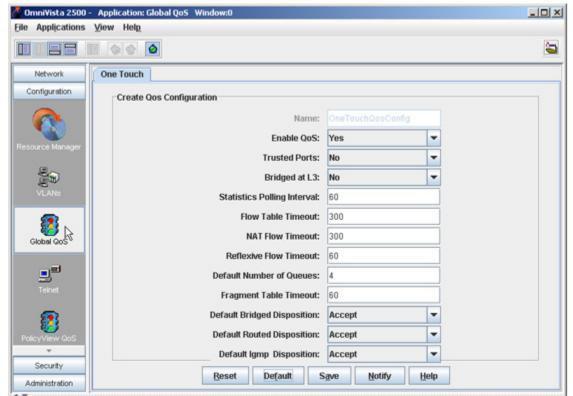
# **Getting Started with Global QoS**

OmniVista Global QoS is used to define the overall QoS configuration for AOS switches. Global QoS is a policy-based application, which means that the global QoS configuration is stored in an LDAP server and is picked up by devices via SNMP triggers. When devices are commanded through SNMP to recache their policies, the Global QoS configuration defined for the device is downloaded by the device, along with other LDAP data.

The Global QoS configuration application is launched by selecting the **Global QoS** icon in **Configuration** folder in the OmniVista Task Bar as shown below.

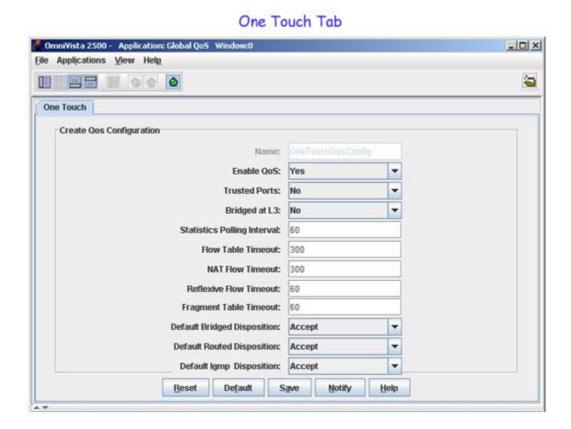


Global QoS Application

Global QoS can be defined for all AOS switches or a specified switch. The configuration will be applied to **all** discovered AOS devices in the network. Click here for detailed configuration instructions.

# **Global QoS One Touch Mode**

Upon initialization, the global QoS configuration is set to default values. The Global QoS configuration is saved in an LDAP server, and applied to **all** discovered devices.



To configure Global QoS parameters, enter or select the parameter in each field. Click the **Save** button to save the configuration to the LDAP server. Click the **Notify** button to apply the configuration to the switches. (all devices that support the configuration are notified.) Click the **Reset** button to return values to those that are currently stored in the LDAP server. Click the **Default** button to return values to the default values.

# **Global QoS Parameters**

Global QoS parameters are defined below.

#### Name

The name of the configuration will always be **OneTouchQosConfig** and cannot be edited.

#### **Enable QoS**

Select Yes to enable global QoS configuration. Select No to disable global QoS configuration.

#### **Trusted Ports**

Configures whether or not devices will trust 802.1p/TOS values on incoming traffic. This parameter can be overridden on a port by port basis via element configuration management. (Default =  $N_0$ )

#### Bridged at L3

Configures whether or not the data traffic is classified based on L3 information. (Default = Yes).

### **Statistics Polling Interval**

The rate, in seconds, at which the QoS Manager queries the NI for packet statistics in field. (Range = 30 - 3600, Default = 60)

#### Flow Table Timeout

The time period, in seconds, above which flows are removed from the device if no traffic is seen. (Range = 2 - 3600, Default = 300)

#### **NAT Flow Timeout**

The length of time, in seconds, a device retains the mapping for TCP flows in a many-to-one NAT. Once traffic is seen in either direction of the anticipated flow, the device will remember the flow for the specified **NAT Flow Timeout** period without seeing traffic in either direction. (Range = 0 to 65535, Default = 300)

#### **Reflexive Flow Timeout**

The length of time, in seconds, a device anticipates reverse flows for reflexive and NAT connections, until a response is seen. (Range = 10 - 3000, Default = 60)

#### **Fragment Table Timeout**

The length of time a device will retain information for packet fragments in the Fragment Table.

### **Default Bridged Disposition**

Specifies the way bridged traffic is disposed when it does not match any defined policies (Accept/Drop/Deny). (Default = Accept).

#### **Default Routed Disposition**

Specifies the way routed traffic is disposed when it does not match any defined policies (Accept/Drop/Deny). (Default = Accept).

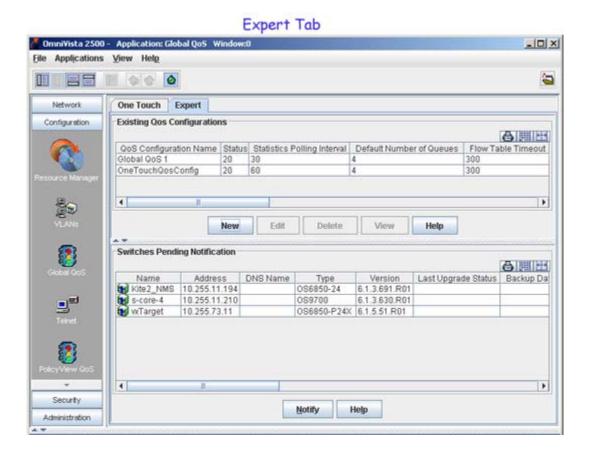
#### **Default IGMP Disposition**

Specifies the way IGMP requests are disposed when they do not match a defined policy. IPMS asks QoS if each IGMP join request is allowed. If the request doesn't match a specific rule, QoS returns the default IGMP join disposition. (Accept/Drop/Deny). (Default = Accept).

**Note**: Global configuration parameters can be overwritten for a particular device on a port-by-port basis by use of element managers, such as WebView.

# **Global QoS Expert Mode**

The Expert Mode is used to create new QoS configurations and apply them to selected switches. Select the **Expert** Tab in the Global QoS configuration window. The Expert Tab panel is displayed as shown below:



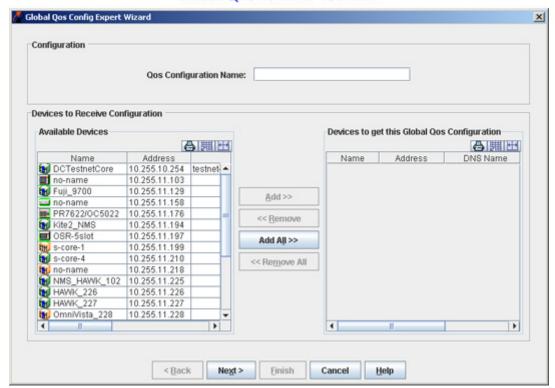
The **Existing QoS Configurations** section lists all of the existing Global QoS configurations. Click on the **New** button to create a new configuration. Select an existing configuration and click on the appropriate button to edit, delete, or view the configuration.

**Note**: You cannot edit or delete the **OneTouchQoSConfig** that was defined in the One Touch Mode. However, conditions created in Expert Mode override those created in One Touch Mode for the switches specified.

The **Switches Pending Notification** table lists all of the devices included in that configuration that have not yet been notified. After creating a configuration, you must click on the **Notify** button to apply the configuration to the switches included in the configuration. Once the switches are notified, they no longer appear in the table.

# **Creating a New Global QoS Configuration**

1. Click the New button. The first screen of the Global Qos Config Expert Wizard is displayed.

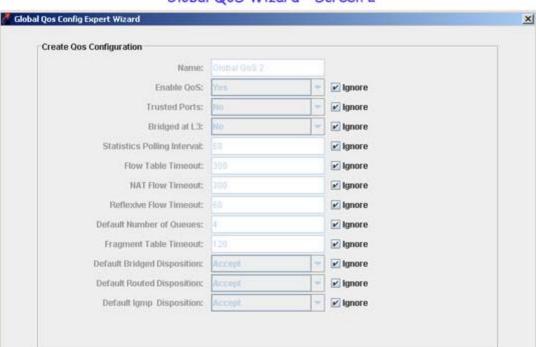


Global QoS Wizard - Screen 1

- 2. Enter the name of the new QoS configuration in Qos Configuration Name field.
- 3. Select the device(s) to which the condition will be applied from the Available Devices list and move it to the Devices to get this Global QoS Configuration list using the Add>>, <<Remove, Add all>>, or<<Remove all buttons. You can use *Shift*-click to select multiple continuous devices and *Ctrl*-click to select multiple non continuous devices.

**Note**: If all switches are selected to receive the configuration, OmniVista will prompt the user to choose whether future switches picked up by polling are to receive the configuration being defined.

4. Click the Next button. Screen 2 of the Global Qos Config Expert Wizard is displayed



## Global QoS Wizard - Screen 2

**5.** De-select the "Ignore" box next to the parameter(s) you want to configure, then select or enter the parameter.

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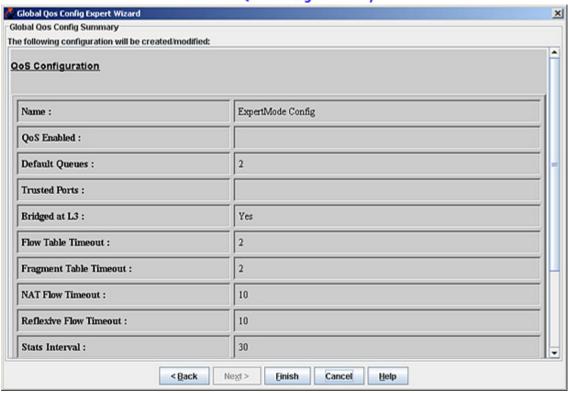
Cancel

Help

Next>

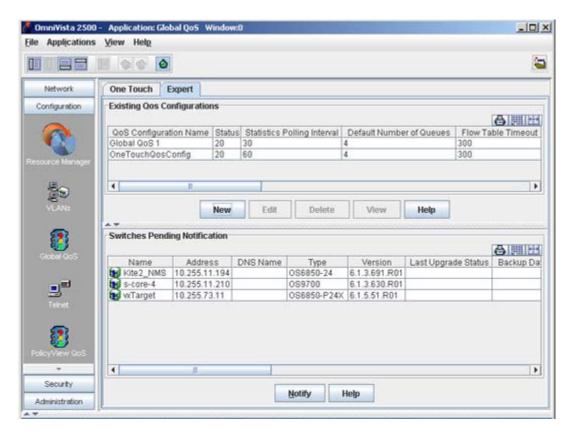
6. Click the Next button. The Global Qos Config Summary window is displayed.

< Back



Global QoS Config Summary

7. Review the configuration, then click **Finish** to save the configuration. The configuration will be written to the LDAP server, and the new QoS configuration will be displayed in the **Existing QoS Configurations** panel. The switches included in the configuration are displayed in the **Switches Pending Notification** panel.



**8.** To notify the switches, click **Notify**, then click **OK** at the confirmation prompt. The QoS configurations will applied on the device(s).

# **Editing a Global QoS Configuration**

To edit a QoS configuration, select the QoS configuration in the **Existing QoS Configuration** table and click **Edit**. The **Global QoS Config Expert Wizard** is displayed with the existing details. Edit the configuration as described above.

# **Deleting a Global QoS Configuration**

To delete an existing configuration, select the QoS configuration and click **Delete**. A confirmation message will be displayed. The configuration will be deleted from the table and from the LDAP server.

## **Viewing a Global QoS Configuration**

To view details of an existing configuration, select the QoS configuration and click **View**. The **Global Qos Config Summary** window will be displayed.

## **Global QoS Parameters**

Global QoS parameters are defined below.

#### Name

The name of the Global QoS Configuration.

#### Enable QoS

Select **Yes** to enable global QoS configuration. Select **No** to disable global QoS configuration. The condition will be enabled by default once you notify the switches.

#### **Trusted Ports**

Configures whether or not devices will trust 802.1p/TOS values on incoming traffic. This parameter can be overridden on a port by port basis via element configuration management. (Default = No)

#### Bridged at L3

Configures whether or not the data traffic is classified based on L3 information. (Default = Yes).

## **Statistics Polling Interval**

The rate, in seconds, at which the QoS Manager queries the NI for packet statistics in field. (Range = 30 - 3600, Default = 60)

#### Flow Table Timeout

The time period, in seconds, above which flows are removed from the device if no traffic is seen. (Range = 2 - 3600, Default = 300)

#### **NAT Flow Timeout**

The length of time, in seconds, a device retains the mapping for TCP flows in a many-to-one NAT. Once traffic is seen in either direction of the anticipated flow, the device will remember the flow for the specified **NAT Flow Timeout** period without seeing traffic in either direction. (Range = 0 to 65535, Default = 300)

#### **Reflexive Flow Timeout**

The length of time, in seconds, a device anticipates reverse flows for reflexive and NAT connections, until a response is seen. (Range = 10 - 3000, Default = 60)

## **Default Number of Queues**

The number of default priority queues to be created for each port on the device. (Range = 2 - 4, Default = 4).

#### **Fragment Table Timeout**

The length of time a device will retain information for packet fragments in the Fragment Table.

## **Default Bridged Disposition**

Specifies the way bridged traffic is disposed when it does not match any defined policies (Accept/Drop/Deny). (Default = Accept).

#### **Default Routed Disposition**

Specifies the way routed traffic is disposed when it does not match any defined policies (Accept/Drop/Deny). (Default = Accept).

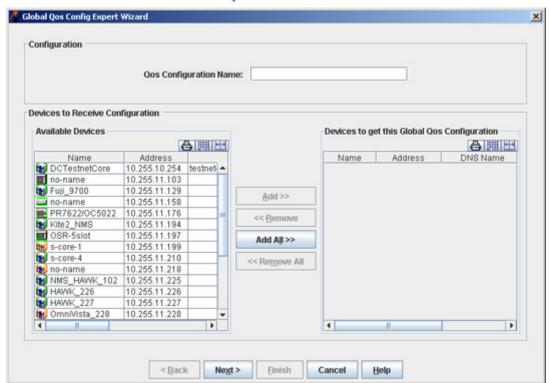
## **Default IGMP Disposition**

Specifies the way IGMP requests are disposed when they do not match a defined policy. IPMS asks QoS if each IGMP join request is allowed. If the request doesn't match a specific rule, QoS returns the default IGMP join disposition. (Accept/Drop/Deny). (Default = Accept).

**Note**: Global configuration parameters can be overwritten for a particular device on a port-by-port basis by use of element managers, such as WebView.

# **Global QoS Expert Wizard - Screen 1**

Screen 1 of the **Global QoS Configuration Expert Wizard** is used to configure the name of the condition and select the device(s) to which the condition will be applied.



Global QoS Wizard - Screen 1

- 1. Enter the name of the new QoS configuration in **Qos Configuration Name** field.
- 2. Select the device(s) to which the condition will be applied from the Available Devices list and move it to the Devices to get this Global QoS Configuration list using the Add>>, <<Remove, Add all>>, or<<Remove all buttons. You can use Shift-click to select multiple continuous devices and Ctrl-click to select multiple non continuous devices.

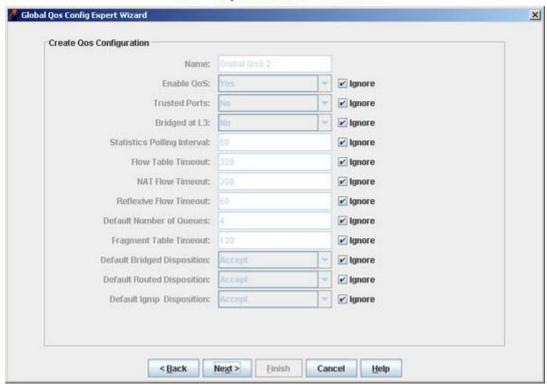
**Note**: If all switches are selected to receive the configuration, OmniVista will prompt the user to choose whether future switches picked up by polling are to receive the configuration being defined.

3. Click the **Next** button.

# Global QoS Expert Wizard - Screen 2

Screen 2 of the Global QoS Configuration Expert Wizard is used to configure the QoS condition.





- **1.** De-select the "Ignore" box next to the parameter(s) you want to configure, then select or enter the parameter.
- 2. Click the Next button to display the Global Qos Config Summary window.

# **Global QoS Parameters**

Global QoS parameters are defined below.

#### Name

The name of the Global QoS Configuration.

### Enable QoS

Select **Yes** to enable global QoS configuration. Select **No** to disable global QoS configuration. The condition will be enabled by default once you notify the switches.

### **Trusted Ports**

Configures whether or not devices will trust 802.1p/TOS values on incoming traffic. This parameter can be overridden on a port by port basis via element configuration management. (Default = No)

#### Bridged at L3

Configures whether or not the data traffic is classified based on L3 information. (Default = Yes).

### **Statistics Polling Interval**

The rate, in seconds, at which the QoS Manager queries the NI for packet statistics in field. (Range = 30 - 3600, Default = 60)

#### Flow Table Timeout

The time period, in seconds, above which flows are removed from the device if no traffic is seen. (Range = 2 - 3600, Default = 300)

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The length of time, in seconds, a device retains the mapping for TCP flows in a many-to-one NAT. Once traffic is seen in either direction of the anticipated flow, the device will remember the flow for the specified **NAT Flow Timeout** period without seeing traffic in either direction. (Range = 0 to 65535, Default = 300)

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The length of time, in seconds, a device anticipates reverse flows for reflexive and NAT connections, until a response is seen. (Range = 10 - 3000, Default = 60)

#### **Default Number of Queues**

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### Fragment Table Timeout

The length of time a device will retain information for packet fragments in the Fragment Table.

#### **Default Bridged Disposition**

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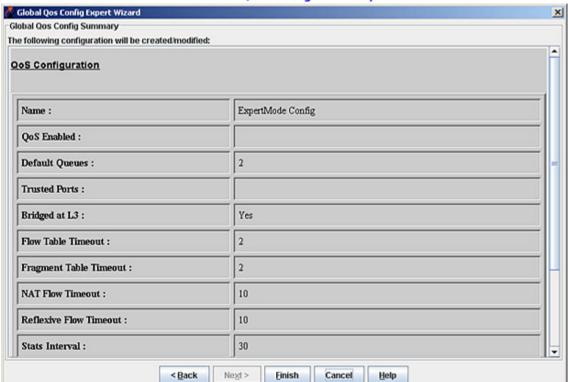
## **Default IGMP Disposition**

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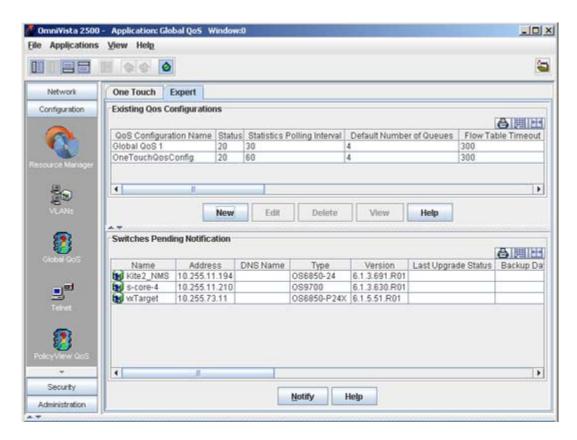
# Global QoS Expert Wizard - Screen 3

Screen 3 of the **Global QoS Configuration Expert Wizard** presents the **Global QoS Config Summary Screen** and is used to save the configuration to the LDAP server.



Global QoS Config Summary

1. Review the configuration, then click **Finish** to save the configuration. The configuration will be written to the LDAP server, and the new QoS configuration will be displayed in the **Existing QoS Configurations** panel. The switches included in the configuration are displayed in the **Switches Pending Notification** panel.



**2.** To notify the switches, click **Notify**, then click **OK** at the confirmation prompt. The QoS configurations will applied on the device(s).