CA Spectrum®

Operator Guide

Release 9.4

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Contents

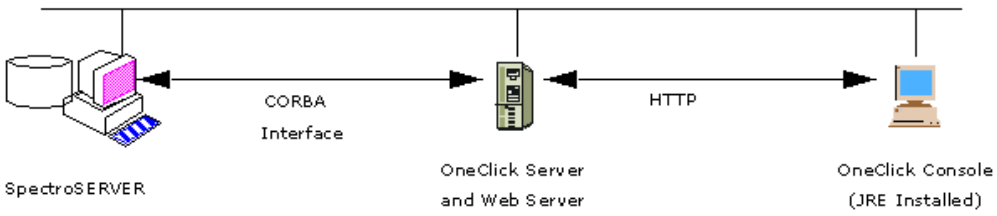
Chapter 1: Getting Started with the OneClick Console

This section contains the following topics:

OneClick and CA Spectrum Overview

OneClick delivers CA Spectrum information to network operators and troubleshooters using an intuitive graphical user interface. OneClick provides customized access to information and tools for users who monitor or troubleshoot specific portions of a network that CA Spectrum manages.

The OneClick architecture uses the Java Network Launch Protocol (JNLP) and the Java Web Start application to let remote systems and users access the OneClick server. JNLP is a standard for application delivery that does not require traditional installers or the launching of executable code. After installation, the OneClick Console communicates with the web server on the OneClick server using port 80 by default for Windows, or port 8080 for UNIX and Solaris. The web server communicates as a single client of the SpectroSERVER using the CORBA interface, as illustrated by the following diagram:



The following CA Spectrum and OneClick guides provide information that is related to installing, customizing, and maintaining OneClick:

- The *Installation Guide* provides detailed instructions for installing the OneClick server and client.
- The *Administrator Guide* provides information about how to configure and administer the OneClick environment, applications, and users.

- The *OneClick Customization Guide* provides information about customizing the OneClick interface by modifying XML files and other techniques.
- The *Modeling and Managing Your IT Infrastructure Administrator Guide* describes how to configure OneClick to discover and model the elements on the network.

How to Set Up the OneClick Client

The following process describes how to set up and start using the OneClick client.

Note: For more information about each of these steps, see the *Installation Guide*.

Follow these steps:

1. Verify that your workstation meets the minimum OneClick client requirements before installing or running the OneClick client.
2. Install JRE and JCEUnlimited Strength Files. The OneClick Console and OneClick add-on applications require Java Runtime Environment (JRE) and JCEUnlimited Strength Files. The JRE includes the Java Web Start client, which is required to run Java Network Launching Protocol (JNLP) applications like OneClick.

   The JCEUnlimited Strength Files are required for the OneClick cryptography requirements. You can install JRE 1.7.0_60 and JCEUnlimited Strength Files from OneClick home web page. To install these two components, click the "Install JRE and JCEUnlimited Strength Files" option on OneClick home page and follow the steps thereafter.

   After you install the JRE and JCEUnlimited Strength Files, you can start OneClick.

   JCEUnlimited Strength Files available with CA Spectrum 9.4 are compatible with JRE 7 only. If you are already on JRE 7, place the JCEUnlimited Strength Files in the JRE version 7. If you are not on JRE 7, install JRE 7 first and then place JCEUnlimited Strength Files in JRE 7.

   Note: If you try to launch OneClick without placing the JCEUnlimited Strength Files in JRE7, a pop-up message appears reminding you to do so. Click OK, and do the needful.
3. Associate .jnlp files with Java Web Start.
4. Launch the OneClick Console.

View the Client Details Web Page

The OneClick Client Details page lets you view the clients that you have opened. You can also log out of clients from this page.

Note: This web page is not automatically updated with the latest client information. To verify that you have the latest information, reload the page in your browser.

How to View the Client Details Page

Follow these steps:

1. Navigate to http://<*webserver*>/spectrum/index.jsp in a Web browser.

   The OneClick home page opens.

2. Click the Client Details link.

   The Client Details web page opens, displaying a Client(s) Logged On table.

How to Log off Clients Using the the Client Details page

Follow these steps:

1. In the Client(s) Logged On table, select the check boxes next to your user name for the clients that you want to log out.
2. Click Log off Clients.

   A confirmation dialog opens.

3. Click OK.

   The clients are logged out.

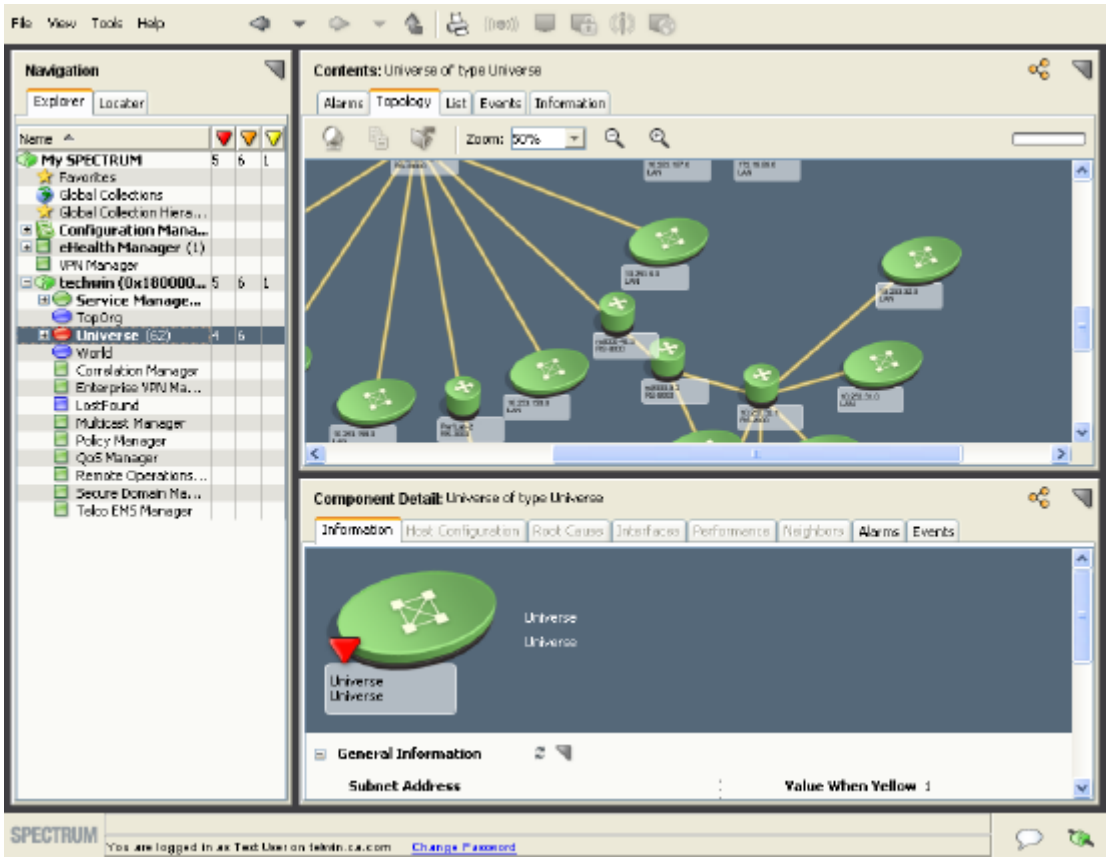
Note: Administrators accessing the Client Details page can view all currently logged in users. For more information, see the *Administrator Guide*.

Chapter 2: OneClick Console User Interface

This section contains the following topics:

OneClick Console User Interface Overview

The OneClick Console user interface comprises three panels that display information about your network assets: the Navigation panel, the Contents panel, and the Component Detail panel. The following image shows an example of the OneClick Console user interface:



The information that is displayed in each panel depends on the item that is selected in the Navigation panel. Each panel displays a different context. The titles of the Content and Component Detail panels describe the context. Tabs in the Contents and Component Detail panels provide detailed lists of devices, alarms, events, and other information about specific items.

You can customize the display by docking, cloning, or removing panels.

Note: The OneClick Console supports multiple add-on applications, such as VPN Manager, Service Performance Manager, Multicast Manager, and Service Manager. For more information, see the user documentation that is provided with those applications.

More information:

OneClick Panels (see page 40)

Navigation Panel

You can use the Navigation panel to access information about your network assets. The Navigation panel includes the following features:

- Alarm views
- Topology views
- Device lists
- Event views
- Detailed device information
- Containers
- Landscapes
- OneClick applications
- Searches

The Navigation panel is on the left side of the default OneClick user interface. Two tabs are available to OneClick operators: the Explorer tab and the Locater tab.

Explorer Tab

The Explorer tab in the Navigation panel displays a hierarchical view of landscapes, containers, OneClick applications, and device models. In this view, container and device icons indicate the model class and status of each container and device model. The OneClick administrator at your organization created the views in the Explorer tab by modeling devices to represent your network infrastructure.

Note: OneClick filters containers and devices from the Explorer view if they are child objects of a container to which you lack view permissions.

The Explorer tab shows a high-level view of alarms that are active for devices in each container and application. You can modify the default alarm view in the Explorer tab. For more information, see Customize Columns (see page 39).

Use the Explorer tab to select a container. You can then view information, alarms, events, lists, and topologies for that selection in the Contents panel. You can also select the OneClick application in the Name column to view information, alarms, events, lists, and topologies for that selection. You can also expand and collapse containers and applications in the Explorer tab as necessary.

Note: Items in the Explorer tab are sorted numerically.

More information:

Table Preferences (see page 39)
Expand and Collapse the Explorer View (see page 37)

Locater Tab

The Locater tab provides search functionality for locating network assets (device and application models) and viewing details about them. Search results appear in the Results tab of the Contents panel. Detailed information about network assets selected in the results list appears in the Component Detail panel.

More information:

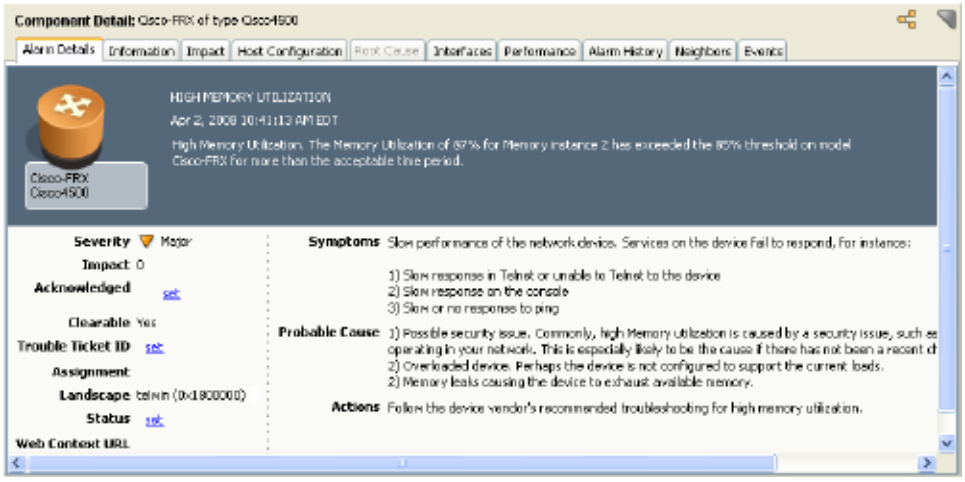
Search Your Network (see page 44)

Contents Panel

The Contents panel is located in the upper right of the OneClick interface. The information in the Contents panel depends on the context that is set from the Navigation panel. If the Locater tab in the Navigation panel is the active tab, the Results tab appears in the Contents panel. The Results tab shows the results of the last search performed in the current user session. If the Explorer tab is the active tab in the Navigation panel, the Contents panel displays the Alarms, Topology, List, Events, and Information tabs for the selected device, container, or application. By default, the Alarms tab is the active tab in the Contents panel.

Component Detail Panel

The Component Detail panel displays more detailed information for the item that is selected in the Contents panel. The following image shows an example of the Component Detail panel.



OneClick Tabs

OneClick categorizes information by tabs that appear in both the Contents and Component Detail panels. The tabs that you see depend on the context, which depends on the current selection in the Navigation panel. The following list describes these OneClick tabs in detail.

Alarms tab

Appears in either the Contents or Component Detail panel depending on context.

Alarm Details tab

Appears in the Component Detail panel and shows detailed information about the alarm that is selected in the Alarms tab.

Topology tab

Displays network topology models that are created manually or by Discovery.

List tab

Displays all models of the container that is selected in the Explorer tab.

Events tab

Displays events for the container, model, or application that is selected in either the Explorer tab or the Contents panel. The display includes all alarms and events for the selected model.

Information tab

Displays details about the container, device, or application that is selected.

Host Configuration

Capture, view, upload, and export device configuration files.

Note: For more information, see the *Network Configuration Manager User Guide.*

Impact tab

Displays the impact and symptoms for a selected alarm.

Note: The state of devices in the Impact tab does not always reflect the current device state.

Root Cause tab

Displays the root cause for a device that is down. The root cause can be helpful when a device has multiple alarms. You can view the date and time of occurrence of each alarm in the "Date/Time" column. You can also view the Condition, Name of the model, Alarm Title, and more information in other columns.

Interfaces tab

Displays interface information for the selected alarm or device.

Performance tab

Displays performance information for the selected device, including CPU & Memory Utilization.

Alarm History tab

Displays the historical information for the selected alarm including associated events, status, when created, and cleared. For general device alarm history, use the Events tab.

Neighbors tab

Displays the model that is selected from either the Explorer tab or the Contents panel and any models that are directly connected to it.

More information:

Information Tab (see page 22)
List Tab (see page 21)
Topology Tab (see page 20)
Alarms Tab (see page 18)
Events Tab (see page 22)
Interface Information (see page 63)
OneClick Console User Interface Overview (see page 13)

Alarms Tab

The Alarms tab displays any alarms that exist for the device, container, or application that is selected in the Navigation panel Explorer tab. Your OneClick administrator would have preconfigured the view of the alarms to show only a subset of alarms available.

Select an alarm in the Alarms tab to display detailed information for that alarm in the Component Detail panel. The toolbar that is displayed at the top of the Alarms tab lets you quickly process alarms in OneClick.

More information:

Alarms Toolbar (see page 23)

Alarm Severity Colors

OneClick uses colors, with audible alerts, to identify the severity of alarms. The following table displays OneClick alarm severity colors and their definitions.

Color	Severity	Description
Blue	Initial	Contact with device is not established.
Gray	Suppressed	Device cannot be reached due to a known error condition that exists on another device.
Brown	Maintenance	Device is offline for maintenance purposes.
Red	Critical	A loss of service has occurred; immediate action is required.
Orange	Major	A loss of service has occurred or is impending; action is required within a short period of time.

Color	Severity	Description
Yellow	Minor	A situation has occurred that does not require immediate action. This severity is also used for alarms created to convey information only, such as "Duplicate IP."
Green	Normal	Contact has been made with the device. Device is operating normally. No alarms are associated with this device.

More information:

Place Devices in Maintenance Mode (see page 79)

Alarms List Columns

The columns in the table categorize the information for each alarm that is displayed in the Alarms tab. The default alarm information categories include Severity, Date/Time, Name, Network Address, Type, Acknowledged, Alarm Type, and Landscape. Other categories are present if OneClick add-on applications are installed. And the OneClick administrator can create custom alarm categories.

You can select the columns to display in the Alarms list. As with all table columns in OneClick, you can sort on the content for each column by clicking the column heading. Click a column header to toggle the sort order.

More information:

Table Preferences (see page 39)

Filter the Alarms List

You can filter the alarms list as follows:

- Select Show or Hide from the Filter drop-down list and enter text in the Filter text box. As you type, the Alarms list displays or hides only those alarms with attributes that match the current text in the Filter field.

  This behavior depends on your Filter drop-down list selection. For example, view only critical alarms by selecting Show from the Filter drop-down list and typing **crit** in the text box.

- You can also create alarm filters to save and reuse.

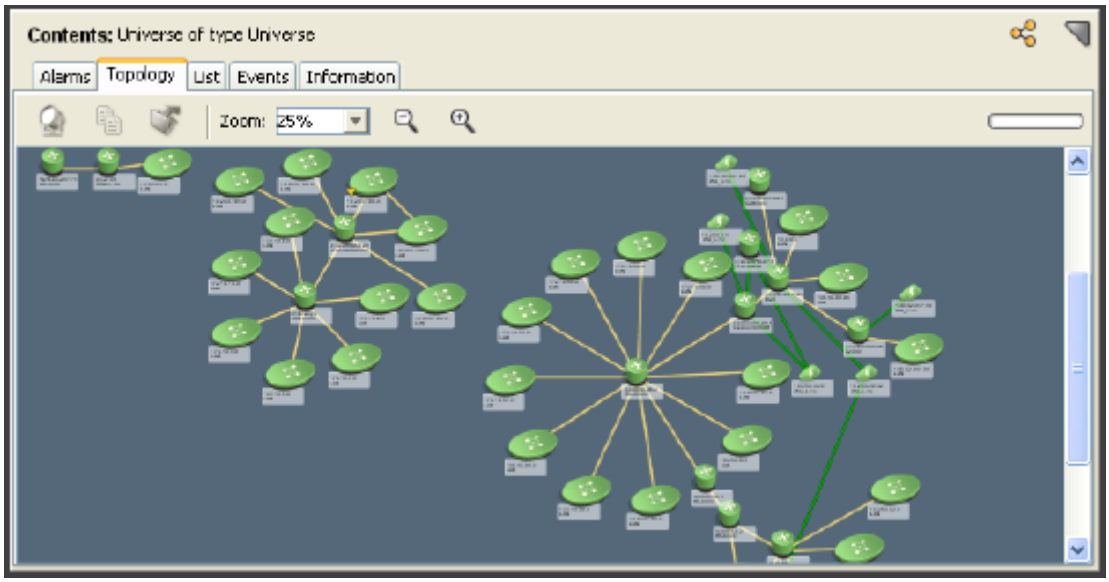
More information:

Filter Alarms (see page 48)
Filter OneClick Lists (see page 39)

Topology Tab

The Topology tab appears in the Contents panel and shows network topology diagrams for selected containers and collections. Expand the view of a container or collection in the Explorer tab, and then select a specific device in that container. The Topology view shows that device in the Contents panel. Double-click an icon in a topology view to change the context of the Navigation panel to display that device, container, or application. The Topology tab is not available if either My Spectrum or a landscape is selected in the Explorer tab.

The following image shows an example of the Topology tab view:



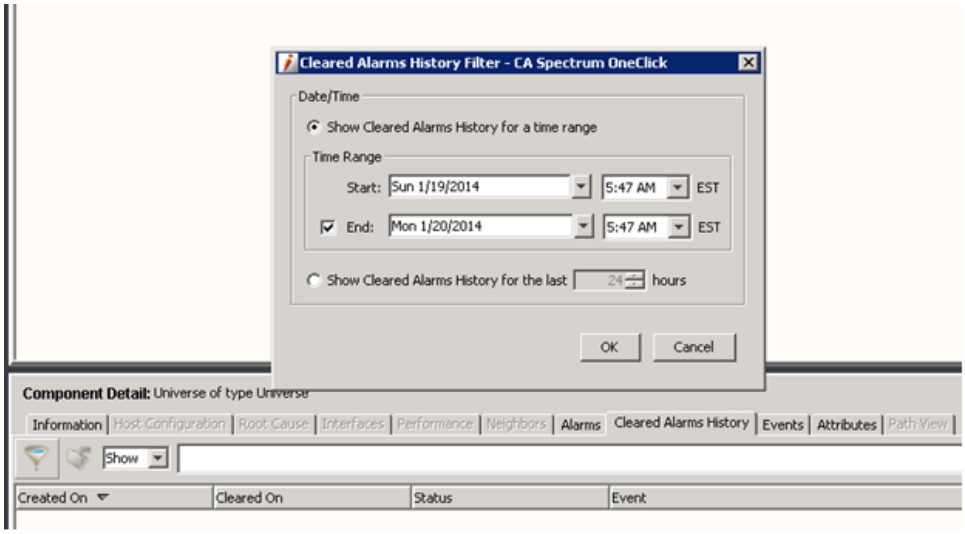
More information:

Topology Toolbar (see page 25)

Cleared Alarms History Tab

You can view the Cleared Alarms History tab from the Component Detail panel. The Cleared Alarms History tab displays historical information about the cleared alarms for the selected model. Historical information includes associated events and the status of created and cleared alarms. By default, cleared alarm history is displayed for the last 24 hours. You can use the Time Range option to view the cleared alarms history of a specific period.

The following image shows the Cleared Alarms History tab view:



List Tab

The List tab displays all models of the container that is selected in the Explorer tab.

If a device is selected in the Explorer tab, all models are displayed for the container of that device. This view is updated when models are added or removed or when attributes are updated. Double-click an entry in the List tab to select that model in the Explorer tab. This tab is not available when My Spectrum or any landscapes are selected in the Explorer tab.

Results Tab

The Results tab displays the results of searches performed in the Locater tab in the Navigation panel.

Events Tab

The Events tab appears in either the Contents or Component Detail panel. The Events tab displays all events for the item that is selected in either the Explorer tab or the Contents panel. If you select My Spectrum, the Events tab appears only in the Component Detail panel.

More information:

Manage Events (see page 58)
Events Tab Preferences (see page 31)

Information Tab

The Information tab appears in either the Contents or Component Detail panel, depending on the context set. The Information tab displays detailed device configuration information, VLAN and VPN configuration settings, and more. The Information tab is not available when My Spectrum or any landscapes are selected in the Explorer tab.

OneClick Toolbars

Toolbars are available in several OneClick panels and tabs. OneClick toolbars use graphical buttons and icons to provide quick access to features and functionality.

Hide Toolbars

By default, all available toolbars are shown in the OneClick Console. You can hide the toolbars that you do not use.

Follow these steps:

1. Select View, Toolbars.

   A submenu lists the available toolbars. Toolbars that are visible are checked.

2. Click a checked toolbar to hide it.

   The menu closes and the toolbar is removed from the applicable view.

Main Toolbar

The Main toolbar, which appears at the top of the OneClick Console, contains buttons for completing tasks common to many OneClick applications. The following table describes the buttons of the Main toolbar:

Button	Description
	**Navigation:** Buttons let you move among views that you have recently accessed. Arrows let you select a view from a list.
	**Go Up:** Lets you move up to the next level in the hierarchy. A tooltip indicates the next level.
	**Ping:** Lets you send an ICMP Ping to the selected devices from the SpectroSERVER modeling the device.
	**Telnet:** Lets you establish a communication session with the selected device using Telnet from the SpectroSERVER modeling the device.
	**Secure Shell:** Establishes an encrypted communication session with the selected device using Secure Shell (SSH), from the SpectroSERVER modeling the device.
	**Poll:** Initiates contact with the selected devices from the SpectroSERVER modeling the device.
	**Web Administration:** Opens a browser using the IP address of the selected device. Available only for models that have the WebAdminURL attribute.

Note: You can also access the functions of the Main toolbar from the File, View, and Tools menus or, from the right-click menu. This selection depends on the current view.

Alarms Toolbar

The Alarms toolbar lets you quickly process alarms in OneClick. The following table describes the buttons and functionality that are available in the Alarms toolbar.

Button	Description
	**Information button:** Opens a dialog containing details about the alarm currently selected in the table.

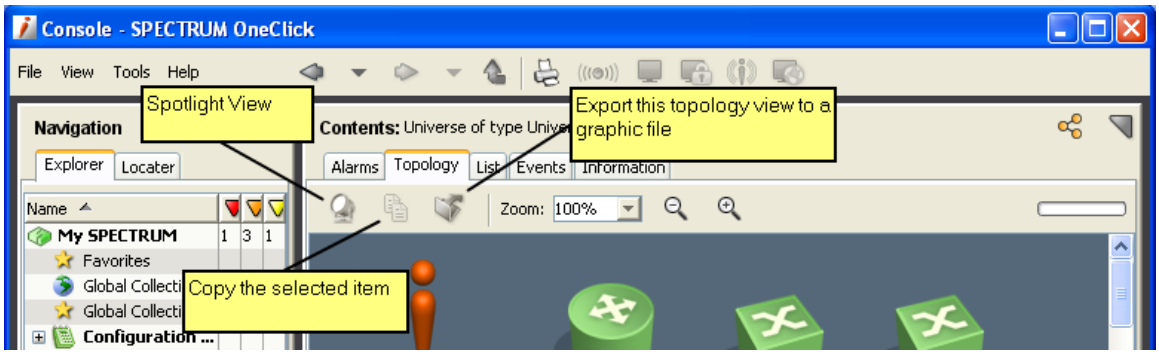
Button	Description
	**Clear selected alarms:** Clears the selected alarms. Cleared alarms are removed from the Alarms table.
	**Acknowledge selected alarms:** Lets you acknowledge the selected alarms.
	**Unacknowledge selected alarms:** Unacknowledges the previously acknowledged, selected alarms.
	**Assign a troubleshooter:** Opens the Select Troubleshooter dialog from which you can assign a troubleshooter to the selected alarms.
	**Unassign the troubleshooter:** Removes a troubleshooter from the selected alarms.
	**Update alarm attributes on the selected alarm(s):** Opens the Update Alarm Attributes dialog from which you can update values for certain alarm attributes, such as a trouble ticket number or an acknowledgment.
	**Mail:** Opens the Mail Selected Alarms dialog, from which you can email alarms to a recipient.
	**Unsnooze:** Unsnoozes all previously snoozed alarms.
	**Alarm Filter:** Lets you create an alarm filter.
	**Export:** Lets you specify a file format and location to export the Alarms list.
Filter	**Filter:** Lets you supply text to filter the current Alarms list view. Select Show or Hide from the Filter drop-down list to specify whether to show or hide filter matches.

More information:

Alarm Filter Dialog (see page 46)
Export Table Data (see page 87)
Snooze Alarms (see page 54)
Email Alarms (see page 57)
Assign and Unassign Troubleshooters (see page 56)
Filter the Alarms List (see page 19)
Unsnooze Alarms (see page 55)

Topology Toolbar

The Topology toolbar appears in the Topology tab in the Contents panel. The following image shows an example of the Topology toolbar.



You can use the Topology toolbar to perform the following tasks:

- Spotlight router redundancy, configured VLANs, VPNs, and LSP Paths.

  Note: LSP Path spotlighting is not available if you do not have MPLS Manager installed. VPN spotlighting is not available if you do not have VPN Manager installed.

- Copy selected items to the paste buffer so that you can paste them to another OneClick field or another application.
- Export the contents of the selected Topology view to a file.
- Adjust the Topology tab view for the current session only by zooming in or out.

Note: Users with administrative privileges also have access to editing tools in the Topology toolbar. For more information, see the *Modeling and Managing Your IT Infrastructure Administrator Guide*.

More information:

Export Topology Views as Image Files (see page 89)
Spotlight Model Relationships in the Topology Tab (see page 69)
Topology Tab Preferences (see page 38)

Neighbors Toolbar

The Neighbors toolbar appears in the Neighbors tab in the Component Detail panel. The Neighbors toolbar functions like the Topology tab toolbar. However, it lacks a Spotlight button.

More information:

Topology Toolbar (see page 25)

OneClick Status Bar

The Status bar is at the bottom of the OneClick Console and provides the following functionality:

- Displays information about the OneClick infrastructure. For example, you can see the connection status of the servers and services that let OneClick provide accurate, real-time network information.
- Lets you view messages from OneClick administrators.
- Identifies the username that is used to log in to the current OneClick session, and the name of the OneClick server to which the current client is connected.
- Lets you change your password using a "Change Password" link.

Chapter 3: Using and Customizing OneClick

This section contains the following topics:

Change Your OneClick Password

You can change your OneClick password from the OneClick home page or the status bar in the OneClick Console.

Follow these steps:

1. Navigate to *one* of the following locations:
   - The bottom of the OneClick home page.
   - The status bar at the bottom of the OneClick Console.
2. Click the 'Change Password' link.
3. Enter your current password, your new password, and reenter your new password.

   Your password is changed.

Favorites Folder

The Favorites folder is something all OneClick users can populate and maintain for their own benefit, without administrator assistance.

In the Explorer tab of the Navigation panel, you can add any OneClick element below the landscape level to your Favorites folder by right-clicking the element and choosing Add To, Favorites. You can also add Global Collections to your favorites by right-clicking your Favorites folder and choosing Add Collections.

To remove an element from the Favorites folder, right-click the element within the Favorites folder and choose Remove.

Important! If you right-click an element and select Delete, the element is not only removed from the Favorites folder, but some models can also be deleted permanently from the system. For more information, see the *Modeling and Managing Your IT Infrastructure Administrator Guide*.

You can create subfolders by right-clicking Favorites (or a subfolder within Favorites) and selecting New Folder. Use the right-click menu to cut, copy, paste, rename, and delete subfolders.

Set SPECTRUM_BROWSER Variable

By default, OneClick uses the Mozilla Firefox browser on Solaris and Linux systems. (On Solaris version 9, the default browser is Netscape.) For Windows systems, OneClick uses the default browser as defined on the system. You can override the default OneClick settings with the SPECTRUM_BROWSER environment variable.

Define SPECTRUM_BROWSER as part of your environment. Include the full path for the command that opens the browser of your choice. Use a placeholder to specify the URL in the SPECTRUM_BROWSER variable using {0} (<*full_path_browser*>/firefox.exe {0}).

When you click a link in OneClick, The URL link replaces the {0}.

The SPECTRUM_BROWSER variable overrides other platform or system browser selection variables.

Set OneClick Preferences

The Set Preferences dialog lets you customize your view of OneClick. You can set preferences in OneClick for a number of categories and add-on applications such as General settings, the Alarms tab, and the Explorer tab. The Set Preferences dialog provides access to these settings. When you select the top-level preferences group in the Set Preferences dialog, all available preferences and the tools to edit them appear.

Other preferences that are only available to administrators can be set for all users or for categories of users.

Follow these steps:

1. Click View, Preferences.

   The Set Preferences dialog opens.

2. Expand the folder for the individual preference or preference group that you want to change in the Name column.
3. Set new values for the selected preference in the right panel as desired.

   Note: If Make Changes Permanent is selected at the bottom of the dialog, any preferences that you set become your default settings. If you clear this option, your changes only apply to the current session.
4. Click Apply.
5. Click OK.

   The preferences are set, and the Set Preferences dialog closes.

Alarms Tab Preferences

Use the Alarms Tab in the Set Preferences dialog to specify settings for OneClick alarms. Alarm preferences and categories available for modification include the following attributes:

Acknowledge When Assign

Specifies whether to auto-acknowledge alarms when assignments are made.

Alarm Filter

Sets the filter that is used for all displayed alarms tables. Click Set Alarm Filter to access the Alarm Filter dialog.

Alarm Notification

Specifies settings for alarm popup alerts and sounds:

New Alarm Popup Alert

Specifies whether you see a popup alert for new alarms. You can also specify the duration and transparency of the popup.

New Alarm Sound

Enables or disables sound notifications for new alarms. Sound notification is a male, English-speaking voice announcing the number and severity of alarms when they are generated.

Alarms Table

Specifies settings for how the alarms table displays including column order, available columns, sorting, and font.

Default Alarm Snooze

Specifies the default alarm snooze time. The value has to be greater than zero and less than 24 hours.

Email Subject Templates

Specifies the available templates that can be included in the Subject heading of an email message.

Email Templates

Specifies the available templates that can be included in an email message.

Expert Clear

Suppresses confirmations for clearing selected alarms.

Show secondary when in maintenance

Specifies whether to show secondary alarms for a device that is in maintenance mode.

Trouble Ticket URL

Specifies a URL in which to enclose the trouble ticket ID. Set the URL for a trouble ticket management system at your organization. The ticket number for an alarm appears as a hyperlink that opens a Web browser to the trouble ticket system URL. The trouble ticket ID can be substituted for the URL at run time by specifying "{0}" in the URL string. The following example shows this substitution:

```
http://acme/ticket?id={0}
```

More information:

Filter Alarms (see page 48)
Create Email Templates (see page 33)

Display Initial and Suppressed Alarms

Important! Displaying Initial and Suppressed alarms is not recommended in OneClick. These alarms can create a significant amount of network traffic.

If the Disable Initial Alarms and Disable Suppressed Alarms settings for the Virtual Network Machine (VNM) managing your network are disabled, you can view initial and suppressed alarm conditions. Only users with OneClick administrator privileges can change these settings. Go to the Disable Initial and Suppressed Alarms attributes in the Alarm Management submenu for the VNM.

Follow these steps:

1. Click View, Preferences.

   The Set Preferences dialog opens.

2. Expand the Alarms Tab folder, select Alarm Filter, and click Set Alarm Filter.

   The Alarm Filter dialog opens.

3. Click Add.

   The Enter Filter Name dialog opens.

4. Enter a name for the new alarm filter and click OK.
5. Click the Severity tab in the Alarm Filter dialog.
6. Select the Initial and Suppressed alarm categories and click to move them to the Show list.

   Click OK.

7. The Alarm Filter dialog closes.
8. Click OK.

   The Set Preferences dialog closes.

9. Right-click the Name column header in the Explorer tab.

   The Table Preferences dialog opens.

10. Select the Initial Alarm Count and Suppressed Alarm Count check boxes.
11. Click OK.

    Initial and Suppressed alarms are displayed in OneClick.

Events Tab Preferences

Select Events in the Set Preferences dialog to set preferences for the Events tab. The following preferences are available for customization:

Default Time Interval

Specifies the default time interval that is used to retrieve events for display in the Events tab. OneClick uses this value initially to display events for a model. You can change this value using the Event Filter dialog.

Email Subject Templates

Specifies the available templates that can be included in the Subject heading of an email message.

Email Templates

Specifies the available templates that can be included in an email message.

Events Table

Columns

Specifies the columns of information to display in the Events table.

Font

Specifies the font family and type size used in the Events table.

Sort

Specifies the default sorting methodology for the Events table.

Filtered Event Types

Specifies the types of events to exclude from the Events table.

Show events for subcomponents

Specifies whether to show events for the subcomponents of the selected model in the Events tab. For example, ports are subcomponents. OneClick uses this value to display events for a model. You can change this value in the Event Filter dialog.

More information:

Exclude Event Types (see page 32)
Event Filter Dialog (see page 58)
Create Email Templates (see page 33)

Exclude Event Types

You can exclude event types from displaying in the Events table.

How to Add Filtered Event Types to the Excluded Event Types List

Follow these steps:

1. Click View, Preferences.

   The Set Preferences dialog opens.

2. Expand the Events Tab folder in the Name column and click Filtered Event Types.

3. Click Browse under the Excluded event types list.

   The Select Event Type dialog opens displaying all the available event types.

   Note: If you know the event code for the event type to exclude, enter it in the Filter box beneath the list of excluded event types and click Add.

4. Select the desired event from the Select Event Type dialog and click OK.

   The Select Event Type dialog closes. The event code appears in the text box beneath the list of excluded event types.

5. Click Add.

   The event type is added to the Excluded event types list.

6. Click Apply in the Set Preferences dialog.

   The event types you selected are now excluded and are not displayed in the Events table.

How to Remove Filtered Event Types from the Excluded Event Types List

Follow these steps:

1. Click View, Preferences.

   The Set Preferences dialog opens.

2. Expand the Events Tab folder in the Name column and click Filtered Event Types.
3. Select the excluded event type that you want to remove from this list.
4. Click Remove.
5. Repeat for other event types that you want to include in the Events table.

   The event types that you selected are again displayed in the Events table.

Email Templates

OneClick contains email templates that you can use to email alarms or events. These email templates let you automatically include specific values from the related alarm or event in your email messages. You can modify existing email templates from either the Preferences dialog or the email message dialog itself.

The following types of email templates are available in OneClick:

Subject Templates

Specifies the fields to include in the subject line of the email messages that use this template.

Message Templates

Specifies the fields to include in the body of the email messages that use this template.

Create Email Templates

You can create new email templates by editing existing email templates.

Note: The following procedure describes how to create email templates for alarms. The same steps apply to setting up email templates for events. For more information, see Events Tab Preferences (see page 31).

Follow these steps:

1. Click View, Preferences.

   The Set Preferences dialog opens.

2. Expand the Alarms Tab folder in the Name column. Take one of the following steps:

   - Click Email Templates
   - Click Email Subject Templates

3. Select a template from the Templates drop-down list.

4. Click Edit to modify the selected template.

   The Edit Template dialog opens.

5. Enter a name for this new template in the Save As field.

6. Select the information that you want to display in the new message template.

   Each option corresponds to a column in the alarm.

7. (Optional) Click Move Up or Move Down to change the order in which the information appears in the message.

8. Click OK when you have finished creating the template.

   The new template appears in the Templates drop-down list.

Modify Email Templates

You can modify existing email templates.

Note: The following procedure describes how to modify email templates for alarms. However, the same steps apply to setting up email templates for events.

Follow these steps:

1. Click View, Preferences.

   The Set Preferences dialog opens.

2. Expand the Alarms Tab folder in the Name column, and take one of the following steps:

   - Click Email Templates.
   - Click Email Subject Templates

3. Select a template from the Templates drop-down list.

4. Click Edit to modify the selected template.

   The Edit Template dialog opens.

5. Select the information to display in the message template.

6. (Optional) Click Move Up or Move Down to change the order in which the information appears in the message.
7. Click OK when you have finished modifying the template.

   The modified template is now available in the Templates drop-down list.

General Preferences

This section describes the general preferences available in the Set Preferences dialog. Depending on your access rights, you may not have access to all of the following settings.

SNMP Community Strings List

Lets you edit the stored SNMP community strings list. Use this setting to add SNMP community strings to the list, remove stored SNMP community strings that were typed incorrectly, or clear the entire list.

Note: The OneClick administrator can lock this preference.

Default Field Font

Specifies the default font that is used for all field views in the Information panels.

Default Table Font

Specifies the default font used in all OneClick tables. This setting can be overridden for a specific table by using the Table Preferences dialog.

Email Address List

Specifies the email addresses available from the To/Cc fields in Mail dialogs. You can add and remove addresses as needed. Also, any email address that you type manually into a Mail dialog in OneClick is automatically saved to this list. You can also add names along with the email address using the following format: *<RecipientA Name>*:*<RecipientA Email Address>.*

Locale

Specifies the regional locale that is used to format dates, time, and numbers. This setting overrides the operating system setting. You can maintain the same locale setting independent of the system where you are logged on.

Note: Restart the OneClick client to apply this setting.

Look and Feel

Specifies the look and feel for the OneClick client. The default setting is the native look and feel for the system running the client, such as Windows. If you choose to override the system default, OneClick attempts to use the same look and feel setting independent of the system you are logged on to. If the system does not support the specified look and feel, OneClick uses the system default.

Note: Restart the OneClick client to apply this setting.

New Message Sound

Specifies whether there is a sound indicator when you receive a new message from OneClick administrators.

Scrollbar Increment

Specifies the amount that each scrollbar adjusts to when you click the scrollbar arrow.

Time Format

Specifies the time format in OneClick as either 12-hour or 24-hour.

Time Zone

Specifies whether to use Coordinated Universal Time (UTC) to display dates and time in OneClick. By default, OneClick uses the local system time zone.

Tool Tip Delay

Specifies the amount of time, in seconds, that your cursor remains over a button, field, or other component in the OneClick interface before a tooltip displays.

Explorer Tab Preferences

The following Explorer preference options are available in the Set Preferences dialog in the Explorer Tab section.

Expansion Limit

Displays a warning when you expand an Explorer node whose number of elements exceeds the limit specified.

Explorer Table

Specifies the following preferences for the Explorer tab:

Columns

Specifies the Alarm category columns that appear in the Explorer.

Note: For more information, see Display Initial and Suppressed Alarms (see page 30).

Fonts

Specifies the font and type size that are used to display text in the Explorer.

Sort

Specifies the default sorting method for the Explorer.

Initial View

Specifies how the Explorer tab appears in the OneClick Console each time you start the application.

Expand and Collapse the Explorer View

You can collapse the hierarchy in the Explorer tab with one click.

Follow these steps:

1. Click the Explorer tab.
2. Select the node that you want to collapse, right-click, and select Collapse All.

   Everything beneath the selected node is collapsed to the level of the selected node.
3. (Optional) Select a node that you want to expand, right-click, and select Expand All.

   Everything beneath the selected node is fully expanded.

Locater Tab Preferences

This section describes the Locater tab preferences available in the Set Preferences dialog. Depending on your access rights, you may not have access to all the following settings.

Prompt for Landscapes

Specifies whether to prompt you for the landscape you want to search when executing a search from the Locater tab.

Default: Yes

Results Table

Columns

Specifies the columns of information to display in the table.

Font

Specifies the font family and type size used in the table.

Sort

Specifies the default sorting methodology for the table.

Topology Tab Preferences

This section describes the Topology tab preferences that are available in the Set Preferences dialog. Depending on your access rights, you may not have access to all the following settings.

Annotation Font

Specifies the default font settings for topology annotation text. You can modify font, style, size, and background and foreground colors.

Grid Properties

Affect the topology view in Edit mode. Only administrators can place OneClick topologies into Edit mode.

Initial Zoom

Affects the default view of the Topology tab. Select from the following options:

- The system default zoom percentage. The OneClick administrator sets the value.
- A custom zoom percentage.
- Fitting the topology into a visible window with the zoom level at or above a minimum setting.

Model By Type

Specifies the model types that are available from the Model by Type dialog. Model types are available when you manually create models by model type in the Topology tab.

Note: For more information, see the *Modeling and Managing Your IT Infrastructure Administrator Guide*.

Show Off Page Reference Models

Specifies whether off-page reference models are displayed in the Topology tab.

Show Pipe Label

Specifies whether to show pipe (connection) labels in the Topology tab.

Default: No

VLAN Duplicates

Specifies whether to show VLAN duplicate IDs even if the same device appears more than once in a Global Collection.

Note: If you change any of the Topology preferences, and 'Make Changes Permanent' is selected, the changes are in effect each time you use OneClick.

Table Preferences

You can change the way columns appear in OneClick by right-clicking a column heading. In the Table Preferences dialog, you can select the columns that you want to display. The available choices vary depending on the OneClick application you are using.

You can resize a column by clicking and dragging a column header to the left or right. You can also resize a column to fit the longest text string. Double-click the column header boundary to the right of the column. Click a column heading to sort a list by the attribute values in a particular column.

You can also set table preferences in each of the Set Preferences dialog categories that support tables.

View Row Details

You can view more information about the rows in OneClick Console lists from the Row Details dialog. The Row Details dialog displays the value for each available field. Values for fields that are not currently displayed in the list are also included.

Follow these steps:

1. Right-click the desired row item and select Row Details.

   The Row Details dialog opens.

2. (Optional) Click another row in the same list.

   The Row Details dialog displays values for the newly selected row.

3. Click Close when you have finished reviewing row details for items in this list.

Filter OneClick Lists

You can filter the items that are displayed in OneClick lists using the Filter text box. A Filter text box appears in many OneClick panels and tabs. The filtering feature lets you enter text to filter the data that appears in columns and lists. As you type in the Filter text box, the list displays or hides only the items that contain the text you entered. You can include or exclude items by selecting Show or Hide from the Filter drop-down list.

Select Landscapes

A CA Spectrum landscape is the network view of a specific CA Spectrum server. In a distributed CA Spectrum environment, multiple CA Spectrum servers are used to manage the network. Each server has its own view of the network. Depending on how your CA Spectrum environment is configured, you may have access to more than one CA Spectrum server.

As such, the ‘Select Landscapes to Search’ dialog can appear when you perform certain actions. This dialog asks you to select those landscapes on which you want to perform the actions. This dialog lists the included landscapes on the left, and the excluded landscapes on the right. If you have only a single landscape, that single landscape appears in the list of included landscapes.

OneClick Panels

By default all three panels appear in the OneClick interface, however, you can modify your view of the panels as needed.

- **View menu:** Each panel is listed in the View menu. If the panel has a checkmark next to it, it is viewable. If the panel does not have a checkmark next to it, it is not currently viewable in the OneClick Console interface.
- **Docking and Cloning:** Each OneClick panel can be docked, undocked, or cloned using the following buttons:
  -  **Undock:** Click to undock a OneClick Console panel.
  -  **Dock:** Click to dock a previously undocked OneClick Console panel.
  -  **Clone:** Click to clone a OneClick Console panel.

Dock and Undock Panels

Undocking a panel opens it in its own window, at the same time removing it from the main OneClick Console view. Undocking panels can help you to make better use of your screen space.

You can dock an undocked panel by clicking Dock or by using the View menu. To display panels that you have closed, click the View menu and select the panel to display.

Clone Panels

Click Clone in either the Contents panel or the Component Detail panel to open a separate window containing another instance of the panel. Clicking Clone in the Contents panel while the Component Detail panel is visible opens a new window containing instances of both panels.

Use cloning to view more than one area of your network. The display of information of a cloned window is not affected when you navigate away from the original source to view other network assets.

More information:

Multiple Alarm Filters (see page 49)

Copy Text from the Component Detail Panel

You can copy text from the Component Detail panel.

Follow these steps:

1. Select the text in the Component Detail panel you want to copy by taking *one* of the following steps:
   - Place the cursor over the beginning of the range of text you want to copy, press and hold the left mouse and drag the cursor across the range of text.
   - Double-click a word that you want to select, or triple-click to select an entire line of text.

   The text range is highlighted.
2. Take *one* of the following steps with the text range highlighted:
   - Right-click and select Copy.
   - Press Ctrl+C.
3. Paste the text into the writable field in OneClick or in another document or email program.

Insert URLs in OneClick

You can insert URLs into writable fields in the Component Detail panel.

Follow these steps:

1. Find the field in the Component Detail panel where you want to add a URL.

   For example, select the Notes field from the General Information submenu and click set.
2. Enter the text and the URL to include in the note. For example:

   Issue is described at http://internal.info.xyz.com
3. Click Save.

Including spaces or commas in a URL can cause some browsers to have problems locating the web resource. To include spaces or commas in a URL that you are including in the Component Detail panel, use the hexadecimal equivalent and proper encoding:

- For a comma, use **%2C**
- For a space, use **%20**

Note: The OneClick administrator can provide more information about URL formatting.

Chapter 4: Monitoring Your Network with OneClick

This section contains the following topics:

Global Collections

Global Collections help organize operator views of network devices that span containers or landscapes. OneClick administrators create Global Collections, and operators monitor Global Collections by selecting them in the Explorer tab, and then viewing the Alarms, Events, and List tabs in the Contents panel.

A Global Collection can be empty for the following reasons:

- Collections are not configured.
- Your user account does not have access to existing collections.
- Dynamic collections do not currently contain any models.

OneClick administrators maintain Global Collections and grant or restrict access to them.

Note: For more information, see the *Modeling and Managing Your IT Infrastructure Administrator Guide*.

Network Searches

Searching your network with CA Spectrum is a fundamental network management task. As an operator, you can run predefined searches using the Locater tab to identify specific models or groups of models on your network. You can choose from several categories of search criteria when performing a search. For example, not only can you search for network assets, but you can also search for configuration items, such as schedules. You can determine which schedules are in effect and can determine the models to which a schedule is applied.

Some predefined searches that are available from the Locater tab include the following objects:

- All Devices
- Devices, By IP Address
- All Application Models
- All SNMPv3 Devices
- All Schedules

If you are operating in a Distributed SpectroSERVER (DSS) environment, some searches require you to select the landscapes to include in your search using the landscape selection dialog.

Note: For more information, see the *Administrator Guide*.

More information:

Select Landscapes (see page 39)

Search Your Network

You can run predefined searches of your network from the Locater tab.

Follow these steps:

1. Click the Locater tab in the Navigation panel.
2. Find the search that you want to run in the Locater tab and do *one* of the following actions:
   - Double-click the search.
   - Select the search and click  (Launch the selected search).

   If no further information is required, the search runs and the results are displayed in the Results tab. If more information is required, the Search dialog opens.

3. Take *one* of the following steps:
   - Type the value you want to search for.
   - Select the value that you want to search for from the drop-down list:

   The value that you want to search for is now listed in the Search dialog.
4. (Optional) Select the Ignore Case check box for a search that is not case-sensitive.
5. (Optional) Click the List button to search for multiple values for a single attribute (see page 45).
6. Click OK.

   The search runs. The results are displayed in the Results tab of the Contents panel.

More information:

Locater Tab (see page 15)

Search for Multiple Values for a Single Attribute

You can specify a list of values to search on using the List button in the Search dialog after executing a search.

Note: The List button is not available for regular expression searches or for 'negative' searches, such as Does Not Contain, Does Not Start With, Does Not End With, Not Equal To.

Follow these steps:

1. Run the desired search for which you want to enter a list of values.

   The Search dialog opens.
2. Click List.

   The List of Values dialog opens.
3. Do *one* of the following actions:
   - Type the values that you want to search for in the List of Values dialog.
   - Click Import, select the file that contains the values you want to search for, and click Open.

   Note: The values that you enter are logically OR'ed together. For example, if you enter "router 1, router 2, router 3", the search returns "router 1 OR router 2 OR router 3."

   The values that you are searching for are displayed in the List of Values dialog.

4. (Optional) Select the Ignore Case check box.

   The search is now case-insensitive.

5. Select one of the following characters from the Delimiter drop-down list, depending on which delimiter you are using to separate each value in the list:

   - <new line>
   - <space>
   - ,
   - ;

6. Click OK.

   The List of Values dialog closes.

7. Click OK

   The search runs and results are displayed in the Results tab in the Contents panel.

Manage Alarms

OneClick provides tools to identify and manage the alarms that are displayed in the Alarms tab. Some settings let administrators customize the alarms that are generated in OneClick. Other settings are available to let operators manage the alarms that they see in OneClick.

Alarm Filter Dialog

The Alarm Filter dialog lets you create alarm filters to determine how alarms appear in your OneClick Alarms tab. The dialog contains the following tabs:

Landscape

Defines the landscapes for which to display alarms.

Severity

Defines the alarm severities that are applied to this filter.

State

Specifies the states that you want to show. Options are as follows:

Acknowledged State

Acknowledged, Not Acknowledged, Both.

Clearable State

Clearable, Not Clearable, Both.

Primary/Secondary State

Show Primary For Containers/All For Devices, Show Only Primary, Show All Alarms.

Note: Select Both under Acknowledged State or Clearable State to see both options for that state.

Symptoms

Specifies whether to show alarms that are determined to be the cause of symptoms.

Network Address

Specifies a range of network addresses for which to show or hide alarms.

Assignment

Specifies which assigned owners can view alarms.

Model Class

Specifies the model classes for which you do not want to display alarms.

Model Type

Specifies the model types for which you do not want to display alarms.

Alarm Type

Specifies the alarm types for which you do not want to display alarms.

Attribute

Attribute: Select an attribute of a device to filter.

Comparison Type: Specifies how to compare the value of the attribute ID with the value in the Attribute Value field. Only the comparison types appropriate to the data type of the attribute are displayed.

Ignore Case: Select the Ignore Case check box if you do not want the comparison to be case-sensitive. This selection is only enabled when it is appropriate for the data type of the attribute that you selected.

Attribute Value: Enter or select the desired attribute value that you want to use in the comparison.

The Show Advanced button in this tab lets you use complex attribute filtering.

The following buttons are available in the Alarm Filter dialog from every tab:

Clear Tabs

Clears all fields in all tabs, and clears any filters that are set in the tabs.

Clear All

Clears all fields in all tabs and in the Advanced filter section. If you click Clear All and click OK, all alarms appear because no filters are set.

Show Advanced

Opens the Advanced Filter panel.

Available Filters

Contains saved filters so that you can apply, edit, or delete them.

Add

Creates an alarm filter using the Enter Filter Name dialog. The new alarm filter displays in the Available Filters drop-down list.

Delete

Removes the selected filter from the Available Filters list.

More information:

Create and Save Alarm Filters (see page 49)
Use Advanced Alarm Filtering (see page 50)

Filter Alarms

You can determine how alarms appear in your OneClick view using alarm filters created in the Alarm Filters dialog.

To open the Alarm Filter dialog, do *one* of the following actions:

- In the Set Preferences dialog, select Alarm Filter from the Alarms Tab folder and click Set Alarm Filter.
- Click  (Filter) in the Alarms tab toolbar.

You can create alarm filters to customize which alarms OneClick displays in the Alarms tab. You can also create advanced alarm filters, as described in Advanced Alarm Filter.

More information:

Use Advanced Alarm Filtering (see page 50)

Multiple Alarm Filters

You can create multiple alarm filters to screen for specific alarm conditions on specific devices, containers, or other models. You can use these filters to view different alarm conditions simultaneously in multiple Alarm views. Create multiple Alarm views by cloning the Component Detail or Contents panel, and displaying the Alarm tab in each panel. Select a different alarm filter that you have created to troubleshoot or watch for specific conditions in each Alarm view.

More information:

Clone Panels (see page 40)

Create and Save Alarm Filters

You can create and save alarm filters so that you can retrieve and use them later.

Follow these steps:

1. Click the Alarms tab in the Contents panel.
2. Click  (Filter) in the Alarms tab toolbar.

   The Alarm Filter dialog opens.
3. Click Add.

   The Enter Filter Name dialog opens.
4. Enter the name of the filter you want to create and click OK.
5. Click the tab that you want to use to configure the filtering criteria. These tabs are described in Advanced Alarm Filter.
6. Click Apply.

   The filter settings are saved and the filter is applied to the Alarms tab view.
7. Click OK.

   The alarm filter is now created and saved and the Alarm Filter dialog closes.

More information:

Use Advanced Alarm Filtering (see page 50)

Use Advanced Alarm Filtering

The Advanced Filter provides more flexibility when compared to simple filtering because it lets you make multiple selections of the types of filters you want to apply. Simple filtering, on the other hand, simply groups all filter selections and applies them in a linear fashion, (for example Filter by Landscape *and* Secondary Alarms *and* Model Type). In simple filtering, all criteria must be met; in advanced filtering, any of the criteria you define can be met.

Advanced alarm filtering has two requirements:

- At least two sets of filter criteria.
- Alarms are filtered in an “either/or” fashion.

For example, with advanced filtering, you can display red (Critical) HubCat5000 model types or yellow (Minor) Pingable model types. In this case, neither red (Critical) Pingable model types nor yellow (Minor) HubCat5000 model types show up in the Alarms list. Simple alarm filtering does not make such a fine distinction. Instead, all Minor and Critical Pingables and all Minor and Critical HubCat5000 display with simple filtering.

This procedure continues the example and describes advanced filtering for critical HubCat5000 model types or minor pingable model types.

Follow these steps:

1. Click View, Preferences.

   The Set Preferences dialog opens.

2. Expand the Alarms Tab folder in the Name column and click Alarm Filter, Set Alarm Filter.

   The Alarm Filter dialog opens.

3. Click the Model Type tab and hide all model types except HubCat5000 models by doing the following actions:

   a. Click the double-right arrow button to move all model types from the Show list to the Hide list.

   b. Type **HubCat5000** in the Filter field on the right side of the dialog.

      Note: Scroll down to see the Filter field.

   c. With the HubCat5000 model type selected, click the single-left arrow button.

   HubCat5000 is moved to the Show list.

4. Click the Severity tab and move Major and Minor alarms to the Hide list.

5. Click Show Advanced.

   The Alarm Filter dialog expands to display the Advanced Filter section.

6. Click Add in the Advanced Filter section.

   Your selections are placed into the Advanced Filter panel; the panel now displays the following filter:

   ```
   Severity (Hide Suppressed, Major, Minor, Initial, Maintenance) AND Model Type (Show HubCat5000)
   ```

7. Click Clear Tabs.

   The filters that you just set are cleared.

   Note: The filter that you created still appears in the Advanced Filter panel, but now you are going to add to it.

8. Click the Model Type tab and move all model types to the Hide list except Pingable.

9. Click the Severity tab and move Major, Critical, Initial, and Suppressed alarms to the Hide list.

10. Click Add in the Advanced Filter panel to move your selections to the Advanced Filter panel.

    The panel now displays the following filter:

    ```
    Severity (Hide Suppressed, Major, Minor, Initial, Maintenance) AND Model Type (Show HubCat5000)
    OR Severity (Hide Critical, Suppressed, Major, and Initial) AND Model Type (Show Pingable).”
    ```

11. Click Add next to the Available Filters list.

    Your settings are saved and the Enter Filter Name dialog opens.

12. Enter a name for the filter you want to save.

13. Click OK.

    The Enter Filter Name dialog closes and the filter you saved appears in the Available Filters drop-down list.

14. Click OK.

    The Alarm Filter dialog closes.

15. Click OK.

    The Set Preferences dialog closes.

System Cleared Alarms

System cleared alarms are alarms that are cleared automatically by the system without user acknowledgment. The result is a device that returns to a normal (green) condition. You can track these alarms as part of network monitoring.

Enable system cleared alarm tracking on a per-model basis. With tracking enabled, you can locate these system cleared alarms from the Locater tab by running the Devices > All Devices with System Cleared Alarms search. You can then acknowledge them as needed.

Note: This search only finds devices that had an alarm that was cleared by the system. An aged out alarm which is cleared displays the "System.Alarm_AgeOut" value in its corresponding "Cleared By" column under "Cleared Alarms History" tab. The corresponding cleared event also displays this value in its "Cleared By" column under Events tab.

Example: System Cleared Alarms

The following example describes two devices, each with tracking enabled.

Device A has one critical alarm. The system clears the critical alarm; the device returns to normal condition and is found by the Devices, All Devices with System Cleared Alarms search.

Device B has one critical alarm and one major alarm. The system clears the critical alarm, but not the major alarm. Because the condition is *not* normal, the search does not find the device.

Track System Cleared Alarms

You can track system cleared alarms as part of monitoring your network.

How to Enable System Cleared Alarm Tracking

Follow these steps:

1. Select the model for which you want to track system cleared alarms.
2. Right-click and select Track System Cleared Alarms.

   Any system cleared alarms that occur on this model are now tracked.

How to Locate System Cleared Alarms

Follow these steps:

1. Click the Locater tab in the Navigation panel.
2. Double-click the Devices, All Devices with System Cleared Alarms search.

   If additional input is not required, the search runs immediately; the search results appear in the Contents panel.

   All system cleared alarms are displayed.

How to Acknowledge a System Cleared Alarm

Follow these steps:

1. Select the model with the system cleared alarm on it.
2. Right-click and select Acknowledge System Cleared Alarms.

   The alarm is acknowledged.

   The model no longer appears in the Devices, All Devices with System Cleared Alarms search.

How to Disable System Cleared Alarm Tracking

Follow these steps:

1. Select the model for which you want to disable system cleared alarm tracking.
2. Right-click and select Ignore System Cleared Alarms.

   Any system cleared alarms that occur on this model are no longer tracked.

Update Alarm Attributes

By default, CA Spectrum lets you update the following two alarm attributes from the Alarms tab:

- Alarm Status
- Trouble Ticket ID

Updating an attribute of an alarm lets you provide more information about the alarm to other users. For example, update the status of an alarm to let other operators know how the situation related to an alarm is being handled.

Note: You can also define your own custom alarm attributes as needed. For more information, see the *OneClick Customization Guide*.

Follow these steps:

1. Click the Alarms tab in the Contents panel.
2. Select the alarm that you want to update.
3. Click  (Update alarm attributes).

   The Update Alarm Attributes dialog opens.
4. Select the attribute that you want to update from the Attribute drop-down list.
5. Type the new value for the attribute in the Attribute Value field.
6. Click OK.

   The Update Alarm Attributes dialog closes. The alarm attribute is updated.

Snooze Alarms

You can snooze alarms for any period shorter than 24 hours. The Snooze feature is helpful, for example, if some alarms are not as critical as others. Snooze an alarm to postpone action on a less critical issue so that you can focus on the more serious alarms.

Follow these steps:

1. Click the Alarms tab in the Contents panel.
2. Select the alarms that you want to snooze.
3. Right-click the selected alarms, select Snooze, and select *one* of the following options:
   - Snooze Selected Alarms.
   - Snooze Alarms From Corresponding Sources.

   The Snooze Alarms dialog opens.
4. Take the following steps:
   a. Complete the fields to indicate how long the alarms remain snoozed.
   b. (Optional) Select the Save Current Time as Default check box.
   c. Click OK.

   The alarms that you selected are no longer visible in the Alarms tab and reappear when the snooze time has expired.

Unsnooze Alarms

You do not have to wait for the default snooze time to expire before you can view snoozed alarms again. You can unsnooze these alarms whenever you are ready to focus your attention on them.

Follow these steps:

1. Click the Alarms tab in the Contents panel.
2. Click  (Unsnooze) in the Alarms toolbar.

   All previously snoozed alarms are visible again in the Alarms tab.

Alarm Troubleshooters

You can assign individuals, named troubleshooters, the responsibility of investigating alarms and solving problems. Troubleshooters are assigned to alarms using the Alarms toolbar. When you assign a troubleshooter to an alarm, they automatically receive an email about the alarm. You can edit the email before it is sent.

Create Troubleshooters

First create troubleshooters before you can assign an alarm to them.

Follow these steps:

1. Click Tools, Utilities, Troubleshooters.

   The Troubleshooters dialog opens.
2. Click Create.

   The Create Troubleshooter dialog opens.
3. In the Create Troubleshooter dialog, do the following:
   a. Enter the name of the troubleshooter and email address.
   b. Select the landscapes to which you are assigning the troubleshooter.
   c. Click OK.
4. Click Close.

   The troubleshooter is now created and you can now assign this troubleshooter to an alarm.

Assign and Unassign Troubleshooters

You can use the Alarms toolbar to assign and unassign troubleshooters to the alarms that are displayed in the Alarms list. Troubleshooters must already exist in OneClick to assign them.

Note: The administrator must configure email services on the OneClick server to enable the sending of notification email messages to the assigned troubleshooter. For more information, see the *Administrator Guide*.

How to Assign a Troubleshooter and Send a Notification Email

Follow these steps:

1. Click the Alarms tab in the Contents panel.
2. Select the alarms to which to assign a troubleshooter.
3. Click  (Assign Troubleshooter).

   The Select Troubleshooter dialog opens.
4. Select a troubleshooter from the list.
5. (Optional) Click Edit Mail to edit the message before sending it to the troubleshooter.
6. Click OK.

   The Select Troubleshooter dialog closes. An alarm notification email message is sent to the troubleshooter you selected.

How to Unassign a Troubleshooter

Follow these steps:

1. Click the Alarms tab in the Contents panel.
2. Select the alarms from which to unassign a troubleshooter.
3. Click  (Unassign Troubleshooter).
4. Confirm that you want to unassign the troubleshooter from the alarm.

   OneClick sends an email message to the troubleshooter with information about the change.

More information:

Create Troubleshooters (see page 55)
Alarms Toolbar (see page 23)

View Troubleshooter Assignments

You can display the Assignment column in the Alarms list to see the names of troubleshooters that are assigned to each alarm.

Follow these steps:

1. Click the Alarms tab in the Contents panel.
2. Right-click the column header in the Alarms list.

   The Table Preferences dialog opens.
3. Select Assignment in the Columns tab and click OK.

   The Assignment column now appears in the Alarms list, displaying the names of troubleshooters that are assigned to alarms.

Email Alarms

You can send email messages which contain alarm details to troubleshooters and nontroubleshooters as needed.

Follow these steps:

1. Click the Alarms tab in the Contents panel.

   The Alarms list opens.
2. Select the alarms that you want to send in an email.
3. Click  (Email).

   The Mail Selected Alarms dialog opens.
4. Do any of the following actions:
   - Type one or more new recipient email addresses in either the To field or the Cc field, separated by semi-colons.

     These new addresses are saved to the Email Address List in your General preferences.
   - Use an existing email address by doing the following action:
     a. Click To or Cc.

        The Select Email Address dialog opens.

     b. Select one or more email addresses from the list and click To or Cc.

        The email addresses are added to the To or Cc field in the Select Email Address dialog.

c. Click OK.

The Select Email Address dialog closes and the email addresses you selected appear in either the To field or the Cc field in the Mail Selected Alarms dialog.

5. Type a subject in the Subject field, or select a subject template from the drop-down list.
6. Select the message template to use from the Templates drop-down list, or edit the template.
7. Click Send.

The message is sent.

Manage Events

View events for containers and modeled devices by selecting the container or device in the Explorer tab, and then clicking the Events tab in the Contents panel or the Component Detail panel. You can filter the Events tab using the Event Filter dialog.

Email Events

You can email events using the same steps that you use to email alarms. For details, see Email Alarms (see page 57).

Event Filtering

You can filter the events displayed in the Events tab by entering text to filter on in the Filter text box. You can also create event filters to save and reuse.

More information:

Event Filter Dialog (see page 58)
Filter OneClick Lists (see page 39)

Event Filter Dialog

The Event Filter dialog lets you set more conditions for filtering events. You can access this dialog from the Events tab by clicking  (Filter) in the toolbar, or by right-clicking an event in the Events list and selecting Filter from the menu.

You can filter your current view of the Events list as follows:

- Display Events for a Date and Time Range
- Display Events for a Range of Hours
- Display Events for Ports and Applications
- Exclude and Include Events in the Event Table by Type
- Advanced Event Filter

When you change many of these settings in the Event Filter dialog, the change only applies to the current instance of the Events tab. Default values for the Date/Time and Show events for subcomponents options are applied each time that you select the Events tab for a model. These default values can be set using the Set Preferences dialog (View, Preferences). Default preference values for these and other options can be set globally for all users by the OneClick administrator using the Set Preferences dialog.

Display Events for a Date and Time Range

In the Date/Time section of the General tab in the Event Filter dialog, you can limit the events shown in the Events tab to a particular range by selecting the 'Show events for a time range' option. Enter a start date and time for the range. If you do not select an end date and time for the range, OneClick displays all the events starting for that date and time onward. Create an end date and time for the range by selecting the End check box, and entering a date and time.

When you select the 'Show events for a time range' option, the Events tab shows the time range for which events are currently being displayed just above the Events list.

Display Events for a Range of Hours

You can show only those events that fall within the range of specific hours.

Follow these steps:

1. Click the Events tab in the Contents panel.
2. Click  (Filter) in the Events tab toolbar.

   The Event Filter dialog opens.
3. Select 'Show events for the last <*X*> hours.'

4. Enter a number in the selection box to indicate how many hours of recent events you want to see in the Events list.
5. Click OK.

   The Events list now displays only those events from the past number of hours you specified.

   Note: When you select 'Show events for the last <*X*> hours,' the Events tab shows the time range for which events are currently being displayed just above the Events table.

Display Events for Ports and Applications

You can show events for device model subcomponents including port and application models by selecting the 'Show events for subcomponents' option. By default, this option is not selected.

Exclude and Include Events in the Event Table by Type

You can add and remove events that are in the Exclude Event Types List. Events listed in the Exclude Event Types list are not displayed in the Events table.

Note: The following procedures only impact the Events tab view in the context in which you perform the task. You cannot save event view settings to use later.

You can exclude event types directly from the Events table.

To exclude event types from being displayed in OneClick, right-click the event that you want to exclude in the Events table and select Exclude from the menu.

The event is removed from the Events table.

How to Exclude Event Types from Being Displayed in OneClick using the Event Filter Dialog

Follow these steps:

1. Click the Events tab in the Contents panel.
2. Click  (Filter) in the Events tab toolbar.

   The Event Filter dialog opens.
3. Click the Event Type tab.

4. Do *one* of the following actions:
   - Enter the value for the event type directly in the text field.
   - Click Browse, select the desired event value from the list that appears, and click OK.

   The selected event value is entered in the text field.
5. Click Add.

   The event is added to the 'Excluded event types' list.

How to Include Event Types in the Events Table

Follow these steps:

1. Click the Events tab in the Contents panel.
2. Click  (Filter) in the Events tab toolbar.

   The Event Filter dialog opens.
3. Select the Event Type tab.
4. Select the event type that you want to display in the Events table from the 'Excluded event types' list.
5. Click Remove.

   The event type is removed from the 'Excluded event types' list and appear in the Events table when it is generated.

Note: OneClick administrators can also use the Set Preferences dialog to specify whether any event types are excluded from the Events table.

More information:

Events Tab Preferences (see page 31)

Create Advanced Event Filters

You can select or create an advanced event filter using the Advanced tab in the Event Filter dialog. The advanced filters that you create are stored and can be reused. To use an existing advanced filter, select one from the Available Filters drop-down list.

How to Create an Advanced Event Filter

Follow these steps:

1. Click the Events tab in the Contents panel.
2. Click  (Filter) in the Events tab toolbar.

   The Event Filter dialog opens.
3. Click the Advanced tab.
4. Select the Attribute from the drop-down list.
5. Select the Comparison Type from the drop-down list.
6. Enter the Attribute Value in the text box.
7. If you selected either Event Type or Model Type Name as the Attribute and you do not know the attribute value, click Browse.

   Either the Select Event Type or Select Model Type dialog opens.
8. Select the desired Event Type or Model Type from the dialog, and click OK.

   The Attribute value appears in Attribute Value field.
9. Click Add.

   The Enter Filter Name dialog opens.
10. Enter a name for the filter, and click OK.
11. Take *one* of the following steps:
    - Click OK to apply the filter and close the Event Filter dialog.
    - Click Show Advanced to continue and create a complex filter by using And/Or relationships between multiple advanced filters.

How to Clear Advanced Event Filters

Follow these steps:

1. Click the Events tab in the Contents panel.
2. Click  (Filter) in the Events tab toolbar.

   The Event Filter dialog opens.

3. Click the Advanced tab.
4. Click Clear.
5. Click OK.

How to Delete an Advanced Event Filter

Follow these steps:

1. Click the Events tab in the Contents panel.
2. Click  (Filter) in the Events tab toolbar.

   The Event Filter dialog opens.
3. Click the Advanced tab.
4. Select the filter you want to delete from the Available Filters drop-down list.
5. Click  (Delete).
6. Click OK.

Interface Information

You can view information about the interfaces of a device model by selecting the model and selecting the Interfaces tab in the Component Detail panel. The Interfaces tab displays a list of the configured interfaces and subinterfaces for the selected device, along with the parameters defined in this section.

Note: The colors of icons in the Name, Condition, and Status fields have the same meaning as the colors that indicate device model status throughout OneClick.

Not all of the parameters that are listed here appear in the default Interfaces tab view. See Customize Columns (see page 39) for information about displaying hidden columns in tables.

Name

Specifies the name of the interface.

Condition

Specifies the contact status for the device, in addition to any alarm conditions in effect for the device model.

Status

Indicates whether the interface is operational or nonoperational. An interface may be nonoperational for various reasons including being administratively disabled. Some of the possible values include up, down, off, and dormant.

Type

Identifies the physical layer interface standard that the interface uses, such as Ethernet, SONET, and V.35.

Description

Describes whether the interface is physical or logical, and the interface ID, such as et.2.1

Device Connected

Specifies the name and status (green for up or red for down) of the device that the current interface is connected to. The device name is a hyperlink that displays the Information tab for the connected device.

Port Connected

The name of the port on the device that the current port is connected to. The port name is a hyperlink that displays the Interfaces tab for the device that the current port is connected to.

QoS Policy

Specifies the QoS policy name that applies to this interface.

Index

Specifies the value of the index object in the standard RFC or proprietary MIB that uniquely identifies this interface within the device.

Board.Port

Identifies the board and port number on the device for the corresponding port. For example, if the port is port 4 on a module in the third slot device, the Board.Port value is 3.4.

MAC Address

Specifies the MAC address of the corresponding interface.

IP Address

Specifies the IP address of the corresponding interface.

Port Speed

Specifies the connection speed of the corresponding interface.

Duplex Status

Specifies the duplex state of the corresponding interface, either full, half, unknown, or N/A.

Trunk Membership

Identifies if an interface is a member of an 802.3ad trunk. Trunk Membership displays either the trunk ID that the interface is a member of, or a zero for no membership.

Network Link Type

Describes the type of network device the interface is connected to. Possible values are:

- End Station Link
- Internal Link
- No Link
- Router Link
- Shared Access Link
- Switch Link
- Unknown Link

% Total Utilization

Utilization rate of the corresponding interface that is expressed as percentage of the total capacity of the interface. For interfaces that share bandwidth between inbound and outbound traffic (such as Ethernet interfaces in half duplex-mode) thresholds against % Total Utilization are helpful in monitoring the “load” on the interface.

% In Utilization

Utilization rate of the corresponding interface that is expressed as percentage of the total inbound capacity of the interface. For interfaces that provide dedicated bandwidth to inbound and outbound traffic separately (such as Ethernet interfaces in full-duplex mode) individual thresholds against % Inbound Utilization and % Outbound Utilization can be more helpful in monitoring the “load” on the interface. This type of threshold configuration proves useful when an interface is expected to experience predominantly outbound or inbound traffic (such as one on a web server or a load balancer).

% Out Utilization

Utilization rate of the corresponding interface that is expressed as percentage of the total outbound capacity of the interface.

IF Alias

Specifies the value of the MIB II object ifAlias for the corresponding interface.

IF Name

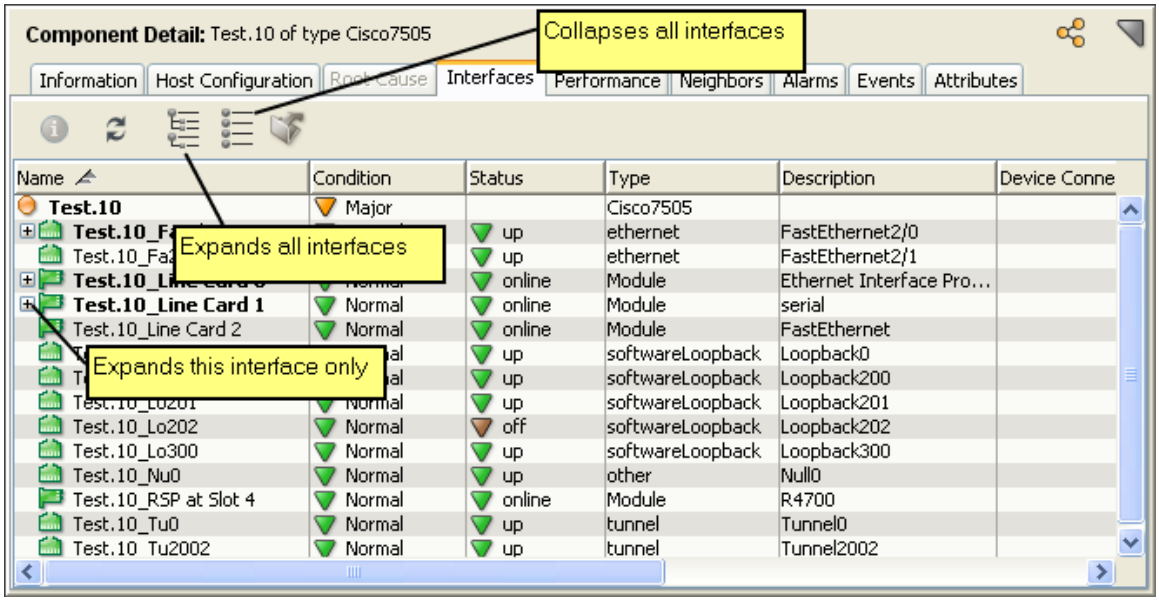
Specifies the value of the MIB II object ifName for the corresponding interface.

Note: For performance reasons, clicking  (Refresh) in the Interfaces tab does not update external attributes (like ifAlias, for example). To update all values, instead select the specific rows in the list that you would like to update and click Refresh.

Subinterfaces

When a device supports virtual or subinterfaces, and subinterface modeling is enabled for the device model, CA Spectrum models the endpoints associated with multiplexed physical connections as subinterfaces. This includes, for example, Cisco IPSEC tunneling on a physical Ethernet interface, Permanent Virtual Circuits (PVCs) on a physical ATM interface, and DCL circuits on a physical Frame Relay interface.

Some modeled interfaces also have subinterfaces available for viewing. The plus sign (+) next to modeled interfaces indicates that subinterfaces are available:



You can expand subinterfaces individually by clicking the plus sign (+) to expand the view of the interface. Or you can click the  button (Expands all interfaces) to expand the view of every subinterface belonging to this modeled interface.

Modeling of subinterfaces must be enabled on a model or device by a network administrator. For more information, see the *Modeling and Managing Your IT Infrastructure Administrator Guide*.

Interface Component Detail Window

The interface Component Detail window provides access to tabs and subviews displaying information about the selected interface and its parent device. To display the interface Component Detail window, select the interface in the Interfaces tab and click  (Information).

Interface Thresholds Subview

The Thresholds subview displays the current settings of pairs of parameters that are used to define interface alarm trigger and reset levels. Each parameter has the following threshold settings:

- A threshold level above which an alarm can be generated.
- A reset level that defines the value below which an existing threshold alarm condition is cleared.
- An allowed threshold violation duration which defines the duration, in seconds, that a threshold level can be violated before generating an alarm.

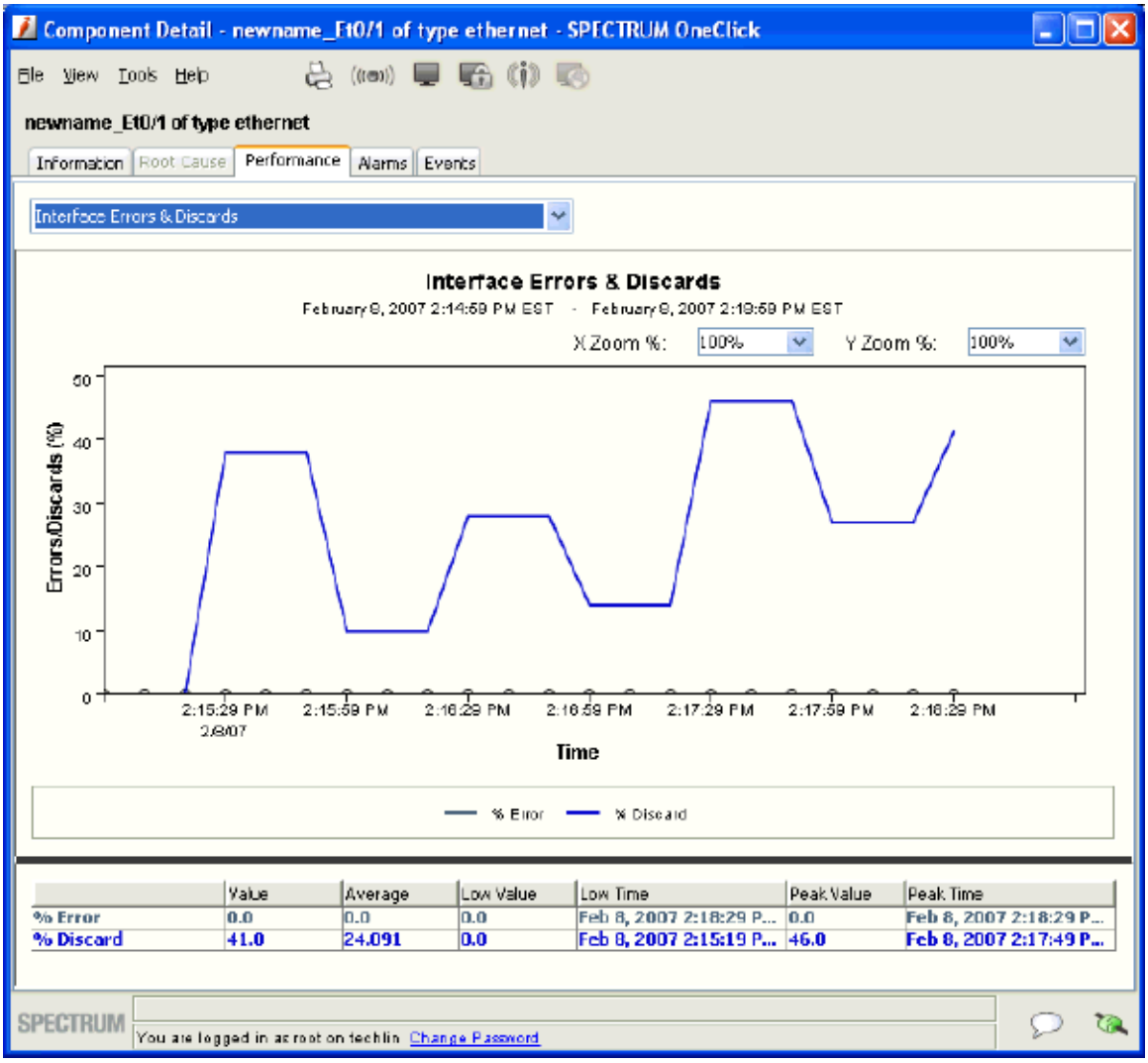
The following interface thresholds parameters appear in the Thresholds subview:

- % Total Utilization: Defines the level of port capacity used that triggers an alarm condition for a port.
- % Inbound Utilization: Defines the level of inbound port capacity used that triggers an alarm condition for a port.
- % Outbound Utilization: Defines the level of outbound port capacity used that triggers an alarm condition for a port.
- Total Packet Rate (packets/sec): Defines the number of packets per second that triggers an alarm condition for a port.
- % Errors: Defines the error rate on a port that triggers an alarm condition.
- % Discarded: Defines the percentage of discarded packets on a port that triggers an alarm condition.

Note: Network administrators can set the values for these parameters. For more information, see the *Modeling and Managing Your IT Infrastructure Administrator Guide*.

Interface Performance View

The Performance view for the selected interface displays real-time graphs of interface utilization, throughput, and errors and discards. You can select from the performance views available using the drop-down list. You can set the zoom level for the X and Y scales for each graph, and each graph includes a legend explaining the data that appears in the graph. The following image shows an example of the interface Performance view:



Spotlighting Model Relationships

The spotlighting feature in OneClick lets you isolate and visualize the following model relationships within your network that are not readily visible from the Topology view:

- Router redundancy
- VPNs
- VLANs
- LSP Paths

The Topology view does not visually distinguish these model relationships, making it more difficult to picture them within the context of your network. With spotlighting, these model relationships are accentuated, showing you where they appear in the network topology.

For example, you can use the spotlighting feature to select an LSP Path to view in the Topology view. Viewing LSP Path information from this view can help you more easily understand which devices make up a Path in an MPLS environment. From this view, you can also see if any alarming devices are impacting a Path's performance.

Note: LSP Path spotlighting is not available if you do not have MPLS Manager installed. VPN spotlighting is not available if you do not have VPN Manager installed.

Spotlight Model Relationships in the Topology Tab

You can use the spotlighting feature in OneClick to see the VLANs, VPNs, LSP Paths, and router redundancy groups that are configured on your network. You can only spotlight these items if they have been enabled and configured on your network. For example, network administrators configure VLANs.

The following example describes how to spotlight VLANs, however, this procedure also applies to VPNs, LSP Paths, and router redundancy groups.

Follow these steps:

1. Select the desired Topology or container in the Navigation panel.
2. Click the Topology tab.
3. Click  (Spotlight View), VLAN List in the Topology tab toolbar.

   The Topology tab view highlights the VLANs in the network and the VLAN List dialog opens, listing all the VLANs in the selected topology.

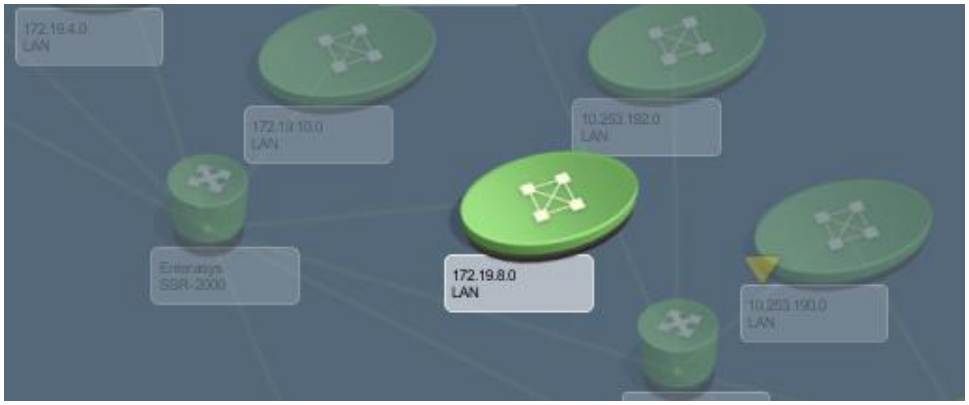
4. Select the VLAN that you want spotlight from the list and click the Information button.

   The VLAN List dialog expands to display OneClick tabs, which provide information about the selected VLAN.

Highlight Modeled Devices

The Topology view for a Universe or other container can include many models, making it difficult to find a specific device or model. The OneClick highlighting feature can enable you to locate a model in the Topology view.

You can use the OneClick highlight mode to highlight modeled devices and containers in a topology view. In highlight mode, all devices except the highlighted device become translucent. The highlighted device stands out, as shown in the following image:



How to Find a Single Model using Highlight Mode

Follow these steps:

1. Select the container in the Explorer tab that you want to display in the Topology view.
2. Click the Topology tab in the Contents panel to view the topology.
3. Locate and select the model in the Explorer tab that you want to highlight.
4. Press the Shift key.

   The topology view and the device you selected appear.
5. (Optional) Navigate around the topology view using the horizontal and vertical scrollbars to locate the highlighted model if it does not appear in the viewable area of the topology.
6. Press the Shift key again to exit the highlight mode.

   You are returned to your original view of the Topology tab.

How to Find Multiple Models using Highlight Mode

Follow these steps:

1. Select the container in the Explorer tab that you want to display in the Topology view.
2. Click the Topology tab in the Contents panel to view the topology.
3. Press and hold the Shift key. The icons in the topology view become translucent.
4. Place the cursor over the model you want to highlight in the Explorer tab, without selecting it.

   The model is highlighted in the topology view.

   Note: Use the scroll bars in the Topology tab to locate the highlighted device. The topology view does not adjust to show the highlighted device because it is not selected.
5. Move the cursor to the next model you want to highlight. As you move the cursor over any model in the Explorer tab, it becomes highlighted in the topology view.
   - If you place the cursor over a model that contains other models, such as a global collection, the devices in the global collection that are visible in the topology are highlighted.
   - If you place the cursor over a device that is part of a multicast group configured in OneClick, all of the devices in that multicast group that are visible in the topology are highlighted.
6. Release the Shift key to exit the highlight mode.

   You are returned to your original view of the Topology tab.

Connection Status Indicator

The OneClick Console provides visual indicators when the connection status to the SpectroSERVER changes. If the connection is lost, the borders around the OneClick Console turn red. If the connection has switched to a secondary SpectroSERVER, the borders turn yellow. The Information, Interfaces, and Performance tabs also display an orange border if the connection is lost to the selected device. A brown border indicates that the selected device model is in maintenance mode.

Check Connection Status

OneClick provides the status of connections to servers and services. The Connection Status dialog provides connection status and shows status logs for the servers and services used by the OneClick Console and OneClick add-on applications. The dialog provides the following information:

- Web services provided by the OneClick server
- Landscape service provided by the SpectroSERVER
- Events services provided by the SpectroSERVER

The status of other services and server connections is available when you view the Connection Status dialog from other OneClick applications.

Follow this step:

- Click  (Connection *<status>*) in the OneClick status bar.

  The Connection Status dialog shows the status of web, landscape, and event services.

OneClick Messages

You can receive messages from OneClick administrators if your CA Spectrum environment is configured to support this option.

The Messages icon () appears in the status bar. The Messages icon displays a + sign when you have unread messages. Retrieve your messages by clicking the Messages icon, which opens the Messages dialog. The Messages dialog lets you access messages that are sent to you by a OneClick administrator.

OneClick Schedules

You can schedule OneClick actions to occur at a given time with a recurrence if desired. Schedules include the following information:

- Start date
- Start and end times
- Total duration in hours
- Recurrence
- Description

When you apply a schedule to a modeled device, the event starts and ends at the specified start and end times in the time zone of the SpectroSERVER managing the device.

Access Schedules

You can locate existing schedules in OneClick by using the Schedules search function in the Locater tab. Once you have performed a search and one or more schedules appear in the Results list, you can access information about a schedule.

More information:

Search Your Network (see page 44)

Schedule Information View

The schedule Information tab contains subviews which display schedule parameters. The schedule information that appears depends on the OneClick add-on applications that are installed as part of your CA Spectrum environment.

You can access the schedule Information view after running a search for schedules. Select a schedule from the Results list and select the Information tab in the Component Detail panel.

Schedule General Information Subview

The following parameters appear in the General Information subview in the Information tab for the selected schedule.

Creation Author

Identifies the user who created the schedule. Schedules that ship with CA Spectrum show CA as the author.

Creation Time

Identifies when the schedule was created.

State

Identifies whether a schedule is active.

Note: A schedule with no duration, such as a schedule associated with Discovery Configurations, always appears as Inactive.

In Use

Identifies whether or not the schedule is applied to any devices, services, or other models.

Description

Optional text describing the schedule.

Items Scheduled for Maintenance Subview

The Items Scheduled for Maintenance subview displays all the devices that the schedule is applied to as a maintenance schedule. You can right-click any of the table headings to display a list of other columns available for viewing in this table.

Discoveries Planned with this Schedule Subview

The Discoveries Planned with this Schedule subview displays all the Discovery configurations to which this schedule is applied. See the *Modeling and Managing Your IT Infrastructure Administrator Guide* for more information about OneClick discovery and modeling configurations.

Create Schedules

You can create your own schedule by clicking the Schedule button wherever it is found, for example, in the In Maintenance field in the General Information subview.

Follow these steps:

1. Click Schedule.

   The Add/Remove Schedules dialog opens.

2. Click Create.

   The Create Schedule dialog opens.

3. Complete the fields as desired.

4. Click OK.

   The Create Schedule dialog closes and the schedule you created appears in the Current Schedules list.

5. Click OK.

   The Modifying Schedules dialog opens, indicating that the changes you made are being applied.

OneClick Schedules in a DSS Environment

In a Distributed SpectroSERVER (DSS) environment, there are likely to be SpectroSERVERs located in different time zones. Each SpectroSERVER interprets all schedules as local time. When you create schedules and apply them to devices that are managed in different landscapes, the scheduled item begins and end at the specified times local to each time zone. OneClick and CA Spectrum do not correlate schedules so that they start and end simultaneously across time zones. The following example illustrates how time zones and schedules work in a DSS environment.

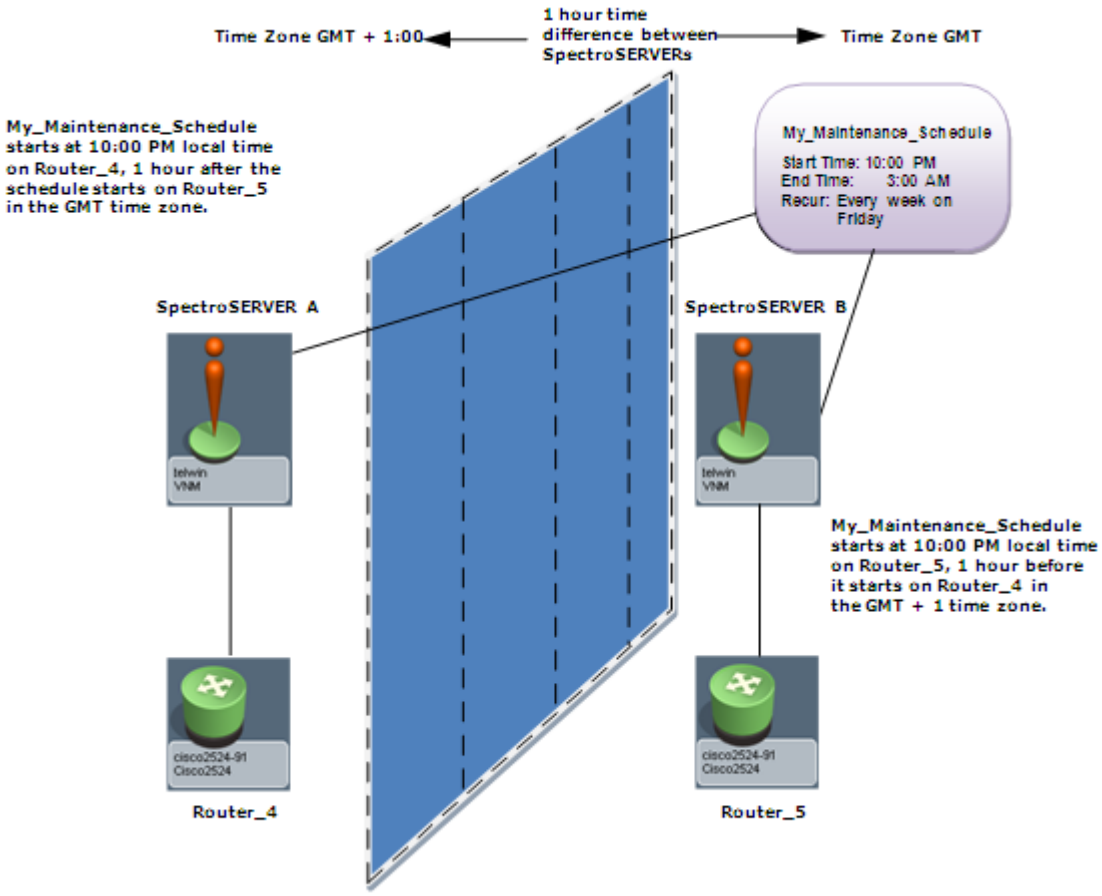
Apply a schedule to devices in different time zones

A schedule named My_Maintenance_Schedule specifies putting a device into maintenance mode starting at 10:00 PM and ending at 3:00 AM. My_Maintenance_Schedule is applied to Router_5 in the GMT time zone, and to Router_4 in the GMT+1 hour time zone.

Applying My_Maintenance_Schedule to these two devices results in the following situations:

- Router_5 enters maintenance mode at 10:00 PM GMT and exits maintenance mode at 3:00 AM GMT.
- Router_4 enters maintenance mode at 10:00 PM GMT+1 (11:00 PM GMT) and exits maintenance mode at 3:00 AM GMT+1 (4:00 AM GMT).

The following diagram illustrates this example:



Recurring Schedules

When creating a schedule, you can specify a recurrence. Consider the following things when you use recurring schedules:

- The Start Date controls when the schedule goes into effect. Consider the following points when specifying the Start Date:
  - The Start Date defaults to today's date. You can also specify today's date by using the Today button from the drop-down calendar. For recurring definitions, the default value of today's date is ignored unless you explicitly specify today's date by using the Today button.
  - If the Start Date field remains unchanged, the schedule goes into effect immediately; any scheduled action occurs on the next instance of a date and time that complies with the schedule.
  - If the Start Date field is modified in any way, regardless of if it is today's date or a future date, it must fall on a day that complies with the recurrence definition. For example, if the recurrence definition specifies that an action is performed every Saturday, the Start Date must be a Saturday.
- The recurrence definition for Daily, Weekly, and Monthly supports a year's time frame. For example, when specifying an action to occur every *x* weeks, you cannot exceed 51, which is one unit less than a year. To use anything greater, use Yearly.

  Note: Although you can manually enter a value beyond a year's time frame, the recurrence definition defaults to the last valid value entered.
- If a schedule with no duration is set, as is the case for a schedule associated with Discovery Configurations, viewing it in a Locater search result list always shows its State as Inactive. Check the In Use column to determine whether it is associated with any tasks. To see its associated tasks, select the schedule and view its Information tab in the Component Detail panel.
- After a schedule is created, you cannot modify its definition. To change the time or duration for which a task is scheduled, a new schedule must be created and the associated task must be altered to use the new schedule.

Chapter 5: Maintenance and Hibernation Mode for Devices

This section contains the following topics:

Maintenance and Hibernation Mode

Maintenance and hibernation modes in OneClick let you suspend management traffic to a modeled device and its components. When a modeled device is in maintenance or hibernation mode, the SpectroSERVER continues to receive and process all SNMP traps for that device. However, it does not generate events or alarms for the device or its components.

Maintenance mode differs from hibernation mode by requiring you to disable the maintenance mode option before the device can resume normal management traffic. By contrast, hibernation mode automatically restarts normal management traffic as soon as the SpectroSERVER detects successful communication with the device after a set of successful polls.

Hibernation mode takes precedence over maintenance mode on a device model. However, if the device model has interface models in maintenance mode, those models remain in maintenance mode after the hibernation device model resumes normal management communication.

By default, placing a device model into maintenance or hibernation mode also places its interface models and application models into maintenance or hibernation mode. When a modeled device is in maintenance or hibernation mode, its topology icon displays a brown condition color. Brown alarms are shown for all device models in maintenance or hibernation mode, but they are not shown on the application and interface models that have inherited the mode from the device model.

Place Devices in Maintenance Mode

The device maintenance mode setting is in the General Information subview of the Information view. Find the Information view in the Contents panel or in the Component Detail panel.

Follow these steps:

1. Select the device in the Navigation panel, in a Topology view, or in a List view.
2. Click the Information tab.
3. Expand the General Information subview.
4. Click Set next to the In Maintenance setting and select Yes from the drop-down list.

   The device is now in maintenance mode, and its icon changes to brown.

Schedule Maintenance Mode

You can schedule when a device enters maintenance mode by applying a maintenance schedule. You can apply an existing schedule or can create a maintenance mode schedule.

Note: See OneClick Schedules (see page 72) for information about how OneClick and CA Spectrum apply schedules across time zones in DSS environments.

Follow these steps:

1. Select the device for which you want to set up a maintenance mode schedule.
2. Click the Information tab.
3. Expand the General Information subview if necessary, locate 'In Maintenance', and click Schedule.

   The Add/Remove Schedules dialog opens. Any maintenance schedules applied to the device appear in the Current Schedules column.

   Note: You can also open the Add/Remove Schedules dialog by clicking Tools, Utilities, Schedule Maintenance.
4. Take *one* of the following actions:

   - **To apply an existing schedule to the device**, select the schedule from the Available Schedules column, and click the left arrow button to move it to the Current Schedules column.

     A device can have more than one schedule that is applied to it.
   - **To remove an existing schedule from the device**, select the schedule from the Current Schedules column and click the right arrow button to move it to the Available Schedules column.
   - **To create a new schedule**, click Create; the Create Schedule dialog opens. Configure a schedule by selecting a Start Date, a Start Time, and either an End Time or Duration. Select the Recurrence factor.

     Note: You can create a one-time maintenance mode window by leaving the Recurrence set to None. Enter a Description that adequately identifies the schedule you are creating.

5. Click OK.

   The new schedule appears in the Available Schedules column in the Add/Remove Schedules dialog.

6. Click OK.

   The maintenance mode scheduling changes are applied to the device.

Determine Whether Devices are Scheduled for Maintenance

You can determine if a device is scheduled for maintenance from the List tab or from the Information tab of a device.

How to Determine If a Specific Device is Scheduled for Maintenance

Follow these steps:

1. Select the device from either the List tab or the Topology tab.
2. Click the Information tab in the Component Detail panel.
3. View the In Maintenance section in the General Information subview.

   The Assigned Maintenance Schedules list displays the maintenance schedules that are assigned to this device.

How to Determine If Any Devices are Scheduled for Maintenance

Follow these steps:

1. Click the List tab.
2. Review the information in the Assigned Maintenance Schedules column.

   Note: If you do not see the Assigned Maintenance Schedules column**,** add it to complete this procedure.

   The Assigned Maintenance Schedules column displays the maintenance schedule that is assigned to each device. If a device has more than one schedule that is assigned to it, a 'view' link is displayed.

3. (Optional) If a device has multiple schedules that are assigned to it, do the following actions:

   a. Click the 'view' link.

      The Assigned Maintenance Schedules dialog opens.

   b. Review the schedules that are assigned to this device.

   c. Click Close to close the Assigned Maintenance Schedules dialog.

More information:

Table Preferences (see page 39)

Place Devices in Hibernation Mode

In the Component Detail panel for a modeled device, the In Hibernation attribute indicates whether a device is in hibernation mode. When a device model is in hibernation mode, management traffic to the device and its components is suspended until a predefined number of communication attempts have succeeded. When the device can be contacted, the device model automatically resumes normal management communication.

Change the Number of Communication Attempts

The default number of successful communication attempts is 3 with the polling interval time (default 60 seconds) between each attempt. You can change the default number of successful communication attempts using the CA Spectrum Command Line Interface (CLI) or the OneClick Attribute Editor. For more information about the CA Spectrum CLI, see the *Command Line Interface User Guide*.

Either method requires changing the GlobalConfig mtype 0x00010470; the attribute HibernationCommSuccessTries 0x12acb is initially set to the default value of 3.

Note: You can also change this value using the Attribute Editor. For more information, see the *Modeling and Managing Your IT Infrastructure Administrator Guide*.

Hibernate After Maintenance

You can specify whether a device goes into hibernation mode when it comes out of scheduled maintenance. Maintenance Schedules include an option to automatically hibernate.

Follow these steps:

1. Select the device that you want to put into hibernation after maintenance.
2. Set up a maintenance mode schedule for the device as described in Schedule Maintenance Mode (see page 80).

3. Click the Information tab in either the Contents or Component Detail panel and expand the General Information subview if necessary.
4. Locate the Hibernate After Maintenance setting, click set, and select Yes from the drop-down list.

   The device now automatically hibernates after a scheduled maintenance window closes. In hibernation, the device is polled 3 times and, if successful, the device comes out of maintenance.

Place Interface Models in Maintenance or Hibernation Mode

In the Component Detail panel of a device interface, enable the In Maintenance option to place the interface model into maintenance mode. This action suspends management of the interface. However, CA Spectrum still performs regular management on the device and on its other interface.

Note: Unlike the maintenance mode, hibernation only applies to devices; you cannot place the interfaces alone into hibernation mode.

In the maintenance or hibernation mode, following conditions apply to the interface model:

- Brown alarms are shown for interfaces in hibernation mode.
- Alarms are not created for the port.
- Events are logged for the port.
- No polling, logging, or other device communication is performed for the port model until the interface resumes normal management.
- Link Down traps that are sent are ignored, and no alarms are generated.
- If the Live Pipes option is enabled for a connection and one of its end points is in hibernation mode, the color of the pipe in the topology view turns brown. Status polling for that port is discontinued.

If a connection is modeled with a WA_Link model connection to two ports, and one of those ports is in hibernation mode (or maintenance mode), an alarm is created on the WA_Link and WA_Segment models. The WA_Link icon in the OneClick topology views turns brown. If Live Pipes are enabled on this link, the pipe remains green as long one port is up. If the second port is down or unreachable, the pipe condition color turns gray.

If CA Spectrum loses contact with a device model that is connected to a port in hibernation or maintenance mode, the 'Device Has Stopped Responding to Polls' alarm is suppressed for that device and for all adjacent devices. If device_contact_lost alarms are suppressed because of their position relative to a port in hibernation (or maintenance) mode, the hibernation or maintenance mode alarm reflects these lost devices in its Impact and Severity attributes. View these lost devices in the Impact tab of the Alarm Details panel for that maintenance alarm.

Place Wide Area Link Models in Maintenance or Hibernation Mode

A wide area link model represents a wide area connection between two router interfaces and includes:

- A WA_Link model that appears in the topology view.
- A WA_Segment model that exists within the WA_Link model and connects the two router interfaces together.

To place a wide area link into maintenance or hibernation mode, you have to modify settings for both the WA_Link and WA_Segment models.

In the Component Detail panels of both the WA_Link and the WA_Segment models, set the In Maintenance or In Hibernation setting to Yes to place the wide area link model into maintenance mode or hibernation mode. Management of the wide area link is suspended while regular management of the connected router interfaces continues.

When in maintenance or hibernation mode, both the WA_Link and WA_Segment models have a brown condition. The two connected router interfaces remain managed, and events and alarms are still generated on them.

Note: You can also put the router interfaces into maintenance mode, which allows full customizable control over how events and alarms are generated for wide area links. See Place Interface Models in Maintenance or Hibernation Mode (see page 83).

To take a wide area link model out of maintenance or hibernation mode, modify settings for both the WA_Link and WA_Segment models accordingly.

Suppress Events and Alarms for Devices in Maintenance or Hibernation

When a model is in maintenance or hibernation mode, no events are processed for that model. That includes events that would typically clear an alarm on the model, as well as events that would create an alarm. For example:

If a link_down event generated an alarm on a device model before the model being placed in maintenance mode and a link_up event occurred while the device model is in maintenance mode, the SpectroSERVER does not clear the alarm since the link_up event is not processed.

In this example, the SpectroSERVER would not resume normal management traffic to the maintenance modeled device until you manually disable the maintenance mode option for this device in the Component Detail panel.

If, in this example, the modeled device was placed in hibernation mode instead of maintenance mode, the SpectroSERVER would have to make a set of successful communication attempts to the device before it could resume normal management traffic with the device.

More information:

Place Devices in Maintenance Mode (see page 79)
Place Devices in Hibernation Mode (see page 82)

Secondary Alarms and Devices in Maintenance Mode

You can configure CA Spectrum to show or hide secondary alarms when a device is in maintenance mode. The ‘Show Secondary Alarms When Device is in Maintenance’ parameter in the Set Preferences dialog controls this behavior. If this parameter is enabled, secondary alarms are shown when a device is in maintenance mode.

Note: You cannot show or hide secondary alarms for devices in hibernation mode.

The 'Show Secondary Alarms' option is disabled by default. Secondary alarms are hidden when a device is in maintenance mode and are shown later when the device is taken out of maintenance mode.

Note: The ‘Show Secondary Alarms' setting only applies when the primary and secondary alarms are enabled in the Alarm Filter settings in the Set Preferences dialog.

Show Brown Alarms for Interfaces and Applications

You can display brown alarms for interfaces and applications that have inherited maintenance or hibernation mode from the device model by using the CA Spectrum Command Line Interface (CLI).

- To generate brown alarms on interface models that have inherited maintenance mode, set the device model attribute 0x00012a7a (rollMMAlarmToIF) to TRUE.
- To generate brown alarms on application models that have inherited maintenance mode, set the device model attribute 0x00012a7b (rollMMAlarmToApp) to TRUE.

Note: For more information, see the *Command Line Interface User Guide*.

Chapter 6: Exporting Data and Images from OneClick

This section contains the following topics:

Export Table Data

You can export table data from OneClick to a file. Table data can be exported from the Alarms tab, the List tab, and other tabs.

Follow these steps:

1. Navigate to a table that contains the Export button  (Export) in the toolbar.
2. Click  (Export).

   The 'Export table data to file' dialog opens.
3. Complete the following information:

   Save in

   Specifies the location to save the exported data file.

   Save as type

   Specifies the file type that you want to use when saving the exported data.

   File name

   Defines the name for the exported data file.

   Files of type

   Specifies the type of file format to use. The following file formats are supported for export:

   - Comma separated values (CSV)
   - Tab-delimited text
   - HTML.
4. Select a location to save the file and click Save.

   The file is saved in the directory that you selected.

Copy and Paste Table Data

You can copy and paste OneClick table data to an external application. In the following procedure, the Alarms table is used as an example, but you can use this procedure in other OneClick tables too.

Follow these steps:

1. Select the alarms to export in the Alarms tab of the Contents panel.

   To select all alarms in the Alarms list, click any alarm and press Ctrl+A.

2. Copy the selected alarms as tab-delimited text (Ctrl+C).
3. Open a spreadsheet application or text editor.
4. Paste Ctrl+V to paste the tab-delimited text into a document.

   The data from the Alarms table appears in the spreadsheet application or text editor that you selected.

Fix Exported CSV Files Containing Board.Port Data

When you export a table that includes Board.Port data to CSV and open it in Microsoft® Excel, trailing zeros are truncated. For example, if the Board.Port value is 2.10, it appears as 2.1 in the spreadsheet. These trailing zeros are not truncated if you export to TXT or HTML format. However, you can take a few steps to fix an exported CSV file in which trailing zeros have been truncated.

Follow these steps:

1. Rename your CSV file from <*filename*>.csv to <*filename*>.txt.
2. Select File, Open in Microsoft Excel.
3. Select 'Text Files' from the Files of Type drop-down list.
4. Select your file and click Open.

   The Text Import Wizard dialog opens.

5. Select Delimited, and click Next.
6. Select Comma, and click Next.
7. Select the column that contains data with trailing zeros.
8. Select Text from the Column Data Format section.
9. Click Finish.

   Microsoft Excel opens the file. The trailing zeros are preserved.

Export Topology Views as Image Files

Some OneClick views, such as the Topology view, the Neighbors Topology view, and the Link Information view, can be exported as images. The export creates a Portable Network Graphics (PNG) file.

Note: The image is saved according to the current zoom level in the view.

Follow these steps:

1. Select the desired Topology or container in the Navigation panel.
2. Click the Topology tab.
3. Click  (Export).

   The Save As dialog opens.
4. Select a location to save the file, enter a file name, and click Save.

   The file is saved as *<filename>*.png in the directory you select.

Important! The default setting for a minimum image size to export is 640x480 pixels. You can create a large image when exporting the Topology view (4000x4000 pixels or larger). Excessive size can cause an out-of-memory error in OneClick. Reduce the size of the image that you are exporting by zooming out in the Topology view. Or ask the OneClick administrator to increase your client memory settings.

Appendix A: Keyboard Shortcuts

The following keyboard shortcuts are available in the OneClick Console.

CTRL + P

Opens the Print dialog from which you can specify what you want to print and which printer you want to use.

CTRL + G

Sends an ICMP Ping to the selected devices, from the SpectroSERVER modeling the device.

CTRL+T

Establishes a communication session with the selected device using Telnet, from the SpectroSERVER modeling the device.

CTRL+H

Establishes an encrypted communication session with the selected device using Secure Shell (SSH), from the SpectroSERVER modeling the device.

CTRL+L

Polls the selected devices from the SpectroSERVER modeling the device.

CTRL+W

Web administration. Launches a browser using the IP address of the selected device. Available only for models that have the WebAdminURL attribute.

ALT+LEFT ARROW

Goes back to a previous container or device.

ALT+RIGHT ARROW

Goes forward to a container or device after navigating back.

ALT+V, S

Shows or hides the Status bar.

ALT+V, N

Shows or hides the Navigation panel.

ALT+V, C

Shows or hides the Contents panel.

ALT+V, D

Shows or hides the Component Detail panel.

ALT+H

Opens the Help menu from which you can access CA Spectrum support, CA Spectrum training information, and CA Spectrum documentation.

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