NetQoS NetVoyant 7.0
User Guide

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NetVoyant User Guide

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About This Document

NetQoS NetVoyant is a powerful performance analysis and reporting software package that automates the collection, analysis, and reporting of critical device data. Using Simple Network Management Protocol (SNMP), the NetVoyant product automatically polls and correlates data from devices installed on your network. Data from routers, switches, servers, RMON2 probes, frame relay circuits, logical segments, and wide area links are collected and organized to give you real information about your network. You can easily identify trends and issues before they become problems.

This document provides information and procedures to help you effectively use the NetVoyant reporting interface.

Chapter	Description
Chapter 1, "Using NetVoyant Reports" on page 11	Explains how to perform basic functions in the NetVoyant reporting interface.
Chapter 2, "Sharing NetVoyant Reporting Information" on page 25	Explains how to share report pages through various methods such as email, print, or displaying a report view on an external web portal.
Chapter 3, "Customizing the NetVoyant Reporting Interface" on page 33	Explains how to customize the NetVoyant reporting interface to better meet your needs by editing report pages and views, setting a homepage, reordering the pages in a menu, and so on.
Chapter 4, "Viewing NetVoyant Standard Report Pages" on page 53	Describes the default reports available in the NetVoyant reporting tool and how to access them.
Chapter 5, "Working with Custom Reports and Views" on page 115	Explains how to create your own custom report pages and views, which you can add to your **My Pages** menu.
Chapter 6, "Reporting Administration" on page 151	Explains how to perform administrative tasks in the NetVoyant reporting tool, such as configuring an SMTP server or adding a new user account.
Appendix A, "Built-In NetVoyant Views" on page 171	Describes the built-in NetVoyant views that are available to add to your NetVoyant report pages.
Appendix B, "Integrated Reporting in the NetQoS Performance Center" on page 583	Explains the process for registering NetQoS NetVoyant with the NetQoS Performance Center and describes the differences is the displayed views when rendered in the NetQoS Performance Center user interface.

RELATED DOCUMENTATION

In addition to this book, you can find useful information in the following publications:

Document	Description
NetVoyant Administrator Guide	This guide provides NetVoyant administrators with the information that they need to configure and maintain SNMP polling using the NetVoyant console.
NetVoyant v7.0 Release Notes	Summarizes product enhancements, fixes, and open issues.
NetVoyant v7.0 Help	Provides context-sensitive help for tasks that you perform through the NetVoyant console and web reporting tool.

You can access the product documentation in the following ways:

- In the NetVoyant web reporting tool, navigate to the **About** page in the product and click the **User Guide** link.

- Navigate to the **Documentation** directory on the server, which contains the PDF files for both the User Guide and Administrator Guide, as well as supplemental documentation.

  The product documentation is available in PDF format on the server where the NetVoyant product is installed. Find the PDF files in the following location:

  `D:\NetVoyant\Portal\WebSite\Docs`

- On the desktop of the server, find shortcuts that link to the User Guide and Administrator Guide PDF files.

The most up-to-date versions of the PDF files for the product documentation, including the *Release Notes*, are always available on the NetQoS Self-Service Portal.

CONVENTIONS

The following conventions are used in this book:

- In instructions, **sans-serif boldface** type highlights information that you enter or user interface elements that you select.

- All syntax and literal examples are presented in `monospace` typeface.

- In syntax, path names, or system messages, text enclosed in angle brackets (<>) represents a variable as shown in the following example:

  net time/setsntp: *<ntpserver>*

PROVIDING DOCUMENTATION FEEDBACK

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Using NetVoyant Reports

NetQoS NetVoyant, the device performance module of the NetQoS Performance Center, provides SNMP-based performance metrics for managing network infrastructure, devices, and services. NetVoyant report pages provide you with a collection of graphs, tables, and other sets of data in one convenient location. You can view the default NetVoyant reports or view custom reports created by NetVoyant administrators and designers.

With full integration into the NetQoS Performance Center and the extensive reporting delivered by NetVoyant, you can establish device availability and performance goals and track how well you meet them. Utilizing the NetQoS Performance Center, you can add the NetVoyant product as a data source, making the NetVoyant views available within the NetQoS Performance Center reporting interface. For more information about using the NetQoS Performance Center to access NetVoyant reporting views, refer to the *NetQoS Performance Center Administrator and User Guide*.

The following topics provide basic information about using NetVoyant reports:

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GETTING STARTED WITH NETVOYANT REPORTS

Contact your NetVoyant administrator to get the correct NetVoyant server name or IP address and your login information. Access the server that hosts the NetVoyant product by entering the server name or IP address into the address field of your web browser:

```
http://<IPAddress>
```

If you have the NetQoS Performance Center installed on the same server, this address defaults to the the NetQoS Performance Center interface. To access the NetVoyant reporting tool, enter the following IP address into the address field of your web browser:

```
http://<IPAddress>/nv
```

The NetVoyant reporting interface requires Microsoft Internet Explorer version 6 or 7.

You are prompted to log in when you first access the NetVoyant reporting interface.

Note: Some user interface components in the NetVoyant reporting tool require the Adobe Flash Player (version 9.0.115.0 or later). If you do not have the Flash Player installed on your system, you will be prompted to install it. Click the link to install the latest version. Adobe Flash does not currently support 64-bit, and using the Flash Player requires a 32-bit operating system or a 32-bit browser running on a 64-bit operating system.

Understanding Reporting Terms

To understand and use NetVoyant reports, you should be familiar with the following terms and concepts:

Term	Definition
View	A particular graph, table, or set of collected data. The NetVoyant reporting tool displays a set of views on a page. You can add default views to a report page, edit or copy the individual views on a page, or create custom views and reports.
Report page	A collection of views that can be accessed as a single unit. NetVoyant administrators and designers can select views to add to a shared page, name the page, and save it.
	The NetVoyant reporting tool provides standard report pages designed for particular types of users such as operations personnel, executives, and engineers. You can also edit or create custom report pages.
Menu	Report pages are accessible from the menus in the NetVoyant reporting interface. NetVoyant administrators can designate the menus that are available to each role and the pages that are available from each menu.
Group	NetVoyant administrators can create groups to organize your devices and networks. Groups function similar to a tree file structure, with each group containing subgroups, networks, or devices. You can set the context of a report page by group.

Accessing Report Pages

Menus and report pages are available to you by accessing the **Report Pages** option from the main menu of the NetVoyant reporting interface. Accessibility to menus and report pages is based upon the role assigned to the user.

To learn more about menus, report pages, views, and other reporting concepts, see "Understanding Reporting Terms" on page 12.

To access a report page from a menu:

▶ Click one of the menus at the top of the reporting interface and choose a page from the drop-down menu.
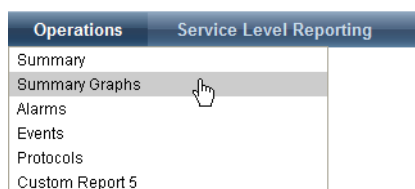
This displays the selected report page.

To access a report page from a list of available pages:

1. From the **Report Pages** menu, select **Report Pages**.

This lists all the report pages that are available to you.
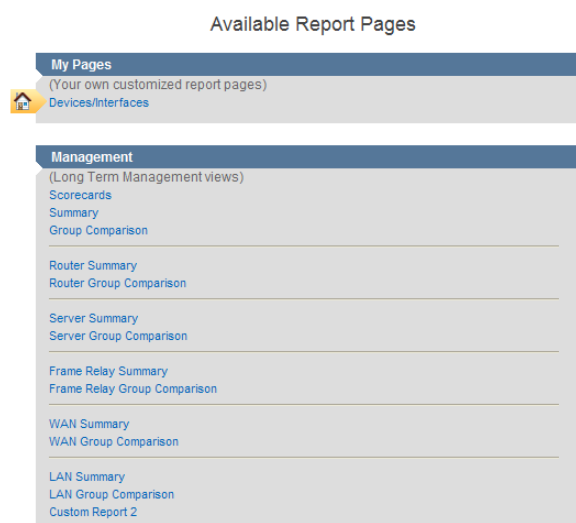
Note: The home icon is displayed next to your current homepage. For more information, see "Setting Your Homepage" on page 34.

2. Click a page title in the list to display the report page.

Searching for Objects by Name or Address

To find reports relating to a selected item, search for the item in the NetVoyant reporting interface. The NetVoyant reporting tool enables you to search for objects by name or IP address. There are two ways to search for an object in the NetVoyant reporting tool:

- You can use the Search field in the page header to quickly enter a text string or filter expression and return a page listing all types of objects matching the string or filter.
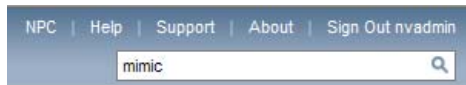
- You can open to the Search interface to select an object type and enter a text string.

To search for an object using the Search interface:

1. From the **Report Pages** menu, select **Search**.

   This displays the Search interface.

2. Select the type of object from the **Type** list.

3. Enter a filter expression.

   You can use * as a wild card. For example, while searching for an IP address you can enter 10.0.7* to display only those addresses that start with 10.0.7. For this name filter, the page displays 10.0.7.1, but does not display 10.0.8.1.

4. Click **Search**.

   The page displays a list of items that match the filter expression.

   - Under the search results, click a number to display another results page.
   - To display more items per page, select a larger **Max Per Page** from the list.

The Search Results

The NetVoyant reporting tool displays the following information for each item, depending on the type of search that you perform:

Parameter	Search type	Description
Status	Device	Indicates the alarm status of a device. The color of the status indicates what type of alarm is active on the device if any. A green status indicates that no alarms are present on the device.
Name	Device Interface Poll Instance	The name of a device, interface, or poll instance.
Type	Device	The device class of a device.
Model	Device	The device model of a device.
Description	Device Interface Poll Instance Group	An optional description of a device, interface, poll instance, or group.
ifType	Interface	An interface's type as defined by the `ifType` field in the SNMP ifEntry table. For example, `frame-relay`.
ifIndex	Interface	The index for an interface's SNMP ifEntry table.
In Speed	Interface	The interface speed for data entering an interface.
Out Speed	Interface	The interface speed for data exiting an interface.
Address	Address	The IP address of a device or interface.
Interface	Address	The interface that is assigned to an IP address.
Device	Address Poll Instance	The device to which a poll instance or an interface with a selected IP address belongs.
Metrics	Poll Instance	The type of data that a poll instance stores, which corresponds to a NetVoyant dataset.
Path	Group	The tree location of a group, which indicates if the group is a subgroup of another group.
Members	Group	The number of devices in a group, ignoring devices in any subgroups of the group.

Drilling Down to Detailed Views

The NetVoyant reporting tool displays detailed information about the selected device, interface, or group when you click a report or links within a report. You must have drilling permission to use this feature.

For example, clicking on a server in a Top Deviation from Norm - Server CPU Utilization view displays a Server Performance report page.

Clicking a server name...

...displays a server report.
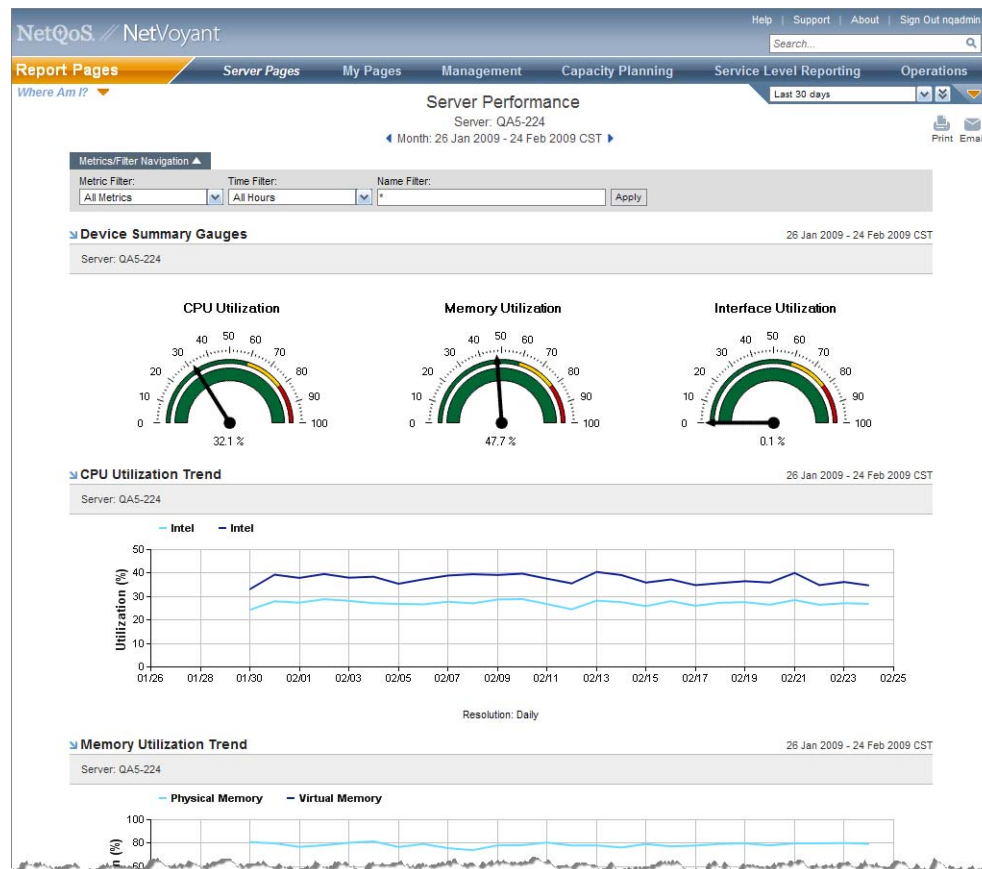
VIEWING REPORTS BY TASK

The NetVoyant reporting tool uses five default menus to organize reports. The menus are organized to help you perform NetVoyant tasks more effectively and efficiently.

You can access all of the default menus or change the settings to display only selected menus. The default menus are described in the following table.

Menu	Description	More information
My Pages	The reports in this menu are customized for you and your specific job function.	"Adding Report Pages to My Pages" on page 116
Management	The overview reports in this menu survey views into device and network performance using goal-oriented scorecards and powerful device and segment-type summaries.	"Viewing Management Reports" on page 55
Capacity Planning	The reports in this menu enable you to make decisions about what devices or segments need an upgrade without having to sort through large amounts of unrelated data. Capacity Planning reports pinpoint the fastest growth, the top changes, and the metrics closest to threshold and enable you to quickly drill down to more detailed reports on the related devices or interfaces.	"Viewing Reports for Capacity Planning" on page 62
Service Level Reporting	The reports in this menu can help you verify your service level agreements or keep track of which of your metrics have unexpected values. Service Level reports include coverage of your IP SLA operations, VoIP tests, and the worst deviations away from baselines or over thresholds.	"Viewing Service-Level Reports" on page 65
Operations	The reports in this menu provide you with an operations level view of the devices in your network, including those devices that are most unavailable, the interfaces that are most utilized, and those protocols that are most active on your network (requires an RMON2 probe). You can also view the NetVoyant events or alarms that could be causing loss of SNMP data.	"Viewing Operations Management Reports" on page 70

Note: Access to NetVoyant capabilities depends on how your NetVoyant administrator has configured your role and permissions. Contact your NetVoyant administrator for information about your account or permissions.

Detailed Reports Underlying the Data

The NetVoyant reporting tool displays detailed information about the selected device, interface, or group when you click a report or links within a report. For more information about these detailed, context-level reports, see "Viewing Context-Level Reports" on page 74.

Creating Custom Views and Reports

NetVoyant report pages are composed of views into your NetVoyant SNMP data. You can edit and create new report pages on the **My Pages** menu or on shared pages. Create custom views using the NetVoyant reporting tool's redesigned Custom View Wizard. For more information, see "Using the My Pages Menu" on page 116.

Sharing Report Information

There are several methods for exporting data from the NetVoyant reporting tool:

- Email report pages directly from the NetVoyant reporting tool.
- Print report pages to PDF directly from the NetVoyant reporting tool.
- Export individual views as CSV files that open in Microsoft Excel or another external spreadsheet software program.
- Generate URLs from your views to display device performance statistics on your website or Sharepoint portal.

For more information, see "Sharing Report Pages and Data" on page 26.

CHANGING DATA DISPLAY IN REPORT PAGES

Change the way that the NetVoyant reporting tool presents data in a report page by performing any of the following tasks:

- Change the time period for a report page. For example, you can select to display only reporting data for a selected month or hour. For more information, see "Changing Time Periods" on page 18.
- Change the reporting context for a report page. For example, you can select to display only reporting data for a selected group or type of device. For more information, see "Setting the Group Context for a Report Page" on page 20.
- Limit the types of data displayed on a report page by data type or object name. For example you can select to display only device availability data on a report page or only data related to devices that have a name that starts with "10.0." For more information, see "Limiting the Types of Data Displayed on a Report Page" on page 21 and"Filtering the Data Displayed in a Table View" on page 24.

Changing Time Periods

When you are viewing report pages, you can change the time period for the displayed data. For example, if you are viewing data for the last day in a report and you notice an issue, you might want to change the time frame to the last seven days to determine if the issue is occurring on a daily basis.

You can also use time filters to display data using time filtered rollups. These time filters are set up by your NetVoyant administrator so that the NetVoyant product aggregates data according to hours of operation or other useful day/time selections.

Note: Each user account has a time zone assigned, which determines how reports label data with time for that user. For example, if a user has a time zone of Central Standard Time (CST) instead of the

default of Universal Coordinated Time (UTC) and the user views a report with data for 8:00 a.m.to 9:00 a.m., the NetVoyant reporting tool displays data for 8:00 a.m. to 9:00 a.m. CST. A NetVoyant administrator can modify this setting for the user account. For more information about user account administration, see "Adding or Editing a NetVoyant User" on page 163.

To change the time frame for a report page:

▶ Click the time period menu in the upper-right corner of the reporting interface.
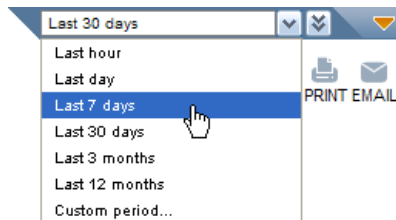
The page displays data from the selected time period in the views on the report page.

Setting Custom Time Periods

You can change time periods while viewing report pages. You can also set the following custom time periods:

- A specific hour
- A specific day
- A unique week time period by specifying a day within the Saturday to Sunday 7-day time period that you want
- A unique month time period by selecting the month name and year
- A unique quarter time period by selecting the quarter number and year
- A unique year time period by selecting the year

Note: For pages displaying poll instance details within a drill-in context, you can specify any start date and stop date. All other pages use calculated rollups over a pre-defined calendar period (such day, week, month, and quarter) and cannot display time periods with arbitrary start or stop dates.

To set a custom time period for a standard page:

1. Open a report page.

2. In the upper-right corner of the reporting interface, click the drop-down icon (⯭).

   The NetVoyant reporting tool displays the **Custom Time Period** dialog box.
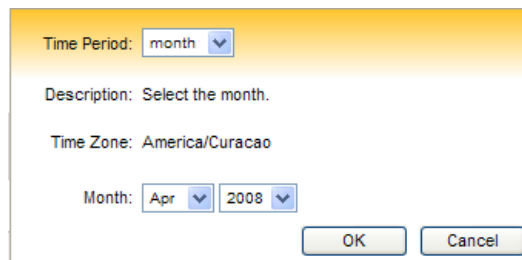
3. Select the **Time Period** from the list.

For example, select **day** to view a specific day.

4. Define the desired time period.

For example, if you selected **month** as the time period, select the month and year.

5. Click **OK**.

The NetVoyant reporting tool applies the custom time period to the report page.

Note: If you set a custom time period and then select another time period such as **Last hour**, it applies the new time period and does not save the custom time period.

Setting the Group Context for a Report Page

When you are viewing report pages, you can change the context for the displayed data. For example, if you are viewing the Management Scorecard report for your overall network, it is possible to change the context to display only the views that relate to a group that you created for your central office.

When you set the group context for a report page, the NetVoyant reporting tool applies the same group context to any other report pages that you view during your current NetVoyant session.

To reset the context to all devices and networks, select the NetVoyant server name from the **Group** list.

Note: You cannot change the context on some report pages.

To select a group context to set for the page:

1. View a report page.

For more information, see "Accessing Report Pages" on page 13.

2. Click the yellow arrow symbol ( ) next to **Group Filter** at the top of the report page, or click the orange drop-down arrow and select **Change Group**.
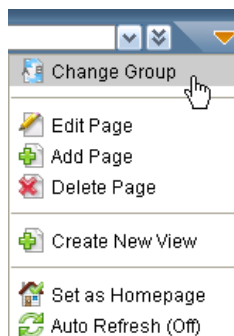
The NetVoyant reporting tool displays the **Select Group** dialog box, which displays an expandible list of all groups, networks, and custom groups.
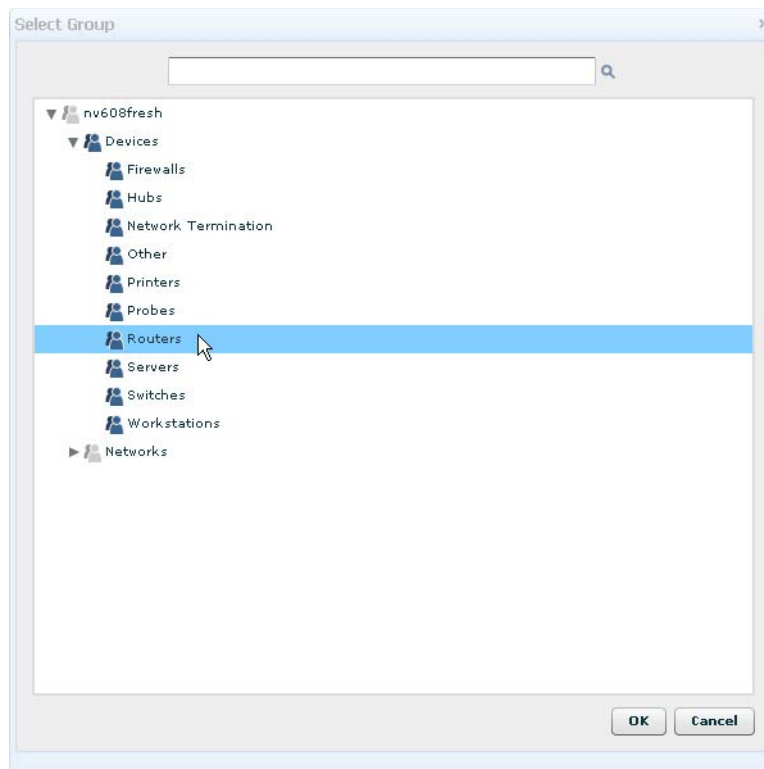
3. Click a group or network to select the context for the report page.

4. Click **OK**.

   The dialog box closes and the report page refreshes to display only those views and report data that apply to the selected group or network.

Note: If you select a network as the context for a report page, the network is added to your context quick list for your current NetVoyant session.

Limiting the Types of Data Displayed on a Report Page

When you are viewing report pages, you can change the data that the NetVoyant reporting tool displays on a page. For example, if you are viewing the Top Projections report for your overall network, you can select to display only views related to device availability metrics for devices with names that start with 10.0.1.

Note: You cannot change the metrics or apply name filters on some report pages.

To change the data displayed on a report page:

1. View a report page.

   For more information, see "Accessing Report Pages" on page 13.

2. From the **Metric Filter** list, select the type of data you want to display.

   The NetVoyant reporting tool displays datasets in the list. When you select a metric in the list, it refreshes the report page to display only the types of data defined in the selected dataset.

Note: Your NetVoyant administrator can add and configure the available datasets to configure the metrics that you can select for report pages. For more information, see the *NetVoyant Administrator Guide*.
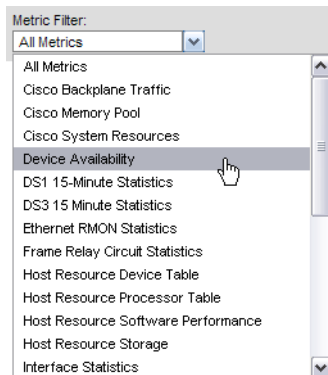
When you limit the metrics displayed on a report page, the NetVoyant reporting tool also limits the metrics displayed on any other report pages that you view during your current NetVoyant session. To reset the metrics displayed, select **All Metrics** from the list.

To use a name filter to limit the items displayed on a report page:

1. View a report page.

    For more information, see "Accessing Report Pages" on page 13.

2. Enter a **Name Filter** to limit the devices, interfaces, or poll instances displayed on the report page.

    You can use * as a wildcard. For example, you can enter 10.0.1* to display only those items that have a name that begins with 10.0.1. For this name filter, the list displays 10.0.1.1, but does not display 10.0.8.1.

3. Click **Apply** to apply the name filter.

    The NetVoyant reporting tool refreshes the report page to display only those items with names that match the name filter.

Including More Data in a View

The number of report items that the NetVoyant reporting tool displays is configurable in many types of views on the report pages.

If you're viewing a Management Scorecard for the overall network, by default the view only displays 10 items; however, it is possible to display up to 200 items at a time and flip through multiple "pages" of items.

Note: A NetVoyant administrator can configure the number of items that the NetVoyant reporting tool shows by default in all views. For more information, see "Configuring Global Settings" on page 158.

To view more data in a view:

1. View a report page that contains the view.

   For more information, see "Accessing Report Pages" on page 13.

2. To view more items per page, from the **Max Per Page** list, select the number of items to display on a page.

   This displays the selected number of items in the view.
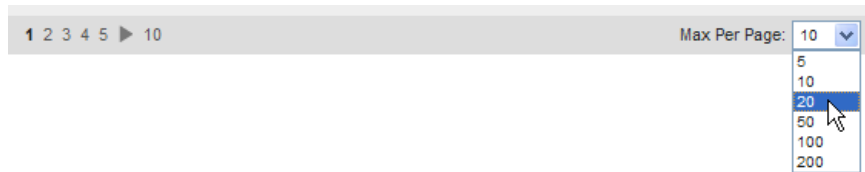
3. To view another page of data, click the page number.

   This displays the selected page.

Sorting Data in a Table View

In a table-style report view, items can be sorted according to any of the columns in the table in ascending or descending order. You can change the sort order from ascending to descending, or vice-versa. Or, you can change the column used for sorting the table.

To change the sorting for data in a table view:

1. View a report page that contains the table view.

   For more information, see "Accessing Report Pages" on page 13.

   The column that is currently used for sorting the data has a an up or down arrow icon to indicate the sort order.

2. To change the sort order for the column, click the sort arrow next to the column name.
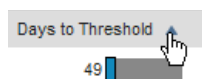
3. To use a different column for sorting the table view, click the name of another column in the table.

   When you place the pointer over the name of the column, it appears as a clickable link with an underline.

Filtering the Data Displayed in a Table View

It is possible to limit the report items that the NetVoyant reporting tool displays in a table-style report view. For example, when viewing a Top Projections - Latency view, by default it displays the top 10 devices with the highest latency or you can filter the view to view the top 10 devices that have names starting with 10.0.7.

For more information about view styles such as the table style, see "NetVoyant View Styles" on page 136.

To limit the data displayed in a table view by using a filter:

1. View a report page that contains a table view.

   For more information, see "Accessing Report Pages" on page 13.

2. At the bottom-left corner of the table, enter a filter expression to use on the first column of data.

   You can use * as a wildcard. For example, you can enter nq* to display only those items that begin with **nq**. Using this name filter, the page displays **nqfs**, but does not display **nvfs**.

   QA*

3. Click **Filter**.

   The NetVoyant reporting tool restricts the data in the table to those report items that match the filter expression.

Closest to Threshold - Device Memory Utilization				12 Nov 2008 - 11 Feb 2009 CST
Name	Metric	Average	Threshold	Days to Threshold ▲
QA1-16 - C:\ Label: Serial Number 8c1510b6	Percent Used	94.27%	95.00%	62
QA1-14 - Physical Memory	Percent Used	44.67%	95.00%	254
QA1-13 - Physical Memory	Percent Used	25.68%	95.00%	288
QA*				Show Top: 10

Sharing NetVoyant Reporting Information

The NetVoyant reporting tool provides multiple methods for sharing report pages, views, and data with co-workers or others interested in the information. This information can be shared using a number of different methods:

- **Emailing** a report page or scheduling the NetVoyant reporting tool to email an up-to-date report page at regular intervals.
- **Saving a report page to a printable format** using the Portable Document Format (PDF) file.
- **Exporting a view to a Comma Separated Value (CSV) file**, which you can open in Microsoft Excel or another external spreadsheet software program.
- **Generating a URL from a view** to display on your website or SharePoint portal.
- **Exporting the SQL commands for a view,** which your NetVoyant administrator can use to restore a view to the NetVoyant database.

The methods available for sharing NetVoyant reports depend on how your NetVoyant administrator has configured your user account. Contact your NetVoyant administrator for information about your account or permissions.

The following topics provide information about sharing information from NetVoyant reports:

SHARING REPORT PAGES AND DATA

There are several methods for exporting data from the NetVoyant reporting tool. This allows you to share the information with managers, coworkers, and others who may not have access.

- Email report pages directly from the NetVoyant reporting tool.
- Print report pages to PDF directly from the NetVoyant reporting tool.
- Export individual views as CSV files that open in Microsoft Excel or another external spreadsheet software program.
- Generate URLs from your views to display device performance statistics on your website or Sharepoint portal.

Emailing Report Pages
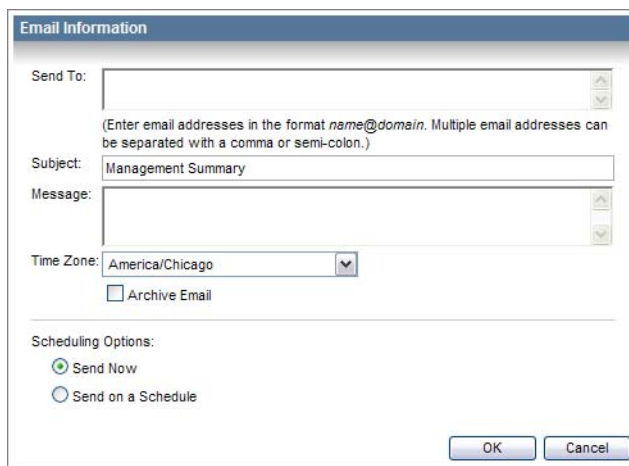
Email report pages to share information displayed in NetVoyant reports. For example, email a Server Summary report from the past month to your manager to quickly show what your team has been experiencing.

Important: A NetVoyant administrator must configure an SMTP server for the NetVoyant reporting tool before you can email report pages. For more information, see "Adding an SMTP Server" on page 153.

To email a report page:

1. View the report page.

2. Click the Email icon (EMAIL) at the top-right corner of the report page.

   The **Email Page** dialog box opens.

3. Enter the following information:

Parameter	Description
Send To	Enter the email address to which you want to send the report page. Separate multiple email addresses with commas.
Subject	Enter the subject line for the email.

Parameter	Description
Message	Enter a message to explain the report or the purpose of the email.
Time Zone	The time zone used for generating the report data.
Archive Email	Select this check box to save a copy of the generated report PDF to a database. This does not archive the email message or recipient information.
Scheduling Options	Select one of the following options: • **Send Now** - Select this option to send the email immediately. • **Send on a Schedule** - Select this option to schedule the email message to be sent each day, week, month, quarter, or year. If you select Send on a Schedule, select one of the following options: • **Send Daily** - Select which days of the week to send the email. • **Send Weekly** - Select which day to send the email. • **Send Monthly** - Sends the email on the last day of the month. • **Send Quarterly** - Select the month that designates the end of the first quarter to send the email. The NetVoyant reporting tool sends the email on the last day of each quarter. • **Send Yearly** - Select the last month of the year. The NetVoyant reporting tool sends the email on the last day of the year. *Note:* Scheduled emails generate the PDF using a stored URL address. If you have filters or custom sorting applied to the views on the current report page, they are not applied to a report page in the scheduled email. If a filter is applied to the entire page, this filter will apply to the page sent in the scheduled email. You can also create custom views or edit existing views by applying ORDER BY and WHERE clauses to the SQL statement.

4. Click **OK**.

   • If you selected **Send Now**, the NetVoyant reporting tool sends the email with the current report page attached as a PDF file.
   • If you selected to **Send on a Schedule**, the NetVoyant reporting tool configures the email schedule.

Note: You can view, edit, or delete email schedules that you configure from the **Administration** section of the NetVoyant reporting interface. For more information, see "Viewing, Editing, or Deleting an Email Schedule" on page 154.

Printing Report Pages

Print report pages to a PDF file to share information displayed in NetVoyant reports. For example, print Capacity Planning reports and show them to the Director of IT to illustrate that your team requires more resources. The NetVoyant reporting tool generates a PDF for the report page, which can then be printed from a PDF viewer.

To print a report page:

1. View the report page.

2. Click the Print icon (🖨 PRINT) at the top-right corner of the report page.

   NetVoyant generates a printable version of the report in a new browser window. This is a PDF file that can be viewed in Internet Explorer and printed.
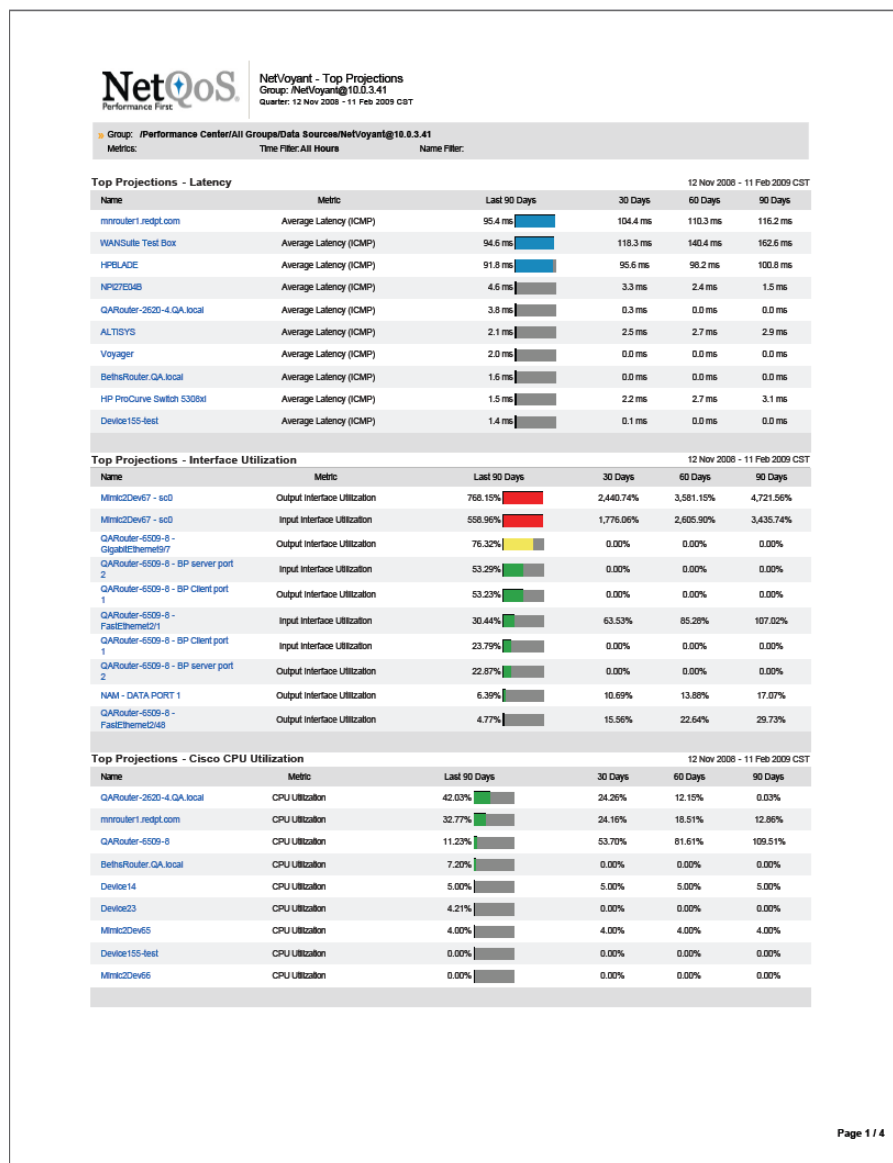
3. In the browser toolbar, click the Printer icon.

   Your browser displays a **Print** dialog box. Use this to select a printer and set other printing options.

4. Click **OK** to print the PDF file.

EXPORTING AND GENERATING VIEWS

The NetVoyant reporting tool provides multiple ways to extract the information displayed in the reports and include it in other applications or web views.

Exporting a View to a CSV File

Report pages with table views can be exported to a Comma-Separated Value (CSV) file. The CSV can be opened in Microsoft Excel or another external spreadsheet software program. This allows you to manipulate, sort and format the data for presentations.

To export a view to a CSV file:

1. View a report page that contains the table view.

2. Click the blue arrow at the top-left corner of the view and select **Export to CSV**.
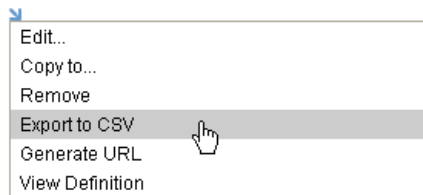
3. In the **File Download** dialog box, perform one of the following tasks:
   - Click **Open** to display the view in tabular format in Microsoft Excel.
   - Click **Save** to save the view as a CSV file.

Generating a URL for a View

Generating a URL for the view allows you to display a view outside of the NetVoyant reporting tool. When a URL is generated for a view, it provides a URL and an HTML code snippet that is used to display the view in an in-line Frame (iFrame) on a web page. A URL can be generated for any accessible view in the NetVoyant reporting tool.

Note: You can generate a URL for a view only if a NetVoyant administrator has granted you permission to export views. Contact your NetVoyant administrator for information about your account or permissions.

To generate a URL for a view:

1. View a report page that contains the view.

2. Click the blue arrow at the top-left corner of the view and select **Generate URL**.
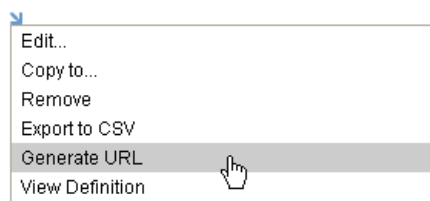
The **Generate URL** dialog box opens.

3. You can edit the following parameters for the generated URL:

Parameter	Description
URL	This text box is automatically populated with the current URL information.
Display Options	Set the display options as follows: • Select **View Container** to display the chart or graph with the surrounding container including the title bar. • Select **Drill Down** to enable users to drill down into the underlying NetVoyant product for more detailed data. For more information about drilling down into views, see "Drilling Down to Detailed Views" on page 16.

Parameter	Description
End Time	Select the ending time for the view to display data. The view does not display data that collected after the **End Time**. Select one of the following: • Select **Current Time** if you want the view to use the current time as its end time. • Select **End Time On** and enter the date and time in the specified format (*M/d/yyyy H:m:s*).
Time Span	Select the time period for the view. For example, select **Monthly** to display data from an entire month.
Token Expiration	Select when you want the NetVoyant security token for the view to expire. You can select one of the following: • Select **Never Expires** if you want the exported view to display indefinitely. • Select **Expires in** and enter a number of days after which you want the view to expire. • Select **Expires On** and enter a date and time in the specified format (*M/d/yyyy H:m:s*) if you want the view to expire at a specified date and time.

4. Click **Update URL** to update the URL according to your settings.

5. Copy the URL displayed at the top of the dialog box.

6. *(Optional)* To view a preview of the URL or to copy the HTML code snippet, click **View Preview**. Click **OK** when you are done previewing the URL.

7. Click **OK** to close the dialog box.

Exporting the SQL Queries for a View

You can export the SQL queries for a view to a text file, which can be saved and imported into the NetVoyant database by an administrator. Saving the SQL definitions of views can be used as a method to back up custom views.

Note: You can export a view to SQL queries only if a NetVoyant administrator has given your user account the ability to export views. Contact your NetVoyant administrator for information about your account or permissions.

To export the SQL commands for a view:

1. View a report page that contains the view.

2. Click the blue arrow at the top-left corner of the view and select **View Definition**.

The NetVoyant reporting tool displays a series of SQL INSERT statements in a browser pop-up window. A NetVoyant administrator can import these commands into the NetVoyant database.

3. Select all of the text in the browser window and press CTRL+C to copy it to your clipboard.

4. Open a text file and press CTRL+V to paste the contents into the text file.
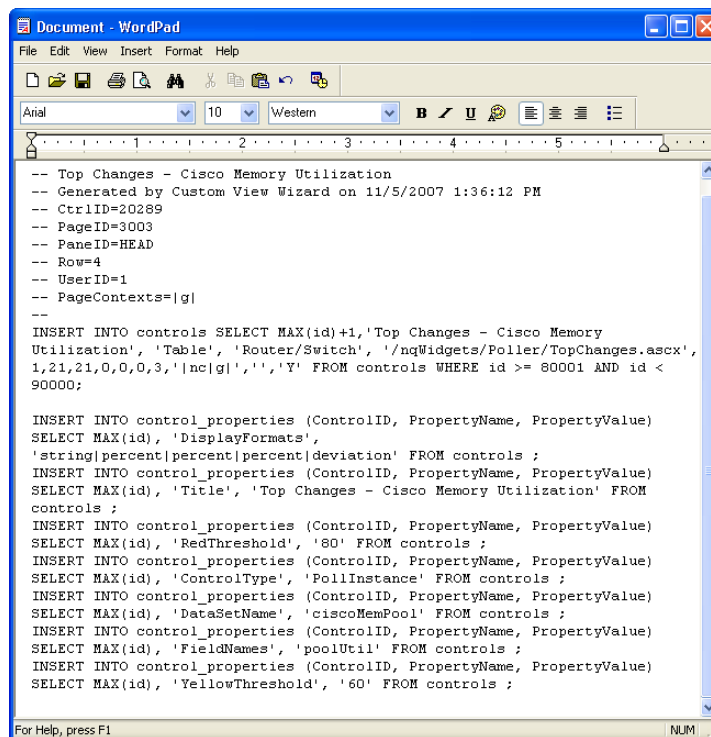
5. You can save the text file and share the view definition with your NetVoyant administrator.

CHAPTER 3

Customizing the NetVoyant Reporting Interface

The NetVoyant web reporting toll installs with a number of pre-built reports organized into menus according to their typical usage in a Network Operations Center. Many organizations and users want to customize the menu organization and the reports that are available to accommodate their own workflows and areas of responsibility. There are multiple methods for customizing the NetVoyant reporting interface to suit your needs.

This chapter covers the following topics:

- "Working with Homepages and Menus" on page 34
- "Editing Reports" on page 36
- "Working with Views" on page 43

WORKING WITH HOMEPAGES AND MENUS

The NetVoyant reporting tool installs with standard menus and reports that display the most commonly needed views grouped according to standard roles and areas of responsibility in an enterprise network operations center.

The NetVoyant reporting tool provides a web interface for customizing the available menus and the listed reports, allowing for easy navigation to the information that is most useful to you. Every user has an individual homepage, that can be set to display one of the standard reports or a custom report. Change your homepage and customize menus so that they provide easy access to the information that you want to see quickly.

Setting Your Homepage

Your homepage is the first page that displays when you log in to the NetVoyant reporting tool. You can change your homepage to any report page that you can access, including a custom report page in the **My Pages** menu.

To set a report page as your new homepage:

1. View the report page that you want to set as your homepage.

2. Click the page-level drop-down menu and select **Set as Homepage**.
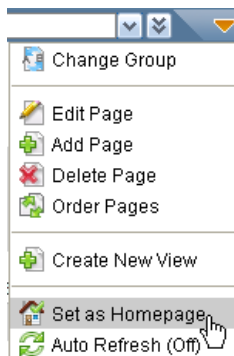
3. Click **OK**.

    This sets the current report page as your homepage.

Accessing Your Homepage

Your homepage is the first page that displays when you log in to the NetVoyant reporting tool. You can quickly access your homepage from the **Report Pages** menu.

To access your homepage:

▶ From the **Report Pages** menu, select **Homepage**.

This displays your current homepage.

Reordering the Report Pages in a Menu

The order in which report pages are displayed in the **My Pages** menu can be customized.

Note: If you have *Edit Shared Views* permissions, you can also move report pages on shared menus. Contact your NetVoyant administrator for information about your account or permissions.

To reorder the report pages in a menu:

1. Select a report page in the menu that you want to reorder.

   For more information about how to access a report page, see "Accessing Report Pages" on page 13.

2. Click the orange drop-down arrow and select **Order Pages**.
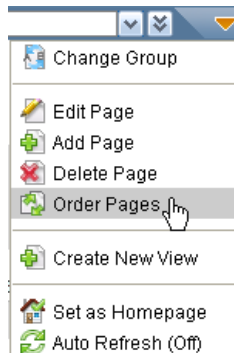
   This displays the **Edit Page Order** page.

3. To move a report page, select it in the list and click the up or down arrows.
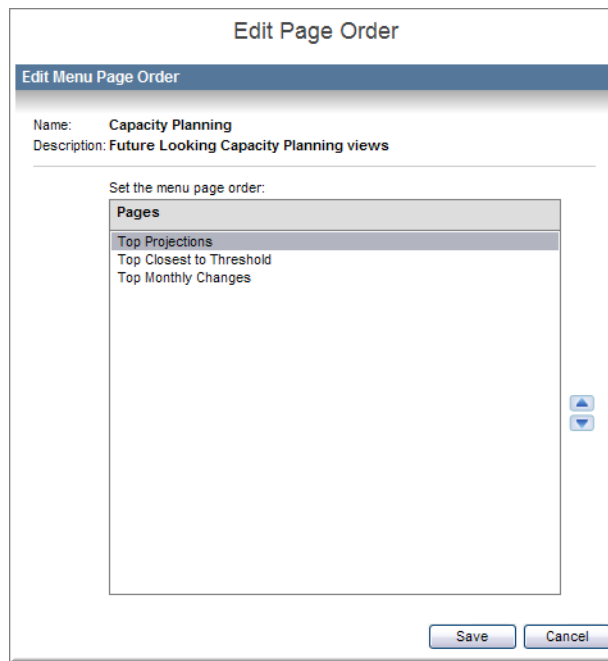
4. Click **Save**.

EDITING REPORTS

Report pages are customizable so that you can display the information you need. It is possible to copy a view from one report page to another, remove a view, edit the views that appear on the report page, and apply filters.

Copying a View

Copy a view to a report page in the **My Pages** menu to create custom report pages. This is a quick and easy way to create a report from views that are already defined.

Note: If you have *Edit Shared Views* permissions, you can also copy views to report pages on shared menus. Contact your NetVoyant administrator for information about your account or permissions.

To copy a view to another report page:

1. View a report page that contains the view you want to copy.

   For more information about how to access a report page, see "Accessing Report Pages" on page 13.

2. Click the blue arrow at the top-left corner of the view and select **Copy to**.
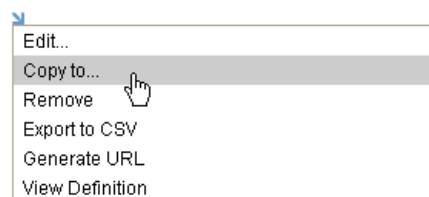
The **Copy view to another page** dialog box opens.

3. From the **Select Menu** list, select the menu that contains the report page to which you want to copy the view.
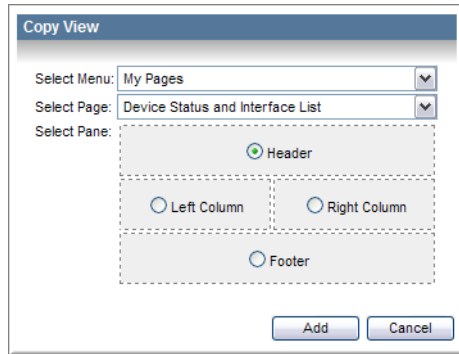
4. From the **Select Page** list, select the page to which you want to copy the view.

5. Select where on the report page you want the view to display.

6. Click **Add**.

This copies the view to the selected report page.

Removing a View from a Report Page

While you are editing custom pages, you might need to remove a view from a report page. In the **My Pages** menu, you can remove views from the report pages.

Note: If you have *Edit Shared Views* permissions, you can also remove views to report pages on shared menus. Contact your NetVoyant administrator for information about your account or permissions.

Note: The NetVoyant reporting tool deletes any custom settings for the view when it is removed from the report page.

To remove a view:

1. View a report page that contains the view you want to remove.

   For more information about how to access a report page, see "Accessing Report Pages" on page 13.

2. Click the blue arrow at the top-left corner of the view and select **Remove**.
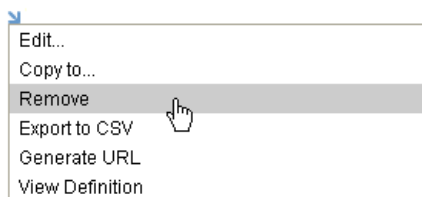
The **Remove Widget From Page** dialog box opens.
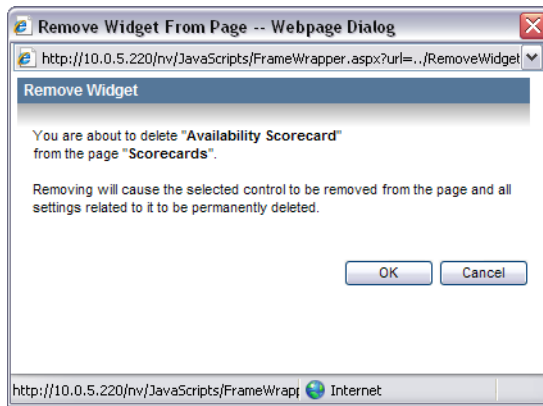
3. Click **OK** to confirm.

   This removes the view from the page.

Editing the Contents in a Report Page

From the **My Pages** menu, views can be added to report pages or moved to a new location on the report pages.

Note: If you have *Edit Shared Views* permissions, you can add and move views on report pages on shared menus. Contact your NetVoyant administrator for information about your account or permissions.

To edit a report page:

1. Select the report page that you want to edit.

   For more information about how to access a report page, see "Accessing Report Pages" on page 13.

2. Click the orange drop-down arrow and select **Edit Page**.
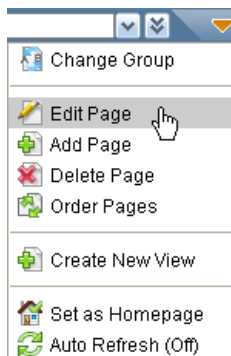
   This opens the **Edit Page Layout** page.

Edit Page Layout

3. At the top of the page, you can edit the following items for the report:

Parameter	Description
Menu Title	Edit the title for the report as it is displayed in the menu bar.
Page Title	Edit the title displayed at the top of the report page.

4. In the main body of the **Edit Page Layout** page, you can perform the following actions:

Task	Description
Add a view	To add a view to the report page, select a context to display the views related to that context. For example, select **IP SLA** to display all IP SLA views that are available for the current context. *Note:* Select the **Custom Views** grouping to view all custom views available to you. Click a view in the list and drag it to a page layout section on the right side of the page.
Remove a view	To remove a view from the report page, click **Remove** next to a view. *Note:* The NetVoyant reporting tool deletes custom settings when it removes the view from the report page.
Move a view	To move a view on the report page, click a view in the list and drag it to a different page layout section on the right side of the page.

5. Click **Save** to save your edits.

Adding Group Navigation or Filters to a Report Page

You can add group navigation and filters to a custom report page by adding navigation views to the top of the report page. These navigation views enable you to:

- Change the context for the displayed data on a report page to a selected network or group. For more information, see "Setting the Group Context for a Report Page" on page 20.
- Filter the report data on a report page to a selected type of data. For more information, see "Filtering the Data Displayed in a Table View" on page 24.
- Filter the report data on a report page to only those objects that have a name that matches a filter expression. For more information, see "Filtering the Data Displayed in a Table View" on page 24.

To add group navigation or filters to a report page:

1. Select the report page that you want to edit.

   For more information about how to access a report page, see "Accessing Report Pages" on page 13.

2. Click the orange drop-down arrow and select **Edit Page**.
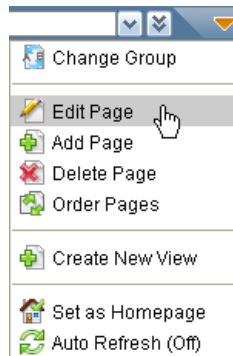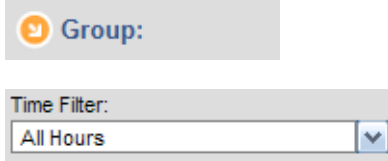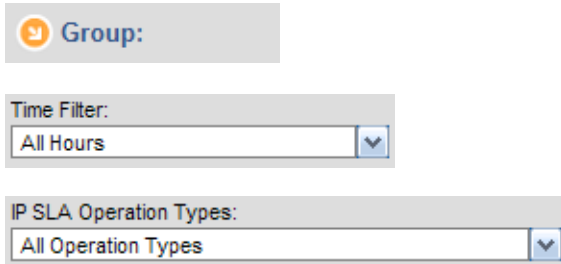
   This opens the **Edit Page Layout** page.

3. On the left side of the Edit Page Layout page, select the **Navigation** category to display the navigation bar views.
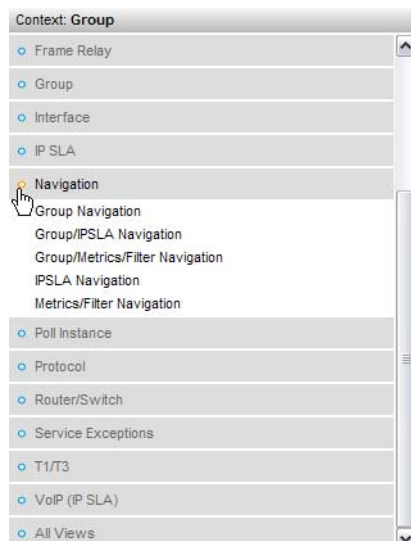
4. Click a view in the list and drag it to the top of the report page layout on the right side of the Edit Page Layout interface.

The following views are available:

View	Description
Group Navigation	Inserts two drop-down lists at the top of the report page that enable you to: • Change the context for the displayed data on a report page to a selected network or group. • Filter the report data on the report page to a selected time filter.
Group/IP SLA Navigation	Inserts three drop-down lists at the top of the report page that enable you to: • Change the context for the displayed data on a report page to a selected network or group. • Filter the report data on the report page to a selected time filter. • Filter the report data on the report page to only those IP SLA operations.
Group/Metrics/ Filter Navigation	Inserts four drop-down lists at the top of the report page that enable you to: • Change the context for the displayed data on a report page to a selected network or group. • Filter the report data on the report page to a selected time filter. • Filter the report data on the report page to a selected type of data. • Filter the report data on the report page to only those objects that have a name that matches a filter expression.

View	Description
Metrics/Filter Navigation	Inserts three drop-down lists at the top of the report page that enable you to: • Filter the report data on the report page to a selected time filter. • Filter the report data on the report page to a selected type of data. • Filter the report data on the report page to only those objects that have a name that matches a filter expression.

Time Filter:
All Hours

Metric Filter:
All Metrics

Name Filter:
*   Apply

5. Click **Save** to save your edits.

Deleting a Report Page

Report pages displayed in the **My Pages** menu can be deleted.

Note: If you have *Edit Shared Views* permissions, you can delete report pages on shared menus. Contact your NetVoyant administrator for information about your account or permissions.

Warning: Before deleting report pages, contact your NetVoyant administrator to make sure the database is backed up. A deleted report page can be recovered only from a database backup.

To delete a report page:

1. Select the report page you want to delete.

   For more information about how to access a report page, see "Accessing Report Pages" on page 13.

2. Click the orange drop-down arrow and select **Delete Page**.

    Change Group
    Edit Page
    Add Page
    Delete Page
    Order Pages
    Create New View
    Set as Homepage
    Auto Refresh (Off)
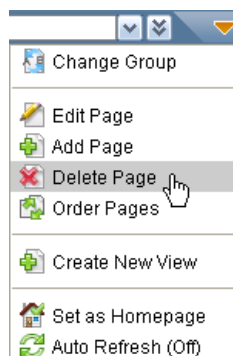
    This displays the **Delete Current Page** page.
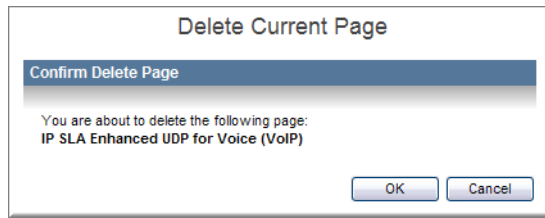
3. Click **OK** to confirm.

Note: The NetVoyant reporting tool deletes custom settings when it removes the page.

WORKING WITH VIEWS

Each view on a report page is a dynamically generated display of data. The view reflects the most recent data stored in the NetVoyant database when the page was loaded or last refreshed.

Editing a View

To further customize the pages added to your **My Pages** menu, edit the views on these report pages. If you have *Edit Shared Views* permissions, you can edit the views on report pages on shared menus. Contact your NetVoyant administrator for information about your account or permissions.

Note: There are types of default views that cannot be edited.

To edit a view:

1. View a report page that contains the view that needs to be edited.

For more information about how to access a report page, see "Accessing Report Pages" on page 13.

2. Click the blue arrow at the top-left corner of the view and select **Edit**.

The NetVoyant reporting tool displays the **Custom View Wizard** with the settings for the selected view populated. The **Choose Name and Type** page is the first page in the Custom View Wizard.

3. Edit the following parameters on the **Choose Name and Type** page:

Parameter	Description
View Name	Edit the name of the view. The NetVoyant reporting tool uses this name as the view title on report pages.
View Description	(*Optional*) Edit the description of the view.
View Category	Select the View Category for the report view, which enables you to select similar views when editing a report page. • To select an existing View Category, click [...]. • To enter a new category, enter the View Category.

4. (*Optional*) To reset a view to the default settings, click **Revert to Default**.

5. Click **Next >>**.

    This opens the **Style and Options** page.

6. You can edit the following parameters on this page:

Parameter	View style	Description
Style	All	Select the style of the view, which defines how the NetVoyant reporting tool displays report data in the view.
		For more information, see "NetVoyant View Styles" on page 136.
Graph Settings	Charts	Configure how the NetVoyant reporting tool labels and scales the axes on a graph-style view.
		For more information, see "Editing Axis Titles and Ranges on a Graph View" on page 138.
Thresholds	Selected views only	Edit the thresholds on some views, which configures the values for which the NetVoyant reporting tool displays status colors.
		For more information, see "Editing the Thresholds for a View" on page 139.
Drill-down	All	Specify an existing report page to use as a drill-down page. Each report page has a pg setting in its URL that indicates its page number or ID. For example `pg=7001` or `pg=classmap`. Use the value for that key as the drill-down value here.
Footer	Selected views only	Add a footer to many views, which can add extra information to the view.
		For more information, see "Adding Other Elements to Customize Views" on page 148.

7. Click **Next >>**.

This displays the **Metrics** page. You cannot edit settings on this page for existing views.

8. Click **Next >>**.

   This opens the **Data Expressions and Settings** page.

9. You can edit the following parameters:

Parameter	View types	Description
Expression(s)	All	Select the expressions for which you want the view to display data.
Distribution Ranges	Distribution	Add, edit, or remove the ranges used for a distribution table or graph. These distribution ranges determine how the data is grouped in the view.
Limit (top-n)	Top-N tables and charts	Enter the number of poll instances you want NetVoyant to display in the Top-N view.
Scorecard Target	Scorecards	Edit the target used for a Scorecard view to determine what values are seen as acceptable for the data.
Where	Top-N tables Pie chart tables	Use this field to limit the items shown in the view by a defined set of criteria. This must follow the syntax of an SQL query clause. For assistance with this advanced reporting feature, contact NetQoS Technical Support.
Group By	Top-N tables Pie chart tables	If you are using aggregations for the expressions in the view, use this field to group items in a report by a specified property or field name. This can be a NetVoyant property or field name preceded by a $ sign. For example, $ProtocolName can be used to group protocol data that have the same name into the same section in a Protocol pie chart.
Order By	Top-N tables	Select the expression by which NetVoyant sorts data in a Top-N table view to determine what data the view emphasizes.

Parameter	View types	Description
Show Projection	Group Summary	Select whether to add a projection line to a Group Summary view.
		Projection lines indicate the direction your data is taking over a period of time and can help you predict future performance based on the trending of available data.
		NetVoyant calculates the projection line from baseline values from your data.
Show Baseline and Projection	Trend	Select whether to show a projection line or hourly baselines on a Trend view. If you select to display them, hourly baselines (for hourly and daily data) or a projection line (weekly or longer data) displays on the view, depending on the time period selected for the report page.
		Hourly baselines display normal ranges of values during a selected time period and can help you identify abnormal values ignoring differences based on time of day.
		Projection lines indicate the direction that your data is taking over a period of time and can help you predict future performance based on the trending of available data.
		NetVoyant calculates the projection line from baseline values from your data.

For more information about types of views, see "NetVoyant View Types" on page 126.

10. Click **Next >>**.

    NetVoyant displays the Summary/Save page.

11. Review the settings for the view and, if necessary, click **<< Back** to return to a previous page and make corrections.

12. At the bottom of the page, select where you want to **Apply Changes To**.
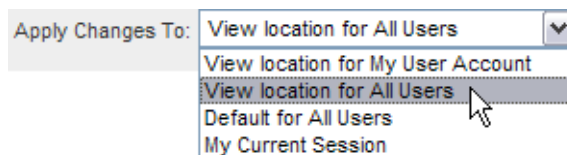
    You can select one of the following options:

Option	Description
View Location for My User Account	Applies the changes to that view location (category) for your user account only.
View Location for All Users	Applies the changes to that view location (category) for all user accounts.
Default For All Users	Applies the changes for all user accounts.
My Current Session	Applies the changes for your user account only for the current session. When you log out, NetVoyant removes the changes.

13. Click **Save**.

This saves your changes to the view.

14. Click **Close** to close the Custom View Wizard.

This refreshes the report page and applies your changes to the view.

Note: You can revert a view to the default settings if you want to remove your changes to the view. For more information, see "Reverting a View to the Default Settings" on page 51.

Editing an IP SLA View

Most IP SLA views cannot be edited. For those IP SLA views that can be edited, you can apply an operation filter to the view. For more information about IP SLA views, see "IP SLA Views" on page 421.

An operation filter limits the IP SLA operations on which a selected view reports.

To apply an operation filter to an IP SLA view:

1. Click the blue and white drop-down arrow at the top-left corner of the view and select **Edit**.

```
Edit...
Copy to...
Remove
Export to CSV
Generate URL
View Definition
```

This opens an edit dialog box.

```
Select Operation Filter

Select Operation Filter: All Operation Types  ▾

Apply Changes To: My Current Session  ▾

          OK      Cancel   Use Defaults
```
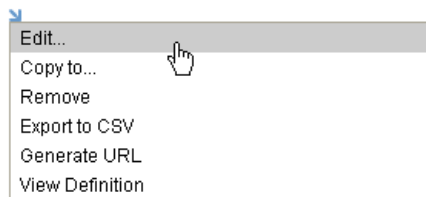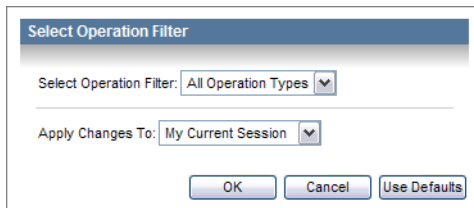
2. Select the operation filter from the **Select Operation Filter** list.

3. Select where you want to **Apply Changes To** from the following options:

Option	Description
View Location for My User Account	If you are an administrator, designer, or a user with *Save Edits* permissions, use this setting to save changes to the view only for the current user account, when the view is displayed on the current page, and in its current location on the page (top, left, right, bottom, as well as the order number). Using this setting enables you to include more than one version of the same view on the page.
View Location for All Users	If you are an administrator or designer, use this setting to save changes to the view for all user accounts, when the view is displayed on the current page, and in its current location on the page (top, left, right, bottom, as well as the order number). Using this setting enables you to include more than one version of the same view on the page.

Option	Description
Default For All Users	If you are an administrator or designer, use this setting to apply the changes for all user accounts and for all locations. However, if a view has been edited from the default for a specific location, the location-specific edits will override these changes.
My Current Session	All users with *Edit* permissions can use this setting to save the changes for that user account and only for the current session. When you log out, the NetVoyant reporting tool removes the changes.

4. *(Optional)* To remove an operation filter, click **Use Defaults**.

   If you remove an operation filter, the page displays all relevant IP SLA operations in the view.

5. Click **OK**.

   This refreshes the report page and applies your changes to the view.

Changing the Resolution in a Trend Graph

The resolution for a graph view indicates the time interval used to plot data points on a trend graph. the NetVoyant reporting tool determines the resolution for a trend graph based on the following factors:

- The **polling rate** for the dataset. The polling rate determines how often the NetVoyant product collects data from your devices.

- The **data retention and rollup settings** for the poll group for the related dataset. Data retention and rollup settings determine how often polling data is rolled up into optimized collections of data with a lower resolution.

- The **time period** displayed for the report page. To optimize reporting, the NetVoyant reporting tool displays data differently based on the time period that you select for the report page.

Trend graph with a resolution of one day
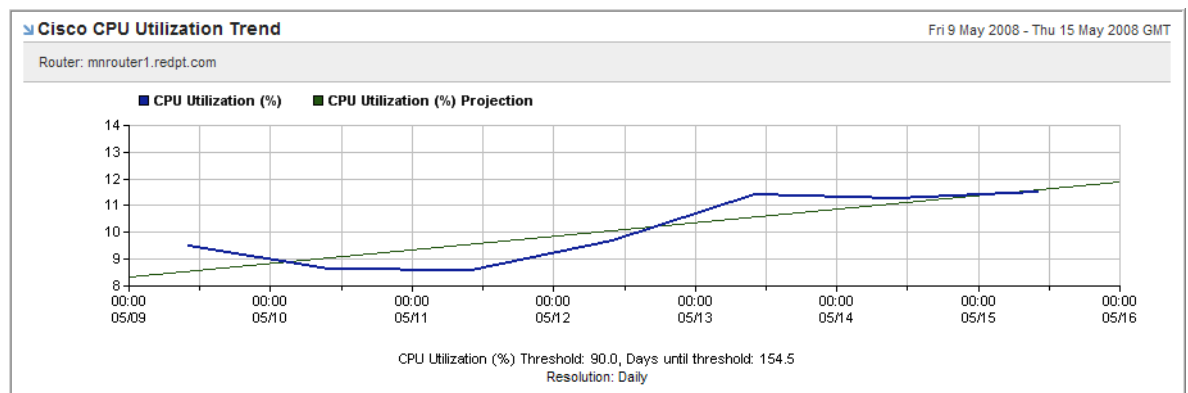
Trend graph with a resolution of one hour
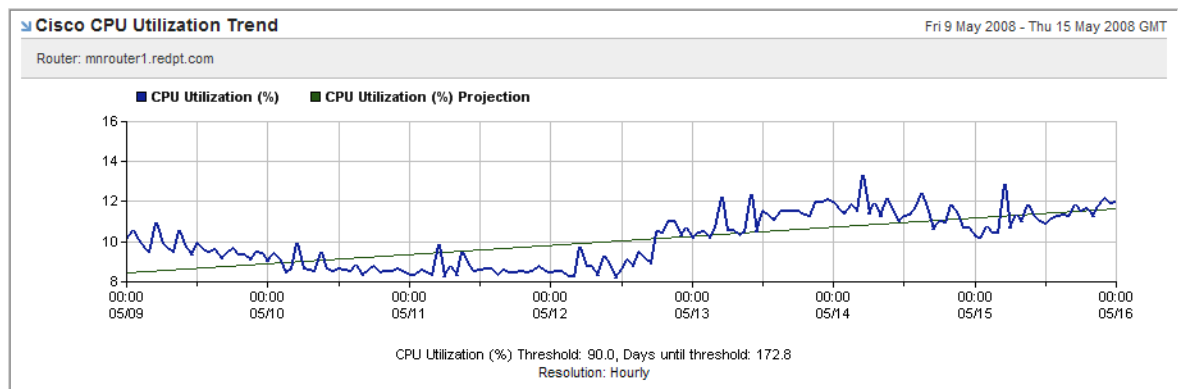
To change the resolution of a trend graph view:

1. Click the blue and white drop-down arrow at the top-left corner of the view and select **Change Resolution**.
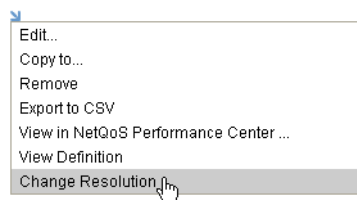
This opens an edit dialog box.
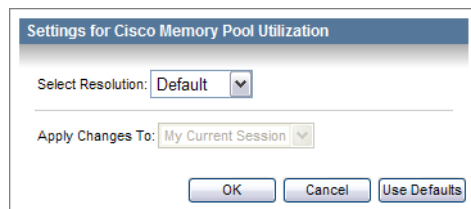
2. Select the resolution level from the **Select Resolution** list.

3. If the trend graph view is one of your custom views, you can use the **Apply Changes To:** option to apply the resolution setting to the current session or to the saved view settings.

4. Click **OK**.

Reverting a View to the Default Settings

If you or another user has edited a shared view, or if you have edited one of the views for your own use, the original default settings can be restored at any point after a view has been edited.

To revert a view to the default settings:

1. Open the view for editing.

   For more information about how to edit a view, see "Editing a View" on page 43.

2. On the **Name and Type** page, click **Revert to Default**.

   This refreshes the report page and resets the settings for the view to the defaults.

CHAPTER 4

Viewing NetVoyant Standard Report Pages

NetQoS NetVoyant provides multiple methods for customizing the NetVoyant reporting interface to suit your needs. By default, it organizes its reports into six categories that can help you perform tasks more effectively and efficiently.

Note: Report page access is controlled according to roles and permissions assigned by your NetVoyant administrator. Contact your NetVoyant administrator for information about your account or permissions.

The following topics provide information about the NetVoyant standard reports:

- "Viewing Standard Report Pages" on page 54
- "Viewing Management Reports" on page 55
- "Viewing Reports for Capacity Planning" on page 62
- "Viewing Service-Level Reports" on page 65
- "Viewing Operations Management Reports" on page 70
- "Viewing Context-Level Reports" on page 74

VIEWING STANDARD REPORT PAGES

You can access the following types of standard (pre-built) reports:

Report type	Description	More information
My Pages	The reports in this menu are customizable for you and your specific job function.	"Adding Report Pages to My Pages" on page 116
Management	The reports in this menu provide an overview into your device and network performance using goal-oriented scorecards and powerful device and segment-type summaries.	"Viewing Management Reports" on page 55
Capacity Planning	The reports in this menu enable you to make decisions about what devices or segments need an upgrade without having to sort through large amounts of unrelated data. Capacity Planning reports pinpoint the fastest growth, the top changes, and the metrics closest to threshold and enable you to quickly drill down to more detailed reports on the related devices or interfaces.	"Viewing Reports for Capacity Planning" on page 62
Service Level Reporting	The reports in this menu can help you verify your service level agreements or keep track of which of your metrics have unexpected values. Service Level reports include coverage of your IP SLA operations, VoIP tests, and the worst deviations away from baselines or over thresholds.	"Viewing Service-Level Reports" on page 65
Operations	The reports in this menu provide you with an operations-level view of the devices in your network, including those devices that are most unavailable, the interfaces that are most utilized, and those protocols that are most active on your network (requires an RMON2 probe). You can also view all the NetVoyant events or alarms that could be causing loss of SNMP data.	"Viewing Operations Management Reports" on page 70
Context-Level Reports	You can access detailed information related to most reports by clicking links in a report or on a report itself. The NetVoyant reporting tool automatically displays more information about the selected device, interface, or group.	"Viewing Context-Level Reports" on page 74

Note: Access to NetVoyant reporting tool capabilities depends on how your NetVoyant administrator has configured your role and permissions. Contact a NetVoyant administrator for information about your account or permissions.

VIEWING MANAGEMENT REPORTS

These overview reports provide survey views into your device and network performance using goal-oriented scorecards and powerful device and segment-type summaries.

The following are the Management-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Scorecards	Quickly identify the location and severity of critical issues across multiple reporting groups or networks.	"Scorecards Report" on page 56
Management Summary	Assess the overall health of a selected group of devices.	"Management Summary Report" on page 56
Management Group Comparison	Compare performance across geographic regions, device types, or any other groups that a NetVoyant administrator has configured for your network.	"Management Group Comparison Report" on page 57
Router Summary	Assess the overall health of a selected group of routers.	"Router Summary Report" on page 57
Router Group Comparison	Compare router performance across geographic regions or any other groups that a NetVoyant administrator has configured for your network.	"Router Group Comparison Report" on page 58
Server Summary	Assess the overall health of a selected group of servers.	"Server Summary Report" on page 58
Server Group Comparison	Compare server performance across geographic regions or any other groups that a NetVoyant administrator has configured for your network.	"Server Group Comparison Report" on page 59
Frame Relay Summary	Assess the overall health of a selected group of frame-relay circuits.	"Frame Relay Summary Report" on page 59
Frame Relay Group Comparison	Compare frame-relay performance across geographic regions or other groups that a NetVoyant administrator has configured for your network.	"Frame Relay Group Comparison Report" on page 60
WAN Summary	Assess the overall health of a selected group of WAN interfaces.	"WAN Summary Report" on page 60
WAN Group Comparison	Compare WAN performance across geographic regions or other groups that a NetVoyant administrator has configured for your network.	"WAN Group Comparison Report" on page 61
LAN Summary	Assess the overall health of a selected group of LAN interfaces.	"LAN Summary Report" on page 61

Report	Enables you to...	More information
LAN Group Comparison	Compare LAN performance across geographic regions or other groups that a NetVoyant administrator has configured for your network.	"LAN Group Comparison Report" on page 62

Scorecards Report

The Scorecards report displays a management overview of device performance in a reporting group. The report is made up of management scorecard views, which grade average values for a metric based on a configurable goal range and enable you to quickly identify the location and severity of critical issues across multiple reporting groups or networks.

See the following entries to view more information about the views displayed on this report:

- "Availability Scorecard" on page 261
- "Reachability Scorecard" on page 292
- "95th Percentile Utilization Scorecard" on page 366
- "Interface Availability Scorecard" on page 384
- "IP SLA Availability Scorecard" on page 443
- "IP SLA Over-Threshold Scorecard" on page 447
- "95th Percentile Device CPU Utilization Scorecard" on page 256
- "95th Percentile Cisco CPU Utilization Scorecard" on page 491
- "95th Percentile Frame Relay Utilization Scorecard" on page 331

To view the Scorecards report:

1. From the menu bar, click **Management**.
2. Select **Scorecards**.

Management Summary Report

The Management Summary report displays a graphical management overview of device performance in a reporting group. The report is made up of Distribution views, which aggregate values for selected metrics for all devices within a selected group and enable you to assess the overall health of a selected group of devices.

See the following entries to view more information about the views displayed on this report:

- "Availability Distribution (Count/Percentage)" on page 258
- "Average Availability" on page 262
- "Utilization Distribution" on page 415
- "Total In/Out Volume" on page 411
- "Avg Utilization In vs. 95th Percentile" on page 371
- "Avg Utilization Out vs. 95th Percentile" on page 371

To view the Management Summary report:

1. From the menu bar, click **Management**.

2. Select **Summary**.

Management Group Comparison Report

The Management Group Comparison report compares device performance among multiple subgroups of a selected reporting group. The report is made up of Group Comparison views, which compare aggregated values for a metric for devices across multiple subgroups. It enables you to compare performance across geographic regions, device types, or other groups that a NetVoyant administrator has configured for your network.

See the following entries to view more information about the views displayed on this report:

- "Availability Group Comparison" on page 259
- "Reachability Group Comparison" on page 290
- "Latency Group Comparison" on page 279
- "Utilization Group Comparison" on page 417
- "Total Volume Group Comparison" on page 413

To view the Management Group Comparison report:

1. From the menu bar, click **Management**.

2. Select **Group Comparison**.

Router Summary Report

The Router Summary report displays a graphical management overview of router performance in a reporting group. The report is made up of distribution views, which aggregate values for selected metrics for all routers within a selected group and enable you to assess the overall health of a selected group of routers.

See the following entries to view more information about the views displayed on this report:

- "Cisco CPU Utilization Distribution" on page 496
- "Avg CPU Utilization vs. 95th Percentile" on page 369
- "Cisco Memory Util Distribution" on page 499
- "Average Latency" on page 263
- "Total In/Out Volume" on page 411
- "Top Errors" on page 403
- "Top Discards" on page 402

To view the Router Summary report:

1. From the menu bar, click **Management**.

2. Select **Router Summary**.

Router Group Comparison Report

The Router Group Comparison report compares router performance across multiple subgroups of a selected reporting group. The report is made up of group comparison views, which compare aggregated values for a metric for routers across multiple subgroups. It enables you to compare router performance across geographic regions or any other groups that a NetVoyant administrator has configured for your network.

See the following entries to view more information about the views displayed on this report:

- "Cisco CPU Group Comparison" on page 493
- "Cisco CPU Util Sub Group Summary" on page 495
- "Cisco Memory Util Group Comparison" on page 501
- "Cisco Memory Util Sub Group Summary" on page 502
- "Total Volume Group Comparison" on page 413
- "Volume Sub Group Summary" on page 420

To view the Router Group Comparison report:

1. From the menu bar, click **Management**.

2. Select **Router Group Comparison**.

Server Summary Report

The Server Summary report displays a graphical management overview of server performance in a reporting group. The report is made up of Distribution views, which aggregate values for selected metrics for all servers within a selected group and enable you to assess the overall health of a selected group of servers.

See the following entries to view more information about the views displayed on this report:

- "CPU Util Distribution" on page 267
- "Avg CPU Utilization vs. 95th Percentile" on page 369
- "Top CPU Utilization" on page 294
- "Top Disk Utilization" on page 302
- "Top Disk Storage" on page 301
- "Average Availability" on page 262
- "Average Latency" on page 263
- "Total In/Out Volume" on page 411

To view the Server Summary report:

1. From the menu bar, click **Management**.

2. Select **Server Summary**.

Server Group Comparison Report

The Server Group Comparison report compares server performance across multiple subgroups of a selected reporting group. The report is made up of group comparison views, which compare aggregated values for a metric for servers across multiple subgroups. It enables you to compare server performance across geographic regions or other groups that a NetVoyant administrator has configured for your network.

See the following entries to view more information about the views displayed on this report:

- "CPU Util Group Comparison" on page 269
- "CPU Util Sub Group Summary" on page 270
- "Memory Util Group Comparison" on page 283
- "Memory Util Sub Group Summary" on page 285
- "Total Volume Group Comparison" on page 413
- "Volume Sub Group Summary" on page 420
- "Latency Sub Group Summary" on page 280

To view the Server Group Comparison report:

1. From the menu bar, click **Management**.
2. Select **Server Group Comparison**.

Frame Relay Summary Report

The Frame Relay Summary report displays a graphical management overview of frame-relay performance in a reporting group. The report is made up of distribution views, which aggregate values for selected metrics within a selected group and enable you to assess the overall health of a selected group of frame-relay circuits.

See the following entries to view more information about the views displayed on this report:

- "Avg Frame Relay Performance Index" on page 332
- "Frame Relay Total Volume" on page 341
- "Top Frame Relay Circuits" on page 358
- "Avg Utilization In vs. 95th Percentile" on page 371
- "Avg Utilization Out vs. 95th Percentile" on page 371

To view the Frame Relay Summary report:

1. From the menu bar, click **Management**.
2. Select **Frame Relay Summary**.

Frame Relay Group Comparison Report

The Frame Relay Group Comparison report compares frame-relay performance across multiple subgroups of a selected reporting group. The report is made up of group comparison views, which compare aggregated values for a metric across multiple subgroups. It enables you to compare frame relay performance across geographic regions or other groups that a NetVoyant administrator has configured for your network.

See the following entries to view more information about the views displayed on this report:

- "Frame Relay Util Group Comparison" on page 342
- "Frame Relay Volume Group Comparison" on page 353
- "Frame Relay Congestion Group Comparison" on page 336

To view the Frame Relay Group Comparison report:

1. From the menu bar, click **Management**.

2. Select **Frame Relay Group Comparison**.

WAN Summary Report

The WAN Summary report displays a graphical management overview of Wide Area Network (WAN) performance in a reporting group. The report is made up of distribution views, which aggregate values for selected metrics within a selected group and enable you to assess the overall health of a selected group of WAN interfaces.

See the following entries to view more information about the views displayed on this report:

- "Average T1 Availability" on page 551
- "Total T1 Volume" on page 576
- "Top T1 Circuits" on page 567
- "Top T1 Interfaces" on page 568
- "Average T3 Availability" on page 552
- "Total T3 Volume" on page 576
- "Top T3 Circuits" on page 571
- "Top T3 Interfaces" on page 572

To view the WAN Summary report:

1. From the menu bar, click **Management**.

2. Select **WAN Summary**.

WAN Group Comparison Report

The WAN Group Comparison report compares Wide Area Network (WAN) performance across multiple subgroups of a selected reporting group. The report is made up of group comparison views, which compare aggregated values for a metric across multiple subgroups. It enables you to compare WAN performance across geographic regions or other groups that a NetVoyant administrator has configured for your network.

See the following entries to view more information about the views displayed on this report:

- "T1 Availability Group Comparison" on page 557
- "Total MIB-II T1 Volume Group Comparison" on page 574
- "T1 Error Detail Group Comparison" on page 557
- "T3 Availability Group Comparison" on page 560
- "Total MIB-II T3 Volume Group Comparison" on page 575
- "T3 Error Detail Group Comparison" on page 561

To view the WAN Group Comparison report:

1. From the menu bar, click **Management**.

2. Select **WAN Group Comparison**.

LAN Summary Report

The LAN Summary report displays a graphical management overview of Local Area Network (LAN) performance in a reporting group. The report is made up of distribution views, which aggregate values for selected metrics within a selected group and enable you to assess the overall health of a selected group of LAN interfaces.

See the following entries to view more information about the views displayed on this report:

- "Average Performance Index" on page 368
- "Total MIB-II Ethernet Volume" on page 412
- "Avg Ethernet Utilization" on page 370
- "Total Ethernet Volume" on page 411
- "Top Ethernet Error Detail" on page 326

To view the LAN Summary report:

1. From the menu bar, click **Management**.

2. Select **LAN Summary**.

LAN Group Comparison Report

The LAN Group Comparison report compares Local Area Network (LAN) performance across multiple subgroups of a selected reporting group. The report is made up of group comparison views, which compare aggregated values for a metric across multiple subgroups. It enables you to compare LAN performance across geographic regions or other groups that a NetVoyant administrator has configured for your network.

See the following entries to view more information about the views displayed on this report:

- "Total MIB-II Ethernet Volume Group Comparison" on page 330
- "Ethernet Utilization Group Comparison" on page 319
- "Ethernet Volume Group Comparison" on page 320
- "Ethernet Errors Group Comparison" on page 319

To view the LAN Group Comparison report:

1. From the menu bar, click **Management**.
2. Select **LAN Group Comparison**.

VIEWING REPORTS FOR CAPACITY PLANNING

These reports enable you to make decisions about what devices or segments need an upgrade without having to sort through large amounts of unrelated data. Capacity Planning reports pinpoint the fastest growth, the top changes, and the metrics closest to threshold and enable you to quickly drill down to more detailed reports on the related devices or interfaces.

The following are the capacity planning reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Top Projections	Ascertain the future health and capacity of your devices and interfaces based on historical performance.	"Top Projections Report" on page 63
Top Closest to Threshold	View a snapshot of those devices that need attention based on historical trends in growth rates.	"Top Closest to Threshold Report" on page 63
Top Monthly Changes	Determine which devices and interfaces are experiencing rapid changes in performance.	"Top Monthly Changes Report" on page 64

Top Projections Report

The Top Projections report displays growth-rate projections for selected metrics for 30, 60, and 90 days within a selected reporting group. This report enables you to quickly ascertain the future health and capacity of your devices and interfaces based on historical performance.

See the following entries to view more information about the views displayed on this report:

- "Top Projections - Latency" on page 310
- "Top Projections - Interface Utilization" on page 409
- "Top Projections - Cisco CPU Utilization" on page 519
- "Top Projections - Cisco Memory Utilization" on page 520
- "Top Projections - Device CPU Utilization" on page 308
- "Top Projections - Device Memory Utilization" on page 309
- "Top Projections - Frame Relay PVC Util" on page 364
- "Top Projections - Frame Relay Congestion" on page 363
- "Top Projections - T1" on page 564
- "Top Projections - T3" on page 564
- "Top Projections - CBQoS Class Map Pre-Util" on page 200
- "Top Projections - CBQoS Class Map Post-Util" on page 199
- "Top Projections - Ethernet Utilization" on page 328
- "Top Projections - Ethernet Volume" on page 328

To view the Top Projections report:

1. From the menu bar, click **Capacity Planning**.
2. Select **Top Projections**.

Top Closest to Threshold Report

The Top Closest to Threshold report displays those devices or interfaces with metric values that are closest to the threshold for those metrics and a projection in days until each value exceeds the threshold. This report provides you with a snapshot of those devices that need attention based on historical trends in growth rates.

See the following entries to view more information about the views displayed on this report:

- "Closest to Threshold - Latency" on page 266
- "Closest to Threshold - Interface Utilization" on page 372
- "Closest to Threshold - Cisco CPU Utilization" on page 504
- "Closest to Threshold - Cisco Memory Utilization" on page 504
- "Closest to Threshold - Device CPU Utilization" on page 264
- "Closest to Threshold - Device Memory Utilization" on page 265
- "Closest to Threshold - Frame Relay PVC Util" on page 334
- "Closest to Threshold - Frame Relay Congestion" on page 334

- "Closest to Threshold - T1" on page 553
- "Closest to Threshold - T3" on page 554
- "Closest to Threshold - Ethernet Utilization" on page 315
- "Closest to Threshold - Ethernet Volume" on page 316

To view the Top Closest to Threshold report:

1. From the menu bar, click **Capacity Planning**.

2. Select **Top Closest to Threshold**.

Top Monthly Changes Report

The Top Monthly Changes report displays the average metric values for devices and interfaces that have the highest change in those metric values. The views in this report display the current month and previous month's 95th percentile values, which are used to calculate which metrics changed the most. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value, which normalizes and removes spikes from the data.

This report enables you to quickly determine which devices and interfaces are experiencing rapid changes in performance.

See the following entries to view more information about the views displayed on this report:

- "Top Changes - Interface Utilization" on page 399
- "Top Changes - Cisco CPU Utilization" on page 506
- "Top Changes - Cisco Memory Utilization" on page 507
- "Top Changes - Device CPU Utilization" on page 293
- "Top Changes - Frame Relay PVC Util" on page 354

To view the Top Monthly Changes report:

1. From the menu bar, click **Capacity Planning**.

2. Select **Top Monthly Changes**.

VIEWING SERVICE-LEVEL REPORTS

Service-Level reports can help you verify your service level agreements or keep track of which of your metrics have unexpected values. These reports include coverage of your IP SLA operations, Class-Based QoS measurements, VoIP tests, and the worst deviations away from baselines or over thresholds.

The following are the service-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Top Deviation from Normal	Pinpoint where devices and interfaces in a selected reporting group are experiencing the most change.	"Top Deviation from Normal Report" on page 65
Top Threshold Violations	Identify and respond to the worst threshold violations.	"Top Threshold Violations Report" on page 67
IP SLA	Measure round-trip delay, jitter, packet loss, errors and other metrics to qualify the overall health of network paths between configured source and destination addresses.	"IP SLA Report" on page 68
VoIP	Measure round-trip delay, jitter, packet loss, errors and other metrics to qualify the expected quality of voice or other Real-time Transport Protocol (RTP) traffic between configured source and destination addresses.	"VoIP Report" on page 68
Class Based QoS	View the Pre and Post Policy volume and rate, queue drops, as well as queue size, utilization and discards.	"Class Based QoS Report" on page 69

Top Deviation from Normal Report

The Top Deviation from Normal report compares metric values on those devices and interfaces that have deviated the most from the 30-day rolling baseline values for those metrics. This report enables you to quickly pinpoint where devices and interfaces in a selected reporting group are experiencing the most change.

Note: Normals are generated as averages of data using baselines over the past 30 days. Baselines are generated for expressions when there are baselines configured by dataset in the NetVoyant Console. The baselines used to calculate the normal values used in this standard report are configured by default, but can be modified in the NetVoyant Console by a NetVoyant administrator.

See the following entries to view more information about the views displayed on this report:

- "Top Deviation From Norm - Latency" on page 298
- "Top Deviation From Norm - Interface Utilization" on page 401
- "Top Deviation From Norm - Interface Errors/Discards" on page 400
- "Top IP SLA RTT Deviation From Norm" on page 459
- "Top Deviation From Norm - Cisco CPU Util" on page 517

- "Top Deviation From Norm - Cisco Memory Util" on page 518
- "Top Deviation From Norm - Device CPU Util" on page 296
- "Top Deviation From Norm - Device Memory Util" on page 297
- "Top Deviation From Norm - Frame Relay PVC Util" on page 356
- "Top Deviation From Norm - Frame Relay Congestion" on page 355
- "Top Deviation From Norm - T1 Unavailable/Errored Seconds" on page 562
- "Top Deviation From Norm - T3 Unavailable Seconds" on page 563
- "Top Deviation From Norm - CBQoS Class Map Pre-Util" on page 198
- "Top Deviation From Norm - CBQoS Class Map Post-Util" on page 197

To view the Top Deviation from Normal report:

1. From the menu bar, click **Service Level Reporting**.

2. Select **Top Deviation from Normal**.

Top Deviation from Normal Report Calculations

All *normals* are averages based on the hourly rollup values. However, if you select a different time period for a Top Deviation from Normal report, it changes the way that normal is calculated.

The default time period for the Top Deviation from Norm views is Last hour
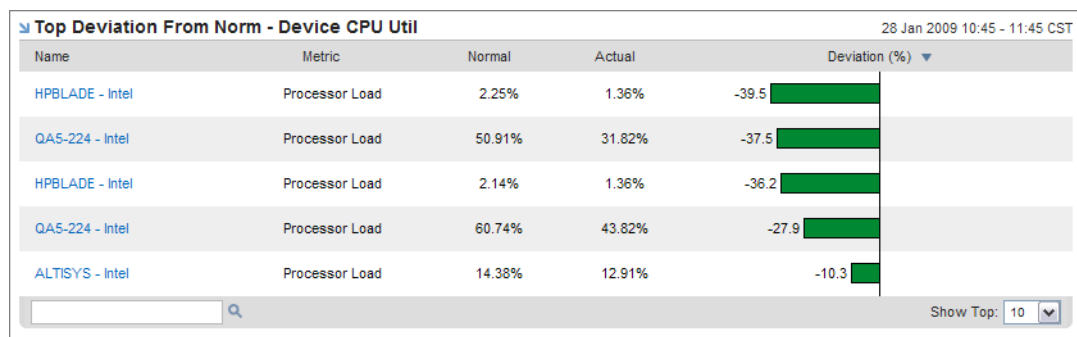
Last hour. This is the default time period for Top Deviation from Norm views and displays an hourly baseline or normal calculated as the average of the past 30 days of that particular hour.

Note: If the configuration on the NetVoyant Console has been set up by an administrator so that baselines can be calculated for source intervals of less than an hour, this displays an hourly baseline calculated as the average of the past 30 days of all of the less-than-hourly baselines for the hour selected. For example, if you have `rttstats` (IP SLA data) with a baseline source interval of 15 minutes and you display the view for the past hour, you should see an hourly baseline that is calculated as an average of four 15-minute baselines for that hour for the past 30 days.

Last day or specified day. If you select a one-day time period, the view displays a daily baseline calculated as the average of the hourly baselines for that day, which are all based on an average of the past 30 days.

Last 7 days or specified week. If you select a one-week time period, the view displays a weekly baseline calculated as the average of that week's worth of daily baselines, which are based on the hourly baselines.

Last 30 days or specified month. If you select a one-month time period, the view displays a monthly baseline calculated as the average of that month's worth of daily baselines, which are based on the hourly baselines.

Last 3 months or specified quarter. If you select a three-month time period, the view displays a monthly baseline calculated as the average of that quarter's worth of daily baselines, which are based on the hourly baselines.

Last 12 months or specified month. If you select a one-year time period, the view displays an annual baseline calculated as the average of that year's worth of monthly baselines, which are based on the hourly baselines.

Top Threshold Violations Report

The Top Threshold Violations report displays metrics that exceeded their thresholds on the devices or interfaces in a selected reporting group. Those values that exceeded threshold display in red. This report also displays the percent of time that each value was over threshold and the number of unique threshold crossing events observed for a device or interface during the selected time period.

This report enables you to identify and respond to the worst threshold violations.

See the following entries to view more information about the views displayed on this report:

- "Top Threshold Violations - Interfaces" on page 409
- "Top Threshold Violations - Cisco System" on page 522
- "Top Threshold Violations - Switch Backplane Util" on page 523
- "Top Threshold Violations - Device CPU" on page 312
- "Top Threshold Violations - Device Storage" on page 312
- "Top Threshold Violations - Frame Relay" on page 364

To view the Top Deviation from Normal report:

1. From the menu bar, click **Service Level Reporting**.

2. Select **Top Threshold Violations**.

IP SLA Report

The IP SLA report displays metrics collected by Cisco IOS IP SLA operations that you or an administrator has configured on IP SLA-capable Cisco devices. IP SLA operation data collected in this report can measure round-trip delay, jitter, packet loss, errors and other metrics to qualify the overall health of network paths between configured source and destination addresses.

See the following entries to view more information about the views displayed on this report:

- "IP SLA Summary" on page 447
- "IP SLA Operations by Rtt Type" on page 445
- "IP SLA Operations by Router" on page 444
- "Top IP SLA RTT Deviation From Norm" on page 459
- "Top IP SLA Over Threshold" on page 458
- "Top IP SLA Errored Operations" on page 456
- "IP SLA Operations List" on page 446
- "Top VoIP Jitter Operations" on page 579
- "Service Exceptions - IP SLA" on page 544

To view the IP SLA report:

1. From the menu bar, click **Service Level Reporting**.

2. Select **IP SLA**.

VoIP Report

The VoIP report displays metrics that predict voice quality over Voice Over IP (VoIP) on your network. These metrics must be collected by Cisco IOS IP SLA operations that you or an administrator has configured on IP SLA capable Cisco devices.

VoIP data collected in this report can measure round-trip delay, jitter, packet loss, errors and other metrics to qualify the expected quality of voice or other Real-time Transport Protocol (RTP) traffic between configured source and destination addresses.

See the following entries to view more information about the views displayed on this report:

- "IP SLA VoIP Summary" on page 577
- "VoIP Operations by Router" on page 581
- "Top VoIP RTT Deviation from Norm" on page 580
- "Top VoIP Over Threshold" on page 579
- "Top VoIP Errored Operations" on page 578
- "Top VoIP Jitter Operations" on page 579
- "Worst MOS Scores" on page 582
- "Service Exceptions - VoIP" on page 550

To view the VoIP report:

1. From the menu bar, click **Service Level Reporting**.

2. Select **VoIP**.

Class Based QoS Report

The Class Based QoS report is a top-level QoS "dashboard" and displays highly aggregated views to provide an overall picture or view of QoS utilization, rate, volume, and drops aggregated by the name of the classmap. Separate views are presented for Input/Inbound policy and Output/Outbound policy directions.

The initial page is populated with the overall data derived from the `ClassMapStats` table in the CBQoS MIB showing Pre- and Post-policy utilization, rate, volume, and drops. If desired, Top level views can be added to the page to show statistics from Police activity, Queuing, WRED, and/or Traffic Shaping. By default, these views have not been added, as every organization is different and NetQoS cannot predict what QoS mechanisms will be used by an organization.

When you drill down by clicking any of the class names in the views displayed on the Class Based QoS report, it automatically forwards you to a new page that shows Top N style views (tables and bar charts) displaying the Top Interfaces for that class. This page is intended to answer the question, "What interfaces are pushing the most Gold or Real-time traffic?" Of course you can drill down to any queue, but the general idea is a top-N style listing of the interfaces that have the most utilization, rate, volume, and potentially drops for a given classmap.

For more information about the context-level CB QoS Class Map reports, see "Viewing CBQoS Class Map Reports" on page 95.

See the following entries to view more information about the views displayed on this report:

- "CBQoS Input Class Maps" on page 201
- "CBQoS Output Class Maps" on page 206
- "CBQoS Input Policy Pre-Post Class Maps" on page 203
- "CBQoS Output Policy Pre-Post Class Maps" on page 208
- "CBQoS Input Pre-vs-Post Utilization by Class" on page 204
- "CBQoS Output Pre-vs-Post Utilization by Class" on page 210
- "CBQoS Input Pre-vs-Post Volume by Class" on page 205
- "CBQoS Output Pre-vs-Post Volume by Class" on page 210
- "CBQoS Input Dropped Packet Percentage by Class" on page 202
- "CBQoS Output Dropped Packet Percentage by Class" on page 206

To view the Class Based QoS report:

1. From the menu bar, click **Service Level Reporting**.

2. Select **Class Based QoS**.

Note: Depending on how you configured your devices for congestion avoidance and management, some views in the report may not be populated with data. If some tables do not contain data, remove

these views from the report to reduce clutter on the page. For more information about how to remove a view from a page, see "Removing a View from a Report Page" on page 37.

VIEWING OPERATIONS MANAGEMENT REPORTS

These reports provide you with an operations-level view of the devices in your network, including those devices that are most unavailable, the interfaces that are most utilized, and those protocols that are most active on your network. You can also view the NetVoyant events or alarms that could be causing loss of SNMP data.

The following are the operations reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Operations Summary	Identify devices and interfaces in a selected reporting group that are more prone to critical issues or failure.	"Operations Summary Report" on page 70
Operations Summary Graphs	Identify and see trends over time for devices and interfaces in a selected reporting group that are more prone to critical issues or failure.	"Operations Summary Graphs Report" on page 71
Alarms	Respond to those events that could be causing loss of critical SNMP data.	"Alarms Report" on page 72
Events	Monitor the collection of SNMP data.	"Events Report" on page 73
Protocol Distribution	Monitor application protocols and identify and respond to undesirable protocols or applications that may be active on your network.	"Protocol Distribution Report" on page 73

Operations Summary Report

The Operations Summary report compares those devices and interfaces that have the worst values for a metric, such as availability. This report enables you to quickly identify devices and interfaces in a selected reporting group that are more prone to critical issues or failure.

See the following entries to view more information about the views displayed on this report:

- "Top Least Available" on page 302
- "Top Least Reachable" on page 304
- "Top Interfaces" on page 406
- "Top Interface Errors/Discards" on page 404
- "Top IP SLA Operations" on page 457
- "Top Cisco CPU/Buffer Utilization" on page 511
- "Top Cisco Memory" on page 513
- "Top Cisco Switch Backplane Utilization" on page 516
- "Top CPU Utilization" on page 294
- "Top Memory Utilization" on page 306

- "Top Disk Storage" on page 301
- "Top Device Software" on page 299
- "Top Frame Relay Circuits" on page 358
- "Top T1 Circuits" on page 567
- "Top T3 Circuits" on page 571
- "Top Ethernet Utilization" on page 327
- "CBQoS Input Policy Pre-Post Class Maps" on page 203
- "CBQoS Output Policy Pre-Post Class Maps" on page 208

To view the Operations Summary report:

1. From the menu bar, click **Operations**.

2. Select **Summary**.

Operations Summary Graphs Report

The Operations Summary Graphs report presents a graphical comparison for those devices and interfaces that have the worst values for a metric, such as availability. This report enables you to quickly identify and see trends over time for devices and interfaces in a selected reporting group that are more prone to critical issues or failure.

See the following entries to view more information about the views displayed on this report:

- "Top Least Available" on page 302
- "Top Least Reachable" on page 304
- "Top Interface Utilization" on page 405
- "Top Interface Volume" on page 405
- "Top Errors" on page 403
- "Top Discards" on page 402
- "Top Least Available (Reboots)" on page 303
- "Top Interfaces" on page 406

To view the Operations Summary Graphs report:

1. From the menu bar, click **Operations**.

2. Select **Summary Graphs**.

Alarms Report

The Alarms report lists all NetVoyant service exceptions broken down by type, such as alarms relating to the collection of T1 or Ethernet data. This report enables you to quickly respond to those events that could be causing loss of critical SNMP data.

Note: The Alarms report displays service exception views. These views are designed to include trap, polling, and threshold events that were open during the selected time period. The displayed events can be cleared during the period, cleared some time after that period, or still open.

See the following entries to view more information about the views displayed on this report:

- "Service Exceptions - Availability" on page 526
- "Service Exceptions - Reachability" on page 546
- "Service Exceptions - Interfaces" on page 543
- "Service Exceptions - HR Processor" on page 540
- "Service Exceptions - HR Storage" on page 542
- "Service Exceptions - Ethernet" on page 538
- "Service Exceptions - IP SLA" on page 544
- "Service Exceptions - Frame Relay" on page 539
- "Service Exceptions - Cisco System" on page 537
- "Service Exceptions - Cisco Memory Pool" on page 535
- "Service Exceptions - Cisco Switch" on page 537
- "Service Exceptions - T1" on page 547
- "Service Exceptions - T3" on page 548
- "Service Exceptions - Cisco NBAR" on page 536
- "Service Exceptions - Traps" on page 549
- "Service Exceptions - CBQoS Class Maps" on page 527
- "Service Exceptions - CBQoS Match Statements" on page 529
- "Service Exceptions - CBQoS Queueing" on page 531
- "Service Exceptions - CBQoS Police Action" on page 529
- "Service Exceptions - CBQoS Traffic Shaping" on page 534
- "Service Exceptions - CBQoS RED" on page 532
- "Service Exceptions - CBQoS Police Color" on page 530
- "Service Exceptions - CBQoS Set" on page 533

To view the Alarms report:

1. From the menu bar, click **Operations**.

2. Select **Alarms**.

Events Report

The Events report lists all NetVoyant events, which are actions, changes, or other occurrences that are tracked using event logs. This report enables you to monitor the collection of SNMP data.

See "Event Log" on page 524 to view more information about the view displayed on this report:

To view the Events report:

1. From the menu bar, click **Operations**.
2. Select **Events**.

Protocol Distribution Report

The Protocol Distribution report presents pie charts and tables to compare those protocols that are most active on your network using NBAR data and data from an RMON2 probe. This report enables you to monitor application protocols and identify and respond to undesirable protocols or applications that may be active on your network.

See the following entries to view more information about the views displayed on this report:

- "Top Protocols In (NBAR)" on page 488
- "Top Protocols Out (NBAR)" on page 489
- "Top Protocol Utilization (NBAR)" on page 485
- "Top Protocol Volume (NBAR)" on page 486
- "Top Protocol Packets (NBAR)" on page 484
- "Top Protocol Rates (NBAR)" on page 484
- "Top Protocols (RMON2)" on page 487
- "Top (All Traffic) Protocols (RMON2)" on page 480

To view the Protocol Distribution report:

1. From the menu bar, click **Operations**.
2. Select **Protocols**.

VIEWING CONTEXT-LEVEL REPORTS

You can access detailed information related to most reports by clicking links in a report or on a report itself. The NetVoyant reporting tool automatically displays more information about the selected device, interface, or group.

When you drill down to a context-level report, you can view more context-level reports from the context-level menu. For example, if you click a server in a view on a report page, the NetVoyant reporting tool displays a Server Performance report page and adds a **Server Pages** menu to the menu bar. From the Server Pages menu, you can select more server-level reports for the selected server such as the Server Capabilities report.

You can access all or a selection of these context-level reports:

Report type	Description	More information
Device reports	Reports related to a selected device	"Viewing Device Reports" on page 75
Server reports	Reports related to a selected server	"Viewing Server Reports" on page 79
Router reports	Reports related to a selected router	"Viewing Router Reports" on page 83
Switch reports	Reports related to a selected switch	"Viewing Switch Reports" on page 87
Interface reports	Reports related to a selected interface	"Viewing Interface Reports" on page 91
CB QoS Class Map reports	Reports related to a selected CB QoS class map	"Viewing CBQoS Class Map Reports" on page 95
CB QoS Policy reports	Reports related to a selected CB QoS policy	"Viewing CB QoS Policy Reports" on page 98
IP SLA Operations reports	Reports related to a selected IP SLA operation type	"Viewing IP SLA Operations Reports" on page 102
Cisco reports	Reports related to a selected Cisco metric	"Viewing Cisco Performance Reports" on page 108
Frame Relay reports	Reports related to a selected Frame Relay metric	"Viewing Frame Relay Reports" on page 109
WAN reports	Reports related to a selected WAN T1 or T3 circuit	"Viewing T1/T3 Performance Reports" on page 112
Protocol Summary reports	Reports related to a selected protocol type	"Viewing the Protocol Summary and Detail Reports" on page 113
Ethernet Performance report	Report related to a selected ethernet connection	"Viewing the Ethernet Performance Report" on page 114

Viewing Device Reports

These reports can help you monitor a selected device, such as a network hub or workstation. To view device reports, you must select a device in a NetVoyant report or a device or address search.

The following are the device-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Device Performance	View trends in performance for a selected device, such as a network hub or workstation.	"Device Performance Report" on page 75
Device Capabilities	View and monitor resources or interfaces on a device.	"Device Capabilities Report" on page 76
Device Exceptions	Respond to those events that could be causing loss of critical SNMP data for a device.	"Device Exceptions Report" on page 77
Device Details	View information about a device, such as the device name, location, or contact.	"Device Details Report" on page 78

Device Performance Report

The Device Performance report displays trends in performance for a selected device, such as a network hub, printer, or workstation.

Note: The views displayed in this report depend upon the device class and the metrics supported by the selected device.

See the following entries to view more information about some of the views displayed on this report:

- "Device Summary Gauges" on page 275
- "Switch Summary Gauges" on page 505
- "Cisco Memory Utilization Trend" on page 500
- "Cisco CPU Utilization Trend" on page 497
- "CPU Utilization Trend" on page 268 (if the selected device is not a printer)
- "Memory Utilization Trend" on page 286
- "Availability Trend" on page 262
- "Ping Latency Trend w/ Baseline" on page 288
- "Cisco Switch Backplane Utilization Trend" on page 503
- "Cisco Buffer Utilization" on page 492
- "Cisco Buffer Miss Rate" on page 492
- "Top Interface Utilization" on page 405
- "Top Interface Volume" on page 405
- "Top Errors" on page 403
- "Top Discards" on page 402

To view a Device Performance report:

1. Perform one of the following actions:

   - Drill down to a view that displays the device.
   - Search for and select the device.

     The NetVoyant reporting tool displays information relating to the selected device and displays a **Device Pages** menu.

2. Click the **Device Pages** menu and select **Device Performance**.

Device Capabilities Report

The Device Capabilities report displays tables of interfaces, frame-relay circuits, IP SLA operations, memory and system resources for a selected device, such as a network hub or workstation. This report enables you to view and monitor resources or interfaces on a device.

Note: The views displayed in this report depend upon the device class of the selected device.

See the following entries to view more information about the views displayed on this report:

- "Top Least Available" on page 302
- "Top Interfaces" on page 406
- "Top Interface Errors/Discards" on page 404
- "Top CPU Utilization" on page 294
- "IP SLA Operations List" on page 446
- "Top Cisco CPU/Buffer Utilization" on page 511
- "Top Cisco Memory" on page 513
- "Top Cisco Switch Backplane Utilization" on page 516
- "Top Disk Storage" on page 301
- "Top Frame Relay Circuits" on page 358
- "Top T1 Circuits" on page 567
- "Top T3 Circuits" on page 571
- "Top Ethernet" on page 325
- "Top Protocols (RMON2)" on page 487

To view a Device Capabilities report:

1. Perform one of the following actions:

   - Drill-in to a view that displays the device.
   - Search for and select the device.

     The NetVoyant reporting tool displays information relating to the selected device and displays a **Device Pages** menu.

2. Click the **Device Pages** menu and select **Device Capabilities**.

Device Exceptions Report

The Device Exceptions report displays all NetVoyant alarms broken down by type for a selected device, such as a network hub or workstation. This report enables you to quickly respond to those events that could be causing loss of critical SNMP data for a device.

Note: The views displayed in this report depend upon the device class of the selected device.

See the following entries to view more information about some of the views displayed on this report:

- "Service Exceptions - Availability" on page 526
- "Service Exceptions - Reachability" on page 546
- "Service Exceptions - Interfaces" on page 543
- "Service Exceptions - HR Processor" on page 540
- "Service Exceptions - HR Storage" on page 542
- "Service Exceptions - Ethernet" on page 538
- "Service Exceptions - IP SLA" on page 544
- "Service Exceptions - Frame Relay" on page 539
- "Service Exceptions - Cisco System" on page 537
- "Service Exceptions - Cisco Memory Pool" on page 535
- "Service Exceptions - Cisco Switch" on page 537
- "Service Exceptions - T1" on page 547
- "Service Exceptions - T3" on page 548
- "Service Exceptions - Protocols (RMON2)" on page 545
- "Service Exceptions - CBQoS Class Maps" on page 527
- "Service Exceptions - CBQoS Match Statements" on page 529
- "Service Exceptions - CBQoS Queueing" on page 531
- "Service Exceptions - CBQoS Police Action" on page 529
- "Service Exceptions - CBQoS Traffic Shaping" on page 534
- "Service Exceptions - CBQoS RED" on page 532
- "Service Exceptions - CBQoS Police Color" on page 530
- "Service Exceptions - CBQoS IP Header Compression" on page 528
- "Service Exceptions - CBQoS Set" on page 533
- "Service Exceptions - Cisco NBAR" on page 536
- "Service Exceptions - Traps" on page 549

To view a Device Exceptions report:

1. Perform one of the following actions:
   - Drill down to a view that displays the device.
   - Search for and select the device.

     The NetVoyant reporting tool displays information relating to the selected device and displays a **Device Pages** menu.

2. Click the **Device Pages** menu and select **Device Exceptions**.

Device Details Report

The Device Details report displays a table of information about a selected device, such as a network hub or workstation. This report enables you to quickly view information about a device, such as the device name, location, or contact.

The Device Details view displays some or all of the following details for a device:

Parameter	Description
Device Alias	The device's name in the NetVoyant product. By default, it names devices using the device's DNS name or, for unresolvable names, the device's IP address.
	You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. You can also edit the device alias to another value on the device's **Details** tab in the NetVoyant Console. For more information, see the *NetVoyant Administrator Guide*.
Device Name	The device's DNS name or, for unresolvable names, the device's IP address.
sysName	The device's name as identified in the sysName OID on the device.
	You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. For more information, see the *NetVoyant Administrator Guide*.
sysDescr	The device's description as identified in the sysDescr OID on the device.
sysObjectID	The device's SNMP agent uniquely identifies the device model using the sysObjectID.
sysContact	The device's contact person as identified in the sysContact OID on the device.
sysLocation	The device's location as identified in the sysLocation OID on the device.
SNMP Capable	The SNMP version that the device's SNMP agent supports.
Device Class	The device's class, as identified during discovery. For more information, see the *NetVoyant Administrator Guide*.
Device Model	The device's model, as identified during discovery. For more information, see the *NetVoyant Administrator Guide*.
SNMP Timeout	The length of time in seconds to wait for an SNMP reply from the device before it considers the request to have timed out. Longer timeouts significantly increase how long it takes to complete the discovery process.
SNMP Retries	The number of times to retry the device for each SNMP community string if an SNMP request times out. More retries significantly increase how long it takes to complete the discovery process.

Parameter	Description
SNMP Discovery	Indicates how the device is configured for discovery. For more information, see the *NetVoyant Administrator Guide*.
	The following are possible values for SNMP Discovery:
	• **Extended** indicates that the device is set to extended discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process. It also uses information in this device's ARP cache and IP routing table to discover other devices to discover.
	• **Enabled** indicates that the device is enabled normally for discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process.
	• **Disabled** indicates that discovery is disabled for the device. The NetVoyant product does not rediscover this device's characteristics during its rediscovery process.
Polling Enabled	Indicates whether polling is enabled for the device.
	If polling is enabled, the NetVoyant product is gathering data for the device.
Polling Station	The NetVoyant server that polls the device for SNMP statistics. In a distributed configuration, this is the polling station that polls the device. In a standalone configuration, the Polling Station is the Master Console.
Properties	Properties for the selected device.

To view a Device Details report:

1. Perform one of the following actions:

   • Drill down to a view that displays the device.

   • Search for and select the device.

      The NetVoyant reporting tool displays information relating to the selected device and displays a **Device Pages** menu.

2. Click the **Device Pages** menu and select **Device Details**.

Viewing Server Reports

These reports can help you monitor a selected server. To view server reports, you must select a server in a NetVoyant report or a device or address search.

The following are the server-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Server Performance	View trends in performance for a selected server.	"Server Performance Report" on page 80
Server Capabilities	View and monitor resources or interfaces on a server.	"Server Capabilities Report" on page 80
Server Exceptions	Respond to those events that could be causing loss of critical SNMP data for a server.	"Server Exceptions Report" on page 81
Server Details	View information about a server, such as the device name, location, or contact.	"Server Details Report" on page 81

Report	**Enables you to...**	**More information**
Server Storage Performance	*(Storage volumes only)* Assess the performance of a server's storage volume.	"Server Storage Performance Report" on page 83

Server Performance Report

The Server Performance report displays trends in performance for a selected server.

See the following entries to view more information about the views displayed on this report:

- "Device Summary Gauges" on page 275
- "CPU Utilization Trend" on page 268
- "Memory Util Distribution" on page 282
- "Availability Trend" on page 262
- "Top Discards" on page 402
- "Top Errors" on page 403

To view a Server Performance report:

1. Perform one of the following actions to get the server information and to display a **Server Pages** menu:

   - Drill-in to a view that displays the server.
   - Search for and select the server.

2. Click the **Server Pages** menu and select **Server Performance**.

Server Capabilities Report

The Server Capabilities report displays tables of interfaces, memory and storage resources, and software resource usage for a selected server. This report enables you to view and monitor resources or interfaces on a server.

See the following entries to view more information about the views displayed on this report:

- "Top Least Available" on page 302
- "Top Interfaces" on page 406
- "Top CPU Utilization" on page 294
- "Top Memory Utilization" on page 306
- "Top Disk Storage" on page 301
- "Top Device Software" on page 299
- "Top Ethernet" on page 325

To view a Server Capabilities report:

1. Perform one of the following actions:

   - Drill-in to a view that displays the server.
   - Search for and select the server.

   This displays information relating to the selected server and displays a **Server Pages** menu.

2. Click the **Server Pages** menu and select **Server Capabilities**.

Server Exceptions Report

The Server Exceptions report displays all NetVoyant alarms broken down by type for a selected server. This report enables you to quickly respond to those events that could be causing loss of critical SNMP data for a server.

See the following entries to view more information about the views displayed on this report:

- "Service Exceptions - Availability" on page 526
- "Service Exceptions - Reachability" on page 546
- "Service Exceptions - Interfaces" on page 543
- "Service Exceptions - HR Processor" on page 540
- "Service Exceptions - HR Storage" on page 542
- "Service Exceptions - Ethernet" on page 538

To view a Server Exceptions report:

1. Perform one of the following actions to get the server information and to display a **Server Pages** menu:

    - Drill-in to a view that displays the server.
    - Search for and select the server.

2. Click the **Server Pages** menu and select **Server Exceptions**.

Server Details Report

The Server Details report displays a table of information about a selected server. This report enables you to quickly view information about a server, such as the device name, location, or contact.

The following details can be displayed for a server:

Parameter	Description
Device Alias	The device's name in the NetVoyant product. By default, it names devices using the device's DNS name or, for unresolvable names, the device's IP address.
	You can configure the NetVoyant product to apply names to discovered devices using the sysName OID. You can also edit the device alias to another value on the device's **Details** tab. For more information, see the *NetVoyant Administrator Guide*.
Device Name	The device's DNS name or, for unresolvable names, the device's IP address.
sysName	The device's name as identified in the sysName OID on the device.
	You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. For more information, see the *NetVoyant Administrator Guide*.
sysDescr	The device's description as identified in the sysDescr OID on the device.
sysObjectID	The device's SNMP agent uniquely identifies the device model using the sysObjectID.

Parameter	Description
sysContact	The device's contact person as identified in the sysContact OID on the device.
sysLocation	The device's location as identified in the sysLocation OID on the device.
SNMP Capable	The SNMP version that the device's SNMP agent supports.
Device Class	The device's class, as identified by the NetVoyant product during discovery. For more information, see the *NetVoyant Administrator Guide*.
Device Model	The device's model, as identified by the NetVoyant product during discovery. For more information, see the *NetVoyant Administrator Guide*.
SNMP Timeout	The length of time in seconds to wait for an SNMP reply from the device before it considers the request to have timed out. Longer timeouts significantly increase how long it takes to complete the discovery process.
SNMP Retries	The number of times to retry the device for each SNMP community string if an SNMP request times out. More retries significantly increase how long it takes to complete the discovery process.
SNMP Discovery	Indicates how the device is configured for discovery. For more information, see the *NetVoyant Administrator Guide*. The following are possible values for SNMP Discovery: • Extended indicates that the device is set to extended discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process. It also uses information in this device's ARP cache and IP routing table to discover other devices to discover. • Enabled indicates that the device is enabled normally for discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process. • Disabled indicates that discovery is disabled for the device. The NetVoyant product does not rediscover this device's characteristics during its rediscovery process.
Polling Enabled	Indicates whether polling is enabled for the device. If polling is enabled, the NetVoyant product is gathering data for the device.
Polling Station	The NetVoyant server that polls the device for SNMP statistics. In a distributed configuration, this is the polling station that polls the device. In a standalone configuration, the Polling Station is the Master Console.
Properties	Property information for the selected server.

To view a Server Details report:

1. Perform one of the following actions to get the server information and to display a **Server Pages** menu:

   • Drill-in to a view that displays the server.
   • Search for and select the server.

2. Click the **Server Pages** menu and select **Server Details**.

Server Storage Performance Report

The Server Storage Performance report displays trends in utilization and failures for a selected storage volume on a server. This report enables you to assess the performance of a server's storage volume.

See the following entries to view more information about the views displayed on this report:

- "Device Storage Utilization Trend" on page 277
- "Device Storage Failures Trend" on page 276
- "Poll Instance Details" on page 477

To view a Server Storage Performance report:

1. Drill-in to a Server Storage view that displays the disk drive.

   For example, click a disk drive in the Server Storage Table in a Server Capabilities report. The NetVoyant reporting tool displays information relating to the selected disk drive and displays a **Server Storage Pages** menu.

2. Click the **Server Storage Pages** menu and select **Server Storage Performance**.

Viewing Router Reports

The router reports can help you monitor a selected router. To view router reports, you must select a router in a NetVoyant report, or perform a device or address search and select a router from the list.

The following are the router-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Router Performance	View trends in performance for a selected router.	"Router Performance Report" on page 83
Router Capabilities	View and monitor resources or interfaces on a router.	"Router Capabilities Report" on page 84
Router Exceptions	Respond to those events that could be causing loss of critical SNMP data for a router.	"Router Exceptions Report" on page 85
Router Details	View information about a router, such as the device name, location, or contact.	"Router Details Report" on page 86

Router Performance Report

The Router Performance report displays trends in performance for a selected router.

Note: The views displayed in this report depend upon the metrics supported by the selected router.

See the following entries to view more information about some of the views displayed on this report:

- "Router Summary Gauges" on page 505
- "Cisco CPU Utilization Trend" on page 497
- "Availability Trend" on page 262
- "Ping Latency Trend w/ Baseline" on page 288

- "Cisco Buffer Utilization" on page 492
- "Cisco Buffer Miss Rate" on page 492
- "Top Interface Utilization" on page 405
- "Top Errors" on page 403
- "Top Interface Volume" on page 405
- "Top Discards" on page 402

To view a Router Performance report:

1. Do one of the following to view router information and to display a **Router Pages** menu:
   - Drill down to a view that displays the router.
   - Search for and select the router.

2. Click the **Router Pages** menu and select **Router Performance**.

Router Capabilities Report

The Router Capabilities report displays tables of interfaces, frame-relay circuits, IP SLA operations, memory and system resources for a selected router. This report enables you to view and monitor resources or interfaces on a router.

Note: The views displayed in this report depend upon the metrics supported by the selected router.

See the following entries to view more information about some of the views displayed on this report:

- "Top Least Available" on page 302
- "Top Interfaces" on page 406
- "Top Interface Errors/Discards" on page 404
- "CBQoS Input Policy Class Maps Pre-vs-Post" on page 180
- "CBQoS Output Policy Class Maps Pre-vs-Post" on page 183
- "IP SLA Operations List" on page 446
- "Top Cisco CPU/Buffer Utilization" on page 511
- "Top Cisco Memory" on page 513
- "Top Cisco Switch Backplane Utilization" on page 516
- "Top Frame Relay Circuits" on page 358
- "Top T1 Circuits" on page 567
- "Top T3 Circuits" on page 571
- "Top Ethernet" on page 325
- "Top Protocols (RMON2)" on page 487
- "Top CBQoS Class Map Pre-vs-Post" on page 192
- "Top CBQoS Class Map Post/Drops" on page 190
- "Top CBQoS Queueing Statistics" on page 221
- "Top CBQoS Match Statistics" on page 215
- "Top CBQoS Police Statistics" on page 218

- "Top CBQoS Traffic Shaping Packets" on page 227
- "Top CBQoS RED Volume" on page 224
- "Top CBQoS IPHC Packets" on page 212
- "Top CBQoS RED Packets" on page 222

To view a Router Capabilities report:

1. Perform one of the following actions to get the router information and to display a **Router Pages** menu:
   - Drill down to a view that displays the router.
   - Search for and select the router.
2. Click the **Router Pages** menu and select **Router Capabilities**.

Router Exceptions Report

The Router Exceptions report displays all NetVoyant alarms broken down by type for a selected router. This report enables you to quickly respond to those events that could be causing loss of critical SNMP data for a router.

Note: The views displayed in this report depend upon the metrics supported by the selected router.

See the following entries to view more information about the views displayed on this report:

- "Service Exceptions - Availability" on page 526
- "Service Exceptions - Reachability" on page 546
- "Service Exceptions - Interfaces" on page 543
- "Service Exceptions - IP SLA" on page 544
- "Service Exceptions - Frame Relay" on page 539
- "Service Exceptions - Cisco System" on page 537
- "Service Exceptions - Cisco Memory Pool" on page 535
- "Service Exceptions - Cisco Switch" on page 537
- "Service Exceptions - Ethernet" on page 538
- "Service Exceptions - T1" on page 547
- "Service Exceptions - T3" on page 548
- "Service Exceptions - Protocols (RMON2)" on page 545
- "Service Exceptions - CBQoS Class Maps" on page 527
- "Service Exceptions - CBQoS Match Statements" on page 529
- "Service Exceptions - CBQoS Queueing" on page 531
- "Service Exceptions - CBQoS Police Action" on page 529
- "Service Exceptions - CBQoS Traffic Shaping" on page 534
- "Service Exceptions - CBQoS RED" on page 532
- "Service Exceptions - CBQoS Police Color" on page 530
- "Service Exceptions - CBQoS IP Header Compression" on page 528

- "Service Exceptions - CBQoS Set" on page 533
- "Service Exceptions - Cisco NBAR" on page 536
- "Service Exceptions - Traps" on page 549

To view a Router Exceptions report:

1. Do one of the following to view the router information and to display a **Router Pages** menu:
   - Drill down to a view that displays the router.
   - Search for and select the router.

2. Click the **Router Pages** menu and select **Router Exceptions**.

Router Details Report

The Router Details report displays a table of information about a selected router. This report enables you to quickly view information about a router, such as the device name, location, or contact.

The following details could be displayed for a router:

Parameter	Description
Device Alias	The device's name in the NetVoyant product. By default, it names devices using the device's DNS name or, for unresolvable names, the device's IP address.
	The NetVoyant product can be configured to apply names to your discovered devices using the sysName OID. You can also edit the device alias to another value on the device's **Details** tab in the NetVoyant Console. For more information, see the *NetVoyant Administrator Guide*.
Device Name	The device's DNS name or, for unresolvable names, the device's IP address.
sysName	The device's name as identified in the sysName OID on the device.
	You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. For more information, see the *NetVoyant Administrator Guide*.
sysDescr	The device's description as identified in the sysDescr OID on the device.
sysObjectID	The device's SNMP agent uniquely identifies the device model using the sysObjectID.
sysContact	The device's contact person as identified in the sysContact OID on the device.
sysLocation	The device's location as identified in the sysLocation OID on the device.
SNMP Capable	The SNMP version that the device's SNMP agent supports.
Device Class	The device's class, as identified by the NetVoyant product during discovery. For more information, see the *NetVoyant Administrator Guide*.
Device Model	The device's model, as identified by the NetVoyant product during discovery. For more information, see the *NetVoyant Administrator Guide*
SNMP Timeout	The length of time in seconds to waits for an SNMP reply from the device before it considers the request to have timed out. Longer timeouts significantly increase how long it takes to complete the discovery process.

Parameter	Description
SNMP Retries	The number of times to retry the device for each SNMP community string if an SNMP request times out. More retries significantly increase how long it takes to complete the discovery process.
SNMP Discovery	Indicates how the device is configured for discovery. For more information, see the *NetVoyant Administrator Guide*. The following are possible values for SNMP Discovery: • Extended indicates that the device is set to extended discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process. It also uses information in this device's ARP cache and IP routing table to discover other devices to discover. • Enabled indicates that the device is enabled normally for discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process. • Disabled indicates that discovery is disabled for the device. The NetVoyant product does not rediscover this device's characteristics during its rediscovery process.
Polling Enabled	Indicates whether polling is enabled for the device. If polling is enabled, the NetVoyant product is gathering data for the device.
Polling Station	The NetVoyant server that polls the device for SNMP statistics. In a distributed configuration, this is the polling station that polls the device. In a standalone configuration, the Polling Station is the Master Console.
Properties	Property information for the selected router.

To view a Router Details report:

1. Do one of the following to view the router information and to display a **Router Pages** menu:

   • Drill-in to a view that displays the router.
   • Search for and select the router.

2. Click the **Router Pages** menu and select **Router Details**.

Viewing Switch Reports

The switch reports can help you monitor a selected switch. To view switch reports, you must select a switch in a NetVoyant report, or perform a device or address search and select a switch from the list.

The following are the switch-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Switch Performance	View trends in performance for a selected switch.	"Switch Performance Report" on page 88
Switch Capabilities	View and monitor resources or interfaces on a switch.	"Switch Capabilities Report" on page 88
Switch Exceptions	Respond to those events that could be causing loss of critical data for a switch.	"Switch Exceptions Report" on page 89

Report	Enables you to...	More information
Switch Details	View information about a switch, such as the device name, location, or contact.	"Switch Details Report" on page 90

Switch Performance Report

The Router Performance report displays trends in performance for a selected router.

Note: The views displayed in this report depend upon the metrics supported by the selected router.

See the following entries to view more information about some of the views displayed on this report:

- "Switch Summary Gauges" on page 505
- "Cisco Memory Utilization Trend" on page 500
- "Cisco CPU Utilization Trend" on page 497
- "Availability Trend" on page 262
- "Ping Latency Trend w/ Baseline" on page 288
- "Cisco Switch Backplane Utilization Trend" on page 503
- "Cisco Buffer Utilization" on page 492
- "Cisco Buffer Miss Rate" on page 492
- "Top Interface Utilization" on page 405
- "Top Errors" on page 403
- "Top Interface Volume" on page 405
- "Top Discards" on page 402

To view a Switch Performance report:

1. Do one of the following to view switch information and to display a **Switch Pages** menu:
   - Drill-in to a view that displays the switch.
   - Search for and select the switch.
2. Click the **Switch Pages** menu and select **Switch Performance**.

Switch Capabilities Report

The Switch Capabilities report displays tables of interfaces, memory and system resources for a selected switch. This report enables you to view and monitor resources or interfaces on a switch.

Note: The views displayed in this report depend upon the metrics supported by the selected switch.

See the following entries to view more information about some of the views displayed on this report:

- "Top Least Available" on page 302
- "Top Interfaces" on page 406
- "Top Interface Errors/Discards" on page 404
- "Top Cisco CPU/Buffer Utilization" on page 511
- "Top Cisco Memory" on page 513

- "Top Cisco Switch Backplane Utilization" on page 516
- "Top Ethernet" on page 325
- "Top Protocols (RMON2)" on page 487

To view a Switch Capabilities report:

1. Perform one of the following actions to get the switch information and to display a **Switch Pages** menu:
   - Drill-in to a view that displays the switch.
   - Search for and select the switch.

2. Click the **Switch Pages** menu and select **Switch Capabilities**.

Switch Exceptions Report

The Switch Exceptions report displays all NetVoyant alarms broken down by type for a selected switch. This report enables you to quickly respond to those events that could be causing loss of critical data for a switch.

Note: The views displayed in this report depend upon the metrics supported by the selected switch.

See the following entries to view more information about the views displayed on this report:

- "Service Exceptions - Availability" on page 526
- "Service Exceptions - Reachability" on page 546
- "Service Exceptions - Interfaces" on page 543
- "Service Exceptions - HR Processor" on page 540
- "Service Exceptions - HR Storage" on page 542
- "Service Exceptions - Ethernet" on page 538
- "Service Exceptions - Cisco System" on page 537
- "Service Exceptions - Cisco Memory Pool" on page 535
- "Service Exceptions - Cisco Switch" on page 537
- "Service Exceptions - Protocols (RMON2)" on page 545
- "Service Exceptions - CBQoS Class Maps" on page 527
- "Service Exceptions - CBQoS Match Statements" on page 529
- "Service Exceptions - CBQoS Queueing" on page 531
- "Service Exceptions - CBQoS Police Action" on page 529
- "Service Exceptions - CBQoS Traffic Shaping" on page 534
- "Service Exceptions - CBQoS RED" on page 532
- "Service Exceptions - CBQoS Police Color" on page 530
- "Service Exceptions - CBQoS IP Header Compression" on page 528
- "Service Exceptions - CBQoS Set" on page 533
- "Service Exceptions - Cisco NBAR" on page 536
- "Service Exceptions - Traps" on page 549

To view a Switch Exceptions report:

1. Do one of the following to view the switch information and to display a **Switch Pages** menu:
   - Drill-in to a view that displays the switch.
   - Search for and select the switch.

2. Click the **Switch Pages** menu and select **Switch Exceptions**.

Switch Details Report

The Switch Details report displays a table of information about a selected switch. This report enables you to quickly view information about a switch, such as the device name, location, or contact.

The following details could be displayed for a switch:

Parameter	Description
Device Alias	The device's name in the NetVoyant product. By default, it names devices using the device's DNS name or, for unresolvable names, the device's IP address. The NetVoyant product can be configured to apply names to your discovered devices using the sysName OID. You can also edit the device alias to another value on the device's **Details** tab in the NetVoyant Console. For more information, see the *NetVoyant Administrator Guide*.
Device Name	The device's DNS name or, for unresolvable names, the device's IP address.
sysName	The device's name as identified in the sysName OID on the device. You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. For more information, see the *NetVoyant Administrator Guide*.
sysDescr	The device's description as identified in the sysDescr OID on the device.
sysObjectId	The device's SNMP agent uniquely identifies the device model using the sysObjectId.
sysContact	The device's contact person as identified in the sysContact OID on the device.
sysLocation	The device's location as identified in the sysLocation OID on the device.
SNMP Capable	The SNMP version that the device's SNMP agent supports.
Device Class	The device's class, as identified by the NetVoyant product during discovery. For more information, see the *NetVoyant Administrator Guide*.
Device Model	The device's model, as identified by the NetVoyant product during discovery. For more information, see the *NetVoyant Administrator Guide*
SNMP Timeout	The length of time in seconds to waits for an SNMP reply from the device before it considers the request to have timed out. Longer timeouts significantly increase how long it takes to complete the discovery process.
SNMP Retries	The number of times to retry the device for each SNMP profile if an SNMP request times out. More retries significantly increase how long it takes to complete the discovery process.

Parameter	Description
SNMP Discovery	Indicates how the device is configured for discovery. For more information, see the *NetVoyant Administrator Guide*. The following are possible values for SNMP Discovery: • **Extended** indicates that the device is set to extended discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process. It also uses information in this device's ARP cache and IP routing table to discover other devices to discover. • **Enabled** indicates that the device is enabled normally for discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process. • **Disabled** indicates that discovery is disabled for the device. The NetVoyant product does not rediscover this device's characteristics during its rediscovery process.
Polling Enabled	Indicates whether polling is enabled for the device. If polling is enabled, the NetVoyant product is gathering data for the device.
Polling Station	The NetVoyant server that polls the device for SNMP statistics. In a distributed configuration, this is the polling station that polls the device. In a standalone configuration, the Polling Station is the Master Console.
Properties	Property information for the selected switch.

To view a Switch Details report:

1. Do one of the following to view the router information and to display a **Switch Pages** menu:

   • Drill-in to a view that displays the switch.
   • Search for and select the switch.

2. Click the **Switch Pages** menu and select **Switch Details**.

Viewing Interface Reports

These reports can help you monitor a selected interface, such as a T1 or Ethernet interface on a switch. To view interface reports, you must select an interface in a NetVoyant report or an interface or address search.

The following are the interface-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Interface Summary	Assess the health of a selected interface.	"Interface Summary Report" on page 92
Interface Utilization	View trends in utilization for a selected interface, such as a T1 or Ethernet interface.	"Interface Utilization Report" on page 92
Interface Volume and Bandwidth	View trends in volume and observed transfer rates on a selected interface, such as a T1 or Ethernet interface.	"Interface Volume and Bandwidth Report" on page 93

Report	Enables you to...	More information
Interface Errors and Discards	View trends in inbound and outbound error and discard rates on a selected interface, such as a T1 or Ethernet interface.	"Interface Errors/Discards Report" on page 93
Interface Details	View information about an interface, such as the interface type or speed.	"Interface Details Report" on page 94

Interface Summary Report

The Interface Summary report displays trends in utilization, errors, and discards for a selected interface. This report enables you to quickly assess the overall health of the interface.

See the following entries to view more information about the views displayed on this report:

- "Interface Utilization In Trend/Baseline Detail" on page 391
- "Interface Utilization Out Trend/Baseline Detail" on page 395
- "Error Rate In Trend" on page 377
- "Error Rate Out Trend" on page 377
- "Discard Rate In Trend" on page 373
- "Discard Rate Out Trend" on page 374

To view an Interface Summary report:

1. Perform one of the following actions to get the interface information and to display an **Interface Pages** menu:

   - Drill-in to a view that displays the interface.
   - Search for and select the interface.

2. Click the **Interface Pages** menu and select **Interface Summary**.

Interface Utilization Report

The Interface Utilization report displays trends in utilization for a selected interface, such as a T1 or Ethernet interface.

See the following entries to view more information about the views displayed on this report:

- "Interface Utilization In Trend" on page 390
- "Interface Utilization Out Trend" on page 393
- "Interface Utilization In Trend Detail" on page 391
- "Interface Utilization Out Trend Detail" on page 394
- "Utilization Calendar Chart" on page 415

To view an Interface Utilization report:

1. Perform one of the following actions to get the interface information and to display an **Interface Pages** menu:

   - Drill-in to a view that displays the interface.

- Search for and select the interface.

2. Click the **Interface Pages** menu and select **Interface Utilization**.

Interface Volume and Bandwidth Report

The Interface Volume and Bandwidth report displays trends in volume and observed transfer rates on a selected interface, such as a T1 or Ethernet interface.

See the following entries to view more information about the views displayed on this report:

- "Interface Volume In/Out Trend" on page 397
- "Interface Rate In/Out Trend" on page 389
- "CBQoS Input Class Map Volume" on page 177
- "CBQoS Output Class Map Volume" on page 181

To view an Interface Volume and Bandwidth report:

1. Perform one of the following actions to get the interface information and to display an **Interface Pages** menu:
   - Drill-in to a view that displays the interface.
   - Search for and select the interface.

2. Click the **Interface Pages** menu.

3. Select **Interface Volume/Bandwidth**.

Interface Errors/Discards Report

The Interface Errors/Discards report displays trends in inbound and outbound error and discard rates on a selected interface, such as a T1 or Ethernet interface.

See the following entries to view more information about the views displayed on this report:

- "Errors In/Out Trend" on page 379
- "Discards In/Out Trend" on page 375
- "Errors Out Trend Detail" on page 379
- "Discard Rate In Trend" on page 373
- "CBQoS Input Class Map Drops" on page 177
- "CBQoS Output Class Map Drops" on page 180

To view an Interface Errors and Discards report:

1. Perform one of the following actions to get the interface information and to display an **Interface Pages** menu:
   - Drill-in to a view that displays the interface.
   - Search for and select the interface.

2. Click the **Interface Pages** menu and select **Interface Errors/Discards**.

Interface Details Report

The Interface Details report displays a table of information about a selected interface. This report enables you to quickly view information about an interface, such as the interface type or speed, as well as its IP address.

For more information about the views displayed on this report, see:

The following details are displayed for an interface:

Parameter	Description
Name	The name of the interface, which is used to reference the interface in reports.
Description	A description of the interface, which is used to reference the interface in the NetVoyant Console.
Device sysName	The device's name as identified in the sysName OID on the device. You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID.
Device sysDescr	The device's description as identified in the sysDescr OID on the device. You can configure the NetVoyant product to apply descriptions to your discovered devices using the sysDescr OID.
Polling Enabled	Indicates whether polling is enabled for the device. If polling is enabled, the NetVoyant product is gathering data for the device.
Polling Station	The NetVoyant server that gathers data for the interface. In a standalone configuration, the Poller is the Master Console. In a distributed configuration, the Poller is the polling station that polls the device to which the interface belongs.
ifIndex	The index for the interface's SNMP ifEntry table.
ifDescr	The description of the interface 9as defined in the SNMP ifEntry table. You can use the ifDescr to dynamically name and apply descriptions to new interfaces.
ifType	An interface's type as defined by the ifType field in the SNMP ifEntry table. For example, frame-relay.
Interface Type	Provides a descriptive name for the interface type.
ifPhysAddress	The physical address of an interface according to the SNMP ifEntry table.
Discovered Speed	An interface's speed as defined by the ifSpeed field in the SNMP ifEntry table
Poll Rate	The polling group to which the interface belongs. The interface determines how often the NetVoyant product gathers and rolls up data for the interface.
Properties	Displays any custom properties defined for the interface.
Configured Speed In	Displays the inbound speed for the interface, as configured in the NetVoyant Console.
Configured Speed Out	Displays the outbound speed for the interface, as configured in the NetVoyant Console.

To view an Interface Details report:

1. Do one of the following to view the interface information and to display an **Interface Pages** menu:
   - Drill-in to a view that displays the interface.
   - Search for and select the interface.

2. Click the **Interface Pages** menu and select **Interface Details**.

Interface Capabilities Reports

The Interface Capabilities report displays tables of frame-relay, T1 and T3 circuits, as well as any configured CB QoS Class Maps for a selected router. This report enables you to view and monitor resources on an interface.

Note: The views displayed in this report depend upon the metrics supported by the selected interface.

See the following entries to view more information about some of the views displayed on this report:

- "Top Frame Relay Circuits" on page 358
- "Top T1 Circuits" on page 567
- "Top T3 Circuits" on page 571
- "CBQoS Input Policy Class Maps" on page 178
- "CBQoS Output Policy Class Maps" on page 182
- "CBQoS Input Class Map Volume" on page 177

To view a Interface Capabilities report:

1. Perform one of the following actions to get the router information and to display an **Interface Pages** menu:
   - Drill-in to a view that displays the interface.
   - Search for and select the interface.

2. Click the **Interface Pages** menu and select **Interface Capabilities**.

Viewing CBQoS Class Map Reports

In the NetVoyant web reporting tool, the QoS reporting workflow begins with selecting the Class Based QoS page from the **Service Level Reporting** menu. To view CBQoS Class Map reports, you must select a class map in Class Based QoS report.

The following are the CBQos Class Map reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
CB QoS Class Map report	Provides Top-N views related to a selected class map	"CB QoS Class Map Report" on page 96

Report	Enables you to...	More information
Class Map Detail report	Assess the health of a selected interface.	"CBQoS Class Map Detail Report" on page 96
Class Map Capabilities report	View trends in utilization for a selected interface, such as a T1 or Ethernet interface.	"Class-Based QoS Class Map Capabilities Report" on page 97

CB QoS Class Map Report

The CB QoS Class Map report provides top-*N* style views (tables and bar charts) displaying the top interfaces for that class. This page is intended to answer the question, "What interfaces are pushing the most traffic for this class map?" You can click the name of an interface within any of the displayed views to drill-in to a Class-Based QoS Class Map Detail report for that interface.

See the following entries to view more information about the views displayed on this report:

- "Top CBQoS Class Maps Pre-Post" on page 187
- "Top CBQoS Class Map Pre/Post Policy Utilization" on page 189
- "Top CBQoS Class Map Pre/Post Policy Volume" on page 190
- "Top CBQoS Class Map Pre/Post Policy Packets" on page 188
- "Top CBQoS Class Map Pre/Post Policy Rates" on page 188
- "Top CBQoS Class Map Dropped Volume" on page 186
- "Top CBQoS Class Map Dropped Packets" on page 186
- "Top CBQoS Class Map Drop Rate" on page 185

To view a CBQoS Class Map report:

▶ Drill-in to a Class Based QoS view that displays the class map.

For example, click a class map name in the CBQoS Output Class Maps table in a Class Based QoS report. The NetVoyant reporting tool displays information relating to the selected class map and displays a **CB QoS Class Maps** menu.

CBQoS Class Map Detail Report

The CBQoS Class Map Detail report displays detailed pre and post information for policy packets, rates, utilization and volume for an individual class map.

See the following entries to view more information about the views displayed on this report:

- "CBQoS Class Map Pre/Post Policy Volume Trend" on page 176
- "CBQoS Class Map Pre-Policy Packets Trend" on page 175
- "CBQoS Class Map Pre/Post Policy Rate Trend" on page 175
- "CBQoS Class Map Dropped Volume Trend" on page 173
- "CBQoS Class Map Dropped Packets Trend" on page 172
- "CBQoS Class Map Dropped Rate Trend" on page 173

- "CBQoS Class Map No SRAM Buffer Dropped Packets Trend" on page 174
- "Poll Instance Details" on page 477

To view a CBQoS Class Map Detail report:

1. Drill-in to a Class Based QoS view that displays the class map.

2. In the CB QoS Class Map report, click the name of an interface.

   For example, click the name of an interface in the Top CBQoS Class Maps Pre-Post view. The NetVoyant reporting tool launches the CBQoS Class Map Detail report with information relating to the selected interface/class map and displays a **CBQoS Class Map Pages** menu.

Class-Based QoS Class Map Capabilities Report

The Class-Based QoS Class Map Capabilities report displays information about the different capabilities that have been configured for an individual class map.

See the following entries to view more information about the views displayed on this report:

- "Top CBQoS Nested Classmaps" on page 235
- "Top CBQoS Match Statements" on page 231
- "Top CBQoS Queueing Statistics" on page 221
- "Top CBQoS Police Action" on page 234
- "Top CBQoS Traffic Shaping" on page 245
- "Top CBQoS RED Volume" on page 242

To view a Class-Based QoS Class Map Capabilities report:

1. Drill-in to a Class Based QoS view that displays the class map.

2. In the CB QoS Class Map report, click the name of an interface.

   For example, click the name of an interface in the Top CBQoS Class Maps Pre-Post view. The NetVoyant reporting tool launches the CBQoS Class Map Detail report with information relating to the selected interface/class map and displays a **CBQoS Class Map Pages** menu.

3. From the **CBQoS Class Map Pages** menu, select **Class Map Capabilities**.

Viewing CB QoS Policy Reports

These reports can help you to view policy information for a selected interface. To view CBQoS Policy reports, you must select a CB QoS policy in a NetVoyant interface-level report.

Working with CB QoS Policies

Policies are the driving force behind Class-Based QoS. An interface can have an inbound policy, an outbound policy, or both. Class maps, or *queues*, are applied to each directional policy. In some cases, such as enterprise computing environments, only outbound policies are applied to interfaces; for example, WAN interfaces into an MPLS cloud. In other cases, there are policies applied to an interface in both directions, such as those found in most service provider networks.

For each policy, there are associated class maps (queues). These class maps are given meaningful names to help identify the traffic they represent or mark, such as "Platinum," "Realtime," "Management," "Gold," "Best-Effort," or "Scavanger." The naming convention for queues/class maps is determined by the organization; however, disciplined organizations will ensure that class map names are applied consistently throughout.

For each class map, traffic policies can be applied that perform QoS functions such as Policing, Traffic Shaping, Weighted Random Early Detect, or Queueing. These policies perform two functions: Congestion Avoidance, or, when congestion does occur, Congestion Management. Both ensure that business critical or latency sensitive traffic is given priority. Basically, each of these traffic handling mechanisms or policies present different algorithms for deciding which traffic gets priority and how/when to drop or discard traffic. Dropping traffic, especially where TCP is involved, causes TCP senders, such as application servers, to slow down (TCP Slow Start), helping to either avoid or ease congestion.

The following are the CBQoS policy-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
CBQoS Set Detail report	Display a packet count trend for those packets marked by the CBQoS Set feature.	"Class-Based QoS Set Packet Marking Detail Report" on page 99
CBQoS Queueing Detail report	Display utilization/rate/volume trends, discards, and queue depth over time	"Class-Based QoS Queueing Detail Report" on page 99
CBQoS Match Detail report	Display utilization/rate/volume trends for match statement policies	"Class-Based QoS Match Detail Report" on page 100
CBQoS Police Detail report	Display utilization/rate/volume trends for policing policies	"Class-Based QoS Police Detail Report" on page 100
CBQoS Random Early Detection Detail report	Display utilization/rate/volume trends for WRED policies	"Class-Based QoS Random Early Detection Detail Report" on page 101
CBQoS Traffic Shaping Detail report	Display utilization/rate/volume trends for traffic shaping policies	"Class-Based QoS Traffic Shaping Detail Report" on page 101

Class-Based QoS Set Packet Marking Detail Report

The Class-Based QoS Set Packet Marking Detail report displays a packet count trend for those packets marked by the CBQoS Set feature.

"CBQoS Set Packets Trend" on page 251

To view a CB QoS Set Detail report:

1. Access the Top CBQoS Packets view.

   The only way to drill-in to the CBQoS Set Detail report within the NetVoyant web reporting tool is to access the Top CBQoS Set Packets view, which is not included in one of the standard reports by default. You can add this view to the Router Capabilities report page if your router has the Set Policy configured in the Class Map.

   For more information about adding a view to a report page, see "Editing the Contents in a Report Page" on page 38.

2. Click the name of a Set Marking policy.

   The NetVoyant reporting tool displays the Class-Based QoS Set Packet Marking Detail report with information relating to the selected Set Marking policy and displays the **CBQoS Set Pages** menu.

Class-Based QoS Queueing Detail Report

Queuing provides queues for class maps given a size, typically in bytes, for each queue. A bandwidth may be associated with the queue and traffic in excess of the bandwidth will be discarded. Also, traffic will be discarded/dropped when the queue becomes full. NetVoyant will also use the bandwidth statement for the associated queue to compute utilization per class map.

The Class-Based Queuing Detail report is valuable to network engineers because it includes trend-based views over time for queue mechanism details for an interface/policy direction/queue. These views display utilization/rate/volume trends, discards, and queue depth over time.

See the following entries to view more information about the views displayed on this report:

- "CBQoS Detailed Queue Discarded Packets" on page 237
- "CBQoS Detailed Queue Depth" on page 236
- "CBQoS Detailed Queue Utilization" on page 238
- "CBQoS Detailed Queue Discarded Volume" on page 238

To view a CB QoS Queueing Detail report:

1. Drill-in to a Router Capabilities Report for a selected router that has a configured Queueing policy.

2. Scroll down to the Top CBQoS Queueing Statistics view.

3. Click a the name of a Queueing policy.

   The NetVoyant reporting tool displays the Class-Based QoS Queueing Detail report with information relating to the selected policy and displays the **CBQoS Queueing Pages** menu.

Class-Based QoS Match Detail Report

Match command statements in the class map define the criteria by which the router classifies packets into specific classes. Packets arriving at either the input or output interface (depending on how the service-policy command is configured) are checked against the match criteria of a class map to determine if the packet belongs to that class.

The Class-Based QoS Match Detail report displays trend views for matching command statements so that network engineers can see the impact that changes in the configuration have had in terms of packet classification.

See the following entries to view more information about the views displayed on this report:

- "CBQoS Match Pre-Policy Volume Trend" on page 231
- "CBQoS Match Pre-Policy Packets Trend" on page 229
- "CBQoS Match Pre-Policy Rate Trend" on page 230

To view a CB QoS Match Detail report:

1. Drill-in to a Router Capabilities Report for a selected router that has a configured Match policy.
2. Scroll down to the Top CBQoS Match Statistics view.
3. Click a the name of a Match policy.

   The NetVoyant reporting tool displays the Class-Based QoS Match Detail report with information relating to the selected policy and displays the **CBQoS Match Pages** menu.

Class-Based QoS Police Detail Report

Policing policies mark traffic based on the classmap as being in Conformance, Exceeding, or in Violation of the rate or CIR assigned to each specific class map. NetVoyant uses the rate to compute the utilization per class map. Configuration of the router determines when traffic is to be dropped if it is in violation of the rate setting.

The Class-Based QoS Police Detail report displays trend views for policing policies demonstrating traffic for an interface/policy direction/class in terms of being in conformance, exceeding, or in violation of the police policy configuration. Using trend views, network engineers can see the impact that changes in the police configuration have had in terms of traffic being within or exceeding traffic settings.

See the following entries to view more information about the views displayed on this report:

- "CBQoS Police Volume Trend" on page 234
- "CBQoS Police Packets Trend" on page 233

To view a CB QoS Police Detail report:

1. Drill-in to a Router Capabilities Report for a selected router that has a configured Police policy.
2. Scroll down to the Top CBQoS Police Statistics view.
3. Click a the name of a Match policy.

   The NetVoyant reporting tool displays the Class-Based QoS Police Detail report with information relating to the selected policy and displays the **CBQoS Police Pages** menu.

Class-Based QoS Random Early Detection Detail Report

Weighted Random Early Detection is a queuing strategy that can perform random drops when a given minimum threshold is crossed as determined by queue size. When the amount of traffic in the queue starts to exceed the maximum threshold for the queue, the WRED mechanism performs "tail" drops.

The RED Detail report is valuable to network engineers because it includes trend-based views over time for the Weighted Random Early Detection QoS mechanism. The queue size trend view is normally fairly static and only changes if the policy is changed. The other views display the amount of traffic transmitted over the queue (`xmit`), ECN (Explicit Congestion Notification) marking, and both random and tail drops. This data is useful for tuning the RED minimum and maximum threshold settings and queue size for each class.

See the following entries to view more information about the views displayed on this report:

- "CBQoS RED Volume Trend" on page 241
- "CBQoS RED Packets Trend" on page 240
- "CBQoS RED Queue Size Trend" on page 241

To view a CB QoS Random Early Detection Detail report:

1. Drill-in to a Router Capabilities Report for a selected router that has a configured RED policy.

2. Scroll down to the Top CBQoS Random Early Detect (RED) Volume view or the Top CBQoS Random Early Detect (RED) Packets view.

3. Click a the name of a RED policy.

   The NetVoyant reporting tool displays the Class-Based QoS Random Early Detection Detail report with information relating to the selected policy and displays the **CBQoS RED Pages** menu.

Class-Based QoS Traffic Shaping Detail Report

Traffic shaping is somewhat similar to queuing in that a queue size is associated with Traffic Shaped Queues, and traffic may be delayed in the queue. If the queue begins to fill, traffic is then dropped.

The Traffic Shaping Detail report is valuable to network engineers because it includes trend-based views over time for the Traffic Shaping mechanism details for an interface/policy direction/queue. These views show the queue size (normally this is pretty flat unless there has been a change in the policy) and the traffic for the queue that was delayed or dropped in terms of volume or packets.

See the following entries to view more information about the views displayed on this report:

- "CBQoS Traffic Shaping Volume Trend" on page 245
- "CBQoS Set Packets Trend" on page 251
- "CBQoS Traffic Shaping Queue Size Trend" on page 244

To view a CB QoS Traffic Shaping Detail report:

1. Drill-in to a Router Capabilities Report for a selected router that has a configured Traffic Shaping policy.

2. Scroll down to the Top CBQoS Traffic Shaping view.

3. Click a the name of a Traffic Shaping policy.

The NetVoyant reporting tool displays the Class-Based QoS Traffic Shaping Detail report with information relating to the selected policy and displays the **CBQoS Traffic Shaping Pages** menu.

Viewing IP SLA Operations Reports

These reports can help you to view information for IP SLA operation types and IP SLA operations on individual interfaces. To view IP SLA Operation reports, you must select an IP SLA operation in the higher-level IP SLA report.

The following are the IP SLA test-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
IP SLA Operations report	Observe summary information for the selected IP SLA operation type	"IP SLA Operations Report" on page 102
DHCP Response report	Observe round-trip time to get an IP address from a DHCP server.	"DCHP Response Report" on page 103
DNS Echo Response report	Observe results from DNS look-up time tests.	"DNS Echo Response Report" on page 103
FTP Response report	Observe results from FTP server performance tests.	"FTP Response Report" on page 104
HTTP Echo Response report	Observe the round-trip time to retrieve a web page.	"HTTP Echo Response Report" on page 104
TCP Connect report	Observe the time taken to connect to a target device with TCP.	"TCP Connect Report" on page 105
ICMP Echo Response report	Observe the round-trip delay for the full path.	"ICMP Echo Response Report" on page 105
Path Echo Response report	Observe the round-trip delay and hop-by-hop round-trip delay.	"Path Echo Response Report" on page 106
UDP Echo Response report	Observe results from server and IP application performance and connectivity testing.	"UDP Echo Response Report" on page 106
Enhanced UDP for Voice (VoIP) report	Observe results from voice and data network performance and general IP performance testing.	"Enhanced UDP For Voice (VoIP) Report" on page 107

IP SLA Operations Report

The IP SLA Operations report provides a high-level summary of a selected IP SLA operation type.

See the following entries to view more information about the views displayed on this report:

- "IP SLA Summary" on page 447
- "Top IP SLA RTT Deviation From Norm" on page 459
- "Top IP SLA Over Threshold" on page 458
- "Top IP SLA Errored Operations" on page 456
- "IP SLA Operations List" on page 446

To view an IP SLA Operations report:

1. From the **Service Level Reporting** menu, select **IP SLA** to open the IP SLA report.

2. In the **IP SLA Operations by Rtt Type** view, click an IP SLA operation name.

   The names of the operation types are displayed in blue to indicate that they provide links that you can use to access more detailed information.

   The NetVoyant reporting tool displays the IP SLA Operations report, with views rendered for the selected IP SLA test type.

DCHP Response Report

A DHCP test measures round-trip time to get an IP address from a DHCP server. A laggy DHCP server leaves devices needing addresses offline until they can get a response. The lag could potentially ripple down through any dependencies on these devices. Use the DCHP Response report to identify these situations.

See the following entries to view more information about the views displayed on this report:

- "DHCP Response" on page 423
- "DHCP Round Trip Time Trend vs. Baseline" on page 425
- "DHCP Errors" on page 422

To view a DHCP Response report:

1. Drill-in to an IP SLA Operations view that displays the DCHP operation type.

2. Click **DCHP** in the view.

3. In the IP SLA Operations report, click the name of a test in one of the views.

   For example, from the IP SLA Operations report, scroll to the Top IP SLA RTT Deviation From Norm view. Click one of the tests in the **Name** column in the view.

   The NetVoyant reporting tool displays the DHCP Response report and displays the **DHCP Echo Pages** menu in the menu bar.

DNS Echo Response Report

A DNS test measures DNS look-up time. A slow DNS response time will reduce the speed for anything needing IP address resolution. Any server or client using a web address (URL) rather than an IP string will potentially have to wait on the DNS server. This can seriously affect network performance. Use the DNS Echo Response report to identify and troubleshoot these situations.

See the following entries to view more information about the views displayed on this report:

- "DNS Response" on page 427
- "DNS Round Trip Time Trend vs. Baseline" on page 429
- "DNS Errors" on page 427

To view a DNS Echo Response report:

1. Drill-in to an IP SLA Operations view that displays the DNS operation type.

2. Click **DNS** in the view.

3. In the IP SLA Operations report, click the name of a DNS test in one of the views.

   For example, from the IP SLA Operations report, scroll to the Top IP SLA RTT Deviation From Norm view. Click one of the tests in the Name column in the view.

   The NetVoyant reporting tool displays the DNS Echo Response report and displays the **DNS Echo Pages** menu in the menu bar.

FTP Response Report

An FTP test measures FTP server performance. The FTP Response report provides valuable information about FTP response time, round trip time, and errors.

See the following entries to view more information about the views displayed on this report:

- "FTP Response" on page 432
- "FTP Round Trip Time Trend vs. Baseline" on page 433
- "FTP Errors" on page 431

To view an FTP Response report:

1. Drill-in to an IP SLA Operations view that displays the FTP operation type.

2. Click **FTP** in the view.

3. In the IP SLA Operations report, click the name of a test in one of the views.

   For example, from the IP SLA Operations report, scroll to the Top IP SLA RTT Deviation From Norm view. Click one of the tests in the **Name** column of the view.

   The NetVoyant reporting tool displays the FTP Response report and displays the **FTP Pages** menu in the menu bar.

HTTP Echo Response Report

An HTTP echo test measures the round-trip time to retrieve a web page. The HTTP Echo Response report provides valuable information about testing the functionality of web servers, including response time, round trip time, and errors.

See the following entries to view more information about the views displayed on this report:

- "HTTP Echo Response" on page 436
- "HTTP Echo Round Trip Time Trend vs. Baseline" on page 437
- "HTTP Echo Errors" on page 435
- "HTTP RTT Detail" on page 438

To view an HTTP Echo Response report:

1. Drill-in to an IP SLA Operations view that displays the HTTP operation type.

2. Click **HTTP** in the view.

3. In the IP SLA Operations report, click the name of a test in one of the views.

For example, from the IP SLA Operations report, scroll to the Top IP SLA RTT Deviation From Norm view. Click one of the tests in the **Name** column in the view.

The NetVoyant reporting tool displays the HTTP Echo Response report and displays the **HTTP Echo Pages** menu in the menu bar.

TCP Connect Report

A TCP connect test measures the time taken to connect to a target device with TCP. TCP response time is key to network application performance. The TCP Connect report provides valuable information about response time, round trip time, and errors.

See the following entries to view more information about the views displayed on this report:

- "TCP Connect Response" on page 453
- "TCP Connect Round Trip Time Trend vs. Baseline" on page 455
- "TCP Connect Errors" on page 453

To view a TCP Connect report:

1. Drill-in to an IP SLA Operations view that displays the HTTP operation type.

2. Click **TCP Connect** in the view.

3. In the IP SLA Operations report, click the name of a test in one of the views.

For example, from the IP SLA Operations report, scroll to the Top IP SLA RTT Deviation From Norm view. Click one of the tests in the **Name** column in the view.

The NetVoyant reporting tool displays the TCP Connect report and displays the **TCP Connect Pages** menu in the menu bar.

ICMP Echo Response Report

An ICMP echo test measures the round-trip delay for the full path. A slow ICMP response time point to a slow ping functionality, which indicates that there is something to be addressed be a network engineer. The ICMP Echo Response report provides valuable information about response time, round trip time, and errors.

See the following entries to view more information about the views displayed on this report:

- "ICMP Echo Response Gauges" on page 440
- "ICMP Echo Round Trip Time Trend vs. Baseline" on page 442
- "ICMP Echo Completion Summary" on page 439
- "ICMP Echo Errors" on page 440

To view an ICMP Echo Response report:

1. Drill-in to an IP SLA Operations view that displays the ICMP Echo operation type.

2. Click **ICMP Echo** in the view.

3. In the IP SLA Operations report, click the name of a test in one of the views.

For example, from the IP SLA Operations report, scroll to the Top IP SLA RTT Deviation From Norm view. Click one of the tests in the **Name** column in the view.

The NetVoyant reporting tool displays the ICMP Echo Response report and displays the **ICMP Echo Pages** menu in the menu bar.

Path Echo Response Report

A path echo test measures the round-trip delay and hop-by-hop round-trip delay. It collects the statistics for each hop along the path and determines this hop-by-hop response time between a Cisco router and any IP device on the network by discovering the path using the traceroute facility. The Path Echo Response report provides valuable information, including a path comparison trend and the top paths.

See the following entries to view more information about the views displayed on this report:

- "Path Comparison Trend" on page 451
- "Top Paths" on page 460

To view a Path Echo Response report:

1. Drill-in to an IP SLA Operations view that displays the Path Echo operation type.

2. Click **Path Echo** in the view.

3. In the IP SLA Operations report, click the name of a test in one of the views.

   For example, from the IP SLA Operations report, scroll to the Top IP SLA RTT Deviation From Norm view. Click one of the tests in the **Name** column in the view.

   The NetVoyant reporting tool displays the Path Echo Response report and displays the **Path Echo Pages** menu in the menu bar.

UDP Echo Response Report

A UDP echo test measures server and IP application performance and connectivity testing. More specifically, it measures end-to-end response time between a Cisco router and devices using IP. UDP is a network layer (Layer 3) Internet protocol that is used for many IP services. UDP echo is used to measure response times and test end-to-end connectivity. The UDP Echo Response report provides valuable information that can be useful in troubleshooting issues with business-critical applications by determining the round-trip delay times and testing connectivity to both Cisco and non-Cisco devices.

See the following entries to view more information about the views displayed on this report:

- "UDP Echo Response" on page 462
- "UDP Echo Round Trip Time Trend vs. Baseline" on page 463
- "VoIP Errors" on page 466

To view a UDP Echo Response report:

1. Drill-in to an IP SLA Operations view that displays the UDP Echo operation type.

2. Click **UDP Echo** in the view.

3. In the IP SLA Operations report, click the name of a test in one of the views.

For example, from the IP SLA Operations report, scroll to the Top IP SLA RTT Deviation From Norm view. Click one of the tests in the **Name** column in the view.

The NetVoyant reporting tool displays the UDP Echo Response report and displays the **UDP Echo Pages** menu in the menu bar.

Enhanced UDP For Voice (VoIP) Report

A UDP jitter (VoIP) test measures voice and data network performance and was primarily designed to diagnose network suitability for real-time traffic applications such as voice over IP (VoIP), video over IP, or real-time conferencing. Jitter means inter-packet delay variance, and for delay-sensitive networks like VoIP, positive jitter values are undesirable, and a jitter value of 0 is ideal.

The UDP jitter operation also includes the data returned by the UDP operation, the UDP jitter operation can be used as a multipurpose data gathering operation. The generated packets carry packet sending sequence and receiving sequence information, and sending and receiving time stamps from the source and the operational target. Based on these, UDP jitter operations are capable of measuring the following:

- Per-direction jitter (source to destination and destination to source)
- Per-direction packet-loss
- Per-direction delay (one-way delay)
- Round-trip delay (average round-trip time)

The Enhanced UDP for Voice (VoIP) report provides valuable, per-direction data so that you can more readily identify where congestion or other problems are occurring in the network.

See the following entries to view more information about the views displayed on this report:

- "VoIP Jitter/Round Trip Time" on page 467
- "Jitter: Source to Destination" on page 449
- "Jitter: Destination to Source" on page 448
- "Mean Opinion Score" on page 449
- "VoIP Errors" on page 466
- "VoIP Round Trip Time" on page 467

To view an Enhanced UDP for Voice report:

1. Drill-in to an IP SLA Operations view that displays the VoIP operation type.

2. Click **VoIP Jitter** in the view.

3. In the IP SLA Operations report, click the name of a test in one of the views.

    For example, from the IP SLA Operations report, scroll to the Top IP SLA RTT Deviation From Norm view. Click one of the tests in the **Name** column in the view.

    The NetVoyant reporting tool displays the Enhanced UDP for Voice (VoIP) report and displays the **eUDP Jitter Pages** menu in the menu bar.

Viewing Cisco Performance Reports

Use the Cisco Performance reports to remotely monitor the memory pool statistics of all physical entities, such as line cards and route processors, in a managed device. This is particularly useful for high-end routers that might have a large number of line cards.

The following are the Cisco Performance-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Cisco Memory Pool Performance report	Assess the utilization of a Cisco router's memory pool.	"Cisco Memory Pool Performance Report" on page 108
Cisco Switch Performance report	Assess the utilization of a Cisco switch.	"Cisco Switch Performance Report" on page 108

Cisco Memory Pool Performance Report

The Cisco Memory Pool Performance report displays trends in utilization for a selected memory pool on a Cisco router. This report enables you to assess the utilization of a Cisco router's memory pool.

See the following entries to view more information about the views displayed on this report:

- "Cisco Memory Pool Utilization" on page 499
- "Cisco Memory Pool Trend" on page 498
- "Poll Instance Details" on page 477

To view a Cisco Memory Pool Performance report:

1. Drill-in to a Router Capabilities report that displays information for a router that has been configured for Cisco Memory Pool.

2. Click the name of the memory configuration name in the Top Cisco Memory view.

   The NetVoyant reporting tool displays the Cisco Memory Pool Performance report and displays the **Cisco Memory Pool Pages** menu in the menu bar.

Cisco Switch Performance Report

The Cisco Switch Performance report displays trends in utilization for a selected backplane on a Cisco switch. This report enables you to assess the utilization of a Cisco switch's backplane.

See the following entries to view more information about the views displayed on this report:

- "Cisco Switch Backplane Utilization Trend" on page 503
- "Poll Instance Details" on page 477

To view a Cisco Switch Performance report:

1. Drill-in to a Device Capabilities report that displays information for a switch that has been configured for Cisco Switch Backplane.

2. Click the name of the switch backplane configuration name in the Top Cisco Switch Backplane Utilization view.

The NetVoyant reporting tool displays the Cisco Switch Performance report and displays the **Cisco Switch Backplane** menu in the menu bar.

Viewing Frame Relay Reports

These reports can help you to view information for Frame Relay circuits on interfaces. To view Frame Relay reports, you must select a Frame Relay circuit in the top-level Frame Relay Summary report.

The following are the Frame Relay circuit-level reports available in the NetVoyant reporting tool:

Report	Enables you to...	More information
Frame Relay Summary report	View utilization in/out trends, as well as congestion and frame rate trends.	"Frame Relay Summary Report" on page 109
Frame Relay Performance report	View information about the frame relay index trends.	"Frame Relay Performance Report" on page 110
Frame Relay Utilization report	View information about frame relay utilization.	"Frame Relay Utilization Report" on page 110
Frame Relay Bandwidth report	View information about frame relay bandwidth.	"Frame Relay Bandwidth Report" on page 110
Frame Relay Congestion report	View information about frame relay congestion.	"Frame Relay Congestion Report" on page 111
Frame Relay Volume report	View information about frame relay volume.	"Frame Relay Volume Report" on page 111
Frame Relay Details report	View detailed information about a frame relay circuit.	"Frame Relay Details Report" on page 112

Frame Relay Summary Report

The Frame Relay Summary report provides a dashboard for accessing the other Frame Relay circuit-level pages. It also provides valuable overview information about Frame Relay utilization, congestion and rates on your network.

See the following entries to view more information about the views displayed on this report:

- "Frame Relay Utilization In Trend" on page 349
- "Frame Relay Utilization Out Trend" on page 351
- "Frame Relay Congestion Trend" on page 336
- "Input/Output Frame Rate Trend" on page 354

To view a Frame Relay Summary report:

1. Open a top-level Frame Relay Summary report from the **Management** menu.

2. On the top-level report, click the name of a Frame Relay circuit.

   For example, scroll to the Top Frame Relay Circuits table view and click one of the circuits in the **Name** column. The NetVoyant reporting tool displays the Frame Relay Summary report for the individual circuit and displays the **Frame Relay Pages** menu in the menu bar.

Frame Relay Performance Report

The Frame Relay Performance report provides a performance index for the selected frame relay circuit.

See the following for more information about the view displayed on this report:

"Frame Relay Performance Index Trend" on page 340

To view a Frame Relay Performance report:

1. Open a top-level Frame Relay Summary report from the **Management** menu.

2. On the top-level report, click the name of a Frame Relay circuit.

   For example, scroll to the Top Frame Relay Circuits table view and click one of the circuits in the **Name** column. The NetVoyant reporting tool displays the Frame Relay Summary report for the individual circuit and displays the **Frame Relay Pages** menu in the menu bar.

3. Select **Frame Relay Performance** from the **Frame Relay Pages** menu.

Frame Relay Utilization Report

The Frame Relay Utilization report provides valuable utilization trend information for the selected frame relay circuit.

See the following entries to view more information about the views displayed on this report:

- "Frame Relay Utilization In/Out Trend" on page 351
- "Frame Relay Utilization In Trend" on page 349
- "Frame Relay Utilization Out Trend" on page 351
- "Frame Relay Utilization In Trend Detail" on page 350
- "Frame Relay Utilization Out Trend Detail" on page 352

To view a Frame Relay Utilization report:

1. Open a top-level Frame Relay Summary report from the **Management** menu.

2. On the top-level report, click the name of a Frame Relay circuit.

   For example, scroll to the Top Frame Relay Circuits table view and click one of the circuits in the **Name** column. The NetVoyant reporting tool displays the Frame Relay Summary report for the individual circuit and displays the **Frame Relay Pages** menu in the menu bar.

3. Select **Frame Relay Utilization** from the **Frame Relay Pages** menu.

Frame Relay Bandwidth Report

The Frame Relay Bandwidth report provides valuable bandwidth rate information for the selected frame relay circuit.

See the following for more information about the view displayed on this report:

"Input/Output Frame Rate Trend" on page 354

To view a Frame Relay Utilization report:

1. Open a top-level Frame Relay Summary report from the **Management** menu.

2. On the top-level report, click the name of a Frame Relay circuit.

   For example, scroll to the Top Frame Relay Circuits table view and click one of the circuits in the **Name** column. The NetVoyant reporting tool displays the Frame Relay Summary report for the individual circuit and displays the **Frame Relay Pages** menu in the menu bar.

3. Select **Frame Relay Bandwidth** from the **Frame Relay Pages** menu.

Frame Relay Congestion Report

The Frame Relay Congestion report provides valuable congestion trend information for the selected frame relay circuit.

See the following entries to view more information about the views displayed on this report:

- "Frame Relay Congestion Trend" on page 336
- "Frame Relay Congestion Rate Trend" on page 335

To view a Frame Relay Congestion report:

1. Open a top-level Frame Relay Summary report from the **Management** menu.

2. On the top-level report, click the name of a Frame Relay circuit.

   For example, scroll to the Top Frame Relay Circuits table view and click one of the circuits in the **Name** column. The NetVoyant reporting tool displays the Frame Relay Summary report for the individual circuit and displays the **Frame Relay Pages** menu in the menu bar.

3. Select **Frame Relay Congestion** from the **Frame Relay Pages** menu.

Frame Relay Volume Report

The Frame Relay Volume report provides valuable volume information for the selected frame relay circuit.

See the following for more information about the view displayed on this report:

"Frame Relay Volume Trend" on page 353

To view a Frame Relay Volume report:

1. Open a top-level Frame Relay Summary report from the **Management** menu.

2. On the top-level report, click the name of a Frame Relay circuit.

   For example, scroll to the Top Frame Relay Circuits table view and click one of the circuits in the **Name** column. The NetVoyant reporting tool displays the Frame Relay Summary report for the individual circuit and displays the **Frame Relay Pages** menu in the menu bar.

3. Select **Frame Relay Volume** from the **Frame Relay Pages** menu.

Frame Relay Details Report

The Frame Relay Details report provides detailed information for the selected frame relay circuit.

See the following for more information about the view displayed on this report:

"Frame Relay Details" on page 337

To view a Frame Relay Details report:

1. Open a top-level Frame Relay Summary report from the **Management** menu.

2. On the top-level report, click the name of a Frame Relay circuit.

   For example, scroll to the Top Frame Relay Circuits table view and click one of the circuits in the **Name** column. The NetVoyant reporting tool displays the Frame Relay Summary report for the individual circuit and displays the **Frame Relay Pages** menu in the menu bar.

3. Select **Frame Relay Details** from the **Frame Relay Pages** menu.

Viewing T1/T3 Performance Reports

These reports can help you to view information for Frame Relay circuits on interfaces. To view T1/T3 Performance reports, you must select a T1 or T3 circuit in the top-level WAN Summary report.

T1 Performance Report

The T1 Performance report provides valuable information for T1 WAN connections, which are critcally important links on a network.

See the following entries to view more information about the views displayed on this report:

- "T1 % Errored Seconds Trend" on page 555
- "T1 % Coding Violations Trend" on page 556

To view a T1 Performance report:

1. Open a top-level WAN Summary report from the **Management** menu.

2. On the top-level report, click the name of a T1 circuit.

   For example, scroll to the TopT1 Circuits table view and click one of the circuits in the **Name** column. The NetVoyant reporting tool displays the T1 Performance report for the individual circuit and displays the **T1 Pages** menu in the menu bar.

T3 Performance Report

The T3 Performance report provides valuable information for T3 WAN connections, which are critcally important links on a network.

See the following for information about the view displayed on this report:

"T3 % Errored Seconds Trend" on page 558

To view a T3 Performance report:

1. Open a top-level WAN Summary report from the **Management** menu.

2. On the top-level report, click the name of a T3 circuit.

   For example, scroll to the Top T3 Circuits table view and click one of the circuits in the **Name** column. The NetVoyant reporting tool displays the T1 Performance report for the individual circuit and displays the **T3 Pages** menu in the menu bar.

Viewing the Protocol Summary and Detail Reports

These reports can help you to view information for network protocols and the associated traffic on your network. To view the Protocol Summary and Protocol Detail reports, you must select a specific protocol in the top-level Protocol Distribution report. When you click an NBAR protocol, the NetVoyant reporting tool displays a Protocol Summary report for the item. When you click an RMON protocol, it displays a Protocol Detail report for the item.

Protocol Summary Report

The Protocol Summary report provides valuable information for investigating a link or device that is over threshold.

See the following entries to view more information about the views displayed on this report:

- "Top Interfaces for Protocol (NBAR)" on page 476
- "Top Interface Utilization (NBAR)" on page 475
- "Top Interface Volume (NBAR)" on page 475
- "Top Interface Packets (NBAR)" on page 474
- "Top Interface Rates (NBAR)" on page 474

To view a Protocol Summary report:

1. Open a top-level Protocol Distribution report from the **Operations** menu.

2. On the top-level report, click the name of a protocol.

   For example, scroll to the Top Protocols In (NBAR) view and click one of the protocols in the **Name** column. The NetVoyant reporting tool displays the Protocol Summary report for the individual protocol type and displays the **Protocol Summary** menu in the menu bar.

Protocol Detail Report

The Protocol Summary report provides detailed information about traffic for a selected protocol over a selected interface.

See the following entries to view more information about the views displayed on this report:

- "Protocol Utilization (NBAR)" on page 472
- "Protocol Volume" on page 473
- "Top Interface Packets (NBAR)" on page 474
- "Top Interface Rates (NBAR)" on page 474

To view a Protocol Summary report:

1. Open a top-level Protocol Distribution report from the **Operations** menu.

2. On the top-level report, click the name of a protocol.

   For example, scroll to the Top Protocols In (NBAR) view and click one of the protocols in the **Name** column. The NetVoyant reporting tool displays the Protocol Summary report for the individual protocol type and displays the **Protocol Summary** menu in the menu bar.

3. In the Protocol Summary report, click an interface.

   For example, go to the Top Interfaces for Protocol view at the top of the report and click one of the interfaces in the **Name** column. The NetVoyant reporting tool displays the Protocol Detail report for the individual protocol/interface and displays the **Protocol Pages** menu in the menu bar.

Viewing the Ethernet Performance Report

The **Etherstats Pages** menu is displayed when you select an ethernet interface. This menu provides access to the Ethernet Performance reports, which provides views to demonstrate trends in utilization and packet size for the selected Ethernet interface.

See the following entries to view more information about the views displayed on this report:

- "Ethernet Utilization Trend Detail" on page 320
- "Packet Size Distribution" on page 322

To view an Ethernet Performance report:

1. Drill-in to an Ethernet view that displays the Ethernet interface.

   For example, click an Ethernet interface in the Top Ethernet Error Details view in the LAN Summary report. The NetVoyant reporting tool displays information relating to the selected Ethernet interface and displays an **Etherstats Pages** menu.

2. Click the **Etherstats Pages** menu and select **Ethernet Performance**.

CHAPTER 5

Working with Custom Reports and Views

Use the Custom View Wizard to design custom views from the data that the NetVoyant product collects from your devices. After you create views, add them to custom report pages on your own **My Pages** menu or on shared menus in the NetVoyant reporting tool.

This chapter covers the following topics:

- "Using the My Pages Menu" on page 116
- "Selecting Views for the Report Page Context" on page 118
- "Creating and Editing Custom Views" on page 120
- "Working with View Types and Styles" on page 126
- "Adding Other Elements to Customize Views" on page 148

USING THE MY PAGES MENU

The **My Pages** menu enables you to collect private report pages that contain report views that are most useful to you. You can add any of the pre-built, standard report pages to this personalized menu, as well as custom report pages.

Adding Report Pages to My Pages

Custom report pages can be added and edited on your **My Pages** menu. When you create a report page, you can add one or more of the standard NetVoyant views or include custom views you created.

Note: A NetVoyant administrator can also add a report page to your **My Pages** menu for you. Contact your NetVoyant administrator for more information.

To add a new report page to the My Pages menu:

1. Perform one of the following tasks:

   - Select an existing report page from **My Pages**.
   - If your **My Pages** menu does not include report pages, select **Add New Page** directly from the menu and skip step 2.

2. Click the orange drop-down arrow and select **Add Page**.
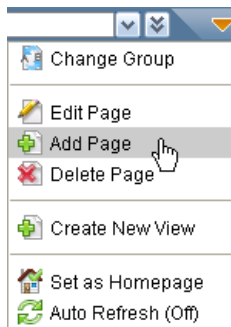
   This displays the **Add Page** page.

3. You can edit the following parameters:

Parameter	Description
Menu Title	Edit the title for the report as it is displayed in the menu bar.
Page Title	Edit the title displayed at the top of the report page.

4. At the bottom of the Add Page page, select a context to display the views in that context.

   For example, select **IP SLA** to display all views in the IP SLA context.

   Note: Select the **Custom Views** context to view all custom views available to you.

5. Click a view in the list and drag it to a page layout section on the right side of the Add Page page.

6. Repeat steps 4 and 5 to add more views to the report page.

   You can add new views, copy views from other pages, or remove views from the report page after you save the page. For more information, see "Editing the Contents in a Report Page" on page 38, "Copying a View" on page 36, and "Removing a View from a Report Page" on page 37.

7. Click **Save** to add the report page to the **My Pages** menu.

Editing Report Pages in My Pages

At any time you can edit the layout or add or remove views from any report page residing in your **My Pages** menu.

To edit a report page in the My Pages menu:

1. View the report page.

2. Click the orange drop-down arrow and select **Edit Page**.

This displays the **Edit Page Layout** page.
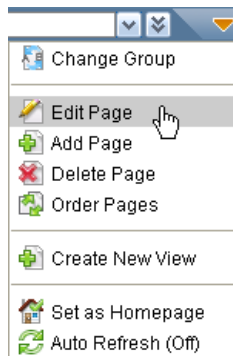
3. You can edit the following parameters:

Parameter	Description
Menu Title	Edit the title for the report as it is displayed in the menu bar.
Page Title	Edit the title displayed at the top of the report page.

4. At the bottom of the Edit Page Layout page, you can perform the following actions:

Task	Description
Add a view	To add a view to the report page, select a context to display the views related to that context. For example, select **IP SLA** to display all views in the IP SLA context.
	Note: Select the **Custom Views** context to view all custom views available to you.
	Click a view in the list and drag it to a page layout section on the right side of the Edit Page Layout page.
Remove a view	To remove a view from the report page, click **Remove** next to a view.
	Note: If you edited the settings for the view on the report page, the NetVoyant reporting tool deletes these custom settings when it removes the view.
Move a view	To move a view on the report page, click a view in the list and drag it to a different page layout section on the right side of the Edit Page Layout page.

5. Click **Save**.

This updates the report page.

SELECTING VIEWS FOR THE REPORT PAGE CONTEXT

When you design your report pages, you can add views that are valid for the current page context. The page context determines the granularity of the reported data, and what view can be displayed for that data.

The following are the contexts that the NetVoyant reporting tool uses to gather and aggregate data:

Context	Description
CBQoS Class Map	This context is active when you are viewing information specific to a selected CB QoS class map.
CBQoS Group by Class Map	This context is active when you are viewing information specific to a selected CB QoS group.
CBQoS IPHC	This context is active when you are viewing information specific to a selected CB QoS IPHC policy.
CBQoS Match	This context is active when you are viewing information specific to a selected CB QoS Match Statement policy.
CBQoS Police	This context is active when you are viewing information specific to a selected CB QoS Policing policy.
CBQoS Police Color	This context is active when you are viewing information specific to a selected CB QoS Police Color policy.
CBQoS Queueing	This context is active when you are viewing information specific to a selected CB QoS Queueing policy.
CBQoS RED	This context is active when you are viewing information specific to a selected CB QoS RED policy.
CBQoS Set	This context is active when you are viewing information specific to a selected CB QoS Set policy.
CBQoS Traffic Shaping	This context is active when you are viewing information specific to a selected CB QoS Traffic Shaping policy.
Cisco Memory Pool	This context is active when you are viewing information specific to a selected Cisco Memory Pool.
Device	This context is active when you are viewing information specific to a selected device.
Ethernet	This context is active when you are viewing information specific to a selected ethernet circuit.
Frame Relay	This context is active when you are viewing information specific to a selected frame relay circuit.
Group	This context is active when you are viewing information specific to a selected group.
Interface	This context is active when you are viewing information specific to a selected interface.
IP SLA	This context is active when you are viewing information specific to IP SLA operations.

Context	Description
• DHCP	This context is active when you are viewing information specific to a selected DHCP IP SLA operation.
• DNS	This context is active when you are viewing information specific to a selected DNS IP SLA operation.
• HTTP	This context is active when you are viewing information specific to a selected HTTP IP SLA operation.
• IPSLA Jitter	This context is active when you are viewing information specific to a selected IP SLA Jitter operation.
• TCP Connect	This context is active when you are viewing information specific to a selected TCP Connect IP SLA operation.
• UDP Echo	This context is active when you are viewing information specific to a selected UDP Echo IP SLA operation.
• ICMP Echo	This context is active when you are viewing information specific to a selected ICMP Echo IP SLA operation.
• Path Echo	This context is active when you are viewing information specific to a selected Path Echo IP SLA operation.
• FTP	This context is active when you are viewing information specific to a selected FTP IP SLA operation.
Protocol	This context is active when you are viewing information specific to a selected protocol.
Protocol Group	This context is active when you are viewing information specific to a selected protocol group.
Router	This context is active when you are viewing information specific to a selected router.
Server	This context is active when you are viewing information specific to a selected server.
Switch	This context is active when you are viewing information specific to a selected switch.
T1	This context is active when you are viewing information specific to a selected T1 circuit.
T3	This context is active when you are viewing information specific to a selected T3 circuit.

CREATING AND EDITING CUSTOM VIEWS

While the NetVoyant reporting tool includes an extensive list of pre-defined views suited for a wide range of reporting needs, you can also create your own custom views. This is particularly useful if there are compiled MIBs in the NetVoyant Console and datasets have been added and enabled to support them. In order to view the data collected for these datasets, you must create custom views and specify the metrics and expressions.

Note: In an unregistered NetVoyant system, only Administrator or Designer user account types can edit views or create custom views. If your NetVoyant system is registered with the NetQoS Performance Center as a data source, only user accounts with an Administrator or Power User NetVoyant product privilege can edit views or create custom views.

Viewing, Editing, or Deleting Custom Views

To determine the need for a custom view, browse the list of existing custom views that are available. As an Administrator or a Designer, you can delete any that are no longer needed or make modifications to those in the list. Custom view modifications can be persisted for other Administrator and Designer user accounts, and reflected in any reports that include a modified view. You cannot delete a custom view that is currently included in a report.

To view all custom views to which you have access:

1. From the **Report Pages** menu, select **Administration**.

   This displays the Administration page.

2. Under **User Settings** click **Custom Views**.

   This displays a list of all custom views available to your user account.

   - To open the Custom View Wizard, click **New**.
   - To edit a view, select a view and click **Edit**.
   - To delete a view, select a view and click **Delete**.

Note: As an Administrator or Designer user, you can add custom views to a report page in the **My Pages** menu. While editing the report page, select the **Custom Views** context to view all custom views available to you.

Using the Custom View Wizard

The Custom View Wizard steps you through the process of creating a new custom view using a NetVoyant dataset.

To create a new view using the Custom View Wizard:

1. From the **Report Pages** menu, select **Administration**.

2. Under **User Settings**, select **Custom Views**.

   This opens the Custom Views page, which lists custom views configured for your NetVoyant system.

3. Click **New**.

   This opens the Custom View Wizard with the **Choose Name and Type** page as the first page in the wizard.

4. Edit the following parameters on this page:

Parameter	Description
View Name	Enter the name of the view. The NetVoyant reporting tool uses this name as the view title on report pages.
Group View Types	Select a view type, which determines what type of data in the view and how it is displayed.
	For more information, see "NetVoyant View Types" on page 126.
	Note: The view types available are dependent on the report page (context) from which you access the Custom View Wizard.
View Description	*(Optional)* Enter a description of the view. This will help other Administrator or Designer users to know what the view contains and its purpose.
View Category	Select the **View Category** for the report view, which enables you to select similar views when editing a report page.
	• To select an existing View Category, click **...**
	• To use a new category, enter the name of a new view category.

5. Click **Next**.

This displays the **Style and Options** page.

6. Select or enter the following parameters on this page:

Parameter	View styles	Description
Style	All	Select the **style** of the view, which defines how the NetVoyant reporting tool displays report data in the view.
		For more information, see "NetVoyant View Styles" on page 136.
Axis settings	Graphs	Configure how the NetVoyant reporting tool labels and scales the axes on a graph-style view.
		For more information, see "Editing Axis Titles and Ranges on a Graph View" on page 138.

Parameter	View styles	Description
Thresholds	Selected views only	Edit the thresholds on some views, which configures the values for which the NetVoyant reporting tool displays status colors. For more information, see "Editing the Thresholds for a View" on page 139.
Drill-down	Selected views only	Specify an existing report page to use as a drill-down page. Each report page has a `pg` setting in its URL that indicates its page number or ID. For example `pg=7001` or `pg=classmap`. Use the value for that key as the drill-down value as the **Target Page**.
Footer	Selected views only	Use this field to add a footer, which can provide extra information about the view. For more information, see "Adding Other Elements to Customize Views" on page 148.

7. Click **Next**.

   The Custom View Wizard displays the **Select Metrics** page.

8. Select the dataset that contains the type of collected data you want to display in the view.

   Datasets are configured by a NetVoyant Administrator in the NetVoyant Console. The NetVoyant product includes a number of pre-configured, default datasets. Administrators can edit the dataset configurations, as well as add new ones. For more information about adding datasets for reporting purposes, see your NetVoyant Administrator.

9. Click **Next**.

   This displays the **Data Expressions and Settings** page.

10. You can enter or edit the following parameters:

Parameter	View types	Description
Expressions	All	Select the expressions for which you want the view to display data. If there are no expressions displayed or the expression you need is not listed, click **Add** to add a new expression.
		For more information about adding expressions, see "Editing Data Expressions for a View" on page 140.
Distribution Ranges	Distribution	Add, edit, or remove the ranges used for a distribution table or graph. These distribution ranges determine how the data is grouped in the view.
Scorecard Target	Scorecards	Edit the target used for a Scorecard view to determine what values are considered acceptable for the data.
Where	Top - N tables and charts Protocol Pie/Table	Use this field to limit the items shown in the view by a defined set of criteria. This must follow the syntax of an SQL query clause. For assistance with this advanced reporting feature, contact NetQoS Technical Support.
Group By	Top - N tables and charts Protocol Pie/Table	If you are using aggregations for the expressions in the view, use this field to group items in a report by a specified property or field name. This can be a NetVoyant property or field name preceded by a $ sign.
		For example, $ProtocolName can be used to group protocol data that have the same name into the same section in a Protocol pie chart.
Order By	Top-N tables and charts	Select the expression used to sort data in a Top-N table view to determine what data the view emphasizes.
Limit (top-n)	Top-N tables and charts	Enter the number of poll instances you want the NetVoyant reporting tool to display in the Top-N table.

Parameter	View types	Description
Show Projection	Group Summary	Select whether to add a projection line to a Group Summary view.
		Projection lines indicate the direction that your data is taking over a period of time and can help you predict performance based on the trending of available data.
		The NetVoyant reporting tool calculates the projection line from baseline values in your data.
Show Baseline and Projection	Trend charts	Select whether to show a projection line (weekly or longer data) or baselines (for hourly and daily data) on a Trend view. If you select to display them, the display depends on the time period selected for the report page.
		Hourly baselines display normal ranges of values during a selected time period and can help you identify abnormal values ignoring differences based on time of day.
		Projection lines indicate the direction your data is taking over a period of time and can help predict performance based on the trending of available data.
		The NetVoyant reporting tool calculates the projection line from baseline values in your data.

11. Click **Next**.

This displays the **Review Summary and Save** page.

12. Review the settings for the new view.

If the settings are not correct, you can click **<< Back** to return to any one of the Custom View Wizard pages and make the needed changes. Then return to the last page to review the changes.

13. Click **Save**.

This creates the custom view as you defined it and adds it to the list of custom views.

14. Close the Custom View Wizard, or use it to create another custom view:

- To create another custom view, click **Create Another View**.
- To close the Custom View Wizard, click **Close**.

Cloning Settings of an Existing Custom View

If you want to create multiple views using the same settings, you can clone the settings of an existing custom view to create additional views. This is a convenient way to create different versions of a view using the same dataset and similar expressions.

To clone a custom view's settings:

1. While you are in the Custom View Wizard, save the view.

2. Before you close the Custom View Wizard, click a number at the top to select the page on which you want to make changes for the second view.

3. Make all desired edits for the new view.

4. Click the **1** at the top of the Custom View Wizard to select the **Name and Type** page.

5. Edit the **View Name** of the view to a new name to differentiate it from the cloned view.

6. Click the **5** at the top of the Custom View Wizard to select the **Review Summary and Save** page.

7. Click **Save**.

    This creates another custom view and adds it to the list of custom views.

8. *(Optional)* Repeat steps 2 through 7 to create additional views.

9. Click **Close** to close the Custom View Wizard.

WORKING WITH VIEW TYPES AND STYLES

When you create custom views in the NetVoyant reporting tool, you must specify the type and style for the view. This determines the data displayed in the view and the way it is presented.

Note: In an unregistered NetVoyant system, only Administrator or Designer user account types can create custom views. If your NetVoyant system is registered with the NetQoS Performance Center as a data source, only user accounts with an Administrator or Power User NetVoyant product privilege can create custom views.

NetVoyant View Types

Each view has a view type that determines what type of data it can include and how you can display the data. Some of these view type are limited by time period or group selection.

You can display and create views with the following view types:

-   Management - Scorecard
-   Management - Distributions
-   Management - Group Distributions
-   Management - Group Comparisons
-   Management - Group Summary
-   Management - Sub Group Summary
-   Operations - Protocol Pie/Table
-   Capacity Planning - Top Projections
-   Capacity Planning - Top Closest to Threshold
-   Capacity Planning - Top Changes
-   Service Level Reporting - Top Deviation from Normal
-   Service Level Reporting - Top Threshold Violations
-   Operations - Top-N
-   Management - Top-N Details
-   Detail View - Trend
-   Detail View - Calendar

Management - Scorecard

This view type displays an overview scorecard for a selected period of time using the average values for an expression across multiple groups or subgroups. You can select a goal range for the values to determine how the NetVoyant reporting tool displays the values in the scorecard.

It is designed to provide a management overview of the service level being provided by the device groupings within a selected reporting group in terms of a specified parameter. This will assist viewers of a report to immediately see where there may be problems and how pervasive the problem might be.

For more information, see "Scorecards Report" on page 56.

Management - Distributions

This view type displays aggregate values for an expression broken down according to distribution ranges, which enables you to compare performance against pre-defined service levels. You can add, edit, or remove the ranges used for a distribution table or graph.

It is designed to provide a high-level overview of the service level being provided by the devices within a selected reporting group in terms of a specified parameter. This will assist viewers of a report to immediately see where there may be problems and how pervasive the problem might be.
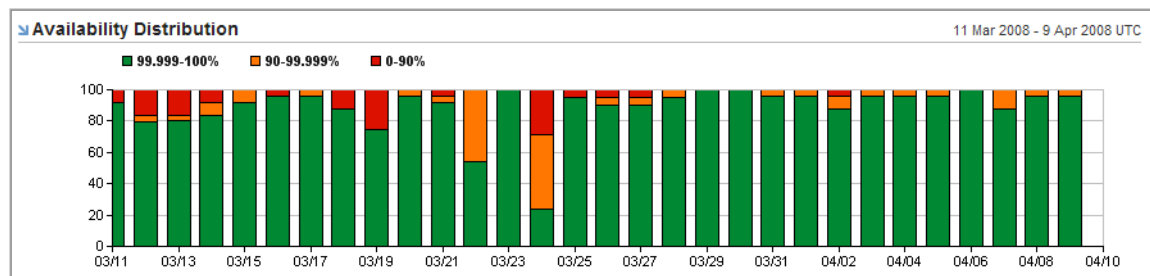
Management - Group Distributions

This view type compares aggregate values for an expression broken down according to distribution ranges across multiple groups or subgroups.

It is designed to provide a high-level overview of the service level being provided by the device groupings within a selected reporting group in terms of a specified parameter. This will assist viewers of a report to immediately see where there may be problems and how pervasive the problem might be.

Note: You can add, edit, or remove the ranges used for a distribution table or graph.
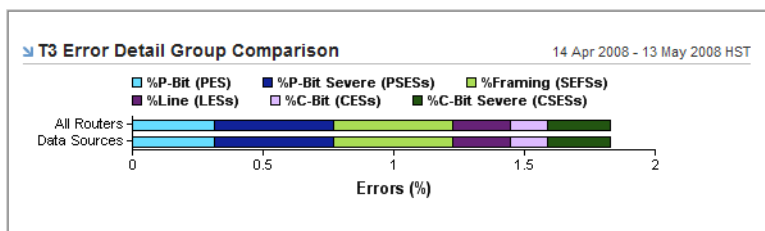
Management - Group Comparisons

This view type compares aggregated values for an expression across multiple groups or subgroups.

It is designed to provide a high-level comparison of the service level being provided by the device groupings within a selected reporting group in terms of a specified parameter that is monitored by the NetVoyant product.
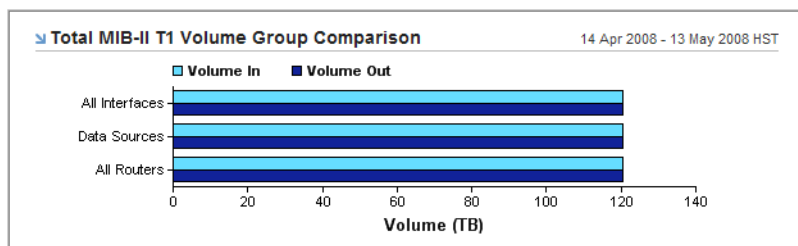
Management - Group Summary

This view type displays aggregate values for an expression for a selected group on an hourly, weekly, monthly, or quarterly basis. Group Summary views can display a projection line.

It is designed to provide a high-level overview of the service level being provided by the devices within a selected reporting group in terms of a specified parameter that is monitored by the NetVoyant product.
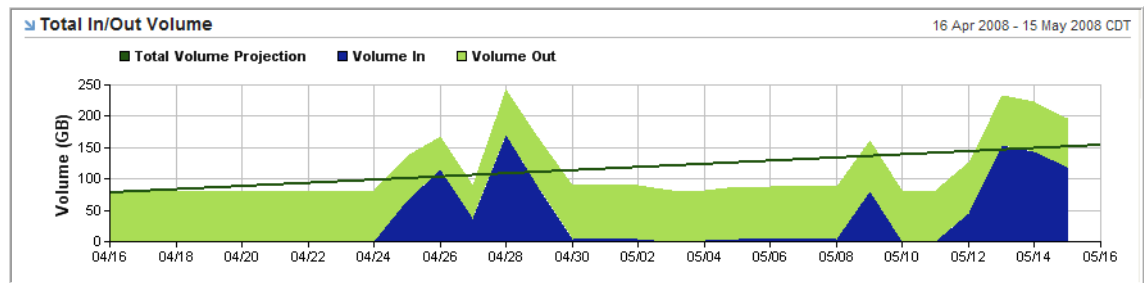
Management - Sub Group Summary

This view type compares aggregate values for an expression on an hourly, weekly, monthly, or quarterly basis across all subgroups of a selected reporting group.

It is designed to provide a high-level comparison of the service level being provided by the device groupings within a selected reporting group in terms of a specified parameter that is monitored by the NetVoyant product.
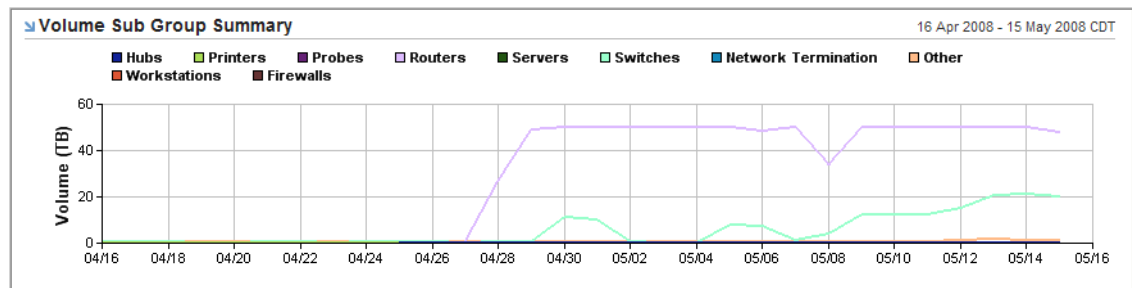
Operations - Protocol Pie/Table

This view type displays a pie graph and table describing the protocols observed in your network traffic by an RMON2 probe or data collected using Cisco's Network Based Application Recognition (NBAR).

It is designed to provide a high-level comparison of the traffic levels on the devices within a selected reporting group.

For more information, see "Protocol Distribution Report" on page 73.
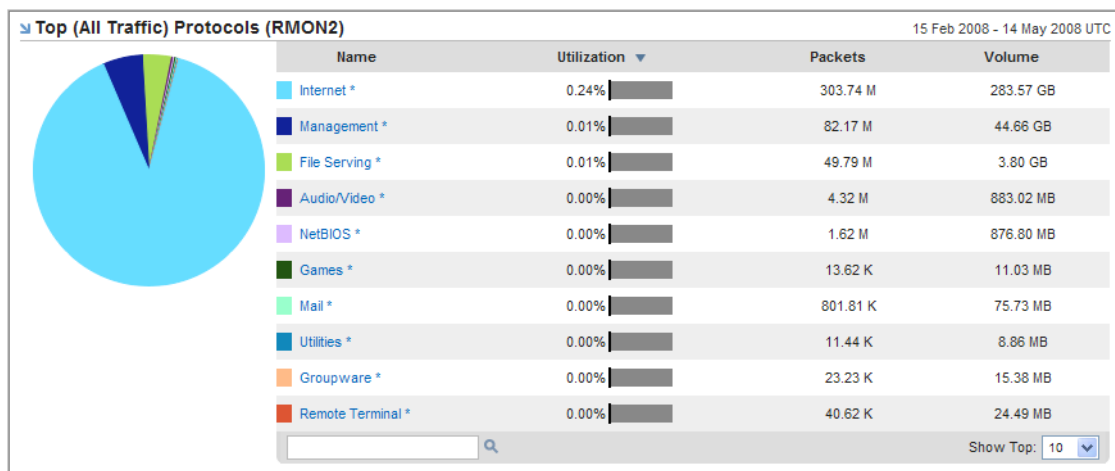
Capacity Planning - Top Projections

This view type displays average values for an expression for the past 30 days and projected values for 30, 60, and 90 days. By default, these views display poll instances sorted from highest to lowest according to their average expression values for the past 30 days.

It is designed to provide focus to those devices experiencing the highest levels in terms of a specified parameter that is monitored by the NetVoyant product. The projected values provide growth rate information to assist in making proactive network management decisions.

For more information, see "Top Projections Report" on page 63.

Capacity Planning - Top Closest to Threshold

This view type displays those poll instances with values for a selected expression that are closest to the threshold for that expression. By default, these views sort poll instances from shortest to longest according to how long until it projects that the value will surpass the threshold.

It is designed to provide focus to those devices experiencing levels at or near threshold values of a specified parameter that is monitored by the NetVoyant product. This information can be used to make proactive network management decisions.

For more information, see "Top Closest to Threshold Report" on page 63.

Closest to Threshold - Latency				15 Feb 2008 - 14 May 2008 UTC
Name	Metric	Average	Threshold	Days to Threshold ▲
ALTISYS	Average Latency (ICMP)	0.4 ms	0.7 ms	2
QARouter-2620-4.QA.local	Average Latency (ICMP)	1.5 ms	2.9 ms	6
QARouter-2821.QA.local	Average Latency (ICMP)	1.1 ms	2.2 ms	10
QARouter-6509-8	Average Latency (ICMP)	0.4 ms	0.8 ms	16
QASwitch-3750	Average Latency (ICMP)	0.7 ms	1.4 ms	123
nclab_rtr_01.netqos.local	Average Latency (ICMP)	40.4 ms	80.8 ms	142
QARouter-2620-5.QA.local	Average Latency (ICMP)	1.8 ms	3.6 ms	147
NPI27E04B	Average Latency (ICMP)	2.4 ms	4.8 ms	181

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Capacity Planning - Top Changes

This view type displays the average values for an expression for the past 30 days and the 95th percentile of values for the current month and the previous month. By default, these views display poll instances sorted from highest to lowest according to the percent change in the 95th percentile of values for the current month.

It is designed to provide focus to those devices experiencing the highest levels of change over time for a specified parameter that is monitored by the NetVoyant product. This information can be used to make proactive network management decisions.

For more information, see

⊿ Top Changes - Device CPU Utilization					15 Apr 2008 - 14 May 2008 UTC
Name	Metric	Current Month Average	Current Month 95th %	Previous Month 95th %	% Change of 95th % ▼
QA5-223 - Intel	Processor Load	0.19%	17.12%	46.32%	-170.6
QA5-223 - Intel	Processor Load	0.19%	18.12%	38.42%	-112.0
QA5-224 - Intel	Processor Load	0.43%	60.40%	12.76%	78.9
QA5-224 - Intel	Processor Load	0.63%	57.78%	13.07%	77.4
QA1-16 - Intel	Processor Load	2.61%	61.53%	16.94%	72.5
QA1-14 - Intel	Processor Load	0.36%	18.39%	5.11%	72.2
ALTISYS - Intel	Processor Load	4.73%	83.15%	30.83%	62.9
ALTISYS - Intel	Processor Load	4.73%	83.10%	30.83%	62.9
QA1-14 - Intel	Processor Load	0.43%	26.78%	14.51%	45.8
QA1-16 - Intel	Processor Load	1.61%	42.26%	25.00%	40.8

Show Top: 10

Service Level Reporting - Top Deviation from Normal

This view type displays the poll instances with values for an expression that most deviate from the baseline for that expression. These views display poll instances sorted from highest to lowest according to the percentage of deviation from the baseline.

It is designed to provide focus to those devices experiencing the greatest levels of change for a specified parameter using a rolling 30-day baseline. This information can be used to make proactive network management decisions.

If you select a different time period for a report, the "normal" is calculated differently; however, all "normals" are averages based on the hourly rollup values.

For more information, see "Top Deviation from Normal Report" on page 65.

⊾ Top Deviation From Norm - Device Memory Util				16 May 2008 08:21 - 09:21 CDT
Name	**Metric**	**Normal**	**Actual**	**Deviation (%)** ▼
QA1-11 - D:\ Label:New Volume Serial Number acd1d1a0	Percent Used	0.63%	0.11%	-82.8
QA1-16 - D:\ Label:New Volume Serial Number acd1d1a0	Percent Used	1.60%	2.04%	27.3
QA1-11 - Physical Memory	Percent Used	35.24%	27.51%	-21.9
QA5-224 - D:\ Label: Serial Number e82bc899	Percent Used	6.40%	7.69%	20.2
QA1-16 - Virtual Memory	Percent Used	22.59%	19.18%	-15.1
QA1-11 - C:\ Label: Serial Number 8c1510b6	Percent Used	20.77%	23.28%	12.1
QA1-16 - Physical Memory	Percent Used	35.00%	31.31%	-10.5
QA1-13 - D:\ Label:New Volume Serial Number acd1d1a0	Percent Used	1.39%	1.53%	9.6
QA5-224 - Physical Memory	Percent Used	53.01%	57.92%	9.3
QA5-224 - C:\ Label: Serial Number 88c40e0e	Percent Used	51.68%	47.40%	-8.3
				Show Top: 10

Service Level Reporting - Top Threshold Violations

This view type displays poll instances with the most threshold violations for a selected expression and how many times and how long the expression was over threshold. These views also display other relevant data for each poll instance to help you identify trouble areas.

It is designed to provide focus to those devices experiencing the greatest levels of threshold violations for a specified parameter. This information can be used to identify trouble spots on your network and make proactive network changes.

Viewers can hover the pointer over the metric value to display the threshold information for the metric.

For more information, see "Top Threshold Violations Report" on page 67.

⊾ Top Threshold Violations - Interfaces								16 Feb 2008 - 15 May 2008 CDT
Name	**Util In (%)**	**Util Out (%)**	**Errors In**	**Errors Out**	**Discards In**	**Discards Out**	**Violation Duration (%)** ▼	**Number of Unique Violations**
Device1 - backup internet link to BRBBD001 ATM4/0.-old(3816)	0.00%	0.00%	0.16%	13.30%	8.41%	33.28%	0.02%	1
Device155 - edge network	0.00%	0.00%	0.34%	100.00%	1.43%	0.00%	0.02%	1
Device209 - edge network	0.00%	0.00%	0.41%	100.00%	1.62%	0.00%	0.01%	3
Device11 - edge network	0.00%	0.00%	0.40%	100.00%	1.59%	0.00%	0.01%	3
								Show Top: 10

Operations - Top-N

This view type displays a graph or table of the poll instances with the highest values for a selected expression.

It is designed to provide focus to those devices experiencing the highest levels for a specified parameter. This information can be used to identify areas of concern on your network and make proactive network changes.
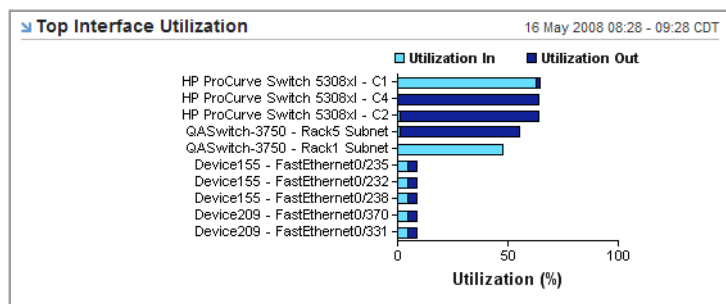
Management - Top-N Details

This view type displays an overview graph of the poll instances with the highest values for a selected expression.

It is designed to provide focus to instance-specific trend lines for those managed objects that are most likely to exhibit problems or failures. This information can be used to identify areas of concern on your network and help you make proactive network changes.
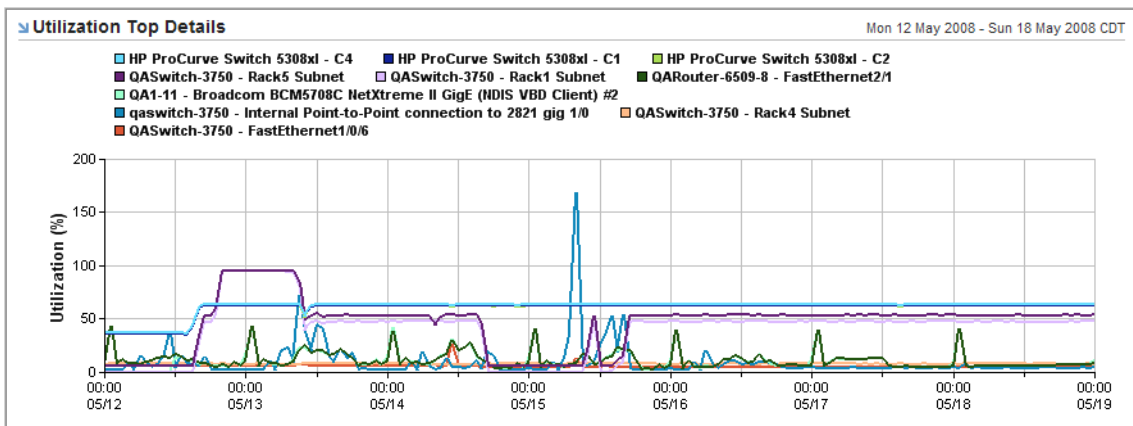
Detail View - Trend

This view type displays a trend graph for a selected expression on a selected interface or device. Trend graphs can display hourly baselines (for hourly and daily data) or a projection line (weekly or longer data). For more information, see "Displaying a Projection Line or Hourly Baselines on a Trend View" on page 147.

The view displays the number of days until the value is expected to cross the threshold in its footer. If the value is not expected to cross the threshold, the view displays **(flat slope)** instead. If an expression is approaching its threshold, the view also displays a line indicating the threshold for the value.
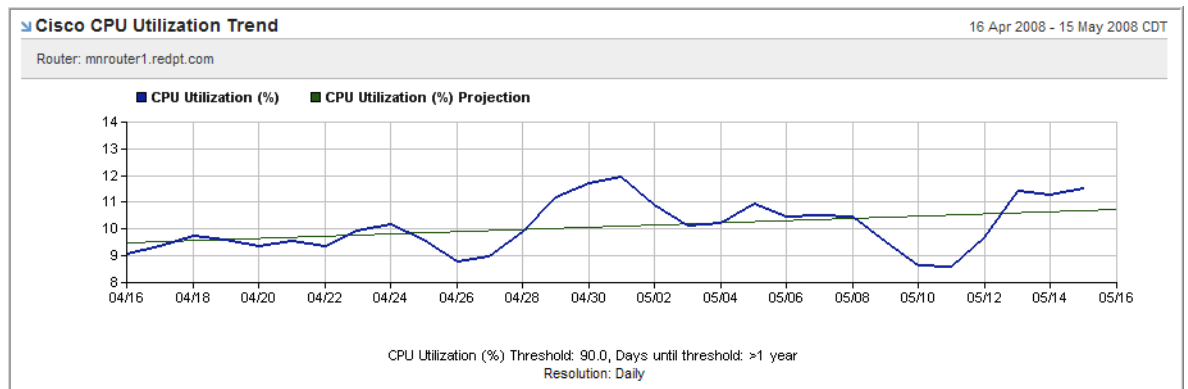
Note: The effects of a threshold change in an alarm profile assigned to the context object are not seen until the NetVoyant product recalculates the rolling baselines during periodic rediscovery (midnight, by default).

Detail View - Calendar

This view type displays the range of values for a selected expression on a selected interface or device for each day and hour over a thirty day period. It is designed so that the highest values are displayed in the deepest shade of red, and the lowest values are displayed in the deepest shade of green.

It is designed to provide a visual comparison of desirable and undesirable performance levels over a one-month period. This information can be used to identify areas of concern on your network and help you make proactive network changes.
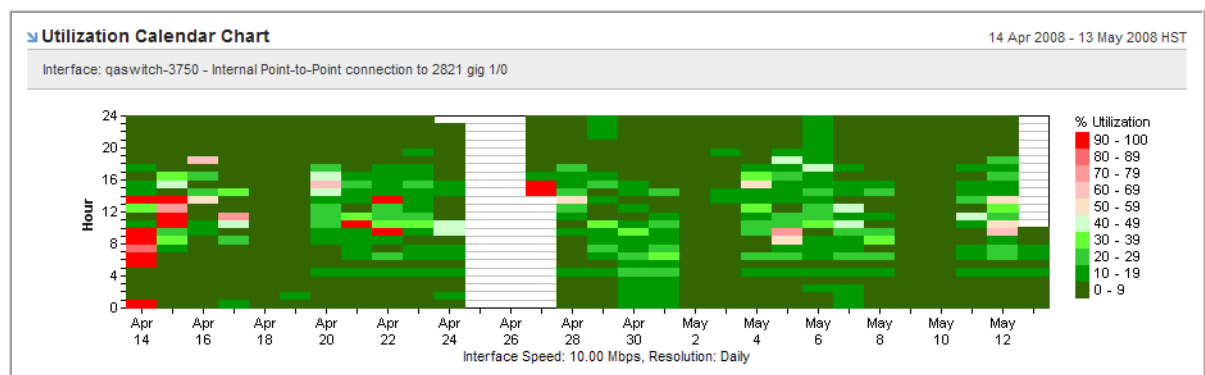
NetVoyant View Styles

Each view has a view style that determines how the NetVoyant reporting tool displays report data. The view styles that are available for a view are dependent on the view type. For more information about view types, see "NetVoyant View Types" on page 126.

You can display and edit views with the following view styles:

- Stacked Bar Chart
- Bar Chart
- Line Chart
- Stacked Area Chart
- Table
- Gauges
- Calendar

Stacked Bar Chart

This view display style stacks one or multiple expressions as colored bars in a chart.
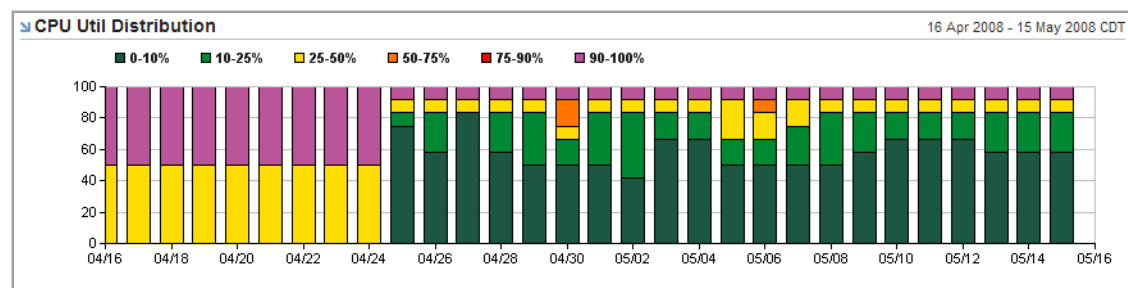
Bar Chart

This view display style plots one or multiple expressions as colored bars on the same axis.
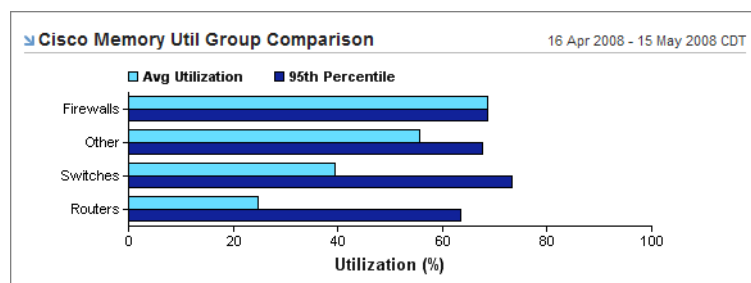
Line Chart

This view display style graphs an expression or multiple expressions as lines.
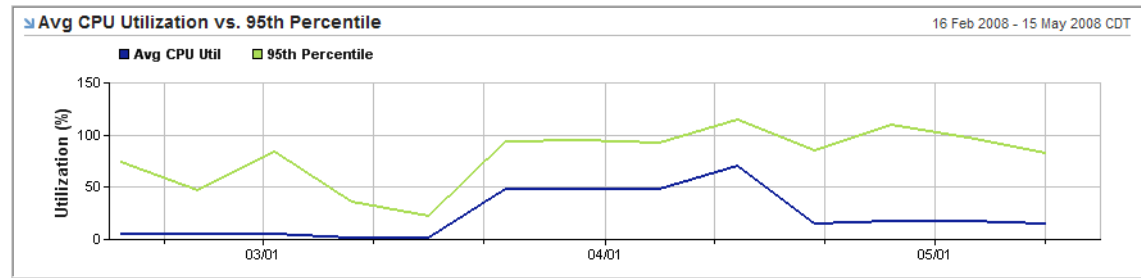
Stacked Area Chart

This view display style graphs one or multiple expressions as colored areas stacked on top of one another.
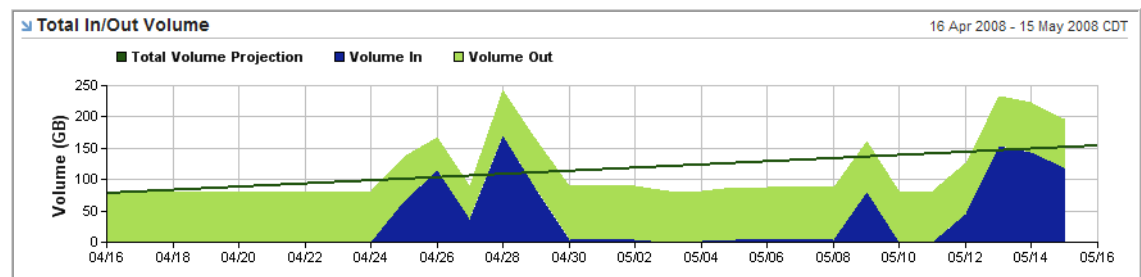
Table

This view display style provides a list of one type of data in a sortable table. Each line represents data from one poll instance, interface, device, or group.

Note: When adding a table style view to a report page, it is best to place it in a full-width (header or footer) area; otherwise, the report page reduces the table view's width to half size, which can result in poor display.

Gauges

This view display style graphs data as gauges indicating desirable and undesirable numbers according to baselines and thresholds. You cannot create new custom gauge-style views or edit existing gauge-style views; however, you can add existing gauge-style views to your report pages.
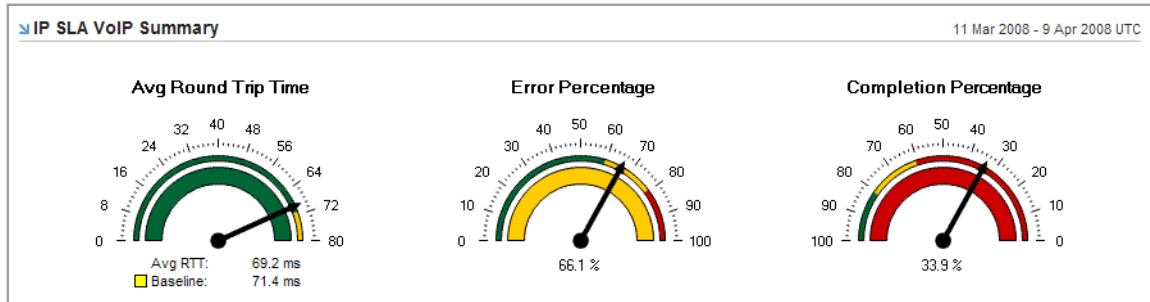
Calendar

This view style displays the range of values of a selected expression for a selected interface or device for each day and hour over a thirty-day time period. This style is available only for Detail View - Calendar view types, and is the only valid style for that type.
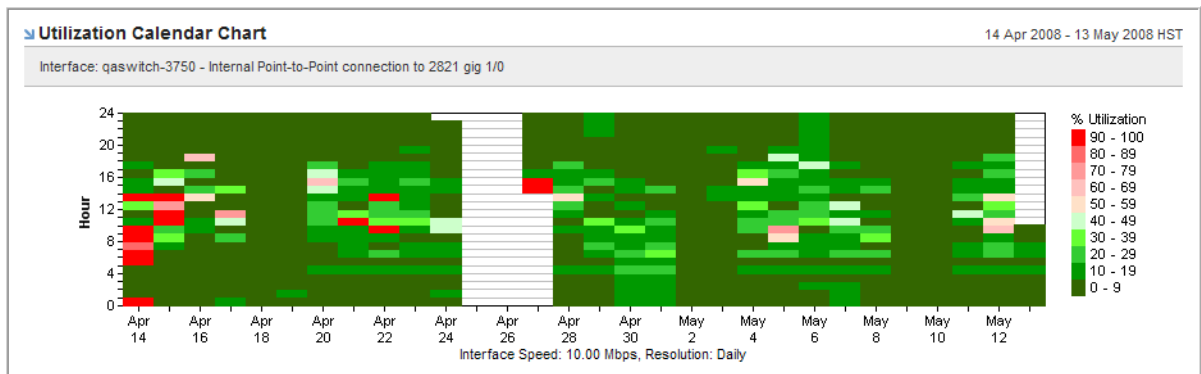
Editing Axis Titles and Ranges on a Graph View

You can edit the axis titles and ranges for custom views to further customize the presentation of the data. The axes available depend on the view type and style; some view will have only an X- axis or a Y-axis, and others can have both. Some view types can utilize a second Y-axis when more than one expression is specified.

To edit the axis titles or ranges on a graph view:

1. Open the view for editing.

   For more information, see "Editing a View" on page 43.

2. Click **Next >>** to display the **Style and Options** page.

3. You can edit all or some of the following parameters for an axis:

Parameter	Description
Title	Specify the title for the graph axis. For example, % Utilization.
Auto-Scale	Select one of the units to specify how the NetVoyant reporting tool scales the data on the selected axis.
From	Enter a starting integer for a custom range for the axis.
	If you do not specify a value, the NetVoyant reporting tool automatically selects an appropriate range starting value for the data in the view.
To	Enter an ending integer for the range for the axis.
	If you do not specify a value, the NetVoyant reporting tool automatically selects an appropriate range ending value for the data in the view.

4. Click the **5** at the top of the Custom View Wizard to select the **Review Summary and Save** page.

5. Click **Save**.

This saves your changes.

6. Click **Close**.

Editing the Thresholds for a View

You can edit the thresholds for some views. These thresholds are used to configure the values for which the NetVoyant reporting tool displays status colors. For example, you can edit the level over which it displays values as red in a graph.

Note: Thresholds specified in the Custom View Wizard are for display purposes only. Threshold values related to NetVoyant datasets are configured in the NetVoyant Console and are used to trigger threshold events based on alarm profiles.

You can edit thresholds on the following view types:

- Management - Group Comparisons *(views with one expression)*
- Capacity Planning - Top Changes
- Service Level Reporting - Top Deviation from Normal
- Operations - Top-N *(chart-style views with one expression)*

To edit the thresholds for a view:

1. Open the view for editing.

For more information, see "Editing a View" on page 43.

2. Click **Next** to display the **Style and Options** page.

3. In the **Thresholds** section next to each status color, enter the value over which the NetVoyant reporting tool displays data as that color.

You can edit one or both of the following thresholds:

Color	Description
Yellow	Indicates values that are close to threshold.
Red	Indicates values that are over threshold.

4. Click the **5** at the top of the Custom View Wizard to display the Review Summary and Save page.

5. Click **Save**.

   This saves your changes.

6. Click **Close**.

Editing Data Expressions for a View

An expression is a combination of variables, symbols, values, and identifiers that calculate a numeric result or produce some other type of value. The expression is said to evaluate to that value. As in mathematics, the expression is (or can be said to have) its evaluated value; the expression is a representation of that value.

The report data in a view comes from an expression or multiple expressions, which are built from expressions in the dataset selected for the view. You can edit the expressions on which a view reports to configure what type of data the view displays.

NetVoyant Reporting Operators

Arithmetic operators are used to perform standard mathematical operations on variables in an expression. You can use the following operators in the expressions displayed in NetVoyant report views:

Operator	Description
+	Adds two expression values.
–	Subtracts the value of the second expression from the value of the first.
*	Multiplies two expression values.
/	Divides the value of the first expression by the value of the second.
AVG()	Calculates the average value for expression data during the rollup period.
SUM()	Calculates the sum of all expression data during the rollup period.
MAX()	Calculates the maximum value for expression data during the rollup period.
MIN()	Calculates the minimum value for expression data during the rollup period.

Operator	Description
PERCENTILE()	Calculates the Nth percentile for expression data during the rollup period, where N is a whole number less than 100 that you enter. For example, you can enter **"95"** for this calculation. The NetVoyant reporting tool then calculates the 95th percentile, for which 95%t of data for the rollup period fell below this value.
COUNT()	Calculates the number of expression data points collected during the rollup period.

Editing Single Expression View Types

The following view types can display data for only one expression:

- Management - Scorecard
- Management - Distributions
- Management - Group Distributions
- Management - Top-N Details

To edit the expression in a view that reports on one expression:

1. Open the view for editing.

   For more information, see "Editing a View" on page 43.

2. Click the **4** at the top of the Custom View Wizard to select the **Data Expressions and Settings** page.

   This page displays the expression on which the view reports.

3. Click the right arrows (**>>**) to display the **Expression Wizard**.

   Note: The Expression Wizard displays the expressions defined in the dataset selected for the view. Contact your NetVoyant administrator if you need additional expressions.

4. Use the Expression Wizard to build an expression:

   - Select an expression name from the first drop-down list.
   - Select an operator from the second drop-down list.
   - If you are using an operator, select an expression name from the third drop-down list.

5. Click **Build Expression**.

   This displays the new expression.

6. Click the **5** at the top of the Custom View Wizard to display the **Review Summary and Save** page.

7. Click **Save**.

   This saves your changes.

8. Click **Close**.

Editing Multiple Expression View Types

Most of the NetVoyant view types can report on multiple expressions. When you edit these expressions, you also specify the order that the NetVoyant reporting tool uses to display them.

Note: You cannot display view thresholds for a view using more than one expression.

To edit the expressions in a view using multiple expressions:

1. Open the view for editing.

   For more information, see "Editing a View" on page 43.

2. Click the **4** at the top of the Custom View Wizard to select the **Data Expressions and Settings** page.

   This page displays the expressions on which the view reports.

   • Select an expression and click **Remove** to remove it.
   • Select an expression and click **Raise** or **Lower** to configure in what order the NetVoyant reporting tool displays the expression in the view.

3. Add a new expression or change an existing expression:

   • Click **Add** to add a new expression.

     This displays the **Add Expression** dialog box.
   • Select an expression and click **Change** to edit an existing expression.

     This displays the **Change Expression** dialog box.

4. Enter or edit the following parameters:

Parameter	Description
Name	Enter a name that describes the data that the expression represents. The NetVoyant reporting tool uses the name to label the data in the view.
	For example, you can enter `Interface Utilization` to describe the expression ifutil.
Expression	Use the Expression Wizard to build an expression to enter or edit an expression:
	• Select an expression name from the first drop-down list.
	• Select an operator from the second drop-down list.
	• If you are using an operator, select an expression name from the third drop-down list.
	Click **Build Expression**.
Color	Select the **Color** to use to label data for the expression in the view.

Note: The Expression Wizard displays the expressions defined in the dataset selected for the view. Contact your NetVoyant administrator if you need additional expressions.

5. Repeat steps 3 and 4 to add or edit the rest of the expressions in the view.

6. Click the **5** at the top of the Custom View Wizard to display the Review Summary and Save page.

7. Click **Save**.

8. Click **Close**.

Editing the Distribution Ranges for a View

You can add, edit, or remove the ranges used for a distribution table or graph. These distribution ranges determine how the data is grouped in the view. You can only edit the distribution ranges on distribution-type views.

Warning: Adding a large number of distribution ranges to a view can severely limit reporting performance.

To edit the distribution ranges for a view:

1. Open the view for editing.

   For more information, see "Editing a View" on page 43.

2. Click the number **4** at the top of the Custom View Wizard to display the Data Expressions and Settings page.

   This page displays the expression on which the view reports and the distribution ranges for the expression values.

3. In the **Distribution Ranges** section, perform one of the following actions:

   - Select a distribution range and click **Change** to edit the distribution range.

     This displays the **Change Distribution Range** dialog box.

   - Click **Add** to add a new distribution range.

     This displays the **Add Distribution Range** dialog box.

4. Enter or edit the following parameters:

Parameter	Description
Name	Enter a name for the distribution range, which the NetVoyant reporting tool uses to label data in the range in the view.
Range	Enter the range of data into which you want to aggregate data. The NetVoyant reporting tool aggregates data within the distribution range formed between the number on the left to the number on the right.
Color	Select a color for the distribution range, which is used to label data in the range in the view.

5. Click **OK**.

6. Repeat steps 3 and 4 to add or edit other distribution ranges.

7. *(Optional)* To delete a distribution range, select the distribution range and click **Remove**.

8. Click the **5** at the top of the Custom View Wizard to select the Summary/Save page.

9. Click **Save**.

This saves your changes.

10. Click **Close**.

Setting the Scorecard Target for a View

You can edit the target used for scorecard views to determine what values are seen as acceptable for the data. Those values that meet the scorecard target display a green checkmark on the scorecard. Those values that do not meet the scorecard target display a red exclamation point on the scorecard.

Values that fall short of a target display a red exclamation point

Group ▲	Target ⇕	Oct ⇕	Nov ⇕	Dec ⇕	Average ⇕
Network Termination	>= 98.00	❗ 92.868	❗ 89.958	❗ 0.000	❗ 60.942
Other	>= 98.00	✔ 99.992	✔ 100.000	✔ 99.918	✔ 99.970
Printers	>= 98.00	✔ 99.984	✔ 99.995	✔ 99.915	✔ 99.965
Probes	>= 98.00	❗ 76.228	❗ 8.403	❗ 0.000	❗ 28.210
Routers	>= 98.00	✔ 99.901	❗ 97.042	❗ 97.358	✔ 98.100
Servers	>= 98.00	✔ 99.281	✔ 99.708	✔ 99.905	✔ 99.631

To set the scorecard target for a view:

1. Open the view for editing.

For more information, see "Editing a View" on page 43.

2. Click the **4** at the top of the Custom View Wizard to select the **Data Expressions and Settings** page.

This page displays the expression on which the view reports and the scorecard target.

3. Select one of the operators and enter a target value to define the range for the **Scorecard Target**.

For example, select the **>=** operator and enter "95" to define a scorecard target of greater than or equal to 95.
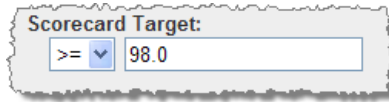
Scorecard Target:
>= ∨ | 98.0

4. Click the **5** at the top of the Custom View Wizard to select the **Review Summary and Save** page.

5. Click **Save**.

    This saves your changes.

6. Click **Close**.

Editing the Default Sort Order for a Top-N View

You can edit how the NetVoyant reporting tool sorts the data in a Top-N table view to determine what data the view emphasizes. You can also sort any table view temporarily by any of the columns in the table.

To edit the default sort order for a view:

1. Open the view for editing.

    For more information, see "Editing a View" on page 43.

2. Click the **4** at the top of the Custom View Wizard to display the Data Expressions and Settings page.

    This page displays the expression on which the view reports and the Order By.

Order By:
| Availability ∨ | Descending ∨ |
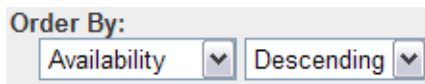
3. From the **Order By** list, select the expressions by which to sort the view.

4. Select one of the following:
    - **Descending**
    - **Ascending**

    For example, while editing a Top Least Available view on the Operations Summary report, select the **Availability** expression and select **Descending** to sort the view to show the least available devices in the table first.

5. Click the **5** at the top of the Custom View Wizard to display the Review Summary and Save page.

6. Click **Save**.

    This saves your changes.

7. Click **Close**.

Using Projection Lines and Hourly Baselines

You can add hourly baselines (for hourly and daily data) and a projection line (weekly or longer data) to Trend views. You can also add projection lines to Group Summary views. For more information, see "Displaying a Projection Line or Hourly Baselines on a Trend View" on page 147 and "Displaying a Projection Line on a Group Summary View" on page 147.

Hourly Baselines. Hourly baselines display normal ranges of values during a selected time period and can help you identify abnormal values ignoring differences based on time of day. The NetVoyant reporting tool calculates the average value for each hour of the day from a 30-day rolling window of data and creates hourly baselines.

Hourly baselines for a daily time period
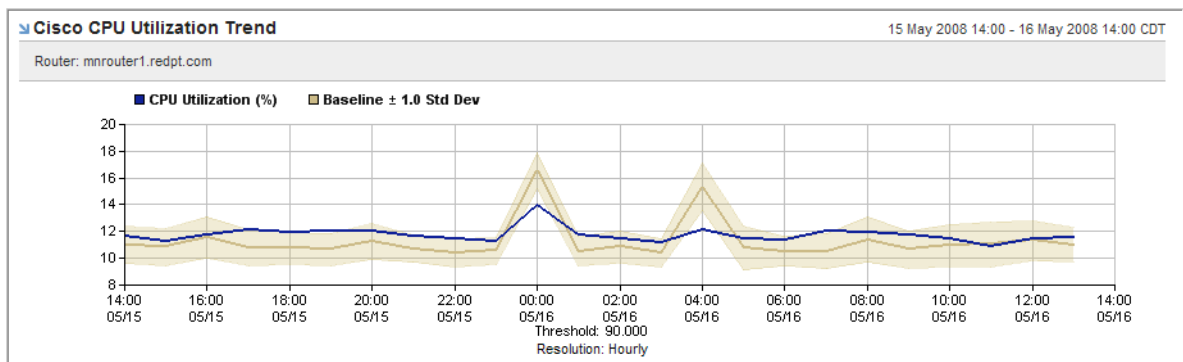
The dark bar in the center of an hourly baseline represents the average value for that hour of the day. The light orange bar represents one standard deviation from a baseline value. If your data falls outside of an hourly baseline bar on a view, the data is varying beyond one standard deviation, which could represent unusual data for that hour.

Projection Lines. Projection lines indicate the direction that your data is taking over a period of time and can help you predict future performance based on the trending of available data. A projection line is a linear regression trend line calculated from the data in the view.

A projection line on the same view for a monthly time period
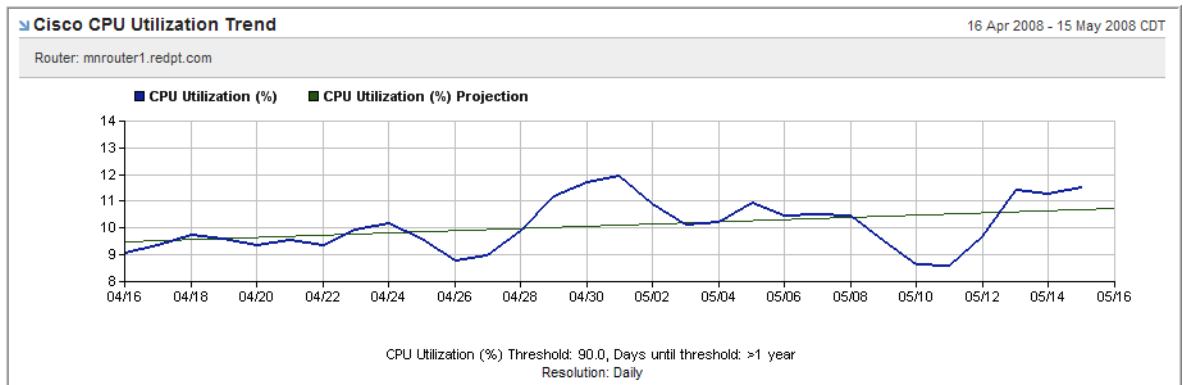
Displaying a Projection Line on a Group Summary View

You can add a projection line to a Group Summary view. You can also add hourly baselines (for hourly and daily data) and a projection line (weekly or longer data) to a Trend view. For more information, see "Displaying a Projection Line or Hourly Baselines on a Trend View".

To display a projection line on a Group Summary view:

1. Open the view for editing.

    For more information, see "Editing a View" on page 43.

2. Click the **4** at the top of the Custom View Wizard to display the Data Expressions and Settings page.

    This page displays the expression on which the view reports.

    Show Projection (weekly and greater):
    ☑ Display Projection for last Expression

3. Place the expression for which you want to display a projection line as the last expression in the list by selecting the expression and clicking **Raise** or **Lower**.

4. Select to **Display Projection for last Expression**.

5. Click the **5** at the top of the Custom View Wizard to display the Review Summary and Save page.

6. Click **Save**.

    This saves your changes.

7. Click **Close**.

Displaying a Projection Line or Hourly Baselines on a Trend View

You can add hourly baselines (for hourly and daily data) and a projection line (weekly or longer data) to a Trend view. You can also add a projection line to a Group Summary view. For more information, see "Displaying a Projection Line on a Group Summary View" on page 147.

To display a projection line or hourly baselines on a Trend view:

1. Open the view for editing.

    For more information, see "Editing a View" on page 43.

2. Click the **4** at the top of the Custom View Wizard to display the Data Expressions and Settings page.

    This page displays the expression on which the view reports.

3. Place the expression for which you want to display a projection line or hourly baselines as the last expression in the list by selecting the expression and clicking **Raise** or **Lower**.

4. Select to **Display Baseline/Projection for last Expression**.

5. Click the **5** at the top of the Custom View Wizard to display the Review Summary and Save page.

6. Click **Save**.

    This saves your changes.

7. Click **Close**.

ADDING OTHER ELEMENTS TO CUSTOMIZE VIEWS

There are some additional elements that you can include in a custom view. These elements provide additional information for interpreting the displayed data.

Adding Footers to Views

You can add a footer to many views, which can add extra information to the view. For some types of trend graphs, you can add the resolution to the view's footer, which can help you determine what type of data you are viewing in a graph. For more information, see "Including View Resolution Information" on page 149.

To add or edit a footer on a view:

1. Open the view for editing.

   For more information, see "Editing a View" on page 43.

2. To display the Style and Options page, click **Next**.

3. Enter the **Footer** text.

4. To display the Review Summary and Save page, click the **5** at the top of the Custom View Wizard.

5. *(Optional)* Select to save the changes to **My Current Session** to only apply the changes for your user account for the current session.

   When you log out, the NetVoyant reporting tool removes the changes.

6. Click **Save**.

   This saves your changes.

7. Click **Close**.

   This closes the Custom View Wizard and adds the footer to the view.

Note: To remove your changes from a view's footer, revert the view to the default settings. For more information, see "Reverting a View to the Default Settings" on page 51.

Adding NetVoyant Properties to Footers

You can enter NetVoyant properties in the footer. To enter a NetVoyant property, enter the property name surrounded by braces. It is also a good idea to include a label for the property.

To enter the interface speed and resolution for an interface view, you can enter the following:

```
Interface Speed In: {ifSpeed}, Speed Out: {ifSpeed}, Resolution: {Resolution}
```

A footer displaying interface speed properties and graph resolution
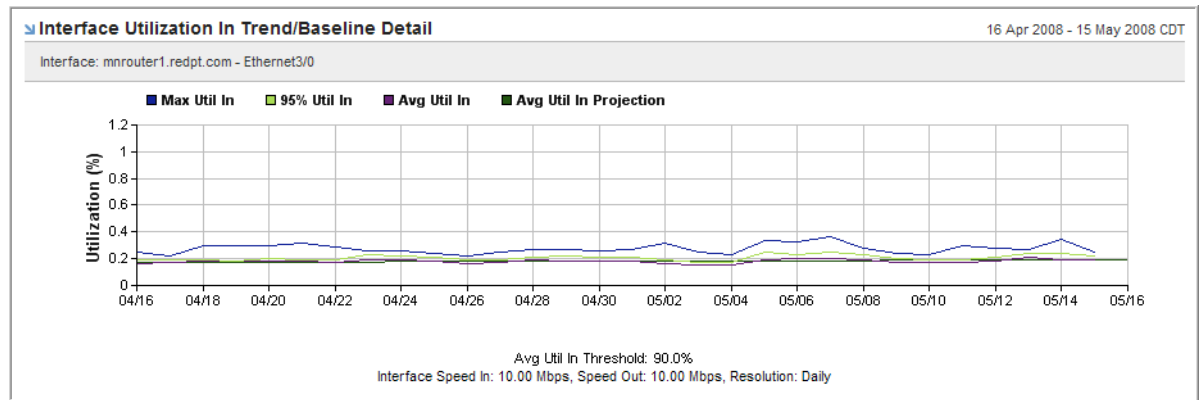
Including View Resolution Information

The resolution for a graph view indicates the time interval used to plot data points on a trend graph. The NetVoyant reporting tool determines the resolution for a trend graph based on the following factors:

- The **polling rate** for the dataset. The polling rate determines how often data is collected from your devices.

- The **data retention and rollup settings** for the poll group for the related dataset. Data retention and rollup settings determine how often polling data is rolled up into optimized collections of data with a lower resolution.

- The **time period** displayed for the report page. To optimize reporting, the NetVoyant reporting tool displays data differently based on the time period that you select for the report page.

Trend graph with a resolution of one day
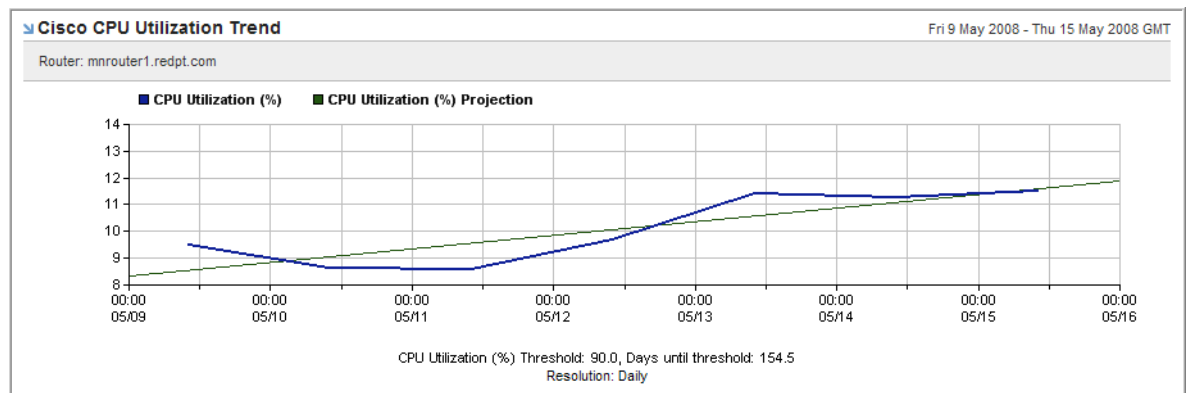
Trend graph with a resolution of one hour
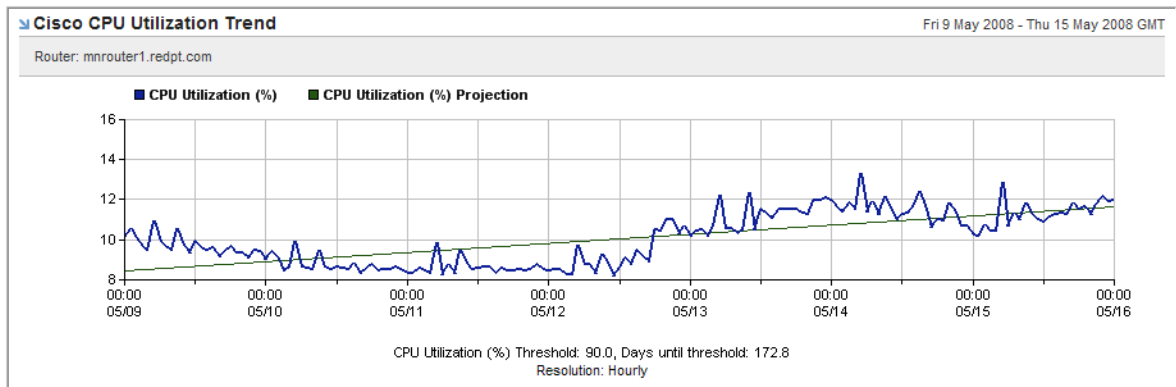
Adding the Resolution to a Trend Graph Footer

Some trend graphs display the resolution of the graph as a footer to the graph, which can help you determine what type of data you are viewing in a graph. For some types of trend graphs, you can add the resolution to the view's footer.

Note: You can add other properties to the footer of a graph view.

To add the resolution to the footer of a graph:

1. Open the graph view for editing in the Custom View Wizard.

2. Click **Next** to display the **Style and Options** page.

3. In the **Footer**, add the following text:

   ```
   Resolution: {Resolution}
   ```


4. Click the **5** at the top of the Custom View Wizard to display the **Review Summary and Save** page.

5. Click **Save**.

6. Click **Close**.

Note: To remove your changes from a view's footer, revert the view to the default settings. For more information, see "Reverting a View to the Default Settings" on page 51.

CHAPTER 6   Reporting Administration

The security features in the NetVoyant reporting tool are similar to those of other NetQoS products and were designed for compatibility with the NetQoS Performance Center. Permissions to access report pages and perform certain tasks are tied to the roles associated with user accounts. An administrator creates a user account for each NetVoyant operator and determines his or her level of product privilege, or access. This design provides a flexible and secure way to determine the product features and reports that each different type of user can use or view.

The product privileges and roles associated with each user account can be shared among NetQoS products. After you register the NetVoyant product with the NetQoS Performance Center, you must manage users, roles, and permissions across all NetQoS products from the NetQoS Performance Center. You must have Administrator product privileges to add, edit, or delete a user.

The current versions of NetQoS NetVoyant and the NetQoS Performance Center support the NetQoS Single Sign-On product, which coordinates user accounts, permissions, and secure access among NetQoS products. An instance of the Single Sign-On software is automatically installed on each computer where a NetQoS product is installed. Single Sign-On settings, such as whether anonymous users are able to log in, control access to those products. More information about this software is provided in the *Single Sign-On Guide*, which is available on the NetQoS Self-Service Portal.

This chapter outlines administration tasks that are performed in the NetVoyant reporting interface. For information about other configuration and administration tasks in the NetVoyant product, refer to the *NetVoyant Administrator Guide*.

- "Changing Your User Account Password" on page 152
- "Configuring Email Servers and Schedules" on page 153
- "Editing the Report Menus" on page 156
- "Working with Roles and User Accounts" on page 159

CHANGING YOUR USER ACCOUNT PASSWORD

When a NetVoyant administrator creates a user account, the account includes a password that enables the user to log into the NetVoyant reporting tool. As a user, you can change the password for your account at any time.

To change your NetVoyant password:

1. From the **Report Pages** menu, select **Administration**.

   The Administration page opens.

2. Under NetVoyant, click **Users**.

   This lists your user account on the **View User Accounts** page.

   Note: If the NetVoyant system is registered as a data source in the NetQoS Performance Center, this automatically opens the NetQoS Performance Center user interface to complete the task. For more information about changing your user password in the NetQoS Performance Center, see the *NetQoS Performance Center Administrator and User Guide.*

3. Select your user account and click **Edit**.

   The **Edit User Account** page opens.

4. Enter or edit the following parameters:

Parameter	Description
Password	Enter the new password for the user account. Passwords are limited to 20 characters.
Confirm Password	Re-enter the password to confirm.

5. Click **Save**.

CONFIGURING EMAIL SERVERS AND SCHEDULES

NetVoyant administrators can configure a Simple Mail Transfer Protocol (SMTP) server that allows users to send or schedule emails in the NetVoyant reporting tool. Users can set up and edit their own email schedules if a NetVoyant administrator has configured the SMTP server. NetVoyant administrators can view, edit, or delete existing email schedules.

Adding an SMTP Server

A NetVoyant administrator must configure a Simple Mail Transfer Protocol (SMTP) server to enable users to send or schedule emails in NetVoyant. If a user attempts to email a report page and an SMTP server has not been configured for the NetVoyant system, it will alert the user to contact an administrator.

To add an SMTP server to NetVoyant:

1. From the **Report Pages** menu, select **Administration**.

   The Administration page opens.

2. In the NetVoyant section, click **Email Server**.

   The **Email Server Settings** page opens.

3. Enter or edit the following settings:

Parameter	Description
Enable Email	Select to enable users to send and schedule emails in the NetVoyant reporting tool.
SMTP Server Address	Enter the IP address or name of the SMTP server.
Email Reply Address	Edit the email reply address. This address is used as the from address for sent emails.
Email Format	Select the format in which you want to send emails. • HTML • Text

4. Click **Save**.

   This adds the designated SMTP server and enables users to send report pages in emails.

Viewing, Editing, or Deleting an Email Schedule

NetVoyant users can create, edit or delete email schedules. Setting up an email schedule can automatically provide data for daily, weekly or monthly reports. Viewer and Designer user accounts can create a schedule when they email report pages and can only view or modify schedules they have created. NetVoyant administrators can view, edit, or delete all existing email schedules.

To view, edit, or delete an email schedule:

1. From the **Report Pages** menu, select **Administration**.

   The **Administration** page opens.

2. Under **User Settings**, click **Email Schedules**.

   The **Email Schedules** page lists the currently configured email schedules.

   Note: If there are no currently schedules emails, the page provides an alert for this condition.

3. To delete an email schedule, select the schedule and click **Delete**.

4. To view or edit an email schedule, select the schedule and click **Edit**.

5. You can view or edit the following settings:

Parameter	Description
Owner	*(Read-only)* The user account that created the email schedule.
Sent To	The email addresses to which the report page is sent.
Subject	The subject line for the email.
Message	The message sent in the body of the email.
Time Zone	The time zone used for generating the report data.
Archive Email	Select this check box to save a copy of the generated report PDF to a database. This does not archive the email message or recipient information.
Scheduling Options	Select one of the following: • **Send Daily** - Select which days of the week to send the email. • **Send Weekly** - Select which day of the week to send the email. • **Send Monthly** - Select to send the email on the last day of each month. • **Send Quarterly** - Select the last month of the first quarter (sends the email on the last day of each quarter). • **Send Yearly** - Select the last month of the year (sends the email on the last day of the year).
Send email at	Use this setting to specify a time of day to send the email. By default, scheduled reports are generated just after midnight (typically around 1:00 a.m., as soon as nightly rollups are completed) in the selected time zone on the day or days selected in the scheduling options. This option specifies a time of day to send the email

6. Click **Save**.

EDITING THE REPORT MENUS

Administrator and Designer user accounts can edit the titles for shared menus and the report pages that appear in each shared menu. Use this feature to customize the report menus for your organization so that the most useful reports are easy to access.

To edit the report menu titles or report pages:

1. From the **Report Pages** menu, select **Administration**.

1. The **Administration** page opens.

2. Under **User Settings**, click **Menus**.

   The **View Menus** page opens.
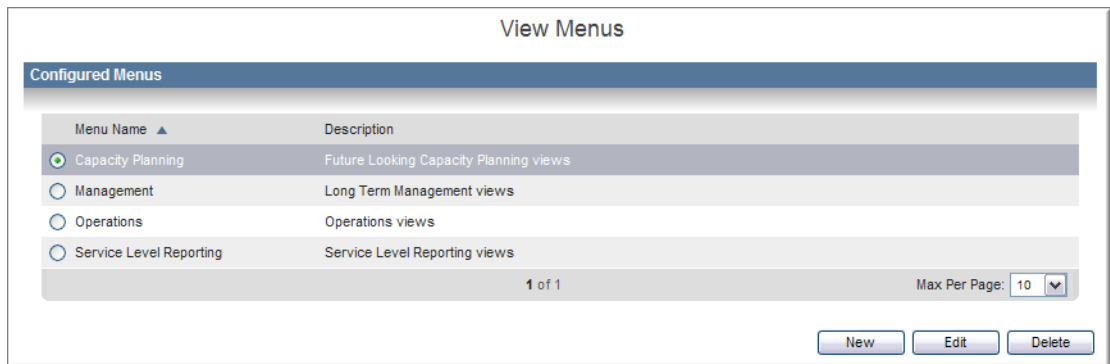
3. Perform one of the following actions:
   - To create a new menu, click **New**.
   - To edit an existing menu, select the menu and click **Edit**.
   - To delete a menu, select the menu and click **Delete**.

   If you are adding a new menu or editing an existing one, the NetVoyant reporting tool displays the **Edit Report Menu** page.

4. Enter or edit the following parameters:

Parameter	Description
Name	Enter the name that you want to use as the heading for the menu.
Description	Enter a description to help you and other users identify what types of report pages are in the menu.
Selected Pages	Perform the following actions to add, reorder, or remove the report pages that are listed in the menu: • To move a report page to the list of **Selected Pages**, select an existing report page from the list of **Available Pages** and click the right arrow. • To rearrange the report pages in the menu, click the up and down arrows. • To remove a report page from the menu, select a report page in the list of **Selected Pages** and click the left arrow.

5. Perform one of the following actions:
   - To save the report menu, click **Save**.
   - To save the menu and add an additional menu, click **Save & Add Another**.

     This adds the menu to the list of available menus.

6. Edit a role to provide access to the menu.

   This adds the menu to the menu bar for that role. For more information about roles, see "Working with Roles and User Accounts" on page 159.

7. *(Optional)* Repeat step 6 to add the menu to other roles.

Configuring Global Settings

You can configure the number of items that the NetVoyant reporting tool shows by default in all views; however, individual users can configure their own views to include a greater or lesser number of items while displaying a view on a report page. For more information, see "Including More Data in a View" on page 22.

Note: You must be a NetVoyant administrator to configure the global settings.

To edit the global settings in NetVoyant:

1. From the **Report Pages** menu, select **Administration**.

   The Administration page opens.

2. Under **NetVoyant**, click **Global Settings**.

   The **Edit Global Settings** page opens.

3. You can edit the following global settings for views in the reporting interface:

Setting	Description	Default	Maximum
Default max rows for tables	Sets the maximum number of rows to display in table views.	10	200
Default max pie chart slices	Sets the maximum number of items to display in pie chart views.	10	15
Default max rows for top-n bar/area charts	Sets the maximum number of items to display in top-n bar and area charts.	10	50

4. Click **Save**.

   This updates all views to reflect your changes.

WORKING WITH ROLES AND USER ACCOUNTS

Roles define how users can access and interact with NetVoyant reports. An administrator must create a user account for each user that will log in to the NetVoyant reporting tool and assign one or more roles for the user. Assigning a role to a user account grants that user the access rights and menu access assigned to that role. Only a NetVoyant administrator can create and edit roles.

Note: If your installation of the NetVoyant product is bound to NetQoS Performance Center as a data source, roles and user accounts must be managed in the NetQoS Performance Center. For more information about managing user accounts and roles in the NetQoS Performance Center, see the *NetQoS Performance Center Administrator and User Guide*.

NetVoyant Default Roles

The NetVoyant product installs with a set of default roles that are already defined and ready to use. These are standard roles that are used in most IT organizations and define the area access allocated to each user. Roles provide a means of protecting sensitive information based on organizational function.

The following are the default roles that are pre-configured for NetVoyant installations:

Role	Description	Access rights	Default Menus
Director of IT	Plans and directs the organization's information technology and manages the IT staff.	• Enable Role • Drill into Views • Edit Share Views • Persist Shared View Edits	• My Pages • Service Level Reporting
Network Engineer	Plans, implements, and supports network solutions and monitors network performance on a daily basis.	• Enable Role • Drill into Views • Edit Share Views • Persist Shared View Edits	• My Pages
Network Manager	Coordinates network solutions with engineers and operators and monitors network performance on a weekly basis.	• Enable Role • Drill into Views • Edit Share Views • Persist Shared View Edits	• My Pages • Management • Capacity Planning • Service Level Reporting • Operations
Network Operator	Monitors network performance and troubleshoots issues on a daily basis.	• Enable Role • Drill into Views • Edit Share Views • Persist Shared View Edits	• My Pages

Role	Description	Access rights	Default Menus
NOC Manager	Manages the network operations center and its personnel.	• Enable Role • Drill into Views • Edit Share Views • Persist Shared View Edits	• My Pages • Capacity Planning
VP of Infrastructure	Provides oversight and direction for maintaining and improving the organization's infrastructure.	• Enable Role • Drill into Views • Edit Share Views • Persist Shared View Edits	• My Pages • Operations

Adding and Editing Roles

Roles define how users access and interact with NetVoyant views and reports. When a user account is assigned to a role, that user inherits the access rights for that role.

Note: If your installation of the NetVoyant product is bound to the NetQoS Performance Center as a data source, roles and user accounts must be managed in the NetQoS Performance Center. For more information about managing user accounts and roles in the NetQoS Performance Center, see the *NetQoS Performance Center Administrator and User Guide*.

To add or edit a role:

1. From the **Report Pages** menu, select **Administration**.

   The **Administration** page opens.

2. Under **User Settings**, click **Roles**.

   The existing roles are listed on the **View User Roles** page.

3. Perform one of the following actions:

   - To create a new role click **New**.

     The **Add User Role** page opens.

   - To edit an existing role, select the role and click **Edit**.

     The **Edit User Role** page opens.

4. Enter or edit the following settings for creating a new role or modifying an existing role:

Parameter	Description
Name	Enter or edit a name to identify the role.
Description	*(Optional)* Enter or edit the description of the role.

Parameter	Description
Access Rights	Enable or disable the following rights (permissions):
	• **Enable Role** - Enables you and other NetVoyant administrators to assign this role to user accounts.
	• **Drill into Views** - Enables users in this role to click views to drill into more detailed information.
	• **Edit Shared Views** - Enables users in this role to edit menus, report pages, and views that are shared with other users. All users can edit the report pages and views in the My Pages menu.
	• **Persist Shared View Edits** - If the role can edit shared views, this right enables those changes to be seen by other users and maintained by the NetVoyant reporting tool. If you disable this access right, changes made by a user in this role to shared menus, pages, or views are not visible to other users and are removed when the user logs out.
Menus For This Role	To configure what menus are visible to users in the role, click **Edit** and perform the following actions:
	• To enable a menu, select the menu in the list of **Available Sub Menus** and click the right arrow to move it to the list of **Selected Sub Menus**.
	• To remove a menu, select the menu in the list of **Selected Sub Menus** and click the left arrow to move it to the list of **Available Sub Menus**.
	• To rearrange a menu, select the menu and click the up or down arrow.
	Click **OK** when you are finished.

5. Perform one of the following actions:
- To save the role, click **Save**.
- To save the role and add an additional role, click **Save & Add Another**.

This creates the role and you can now apply the role to existing or new user accounts.

Note: You can proxy a role to validate how users in that role can view and manipulate report pages in the NetVoyant reporting interface before assigning users to the role. For more information, see

To delete a role:

1. From the **Report Pages** menu, select **Administration**.

The Administration page opens.
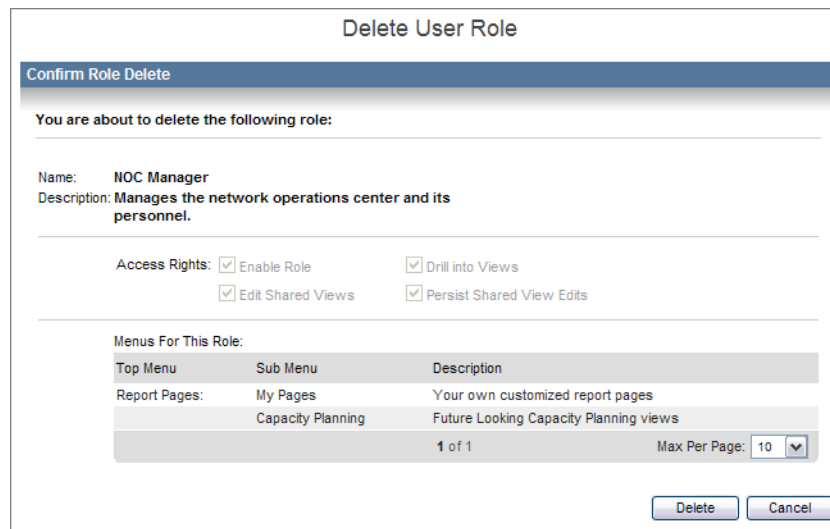
2. Under **User Settings**, click **Roles**.

This lists the existing roles on the **View User Roles** page.

3. Select the role and click **Delete**.

This opens the **Delete User Role** page, which displays information about the role so that the administrator can review it before removing the role.

4. To confirm, click **Delete**.

Adding or Editing a NetVoyant User

As a NetVoyant administrator, you can add new users as well as edit user accounts. You set a password that the user can change later or you can reset a password if a user has forgotten it.

Note: If your installation of the NetVoyant product is bound to the NetQoS Performance Center as a data source, roles and user accounts must be managed in the NetQoS Performance Center. For more information about managing user accounts and roles in NetQoS Performance Center, see the *NetQoS Performance Center Administrator and User Guide*.

To add or edit a NetVoyant user:

1. From the **Report Pages** menu, select **Administration**.

   The **Administration** page opens.

2. Under **User Settings**, click **Users**.

   This lists the existing user accounts on the **View User Accounts** page.

3. Perform one of the following actions:

   - To create a new user account, click **New**.

     The **Add New User** page opens.

   - To edit an existing user account, select the user account and click **Edit**.

     The **Edit User Account** page opens.

   - To delete a user account or multiple user accounts, select the user account and click **Delete**.

4. Enter or edit the following parameters:

Parameter	Description
Name	Enter or edit the name for the user account, which is used to log in to the NetVoyant product.
Description	*(Optional)* Enter or edit a description of the user account.
Email Address	Enter an email address for the user.
Password	Enter or edit the password for the user account, which is used to log in to the NetVoyant product. The password is limited to 20 characters.
Confirm Password	Re-enter the password to confirm.
Time Zone	Select a time zone for the user. The time zone determines how reports label data with time for this user. For example, if a user has a time zone of Central Standard Time (CST) instead of the default of Universal Coordinated Time (UTC) and the user views a report with data for 8:00 a.m.to 9:00 a.m., the NetVoyant reporting tool displays data for 8:00 a.m. to 9:00 a.m. CST.
Role	Select a role to determine user permissions and available menus for the user account. For more information about Netvoyant user roles, see "NetVoyant Default Roles" on page 159 and "Adding and Editing Roles" on page 160.
Type	Select one of the following user account types: **Administrator** - A NetVoyant administrator manages user accounts and roles and performs other administrative tasks. An administrator can also edit and create report pages, views, and menus. **Designer** - A designer can edit and create report pages, views, and shared menus. (This is equivalent to the Power User account type in the NetQoS Performance Center.) **Viewer** - A viewer can view report pages and add report pages to their own My Pages menu.(This is equivalent to the User account type in the NetQoS Performance Center.)

Parameter	Description
Permission Group	*(Optional)* To indicate which devices or networks a user can view or access in NetVoyant reports, click **Change Group**. For more information about setting permission groups for a user account, see "Changing User Permission Groups" on page 165.
Allow user to export views	Select this setting to enable the user to generate URLs for views or export the SQL commands for a view.
Enabled	Select to make the user account active. If this option is not selected, the user cannot log in to the NetVoyant product.

5. Perform one of the following actions:

- To save the user account, click **Save**.
- To save the user account and create an additional user account, click **Save & Add Another**.

NetVoyant creates the user account.

Note: As an administrator, you can proxy a user account to validate how the user can view and manipulate report pages in the NetVoyant reporting interface before making the account available to the user. For more information, see "Proxying a User Account" on page 166.

Changing User Permission Groups

Permission groups determine the data that can be accessed by the user account. The groups created by a NetVoyant administrator to create meaningful reports and views are assigned in the User Account settings to determine what groups and managed objects can be included in reports for that user. This helps to streamline reporting for the user by filtering the data to their area of responsibility. It also provides added security within an organization by restricting users to only the data that they should access.

Note: If your installation of the NetVoyant product is bound to the NetQoS Performance Center as a data source, roles and user accounts must be managed in the NetQoS Performance Center. For more information about managing user accounts and roles in the NetQoS Performance Center, see the *NetQoS Performance Center Administrator and User Guide.*

To change the Permission Groups for a user:

1. In the **Edit User Account** page, click » Change Group .

For more information about opening the Edit User Account page to modify user account settings, see "Adding or Editing a NetVoyant User" on page 163.
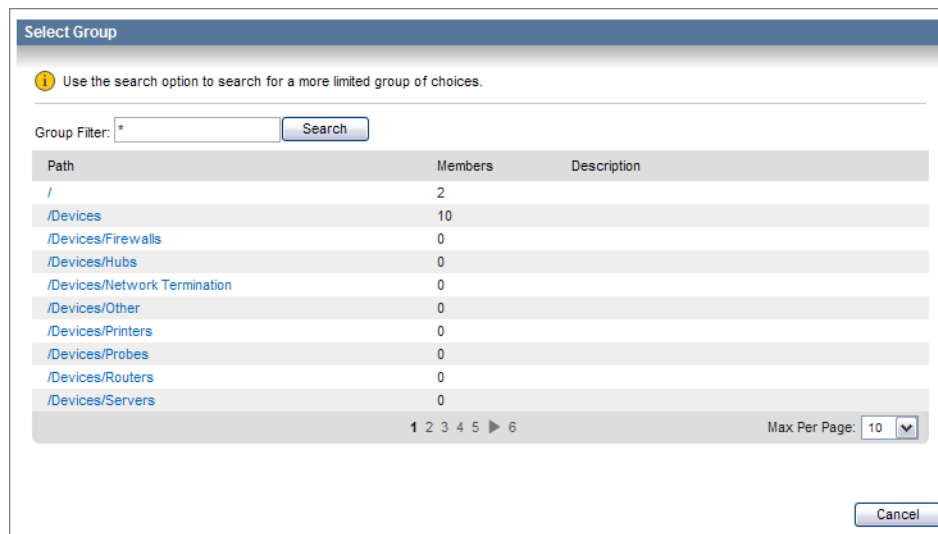
This opens the **Select Group Permissions** dialog box, which lists groups, networks, and custom groups, as well as the number of devices (members) in each group, and a description.

2. *(Optional)* In the dialog box, enter a **Group Filter** and click **Search** to limit the groups by name.

You can use * as a wildcard. For example, you can enter Aus* to display only those groups that begin with the text "Aus" in their names, such as Austin, Australia, Austria, and so on.

To display more groups, select a larger **Size** from the list at the lower-right corner of the group list.

3. To limit what the user can view to a group or network, click the name of group or network.

Note: When you select a parent group, all child groups (or sub-groups) are included. Groups should be organized in such a way so that devices and networks are members of groups according to area of responsibility and access requirements.

This closes the dialog box, and the selected group appears in the **Edit User Account** page next to the **Permission Group** setting.
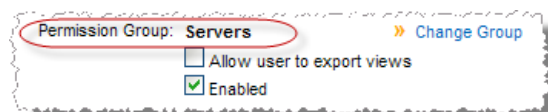
4. Click **Save** to save the changes to user account.

Proxying a User Account

Proxying a user account enables you to validate significant changes or enhancements to the available report pages. Only a NetVoyant administrator can proxy a user account. As an administrator, you can also proxy a user account to create a new report page in the My Pages menu for that user. For more information about adding a report page to a user's My Pages menu, see "Adding Pages to a User's My Pages Menu" on page 167.

As a proxy, you view and manipulate pages in the NetVoyant reporting tool in exactly the same way as the role or user account that you assume.

Note: If your installation of the NetVoyant product is bound to the NetQoS Performance Center as a data source, roles and user accounts must be managed in NetQoS Performance Center. For more

information about managing user accounts and roles in the NetQoS Performance Center, see the *NetQoS Performance Center Administrator and User Guide.*

To proxy a user account:

1. From the **Report Pages** menu, select **Administration**.

   The Administration page opens.

2. Under **User Settings**, click **Users**.

   This lists the existing user accounts on the **View User Accounts** page.

3. Select the user account and click **Proxy**.

4. Perform the required actions or test the user account.

5. Log out of the NetVoyant reporting tool to return to your own user account.

Adding Pages to a User's My Pages Menu

The **My Pages** menu enables users to collect private report pages that contain the report views most useful to them. As a NetVoyant administrator, you can add a report page to a user's My Pages menu by proxying the user account and adding the report page directly. You must be a NetVoyant administrator to add report pages to other users' My Pages menus.

Note: If your installation of the NetVoyant product is bound to the NetQoS Performance Center as a data source, roles and user accounts must be managed in NetQoS Performance Center. For more information about managing user accounts and roles in NetQoS Performance Center, see the *NetQoS Performance Center User Guide.*

To add a page to a user's My Pages menu:

1. Proxy the user's account.

   For more information about proxying a user's account, see "Proxying a User Account" on page 166.

2. Add the page or pages to the **My Pages** menu.

3. Log out of the NetVoyant reporting tool.

   When the user logs in, the NetVoyant reporting tool displays the report page on the **My Pages** menu.

Proxying a Role

Proxying a role enables you to validate significant changes or enhancements to available report pages. As a proxy, you view and manipulate pages in the NetVoyant reporting tool in exactly the same way as the role that you assume. You must be a NetVoyant administrator to proxy a role.

You can also proxy an individual user account. Fore more information, see

Note: If your installation of the NetVoyant reporting tool is bound to the NetQoS Performance Center as a data source, roles and user accounts must be managed in NetQoS Performance Center. For more information about managing user accounts and roles in NetQoS Performance Center, see the *NetQoS Performance Center User Guide*.

To proxy a user role:

1. From the **Report Pages** menu, select **Administration**.

   The Administration page opens.

2. Under **User Settings**, click **Roles**.

   The **View User Roles** page opens and lists the existing roles. Your current role appears at the top of the list in the displayed page.

3. Select the role and click **Proxy**.

The **Current role** appears at the top of the list changes to reflect the proxied role.

4. Perform the required actions or test the role.

5. Return to the **View User Roles** page and click **Return Role**.

Built-In NetVoyant Views

When you design or edit report pages in the NetVoyant reporting tool, you can add your own custom views or add any of the built-in views included with the NetVoyant product. These built-in NetVoyant views provide definitions for an extensive combination of data types and expressions and enable you to quickly construct report pages that are useful for you and your organization.

Most of the built-in views can be modified by clicking the blue arrow at the top-left corner of the view, selecting **Edit**, and using the Custom View Wizard to modify the title, display style, and data expression calculations and settings.

For more information about creating custom views and editing existing views, see "Using the Custom View Wizard" on page 121.

This appendix covers the following topics:

CBQoS Class Map Views

The following sections describe the views related to CBQoS Class Maps that you can add to your NetVoyant report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics and expressions for many of the built-in CBQoS views cannot be edited in the Custom View Wizard.

CBQoS Class Map Dropped Packets Trend

Displays the number of dropped packets for the selected class map over a selected time period. The view is designed to provide a graphical or tabular comparison of the number of dropped packets over time.
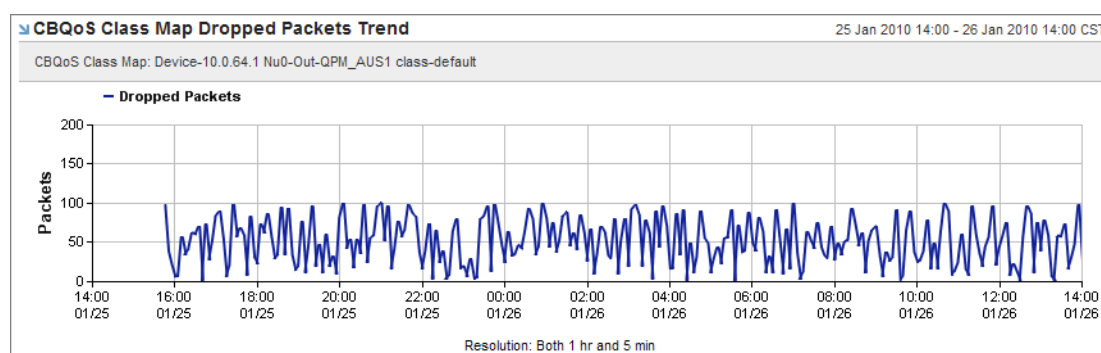
Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Dropped Packets	Count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the CBQoS Class Map Detail Report.

CBQoS Class Map Dropped Rate Trend

Displays rate of dropped packets as a percentage for the selected class map over a selected time period. The view is designed to provide a graphical or tabular comparison of the dropped packet rate over time.
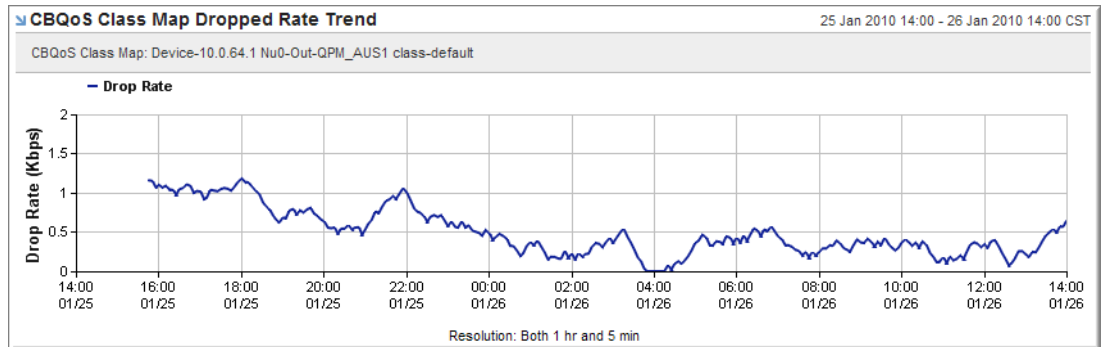
Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Drop Rate	Bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the CBQoS Class Map Detail Report and Class-Based QoS Class Map Capabilities Report.

CBQoS Class Map Dropped Volume Trend

Displays the total volume (bytes) of dropped packets for the selected class map over a selected time period. The view is designed to provide a graphical or tabular comparison of this percentage over time.
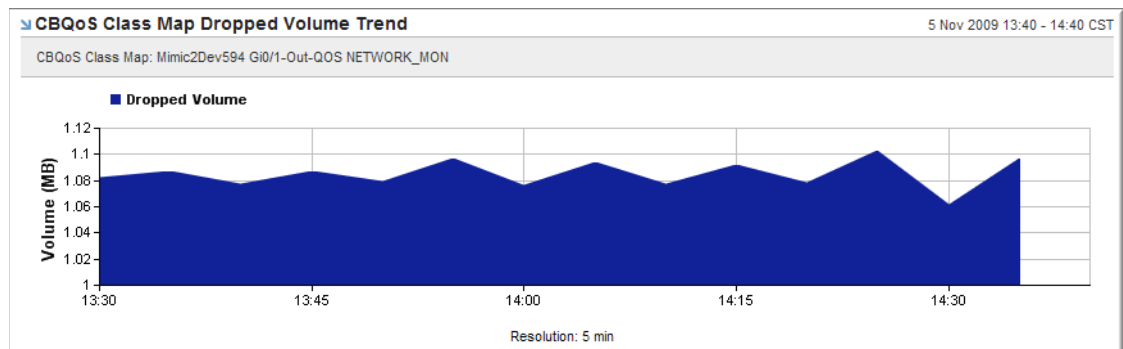
Context: This view requires a selected CBQoS Class Map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Dropped Volume	Count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the CBQoS Class Map Detail Report.

CBQoS Class Map No SRAM Buffer Dropped Packets Trend

Displays the number of dropped packets for the selected class map due to the lack of SRAM Buffers during a selected time period. The view is designed to provide a graphical or tabular comparison of this number over time.
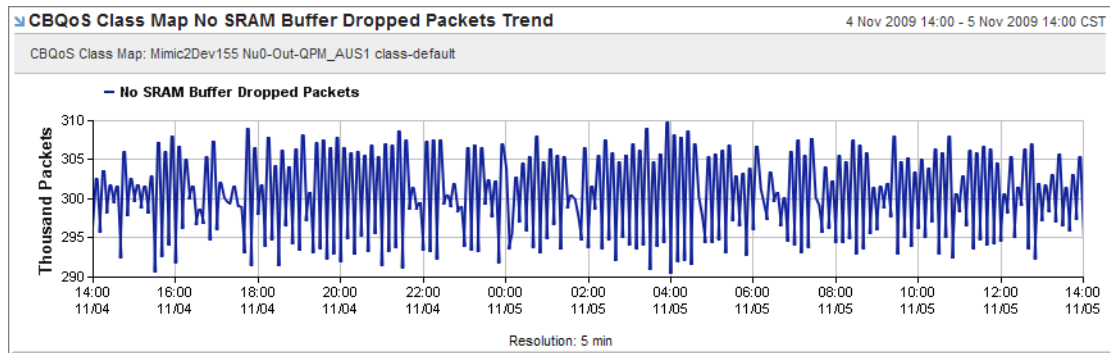
Context: This view requires a selected CBQoS Class Map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

No SRAM Buffer Dropped Packets	Count of dropped packets that occurred due to a lack of SRAM buffers during output processing on an interface.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the CBQoS Class Map Detail Report and Class-Based QoS Class Map Capabilities Report.

CBQoS Class Map Pre-Policy Packets Trend

Displays the total count of pre-policy packets for the class map over a selected time period. This view is designed to provide a graphical or tabular comparison of the pre-policy volume over time. Examining the behavior of the traffic before the effect of the policy helps identify the traffic's pattern prior to passing through the interfaces where the policy is applied.
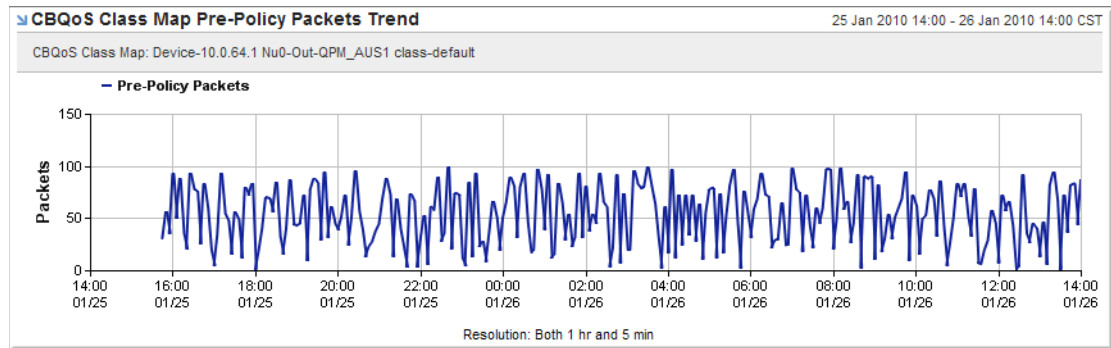
Context: This view requires a selected CBQoS Class Map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

  Pre-Policy Packets   Count of inbound packets prior to executing any QoS policies.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the CBQoS Class Map Detail Report.

CBQoS Class Map Pre/Post Policy Rate Trend

Displays the pre-policy and post-policy utilization rate (Kbps) for the selected class map over a selected time period. The view is designed to provide a graphical or tabular comparison of the utilization rates over time.

Context: This view requires a selected CBQoS Class Map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Rate   Bit rate of the traffic prior to executing any QoS policies.

Post-Rate   Bit rate of the traffic after executing any QoS policies.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the CBQoS Class Map Detail Report.

CBQoS Class Map Pre/Post Policy Volume Trend

Displays pre- and post-policy volumes for the selected class map over a selected time period. The view is designed to provide a graphical or tabular comparison of the volume over time.
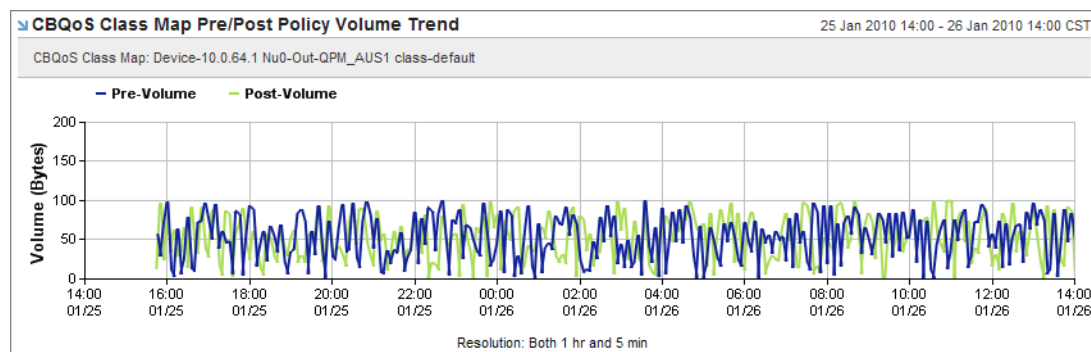
Context: This view requires a selected CBQoS Class Map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Volume   Count of inbound octets prior to executing any QoS policies.

Post-Volume   Count of inbound octets after executing any QoS policies.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the CBQoS Class Map Detail Report.

CBQoS Input Class Map Drops

Displays the number of input class map dropped packets for a selected interface during a selected time period. The view is designed to provide focus to those class maps on the interface with the highest number of inbound dropped packets.
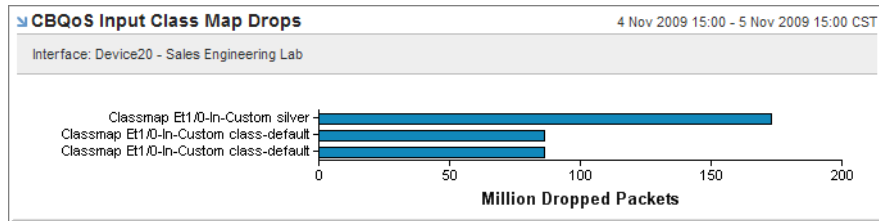
Context: This view requires a selected interface configured for one or more CB QoS input class maps to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Buffer Drops   Count of dropped packets that occurred due to a lack of SRAM buffers

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface QoS report and the Interface Details report.

CBQoS Input Class Map Volume

Displays the total input class map volumes (KB) for a selected interface during a selected time period. The view is designed to provide focus to the input class maps on the interface, comparing the volume of inbound packets.
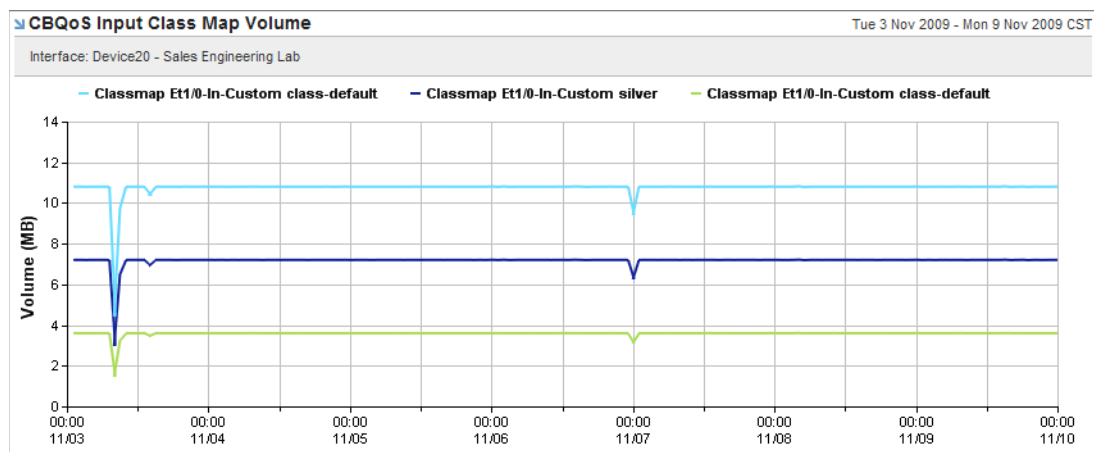
Note: This view cannot be edited in the Custom View Wizard.

Context: This view requires a selected interface configured for one or more CB QoS input class maps to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Volume	Total volume for the input class map

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface QoS report and the Interface Errors and Exceptions report.

CBQoS Input Policy Class Maps

Displays the input class maps for the selected interface, including the inbound pre- and post-policy number of packets, volume, bit rate, and number of drops, during the selected time period. This view is designed to provide focus to the input policy class maps and their average performance statistics.

CBQoS Input Policy Class Maps							5 Nov 2009 14:53 - 15:53 CST
Interface: Device20 - Sales Engineering Lab							
Name	Pre Pkts ▼	Pre Volume	Pre Bit Rate	Post Volume	Post Bit Rate	Drop Volume	Drop Bit Rate	Drops
class-default	9.00 M	10.80 MB	11.00 Kbps	10.80 MB	10.00 Kbps	3.60 MB	1.00 Kbps	3.60 M
silver	7.20 M	7.20 MB	2.00 Kbps	7.20 MB	1.00 Kbps	3.60 MB	1.00 Kbps	3.60 M
class-default	5.40 M	3.60 MB	4.00 Kbps	3.60 MB	3.00 Kbps	3.60 MB	1.00 Kbps	3.60 M
	1 of 1					Max Per Page:	10

Context: This view requires a selected interface configured for one or more CB QoS input class maps to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Pkts	Count of inbound packets prior to executing any QoS policies.
Pre Volume	Count of inbound octets prior to executing any QoS policies.
Pre Bit Rate	Bit rate of the inbound traffic prior to executing any QoS policies.
Post Volume	Count of outbound octets after executing QoS policies.
Post Bit Rate	Bit rate of the outbound traffic after executing QoS policies.
Drop Volume	Count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).
Drop Bit Rate	Bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Drops	Count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface QoS report.

CBQoS Input Policy Class Maps Post/Drops

Displays the input policy class maps with the greatest post-policy packet drops on the selected router over the selected time period. This view is designed to provide focus to the input policy class maps on the router and their average post policy statistics.

Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Post Util	Average post policy utilization rate
Post Volume	Total count of outbound octets after executing QoS policies.
Post Bit Rate	Total bit rate of the outbound traffic after executing QoS policies.
Drop Volume	Total count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).
Drop Bit Rate	Total bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Drops	Total count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Input Policy Class Maps Pre-vs-Post

Displays the pre- and post-policy performance (utilization, volume, and bit rate) for input class map policies on the selected router during a selected time period. This view is designed to provide focus to the input policy class maps on the router, comparing the pre- and post-policy performance statistics.

CBQoS Input Policy Class Maps Pre-vs-Post							Thu 29 Oct 2009 - Wed 4 Nov 2009 CST
Router: Device20							
Name	Pre Util ▼	Pre Pkts	Pre Volume	Pre Bit Rate	Post Util	Post Volume	Post Bit Rate
silver	0.00%	1.04 G	1.04 GB	2.00 Kbps	0.00%	1.04 GB	1.00 Kbps
class-default	0.00%	2.08 G	2.08 GB	15.00 Kbps	0.00%	2.08 GB	13.00 Kbps

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Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Util	Average utilization rate prior to executing QoS policies
Pre Pkts	Total count of octets prior to executing QoS policies
Pre Volume	Total volume of the traffic prior to executing QoS policies
Pre Bit Rate	Total bit rate of the traffic prior to executing QoS policies
Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Output Class Map Drops

Displays post-policy utilization, volume, and bit rate data, as well as data for dropped packets for the output class maps on the selected router or interface during a selected time period. This view is designed to provide focus to the outbound policy performance and drops for class maps on the router or interface.
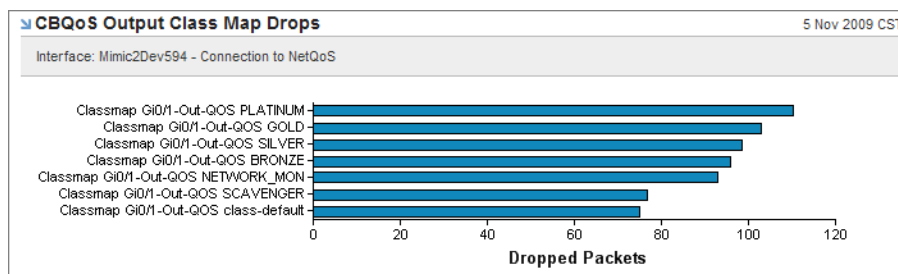
Context: This view requires a selected interface configured for one or more CB QoS output class maps to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:
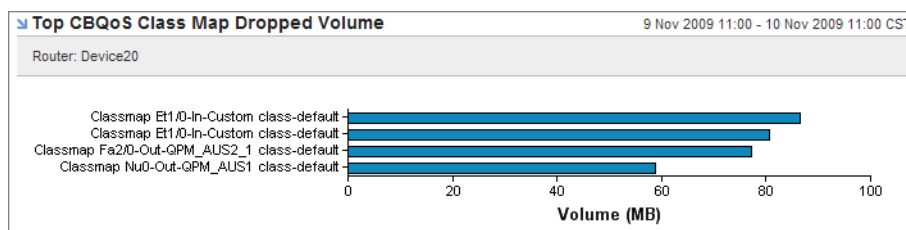
Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies
Drop Volume	Total count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).
Drop Bit Rate	Total bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Packet Drops	Total count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface QoS report and the Interface Details report.

CBQoS Output Class Map Volume

Displays pre- and post-policy class map volume for outbound traffic for the class maps with the highest combined volume on the selected interface during the selected time period. This view is designed to provide focus to the outbound policy volume for class maps on the interface.
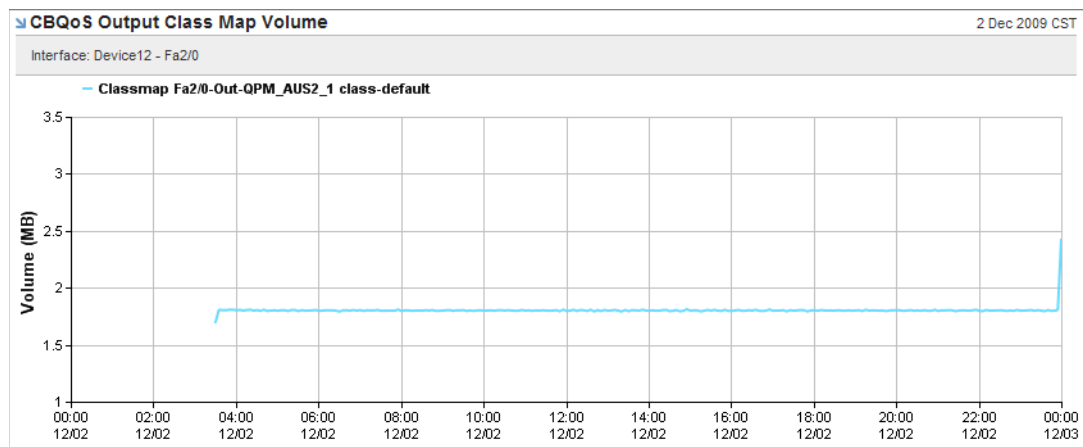
Note: This view cannot be edited in the Custom View Wizard.

Context: This view requires a selected interface configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Volume	Total output class map volume for the interface

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface QoS report and the Interface Errors and Exceptions report.

CBQoS Output Policy Class Maps

Displays pre- and post-policy class map statistics for outbound traffic for the class maps with the highest pre-policy packet numbers on the selected interface during the selected time period. This view is designed to provide focus to the outbound policy class map statistics for the interface.

Context: This view requires a selected interface configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:
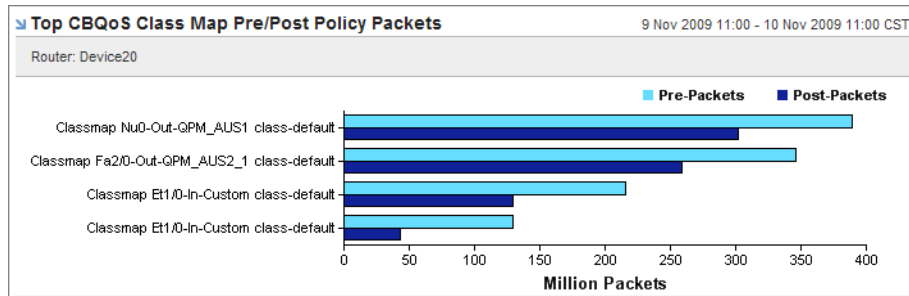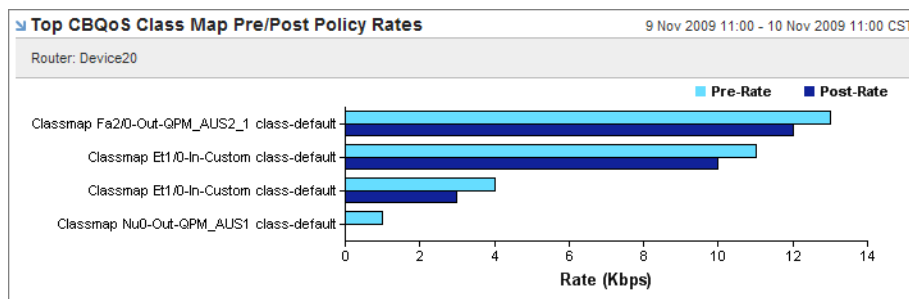
Pre Pkts	Count of packets prior to executing QoS policies
Pre Volume	Volume of the traffic prior to executing QoS policies
Pre Bit Rate	Bit rate of the traffic prior to executing QoS policies
Post Volume	Volume of the traffic after executing QoS policies
Post Bit Rate	Bit rate of the traffic after executing QoS policies
Drop Volume	Total count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).
Drop Bit Rate	Total bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Drops	Total count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Output Policy Class Maps Post/Drops

Displays post-policy utilization, volume, and bit rate data, as well as data for the output class map dropped packets on the selected router during a selected time period. This view is designed to provide focus to the outbound policy class map post-policy drop statistics for the router.

CBQoS Output Policy Class Maps Post/Drops						8 Nov 2009 - 7 Dec 2009 CST
Router: Device12						
Name	Post Util ▼	Post Volume	Post Bit Rate	Drop Volume	Drop Bit Rate	Packet Drops
class-default	3.18%	13.77 GB	23.00 Kbps	2.30 GB	3.00 Kbps	2.30 G
QPM_silver1	0.03%	3.06 GB	10.00 Kbps	765.06 MB	1.00 Kbps	765.06 M

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Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:
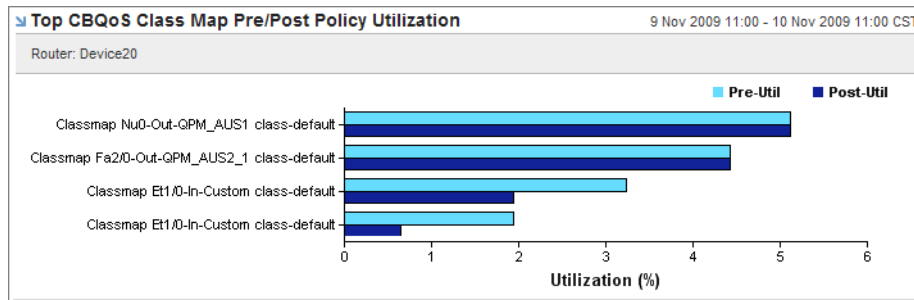
Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies
Drop Volume	Total count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).
Drop Bit Rate	Total bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Packet Drops	Total count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Output Policy Class Maps Pre-vs-Post

Displays the pre- and post-policy statistics for output class maps on the selected router during the selected time period. This view is designed to provide a comparison of the outbound pre- and post-policy performance on the router.

CBQoS Output Policy Class Maps Pre-vs-Post							Tue 3 Nov 2009 - Mon 9 Nov 2009 CST
Router: Device20							
Name	Pre Util ▼	Pre Pkts	Pre Volume	Pre Bit Rate	Post Util	Post Volume	Post Bit Rate
class-default	3.19%	7.22 G	10.83 GB	26.00 Kbps	3.19%	10.83 GB	23.00 Kbps
QPM_silver1	0.03%	1.81 G	2.41 GB	11.00 Kbps	0.03%	2.41 GB	10.00 Kbps

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Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Util	Average utilization rate prior to executing QoS policies
Pre Pkts	Total count of packets prior to executing QoS policies
Pre Volume	Total volume of the traffic prior to executing QoS policies
Pre Bit Rate	Total bit rate of the traffic prior to executing QoS policies
Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Class Map Drop Percentage

Displays the drop percentages for the selected class map on those interfaces with the greatest drop percentage over the selected time period. This view is designed to provide a comparison of class map drop levels by interface.
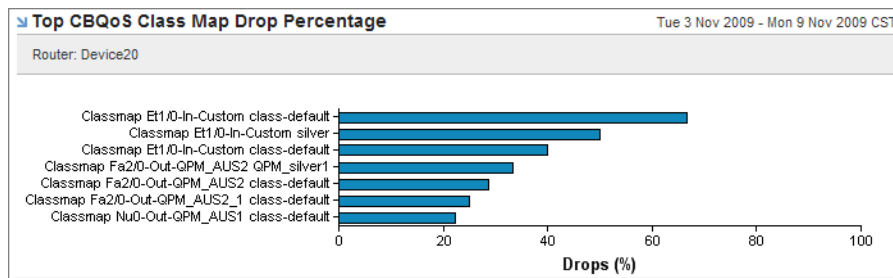
Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

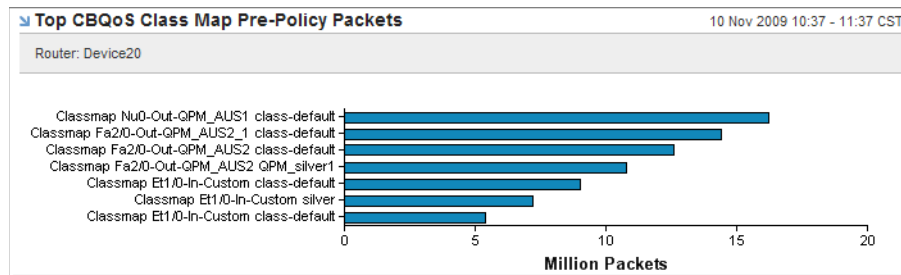|	
Drop Percentage	The percentage of drops from all packets prior to executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report and CBQoS Dashboard report.

Top CBQoS Class Map Drop Percentage Details

Displays the drop percentages for the interfaces with the highest drop percentages for the selected class map over the selected time period. This view is designed to provide a comparison of class map drop levels by interface.
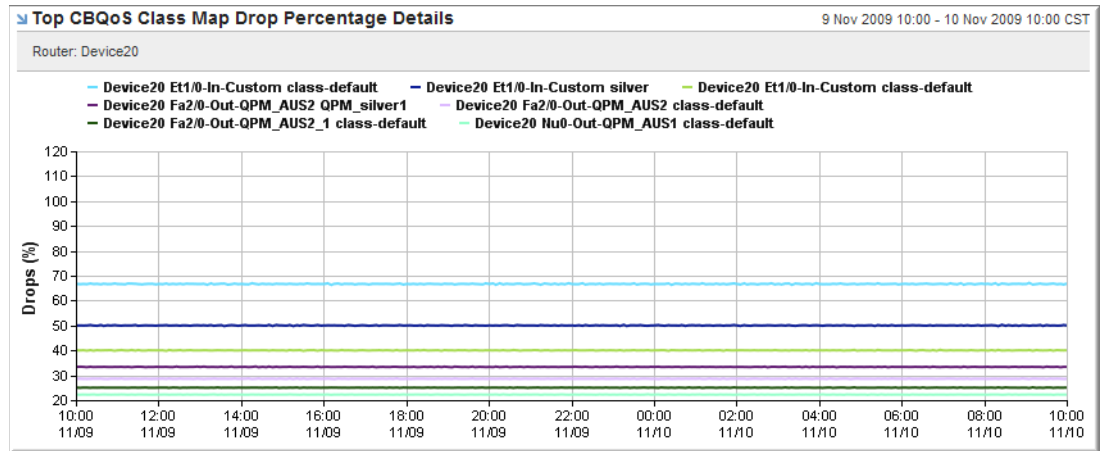
Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Drops   The percentage of drops from all packets prior to executing the QoS policy

Styles: This view can be displayed as a line chart only.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Class Map Drop Rate

Displays the class map drop rates for the selected class map by interface, for those interfaces with the highest drop rates during the selected time period. This view is designed to provide a comparison of class map drop rates by interface.
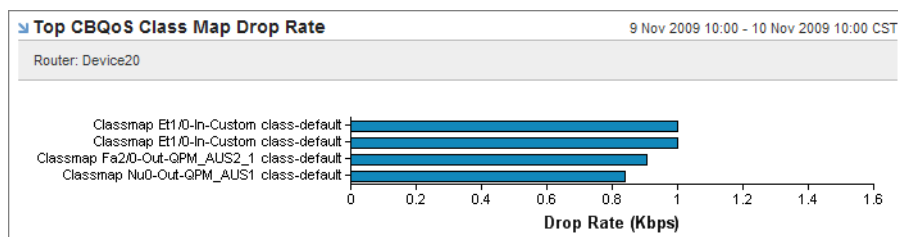
Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Drop Rate   The percentage of drops from all packets prior to executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the CB QoS Class Map Report.

Top CBQoS Class Map Dropped Packets

Displays the number of dropped packets for the interfaces on the selected router with the greatest number of drops during the selected time period. This view is designed to provide a comparison of drop rates by interface.
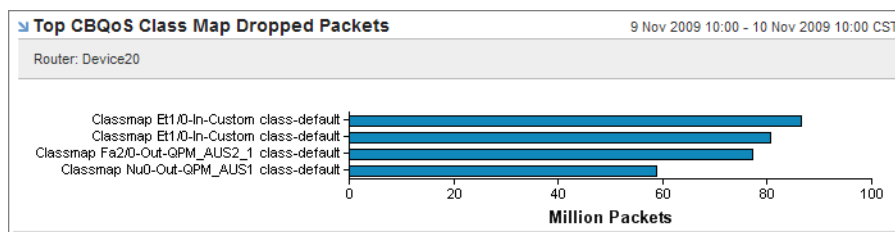
Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Drops   Count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).
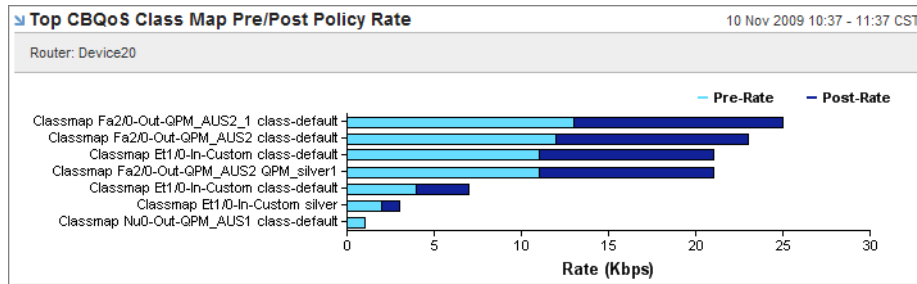
Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the CB QoS Class Map Report.

Top CBQoS Class Map Dropped Volume

Displays the total volume of dropped packets for the selected class map on those interfaces with the greatest drop volume during the selected time period. This view is designed to provide a comparison of class map drop levels by interface.

Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:
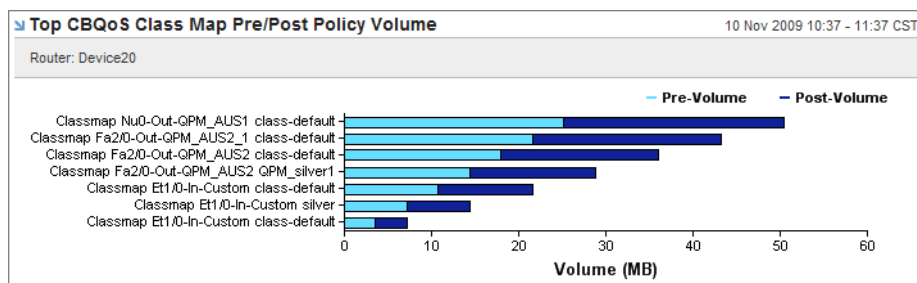
Drops	Count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the CB QoS Class Map Report.

Top CBQoS Class Maps Pre-Post

Displays the pre- and post-policy statistics for the selected class map on those interfaces with the greatest pre-policy utilization during the selected time period. This view is designed to provide focus to class map policy performance on those interfaces with the highest pre-policy utilization.

Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Util	Average utilization rate prior to executing QoS policies
Pre Pkts	Total count of packets prior to executing QoS policies
Pre Volume	Total volume of the traffic prior to executing QoS policies
Pre Bit Rate	Total bit rate of the traffic prior to executing QoS policies
Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the CB QoS Class Map Report.

Top CBQoS Class Map Pre/Post Policy Packets

Compares the pre- and post-policy packet numbers for the interfaces with the greatest combined numbers for the selected class map during the selected time period. This view is designed to provide a comparison of class map packet levels by interface.

Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Packets	Count of packets prior to executing QoS policies
Post-Packets	Count of packets prior to executing QoS policies minus the count of dropped packets

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the CB QoS Class Map Report.

Top CBQoS Class Map Pre/Post Policy Rates

Displays the pre- and post-policy bit rates for the selected class map for those interfaces with the greatest combined bit rates during the selected time period. This view is designed to provide a comparison of class map bit rates by interface.

Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Rate	Bit rate for packets prior to executing QoS policies
Post-Rate	Bit rate for packets after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the CB QoS Class Map Report.

Top CBQoS Class Map Pre/Post Policy Utilization

Displays the pre- and post-policy utilization rates for the selected class map on those interfaces with the greatest combined utilization rates during the selected time period. This view is designed to provide a comparison of class map utilization by interface.

Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Util	Average utilization rate prior to executing QoS policies
Post-Util	Average utilization rate after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the CB QoS Class Map Report.

Top CBQoS Class Map Pre/Post Policy Volume

Displays the pre- and post-policy packet volumes for the selected class map on those interfaces with the greatest combined volumes during the selected time period. This view is designed to provide a comparison of the class map volumes by interface.
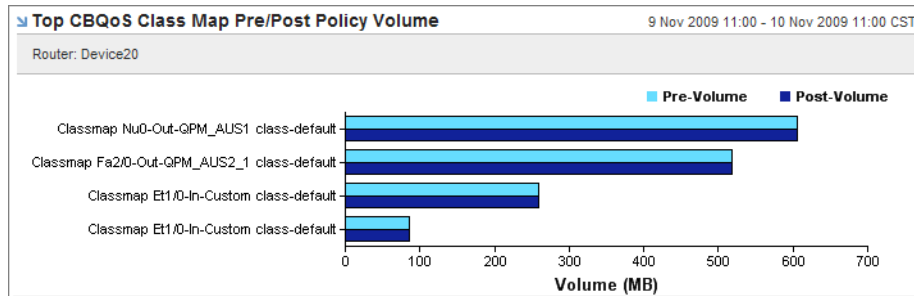
Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Volume	Volume of the traffic (count of octets) prior to executing QoS policies
Post-Volume	Volume of the traffic (count of octets) after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the CB QoS Class Map Report.

Top CBQoS Class Map Post/Drops

Displays the post-policy and packet drop statistics for the class maps with the greatest post-policy utilization on the selected router during the selected time period. This view is designed to provide focus to the class map post-policy drops on the router.

Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Post-Util	Average utilization rate after executing QoS policies
Post-Volume	Count of bytes of the traffic after executing QoS policies
Post-Rate	Bit rate of the traffic after executing QoS policies
Drop-Volume	Count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).
Drop-Rate	Bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Drop-Packets	Count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

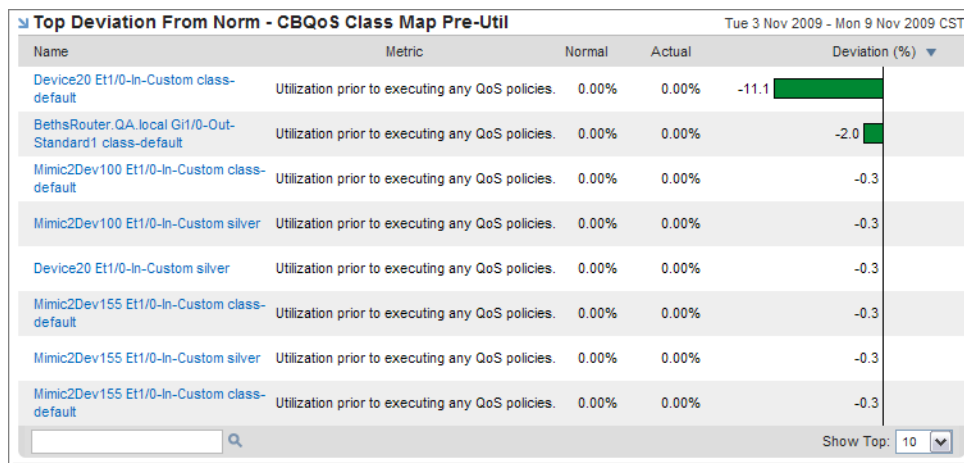**Styles:** This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the CBQoS Dashboard report and the Router Interfaces report.

Top CBQoS Class Map Pre-Policy Packets

Displays the number of post-policy packets for the class maps on the selected router with the greatest number during the selected time period. This view is designed to provide a comparison of the class map pre-policy packet levels by interface.

Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Packets	Count of packets prior to executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the CBQoS Dashboard report.

Top CBQoS Class Map Pre-vs-Post

Displays the pre- and post-policy packet statistics for the class maps with the greatest pre-policy utilization on the selected router during the selected time period. This view is designed to provide a comparison of the pre- and post-policy class map performance on the router.

Top CBQoS Class Map Pre-vs-Post								10 Nov 2009 10:37 - 11:37 CST
Router: Device20								
Name	Pre-Util ▼	Post-Util	Pre-Volume	Post-Volume	Pre-Rate	Post-Rate	Pre-Packets	Post-Packets
Classmap Nu0-Out-QPM_AUS1 class-default	5.12%	5.12%	25.20 MB	25.20 MB	1.00 Kbps	0 bps	16.20 M	12.60 M
Classmap Fa2/0-Out-QPM_AUS2_1 class-default	4.43%	4.43%	21.60 MB	21.60 MB	13.00 Kbps	12.00 Kbps	14.40 M	10.80 M
Classmap Et1/0-In-Custom silver	0.00%	0.00%	7.20 MB	7.20 MB	2.00 Kbps	1.00 Kbps	7.20 M	3.60 M
Classmap Et1/0-In-Custom class-default	0.00%	0.00%	10.80 MB	10.80 MB	11.00 Kbps	10.00 Kbps	9.00 M	5.40 M
Classmap Et1/0-In-Custom class-default	0.00%	0.00%	3.60 MB	3.60 MB	4.00 Kbps	3.00 Kbps	5.40 M	1.80 M
🔍			1 of 1				Max Per Page:	10 ▼

Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Util	Average utilization rate prior to executing QoS policies
Post-Util	Average utilization rate after executing QoS policies
Pre-Volume	Count of bytes of the traffic prior to executing QoS policies
Post-Volume	Count of bytes of the traffic after executing QoS policies
Pre-Rate	Bit rate of the traffic prior to executing QoS policies
Post-Rate	Bit rate of the traffic after executing QoS policies
Pre-Packets	Count of packets prior to executing QoS policies
Post-Packets	The number of packets prior to executing QoS policies minus the number of dropped packets

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the CBQoS Dashboard report and the Router Interfaces report.

Top CBQoS Class Map Pre/Post Policy Rate

Displays the pre- and post-policy bit rates for the class maps with the greatest combined bit rate on the selected router during the selected time period. This view is designed to provide a comparison of the router's pre- and post-policy class map bit rates by interface.

Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Rate	Bit rate of the traffic prior to executing QoS policies
Post-Rate	Bit rate of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Class Map Pre/Post Policy Volume

Displays the pre- and post-policy volumes for the class maps on the selected router with the greatest combined volume during the selected time period. This view is designed to provide a comparison of the router's pre- and post-policy class map volumes by interface.

Context: This view requires a selected router configured for CB QoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Volume   Count of bytes of the traffic prior to executing QoS policies

Post-Volume   Count of bytes of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Class Map Post-Policy Rate Details

Displays the CB QoS post-policy bit rates by interface for the selected class map during the selected time period. This view is designed to provide a comparison of the class map's post-policy bit rates by interface.
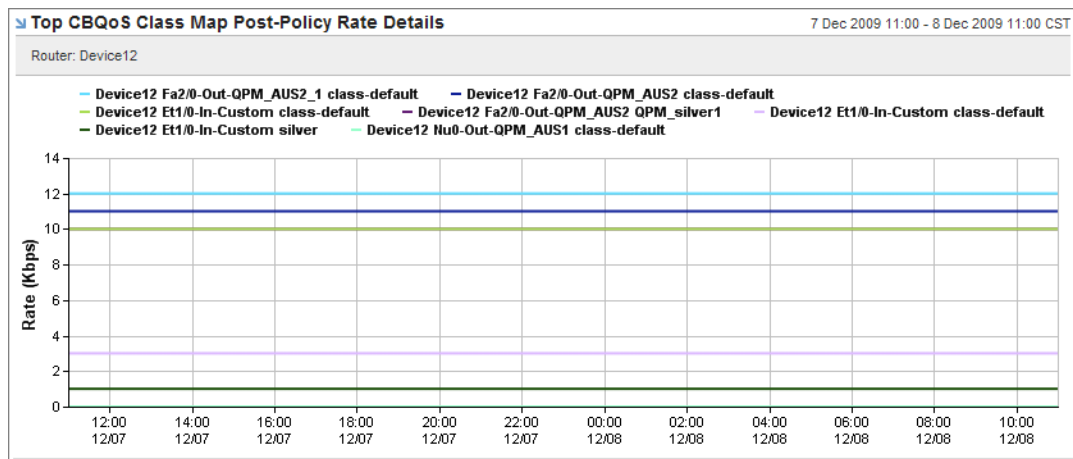
Note: This view cannot be edited in the Custom View Wizard.

Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

**Rate**   Bit rate for packets after executing class map QoS policies

Styles: This view can be displayed as a line chart only.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Class Map Utilization

Displays the pre- and post-policy utilization by router and interface with the greatest pre-policy utilization for the selected class map during the selected time period. This view is designed to provide focus to the class map's highest pre- and post policy utilization levels by interface.

Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Util	Average utilization rate prior to executing QoS policies
Pos Util	Average utilization rate after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Class Maps

Displays the pre- and post-policy and drop statistics for the selected class map on those interfaces with the greatest number of pre-policy packets during the selected time period. This view is designed to provide focus to the class map's performance levels on the most utilized interfaces.

Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Util	Average utilization rate prior to executing QoS policies
Pre Pkts	Total count of packets prior to executing QoS policies
Pre Volume	Total volume of the traffic prior to executing QoS policies
Pre Bit Rate	Total bit rate of the traffic prior to executing QoS policies
Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies
Drop Volume	Count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).
Drop Bit Rate	Bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Packet Drops	Count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Class Maps Pre-Post

Displays the pre- and post-policy statistics for the selected class map on those interfaces with the greatest number of pre-policy packets during the selected time period. This view is designed to provide a comparison of the class map's pre- and post-policy performance levels on the most utilized interfaces.

Context: This view requires a selected CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Util	Average utilization rate prior to executing QoS policies
Pre Pkts	Total count of packets prior to executing QoS policies
Pre Volume	Total volume of the traffic prior to executing QoS policies

Pre Bit Rate	Total bit rate of the traffic prior to executing QoS policies
Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the CB QoS Class Map Report.

Top Deviation From Norm - CBQoS Class Map Post-Util

Displays a table of the post-policy utilization for the class maps in the selected group that have the highest deviation from the 30-day rolling baseline (normal) value for post-policy utilization. This view is designed to provide focus to those interfaces where class map utilization is experiencing the most rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Top Deviation From Norm - CBQoS Class Map Post-Util				Tue 3 Nov 2009 - Mon 9 Nov 2009 CST
Name	Metric	Normal	Actual	Deviation (%) ▼
Device20 Et1/0-In-Custom class-default	Utilization after executing any QoS policies.	0.00%	0.00%	-11.1
BethsRouter.QA.local Gi1/0-Out-Standard1 class-default	Utilization after executing any QoS policies.	0.00%	0.00%	-2.0
Mimic2Dev100 Et1/0-In-Custom class-default	Utilization after executing any QoS policies.	0.00%	0.00%	-0.3
Device20 Et1/0-In-Custom silver	Utilization after executing any QoS policies.	0.00%	0.00%	-0.3
Mimic2Dev100 Et1/0-In-Custom silver	Utilization after executing any QoS policies.	0.00%	0.00%	-0.3
Mimic2Dev155 Et1/0-In-Custom silver	Utilization after executing any QoS policies.	0.00%	0.00%	-0.3
Mimic2Dev155 Et1/0-In-Custom class-default	Utilization after executing any QoS policies.	0.00%	0.00%	-0.3
Mimic2Dev155 Et1/0-In-Custom class-default	Utilization after executing any QoS policies.	0.00%	0.00%	-0.3
				Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

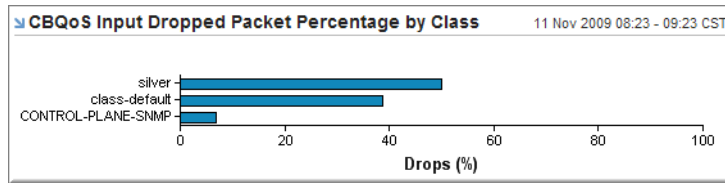|	
Post Util	Average utilization rate after executing QoS policies

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report and the CBQoS Dashboard report.

Top Deviation From Norm - CBQoS Class Map Pre-Util

Displays a table of the post-policy utilization for the class maps in the selected group that have the highest deviation from the 30-day rolling baseline (normal) value for post-policy utilization. This view is designed to provide focus to those interfaces where class map pre-policy utilization is experiencing the most rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Top Deviation From Norm - CBQoS Class Map Pre-Util				Tue 3 Nov 2009 - Mon 9 Nov 2009 CST
Name	Metric	Normal	Actual	Deviation (%) ▼
Device20 Et1/0-In-Custom class-default	Utilization prior to executing any QoS policies.	0.00%	0.00%	-11.1
BethsRouter.QA.local Gi1/0-Out-Standard1 class-default	Utilization prior to executing any QoS policies.	0.00%	0.00%	-2.0
Mimic2Dev100 Et1/0-In-Custom class-default	Utilization prior to executing any QoS policies.	0.00%	0.00%	-0.3
Mimic2Dev100 Et1/0-In-Custom silver	Utilization prior to executing any QoS policies.	0.00%	0.00%	-0.3
Device20 Et1/0-In-Custom silver	Utilization prior to executing any QoS policies.	0.00%	0.00%	-0.3
Mimic2Dev155 Et1/0-In-Custom class-default	Utilization prior to executing any QoS policies.	0.00%	0.00%	-0.3
Mimic2Dev155 Et1/0-In-Custom silver	Utilization prior to executing any QoS policies.	0.00%	0.00%	-0.3
Mimic2Dev155 Et1/0-In-Custom class-default	Utilization prior to executing any QoS policies.	0.00%	0.00%	-0.3
				Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:
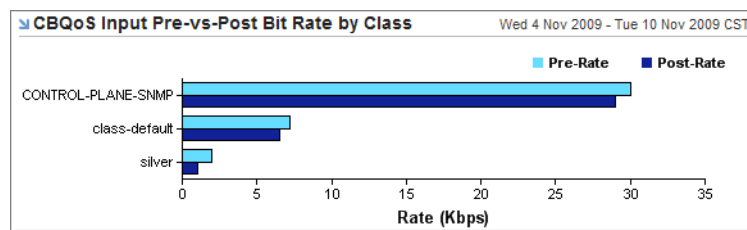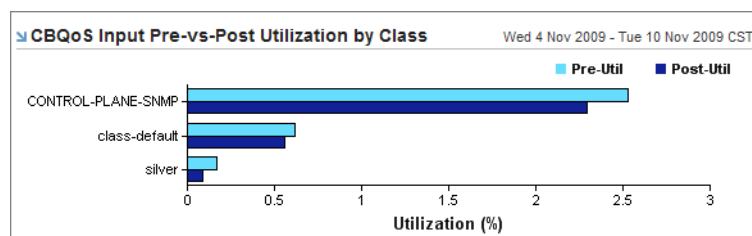
Pre Util   Average utilization rate prior to executing QoS policies

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report and the CBQoS Dashboard report.

Top Projections - CBQoS Class Map Post-Util

Displays the average post-policy utilization for the class maps in the selected group that have the highest post-policy utilization growth rates, and the 30-, 60-, and 90-day projected values. The projection values are based upon the change in the 30-day rolling baseline over the last 90 days.

⬎ Top Projections - CBQoS Class Map Post-Util				10 Aug 2009 - 9 Nov 2009 CST	
Name	Metric	Last 90 Days ▼	30 Days	60 Days	90 Days
Mimic2Dev594 Gi0/1-Out-QOS NETWORK_MON	Utilization after executing any QoS policies.	23.25%	23.24%	23.24%	23.24%
Mimic2Dev594 Gi0/1-Out-QOS NETWORK_MON	Utilization after executing any QoS policies.	23.24%	23.24%	23.24%	23.24%
Mimic2Dev594 Gi0/1-Out-QOS NETWORK_MON	Utilization after executing any QoS policies.	23.24%	23.24%	23.23%	23.23%
Mimic2Dev100 Nu0-Out-QPM_AUS1 class-default	Utilization after executing any QoS policies.	5.14%	5.14%	5.14%	5.14%
Mimic2Dev155 Nu0-Out-QPM_AUS1 class-default	Utilization after executing any QoS policies.	5.14%	5.14%	5.14%	5.14%
Mimic2Dev100 Fa2/0-Out-QPM_AUS2_1 class-default	Utilization after executing any QoS policies.	4.45%	4.45%	4.45%	4.45%
Mimic2Dev155 Fa2/0-Out-QPM_AUS2_1 class-default	Utilization after executing any QoS policies.	4.45%	4.45%	4.44%	4.44%
Mimic2Dev156 Fa2/0-Out-QPM_AUS2_1 class-default	Utilization after executing any QoS policies.	4.45%	4.44%	4.44%	4.43%

Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:
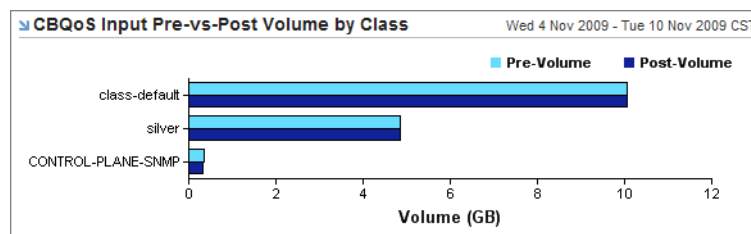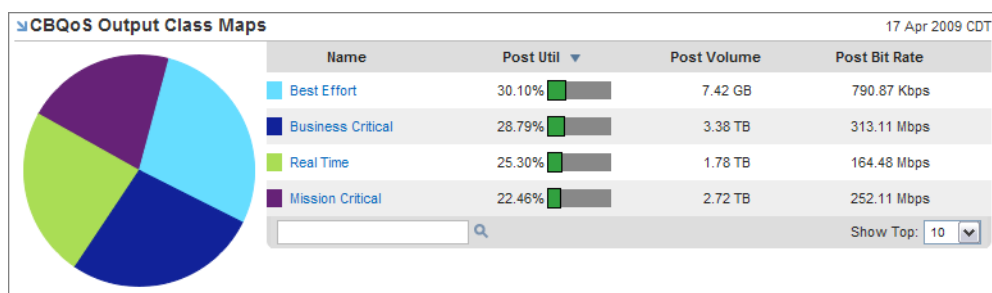
Post Util   Average utilization rate after executing QoS policies

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top Projections - CBQoS Class Map Pre-Util

Displays the average pre-policy utilization for the class maps in the selected group that have the highest pre-policy utilization growth rates, and the 30-, 60-, and 90-day projected values. The projection values are based upon the change in the 30-day rolling baseline over the last 90 days.

Name	Metric	Last 90 Days ▼		30 Days	60 Days	90 Days
Mimic2Dev594 Gi0/1-Out-QOS NETWORK_MON	Utilization prior to executing any QoS policies.	45.97%	▉	45.94%	45.93%	45.91%
Mimic2Dev594 Gi0/1-Out-QOS NETWORK_MON	Utilization prior to executing any QoS policies.	45.96%	▉	45.95%	45.95%	45.94%
Mimic2Dev594 Gi0/1-Out-QOS NETWORK_MON	Utilization prior to executing any QoS policies.	45.96%	▉	45.95%	45.94%	45.94%
Mimic2Dev100 Nu0-Out-QPM_AUS1 class-default	Utilization prior to executing any QoS policies.	5.14%	▌	5.14%	5.14%	5.14%
Mimic2Dev155 Nu0-Out-QPM_AUS1 class-default	Utilization prior to executing any QoS policies.	5.14%	▌	5.14%	5.14%	5.14%
Mimic2Dev100 Fa2/0-Out-QPM_AUS2_1 class-default	Utilization prior to executing any QoS policies.	4.45%	▌	4.45%	4.45%	4.45%
Mimic2Dev156 Fa2/0-Out-QPM_AUS2_1 class-default	Utilization prior to executing any QoS policies.	4.45%	▌	4.44%	4.44%	4.44%
Mimic2Dev155 Fa2/0-Out-QPM_AUS2_1 class-default	Utilization prior to executing any QoS policies.	4.45%	▌	4.45%	4.45%	4.45%

Top Projections - CBQoS Class Map Pre-Util — 10 Aug 2009 - 9 Nov 2009 CST — Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

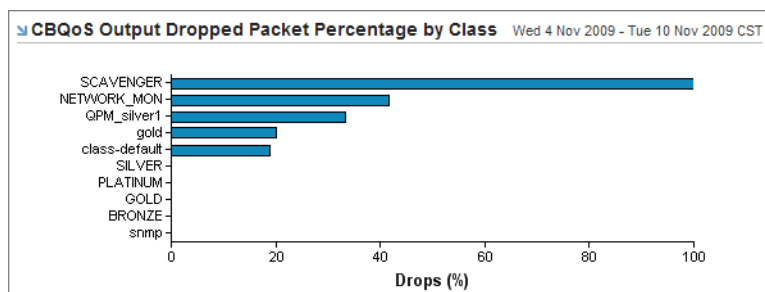| Pre Util	Average utilization rate prior to executing QoS policies

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

CBQoS Group by Class Map Views

The following sections describe the views related to CBQoS groups by class map that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics for many of the CBQoS views cannot be edited in the Custom View Wizard.

CBQoS Input Class Maps

Displays statistics for the CBQoS Input Policy class maps with the highest post-policy utilization rates in the selected reporting group during the selected time period. This view is designed to provide a high-level comparison of those input class maps in the reporting group with the highest utilization.

Context: This view requires a selected reporting group or a managed object configured for CBQoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies

Styles: This view can be displayed as a table with pie chart only.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Class Based Quality of Service report and CBQos Dashboard report.

CBQoS Input Dropped Packet Percentage by Class

Displays the CBQoS Input Policy class maps in the selected reporting group with the highest drop percentage during the selected time period. This view is designed to provide a high-level comparison of class map drop levels.

Context: This view requires a selected reporting group or a managed object configured for CBQoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Drop Percentage	Percentage value calculated using the average of the count of dropped packets as the result of all features that can produce drops (police, random detect, etc.) divided by the count of packets prior to executing QoS policies.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Class Based Quality of Service report.

CBQoS Input Policy Post-Drops by Class

Displays post-policy and drop statistics for the CBQoS Input Policy class maps in the selected reporting group with the highest pre-policy utilization during the selected time period. This view is designed to provide focus to those input class maps with the most post-policy drops.

Context: This view requires a selected reporting group or a managed object configured for CBQoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies
Drop Volume	Total number of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).
Drop Bit Rate	Bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Buffer Drops	Count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Input Policy Pre-Post Class Maps

Displays pre- and post-policy statistics for the CBQoS Input Policy class maps with the highest pre-policy utilization in the selected reporting group during the selected time period. This view is designed to provide focus to those input class maps with the highest pre-policy utilization.

Context: This view requires a selected reporting group or a managed object configured for CBQoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Util	Average utilization rate prior to executing QoS policies
Pre Volume	Total volume of the traffic prior to executing QoS policies
Pre Bit Rate	Total bit rate of the traffic prior to executing QoS policies
Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report and Operations Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report and the Class Based Quality of Service report.

CBQoS Input Pre-vs-Post Bit Rate by Class

Displays pre- and post-policy bit rates for the CBQoS Input Policy class maps with the highest pre-policy bit rates in the selected reporting group during the selected time period. This view is designed to provide a comparison of pre- and post-policy bit rates for input class maps.

Context: This view requires a selected reporting group or a managed object configured for CBQoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Rate	Total bit rate of the traffic prior to executing QoS policies
Post-Rate	Total bit rate of the traffic after executing QoS policies

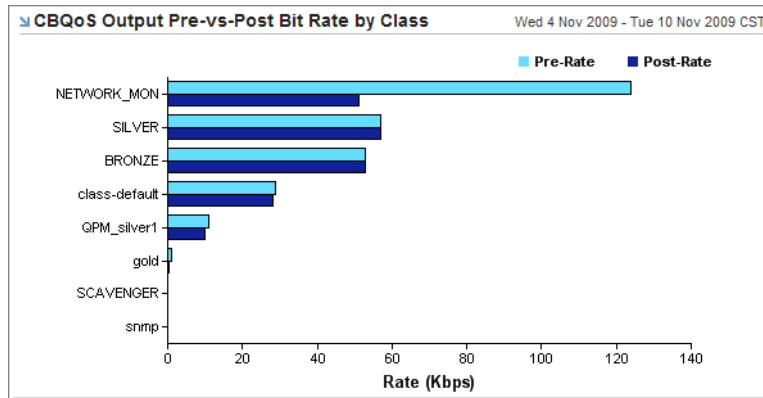**Styles:** This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Input Pre-vs-Post Utilization by Class

Displays pre- and post-policy utilization rates for the CBQoS Input Policy class maps with the highest pre-policy utilization rates in the selected reporting group during the selected time period. This view is designed to provide a comparison of pre- and post-policy utilization for input class maps.

Context: This view requires a selected reporting group or a managed object configured for CBQoS to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Util   Average utilization rate prior to executing QoS policies

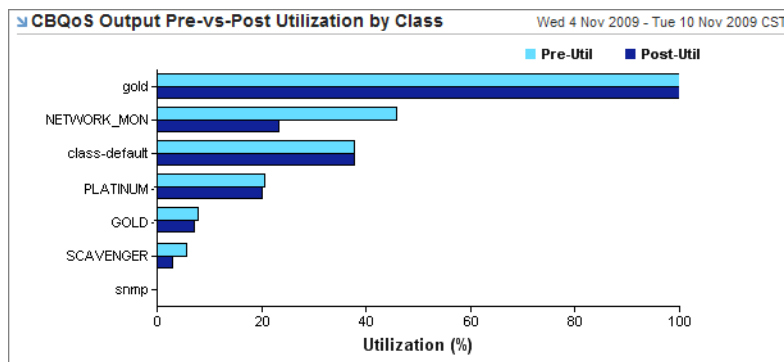**Post-Util**   Average utilization rate after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Class Based Quality of Service report.

CBQoS Input Pre-vs-Post Volume by Class

Displays pre- and post-policy volumes for the CBQoS Input Policy class maps with the highest pre-policy volumes in the selected reporting group during the selected time period. This view is designed to provide a comparison of pre- and post-policy volumes for input class maps.

Context: This view requires a selected group or CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Volume   Total volume (bytes) of the traffic prior to executing QoS policies

Post-Volume   Total volume (bytes) of the traffic after executing QoS policies
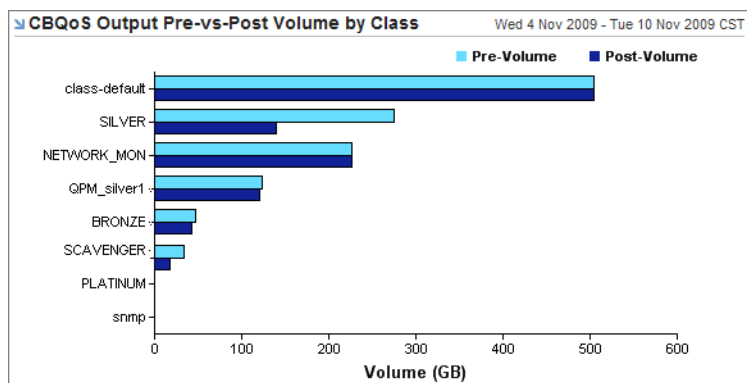
Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Class Based Quality of Service report.

CBQoS Output Class Maps

Displays the CBQoS Output Policy class maps with the highest post-policy utilization rates in the selected reporting group during the selected time period. This view is designed to provide a high-level comparison of those output class maps in the reporting group with the highest utilization.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies

Styles: This view can be displayed table with pie chart only.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report.

**Standard NetQoS Performance Center 6.0 reports:** This view is included by default in the Class Based Quality of Service report and CBQos Dashboard report.

CBQoS Output Dropped Packet Percentage by Class

Displays the CBQoS Output Policy class maps in the selected reporting group with the highest drop percentage during the selected time period. This view is designed to provide a comparison of drop levels for output class maps.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expression:

Drop Percentage	Percentage value calculated using the average of the count of dropped packets as the result of all features that can produce drops (police, random detect, etc.) divided by the count of packets prior to executing QoS policies.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Class Based Quality of Service report.

CBQoS Output Policy Post-Drops by Class

Displays post-policy and drop statistics for the CBQoS Output Policy class maps in the selected reporting group with the highest pre-policy utilization during the selected time period. This view is designed to provide focus on post-policy performance for output class maps.

CBQoS Output Policy Post-Drops by Class						Wed 4 Nov 2009 - Tue 10 Nov 2009 CST
Name	Post Util ▼	Post Volume	Post Bit Rate	Drop Volume	Drop Bit Rate	Buffer Drops
gold	125.25%	418.22 MB	200 bps	52.28 MB	1.00 Kbps	52.28 M
NETWORK_MON	23.18%	6.72 GB	153.00 Kbps	6.56 GB	219.00 Kbps	18.14 M
class-default	2.04%	504.10 GB	536.20 Kbps	7.31 GB	13.00 Kbps	7.31 G
QPM_silver1	0.03%	9.68 GB	40.00 Kbps	2.42 GB	4.00 Kbps	2.42 G
SILVER	0.00%	13.29 GB	228.00 Kbps	0 Bytes	0 bps	0
BRONZE	0.00%	4.18 GB	159.00 Kbps	0 Bytes	0 bps	0
PLATINUM	0.00%	1.12 MB	0 bps	0 Bytes	0 bps	0
GOLD	0.00%	172.37 MB	0 bps	0 Bytes	0 bps	0
SCAVENGER	0.00%	0 Bytes	0 bps	139.71 MB	0 bps	241.92 K
snmp	0.00%	0 Bytes	0 bps	0 Bytes	0 bps	0

Show Top: 10

Context: This view requires a selected group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies
Drop Volume	Total number of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).

Drop Bit Rate	Bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Buffer Drops	Count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Output Policy Pre-Post Class Maps

Displays pre- and post-policy statistics for the CBQoS Output Policy class maps in the selected reporting group with the highest pre-policy utilization during the selected time period.This view is designed to provide a comparison of pre- and post-policy performance for output class maps.

⊾ CBQoS Output Policy Pre-Post Class Maps				Wed 4 Nov 2009 - Tue 10 Nov 2009 CST		
Name	Pre Util ▼	Pre Volume	Pre Bit Rate	Post Util	Post Volume	Post Bit Rate
gold	125.24%	418.21 MB	1.20 Kbps	125.25%	418.22 MB	200 bps
NETWORK_MON	45.83%	13.28 GB	372.00 Kbps	23.18%	6.72 GB	153.00 Kbps
class-default	2.04%	504.09 GB	549.40 Kbps	2.04%	504.10 GB	536.20 Kbps
QPM_silver1	0.03%	9.68 GB	44.00 Kbps	0.03%	9.68 GB	40.00 Kbps
SILVER	0.00%	13.29 GB	228.00 Kbps	0.00%	13.29 GB	228.00 Kbps
BRONZE	0.00%	4.18 GB	159.00 Kbps	0.00%	4.18 GB	159.00 Kbps
PLATINUM	0.00%	1.12 MB	0 bps	0.00%	1.12 MB	0 bps
GOLD	0.00%	172.37 MB	0 bps	0.00%	172.37 MB	0 bps
SCAVENGER	0.00%	139.71 MB	0 bps	0.00%	0 Bytes	0 bps
snmp	0.00%	0 Bytes	0 bps	0.00%	0 Bytes	0 bps

Show Top: 10

Context: This view requires a selected group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Util	Average utilization rate prior to executing QoS policies
Pre Volume	Total volume of the traffic prior to executing QoS policies
Pre Bit Rate	Total bit rate of the traffic prior to executing QoS policies
Post Util	Average utilization rate after executing QoS policies
Post Volume	Total volume of the traffic after executing QoS policies
Post Bit Rate	Total bit rate of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report and Operations Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report and the Class Based Quality of Service report.

CBQoS Output Pre-vs-Post Bit Rate by Class

Displays pre- and post-policy bit rates for the CBQoS Output Policy class maps in the selected reporting group with the highest pre-policy bit rates during the selected time period. This view is designed to provide a comparison of pre- and post-policy bit rates for output class maps.

Context: This view requires a selected group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Rate	Total bit rate of the traffic prior to executing QoS policies
Post-Rate	Total bit rate of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Output Pre-vs-Post Utilization by Class

Displays pre- and post-policy utilization rates for the CBQoS Output Policy class maps in the selected reporting group with the highest pre-policy utilization rates during the selected time period. This view is designed to provide a comparison of pre- and post-policy utilization for output class maps.

Context: This view requires a selected group to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Util   Average utilization rate prior to executing QoS policies

Post-Util   Average utilization rate after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Class Based Quality of Service report.

CBQoS Output Pre-vs-Post Volume by Class

Displays pre- and post-policy volumes for the CBQoS Input Policy class maps with the highest pre-policy volumes in the selected reporting group during the selected time period. This view is designed to provide a comparison of pre- and post-policy volumes for output class maps.

Context: This view requires a selected group or CB QoS class map to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Volume	Total volume (bytes) of the traffic prior to executing QoS policies
Post-Volume	Total volume (bytes) of the traffic after executing QoS policies

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class Based QoS Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Class Based Quality of Service report.

CBQoS Top-N Views

The following sections describe the views related to CBQoS Top-N data that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics for many of the CBQoS views cannot be edited in the Custom View Wizard.

Top CBQoS Current Queue Depth

Displays the queue depth for CBQoS packets for the interface/class maps in the selected reporting group or managed object with the highest queue depth during the selected time period. This view is designed to provide focus to those interfaces with the worst (highest) queue sizes, which may be more prone to problems or failure.
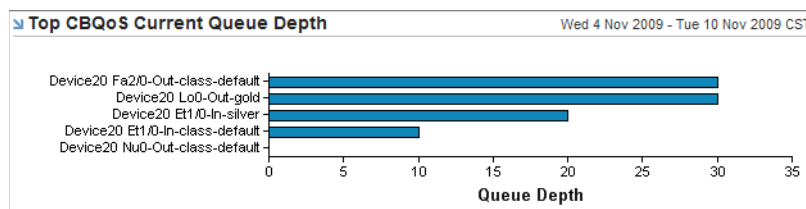
Context: This view requires a selected group or router configured for CB QoS Queueing to be displayed.

Data: The metric used to render this view is `disquiet`, which corresponds to the QoS Queueing Statistics dataset in NetVoyant. The view includes data for the following expressions:

Queue Depth	The current depth of the queue

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest queue depth for the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS IPHC Packets

Displays the number of CBQoS IPHC packets for the interface/class maps in the selected reporting group or managed object with the highest number during the selected time period. This view is designed to provide focus to those interfaces with the highest number of IPHC packets.

Context: This view requires a selected group or router configured for CB QoS IPHC to be displayed.

Data: The metric used to render this view is `qosiphc`, which corresponds to the QoS IP Header Compression Statistics dataset in NetVoyant. The view includes data for the following expressions:

UDP/RTP Sent Pkts	Count of outbound UDP/RTP packets
UDP Compressed Pkts	Count of outbound compressed UDP/RTP packets
TCP Sent Pkts	Count of outbound TCP packets
TCP Compressed Pkts	Count of outbound compressed TCP packets.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total number of UDP/RTP (sent and compressed) and TCP (sent and compressed) over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS IPHC Rates

Displays the CBQoS IPHC rates for the interface/class maps in the selected reporting group or managed object with the highest number during the selected time period. This view is designed to provide focus to those interfaces with the highest number of IPHC packets.

Context: This view requires a selected group or router configured for CB QoS IPHC to be displayed.

Data: The metric used to render this view is `qosiphc`, which corresponds to the QoS IP Header Compression Statistics dataset in NetVoyant. The view includes data for the following expressions:

UDP/RTP Sent Rate	Count of outbound UDP/RTP byte rate
TCP Sent Rate	Count of outbound TCP byte rate

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total UDP/RTP and TCP byte rate over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS IPHC Volume

Displays the CB QoS IPHC volumes for the interface/class maps in the selected reporting group or managed object with the highest volume during the selected time period. The view is designed to provide focus to those interfaces with the highest CB QoS IPHC volume, which may be more prone to problems or failure.

Context: This view requires a selected group or router configured for CB QoS IPHC to be displayed.

Data: The metric used to render this view is `qosiphc`, which corresponds to the QoS IP Header Compression Statistics dataset in NetVoyant. The view includes data for the following expressions:

UDP/RTP Saved Bytes	Count of UDP/RTP bytes saved due to IPHC
UDP/RTP Sent Bytes	Count of outbound UDP/RTP bytes
TCP Saved Bytes	Count of TCP bytes saved due to IPHC
TCP Sent Bytes	Count of outbound TCP bytes

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total of saved and sent bytes for UDP/RTP and TCP over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Match Pre-Policy Packets

Displays the total number of CB QoS Match pre-policy packets for the interface/class maps in the selected reporting group or managed object with the highest number during the selected time period. The view is designed to provide focus to those interfaces with the highest number of CB QoS Match pre-policy packets.

Context: This view requires a selected group or router configured for CB QoS Match policies to be displayed.

Data: The metric used to render this view is `qosmatch`, which corresponds to the QoS Match Statistics dataset in NetVoyant. The view includes data for the following expression:

Pre-Policy Packets   Count of inbound packets prior to executing any QoS Match policies.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest number of pre-policy packets over the selected time period.
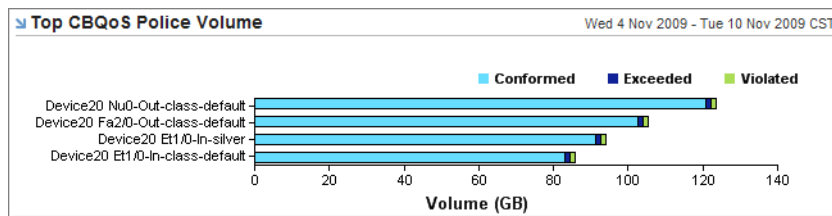
Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Match Pre-Policy Rate

Displays the bit rate of CB QoS Match pre-policy packets for the interface/class maps in the selected reporting group or managed object with the highest rates during the selected time period. The view is designed to provide focus to those interfaces with the highest bit rate of CB QoS Match pre-policy packets.
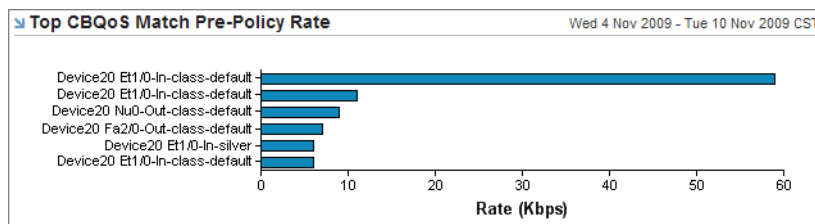
Context: This view requires a selected group or router configured for CB QoS Match policies to be displayed.

Data: The metric used to render this view is `qosmatch`, which corresponds to the QoS Match Statistics dataset in NetVoyant. The view includes data for the following expression:

Pre-Policy Rate   Bit rate of the traffic prior to executing any QoS Match policies.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest bit rate of pre-policy packets over the selected time period.
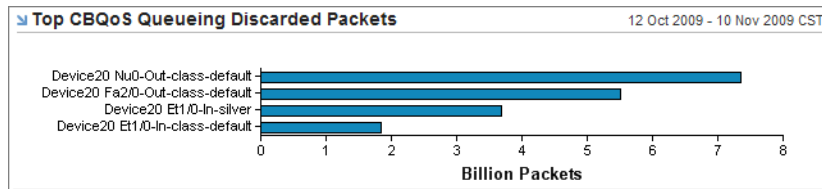
Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Match Pre-Policy Volume

Displays the total volume of CB QoS Match pre-policy packets for the interface/class maps in the selected reporting group or managed object with the highest volume during the selected time period. The view is designed to provide focus to those interfaces with the highest volume of CB QoS Match pre-policy packets.
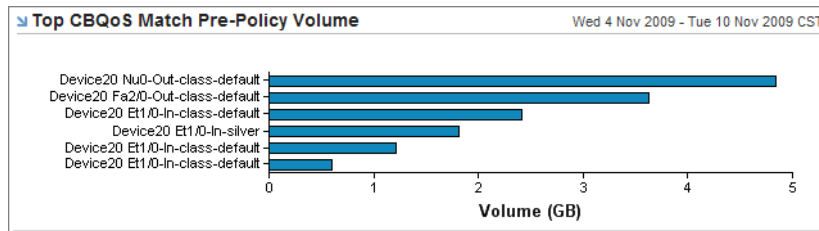
Context: This view requires a selected group or router configured for CB QoS Match policies to be displayed.

Data: The metric used to render this view is `qosmatch`, which corresponds to the QoS Match Statistics dataset in NetVoyant. The view includes data for the following expression:

Pre-Policy Volume	Volume (bytes) of inbound packets prior to executing any QoS policies

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest volume of pre-policy packets over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Match Statistics

Displays all of the CB QoS Match pre-policy packet statistics for the interface/class maps in the selected reporting group or managed object with the highest CB QoS Match volume during the selected time period. The view is designed to provide focus to those interfaces with the highest volume of CB QoS Match pre-policy packets.

Context: This view requires a selected group or router configured for CB QoS Match policies to be displayed.

Data: The metric used to render this view is `qosmatch`, which corresponds to the QoS Match Statistics dataset in NetVoyant. The view includes data for the following expressions:

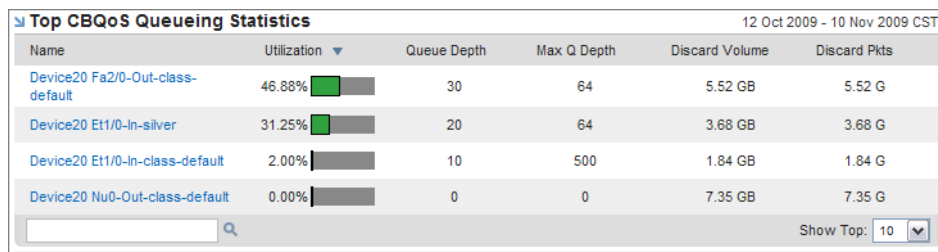|	
Pre-Volume	Volume (bytes) of inbound packets prior to executing any QoS policies
Pre-Pkts	Count of inbound packets prior to executing any QoS policies
Pre-Rate	Bit rate of the traffic prior to executing any QoS policies

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest volume of pre-policy packets over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Capabilities report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Interfaces report.

Top CBQoS Police Color Packets

Displays the total number of packets marked as Cfm/Exd/Vlt-to-Conform/Exceed/Violate by the CBQoS Policing feature for the interface/class maps in the selected reporting group or managed object with the highest number during the selected time period. The view is designed to provide focus to those interfaces with the highest number of CB QoS Police Color packets.

Context: This view requires a selected group or router configured for CB QoS Police Color to be displayed.

Data: The metric used to render this view is `qoscolor`, which corresponds to the QoS Police Color Statistics dataset in NetVoyant. The view includes data for the following expressions:

Cfm Conform	Count of packets which are marked as Conform-Color by previous node and treated as conforming by the policing feature on this node.
Cfm Exceed	Count of packets which are marked as Conform-Color by previous node and treated as exceeding by the policing feature on this node.
Cfm Violate	Count of packets which are marked as Conform-Color by previous node and treated as violating by the policing feature on this node.
Exd Exceed	Count of packets which are marked as Exceed-Color by previous node and treated as exceeding by the policing feature on this node
Vlt Violate	Count of packets which are marked as Exceed-Color by previous node and treated as violating by the policing feature on this node.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total number of Police Color packets (Conform-Color and Exceed-Color) over the selected time period.

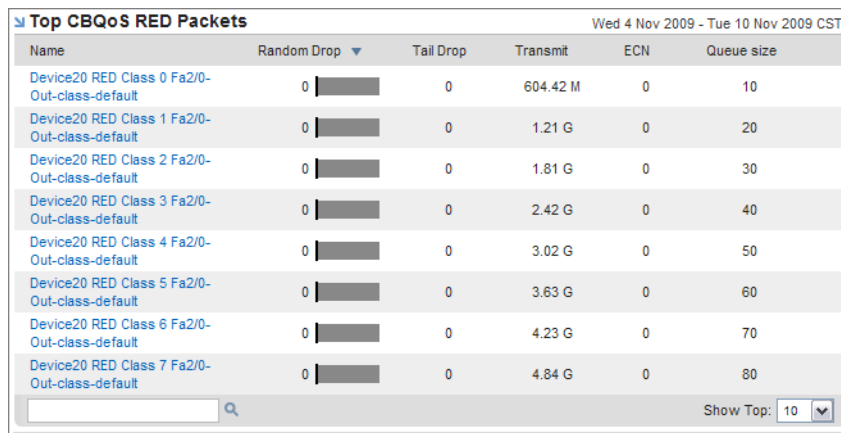**Styles:** This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Police Color Volume

Displays the total volume of packets marked as Cfm/Exd/Vlt-to-Conform/Exceed/Violate by the CBQoS Policing feature for the interface/class maps in the selected reporting group or managed object with the highest number during the selected time period. The view is designed to provide focus to those interfaces with the highest volume of CB QoS Police Color packets.

Context: This view requires a selected group or router configured for CB QoS Police Color to be displayed.

Data: The metric used to render this view is `qoscolor`, which corresponds to the QoS Police Color Statistics dataset in NetVoyant. The view includes data for the following expressions:

Cfm Conform	Count of bytes which are marked as Conform-Color by previous node and treated as conforming by the policing feature on this node.
Cfm Exceed	Count of bytes which are marked as Conform-Color by previous node and treated as exceeding by the policing feature on this node.
Cfm Violate	Count of bytes which are marked as Conform-Color by previous node and treated as violating by the policing feature on this node.
Exd Exceed	Count of bytes which are marked as Exceed-Color by previous node and treated as exceeding by the policing feature on this node
Exd Violate	Count of bytes which are marked as Exceed-Color by previous node and treated as violating by the policing feature on this node.
Vlt Violate	Count of bytes which are marked as Violate-Color by previous node and treated as violating by the policing feature on this node.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total volume of Police Color packets (Conform-Color and Exceed-Color) over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Police Packets

Displays the total volume of packets marked by the CBQoS Policing feature for the interface/class maps in the selected reporting group or managed object with the highest volume during the selected time period. This view is designed to provide focus to policy performance on those interfaces with the highest volume of CB QoS Police packets.
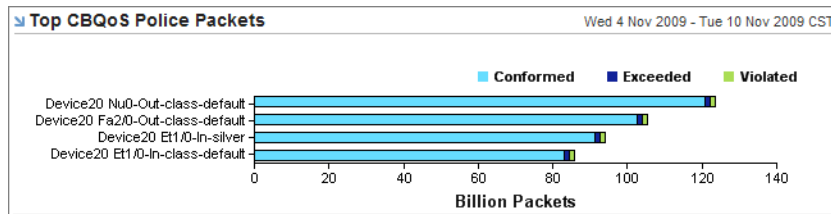
Context: This view requires a selected group or router configured for CB QoS Policing to be displayed.

Data: The metric used to render this view is `qospolice`, which corresponds to the QoS Police Statistics dataset in NetVoyant. The view includes data for the following expressions:

Conformed	Count of packets treated as conforming by the policing feature.
Exceeded	Count of packets treated as non-conforming by the policing feature.
Violated	Count of packets treated as violated by the policing feature.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total number of Policing packets (Conform, Exceed, and Violate) over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Capabilities Report.

Top CBQoS Police Statistics

Displays the number of packets, by type, marked by the CBQoS Policing feature for the interface/class maps in the selected reporting group or managed object with the highest volume of conformed packets during the selected time period. This view is designed to provide focus to policy performance on those interfaces with the highest volume of CB QoS Police packets.

Context: This view requires a selected group or router configured for CB QoS Policing to be displayed.

Data: The metric used to render this view is `qospolice`, which corresponds to the QoS Police Statistics dataset in NetVoyant. The view includes data for the following expressions:

Conformed Volume	Count of bytes treated as conforming by the policing policy.
Conformed Packets	Count of packets treated as conforming by the policing policy.
Exceeded Volume	Count of bytes treated as exceeding by the policing policy.

Exceeded Packets	Count of packets treated as exceeding by the policing policy.
Violated Volume	Count of bytes treated as violated by the policing policy.
Violated Packets	Count of packets treated as violated by the policing policy.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total number of Policing packets (Conform, Exceed, and Violate) over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Interfaces report.

Top CBQoS Police Volume

Displays the volume of packets, by type, marked by the CBQoS Policing feature for the interface/class maps in the selected reporting group or managed object with the highest volume during the selected time period. The view is designed to provide focus to policy performance on those interfaces with the highest volume of CB QoS Police packets.

Context: This view requires a selected group or router configured for CB QoS Policing to be displayed.

Data: The metric used to render this view is `qospolice`, which corresponds to the QoS Police Statistics dataset in NetVoyant. The view includes data for the following expressions:

Conformed	Count of bytes treated as conforming by the policing policy.
Exceeded	Count of bytes treated as exceeding by the policing policy.
Violated	Count of bytes treated as violated by the policing policy.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total volume of Policing packets (Conform, Exceed, and Violate) over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Class Map Capabilities Report.

Top CBQoS Queueing Discarded Packets

Displays the number of packets discarded by the CBQoS Queueing feature for the interface/class maps in the selected reporting group or managed object with the highest number during the selected time period. The view is designed to provide focus to those interfaces with the highest number of CB QoS Queueing discards.

Context: This view requires a selected group or router configured for CB QoS Queueing to be displayed.

Data: The metric used to render this view is `qosqueue`, which corresponds to the QoS Queueing Statistics dataset in NetVoyant. The view includes data for the following expression:

Discarded Packets	Count of packets, associated with this class, that were dropped by queueing.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest number of packets discarded by the CB QoS Queueing policy over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report.

Top CBQoS Queueing Discarded Volume

Displays the volume (bytes) discarded by the CBQoS Queueing feature for the interface/class maps in the selected reporting group or managed object with the highest volume during the selected time period. The view is designed to provide focus to those interfaces with the highest volume of CB QoS Queueing discards.
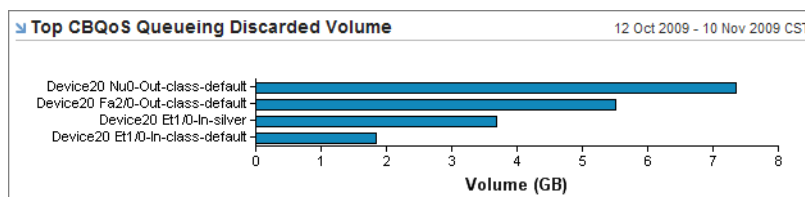
Context: This view requires a selected group or router configured for CB QoS Queueing to be displayed.

Data: The metric used to render this view is `qosqueue`, which corresponds to the QoS Queueing Statistics dataset in NetVoyant. The view includes data for the following expression:

Discarded Volume Count of bytes, associated with this class, that were dropped by queueing.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest number volume of packets discarded by the CB QoS Queueing policy over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Queueing Statistics

Displays the utilization of CBQoS Queueing, along with the number and volume of discarded packets, for the interface/class maps in the selected reporting group or managed object with the highest utilization during the selected time period. The view is designed to provide focus to policy performance on those interfaces with the highest CB QoS Queueing utilization.

Top CBQoS Queueing Statistics				12 Oct 2009 - 10 Nov 2009 CST	
Name	Utilization ▼	Queue Depth	Max Q Depth	Discard Volume	Discard Pkts
Device20 Fa2/0-Out-class-default	46.88%	30	64	5.52 GB	5.52 G
Device20 Et1/0-In-silver	31.25%	20	64	3.68 GB	3.68 G
Device20 Et1/0-In-class-default	2.00%	10	500	1.84 GB	1.84 G
Device20 Nu0-Out-class-default	0.00%	0	0	7.35 GB	7.35 G
🔍				Show Top: 10	

Context: This view requires a selected reporting group or router configured for CB QoS Queueing to be displayed.

Data: The metric used to render this view is `qosqueue`, which corresponds to the QoS Queueing Statistics dataset in NetVoyant. The view includes data for the following expressions:

Utilization Where the maximum queue depth value is greater than 0, a percentage value equal to the current queue depth divided by the maximum queue depth.

Queue Depth Current depth of the queue.

Max Q Depth Maximum depth of the queue.

Discard Volume Count of octets, associated with this class, that were dropped by queueing.

Discard Pkts Count of packets, associated with this class, that were dropped by queueing.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest utilization of the CB QoS Queueing policy over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

**Standard NetVoyant reports:** This view is included by default in the Router Capabilities Report and Class-Based QoS Class Map Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Dashboard report and the Router Interfaces report.

Top CBQoS RED Packets

Displays the total number of dropped CBQoS RED packets, as well as the queue size for the interface/class maps in the selected reporting group or managed object with the highest number of random drops during the selected time period. The view is designed to provide focus to those interfaces with the worst (highest) random drop values, which may be more prone to problems or failure.

Top CBQoS RED Packets				Wed 4 Nov 2009 - Tue 10 Nov 2009 CST	
Name	Random Drop ▼	Tail Drop	Transmit	ECN	Queue size
Device20 RED Class 0 Fa2/0-Out-class-default	0	0	604.42 M	0	10
Device20 RED Class 1 Fa2/0-Out-class-default	0	0	1.21 G	0	20
Device20 RED Class 2 Fa2/0-Out-class-default	0	0	1.81 G	0	30
Device20 RED Class 3 Fa2/0-Out-class-default	0	0	2.42 G	0	40
Device20 RED Class 4 Fa2/0-Out-class-default	0	0	3.02 G	0	50
Device20 RED Class 5 Fa2/0-Out-class-default	0	0	3.63 G	0	60
Device20 RED Class 6 Fa2/0-Out-class-default	0	0	4.23 G	0	70
Device20 RED Class 7 Fa2/0-Out-class-default	0	0	4.84 G	0	80

Show Top: 10

Context: This view requires a selected group or router configured for CB QoS RED to be displayed.

Data: The metric used to render this view is `qosred`, which corresponds to the QoS Random Early Detect Statistics dataset in NetVoyant. The view includes data for the following expressions:

Random	Count of packets dropped when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold
Tail	Count of bytes dropped when the number of packets in the associated queue was greater than the maximum threshold
Xmit	Count of bytes transmitted
ECN	Count of bytes ecn marked when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest number of random drops over the selected time period.

Styles: This view can be displayed as a table or bar chart.

Standard NetVoyant reports: This view is included by default in the Router Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Interfaces report.

Top CBQoS RED Queue Size

Displays the average CBQoS RED queue size for the interface/class maps in the selected reporting group or managed object with the highest sizes during the selected time period. The view is designed to provide focus to those interfaces with the highest RED queue sizes.
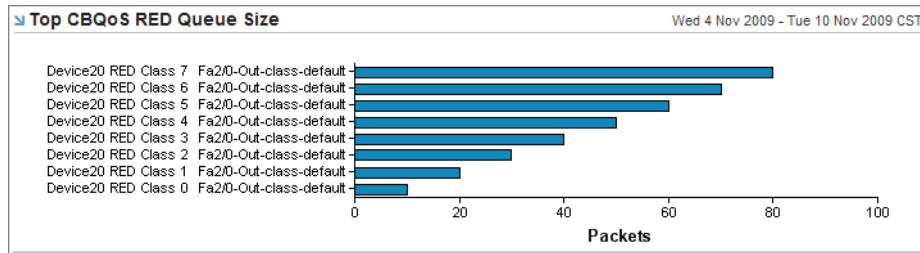
Context: This view requires a selected group or router configured for CB QoS RED to be displayed.

Data: The metric used to render this view is `qosred`, which corresponds to the QoS Random Early Detect Statistics dataset in NetVoyant. The view includes data for the following expression:

Queue Size   The average queue size computed and used by the WRED algorithm

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest value over the selected time period.
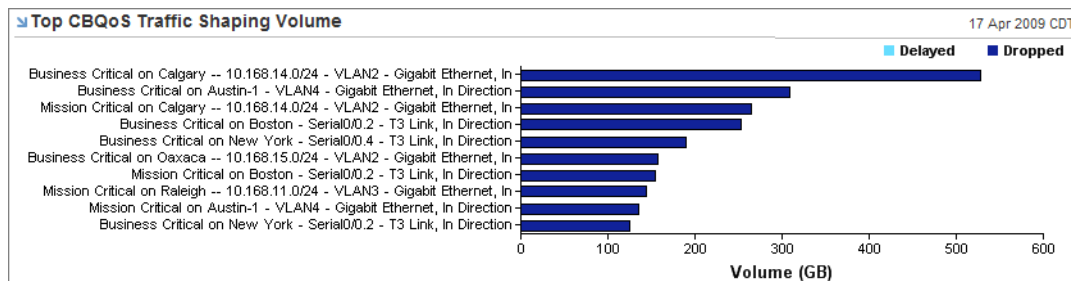
Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS RED Volume

Displays the CBQoS RED volumes for the interface/class maps in the selected reporting group or managed object with the highest volume of random drops during the selected time period. The view is designed to provide focus to those interfaces with the highest volume, which may be more prone to problems or failure of CB QoS RED policy.

Top CBQoS RED Volume	Wed 4 Nov 2009 - Tue 10 Nov 2009 CST				
Name	Random Drop ▼	Tail Drop	Transmit	ECN	Queue size
Device20 RED Class 7 Fa2/0-Out-class-default	4.84 GB	0 Bytes	0 Bytes	0 Bytes	80
Device20 RED Class 6 Fa2/0-Out-class-default	4.23 GB	0 Bytes	0 Bytes	0 Bytes	70
Device20 RED Class 5 Fa2/0-Out-class-default	3.63 GB	0 Bytes	0 Bytes	0 Bytes	60
Device20 RED Class 4 Fa2/0-Out-class-default	3.02 GB	0 Bytes	0 Bytes	0 Bytes	50
Device20 RED Class 3 Fa2/0-Out-class-default	2.42 GB	0 Bytes	0 Bytes	0 Bytes	40
Device20 RED Class 2 Fa2/0-Out-class-default	1.81 GB	0 Bytes	0 Bytes	0 Bytes	30
Device20 RED Class 1 Fa2/0-Out-class-default	1.21 GB	0 Bytes	0 Bytes	0 Bytes	20
Device20 RED Class 0 Fa2/0-Out-class-default	604.42 MB	0 Bytes	0 Bytes	0 Bytes	10
				Show Top: 10	

Context: This view requires a selected group or router configured for CB QoS RED to be displayed.

Data: The metric used to render this view is `qosred`, which corresponds to the QoS Random Early Detect Statistics dataset in NetVoyant. The view includes data for the following expressions:

Random	Count of bytes dropped when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold
Tail	Count of bytes dropped when the number of packets in the associated queue was greater than the maximum threshold
Xmit	Count of bytes transmitted
ECN	Count of bytes ecn marked when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest volume of RED random drops.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Capabilities Report.

Top CBQoS Set Packets

Displays the CB QoS Set statistics for the interface/class maps in the selected reporting group or managed object with the highest number of packets marked by the CBQoS Set feature over the selected time period. The view is designed to provide focus to those interfaces with the highest number of Set packets.

Context: This view requires a selected group or router configured for CB QoS Set to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS SET Statistics dataset in NetVoyant. The view includes data for the following expressions:

DSCP	Count of packets with the DSCP field marked by the Set feature
Precedence	Count of packets with the Precedence field marked by the Set feature
QoS Group	Count of packets with the Qos Group field marked by the Set feature
FR DE	Count of packets with the Frame Relay DE Bit marked by the Set feature
ATM CLP	Count of packets with the ATM CLP Bit is marked by the Set feature
L2 CoS	Count of packets with the Layer 2 Cos field marked by the Set feature
MPLS Imposition	Count of packets with the MPLS Experimental Imposition field marked by the Set feature
Discard Class	Count of packets with the Discard Class field marked by the Set feature
MPLS Top Most	Count of packets with the MPLS Experimental TopMost field marked by the Set feature
SRP Priority	Count of packets with the SRP Priority field marked by the Set feature
FR FECN/ BECN	Count of packets with the Frame Relay FECN BECN field marked by the Set feature
DSCP Tunnel	Count of packets with the DSCP Tunnel field marked by the Set feature
Precedence Tunnel	Count of packets with the Precedence Tunnel field marked by the Set feature

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest number of DSCP marked packets for the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Top CBQoS Traffic Shaping

Displays the CB QoS Traffic Shaping statistics for the interface/class maps in the selected reporting group or managed object with the highest Traffic Shaping delayed volume during the selected time period. The view is designed to provide focus to those interfaces experiencing the highest level of Traffic Shaping drop and delay, and may be more prone to problems or failure.

Top CBQoS Traffic Shaping					17 Apr 2009 CDT
Name	Delayed Volume ▼	Delayed Packets	Dropped Volume	Dropped Packets	Queue Size
Business Critical on London - Serial 2/0.0 - T1 Link, In Direction	6.25 GB	837.23 K	10.40 GB	4.12 M	3.78 M
Business Critical on Serial 0/1, In Direction	3.21 GB	1.72 M	8.42 GB	3.16 M	8.66 M
Mission Critical on London - Serial 2/0.0 - T1 Link, In Direction	2.33 GB	676.10 K	6.69 GB	3.66 M	1.46 M
Business Critical on Boston - Serial 2/0.0 - T1 Link, In Direction	2.08 GB	1.16 M	4.33 GB	2.16 M	1.87 M
Mission Critical on Boston - Serial 2/0.0 - T1 Link, In Direction	1.65 GB	1.16 M	11.21 GB	3.53 M	1.90 M
Mission Critical on Serial 0/1, In Direction	979.77 MB	494.20 K	4.01 GB	2.29 M	3.67 M
Business Critical on Houston - Serial 2/0.1 - T1 Link, In Direction	449.20 MB	181.42 K	9.13 GB	2.09 M	276.17 K
Business Critical on PeopleSoft Data Center - Downlink, In Direction	203.90 MB	129.29 K	8.08 GB	2.99 M	343.54 K
Mission Critical on Houston - Serial 2/0.1 - T1 Link, In Direction	181.28 MB	79.72 K	7.87 GB	3.14 M	175.06 K
Mission Critical on Austin-1 - VLAN4 - Gigabit Ethernet, In Direction	28.27 MB	2.98 K	135.74 GB	29.61 M	396

Show Top: 10

Context: This view requires a selected group or router configured for CB QoS traffic shaping to be displayed.

Data: The metric used to render this view is `qosts`, which corresponds to the QoS Traffic Shaping Statistics dataset in NetVoyant. The view includes data for the following expressions:
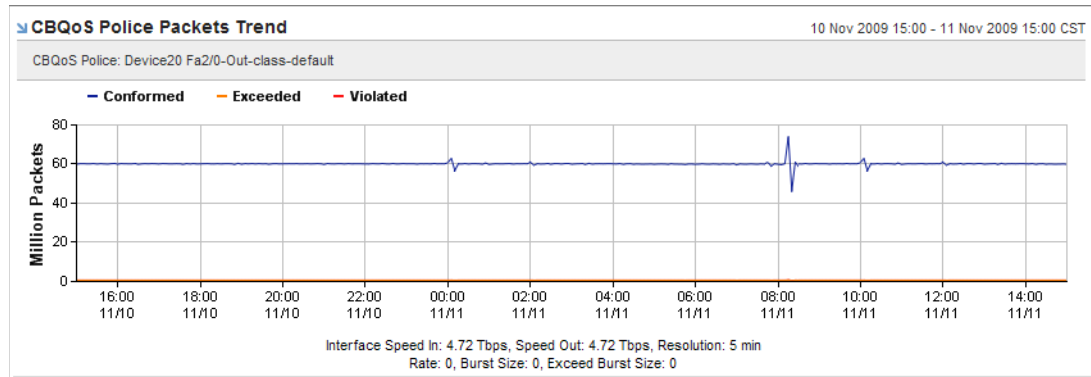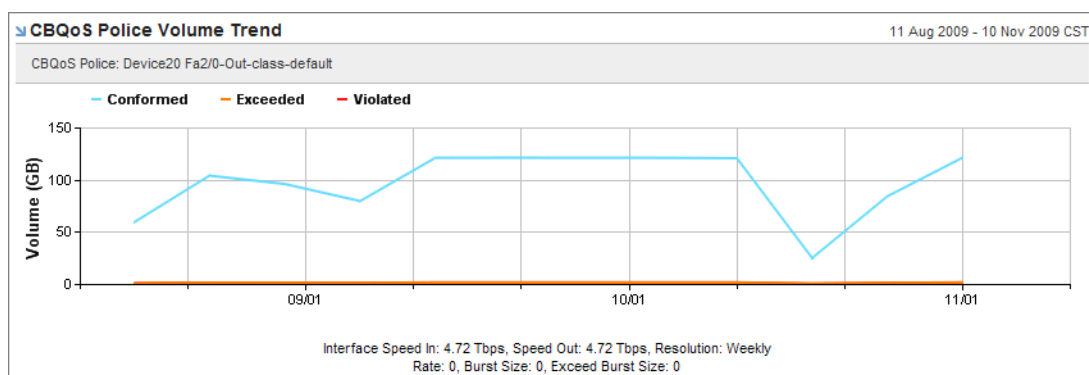
Delayed Volume	Count of bytes that have been delayed
Delayed Packets	Count of packets that have been delayed
Dropped Volume	Count of bytes that have been dropped during shaping
Dropped Packets	Count of packets that have been dropped during shaping
Queue Size	Current traffic-shaping queue depth in packets

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest level of Traffic Shaping delayed volume.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the CBQoS Dashboard report and the Router Interfaces report.

Top CBQoS Traffic Shaping Packets

Displays the total of dropped and delayed CBQoS Traffic Shaping packets for the interface/class maps in the selected reporting group or managed object with the highest number of delayed and dropped packets during the selected time period. The view is designed to provide focus to those interfaces with the worst (highest) values, which may be more prone to problems or failure.
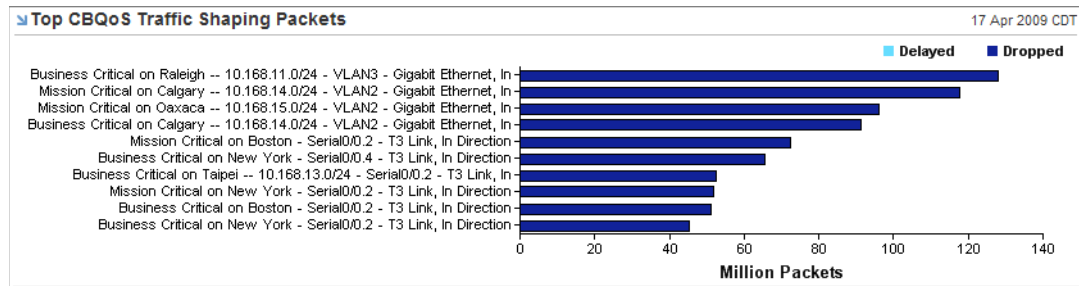
Context: This view requires a selected group or router configured for CB QoS traffic shaping to be rendered.

Data: The metric used to render this view is `qosts`, which corresponds to the QoS Traffic Shaping Statistics dataset in NetVoyant. The view includes data for the following expressions:

Delayed	Count of packets that have been delayed
Dropped	Count of packets that have been dropped during shaping

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total number of Traffic Shaping dropped and delayed packets.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the CBQoS Dashboard report.

Top CBQoS Traffic Shaping Queue Size

Displays the total CBQoS Traffic Shaping queue size for the interface/class maps in the selected reporting group or managed object with the highest queue sizes during the selected time period. The view is designed to provide focus to those interfaces with the worst (highest) values, which may be more prone to problems or failure.
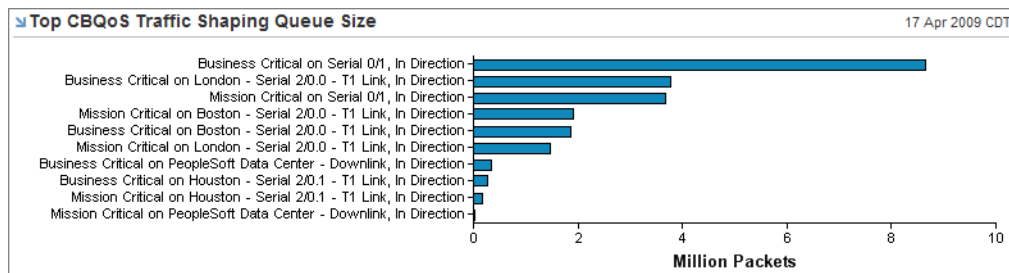
Context: This view requires a selected group or router configured for CB QoS traffic shaping to be displayed.

Data: The metric used to render this view is `qosts`, which corresponds to the QoS Traffic Shaping Statistics dataset in NetVoyant. The view includes data for the following expression:

    Queue Size   Current traffic-shaping queue depth in packets

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest Traffic Shaping queue depth.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the CBQoS Dashboard report.

Top CBQoS Traffic Shaping Volume

Displays the volume (bytes) for CBQoS Traffic Shaping dropped and delayed packets for the interface/class maps in the selected reporting group or managed object with the highest volume of delayed and dropped packets during the selected time period. The view is designed to provide focus to those interfaces with the worst (highest) values, which may be more prone to problems or failure.

Context: This view requires a selected group or router configured for CB QoS traffic shaping to be displayed.

Data: The metric used to render this view is `qosts`, which corresponds to the QoS Traffic Shaping Statistics dataset in NetVoyant. The view includes data for the following expressions:

Delayed	Count of bytes that have been delayed
Dropped	Count of bytes that have been dropped during shaping

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest total volume of Traffic Shaping dropped and delayed packets.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the CBQoS Dashboard report.

# CBQoS Match Views

The following sections describe the views related to CBQoS Match that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics for many of the CBQoS views cannot be edited in the Custom View Wizard.

CBQoS Match Pre-Policy Packets Trend

Displays the volume of pre-policy packets for the selected CB QoS match statement over the selected time period. The view is designed to show the packet volume changes over time for the match statement.

Context: This view requires a selected CB QoS class map configured for CB QoS Match policies to be displayed.

Data: The metric used to render this view is `qosmatch`, which corresponds to the QoS Match Statistics dataset in NetVoyant. The view includes data for the following expression:
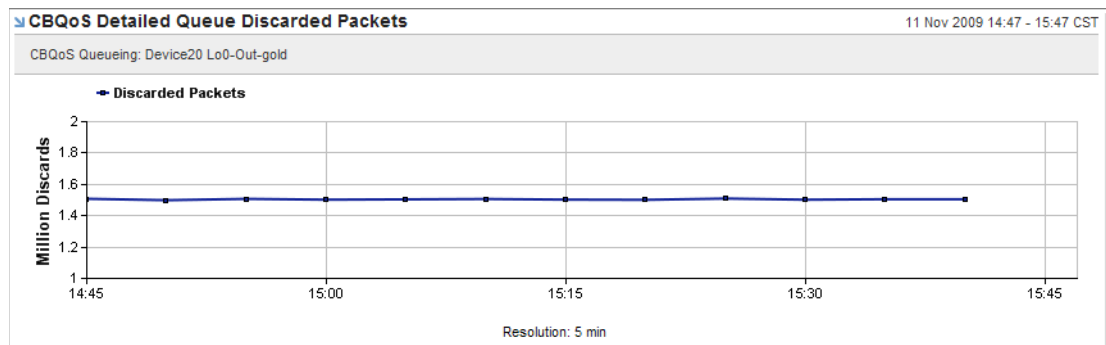
Pre-Policy Packets   Count of inbound packets prior to executing the CB QoS Match statement policy.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Match Detail Report report.

CBQoS Match Pre-Policy Rate Trend

Displays the bit rate of pre-policy packets for the CB QoS match statement over the selected time period. The view is designed to show the bit rate changes over time for the match statement.
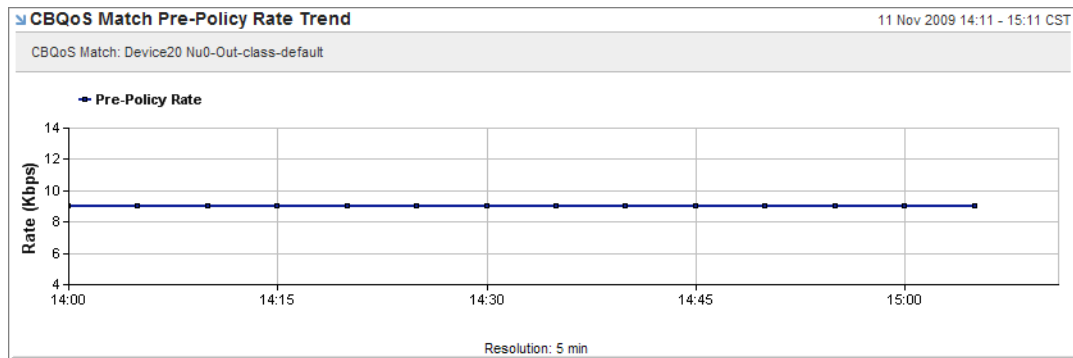
Context: This view requires a selected CB QoS class map configured for CB QoS Match policies to be displayed.

Data: The metric used to render this view is `qosmatch`, which corresponds to the QoS Match Statistics dataset in NetVoyant. The view includes data for the following expression:

Pre-Policy Rate   Bit rate of inbound packets prior to executing the CB QoS Match statement policy.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Match Detail Report.

CBQoS Match Pre-Policy Volume Trend

Displays the volume of pre-policy packets for the selected CB QoS match statement over the selected time period. The view is designed to show the changes in volume for the match statement over time.
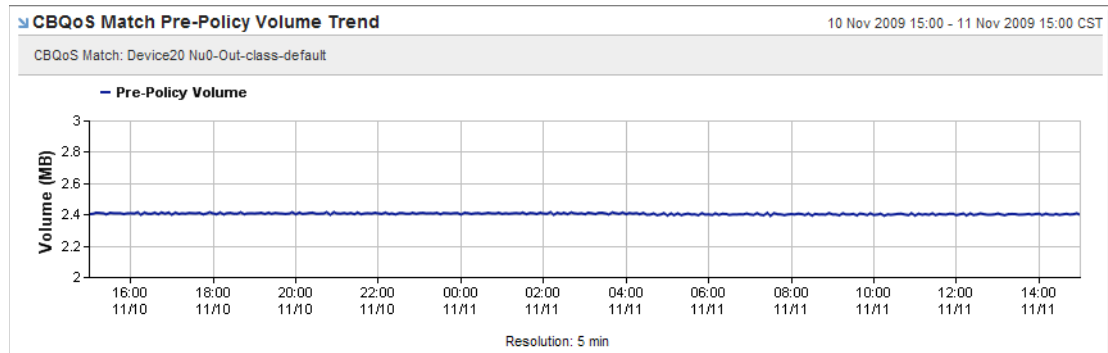
Context: This view requires a selected CB QoS class map configured for CB QoS Match policies to be displayed.

Data: The metric used to render this view is `qosmatch`, which corresponds to the QoS Match Statistics dataset in NetVoyant. The view includes data for the following expression:

Pre-Policy Volume	Count of inbound bytes prior to executing the CB QoS Match statement policy.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Match Detail Report.

Top CBQoS Match Statements

Displays the top CB QoS match statements for the selected class map during the selected time period. The view is designed to provide focus to those match statements with the highest values.

Context: This view requires a selected CB QoS class map configured for CB QoS Match policies to be displayed.

Data: The metric used to render this view is `qosmatch`, which corresponds to the QoS Match Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre-Volume	Count of inbound bytes prior to executing the Match statement policy.
Pre-Pkts	Count of inbound packets prior to executing the Match statement policy.
Pre-Rate	Bit rate of the traffic prior to executing the Match statement policy.

The view data is rendered and ordered according to which match statements in the selected class map have the highest total volume of traffic.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Class Map Capabilities Report report.

CBQoS POLICE VIEWS

The following sections describe the views related to CBQoS Police that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics for some of the CBQoS views cannot be edited in the Custom View Wizard.

CBQoS Police Bit Rate Trend

Displays the bit rate of pre-policy packets for the CB QoS police action policy over the selected time period.
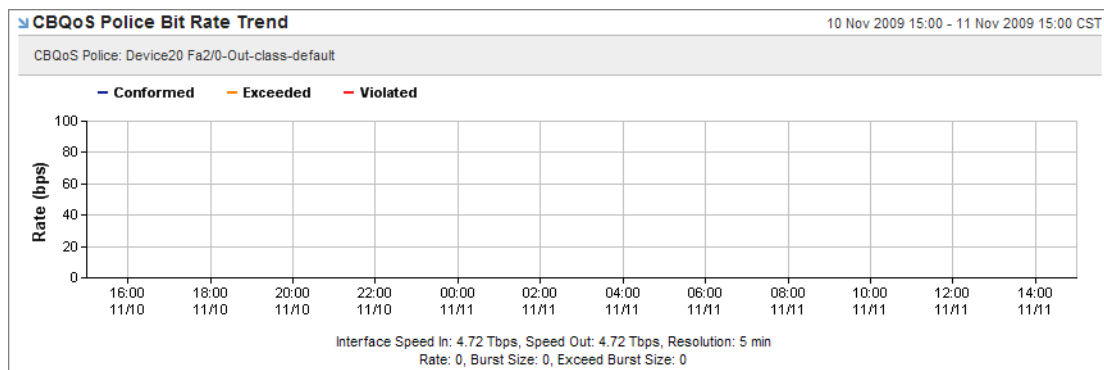
Context: This view requires a selected CB QoS Policing policy for a class map to be displayed.

Data: The metric used to render this view is `qospolice`, which corresponds to the QoS Police Statistics dataset in NetVoyant. The view includes data for the following expressions:

Conformed	Bit rate for packets treated as conforming by the policing policy.
Exceeded	Bit rate for packets treated as exceeding by the policing policy.
Violated	Bit rate for packets treated as violated by the policing policy.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: .This view is not included by default on any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Police Packets Trend

Displays the number of pre-policy packets for the selected CB QoS police action policy over the selected time period.

Context: This view requires a selected CB QoS Policing policy for a class map to be displayed.

Data: The metric used to render this view is `qospolice`, which corresponds to the QoS Police Statistics dataset in NetVoyant. The view includes data for the following expressions:

Conformed	Count of packets treated as conforming by the policing policy.
Exceeded	Count of packets treated as exceeding by the policing policy.
Violated	Count of packets treated as violated by the policing policy.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Police Detail Report.

CBQoS Police Volume Trend
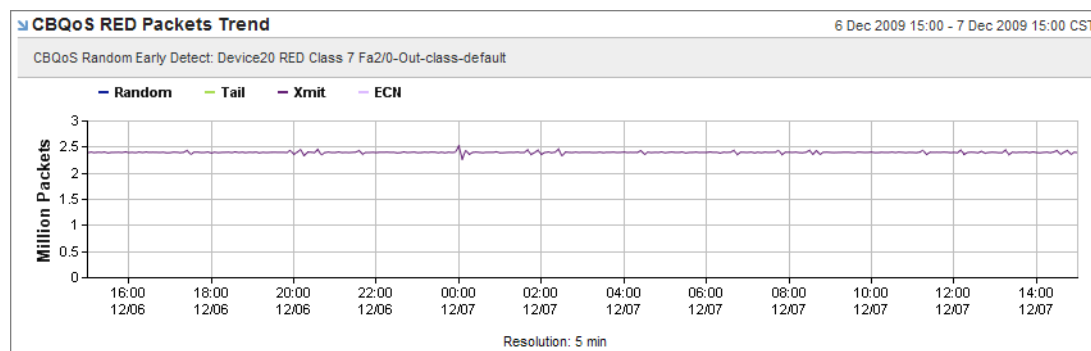
Displays the volume of pre-policy packets for the selected CB QoS police action policy over the selected time period.

Context: This view requires a selected CB QoS Policing policy for a class map to be displayed.

Data: The metric used to render this view is `qospolice`, which corresponds to the QoS Police Statistics dataset in NetVoyant. The view includes data for the following expressions:

Conformed	Count of bytes for packets treated as conforming by the policing policy.
Exceeded	Count of bytes for packets treated as exceeding by the policing policy.
Violated	Count of bytes for packets treated as violated by the policing policy.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Police Detail report.

Top CBQoS Police Action

Displays the top CB QoS police action policies for the class map during the selected time period and compares the number and volume of packets, by type, marked by the CBQoS Policing feature for the selected class map during the selected time period.

Context: This view requires a class map configured for CB QoS Policing to be displayed.

Data: The metric used to render this view is `qospolice`, which corresponds to the QoS Police Statistics dataset in NetVoyant. The view includes data for the following expressions:

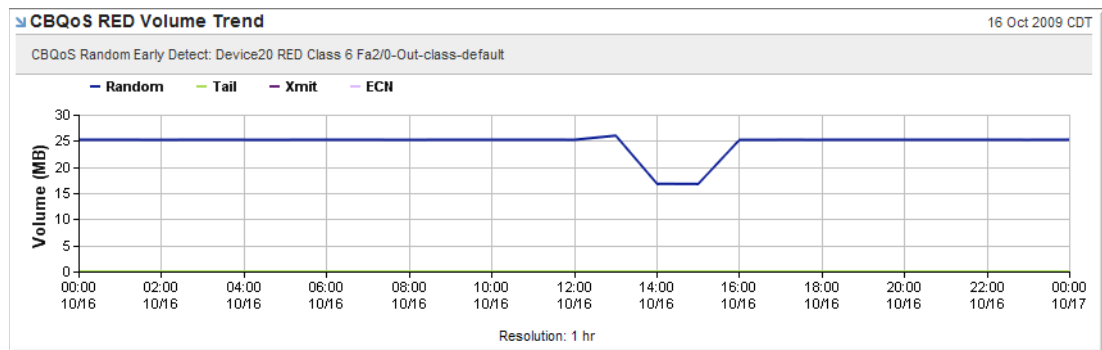|	
Conformed Volume	Count of bytes treated as conforming by the policing policy.
Conformed Packets	Count of packets treated as conforming by the policing policy.
Exceeded Volume	Count of bytes treated as exceeding by the policing policy.
Exceeded Packets	Count of packets treated as exceeding by the policing policy.
Violated Volume	Count of bytes treated as violated by the policing policy.
Violated Packets	Count of packets treated as violated by the policing policy.

The view data is rendered and ordered according to which interfaces in the selected group or router have the highest volume of Policing packets (Conform, Exceed, and Violate) over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Class Map Capabilities report.

CBQOS POLICY VIEW

The following sections describe the views related to CBQoS Policy that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics for many of the CBQoS views cannot be edited in the Custom View Wizard.

Top CBQoS Nested Classmaps

Displays the top CB QoS nested policies for the class map during the selected time period and compares the packet number, volume, and drops.

Context: This view requires a class map configured for CB QoS Policing to be displayed.

Data: The metric used to render this view is `qosclass`, which corresponds to the QoS Class Map Statistics dataset in NetVoyant. The view includes data for the following expressions:

Pre Pkts	Count of inbound packets prior to executing any QoS policies
Pre Volume	Volume (bytes) of inbound packets prior to executing any QoS policies
Pre Bit Rate	Bit rate of the traffic prior to executing any QoS policies

Post Pkts	Count of inbound packets after executing any QoS policies
Post Volume	Volume (bytes) of inbound packets after executing any QoS policies
Post Bit Rate	Bit rate of the traffic after executing any QoS policies
Drop Volume	Count of dropped bytes per class as the result of all features that can produce drops (police, random detect, etc.).
Drop Bit Rate	Bit rate of the drops per class as the result of all features that can produce drops (police, random detect, etc.).
Drops	Count of dropped packets per class as the result of all features that can produce drops (police, random detect, etc.).

The view data is rendered and ordered according to which class maps/policies have the highest number of pre-policy packets during the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

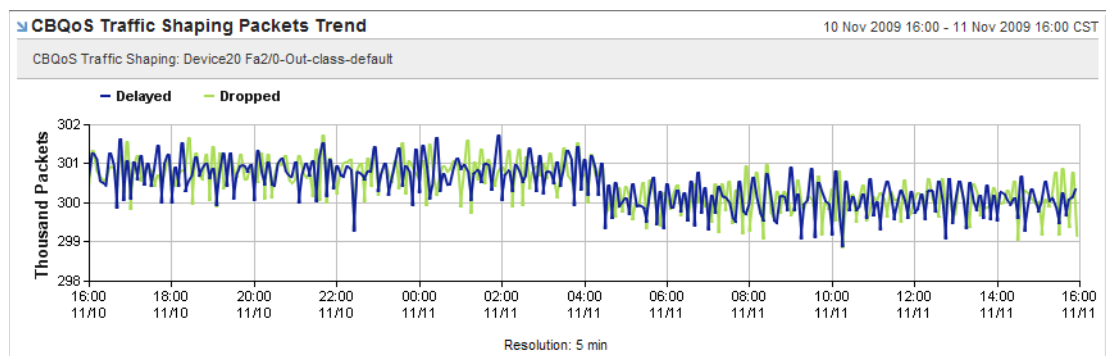**Standard NetVoyant reports:** This view is included by default in the Class-Based QoS Class Map Capabilities Report.

CBQoS Queueing Views

The following sections describe the views related to CBQoS Queueing that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics for many of the CBQoS views cannot be edited in the Custom View Wizard.

CBQoS Detailed Queue Depth

Displays the queue depth for the CB QoS queueing policy over the selected time period. The view is designed to show the queue depth changes over time for the Queueing policy.
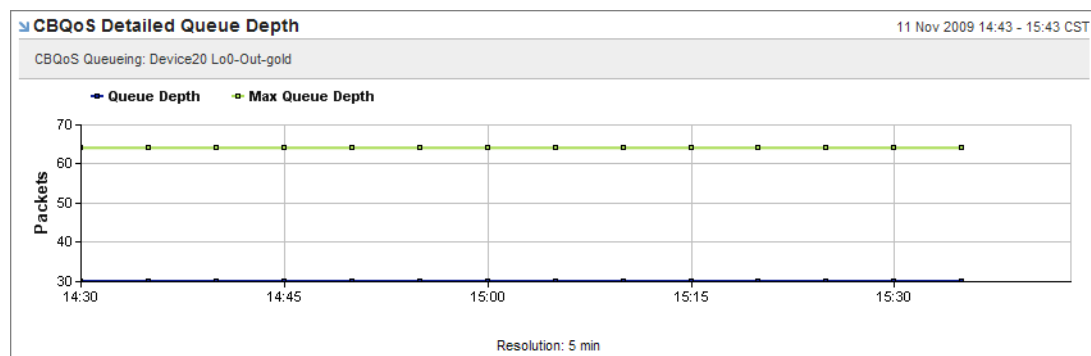
Context: This view requires a selected CB QoS Queueing policy to be displayed.

Data: The metric used to render this view is qosqueue, which corresponds to the QoS Queueing Statistics dataset in NetVoyant. The view includes data for the following expressions:
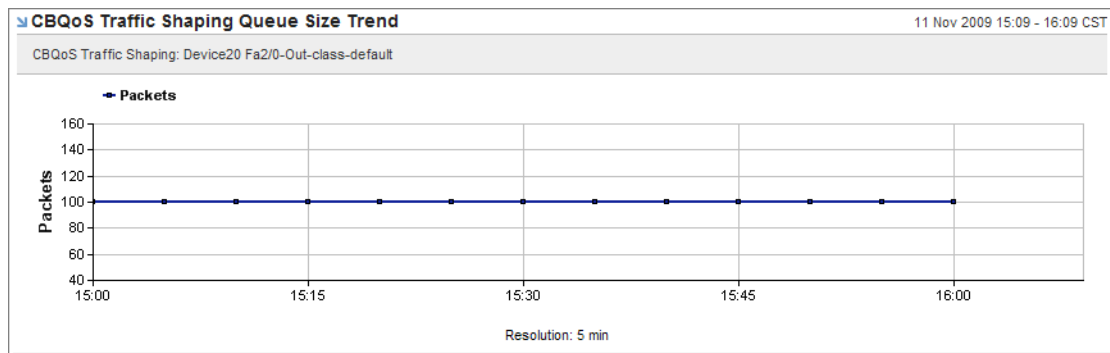
Avg Queue Depth   Current average depth of the queue.

Max Queue Depth   Maximum depth of the queue.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Queueing Detail Report.

CBQoS Detailed Queue Discarded Packets

Displays the number discarded packets for the selected CB QoS queueing policy over the selected time period. The view is designed to show the discard number changes over time for the Queueing policy.

Context: This view requires a selected CB QoS Queueing policy to be displayed.

Data: The metric used to render this view is qosqueue, which corresponds to the QoS Queueing Statistics dataset in NetVoyant. The view includes data for the following expression:

Discarded Packets   Count of packets, associated with this class, that were dropped by queueing.
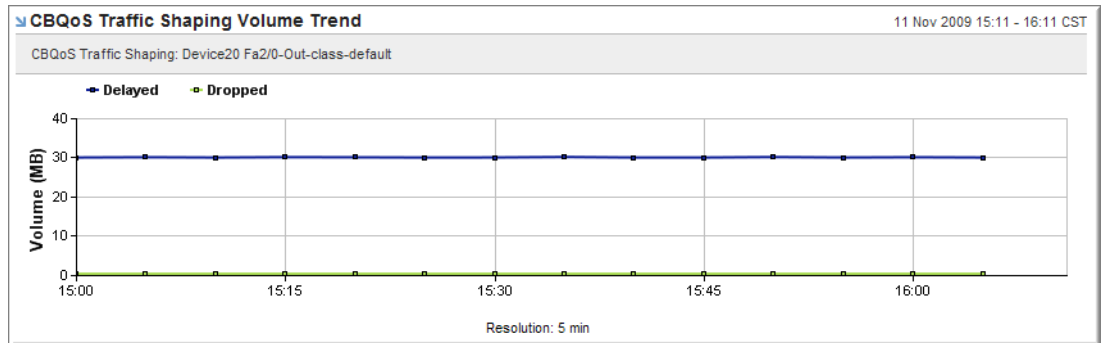
Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Queueing Detail Report.

CBQoS Detailed Queue Discarded Volume

Displays the discard volume (MB) for the selected CB QoS queueing policy over the selected time period. The view is designed to show the discard volume changes over time for the CBQoS Queueing policy.
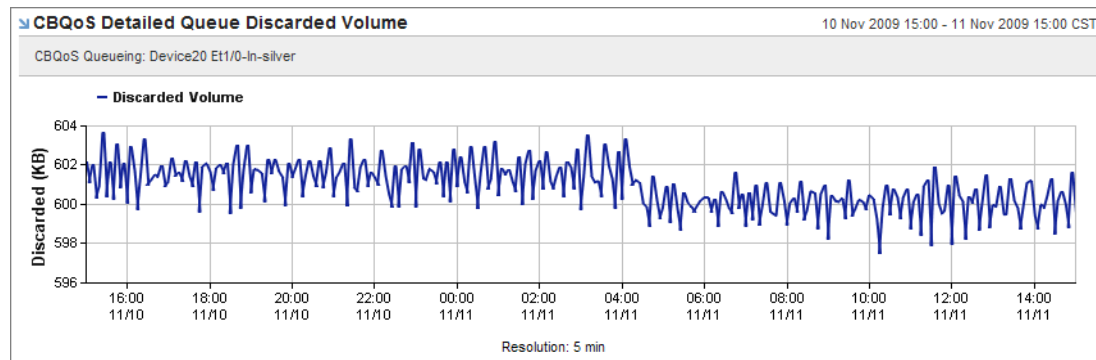
Context: This view requires a selected CB QoS Queueing policy to be displayed.

Data: The metric used to render this view is `qosqueue`, which corresponds to the QoS Queueing Statistics dataset in NetVoyant. The view includes data for the following expression:

Discarded Volume	Count of bytes, associated with this class, that were dropped by queueing.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Queueing Detail Report.

CBQoS Detailed Queue Utilization

Displays the utilization for the CB QoS queueing policy over the selected time period. The view is designed to show the discard volume changes over time for the Queueing policy.
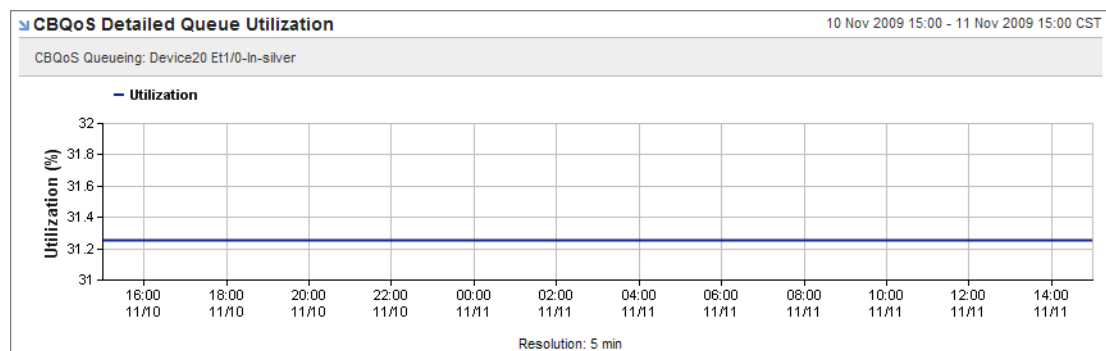
Context: This view requires a selected CB QoS Queueing policy to be displayed.

Data: The metric used to render this view is `qosqueue`, which corresponds to the QoS Queueing Statistics dataset in NetVoyant. The view includes data for the following expression:

Utilization	Where the maximum queue depth value is greater than 0, a percentage value equal to the current queue depth divided by the maximum queue depth.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Queueing Detail Report.

Top CBQoS Queueing Statistics

Displays the top CB QoS queueing statistics for the class map during the selected time period. This view compares the utilization of CBQoS Queueing, along with the queue depth and number and volume of discarded packets.
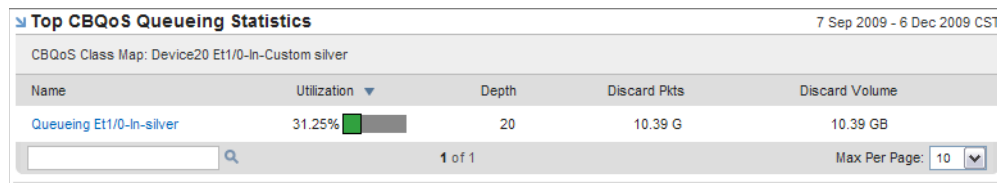
Context: This view requires a selected CB QoS class map configured for Queueing policies to be displayed.

Data: The metric used to render this view is `qosqueue`, which corresponds to the QoS Queueing Statistics dataset in NetVoyant. The view includes data for the following expressions:

Utilization	Where the maximum queue depth value is greater than 0, a percentage value equal to the current queue depth divided by the maximum queue depth.
Depth	Current depth of the queue.
Discard Pkts	Count of packets, associated with this class, that were dropped by queueing.
Discard Volume	Count of bytes, associated with this class, that were dropped by queueing.

The view data is rendered and ordered according to which policies in the selected class map have the highest utilization of the CB QoS Queueing policy over the selected time period.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Class Map Capabilities Report.

# CBQoS RED Views

The following sections describe the views related to CBQoS RED that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics for many of the CBQoS views cannot be edited in the Custom View Wizard.

CBQoS RED Packets Trend

Displays the number of packets, by type, for the CB QoS RED policy over the selected time period. The view is designed to show the packet number changes over time for the RED policy.

Context: This view requires a selected CB QoS RED policy to be displayed.

Data: The metric used to render this view is `qosred`, which corresponds to the QoS Random Early Detect Statistics dataset in NetVoyant. The view includes data for the following expressions:

Random	Count of packets dropped when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold
Tail	Count of packets dropped when the number of packets in the associated queue was greater than the maximum threshold
Xmit	Count of packets transmitted
ECN	Count of packets marked as ecn when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Random Early Detection Detail Report.

CBQoS RED Queue Size Trend

Displays the queue size for the CB QoS RED policy over the selected time period. The view is designed to show the queue size changes over time for the RED policy.
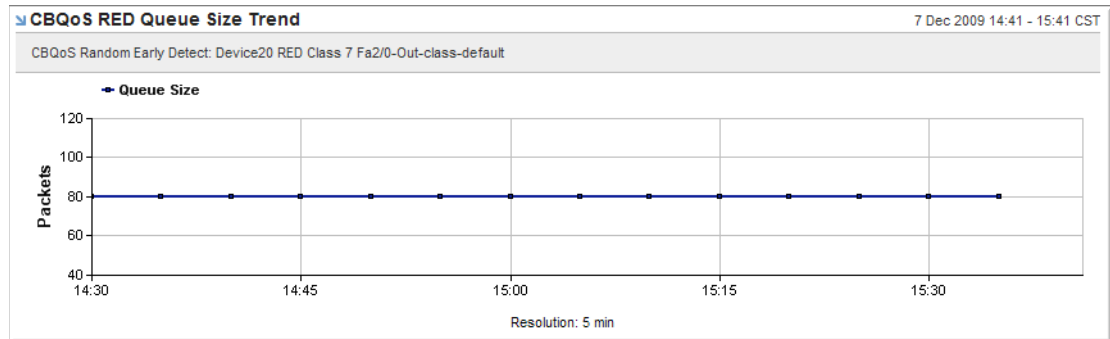
Context: This view requires a selected CB QoS RED policy to be displayed.

Data: The metric used to render this view is `qosred`, which corresponds to the QoS Random Early Detect Statistics dataset in NetVoyant. The view includes data for the following expression:
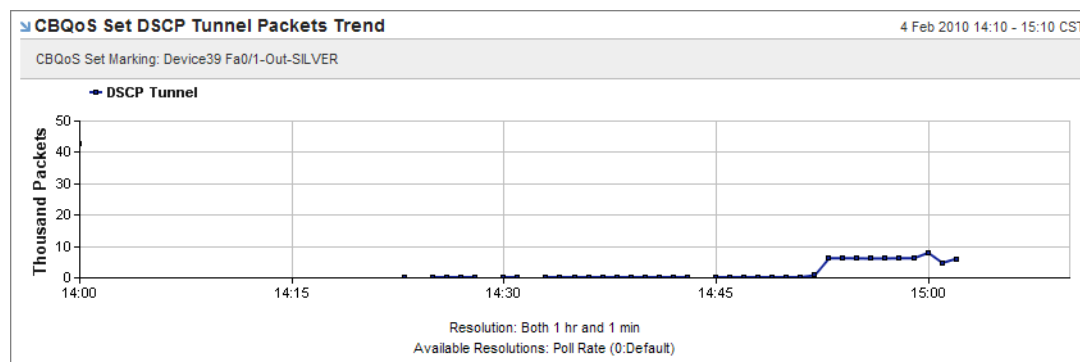
Queue Size   Average queue size computed and used by the WRED algorithm

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Random Early Detection Detail Report.

CBQoS RED Volume Trend

Displays the volume of packets for the CB QoS RED policy over the selected time period. The view is designed to show the packet volume changes over time for the RED policy.

Context: This view requires a selected CB QoS RED policy to be displayed.

Data: The metric used to render this view is `qosred`, which corresponds to the QoS Random Early Detect Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Random	Count of bytes dropped when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold
Tail	Count of bytes dropped when the number of packets in the associated queue was greater than the maximum threshold
Xmit	Count of bytes transmitted
ECN	Count of bytes in packets marked as ecn when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Random Early Detection Detail Report.

Top CBQoS RED Volume

Displays the top CBQoS RED volumes for the class map or managed object during the selected time period. This view compares the utilization of CBQoS RED, along with the queue depth and number and volume of discarded packets.

Context: This view requires a selected router or class map configured for CB QoS RED to be displayed.

Data: The metric used to render this view is `qosred`, which corresponds to the QoS Random Early Detect Statistics dataset in NetVoyant. The view includes data for the following expressions:

Random Drop	Count of bytes dropped when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold
Tail Drop	Count of bytes dropped when the number of packets in the associated queue was greater than the maximum threshold
Transmit	Count of bytes transmitted
ECN	Count of bytes ecn marked when the number of packets in the associated queue was greater than the minimum threshold and less than the maximum threshold
Queue size	Average queue size computed and used by the WRED algorithm

The view data is rendered and ordered according to which items have the highest number of RED random drops.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Class Map Capabilities Report and Router Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Interfaces report.

CBQoS TRAFFIC SHAPING VIEWS

The following sections describe the views related to CBQoS Traffic Shaping that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics for many of the CBQoS views cannot be edited in the Custom View Wizard.

CBQoS Traffic Shaping Packets Trend

Displays the number of delayed and dropped packets for the CB QoS Traffic Shaping policy over the selected time period. The view is designed to show the packet number changes over time for the traffic shaping policy.

Context: This view requires a selected CB QoS Traffic Shaping policy to be displayed.

Data: The metric used to render this view is `qosts`, which corresponds to the QoS Traffic Shaping Statistics dataset in NetVoyant. The view includes data for the following expressions:

Delayed   Count of packets that have been delayed during shaping

Dropped   Count of packets that have been dropped during shaping

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Traffic Shaping Detail Report.

CBQoS Traffic Shaping Queue Size Trend

Displays the queue size for the CB QoS Traffic Shaping policy over the selected time period. The view is designed to show the queue size changes over time for the traffic shaping policy.

Context: This view requires a selected CB QoS Traffic Shaping policy to be displayed.

Data: The metric used to render this view is `qosts`, which corresponds to the QoS Traffic Shaping Statistics dataset in NetVoyant. The view includes data for the following expression:
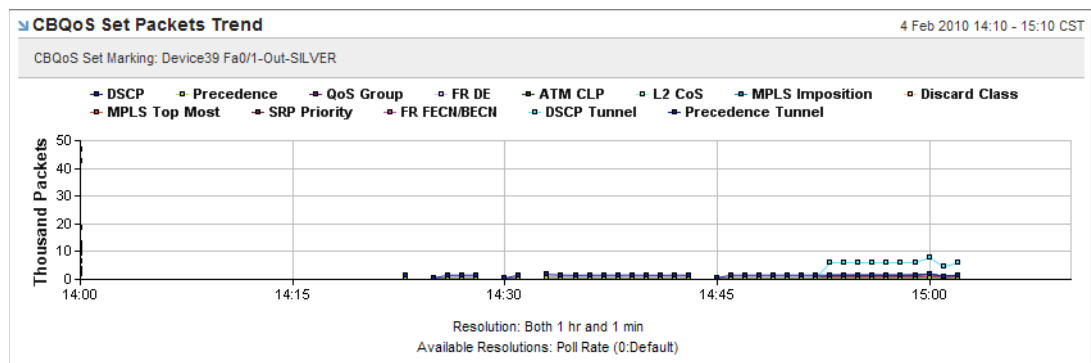
Packets   Current traffic-shaping queue depth in packets

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Traffic Shaping Detail Report.

CBQoS Traffic Shaping Volume Trend

Displays the volume of packets, by type, for the CB QoS Traffic Shaping policy over the selected time period. The view is designed to show the packet volume changes over time for the traffic shaping policy.

Context: This view requires a selected CB QoS Traffic Shaping policy to be displayed.

Data: The metric used to render this view is `qosts`, which corresponds to the QoS Traffic Shaping Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Delayed	Count of bytes for packets that have been delayed during shaping
Dropped	Count of bytes for packets that have been dropped during shaping

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Traffic Shaping Detail Report.

Top CBQoS Traffic Shaping

Displays the top CB QoS traffic shaping policies over the selected time period. The view is designed to provide focus to those interfaces with the highest volume of Traffic Shaping drop and delay, and may be more prone to problems or failure.

Context: This view requires a selected class map configured for CB QoS traffic shaping to be displayed.

Data: The metric used to render this view is `qosts`, which corresponds to the QoS Traffic Shaping Statistics dataset in NetVoyant. The view includes data for the following expressions:

Delayed Volume	Count of bytes that have been delayed
Delayed Packets	Count of packets that have been delayed
Dropped Volume	Count of bytes that have been dropped during shaping
Dropped Packets	Count of packets that have been dropped during shaping
Queue Size	Current traffic-shaping queue depth in packets

The view data is rendered and ordered according to which items have the highest Traffic Shaping delayed volume.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Class-Based QoS Class Map Capabilities Report.

CBQoS Set Views

The following sections describe the views related to CBQoS Set that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Note: Metrics for many of the CBQoS views cannot be edited in the Custom View Wizard.

CBQoS Set ATM CLP Packets Trend

Displays a the number of packets marked as ATM CLP by the CBQoS Set policy over the selected time period. The view is designed to show the packet number changes over time for the Set Marking policy.
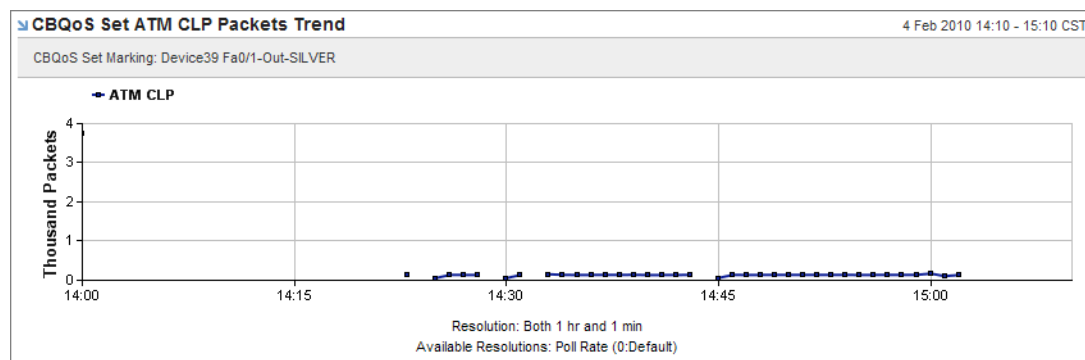
Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:
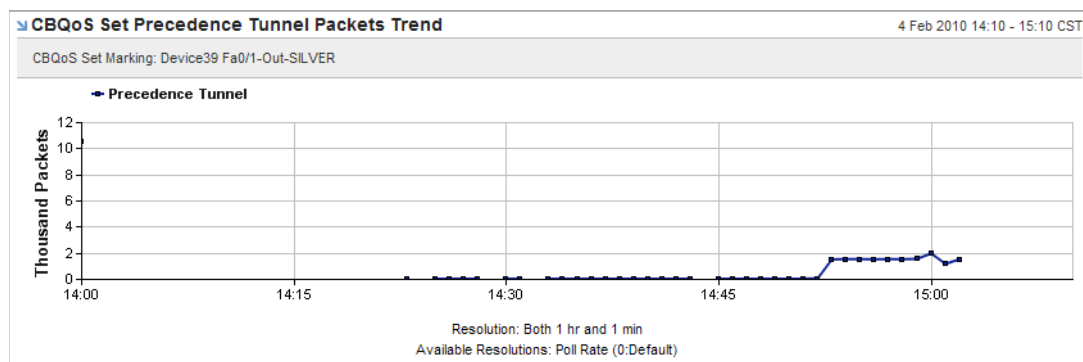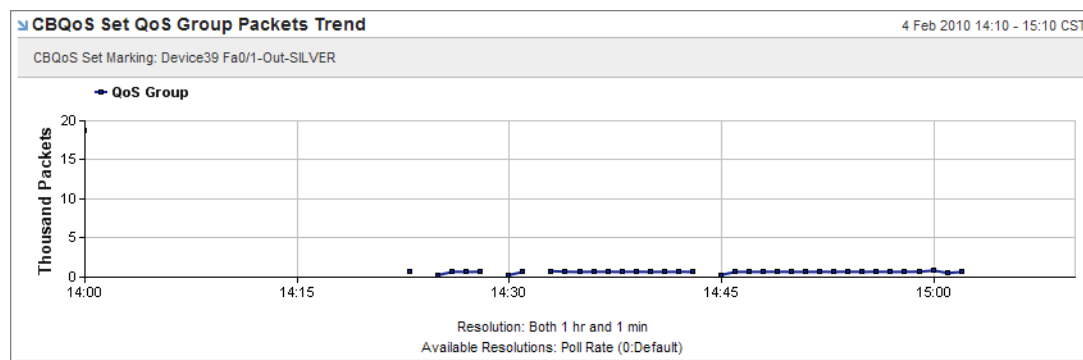
ATM CLP   Count of packets with the ATM CLP Bit marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set Discard Class Packets Trend

Displays a the number of packets whose Discard Class field is marked by the CBQoS Set policy over the selected time period. The view is designed to show the discard class number changes over time for the Set Marking policy.
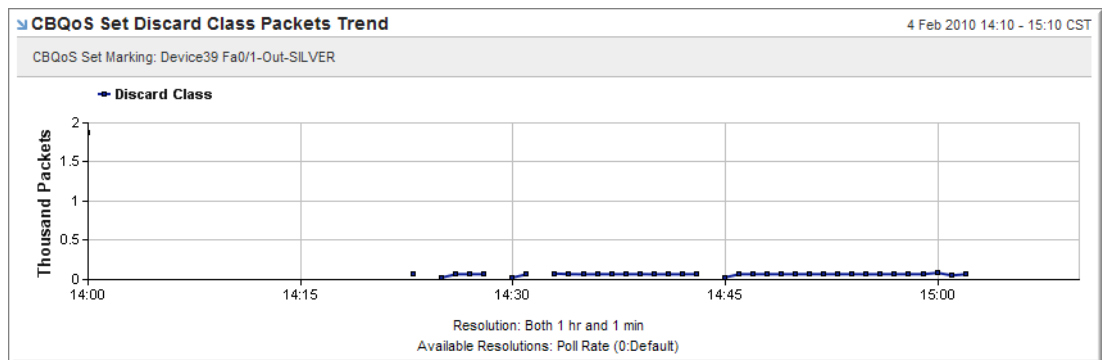
Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

Discard Class   Count of packets with the Discard Class field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set DSCP Packets Trend

Displays a count of packets whose DSCP field is marked by the CBQoS Set policy over the selected time period. The view is designed to show the DSCP number changes over time for the Set Marking policy.
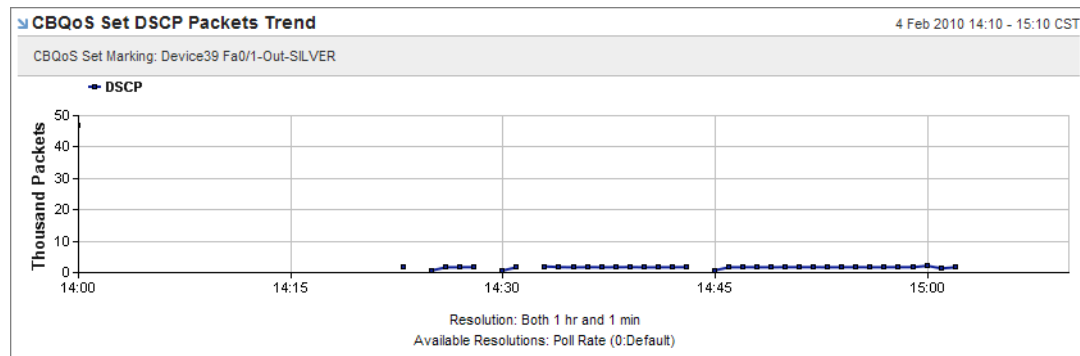
Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

DSCP   Count of packets with the DSCP field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set DSCP Tunnel Packets Trend

Displays a count of packets whose DSCP Tunnel field is marked by the CBQoS Set policy over the selected time period. The view is designed to show the DSCP Tunnel number changes over time for the Set Marking policy.

Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

DSCP Tunnel Count of packets with the DSCP Tunnel field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set Frame Relay DE Packets Trend

Displays a count of packets whose Frame Relay DE bit is marked by the CBQoS Set policy over the selected time period. The view is designed to show the Frame Relay DE number changes over time for the Set Marking policy.
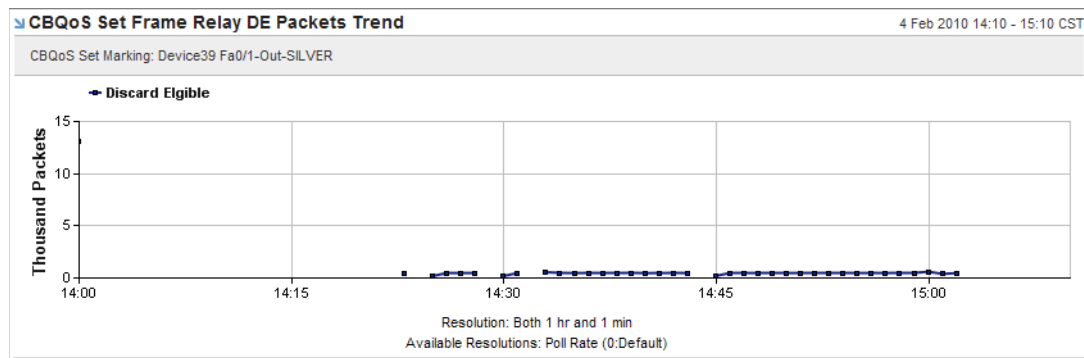
Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

FR DE Count of packets with the Frame Relay DE Bit marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set Frame Relay FECN/BECN Packets Trend

Displays a count of packets whose Frame Relay FECN/BECN bit is marked by the CBQoS Set policy over the selected time period. The view is designed to show the Frame Relay FECN/BECN number changes over time for the Set Marking policy.
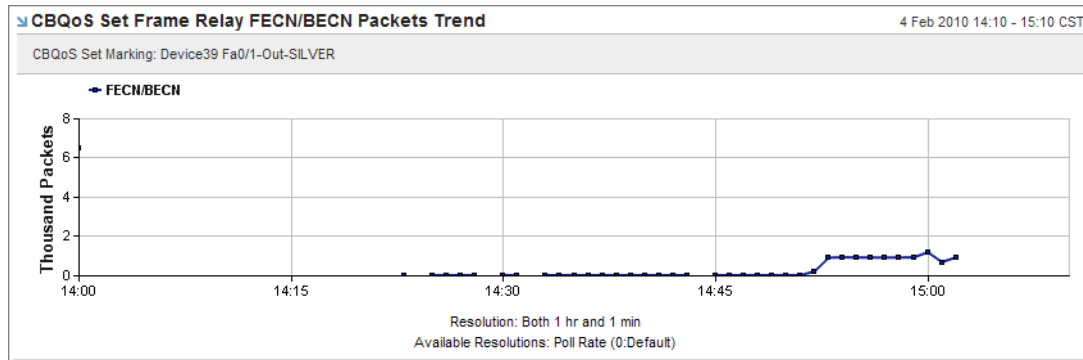
Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

FR FECN/BECN	Count of packets with the Frame Relay FECN BECN field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set MPLS Implosion Packets Trend

Displays a count of packets whose MPLS Experimental Implosion field is marked by the CBQoS Set policy over the selected time period. The view is designed to show the MPLS Experimental Implosion number changes over time for the Set Marking policy.

Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

MPLS Implosion	Count of packets with the MPLS Experimental Implosion field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set MPLS TopMost Packets Trend

Displays a count of packets whose MPLS Experimental TopMost field is marked by the CBQoS Set policy over the selected time period. The view is designed to show the MPLS Experimental TopMost number changes over time for the Set Marking policy.
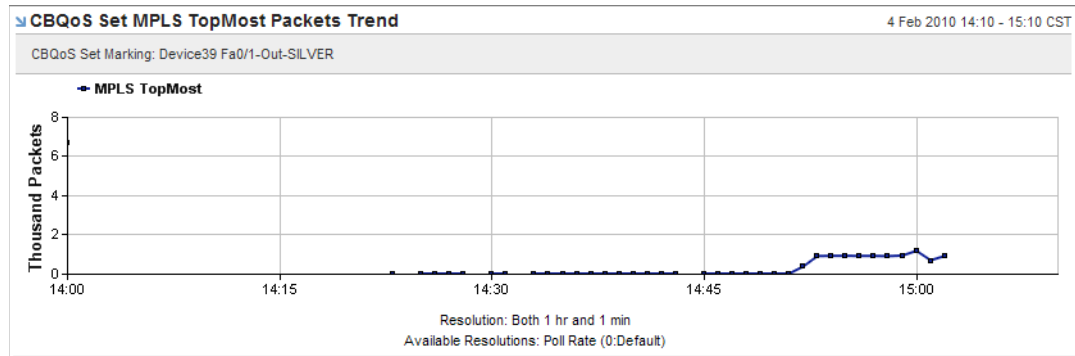
Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

MPLS Top Most	Count of packets with the MPLS Experimental TopMost field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set Packets Trend

Displays a count of packets, by type, marked by the CBQoS Set policy over the selected time period. The view is designed to show the packet number changes over time for the Set Marking policy.

Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expressions:

DSCP	Count of packets with the DSCP field marked by the Set Marking policy
Precedence	Count of packets with the Precedence field marked by the Set Marking policy
QoS Group	Count of packets with the QoS Group field marked by the Set Marking policy
FR DE	Count of packets with the Frame Relay DE Bit marked by the Set Marking policy
ATM CLP	Count of packets with the ATM CLP Bit marked by the Set Marking policy
L2 CoS	Count of packets with the Layer 2 CoS field marked by the Set Marking policy
MPLS Imposition	Count of packets with the MPLS Experimental Imposition field marked by the Set Marking policy
Discard Class	Count of packets with the Discard Class field marked by the Set Marking policy
MPLS Top Most	Count of packets with the MPLS Experimental TopMost field marked by the Set Marking policy
SRP Priority	Count of packets with the SRP Priority field marked by the Set Marking policy
FR FECN/BECN	Count of packets with the Frame Relay FECN BECN field marked by the Set Marking policy
DSCP Tunnel	Count of packets with the DSCP Tunnel field marked by the Set Marking policy
Precedence Tunnel	Count of packets with the Precendence Tunnel field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

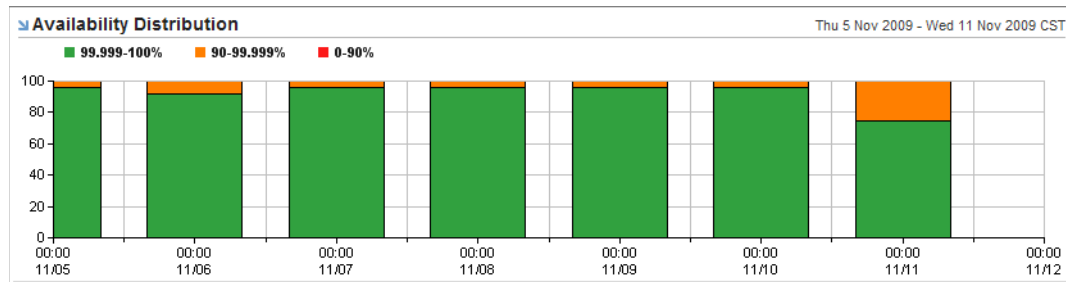**Standard NetVoyant reports:** This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set Precedence Packets Trend

Displays a count of packets whose Precedence field is marked by the CBQoS Set policy over the selected time period. The view is designed to show the Precedence number changes over time for the Set Marking policy.
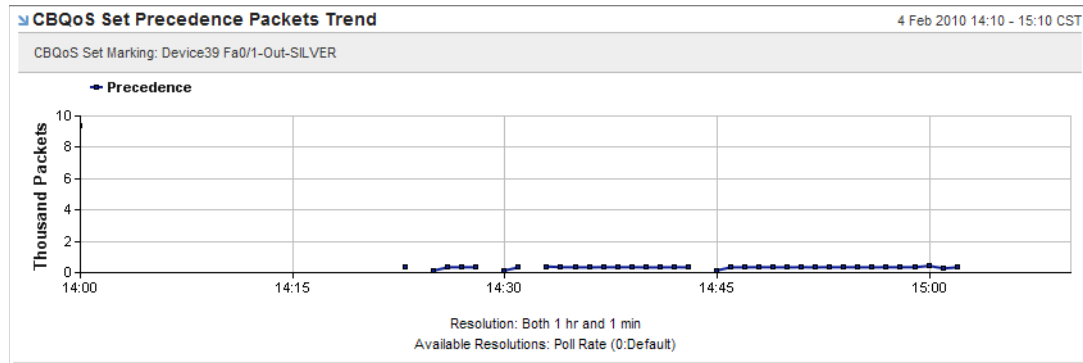
Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

Precedence	Count of packets with the Precedence field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

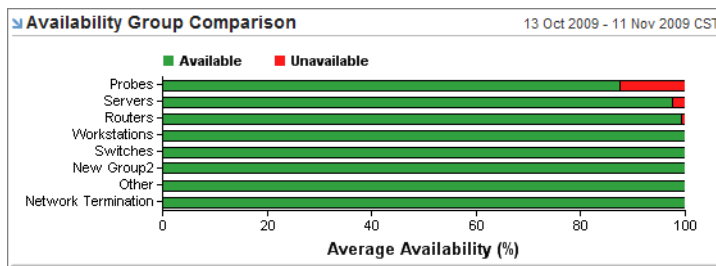**Standard NetVoyant reports:** This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set Precedence Tunnel Packets Trend

Displays a count of packets whose Precedence Tunnel field is marked by the CBQoS Set policy over the selected time period. The view is designed to show the Precedence Tunnel number changes over time for the Set Marking policy.

Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

Precedence Tunnel   Count of packets with the Precendence Tunnel field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set QoS Group Packets Trend

Displays a count of packets whose QoS Group field is marked by the CBQoS Set policy over the selected time period. The view is designed to show the QoS Group number changes over time for the Set Marking policy.

Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

QoS Group   Count of packets with the Qos Group field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

CBQoS Set SRP Priority Packets Trend

Displays a count of packets whose SRP Priority field is marked by the CBQoS Set policy over the selected time period. The view is designed to show the SRP Priority number changes over time for the Set Marking policy.
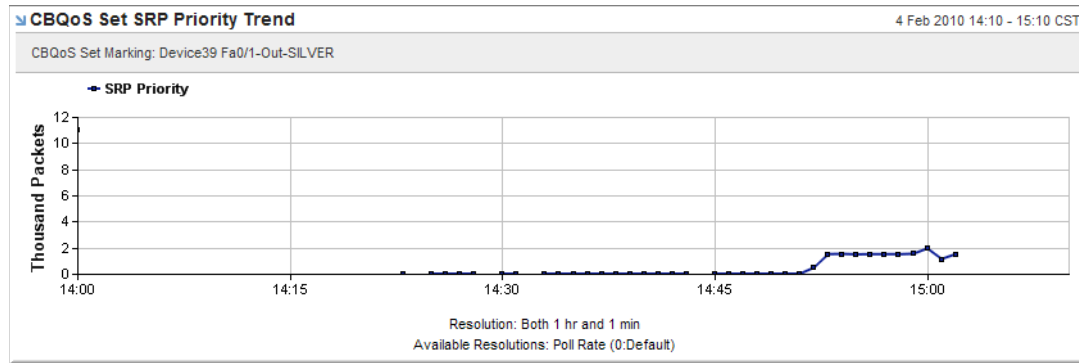
Context: This view requires a selected CB QoS Set Packet Marking policy to be displayed.

Data: The metric used to render this view is `qosset`, which corresponds to the QoS Set Statistics dataset in NetVoyant. The view includes data for the following expression:

SRP Priority	Count of packets with the SRP Priority field marked by the Set Marking policy

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in any of the standard NetVoyant reports, but you can add it to a report page.

DEVICE VIEWS

The following sections describe the views related to devices that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Device views are designed to provide status and performance information about individual devices and aggregations of NetVoyant reporting groups.

95th Percentile Device CPU Utilization Scorecard

Displays a management overview of the 95th percentile CPU utilization for devices making up a reporting group. By glancing at this report it is immediately obvious where there may be problems and how significant the problem might be.

Scorecard views display monthly performance data for the previous six month or seven week period by sub-group, for the currently selected group. Scorecards are high-level indicators of whether or not measured resources are meeting service-level goals. These views incorporate check marks and exclamation points as visual indicators to enhance quick understanding.

⬐ 95th Percentile CPU Utilization Scorecard								Wed 4 Nov 2009 - Tue 10 Nov 2009 CST
Group ▲	Target	Sep 27	Oct 4	Oct 11	Oct 18	Oct 25	Nov 1	Nov 8	Average
− NetVoyant	<= 95.00	✓ 48.1	✓ 49.4	✓ 48.3	✓ 52.6	✓ 49.3	✓ 59.2	✓ 61.5	✓ 52.6
Devices	<= 95.00	✓ 48.1	✓ 49.4	✓ 48.3	✓ 52.6	✓ 49.3	✓ 59.2	✓ 61.5	✓ 52.6
Networks	<= 95.00	--	--	--	--	--	--	--	--
1 of 1								Max Per Page: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is hrprocessor, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expression:

Percentile	When set to a 95th percentile, this is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Note: You can edit the scorecard target in the Custom View Wizard to determine how the values in the scorecard are calculated and displayed.
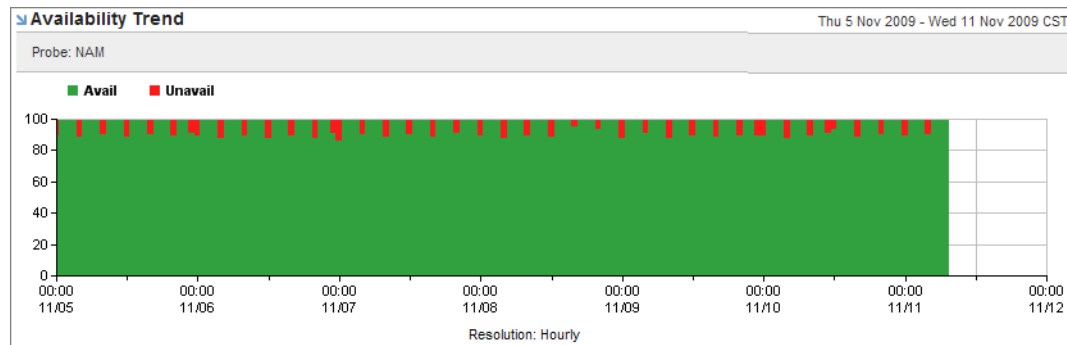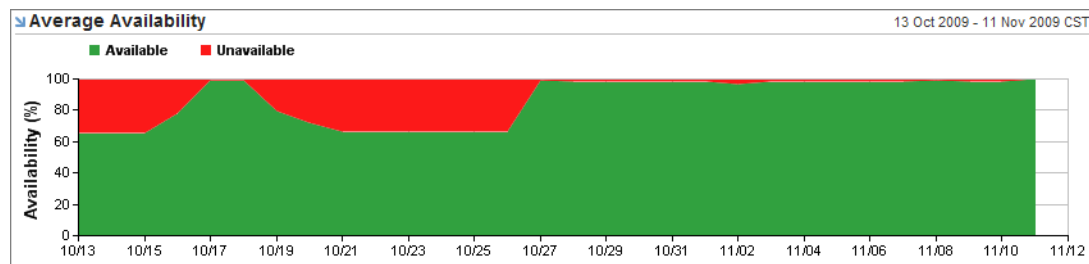
Styles: This view can be displayed as table only.

Standard NetVoyant reports: This view is included by default in the Scorecards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Scorecards report.

Availability Details

Displays detailed information about the selected device and its availability during the selected time period.

Note: This view cannot be edited in the Custom View Wizard.

Context: This view requires a selected device, server, router, switch, or interface to be displayed.

Data: This view uses multiple metrics to render property information for the managed object. This view includes values for the following attributes:

Name	The device's name in the NetVoyant product. By default, it names devices using the device's DNS name or, for unresolvable names, the device's IP address.
	You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. You can also edit the device alias to another value on the device's **Details** tab in the NetVoyant Console. For more information, see the *NetVoyant Administrator Guide*.
Description	The device's description in the NetVoyant product. If a description is not specified, it is the device's description as identified in the sysDescr OID on the device.
Device sysName	The device's name as identified in the sysName OID on the device.
	You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. For more information, see the *NetVoyant Administrator Guide*.
Device sysDescr	The device's description as identified in the sysDescr OID on the device.
Polling Enabled	Indicates whether polling is enabled for the device.
	If polling is enabled, the NetVoyant product is gathering data for the device.
Polling Station	The NetVoyant server that polls the device for SNMP statistics. In a distributed configuration, this is the poller that polls the device. In a standalone configuration, the poller is the Master Console.
Properties	Properties for the selected device.

Latency Threshold	The most restrictive threshold for Availability that is assigned to a NetVoyant group where the device is a member.
Latency Cleared	The date/time the most recent Availability threshold event associated with the device was cleared.

Styles: This view can be displayed as table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Availability Distribution (Count/Percentage)

Displays the number of devices that fall within the defined average availability ranges in the selected reporting group.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Availability Distribution			Thu 5 Nov 2009 - Wed 11 Nov 2009 CST
Date/Time ▲	0-90%	90-99.999%	99.999-100%
Thu 05 November	0 / 0%	1 / 4.17%	23 / 95.83%
Fri 06 November	0 / 0%	2 / 8.33%	22 / 91.67%
Sat 07 November	0 / 0%	1 / 4.17%	23 / 95.83%
Sun 08 November	0 / 0%	1 / 4.17%	23 / 95.83%
Mon 09 November	0 / 0%	1 / 4.17%	23 / 95.83%
Tue 10 November	0 / 0%	1 / 4.17%	23 / 95.83%
Wed 11 November	0 / 0%	1 / 25.00%	3 / 75.00%

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expressions:

99.999-100%	Count and percentage of availability values between 99.999 and 100.
90-99.999%	Count and percentage of availability values between 90 and 99.999.
0-90%	Count and percentage of availability values 90 or below.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Management Summary report.

Availability Distribution

Displays the number of devices that fall within the defined average availability ranges in the selected reporting group.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expressions:

99.999-100%	Percentage of availability values between 99.999 and 100.
90-99.999%	Percentage of availability values between 90 and 99.999.
0-90%	Percentage of availability values 90 or below.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Management Summary report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Summary report.

Availability Group Comparison

Compares the overall availability of devices in the selected reporting group by sub-group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expressions:

Available	Average availability value
Unavailable	Value calculated by subtracting the average availability from 100

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Management Group Comparison report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Group Comparison report and the Availability Dashboard report.

Availability Group Distribution

Displays the number of devices by sub-group that fall within the defined average availability ranges in the selected reporting group.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expressions:

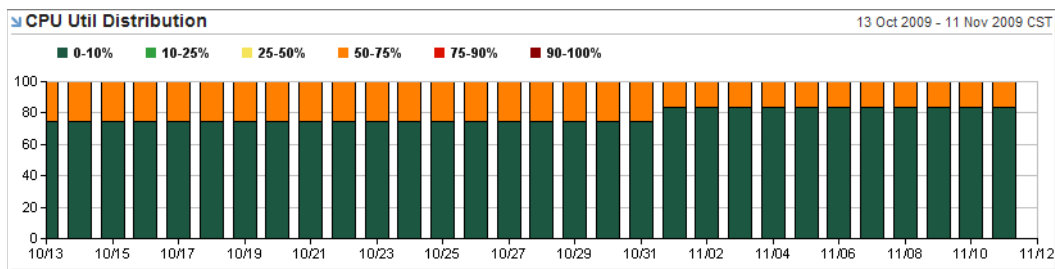|	
0-90%	Count of availability values 90 or below.
90-99.999%	Count of availability values between 90 and 99.999.
99.999-100%	Count of availability values between 99.999 and 100.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Availability Scorecard

Displays an overview scorecard for the average availability of devices across multiple groups or sub-groups. You can select a goal range for the values to determine how the values in the scorecard display.

Scorecard views display monthly performance data for the previous six month or seven week period by sub-group, for the currently selected group. Scorecards are high-level indicators of whether or not measured resources are meeting service-level goals. These views incorporate check marks and exclamation points as visual indicators to enhance quick understanding.

Availability Scorecard — Thu 5 Nov 2009 - Wed 11 Nov 2009 CST

Group ▲	Target	Sep 27	Oct 4	Oct 11	Oct 18	Oct 25	Nov 1	Nov 8	Average
− Devices	>= 98.00	✓ 99.799	✓ 99.820	✓ 99.732	✓ 99.755	✓ 99.805	✓ 99.634	✓ 99.825	✓ 99.767
Network Termination	>= 98.00	--	--	--	--	--	--	--	--
Other	>= 98.00	✓ 100.000	✓ 100.000	✓ 100.000	✓ 100.000	✓ 100.000	✓ 100.000	✓ 100.000	✓ 100.000
Printers	>= 98.00	--	--	--	--	--	--	--	--
Probes	>= 98.00	! 96.992	! 97.293	! 97.163	! 96.543	! 96.687	! 96.409	! 97.093	! 96.883
Routers	>= 98.00	✓ 100.000	✓ 100.000	✓ 99.864	✓ 100.000	✓ 100.000	✓ 99.770	✓ 99.976	✓ 99.944
Servers	>= 98.00	✓ 100.000	✓ 100.000	✓ 100.000	✓ 99.644	✓ 100.000	✓ 99.967	✓ 100.000	✓ 99.944
Switches	>= 98.00	✓ 100.000	✓ 100.000	✓ 99.972	✓ 100.000	✓ 100.000	✓ 99.801	✓ 100.000	✓ 99.967

1 2   Max Per Page: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expression:

Month or Date	The availability percentage for the group or sub-group, as a monthly or weekly average

Note: This scorecard view uses a default target percentage of 98.0, so that sub-groups with an average availability below that target are displayed with a red exclamation point to indicate that the item falls below the target. You can modify this target value in the Custom View Wizard to meet your organization's service level goals.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Scorecards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Scorecards report and the Availability Dashboard report.

Availability Trend

Displays the availability and unavailability values for the selected managed object over the selected time period.

Context: This view requires a selected device, server, router, or switch to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expressions:

Avail	The device's average availability as a value between 0 and 100.
Unavail	The value calculated by subtracting the average availability from 100.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Performance Report, Router Performance Report, and Device Performance Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Performance report and the Switch Performance report.

Average Availability

Displays the average percentage that devices in the selected reporting group were available and unavailable by date/time over the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expressions:

Avail	The average availability as a value between 0 and 100.
Unavail	The value calculated by subtracting the average availability from 100.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Management Summary Report and Server Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Summary report and the Server Summary report.

Average Latency

Displays the average latency values (ms) for devices in the selected reporting group during the selected time period. By default, this view includes a projection trend when the selected time period is one week or greater.
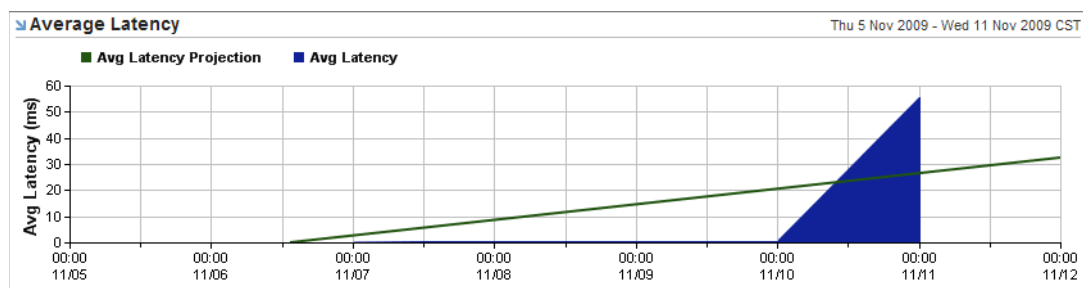
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

Avg Latency	Average round trip time delay.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the average latency projection is not displayed.

Standard NetVoyant reports: This view is included by default in the Router Summary Report and Server Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Summary report and the Server Summary report.

Avg CPU Utilization vs. 95th Percentile

Displays the average CPU utilization for all devices in a group over a selected time period compared to the 95th percentile and the 95th percentile utilization projection.
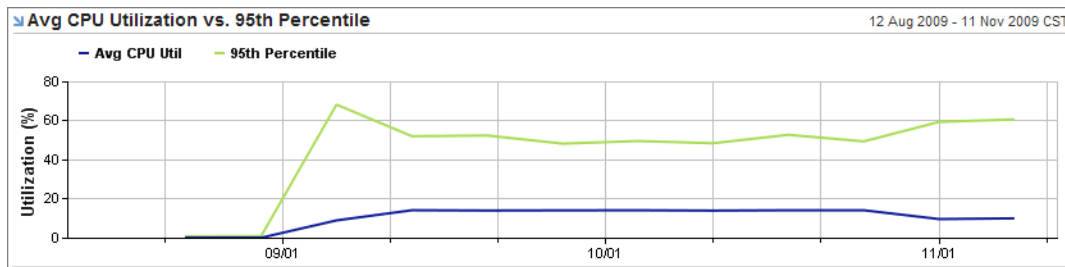
Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expressions:

Avg CPU Util	Average utilization value for the processor
95th Percentile	This is the value such that 95 percent of utilization data for the rollup period is less than this value. This removes spikes in utilization from the data.

Note: When you display this view as a table, the 95th percentile utilization projection is not displayed.
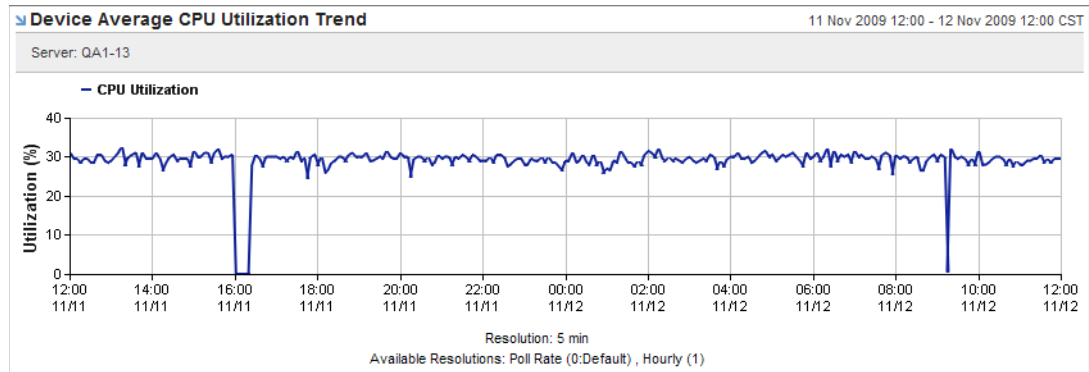
Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Summary report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Summary report.

Closest to Threshold - Device CPU Utilization

Displays those servers that have average CPU utilization closest to the CPU utilization threshold. By default, this view also displays the projected number of days until the CPU utilization for each device crosses the threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if utilization has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following:

Metric	Processor Load
Average	Average utilization value as a percentage
Threshold	The threshold for the `hrprocessorload` expression in NetVoyant
Days to Threshold	The projected number of days until the value for the expression exceeds the threshold.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold report and the Alerts and Violations report.

Closest to Threshold - Device Memory Utilization
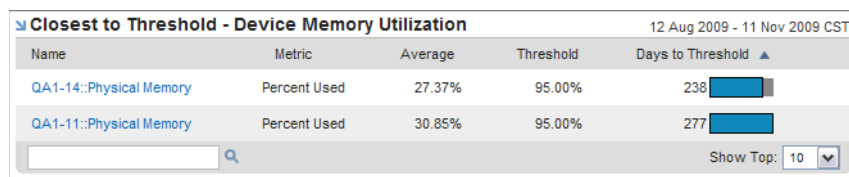
Displays those servers that have average memory utilization closest to the memory utilization threshold. By default, this view also displays the projected number of days until the memory utilization for each device crosses the threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if utilization has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Closest to Threshold - Device Memory Utilization				12 Aug 2009 - 11 Nov 2009 CST
Name	Metric	Average	Threshold	Days to Threshold ▲
QA1-14::Physical Memory	Percent Used	27.37%	95.00%	238
QA1-11::Physical Memory	Percent Used	30.85%	95.00%	277
				Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage Table dataset in NetVoyant. The view includes data for the following:

Metric	Description of the storage memory usage calculation - Percent Used
Average	Average storage value as a percentage
Threshold	The threshold for the `perctused` expression in NetVoyant
Days to Threshold	The projected number of days until the value for the expression exceeds the threshold.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold report and the Alerts and Violations report.

Closest to Threshold - Latency

Displays a table of those devices that have average latencies closest to the latency threshold. By default, this view also displays the projected number of days until the latency for each device crosses the latency threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following:

Metric	Description of the round trip delay calculation - Percent Used
Average	Average round trip delay as a percentage
Threshold	The threshold for the `avg_rt_delay` expression in NetVoyant
Days to Threshold	The projected number of days until the value for the expression exceeds the threshold.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold report.

CPU Util Distribution (Count)

Displays the number and percentage of devices that fall within the defined average CPU utilization ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

CPU Util Distribution					Thu 5 Nov 2009 - Wed 11 Nov 2009 CST	
Date/Time ▲	0-10%	10-25%	25-50%	50-75%	75-90%	90-100%
Thu 05 November	5 / 83.33%	0 / 0%	0 / 0%	1 / 16.67%	0 / 0%	0 / 0%
Fri 06 November	5 / 83.33%	0 / 0%	0 / 0%	1 / 16.67%	0 / 0%	0 / 0%
Sat 07 November	5 / 83.33%	0 / 0%	0 / 0%	1 / 16.67%	0 / 0%	0 / 0%
Sun 08 November	5 / 83.33%	0 / 0%	0 / 0%	1 / 16.67%	0 / 0%	0 / 0%
Mon 09 November	5 / 83.33%	0 / 0%	0 / 0%	1 / 16.67%	0 / 0%	0 / 0%
Tue 10 November	5 / 83.33%	0 / 0%	0 / 0%	1 / 16.67%	0 / 0%	0 / 0%
Wed 11 November	5 / 83.33%	0 / 0%	0 / 0%	1 / 16.67%	0 / 0%	0 / 0%

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expressions:

0-10%	Count and percentage of utilization values of 10% or below.
10-25%	Count and percentage of utilization values between 10 and 25%.
25-50%	Count and percentage of utilization values between 25 and 50%.
50-75%	Count and percentage of utilization values between 50 and 75%.
75-90%	Count and percentage of utilization values between 75 and 90%.
90-100%	Count and percentage of utilization values between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

CPU Util Distribution

Displays the percentage of devices that fall within the defined average CPU utilization ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expressions:

0-10%	Percentage of utilization values of 10% or below.
10-25%	Percentage of utilization values between 10 and 25%.
25-50%	Percentage of utilization values between 25 and 50%.
50-75%	Percentage of utilization values between 50 and 75%.
75-90%	Percentage of utilization values between 75 and 90%.
90-100%	Percentage of utilization values between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is included by default in the Device Capabilities Report, which is a standard NetVoyant report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Summary report.

CPU Utilization Trend

Displays the CPU utilization percentage for each processor on the selected device over the selected time period.
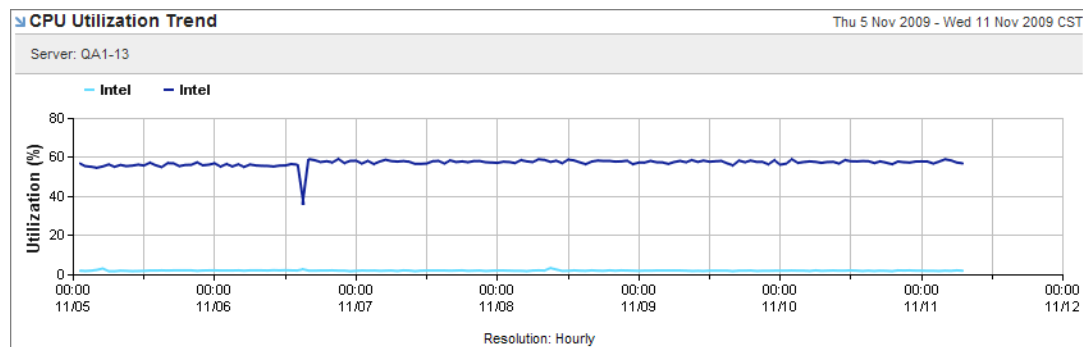
Context: This view requires a selected device or server to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expression:

Utilization (%)	CPU utilization (percent used) value

Note: This view cannot be edited in the Custom View Wizard.
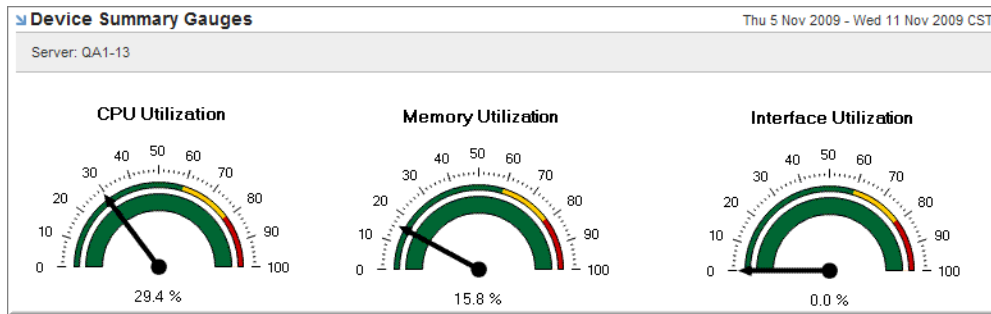
Styles: This view can be displayed as a line chart only.

Standard NetVoyant reports: This view is included by default in the Server Performance Report and Device Performance Report.

CPU Util Group Comparison

Compares the average CPU utilization for all devices by sub-group in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expression:

Avg Utilization	Average of the utilization value for all devices within the group/ sub-group

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

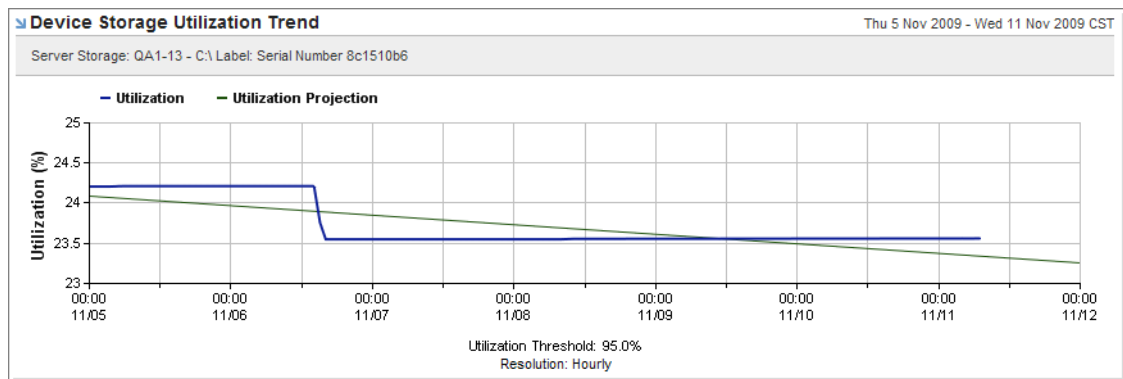**Standard NetVoyant reports:** This view is included by default in the Server Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Group Comparison report.

CPU Util Group Distribution

Displays the number of devices, by sub-group, that fall within the defined average CPU utilization ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expressions:

0-10%	Count of utilization values of 10% or below.
10-25%	Count of utilization values between 10 and 25%.

25-50%	Count of utilization values between 25 and 50%.
50-75%	Count of utilization values between 50 and 75%.
75-90%	Count of utilization values between 75 and 90%.
90-100%	Count of utilization values between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

CPU Util Sub Group Summary

Compares the average CPU utilization for devices by sub-group for the selected reporting group during the selected time period.

Group Summary views provide an aggregate view for the selected group broken down by sub-group to display meaningful comparisons of performance. Because reporting groups and sub-groups are typically organized to match your network organization, these views can also provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expression:

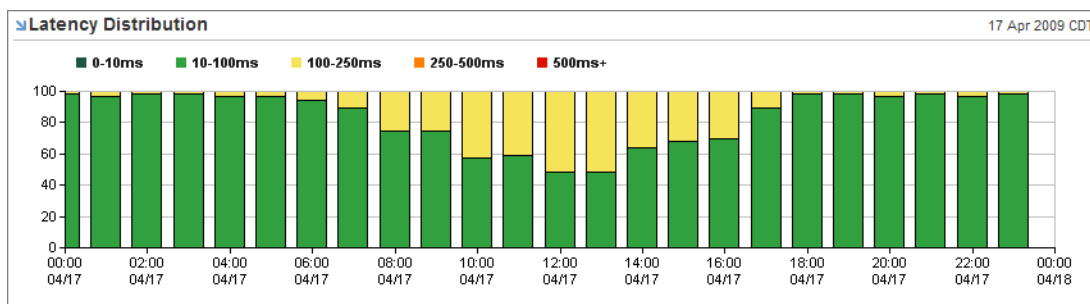|	
Avg Utilization	Average of the utilization value for all devices within the group/sub-group

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Group Comparison report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Group Comparison report.

Device Average CPU Utilization Trend

Displays the average CPU utilization percentage for all processors on the selected device over the selected time period.

Context: This view requires a selected device or server to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expression:

Avg CPU Utilization   Total average CPU memory utilization (percent used) value

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Device Details

Displays a table containing property information for the selected device.

Context: This view requires a selected device, server, router, switch, or interface to be displayed.

Data: This view uses multiple metrics to render property information for the managed object. This view includes values for the following attributes:

Device Alias	The device's name in the NetVoyant product. By default, it names devices using the device's DNS name or, for unresolvable names, the device's IP address.
	You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. You can also edit the device alias to another value on the device's **Details** tab in the NetVoyant Console. For more information, see the *NetVoyant Administrator Guide*.
Device Name	The device's DNS name or, for unresolvable names, the device's IP address.
sysName	The device's name as identified in the sysName OID on the device.
	You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. For more information, see the *NetVoyant Administrator Guide*.
sysDescr	The device's description as identified in the sysDescr OID on the device.
sysObjectId	The device's SNMP agent uniquely identifies the device model using the sysObjectID.
sysContact	The device's contact person as identified in the sysContact OID on the device.
sysLocation	The device's location as identified in the sysLocation OID on the device.
SNMP Capable	The SNMP version that the device's SNMP agent supports.
Device Class	The device's class, as identified during discovery. For more information, see the *NetVoyant Administrator Guide*.
Device Model	The device's model, as identified during discovery. For more information, see the *NetVoyant Administrator Guide*.
SNMP Timeout	The length of time in seconds to wait for an SNMP reply from the device before it considers the request to have timed out. Longer timeouts significantly increase how long it takes to complete the discovery process.
SNMP Retries	The number of times to retry the device for each SNMP community string if an SNMP request times out. More retries significantly increase how long it takes to complete the discovery process.

SNMP Discovery	Indicates how the device is configured for discovery. For more information, see the *NetVoyant Administrator Guide*.
	The following are possible values for SNMP Discovery:
	• **Extended** indicates that the device is set to extended discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process. It also uses information in this device's ARP cache and IP routing table to discover other devices to discover.
	• **Enabled** indicates that the device is enabled normally for discovery. The NetVoyant product rediscovers this device's characteristics during its rediscovery process.
	• **Disabled** indicates that discovery is disabled for the device. The NetVoyant product does not rediscover this device's characteristics during its rediscovery process.
Polling Enabled	Indicates whether polling is enabled for the device.
	If polling is enabled, the NetVoyant product is gathering data for the device.
Polling Station	The NetVoyant server that polls the device for SNMP statistics. In a distributed configuration, this is the poller that polls the device. In a standalone configuration, the poller is the Master Console.
Properties	Properties for the selected device.

Note: This view cannot be edited in the Custom View Wizard.

Styles: This view can be displayed as table only.

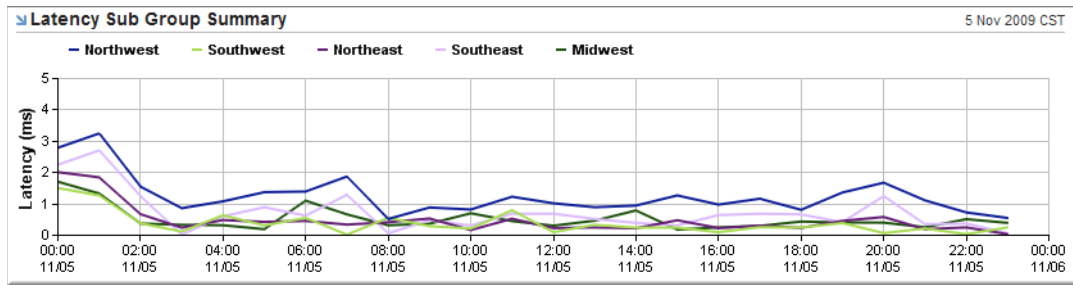**Standard NetVoyant reports:** This view is included by default in the Device Details Report, Server Details Report, Router Details Report, and Switch Details Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Details report, Router Details report, and Switch Details report.

Device List

Displays a list of devices in the selected reporting group. The information presented in the table is similar to what is displayed when you perform a device search. This view enables you to quickly drill in to more information about an individual device.

Context: This view requires a selected reporting group to be displayed.

Data: This view uses multiple metrics to render property information for the managed object. This view includes values for the following attributes:

Status	Indicates whether the device currently has one or more uncleared major alarms (red), one or more uncleared minor alarms (yellow), or no alarms (green).
Name	The device's name as identified in the sysName OID on the device.
	You can configure the NetVoyant product to apply names to your discovered devices using the sysName OID. For more information, see the *NetVoyant Administrator Guide*.
Type	The device's type, or class, as identified during discovery. For more information, see the *NetVoyant Administrator Guide*.
Model	The device's model, as identified during discovery. For more information, see the *NetVoyant Administrator Guide*.
Polling Status	The device's current polling status, which can be one of the following:

- Enabled
- Disabled
- Manually Disabled
- Auto-Disabled
- Expiring
- Off-line
- Out-of-scope

For more information, see the *NetVoyant Administrator Guide*.

Polling Expiration	If a device's status is Auto-disabled or Out-of-scope, this is the date and time of its last poll instance/interface expiration.
	Each dataset has a setting for poll instance expiration. If the NetVoyant product determines that a poll instance or interface is out-of-scope or unresponsive, its expiration clock will start and elapse according to the number of days indicated in the dataset. When it expires, the poll instance or interface no longer exists for that device.
Description	The device's description as identified in the sysDescr OID on the device.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Device Disk Utilization Trend

Displays the disk utilization percentage for each volume on the selected device over the selected time period.
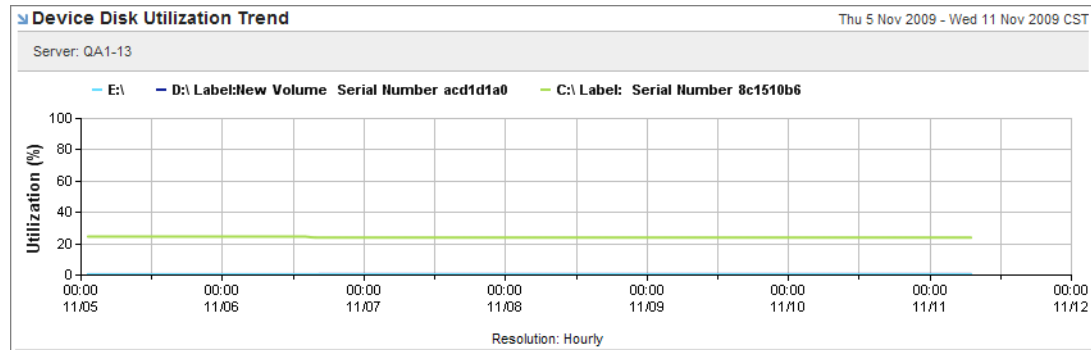
Context: This view requires a selected device or server to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage Table dataset in NetVoyant. The view includes data for the following expression:

Utilization (%)   Disk utilization (percent used) value

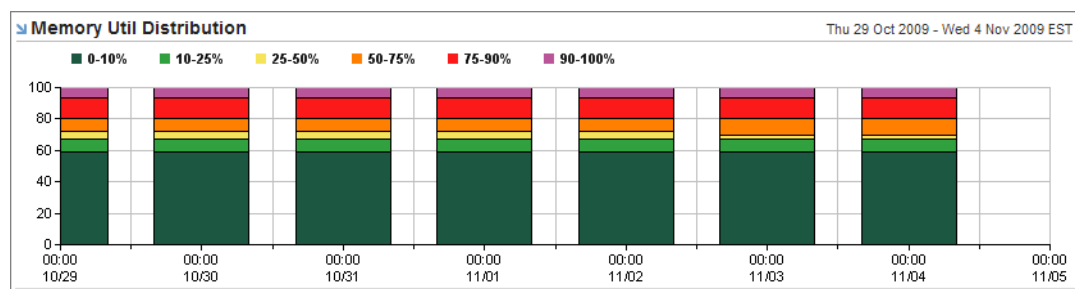*Note:* This view cannot be edited in the Custom View Wizard.

Styles: This view can be displayed as a line chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Device Summary Gauges

Displays the performance index, compared to a baseline, for the CPU utilization, the memory utilization, and the interface utilization on a selected device.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.

Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

Context: This view requires a selected device or server to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the Device Performance Report and Server Performance Report.

Device Storage Failures Trend

Displays the number of storage failures on a selected device storage volume over the selected time period.
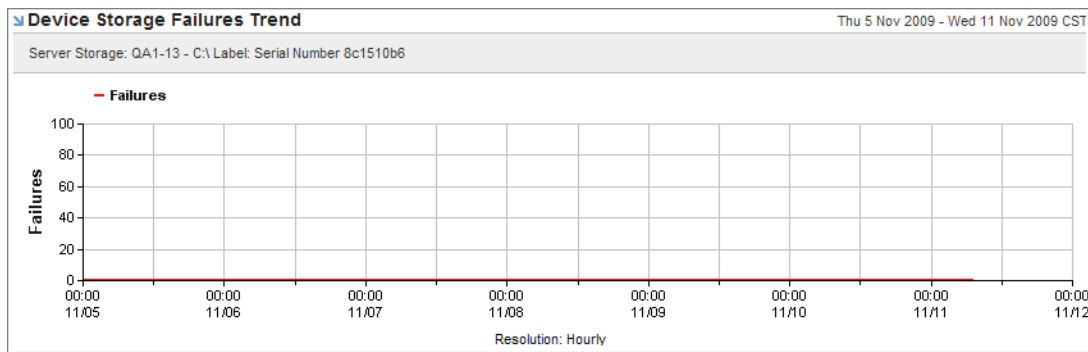
Context: This view requires a selected server storage drive to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expression:

| Failures | Count of storage allocation failures (requests for storage that could not be honored due to insufficient storage). |

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Storage Performance Report.

Device Storage Utilization Trend

Displays storage utilization on a selected device storage volume over the selected time period. This view includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default. The view footer also displays the utilization threshold value for the device, with a warning message when the values in the view are exceeding the threshold.

Note: The 30-day moving baseline is calculated using the value for each hour of the day and the percentage usage for each hour of the day compared to the theoretical maximum (threshold) for an interface over the selected time period. The effects of a threshold change in an alarm profile assigned to the interface are not seen until the NetVoyant product recalculates the rolling baselines (midnight, by default).

Context: This view requires a selected server storage drive to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expression:

Utilization	Percentage calculated by dividing the count of storage used by the storage size.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Storage Performance Report.

Latency Distribution

Displays the percentage of devices that fall within the defined average latency ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-10ms	Percentage of average latency (round trip delay) values of 10 milliseconds or below.
10-100ms	Percentage of average latency (round trip delay) values between 10 and 100 milliseconds.
100-250ms	Percentage of average latency (round trip delay) values between 100 and 250 milliseconds.
250-500ms	Percentage of average latency (round trip delay) values between 250 and 500 milliseconds.
500ms+	Percentage of average latency (round trip delay) values greater than 500 milliseconds.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.
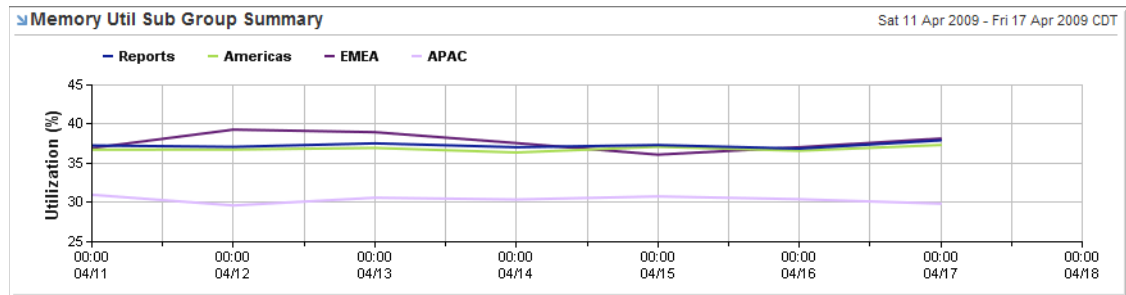
Latency Distribution (Count)

Displays the number and percentage of devices, by sub-group, that fall within the defined average latency ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-10ms	Count and percentage of average latency (round trip delay) values of 10 milliseconds or below.
10-100ms	Count and percentage of average latency (round trip delay) values between 10 and 100 milliseconds.
100-250ms	Count and percentage of average latency (round trip delay) values between 100 and 250 milliseconds.
250-500ms	Count and percentage of average latency (round trip delay) values between 250 and 500 milliseconds.
500ms+	Count and percentage of average latency (round trip delay) values greater than 500 milliseconds.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Latency Group Comparison

Compares the average latency for all devices by sub-group in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

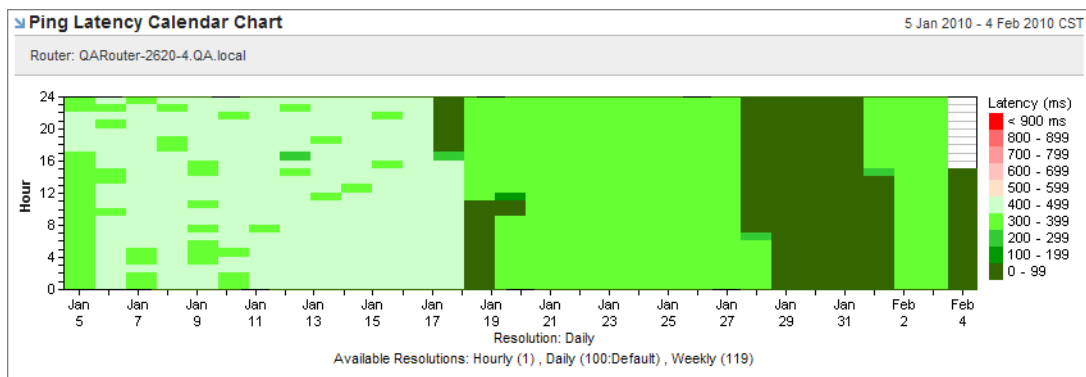|	
Avg Latency	The average latency (round trip delay) value in milliseconds

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Management Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Group Comparison report.

Latency Group Distribution

Displays the number of devices, by sub-group, that fall within the defined average latency ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
0-10ms	Count of average latency (round trip delay) values of 10 milliseconds or below.
10-100ms	Count of average latency (round trip delay) values between 10 and 100 milliseconds.
100-250ms	Count of average latency (round trip delay) values between 100 and 250 milliseconds.
250-500ms	Count of average latency (round trip delay) values between 250 and 500 milliseconds.
500ms+	Count of average latency (round trip delay) values greater than 500 milliseconds.

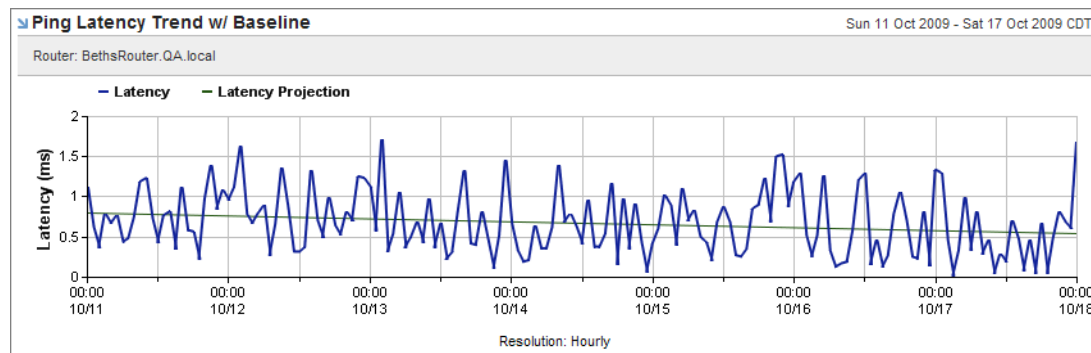**Styles:** This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Latency Sub Group Summary

Compares the average latency for devices, by sub-group, for the selected reporting group during the selected time period.

Group Summary views provide an aggregate view for the selected group broken down by sub-group to display meaningful comparisons of performance. Because reporting groups and sub-groups are typically organized to match your network organization, these views can also provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

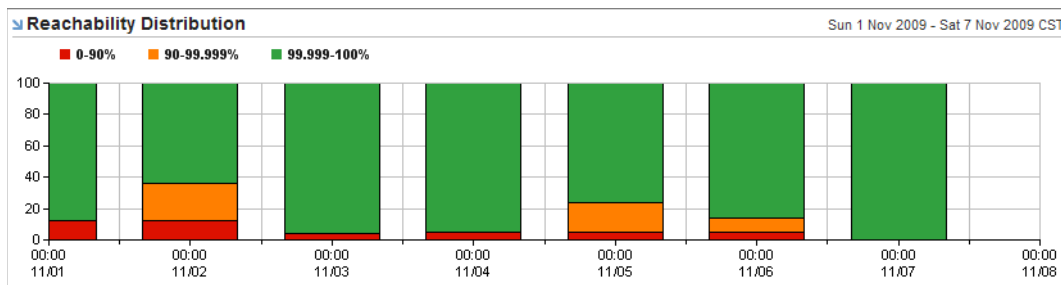**Avg Latency**   The average latency (round trip delay) value in milliseconds

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Group Comparison report.

Latency Top Details

Displays the average latency values of those devices in the selected reporting group with the highest latency over the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

Avg Latency   The average latency (round trip delay) value in milliseconds

Styles: This view can be displayed as a line chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Memory Util Distribution

Displays the number of devices, by sub-group, that fall within the defined average memory utilization ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

0-10%	Count of devices with a memory utilization value of 10% or below.
10-25%	Count of devices with a memory utilization value between 10 and 25%.
25-50%	Count of devices with a memory utilization value between 25 and 50%.
50-75%	Count of devices with a memory utilization value between 50 and 75%.
75-90%	Count of devices with a memory utilization value between 75 and 90%.
90-100%	Count of devices with a memory utilization value between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is included by default in the Server Performance Report.

Memory Util Distribution (Count)

Displays the number of devices, by date/time, that fall within the defined average memory utilization ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Memory Util Distribution						Thu 5 Nov 2009 - Wed 11 Nov 2009 CST
Date/Time ▲	0-10%	10-25%	25-50%	50-75%	75-90%	90-100%
Thu 05 November	7 / 46.67%	4 / 26.67%	3 / 20.00%	0 / 0%	0 / 0%	1 / 6.67%
Fri 06 November	7 / 46.67%	4 / 26.67%	3 / 20.00%	0 / 0%	0 / 0%	1 / 6.67%
Sat 07 November	7 / 46.67%	4 / 26.67%	3 / 20.00%	0 / 0%	0 / 0%	1 / 6.67%
Sun 08 November	7 / 46.67%	4 / 26.67%	3 / 20.00%	0 / 0%	0 / 0%	1 / 6.67%
Mon 09 November	7 / 46.67%	4 / 26.67%	3 / 20.00%	0 / 0%	0 / 0%	1 / 6.67%
Tue 10 November	7 / 46.67%	4 / 26.67%	3 / 20.00%	0 / 0%	0 / 0%	1 / 6.67%

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

0-10%
Count and percentage of devices with a memory utilization value of 10% or below.

10-25%
Count and percentage of devices with a memory utilization value between 10 and 25%.

25-50%
Count and percentage of devices with a memory utilization value between 25 and 50%.

50-75%
Count and percentage of devices with a memory utilization value between 50 and 75%.

75-90%
Count and percentage of devices with a memory utilization value between 75 and 90%.

90-100%
Count and percentage of devices with a memory utilization value between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Memory Util Group Comparison

Compares the average memory utilization for all devices by sub-group in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expression:

Avg Utilization
Average of the memory utilization (percent used) value for all devices within the group/sub-group

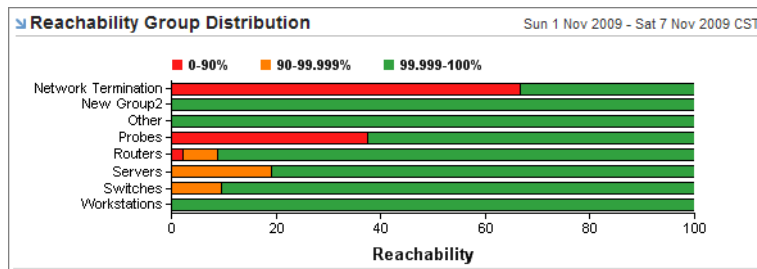**Styles:** This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Group Comparison report.

Memory Util Group Distribution

Displays the number of devices, by sub-group, that fall within the defined average memory utilization ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

0-10%	Count of devices with a memory utilization (percent used) value of 10% or below.
10-25%	Count of devices with a memory utilization (percent used) value between 10 and 25%.
25-50%	Count of devices with a memory utilization (percent used) value between 25 and 50%.
50-75%	Count of devices with a memory utilization (percent used) value between 50 and 75%.
75-90%	Count of devices with a memory utilization (percent used) value between 75 and 90%.
90-100%	Count of devices with a memory utilization (percent used) value between 90 and 100%.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Memory Util Sub Group Summary

Compares the average memory utilization for devices, by sub-group, for the selected reporting group during the selected time period.

Group Summary views provide an aggregate view for the selected group broken down by sub-group to display meaningful comparisons of performance. Because reporting groups and sub-groups are typically organized to match your network organization, these views can also provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

Avg Utilization	Average of the memory utilization (percent used) value for all devices within the group/sub-group

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Group Comparison report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Group Comparison report.

Memory Utilization Trend

Displays the memory utilization percentage for both physical and virtual memory on the selected device over the selected time period.
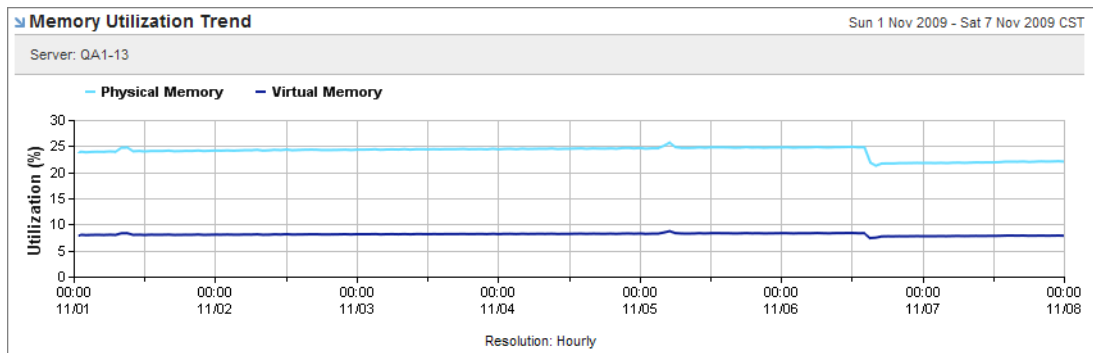
Context: This view requires a selected device or server to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

Utilization (%)   Percentage calculated by dividing the amount used by the total size

Styles: This view can be displayed as line chart only.

Standard NetVoyant reports: This view is included by default in the Device Performance report.

Ping Latency Calendar Chart

Displays the ping response times for a selected device in a monthly calendar format over the selected time period.

Note: This view cannot be edited in the Custom View Wizard.

Context: This view requires a selected device, server, router, or switch to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expression:

Latency   Average round-trip time delay

Styles: This view can be displayed as calendar chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Performance report and the Switch Performance report.

Ping Latency Trend Detail

Displays the maximum, minimum, and average ping response times for the selected device over the selected time period.
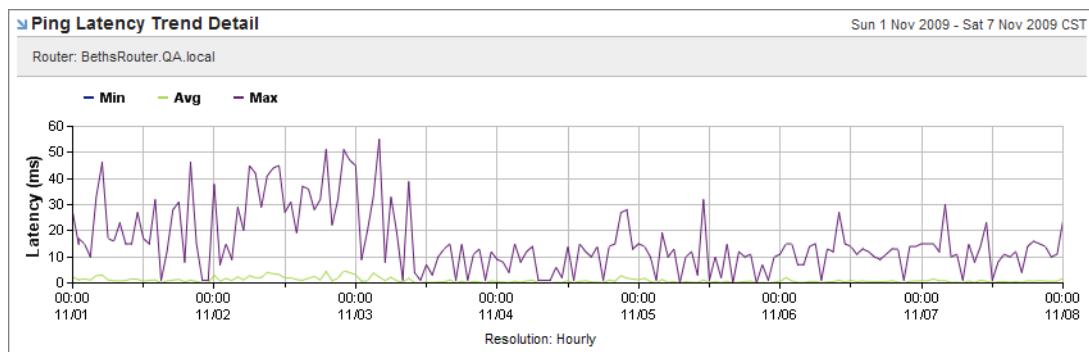
Context: This view requires a selected device, server, router, switch, or interface to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

Min   Minimum round-trip time delay

Avg   Average round-trip time delay

Max   Maximum round-trip time delay

Note: Minimum and maximum values are calculated using rollup data and cannot be displayed when the resolution is set to the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Ping Latency Trend w/ Baseline

Displays the longest ping response times from a device over the selected time period to its baseline.This view includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default.

Note: The 30-day moving baseline is calculated using the value for each hour of the day and the percentage usage for each hour of the day compared to the theoretical maximum (threshold) for a device over the selected time period.

Context: This view requires a selected device, server, router, switch, or interface to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

Latency   Average round-trip time delay

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Device Performance report, Router Performance report, and Switch Performance report.

Reachability Distribution

Displays the percentage of devices, by sub-group, that fall within the defined average reachability ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-90%	Percentage of devices with a reachability value of 90% or below.
90-99.999%	Percentage of devices with a reachability value between 90 and 99.999%.
99.999-100%	Percentage of devices with a reachability value between 99.999 and 100%.

Note: The reachability value is a ping received from the device during each polling interval as a percentage. For each polling interval, the reachabilty is either 100 (ping received) or 0 (ping not received)

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Reachability Distribution (Count)

Displays the number and percentage of devices, by date/time, that fall within the defined average reachability ranges in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-90%	Count and percentage of devices with a reachability value of 90% or below.
90-99.999%	Count and percentage of devices with a reachability value between 90 and 99.999%.
99.999-100%	Count and percentage of devices with a reachability value between 99.999 and 100%.

Note: The reachability value is a ping received from the device during each polling interval as a percentage. For each polling interval, the reachabilty is either 100 (ping received) or 0 (ping not received)

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Reachability Group Comparison

Compares the average reachability for all devices by sub-group in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

Avg Reachability	Average of the reachability, which is a ping received from the device during each polling interval as a percentage. For each polling interval, the reachabilty is either 100 (ping received) or 0 (ping not received).
Avg Unreachability	Value calculated by subtracting the average reachability from 100

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Management Group Comparison report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Group Comparison report and the Availability Dashboard report.

Reachability Group Distribution

Displays the overall reachability values of devices, by sub-group, for the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-90%	Count of devices in the sub-group with a reachability value of 90% or below.
90-99.999%	Count of devices in the sub-group with a reachability value between 90 and 99.999%.
99.999-100%	Count of devices in the sub-group with a reachability value between 99.999 and 100%.

Note: The reachability value is a ping received from the device during each polling interval as a percentage. For each polling interval, the reachabilty is either 100 (ping received) or 0 (ping not received)

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Reachability Scorecard

Displays an overview scorecard for the average reachability of devices across multiple groups or subgroups. You can select a goal range for the values to determine how the values in the scorecard are displayed.

Scorecard views display monthly performance data for the previous six month or seven week period by sub-group, for the currently selected group. Scorecards are high-level indicators of whether or not measured resources are meeting service-level goals. These views incorporate check marks and exclamation points as visual indicators to enhance quick understanding.

⌐ Reachability Scorecard								Sun 1 Nov 2009 - Sat 7 Nov 2009 CST	
Group ▲	Target	Sep 20	Sep 27	Oct 4	Oct 11	Oct 18	Oct 25	Nov 1	Average
– Routers	>= 98.00	✔ 100.000	✔ 99.995	✔ 100.000	✔ 99.833	❗ 97.772	✔ 99.955	✔ 98.771	✔ 99.428
Midwest	>= 98.00	✔ 100.000	✔ 100.000	✔ 100.000	✔ 100.000	✔ 100.000	✔ 100.000	✔ 99.735	✔ 99.962
Northeast	>= 98.00	✔ 100.000	✔ 99.983	✔ 100.000	✔ 99.669	✔ 99.868	✔ 99.857	✔ 99.868	✔ 99.892
Northwest	>= 98.00	✔ 100.000	✔ 100.000	✔ 100.000	✔ 100.000	❗ 90.476	✔ 99.931	❗ 94.661	❗ 97.365
Southeast	>= 98.00	✔ 100.000	✔ 100.000	✔ 100.000	✔ 99.752	✔ 100.000	✔ 100.000	✔ 100.000	✔ 99.975
Southwest	>= 98.00	✔ 100.000	✔ 100.000	✔ 100.000	✔ 99.802	✔ 100.000	✔ 100.000	✔ 100.000	✔ 99.972
				1 of 1				Max Per Page: 10 ▾	

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

Month or **Date**	The reachability percentage for the group or sub-group, as a monthly or weekly average
	Note: The reachability value is a ping received from the device during each polling interval as a percentage. For each polling interval, the reachabilty is either 100 (ping received) or 0 (ping not received)

Note: This scorecard view uses a default target percentage of 98.0, so that sub-groups with an average reachability below that target are displayed with a red exclamation point to indicate that the item falls below the target. You can modify this target value in the Custom View Wizard to meet your organization's service level goals.
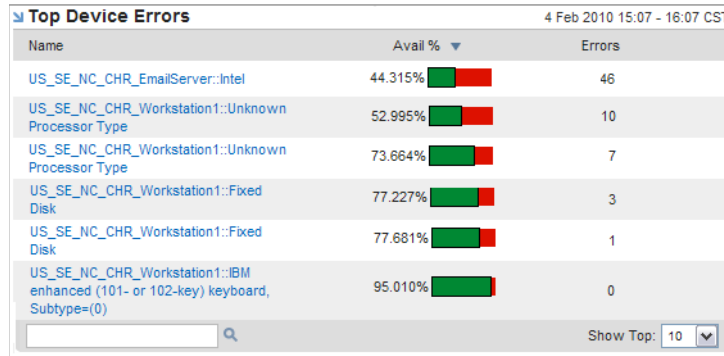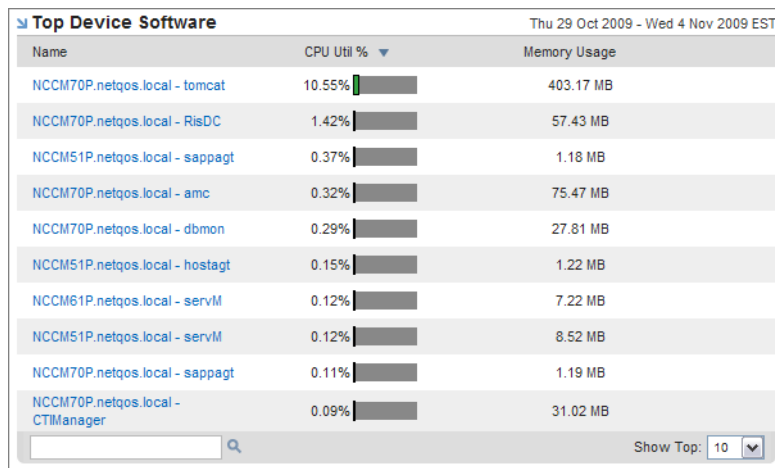
Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Scorecards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Scorecards report and the Availability Dashboard report.

Reachability Trend

Displays the average reachability and unreachability of the selected device over the selected time period.

Context: This view requires a selected device, server, router, or switch to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

Reachability	Average reachability, which is a ping received from the device during each polling interval as a percentage. For each polling interval, the reachabilty is either 100 (ping received) or 0 (ping not received).
Unreachability	Value calculated by subtracting the average reachability from 100

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Changes - Device CPU Utilization

Displays the current month's average CPU utilization (processor load) for those devices that have the highest change in CPU utilization. The amount of change in utilization is calculated from the change in the 95th percentile of data from the previous time period.

Note: The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Top Changes - Device CPU Utilization					6 Oct 2009 - 4 Nov 2009 EST	
Name	Metric	Current Month Average	Current Month 95th %	Previous Month 95th %	% Change of 95th % ▼	
NCCM42P - Intel	Processor Load	0.73%	5.21%	6.56%	-26.0	
NCCM70P.netqos.local - vendor_id: GenuineIntel	Processor Load	5.92%	38.34%	42.86%	-11.8	
NCCM70P.netqos.local - vendor_id: GenuineIntel	Processor Load	6.86%	35.58%	38.78%	-9.0	
nclabpcon01 - Intel	Processor Load	0.06%	43.60%	46.49%	-6.6	
nclabpcon01 - Intel	Processor Load	0.06%	38.90%	41.29%	-6.1	
NCCUPS01.netqos.local - vendor_id: GenuineIntel	Processor Load	8.31%	37.14%	35.32%	4.9	
NCCUPS01.netqos.local - vendor_id: GenuineIntel	Processor Load	7.91%	36.67%	35.09%	4.3	
NCCM61P.netqos.local - vendor_id: GenuineIntel	Processor Load	5.46%	29.84%	29.19%	2.2	
nccm51p.netqos.local - vendor_id: GenuineIntel	Processor Load	7.05%	40.32%	39.99%	0.8	
NCCM61P.netqos.local - vendor_id: GenuineIntel	Processor Load	5.95%	30.40%	30.45%	-0.2	

Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expression:

|	
Metric	Processor Load
Current Month Average	Average value for the metric over the current reporting month
Current Month 95th %	Average value for the metric over the current reporting month using the 95th percentile data
Previous Month 95th %	Average value for the metric for the month previous to the current reporting month using the 95th percentile data
% Change of 95th %	Percentage change between the current month's 95th percentile value and the previous month's 95th percentile value

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Monthly Changes Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Monthly Changes report.

Top CPU Utilization

Displays the CPU utilization on those devices in the selected reporting group or volumes in the selected managed object that are experiencing the highest processor load for the selected time period. This view also displays the 95th percentile for data and the number of CPUs for each of the devices.

Note: The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expressions:

CPU Util Avg	The average of the percentage of time that the processor was not idle
CPU Util 95th Percentile	The value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report and Server Overview report.

Top CPU Utilization (Count)

Displays the CPU utilization statistics and a count of the CPUs for those devices in the selected reporting group that are experiencing the highest processor load for the selected time period. This view also displays the 95th percentile for data and the number of CPUs for each of the devices.

Note: The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Context: This view requires a selected reporting group.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expressions:

CPU Util Avg	The average of the percentage of time that processing was not idle
CPU Util 95th Percentile	The value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.
Num CPUs	Count of CPUs for the device

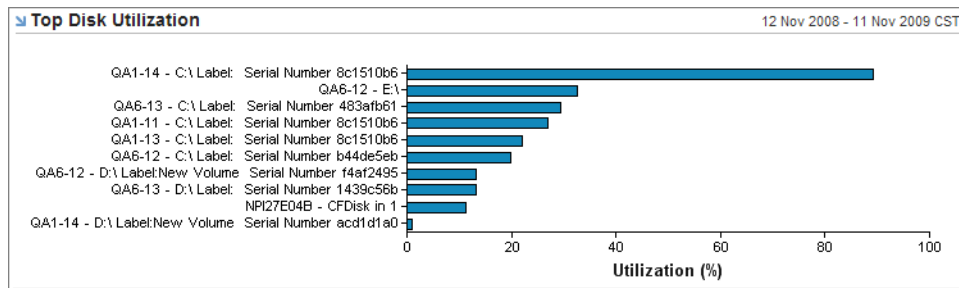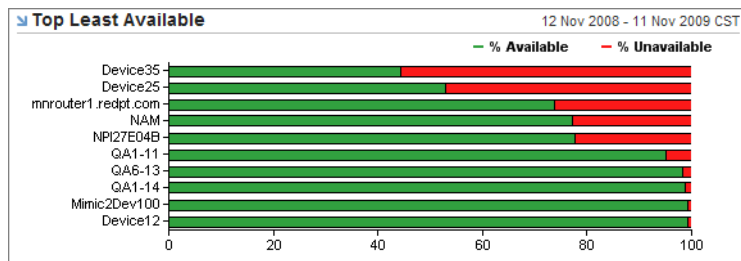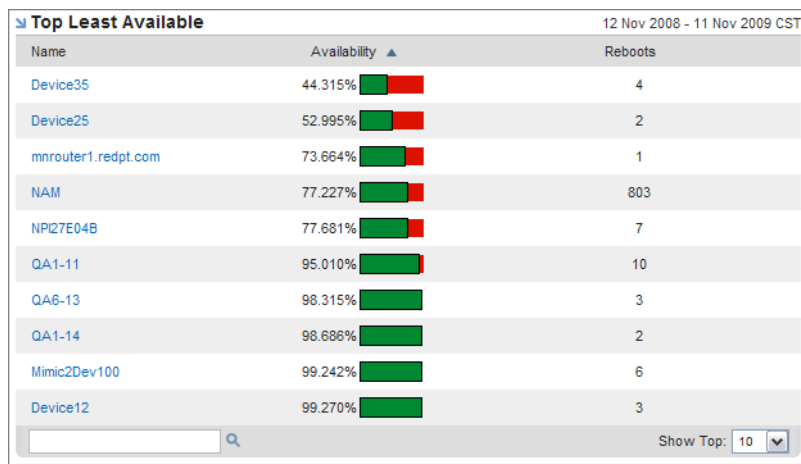**Styles:** This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, Server Summary Report, and Server Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Overview report, the Server Summary report, and the Server Dashboard report.

Top Deviation From Norm - Device CPU Util

Displays those devices that have the highest deviation from the 30-day rolling baseline value for CPU utilization. This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expressions:

Metric	Processor Load
Normal	Normal utilization value calculated from a 30-day rolling baseline
Actual	The average utilization percentage during the selected time period
Deviation	The value of the actual utilization calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.

Top Deviation From Norm - Device Memory Util

Displays those device memory resources that have the highest deviation from the 30-day rolling baseline value for memory utilization.This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Top Deviation From Norm - Device Memory Util				6 Oct 2009 - 4 Nov 2009 EST
Name	Metric	Normal	Actual	Deviation (%) ▼
NCCM51P.netqos.local - Virtual Memory	Percent Used	29.60%	2.39%	-91.9
NCCM61P.netqos.local - Virtual Memory	Percent Used	18.46%	4.58%	-75.2
NCCM70P.netqos.local - /dev/shm	Percent Used	39.24%	67.67%	72.5
NCCUPS01.netqos.local - Virtual Memory	Percent Used	25.02%	8.85%	-64.6
NCCM70P.netqos.local - /partB	Percent Used	2.49%	4.08%	63.9
nclabpcon01 - Virtual Memory	Percent Used	10.85%	7.45%	-31.3
SMALLSITE - Virtual Memory	Percent Used	3.27%	2.24%	-31.3
SMALLSITE - Physical Memory	Percent Used	18.42%	14.48%	-21.4
NCCM70P.netqos.local - /common	Percent Used	70.54%	83.58%	18.5
NCCM70P.netqos.local - /grub	Percent Used	4.99%	5.72%	14.6

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Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage Table dataset in NetVoyant. The view includes data for the following expressions:

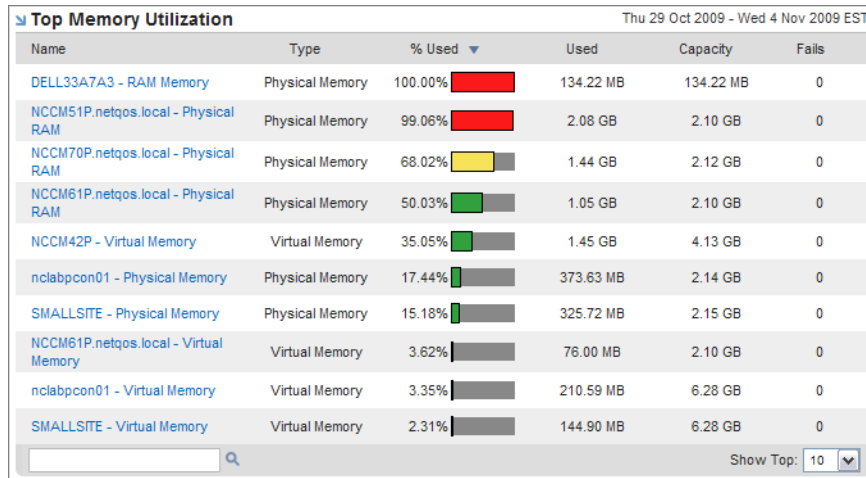|	
Metric	Percent Used
Normal	Normal utilization value calculated from a 30-day rolling baseline
Actual	The average utilization percentage during the selected time period
Deviation	The value of the actual utilization calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.

Top Deviation From Norm - Latency

Displays average latency (round trip delay) for those devices that have the most change from the 30-day rolling baseline value for latency. This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Average Latency (ICMP)
Normal	Normal latency value calculated from a 30-day rolling baseline
Actual	The average latency percentage during the selected time period
Deviation	The value of the actual latency calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.

Top Device Errors

Displays the devices with the highest number of errors unrelated to availability occurring during the specified time period.

Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrdevice`, which corresponds to the Host Resource Device Table dataset in NetVoyant. The view includes data for the following expressions:

Avail %	The percentage of polling intervals where the current operational state of the device is up and running with no known error conditions
Errors	Count of errors detected

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Device Software

Displays the CPU and memory utilization for those applications with the highest utilization in the selected reporting group or on the selected device during the specified time period.

Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrswrun`, which corresponds to the Host Resource Software Performance dataset in NetVoyant. The view includes data for the following expressions:

CPU Util %	Utilization percentage calculated using the number of centi-seconds of the total system's CPU resources consumed by the process
Memory Usage	Total amount of real system memory allocated to this process

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Capabilities Report and Operations Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report.

Top Device Software CPU Utilization

Displays the utilization percentage for applications with the highest CPU utilization on the devices in the selected reporting group during the specified time period.
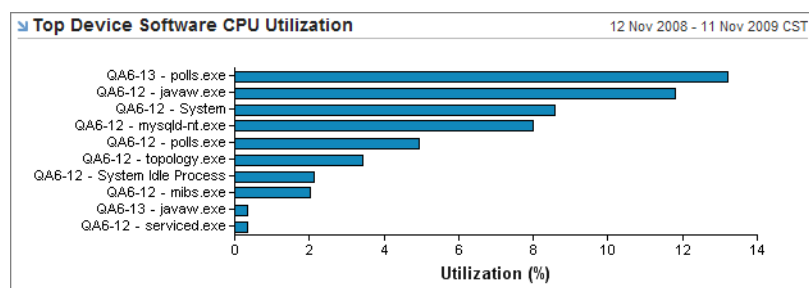
Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrswrun`, which corresponds to the Host Resource Software Performance dataset in NetVoyant. The view includes data for the following expression:

|	
CPU Util	Utilization percentage, by application, calculated using the number of centi-seconds of the total system's CPU resources consumed by the process

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Disk Storage

Displays the disk storage utilization on those storage volumes in the selected reporting group or on the selected managed device with the highest percentage of storage volume used during the selected time period.

Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

Type	Type of disk storage determined by `p_Type.property_value`
% Used	Percentage calculated by dividing the count of storage used by the storage size.
Used	Count of bytes used
Capacity	Storage size in bytes
Fails	Count of storage allocation failures (requests for storage that could not be honored due to insufficient storage).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, Server Summary Report, Device Capabilities Report, and Server Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report and the Server Dashboard report.

Top Disk Utilization

Displays the disk utilization on those volumes in the selected reporting group or on the selected managed device with the highest utilization during the selected time period.

Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expression:

Utilization	Utilization percentage calculated by dividing the count of storage used by the storage size.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Server Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Summary report.

Top Least Available

Displays the availability and unavailability percentages for those devices in the selected reporting group that were least available during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expression:

% Available	Percentage of time that the system is up and running
% Unavailable	Percentage calculated by subtracting % Available from 100

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Graphs Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Availability Dashboard report.

Top Least Available (Reboots)

Displays availability percentages and number of reboots for those devices in the selected reporting group or volumes on the selected managed object that were least available during the selected time period.

Context: This view requires a selected reporting group or managed device to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expression:

Availability	Percentage of time that the system is up and running
Reboots	Count of system reboots

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, Server Capabilities Report, Device Capabilities Report, Router Capabilities Report, and Switch Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report, Enterprise Summary report, Enterprise Dashboard report, and the Availability Dashboard report.

Top Least Reachable

Displays the overall reachability of those devices that were least reachable during the selected time period.
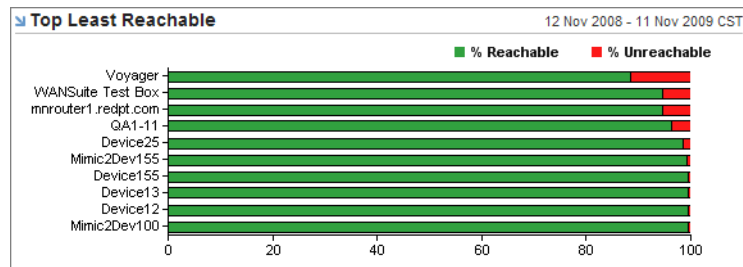
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

% Reachable	Percentage of attempts that the device was reachable, which is a ping received from the device during each polling interval, for all attempts. For each polling interval, the reachabilty is either 100 (ping received) or 0 (ping not received).
% Unreachable	Value calculated by subtracting the % Reachable from 100

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Graphs Report, which is a standard NetVoyant report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Availability Dashboard report.

Top Least Reachable (Details)

Displays the overall reachability, ping latency, ICMP loss, and SNMP loss of those devices in the selected reporting group that were least reachable during the selected time period.

⬊ Top Least Reachable				12 Nov 2008 - 11 Nov 2009 CST
Name	Reachability ▲	Ping Latency	ICMP Loss	SNMP Loss
Voyager	88.389%	1.7 ms	19.38%	11.74%
WANSuite Test Box	94.719%	107.2 ms	13.50%	7.91%
mnrouter1.redpt.com	94.727%	109.1 ms	13.71%	8.28%
QA1-11	96.386%	0.7 ms	4.06%	3.67%
Device25	98.485%	0.1 ms	9.38%	2.49%
Mimic2Dev155	99.315%	1.0 ms	6.32%	2.07%
Device155	99.409%	1.1 ms	11.95%	0.43%
Device13	99.494%	0.8 ms	0.51%	0.51%
Device12	99.494%	0.7 ms	0.53%	0.51%
Mimic2Dev100	99.506%	0.7 ms	0.53%	0.56%
🔍				Show Top: 10 ▾

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

Reachability	Percentage of attempts that the device was reachable, which is a ping received from the device during each polling interval, for all attempts. For each polling interval, the reachabilty is either 100 (ping received) or 0 (ping not received).
Ping Latency	Average round trip time delay
ICMP Loss	Percentage of pings received to those sent
SNMP Loss	Percentage of SNMP packets received to those sent

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, which is a standard NetVoyant report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report, Enterprise Summary report, Enterprise Dashboard report, and Availability Dashboard report.

Top Memory Utilization

Displays the storage utilization for both physical memory and virtual memory on those devices in the selected reporting group or volumes in the managed object with the most utilization during the selected time period.

Top Memory Utilization				Thu 29 Oct 2009 - Wed 4 Nov 2009 EST	
Name	Type	% Used ▼	Used	Capacity	Fails
DELL33A7A3 - RAM Memory	Physical Memory	100.00%	134.22 MB	134.22 MB	0
NCCM51P.netqos.local - Physical RAM	Physical Memory	99.06%	2.08 GB	2.10 GB	0
NCCM70P.netqos.local - Physical RAM	Physical Memory	68.02%	1.44 GB	2.12 GB	0
NCCM61P.netqos.local - Physical RAM	Physical Memory	50.03%	1.05 GB	2.10 GB	0
NCCM42P - Virtual Memory	Virtual Memory	35.05%	1.45 GB	4.13 GB	0
nclabpcon01 - Physical Memory	Physical Memory	17.44%	373.63 MB	2.14 GB	0
SMALLSITE - Physical Memory	Physical Memory	15.18%	325.72 MB	2.15 GB	0
NCCM61P.netqos.local - Virtual Memory	Virtual Memory	3.62%	76.00 MB	2.10 GB	0
nclabpcon01 - Virtual Memory	Virtual Memory	3.35%	210.59 MB	6.28 GB	0
SMALLSITE - Virtual Memory	Virtual Memory	2.31%	144.90 MB	6.28 GB	0
🔍				Show Top: 10 ▾	

Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

Type	Type of disk storage determined by `p_Type.property_value`
% Used	Percentage calculated by dividing the count of storage used by the storage size.
Used	Count of bytes used
Capacity	Storage size in bytes
Fails	Count of storage allocation failures (requests for storage that could not be honored due to insufficient storage).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report and Server Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report and the Server Overview report and the Server Dashboard report.

Top Physical Memory Utilization

Displays the physical memory utilization percentage on those devices in the selected reporting group or volumes on the selected managed object with the most utilization during the selected time period.
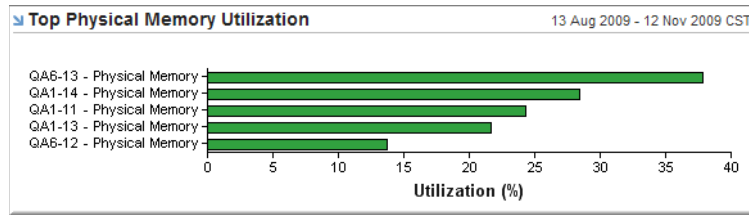
Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expression:

Utilization	Utilization percentage calculated by dividing the count of physical memory used by the total capacity.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Ping Latency

Displays the overall ping latency (ms) for those devices in the selected reporting group with the highest ping latency during the selected time period.
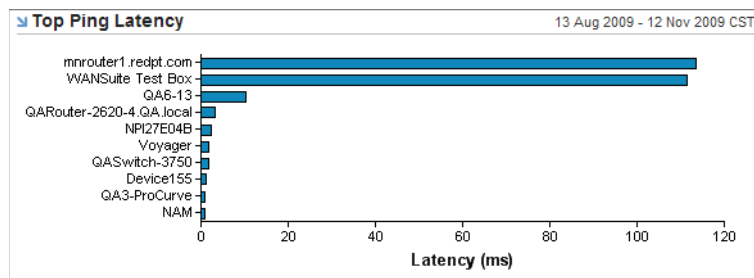
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

Latency	Average round trip delay

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Ping Loss Rate

Displays the overall ping loss rate for those devices in the selected reporting group with the highest ping loss rates during the selected time period.

The ping loss rate can be used as an indicator that there is congestion on the network that the device is approaching a loss threshold.
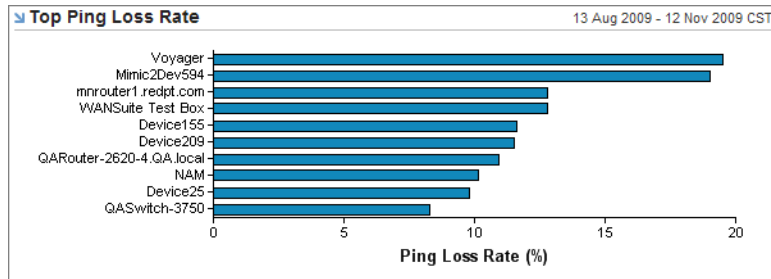
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

ICMP Loss	Percentage of pings received to those sent

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Projections - Device CPU Utilization

Displays 30, 60, and 90-day projections for CPU utilization for those devices in the selected reporting group with the highest CPU utilization 90-day growth rates.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expressions:

Metric	Processor Load
Last 90 Days	The CPU utilization growth rate calculated over the preceding 90 days
30 Days	The projected CPU utilization 30 days from now
60 Days	The projected CPU utilization 60 days from now
90 Days	The projected CPU utilization 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top Projections - Device Memory Utilization

Displays 30, 60, and 90-day projections for memory utilization for those device memory resources in the selected reporting group with the highest memory utilization 90-day growth rates.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

Metric	Percent Used
Last 90 Days	The utilization percentage growth rate calculated over the preceding 90 days
30 Days	The projected utilization percentage increase 30 days from now
60 Days	The projected utilization percentage increase 60 days from now
90 Days	The projected utilization percentage increase 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top Projections - Latency

Displays 30, 60, and 90-day projections for average latency for those devices in the selected reporting group with the highest latency 90-day growth rates.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Average Latency (ICMP) - round trip delay
Last 90 Days	The latency growth rate calculated over the preceding 90 days
30 Days	The projected latency increase 30 days from now
60 Days	The projected latency increase 60 days from now
90 Days	The projected latency increase 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top SNMP Packet Loss Rate

Displays the overall SNMP packet loss rate for those devices in the selected reporting group with the highest SNMP packet loss rates during the selected time period.
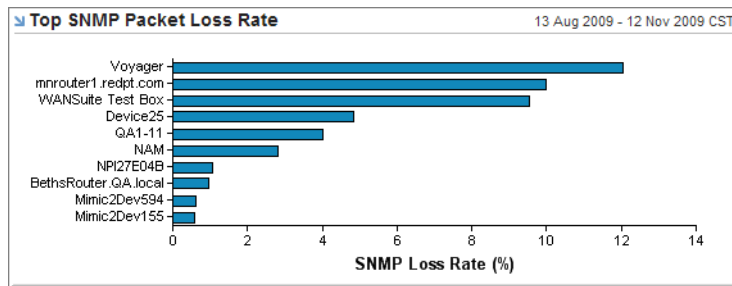
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expression:

SNMP Loss   Percentage of SNMP packets received to those sent, subtracted from 100

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Software Memory Utilization

Displays the application memory usage for devices in the selected reporting group with the most utilization per application during the selected time period.
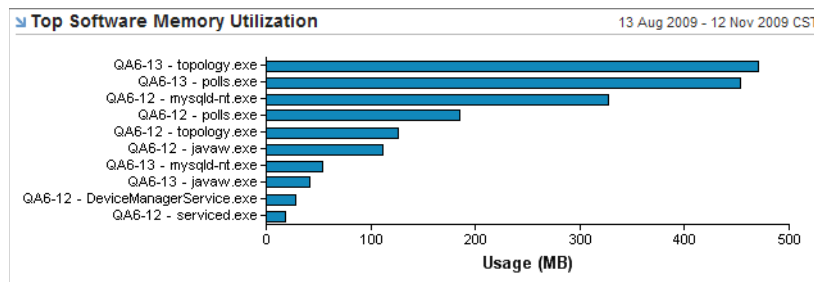
Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrswrun`, which corresponds to the Host Resource Software Performance dataset in NetVoyant. The view includes data for the following expression:

Memory Utilization   Total amount of real system memory allocated to a single application (process) in megabytes

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.
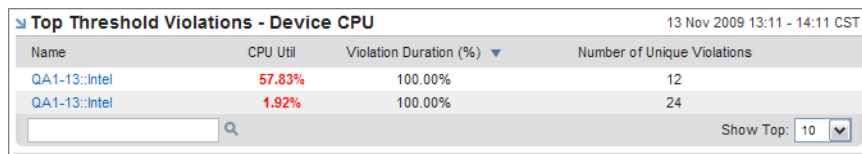
Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Threshold Violations - Device CPU

Displays the number and duration of threshold events that have occurred for CPU utilization values for those devices in the selected reporting group with the highest duration values during the selected time period. Those utilization values that have exceeded the threshold when averaged over the reporting time period display in red.

The view also displays the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

⬎ Top Threshold Violations - Device CPU			13 Nov 2009 13:11 - 14:11 CST
Name	CPU Util	Violation Duration (%) ▼	Number of Unique Violations
QA1-13::Intel	57.83%	100.00%	12
QA1-13::Intel	1.92%	100.00%	24
🔍			Show Top: 10 ▾

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrprocessor`, which corresponds to the Host Resource Processor Table dataset in NetVoyant. The view includes data for the following expressions:

CPU Util	Average percentage of time that the processor was not idle.
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Threshold Violations Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Threshold Violations report and the Alerts and Violations report.

Top Threshold Violations - Device Storage

Displays the number and duration of threshold events that have occurred for device storage values for those devices in the selected reporting group with the highest duration values during the selected time period. Those storage utilization values that have exceeded the threshold when averaged over the reporting time period display in red.

The view also displays the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

Top Threshold Violations - Device Storage					17 Apr 2009 CDT
Name	% Used	Capacity	Fails	Violation Duration (%) ▼	Number of Unique Violations
PeopleSoft Web Front End Server 1 - Disk 1	61.73%	1.02 TB	0	58.81%	1
US Web Proxy Server - Physical Memory	64.03%	2.05 GB	0	55.62%	16
portal07.c22.net - Disk 0	58.76%	1.02 TB	0	55.07%	11
SAP DB 2 - Disk 1	60.88%	1.02 TB	0	54.56%	3
SAP DB 1 - Disk 2	59.18%	1.02 TB	0	53.38%	23
Finance - OracleDatabase3 Tier 3 - Physical Memory	51.85%	2.05 GB	0	52.34%	8
Finance - Web3 Tier 1 - Disk 1	52.71%	1.02 TB	0	50.96%	13
PeopleSoft Web Front End Server 2 - Physical Memory	64.00%	2.05 GB	0	50.84%	16
exchange07.c22.net - Disk 0	64.77%	1.02 TB	0	50.38%	21
sales82.c22.net - Disk 0	53.26%	1.02 TB	0	50.25%	10

Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

% Used	Percentage calculated by dividing the count of storage used by the storage size
Capacity	Total storage size in bytes
Fails	Count of storage allocation failures (requests for storage that could not be honored due to insufficient storage)
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Threshold Violations Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Threshold Violations report and the Alerts and Violations report.

Top Threshold Violations - Latency

Displays the number and duration of threshold events that have occurred for latency values for those devices in the selected reporting group with the highest duration values during the selected time period. Those latency values that have exceeded the threshold when averaged over the reporting time period display in red.

The view also displays the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.
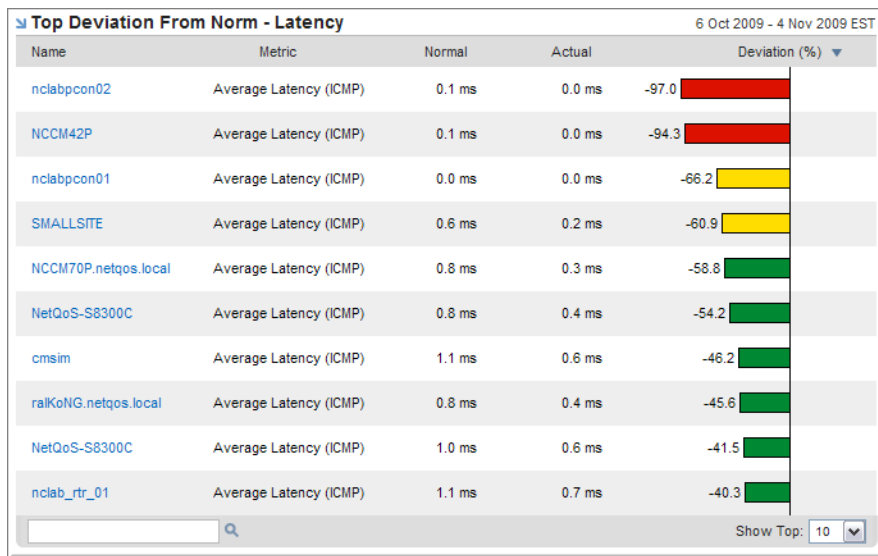
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `reach`, which corresponds to the Reachability Statistics dataset in NetVoyant. The view includes data for the following expressions:

Min Latency	The minimum latency (round trip delay) value in milliseconds
Avg Latency	The average latency (round trip delay) value in milliseconds
Max Latency	The maximum latency (round trip delay) value in milliseconds
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Virtual Memory Utilization

Displays the virtual memory utilization on those devices in the selected reporting group with the most utilization during the selected time period.
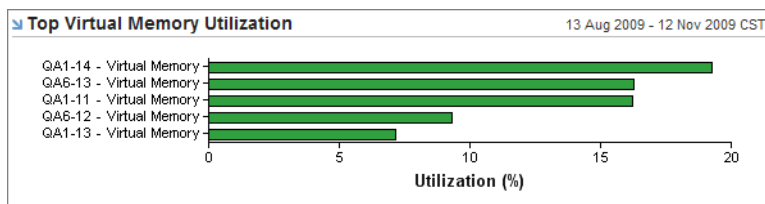
Context: This view requires a selected reporting group, device, or server to be displayed.

Data: The metric used to render this view is `hrstorage`, which corresponds to the Host Resource Storage dataset in NetVoyant. The view includes data for the following expressions:

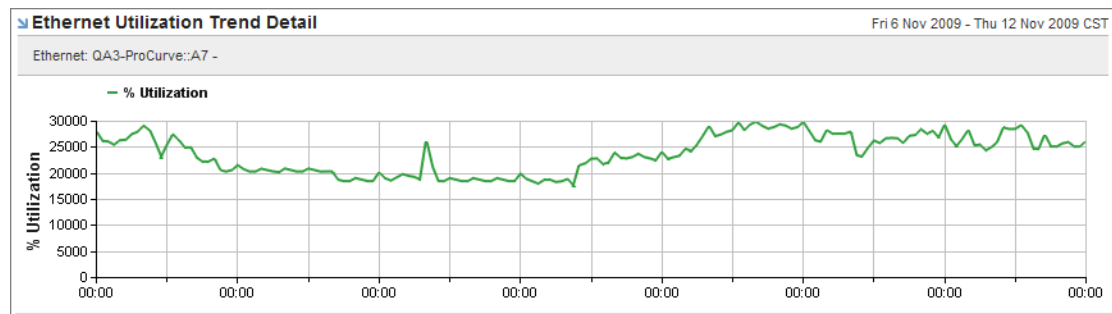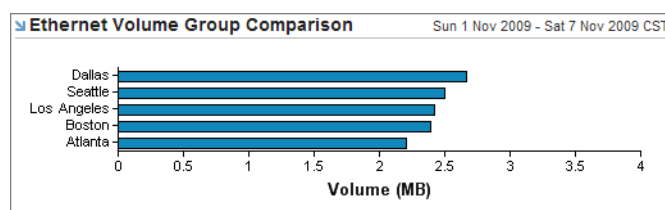|	
Utilization	Percentage calculated by dividing the count of virtual memory used by the total size

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Overview report.

ETHERNET VIEWS

The following sections describe the views related to Ethernet interfaces that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Ethernet views are designed to provide status and performance information about individual ethernet interfaces and aggregations of reporting groups.

Closest to Threshold - Ethernet Utilization

Displays a table of those Ethernet interfaces that have average utilization closest to the utilization threshold. By default, this view also displays the projected number of days until the utilization for each interface crosses the threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following:

Metric	Description of the utilization calculation
Average	Average utilization value as a percentage
Threshold	The threshold for the `utilization` expression in NetVoyant
Days to Threshold	The projected number of days until the value for the expression exceeds the threshold.

Styles: This view can be displayed as a table only.

Closest to Threshold - Ethernet Volume

Displays a table of those Ethernet interfaces that have average volume closest to the volume threshold. By default, this view also displays the projected number of days until the volume for each interface crosses the threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following:

|	
Metric	Description of the volume calculation
Average	Average volume value as a percentage
Threshold	The threshold for the `volume` expression in NetVoyant
Days to Threshold	The projected number of days until the value for the expression exceeds the threshold.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold Report.

Error Distribution

Displays the number of error types, by date/time, for the selected ethernet interface during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected ethernet interface to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expressions:

Over Sized	Count of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.
Under Sized	Count of packets received that were less than 64 octets long (excluding framing bits, but including FCS octets) and were otherwise well formed.

Dropped	Count of events in which packets were dropped by the probe due to lack of resources. This number is not necessarily the number of packets dropped; it is just the number of times this condition has been detected.
CRC Align	Count of packets received that had a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets, inclusive, but had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets
Fragments	Count of packets received that were less than 64 octets in length (excluding framing bits but including FCS octets) and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets
Jabbers	Count of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets), and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets
Collisions	Best estimate of the total number of collisions on this Ethernet segment. The value returned will depend on the location of the RMON probe.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

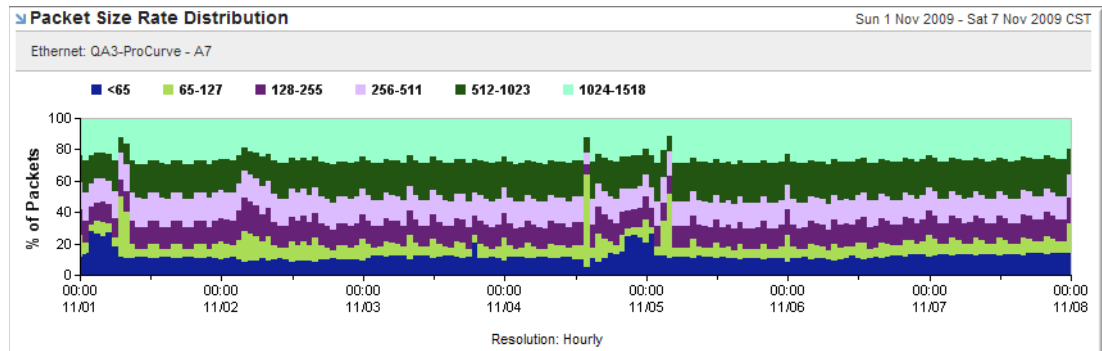**Standard NetVoyant reports:** This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Error Rate Distribution

Displays the percentages of error types, by date/time, for the selected ethernet interface during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected ethernet interface to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expressions:

Over Sized	Percentage of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.
Under Sized	Percentage of packets received that were less than 64 octets long (excluding framing bits, but including FCS octets) and were otherwise well formed.

Dropped	Percentage of packets/events in which packets were dropped by the probe due to lack of resources. This number does not necessarily represent the percentage of packets dropped; it is the number of times this condition has been detected over the total number of packets.
CRC Align	Percentage of packets received that had a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets, inclusive, but had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets
Fragments	Percentage of packets received that were less than 64 octets in length (excluding framing bits but including FCS octets) and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets
Jabbers	Percentage of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets), and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets
Collisions	Percentage calculated using the best estimate of the total number of collisions on this Ethernet segment (value returned will depend on the location of the RMON probe) over the total number of packets.

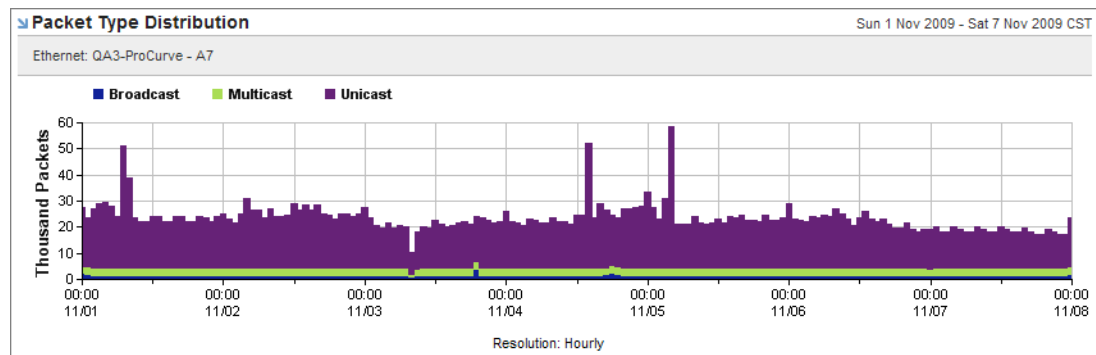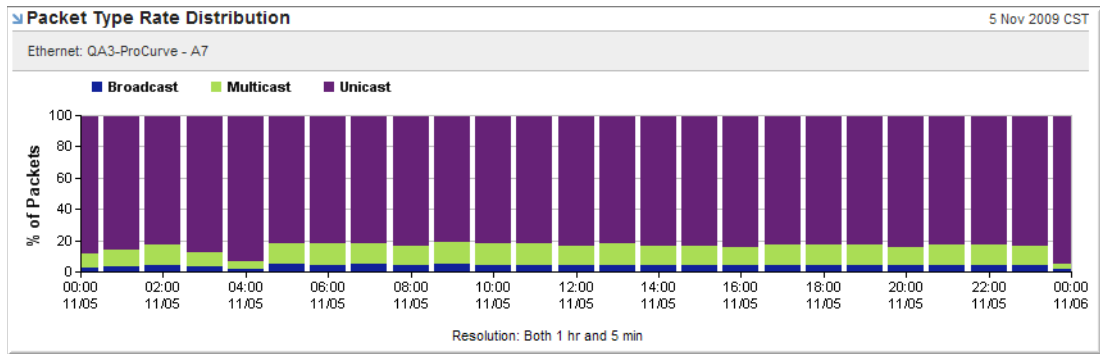**Styles:** This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Ethernet Error Trend Detail

Displays the percentage of errors occurring, by date/time, on the ethernet interface over the selected period of time.

Context: This view requires a selected ethernet interface to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

Error Rate	The percentage of errors (all error types)

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Ethernet Errors Group Comparison

Compares the number of ethernet errors, by sub-group, on the ethernet interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

  Avg Errors   Average number of errors (all error types)

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the LAN Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the LAN Group Comparison report.

Ethernet Utilization Group Comparison

Compares the ethernet utilization, by sub-group, on the ethernet interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.
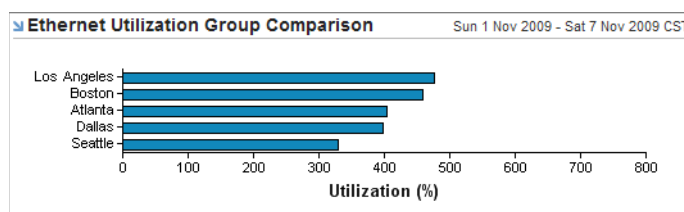
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:
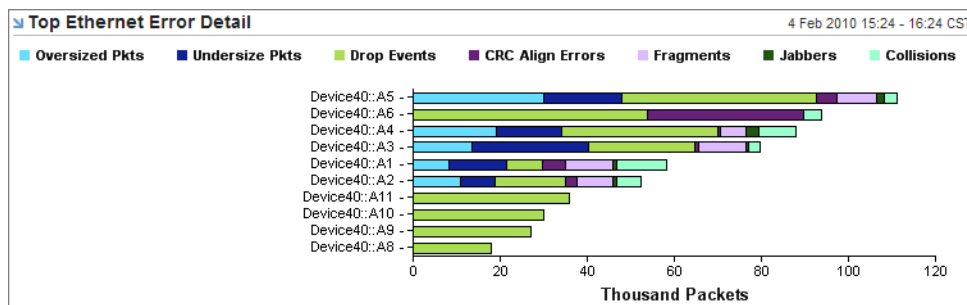
  Avg Utilization   Average ethernet utilization value, which is calculated by sampling before and after a common interval, as follows: Pkts * (9.6 + 6.4) + (Octets * .8) *800.00/duration* interface speed.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the LAN Group Comparison Report and Device Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the LAN Group Comparison report.

Ethernet Utilization Trend Detail

Displays ethernet utilization values on the selected ethernet interface over the selected time period.

Context: This view requires a selected ethernet interface to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

% Utilization	Utilization calculated by sampling before and after a common interval, as follows: Pkts * (9.6 + 6.4) + (Octets * .8) *800.00/duration* interface speed.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Ethernet Performance report.

Ethernet Volume Group Comparison

Compares the ethernet volume, by sub-group, on the ethernet interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

Total Volume	The total volume calculated by sampling before and after a common interval, as follows: Pkts * (9.6 + 6.4) + (Octets * .8) *800.00/duration

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the LAN Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the LAN Group Comparison report.

Ethernet Volume Trend Detail

Displays the total volume for the selected ethernet interface over the selected time period.
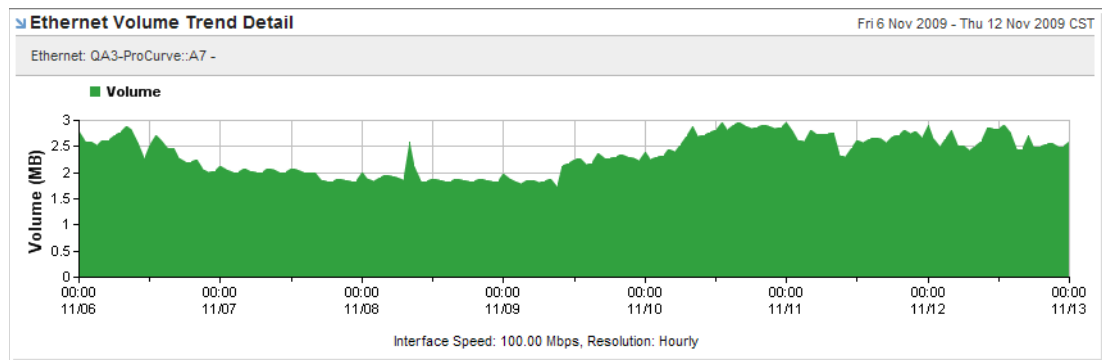
Context: This view requires a selected ethernet interface to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

Volume	Volume calculated by sampling before and after a common interval, as follows: Pkts * (9.6 + 6.4) + (Octets * .8) *800.00/duration

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Packet Size Distribution

Displays the number of packets, by date/time, that fall within the defined size ranges for the selected ethernet interface during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected ethernet interface to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

<65	Count of packets (including bad packets) received that were 64 octets in length (excluding framing bits but including FCS octets).
65-127	Count of packets (including bad packets) received that were between 65 and 127 octets in length inclusive (excluding framing bits but including FCS octets).
128-255	Count of packets (including bad packets) received that were between 128 and 255 octets in length inclusive (excluding framing bits but including FCS octets).
256-511	Count of packets (including bad packets) received that were between 256 and 511 octets in length inclusive (excluding framing bits but including FCS octets).
512-1023	Count of packets (including bad packets) received that were between 512 and 1023 octets in length inclusive (excluding framing bits but including FCS octets).
1024-1518	Count of packets (including bad packets) received that were between 1024 and 1518 octets in length inclusive (excluding framing bits but including FCS octets).

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Ethernet Performance report.

Packet Size Rate Distribution

Displays the percentages of packet sizes, by date/time, within the defined size ranges for the selected ethernet interface during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected ethernet interface to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

<65	Percentage of packets (including bad packets) received that were 64 octets in length (excluding framing bits but including FCS octets).
65-127	Percentage of packets (including bad packets) received that were between 65 and 127 octets in length inclusive (excluding framing bits but including FCS octets).
128-255	Percentage of packets (including bad packets) received that were between 128 and 255 octets in length inclusive (excluding framing bits but including FCS octets).
256-511	Percentage of packets (including bad packets) received that were between 256 and 511 octets in length inclusive (excluding framing bits but including FCS octets).
512-1023	Percentage of packets (including bad packets) received that were between 512 and 1023 octets in length inclusive (excluding framing bits but including FCS octets).
1024-1518	Percentage of packets (including bad packets) received that were between 1024 and 1518 octets in length inclusive (excluding framing bits but including FCS octets).

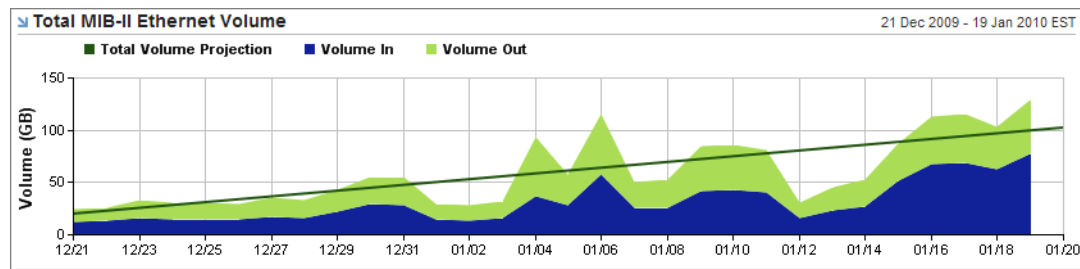**Styles:** This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Packet Type Distribution

Displays the number of packet types, by date/time, for the selected ethernet interface during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected ethernet interface to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

Broadcast	Count of good packets received that were directed to the broadcast address
Multicast	Count of good packets received that were directed to a multicast address
Unicast	Count of all good packets received, excluding those directed to the broadcast and multicast addresses

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Packet Type Rate Distribution

Displays the percentage of packet types, by date/time, for the selected ethernet interface during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected ethernet interface to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expressions:

Broadcast	Percentage of good packets received that were directed to the broadcast address
Multicast	Percentage of good packets received that were directed to a multicast address
Unicast	Percentage of all good packets received, excluding those that were directed to both the broadcast and multicast addresses

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Ethernet

Displays the ethernet utilization, number of errors, volume, and number of packets for those interfaces in the selected reporting group with the highest ethernet utilization during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

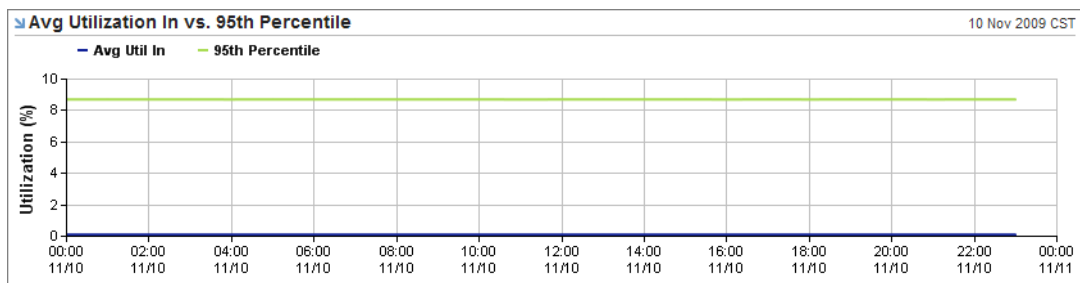|	
Util	Utilization calculated by sampling before and after a common interval, as follows: Pkts * (9.6 + 6.4) + (Octets * .8) *800.00/duration* interface speed.
Errors	Percentage of errors (all error types) over all packets
Volume	Volume in bytes calculated by sampling before and after a common interval, as follows: Pkts * (9.6 + 6.4) + (Octets * .8) *800.00/duration
Packets	Count of all packets

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Switch Capabilities Report.

Top Ethernet Error Detail

Displays the number of each ethernet error type on those ethernet interfaces in the selected reporting group that have the most total errors.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expressions:

Over Sized	Count of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) and were otherwise well formed.
Under Sized	Count of packets received that were less than 64 octets long (excluding framing bits, but including FCS octets) and were otherwise well formed.
Dropped	Count of events in which packets were dropped by the probe due to lack of resources. This number is not necessarily the number of packets dropped; it is just the number of times this condition has been detected.
CRC Align	Count of packets received that had a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets, inclusive, but had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets

Fragments	Count of packets received that were less than 64 octets in length (excluding framing bits but including FCS octets) and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets
Jabbers	Count of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets), and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets
Collisions	Best estimate of the total number of collisions on this Ethernet segment. The value returned will depend on the location of the RMON probe.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the LAN Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the LAN Summary report.

Top Ethernet Error Rates

Displays the ethernet error percentage (total of all types) on those ethernet interfaces in the selected reporting group that have the highest error percentage.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

| **Error Rate** | The percentage of errors (all error types) |

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Ethernet Utilization

Displays the overall utilization for those ethernet interfaces in the selected reporting group with the highest utilization.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

Utilization	Utilization calculated by sampling before and after a common interval, as follows: Pkts * (9.6 + 6.4) + (Octets * .8) *800.00/duration* interface speed.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report and Router Capabilities Report.

Top Projections - Ethernet Utilization

Displays 30, 60, and 90-day projections for utilization for those ethernet interfaces in the selected reporting group with the highest utilization 90-day growth rates.

Top Projections - Ethernet Utilization					4 Nov 2009 - 3 Feb 2010 CST
Name	Metric	Last 90 Days ▼	30 Days	60 Days	90 Days
QA3-ProCurve::A7 -	segment utilization	13,112.58%	0.00%	0.00%	0.00%
QA3-ProCurve::C1 -	segment utilization	463.70%	0.00%	0.00%	0.00%
QA3-ProCurve::C2 -	segment utilization	463.70%	0.00%	0.00%	0.00%
QA3-ProCurve::B9 -	segment utilization	0.00%	0.00%	0.00%	0.00%
QA3-ProCurve::B13 -	segment utilization	0.00%	0.00%	0.00%	0.00%
QA3-ProCurve::B12 -	segment utilization	0.00%	0.00%	0.00%	0.00%
					Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

Metric	Average ethernet segment utilization
Last 90 Days	The utilization growth rate calculated over the preceding 90 days
30 Days	The projected utilization increase 30 days from now
60 Days	The projected utilization increase 60 days from now
90 Days	The projected utilization increase 90 days from now

**Styles:** This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Top Projections - Ethernet Volume

Displays 30, 60, and 90-day projections for volume for those ethernet interfaces in the selected reporting group with the highest volume 90-day growth rates.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Average ethernet volume
Last 90 Days	The volume growth rate calculated over the preceding 90 days
30 Days	The projected volume increase 30 days from now
60 Days	The projected volume increase 60 days from now
90 Days	The projected volume increase 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Top Threshold Violations - Ethernet

Displays the maximum utilization, volume and error rate for those interfaces in the selected reporting group with the highest duration values for threshold events during the selected time period. Those values that have exceeded the threshold display in red.

The view also displays the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expressions:

Utilization	The maximum utilization value observed
Volume	The maximum volume value observed
Errors	The maximum error rate value observed
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Total MIB-II Ethernet Volume Group Comparison

Displays the inbound and outbound volume, by sub-group, for the ethernet interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

**Volume In**   Total number of inbound gigabytes

Volume Out   Total number of outbound gigabytes

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the LAN Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the LAN Group Comparison report.

FRAME RELAY VIEWS

The following sections describe the views related to frame relay circuits that you can add to your report pages. This information includes the view styles possible for each view, the metric used to render the view, and the standard report pages that include the view by default.

Frame relay views are designed to provide status and performance information about individual frame relay circuits and aggregations of reporting groups.

95th Percentile Frame Relay Utilization Scorecard

Displays an overview scorecard for the 95th percentile frame relay utilization across multiple groups or subgroups. You can select a goal range for the values to determine how the values in the scorecard are displayed.

Scorecard views display monthly performance data for the previous six month or seven week period by sub-group, for the currently selected group. Scorecards are high-level indicators of whether or not measured resources are meeting service-level goals. These views incorporate check marks and exclamation points as visual indicators to enhance quick understanding.

95th Percentile Frame Relay Utilization Scorecard									Fri 6 Nov 2009 - Thu 12 Nov 2009 CST
Group ▲	Target	Sep 27	Oct 4	Oct 11	Oct 18	Oct 25	Nov 1	Nov 8	Average
− Routers	<= 90.00	✔ 8.7	✔ 8.7	✔ 8.7	✔ 7.8	✔ 7.8	✔ 7.8	✔ 7.8	✔ 7.3
Midwest	<= 90.00	--	--	--	--	--	--	--	--
Northeast	<= 90.00	✔ 8.7	✔ 8.7	✔ 8.7	✔ 8.7	✔ 8.7	✔ 8.7	✔ 8.7	✔ 8.7
Northwest	<= 90.00	--	--	--	--	--	--	--	--
Southeast	<= 90.00	✔ 0.0	✔ 0.0	✔ 0.0	✔ 0.0	✔ 0.0	✔ 0.0	✔ 0.0	✔ 0.0
Southwest	<= 90.00	--	--	--	--	--	--	--	--
				1 of 1				Max Per Page:	10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expression:

Percentile   When set to a 95th percentile (default), this is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Note: This scorecard view uses a default target percentage of 90.0, so that sub-groups with an average utilization below that target are displayed with a red exclamation point to indicate that the item falls below the target. You can modify this target value in the Custom View Wizard to meet your organization's service level goals.
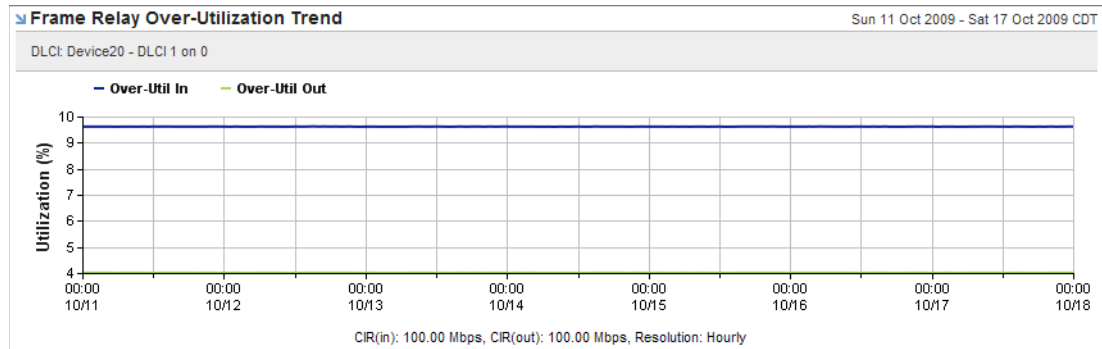
Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Scorecards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Scorecards report.

Avg Frame Relay Performance Index

Displays the average performance index for all frame relay circuits in a group for a selected time period. The performance index is calculated from the utilization and the congestion on a circuit. A utilization and congestion index of zero indicates a "healthy" circuit.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is frcircuit, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

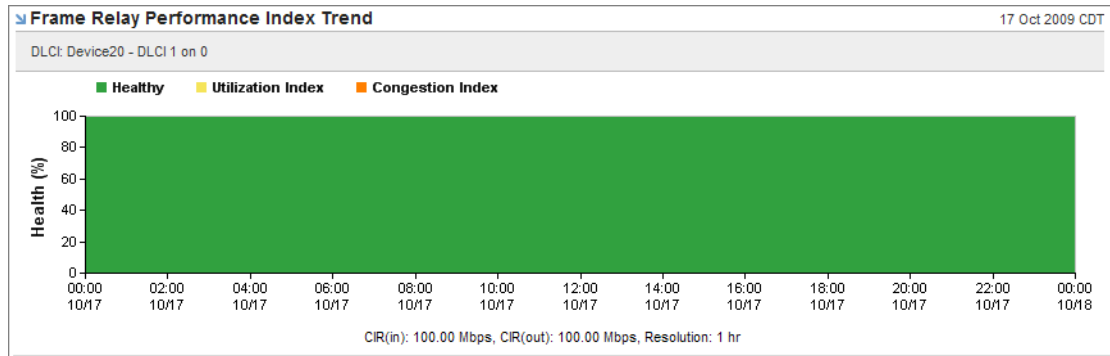|	
Healthy	"Health" index value calculated by adding the utilization index and congestion index, dividing by 2, and subtracting from 100
Util Index	Average utilization weighted against the baseline and threshold values
Congestion Index	Average congestion weighted against the baseline and threshold values

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Frame Relay Summary report.

Avg Utilization In vs. 95th Percentile

Displays the average inbound utilization compared to the 95th percentile for frame relay circuits in the selected reporting group over the selected time period. For time periods of one week or more, it also displays the 95th percentile utilization projection.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Avg Util In	The average inbound utilization, which is calculated by dividing the inbound bytes received by the incoming Committed Information Rate for the frame relay circuit multiplied by the duration
95th Percentile	The 95th percentile for the average utilization. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the 95th percentile utilization projection is not displayed.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Summary report.

Avg Utilization Out vs. 95th Percentile

Displays the average outbound utilization compared to the 95th percentile for frame relay circuits in the selected reporting group over the selected time period. For time periods of one week or more, it also displays the 95th percentile utilization projection.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg Util Out	The average outbound utilization, which is calculated by dividing the outbound bound bytes received by the outgoing Committed Information Rate for the frame relay circuit multiplied by the duration
95th Percentile	The 95th percentile for the average outbound utilization. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the 95th percentile utilization projection is not displayed.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Summary report.

Closest to Threshold - Frame Relay Congestion

Displays those frame relay circuits in the selected reporting group that have congestion rate values closest to the threshold. By default, this view also displays the projected number of days until the rate for each circuit crosses the congestion threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Description of the congestion calculation
Average	Average congestion value as a percentage
Threshold	The threshold for the `congest_rate` expression in NetVoyant
Days to Threshold	The projected number of days until the value for the expression exceeds the threshold.

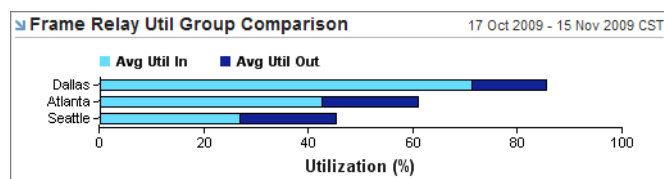**Styles:** This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold report.

Closest to Threshold - Frame Relay PVC Util

Displays those frame relay circuits in the selected reporting group that have average permanent virtual circuit (PVC) utilization values closest to the threshold. By default, this view also displays the projected number of days until the rate for each circuit crosses the PVC utilization threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Description of the PVC utilization calculation
Average	Average PVC utilization value as a percentage
Threshold	The threshold for the `congest_rate` expression in NetVoyant
Days to Threshold	The projected number of days until the value for the expression exceeds the threshold.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold report.

Frame Relay Congestion Rate Trend

Displays the congestion rate, by date/time increments, for the selected frame relay circuit over the selected time period. This view also includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default.
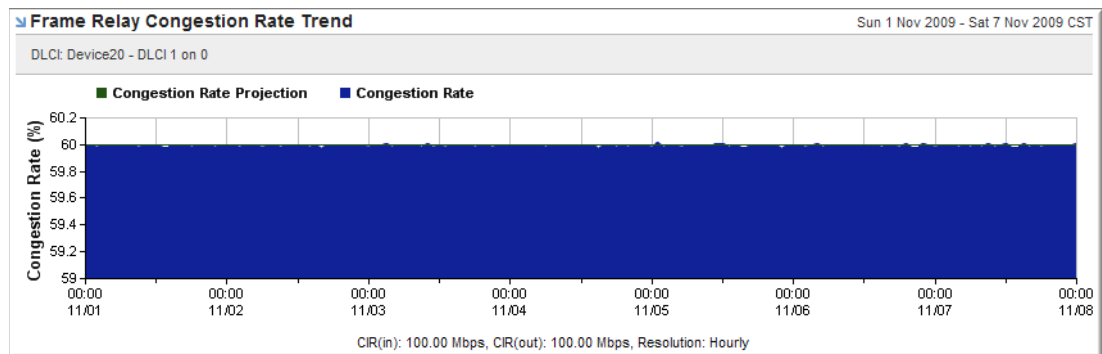
Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expression:

Congestion Rate	Percentage of frames sent or received that indicate either forward or backward congestion.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Congestion Report.

Frame Relay Congestion Trend

Displays the FECN rate and BECN rate, by date/time increments, for the selected frame relay circuit during the selected time period. This view also includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default.
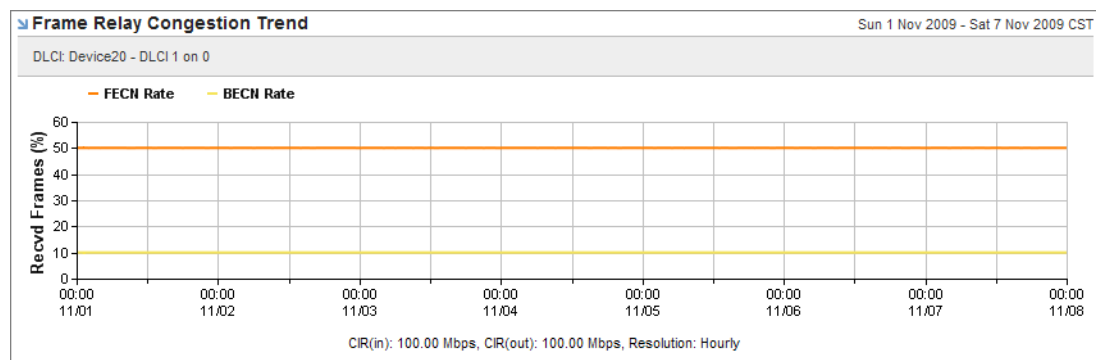
Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

FECN Rate	Percentage of frames received from the network that indicate forward congestion
BECN Rate	Percentage of frames sent by the network that indicate backward congestion

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Summary Report and Frame Relay Congestion Report.

Frame Relay Congestion Group Comparison

Compares the average Forward Explicit Congestion Notifications (FECNs) and Backward Explicit Congestion Notifications (BECNs) by sub-group on the frame relay circuits in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.
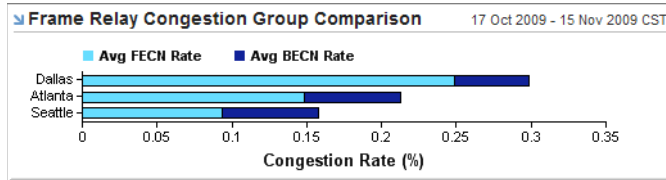
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg FECN Rate	Average percentage of frames received from the network that indicate forward congestion since the virtual circuit was created
Avg BECN Rate	Average percentage of frames sent by the network that indicate backward congestion since the virtual circuit was created.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Frame Relay Group Comparison report.

Frame Relay Details

Displays a table containing detailed information for the selected frame relay circuit.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: This view uses multiple metrics to render property information for the managed object. This view includes values for the following attributes:

Name	The circuit's name as defined by Poll Instance Name template for the Frame Relay Circuit Statistics dataset in the NetVoyant Console.
Description	The circuit's description as defined by Poll Instance Description template for the Frame Relay Circuit Statistics dataset in the NetVoyant Console.
Device sysName	The device's name as identified in the sysName OID on the device.
Device sysDescr	The device's description as identified in the sysDescr OID on the device.
Polling Enabled	Indicates whether polling is enabled for the device.
	If polling is enabled, the NetVoyant product is gathering data for the device.
Polling Station	The NetVoyant server that polls the device for SNMP statistics. In a distributed configuration, this is the poller that polls the device. In a standalone configuration, the poller is the Master Console.
Poll Rate	The poll rate (interval) for the device
Properties	Properties, if any, configured on the circuit
CirIn	The incoming Committed Information Rate for the frame relay circuit, which indicates how much bandwidth is guaranteed by your service provider. The CirIn can range from zero to the EirIn.
CirOut	The outgoing Committed Information Rate for the frame relay circuit, which indicates how much bandwidth is guaranteed by your service provider. The CirOut can range from zero to the EirOut.
EirIn	The incoming Excess Information Rate for the frame relay circuit, which is typically the circuit speed.
EirOut	The outgoing Excess Information Rate for the frame relay circuit, which is typically the circuit speed.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Frame Relay Details Report.

Frame Relay Over-Utilization Trend

Displays the inbound and outbound over-utilization for the selected frame relay circuit during the selected time period.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Over-Util In	The inbound PVC over-utilization, which is calculated by dividing the inbound volume received by the incoming Excess Information Rate for the frame relay circuit.
Over-Util Out	The outbound PVC over-utilization, which is calculated by dividing the outbound volume sent by the outgoing Excess Information Rate for the frame relay circuit.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, staked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Performance Index

Displays the performance index for each frame relay circuit in the selected reporting group during the selected time period. The performance index is calculated from the utilization and the congestion on a circuit. A utilization and congestion index of zero indicates a "healthy" circuit.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Utilization Index	Average utilization weighted against the baseline and threshold values
Congestion Index	Average congestion weighted against the baseline and threshold values

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Performance Index Trend

Displays the performance index, by date/time intervals, for the selected frame relay circuit during the selected time period. The performance index is calculated from the utilization and the congestion on a circuit. A utilization and congestion index of zero indicates a "healthy" circuit.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Healthy	"Health" index value calculated by adding the utilization index and congestion index, dividing by 2, and subtracting from 100
Util Index	Average utilization weighted against the baseline and threshold values
Congestion Index	Average congestion weighted against the baseline and threshold values

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, staked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Performance Report.

Frame Relay Rate Trend

Displays the inbound and outbound rate (bytes/second), in date/time increments, for the selected frame relay circuit during the selected time period.
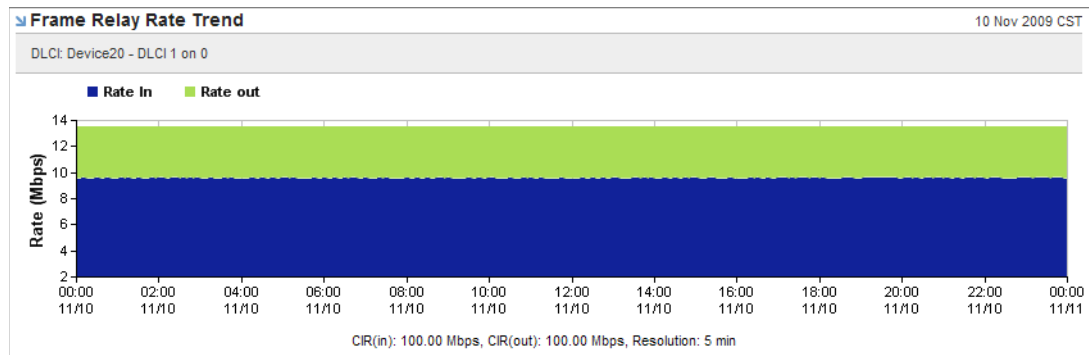
Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Rate In	Average rate (bps) for frames received
Rate Out	Average rate (bps) for frames sent

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, staked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Total Volume

Displays the overall volume in and volume out for frame relay circuits in the selected reporting group during the selected time period. For time periods of one week or more, it also displays a projection of the total volume (volume in + volume out).
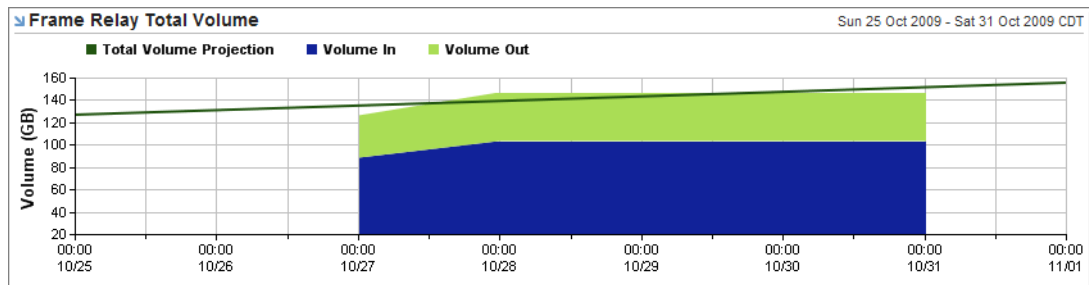
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In	Volume (bytes) received over the virtual circuit.
Volume Out	Volume (bytes) sent from the virtual circuit.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the total volume projection is not displayed.

Standard NetVoyant reports: This view is included by default in the Frame Relay Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Frame Relay Summary report.

Frame Relay Util Group Comparison

Displays the average inbound and outbound PVC utilization, by sub-group, on frame relay circuits in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:
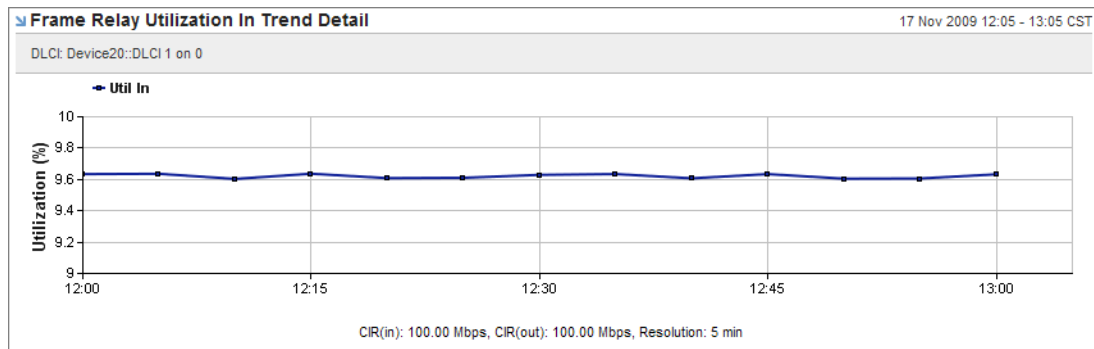
Avg Util In	The average inbound PVC utilization, which is calculated by dividing the inbound bytes received by the incoming Committed Information Rate for the frame relay circuit multiplied by the duration
Avg Util Out	The average outbound PVC utilization, which is calculated by dividing the outbound bytes received by the outgoing Committed Information Rate for the frame relay circuit multiplied by the duration

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Frame Relay Group Comparison report.

Frame Relay Util In Distribution

Displays the inbound utilization for frame relay circuits in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:
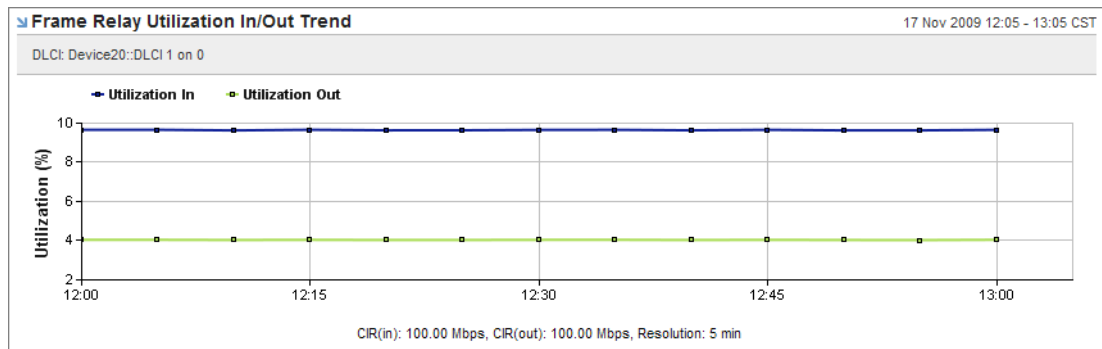
0-25%	Count of frame relay circuits with an inbound utilization value of 25% or below.
25-50%	Count of frame relay circuits with an inbound utilization value between 25% and 50%.
50-75%	Count of frame relay circuits with an inbound utilization value between 50% and 75%.
75-90%	Count of frame relay circuits with an inbound utilization value between 75% and 90%.
90-100%	Count of frame relay circuits with an inbound utilization value between 90% and 100%.
100%+	Count of frame relay circuits with an inbound utilization value of 100% or more.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Util In Distribution Table

Displays the inbound utilization, by date/time, for frame relay circuits in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

⬆ Frame Relay Util In Distribution Table					16 Nov 2009 11:29 - 12:29 CST	
Date/Time ▲	0-25%	25-50%	50-75%	75-90%	90-100%	100%+
11:30	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
11:35	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
11:40	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
11:45	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
11:50	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
11:55	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
12:00	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
12:05	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
12:10	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
12:15	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
12:20	501 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:
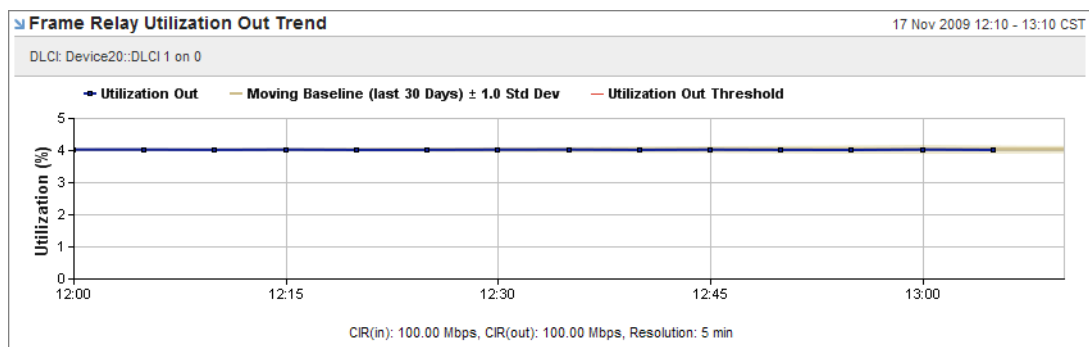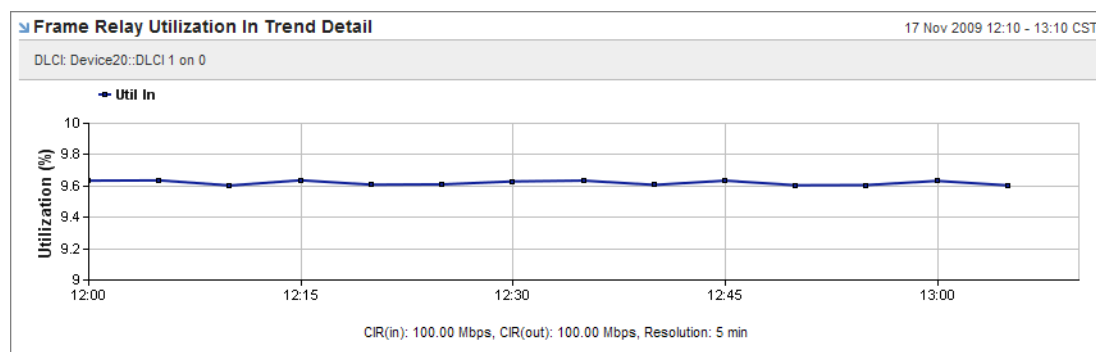
0-25% Count and percentage of frame relay circuits with an inbound utilization value of 25% or below.

25-50% Count and percentage of frame relay circuits with an inbound utilization value between 25% and 50%.

50-75% Count and percentage of frame relay circuits with an inbound utilization value between 50% and 75%.

75-90% Count and percentage of frame relay circuits with an inbound utilization value between 75% and 90%.

90-100% Count and percentage of frame relay circuits with an inbound utilization value between 90% and 100%.

100%+ Count and percentage of frame relay circuits with an inbound utilization value of 100% or more.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Util In Group Distribution

Displays a distribution bar chart or table that compares the overall inbound utilization, by sub-group, for frame relay circuits in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

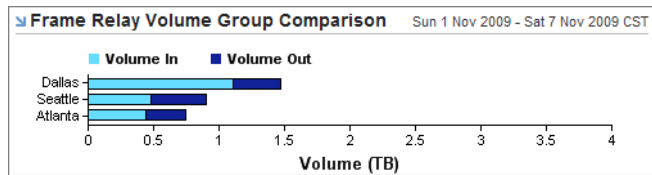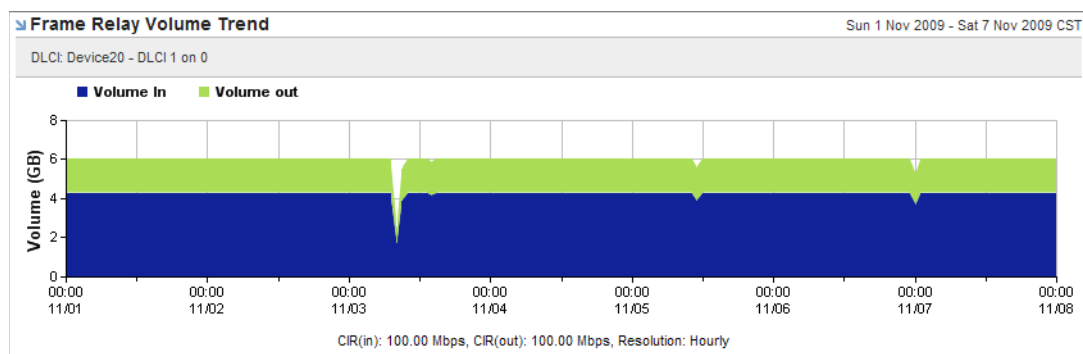|	
0-25%	Percentage of frame relay circuits with an inbound utilization value of 25% or below.
25-50%	Percentage of frame relay circuits with an inbound utilization value between 25% and 50%.
50-75%	Percentage of frame relay circuits with an inbound utilization value between 50% and 75%.
75-90%	Percentage of frame relay circuits with an inbound utilization value between 75% and 90%.
90-100%	Percentage of frame relay circuits with an inbound utilization value between 90% and 100%.
100%+	Percentage of frame relay circuits with an inbound utilization value of 100% or more.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Util In Sub Group Summary

Displays the average inbound utilization, by sub-group, for frame relay circuits in the selected reporting group during the selected time period.

Group Summary views provide an aggregate view for the selected group broken down by sub-group to display meaningful comparisons of performance. Because reporting groups and sub-groups are typically organized to match your network organization, these views can also provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expression:

Avg Utilization	The average inbound PVC utilization, which is calculated by dividing the inbound bytes received by the incoming Committed Information Rate for the frame relay circuit multiplied by the duration

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Util Out Distribution

Displays the outbound utilization for frame relay circuits in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-25%	Count of frame relay circuits with an outbound utilization value of 25% or below.
25-50%	Count of frame relay circuits with an outbound utilization value between 25% and 50%.
50-75%	Count of frame relay circuits with an outbound utilization value between 50% and 75%.
75-90%	Count of frame relay circuits with an outbound utilization value between 75% and 90%.
90-100%	Count of frame relay circuits with an outbound utilization value between 90% and 100%.
100%+	Count of frame relay circuits with an outbound utilization value of 100% or more.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Util Out Distribution Table

Displays the outbound utilization, by date/time, for frame relay circuits in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

⬃ Frame Relay Util Out Distribution Table					Sun 1 Nov 2009 - Sat 7 Nov 2009 CST	
Date/Time ▲	0-25%	25-50%	50-75%	75-90%	90-100%	100%+
Sun 01 November	201 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Mon 02 November	201 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Tue 03 November	201 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Wed 04 November	151 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Thu 05 November	151 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Fri 06 November	151 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Sat 07 November	151 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-25%	Count and percentage of frame relay circuits with an outbound utilization value of 25% or below.
25-50%	Count and percentage of frame relay circuits with an outbound utilization value between 25% and 50%.
50-75%	Count and percentage of frame relay circuits with an outbound utilization value between 50% and 75%.
75-90%	Count and percentage of frame relay circuits with an outbound utilization value between 75% and 90%.
90-100%	Count and percentage of frame relay circuits with an outbound utilization value between 90% and 100%.
100%+	Count and percentage of frame relay circuits with an outbound utilization value of 100% or more.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Util Out Group Distribution

Displays a distribution bar chart that compares the overall outbound utilization, by sub-group, for frame relay circuits in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-25%	Percentage of frame relay circuits with an outbound utilization value of 25% or below.
25-50%	Percentage of frame relay circuits with an outbound utilization value between 25% and 50%.
50-75%	Percentage of frame relay circuits with an outbound utilization value between 50% and 75%.
75-90%	Percentage of frame relay circuits with an outbound utilization value between 75% and 90%.
90-100%	Percentage of frame relay circuits with an outbound utilization value between 90% and 100%.
100%+	Percentage of frame relay circuits with an outbound utilization value of 100% or more.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Util Out Sub Group Summary

Compares the average outbound utilization, by sub-group, for frame relay circuits in the selected reporting group during the selected time period.

Group Summary views provide an aggregate view for the selected group broken down by sub-group to display meaningful comparisons of performance. Because reporting groups and sub-groups are typically organized to match your network organization, these views can also provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expression:

Avg Utilization	The average outbound PVC utilization, which is calculated by dividing the outbound bytes received by the outgoing Committed Information Rate for the frame relay circuit multiplied by the duration

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Utilization Calendar Chart

Displays the range of values for permanent virtual circuit (PVC) utilization roll-up values for the selected frame relay circuit for each day and hour during a selected time period.

Note: This view cannot be edited in the Custom View Wizard.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `avail`, which corresponds to the Device Availability dataset in NetVoyant. The view includes data for the following expression:

% Utilization   The combined (inbound and outbound) PVC utilization

Styles: This view can be displayed as calendar chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Frame Relay Utilization In Trend

Displays the inbound permanent virtual circuit (PVC) utilization, by date/time increments, for the selected frame relay circuit during the selected time period. This view also includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expression:

Util In   Average inbound PVC utilization, which is calculated by dividing the inbound bytes received by the incoming Committed Information Rate for the frame relay circuit multiplied by the duration

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Summary Report and Frame Relay Utilization Report.

Frame Relay Utilization In Trend Detail

Displays the inbound permanent virtual circuit (PVC) utilization compared to the maximum and 95th percentile values, by date/time increments, for the selected frame relay circuit during the selected time period. This view also includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Util In	Average inbound PVC utilization, which is calculated by dividing the inbound bytes received by the incoming Committed Information Rate for the frame relay circuit multiplied by the duration
95th % Util In	The 95th percentile for the inbound utilization. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.
Max Util In	The maximum inbound PVC utilization value observed

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Utilization Report.

Frame Relay Utilization In/Out Trend

Displays inbound and outbound permanent virtual circuit (PVC) utilization, by date/time increment, for the selected frame relay interface over the selected time period.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Utilization In	Inbound PVC utilization (percentage), which is calculated by dividing the inbound bytes received by the incoming Committed Information Rate for the frame relay circuit multiplied by the duration
Utilization Out	Outbound PVC utilization (percentage), which is calculated by dividing the outbound bytes received by the outgoing Committed Information Rate for the frame relay circuit multiplied by the duration

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Utilization report.

Frame Relay Utilization Out Trend

Displays the outbound permanent virtual circuit (PVC) utilization, by date/time increments, for the selected frame relay circuit during the selected time period. This view also includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expression:

Util Out	Average outbound PVC utilization, which is calculated by dividing the outbound bytes received by the outgoing Committed Information Rate for the frame relay circuit multiplied by the duration

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Summary Report and Frame Relay Utilization Report.

Frame Relay Utilization Out Trend Detail

Displays the outbound permanent virtual circuit (PVC) utilization compared to the maximum and 95th percentile values, by date/time increments, for the selected frame relay circuit during the selected time period. This view also includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:
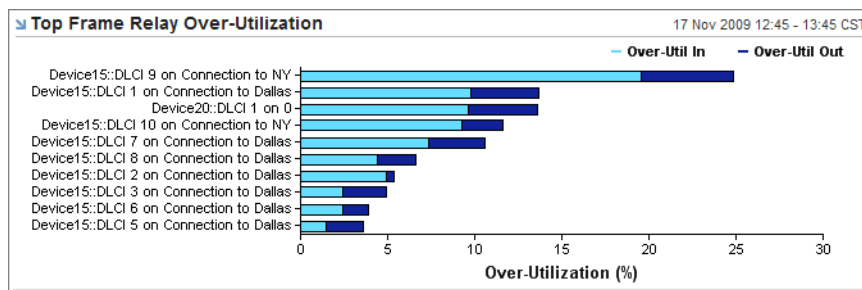
Util In	Average outbound PVC utilization, which is calculated by dividing the outbound bytes received by the outgoing Committed Information Rate for the frame relay circuit multiplied by the duration
95th % Util In	The 95th percentile for the outbound utilization. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.
Max Util In	The maximum outbound PVC utilization value observed

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Utilization Report.

Frame Relay Volume Group Comparison

Displays the inbound and outbound volumes, by sub-group, on frame relay circuits in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In   Volume (bytes) received over the virtual circuit.

Volume Out   Volume (bytes) sent from the virtual circuit.

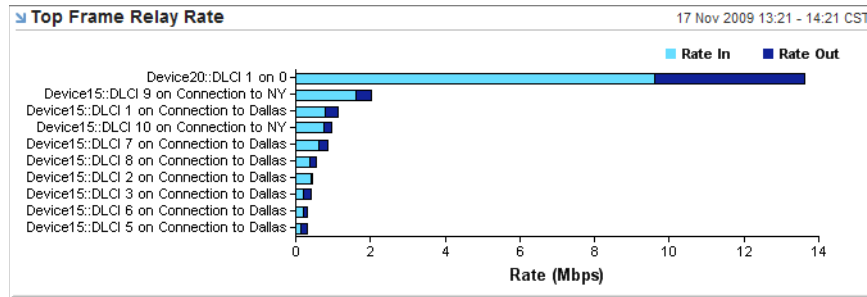**Styles:** This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Frame Relay Group Comparison report.

Frame Relay Volume Trend

Displays the inbound and outbound volume (bytes) of traffic, in date/time increments, for the selected frame relay circuit over the selected period of time.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:
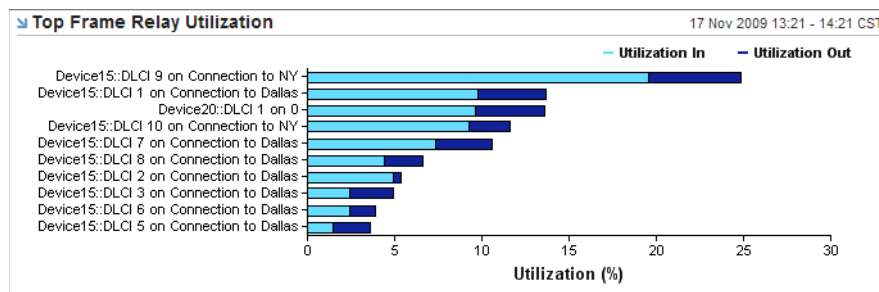
Volume In   Volume (bytes) received over the virtual circuit.

Volume Out   Volume (bytes) sent from the virtual circuit.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Volume Report.

Input/Output Frame Rate Trend

Displays the calculated 30-day moving baseline rate values for inbound and outbound frames, by date/time increments, for the selected frame relay circuit over the selected time period.

Context: This view requires a selected DLCI (Frame Relay) circuit to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Frames In   Rate of frames per second received

Frames Out   Rate of frames per second sent

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Summary Report and Frame Relay Bandwidth Report.

Top Changes - Frame Relay PVC Util

Displays average inbound or outbound permanent virtual circuit (PVC) utilization for those frame relay circuits in the selected reporting group that have the highest change in inbound or outbound PVC utilization over the past month.

The view also shows the current month and previous month's 95th percentile PVC utilization. The amount of change in utilization is calculated from the change in the 95th percentile of data.

Note: The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Top Changes - Frame Relay PVC Util					18 Oct 2009 - 16 Nov 2009 CST
Name	Metric	Current Month Average	Current Month 95th %	Previous Month 95th %	% Change of 95th % ▼
Device20::DLCI 1 on 0	Output PVC util	4.01%	4.01%	4.01%	-0.001
Device20::DLCI 1 on 0	Input PVC util	9.62%	9.63%	9.63%	0.000
	🔍				Show Top: 10 ▾

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Input PVC util or Output PVC util
Current Month Average	Average value for the metric over the current reporting month
Current Month 95th %	Average value for the metric over the current reporting month using the 95th percentile data
Previous Month 95th %	Average value for the metric for the month previous to the current reporting month using the 95th percentile data
% Change of 95th %	Percentage change between the current month's 95th percentile value and the previous month's 95th percentile value

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Monthly Changes Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Monthly Changes report.

Top Deviation From Norm - Frame Relay Congestion

Displays the average congestion for those frame relay circuits in the selected reporting group that have the highest deviation from the 30-day rolling baseline value for congestion rate.This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Metric	Average Congestion
Normal	Normal congestion value calculated from a 30-day rolling baseline
Actual	The average congestion percentage during the selected time period
Deviation (%)	The value of the actual congestion calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.
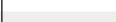
Top Deviation From Norm - Frame Relay PVC Util

Displays the average permanent virtual circuit (PVC) utilization for those frame relay circuits in the selected reporting group that have the highest deviation from the 30-day rolling baseline value for PVC utilization. This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Top Deviation From Norm - Frame Relay PVC Util				17 Nov 2009 12:34 - 13:34 CST
Name	Metric	Normal	Actual	Deviation (%) ▼
Device15::DLCI 5 on Connection to Dallas	Output PVC util	1.76%	2.15%	22.3
Device15::DLCI 8 on Connection to Dallas	Output PVC util	1.84%	2.25%	22.3
Device15::DLCI 10 on Connection to NY	Output PVC util	1.92%	2.35%	22.3
Device15::DLCI 4 on Connection to Dallas	Output PVC util	0.96%	1.17%	22.3
Device15::DLCI 7 on Connection to Dallas	Output PVC util	2.64%	3.23%	22.3
Device15::DLCI 3 on Connection to Dallas	Output PVC util	2.00%	2.45%	22.3
Device15::DLCI 4 on Connection to Dallas	Input PVC util	1.76%	2.15%	22.3
Device15::DLCI 7 on Connection to Dallas	Input PVC util	6.00%	7.34%	22.3
Device15::DLCI 9 on Connection to NY	Output PVC util	4.32%	5.28%	22.3
Device15::DLCI 2 on Connection to Dallas	Output PVC util	0.40%	0.49%	22.3

Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Average PVC Util
Normal	Normal utilization value calculated from a 30-day rolling baseline
Actual	The average PVC utilization percentage during the selected time period
Deviation (%)	The value of the actual PVC utilization calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.

Top Frame Relay Circuits

Displays the permanent virtual circuit (PVC) inbound and outbound utilization and the Forward Explicit Congestion Notification (FECN) rate and Backward Explicit Congestion Notification (BECN) rate on those circuits in the selected reporting group with the highest inbound PVC utilization during the selected time period.

Top Frame Relay Circuits				17 Nov 2009 12:45 - 13:45 CST
Name	PVC Util In ▼	PVC Util Out	FECN Rate	BECN Rate
Device15::DLCI 9 on Connection to NY	19.56%	5.28%	58.810	55.864
Device15::DLCI 1 on Connection to Dallas	9.78%	3.91%	29.997	39.998
Device20::DLCI 1 on 0	9.61%	4.01%	50.004	10.000
Device15::DLCI 10 on Connection to NY	9.29%	2.35%	20.586	16.535
Device15::DLCI 7 on Connection to Dallas	7.34%	3.23%	20.001	13.328
Device15::DLCI 2 on Connection to Dallas	4.89%	0.49%	49.993	10.001
Device15::DLCI 8 on Connection to Dallas	4.40%	2.25%	8.695	22.497
Device15::DLCI 3 on Connection to Dallas	2.45%	2.45%	4.799	10.003
Device15::DLCI 6 on Connection to Dallas	2.45%	1.47%	1.563	21.886
Device15::DLCI 4 on Connection to Dallas	2.15%	1.17%	0.100	0.009

Show Top: 10

Context: This view requires a selected reporting group, device, or interface to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

PVC Util In	Inbound PVC utilization (percentage), which is calculated by dividing the inbound bytes received by the incoming Committed Information Rate for the frame relay circuit multiplied by the duration
PVC Util Out	Outbound PVC utilization (percentage), which is calculated by dividing the outbound bytes received by the outgoing Committed Information Rate for the frame relay circuit multiplied by the duration
FECN Rate	Rate of frames per second received from the network that indicate forward congestion
BECN Rate	Rate of frames per second sent by the network that indicate backward congestion

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Frame Relay Summary Report, Operations Summary Report, Device Capabilities Report, and Router Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Circuits report, the Enterprise Summary report, and the Frame Relay Summary report.

Top Frame Relay Congestion

Displays the Forward Explicit Congestion Notification (FECN) rate and Backward Explicit Congestion Notification (BECN) rate on those circuits in the selected reporting group with the highest total (FECN and BECN) rates during the selected time period.
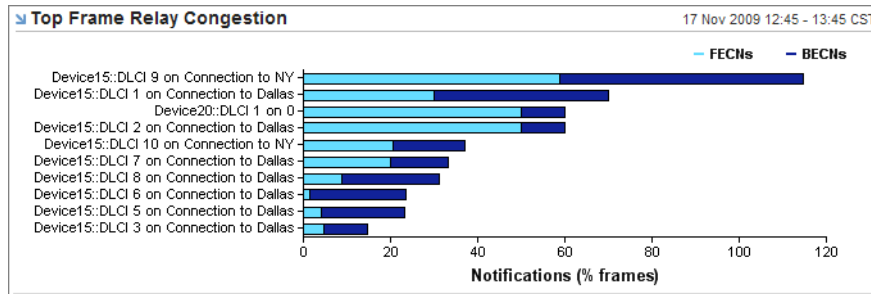
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

FECNs	Rate of frames per second received from the network that indicate forward congestion
BECNs	Rate of frames per second sent by the network that indicate backward congestion

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Frame Relay Input/Output Frame Rate

Displays the inbound and outbound frame rates (frames per second) on those circuits in the selected reporting group with the highest combined input and output rates during the selected time period.
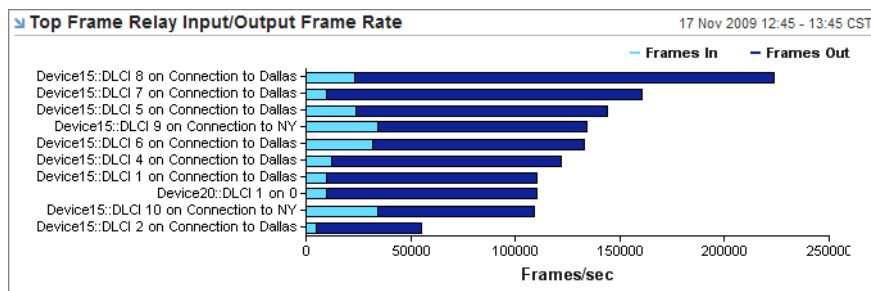
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Frames In   Rate of frames per second received

Frames Out   Rate of frames per second sent

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Frame Relay Over-Utilization

Displays the inbound and outbound over-utilization on those circuits in the selected reporting group with the highest over-utilization (inbound + outbound) during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Over-Util In   The inbound PVC over-utilization, which is calculated by dividing the inbound volume received by the incoming Excess Information Rate for the frame relay circuit.

Over-Util Out   The outbound PVC over-utilization, which is calculated by dividing the outbound volume sent by the outgoing Excess Information Rate for the frame relay circuit.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report.

Top Frame Relay Rate

Displays the inbound and outbound rate (bps) on those circuits in the selected reporting group with the highest combined rates during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Rate In　　　　Average rate (bps) for frames received

Frames Out　　Average rate (bps) for frames sent

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Frame Relay Utilization

Displays the permanent virtual circuit (PVC) inbound and outbound utilization on those circuits in the selected reporting group with the highest combined utilization during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Utilization In	Inbound PVC utilization (percentage), which is calculated by dividing the inbound bytes received by the incoming Committed Information Rate for the frame relay circuit multiplied by the duration
Utilization Out	Outbound PVC utilization (percentage), which is calculated by dividing the outbound bytes received by the outgoing Committed Information Rate for the frame relay circuit multiplied by the duration

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Frame Relay Volume

Displays the inbound and outbound volume on those circuits in the selected reporting group with the highest total volume during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In	Volume (bytes) received over the virtual circuit.
Volume Out	Volume (bytes) sent from the virtual circuit.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.
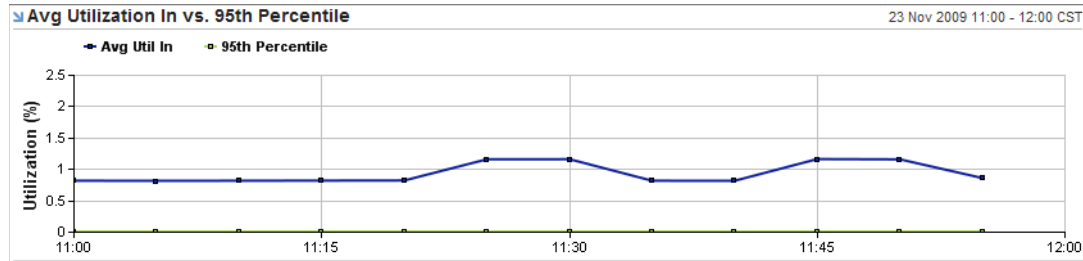
Top Projections - Frame Relay Congestion

Displays 30, 60, and 90-day projections for congestion rate for those frame relay circuits in the selected reporting group with the highest congestion 90-day growth rates.

Top Projections - Frame Relay Congestion					17 Aug 2009 - 16 Nov 2009 CST
Name	Metric	Last 90 Days ▼	30 Days	60 Days	90 Days
Device15::DLCI 9 on Connection to NY	Total Congestion Rate	114.71%	114.68%	114.65%	114.62%
Device15::DLCI 1 on Connection to Dallas	Total Congestion Rate	70.00%	69.99%	69.99%	69.98%
Device15::DLCI 2 on Connection to Dallas	Total Congestion Rate	60.00%	60.00%	60.00%	60.01%
Device20::DLCI 1 on 0	Total Congestion Rate	60.00%	59.98%	59.97%	59.96%
Device15::DLCI 10 on Connection to NY	Total Congestion Rate	37.12%	37.12%	37.13%	37.13%
Device15::DLCI 7 on Connection to Dallas	Total Congestion Rate	33.33%	33.34%	33.34%	33.34%
Device15::DLCI 8 on Connection to Dallas	Total Congestion Rate	31.20%	31.19%	31.19%	31.19%
Device15::DLCI 6 on Connection to Dallas	Total Congestion Rate	23.45%	23.46%	23.47%	23.48%
Device15::DLCI 5 on Connection to Dallas	Total Congestion Rate	23.33%	23.32%	23.31%	23.29%
Device15::DLCI 3 on Connection to Dallas	Total Congestion Rate	14.80%	14.80%	14.79%	14.79%

Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Total Congestion Rate
Last 90 Days	The congestion growth rate calculated over the preceding 90 days
30 Days	The projected congestion increase 30 days from now
60 Days	The projected volume increase 60 days from now
90 Days	The projected volume increase 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top Projections - Frame Relay PVC Util

Displays 30, 60, and 90-day projections for inbound or outbound permanent virtual circuit (PVC) utilization for those frame relay circuits in the selected reporting group with the highest 90-day PVC utilization growth rates.

Top Projections - Frame Relay PVC Util			17 Aug 2009 - 16 Nov 2009 CST		
Name	Metric	Last 90 Days ▼	30 Days	60 Days	90 Days
Device15::DLCI 9 on Connection to NY	Input PVC util	19.60%	19.50%	19.42%	19.33%
Device15::DLCI 1 on Connection to Dallas	Input PVC util	9.81%	9.79%	9.77%	9.75%
Device20::DLCI 1 on 0	Input PVC util	9.63%	9.63%	9.64%	9.64%
Device15::DLCI 10 on Connection to NY	Input PVC util	9.32%	9.30%	9.28%	9.27%
Device15::DLCI 7 on Connection to Dallas	Input PVC util	7.36%	7.33%	7.30%	7.27%
Device15::DLCI 9 on Connection to NY	Output PVC util	5.30%	5.30%	5.30%	5.30%
Device15::DLCI 2 on Connection to Dallas	Input PVC util	4.90%	4.89%	4.87%	4.86%
Device15::DLCI 8 on Connection to Dallas	Input PVC util	4.41%	4.42%	4.42%	4.43%
Device20::DLCI 1 on 0	Output PVC util	4.01%	4.02%	4.02%	4.02%
Device15::DLCI 1 on Connection to Dallas	Output PVC util	3.92%	3.92%	3.92%	3.92%

Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Input PVC util or Output PVC util
Last 90 Days	The utilization growth rate calculated over the preceding 90 days
30 Days	The projected utilization increase 30 days from now
60 Days	The projected utilization increase 60 days from now
90 Days	The projected utilization increase 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top Threshold Violations - Frame Relay

Displays the maximum inbound and outbound permanent virtual circuit (PVC) utilization and congestion rate for those frame relay circuits in the selected reporting group with the highest duration values for threshold events during the selected time period. Those values that have exceeded the threshold display in red.

The view also displays the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

Note: You can hover the pointer over a value to display the threshold for the expression.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
PVC Util In	The maximum inbound PVC utilization value observed
PVC Util Out	The maximum outbound PVC utilization value observed
Congest Rate	The maximum congestion rate value observed
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Threshold Violations Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Threshold Violations report.

GROUP LIST VIEW

There is a single view designed to provide group information. This view lists all groups that are available for the user account and can be added to your custom report pages.

For information about adding the Groups filter interface to your report pages, see "Adding Group Navigation or Filters to a Report Page" on page 40.

Group List

Displays a list of all reporting groups, with the number of members and descriptive information This information is similar to when you perform a group search. Use this view to quickly drill-in to more information about a selected group.

Context: This view requires a selected reporting group to be displayed.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

INTERFACE VIEWS

The following sections describe the views related to interfaces that you can add to your report pages. This information includes the view styles available for each view, the metric used to render the view, and the standard report pages that include the view by default.

Interface views are designed to provide status and performance information about individual interfaces and interface aggregations within reporting groups.

95th Percentile Utilization Scorecard

Displays an overview scorecard for the 95th percentile interface utilization across multiple groups or subgroups. You can select a goal range for the values to determine how the values in the scorecard are displayed.

The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in CPU utilization from the data.

Scorecard views display monthly performance data for the previous six month or seven week period by sub-group, for the currently selected group. Scorecards are high-level indicators of whether or not measured resources are meeting service-level goals. These views incorporate check marks and exclamation points as visual indicators to enhance quick understanding.

95th Percentile Utilization Scorecard								Sun 1 Nov 2009 - Sat 7 Nov 2009 CST
Group ▲	Target	Sep 20	Sep 27	Oct 4	Oct 11	Oct 18	Oct 25	Nov 1	Average
– Routers	<= 90.00	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8
Midwest	<= 90.00	✓ 0.8	✓ 0.7	✓ 0.7	✓ 0.7	✓ 0.8	✓ 0.7	✓ 0.8	✓ 0.8
Northeast	<= 90.00	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8
Northwest	<= 90.00	✓ 0.2	✓ 0.2	✓ 0.2	✓ 0.2	✓ 0.2	✓ 0.2	✓ 0.2	✓ 0.2
Southeast	<= 90.00	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8	✓ 9.8
Southwest	<= 90.00	✓ 0.7	✓ 0.7	✓ 0.7	✓ 0.8	✓ 0.8	✓ 0.7	✓ 0.7	✓ 0.7
				1 of 1				Max Per Page: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Percentile   Average calculated using the 95th percentile data for the average interface utilization
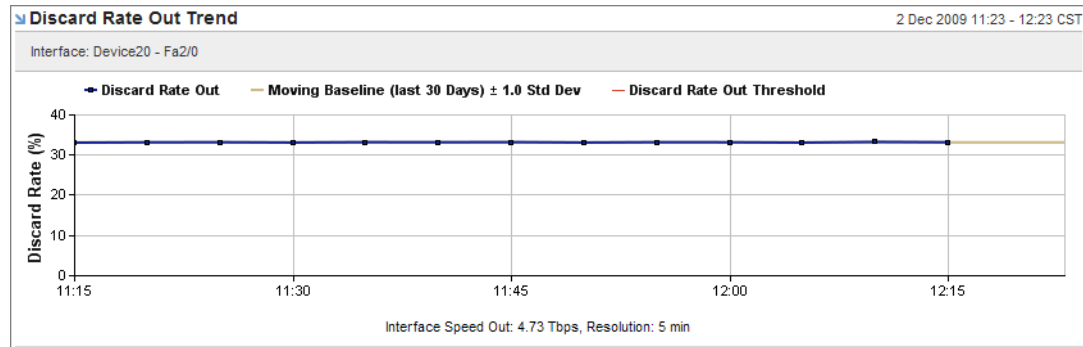
Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Scorecards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Scorecards report.

Address List

Displays a table of IP addresses for the selected reporting group or managed object. The information presented in the table is similar to what is displayed when you perform an interface search. This view enables you to quickly drill in to see more information about a selected address, interface, or device.

Context: This view requires a selected reporting group, device, server, router, switch, or interface to be displayed.

Data: This view uses multiple metrics to render property information for the managed object. This view includes the following information for each item in the list:

Address	The IP address for the interface
Interface	The interface name
Device	The device name for the interface

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Interface Details Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Details report and the Switch Details report.

Average Interface Availability

Displays the percentage of availability and unavailability for the interfaces in the selected reporting group during the selected time period.
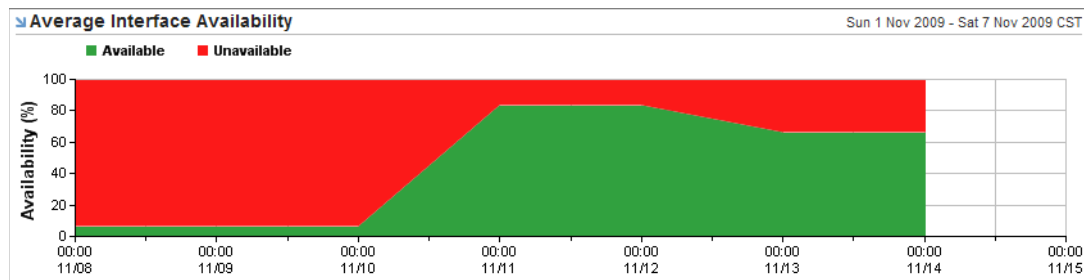
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Avail   The average availability as a value between 0 and 100.

Unavail   The value calculated by subtracting the average availability from 100.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Average Performance Index

Displays the average performance index, by date/time intervals, for interfaces in the selected reporting group during the selected time period. The performance index is calculated from the utilization, the number of discards, and the number of errors on an interface. A utilization, errors, and discards index of zero indicates a "healthy" interface.
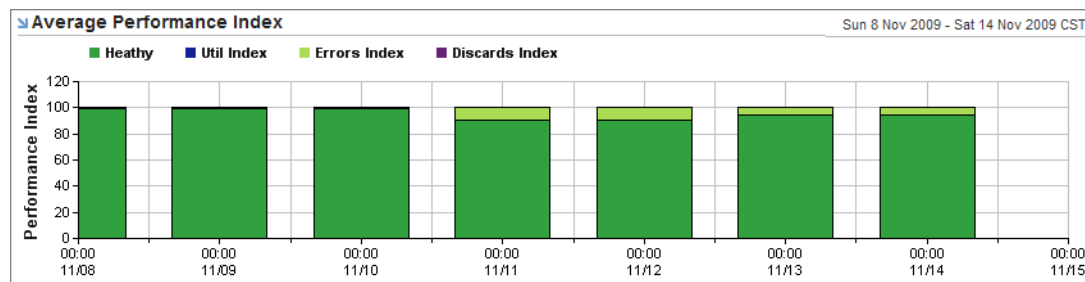
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Healthy   "Health" index value calculated by adding the utilization index, errors index, and discards index, dividing by 3, and subtracting from 100

Util Index   Average utilization weighted against the baseline and threshold values

Errors Index   Average percentage of errors weighted against the baseline and threshold values

Discards Index   Average percentage of discards weighted against the baseline and threshold values

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the LAN Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the LAN Summary report.

Average Utilization

Displays the average inbound and outbound utilizations, by date/time, for all interfaces in a selected reporting group during the selected time period compared to the 30-day rolling baselines.
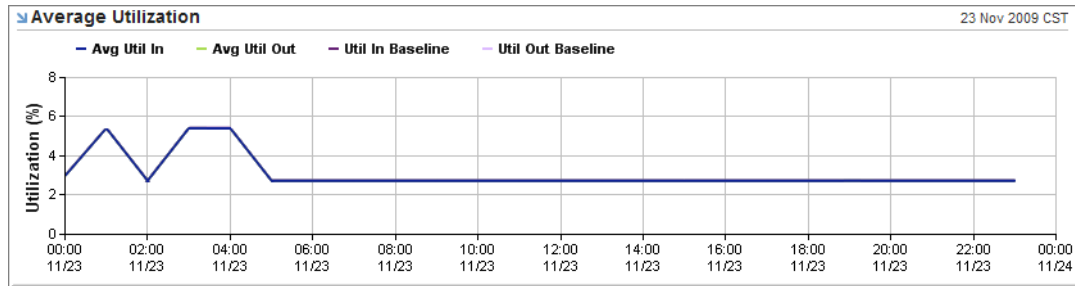
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

|	
Avg Util In	Average inbound utilization percentage
Avg Util Out	Average outbound utilization percentage
Util In Baseline	30-day moving baseline for the inbound utilization percentage
Util Out Baseline	30-day moving baseline for the outbound utilization percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Avg CPU Utilization vs. 95th Percentile

Displays the average CPU utilization and 95th percentile utilization for interfaces in the selected reporting group over the selected time period. This view also displays the 95th percentile utilization projection, by default, for time periods of one week or more.

The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in CPU utilization from the data.
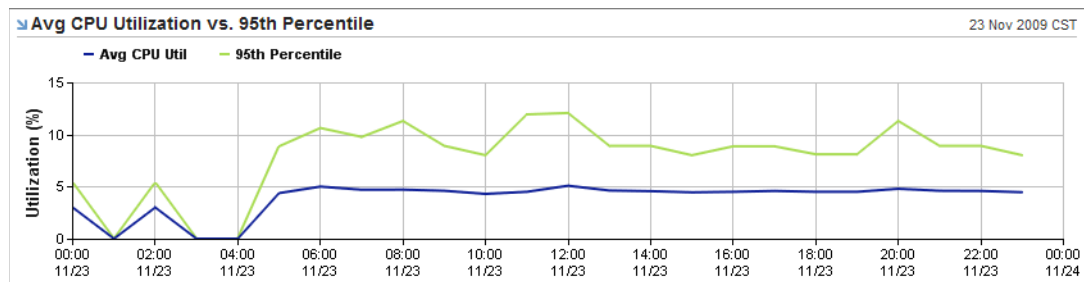
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

Avg CPU Util   5 minute exponentially-decayed moving average of the CPU busy percentage.

95th Percentile   Average calculated using the 95th percentile data for the average CPU utilization

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the 95th percentile utilization projection is not displayed.

Standard NetVoyant reports: This view is included by default in the Router Summary Report and Server Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Summary report.

Avg Ethernet Utilization

Displays the average Ethernet utilization for interfaces in the selected reporting group during the selected time period. If you select the **Show Projection** option in the Custom View Wizard, this view also displays the Ethernet utilization projection for time periods of one week or more.
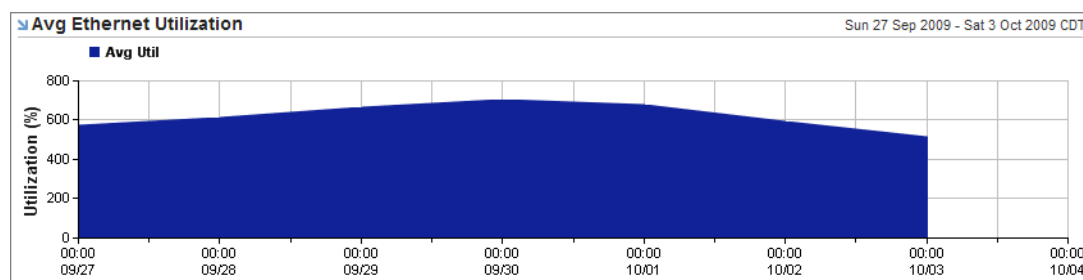
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet RMON Statistics dataset in NetVoyant. The view includes data for the following expression:

Avg Util   Rolling average for the ethernet utilization percentage
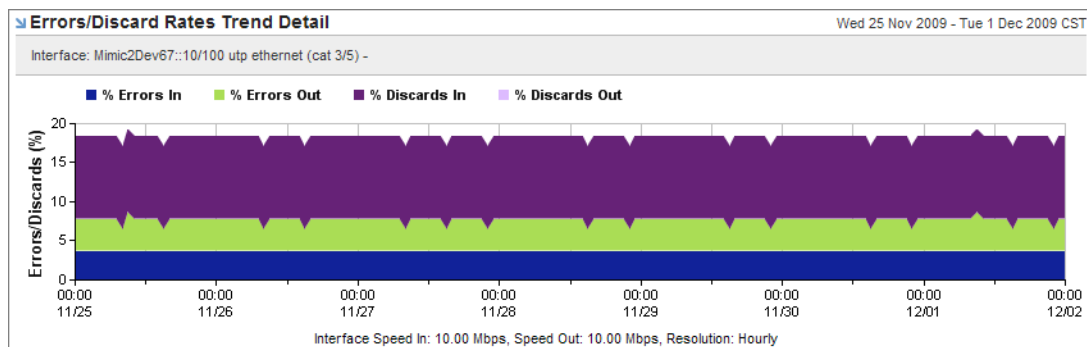
Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the LAN Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the LAN Summary report.

Avg Utilization In vs. 95th Percentile

Displays the average inbound utilization for interfaces in the selected reporting group over the selected time period compared to the 95th percentile. This view also displays the 95th percentile utilization projection, by default, for time periods of one week or more.

The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Avg Util In	Average inbound utilization percentage
95th Percentile	Average calculated using the 95th percentile data for interface utilization

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the 95th percentile utilization projection is not displayed.

Standard NetVoyant reports: This view is included by default in the Management Summary Report and Frame Relay Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Frame Relay Summary report.

Avg Utilization Out vs. 95th Percentile

Displays the average outbound utilization for interfaces in the selected reporting group over the selected time period compared to the 95th percentile. This view also displays the 95th percentile utilization projection, by default, for time periods of one week or more.

The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Avg Util Out	Average outbound utilization percentage
95th Percentile	Average calculated using the 95th percentile data for interface utilization

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the 95th percentile utilization projection is not displayed.

Standard NetVoyant reports: This view is included by default in the Management Summary Report and Frame Relay Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Frame Relay Summary report.

Closest to Threshold - Interface Utilization

Displays those interfaces in the selected reporting group that have average inbound or outbound utilization values closest to the threshold. By default, this view also displays the projected number of days until the rate for each interface crosses the utilization threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Interface inbound utilization or Interface outbound utilization
Average	Average utilization value as a percentage
Threshold	The threshold for the `in_ifutil` or `out_ifutil` expression in NetVoyant
Days to Threshold	The projected number of days until the value for the expression exceeds the threshold.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold and the Alerts and Violations report.

Discard Rate In Trend

Displays the average inbound discard rate for the selected interface over the selected time period. This view also displays the calculated 30-day moving baseline and threshold for daily or hourly time periods and the average inbound discard rate projection for time periods of one week or more.
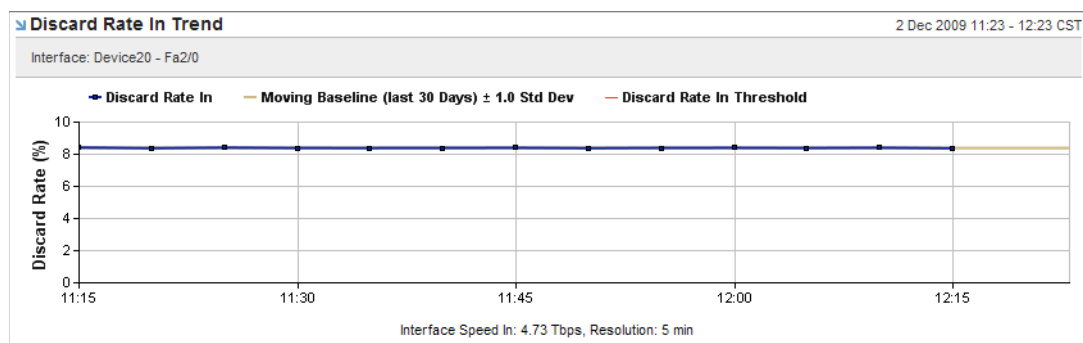
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Discard Rate In	Inbound discard rate (percentage) for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the inbound discard rate projection is not displayed.

Standard NetVoyant reports: This view is included by default in the Interface Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Capacity report.

Discard Rate Out Trend

Displays the average outbound discard rate for the selected interface over the selected time period. This view also displays the calculated 30-day moving baseline and threshold for daily or hourly time periods and the average outbound discard rate projection for time periods of one week or more.

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

  Discard Rate Out   Outbound discard rate (percentage) for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the outbound discard rate projection is not displayed.

Standard NetVoyant reports: This view is included by default in the Interface Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Capacity report.

Discards In Trend Detail

Displays the average inbound discard rate on the selected interface over the selected time period compared to the maximum value observed for the roll-up data.
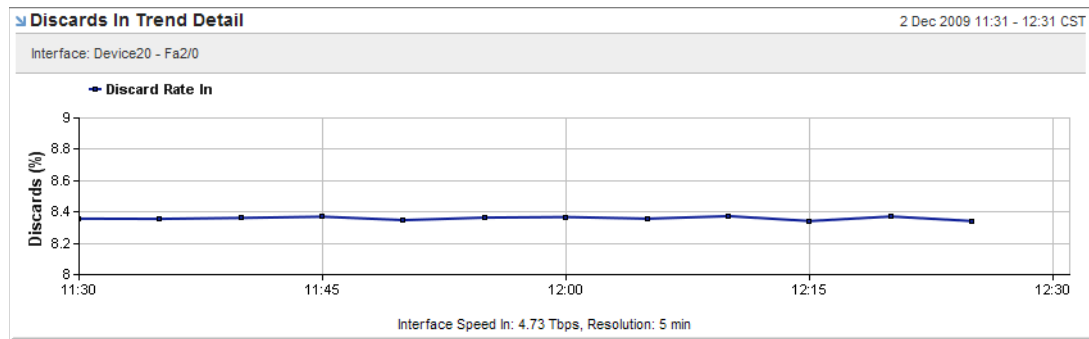
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Discard Rate In	Average inbound discard rate (percentage) for the interface
Max Discard Rate In	Maximum inbound discard rate observed

Note: Maximum values are calculated using rollup data and cannot be displayed when the resolution is set to the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Discards In/Out Trend

Displays the average inbound and outbound discard rates (percentages) for the selected interface over the selected time period.
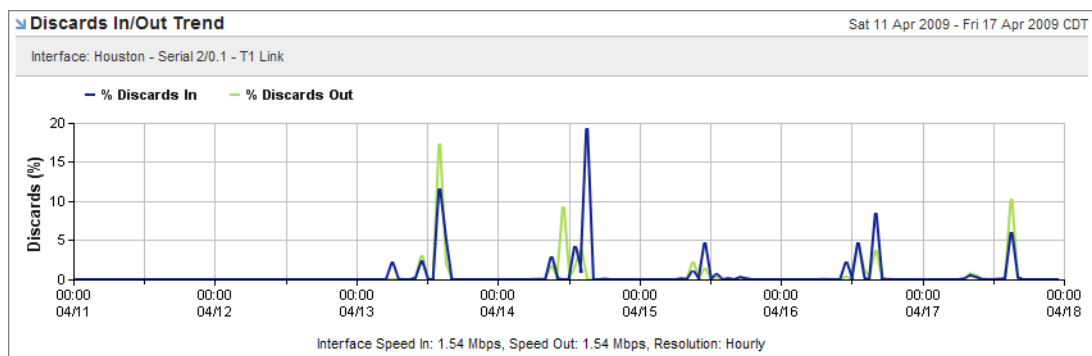
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

% Discards In   Inbound discard rate (percentage) for the interface

% Discards Out   Outbound discard rate (percentage) for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Errors/Discards Report.

Discards Out Trend Detail

Displays the average outbound discard rate on the selected interface over the selected time period compared to the maximum value observed for the roll-up data.
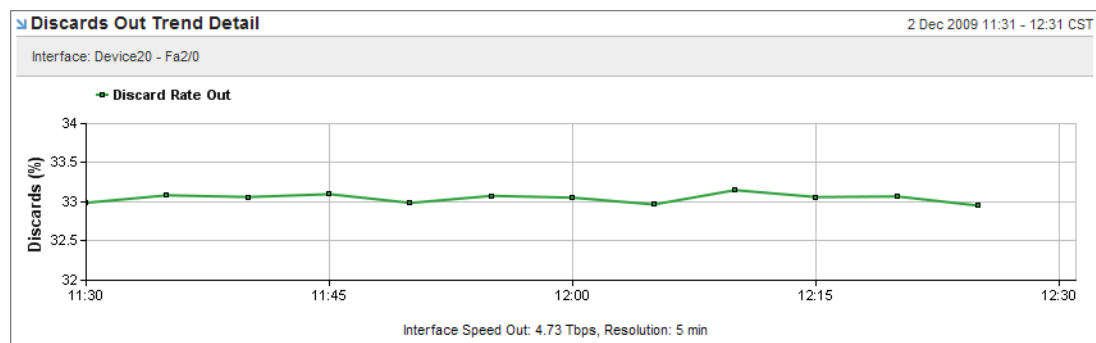
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Discard Rate Out   Average outbound discard rate (percentage) for the interface

Max Discard Rate Out   Maximum outbound discard rate observed

Note: Maximum values are calculated using rollup data and cannot be displayed when the resolution is set to the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Error Rate In Trend

Displays the average inbound error rate for the selected interface over a selected time period. This view also displays the 30-day rolling baseline for hourly/daily time periods and the average inbound error rate projection for selected time periods of one week or more.
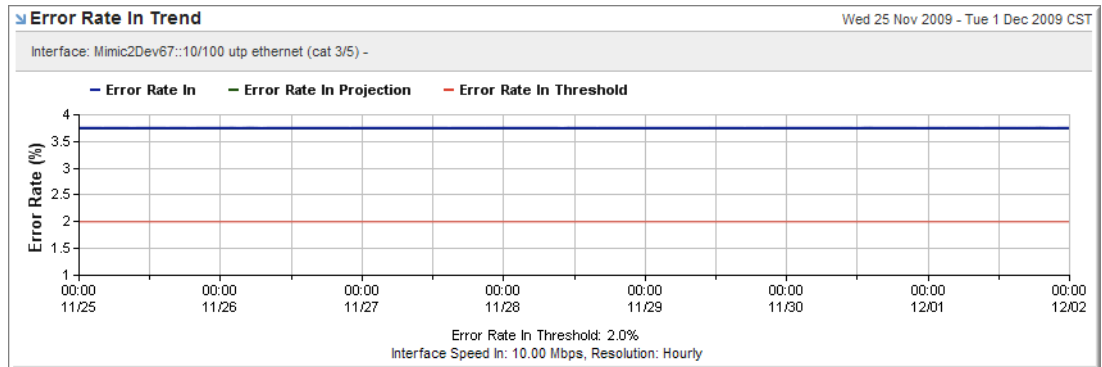
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Error Rate In   Average inbound error rate (percentage) for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Summary Report.

Error Rate Out Trend

Displays the average outbound error rate for the selected interface over a selected time period. This view also displays the 30-day rolling baseline for hourly/daily time periods and the average outbound error rate projection for selected time periods of one week or more.
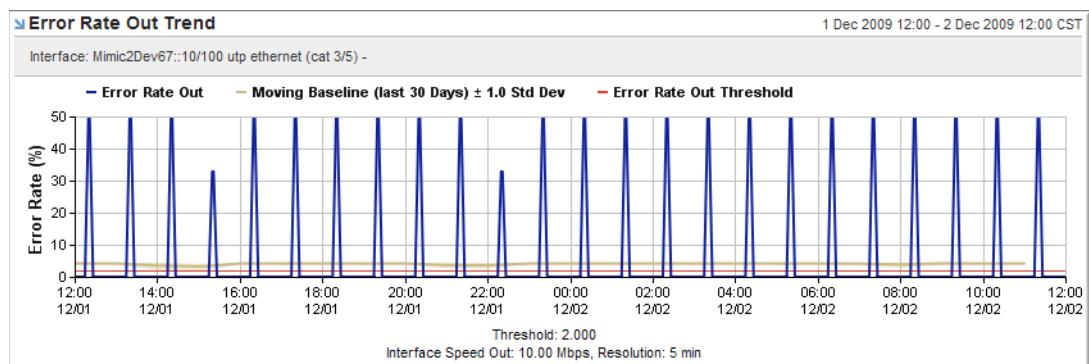
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Error Rate Out   Average outbound error rate (percentage) for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Summary Report.

Errors In Trend Detail

Displays the average inbound error rate on the selected interface over a selected time period compared to the maximum value observed for the roll-up data.
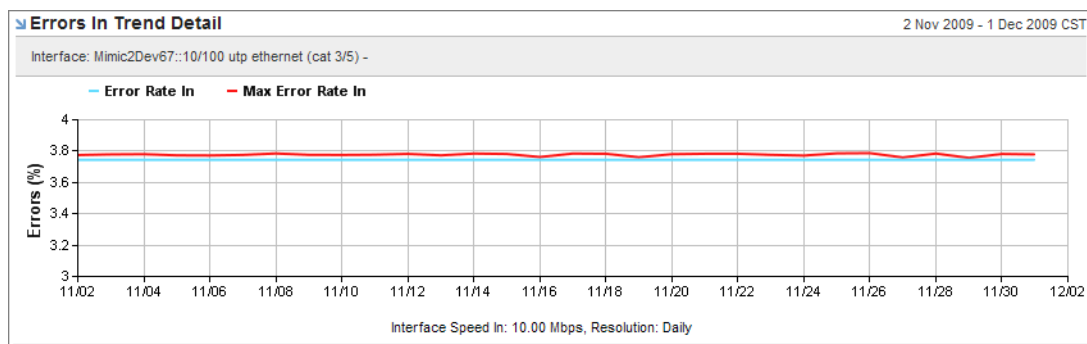
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Error Rate In   Average inbound error rate (percentage) for the interface
Max Error Rate In   Maximum inbound error rate observed

Note: Maximum values are calculated using rollup data and cannot be displayed when the resolution is set to the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Errors/Discards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Capacity report.

Errors In/Out Trend

Displays the average inbound and outbound error rates (percentages) for the selected interface over the selected time period.
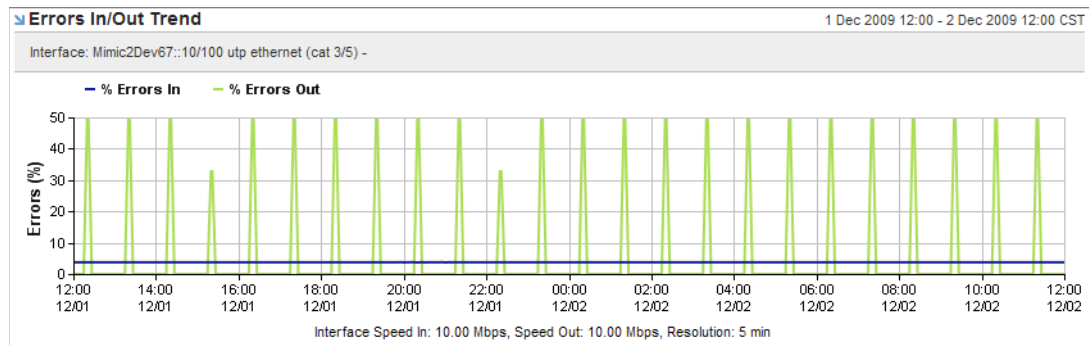
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

% Errors In Inbound error rate (percentage) for the interface

% Errors Out Outbound error rate (percentage) for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Errors/Discards Report.

Errors Out Trend Detail

Displays the average outbound error rate on the selected interface over a selected time period compared to the maximum value observed for the roll-up data.
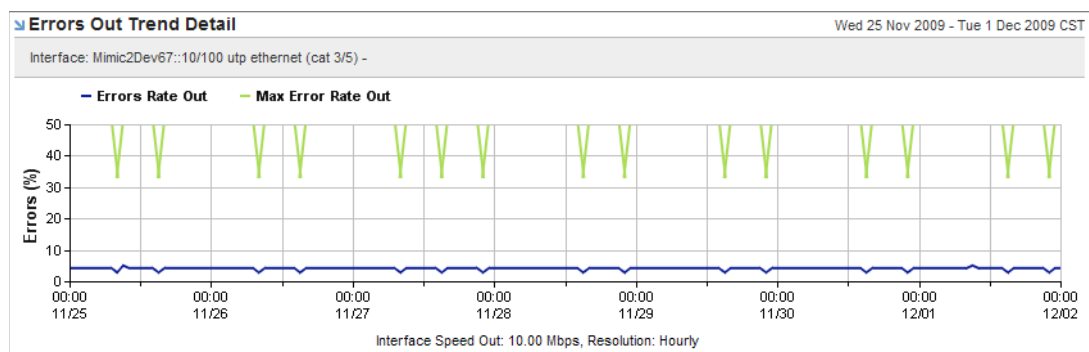
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Error Rate Out   Average outbound error rate (percentage) for the interface

Max Error Rate Out   Maximum outbound error rate observed

Note: Maximum values are calculated using rollup data and cannot be displayed when the resolution is set to the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Errors/Discards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Capacity report.

Errors/Discards Rates Trend Detail

Displays the inbound and outbound error and discard rates (percentages) for the selected interface over the selected time period.

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

% Errors In   Inbound error rate (percentage) for the interface

% Errors Out   Outbound error rate (percentage) for the interface

% Discards In   Inbound discard rate (percentage) for the interface

% Discards Out   Outbound discard rate (percentage) for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.
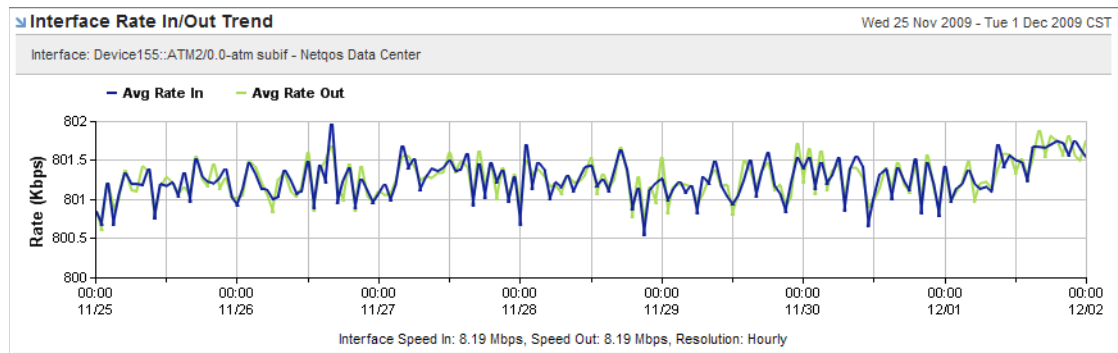
Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface QoS report.

Errors/Discards/Unknown-Protos Trend Detail

Displays the number of errored and discarded packets (inbound and outbound), as well as the volume of unknown protocols, for the selected interface over the selected time period.
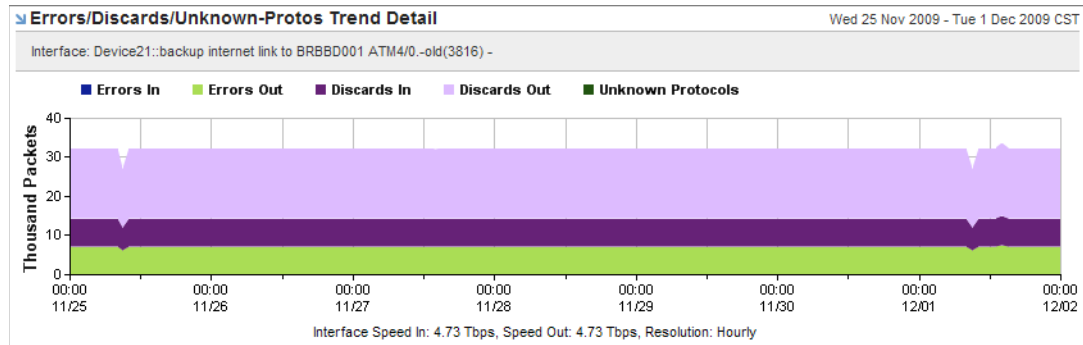
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Errors In	Number of errored inbound packets for the interface
Errors Out	Number of errored outbound packets for the interface
Discards In	Number of discarded inbound packets for the interface
Discards Out	Number of discarded outbound packets for the interface
Unknown Protocols	Number of packets with an unknown protocol

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Interface Availability Distribution (Low to High)

Displays availability statistics, by date/time, for interfaces within the selected reporting group or managed object during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-90%   Count and percentage of availability values of 90% or below.

90-99.999%   Count and percentage of availability values between 90 and 99.999%.

99.999-100%   Count and percentage of availability values between 99.999 and 100%.

Styles: This view can be displayed as stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Interface Availability Distribution (High to Low)

Displays availability statistics, by date/time, for interfaces within the selected reporting group or managed object during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

99.999-100%   Percentage of availability values between 99.999 and 100%.

90-99.999%   Percentage of availability values between 90 and 99.999%.

0-90%   Percentage of availability values of 90% or below.

Styles: This view can be displayed as stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Interfaces report and the Switch Interfaces report.

Interface Availability Group Comparison

Compares the overall availability, by sub-group, for interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Available   Average availability value

Unavailable   Value calculated by subtracting the average availability from 100
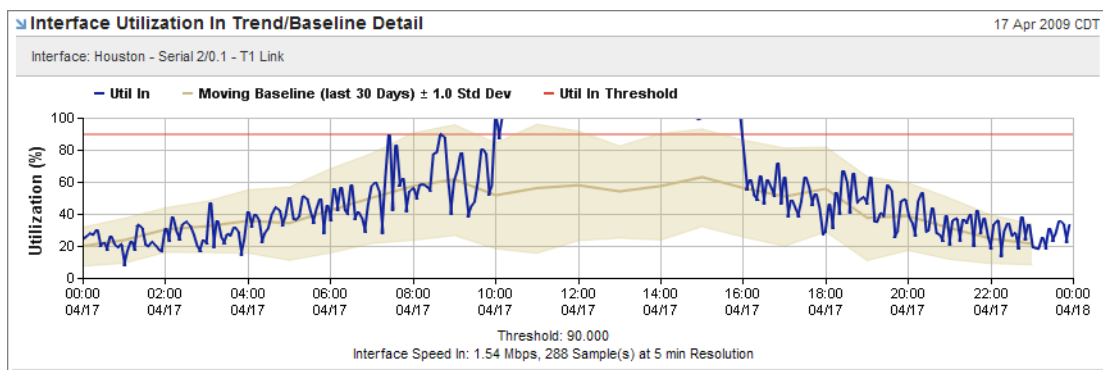
Styles: This view can be displayed as bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Interface Availability Group Distribution

Displays average availability, by sub-group, for interfaces within the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

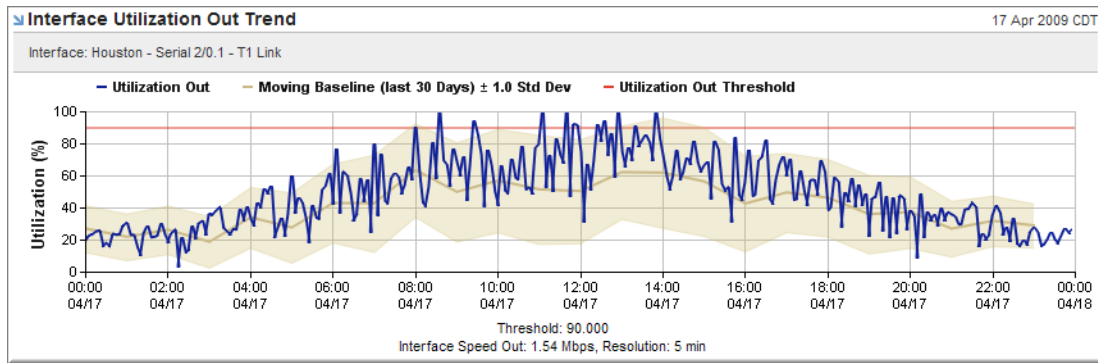|	
0-90%	Count and percentage of availability values of 90% or below.
90-99.999%	Count and percentage of availability values between 90 and 99.999%.
99.999-100%	Count and percentage of availability values between 99.999 and 100%.

Styles: This view can be displayed as stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Interface Availability Scorecard

Displays an overview scorecard for the average availability of interfaces across multiple groups or subgroups. You can select a goal range for the values to determine how the values in the scorecard are displayed.

Scorecard views display monthly performance data for the previous six month or seven week period by sub-group, for the currently selected group. Scorecards are high-level indicators of whether or not measured resources are meeting service-level goals. These views incorporate check marks and exclamation points as visual indicators to enhance quick understanding.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Month or Date	The availability percentage for the group or sub-group, as a monthly or weekly average

Note: This scorecard view uses a default target percentage of 98.0, so that sub-groups with an average availability below that target are displayed with a red exclamation point to indicate that the item falls below the target. You can modify this target value in the Custom View Wizard to meet your organization's service level goals.

Styles: This view can be displayed as table only.

Standard NetVoyant reports: This view is included by default in the Scorecards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Scorecards report.

Interface Availability Trend

Displays the availability/unavailability percentages for the selected interface over the selected time period.
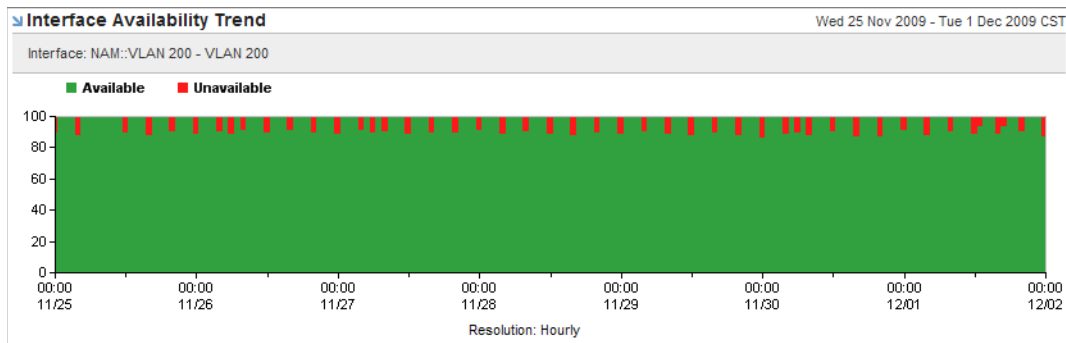
Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:
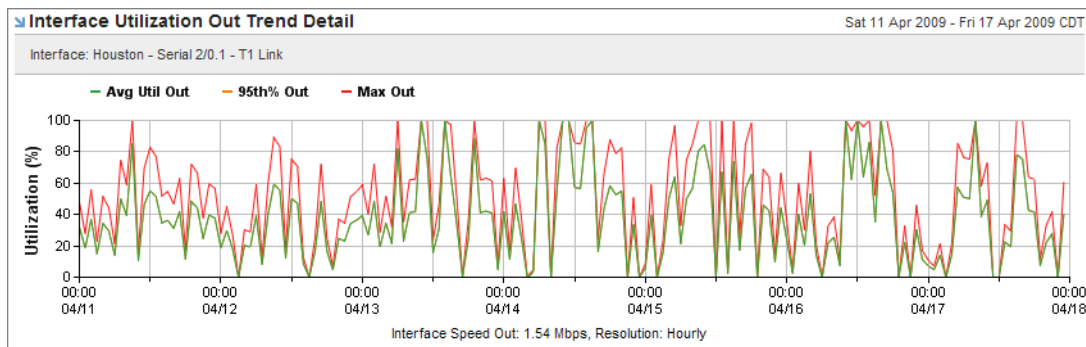
Available	Availability as a percentage (`ifuptime/ifduration`).
Unavailability	Percentage value calculated by subtracting the availability from 100%.

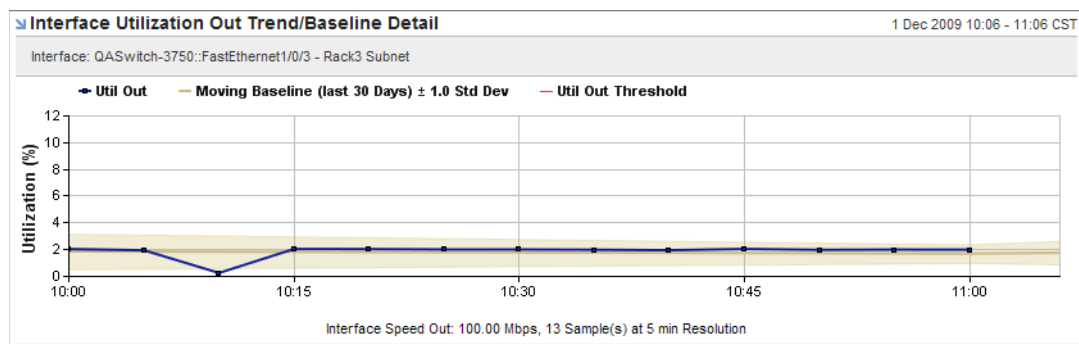**Context:** This view requires a selected interface to be displayed.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Capacity report.

Interface Details

Displays detailed information for the selected interface.

Context: This view requires a selected interface to be displayed.

Data: This view uses multiple metrics to render property information for the managed object. This view includes values for the following attributes:

Name	The interface's name as defined by Poll Instance Name template for the Interface Statistics dataset in the NetVoyant Console.
Description	The interface's description as defined by Poll Instance Description template for the Interface Statistics dataset in the NetVoyant Console.
Device sysName	The device's name as identified in the `sysName` OID on the device.
Device sysDescr	The device's description as identified in the `sysDescr` OID on the device.
Polling Enabled	Indicates whether polling is enabled for the device.
	If polling is enabled, the NetVoyant product is gathering data for the device.

Polling Station	The NetVoyant server that polls the device for SNMP statistics. In a distributed configuration, this is the poller that polls the device. In a standalone configuration, the poller is the Master Console.
ifIndex	The index for the interface's SNMP `ifEntry` table
ifDescr	The description of the interface as defined by the `ifDescr` field in the SNMP `ifEntry` table.
ifType	The interface's type as defined by the `ifType` field in the SNMP `ifEntry` table.
Interface Type	The interface's type as defined by the assigned class/model in the NetVoyant Console.
ifPhysAddress	The physical address of the interface according to the SNMP `ifEntry` table
Discovered Speed	The interface's speed as defined by the `ifSpeed` field in the SNMP `ifEntry` table
Poll Rate	The poll rate (interval) for the interface
Properties	Properties, if any, configured on the interface
Configured Speed In	The interface's inbound speed as defined by the `ifSpeed_in` field in the SNMP `ifEntry` table. This setting can be used to calculate utilization for the inbound direction.
Configured Speed Out	The interface's outbound speed as defined by the `ifSpeed_out` field in the SNMP `ifEntry` table. This setting can be used to calculate utilization for the outbound direction.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Interface Details Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Details report.

Interface List

Displays the interfaces in the selected reporting group or managed object. The information presented is similar to what is displayed when you perform an interface search. This view enables you to quickly drill in to more information about an individual interface.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: This view uses multiple metrics to render property information for the managed object. This view includes values for the following attributes:

Name	The interface's name as defined by Poll Instance Name template for the Interface Statistics dataset in the NetVoyant Console.
Type	The interface's type as defined by the assigned class/model in the NetVoyant Console.
ifIndex	The index for the interface's SNMP `ifEntry` table
Speed	The interface's speed as defined by the `ifSpeed` field in the SNMP `ifEntry` table
Device	The device name as identified in the `sysName` OID on the device.
Polling Status	The device's current polling status, which can be one of the following: • Enabled • Disabled • Manually Disabled • Auto-Disabled • Expiring • Off-line • Out-of-scope For more information, see the *NetVoyant Administrator Guide*.
Polling Expiration	If an interface's status is Auto-disabled or Out-of-scope, this is the date and time of its last poll instance/interface expiration. Each dataset has a setting for poll instance expiration. If the NetVoyant product determines that a poll instance or interface is out-of-scope or unresponsive, its expiration clock will start and elapse according to the number of days indicated in the dataset. When it expires, the poll instance or interface no longer exists for that device.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Details report and the Switch Details report

Interface Rate In/Out Trend

Displays the average inbound and outbound observed rate for the selected interface over a selected time period.

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

**Avg Rate In**   Average inbound rate (Kbps) for the interface

Avg Rate Out   Average outbound rate (Kbps) for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Volume and Bandwidth Report.

Interface Summary Gauges

Displays the performance index compared to a baseline, the percentage of packets that experience errors, and the percentage of packets that are discarded on interfaces in a group.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.
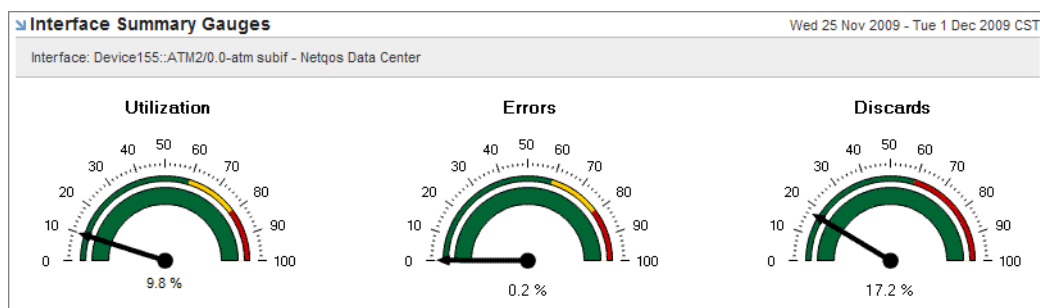
Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

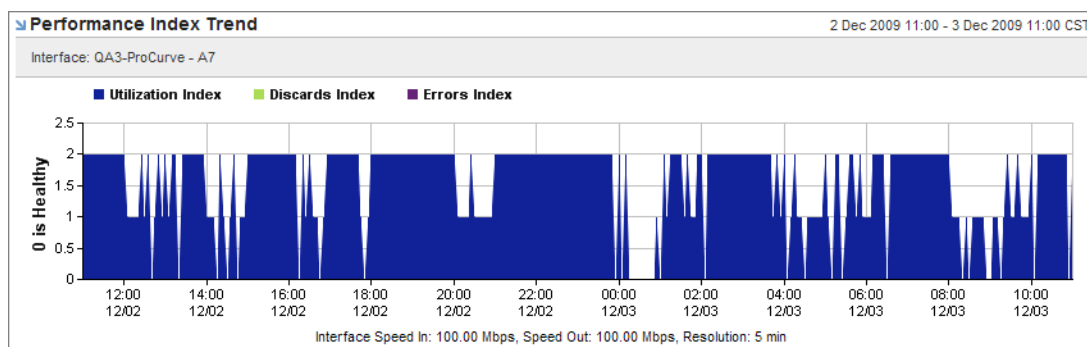**Context:** This view requires a selected reporting group or interface to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Interface Utilization In Trend

Displays the inbound utilization, by date/time, for the selected interface over the selected time period. For hourly/daily time periods, this view also displays the 30-day rolling baseline. And for time periods of one week or more, it displays the inbound utilization projection values.

Note: The 30-day moving baseline is calculated using the value for each hour of the day and the percentage usage for each hour of the day compared to the theoretical maximum (threshold) for an interface over the selected time period. The effects of a threshold change in an alarm profile assigned to the interface are not seen until the NetVoyant product recalculates the rolling baselines (midnight, by default).

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

  Utilization In   The inbound utilization percentage on the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Interface Utilization In Trend Detail

Displays the inbound utilization (average maximum, 95th percentile, and average), by date/time, for the selected interface over a selected time period.

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg Util In	The average inbound utilization percentage on the interface
95th % In	The average inbound utilization omitting the data outside of the 95th percentile. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
Max In	The average maximum inbound utilization observed for the rollup period
	Note: This expression is displayed only when the view resolution is greater than the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Utilization report.

Interface Utilization In Trend/Baseline Detail

Displays the average maximum inbound utilization, 95th percentile inbound utilization, and average inbound utilization, by date/time, for the selected interface over a selected time period compared to the average inbound utilization baseline or projection.

Note: The 30-day moving baseline is calculated using the value for each hour of the day and the percentage usage for each hour of the day compared to the theoretical maximum (threshold) for an interface over the selected time period. The effects of a threshold change in an alarm profile assigned to the interface are not seen until the NetVoyant product recalculates the rolling baselines (midnight, by default).

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Max Util In	The average maximum inbound utilization observed for the rollup period
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
95th % Util In	The average inbound utilization omitting the data outside of the 95th percentile. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
Avg Util In	The average inbound utilization percentage on the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Summary report and Interface Utilization report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Capacity report and the Interface QoS report.

Interface Utilization In/Out Trend

Displays the inbound and outbound average utilization, by date/time, for the selected interface over the selected time period.

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg Util In   The average inbound utilization percentage on the interface

Avg Util Out   The average outbound utilization percentage on the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Interface Utilization Out Trend

Displays the outbound utilization, by date/time, for the selected interface over the selected time period. For hourly/daily time periods, this view also displays the 30-day rolling baseline. And for time periods of one week or more, it displays the inbound utilization projection values.

Note: The 30-day moving baseline is calculated using the value for each hour of the day and the percentage usage for each hour of the day compared to the theoretical maximum (threshold) for an interface over the selected time period. The effects of a threshold change in an alarm profile assigned to the interface are not seen until the NetVoyant product recalculates the rolling baselines (midnight, by default).

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

Utilization Out   The outbound utilization percentage on the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Utilization Report.

Interface Utilization Out Trend Detail

Displays the outbound utilization (average maximum, 95th percentile, and average), by date/time, for the selected interface over a selected time period.

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg Util Out   The average outbound utilization percentage on the interface

95th% Out   The average outbound utilization omitting the data outside of the 95th percentile. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

> *Note:* This expression is displayed only when the view resolution is greater than the poll rate.

Max Out   The average maximum outbound utilization observed for the rollup period

> *Note:* This expression is displayed only when the view resolution is greater than the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Interface Utilization Out Trend/Baseline Detail

Displays the average maximum outbound utilization, 95th percentile outbound utilization, and average outbound utilization, by date/time, for the selected interface over a selected time period compared to the average outbound utilization baseline or projection.

Note: The 30-day moving baseline is calculated using the value for each hour of the day and the percentage usage for each hour of the day compared to the theoretical maximum (threshold) for an interface over the selected time period. The effects of a threshold change in an alarm profile assigned to the interface are not seen until the NetVoyant product recalculates the rolling baselines (midnight, by default).

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Max Util Out The average maximum outbound utilization observed for the rollup period

Note: This expression is displayed only when the view resolution is greater than the poll rate.

95th % Util Out The average outbound utilization omitting the data outside of the 95th percentile. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Note: This expression is displayed only when the view resolution is greater than the poll rate.

Avg Util In The average inbound utilization percentage on the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Utilization report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Capacity report and the Interface QoS report.

Interface Utilization Trend Detail

Displays the inbound and outbound utilization (average and 95th percentile), by date/time, for the selected interface over a selected time period.

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg Util In The average inbound utilization percentage on the interface

Avg Util Out The average outbound utilization percentage on the interface

95th% In	The average inbound utilization omitting the data outside of the 95th percentile. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
95th% Out	The average outbound utilization omitting the data outside of the 95th percentile.
	Note: This expression is displayed only when the view resolution is greater than the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Interface Volume In/Out Trend

Displays the average inbound and outbound volume (MB), by date/time, for the selected interface over the selected time period.
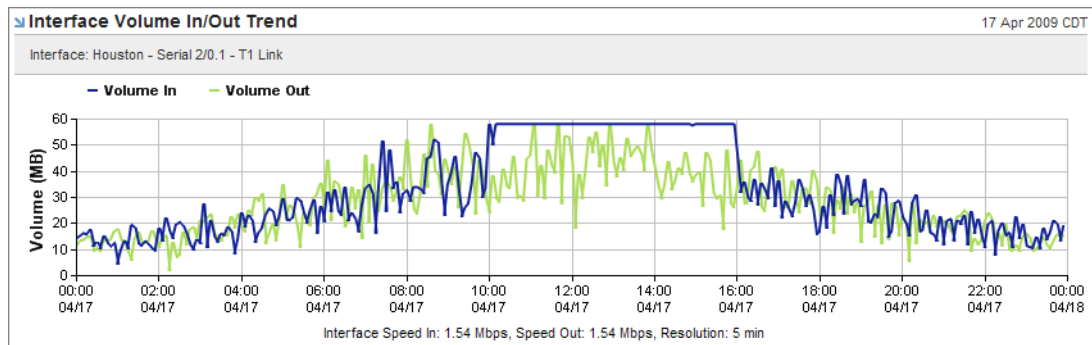
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

| **Volume In** | The inbound volume (MB) for the interface |
| **Volume Out** | The outbound volume (MB) on the interface |

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Interface Volume and Bandwidth Report.

Performance Index

Displays the performance index for each frame relay circuit in the selected reporting group during the selected time period. The performance index is calculated from the utilization and the congestion on a circuit. A utilization and congestion index of zero indicates a "healthy" circuit.
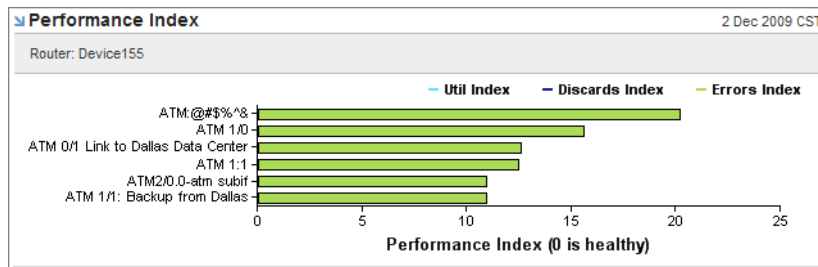
Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `frcircuit`, which corresponds to the Frame Relay Circuit Statistics dataset in NetVoyant. The view includes data for the following expressions:

Util Index	Average utilization weighted against the baseline and threshold values
Discards Index	Average discard rate weighted against the baseline and threshold values
Errors Index	Average error rate weighted against the baseline and threshold values

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Interfaces report and the Switch Interfaces report.

Performance Index Trend

Displays the performance index, by date/time intervals, for the selected interface during the selected time period. The performance index is calculated from the utilization, errors, and discards on an interface.

Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Utilization Index	Average utilization weighted against the baseline and threshold values
Discards Index	Average discard rate weighted against the baseline and threshold values
Errors Index	Average error rate weighted against the baseline and threshold values

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Changes - Interface Utilization

Displays average inbound and outbound utilization for those interfaces in the selected reporting group that have the highest change in utilization over the past month. The view also shows the current month and previous month's 95th percentile utilization. The amount of change in utilization is calculated from the change in the 95th percentile of data.

Note: The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Top Changes - Interface Utilization					6 Oct 2009 - 4 Nov 2009 EST
Name	Metric	Current Month Average	Current Month 95th %	Previous Month 95th %	% Change of 95th % ▼
nclabl3sw1 - FastEthernet0/22	Input Interface Utilization	0.30%	1.36%	2.30%	-68.6
NCCM70P.netqos.local - eth0	Output Interface Utilization	0.01%	0.31%	0.11%	65.7
nclabl3sw1 - FastEthernet0/23	Input Interface Utilization	0.03%	0.40%	0.15%	62.9
nclabl3sw1 - FastEthernet0/13	Input Interface Utilization	1.61%	7.68%	5.75%	25.1
nclabl3sw1 - Uplink to production Dell Layer3	Output Interface Utilization	1.85%	7.88%	5.97%	24.3
nclabl3sw1 - FastEthernet0/23	Output Interface Utilization	0.03%	0.26%	0.22%	15.9
nclab_rtr_01 - Serial0/0/1	Input Interface Utilization	0.34%	0.95%	1.07%	-12.5
nclabl3sw1 - FastEthernet0/14	Output Interface Utilization	0.10%	1.72%	1.51%	11.9
nclabl3sw1 - FastEthernet0/22	Output Interface Utilization	0.19%	0.89%	0.81%	9.3
nclab_rtr_02 - Serial0/0/1	Output Interface Utilization	0.34%	1.31%	1.38%	-5.5

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Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

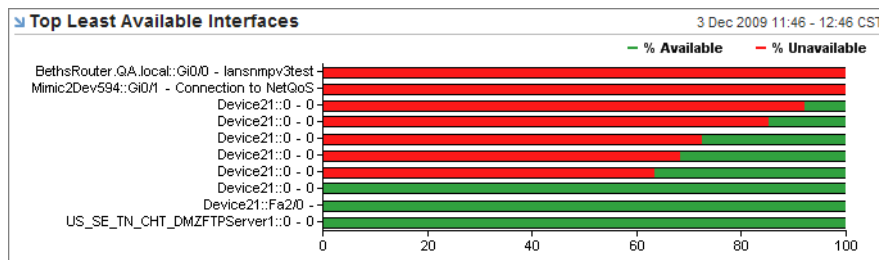|	
Metric	Input Interface Utilization or Output Interface Utilization
Current Month Average	Average value for the metric over the current reporting month
Current Month 95th %	Average value for the metric over the current reporting month using the 95th percentile data
Previous Month 95th %	Average value for the metric for the month previous to the current reporting month using the 95th percentile data
% Change of 95th %	Percentage change between the current month's 95th percentile value and the previous month's 95th percentile value

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Monthly Changes Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Monthly Changes report.

Top Deviation From Norm - Interface Errors/Discards

Displays the percentage of errors and discards for inbound and outbound traffic on those interfaces in the selected reporting group that have the highest deviation from the 30-day rolling baseline value for errors or discards. This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Output Discards, Input Discards, Output Errors, or Input Errors
Normal	Normal value calculated from a 30-day rolling baseline
Actual	The average percentage for the metric during the selected time period
Deviation (%)	The value of the metric calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.

Top Deviation From Norm - Interface Utilization

Displays the average utilization for inbound and outbound traffic on those interfaces in the selected reporting group that have the highest deviation from the 30-day rolling baseline value for utilization.This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Top Deviation From Norm - Interface Utilization				Thu 26 Nov 2009 - Wed 2 Dec 2009 CST
Name	Metric	Normal	Actual	Deviation (%) ▼
QASwitch-3750 - Rack4 Subnet	Input Interface Utilization	0.02%	0.17%	934.7
QASwitch-3750 - trunk to rack 8 subnet 11	Input Interface Utilization	0.07%	0.16%	131.5
QASwitch-3750 - Rack3 Subnet	Input Interface Utilization	0.40%	0.81%	101.4
QASwitch-3750 - trunk to rack 9 subnet 13	Input Interface Utilization	1.30%	0.12%	-90.7
QASwitch-3750 - Trunk connection to QAOffices-switch in IT Closet	Output Interface Utilization	0.41%	0.11%	-73.8
QASwitch-3750 - Mimic 2 Subnet (.40.0 - .43.0)	Output Interface Utilization	0.46%	0.77%	66.4
QASwitch-3750 - trunk to rack 6	Output Interface Utilization	1.11%	0.45%	-59.8
QASwitch-3750 - Internal Point-to-Point connection to 2821 gig 1/0	Output Interface Utilization	0.27%	0.12%	-57.6
QASwitch-3750 - Trunk connection to QAswitch-3500-4 in Rack 1	Input Interface Utilization	2.84%	1.46%	-48.7
QASwitch-3750 - Mimic 1 Subnet (.8.0 - .9.0)	Output Interface Utilization	0.16%	0.22%	38.6

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Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Output Interface Utilization or Input Interface Utilization
Normal	Normal utilization value calculated from a 30-day rolling baseline
Actual	The average percentage for the metric during the selected time period
Deviation (%)	The value of the metric calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.

Top Discards

Displays the discard rate for inbound and outbound traffic on the interfaces in the selected reporting group or managed object with the highest total discard rates during the selected time period.
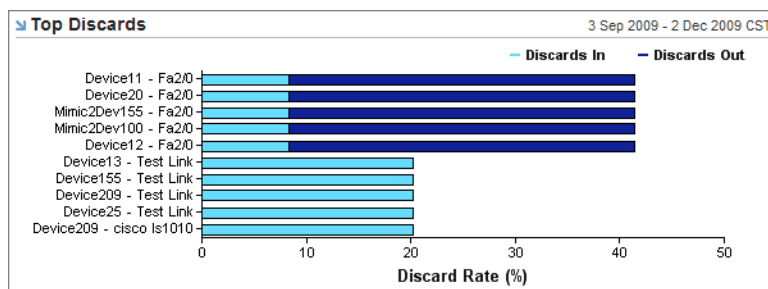
Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Discards In	Percentage of discards for inbound traffic on the interface
Discards Out	Percentage of discards for outbound traffic on the interface

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Summary Report, Operations Summary Graphs Report, Device Performance Report, Server Performance Report, Router Performance Report, and Switch Performance Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Performance report, Router Interfaces report, Switch Performance report, Switch Interfaces report, Top Issues report, Routers/Switches Overview report, and Router Summary report.

Top Errors

Displays the error rate for inbound and outbound traffic on the interfaces in the selected reporting group or managed object with the highest total error rates during the selected time period.
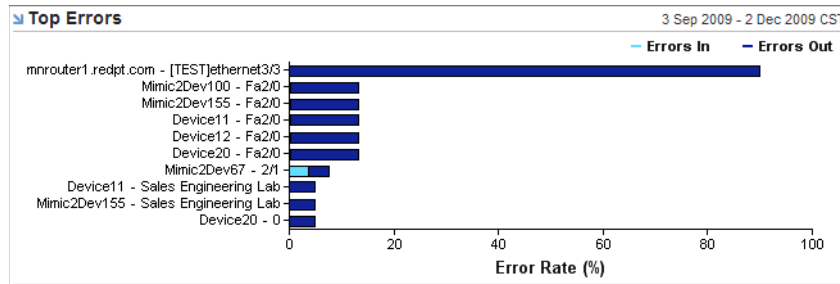
Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Errors In	Percentage of errors for inbound traffic on the interface
Errors Out	Percentage of errors for outbound traffic on the interface

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Summary Report, Operations Summary Graphs Report, Device Performance Report, Server Performance Report, Router Performance Report, and Switch Performance Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Performance report, Router Interfaces report, Switch Performance report, Switch Interfaces report, Top Issues report, Routers/Switches Overview report, and Router Summary report.

Top Interface Errors/Discards

Compares discard and error rates for inbound and outbound traffic on the interfaces in the selected reporting group or managed object with the highest total loss rates during the selected time period.

Top Interface Errors/Discards					3 Sep 2009 - 2 Dec 2009 CST
Name	Discard Rate In	Discard Rate Out	Error Rate In	Error Rate Out	Loss Indicator ▼
mnrouter1.redpt.com - [TEST] ethernet3/3	0.00%	0.00%	0.00%	89.97%	89.97
Mimic2Dev155 - Fa2/0	8.36%	33.04%	0.14%	13.22%	54.75
Mimic2Dev100 - Fa2/0	8.36%	33.04%	0.14%	13.22%	54.75
Device11 - Fa2/0	8.36%	33.04%	0.14%	13.22%	54.75
Device20 - Fa2/0	8.36%	33.04%	0.14%	13.22%	54.75
Device12 - Fa2/0	8.36%	33.04%	0.14%	13.22%	54.75
Device209 - cisco ls1010	20.16%	0.00%	0.40%	0.00%	20.57
Device155 - cisco ls1010	20.16%	0.00%	0.40%	0.00%	20.56
Device13 - cisco ls1010	20.16%	0.00%	0.40%	0.00%	20.56
Device25 - cisco ls1010	20.16%	0.00%	0.40%	0.00%	20.56

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Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Discard Rate In	Percentage of errors for inbound traffic on the interface
Discard Rate Out	Percentage of errors for outbound traffic on the interface
Error Rate In	Percentage of errors for inbound traffic on the interface
Error Rate Out	Percentage of errors for outbound traffic on the interface
Loss Indicator	Total loss rate calculated by adding the inbound and outbound error and discard rates

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, Device Capabilities Report, Router Capabilities Report, and Switch Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report.

Top Interface Utilization

Displays the utilization for inbound and outbound traffic on the interfaces in the selected reporting group or managed object with the highest total utilization rates during the selected time period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Utilization In	Utilization percentage for inbound traffic on the interface
Utilization Out	Utilization percentage for outbound traffic on the interface

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Graphs Report, Device Performance Report, Router Performance Report, and Switch Performance Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Routers/Switches Overview report.

Top Interface Volume

Displays the volume of inbound and outbound traffic on the interfaces in the selected reporting group or managed object with the highest total utilization rates during the selected time period.
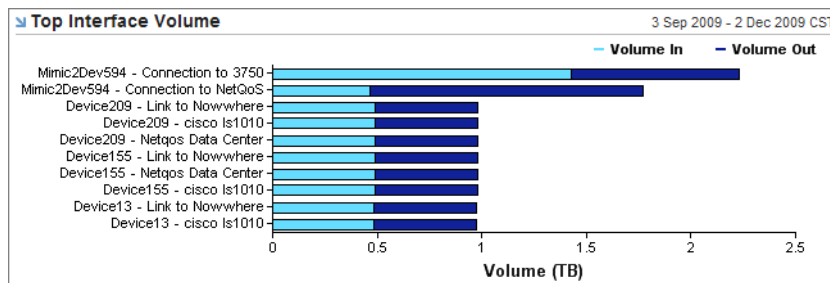
Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In   Volume of inbound traffic on the interface

Volume Out   Volume of outbound traffic on the interface

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

**Standard NetVoyant reports:** This view is included by default in the Operations Summary Graphs Report, Device Performance Report, Router Performance Report, and Switch Performance Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Routers/Switches Overview report, the Router Interfaces report, and the Switch Interfaces report.

Top Interfaces

Displays the inbound and outbound utilization, interface speed, and inbound and outbound observed rates on the interfaces in the selected reporting group or managed object with the highest inbound utilization during the selected time period.

Name	Util In ▼	Util Out	Speed	Rate In	Rate Out
Device155::ATM 1/1: Backup from Dallas - Link to Nowhere	9.78%	9.78%	8.19 Mbps	801.58 Kbps	801.42 Kbps
Device155::ATM 0/1 Link to Dallas Data Center - cisco ls1010	9.78%	9.79%	8.19 Mbps	801.51 Kbps	801.64 Kbps
Device155::ATM2/0.0-atm subif - Netqos Data Center	9.78%	9.78%	8.19 Mbps	801.21 Kbps	801.29 Kbps
QASwitch-3750::FastEthernet1/0/1 - Rack1 Subnet	4.84%	0.02%	100.00 Mbps	4.84 Mbps	17.36 Kbps
QASwitch-3750::FastEthernet1/0/9 - Mimic 2 Subnet (.40.0 - .43.0)	1.70%	0.67%	100.00 Mbps	1.70 Mbps	670.88 Kbps
Device155::ATM 1:1 - Test Link	0.98%	0.98%	8.19 Mbps	80.13 Kbps	80.14 Kbps
Device155::ATM 1/0 - Lab Backup	0.98%	0.98%	8.19 Mbps	80.12 Kbps	80.11 Kbps
Device155::ATM:@#$%^& - cisco ls1010	0.98%	0.98%	8.19 Mbps	80.11 Kbps	80.13 Kbps
QASwitch-3750::FastEthernet1/0/16 - Trunk connection to QAswitch-3500-4 in Rack 1	0.94%	0.74%	100.00 Mbps	935.71 Kbps	740.44 Kbps
Mimic2Dev156::FastEthernet1/15 - 0	0.72%	0.18%	100.00 Mbps	716.75 Kbps	183.03 Kbps

Top Interfaces — 3 Dec 2009 11:38 - 12:38 CST — Show Top: 10

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Util In   Utilization percentage for inbound traffic on the interface

Util Out   Utilization percentage for outbound traffic on the interface

Speed   Speed for traffic on the interface

Rate In   Inbound rate (bps) for the interface

Rate Out   Outbound rate (bps) for the interface

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, Operations Summary Graphs Report, Device Capabilities Report, Server Capabilities Report, Router Capabilities Report, and Switch Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report, Router Interfaces report, and Switch Interfaces report.

Top Least Available Interfaces

Displays the availability statistics for the interfaces in the selected reporting group or managed object with the highest unavailability percentages during the selected time period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

% Available   Percentage of time that the interface is up and running

% Unavailable   Percentage calculated by subtracting % Available from 100

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report, Router Interfaces report, and Switch Interfaces report.

Top Least Available Interfaces (with Utilization)

Displays the availability, inbound utilization, and outbound utilization for the interfaces in the selected reporting group or managed object with the lowest availability percentages during the selected time period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Available	Percentage of time that the interface is up and running
In Utilization	Utilization percentage for inbound traffic on the interface
Out Utilization	Utilization percentage for outbound traffic on the interface

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Dashboard report.

Top Projections - Interface Utilization

Displays 30, 60, and 90-day projections for inbound or outbound utilization for those interfaces in the selected reporting group with the highest utilization growth rates.

Name	Metric	Last 90 Days ▼	30 Days	60 Days	90 Days
QASwitch-3750 - SPAN DESTINATION	Output Interface Utilization	15.90%	33.44%	40.47%	47.51%
Device25 - Link to Nowwhere	Input Interface Utilization	9.81%	9.81%	9.81%	9.82%
Device25 - Link to Nowwhere	Output Interface Utilization	9.81%	9.81%	9.81%	9.81%
Device25 - cisco ls1010	Input Interface Utilization	9.81%	9.81%	9.81%	9.82%
Device25 - cisco ls1010	Output Interface Utilization	9.81%	9.81%	9.81%	9.81%
Device13 - Netqos Data Center	Output Interface Utilization	9.81%	9.81%	9.81%	9.81%
Device13 - Netqos Data Center	Input Interface Utilization	9.81%	9.81%	9.81%	9.81%
Device25 - Netqos Data Center	Input Interface Utilization	9.81%	9.81%	9.81%	9.81%
Device25 - Netqos Data Center	Output Interface Utilization	9.81%	9.81%	9.81%	9.81%
Device13 - Link to Nowwhere	Input Interface Utilization	9.81%	9.81%	9.81%	9.81%

Top Projections - Interface Utilization   5 Aug 2009 - 4 Nov 2009 CST
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Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	Input Interface Utilization or Output Interface Utilization
Last 90 Days	The utilization growth rate calculated over the preceding 90 days
30 Days	The projected utilization increase 30 days from now
60 Days	The projected utilization increase 60 days from now
90 Days	The projected utilization increase 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top Threshold Violations - Interfaces

Displays the maximum inbound and outbound utilization, error rate, and discard rate for those interfaces in the selected reporting group with the highest duration values for threshold events during the selected time period. Those values that have exceeded the threshold display in red.

The view also displays the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

Note: Place the cursor over the utilization value to display the threshold for the expression.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

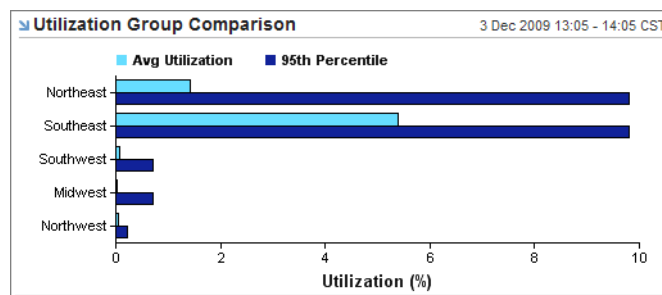|	
Util In	The maximum inbound utilization value observed
Util Out	The maximum outbound utilization value observed
Errors In	The maximum inbound error rate value observed
Errors Out	The maximum outbound error rate value observed
Discards In	The maximum inbound discard rate value observed
Discards Out	The maximum outbound discard rate value observed
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of unique threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Threshold Violations Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Threshold Violations report and the Alerts and Violations report.

Total Ethernet Volume

Displays the total volume, by date/time increments, for Ethernet interfaces in the selected reporting group during the selected time period. By default, this view also displays a total volume projection for time periods of one week or more.
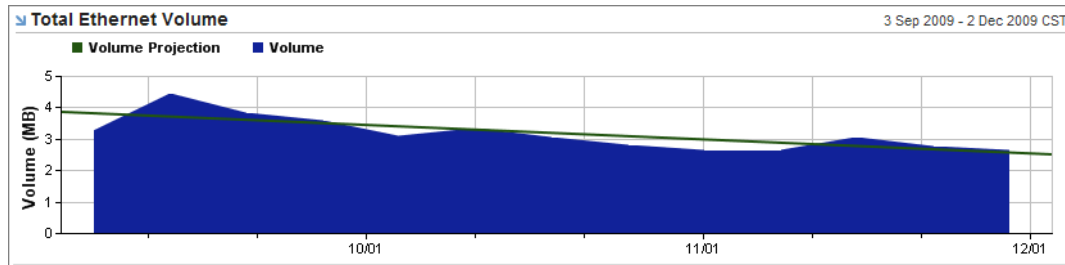
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `etherstats`, which corresponds to the Ethernet ROM Statistics dataset in NetVoyant. The view includes data for the following expression:

   Volume   Total Ethernet volume for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the volume projection is not displayed.

Standard NetVoyant reports: This view is included by default in the LAN Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the LAN Summary report.

Total In/Out Volume

Displays the total volume of inbound and outbound traffic, by date/time increments, for interfaces in the selected reporting group during the selected time period. By default, this view also displays a total volume projection for time periods of one week or more.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In   Total volume of inbound traffic on the interfaces

Volume Out   Total volume of outbound traffic on the interfaces

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the volume projection is not displayed.

Standard NetVoyant reports: This view is included by default in the Management Summary Report, Router Summary Report, and Server Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Summary report, the Router Summary report, and the Server Summary report.

Total MIB-II Ethernet Volume

Displays the total inbound and outbound volumes, by date/time increment, on Ethernet interfaces in the selected reporting group over a selected time period. By default, this view also displays a total volume projection for time periods of one week or more.
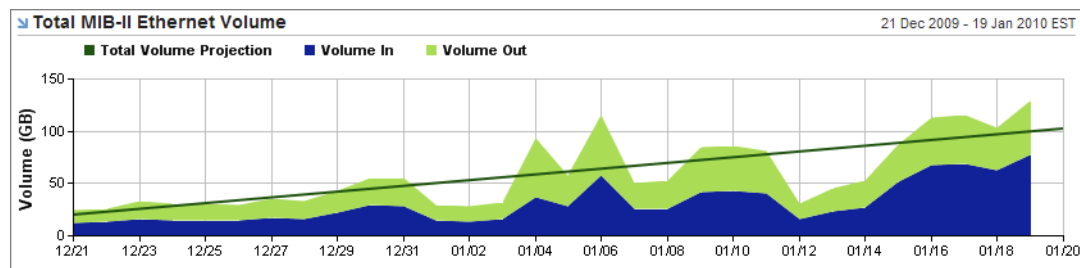
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In   Total volume of inbound traffic on the ethernet interfaces

Volume Out   Total volume of outbound traffic on the ethernet interfaces

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the volume projection is not displayed.

Standard NetVoyant reports: This view is included by default in the LAN Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the LAN Summary report.

Total Volume

Displays the total inbound and outbound volumes, by date/time increment, for the interfaces in the selected reporting group during a selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Total Volume In   Total volume of inbound traffic on the interfaces

Total Volume Out   Total volume of outbound traffic on the interfaces

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

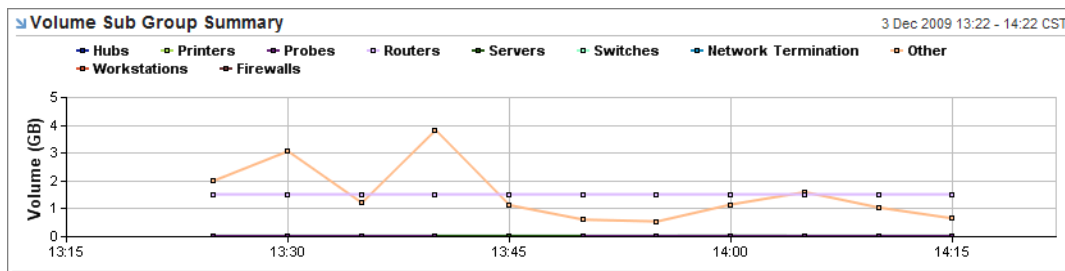*Note:* When you display this view as a table, the volume projection is not displayed.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Total Volume Group Comparison

Displays the total inbound and outbound volumes, by sub-group, for all interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Total Volume In	Total volume of inbound traffic on the interfaces
Total Volume Out	Total volume of outbound traffic on the interfaces

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Management Group Comparison Report, Router Group Comparison Report, and Server Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Group Comparison report, the Router Group Comparison report, and the Server Group Comparison report.

Total Volume Group Comparison (In, Out, and Total)

Displays the inbound, outbound, and total volumes, by sub-group, for all interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

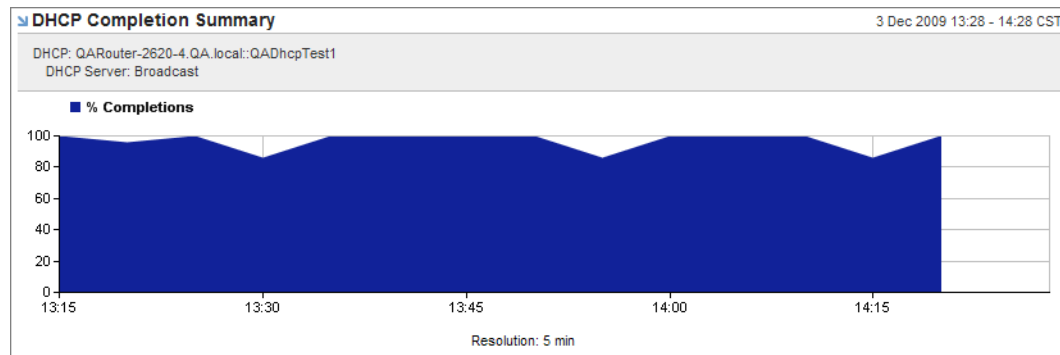|	
Total Volume In	Total volume of inbound traffic on the interfaces
Total Volume Out	Total volume of outbound traffic on the interfaces

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Utilization Calendar Chart

Displays the range of values for utilization roll-up values on the selected interface for each day and hour during a selected time period.
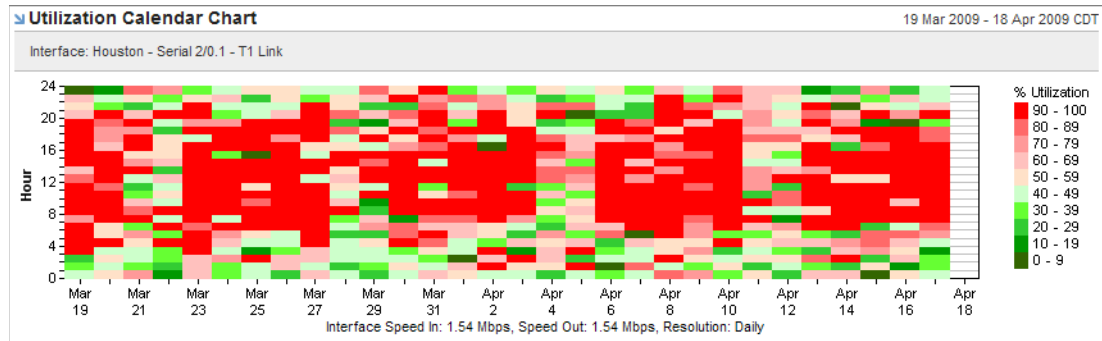
Context: This view requires a selected interface to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

% Utilization   The combined (inbound and outbound) PVC utilization

Styles: This view can be displayed as calendar chart only.

Note: This view cannot be edited in the Custom View Wizard.

Standard NetVoyant reports: This view is included by default in the Interface Utilization Report.

Utilization Distribution

Displays the overall utilization for interfaces in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-25%   Percentage of interfaces with a utilization value of 25% or below.

25-50%   Percentage of interfaces with a utilization value between 25% and 50%.

50-75%   Percentage of interfaces with a utilization value between 50% and 75%.

75-90%   Percentage of interfaces with a utilization value between 75% and 90%.

90-100%   Percentage of interfaces with a utilization value between 90% and 100%.

100%+   Percentage of interfaces with a utilization value of 100% or more.
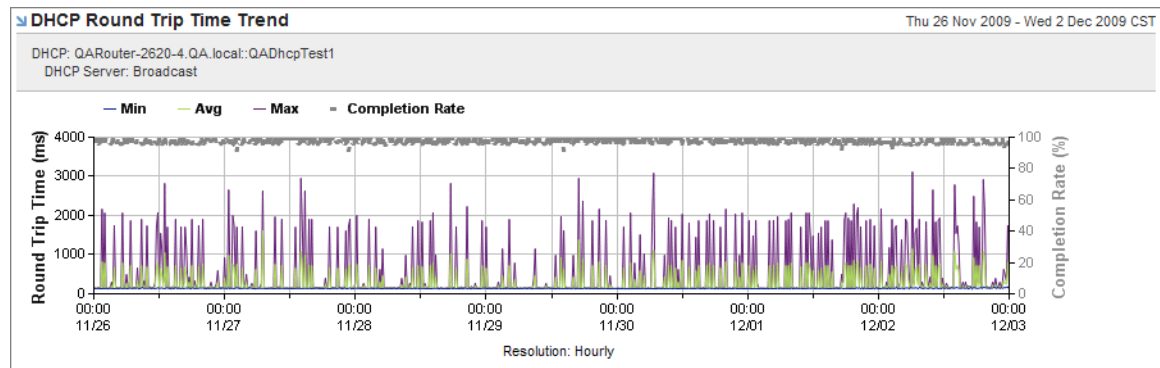
Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is included by default in the Management Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Summary report.

Utilization Distribution (with Count)

Displays the overall utilization, by date/time increments, for interfaces in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

⊿ Utilization Distribution					Thu 26 Nov 2009 - Wed 2 Dec 2009 CST	
Date/Time ▲	0-25%	25-50%	50-75%	75-90%	90-100%	100%+
Thu 26 November	8 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Fri 27 November	8 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Sat 28 November	8 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Sun 29 November	8 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Mon 30 November	8 / 100.00%	0 / 0%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Tue 01 December	7 / 87.50%	1 / 12.50%	0 / 0%	0 / 0%	0 / 0%	0 / 0%
Wed 02 December	7 / 87.50%	1 / 12.50%	0 / 0%	0 / 0%	0 / 0%	0 / 0%

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:
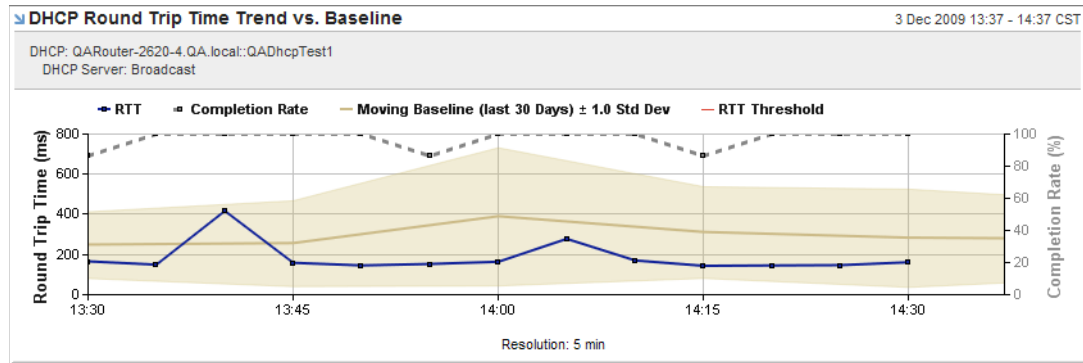
0-25%   Count and percentage of interfaces with a utilization value of 25% or below.

25-50%   Count and percentage of interfaces with a utilization value between 25% and 50%.

50-75%   Count and percentage of interfaces with a utilization value between 50% and 75%.

75-90%   Count and percentage of interfaces with a utilization value between 75% and 90%.

| **90-100%** | Count and percentage of interfaces with a utilization value between 90% and 100%. |
| **100%+** | Count and percentage of interfaces with a utilization value of 100% or more. |

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Utilization Group Comparison

Displays the average and 95th percentile utilization, by sub-group, for all interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

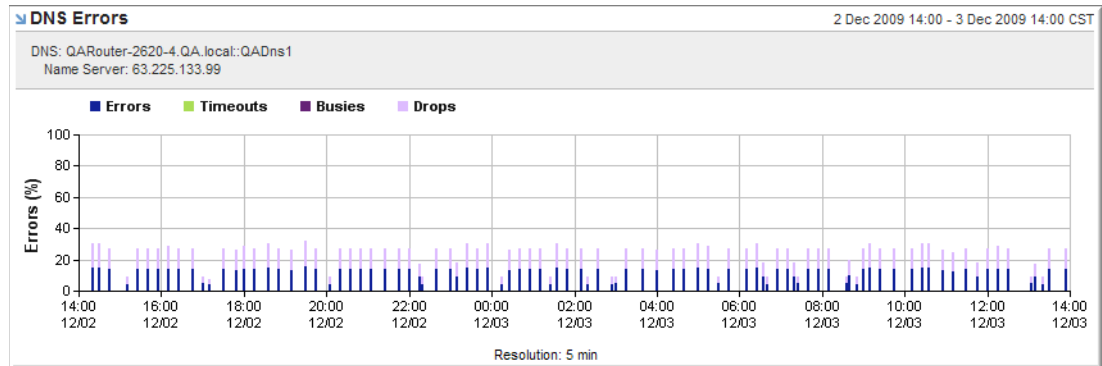| **Avg Utilization** | The average utilization percentage |
| **95th Percentile** | The average utilization omitting the data outside of the 95th percentile. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data. |

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Management Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Management Group Comparison report.

Utilization Group Distribution

Displays average utilization, by sub-group, for interfaces within the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

0-25%	Count and percentage of availability values of 25% or below.
25-50%	Count and percentage of availability values between 25 and 50%.
50-75%	Count and percentage of availability values between 50 and 75%.
75-90%	Count and percentage of availability values between 75 and 90%.
90-100%	Count and percentage of availability values between 90 and 100%.
100%+	Count and percentage of availability values of 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Utilization Sub Group Summary

Displays the average utilization, by sub-group, for all interfaces in the selected reporting group during the selected time period.

Group Summary views provide an aggregate view for the selected group broken down by sub-group to display meaningful comparisons of performance. Because reporting groups and sub-groups are typically organized to match your network organization, these views can also provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

   **Avg Utilization**   The average utilization percentage
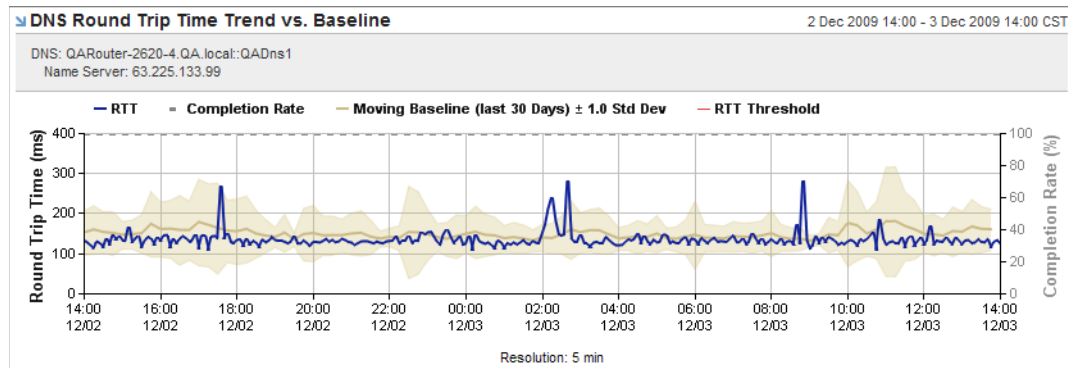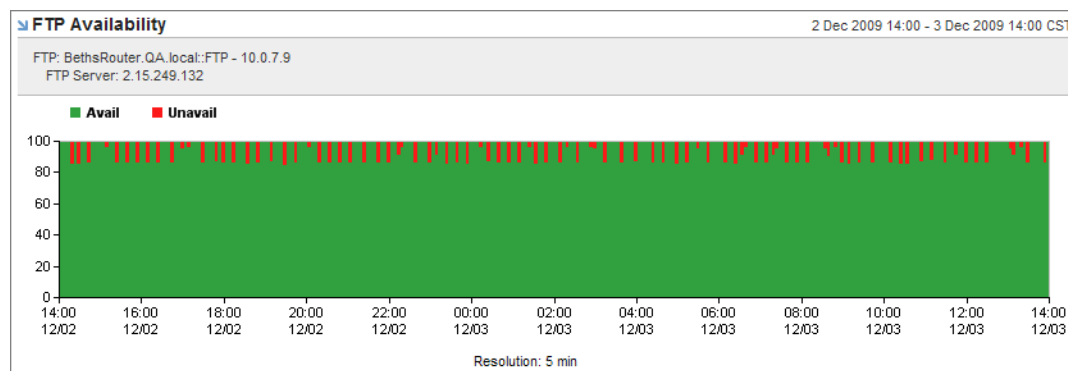
Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Utilization Top Details

Displays the utilization, by date/time, for those interfaces in the selected reporting group or managed object with the highest utilization over the selected time period.
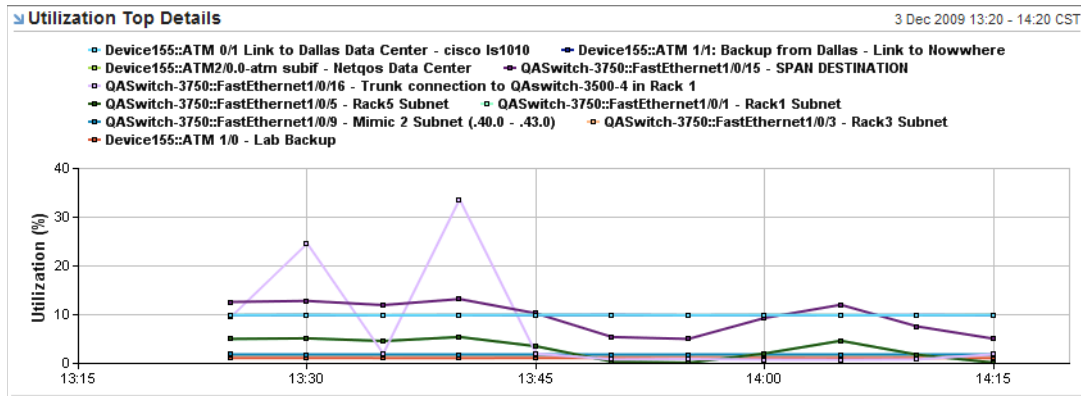
Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:

   Utilization   The utilization percentage

Styles: This view can be displayed as a line chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Volume Sub Group Summary

Displays the total volume for each sub-group, by date/time, for all interfaces in the selected reporting group during the selected time period.

Group Summary views provide an aggregate view for the selected group broken down by sub-group to display meaningful comparisons of performance. Because reporting groups and sub-groups are typically organized to match your network organization, these views can also provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expression:
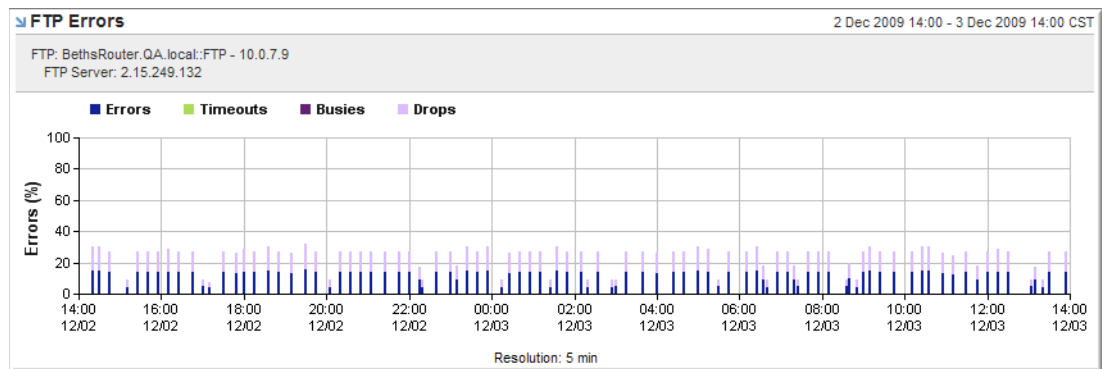
Volume	The total traffic volume for the interfaces

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Group Comparison Report and Router Group Comparison report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Group Comparison report and the Server Group Comparison report.

IP SLA Views

The following sections describe the views related to IP SLA operations that you can add to your report pages. This information includes the view styles available for each view, the metric used to render the view, and the standard report pages that include the view by default.

IP SLA views are designed to provide status and performance information about individual IP SLA tests and IP SLA aggregations within reporting groups.

DHCP Availability

Displays the availability/unavailability percentages for the selected DHCP operation over the selected time period.
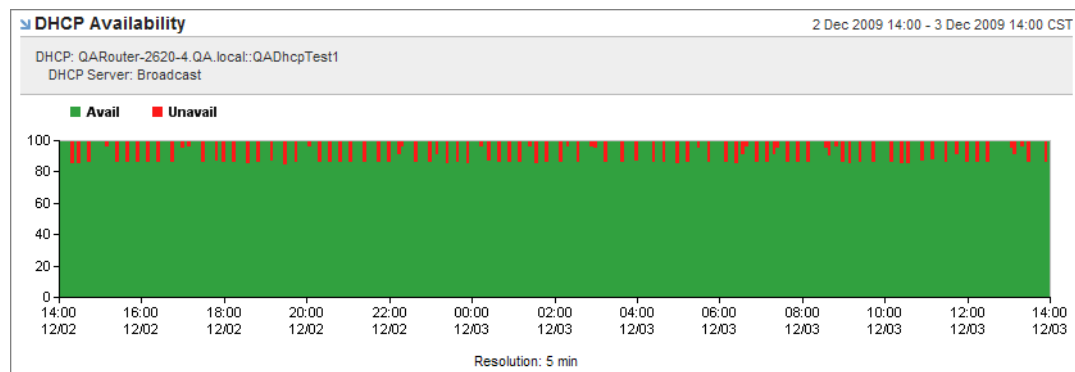
Context: This view requires a selected IP SLA DHCP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Avail	Availability as a percentage (`comp_rate`).
Unavailability	Unavailability as a percentage (`err_rate`).

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

DHCP Completion Summary

Displays the completion rate (percentage) for the selected DHCP operation over the selected time period.

Context: This view requires a selected IP SLA DHCP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expression:

% Completion   Completion rate as a percentage.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

DHCP Errors

Displays the error statistics (errors, timeouts, busies, and drops) for the selected DHCP operation over the selected time period.
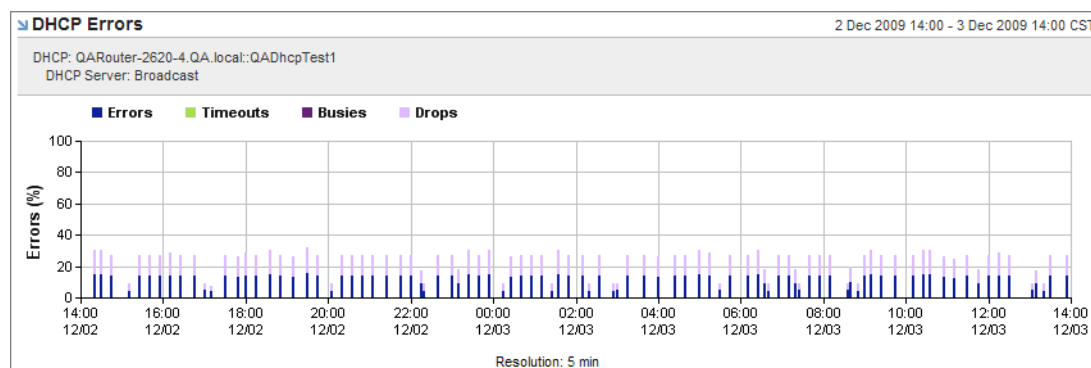
Context: This view requires a selected IP SLA DHCP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:
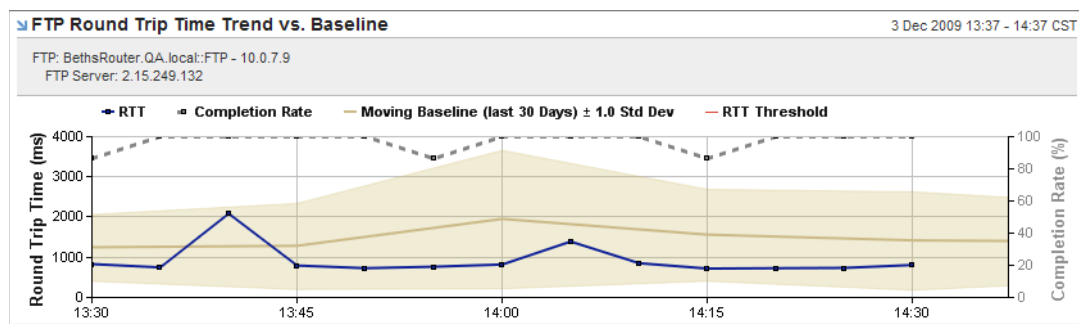
Errors	The basic error rate (sequence errors, verify errors, and disconnects) as a percentage
Timeouts	The rate of timeouts as a percentage
Busies	The rate of busies as a percentage
Drops	The rate of drops as a percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the DCHP Response Report.

DHCP Response

Displays the average round-trip time, error percentage, and completion percentage for the selected DHCP operation.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.
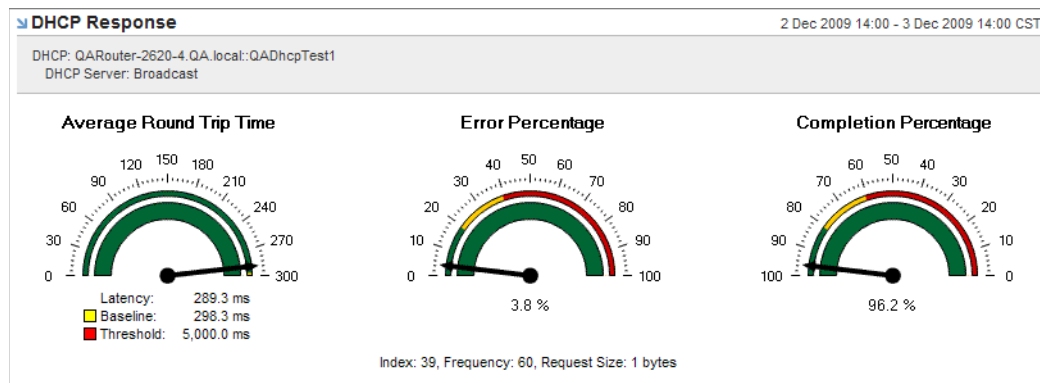
Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

Context: This view requires a selected IP SLA DHCP test to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the DCHP Response Report.

DHCP Round Trip Time Trend

Displays the minimum, maximum, and average round trip times with the completion percentage for the selected DHCP operation over the selected time period.

Context: This view requires a selected IP SLA DHCP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Min   The minimum observed round trip time for the operation

> *Note:* This expression is displayed only when the view resolution is greater than the poll rate.

Avg   The average round trip time for the operation

Max   The maximum observed round trip time for the operation

> *Note:* This expression is displayed only when the view resolution is greater than the poll rate.
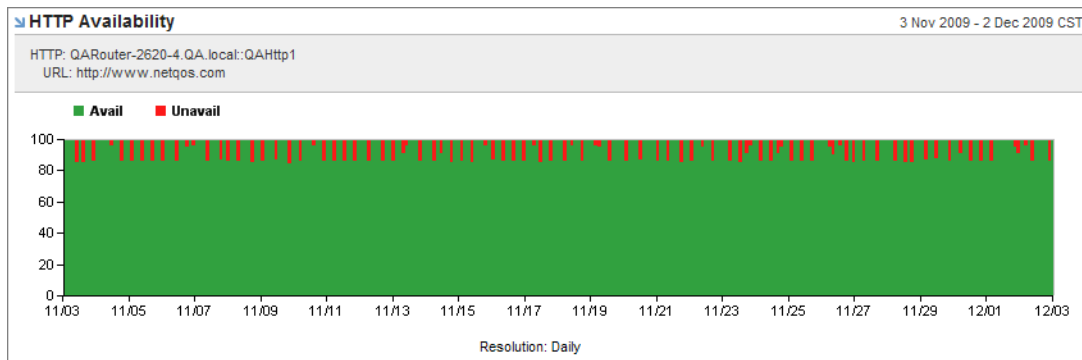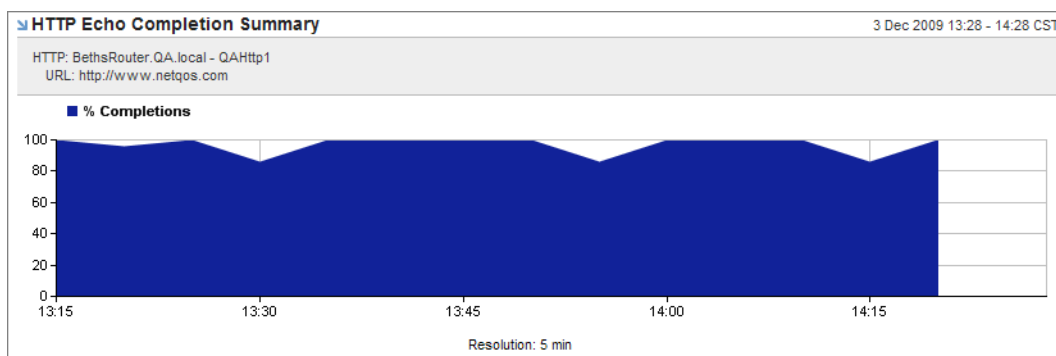
Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

DHCP Round Trip Time Trend vs. Baseline

Displays the round trip time (RTT) vs. baseline (normal) with the completion percentage for the selected DHCP operation over the selected time period. By default, this view also displays the RTT baseline for hourly/daily time periods and an RTT projection for time periods of one week or more.

Context: This view requires a selected IP SLA DHCP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

RTT	The observed round trip time for the operation
Completion Rate	The completion rate as a percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the DCHP Response Report.

DNS Availability

Displays the availability/unavailability percentages for the selected DNS operation over the selected time period.

Context: This view requires a selected IP SLA DNS test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avail   Availability as a percentage (`comp_rate`).

Unavail   Unavailability as a percentage (`err_rate`).

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

DNS Completion Summary

Displays the completion rate (percentage) for the selected DNS operation over the selected time period.

Context: This view requires a selected IP SLA DNS test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expression:

**% Completion**   Completion rate as a percentage.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

DNS Errors

Displays the error statistics by type (errors, timeouts, busies, and drops) for the selected DNS operation over the selected time period.

Context: This view requires a selected IP SLA DNS test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Errors	The basic error rate (sequence errors, verify errors, disconnects, and no-connects) as a percentage
Timeouts	The rate of timeouts as a percentage
Busies	The rate of busies as a percentage
Drops	The rate of drops as a percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the DNS Echo Response Report.

DNS Response

Displays the average round-trip time, error percentage, and completion percentage for the selected DNS operation.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.
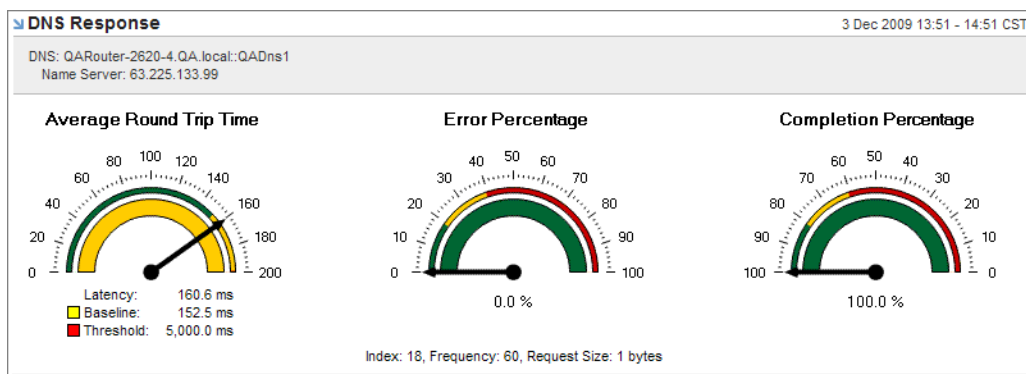
Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.
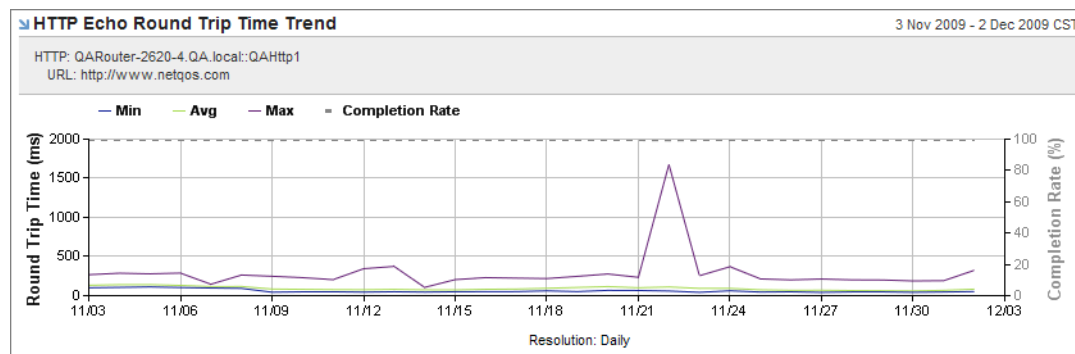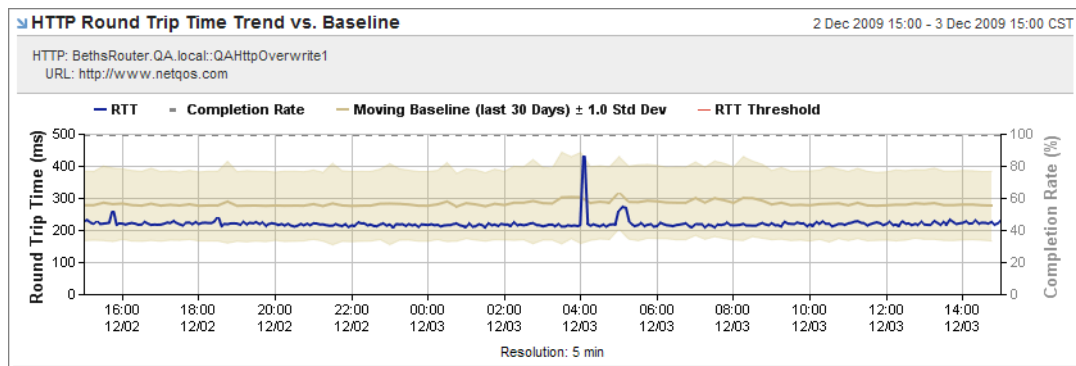
Context: This view requires a selected IP SLA DNS test to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the DNS Echo Response Report.

DNS Round Trip Summary

Displays the minimum, maximum, and average round trip times with the completion percentage for the selected DNS operation over the selected time period.

Context: This view requires a selected IP SLA DNS test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Min   The minimum observed round trip time for the operation

        Note: This expression is displayed only when the view resolution is greater than the poll rate.

Avg   The average round trip time for the operation

Max   The maximum observed round trip time for the operation

        Note: This expression is displayed only when the view resolution is greater than the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

DNS Round Trip Time Trend vs. Baseline

Displays the round trip time (RTT) vs. baseline (normal) with the completion percentage for the selected DNS operation over the selected time period. By default, this view also displays the RTT baseline for hourly/daily time periods and an RTT projection for time periods of one week or more.

Context: This view requires a selected IP SLA DNS test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:
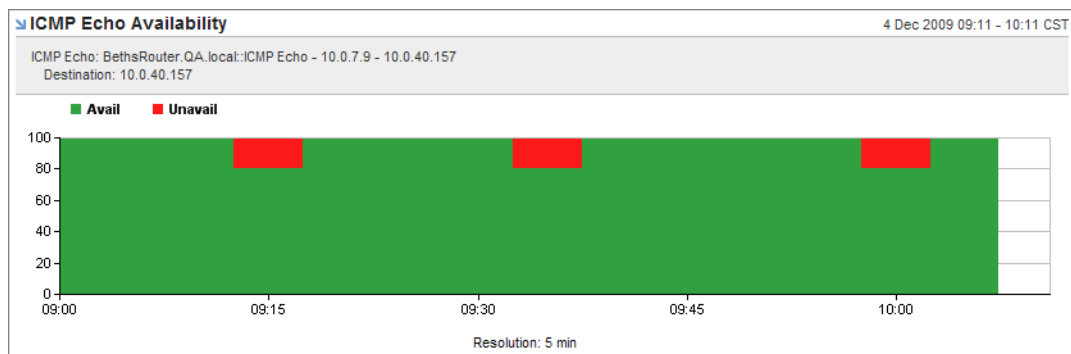
Round Trip Time   The observed round trip time for the operation

Completion Rate   The completion rate as a percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the DNS Echo Response Report.

FTP Availability

Displays the availability/unavailability percentages for the selected FTP operation over the selected time period.

Context: This view requires a selected IP SLA FTP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:
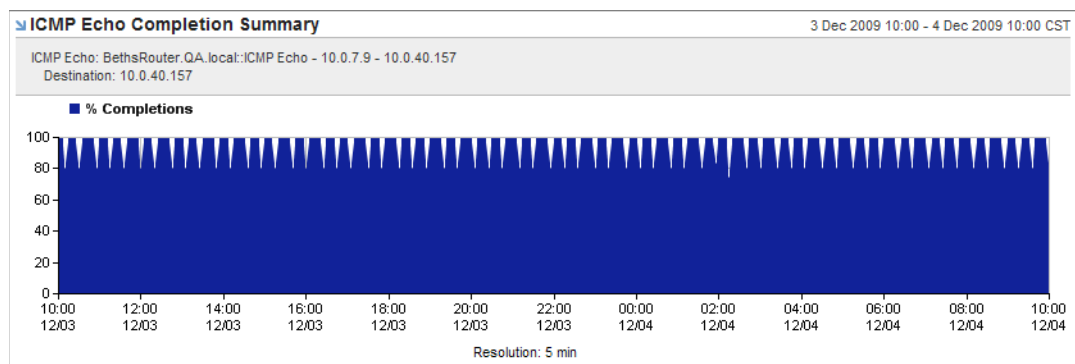
Avail Availability as a percentage (`comp_rate`).

Unavail Unavailability as a percentage (`err_rate`).

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

FTP Completion Summary

Displays the completion rate (percentage) for the selected FTP operation over the selected time period.

Context: This view requires a selected IP SLA FTP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expression:

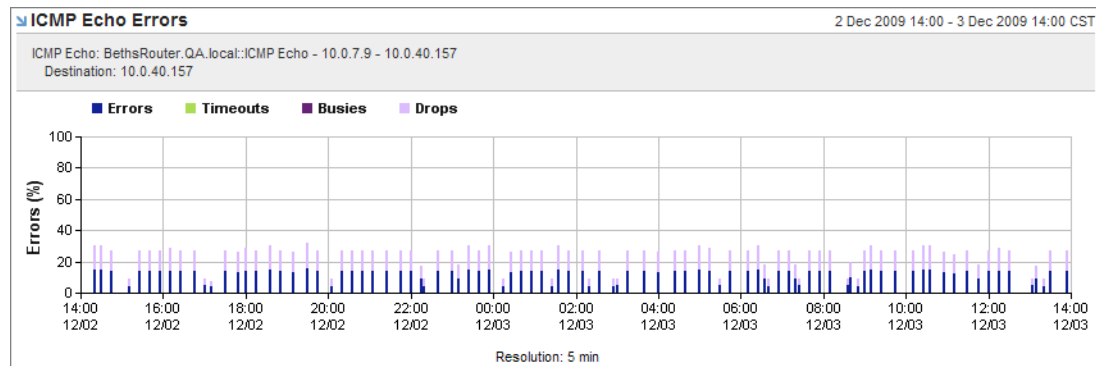**% Completions**   Completion rate as a percentage.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

FTP Errors

Displays the error statistics (percentage of errors, timeouts, busies, and drops) for the selected FTP operation over the selected time period.

Context: This view requires a selected IP SLA FTP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Errors   The basic error rate (sequence errors, verify errors, disconnects, and no-connects) as a percentage

Timeouts   The rate of timeouts as a percentage

Busies   The rate of busies as a percentage

Drops   The rate of drops as a percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the FTP Response Report.

FTP Response

Displays the average round-trip time, error percentage, and completion percentage for the selected FTP operation.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.
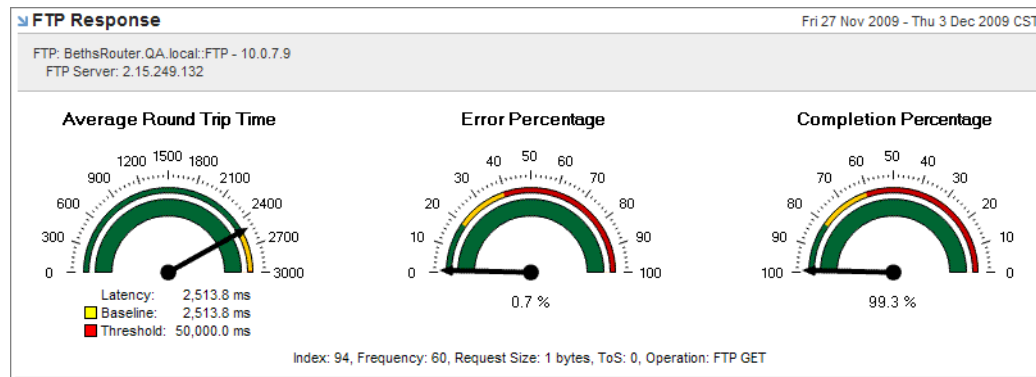
Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.
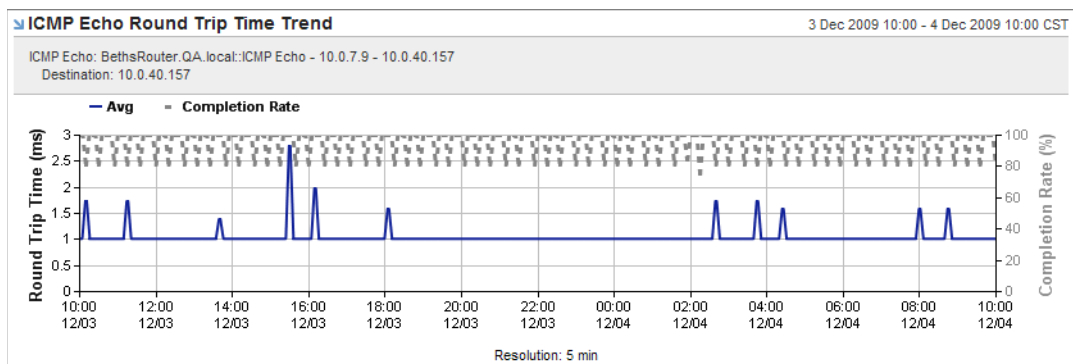
Context: This view requires a selected IP SLA FTP test to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the FTP Response Report.

FTP Round Trip Time Trend

Displays the minimum, maximum, and average round trip times with the completion percentage for the selected FTP operation over the selected time period.

Context: This view requires a selected IP SLA FTP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Min   The minimum observed round trip time for the operation

    Note: This expression is displayed only when the view resolution is greater than the poll rate.

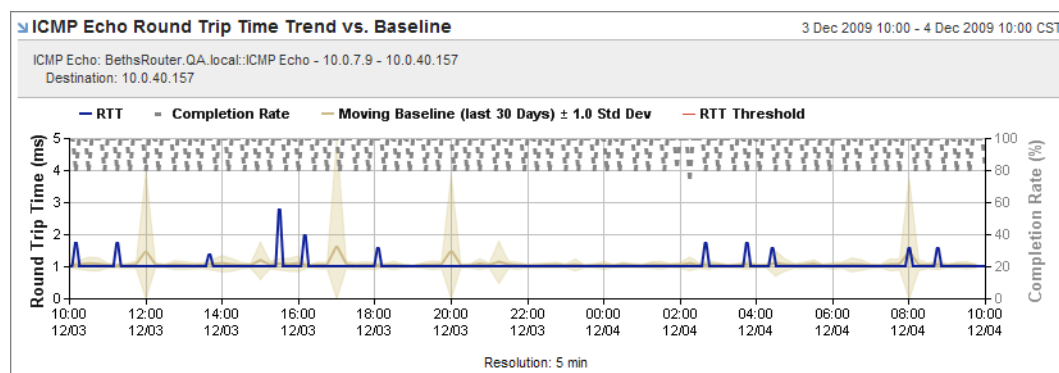Avg   The average round trip time for the operation

Max   The maximum observed round trip time for the operation

    Note: This expression is displayed only when the view resolution is greater than the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

FTP Round Trip Time Trend vs. Baseline

Displays the round trip time (RTT) vs. baseline (normal) with the completion percentage for the selected FTP operation over the selected time period. By default, this view also displays the RTT 30-day rolling baseline for hourly/daily time periods and an RTT projection for time periods of one week or more.

Context: This view requires a selected IP SLA FTP test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Round Trip Time   The observed round trip time for the operation

Completion Rate   The completion rate as a percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the FTP Response Report.

HTTP Availability

Displays the availability/unavailability percentages for the selected HTTP Echo operation over the selected time period.

Context: This view requires a selected IP SLA HTTP Echo test to be displayed.

Data: The metric used to render this view is `rtthttp`, which corresponds to the IPSLA HTTP Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avail	Availability (completions/initiations) as a percentage.
Unavail	Value calculated by subtracting the availability percentage from 100.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

HTTP Echo Completion Summary

Displays the completion rate (percentage) for the selected HTTP Echo operation over the selected time period.

Context: This view requires a selected IP SLA HTTP Echo test to be displayed.

Data: The metric used to render this view is `rtthttp`, which corresponds to the IPSLA HTTP Statistics dataset in NetVoyant. The view includes data for the following expression:

Completion Rate   Completion rate as a percentage.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

HTTP Echo Errors

Displays the timeout and error percentages for the selected HTTP Echo operation over the selected time period.
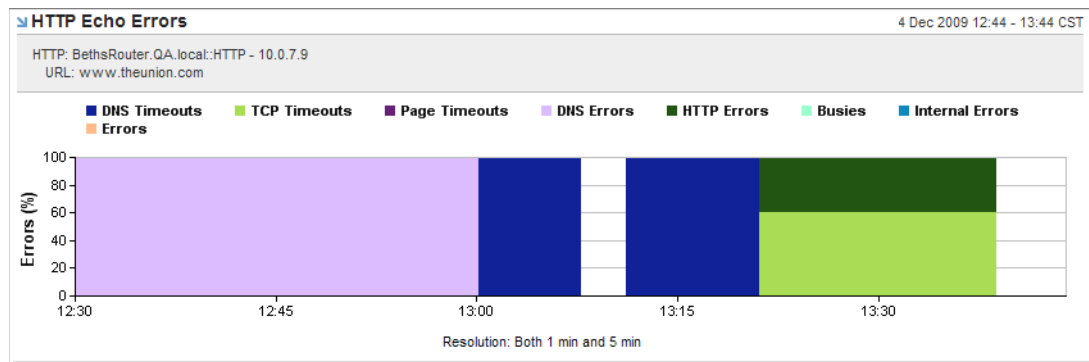
Context: This view requires a selected IP SLA HTTP Echo test to be displayed.

Data: The metric used to render this view is `rtthttp`, which corresponds to the IPSLA HTTP Statistics dataset in NetVoyant. The view includes data for the following expressions:

DNS Timeouts	The percentage of requests that could not connect to the DNS Server
TCP Timeouts	The percentage of requests that could not connect to the HTTP Server
Page Timeouts	The percentage of requests that timed out during HTTP transaction
DNS Errors	The percentage of requests that had DNS Query errors
HTTP Errors	The percentage of requests that had HTTP errors while downloading the base page
Busies	The percentage of occasions when an HTTP operation could not be initiated because a previous HTTP operation had not been completed
Internal Errors	The percentage of occasions when an HTTP operation could not be initiated because of an internal error
Errors	The total percentage of errored requests

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

HTTP Echo Response

Displays the average round-trip time, error percentage, and completion percentage for the selected HTTP operation.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.
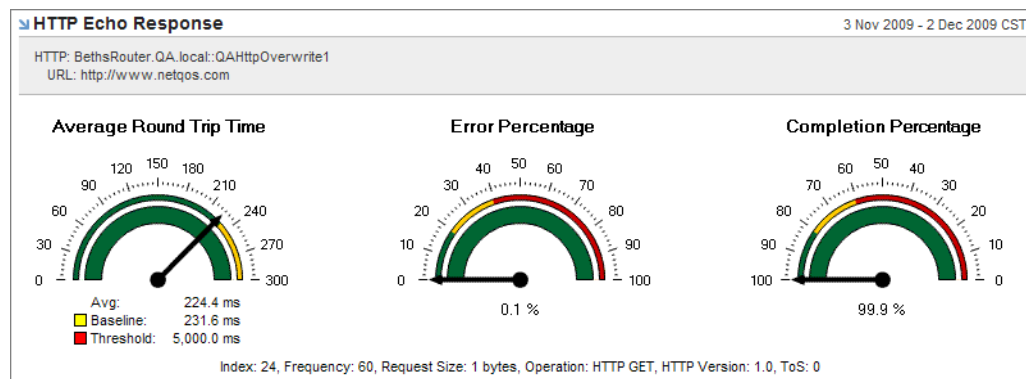
Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

Context: This view requires a selected IP SLA HTTP test to be displayed.

Styles: This view can be displayed as gauge chart only.

HTTP Echo Round Trip Time Trend

Displays the minimum, maximum, and average round trip times with the completion percentage for the selected HTTP Echo operation over the selected time period.

Context: This view requires a selected IP SLA HTTP Echo test to be displayed.

Data: The metric used to render this view is `rtthttp`, which corresponds to the IPSLA HTTP Statistics dataset in NetVoyant. The view includes data for the following expressions:

Min	The minimum observed round trip time for the operation
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
Avg	The average round trip time for the operation
Max	The maximum observed round trip time for the operation
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
Completion Rate	Percentage of completions/initiations

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

HTTP Echo Round Trip Time Trend vs. Baseline

Displays the round trip time (RTT) vs. baseline (normal) with the completion percentage for the selected HTTP Echo operation over the selected time period. By default, this view also displays the RTT 30-day rolling baseline for hourly/daily time periods and an RTT projection for time periods of one week or more.

Context: This view requires a selected IP SLA HTTP Echo test to be displayed.

Data: The metric used to render this view is `rtthttp`, which corresponds to the IPSLA HTTP Statistics dataset in NetVoyant. The view includes data for the following expressions:

RTT	The observed round trip time for the operation
Completion Rate	The completion rate as a percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the HTTP Echo Response Report.

HTTP RTT Detail

Displays the round trip time components (DNS, TCP, and HTTP) for the selected HTTP Echo operation over the selected time period.
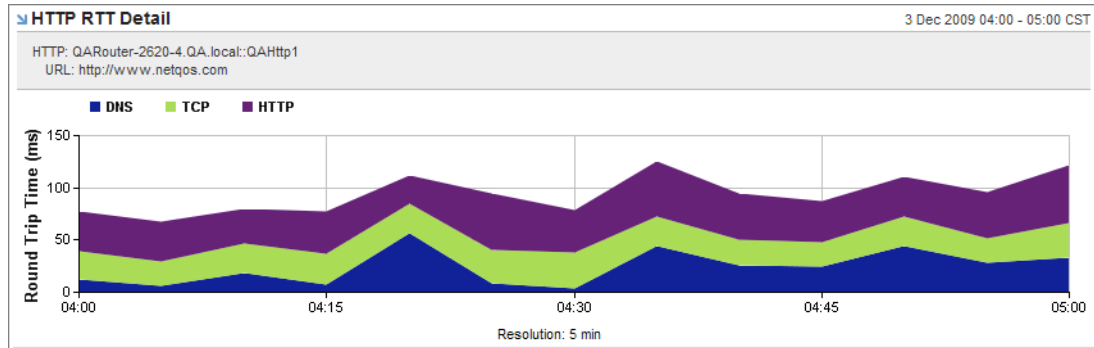
Context: This view requires a selected IP SLA HTTP Echo test to be displayed.

Data: The metric used to render this view is `rtthttp`, which corresponds to the IPSLA HTTP Statistics dataset in NetVoyant. The view includes data for the following expressions:

DNS	The average DNS round trip time for the operation
TCP	The average TCP round trip time for the operation
HTTP	The average HTTP round trip time for the operation

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the HTTP Echo Response Report.

ICMP Echo Availability

Displays the availability/unavailability percentages for the selected ICMP Echo operation over the selected time period.

Context: This view requires a selected IP SLA ICMP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avail	Availability (completions/initiations) as a percentage.
Unavail	Value calculated by subtracting the availability percentage from 100.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

ICMP Echo Completion Summary

Displays the completion rate (percentage) for the selected ICMP Echo operation over the selected time period.

Context: This view requires a selected IP SLA ICMP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expression:

% Completions	Completion rate as a percentage.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the ICMP Echo Response Report.

ICMP Echo Errors

Displays the timeout and error percentages for the selected ICMP Echo operation over the selected time period.

Context: This view requires a selected IP SLA ICMP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Errors	The total percentage of errored requests
Timeouts	The percentage of requests that could not connect to the server
Busies	The percentage of occasions when an ICMP operation could not be initiated because a previous operation had not been completed
Drops	The percentage of occasions when an ICMP operation could not be initiated because of an internal error

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the ICMP Echo Response Report.

ICMP Echo Response Gauges

Displays the average round-trip time, error percentage, and completion percentage for the selected ICMP operation.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.
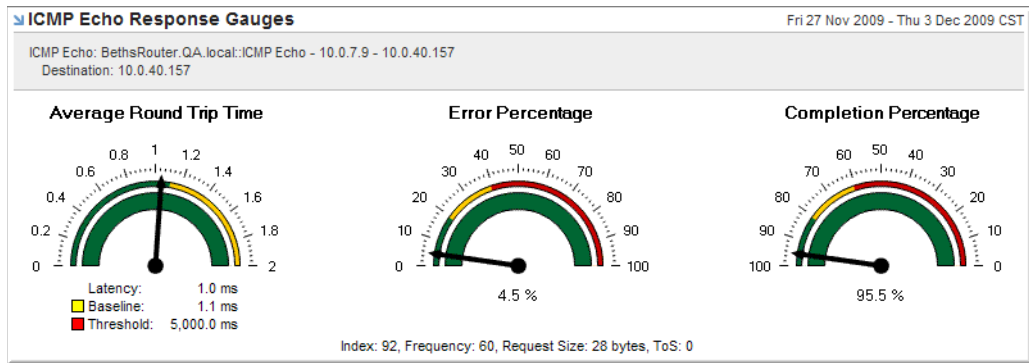
Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.
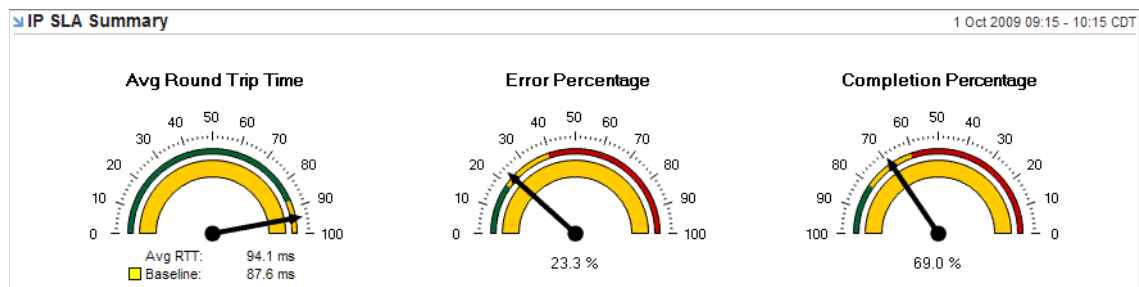
Context: This view requires a selected IP SLA ICMP Echo test to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the ICMP Echo Response Report.

ICMP Echo Round Trip Time Trend

Displays the minimum, maximum, and average round trip times with the completion percentage for the selected ICMP Echo operation over the selected time period.

Context: This view requires a selected IP SLA ICMP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Min	The minimum observed round trip time for the operation
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
Avg	The average round trip time for the operation

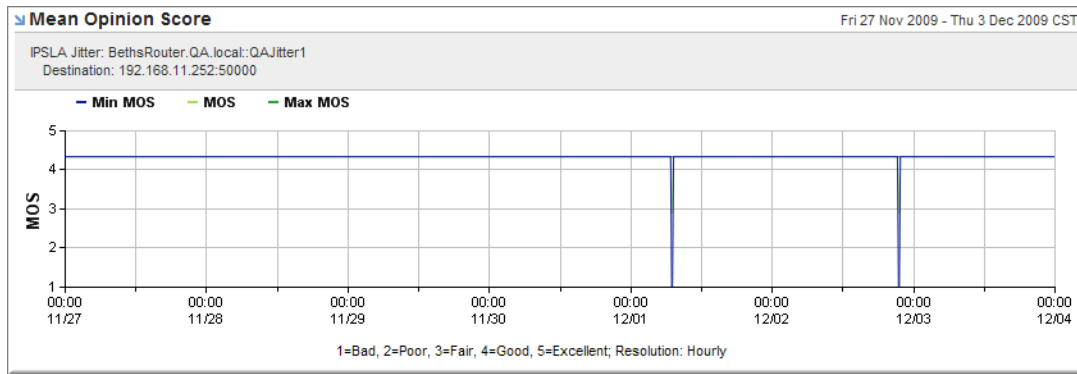|	
Max	The maximum observed round trip time for the operation
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
Completion Rate	Percentage of completions/initiations

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

ICMP Echo Round Trip Time Trend vs. Baseline

Displays the round trip time (RTT) vs. baseline (normal) with the completion percentage for the selected ICMP Echo operation over the selected time period. By default, this view also displays the RTT 30-day rolling baseline for hourly/daily time periods and an RTT projection for time periods of one week or more.

Context: This view requires a selected IP SLA ICMP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

RTT	The observed round trip time for the operation
Completion Rate	Percentage of completions/initiations

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the ICMP Echo Response Report.

IP SLA Availability Scorecard

Displays an overview scorecard for the average availability of IP SLA operations across multiple groups or subgroups. You can select a goal range for the values to determine how the values in the scorecard display.

Scorecard views display monthly performance data for the previous six month or seven week period by sub-group, for the currently selected group. Scorecards are high-level indicators of whether or not measured resources are meeting service-level goals. These views incorporate check marks and exclamation points as visual indicators to enhance quick understanding.

IP SLA Availability Scorecard									Thu 24 Sep 2009 - Wed 30 Sep 2009 CDT
Group ▲	Target	Aug 16	Aug 23	Aug 30	Sep 6	Sep 13	Sep 20	Sep 27	Average
– Devices	>= 98.00	! 61.526	! 63.037	! 60.294	! 60.734	! 71.782	! 68.176	! 68.171	! 64.494
Firewalls	>= 98.00	--	--	--	--	--	--	--	--
Hubs	>= 98.00	--	--	--	--	--	--	--	--
Network Termination	>= 98.00	--	--	--	--	--	--	--	--
New Group1	>= 98.00	--	--	--	--	--	--	--	--
New Group2	>= 98.00	! 74.594	! 74.156	! 66.321	! 68.469	! 67.072	! 65.139	! 63.009	! 68.394
Other	>= 98.00	--	--	--	--	--	--	--	--
Printers	>= 98.00	--	--	--	--	--	--	--	--
Probes	>= 98.00	--	--	--	--	--	--	--	--
Routers	>= 98.00	! 64.807	! 66.075	! 63.426	! 63.931	! 76.413	! 72.246	! 72.432	! 68.086
				1 2				Max Per Page:	10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expression:
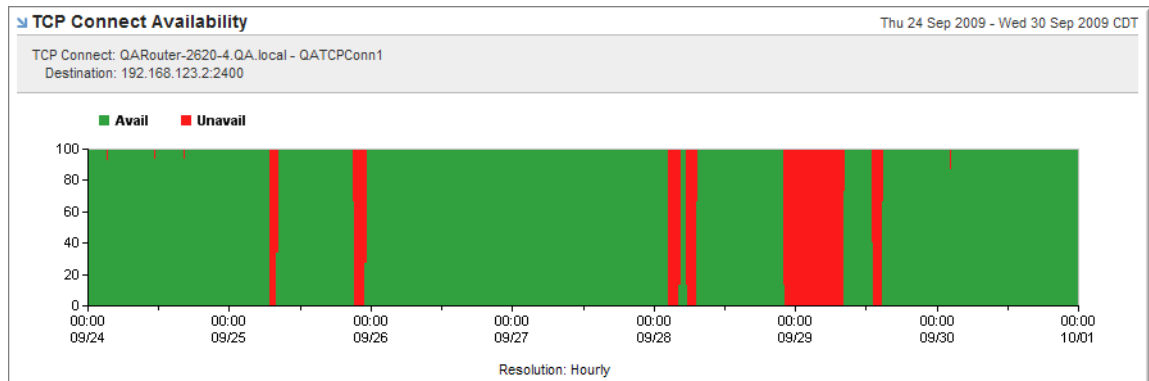
Month or **Date**	The completion rate (percentage) for the group or sub-group, as a monthly or weekly average

Note: This scorecard view uses a default target percentage of 98.0, so that sub-groups with an average availability below that target are displayed with a red exclamation point to indicate that the item falls below the target. You can modify this target value in the Custom View Wizard to meet your organization's service level goals.

Styles: This view can be displayed as table only.

Standard NetVoyant reports: This view is included by default in the Scorecards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Scorecards report and IP SLA Dashboard report.

IP SLA Operations by Router

Displays the average round-trip time (RTT), error rate (%), completion rate (%), and count for the IP SLA operations on the routers in the selected reporting group during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: This view uses a combination of metrics to render the data. To filter the data to display only those operations of a specific type, click the blue arrow at the upper-left corner of the view to access the view menu and select **Edit**. In the **Select Operation Filter** dialog box, choose an IP SLA operation type from the **Select Operation Filter** drop-down list and click **OK**.

Styles: This view can be displayed as table only.

Standard NetVoyant reports: This view is included by default in the IP SLA Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the IP SLA report and IP SLA Dashboard report.

IP SLA Operations by Rtt Type

Displays the average round-trip time (RTT), error rate (%), completion rate (%), and count for the IP SLA operations types occurring in the selected reporting group or managed object during the selected time period.

IP SLA Operations by Rtt Type				1 Oct 2009 09:25 - 10:25 CDT
Name	Avg RTT (ms) ▼	Error Rate (%)	Comp Rate (%)	Count
HTTP	143.4 ms	0.000%	100.000%	9
TCP Connect	135.4 ms	12.500%	75.000%	8
UDP Echo	83.1 ms	12.500%	75.000%	8
DNS	81.4 ms	37.500%	50.000%	8
Path Echo	38.8 ms	0.000%	77.778%	9
ICMP Echo	22.3 ms	40.444%	59.556%	15
VoIP Jitter	2.1 ms	20.000%	80.000%	5
DHCP	0.0 ms	100.000%	0.000%	1
FTP	0.0 ms	100.000%	0.000%	2

1 of 1 — Max Per Page: 10

Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: This view uses a combination of metrics to render the data. To filter the data to display only those operations of a specific type, click the blue arrow at the upper-left corner of the view to access the view menu and select **Edit**. In the **Select Operation Filter** dialog box, choose an IP SLA operation type from the **Select Operation Filter** drop-down list and click **OK**.

Select Operation Filter

Select Operation Filter: All Operation Types

- All Operation Types
- ICMP Echo
- Path Echo
- UDP Echo
- TCP Connect
- HTTP
- DNS
- Jitter
- DLSw
- DHCP
- FTP

Apply Changes To: My [...] ...el   Use Defaults

Styles: This view can be displayed as table only.

Standard NetVoyant reports: This view is included by default in the IP SLA Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the IP SLA report and IP SLA Dashboard report.

IP SLA Operations List

Displays operation type, source and destination addresses, average round-trip time (RTT), error rate (%), and completion rate (%) for each IP SLA operation occurring in the selected reporting group or managed object during the selected time period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: This view uses a combination of metrics to render the data. To filter the data to display only those operations of a specific type, click the blue arrow at the upper-left corner of the view to access the view menu and select **Edit**. In the **Select Operation Filter** dialog box, choose an IP SLA operation type from the **Select Operation Filter** drop-down list and click **OK**.

Styles: This view can be displayed as table only.

Standard NetVoyant reports: This view is included by default in the IP SLA Report, Device Capabilities Report, and Router Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the IP SLA report and IP SLA Dashboard report.

IP SLA Over-Threshold Scorecard

Displays an overview scorecard for the over-thresholds using baseline for IP SLA operations across multiple groups or subgroups. You can select a goal range for the values to determine how the values in the scorecard display.

Scorecard views display monthly performance data for the previous six month or seven week period by sub-group, for the currently selected group. Scorecards are high-level indicators of whether or not measured resources are meeting service-level goals. These views incorporate check marks and exclamation points as visual indicators to enhance quick understanding.

IP SLA Over-Threshold Scorecard									Thu 24 Sep 2009 - Wed 30 Sep 2009 CDT
Group ▲	Target	Aug 16	Aug 23	Aug 30	Sep 6	Sep 13	Sep 20	Sep 27	Average
– Devices	>= 10.00	0.291	0.264	0.272	0.125	0.197	0.225	0.441	0.257
Firewalls	>= 10.00	--	--	--	--	--	--	--	--
Hubs	>= 10.00	--	--	--	--	--	--	--	--
Network Termination	>= 10.00	--	--	--	--	--	--	--	--
New Group1	>= 10.00	--	--	--	--	--	--	--	--
New Group2	>= 10.00	0.667	0.045	0.167	0.000	0.182	0.000	0.000	0.152
Other	>= 10.00	--	--	--	--	--	--	--	--
Printers	>= 10.00	--	--	--	--	--	--	--	--
Probes	>= 10.00	--	--	--	--	--	--	--	--
Routers	>= 10.00	0.307	0.277	0.286	0.132	0.210	0.239	0.469	0.272
1 2								Max Per Page:	10

Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.
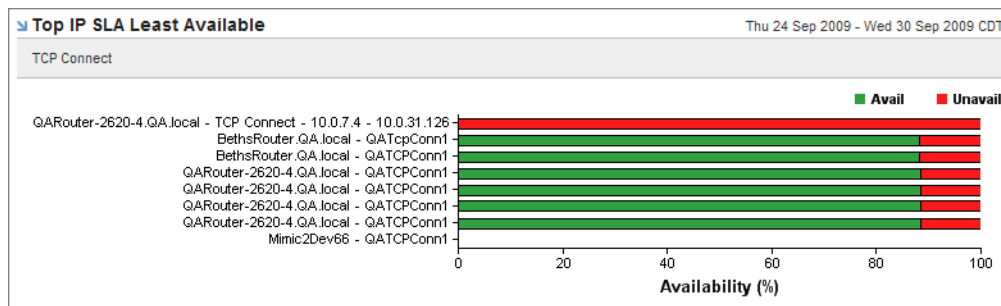
Context: This view requires a selected reporting group to be displayed.

Styles: This view can be displayed as table only.

Standard NetVoyant reports: This view is included by default in the Scorecards Report.

IP SLA Summary

Displays the average round-trip time, error percentage, and completion percentage for IP SLA operations for the selected reporting group or managed object during the selected time period.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.

Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

Context: This view requires a selected reporting group, router, switch or IP SLA operation type to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the IP SLA Report and IP SLA Operations Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the IP SLA report and IP SLA Dashboard report.

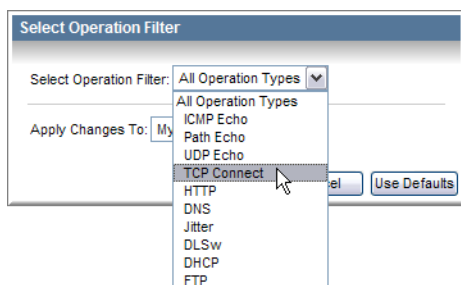## Jitter: Destination to Source

Displays the inter-packet delay in variation from the average jitter measure from the destination to the source for the selected IPSLA Jitter operation during the selected time period.
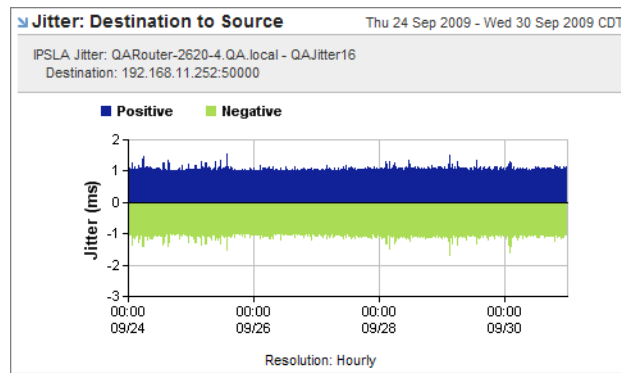
Context: This view requires a selected IP SLA Jitter test to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expressions:

Positive	The average sum of all positive jitter values from packets sent from destination to source.
Negative	The average sum of all negative jitter values from packets sent from destination to source.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Enhanced UDP For Voice (VoIP) Report.

Jitter: Source to Destination

Displays the inter-packet delay in variation from the average jitter measure from the source to the destination for the selected IPSLA Jitter operation during the selected time period.
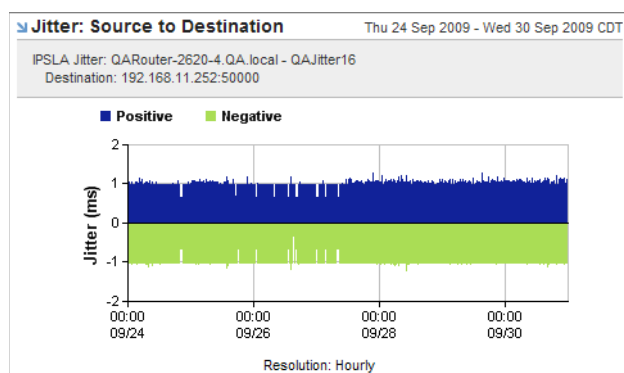
Context: This view requires a selected IP SLA Jitter test to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expressions:

Positive	The average sum of all positive jitter values from packets sent from source to destination.
Negative	The average sum of all negative jitter values from packets sent from source to destination.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Enhanced UDP For Voice (VoIP) Report.

Mean Opinion Score

Displays the minimum, average, and maximum Mean Opinion Score (MOS), which is a measure of user perception based on the selected codec for voice packet round trip, for the selected IP SLA Jitter operation during the selected time period.

MOS is an industry standard for gauging call quality by estimating the impact of various impairments to the quality of the voice signal on the listener's likely perception of the call's quality. The MOS scale ranges from 5.00 to 1.00, with 5.00 representing the highest quality—that is, a score representing an audio signal free from impairments—and 1.00 representing the lowest quality. The average MOS value is the average MOS listening quality (LQK) score observed for the entire voice stream.

Mean Opinion Score Fri 27 Nov 2009 - Thu 3 Dec 2009 CST

IPSLA Jitter: BethsRouter.QA.local::QAJitter1
Destination: 192.168.11.252:50000

— Min MOS   — MOS   — Max MOS

1=Bad, 2=Poor, 3=Fair, 4=Good, 5=Excellent; Resolution: Hourly

Context: This view requires a selected IP SLA Jitter test to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expressions:

Min MOS   The minimum MOS value from IP SLA Jitter test packets sent.

> *Note:* This expression is displayed only when the view resolution is greater than the poll rate.

MOS   The average MOS value from IP SLA Jitter test packets sent.

Max MOS   The maximum MOS value from IP SLA Jitter test packets sent.

> *Note:* This expression is displayed only when the view resolution is greater than the poll rate.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Enhanced UDP For Voice (VoIP) Report.

Path Comparison Trend

Displays the round trip times, by date/time, for each path for the selected path echo operation over the selected time period.
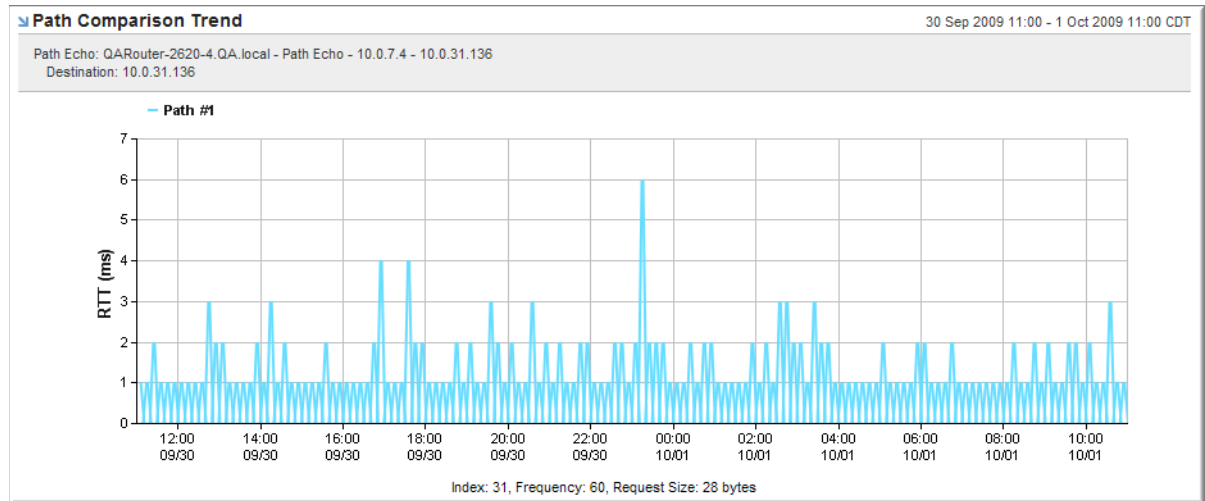
Context: This view requires a selected IP SLA Path Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expression:

> **Path #**   The round trip time for the path by number.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Path Echo Response Report.

TCP Connect Availability

Displays the availability and unavailability percentages for the selected IP SLA TCP operation During the selected time period.

Context: This view requires a selected IP SLA TCP Connect test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avail	Availability (completions/initiations) as a percentage.
Unavail	Value calculated by subtracting the availability percentage from 100.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

TCP Connect Completion Summary

Displays the completion rate (percentage), by date/time, for the selected IP SLA TCP Connect operation over the selected time period.

Context: This view requires a selected IP SLA TCP Connect test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expression:

% Completions	Completion rate as a percentage.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

TCP Connect Errors

Displays the error percentages, by type, for the selected IP SLA TCP Connect operation over the selected time period.

Context: This view requires a selected IP SLA TCP Connect test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:
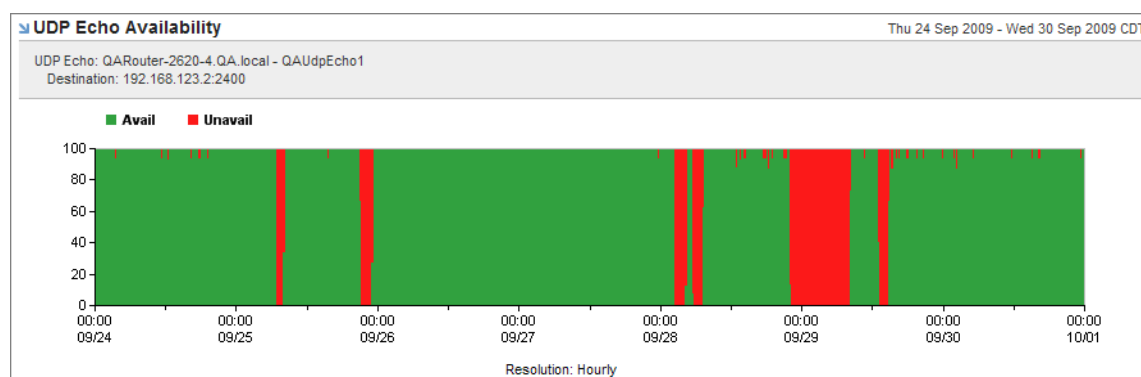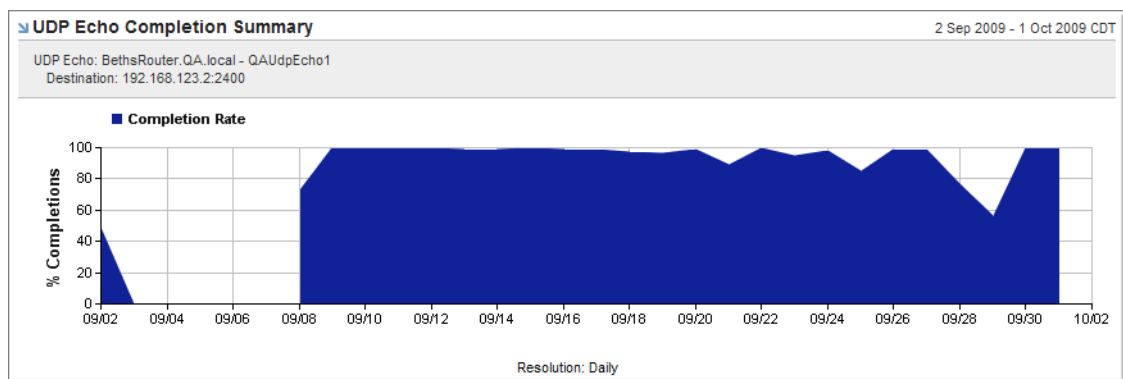
Errors	The total percentage of errored requests, excluding timeouts, busies, and drops
Timeouts	The percentage of requests that could not connect to the server
Busies	The percentage of occasions when a TCP Connect operation could not be initiated because a previous operation had not been completed
Drops	The percentage of occasions when a TCP Connect could not be initiated because of an internal error

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the TCP Connect Report.

TCP Connect Response

Displays the average round-trip time, error percentage, and completion percentage for the selected IP SLA TCP Connect operation during the selected time period.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.

Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

Context: This view requires a selected IP SLA TCP Connect test to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the TCP Connect Report.

TCP Connect Round Trip Time Trend

Displays the minimum, maximum, and average round trip time with the completion percentage for the selected IP SLA TCP Connect operation over the selected time period.

Context: This view requires a selected IP SLA TCP Connect test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Min	The minimum observed round trip time for the operation
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
Avg	The average round trip time for the operation

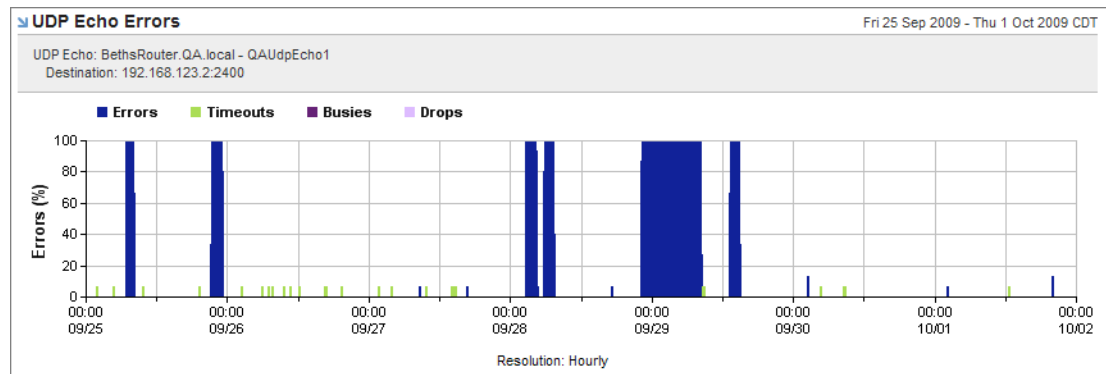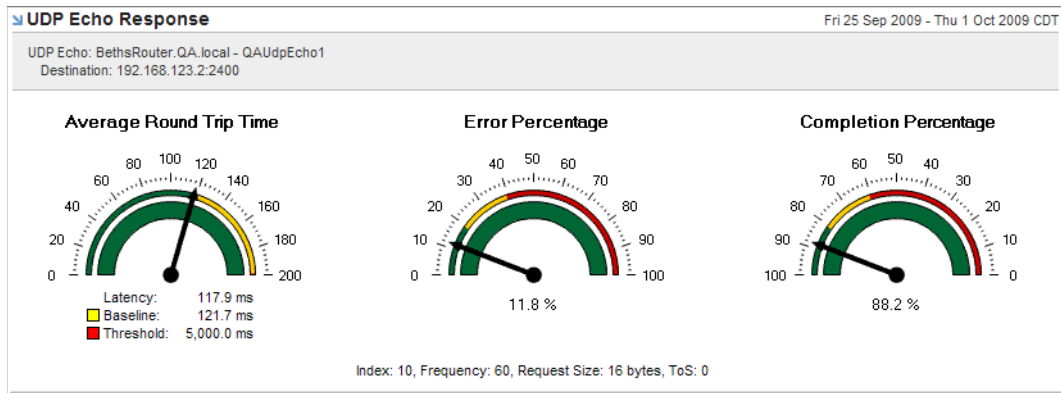|	
Max	The maximum observed round trip time for the operation
	Note: This expression is displayed only when the view resolution is greater than the poll rate.
Completion Rate	Percentage of completions/initiations

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

TCP Connect Round Trip Time Trend vs. Baseline

Displays the average round trip time vs. baseline (normal) for the selected IP SLA TCP Connect operation over the selected time period.

Note: The 30-day moving baseline is calculated using the value for each hour of the day and the percentage usage for each hour of the day compared to the theoretical maximum (threshold) for the operation over the selected time period. The effects of a threshold change in an alarm profile assigned to the router or switch are not seen until the NetVoyant product recalculates the rolling baselines (midnight, by default).

Context: This view requires a selected IP SLA TCP Connect test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

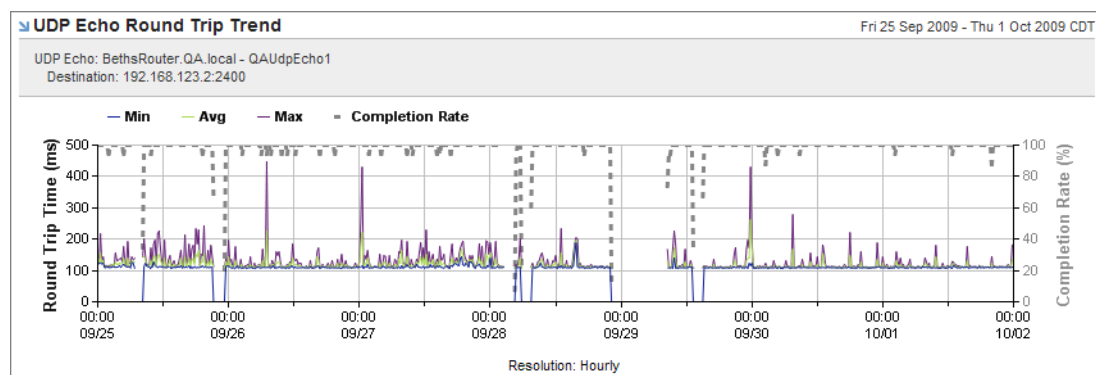|	
RTT	The average round trip time for the operation
Completion Rate	Percentage of completions/initiations

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the TCP Connect Report.

Top IP SLA Errored Operations

Displays the percentage of errored operations for those IP SLA operations in the selected reporting group that experienced the most errors during a selected time period.
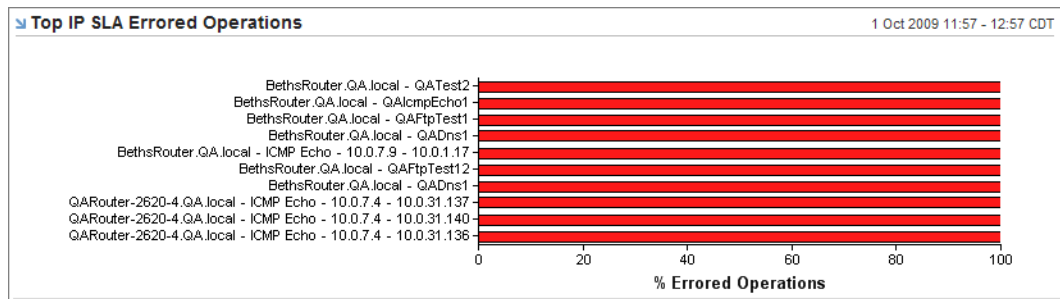
Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metrics used to render this view are `rttstats`, `rttjitter`, and `rtthttp` which correspond to the IPSLA Statistics, IPSLA Jitter Statistics, and IPSLA HTTP Statistics datasets in NetVoyant. The view includes data for the following expression:

Error Rate   The average error rate for the operation

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the IP SLA Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the IP SLA report and IP SLA Dashboard report.

Top IP SLA Least Available

Displays the availability and unavailability for the IP SLA operations in the selected reporting group that were least available (percentage of completions) during the selected time period.

Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metrics used to render this view are `rttstats`, `rttjitter`, and `rtthttp` which correspond to the IPSLA Statistics, IPSLA Jitter Statistics, and IPSLA HTTP Statistics datasets in NetVoyant. The view includes data for the following expressions:
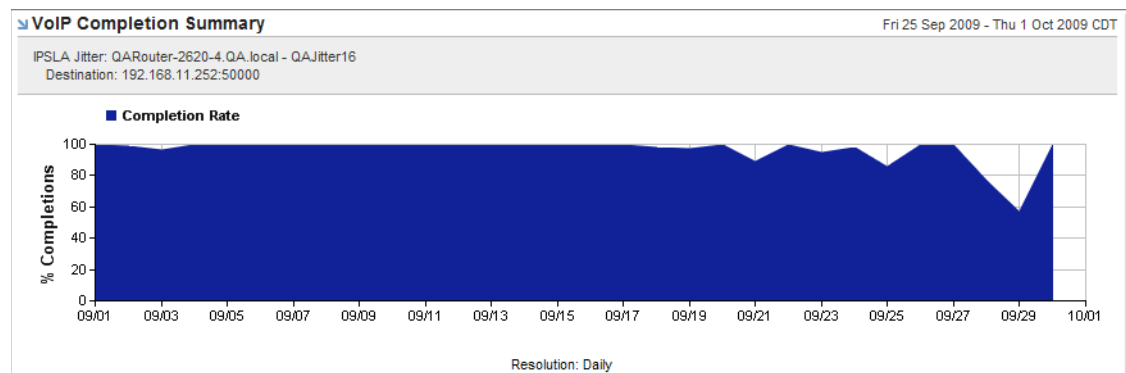
Avail   The average completion rate for the operation

Unavail   Value calculated by subtracting the availability percentage from 100

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the IP SLA Dashboard report.

Top IP SLA Operations

Displays type, source and destination address, average round trip time, and completion rate for those IP SLA operations in the selected reporting group or managed object that have the highest average round-trip time.

Top IP SLA Operations				Thu 24 Sep 2009 – Wed 30 Sep 2009 CDT	
Name	Type	Src	Dst	Avg RTT (ms) ▼	Comp Rate (%)
BethsRouter.QA.local - QAHttp1	HTTP	BethsRouter.QA.local	netqos.com/	256.7 ms	99.722%
BethsRouter.QA.local - QAHttpOverwrite1	HTTP	BethsRouter.QA.local	netqos.com/	252.9 ms	99.722%
QARouter-2620-4.QA.local - QATCPConn1	TCP Connect	QARouter-2620-4.QA.local	192.168.123.2:2400	175.1 ms	88.363%
BethsRouter.QA.local - QATcpConn1	TCP Connect	BethsRouter.QA.local	192.168.123.2:2400	172.7 ms	88.244%
QARouter-2620-4.QA.local - QADhcpTest1	DHCP	QARouter-2620-4.QA.local	Broadcast	166.9 ms	100.000%
BethsRouter.QA.local - QATCPConn1	TCP Connect	BethsRouter.QA.local	192.168.123.2:2400	162.1 ms	88.274%
QARouter-2620-4.QA.local - QATCPConn1	TCP Connect	QARouter-2620-4.QA.local	192.168.123.2:2400	159.6 ms	88.373%
QARouter-2620-4.QA.local - QATCPConn1	TCP Connect	QARouter-2620-4.QA.local	192.168.123.2:2400	156.8 ms	88.363%
QARouter-2620-4.QA.local - QATCPConn1	TCP Connect	QARouter-2620-4.QA.local	192.168.123.2:2400	152.5 ms	88.383%
QARouter-2620-4.QA.local - QADns1	DNS	QARouter-2620-4.QA.local	63.225.133.99	137.1 ms	99.980%

Show Top: 10

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The metrics used to render this view are `rttstats`, `rttjitter`, and `rtthttp` which correspond to the IPSLA Statistics, IPSLA Jitter Statistics, and IPSLA HTTP Statistics datasets in NetVoyant.

To filter the data to display only those operations of a specific type, click the blue arrow at the upper-left corner of the view to access the view menu and select **Edit**. In the **Select Operation Filter** dialog box, choose an IP SLA operation type from the **Select Operation Filter** drop-down list and click **OK**.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report.

Top IP SLA Over Threshold

Displays the percent over threshold for those IP SLA operations in the selected reporting group or managed object that were the most over threshold during a selected time period.
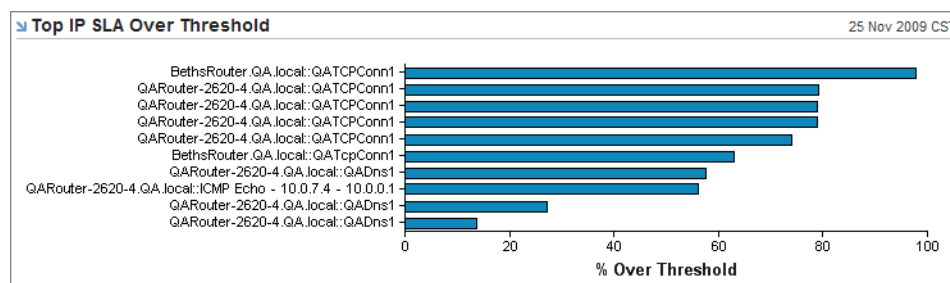
Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metrics used to render this view are `rttstats`, `rttjitter`, and `rtthttp` which correspond to the IPSLA Statistics, IPSLA Jitter Statistics, and IPSLA HTTP Statistics datasets in NetVoyant. The view includes data for the following expressions:

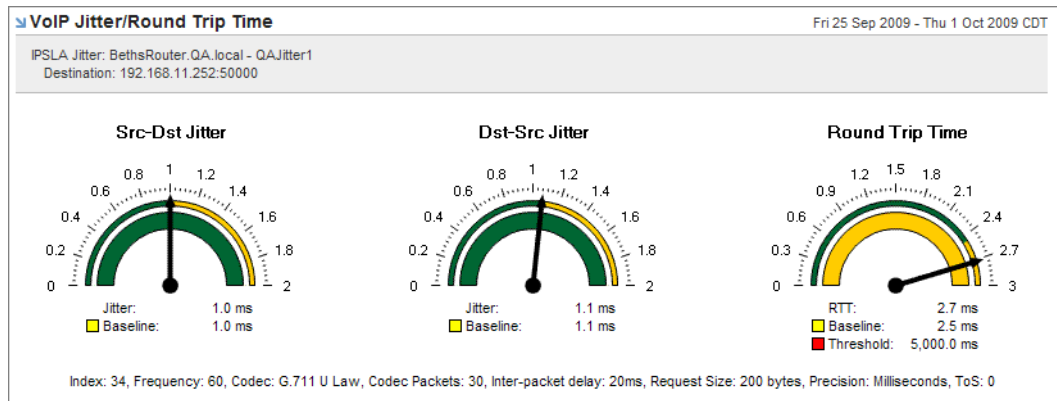|	
Over Threshold	The average number of IP SLA operation completions that were over threshold.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.
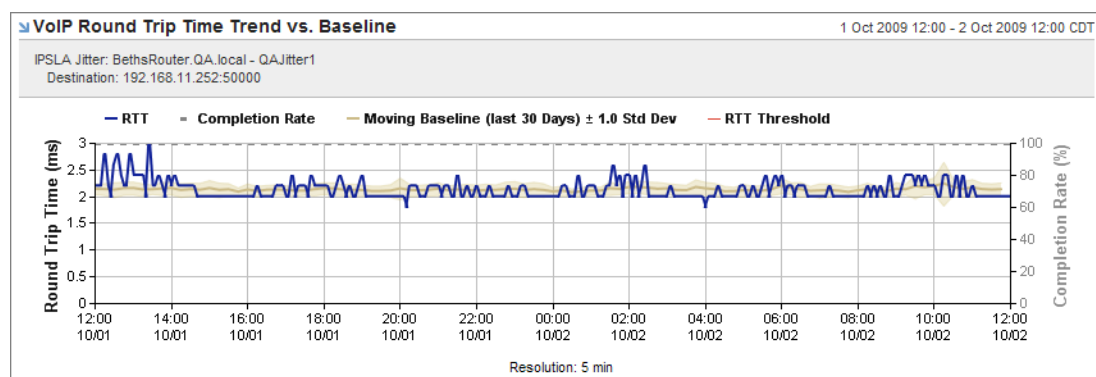
Standard NetVoyant reports: This view is included by default in the IP SLA Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the IP SLA report and IP SLA Dashboard report.

Top IP SLA RTT Deviation From Norm

Displays the type, source and destination address, normal (baseline) RTT value, and average RTT value for those IP SLA operations in the selected reporting group or managed object that have the highest deviation from the 30-day rolling baseline value for round-trip time during the selected time period.

Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metrics used to render this view are `rttstats`, `rttjitter`, and `rtthttp` which correspond to the IPSLA Statistics, IPSLA Jitter Statistics, and IPSLA HTTP Statistics datasets in NetVoyant.

To filter the data to display only those operations of a specific type, click the blue arrow at the upper-left corner of the view to access the view menu and select **Edit**. In the **Select Operation Filter** dialog box, choose an IP SLA operation type from the **Select Operation Filter** drop-down list and click **OK**.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report and IP SLA Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the IP SLA report, IP SLA Dashboard report, and Top Deviation from Normal report.

Top Paths

Displays the completion rate, number of hops, and the minimum, average, and maximum round trip times for paths in the selected IP SLA Path Echo operation during the selected time period.

Context: This view requires a selected IP SLA Path Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expression:

CompRate	The round trip completion rate for the path by number.
# Hops	The number of hops on the path
Min RTT	The minimum RTT value observed for the path
RTT	The average RTT value for the path
Maximum RTT	The maximum RTT value observed for the path

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Path Echo Response Report.

UDP Echo Availability

Displays the availability and unavailability percentages, by date/time, for the selected IP SLA UDP Echo operation over the selected time period.

Context: This view requires a selected IP SLA UDP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avail	The average completion rate for the operation
Unavail	Value calculated by subtracting the availability percentage from 100

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

UDP Echo Completion Summary

Displays the completion rate (percentage), by date/time, for the selected IP SLA UDP Echo operation over the selected time period.

Context: This view requires a selected IP SLA UDP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expression:

Completion Rate	Completion rate as a percentage.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

UDP Echo Errors

Displays the error percentages (each type by date/time) for the selected IP SLA UDP Echo operation over the selected time period.

Context: This view requires a selected IP SLA UDP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

Errors	The total percentage of errored requests, excluding timeouts, busies, and drops
Timeouts	The percentage of requests that could not connect to the server
Busies	The percentage of occasions when a UDP Echo operation could not be initiated because a previous operation had not been completed
Drops	The percentage of occasions when a UDP Echo could not be initiated because of an internal error

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the UDP Echo Response Report.

UDP Echo Response

Displays the average round-trip time, error percentage, and completion percentage for the selected IP SLA UDP Echo operation during the selected time period.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.

Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

Context: This view requires a selected IP SLA UDP Echo test to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the UDP Echo Response Report.

UDP Echo Round Trip Time Trend vs. Baseline

Displays the average round trip time vs. baseline (normal) for the selected IP SLA UDP Echo operation over the selected time period.

Note: The 30-day moving baseline is calculated using the value for each hour of the day and the percentage usage for each hour of the day compared to the theoretical maximum (threshold) for the operation over the selected time period. The effects of a threshold change in an alarm profile assigned to the router or switch are not seen until the NetVoyant product recalculates the rolling baselines (midnight, by default).

Context: This view requires a selected IP SLA UDP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

**RTT** The average round trip time for the operation

Completion Rate Percentage of completions/initiations

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the UDP Echo Response Report.

UDP Echo Round Trip Trend

Displays the minimum, maximum, and average round trip time with the completion percentage for the selected IP SLA UDP Echo operation over the selected time period.

Context: This view requires a selected IP SLA UDP Echo test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

**Min** The minimum observed round trip time for the operation

> **Note:** This expression is displayed only when the view resolution is greater than the poll rate.

Avg The average round trip time for the operation

Max The maximum observed round trip time for the operation

> **Note:** This expression is displayed only when the view resolution is greater than the poll rate.

Completion Rate Percentage of completions/initiations

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

VoIP Availability

Displays the availability and unavailability percentages, by date/time, for the selected IP SLA VoIP Jitter operation over the selected time period.

Context: This view requires a selected IP SLA Jitter test to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avail   The average completion rate for the operation

Unavail   Value calculated by subtracting the availability percentage from 100
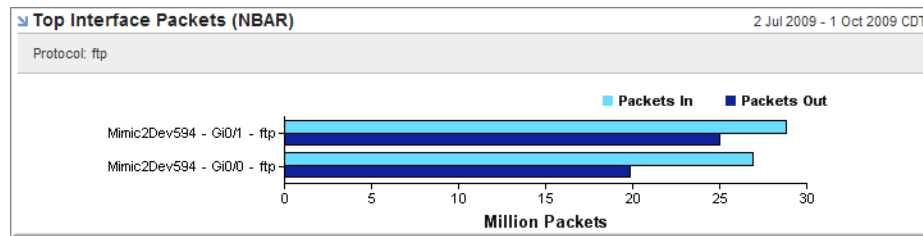
Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

VoIP Completion Summary

Displays the completion rate (percentage), by date/time, for the selected IP SLA VoIP Jitter operation over the selected time period.

Context: This view requires a selected IP SLA Jitter test to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expression:

Completion Rate   Completion rate as a percentage.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

VoIP Errors

Displays the error percentages (each type by date/time) for the selected IP SLA VoIP Jitter operation over the selected time period.
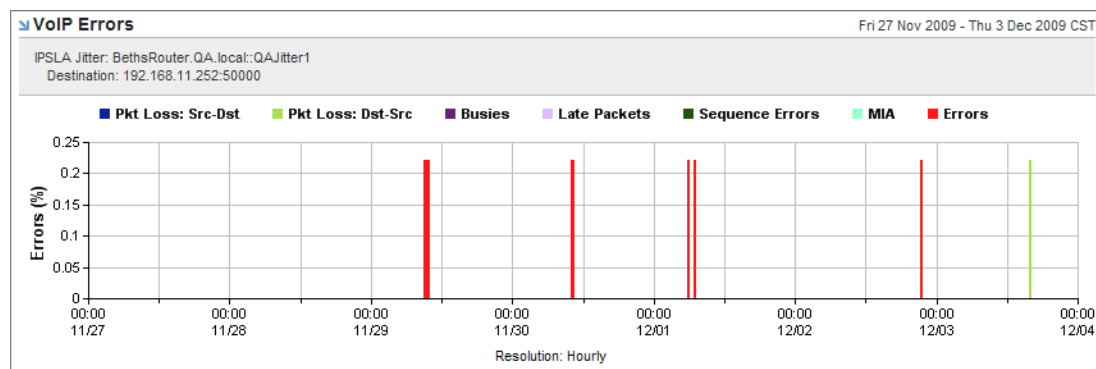
Context: This view requires a selected IP SLA Jitter test to be displayed.

Data: The metric used to render this view is `rttstats`, which corresponds to the IPSLA Statistics dataset in NetVoyant. The view includes data for the following expressions:

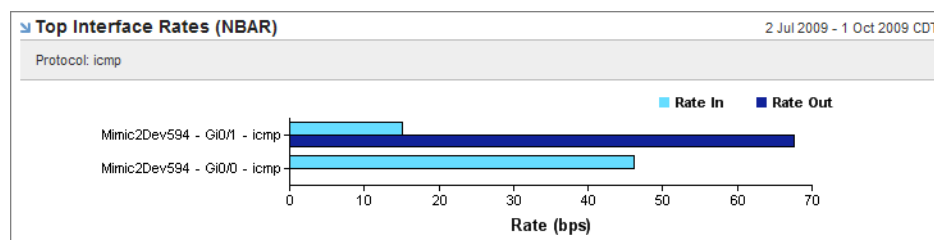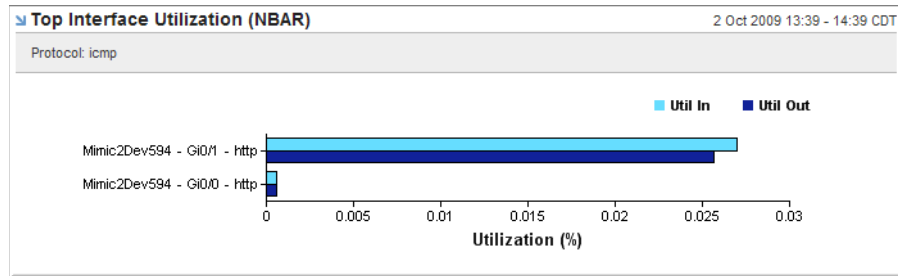**Pkt Loss: Src-Dst**   The packet loss percentage on source to destination

Pkt Loss: Dst-Src   The packet loss percentage on destination to source

Busies   The percentage of occasions when the VoIP Jitter operation could not be initiated because a previous operation had not been completed

Late Packets   The percentage of occasions when a packet arrived late

Sequence Errors   The percentage of occasions when packets arrived out-of-sequence

MIA   The percentage of occasions where one or more packets were missing

Errors   The total percentage of errored requests

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Enhanced UDP For Voice (VoIP) Report.

VoIP Jitter/Round Trip Time

Displays the average source-to-destination jitter, destination-to-source jitter, and round trip time for the selected IP SLA VoIP Jitter operation during the selected time period.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.

Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

Context: This view requires a selected IP SLA Jitter test to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the Enhanced UDP For Voice (VoIP) Report.

VoIP Round Trip Time

Displays the minimum, maximum, and average round trip time with the completion percentage for the selected IP SLA VoIP Jitter operation over the selected time period.

Context: This view requires a selected IP SLA Jitter test to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expressions:

Min	The minimum observed round trip time for the operation
Avg	The average round trip time for the operation
Max	The maximum observed round trip time for the operation
Completion Rate	Percentage of completions/initiations

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Enhanced UDP For Voice (VoIP) Report.

VoIP Round Trip Time vs. Baseline

Displays the average round trip time vs. baseline (normal) for the selected IP SLA VoIP operation over the selected time period.

Note: The 30-day moving baseline is calculated using the value for each hour of the day and the percentage usage for each hour of the day compared to the theoretical maximum (threshold) for the operation over the selected time period. The effects of a threshold change in an alarm profile assigned to the router or switch are not seen until the NetVoyant product recalculates the rolling baselines (midnight, by default).

Context: This view requires a selected IP SLA Jitter test to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expressions:

RTT	The average round trip time for the operation
Completion Rate	Percentage of completions/initiations

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

NAVIGATION VIEWS

The following sections describe the views related to group navigation and filters that you can use to customize report pages. These "views" provide tools for changing or filtering the selected reporting group, time filter, IP SLA operation type, metric, and/or managed object name to affect the data displayed in the report page.

Group Navigation

This view inserts two drop-down lists in the report page that enable the viewer to:

- Change the context for the displayed data on a report page to a selected network or group.
- Filter the report data on the report page to a selected time filter.

Group/IP SLA Navigation

This view inserts three drop-down lists in the report page that enable the viewer to:

- Change the context for the displayed data on a report page to a selected network or group.
- Filter the report data on the report page to a selected time filter.
- Filter the report data on the report page to only the selected IP SLA operation type.

Group/Metrics/Filter Navigation

This view inserts four drop-down lists at the top of the report page that enable the viewer to:

- Change the context for the displayed data on a report page to a selected network or group.
- FIlter the report data on the report page to a selected time filter.
- Filter the report data on the report page to a selected type of data.
- Filter the report data on the report page to only those objects that have a name that matches a filter expression.

IPSLA Navigation

This view inserts two drop-down lists in the report page that enable the viewer to:

- Filter the report data on the report page to only the selected IP SLA operation type.
- Filter the report data on the report page to a selected time filter.

Metrics/Filter Navigation

This view inserts three drop-down lists in the report page that enable the viewer to:

- Filter the report data on the report page to a selected time filter.
- Filter the report data on the report page to a selected type of data.
- Filter the report data on the report page to only those objects that have a name that matches a filter expression.

NBAR Views

The following sections describe the views related to protocols (NBAR) that you can add to your report pages. This information includes the view styles available for each view, the metric used to render the view, and the standard report pages that include the view by default.

NBAR views are designed to provide status and performance information about protocols within reporting groups.

Protocol Packets

Displays the number of inbound and outbound packets for the selected NBAR protocol over the selected time period.

Context: This view requires a selected protocol to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Packets In	Count of inbound packets
Packets Out	Count of outbound packets

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Detail Report.

Protocol Rates

Displays the rates (bits/second) of inbound and outbound packets for the selected NBAR protocol during the selected time period.
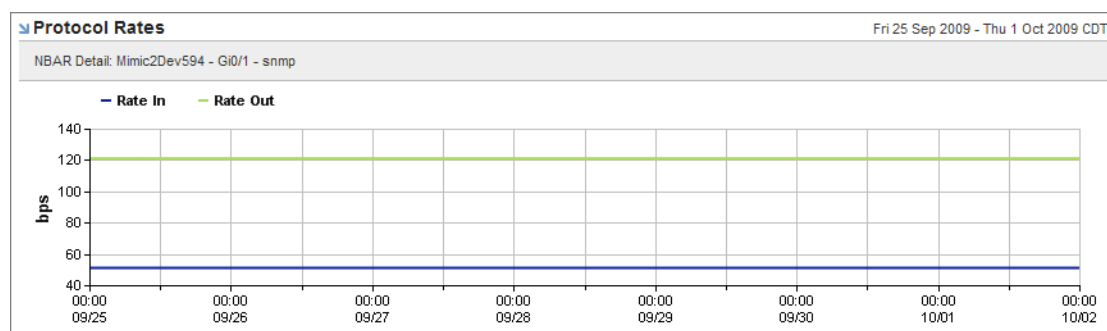
Context: This view requires a selected protocol to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Rate In   Inbound rate (bps) for the interface

Rate Out   Outbound rate (bps) for the interface

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Detail Report.

Protocol Utilization (NBAR)

Displays the inbound and outbound utilization percentages for the selected NBAR protocol during the selected time period.
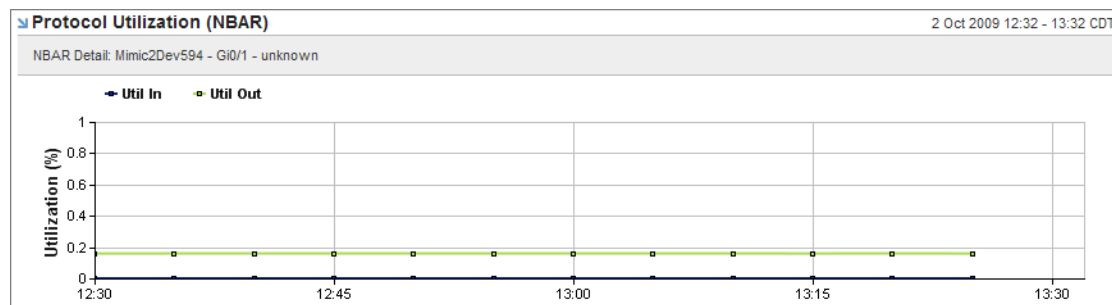
Context: This view requires a selected protocol to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Util In   Utilization percentage for inbound traffic

Util Out   Utilization percentage for outbound traffic

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Detail Report.

Protocol Volume

Displays the inbound and outbound volume (MB), by date/time, for the selected NBAR protocol over the selected time period.
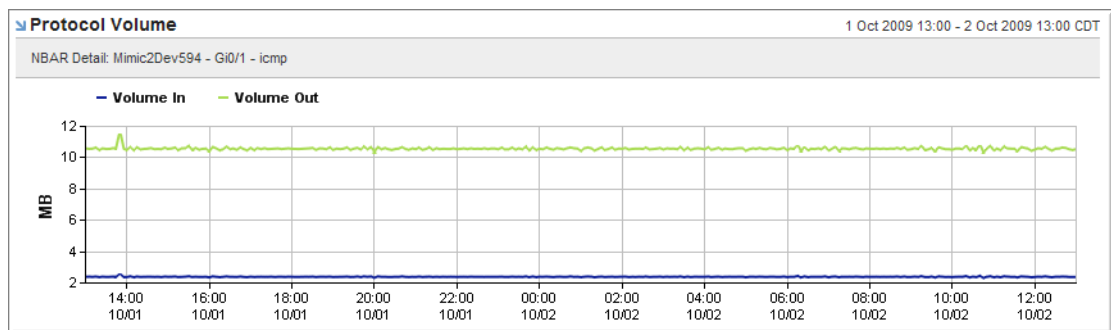
Context: This view requires a selected protocol to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Volume In   Volume (MB) of inbound traffic

Volume Out   Volume (MB) of outbound traffic

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Detail Report.

Top Interface Packets (NBAR)

Displays the number of inbound and outbound packets, by interface, for the selected NBAR protocol on those interfaces with the highest total number of packets during the selected time period.

Context: This view requires a selected protocol to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Packets In	Count of inbound packets
Packets Out	Count of outbound packets

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Summary Report and Protocol Detail Report.

Top Interface Rates (NBAR)

Displays the rate (bits/second) of inbound and outbound packets, by interface, for the selected NBAR protocol on those interfaces with the highest combined rate during the selected time period.

Context: This view requires a selected protocol to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:
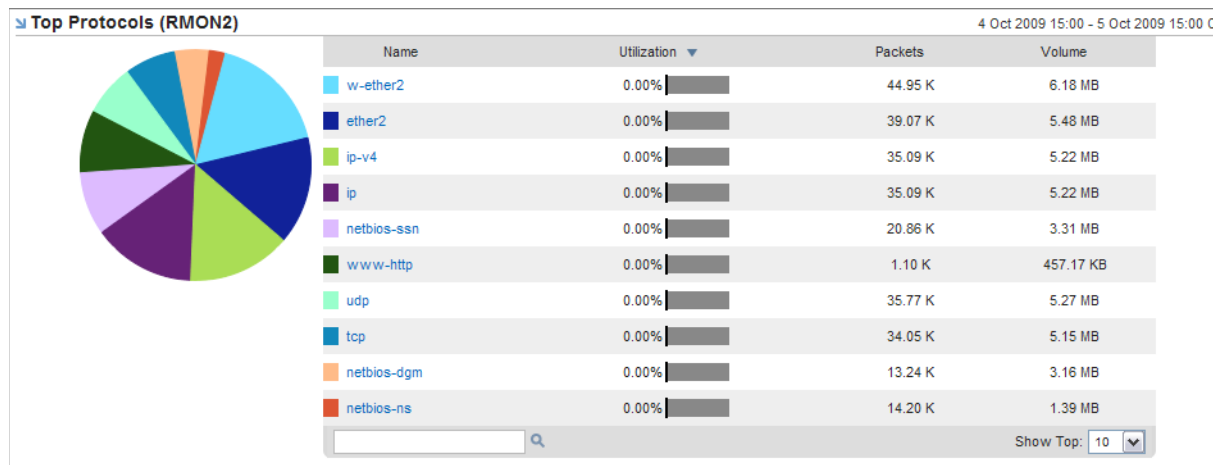
Rate In	Transmission rate (bps) for inbound packets
Rate Out	Transmission rate (bps) for outbound packets

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Summary Report and Protocol Detail Report.

Top Interface Utilization (NBAR)

Displays the utilization percentage of inbound and outbound traffic, by interface, for the selected NBAR protocol on those interfaces with the highest combined utilization during the selected time period.

Context: This view requires a selected protocol to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Rate In	Transmission rate (bps) for inbound packets
Rate Out	Transmission rate (bps) for outbound packets

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Summary Report.

Top Interface Volume (NBAR)

Displays the volume of inbound and outbound traffic, by interface, for the selected NBAR protocol on those interfaces with the highest combined volume during the selected time period.

Context: This view requires a selected protocol to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Volume In	Total volume (MB) for inbound packets
Volume Out	Total volume (MB) for outbound packets

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Summary Report.

Top Interfaces for Protocol (NBAR)

Displays the packet volume values for the selected NBAR protocol on those interfaces experiencing the highest levels of utilization during the selected time period.
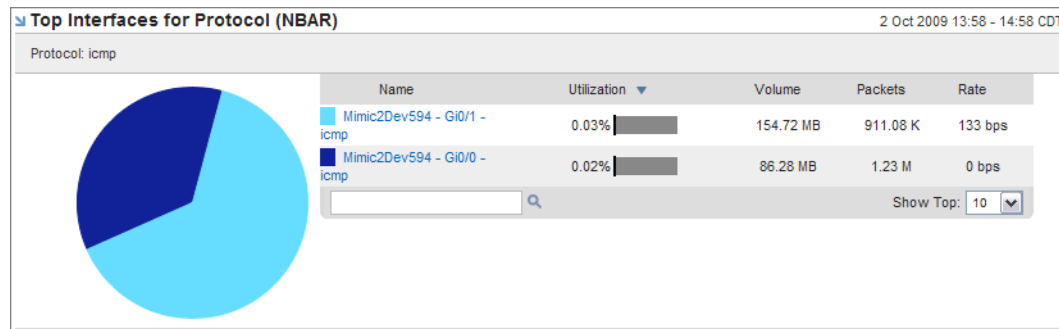
Context: This view requires a selected protocol to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Utilization	Total protocol utilization (%) for the interface
Volume	Total protocol volume (MB) for the interface
Packets	Total number of protocol packets for the interface
Rate	Average protocol rate (bps) for the interface

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is included by default in the Protocol Summary Report.
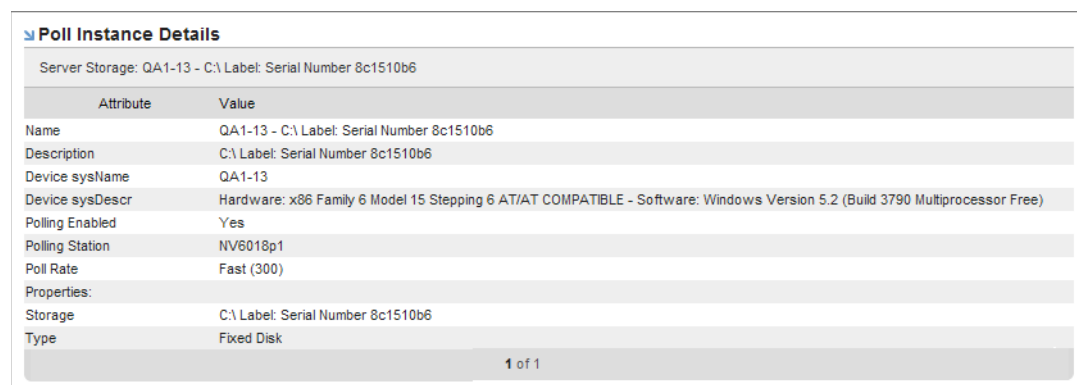
POLL INSTANCE VIEWS

The following sections describe the views related to poll instances that you can add to your report pages. This information includes the view styles available for each view, the metric used to render the view, and the standard report pages that include the view by default.

When the NetVoyant Topology service gathers data from a device, it correlates all OID-labeled data for one managed object with one poll instance. If it gathers data from your server that supports the Host Resources MIB, it correlates data for all OIDs in that MIB (`hrStorgeSize`, `hrStorageUsed`, `hrStorageAllocationFailures`) for one hard drive with one poll instance. The NetVoyant product correlates all data for all OIDs for another hard drive with a separate poll instance. If a device collects data for a polled MIB table from four managed objects, it has four correlated poll instances.

Poll Instance Details

Displays detailed information for the selected poll instance of the storage or memory volume.

Context: This view requires a selected server storage volume to be displayed.

Data: This view uses multiple metrics to render property information for the managed object. This view includes values for the following attributes:

Name	The poll instance's name as defined by Poll Instance Name template for the dataset in the NetVoyant Console.
Description	The poll instance's description as defined by Poll Instance Description template for the dataset in the NetVoyant Console.
Device sysName	The device's name as identified in the sysName OID on the device.
Device sysDescr	The device's description as identified in the sysDescr OID on the device.
Polling Enabled	Indicates whether polling is enabled for the device. If polling is enabled, the NetVoyant system is gathering data for the device.
Polling Station	The NetVoyant server that polls the device for SNMP statistics. In a distributed configuration, this is the poller that polls the device. In a standalone configuration, the poller is the Master Console.
Poll Rate	The poll rate (interval) for the device

Properties	Properties, if any, configured for the poll instance
Storage	*(Storage volumes only)* The name of the storage volume.
Type	*(Storage volumes only)* The storage volume type.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Cisco Memory Pool Performance Report, Cisco Switch Performance Report, Server Storage Performance Report, and CBQoS Class Map Detail Report.

Poll Instance List

Displays a detailed list of the poll instances in a selected reporting group or managed object. The information presented is similar to what is displayed when you perform a poll instance search.

Note: This view cannot be edited in the Custom View Wizard.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: This view uses multiple metrics to render property information for the reporting group or managed object. This view includes values for the following attributes:

Name	The poll instance's name as defined by Poll Instance Name template for the dataset in the NetVoyant Console.
Device	The device name as identified in the sysName OID on the device.
Metrics	The dataset used for the poll instance
Device	The device name as identified in the sysName OID on the device.

Polling Status	The device's current polling status, which can be one of the following:
	• Enabled
	• Disabled
	• Manually Disabled
	• Auto-Disabled
	• Expiring
	• Off-line
	• Out-of-scope
	For more information, see the *NetVoyant Administrator Guide*.
Polling Expiration	If an interface's status is Auto-disabled or Out-of-scope, this is the date and time of its last poll instance/interface expiration.
	Each dataset has a setting for poll instance expiration. If the NetVoyant product determines that a poll instance or interface is out-of-scope or unresponsive, its expiration clock will start and elapse according to the number of days indicated in the dataset. When it expires, the poll instance or interface no longer exists for that device.
Description	The poll instance's description as defined by the Poll Instance Description template for the Interface Statistics dataset in the NetVoyant Console.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

PROTOCOL VIEWS

The following sections describe the views related to NBAR and Remote Monitoring (RMON) protocol data that you can add to your report pages. Also listed are the view styles possible for each view and the standard report pages on which each view is displayed.

Note: RMON2 protocol views require an RMON2 probe. For more information about configuring RMON2 probes in the NetVoyant Console, see the *NetVoyant Administrator Guide*.

Application List

Displays a list of applications observed by an RMON probe in the selected reporting group or attached to a managed object. This view enables you to quickly drill in to see more information about a selected application's protocols.

Context: This view requires a selected reporting group, device, or switch to be displayed.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top (All Traffic) Protocols (RMON2)

Displays the utilization, volume, and packet statistics observed by an RMON probe in the selected reporting group or attached to a selected managed object for those protocols with the highest utilization during the selected time period.
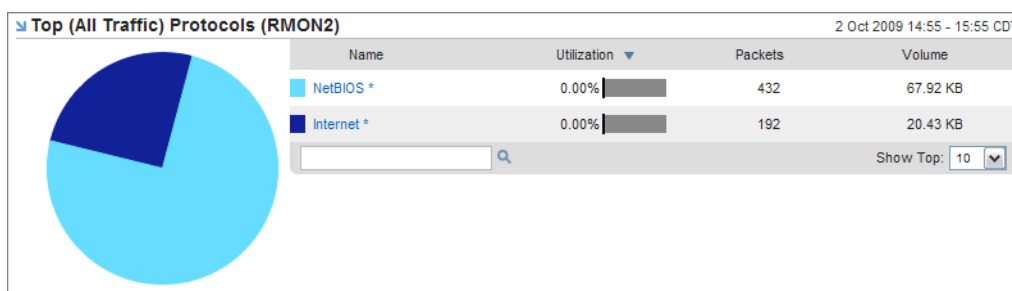
Context: This view requires a selected reporting group, device, or switch to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:
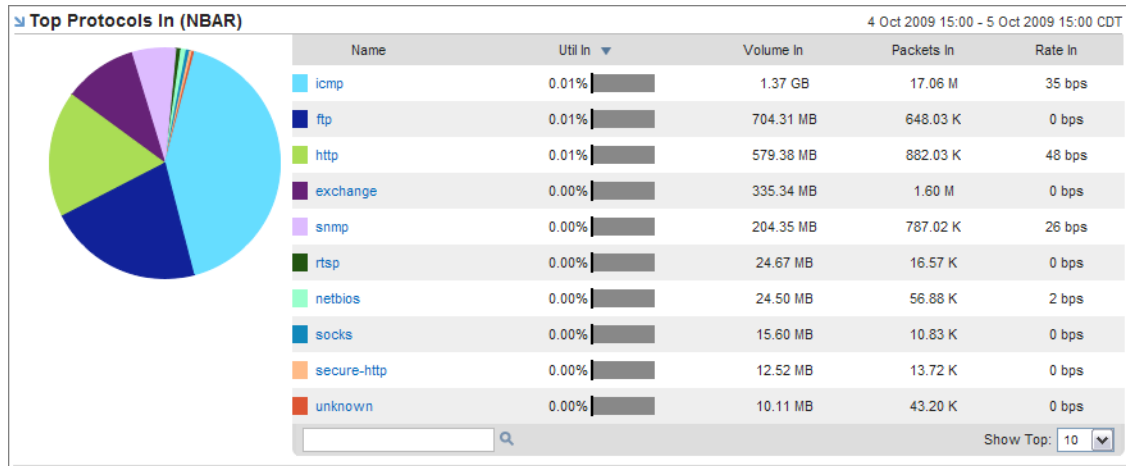
Utilization   Average utilization(%) for the protocol

Packets   Count of packets for the protocol

Volume   Total volume (MB) for the protocol

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is included by default in the Protocol Distribution Report.

Top Application Protocols (RMON2)

Displays the utilization, volume, and packet statistics (organized by application type) observed by an RMON probe in the selected reporting group or attached to a selected managed object for those protocols with the highest utilization during the selected time period.

Context: This view requires a selected reporting group, device, or switch to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Utilization   The average utilization(%) for the application

Packets   Count of packets for the application

Volume   Total volume (MB) for the application

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top H323 Protocols (RMON2)

Displays the number and utilization of inbound and outbound packets for H323 protocols in the selected reporting group or on the selected managed object with the highest total number of packets during the selected time period.

Context: This view requires a selected reporting group, device, or switch to be displayed.

Data: The metric used to render this view is `protodist`, which corresponds to the Protocol Distribution (RMON2) dataset in NetVoyant. The view includes data for the following expressions:

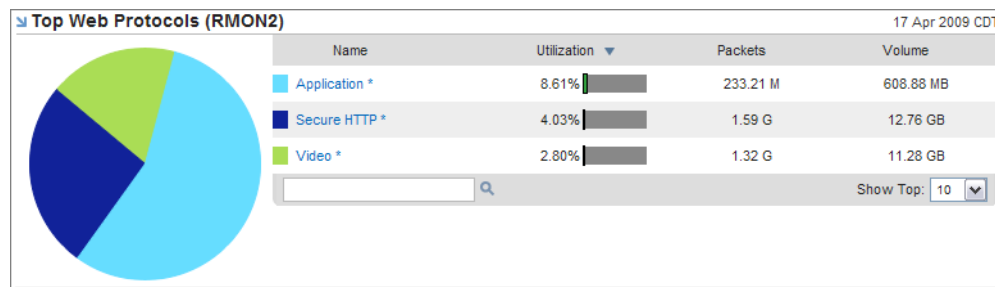|	
Utilization	The average utilization(%) for the application
Packets	Count of packets for the application
Volume	Total volume (MB) for the application

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top IP Protocols (RMON2)

Displays the number and utilization of inbound and outbound packets for IP protocols in the selected reporting group or on the selected managed object with the highest total number of packets during the selected time period.
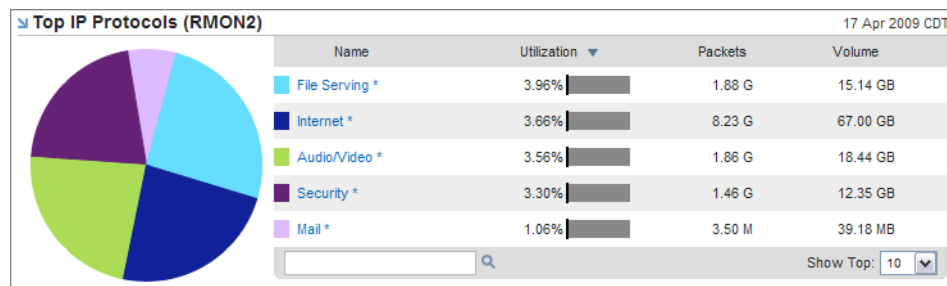
Context: This view requires a selected reporting group, device, or switch to be displayed.

Data: The metric used to render this view is `protodist`, which corresponds to the Protocol Distribution (RMON2) dataset in NetVoyant. The view includes data for the following expressions:

Utilization	The average utilization(%) for IP applications
Packets	Count of packets for IP applications
Volume	Total volume (MB) for IP applications

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Protocols (RMON/NBAR) report.

Top IPX Protocols (RMON2)

Displays the number and utilization of inbound and outbound packets for IPX protocols in the selected reporting group or on the selected managed object with the highest total number of packets during the selected time period.

Context: This view requires a selected reporting group, device, or switch to be displayed.

Data: The metric used to render this view is `protodist`, which corresponds to the Protocol Distribution (RMON2) dataset in NetVoyant. The view includes data for the following expressions:

Utilization	The average utilization(%) for IPX applications
Packets	Count of packets for IPX applications
Volume	Total volume (MB) for IPX applications

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Network Protocols (RMON2)

Displays the number and utilization of inbound and outbound packets for all network protocols in the selected reporting group or on the selected managed object with the highest total number of packets during the selected time period.

Context: This view requires a selected reporting group, device, or switch to be displayed.

Data: The metric used to render this view is `protodist`, which corresponds to the Protocol Distribution (RMON2) dataset in NetVoyant. The view includes data for the following expressions:

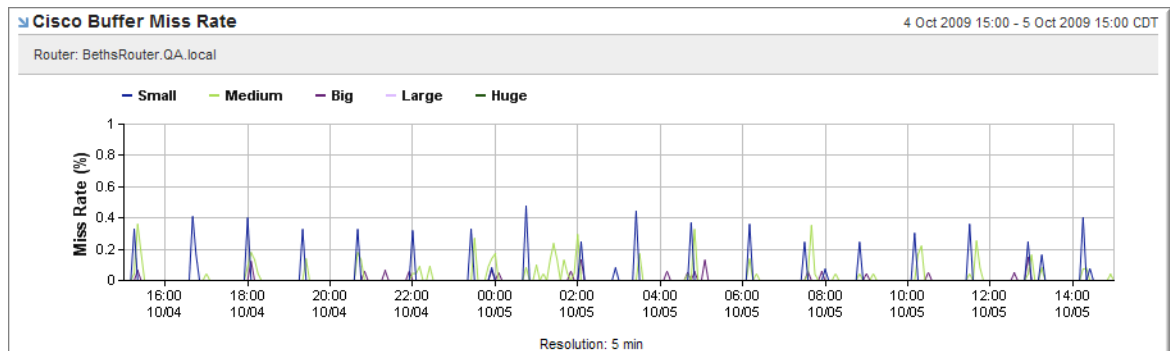|	
Utilization	The average utilization(%) for all network applications
Packets	Count of packets for all network applications
Volume	Total volume (MB) for all network applications

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is included by default in the Protocol Distribution Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Protocols (RMON/NBAR) report.

Top Protocol Packets (NBAR)

Displays the number of inbound and outbound packets for those protocols in the selected reporting group with the highest total number of packets during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Packets In	Count of inbound packets
Packets Out	Count of outbound packets

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Distribution Report.

Top Protocol Rates (NBAR)

Displays the rate (bits/second) of inbound and outbound packets for those protocols in the selected reporting group with the highest combined rate during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Rate In   Transmission rate (bps) for inbound packets

Rate Out   Transmission rate (bps) for outbound packets

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Distribution Report.

Top Protocol Utilization (NBAR)

Displays the utilization percentage of inbound and outbound traffic for those protocols in the selected reporting group with the highest combined utilization during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Util In   Utilization percentage for inbound traffic
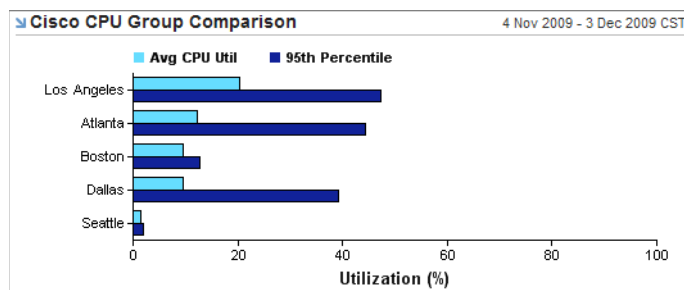
Util Out   Utilization percentage for outbound traffic

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Protocol Distribution Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Protocols (RMON/NBAR) report.

Top Protocol Volume (NBAR)

Displays the volume of inbound and outbound traffic for those protocols in the selected reporting group with the highest combined volume during the selected time period.
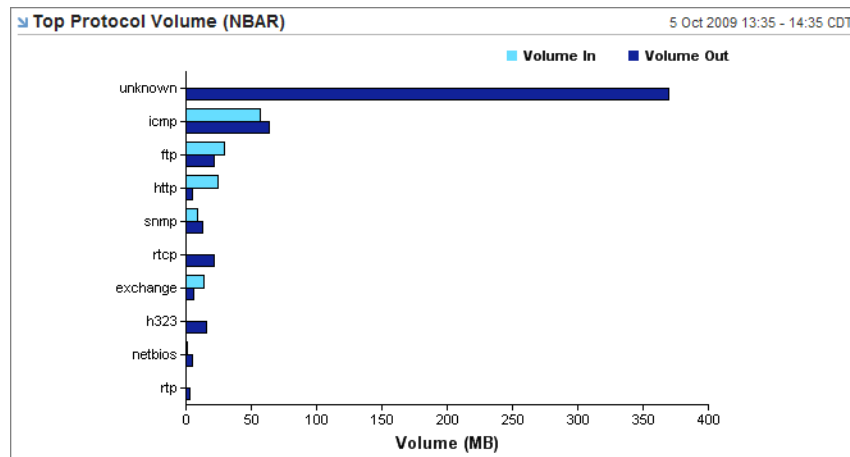
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Volume In	Total volume (MB) for inbound packets
Volume Out	Total volume (MB) for outbound packets

Standard NetVoyant reports: This view is included by default in the Protocol Distribution Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Protocols (RMON/NBAR) report.

Top Protocols (RMON2)

Displays the utilization, volume, and packet statistics observed by an RMON probe in the selected reporting group or attached to a selected managed object for those protocols with the highest utilization during the selected time period.
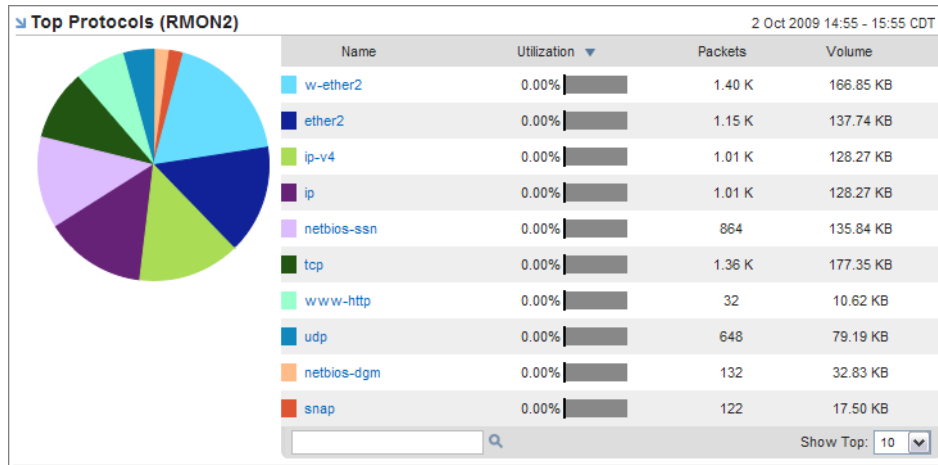
Context: This view requires a selected reporting group, protocol group, device, or switch to be displayed.

Data: The metric used to render this view is `protodist`, which corresponds to the Protocol Distribution (RMON2) dataset in NetVoyant. The view includes data for the following expressions:

Utilization	The average utilization(%) for the protocol
Packets	Count of packets for the protocol
Volume	Total volume (MB) for the protocol

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, Protocol Distribution Report, Protocol Group Detail report, and Switch Capabilities Report.

Top Protocols In (NBAR)

Displays the inbound utilization, volume, packet, and rate statistics for the protocols in the selected reporting group with the highest utilization during the selected time period.

Top Protocols In (NBAR)				4 Oct 2009 15:00 - 5 Oct 2009 15:00 CDT	
	Name	Util In ▼	Volume In	Packets In	Rate In
	icmp	0.01%	1.37 GB	17.06 M	35 bps
	ftp	0.01%	704.31 MB	648.03 K	0 bps
	http	0.01%	579.38 MB	882.03 K	48 bps
	exchange	0.00%	335.34 MB	1.60 M	0 bps
	snmp	0.00%	204.35 MB	787.02 K	26 bps
	rtsp	0.00%	24.67 MB	16.57 K	0 bps
	netbios	0.00%	24.50 MB	56.88 K	2 bps
	socks	0.00%	15.60 MB	10.83 K	0 bps
	secure-http	0.00%	12.52 MB	13.72 K	0 bps
	unknown	0.00%	10.11 MB	43.20 K	0 bps

Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

Util In	The average inbound utilization(%) for the protocol
Volume In	Total inbound volume (MB) for the protocol
Packets In	Count of inbound packets for the protocol
Rate In	Transmission rate (bps) for inbound packets

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is included by default in the Protocol Distribution Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Protocols (RMON/NBAR) report.

Top Protocols Out (NBAR)

Displays the outbound utilization, volume, packet, and rate statistics for the protocols in the selected reporting group with the highest utilization during the selected time period.

↘ Top Protocols Out (NBAR)				4 Oct 2009 15:00 – 5 Oct 2009 15:00 CDT
Name	Util Out ▼	Volume Out	Packets Out	Rate Out
unknown	0.08%	8.87 GB	6.87 M	56 bps
icmp	0.01%	1.52 GB	8.61 M	32 bps
ftp	0.00%	519.54 MB	561.63 K	0 bps
rtcp	0.00%	513.66 MB	12.18 M	0 bps
h323	0.00%	374.86 MB	2.16 K	0 bps
snmp	0.00%	317.29 MB	1.04 M	61 bps
exchange	0.00%	144.00 MB	562.02 K	0 bps
netbios	0.00%	111.76 MB	172.80 K	1 bps
http	0.00%	105.93 MB	838.82 K	35 bps
rtp	0.00%	75.34 MB	1.78 M	0 bps

Show Top: 10
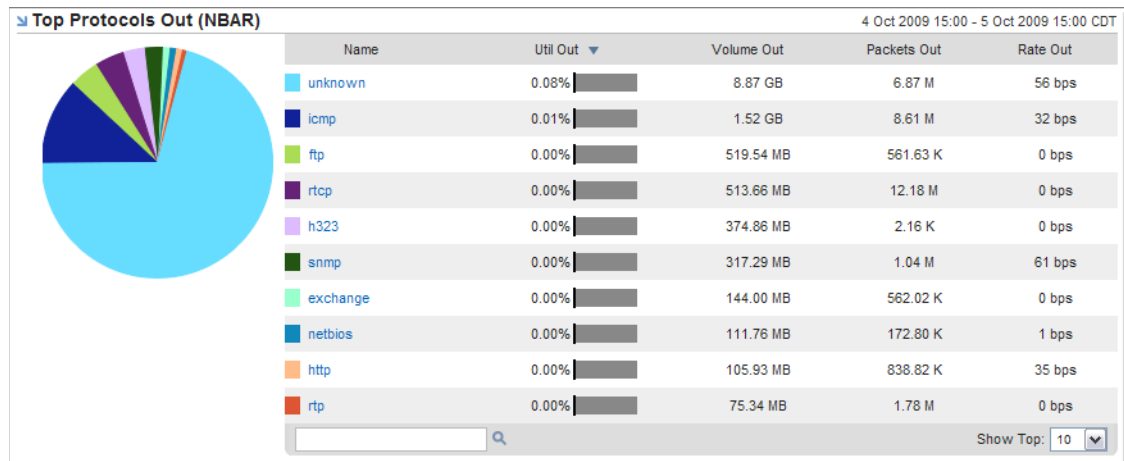
Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `nbarstats`, which corresponds to the Protocol Distribution (NBAR) dataset in NetVoyant. The view includes data for the following expressions:

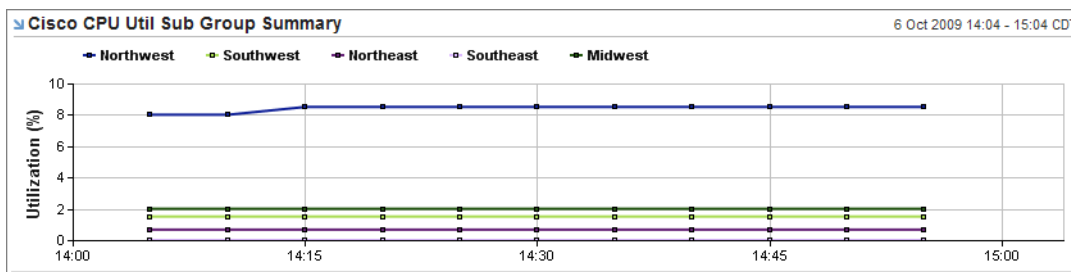|	
Util Out	The average outbound utilization(%) for the protocol
Volume Out	Total outbound volume (MB) for the protocol
Packets Out	Count of outbound packets for the protocol
Rate Out	Transmission rate (bps) for outbound packets

Styles: This view can be displayed as a table/pie chart only.
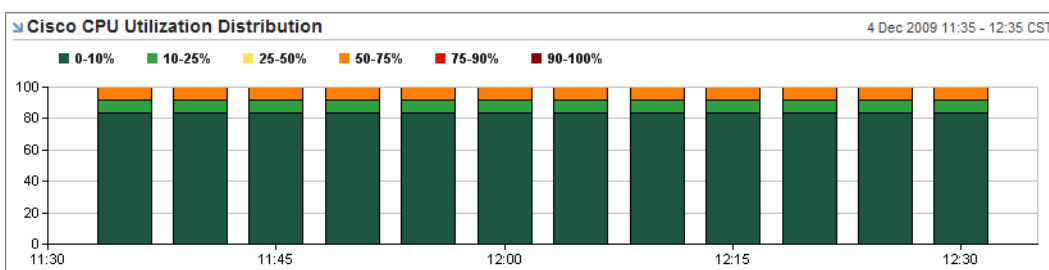
Standard NetVoyant reports: This view is included by default in the Protocol Distribution Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Protocols (RMON/NBAR) report.

Top Transport Protocols (RMON2)

Displays the utilization, volume, and packet statistics observed by an RMON probe in the selected reporting group or attached to a selected managed object for those transport protocols with the highest utilization during the selected time period.

Context: This view requires a selected reporting group, device, or switch to be displayed.

Data: The metric used to render this view is `protodist`, which corresponds to the Protocol Distribution (RMON2) dataset in NetVoyant. The view includes data for the following expressions:

Utilization	The average utilization(%) for the protocol

Packets	Count of packets for the protocol
Volume	Total volume (MB) for the protocol

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Protocols (RMON/NBAR) report.

Top Web Protocols (RMON2)

Displays the utilization, volume, and packet statistics observed by an RMON probe in the selected reporting group or attached to the selected managed object for those web protocols with the highest utilization during the selected time period.

Context: This view requires a selected reporting group, device, or switch to be displayed.

Data: The metric used to render this view is `protodist`, which corresponds to the Protocol Distribution (RMON2) dataset in NetVoyant. The view includes data for the following expressions:

|	
Utilization	The average utilization(%) for the protocol
Packets	Count of packets for the protocol
Volume	Total volume (MB) for the protocol

Styles: This view can be displayed as a table/pie chart only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Protocols (RMON/NBAR) report.

ROUTER AND SWITCH VIEWS

The following sections describe the views related to routers and switches that you can add to your report pages. Also listed are the view styles possible for each view and the standard report pages on which each view is displayed.

95th Percentile Cisco CPU Utilization Scorecard

Displays an overview scorecard for the 95th percentile CPU utilization of Cisco devices across multiple groups or subgroups. You can select a goal range for the values to determine how the values in the scorecard display.

Scorecard views display monthly performance data for the previous six month or seven week period by sub-group, for the currently selected group. Scorecards are high-level indicators of whether or not measured resources are meeting service-level goals. These views incorporate check marks and exclamation points as visual indicators to enhance quick understanding.

95th Percentile Cisco CPU Utilization Scorecard								Fri 27 Nov 2009 - Thu 3 Dec 2009 CST
Group ▲	Target	Oct 18	Oct 25	Nov 1	Nov 8	Nov 15	Nov 22	Nov 29	Average
– Routers	<= 95.00	✔ 14.2	✔ 21.7	✔ 17.2	✔ 21.7	✔ 19.7	✔ 17.3	✔ 19.4	✔ 17.1
Midwest	<= 95.00	✔ 2.0	✔ 2.0	✔ 2.0	✔ 2.0	--	--	✔ 2.0	✔ 2.0
Northeast	<= 95.00	✔ 1.8	✔ 1.8	✔ 1.8	✔ 1.8	--	--	✔ 1.8	✔ 1.8
Northwest	<= 95.00	✔ 16.3	✔ 24.2	✔ 19.8	✔ 24.2	✔ 19.7	✔ 19.3	✔ 25.0	✔ 19.9
Southeast	<= 95.00	✔ 0.0	✔ 0.0	✔ 0.0	✔ 0.0	--	✔ 0.0	✔ 0.0	✔ 0.0
Southwest	<= 95.00	✔ 2.0	✔ 2.7	✔ 2.7	✔ 2.7	--	--	✔ 2.7	✔ 2.5
			1 of 1					Max Per Page: 10 ∨

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

| **Month** or **Date**	The completion rate (percentage) for the group or sub-group, as a monthly or weekly average

Note: This scorecard view uses a default target percentage of 95.0, so that sub-groups with an average availability below that target are displayed with a red exclamation point to indicate that the item falls below the target. You can modify this target value in the Custom View Wizard to meet your organization's service level goals.

Styles: This view can be displayed as table only.

Standard NetVoyant reports: This view is included by default in the Scorecards Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Routers/Switches Overview report and the Scorecards report.

Cisco Buffer Miss Rate

Displays the average miss rate for buffers, categorized by size, on a selected Cisco device during the selected time period.

Context: This view requires a selected device, router, or switch to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

Small	The percentage of small buffer (104 bytes) misses to hits.
Medium	The percentage of middle buffer (600 bytes) misses to hits.
Big	The percentage of big buffer (1524 bytes) misses to hits.
Large	The percentage of large buffer (5024 bytes) misses to hits.
Huge	The percentage of huge buffer (18024 bytes) misses to hits.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Device Performance Report, Router Performance Report, and Switch Performance Report.

Cisco Buffer Utilization

Displays the average buffer utilization, categorized by size, on a selected Cisco device during the selected time period.
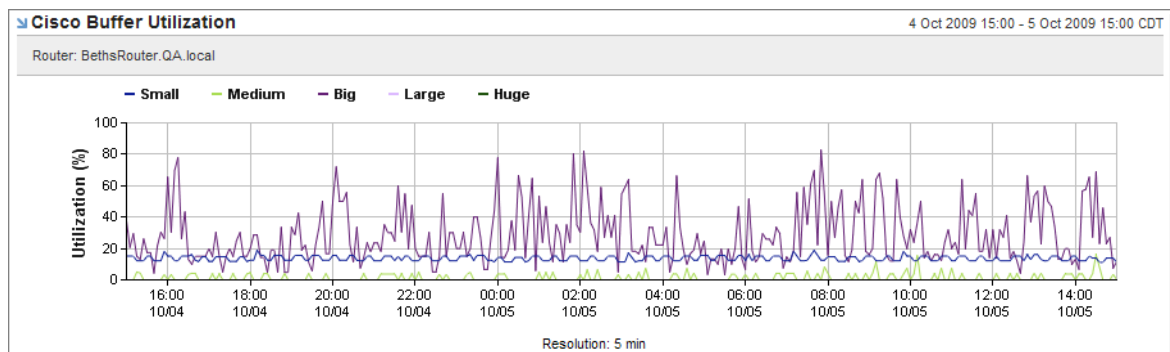
Context: This view requires a selected device, router, or switch to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

Small	The total utilization of small buffers (104 bytes)
Medium	The total utilization of middle buffers (600 bytes)
Big	The total utilization of big buffers (1524 bytes)
Large	The total utilization of large buffers (5024 bytes)
Huge	The total utilization of huge buffers (18024 bytes)

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Device Performance Report, Router Performance Report, and Switch Performance Report.

Cisco CPU Group Comparison

Displays the average and 95th percentile CPU utilization, by sub-group, for devices in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expressions:

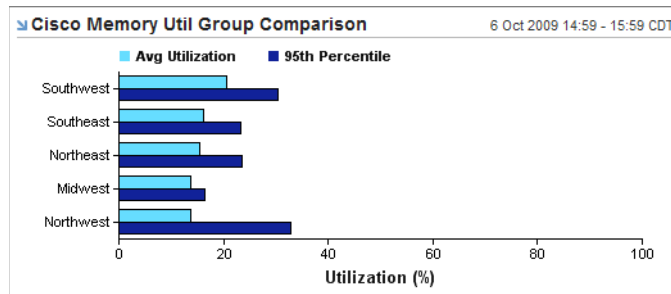|	
Avg CPU Util	The average CPU utilization percentage
95th Percentile	The average CPU utilization omitting the data outside of the 95th percentile. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.
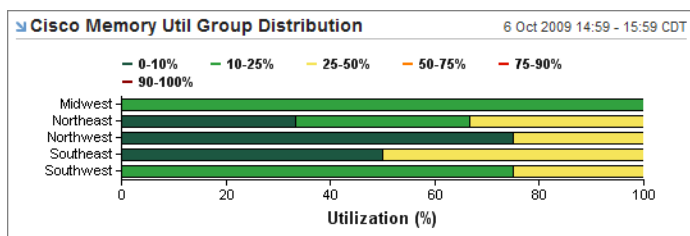
Standard NetVoyant reports: This view is included by default in the Router Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Group Comparison report.

Cisco CPU Util Distribution

Displays the average CPU utilization percentage range, by date/time, for devices in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

⊻ Cisco CPU Util Distribution					4 Dec 2009 11:29 - 12:29 CST	
Date/Time ▲	0-10%	10-25%	25-50%	50-75%	75-90%	90-100%
11:30	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
11:35	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
11:40	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
11:45	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
11:50	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
11:55	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
12:00	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
12:05	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
12:10	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
12:15	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%
12:20	10 / 83.33%	1 / 8.33%	0 / 0%	1 / 8.33%	0 / 0%	0 / 0%

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expressions:

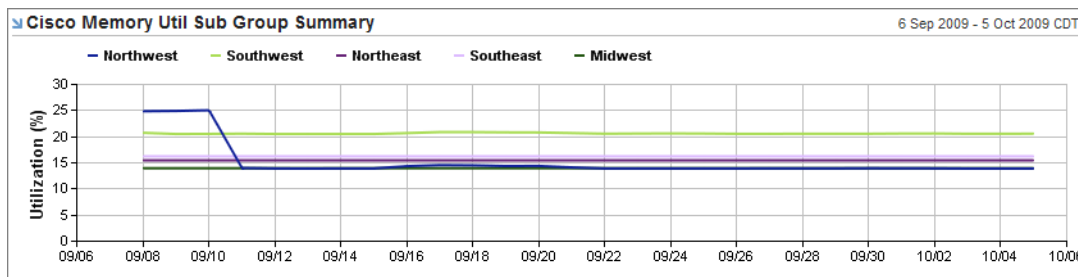|	
0-10%	Count and percentage of devices with a utilization of 10% or below.
10-25%	Count and percentage of devices with a utilization between 10 and 25%.
25-50%	Count and percentage of devices with a utilization between 25 and 50%.
50-75%	Count and percentage of devices with a utilization between 50 and 75%.
75-90%	Count and percentage of devices with a utilization between 75 and 90%.
90-100%	Count and percentage of devices with a utilization between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Cisco CPU Util Group Distribution

Displays the average CPU utilization percentage range, by subgroup, for devices in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expressions:

0-10%	Percentage of devices with a utilization of 10% or below.
10-25%	Percentage of devices with a utilization between 10 and 25%.
25-50%	Percentage of devices with a utilization between 25 and 50%.
50-75%	Percentage of devices with a utilization between 50 and 75%.
75-90%	Percentage of devices with a utilization between 75 and 90%.
90-100%	Percentage of devices with a utilization between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Cisco CPU Util Sub Group Summary

Displays the average CPU utilization percentage for each subgroup, by date/time, for all devices in the selected reporting group during the selected time period.

Group Summary views provide an aggregate view for the selected group broken down by sub-group to display meaningful comparisons of performance. Because reporting groups and sub-groups are typically organized to match your network organization, these views can also provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

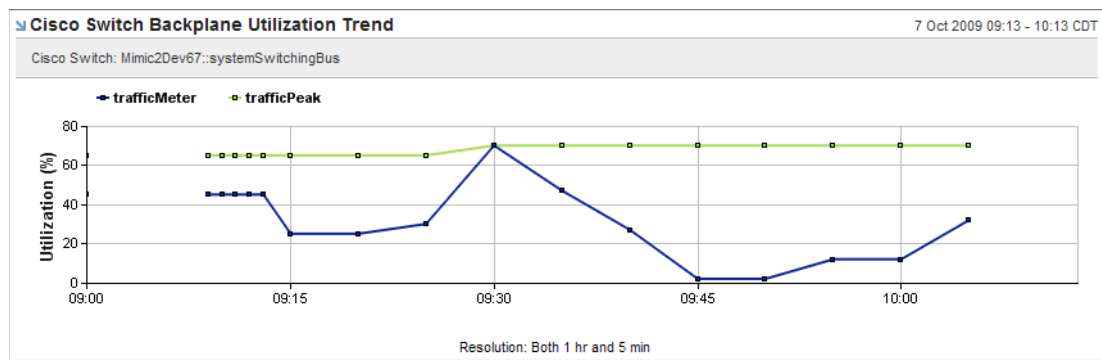   **Utilization**   The average CPU utilization percentage for the subgroup

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Group Comparison report.

Cisco CPU Utilization Distribution

Displays the average CPU utilization percentage range, by date/time, for devices in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expressions:

0-10%   Percentage of devices with a utilization of 10% or below.

10-25%   Percentage of devices with a utilization between 10 and 25%.

25-50%   Percentage of devices with a utilization between 25 and 50%.

50-75%   Percentage of devices with a utilization between 50 and 75%.

75-90%   Percentage of devices with a utilization between 75 and 90%.

90-100%   Percentage of devices with a utilization between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

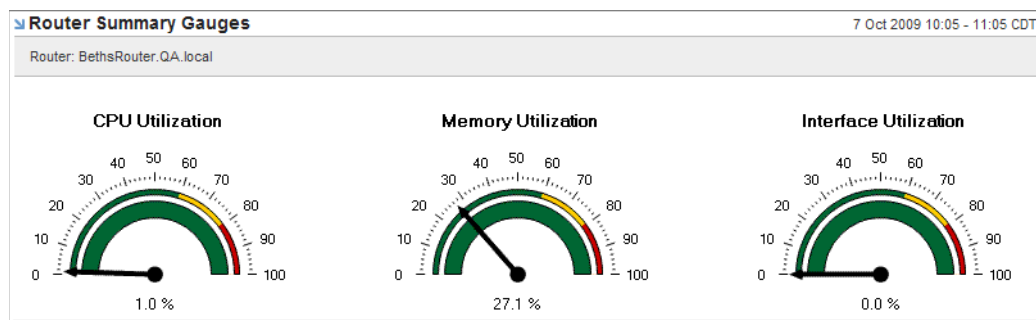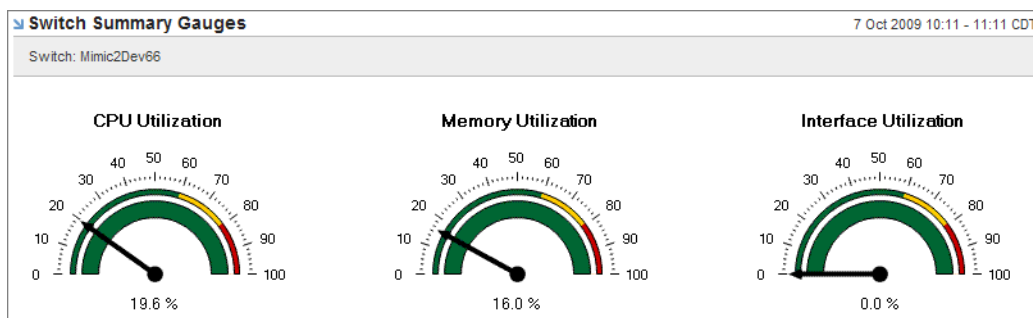**Standard NetVoyant reports:** This view is included by default in the Router Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Summary report.

Cisco CPU Utilization Trend

Displays the average CPU utilization for the selected Cisco device over the selected time period. This view includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default.
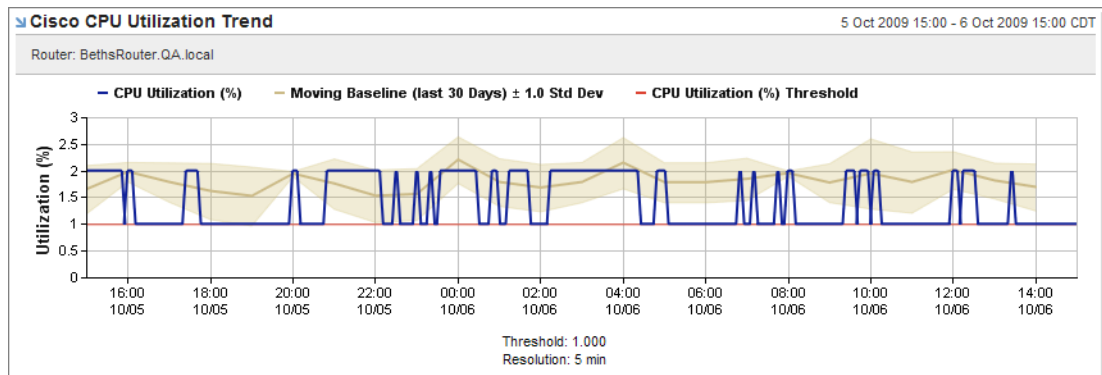
Context: This view requires a selected device, router, or switch to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

Utilization   The average CPU utilization percentage for the device

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Device Performance Report, Router Performance Report, and Switch Performance Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Performance report and the Switch Performance report.

Cisco Memory Pool Trend

Displays the used memory, free memory, and the size of the largest contiguous block of memory, by date/time, on the selected Cisco memory pool during a selected time period.
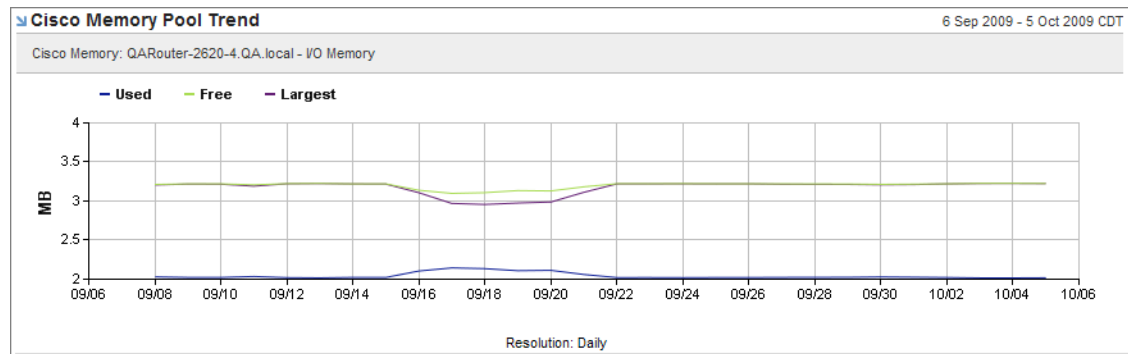
Context: This view requires a Cisco memory pool to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Used	The number of MB from the memory pool that are in use by applications on the device
Free	The number of MB from the memory pool that are unused
Largest	The number of MB for the largest number of contiguous bytes from the memory pool that are currently unused

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Cisco Memory Pool Performance Report.

Cisco Memory Pool Utilization

Displays the average utilization for the selected Cisco memory pool over the selected time period. This view includes a 30-day moving baseline (hourly or daily time periods) or projection (weekly or greater time periods) by default.
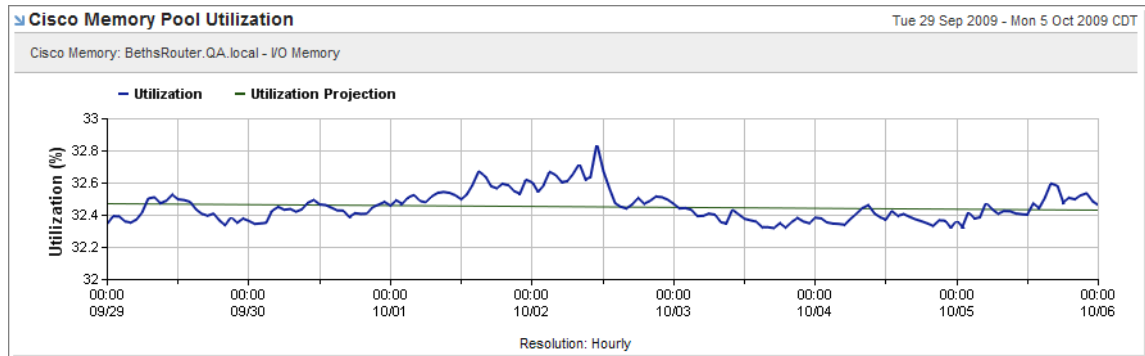
Context: This view requires a selected Cisco memory pool to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expression:

Utilization   The average utilization percentage for the memory pool

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Cisco Memory Pool Performance Report.

Cisco Memory Util Distribution

Displays the average memory utilization percentage range, by date/time, for memory pools in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

0-10%	Count and percentage of memory pools with utilization of 10% or below.
10-25%	Count and percentage of memory pools with utilization between 10 and 25%.
25-50%	Count and percentage of memory pools with utilization between 25 and 50%.
50-75%	Count and percentage of memory pools with utilization between 50 and 75%.
75-90%	Count and percentage of memory pools with utilization between 75 and 90%.
90-100%	Count and percentage of memory pools with utilization between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is included by default in the Router Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Summary report.

Cisco Memory Utilization Trend

Displays the average memory utilization for memory pools on the selected Cisco device during the selected time period.
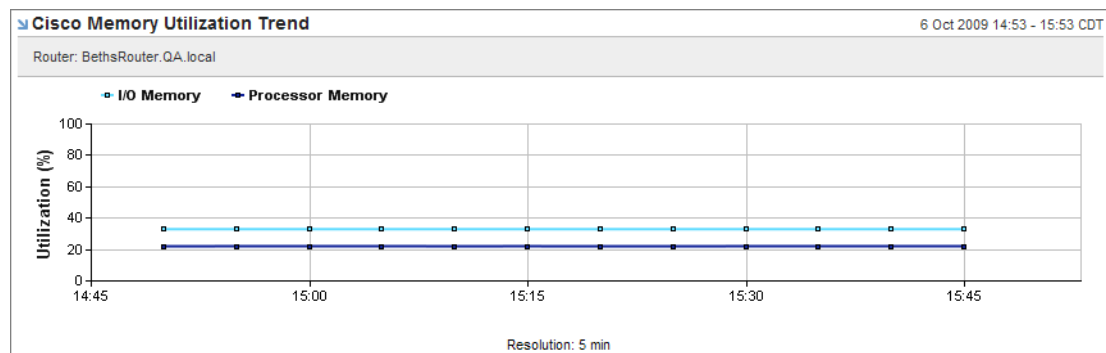
Context: This view requires a selected device or router to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expression:

Utilization	The average utilization percentage for the memory pool

Note: This view cannot be edited in the Custom View Wizard.
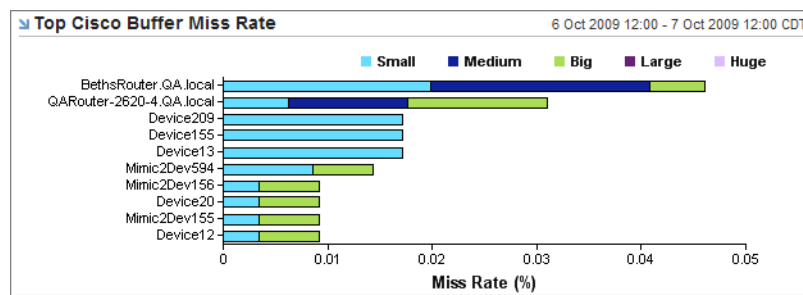
Styles: This view can be displayed as a line chart only.

Standard NetVoyant reports: This view is included by default in the Device Performance Report and Switch Performance Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Performance report and the Switch Performance report.

Cisco Memory Util Group Comparison

Displays the average and 95th percentile utilization, by sub-group, for memory pools in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Avg Utilization	The average utilization percentage
95th Percentile	The average utilization omitting the data outside of the 95th percentile. The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Group Comparison report.

Cisco Memory Util Group Distribution

Displays the average utilization percentage range, by subgroup, for memory pools in the selected reporting group during the selected time period.

Distribution views display aggregate values for an expression broken down according to distribution ranges that enable you to determine how performance compares to pre-defined service levels. You can add, edit, or remove the ranges for a distribution table or graph. This view type can be used to compare distribution ranges across multiple groups or sub-groups.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

0-10%	Percentage of memory pools with a utilization of 10% or below.
10-25%	Percentage of memory pools with a utilization between 10 and 25%.
25-50%	Percentage of memory pools with a utilization between 25 and 50%.
50-75%	Percentage of memory pools with a utilization between 50 and 75%.
75-90%	Percentage of memory pools with a utilization between 75 and 90%.
90-100%	Percentage of memory pools with a utilization between 90 and 100%.

Styles: This view can be displayed as a stacked bar chart or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Cisco Memory Util Sub Group Summary

Displays the average memory pool utilization percentage for each subgroup, by date/time, for the selected reporting group during the selected time period.

Group Summary views provide an aggregate view for the selected group broken down by sub-group to display meaningful comparisons of performance. Because reporting groups and sub-groups are typically organized to match your network organization, these views can also provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expression:
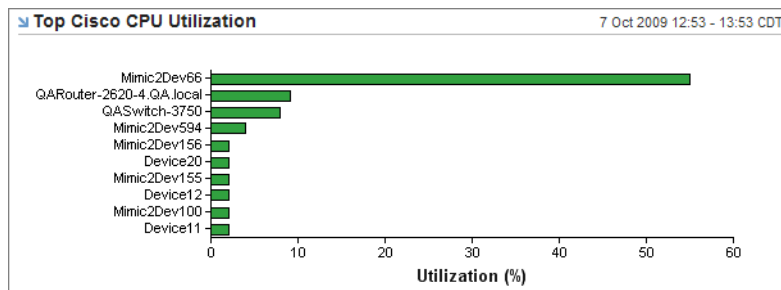
Utilization   The average utilization percentage for the subgroup

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Router Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Group Comparison report.

Cisco Switch Backplane Utilization Trend

Displays the traffic meter and traffic peak value for the selected switch backplane during the selected time period.

Context: This view requires a selected Cisco switch with a backplane to be displayed.

Data: The metric used to render this view is `ciscoSwitch`, which corresponds to the Cisco Backplane Traffic dataset in NetVoyant. The view includes data for the following expressions:

trafficMeter   The percentage of bandwidth utilization for the previous polling interval

trafficPeak   The peak traffic meter value since the system started

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the Device Performance Report, Switch Performance Report, and Cisco Switch Performance Report.

Closest to Threshold - Cisco CPU Utilization

Displays those Cisco devices in the selected reporting group that have average CPU utilization values closest to the threshold. By default, this view also displays the projected number of days until the rate for each interface crosses the utilization threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is ciscoSystem, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expressions:

Metric	Cisco CPU utilization
Average	Average utilization value as a percentage
Threshold	The threshold for the avgBusy5 expression in NetVoyant
Days to Threshold	The projected number of days until the value for the expression exceeds the threshold.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold report and the Alerts and Violations report.

Closest to Threshold - Cisco Memory Utilization

Displays those Cisco devices in the selected reporting group that have average memory pool utilization values closest to the threshold. By default, this view also displays the projected number of days until the rate for each interface crosses the utilization threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is ciscoMemPool, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Metric	Cisco memory utilization
Average	Average utilization value as a percentage

| **Threshold** | The threshold for the expression in NetVoyant |
| **Days to Threshold** | The projected number of days until the value for the expression exceeds the threshold. |

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold report.

Router Summary Gauges

Displays the CPU utilization, memory utilization, and interface utilization compared to a baseline for the selected router during the selected time period.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.

Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

Context: This view requires a selected device or router to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the Router Performance Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Performance report.

Switch Summary Gauges

Displays the CPU utilization, memory utilization, and interface utilization compared to a baseline for the selected switch during the selected time period.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.

Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.

Context: This view requires a selected device, router, or switch to be displayed.

Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the Device Performance Report and Switch Performance Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Switch Performance report.

Top Changes - Cisco CPU Utilization

Displays average CPU utilization for those Cisco devices in the selected reporting group that have the highest change in utilization over the past month. The view also shows the current month and previous month's 95th percentile utilization. The amount of change in utilization is calculated from the change in the 95th percentile of data.

Note: The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expressions:

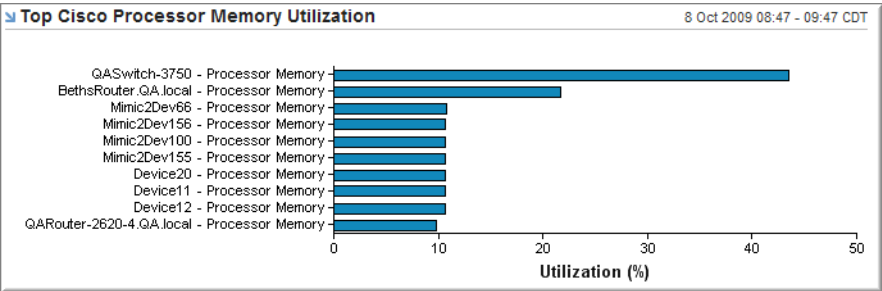|	
Metric	CPU Utilization (`avgBusy5`)
Current Month Average	Average value for the metric over the current reporting month
Current Month 95th %	Average value for the metric over the current reporting month using the 95th percentile data
Previous Month 95th %	Average value for the metric for the month previous to the current reporting month using the 95th percentile data
% Change of 95th %	Percentage change between the current month's 95th percentile value and the previous month's 95th percentile value

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Monthly Changes Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Monthly Changes report and Routers/Switches Overview report.

Top Changes - Cisco Memory Utilization

Displays average memory pool utilization for those Cisco devices in the selected reporting group that have the highest change in utilization over the past month. The view also shows the current month and previous month's 95th percentile utilization. The amount of change in utilization is calculated from the change in the 95th percentile of data.

Note: The 95th percentile is the value such that 95 percent of data for the rollup period is less than this value. This removes spikes in utilization from the data.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Metric	Memory Utilization (`poolUtil`)
Current Month Average	Average value for the metric over the current reporting month

Current Month 95th %	Average value for the metric over the current reporting month using the 95th percentile data
Previous Month 95th %	Average value for the metric for the month previous to the current reporting month using the 95th percentile data
% Change of 95th %	Percentage change between the current month's 95th percentile value and the previous month's 95th percentile value

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Monthly Changes Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Monthly Changes report and Routers/Switches Overview report.

Top Cisco Buffer Miss Rate

Displays average miss rate for buffers, categorized by size, for those Cisco system resources in the selected reporting group that have the highest change in total miss rate over the selected time period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

Small	The percentage of small buffer (104 bytes) misses to hits.
Medium	The percentage of middle buffer (600 bytes) misses to hits.
Big	The percentage of big buffer (1524 bytes) misses to hits.
Large	The percentage of large buffer (5024 bytes) misses to hits.
Huge	The percentage of huge buffer (18024 bytes) misses to hits.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.
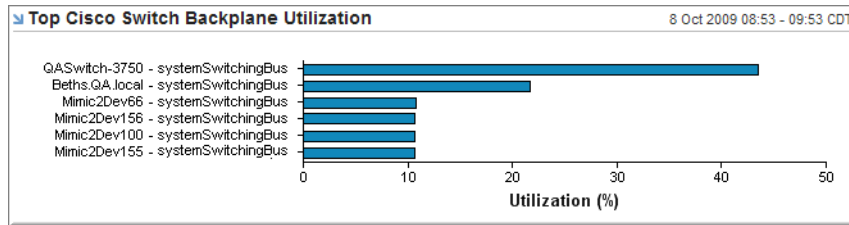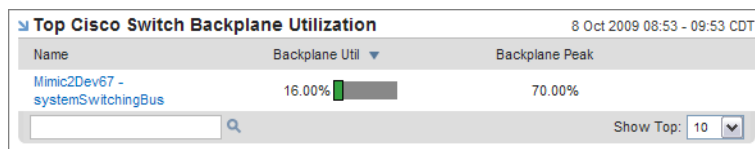
Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Cisco Buffer Miss Rate (with CPU Utilization)

Displays average CPU utilization and average miss rate for buffers, categorized by size, for those Cisco system resources in the selected reporting group that have the highest change in total miss rate over the selected time period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

Small	The percentage of small buffer (104 bytes) misses to hits.
Medium	The percentage of middle buffer (600 bytes) misses to hits.
Big	The percentage of big buffer (1524 bytes) misses to hits.
Large	The percentage of large buffer (5024 bytes) misses to hits.
Huge	The percentage of huge buffer (18024 bytes) misses to hits.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Cisco Buffer Utilization

Displays average buffer utilization, categorized by buffer size, for those Cisco system resources in the selected reporting group that have the highest change in total miss rate over the selected time period.
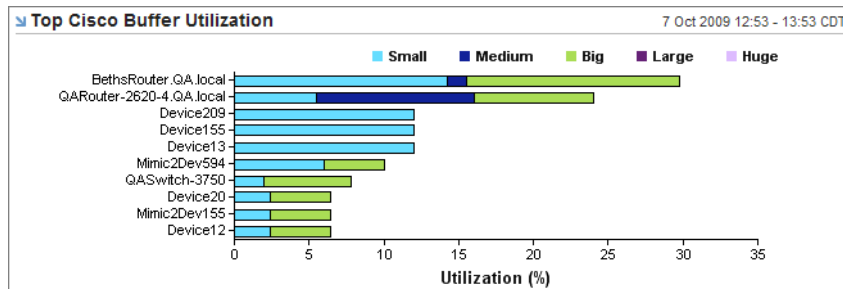
Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expressions:

Small	The average utilization of small buffers (104 bytes)
Medium	The average utilization of middle buffers (600 bytes)
Big	The average utilization of big buffers (1524 bytes)
Large	The average utilization of large buffers (5024 bytes)
Huge	The average utilization of huge buffers (18024 bytes)

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Cisco CPU Utilization

Displays average CPU utilization for those Cisco devices in the selected reporting group or managed object that have the highest change in total utilization over the selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

CPU Util	Average CPU utilization for the Cisco device/resource

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report.

Top Cisco CPU/Buffer Utilization

Displays average CPU utilization and average buffer utilization, categorized by buffer size, for those Cisco devices in the selected reporting group or managed object that have the highest total utilization over the selected time period.

Top Cisco CPU/Buffer Utilization						7 Oct 2009 12:53 - 13:53 CDT
Name	CPU Util ▼	Small	Medium	Big	Large	Huge
Mimic2Dev66	55.00%	0.59%	0.20%	0.40%	0.00%	0.00%
QARouter-2620-4.QA.local	9.17%	5.50%	10.52%	8.00%	0.00%	0.00%
QASwitch-3750	8.00%	2.00%	0.00%	5.79%	0.00%	0.00%
Mimic2Dev594	4.00%	6.00%	0.00%	4.00%	0.00%	0.00%
Mimic2Dev156	2.00%	2.40%	0.00%	4.00%	0.00%	0.00%
Device20	2.00%	2.40%	0.00%	4.00%	0.00%	0.00%
Mimic2Dev155	2.00%	2.40%	0.00%	4.00%	0.00%	0.00%
Device12	2.00%	2.40%	0.00%	4.00%	0.00%	0.00%
Mimic2Dev100	2.00%	2.40%	0.00%	4.00%	0.00%	0.00%
Device11	2.00%	2.40%	0.00%	4.00%	0.00%	0.00%

Show Top: 10

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

CPU Util	Average CPU utilization for the Cisco device/resource
Small	The average utilization of small buffers (104 bytes)
Medium	The average utilization of middle buffers (600 bytes)
Big	The average utilization of big buffers (1524 bytes)
Large	The average utilization of large buffers (5024 bytes)
Huge	The average utilization of huge buffers (18024 bytes)

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, Router Capabilities Report, Device Capabilities Report, and Switch Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report.

Top Cisco I/O Memory

Displays average I/O memory pool utilization, as well as the used memory, free memory, and the size of the largest contiguous block of memory for those Cisco devices in the selected reporting group or managed object that have the highest total I/O memory utilization over the selected time period.

⊿ Top Cisco I/O Memory					7 Oct 2009 15:13 - 16:13 CDT
Name	Type	Util ▼	Used	Free	Largest
QASwitch-3750 - I/O Memory	I/O Memory	69.25%	8.71 MB	3.87 MB	3.36 MB
QARouter-2620-4.QA.local - I/O Memory	I/O Memory	38.57%	2.02 MB	3.22 MB	3.22 MB
BethsRouter.QA.local - I/O Memory	I/O Memory	32.52%	5.46 MB	11.32 MB	11.23 MB
Device209 - I/O Memory	I/O Memory	25.21%	2.11 MB	6.27 MB	6.27 MB
Device155 - I/O Memory	I/O Memory	25.21%	2.11 MB	6.27 MB	6.27 MB
Device13 - I/O Memory	I/O Memory	25.21%	2.11 MB	6.27 MB	6.27 MB
Mimic2Dev66 - I/O Memory	I/O Memory	21.08%	7.07 MB	26.48 MB	26.48 MB
Mimic2Dev155 - I/O Memory	I/O Memory	17.04%	2.14 MB	10.44 MB	10.42 MB
Mimic2Dev100 - I/O Memory	I/O Memory	17.04%	2.14 MB	10.44 MB	10.42 MB
Mimic2Dev156 - I/O Memory	I/O Memory	17.04%	2.14 MB	10.44 MB	10.42 MB

how Top: 10

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Util	Average I/O memory utilization for the Cisco device/resource
Used	The number of MB from the memory pool that are in use by applications on the device
Free	The number of MB from the memory pool that are unused
Largest	The number of MB for the largest number of contiguous bytes from the memory pool that are currently unused

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Monthly Changes report and Routers/Switches Overview report.

Top Cisco I/O Memory Utilization

Displays average I/O memory pool utilization for those Cisco devices in the selected reporting group or managed object that have the highest total utilization over the selected time period.
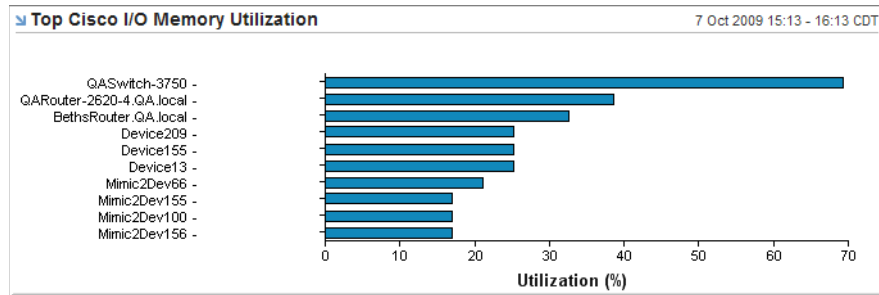
Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expression:

Pool Util   Average I/O memory utilization for the Cisco device/resource

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Cisco Memory

Displays average memory utilization, as well as the used memory, free memory, and the size of the largest contiguous block of memory for those Cisco devices in the selected reporting group or managed object that have the highest total memory pool utilization over the selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Util	Average memory utilization for the Cisco device/resource type
Used	The number of MB from the memory pool that are in use by applications on the device
Free	The number of MB from the memory pool that are unused
Largest	The number of MB for the largest number of contiguous bytes from the memory pool that are currently unused

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, Router Capabilities Report, Device Capabilities Report, and Switch Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Enterprise Summary report.

Top Cisco Processor Memory

Displays average processor memory utilization, as well as the used memory, free memory, and the size of the largest contiguous block of memory for those Cisco devices in the selected reporting group or managed object that have the highest total memory utilization over the selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Util	Average processor memory utilization for the Cisco device/resource type
Used	The number of MB from the processor memory pool that are in use by applications on the device

| **Free** | The number of MB from the processor memory pool that are unused |
| **Largest** | The number of MB for the largest number of contiguous bytes from the processor memory pool that are currently unused |

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Routers/Switches Overview report.

Top Cisco Processor Memory Utilization

Displays average processor memory utilization for those Cisco devices in the selected reporting group or managed object that have the highest total memory utilization over the selected time period.

Context: This view requires a selected device or router to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expression:

| **Pool Util** | Average processor memory utilization for the Cisco device/resource type |

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

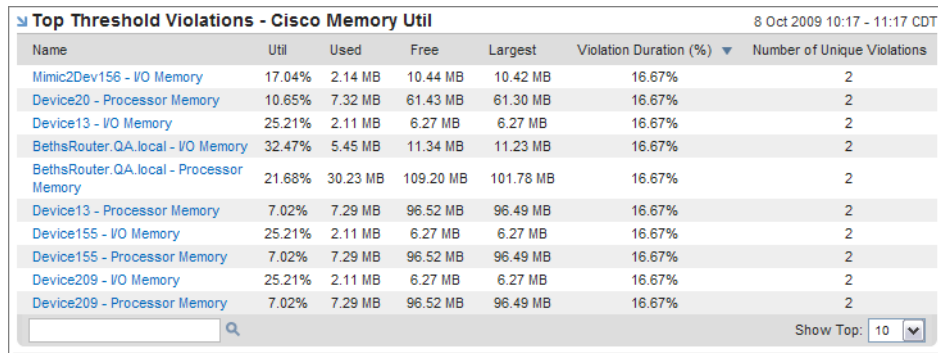**Standard NetVoyant reports:** This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report.

Top Cisco Switch Backplane Utilization

Displays average backplane utilization for those Cisco switch devices in the selected reporting group or managed object that have the highest total backplane utilization over the selected time period.

Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metric used to render this view is `ciscoSwitch`, which corresponds to the Cisco Backplane Traffic dataset in NetVoyant. The view includes data for the following expression:

   Backplane Util   Average backplane utilization for the Cisco switch device

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Cisco Switch Backplane Utilization (with Peak)

Displays average backplane utilization and the backplane utilization peak value for those Cisco switch devices in the selected reporting group or managed object that have the highest total backplane utilization over the selected time period.

Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metric used to render this view is `ciscoSwitch`, which corresponds to the Cisco Backplane Traffic dataset in NetVoyant. The view includes data for the following expressions:

   Backplane Util   Average backplane utilization for the Cisco switch device
   BackPlane Peak   Peak backplane utilization value for the Cisco switch device

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, Router Capabilities Report, and Switch Capabilities Report.

Top Deviation From Norm - Cisco CPU Util

Displays the average CPU utilization for those Cisco devices in the selected reporting group that have the highest deviation from the 30-day rolling baseline value for Cisco CPU utilization. This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Top Deviation From Norm - Cisco CPU Util				8 Sep 2009 - 7 Oct 2009 CDT
Name	Metric	Normal	Actual	Deviation (%) ▼
BethsRouter.QA.local	CPU Utilization	1.86%	1.54%	-17.4
mnrouter1.redpt.com	CPU Utilization	12.08%	10.69%	-11.6
QARouter-2620-4.QA.local	CPU Utilization	14.70%	13.62%	-7.3
Mimic2Dev156	CPU Utilization	7.86%	7.02%	-10.6
Mimic2Dev594	CPU Utilization	6.82%	6.89%	1.1
Device20	CPU Utilization	9.85%	9.81%	-0.4
Mimic2Dev155	CPU Utilization	7.04%	7.02%	-0.2
Device12	CPU Utilization	32.73%	32.69%	-0.1
Mimic2Dev100	CPU Utilization	38.89%	38.91%	0.1
Device11	CPU Utilization	25.21%	25.21%	0.0

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Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expressions:

Metric	Average Cisco CPU Utilization (`avgBusy5`)
Normal	Normal utilization value calculated from a 30-day rolling baseline
Actual	The average utilization percentage during the selected time period
Deviation (%)	The value of the actual utilization calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.

Top Deviation From Norm - Cisco Memory Util

Displays the average memory pool utilization for those Cisco devices in the selected reporting group that have the highest deviation from the 30-day rolling baseline value for Cisco memory pool utilization. This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Metric	Memory Pool Utilization (`poolUtil`)
Normal	Normal utilization value calculated from a 30-day rolling baseline
Actual	The average utilization percentage during the selected time period
Deviation (%)	The value of the actual utilization calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.

Top Projections - Cisco CPU Utilization

Displays 30, 60, and 90-day projections for CPU utilization for those Cisco devices in the selected reporting group with the highest utilization growth rates.

Top Projections - Cisco CPU Utilization					8 Jul 2009 - 7 Oct 2009 CDT
Name	Metric	Last 90 Days ▼	30 Days	60 Days	90 Days
QARouter-2620-4.QA.local	CPU Utilization	17.63%	18.97%	19.62%	20.26%
mnrouter1.redpt.com	CPU Utilization	16.97%	14.25%	13.20%	12.15%
Mimic2Dev594	CPU Utilization	4.00%	4.00%	4.00%	4.00%
BethsRouter.QA.local	CPU Utilization	2.26%	2.71%	2.92%	3.13%
Mimic2Dev156	CPU Utilization	2.00%	2.00%	2.00%	2.00%
Device11	CPU Utilization	2.00%	2.00%	2.00%	2.00%
Mimic2Dev100	CPU Utilization	2.00%	2.00%	2.00%	2.00%
Device12	CPU Utilization	2.00%	2.00%	2.00%	2.00%
Mimic2Dev155	CPU Utilization	2.00%	2.00%	2.00%	2.00%
Device20	CPU Utilization	2.00%	2.00%	2.00%	2.00%

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Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expressions:

Metric	CPU Utilization
Last 90 Days	The utilization growth rate calculated over the preceding 90 days
30 Days	The projected utilization increase 30 days from now
60 Days	The projected utilization increase 60 days from now
90 Days	The projected utilization increase 90 days from now

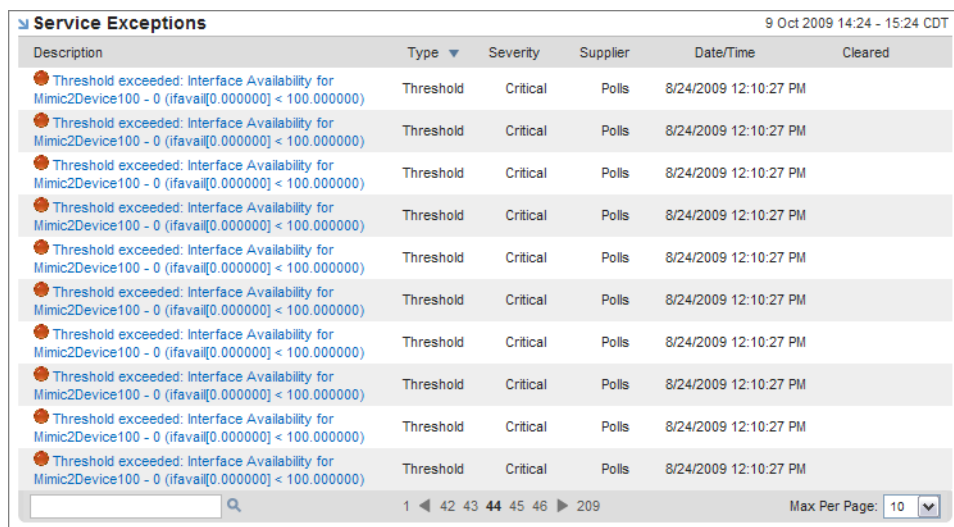**Styles:** This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top Projections - Cisco Memory Utilization

Displays 30, 60, and 90-day projections for memory pool utilization for those Cisco devices in the selected reporting group with the highest utilization growth rates.

Top Projections - Cisco Memory Utilization					8 Jul 2009 - 7 Oct 2009 CDT
Name	Metric	Last 90 Days ▼	30 Days	60 Days	90 Days
mnrouter1.redpt.com - Processor Memory	Memory Pool Utilization	73.01%	132.03%	154.96%	177.89%
QARouter-2620-4.QA.local - I/O Memory	Memory Pool Utilization	39.04%	39.16%	39.22%	39.27%
BethsRouter.QA.local - I/O Memory	Memory Pool Utilization	32.76%	33.00%	33.12%	33.24%
Device25 - I/O Memory	Memory Pool Utilization	25.21%	25.21%	25.21%	25.21%
Device209 - I/O Memory	Memory Pool Utilization	25.21%	25.21%	25.21%	25.21%
Device155 - I/O Memory	Memory Pool Utilization	25.21%	25.21%	25.21%	25.21%
Device13 - I/O Memory	Memory Pool Utilization	25.21%	25.21%	25.21%	25.21%
Mimic2Dev155 - Processor Memory	Memory Pool Utilization	23.13%	0.00%	0.00%	0.00%
BethsRouter.QA.local - Processor Memory	Memory Pool Utilization	19.07%	27.13%	30.99%	34.85%
Mimic2Dev156 - I/O Memory	Memory Pool Utilization	17.04%	17.04%	17.04%	17.04%

Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Metric	Memory Pool Utilization
Last 90 Days	The utilization growth rate calculated over the preceding 90 days
30 Days	The projected utilization increase 30 days from now
60 Days	The projected utilization increase 60 days from now
90 Days	The projected utilization increase 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top Threshold Violations - Cisco Memory Util

Displays memory pool utilization threshold alarms that have occurred on Cisco devices in the selected reporting group, with statistics for the used memory, free memory, and the size of the largest contiguous block of memory.

The view also displays the percent of time (Violation Duration) that the value has been over threshold and the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

Top Threshold Violations - Cisco Memory Util					8 Oct 2009 10:17 - 11:17 CDT	
Name	Util	Used	Free	Largest	Violation Duration (%) ▼	Number of Unique Violations
Mimic2Dev156 - I/O Memory	17.04%	2.14 MB	10.44 MB	10.42 MB	16.67%	2
Device20 - Processor Memory	10.65%	7.32 MB	61.43 MB	61.30 MB	16.67%	2
Device13 - I/O Memory	25.21%	2.11 MB	6.27 MB	6.27 MB	16.67%	2
BethsRouter.QA.local - I/O Memory	32.47%	5.45 MB	11.34 MB	11.23 MB	16.67%	2
BethsRouter.QA.local - Processor Memory	21.68%	30.23 MB	109.20 MB	101.78 MB	16.67%	2
Device13 - Processor Memory	7.02%	7.29 MB	96.52 MB	96.49 MB	16.67%	2
Device155 - I/O Memory	25.21%	2.11 MB	6.27 MB	6.27 MB	16.67%	2
Device155 - Processor Memory	7.02%	7.29 MB	96.52 MB	96.49 MB	16.67%	2
Device209 - I/O Memory	25.21%	2.11 MB	6.27 MB	6.27 MB	16.67%	2
Device209 - Processor Memory	7.02%	7.29 MB	96.52 MB	96.49 MB	16.67%	2
					Show Top: 10	

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoMemPool`, which corresponds to the Cisco Memory Pool dataset in NetVoyant. The view includes data for the following expressions:

Util	Average processor memory utilization for the Cisco device/ resource type
Used	The number of MB from the processor memory pool that are in use by applications on the device
Free	The number of MB from the processor memory pool that are unused
Largest	The number of MB for the largest number of contiguous bytes from the processor memory pool that are currently unused
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of unique threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Threshold Violations - Cisco System

Displays system-related threshold alarms that have occurred on Cisco devices in the selected reporting group, with statistics for buffer utilization categorized by buffer size.

The view also displays the percent of time (Violation Duration) that the value has been over threshold and the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

Top Threshold Violations - Cisco System							8 Sep 2009 - 7 Oct 2009 CDT
Name	CPU Util	Small	Medium	Big	Large	Huge	Violation Duration (%) ▼	Number of Unique Violations
Mimic2Dev156	2.00%	2.4	0.0	4.0	0.0	0.0	99.9%	5.47 K
QARouter-2620-4.QA.local	31.00%	5.3	12.2	15.8	0.0	0.0	98.7%	8.52 K
Device20	2.00%	2.4	0.0	4.0	0.0	0.0	98.7%	8.52 K
Device12	2.00%	2.4	0.0	4.0	0.0	0.0	98.7%	8.52 K
Device11	2.00%	2.4	0.0	4.0	0.0	0.0	98.7%	8.52 K
Mimic2Dev155	2.00%	2.4	0.0	4.0	0.0	0.0	98.6%	8.52 K
Mimic2Dev100	2.00%	2.4	0.0	4.0	0.0	0.0	98.6%	8.52 K
Mimic2Dev594	4.00%	6.0	0.0	4.0	0.0	0.0	98.5%	8.51 K
BethsRouter.QA.local	5.00%	13.3	1.5	19.9	0.0	0.0	98.5%	8.51 K
mnrouter1.redpt.com	22.00%	3.1	3.2	0.3	0.0	0.0	39.0%	3.03 K

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Note: Placing the cursor over the CPU Util value displays the threshold value used to generate the violations (alarms).

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSystem`, which corresponds to the Cisco System Resources dataset in NetVoyant. The view includes data for the following expression:

CPU Util	Average CPU utilization for the Cisco device
Small	The average utilization of small buffers (104 bytes)
Medium	The average utilization of middle buffers (600 bytes)
Big	The average utilization of big buffers (1524 bytes)
Large	The average utilization of large buffers (5024 bytes)
Huge	The average utilization of huge buffers (18024 bytes)
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of unique threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Threshold Violations Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Threshold Violations report and the Alerts and Violations report.

Top Threshold Violations - Switch Backplane Util

Displays backplane utilization threshold alarms that have occurred on Cisco devices in the selected reporting group. Those values that have exceeded threshold display as red values.

The view also displays the percent of time (Violation Duration) that the value has been over threshold and the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

Top Threshold Violations - Switch Backplane Util				7 Sep 2009 - 6 Dec 2009 CST
Name	Backplane Util (%)	Peak Backplane Util (%)	Violation Duration (%) ▼	Number of Unique Violations
Mimic2Dev67 - systemSwitchingBus	**16.00%**	70.00%	93.58%	7.82 K
				Show Top: 10

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ciscoSwitch`, which corresponds to the Cisco Backplane Traffic dataset in NetVoyant. The view includes data for the following expressions:

Backplane Util	Average backplane utilization for the Cisco switch device
BackPlane Peak	Peak backplane utilization value for the Cisco switch device
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of unique threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Threshold Violations Report.

SERVICE EXCEPTIONS VIEWS

The following sections describe the views related to service exceptions that you can add to your report pages. This information includes the view styles available for each view, the dataset used to render the view, and the standard report pages that include the view by default.

Note: Service exception views cannot be edited in the Custom View Wizard.

Important: These views display exceptions that were active (open) during the selected reporting period and not cleared until after the start time of that period, but generated during or prior to that period.

Event Log

Displays a list of all NetVoyant events for the selected reporting group or managed object occurring during the selected time period.

Events are actions, changes, or other occurrences that the NetVoyant product tracks using event logs. Each event has a severity assigned to it, which can be one of the following: normal, warning, minor, major, critical or a custom severity level.

Note: This view cannot be edited in the Custom View Wizard.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The view acquires data from the NetVoyant event log and includes the following information:

Event Description	Descriptive information for the event occurrence
Severity	The severity level associated with the event, which can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service logging the event
Date/time	The server date and time at which the event occurred.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Events Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Details report and Switch Details report.

Service Exceptions

Displays a list of all NetVoyant alarm and events for the selected reporting group or managed object occurring during the selected time period. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events on all datasets. The view displays the following information for each alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Log** - Results from an action that NetVoyant services perform along with topology changes in your network or devices
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.

Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Service Exceptions - Availability

Displays a list of NetVoyant alarms related to availability for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `avail` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Server Exceptions Report, Router Exceptions Report, Switch Exceptions Report, and Device Exceptions Report.

Service Exceptions - CBQoS Class Maps

Displays a list of NetVoyant alarms related to CBQoS class maps for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `qosclass` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - CBQoS IP Header Compression

Displays a list of NetVoyant alarms related to CBQoS IP header compression for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `qosiphc` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Router Exceptions Report and Switch Exceptions Report.

Service Exceptions - CBQoS Match Statements

Displays a list of NetVoyant alarms related to CBQoS match statements for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `qosmatch` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - CBQoS Police Action

Displays a list of NetVoyant alarms related to CBQoS police actions for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Service Exceptions - CBQoS Police Action				5 Jan 2010 - 3 Feb 2010 CST	
Description	Type	Severity	Supplier	Date/Time ▼	Cleared
○ qospolice: polling failed for Mimic2Dev155 Fa2/0-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	2/3/2010 4:45:11 PM	2/3/2010 4:55:04 PM
○ qospolice: polling failed for Mimic2Dev155 Fa2/0-Out-QPM_silver1: 100% SNMP Loss	Polling	Minor	Polls	2/3/2010 4:45:11 PM	2/3/2010 4:55:04 PM
○ qospolice: polling failed for Mimic2Dev156 Fa2/0-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	2/3/2010 4:45:11 PM	2/3/2010 4:55:04 PM
○ qospolice: polling failed for Mimic2Dev156 Fa2/0-Out-QPM_silver1: 100% SNMP Loss	Polling	Minor	Polls	2/3/2010 4:45:11 PM	2/3/2010 4:55:04 PM
○ qospolice: polling failed for Mimic2Dev594 Gi0/0-In-CONTROL-PLANE-SNMP: 100% SNMP Loss	Polling	Minor	Polls	2/3/2010 4:45:11 PM	2/3/2010 4:55:03 PM
🔍		1 of 1			Max Per Page: 10

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `qospolice` dataset. The view displays the following information for each availability alarm event:

Description   A description of the alarm event that occurred.

Type   The type of the event, which can be one the following:
- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity   The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.

Supplier   The NetVoyant service that initiated the event

Date/Time   The server date and time at which the alarm event occurred

Cleared   The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - CBQoS Police Color

Displays a list of NetVoyant alarms related to CBQoS police color for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `qoscolor` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - CBQoS Queueing

Displays a list of NetVoyant alarms related to CBQoS queueing for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `qosque` dataset. The view displays the following information for each availability alarm event:

Description A description of the alarm event that occurred.

Type The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.

Supplier The NetVoyant service that initiated the event

Date/Time The server date and time at which the alarm event occurred

Cleared The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - CBQoS RED

Displays a list of NetVoyant alarms related to CBQoS RED for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Service Exceptions - CBQoS RED				7 Nov 2009 - 6 Dec 2009 CST	
Description	Type	Severity	Supplier	Date/Time ▼	Cleared
qosred: polling failed for mnrouter1.redpt.com RED Class 0 Et3/2-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	12/1/2009 9:35:11 AM	
qosred: polling failed for mnrouter1.redpt.com RED Class 1 Et3/2-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	12/1/2009 9:35:11 AM	
qosred: polling failed for mnrouter1.redpt.com RED Class 2 Et3/2-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	12/1/2009 9:35:11 AM	
qosred: polling failed for mnrouter1.redpt.com RED Class 3 Et3/2-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	12/1/2009 9:35:11 AM	
qosred: polling failed for mnrouter1.redpt.com RED Class 4 Et3/2-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	12/1/2009 9:35:11 AM	
qosred: polling failed for mnrouter1.redpt.com RED Class 5 Et3/2-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	12/1/2009 9:35:11 AM	
qosred: polling failed for mnrouter1.redpt.com RED Class 6 Et3/2-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	12/1/2009 9:35:11 AM	
qosred: polling failed for mnrouter1.redpt.com RED Class 7 Et3/2-Out-class-default: 100% SNMP Loss	Polling	Minor	Polls	12/1/2009 9:35:11 AM	

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Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `qosred` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - CBQoS Set

Displays a list of NetVoyant alarms related to CBQoS sets for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `qosset` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - CBQoS Traffic Shaping

Displays a list of NetVoyant alarms related to CBQoS traffic shaping for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `qosts` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event

Date/Time   The server date and time at which the alarm event occurred

Cleared   The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - Cisco Memory Pool

Displays a list of NetVoyant alarms related to Cisco memory pool data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `ciscoMemPool` dataset. The view displays the following information for each availability alarm event:

Description   A description of the alarm event that occurred.

Type   The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity   The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.

Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, Switch Exceptions Report, and Device Exceptions Report.

Service Exceptions - Cisco NBAR

Displays a list of NetVoyant alarms related to NBAR protocol data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `ciscoSystem` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - Cisco Switch

Displays a list of NetVoyant alarms related to Cisco switch data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `ciscoSwitch` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, Switch Exceptions Report, Device Exceptions Report, and Server Exceptions Report.

Service Exceptions - Cisco System

Displays a list of NetVoyant alarms related to Cisco system data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `ciscoSystem` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Router Exceptions Report, Switch Exceptions Report, Device Exceptions Report, and Server Exceptions Report.

Service Exceptions - Ethernet

Displays a list of NetVoyant alarms related to Ethernet data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `etherStats` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report and Switch Exceptions Report.

Service Exceptions - Frame Relay

Displays a list of NetVoyant alarms related to Frame Relay data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Service Exceptions - Frame Relay				Mon 30 Nov 2009 - Sun 6 Dec 2009 CST	
Description	Type	Severity	Supplier	Date/Time ▼	Cleared
⬤ frcircuit: polling failed for Device25 - DLCI 1 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	
⬤ frcircuit: polling failed for Device25 - DLCI 2 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	
⬤ frcircuit: polling failed for Device25 - DLCI 3 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	
⬤ frcircuit: polling failed for Device25 - DLCI 4 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	
⬤ frcircuit: polling failed for Device25 - DLCI 5 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	
⬤ frcircuit: polling failed for Device25 - DLCI 6 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	
⬤ frcircuit: polling failed for Device25 - DLCI 7 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	
⬤ frcircuit: polling failed for Device25 - DLCI 8 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	
⬤ frcircuit: polling failed for Device25 - DLCI 9 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	
⬤ frcircuit: polling failed for Device25 - DLCI 10 on Link to Nowwhere: 100% SNMP Loss	Polling	Minor	Polls	11/11/2009 4:20:11 PM	

1 2 3 4 5 ▶ 6   Max Per Page: 10 ▼

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `frcircuit` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Device Exceptions Report, Server Exceptions Report, and Router Exceptions Report.

Service Exceptions - HR Processor

Displays a list of NetVoyant alarms related to Host Resources Processor data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, server, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `hrprocessor` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Device Exceptions Report, Server Exceptions Report, Router Exceptions Report, and Switch Exceptions Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Dashboard report.

Service Exceptions - HR Storage

Displays a list of NetVoyant alarms related to Host Resources Storage data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `hrstorage` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Device Exceptions Report, Server Exceptions Report, Router Exceptions Report, and Switch Exceptions Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Server Dashboard report.

Service Exceptions - Interfaces

Displays a list of NetVoyant alarms related to interface statistics data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `ifstats` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Device Exceptions Report, Server Exceptions Report, Router Exceptions Report, and Switch Exceptions Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Errors and Exceptions report.

Service Exceptions - IP SLA

Displays a list of NetVoyant alarms related to IP SLA operation data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `rttstats` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Device Exceptions Report, Server Exceptions Report, Router Exceptions Report, and IP SLA Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the IP SLA report.

Service Exceptions - Protocols (RMON2)

Displays a list of NetVoyant alarms related to RMON2 protocol data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for `protodist`, which corresponds to the Protocol Distribution (RMON2) dataset in NetVoyant. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report and Switch Exceptions Report.

Service Exceptions - Reachability

Displays a list of NetVoyant alarms related to reachability data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `reach` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following: • **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle. • **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Device Exceptions Report, Server Exceptions Report, Router Exceptions Report, and Switch Exceptions Report.

Service Exceptions - T1

Displays a list of NetVoyant alarms related to T1 data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `dsx1near` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Device Exceptions Report, Server Exceptions Report, and Router Exceptions Report.

Service Exceptions - T3

Displays a list of NetVoyant alarms related to T3 data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The service exception information is rendered from active alarm events for the `dsx3near` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:

- **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
- **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.

Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Device Exceptions Report, Server Exceptions Report, and Router Exceptions Report.

Service Exceptions - Traps

Displays a list of NetVoyant alarms related to received SNMP traps for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, server, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for a combination of datasets. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report, Device Exceptions Report, Server Exceptions Report, Router Exceptions Report, Switch Performance Report, and Switch Exceptions Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Interface Errors and Exceptions report.

Service Exceptions - VoIP

Displays a list of NetVoyant alarms related to VoIP IP SLA operation data for the selected reporting group or managed object occurring during the selected time period.

Service exception views display events related to NetVoyant alarms within the specified group and dataset. Duplicate alarms are grouped and the count is displayed in the tool tip.

Note: The exceptions displayed are those that were active (open) during the selected time period and not cleared until after the start time of that period, but generated during or prior to that period.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The service exception information is rendered from active alarm events for the `rttjitter` dataset. The view displays the following information for each availability alarm event:

Description	A description of the alarm event that occurred.
Type	The type of the event, which can be one the following:
	• **Polling** - Occurs when a device does not respond to an SNMP request from the NetVoyant product during a scheduled polling cycle.
	• **Threshold** - Occurs when a polled value for an expression goes beyond the threshold exceeded value set for the expression in an alarm profile.
Severity	The severity level of the alarm. Alarms can be one of the following severity levels: Warning, Minor, Major, or Critical.
Supplier	The NetVoyant service that initiated the event
Date/Time	The server date and time at which the alarm event occurred
Cleared	The date/time stamp indicating when the alarm event was cleared

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Alarms Report and VoIP Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Voice Over IP report.

T1 AND T3 VIEWS

The following sections describe the views related to T1 and T3 interfaces that you can add to your report pages. This information includes the view styles available for each view, the dataset used to render the view, and the standard report pages that include the view by default.

Average T1 Availability

Displays the average availability and unavailability of T1 interfaces, by date/time, for the selected reporting group during the selected time period.

Note: All T1 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg Avail   The average availability percentage

Avg Unavail   The average unavailability percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Summary report.

Average T3 Availability

Displays the average availability and unavailability of T3 interfaces, by date/time, for the selected reporting group during the selected time period.

Note: All T3 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg Avail   The average availability percentage

Avg Unavail   The average unavailability percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.
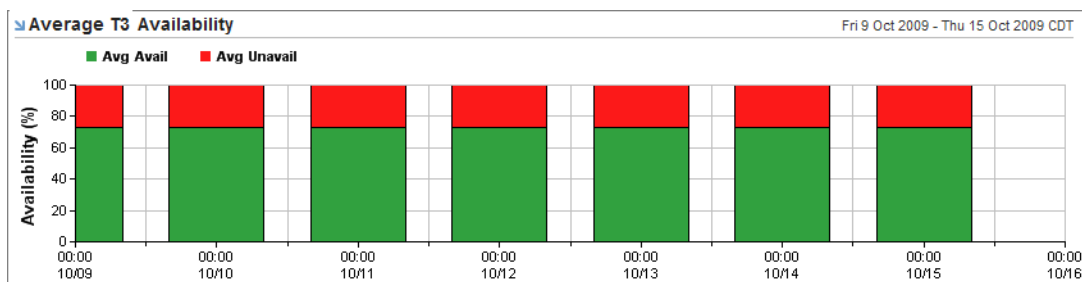
Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Summary report.

Closest to Threshold - T1

Displays those T1 interfaces in the selected reporting group that have unavailable seconds values closest to the threshold. By default, this view also displays the projected number of days until the rate for each interface crosses the threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg Avail   The average availability as a percentage calculated using the number of Unavailable Seconds encountered by a DS3 interface in one of the previous 96, individual 15-minute intervals subtracted from 100

Avg Unavail   The average unavailability as a percentage calculated using the number of Unavailable Seconds encountered by a DS3 interface in one of the previous 96, individual 15-minute intervals.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold report.

Closest to Threshold - T3

Displays those T3 interfaces in the selected reporting group that have unavailable seconds values closest to the threshold. By default, this view also displays the projected number of days until the rate for each interface crosses the threshold.

Closest to Threshold views calculate the trend for an expression. If that calculation projects that the value for the expression will reach or exceed threshold within one year, the data is represented in the view. For example, if latency has been on an incline and thus the baseline is also on an incline, a projection calculation predicts when the device will meet or exceed the threshold.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Avg Avail	The average availability as a percentage calculated using the number of Unavailable Seconds encountered by a DS3 interface in one of the previous 96, individual 15-minute intervals subtracted from 100
Avg Unavail	The average unavailability as a percentage calculated using the number of Unavailable Seconds encountered by a DS3 interface in one of the previous 96, individual 15-minute intervals.

**Styles:** This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Closest to Threshold Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Closest to Threshold report.

T1 % Degraded Minutes Trend

Displays the degraded minutes percentage on the selected DS1 (T1) interface, by date/time, over the selected time period.

Note: All T1 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.
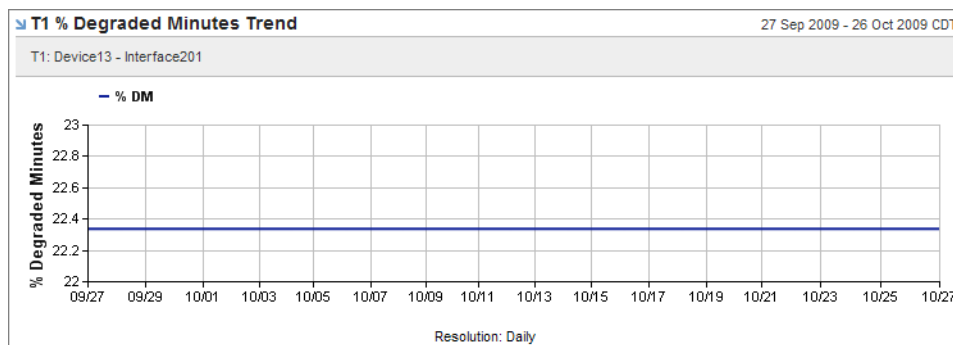
Context: This view requires a selected T1 interface to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expression:

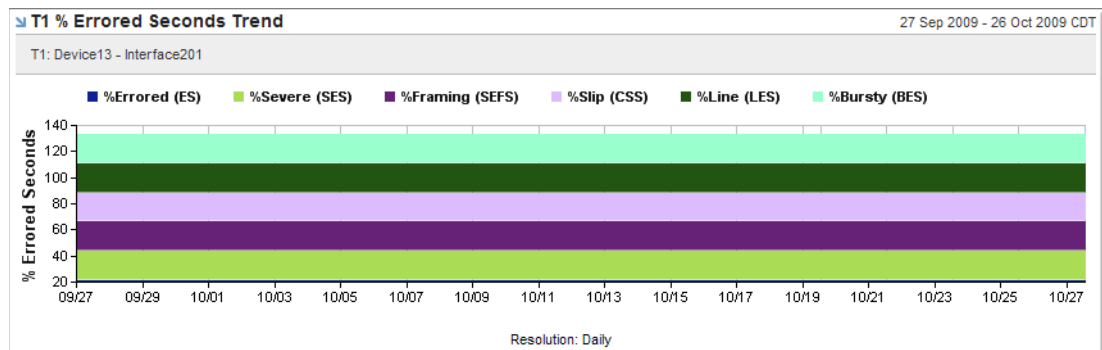|	
% DM	Percentage of degraded minutes, which are determined by collecting all of the available seconds, removing any severely errored seconds, grouping the result in 60-second long groups and counting a 60-second long group (minute) as degraded if the cumulative errors during the seconds present in the group exceed 1E-6.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

T1 % Errored Seconds Trend

Displays the percentage of errored seconds, by type, on the selected DS1 (T1) interface over the selected time period.

Note: All T1 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.

Context: This view requires a selected T1 interface to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

%Errored	Percentage of errored seconds, which are those with one or more Path Code violations, one or more out-of-frame defects, one or more controlled slip events, or a detected AIS defect.
%Severe	Percentage of severely errored seconds, which are those with 320 or more Path Code violation error events, one or more out-of-frame defects, or a detected AIS defect.
%Framing	Percentage of severely errored framing seconds, which are those with one or more out-of-frame defects or a detected AIS defect.

|	
%Slip	Percentage of controlled slip seconds, which are one-second intervals containing one or more controlled slips.
%Line	Percentage of line errored seconds, which are those in which one or more Line Code violation error events were detected.
%Bursty	Percentage of bursty errored seconds (also known as Errored Second type B), which are those with fewer than 320 and more than one Path Coding violation error events, no severely errored frame defects and no detected incoming AIS defects. Controlled slips are not included in this parameter.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the T1 Performance Report.

T1 % Coding Violations Trend

Displays the percentage of violations due to path or line coding in frame relay packets, by date/time, for the selected DS1 (T1) interface over the selected period of time.

Note: All T1 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.
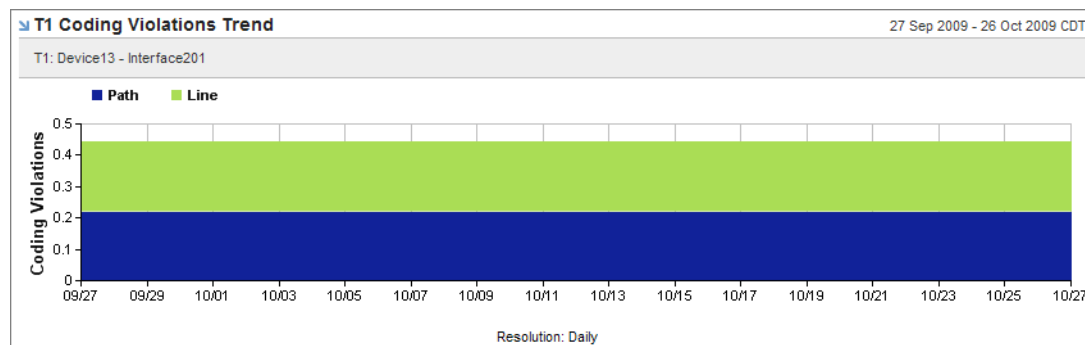
Context: This view requires a selected T1 interface to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Path	Number of path coding violations, which are frame synchronization bit errors in the D4 and E1-noCRC formats or CRC errors in the ESF and E1-CRC formats
Line	Number of line coding violations, which are occurrences of either a Bipolar Violation (BPV) or Excessive Zeroes (EXZ) Error Event.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

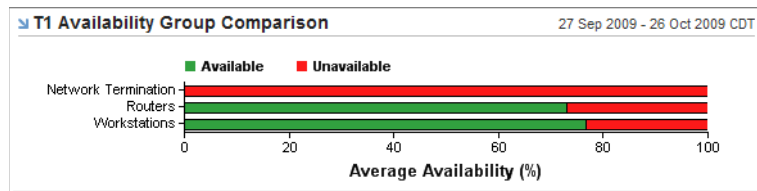**Standard NetVoyant reports:** This view is included by default in the T1 Performance Report.

T1 Availability Group Comparison

Displays the overall availability and unavailability, by sub-group, for TI interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Note: All T1 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Available   The average availability percentage

Unavailable   The average unavailability percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the WAN Group Comparison Report.
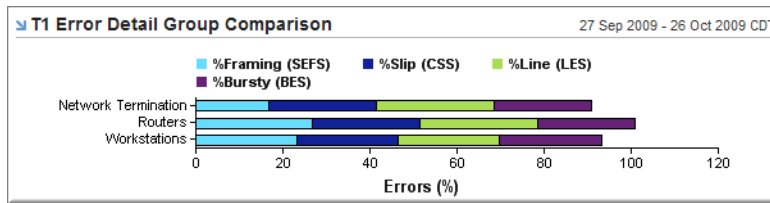
Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Group Comparison report.

T1 Error Detail Group Comparison

Displays the average number for each error type, by sub-group, for TI interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Note: All T1 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

%Framing   Average percentage of severely errored framing seconds, which are those with one or more out-of-frame defects or a detected AIS defect.

%Slip   Average percentage of controlled slip seconds, which are one-second intervals containing one or more controlled slips.

%Line   Average percentage of line errored seconds, which are those in which one or more Line Code violation error events were detected.

%Bursty   Average percentage of bursty errored seconds (also known as Errored Second type B), which are those with fewer than 320 and more than one Path Coding violation error events, no severely errored frame defects and no detected incoming AIS defects. Controlled slips are not included in this parameter.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the WAN Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Group Comparison report.

T3 % Errored Seconds Trend

Displays the percentage of errored seconds, by type, on the selected DS3 (T3) circuit over the selected time period.

Note: All T3 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.

Context: This view requires a selected T3 circuit to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

%P-Bit (PES)	Percentage of P-bit errored seconds, which are those with one or more PCVs, one or more out-of-frame defects, or a detected incoming AIS.
%P-Bit Severe (PSESs)	Percentage of P-bit Severely Errored Seconds, which are those with 44 or more PCVs, one or more out-of-Frame defects, or a detected incoming AIS.
%Framing (SEFSs)	Percentage of Severely Errored Framing Seconds, which are those with one or more out-of-frame defects or a detected incoming AIS.
%Line (LESs)	Percentage of Line Errored Seconds, which are those in which one or more CVs occurred or one or more LOS defects was detected.
%C-Bit (CESs)	Percentage of C-bit Errored Seconds, which are those with one or more CCVs, one or more out-of-frame defects, or a detected incoming AIS.
	Note: This parameter is only for the SYNTRAN and C-bit Parity DS3 applications.
%C-Bit Severe (CSESs)	Percentage of C-bit Severely Errored Seconds, which are those with 44 or more CCVs, one or more out-of-Frame defects, or a detected incoming AIS.
	Note: This parameter is only for the SYNTRAN and C-bit Parity DS3 applications.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the T3 Performance Report.

T3 % Coding Violations Trend

Displays the percentage of violations due to line, P-bit, or C-bit coding, by date/time, for the selected DS3 (T3) interface over the selected period of time.

Note: All T3 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.

Context: This view requires a selected T3 interface to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Line	Number of line coding violations, which are occurrences of either a Bipolar Violation (BPV) or Excessive Zeroes (EXZ) Error Event.
P-bit	Number of P-bit coding violations (parity error events), which are occurrences of a received P-bit code on the DS3 M-frame that is not identical to the corresponding locally- calculated code.
C-bit	Number of C-bit coding violations, which are coding violations reported via the C-bits. For C-bit parity, it is a count of CP-bit parity errors occurring in the accumulation interval. For SYNTRAN, it is a count of CRC-9 errors occurring in the accumulation interval.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.
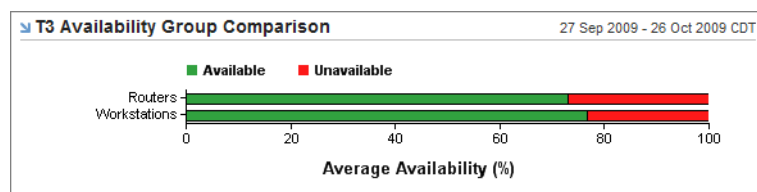
Standard NetVoyant reports: This view is included by default in the T3 Performance Report.

T3 Availability Group Comparison

Displays the overall availability and unavailability, by sub-group, for T3 circuits/interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Note: All T3 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Available	The average availability percentage
Unavailable	The average unavailability percentage

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

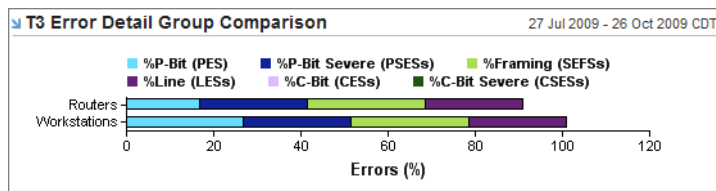**Standard NetVoyant reports:** This view is included by default in the WAN Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Group Comparison report.

T3 Error Detail Group Comparison

Displays the average number for each error type, by sub-group, for T3 circuits/interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Note: All T3 performance parameters are accumulated in 15-minute intervals, with up to 96 intervals (24 hours). Fewer than 96 intervals of data will be available if the NetVoyant poller has been restarted within the last 24 hours. Additionally, there is a rolling 24-hour total of each performance parameter.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

%P-Bit (PES)	Average percentage of P-bit errored seconds, which are those with one or more PCVs, one or more out-of-frame defects, or a detected incoming AIS.
%P-Bit Severe (PSESs)	Average percentage of P-bit Severely Errored Seconds, which are those with 44 or more PCVs, one or more out-of-Frame defects, or a detected incoming AIS.
%Framing (SEFSs)	Average percentage of Severely Errored Framing Seconds, which are those with one or more out-of-frame defects or a detected incoming AIS.
%Line (LESs)	Average percentage of Line Errored Seconds, which are those in which one or more CVs occurred or one or more LOS defects was detected.

%C-Bit (CESs)	Average percentage of C-bit Errored Seconds, which are those with one or more CCVs, one or more out-of-frame defects, or a detected incoming AIS.
	Note: This parameter is only for the SYNTRAN and C-bit Parity DS3 applications.
%C-Bit Severe (CSESs)	Average percentage of C-bit Severely Errored Seconds, which are those with 44 or more CCVs, one or more out-of-Frame defects, or a detected incoming AIS.
	Note: This parameter is only for the SYNTRAN and C-bit Parity DS3 applications.

Styles: This view can be displayed as a line chart, bar chart, stacked bar chart, stacked area chart, or table.

Standard NetVoyant reports: This view is included by default in the WAN Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Group Comparison report.

Top Deviation From Norm - T1 Unavailable/Errored Seconds

Displays the amount of unavailable or errored time for those T1 interfaces in the selected reporting group that have the highest deviation from the 30-day rolling baseline value for unavailable and errored time. This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	DS1 Unavailable Seconds (`UASs`) or DS1 Errored seconds (`ESs`)
Normal	Normal value calculated from a 30-day rolling baseline

| **Actual** | The value over the selected time period |
| **Deviation (%)** | The actual value calculated as a percentage above or below the normal value. |

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Deviation from Normal report.

Top Deviation From Norm - T3 Unavailable Seconds

Displays the amount of unavailable time for those T3 circuits/interfaces in the selected reporting group that have the highest deviation from the 30-day rolling baseline value for unavailable and errored time. This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is dsx3near, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Metric	DS3 Unavailable Seconds (UASs)
Normal	Normal value calculated from a 30-day rolling baseline
Actual	The value over the selected time period
Deviation (%)	The actual value calculated as a percentage above or below the normal value.

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Deviation from Normal Report.

Top Projections - T1

Displays 30, 60, and 90-day projections for unavailable and errored seconds for those T1 interfaces in the selected reporting group with the highest unavailable and errored seconds growth rates.

Top Projections - T1					27 Jul 2009 - 26 Oct 2009 CDT
Name	Metric	Last 90 Days ▼	30 Days	60 Days	90 Days
QARouter-2620-4.QA.local - Se0/0	DS1 Unavailable Seconds	22 hrs 37 min	23 hrs 43 min	1 day 10 min	1 day 37 min
WANSuite Test Box - Network 1	DS1 Unavailable Seconds	21 hrs 28 min	13 hrs 25 min	10 hrs 53 min	8 hrs 21 min
WANSuite Test Box - Network 2	DS1 Unavailable Seconds	21 hrs 28 min	13 hrs 25 min	10 hrs 53 min	8 hrs 21 min
Device13 - Interface223	DS1 Unavailable Seconds	5 hrs 39 min	4 hrs 23 min	3 hrs 43 min	3 hrs 4 min
Device13 - Interface223	DS1 Errored Seconds	5 hrs 39 min	4 hrs 23 min	3 hrs 43 min	3 hrs 4 min
Device13 - Interface222	DS1 Unavailable Seconds	5 hrs 37 min	4 hrs 22 min	3 hrs 42 min	3 hrs 3 min
Device13 - Interface222	DS1 Errored Seconds	5 hrs 37 min	4 hrs 22 min	3 hrs 42 min	3 hrs 3 min
Device13 - Interface221	DS1 Unavailable Seconds	5 hrs 36 min	4 hrs 21 min	3 hrs 41 min	3 hrs 2 min
Device13 - Interface221	DS1 Errored Seconds	5 hrs 36 min	4 hrs 21 min	3 hrs 41 min	3 hrs 2 min
Device13 - Interface220	DS1 Unavailable Seconds	5 hrs 34 min	4 hrs 19 min	3 hrs 40 min	3 hrs 1 min

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Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

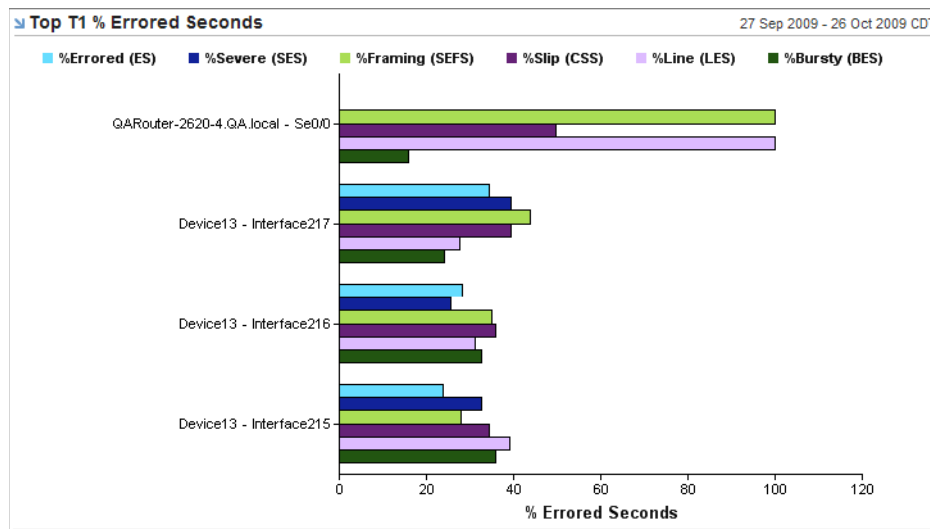|	
Metric	DS1 Unavailable Seconds (`UASs`) or DS1 Errored seconds (`ESs`)
Last 90 Days	The growth rate calculated over the preceding 90 days
30 Days	The projected increase 30 days from now
60 Days	The projected increase 60 days from now
90 Days	The projected increase 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top Projections - T3

Displays 30, 60, and 90-day projections for unavailable seconds for those T3 circuits/interfaces in the selected reporting group with the highest unavailable seconds growth rates.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

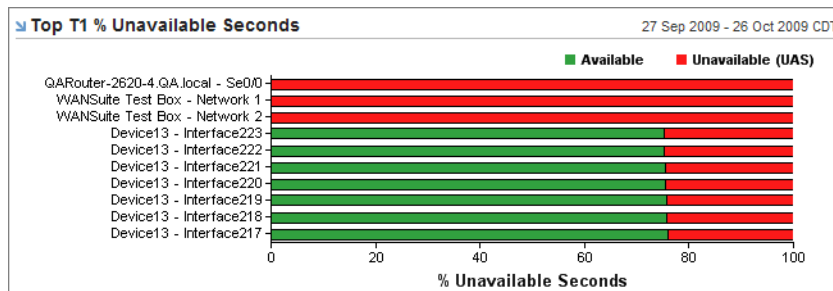|	
Metric	DS3 Unavailable Seconds (`UASs`)
Last 90 Days	The growth rate calculated over the preceding 90 days
30 Days	The projected increase 30 days from now
60 Days	The projected increase 60 days from now
90 Days	The projected increase 90 days from now

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is included by default in the Top Projections Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Projections report.

Top T1 % Errored Seconds

Displays the errored seconds rates for those T1 circuits/interfaces in the selected reporting group with the highest error rates during a selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

%Errored (ES)	Percentage of errored seconds, which are those with one or more Path Code violations, one or more out-of-frame defects, one or more controlled slip events, or a detected AIS defect.
%Severe (SES)	Percentage of severely errored seconds, which are those with 320 or more Path Code violation error events, one or more out-of-frame defects, or a detected AIS defect.

%Framing (SEFS)	Percentage of severely errored framing seconds, which are those with one or more out-of-frame defects or a detected AIS defect.
%Slip (CSS)	Percentage of controlled slip seconds, which are one-second intervals containing one or more controlled slips.
%Line (LES)	Percentage of line errored seconds, which are those in which one or more Line Code violation error events were detected.
%Bursty (BES)	Percentage of bursty errored seconds (also known as Errored Second type B), which are those with fewer than 320 and more than one Path Coding violation error events, no severely errored frame defects and no detected incoming AIS defects. Controlled slips are not included in this parameter.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report.

Top T1 % Unavailable Seconds

Displays the availability and unavailability percentages for those T1 circuits/interfaces in the selected reporting group or managed object with the highest unavailability rates during a selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

|	
Available	The availability percentage
Unavailable (UAS)	The unavailability percentage

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report.

Top T1 Circuits

Displays the availability and error rates on those T1 circuits in the selected reporting group or managed object with the least availability during the selected time period.

Top T1 Circuits							28 Oct 2009 09:06 - 10:06 CDT
Name	%Unavail (UAS) ▼	%Errored (ES)	%Severe (SES)	%Framing (SEFS)	%Slip (CSS)	%Line (LES)	%Bursty (BES)
WANSuite Test Box - Network 2	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
WANSuite Test Box - Network 1	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
QARouter-2620-4.QA.local - Se0/0	100.00%	0.00%	0.00%	100.00%	49.33%	100.00%	0.00%
Device13 - Interface223	24.78%	24.78%	24.78%	24.78%	24.78%	24.78%	24.78%
Device13 - Interface222	24.67%	24.67%	24.67%	24.67%	24.67%	24.67%	24.67%
Device13 - Interface221	24.56%	24.56%	24.56%	24.56%	24.56%	24.56%	24.56%
Device13 - Interface220	24.44%	24.44%	24.44%	24.44%	24.44%	24.44%	24.44%
Device13 - Interface219	24.33%	24.33%	24.33%	24.33%	24.33%	24.33%	24.33%
Device13 - Interface218	24.22%	24.22%	24.22%	24.22%	24.22%	24.22%	24.22%
Device13 - Interface217	24.11%	24.11%	24.11%	24.11%	24.11%	24.11%	24.11%

Show Top: 10

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

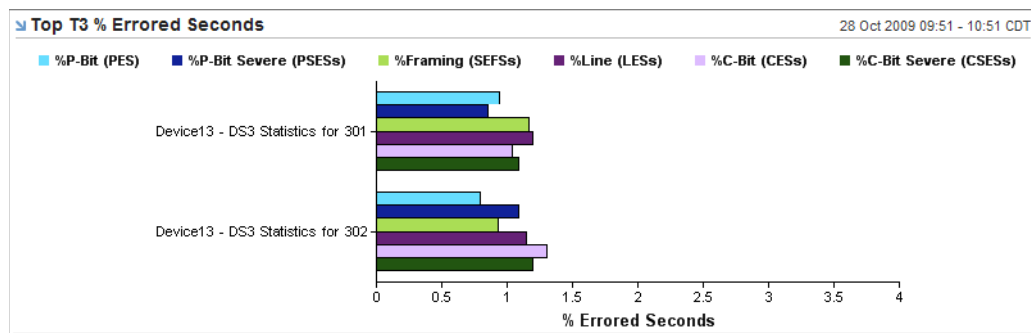|	
%Unavail (UAS)	Percentage of unavailable seconds, which is calculated by counting the number of seconds that the interface is unavailable. The DS1 interface is said to be unavailable from the onset of 10 contiguous SESs, or the onset of the condition leading to a failure.
%Errored (ES)	Percentage of errored seconds, which are those with one or more Path Code violations, one or more out-of-frame defects, one or more controlled slip events, or a detected AIS defect.
%Severe (SES)	Percentage of severely errored seconds, which are those with 320 or more Path Code violation error events, one or more out-of-frame defects, or a detected AIS defect.
%Framing (SEFS)	Percentage of severely errored framing seconds, which are those with one or more out-of-frame defects or a detected AIS defect.
%Slip (CSS)	Percentage of controlled slip seconds, which are one-second intervals containing one or more controlled slips.
%Line (LES)	Percentage of line errored seconds, which are those in which one or more Line Code violation error events were detected.
%Bursty (BES)	Percentage of bursty errored seconds (also known as Errored Second type B), which are those with fewer than 320 and more than one Path Coding violation error events, no severely errored frame defects and no detected incoming AIS defects (controlled slips not included).

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, WAN Summary Report, Device Capabilities Report, and Router Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Circuits report, the Enterprise Summary report, and the WAN Summary report.

Top T1 Coding Violations

Displays the frequency of path and line coding violations on those T1 circuits/interfaces in the selected reporting group or managed object with the highest path coding violation rates during a selected time period.
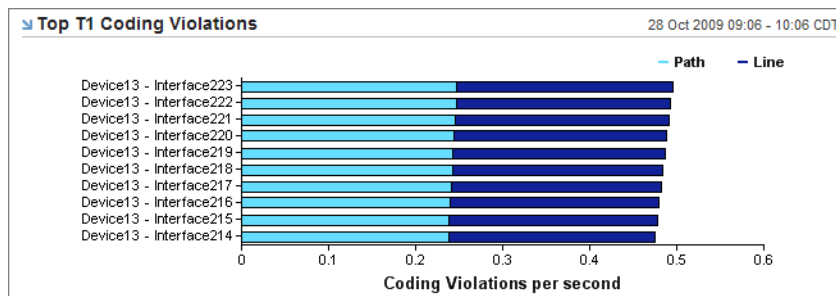
Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

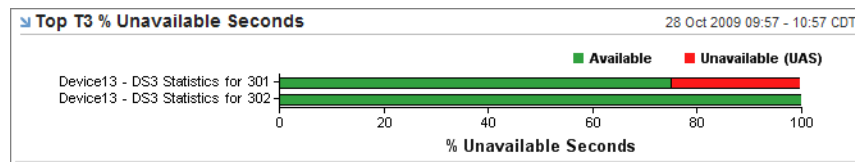|	
Path	Number of path coding violations per second, which are frame synchronization bit errors in the D4 and E1-noCRC formats or CRC errors in the ESF and E1-CRC formats
Line	Number of line coding violations per second, which are occurrences of either a Bipolar Violation (BPV) or Excessive Zeroes (EXZ) Error Event.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top T1 Interfaces

Displays the inbound and outbound utilization and the inbound and outbound observed rates on those T1 interfaces in the selected reporting group or managed object with the highest utilization during a selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Util In   The maximum inbound utilization percentage value observed

Util Out   The maximum outbound utilization percentage value observed

Rate In   The maximum inbound rate (bps) value observed

Rate Out   The maximum outbound rate (bps) value observed

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the WAN Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Summary report.

Top T3 % Errored Seconds

Displays the error type rates on those T3 circuits/interfaces in the selected reporting group or managed object with the highest P-bit error rate during a selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

%P-Bit (PES)   Average percentage of P-bit errored seconds, which are those with one or more PCVs, one or more out-of-frame defects, or a detected incoming AIS.

%P-Bit Severe (PSESs)   Average percentage of P-bit Severely Errored Seconds, which are those with 44 or more PCVs, one or more out-of-Frame defects, or a detected incoming AIS.

%Framing (SEFSs)   Average percentage of Severely Errored Framing Seconds, which are those with one or more out-of-frame defects or a detected incoming AIS.

%Line (LESs)   Average percentage of Line Errored Seconds, which are those in which one or more CVs occurred or one or more LOS defects was detected.

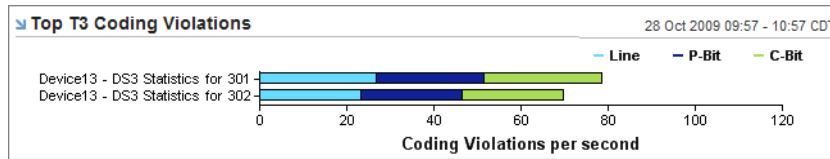|	
%C-Bit (CESs)	Average percentage of C-bit Errored Seconds, which are those with one or more CCVs, one or more out-of-frame defects, or a detected incoming AIS.
	Note: This parameter is only for the SYNTRAN and C-bit Parity DS3 applications.
%C-Bit Severe (CSESs)	Average percentage of C-bit Severely Errored Seconds, which are those with 44 or more CCVs, one or more out-of-Frame defects, or a detected incoming AIS.
	Note: This parameter is only for the SYNTRAN and C-bit Parity DS3 applications.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Top Issues report.

Top T3 % Unavailable Seconds

Displays the availability and unavailability percentages for those T3 circuits/interfaces in the selected reporting group or managed object with the highest unavailability rates during a selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Available	The availability percentage
Unavailable (UAS)	The unavailability percentage

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top T3 Circuits

Displays the unavailability and error rates on those T3 circuits in the selected reporting group or managed object with the least availability during the selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

%Unavail (UAS)	Percentage of unavailable seconds, which is calculated by counting the number of seconds that the interface is unavailable. The DS3 interface is said to be unavailable from the onset of 10 contiguous PSESs, or the onset of the condition leading to a failure.
%P-Bit (PES)	Average percentage of P-bit errored seconds, which are those with one or more PCVs, one or more out-of-frame defects, or a detected incoming AIS.
%P-Bit Severe (PSESs)	Average percentage of P-bit Severely Errored Seconds, which are those with 44 or more PCVs, one or more out-of-Frame defects, or a detected incoming AIS.
%Framing (SEFSs)	Average percentage of Severely Errored Framing Seconds, which are those with one or more out-of-frame defects or a detected incoming AIS.
%Line (LESs)	Average percentage of Line Errored Seconds, which are those in which one or more CVs occurred or one or more LOS defects was detected.
%C-Bit (CESs)	Average percentage of C-bit Errored Seconds, which are those with one or more CCVs, one or more out-of-frame defects, or a detected incoming AIS. *Note:* This parameter is only for the SYNTRAN and C-bit Parity DS3 applications.
%C-Bit Severe (CSESs)	Average percentage of C-bit Severely Errored Seconds, which are those with 44 or more CCVs, one or more out-of-Frame defects, or a detected incoming AIS. *Note:* This parameter is only for the SYNTRAN and C-bit Parity DS3 applications.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the Operations Summary Report, WAN Summary Report, Device Capabilities Report, and Router Capabilities Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Router Circuits report, the Enterprise Summary report, and the WAN Summary report.

Top T3 Coding Violations

Displays the frequency of line, P-bit, and C-bit coding violation rates on those T3 circuits/interfaces in the selected reporting group or managed object with the highest total coding violation rates during a selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `dsx3near`, which corresponds to the DS3 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Line	Number of line coding violations, which are occurrences of either a Bipolar Violation (BPV) or Excessive Zeroes (EXZ) Error Event.
P-bit	Number of P-bit coding violations (parity error events), which are occurrences of a received P-bit code on the DS3 M-frame that is not identical to the corresponding locally- calculated code.
C-bit	Number of C-bit coding violations, which are coding violations reported via the C-bits. For C-bit parity, it is a count of CP-bit parity errors occurring in the accumulation interval. For SYNTRAN, it is a count of CRC-9 errors occurring in the accumulation interval.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top T3 Interfaces

Displays the inbound and outbound utilization and the inbound and outbound observed rates on those T3 interfaces in the selected reporting group or managed object with the highest utilization during a selected time period.

Context: This view requires a selected reporting group, device, or router to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Util In	The maximum inbound utilization percentage value observed
Util Out	The maximum outbound utilization percentage value observed
Rate In	The maximum inbound rate (bps) value observed
Rate Out	The maximum outbound rate (bps) value observed

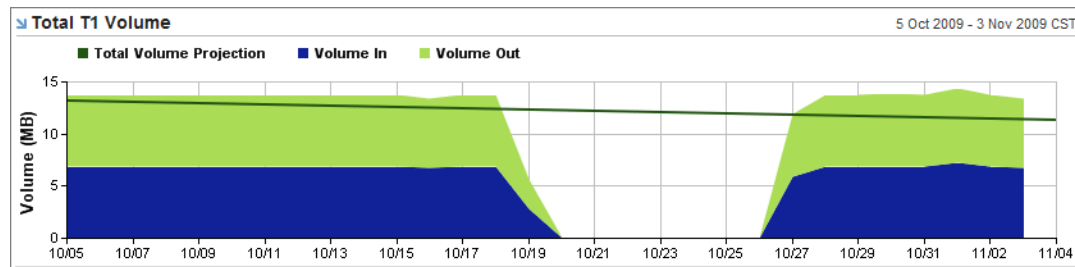**Styles:** This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the WAN Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Summary report.

Top Threshold Violations - T1 Unavailable Seconds

Displays unavailable seconds threshold alarms that have occurred on the T1 circuits/interfaces in the selected reporting group during the selected time period. Those values that have exceeded threshold display as red values.

The view also displays the percent of time (Violation Duration) that the value has been over threshold and the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

Note: Place the pointer over the value to display the threshold settings for the metric.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Unavail (UAS)	Number of unavailable seconds.The DS1 interface is said to be unavailable from the onset of 10 contiguous SESs, or the onset of the condition leading to a failure.
Errored (ES)	Number of errored seconds, which are those with one or more Path Code violations, one or more out-of-frame defects, one or more controlled slip events, or a detected AIS defect.
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of unique threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top Threshold Violations - T3 Unavailable Seconds

Displays unavailable seconds threshold alarms that have occurred on the T3 circuits/interfaces in the selected reporting group during the selected time period. Those values that have exceeded threshold display as red values.

The view also displays the percent of time (Violation Duration) that the value has been over threshold and the number of unique threshold crossing events (Number of Unique Violations) observed during the selected time period.

Note: Place the pointer over the value to display the threshold settings for the metric.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `dsx1near`, which corresponds to the DS1 15-minute Statistics dataset in NetVoyant. The view includes data for the following expressions:

Unavail (UAS)	Number of unavailable seconds. The DS3 interface is said to be unavailable from the onset of 10 contiguous PSESs, or the onset of the condition leading to a failure.
Violation Duration (%)	The total threshold event duration for the reporting time period, as a percentage
Number of Unique Violations	Count of unique threshold events

Styles: This view can be displayed as a table only.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Total MIB-II T1 Volume Group Comparison

Displays the inbound and outbound volume, by sub-group, on T1 interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In	Total volume of inbound traffic on the T1 interfaces
Volume Out	Total volume of outbound traffic on the T1 interfaces

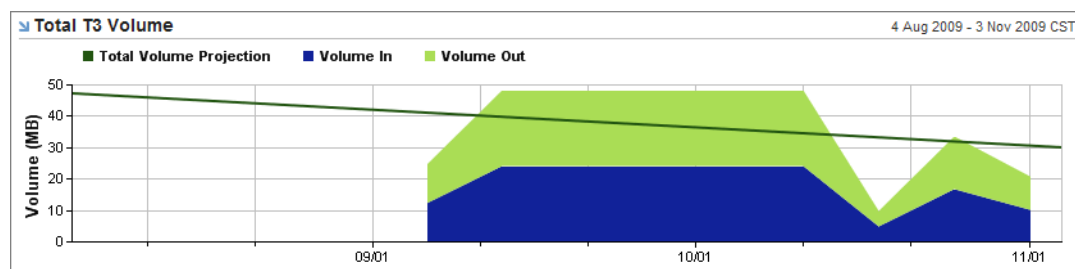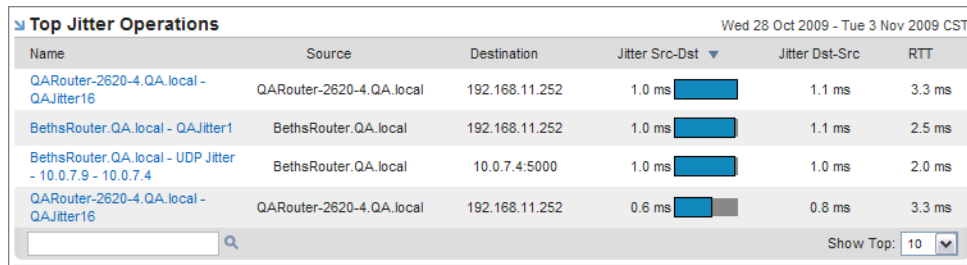**Styles:** This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the WAN Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Group Comparison report.

Total MIB-II T3 Volume Group Comparison

Displays the inbound and outbound volume, by sub-group, on T3 interfaces in the selected reporting group during the selected time period.

Group Comparison views provide meaningful comparisons of performance by sub-group. Because groups are typically organized to match your network organization, these views can provide insights into how specific parts of your network compare to others.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In	Total volume of inbound traffic on the T3 interfaces
Volume Out	Total volume of outbound traffic on the T3 interfaces

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the WAN Group Comparison Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Group Comparison report.

Total T1 Volume

Displays the average inbound and outbound volumes for T1 interfaces in the selected reporting group over a selected time period compared to the total volume projection.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In	Total volume of inbound traffic on the T1 interfaces
Volume Out	Total volume of outbound traffic on the T1 interfaces

Styles: This view can be displayed as a bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the volume projection is not displayed.

Standard NetVoyant reports: This view is included by default in the WAN Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Summary report.

Total T3 Volume

Displays the average inbound and outbound volumes for T3 interfaces in the selected reporting group over a selected time period compared to the total volume projection.

Context: This view requires a selected reporting group to be displayed.

Data: The metric used to render this view is `ifstats`, which corresponds to the Interface Statistics dataset in NetVoyant. The view includes data for the following expressions:

Volume In	Total volume of inbound traffic on the T3 interfaces
Volume Out	Total volume of outbound traffic on the T3 interfaces

Styles: This view can be displayed as a bar chart, stacked bar chart, stacked area chart, or table.

Note: When you display this view as a table, the volume projection is not displayed.

Standard NetVoyant reports: This view is included by default in the WAN Summary Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the WAN Summary report.

VOIP (IP SLA) VIEWS

The following sections describe the views related to VoIP data that you can add to your report pages. This information includes the view styles available for each view, the dataset used to render the view, and the standard report pages that include the view by default.

Note: If there are no standard report pages listed for a view, you must add that view to a report page to display it in the NetVoyant reporting tool.

IP SLA VoIP Summary

Displays the average round-trip time, error percentage, and completion percentage compared to a baseline for all VoIP IP SLA operations in the selected reporting group or managed object during the selected time period.

Gauge views are designed to provide a high-level indication of desirable and undesirable numbers according to baselines and thresholds.
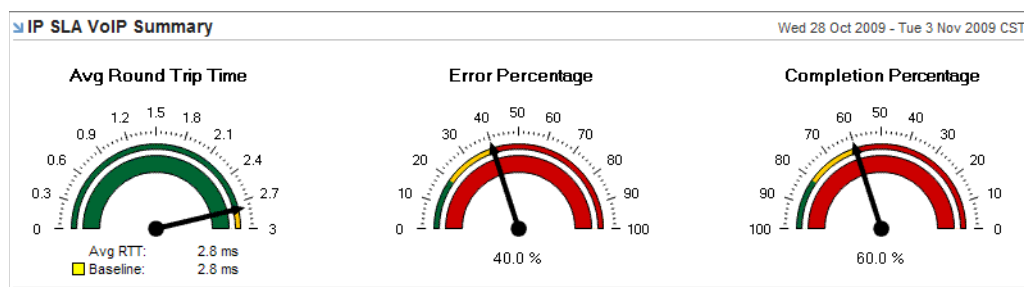
Context: This view requires a selected reporting group, router, or switch to be displayed.

Note: This is a summary view derived from multiple NetVoyant datasets and cannot be edited in the Custom View Wizard.
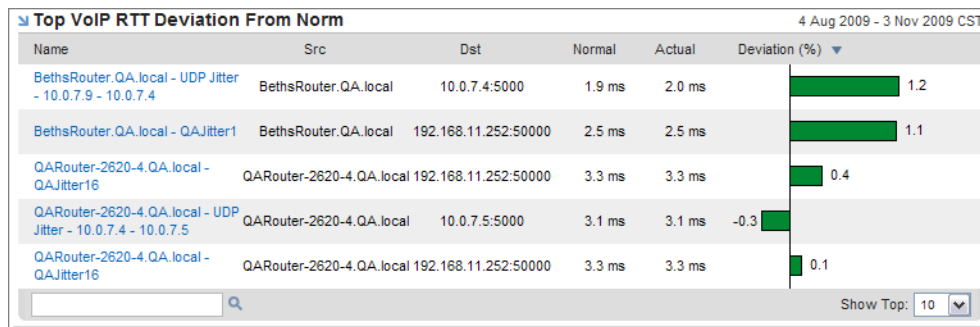
Styles: This view can be displayed as gauge chart only.

Standard NetVoyant reports: This view is included by default in the VoIP Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Voice Over IP report.

Top Jitter Operations

Displays the average source-to-destination and destination-to-source jitter values and the average round trip time for those IP SLA operations in the selected reporting group or managed object with the highest average source-to-destination jitter values during the selected time period.

Jitter is the statistical term for variations in delay among the arrival times of packets in the same stream.

Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expressions:

Source	The source address for the IP SLA jitter operation
Destination	The target address for the IP SLA jitter operation
Jitter Src-Dst	The average jitter values (ms) from packets sent from source to destination
Jitter Dst-Src	The average jitter values (ms) from packets sent from destination to source
RTT	The average round trip time for the operation

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is not included by default in the standard NetVoyant reports, but you can add it to a report page.

Top VoIP Errored Operations

Compares the percentage of errored operations for those VoIP IP SLA operations in the selected reporting group or managed object that experienced the most errors during a selected time period.
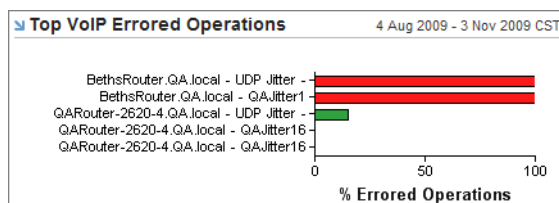
Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expression:

Error Rate	The percentage of errored operations, including lost packets, missing packets, late packets, busies, and sequence errors

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the VoIP Report, which is a standard NetVoyant report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Voice Over IP report.

Top VoIP Jitter Operations

Displays the average positive jitter values for those IP SLA operations in the selected reporting group or managed object with the highest jitter during the selected time period.
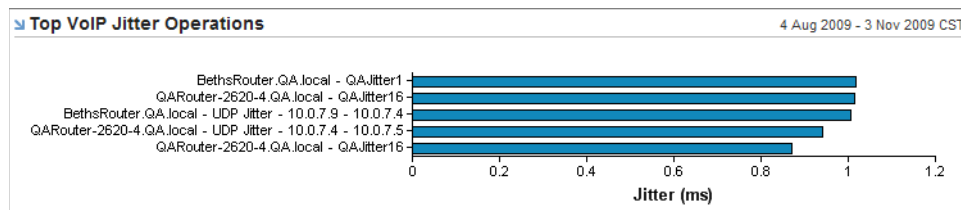
Context: This view requires a selected reporting group, device, router, or switch to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expression:

Jitter	The average positive jitter values (ms)

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the IP SLA Report and VoIP Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Voice Over IP report.

Top VoIP Over Threshold

Displays the percentage over threshold for those VoIP IP SLA operations in the selected reporting group or managed object that most exceeded a threshold value during a selected time period.

Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expression:

Over Threshold   The percentage of jitter operations that exceed a threshold

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the VoIP Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Voice Over IP report.

Top VoIP RTT Deviation from Norm

Displays details for those VoIP IP SLA operations in the selected reporting group or managed object that have the highest deviation from the 30-day rolling baseline value for round-trip time. This view is designed to provide insight into areas experiencing rapid change.

Top Deviation from Normal views compare actual values (values during the selected time period) to a a calculated "normal" value and display those values that have deviated the most from that "normal" value. The "normal" values are calculated as averages using the past 30 days of baselines (generated for expressions as configured in the NetVoyant Console). If you select a different time period for a report, the "normal" is calculated differently; however, all are averages based on the hourly rollup values.

Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metrics used to render this view are `rttstats` and `rttjitter`, which correspond to the IPSLA Statistics and IPSLA Jitter Statistics datasets in NetVoyant.

Src	The source address for the IP SLA jitter operation
Dst	The target address for the IP SLA jitter operation
Normal	Normal value calculated from a 30-day rolling baseline
Actual	The value over the selected time period
Deviation (%)	The actual value calculated as a percentage above or below the normal value.

To filter the data to display only those operations of a specific type, click the blue arrow at the upper-left corner of the view to access the view menu and select **Edit**. In the **Select Operation Filter** dialog box, choose an IP SLA operation type from the **Select Operation Filter** drop-down list and click **OK**.
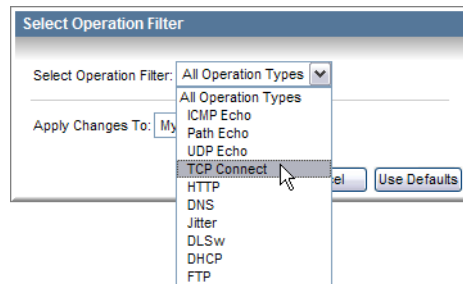
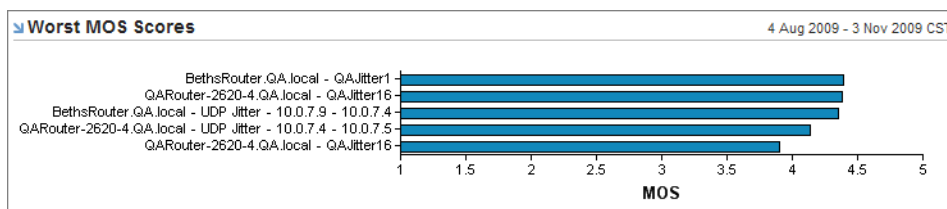**Styles:** This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the VoIP Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Voice Over IP report.

VoIP Operations by Router

Displays average round trip time, error rate, and completion rate for VoIP IP SLA operations by router in the selected reporting group during the selected time period.

Context: This view requires a selected reporting group to be displayed.

Data: The metrics used to render this view are `rttstats` and `rttjitter`, which correspond to the IPSLA Statistics and IPSLA Jitter Statistics datasets in NetVoyant.

Avg RTT (ms)	The average round trip time for the operation
Error Rate (%)	Percentage of errors/initiations
Comp Rate (%)	Percentage of completions/initiations
Count	Count of operations for the router

To filter the data to display only those operations of a specific type, click the blue arrow at the upper-left corner of the view to access the view menu and select **Edit**. In the **Select Operation Filter** dialog box, choose an IP SLA operation type from the **Select Operation Filter** drop-down list and click **OK**.
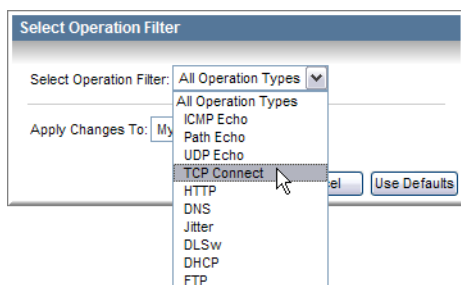
Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the VoIP Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Voice Over IP report.

Worst MOS Scores

Displays the Mean Opinion Score (MOS), which is a measure of user perception based on the selected codec for voice packet round trip, for the IP SLA VoIP/jitter operations in the selected reporting group or managed object with the worst MOS values during the elected time period.

MOS is an industry standard for gauging call quality by estimating the impact of various impairments to the quality of the voice signal on the listener's likely perception of the call's quality. The MOS scale ranges from 5.00 to 1.00, with 5.00 representing the highest quality—that is, a score representing an audio signal free from impairments—and 1.00 representing the lowest quality. The average MOS value is the average MOS listening quality (LQK) score observed for the entire voice stream.

Context: This view requires a selected reporting group, router, or switch to be displayed.

Data: The metric used to render this view is `rttjitter`, which corresponds to the IPSLA Jitter Statistics dataset in NetVoyant. The view includes data for the following expression:

MOS   The average MOS value from IP SLA Jitter packets sent.

Styles: This view can be displayed as a bar chart, stacked bar chart, or table.

Standard NetVoyant reports: This view is included by default in the VoIP Report.

Standard NetQoS Performance Center 6.0 reports: This view is included by default in the Voice Over IP report.

Integrated Reporting in the NetQoS Performance Center

Many of the built-in NetVoyant views are displayed by default in the NetQoS Performance Center. In addition, groups of devices, user accounts, and their associated roles can be created and managed in the NetQoS Performance Center when NetVoyant is registered as a data source. When the NetQoS Event Manager is also registered as a data source, it collects events, alerts, traps, and log streams from the NetVoyant data source, as well as other data sources, and displays them in a single, correlated list, and provides separate data views within the NetQoS Performance Center.

This appendix explains the process for registering NetQoS NetVoyant with the NetQoS Performance Center and describes the differences in the displayed views when rendered in the NetQoS Performance Center user interface. It also explains the differences in event and alarm status between the NetQoS Event Manager and the NetVoyant product when both are added as a data source in a NetQoS Performance Center installation.

When the NetVoyant product is registered as a data source with the NetQos Performance Center, SNMP profiles and reporting groups are also synchronized. For more information about group management and SNMP profiles in the NetVoyant product, see the information about groups and SNMP profiles in the *NetVoyant Administrator Guide*.

This appendix covers the following topics:

- "About the NetQoS Performance Center" on page 584
- "Integration with the NetQoS Performance Center" on page 587
- "NetQoS Event Manager Integration" on page 590

ABOUT THE NETQoS PERFORMANCE CENTER

The NetQoS Performance Center is a web-based tool used to access informative data from supported NetQoS products in various formats so that you can effectively manage your networks, applications, and devices. By combining different types of analytical data for display in one place, the NetQoS Performance Center offers a unique perspective for executives and for Engineering, Operations, and other groups who want to troubleshoot and maintain current resources as well as plan for future initiatives.

The NetQoS Performance Center helps you continuously monitor the end-to-end performance of applications across the network. Knowing what constitutes "normal" application performance helps you validate the impact of planned changes such as QoS policy implementation and application rollouts. The NetQoS Performance Center helps you to determine which applications and devices are using network bandwidth, who is using the bandwidth, and when. It facilitates troubleshooting by helping you identify inappropriate application usage and anomalous traffic volumes. Finally, the NetQoS Performance Center helps you monitor and manage device performance, which means that you can manage capacity issues specific to individual devices such as routers and servers and diagnose availability problems.

Supported Data Sources

Integrated performance data is critical for effectively managing network and application performance. The NetQoS Performance Center can display data from several underlying NetQoS products in unique combinations to help solve specific problems. These underlying products are called *data sources*. The following data sources are fully supported by the NetQoS Performance Center:

Device	Description of data
NetQoS SuperAgent	Collected from end-to-end network, application, and server performance monitoring.
NetQoS ReporterAnalyzer	Network traffic analysis data collected from NetFlow-enabled routers.
NetQoS NetVoyant	Device-specific management and monitoring data collected from SNMP polling.
NetQoS Anomaly Detector	Identifies and alerts on abnormally high flow and volume sources that can indicate issues in the system.
NetQoS Unified Communications Monitor	Collects data for network-based voice and video monitoring and is designed to track the quality of end-user experience, provide alerts on performance problems, and isolate performance issues to speed troubleshooting and MTTR.
Integrated Poller	This is a data source module included with the NetQoS Performance Center that performs limited, device-specific monitoring to users who do not have NetQoS NetVoyant installed.

Other data sources from third-party platforms are partially supported by means of the data export feature referred to as *inbound integration*.

Using the NetQoS Performance Center

The NetQoS Performance Center provides documentation, including online Help, to assist you in using the product. However, for purposes of this appendix, it is helpful to understand a few characteristics of the user interface and some key terms.

Like the NetVoyant web reporting tool, the NetQoS Performance Center uses the concepts of report *pages* and *views* of data within those pages. Views, or charts and graphs of data from selected data sources, are displayed on pages, with multiple views on each page. You can change the views contained on a given page.

The NetQoS Performance Center does not collect or analyze data. NetQoS products and third-party monitoring platforms provide data, either by direct support in the NetQoS Performance Center or by exporting their data in a supported format, to be displayed in views on NetQoS Performance Center report pages.

If your user account has the appropriate permissions, you can access data source devices and interfaces from the NetQoS Performance Center user interface by drilling into a more detailed view or by clicking a link to the data source interface or device.

Most view data is nested in *tiers*, which allow for drill-in from overviews to more detailed data. For example, if a particular view shows data for a list of routers, you can click a specific router name to view more information specific to that router. Each tier provides greater detail. The NetQoS Performance Center offers two main types of tier:

- **overviews** comparing servers, routers, interfaces, or protocols in one view
- **details** of a particular item in one view

The data displayed in a particular view is also dependent on the *context*. A context narrows the scope of the view data. When you select a context for a view, the data shown in the view is selected with respect to that context. For example, if you choose a server group, the data displayed in the views that you select within that context is limited to that server group.

Centralized User Management

NetVoyant integration with the NetQoS Performance Center is similar to that provided by other NetQoS data sources. In addition to the shared data views and seamless drill-in path discussed in "Integration with the NetQoS Performance Center" on page 587, NetQoS Performance Center also provides centralized management of user accounts, permissions, and groups among all NetQoS data source products. Centralizing user account and group management tasks makes it much easier to assign user access permissions and share information from different NetQoS data sources among IT teams.

To take advantage of the centralized management feature, you simply add the NetVoyant data source to the NetQoS Performance Center. As the NetVoyant data source is contacted, it is also automatically registered with the NetQoS Performance Center. Registration of a NetQoS data source product allows the NetQoS Performance Center to assume certain management tasks in that product and make them accessible to users with the appropriate administrative product privileges.

During the registration process, the NetQoS Performance Center adds all of the currently defined user accounts, roles, reporting groups, and SNMP profiles already configured in the NetVoyant product.

Note: The registration process is sometimes referred to informally as "binding."

Managing User Accounts and Roles

Before you register the NetVoyant data source with the NetQoS Performance Center, the Administration page allows the NetVoyant Administrator to view all the predefined and custom NetVoyant user accounts and roles, edit or delete those accounts and roles and their associated product privileges, or add new, custom users and roles.

When the NetVoyant product is registered and bound to a NetQoS Performance Center installation, user accounts and roles must be managed through the NetQoS Performance Center interface. Clicking **Users** or **Roles** on the **Administration** page of the NetVoyant web reporting tool will automatically open the **User List** page or **Roles List** page in the NetQoS Performance Center.
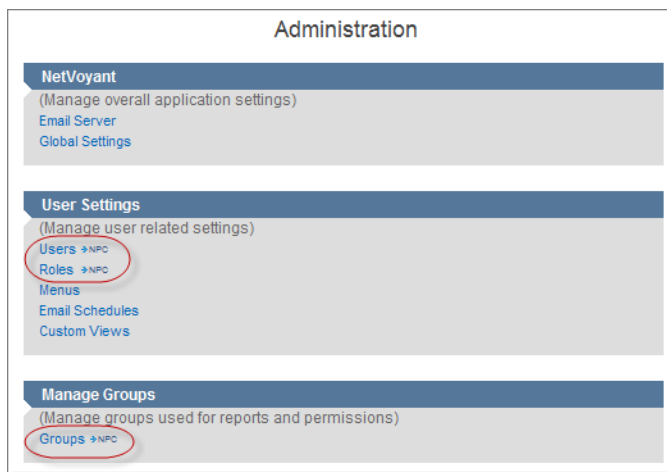
All users and roles defined in the system, including those created in other NetQoS products that are registered with the NetQoS Performance Center, are displayed on the NetVoyant User List and Role List Administration pages and can no longer be managed from those pages. Instead, the provided link opens the Administration page in the NetQoS Performance Center where management tasks can be performed.

INTEGRATION WITH THE NETQOS PERFORMANCE CENTER

The integration features in NetQoS Performance Center allow users with the appropriate permissions to view data in both NetQoS NetVoyant web reporting tool and the NetQoS Performance Center. Many of the standard report pages include default NetVoyant views, and many of the these report pages combine views from multiple NetQoS data sources.

To view data from a NetQoS data source product in the NetQoS Performance Center, you must register the data source. Registration of multiple NetQoS data source products allows for a seamless presentation of the various types of data collected and managed by NetQoS network management products.

Adding the NetVoyant Data Source

To centralize the management of NetQoS SNMP profiles, reporting groups, user accounts, and roles and to access data collected by NetQoS data source products in the NetQoS Performance Center, you must add each NetQoS data source product to the NetQoS Performance Center. The process of adding the data source automatically registers it and integrates user account and role management.

Note: The NetQoS Performance Center can be bound to only one installation of the NetVoyant product.

Adding data sources requires the Administrator product privilege. First, log into the NetQoS Performance Center with an Administrator account.

To add a NetVoyant data source to the NetQoS Performance Center:
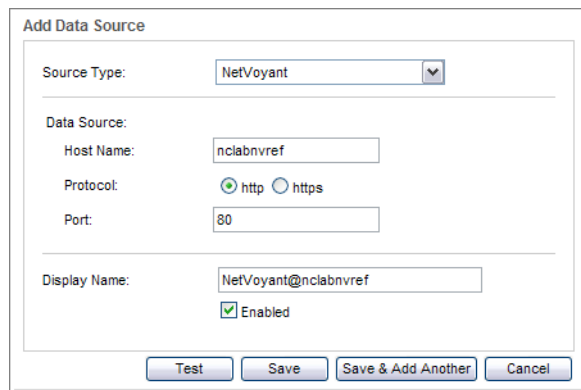
1. On the NetQoS Performance Center main page, click the **Admin** menu.

   The Administration page appears.

2. In the **NetQoS Settings** section, click the **Data Sources** link.
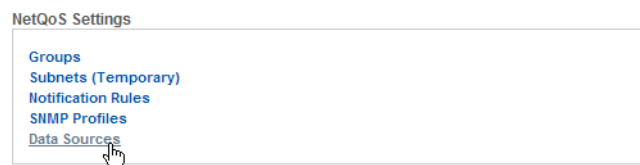
   The **Data Sources List** displays the data sources already configured.

3. Click **New**.

4. In the **Add Data Source** page, select **NetVoyant** from the **Source Type** list.

5. In the **Host Name** field, enter the hostname of the computer where the NetVoyant database is installed (in a distributed system, the Master Console, not a poller).

6. Select the appropriate **Protocol** and specify the **Port** for the NetQoS Performance Center web service to use to contact the corresponding NetVoyant web service.

   By default, HTTP over Port 80 is used, but if Secure Communications have been enabled in IIS for the NetVoyant Web Service site, you should select HTTPS and Port 443.

7. Supply a **Display Name**.

   This is the name that is used to identify the data source. By default, this field is populated with `NetVoyant@<hostname>`; however, you can specify an alternative display name for the NetVoyant data source.

8. Leave the **Enabled** check box selected.

   This check box allows you to quickly disable a data source without unregistering it. If the box is cleared, no data is received from this data source.

9. Click **Test**.

   The NetQoS Performance Center attempts to contact the NetVoyant server. If contact is successfully established, a message states, "`Successfully connected to NetVoyant Web Service.`"

10. Click **Save** to save the data source.

   The NetVoyant data source appears in the **Configured Data Sources** list.

Verifying the NetVoyant Data Source

When you have added NetQoS NetVoyant as a data source in the NetQoS Performance Center, you should be able to see it in the list of data sources. Pause the pointer over the **Inventory** menu. A NetVoyant data source should appear the **Consoles** list.

A link to the hostname of the NetVoyant server you configured as a data source provides quick access to the NetVoyant Login page.
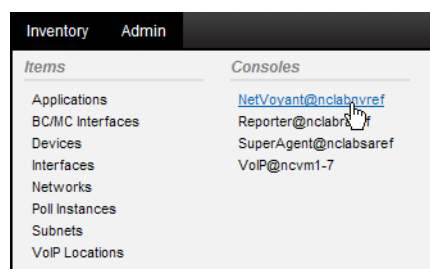
The home page configured for your user account in NetVoyant appears.

Custom Reports in the NetQoS Performance Center

The NetQoS Performance Center provides a unique capability: it enables you to combine metrics from different data sources in one page or report. Creating custom report pages by combining views of data from multiple data sources can help you make the most of the data that NetQoS and other supported monitoring platforms can provide.

The following list provides just a few examples of useful report pages you can create from data views available in the NetQoS Performance Center:

- Application Performance—You can add one or more of the NetQoS NetVoyant views to a page containing views of application performance from NetQoS SuperAgent and see whether device deployment is affecting the performance of existing network applications.

- Device Performance—Similarly, you can add selected views from NetQoS NetVoyant to the VoIP Dashboard containing views from NetQoS Unified Communication Monitor to provide insight into problems at a media device.

- Troubleshooting Schemes—Depending on the other data sources you have installed, the NetQoS Performance Center enables you to combine end-to-end performance, traffic analysis, VoIP and video call performance, and device performance data on a single report page. Such reports can be extremely valuable for an operations team, who can use the information to quickly identify issues, eliminate potential causes, and then identify the real cause of a problem.

  If you design troubleshooting pages that your operations team can check several times a day, your team becomes proactive rather than reactive.

- Overviews—Views available in a summary context are overviews of network performance, as opposed to individual device statistics. They are generally from a higher tier and can provide drill down access to more component detail. Summary views can be added to your custom overview pages to provide a high-level report of system health.

NETQOS EVENT MANAGER INTEGRATION

Although NetQoS Event Manager relies on event data reported by other monitoring products, such as third-party alerting systems, NetQoS NetVoyant, or NetQoS SuperAgent, it adds a great deal of value to the alerting provided by these data sources. In addition to event correlation and automatic notifications, the Event Manager provides views that contain data not available in other NetQoS reports. For example, the **Event Severity** summary table provides data related to event severity and status to help you track the efficiency of IT troubleshooting procedures. The **Event Source** table correlates event types with the managed items where the most recent events have occurred and provides a drilldown path into data for those items. The metrics reported in the Event Manager also help you track the relative frequency of reporting for events of different severity levels.

Some NetQoS data source products apply slightly different rules to the various alerts that they generate, and in some cases, they use different terminology to describe basic event parameters, such as severity and status. It's therefore helpful to understand how the Event Manager displays event data in the Event List. And you also need to know how to access additional event handling features, such as filtering options to help you sort through data from multiple events from multiple event sources.

Event Manager Maps

The NetQoS Event Manager provides a Maps feature, which displays a visual quick reference and overall status of your network and managed items in near real-time. The **Map Event List** is integrated into the Map with the events correlated to the group of managed items displayed in the Map. As you drill down within the map, the displayed events change to reflect those items in the map.
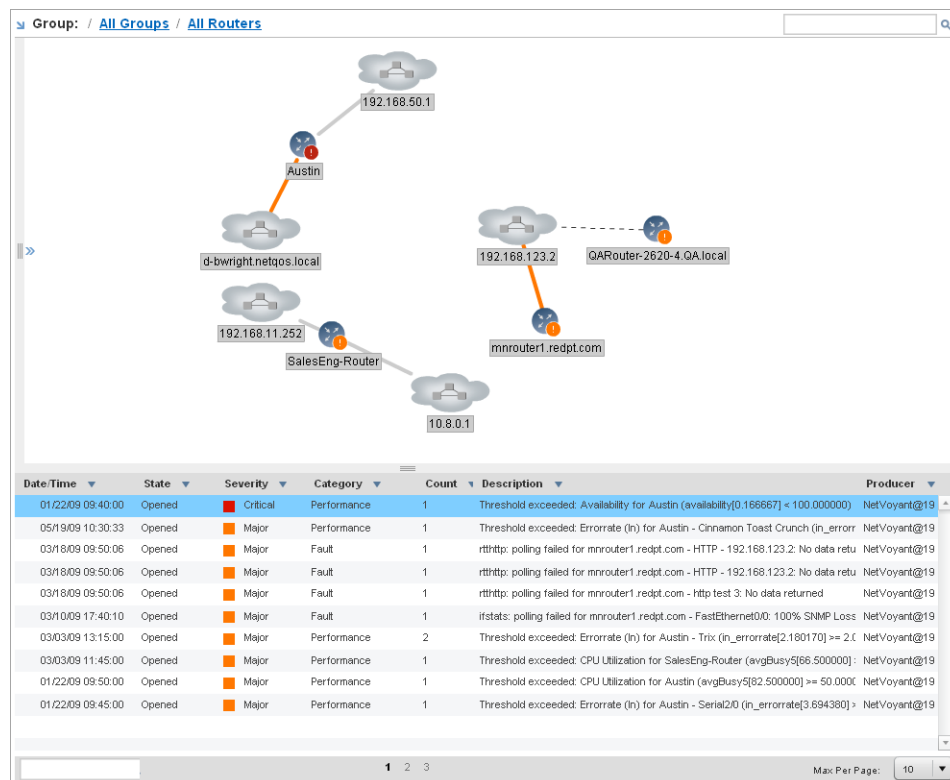
Additional views are available as both bar graph and table formats to sort by severity, type, and source. These can be added to report pages in the NetQoS Performance Center.

Working with Event Manager Event Lists

The **Event List** and **Map Event List** views display the **State**, **Severity**, **Type**, **Category**, and a brief **Description** of events that have been reported by the data sources registered with NetQoS Performance Center.

Event State

An event will transition through multiple states as it opens and is eventually resolved by IT staff. Each data source applies different states to its own incidents or events. The following table provides a generic definition of the various event states used by NetQoS Event Manager:

Event state	Description
Open	The event is neither closed nor resolved. It has not been assigned to be investigated.
Acknowledged	The event is neither closed nor resolved. It has been assigned to be investigated.
Closed	Either the condition associated with this event is no longer true or a user did something that cancelled the event. An event's status can be Closed even if the problem that caused the event has not been corrected.
Cleared	The condition associated with the event is no longer true. The time period required for the event to clear after the condition becomes inapplicable varies by reporting product. This state is not controlled by the user.

The NetVoyant product has three event states: *Open*, *Acknowledged*, and *Closed*. If a user acknowledges an event in the NetVoyant Console, the event status shown in the Event Manager changes to **Closed**. By contrast, if an event is closed by a user in the Event Manager interface, it changes to **Acknowledged** in the NetVoyant Console.

Note: Other NetQoS data source products handle event states somewhat differently. For a more detailed explanation about the differences between the handling of event states between the NetQoS data source products, see the *NetQoS Event Manager User Guide*.

Event Severity

The severity levels of the events you see in NetQoS Event Manager correspond to severity levels in other NetQoS data source products, based on the individual product that reported the event. Generally, the Critical severity level indicates an event of the highest severity, such as an unavailable router. However, not all data sources use this severity level when they report incidents or events;

therefore, these NetQoS data source products do not send events with a Critical severity to the NetQoS Event Manager. For these data sources, the Major severity level indicates the highest-severity events.

NetQoS Event Manager and NetQoS NetVoyant utilize the same event severities and all events produced by the NetVoyant product are displayed in the Event Manager interface using the same severity.

Note: Other NetQoS data source products handle event severities somewhat differently. For a more detailed explanation about the differences between the handling of event states between the NetQoS data source products, see the *NetQoS Event Manager User Guide*.

Event Types

In NetQoS Event manager, event types vary based on the data source that reports the event. Events produced by the NetVoyant product fall into one of the following event types:

- **Log** - Provide information about topology changes and actions performed by NetVoyant services.
- **Polling** - Result from unsuccessful SNMP polls performed by NetQoS NetVoyant. A Polling event is automatically *Cleared* on the next successful polling cycle.
- **Trap** - Events based on incoming SNMP traps. A Trap event is automatically *Cleared* when the clear filter for the trap event is met.
- **Threshold** - Triggered by threshold violations on your devices. Each threshold is composed of a threshold exceeded and a threshold cleared limit. A threshold event occurs when the value for an expression goes beyond the threshold exceeded value set for the alarm rule.

  A Threshold event is automatically *Cleared* when the expression value matches the threshold-cleared definition.

Note: Other NetQoS data source products somewhat different event types. For a more detailed explanation about these event types produced by the other NetQoS data source products, see the *NetQoS Event Manager User Guide*.

In the **Event List** view, you can use the Edit option on the View menu to filter the events that appear in the list by Type. Only those types that have been reported by data sources are listed as options in the filter.

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