CA NETQOS NETVOYANT

Release Notes

Version 7.1, Service Pack 2

January 2012

CA NetQoS NetVoyant (NetVoyant) provides SNMP-based performance metrics for managing network infrastructure, devices, and services. Using data collected from devices such as routers, switches, and servers, NetVoyant summarizes and condenses data into easy-to-understand, web-based reports.

These *Release Notes* provide information about the enhancements and open issues in version 7.1, SP2. This information supplements and supersedes information in the Product Documentation.

Why Install this Release?

This release of NetVoyant provides the following enhancements:

- **Multiple MySQL connections allowed**. This release enables multiple MySQL connections per dataset to prevent polling lockouts and skips during nightly maintenance.
- **GetBulk responses remember complete rows**. With this release, a GetBulk response remembers the number of complete rows in a response that includes a partial row. (25780)
- **Polling cycles save collected data**. With this release, collected data is saved when a polling cycle is overrun, to prevent missed poll cycles. (25833)
- **New logging for polling cycles**. With this release, logging is displayed for a polling cycle that exceeds the allocated polling interval. You can use this information to adjust poll groups, SNMP retries, and timeout values. (25935)
- **Improved initial load time**. This release shortens the time it takes to load the Router/Switch/Server/Device Performance pages. (26020)
- **Revised scalability and performance testing results**. For more information, see "Performance and Scalability" on page 4.

In addition, this release resolves the following issues:

- After a DNS change, updated device names are not resolved. (Defect 22058)
- Equal signs (=) in view names cause a stack trace. (Defect 22942)
- Time filters with long names and special characters do not function properly in the NetVoyant console. (Defect 24868)
- Router gauges show no data for the past hour when the time zone for the user is different from the time zone of the server. (Defect 25075)
- Master-Poller event synchronization stops or is delayed. (Defects 25331, 26007)
- Top QoS views contain the following error: `Unknown column 'ggparent.pollinst_id' in 'where clause'`. (Defect 25341)
- Selecting an alarm profile returns a java error. (Defect 25466)
- Incorrect processing of SNMP responses results in failure to poll multiple interface pollinstances per device. (Defect 25496)
- Problems with synchronization CA NetQoS Performance Center. (Defects 25539, 25681, 25682)
- Selecting certain time zones causes Management views to show no data. (Defect 25612)
- Duplicate rows for RTTStats (IPSLA) cause zero or empty datapoints for some polling cycles. (Defect 25646)

- Change to ifIndex causes interfaces to become auto-disabled and not remap properly. (Defect 25701)

- Topology memory leak (Defect 25786)

- The device model is not saved in the dataset wizard. (Defect 25796)

- Memory leaks for polling groups (Defect 25809)

- The Availability Scorecard does not reflect data for the previous week. (Defect 25922)

- Memory leaks from Alarm Profiles occur when groups are deleted. (Defect 25934)

- Delta calculations are incorrect when a polling overrun causes a polling cycle to stop. (Defect 25936)

- Services hang after being stopped and restarted in the NetVoyant console. (Defect 25960)

- Reports contain no data when there are duplicate CBQoS queueing instances. (Defect 26009)

- Baselines are drawn improperly when time filters include a date range of less than 30 days. (Defect 26015)

- Events are not pushed to CA NetQoS Event Manager (Defect 26050)

- Polling terminates unexpectedly. (Defect 26082)

- DiscoveryControl fails when a polling instance is not part of a polling group. (Defect 26122)

- Events in NetVoyant do not appear in CA NetQoS Performance Center. (Defect 26182)

- Master stops receiving alerts from the poller. (Defect 26183)

- LastEventID and LastTimestamp do not persist and are not considered during event synchronization with Event Manager and CA NetQoS Performance Center. (Defect 26202)

- Ping sends an incorrect event message when a properly formatted IP address is invalid. (Defect 26205)

- A 100 percent SNMP loss returns an incorrect error message: `No response before SNMP timeout.` (Defect 26210)

- HTTP IP SLA dataset returns incorrect round trip time and completion rate. This defect is resolved only for *new installations* of NetVoyant version 7.1, SP2. If you are *upgrading* to version 7.1, SP2, contact CA Technical Support for assistance with manually adjusting the expression. For more information, see "Contact CA Support" on page 11. (Defect 26215)

- Least Available metrics are not available for the last 7 days or the last 30 days. (Defect 26355)

Upgrade and Installation Information

For information about installing the NetVoyant software or upgrading from an earlier version of NetVoyant, see the *CA NetQoS NetVoyant Installation and Upgrade Guide.* This guide is available in the CA NetQoS NetVoyant Bookshelf on the CA Support Online website: http://support.ca.com.

Browser Support

The NetVoyant console is supported on Microsoft Internet Explorer versions 6, 7, and 8.

You may be able to view reports and report administration information using recent versions of Internet Explorer or other browsers, but CA Technologies has not fully tested with them.

Note: Some components in the NetVoyant console require Adobe Flash Player, version 9.0.115.0 or later. If you do not have Flash Player installed on your system, you are prompted to install it. Flash Player does not support 64-bit platforms, and requires a 32-bit operating system or a 32-bit browser running on a 64-bit operating system.

Performance and Scalability

A distributed NetVoyant 7.1 system supports ten pollers, each with 55,000 polled and 140,000 discovered poll instances, for a total of 550,000 polled and 1,400,000 discovered poll instances.

A standalone system supports a poller with 55,000 polled and 140,000 discovered poll instances.

Discovery Performance

In our testing, the average length of time for discovery is 2.5 hours per poller. The initial discovery, including synchronization, is 4 hours on a distributed system with ten pollers.

Master Poller Synchronization Performance

In our testing, we saw the following results during synchronization of the Master poller:

Configuration	Results
One poller with 700 routers and 25 switches per Master console	Testing with two pollers: • 33.33 minutes • 31.4 minutes
Ten pollers with 700 routers and 100 switches per Master console	Testing with 25 switches: Two hours

Manual (Right-Click) Synchronization Performance

In our testing, we saw the following results when manually forcing a synchronization:

Configuration	Results
One poller	Less than one hour
Two pollers	Less than one hour
Four pollers	Less than one hour and 20 minutes
Six pollers	Less than one hour and 40 minutes
Eight pollers	Less than two hours
Ten pollers	Less than two hours and 20 minutes

Poll Instance Performance

In our testing, we spread the polling instances across multiple datasets. We focused on ifstats, qosclass, and qosred, all of which are known to cause performance and scalability issues. The results for each poller are as follows:

Dataset	Enabled Polling Instances	Discovered Polling Instances
avail	700	700
ciscoMemPool	900	1200
ciscoSwitch	25	25
ciscoSystem	700	700
dsx1near	125	175

Dataset	Enabled Polling Instances	Discovered Polling Instances
dsx3near	250	325
frcircuit	600	675
ifstats	15000	20000
qosclass	5000	10000
qosmatch	5000	10000
qospolice	1000	1500
qosqueue	3000	5000
qosred	20000	60000
qosset	1000	1500
qosts	1000	1500
reach	700	700
Total	**55000**	**114000**

Console Performance

With 120 custom groups configured, we saw the following performance in our testing:

- Using group membership rules, devices were populated in all tiers in less than five seconds.
- Navigating the sub-groups took less than three seconds per group to load. The top groups of routers and switches from the Master took longer, up to 20 seconds.
- The Alarm Profiles Group tier had no problem with rendering or performance.
- During discovery:
  - After the initial load was completed, everything responded within three seconds.
  - The Routers and Switches groups took longer than ten seconds, depending how many devices were already populated.
  - When custom groups were created, browsing during and after discovery took no more than five seconds
  - With 7000+ routers in a group and 250+ switches in a group with many child polling instances, the load took about 20 seconds.
  - Browsing with few devices already in the groups while they were populating took no more than two seconds, with 25 percent of the devices discovered.

Performance Factors

Performance results can vary based on your environment. The following is a sampling of the factors that can affect performance:

- Line latency
- SNMP response delay
- Network loss
- Custom MIBs and datasets
- Number of discovered instances
- Number of enabled instances
- Non-default poll groups, such as one-minute
- Number of poll groups
- Custom software running on the system, such as anti-virus software
- SNMP device and agent mix:
  - The GetNext command requires more requests than the GetBulk command.
  - SNMPv3 adds encryption overhead.
- Number of time filters
- Data retention settings
- Custom hardware and virtual machine settings
- PollQueueLimit settings
- PollConcurrency settings
- Number of groups
- Distribution of poll instances across datasets

Test Configurations

Our test environment for a large distributed NetVoyant system included the following:

Master console	• Dell R610 with 12 GB of memory
	• Microsoft Windows 2008 R2
	• IIS, .NET, and SNMP
Ten pollers	• Dell R610 with 8-12 GB of memory
	• Microsoft Windows 2008 R2
	• IIS, .NET, and SNMP
	• 55,000 polled and 140,000 discovered poll instances
	• Seven pollers had added latency of 10-20 ms.
	• Three pollers had added latency of 100-200 ms.

Our test environment for a small distributed NetVoyant system included the following:

Master console	• Dell R610 with 4 GB of memory
	• Microsoft Windows 2008 R2
	• IIS, .NET, and SNMP
Ten pollers	• One Dell R610 with 4 GB of memory
	• One DelR610 with 16 GB of memory
	• Microsoft Windows 2008 R2
	• IIS, .NET, and SNMP
	• 55,000 polled and 140,000 discovered poll instances

Our test environment for a standalone NetVoyant system included the following:

One poller	• One Dell R610 with 2-12 GB of memory
	• Microsoft Windows 2008 R2
	• IIS, .NET, and SNMP
	• 55,000 polled and 140,000 discovered poll instances

Known Issues and Workarounds

This section describes known issues and suggested workarounds.

Cannot create two auto-enable rules with the same SNMP requirement but different property requirements.

If you attempt to create an auto-enable rule using an SNMP requirement and property requirement, the SNMP requirement cannot be used in another rule. **Workaround**: You can vary the SNMP requirement by adding an additional item that is always true, or adding additional characters. For example, use IFname = Eth0/0 for one rule and IFname like Eth0/0 in another. (Defect 21930)

The interface volume and interface rate views trend the same, but when switched to a quarterly view the volume trend takes a sharp downturn.

This problem occurs because the volume is a sum of data points in a weekly rollup, and the rate is an average. Therefore, when the rate is trending up, the volume is trending down. When viewing the graphs on a Saturday right before the weekly rollup, these rate would probably look similar, but on a Monday, when the volume only has one day's worth of data, it looks as though there is a discrepancy. **Workaround**: Use a 30-day time period, which should provide the granularity that is needed and does not present the same issue. (Defect 20709)

SNMP profiles are not synced up when added to a poller, which is then connected to Master in a distributed system.

You must back up the SNMP profiles and database *before* you migrate from a standalone system (all-in-one) to a distributed environment. (Defect 21443)

Adding a device in the Device Wizard does not assign the correct poller.

This problem occurs only when you use the Device Wizard to add a device on the Master in a distributed system where the Master also polls. Typically, the Master server does not perform polling. However, it can support the polling of the pollers in some cases. **Workaround**: To ensure that the added device is assigned correctly, add a discovery scope in the NetVoyant console, and then start discovery of the single device by selecting File, New, Device. (Defect 22614)

NetVoyant online Help is not visible on a Windows Server 2008 computer.

The Help panel is blank, and no error message appears. This problem occurs when the operating system for the NetVoyant console computer is Microsoft Windows Server 2008 *and* the computer is not known by Internet Explorer as a trusted site. To add the local computer as a trusted site, click Tools, Internet Options in your browser window. On the Security tab, click the Trusted sites icon, and then click Sites. (Defect 24912)

NetVoyant may stop polling after an upgrade.

After an upgrade to version 7.1, NetVoyant licenses occasionally become invalid, which causes polling to stop. **Workaround**: Contact CA Technical Support to generate a new license. For more information, see "Contact CA Support" on page 11.

Legal Notice

This documentation and any related computer software help programs (hereinafter referred to as the "Documentation") is for the end user's informational purposes only and is subject to change or withdrawal by CA at any time.

This Documentation may not be copied, transferred, reproduced, disclosed, modified or duplicated, in whole or in part, without the prior written consent of CA. This Documentation is confidential and proprietary information of CA and protected by the copyright laws of the United States and international treaties.

Notwithstanding the foregoing, licensed users may print a reasonable number of copies of the Documentation for their own internal use, and may make one copy of the related software as reasonably required for back-up and disaster recovery purposes, provided that all CA copyright notices and legends are affixed to each reproduced copy. Only authorized employees, consultants, or agents of the user who are bound by the provisions of the license for the product are permitted to have access to such copies.

The right to print copies of the Documentation and to make a copy of the related software is limited to the period during which the applicable license for the product remains in full force and effect. Should the license terminate for any reason, it shall be the user's responsibility to certify in writing to CA that all copies and partial copies of the Documentation have been returned to CA or destroyed.

EXCEPT AS OTHERWISE STATED IN THE APPLICABLE LICENSE AGREEMENT, TO THE EXTENT PERMITTED BY APPLICABLE LAW, CA PROVIDES THIS DOCUMENTATION "AS IS" WITHOUT WARRANTY OF ANY KIND, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT. IN NO EVENT WILL CA BE LIABLE TO THE END USER OR ANY THIRD PARTY FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, FROM THE USE OF THIS DOCUMENTATION, INCLUDING WITHOUT LIMITATION, LOST PROFITS, BUSINESS INTERRUPTION, GOODWILL, OR LOST DATA, EVEN IF CA IS EXPRESSLY ADVISED OF SUCH LOSS OR DAMAGE.

The use of any product referenced in the Documentation is governed by the end user's applicable license agreement.

The manufacturer of this Documentation is CA.

Provided with "Restricted Rights." Use, duplication or disclosure by the United States Government is subject to the restrictions set forth in FAR Sections 12.212, 52.227-14, and 52.227-19(c)(1) - (2) and DFARS Section 252.227-7014(b)(3), as applicable, or their successors.

All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

Contact CA Support

For your convenience, CA provides one site where you can access the information you need for your Home Office, Small Business, and Enterprise CA products. At http://ca.com/support, you can access the following:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- Support policies and guidelines
- Other helpful resources appropriate for your product