



Using ACLI and EDM on Avaya Ethernet Routing Switch 3600 Series

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Chapter 1: Introduction

Purpose

This document provides information about the Avaya Command Line Interface (ACLI) and Enterprise Device Manager (EDM) for the switch.

Chapter 2: New in this document

Using ACLI and EDM on Avaya Ethernet Routing Switch 3600 Series, NN47213-102 is a new document for Release 6.0 so all the features are new in this document. See *Release Notes for Avaya Ethernet Routing Switch 3600 Series, NN47213-400* for a full list of features.

Chapter 3: User interface fundamentals

This chapter provides basic information to help you understand the interfaces you can use to configure and manage a switch. Available features depend on switch model and configuration.

ACLI concepts

Avaya Command Line Interface (ACLI) is a text-based interface that you can use for switch configuration and management. A common command line interface (CLI), ACLI follows the industry standard used for device management across Avaya products.

The command modes within ACLI are listed in order of increasing privileges and each mode is based on the user logon permission level. User logon permission is determined by a logon password as supplied by your system administrator.

You can access ACLI directly through a console connection, remotely through a dial-up modem connection, or in-band through a Telnet session.

You can use ACLI interactively or use the `configure network` command to load and execute ACLI scripts, to manually load the script in the console menu, or to automatically load the script at startup.

ACLI command modes

Avaya Command Line Interface (ACLI) provides the following command modes:

- User EXEC
- Privileged EXEC
- Global Configuration
- Interface Configuration
- RIP Configuration
- Application Configuration

Mode access is determined by access permission levels and password protection.

If no password is set, you can enter ACLI in User EXEC mode and use the `enable` command to move to the next level (Privileged EXEC mode). However, if you have read-only access, you cannot

progress beyond User EXEC mode, the default mode. If you have read-write access you can progress from the default mode through all of the available modes.

With sufficient permission, you can use the rules in the following table to move between the command modes.

Table 1: ACLI command modes

Command mode and sample prompt	Entrance commands	Exit commands
User Executive Switch>	No entrance command, default mode	exit or logout
Privileged Executive Switch#	enable	exit or logout
Global Configuration Switch (config)#	From Privileged Executive mode, enter configure terminal	To return to Privileged Executive mode, enter end or exit To exit ACLI completely, enter logout
Interface Configuration Switch (config-if)#	From Global Configuration mode: To configure a port, enter interface ethernet <port number> To configure a VLAN, enter interface vlan <vlan number> To configure a loopback, enter interface loopback <loopback number>	To return to Global Configuration mode, enter exit To return to Privileged Executive mode, enter end To exit ACLI completely, enter logout
Router Configuration Switch (config-router)#	From Global Configuration mode: To configure RIP, enter router rip	To return to Global Configuration mode, enter exit To return to Privileged Executive mode, enter end

Table continues...

Command mode and sample prompt	Entrance commands	Exit commands
		To exit ACLI completely, enter logout
Application Configuration Switch (config-app)#	From Global, or Interface Configuration mode, enter application	To return to Global Configuration mode, enter exit To return to Privileged Executive mode, enter end To exit ACLI completely, enter logout

ACLI access procedures

Before you begin

- Connect to the switch with a console cable, connected directly to the console port, or use Telnet.
- To connect to the switch remotely, through Telnet, ensure that you enable remote access, and that the switch IP address is valid.
- Use a terminal, or computer with a terminal emulator, as the ACLI command station.
- If you use a console cable and console port, ensure that the terminal emulation program conforms to settings listed in the following table.

Property	Value
Baud Rate	9600 bps
Data Bits	8
Stop Bits	1
Parity	None
Flow Control	None
Terminal Protocol	VT100 and VT100/ANSI

Opening an ACLI session

Procedure

1. Connect to the switch.
2. Enter the password, if applicable.
3. At the ACLI Banner Screen, enter `CTRL+Y`.
4. To access ACLI, from the main menu, press **c** or scroll to Command Line Interface.
5. Press **Enter**.

ACLI help

ACLI help is available at all levels.

ACLI list

From the User EXEC mode, the ACLI list command `show cli list` displays a detailed view of the ACLI commands. Additionally, the verbose command, `show cli list verbose` lists the CLI syntax for each command.

Command list

To obtain a list of all commands available from a prompt, enter a question mark (?).

Command options

To obtain a list of all options for a command, at the prompt enter a portion of a command followed by a space and a question mark (?).

Command names

To obtain a correct command name, at the prompt enter a portion of the command name, and then press the **Tab** key. The system displays the first unambiguous match for your selection. For example, when you enter `down` + **Tab**, the system displays `download`.

Command modes

To obtain a list of ACLI command modes available, enter `help modes`.

Commands organized by mode

To obtain a list of ACLI commands, organized by command mode, enter `help commands`. A short explanation of each command is included.

Keystroke shortcuts

To make using ACLI easier, use the keystroke shortcuts in the following table.

Key combination	Function
Ctrl+A	Start of line
Ctrl+B	Back 1 character
Ctrl+C	Abort command
Ctrl+D	Delete the character indicated by the cursor
Ctrl+E	End of line
Ctrl+F	Forward 1 character
Ctrl+H	Delete character left of cursor (Backspace key)
Tab	Command or parameter completion
Ctrl+K and Ctrl+R	Redisplay line
Ctrl+N or Down arrow	Next history command
Ctrl+P or Up arrow	Previous history command
Ctrl+T	Transpose characters

Table continues...

Key combination	Function
Ctrl+U	Delete entire line
Ctrl+W	Delete word to left of cursor
Ctrl+X	Delete all characters to left of cursor
Ctrl+z	Exit Global Configuration mode to Privileged EXEC mode
?	Context sensitive help
Esc+C and Exc+U	Capitalize character at cursor
Esc+l	Change character at cursor to lower case
Esc+B	Move back 1 word
Esc+D	Delete 1 word to the right
Esc+F	Move 1 word forward

ACLI pipe filter

Pipe (|) is used to display only a subset of information in the command output. To filter the command output, type the existing ACLI command followed by the pipe (|) symbol and then, the pipe filter command. The output contains only the lines specified in the pipe filter.

The following pipe filter functions are supported:

Filter function	Description
count	Counts the number of lines in the output of a command.
match	Displays only the output lines which match the given pattern.
except	Displays only the output lines which do not match the given pattern.
find	Displays the output of a command starting from the first line which matches the given pattern.
no-more	Temporarily disables pagination for the output of an ACLI command. When the lines of output exceed the terminal length, the entire output of the command is displayed and message does not appear to continue or quit.
head	Limits the output of a command to the first few lines. If limit is not specified, the first 10 lines appear.
tail	Limits the output of a command to the last few lines. If a number is not specified the last 10 lines are shown.

To see if a command supports the ACLI pipe filter functionality, enter the command followed by a question mark (?).

For more information about the functions, see [ACLI pipe filter functions](#) on page 42.

Enterprise Device Manager concepts

To manage the switch from a centralized location, using Configuration and Orchestration Manager PLUS (COM PLUS) 1.0 and higher, Avaya offers optional, product-specific EDM plug-ins for COM that include other features such as centralized syslog, trap viewer, troubleshooting and diagnostic tools. For more information, or to purchase plug-ins, go to <http://www.avaya.com/support>

*** Note:**

COM PLUS 1.0 will be available starting on Q1 2017.

The following table compares EDM functions in the embedded version to COM plug-in version.

Table 2: EDM functions: embedded version compared to COM plug-in version

EDM functions	Embedded version	Plug-in version
100% device configuration: device view, device-specific configuration	Yes, with COM PLUS 1.0.	Yes, with COM PLUS 1.0.
Stackable Device Web User Interface features	Yes	No
Centralized off-box multi-user element management: <ul style="list-style-type: none"> • user and device credential manager • user preference • SSO-based user access control • user-based Device Access Control (read only and read-write) • authentication through third party (RADIUS, Microsoft AD, Sun AM) 	No	Yes
Centralized EDM plug-in management (downloadable install and uninstall, upgrade, patch, and inventory view)	No	Yes
User activity log and audit trail	No	Yes
Device performance monitoring and polling	Limited	High performance and low latency
Device-specific single device wizards and template	No	Yes
Centralized syslog and trap viewer	No	Yes
Troubleshooting and diagnostic tools (ping, CLI Manager, path-trace)		

User interface fundamentals

EDM is an embedded application that you can use for single device element management and configuration through a standard Web browser. Because EDM is embedded into Ethernet Routing Switch software, and the switch operates as a Web server, you do not require additional client software.

Tested browsers

EDM has been tested with the following web browsers:

- Microsoft Internet Explorer 11.0
- Mozilla Firefox 45.0.2

Memory requirements

If you install Configuration and Orchestration Manager on a PC to manage your switch, the PC must have at least 500 MB of free disk space.

There are no memory requirements to use EDM through a Web browser.

Online help

Online help is context-sensitive and appears in a separate window in the Web browser.

To obtain help for the current topic, click the **help** button on the toolbar in the work area.

If you are not using EDM through COM, you need to download the help file to a TFTP server and configure the EDM Help file path.

Interface components

This section describes Enterprise Device Manager interface components.

The Enterprise Device Manager window includes the following parts:

- Navigation tree toolbar
- Switch Summary View
- Device Physical View
- EDM window
- Navigation tree
- Menu bar
- Tool bar
- Work area

Switch summary view

The EDM initial view displays a switch summary view in the work area.

The Switch Summary tab displays basic switch information. This information-only display derives from the configuration tab Edit, Chassis, Chassis.

Following is a list of the fields on the Switch Summary tab:

- hardware model
- hardware version
- firmware version
- software version
- system uptime
- system object identifier
- system contact
- system name
- system location

A Stack Information panel appears at the bottom of the switch summary view work area that provides a description of your switch or the units in your switch stack.

This information includes the following:

- Unit number (for stacks) – also lists which unit is the base unit in a stack
- Switch type
- Description
- Running software version

Device Physical View

When you access EDM, the first panel in the work area displays a switch summary view. The tab behind the summary view is a real-time physical view of the front panel of a device or stack called the Device Physical View.

Objects in the Device Physical View are

- a stand-alone switch, called a unit
- a switch stack, called a chassis
- a port

From the Device Physical View you can

- determine the hardware operating status
- select a switch or a port to perform management tasks on specific objects or view fault, configuration, and performance information for specific objects

User interface fundamentals

To select an object, click the object. The system outlines the object in yellow, indicating that the object selected.

The conventions on the device view are similar to the actual switch appearance except that LEDs in Device Physical View do not blink. The LEDs and the ports are color-coded to reflect hardware status. Green indicates the port is up and running; red indicates that the port is disabled.

From the menu bar you can click the Device Physical View tab to open the Device Physical View any time during a session.

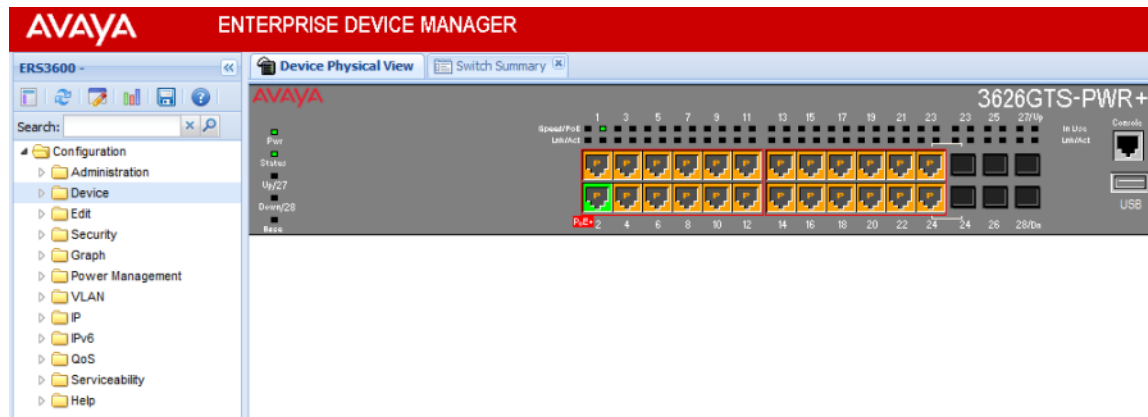


Figure 1: Device Physical View

* Note:

Depending on your hardware model, your switch may appear different than the figure shown in this section.

EDM window

The EDM window contains the following parts:

1. navigation tree—the navigation pane on the left side of the window that displays available command folders in a tree format
2. menu bar—the area at the top of the window that displays primary and secondary tabs that you accessed during the session; the tabs remain available until you close them
3. toolbar—the area just below the menu bar that provides quick access to the most common operational commands such as **Apply**, **Refresh**, and **Help**
4. work area—the main area on the right side of the window that displays the dialog boxes where you view or configure switch parameters

* Note:

Depending on your hardware model, information displayed may appear different than the figure shown in this section.

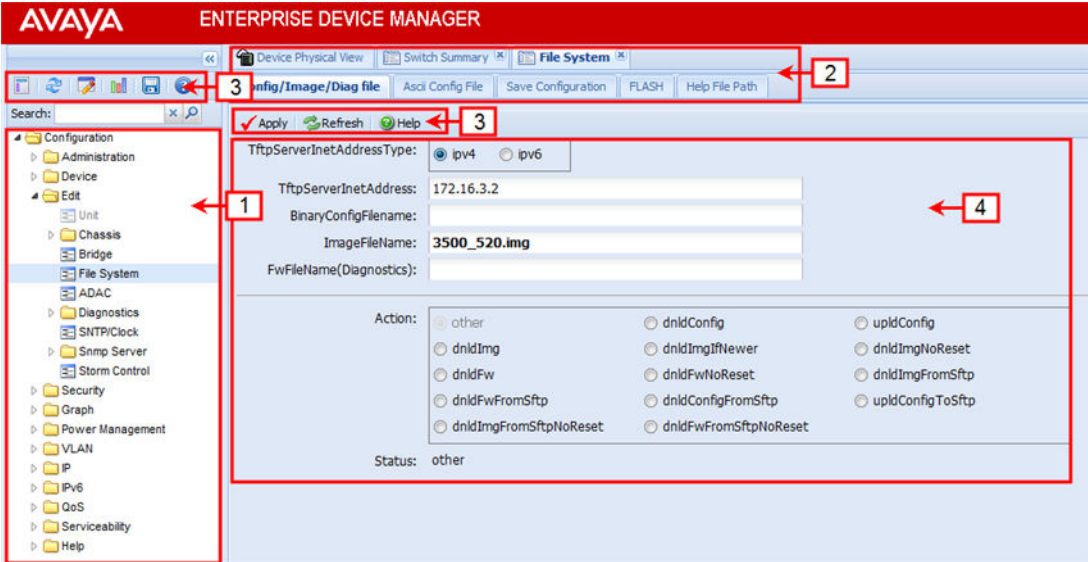


Figure 2: EDM window

Navigation tree

The navigation tree displays available command topics as folders in a tree, as described in the table below.

Table 3: Folders and subfolders in the navigation tree

Folder	Description
Administration	Use the selections in the Administration folder to perform the following functions: <ul style="list-style-type: none"> • Quick Start — sets up IP/Community/VLAN • Remote Access — enables or disables Telnet, SNMP, Web Page, and SSH • Run Script — configures parameters for the switch, according to Avaya best practices. Run Scripts are available for IP Office. • MIB Web Page — performs a MIB Walk
Device	Rediscover Device — Use the Rediscover Device selection to refresh the session. <p>⚠ Caution:</p> <p>All existing tabs are lost.</p>
Edit	Opens edit dialog boxes for the objects selected in the navigation tree. Use the selections in the Edit folder to view or change parameters for the currently-selected object. <ul style="list-style-type: none"> • Unit • Chassis: Chassis, Switch/Stack, Ports, and Environment

Table continues...

User interface fundamentals

Folder	Description
	<ul style="list-style-type: none"> • Bridge • File System • ADAC • Diagnostics: Port Mirrors, Topology, System Log. 802.1AB: LLDP, Port MED, Avaya • SNTP/Clock • Snmp Server: MIB View, User, Community, Host, Notification Control • Storm Control
Security	<p>Use the selections in the Security folder to view or change security settings.</p> <ul style="list-style-type: none"> • General • MAC Security • DHCP Snooping • Dynamic ARP Inspection (DAI) • IP Source Guard (IPSG) • 802.1X/EAP • Web/Telnet/Console • SSH/SSL • RADIUS • TACACS+
Graph	<p>Use the selections in the Graph folder to view statistics and produce graphs of the statistics on the following tabs:</p> <ul style="list-style-type: none"> • Chassis • Port — to view or graph statistics for a port, first select a port on the Device Physical View.
Power Management	<p>The Power Management tab is available only for switches equipped with Power over Ethernet (PoE). Use the tabs associated with the subfolders in the Power Management folder to view and configure Power over Ethernet (PoE) settings and to view and configure Energy Saver settings.</p> <p>Subfolders in the Power Management folder are:</p> <ul style="list-style-type: none"> • PoE • Energy Saver
VLAN	<p>Use the selections in the VLAN folder to configure or view information about the following:</p> <ul style="list-style-type: none"> • VLANs

Table continues...

Folder	Description
	<ul style="list-style-type: none"> • Spanning Tree: Globals, STG, RSTP, MSTP • MLT/LACP • SLPP
IP	<p>Use the selections in the IP folder to set up IP functions on tabs in the following sub-folders:</p> <ul style="list-style-type: none"> • IP • TCP/UDP • IGMP • DHCP Relay • DHCP Server • UDP Forwarding
IPv6	<p>Use the selections in the IPv6 folder to set up IPv6 routing functions on tabs in the following sub-folders:</p> <ul style="list-style-type: none"> • IPv6 • TCP/UDP
QoS	<p>Use the selections in the QoS folder to configure quality of service and set up QoS policies and filters using tabs in the following sub-folders:</p> <ul style="list-style-type: none"> • QoS Devices • QoS Rules • QoS • QoS Agent
Serviceability	<p>Use the selections in the Serviceability folder to navigate to the following sub-folders:</p> <ul style="list-style-type: none"> • RMon for remote monitoring and configuration of <ul style="list-style-type: none"> - Alarms - Control • SLA Mon for Service Level Agreement monitoring
Help	<p>Use the tabs associated with the subfolders in the Help folder to access help and support for the following:</p> <ul style="list-style-type: none"> • Device Manager Basic • Support Portal (Avaya) • Legend: Up, Down, No Link, Standby, Testing, Unmanageable, and Loopback.

To open a folder or sub-folder, you can click the arrowhead to the left of the folder or double-click the folder to display the available commands tabs.

To close a folder, click the arrowhead once.

User interface fundamentals

To access a command tab, double-click the selection in the navigation tree.

Navigation tree toolbar







You can use the toolbar above the navigation tree to perform common functions more easily.

Toolbar:



Figure 3: Toolbar

Following is a description of the toolbar button functions:

Button	Description
	Switch Summary – you can use the Switch Summary toolbar button to open or reopen the switch summary tab
	Refresh Status – in addition to the existing refresh methods you can use the Refresh Status toolbar button to refresh the device status
	Edit Selected – in addition to the existing edit methods, and depending on which object you select on the Device Physical View, you can use this toolbar button to open Edit > Chassis, Edit > Unit, or Edit > Ports tabs. If you do not select an object from the Device Physical View and you click the Edit Select toolbar button, the Edit > Chassis tab opens.
	Graph Selected – depending on which object you select on the Device Physical View, you can use this toolbar button to open Graph > Chassis or Graph > Port tabs. If you do not make a selection on the Device Physical View, or if you select Unit, the Graph > Chassis tab opens.
	Save Config — this button allows you to save the current configuration. A window appears asking if you want to save the configuration: click OK to save the configuration or click Cancel to cancel the Save operation.
	Help Setup Guide – this button connects you to the help setup guide for embedded EDM and it replaces the link that appeared on the top right of work panes.

Under the toolbar is the Search function window. You can use the Search function window to find a specific sub-folder or selection in the navigation tree.

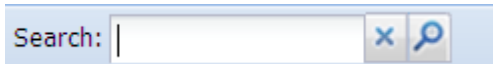


Figure 4: Search function window

Enter the sub-folder or selection you are looking in the Search window and click the magnifying glass to perform the search. The navigation tree displays the sub-folder that best matches your search criteria.

Menu bar

The menu bar appears above the work area and consists of two rows of tabs.

The top row displays tabs that were accessed from the navigation tree during the active session. The tabs in this row, called primary tabs, are docked and available to reopen on demand. The docked tabs appear in the sequence that you accessed them.

When you click a primary tab from the menu bar, the associated secondary tabs appear in the second row and the default dialog box appears in the work area. Click any secondary tab to display its associated dialog box.

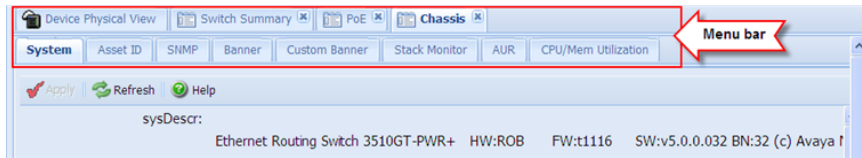


Figure 5: Menu bar

If you want to open a dialog without displacing the current open dialog, you can go to the tab on the menu bar and undock the tab by using your mouse to drag and drop it into the work area. You can drag the dialog box to any location on the screen and you can toggle between the open dialog boxes to compare information and make changes. When you no longer need the undocked tab, you can use the three buttons on the upper right side of the tab to temporarily shrink it, re-dock it, or close it.

In both rows of the menu bar, arrows can appear on the left and right sides when the number of open tabs exceeds the available space. You can use the arrows to scroll to a tab, or you can select the tab from the navigation tree.

To reduce the number of open tabs, you can click the X button on the top right of a tab to close it.

Tool bar

The tool bar, located below the menu bar, contains buttons that provide quick access to commonly used operational commands. Depending on the tab selected, different buttons can appear.

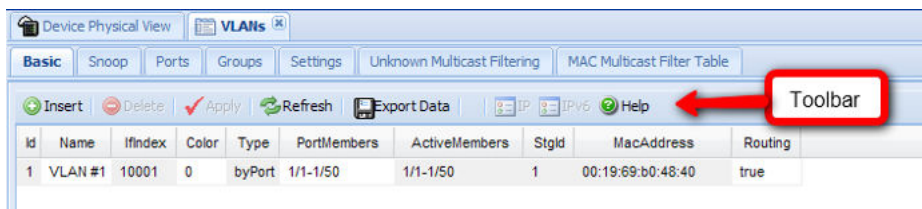


Figure 6: Tool Bar

The following table describes common tool bar buttons.

Table 4: Common tool bar buttons







Button	Name	Description
	Apply	Executes parameter changes

Table continues...

User interface fundamentals

Button	Name	Description
	Refresh	Refreshes screen data
	Help	Displays context-sensitive online help for the current dialog box
	Insert	Opens an insert dialog box Submits the entry from the insert dialog box The insert buttons appear only on panes where you can insert entries.
	Delete	Removes a selected entry
	Cancel	Cancels an operation

Work area

The work area, on the right side of the EDM page, displays the switch Device Physical View and dialog boxes related to the menu selections in the navigation tree. You can use the work area to view and configure switch parameters from the dialog boxes that appear in the work area.

See the following figure for an example of the work area for the File System, Config/Image/Diag file dialog.

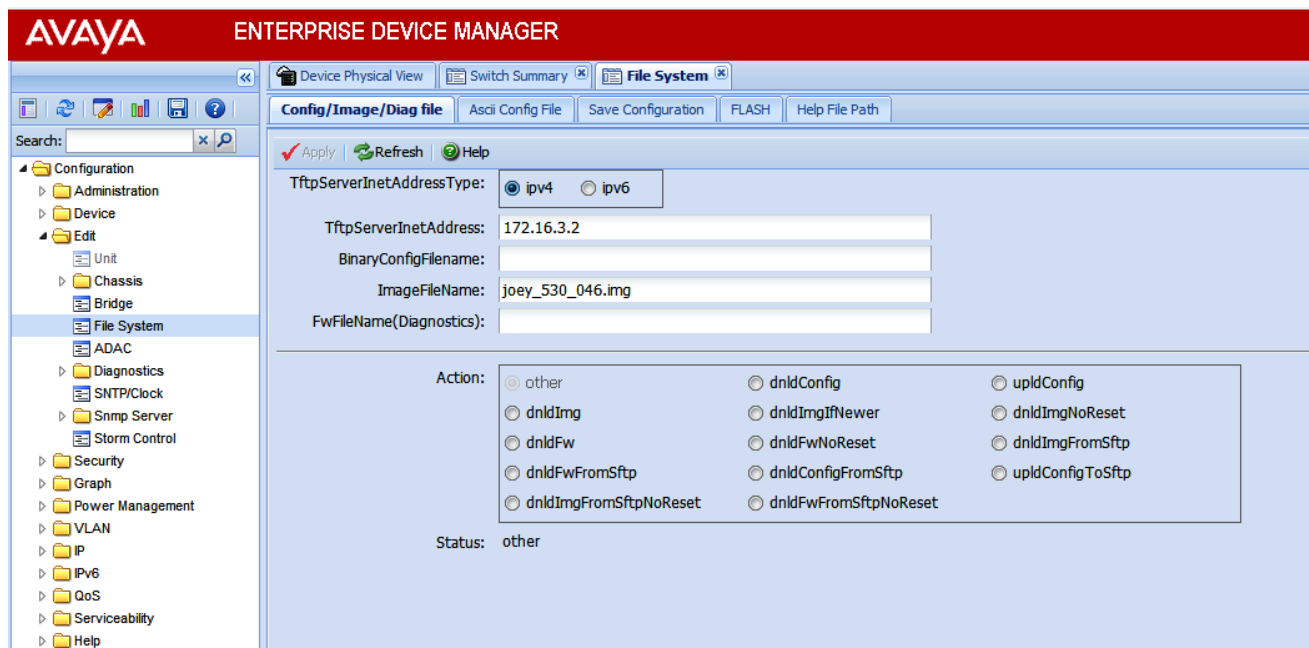


Figure 7: EDM work area

* Note:

Depending on your hardware model, information displayed may appear different than the figure shown in this section.

Single port configuration for EDM

* Note:

Depending on your hardware model, information displayed may appear different than the figures shown in this section.

You can apply configuration changes to single ports by using one of the following methods:

- From the Device Physical View, you can right-click a port and select Edit from the drop-down menu, then click the appropriate tab.

The following figure displays the drop-down menu for the selected port in the Device Physical View.

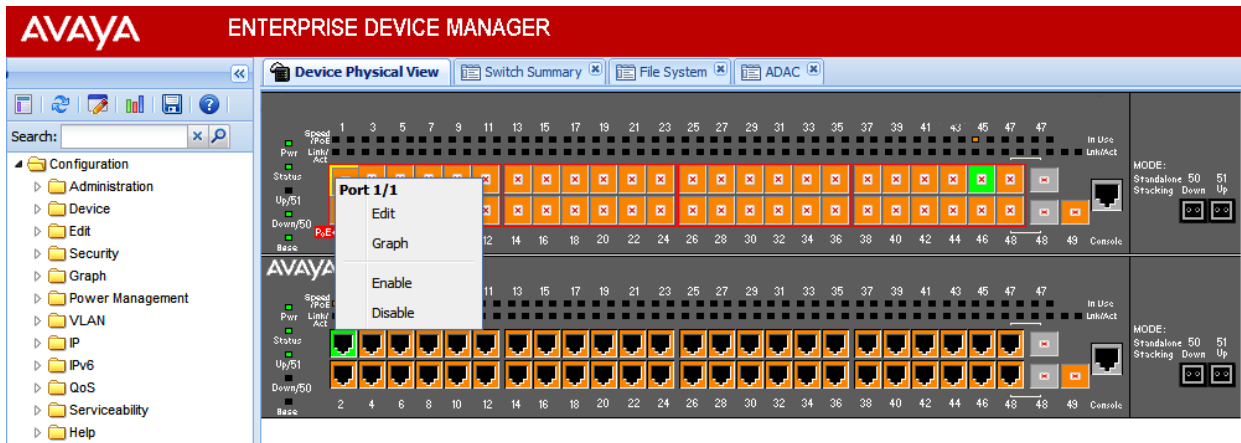


Figure 8: Device Physical View - port edit

The following figure displays the port edit work area with the VLAN tab selected.

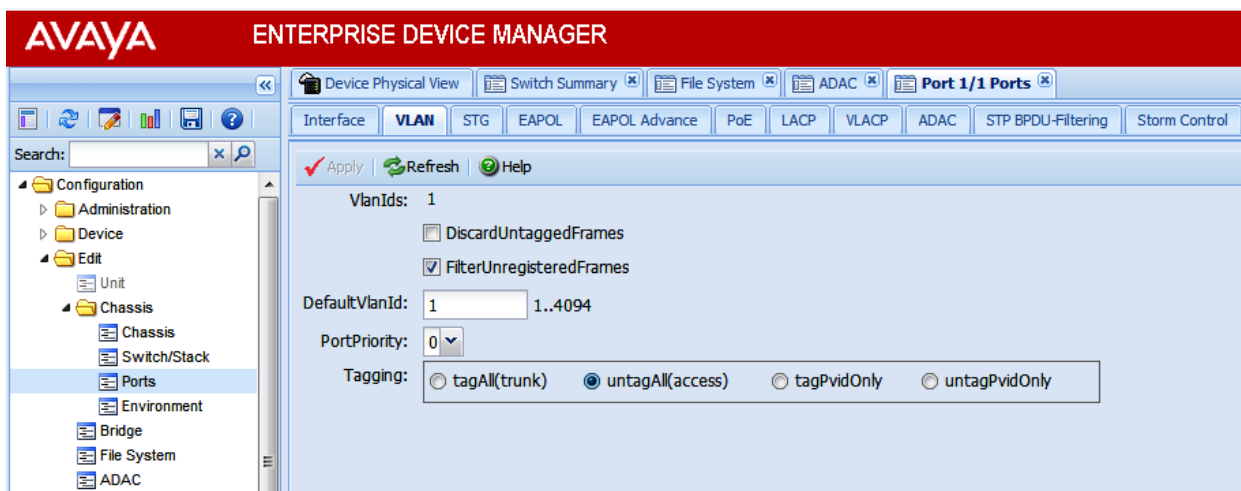


Figure 9: Port edit -VLAN tab

- From the Navigation tree you can select any tab from the Edit, Chassis, Ports work flow and double-click a cell under an editable parameter column heading in the appropriate port row of the table.

User interface fundamentals

The following figure displays the Edit, Chassis, Ports work area with the Interface tab selected.

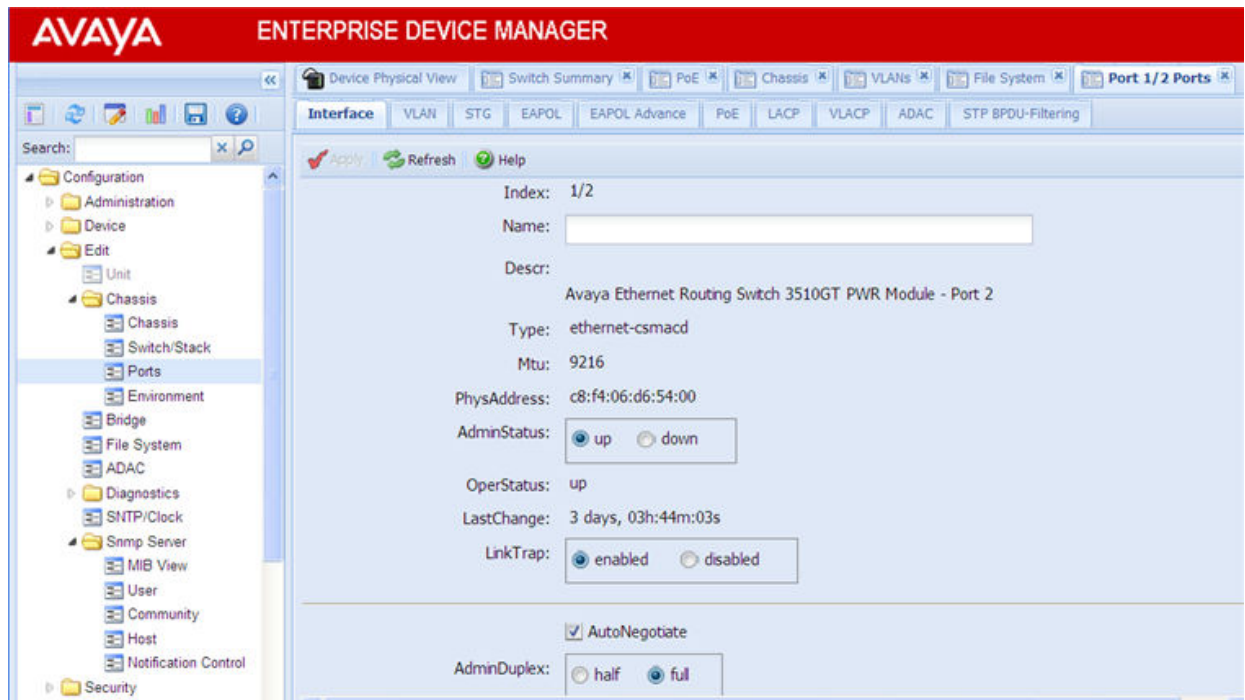


Figure 10: Edit, Chassis, Ports - Interface tab

- From the Navigation tree you can select a port-related tab from a specific, applicable feature work area (for example, VLAN, VLANs, Ports), and double-click a cell under an editable parameter column heading in the appropriate port row of the table.

The following figure displays the VLAN, VLANs, Ports tab work area.

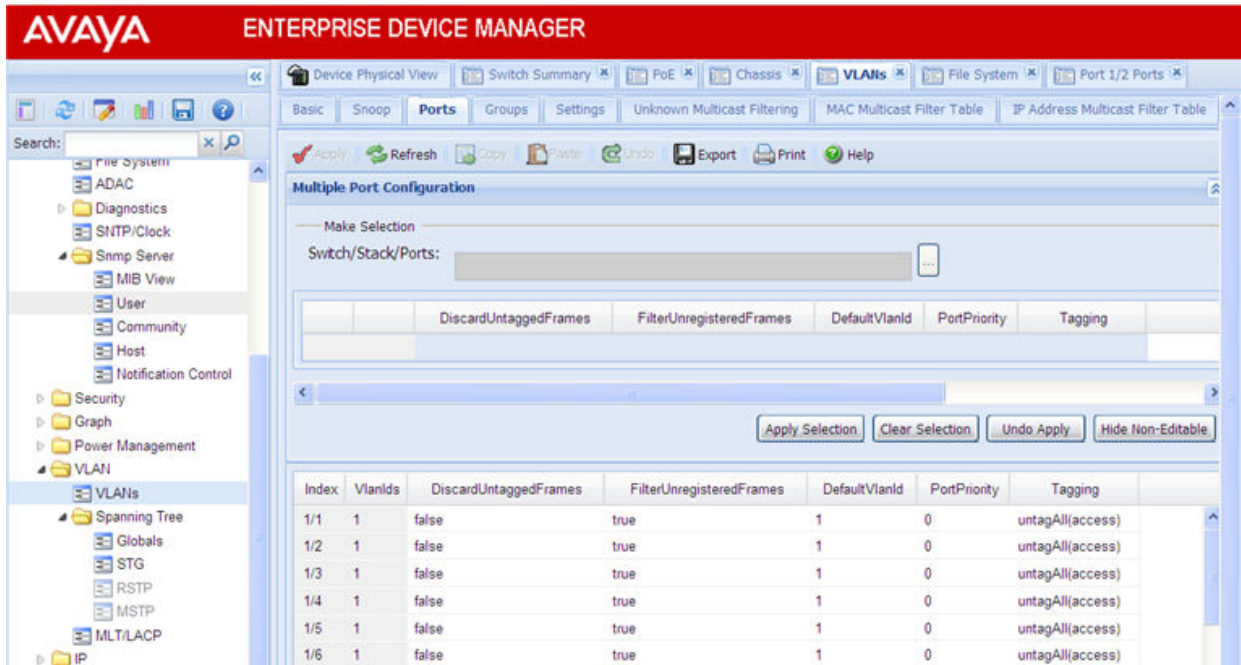


Figure 11: VLAN, VLANs - Ports tab

Multiple Port Configuration for EDM

* Note:

Depending on your hardware model, information displayed may appear different than the figures shown in this section.

When you need to apply the same configuration changes to more than one port, you can use the Multiple Port Configuration function available on all tabs in the Edit, Chassis, Ports work flow, or on port-related tabs for specific, applicable feature work areas (for example, VLAN, VLANs, Ports).

The following sections use the Edit, Chassis, Ports, Interface tab work area to describe the available Multiple Port Configuration functions.

In the work area for any of the Edit, Chassis, Ports tabs, the following two panes appear in the default view:

- Multiple Port Configuration pane—provides port selection for one port, several ports, or all ports, and configurable port parameters
- Tab work pane—displays existing configuration information for the feature and configurable cells for individual ports

With Multiple Port Configuration you can perform the following:

- Hide non-editable fields from the multiple configuration pane so that you choose to view only those fields that can be configured.
- Select an individual port or a group of ports from the Port Editor.
- Select all ports from the Port Editor.

User interface fundamentals

- Double-click any or all of the editable fields to change the configuration parameter.
- Clear your selections.
- Apply your selections.
- Undo the application of your selections.

You can expand or collapse the Multiple Port Configuration pane by clicking the Multiple Port Configuration task bar. The Multiple Port Configuration pane is expanded by default.

The following figure displays the tabs available in the Edit, Chassis, Ports work flow, with the Interface tab selected and the Multiple Port Configuration pane expanded.

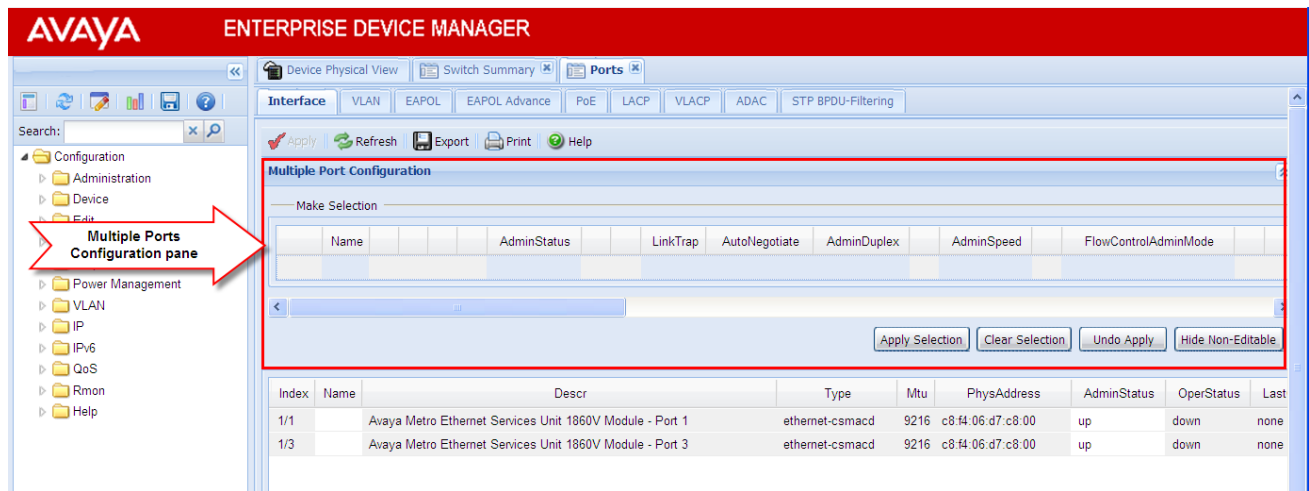


Figure 12: Interface tab — Multiple Port Configuration pane expanded

The following figure displays the Edit, Chassis, Ports, Interface tab with the Multiple Port Configuration pane collapsed.

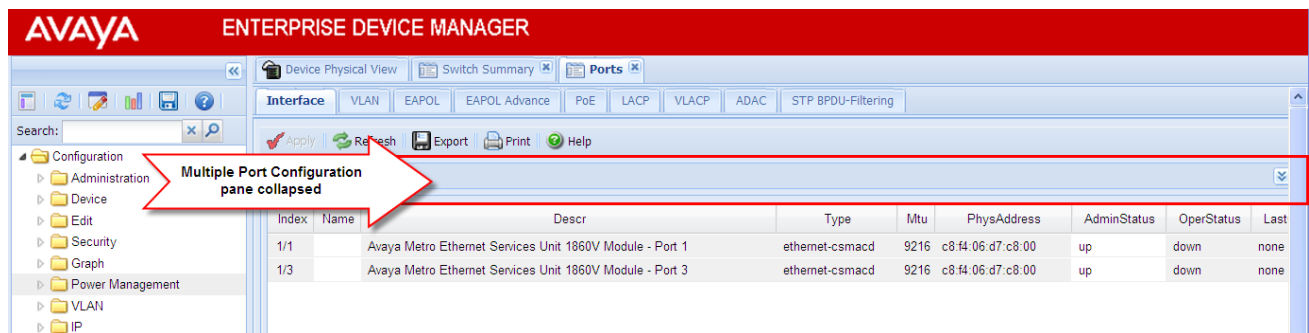


Figure 13: Interface tab — Multiple Port Configuration pane collapsed

Changes you make to a port configuration using Multiple Port Configuration are applied to the switch configuration only after you click **Apply** on the work area toolbar.

The following figure displays the location of the **Apply** button on the work area toolbar.

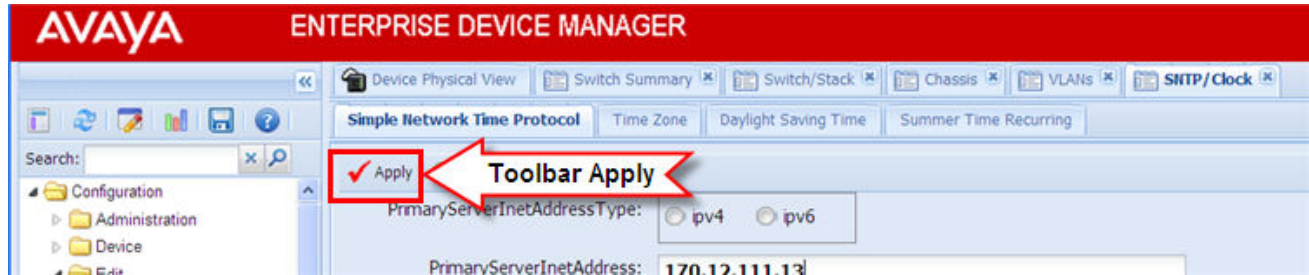


Figure 14: Toolbar Apply button

Enterprise Device Manager procedures

This section contains procedures for starting and using Enterprise Device Manager (EDM) on your switch. You can use EDM software on the switch; you do not need to install a client-based application on your computer.

Enabling the Web server using ACLI

The Web server is enabled by default. If you have assigned an IP address to the switch you can access EDM.

If you have disabled the Web server, use this procedure to enable and manage the Web server using ACLI. After you enable the Web server you can start EDM.

For more information about the Web server, see *Configuring Security on Avaya Ethernet Routing Switch 3600 Series, NN47213-504*.

Procedure

1. Enter Global Configuration mode:


```
enable
configure terminal
```
2. At the command prompt, enter the following command:


```
web-server enable
```

Disabling the Web server using ACLI

Use this procedure to disable the Web server using ACLI. After you disable the Web server, you cannot start EDM.

Procedure

1. Enter Global Configuration mode:

```
enable  
configure terminal
```
2. At the command prompt, enter the following commands:

```
no web-server  
web-server disable
```

Displaying the Web server status using ACLI

Use the following procedure to display the status of the Web server using ACLI.

Procedure

1. Enter Global Configuration mode:

```
enable  
configure terminal
```
2. At the command prompt, enter the following command:

```
show web-server
```

Starting EDM

To configure and maintain your switch through a Web-based graphical user interface, start EDM.

Before you begin

- Ensure that the switch is running.
- Note the switch IP address.
- Ensure that the Web server is enabled.
- Note the user name.
- Note the password.
- Open one of the supported Web browsers.

Procedure

1. In a supported Web browser, enter the IP address of the switch using one of the following formats:
 - `http://<IP Address>`
 - `https://<IP Address>`
2. Enter the user name.

3. Enter the password.
4. Click **Log On**.

Using shortcut menus

In the EDM Device Physical View you can use shortcut menus to edit objects and apply changes.

Procedure

1. In the **Device Physical View**, select an object.
2. Right-click the object.
3. Select a function from the list.

Shortcut menus field descriptions

Name	Description
Unit	
Edit	Display the Edit unit dialog box and tabs
Refresh	Refreshes switch status
Refresh Port Tooltips	Refreshes the port tooltip data. Port tooltip data contains: Slot/Port, PortName, and PortOperSpeed
Port	
Edit	Displays the Edit port dialog box and tabs
Graph	Displays the graph port dialog box and tabs
Enable	Enables the port administratively
Disable	Shuts down the port administratively

Navigating around EDM

Use the following procedure to navigate around EDM.

Procedure

1. In the navigation pane, click the arrowhead to the left of a folder to display the sub-level folders in the tree.
2. If there is a sub-folder, double-click the folder or click the arrowhead beside it, to open the sub-folder.
3. The primary tabs appear under the folders and sub-folders. Click a tab to open it in the work area.

Undocking tabs

To improve certain types of configuration, you can view more than one tab at a time. To view more than one tab, you use the undock function to activate a previously-opened tab from the menu bar.

 **Important:**

When you undock a tab to make changes, then return to another open tab, in order to see the effects of the changes, you must click the **Refresh** button on the tool bar.

Procedure

1. From the menu bar, drag and drop the tab you want to open.
2. To reposition the tab in the work area, click and drag the title bar of the tab.

Docking tabs

You can re-dock an undocked tab using one of the following methods.

Procedure

To re-dock a tab, do one of the following:

- On the undocked tab, click the dock-back button (the middle button on the top right of the panel)
- On the undocked tab, click the collapse button (left button on the top right of the panel) to temporarily minimize the panel.

Editing a dialog box

Use this procedure to edit a dialog box.

Procedure

1. In the work area, double-click the field you want to edit.
2. Select a value from the list of predetermined values or enter the value for a field without preset values.

 **Important:**

Enter an IP address in decimal format: <xxx> <xxx> <xxx> <xxx>.

Enter a MAC address in hexadecimal format: xx:xx:xx:xx:xx:xx.

Time is a value based on the delta from the switch boot-up time.

3. Click **Apply**.

Inserting an entry in a dialog box

Use this procedure to insert an entry in a dialog box.

Procedure

1. On the tool bar, click **Insert**.
2. Enter changes in the Insert dialog box.
3. Click **Insert** to submit the entry and return to the active tab in the work area.
4. On the toolbar, click **Apply** to commit the change to the configuration. The system refreshes the view and errors display in a browser popup.

Deleting an entry from a dialog box

Use this procedure to delete an entry from a dialog box.

Procedure

1. Highlight the entry.
2. Click **Delete**.

Editing an object using the shortcut menu

You can edit objects in the Device Physical View from the navigation tree or the shortcut menu. Use this procedure to edit an object using the shortcut menu.

About this task

Changes are not applied to the running configuration until you click **Apply**.

Procedure

1. On the Device Physical View, you can
 - right click an object
 - press Ctrl+click to select several objects, then right click
 - click and drag to select a group of objects, then right click
 - click an entire device, then right click
2. From the list, click **Edit**.
3. Edit the applicable tab in the work area.
4. Click **Apply**.

Editing file system elements

Use this procedure to edit file system elements.

Procedure

1. Click the **Edit** arrowhead to open the Edit menu.
2. Double-click **File System** to open the File System tab in the work area.

File System work area field descriptions

The following table describes the tabs in the File System work area.

Tab	Description
Config/Image/Diag file	Use this tab to view information about and acquire image, configuration, and firmware files.
Ascii Config File	Use this tab to acquire ASCII configuration files.
Save Configuration	Use this tab to save the current configuration manually or automatically.

Configuring multiple interface ports using EDM - Example 1

Use this procedure as an example for configuring multiple interface ports using the Multiple Port Configuration function and the **Edit, Chassis, Ports, Interface** work flow.

Before you begin

- Select ports on the Device Physical View.

Procedure

1. In the navigation tree, double-click **Edit**.
2. In the Edit tree, double-click **Chassis**.
3. In the Chassis tree, click **Ports**.
4. Click the **Interface** tab.
5. To change the configuration of the selected ports, in the Multiple Port Configuration pane, double-click the cell beneath the column heading that represents the parameter you want to change and do one of the following:
 - Select a value from a drop-down list.
 - Type a value in the cell.
6. In the Make Selection pane, click **Apply Selection**. The changes appear in the table.
7. On the Interface tab toolbar, click **Apply** to apply the changes to the switch configuration.

Configuring multiple ports using EDM - Example 2

Use this procedure to configure multiple ports using the Multiple Port Configuration functions and the **Security, MAC Security, AutoLearn** workflow. When you use this workflow you can select ports directly from the Multiple Port Configuration pane on the **Configuration** tab.

Procedure

1. In the navigation tree, double-click **Security**.
2. In the Security tree, double-click **MAC Security**.
3. Click the **AutoLearn** tab.
4. In the work area, in the Make Selection section of the Multiple Port Configuration pane, click the Switch/Stack/Ports ellipsis (...) to open the Port Editor dialog.
5. In the Port Editor window, click the ports you want to configure.

 **Note:**

- If you want to configure all ports, click **All**.
6. Click **OK** to return to the Make Selection pane.
The ports you selected appear in the Switch/Stack/Ports box.
 7. To change the configuration of the selected ports, in the Multiple Port Configuration pane, double-click the cell beneath the column heading that represents the parameter you want to change and do one of the following:
 - Select a value from a drop-down list.
 - Type a value in the cell.
 8. In the Make Selection pane, click **Apply Selection**.
The changes appear in the table.
 9. On the **AutoLearn** tab toolbar, click **Apply** to apply the changes to the configuration.

Graphing statistics

You can graph statistics for an entire device, a group of ports, or a single port.

Before you begin

On a Device Physical View select one of the following:

- a port
- a group of ports
- a device

Procedure

1. In the navigation tree, double-click **Graph**.
2. In the Graph tree, select one of the following:
 - **Chassis**
 - **Port**
3. In the work area, select a tab.
4. On the tab, select information to graph. To export the information to another application, on the task bar click **Export Data**.
5. To create the graph, on the task bar, click a graph type.

Getting EDM online help files for embedded EDM

Because help files are not included with the embedded EDM software files on the switch, you need to download the help files to a TFTP destination and use ACLI to configure a path from your switch to the help files.

If you are using COM to manage your switch, help resides with COM and you do not need to use these procedures.

Downloading help files

Use this procedure to download help files.

Before you begin

- An available TFTP server — ensure that the TFTP path differs from the path you use to download switch software

Caution:

Do not install EDM help files on Flash.

Procedure

1. To obtain EDM help files for the embedded element manager, do one of the following:
 - Go to the Avaya Web site <http://support.avaya.com/css/appmanager/public/support> and locate the help file for the appropriate product.
 - Select the help file from the software CD ROM contained in the Base Software License Kit.
2. Download the help file to a TFTP server.

Configuring the path to the help files using ACLI

Use this procedure to configure the path to the help files.

Procedure

1. Enter Global Configuration mode:

```
enable
```

```
configure terminal
```

2. At the command prompt, enter the following command:

```
edm help-file-path <path name> <tftp address> <filename>
```

Example

Following is an example of an ACLI EDM help file path: `edm help-file-path ERS3600_xx_Help tftp address 10.100.100.15`

In the preceding example, `ERS3600_xx_Help` is a folder that contains help files and the folder is located on a TFTP server at the `10.100.100.15` address.

Configuring the help file path using EDM

Use this procedure to configure the path to the help files.

Procedure

1. In the navigation tree, double-click **Edit** or click the Edit arrowhead to open the Edit menu.
2. Click **File System** to open the File System work area.
3. In the work area, click the **Help File Path** tab.
4. In the Path dialog box, enter the path to the help file storage location.

Example

```
tftp://A.B.C.D/file_name
```

Chapter 4: Configuration files fundamentals

This chapter provides fundamental information about working with configuration files.

Configuration files are ASCII text files that allow the administrator to change switch configuration quickly.

Procedures to manage binary configuration files are included in the Enterprise Device Manager section.

ACL configuration files

You can use ACLI to display, store, and retrieve configuration files, and to save the current configuration.

Viewing current configuration using ACLI

Use this procedure to view the current configuration.

Procedure

1. Enter Privileged EXEC mode:
`enable`
2. At the command prompt, enter the following command:
`show running-config`

Saving current configuration to TFTP server using ACLI

Procedure

1. Enter Privileged EXEC mode:
`enable`
2. At the command prompt, enter the following command:

```
copy running-config tftp [address (<A.B.C.D> | <WORD>)] [filename <WORD>]
```

Variable definitions

The following table describes the parameters for the `copy running-config` command.

Variable	Value
address<A.B.C.D>	Specifies the address of the TFTP server. <ul style="list-style-type: none"> • A.B.C.D — specifies the IP address
filename<name>	Specifies the configuration file name.

Variable definitions

The following table describes the parameters for the `copy running-config sftp` command.

Variable	Value
address<A.B.C.D>	Specifies the address of the TFTP server. <ul style="list-style-type: none"> • A.B.C.D — specifies the IP address
filename<name>	Specifies the configuration file name.
module	Copies configuration of an application.
verbose	Copies entire configuration (defaults and non-defaults).

Saving current configuration to SFTP server using ACLI

Procedure

1. Enter Privileged EXEC mode:

```
enable
```

2. At the command prompt, enter the following command:

```
copy running-config sftp [verbose] [module<applicationModules>]
[filename <WORD>] ([address {<A.B.C.D> | <ipv6addr>}]) username
<WORD> [password]
```

Saving current configuration to USB device using ACLI

Procedure

1. Enter Privileged EXEC mode:

```
enable
```

2. At the command prompt, enter the following command:

```
copy running-config usb [filename <WORD>] [module
<applicationModules>] [verbose]
```

Saving current configuration to flash memory using ACLI

Use this procedure to save the current configuration to flash memory. Note that the system automatically issues the `copy config nvram` command periodically.

Procedure

1. Enter Privileged EXEC mode:
enable
2. At the command prompt, enter the following command:
copy config nvram

*** Note:**

The current configuration can also be saved to Non-Volatile RAM (NVRAM) using the `write memory` command or the `save config` command. Both of these commands are also issued from Privileged EXEC command mode.

Restoring system configuration from TFTP using ACLI

Use this procedure to restore the system configuration from TFTP.

Procedure

1. Enter Privileged EXEC mode:
enable
2. At the command prompt, enter the following command:
copy tftp config address <A.B.C.D> filename <name>

Variable definitions

The following table describes the parameters for the `copy tftp config` command.

Variable	Value
address <A.B.C.D>	Specifies the address of the TFTP server. • A.B.C.D — specifies the IP address
filename <name>	Specifies the configuration file name.

Restoring system configuration from SFTP using ACLI

Procedure

1. Enter Privileged EXEC mode:

```
enable
```

2. At the command prompt, enter the following command:

```
copy sftp config address <A.B.C.D> | <WORD> filename <name> username
<WORD> [password]
```

Restoring system configuration from USB device using ACLI

Procedure

1. Enter Privileged EXEC mode:

```
enable
```

2. At the command prompt, enter the following command:

```
copy config usb {filename <name> | unit <1-8>}
```

Downloading a configuration file automatically using ACLI

Use this procedure to configure a switch to automatically load a configuration file.

Procedure

1. Enter Privileged EXEC mode:

```
enable
```

2. At the command prompt, enter the following command:

```
configure network load-on-boot {disable | use-bootp | use-config}
address <A.B.C.D> filename <name>
```

Variable definitions

The following table describes the parameters for the `copy running-config` command.

Variable	Value
address <A.B.C.D>	Specifies the address of the TFTP server. <ul style="list-style-type: none"> • A.B.C.D — specifies the IP address
filename <name>	Specifies the configuration file name.

Table continues...

Variable	Value
username <WORD>	Specifies the username for downloading a configuration file automatically using ACLI.
[password]	Specifies the password for downloading a configuration file automatically using ACLI.

Use the definitions in the following table to use the configure **network load-on-boot** command.

Variable	Value
load-on-boot { <i>disable</i> <i>use-bootp</i> <i>use-config</i> }	<p>Specifies the setting to automatically load a configuration file when the system starts</p> <ul style="list-style-type: none"> • <i>disable</i> — disables the automatic loading of the configuration file • <i>use-bootp</i> — specifies loading the ASCII configuration file at startup and using BootP to obtain values for the TFTP address and file name • <i>use-config</i> — specifies loading the ASCII configuration file at startup and using the locally configured values for the TFTP address and file name <p>If you omit the variables, the system immediately downloads and runs the ASCII configuration file.</p>

Viewing USB files

Use this procedure to display configuration files stored on a USB device in a unit in a stack.

Before you begin

Insert a USB device in the base unit or in a stack unit.

Procedure

1. Enter Privileged EXEC mode:

```
enable
```
2. To display files on a USB device inserted in the base unit, enter the following command :

```
show usb-files
```
3. To display files on a USB device inserted in a stack unit, enter the following command :

```
show usb-files unit <unit_number>
```

Displaying USB file information using ACLI

Before you begin

Insert USB device in the switch.

Procedure

1. Enter Privileged EXEC mode:
`enable`
2. Enter the following command:
`show usb-host-port all`

Example

Downloading an ASCII configuration file from a TFTP server or USB device

Use this procedure to download an ASCII configuration file from a TFTP server or USB device to the local ASCII file system. You can then boot the system from the local file system. In a stack, the downloaded ASCII configuration file will be saved in all units.

Procedure

1. Enter Global Configuration mode:
`enable`
`configure terminal`
2. To download from a TFTP server, enter the following command at the command prompt:
`copy tftp config address <address> filename <filename>`
3. To download from a USB device, enter the following command at the command prompt:
`copy usb config filename <filename>`

Next steps

Proceed with the `boot script` command to boot the system with the local ASCII configuration file.

When the system boots successfully with an ASCII configuration file, the system configuration is saved to the binary configuration. If the system boot fails, the system resets and boots with the current binary configuration.

Variable definitions

The following table describes the parameters for the `copy [tftp] [usb] script` command.

Variable	Value
address <A.B.C.D>	Specifies the address of the TFTP server. <ul style="list-style-type: none"> • A.B.C.D — specifies the IPv4 address • WORD - specifies the IPv6 address
filename <Word>	Specifies the name of the file to be retrieved.
block <1-2> [name <WORD>]	Specifies the block from which the ASCII configuration file is to be downloaded If you do not specify a name for the block name, the default is the name of the file retrieved.

ACLI pipe filter functions

This section provides the supported pipe (|) filter functions.

Count filter

This filter counts the number of lines in the output of a command.

Syntax

```
<ACLI command> | count
```

Example

```
#show running-config | count
Count: 100 lines
```

Display output matching a pattern

The match filter displays only the output lines that match the given pattern.

Syntax

```
<ACLI command> | match <pattern> [field <number>] [ignore-case] [header <number>]
```

Parameter	Description
pattern	Specifies the regular expression to be matched against each line of output. Quotations are required if the parameter contains spaces.
field <number>	Specifies the field in each line to be matched against the pattern. Fields are separated by white spaces and are counted starting with 1 for the left-most field.
ignore-case	Specifies letters to be matched in the pattern regardless of case.
header <number>	Specifies a number of lines from the start of the output to be displayed unchanged before trying to match the pattern. Useful to keep the header of a table intact.

Examples

```
#show interfaces | match 1000 header 3
      Status
Port Trunk Admin Oper Link LinkTrap Negotiation Speed Duplex Control
-----
5          Enable Up   Up   Disabled Enabled  1000Mbps Full  Asymm
9          Enable Up   Up   Enabled  Enabled  1000Mbps Full  Asymm

#show interfaces | match disabled field 5 ignore-case
5          Enable Up   Up   Disabled Enabled  1000Mbps Full  Asymm
11         Enable Down Down Disabled Enabled
```

Ignore output that matches a pattern

The ignore filter displays only the output lines that do not match the given pattern. The lines matching the pattern are discarded.

Syntax

```
<ACLI command> | except <pattern> [field <number>] [ignore-case] [header <number>]
```

Parameter	Description
pattern	Specifies the regular expression to be matched against each line of output. Quotations are required if the parameter contains spaces.
field <number>	Specifies the field in each line to be matched against the pattern. Fields are separated by white spaces and are counted starting with 1 for the left-most field.
ignore-case	Specifies letters to be matched in the pattern regardless of case.
header <number>	Specifies a number of lines from the start of the output to be displayed unchanged before trying to match the pattern. Useful to keep the header of a table intact.

Example

```
#show interfaces | except down ignore-case header 3
      Status
Port Trunk Admin Oper Link LinkTrap Negotiation Speed Duplex Control
-----
5          Enable Up   Up   Disabled Enabled  1000Mbps Full  Asymm
9          Enable Up   Up   Enabled  Enabled  1000Mbps Full  Asymm
```

Display output from the first match of a pattern

The find filter displays the output of a command starting from the first line that matches the given pattern.

Syntax

```
<ACLI command> | find <pattern> [field <number>] [ignore-case] [header <number>]
```

Parameter	Description
pattern	Specifies the regular expression to be matched against each line of output. Quotations are required if the parameter contains spaces.
field <number>	Specifies the field in each line to be matched against the pattern. Fields are separated by white spaces and are counted starting with 1 for the left-most field.
ignore-case	Specifies letters to be matched in the pattern regardless of case.
header <number>	Specifies a number of lines from the start of the output to be displayed unchanged before trying to match the pattern. Useful to keep the header of a table intact.

Example

```
#show interfaces | find 47 header 3
      Status
Port Trunk Admin Oper Link LinkTrap Auto      Speed Duplex Flow
-----
47          Enable Down Down Enabled Enabled
48          Enable Down Down Enabled Enabled
49          Enable Down Down Enabled Disabled 10Gbps Full  Asymm
50          Enable Down Down Enabled Disabled 10Gbps Full  Asymm
51          Enable Down Down Enabled Disabled 10Gbps Full  Asymm
52          Enable Down Down Enabled Disabled 10Gbps Full  Asymm
```

Do not paginate output of a single command

The no-more command filter temporarily disables pagination for the output of an ACLI command. When the lines of output exceed the terminal length, you are not prompted to continue or to quit but the entire output of the command continues to be displayed. The effect is similar to setting terminal length 0 but only for the current command.

Example

```
#show interfaces | no-more
```

Display only the first few lines of output

The head filter limits the output of a command to the first few lines. If a number is not specified then the first 10 lines are shown.

Syntax

```
<ACLI command> | head [<number>]
```

Parameter	Description
<number>	Specifies the number of lines to keep from the beginning of the output.

Example

```
#show interfaces | head
      Status
Port Trunk Admin Oper Link LinkTrap Auto      Speed Duplex Flow
-----
1          Enable Down Down Enabled Enabled
2          Enable Down Down Enabled Enabled
3          Enable Down Down Enabled Enabled
```

```

4      Enable  Down Down Enabled  Enabled
5      Enable  Up   Up   Disabled Enabled  1000Mbps Full  Asymm
6      Enable  Down Down Enabled  Enabled
7      Enable  Down Down Enabled  Enabled

```

Display only the last few lines of output

The tail filter limits the output of a command to the last few lines. If a number is not specified, then the last 10 lines are shown.

Syntax

```
<ACLI command> | tail {[<number>] | from-line <number> } [header <number>]
```

Parameter	Description
<number>	Specifies the number of lines to keep from the end of the output.
from-line <number>	Specifies the line from which to start the output.
[header]	Same description as for the other commands which allow it.

Example

```

#show interfaces | tail 3
50      Enable  Down Down Enabled  Disabled  10Gbps  Full  Asymm
51      Enable  Down Down Enabled  Disabled  10Gbps  Full  Asymm
52      Enable  Down Down Enabled  Disabled  10Gbps  Full  Asymm

```

Regular expressions

Match, except, and find filters require a pattern parameter, which is a regular expression.

Pattern parameter	Description
regular expression	Zero or more branches separated by the pipe symbol ' '. It matches anything that matches one of the branches.
branch	Zero or more pieces, concatenated. For instance, it matches a match for the first, followed by a match for the second.
piece	An atom possibly followed by '*', '+', or '?'. An atom followed by '*' matches a sequence of 0 or more matches of the atom. An atom followed by '+' matches a sequence of 1 or more matches of the atom. An atom followed by '?' matches a match of the atom, or the null string.
atom	A regular expression in parentheses (matching a match for the regular expression), a range, '.' (matching any single character), '^' (matching the null string at the beginning of the input string), '\$' (matching the null string at the end of the input string), a '\' followed by a single character (matching that character), or a single character with no other significance (matching that character).
range	A sequence of characters enclosed in '['']. It normally matches any single character from the sequence. If the sequence begins with '^', it matches any single character not from the rest of the sequence. If two characters in the sequence are separated by '-', this is shorthand for the full list of ASCII characters between them (for example, '[0-9]' matches any decimal digit). To

Table continues...

Pattern parameter	Description
	include a literal `]' in the sequence, make it the first character (following a possible `^). To include a literal `-', make it the first or last character.
	If the pattern includes white spaces then it must be enclosed in quotation marks.
	To match characters which have a special meaning – one of <code>*.+?^\$()[\</code> – they must be escaped. They must be preceded by a single backslash if the pattern is not in quotation marks and by double backslash if the pattern is enclosed in quotes.

Regular expression examples

Regular expression	Description
<code>est</code>	Matches a string containing “est”. For example, “testing”.
<code>A(d+)r</code>	Matches a string containing an ‘A’ followed by at least one ‘d’ followed by ‘r’. For example, “Address”.
<code>^1</code>	Matches a ‘1’ only at the beginning of a line.
<code>192\.[0-9]+\.[0-9]+\.[0-9]+</code>	Matches a string representing a valid IPv4 address starting with 192.
<code>“192\.[0-9]+\.[0-9]+\.[0-9]+”</code>	Matches a string representing a valid IPv4 address starting with 192 when the pattern is enclosed in quotes. The un-escaped ‘.’ means “any single character” which would make the regular expression accept invalid addresses as well.

Enterprise Device Manager configuration files

You can use Enterprise Device Manager procedures in the following sections to:

- store the current switch ASCII configuration on a TFTP server
- retrieve an ASCII configuration file from a TFTP server to apply to a switch
- store a binary configuration file from a TFTP server
- retrieve a binary configuration file from a TFTP server
- manually save the current configuration to flash memory
- designate a configuration to download automatically at switch startup

You can check file upload transfer status of ASCII configuration files in the `ScriptLastStatusChange` field on the `Edit > File System > Ascii Config Script Files` tab. During upload transfer, the status is `manualUploadInProgress`. To check changes to file transfer status, click **Refresh**. After the file transfer is complete the status displays as either `manualUploadPassed` or `manualUploadFailed`.

You can check file download transfer status of ASCII configuration files in the `ScriptLastStatusChange` field on the **Ascii Config File** tab. During download transfer, the status is `manualDownloadInProgress`. To check changes to file transfer status, click **Refresh**. After the

file transfer is complete, the status displays as either `manualDownloadPassed` or `manualDownloadFailed`.

You can also designate an ASCII configuration file to download automatically at switch startup.

To control which ASCII configuration files load automatically, at switch startup use the fields in the table on the `Edit > File System > Ascii Config Script Files` .

The **Ascii Config Script Files** table provides a way to control which ASCII configuration files are loaded, and in which order, because you can designate the path to an ASCII configuration file, a boot priority value, and a script index priority for each entry in the table.

Depending on which script source you designate for an entry, the system uses the designated paths in the Ascii Config Script Files table in one of the following ways:

- The system uses BootP to download the designated ASCII configuration file from the network, according to the specified IP address and file name.
- The system downloads the designated ASCII configuration file from a TFTP or SFTP server, according to the specified IP address and file name.
- The system downloads the ASCII configuration file from a USB device, according to the specified file name.

In the **boot priority** column on the Ascii Config Script Files tab, if you designate a non-zero boot priority value for any but the first row, the switch attempts to load the configuration file at startup. The first entry in the configuration files table is assigned a fixed boot priority value of 0 and it is not available to load at startup.

The switch attempts to load each ASCII configuration file with a non-zero priority value, in ascending order, until a script file loads successfully. If ASCII configuration file boot priority values are equal, the switch attempts to load the configuration files according to their script index order.

In the **Script Source** column in the Ascii Config Script Files table, if you designate a USB device in a stand-alone switch as the load-on-boot path to the ASCII configuration file, the switch downloads the specified configuration file from the USB port of the switch.

If you designate a USB device in a stack unit as the load-on-boot path to the ASCII configuration file entry, the system downloads the specified configuration file from the USB port of the designated unit or, if no unit is designated, from the USB port of the base unit.

If the system cannot download the configuration file, or if the script does not execute successfully, the script operational status changes to `autoDownloadFailed` and the system downloads the next entry in the table.

When the configuration file downloads and executes without errors, the operational status for the entry changes to `autoDownloadPassed`.

ASCII configuration file management using EDM

Use the following procedure to manage ASCII configuration files.

Storing current ASCII configuration on a TFTP server using EDM

Use this procedure to store the current ASCII configuration on a TFTP server.

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit tree.
2. Double-click **File System**.
3. Click the **Ascii Config File** tab.
4. In **TftpServerInetAddressType** choose the TFTP server internet address type.
5. In **TFTPServerInetAddress**, enter the TFTP server IP address.
6. In **AsciiConfigFilename**, enter the configuration file name.
7. In **AsciiConfigManualUpload**, choose **uploadNow**.
8. On the toolbar, click **Apply**.

Storing current ASCII configuration to SFTP server using EDM

Use this procedure to store the current ASCII configuration on a SFTP server.

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit tree.
2. Double-click **File System**.
3. Click the **Ascii Config File** tab.
4. In **TftpServerInetAddressType** choose the SFTP server internet address type.
5. In **TFTPServerInetAddress**, enter the SFTP server IP address.
6. In **AsciiConfigFilename**, enter the configuration file name.
7. In **AsciiConfigManualUpload**, choose **uploadToSftp**.
8. On the toolbar, click **Apply**.

ASCII Config File field descriptions

The following table describes the fields on the Ascii Config File tab.

Name	Description
TftpServerInetAddressType	Specifies the IP version of the TFTP server address.
TftpServerInetAddress	Specifies the TFTP server IP address.
AsciiConfigFilename	Specifies the name of the ASCII configuration file.
AsciiConfigManualUpload	<ul style="list-style-type: none"> • uploadNow — Initiates manual configuration upload • uploadVerboseNow — • uploadToSftp —

Downloading an ASCII configuration from a TFTP server using EDM

Use this procedure to download an ASCII configuration from a TFTP server.

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit tree.
2. Double-click **File System**.
3. Click the **Ascii Config File** tab.
4. In **TftpServerInetAddressType** field, choose the TFTP server internet address type .
5. In **TftpServerInetAddress** field, type the TFTP server IP address.
6. In **AsciiConfigFilename** field, type the configuration file name.
7. In **AsciiConfigManualDownload**, choose **downloadNow**.
8. On the toolbar, click **Apply**.

Downloading an ASCII configuration from an SFTP server using EDM

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit tree.
2. Double-click **File System**.
3. Click the **Ascii Config File** tab.
4. In **TftpServerInetAddressType** field, choose the SFTP server internet address type .
5. In **TftpServerInetAddress** field, type the SFTP server IP address.
6. In **AsciiConfigFilename** field, type the configuration file name.
7. In **AsciiConfigManualDownload**, choose **downloadFromSftp**.
8. On the toolbar, click **Apply**.

Downloading a configuration file automatically using EDM

Use this procedure to download a configuration file automatically.

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit tree.
2. Double-click **File System**.
3. Click the **Ascii Config File** tab.
4. In the **TftpServerInetAddressType** field, choose the TFTP server internet address type .
5. In the **AsciiConfigFilename** field, type the configuration file name.
6. In the **AsciiConfigAutoDownload** field, choose the automatic download source:
 - **useBootp**

- **useConfig**

7. On the toolbar, click **Apply**.

ASCII Config File field descriptions

The following table describes the fields on the Ascii Config File tab.

Name	Description
TftpServerInetAddressType	Specifies the IP version of the TFTP server address.
TftpServerInetAddress	Specifies the TFTP server IP address.
AsciiConfigFilename	Specifies the name of the ASCII configuration file.
AsciiConfigAutoDownload	<ul style="list-style-type: none"> • disabled — Disabled automatic loading of ASCII configuration file at startup • useBootp — Specifies loading the ASCII configuration file at startup and using BootP to obtain values for the TFTP address and file name • useConfig — Specifies loading the ASCII configuration file at startup and using the locally configured values for the TFTP address and file name
AsciiConfigAutoDldStatus	Displays the configuration automatic download status

Job aid—Config/Image/Diag file tab field descriptions

The following table provides information about fields on the Config/Image/Diag file tab.

Filename	Description
TftpServerInetAddressTyp	Specifies the IP version of the TFTP server address
TftpServerInetAddress	Specifies the TFTP server IP address
BinaryConfigFilename	Specifies the name of the binary configuration file
BinaryConfigUnitNumber	Specifies the unit number of a switch in a stack
ImageFileName	Specifies the software image file name
FWFileName(Diagnostics)	Specifies the diagnostics file name
Action	<ul style="list-style-type: none"> • dnldImg—Downloads a new software image to the switch. • dnldFw—Downloads a new diagnostic software image to the switch. • dnldFwFromSFTP—Downloads a new diagnostic software image from SFTP • dnldImgFromSftpNoReset—Downloads the agent image from a SFTP server and does not reset the switch.

Table continues...

Filename	Description
	<ul style="list-style-type: none"> • dnldConfig—Downloads a configuration file to the switch. • dnldImgIfNewer—Downloads a new software image to the switch only if it is newer than the current image. • dnldFwNoReset—Downloads a new diagnostic software image to the switch without a switch reset. • dnldConfigFromSftp—Downloads a configuration to the switch from the SFTP server. • dnldFwFromSftpNoReset—Downloads the diagnostic image from a SFTP server and does not reset the switch.
Status	Displays the status of the most recent action since last switch restart.

Binary configuration file management using EDM

Use the following procedures to manage binary configuration files.

Storing a binary configuration file on a TFTP server using EDM

Use this procedure to store a binary configuration file on a TFTP server.

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit menu.
2. Double-click **File System**.
3. Click the **Config/Image/Diag file** tab.
4. In **TftpServerInetAddressType**, choose the TFTP server internet address type .
5. In **TftpServerInetAddress**, enter the TFTP server IP address.
6. In **BinaryConfigFilename**, enter the configuration file name.
7. In **Action**, select **upldConfig**.
8. On the toolbar, click **Apply**.

Config Image Diag file tab field descriptions

The following table describes the fields on the Config/Image/Diag file tab.

Name	Description
TftpServerInetAddressType	Specifies the IP version of the TFTP server address.
TftpServerInetAddress	Specifies the TFTP server IP address.
BinaryConfigFilename	Specifies the name of the binary configuration file.
Action	<ul style="list-style-type: none"> • dnldConfig—Downloads a configuration file to the switch. • upldConfig—Uploads a configuration file to the switch from a designated location. • dnldImg—Downloads a new software image to the switch. • dnldImgIfNewer—Downloads a new software image to the switch only if it is newer than the current image. • dnldImgNoReset—Downloads a new software image to the switch without a switch reset. • dnldFW—Downloads a new diagnostic software image to the switch. • dnldFwNoReset—Downloads a new diagnostic software image to the switch without a switch reset.
Status	Displays the status of the most recent action since the last switch restart.

Storing a binary configuration file on a TFTP server using EDM

Use this procedure to store a binary configuration file on a TFTP server.

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit menu.
2. Double-click **File System**.
3. Click the **Config/Image/Diag file** tab.
4. In **BinaryConfigFilename**, enter the configuration file name.
5. In **BinaryConfigUnitNumber**, field enter the stack unit number or, for a stand-alone switch, enter 0.
6. In the **Action** field, click **upldConfigtoUsb**.
7. On the toolbar, click **Apply**.

Downloading a binary configuration file on a TFTP server using EDM

Use this procedure to download a binary configuration file on a TFTP server.

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit menu.
2. Double-click **File System**.
3. Click the **Config/Image/Diag file** tab.
4. In **TftpServerInetAddress**, enter the TFTP server IP address.
5. In **BinaryConfigFilename**, enter the configuration file name.
6. In **Action**, select **dnldConfig**.
7. On the toolbar, click **Apply**.

Config Image Diag file tab field descriptions

The following table describes the fields on the Config/Image/Diag file tab.

Name	Description
TftpServerInetAddressType	Specifies the IP version of the TFTP server address.
TftpServerInetAddress	Specifies the TFTP server IP address.
BinaryConfigFilename	Specifies the name of the binary configuration file.
Action	<ul style="list-style-type: none"> • dnldConfig—Downloads a configuration file to the switch. • upldConfig—Uploads a configuration file to the switch from a designated location. • dnldImg—Downloads a new software image to the switch. • dnldImgIfNewer—Downloads a new software image to the switch only if it is newer than the current image. • dnldImgNoReset—Downloads a new software image to the switch without a switch reset. • dnldFW—Downloads a new diagnostic software image to the switch. • dnldFwNoReset—Downloads a new diagnostic software image to the switch without a switch reset.

Downloading an ASCII configuration from an SFTP server using EDM

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit tree.
2. Double-click **File System**.
3. Click the **Ascii Config File** tab.
4. In **TftpServerInetAddressType** field, choose the SFTP server internet address type .

5. In **TftpServerInetAddress** field, type the SFTP server IP address.
6. In **AsciiConfigFilename** field, type the configuration file name.
7. In **AsciiConfigManualDownload**, choose **downloadFromSftp**.
8. On the toolbar, click **Apply**.

Saving current configuration to flash memory manually using EDM

Use this procedure to save the current configuration to flash memory manually.

Procedure

1. In the navigation tree, double-click **Edit** to open the Edit tree.
2. Double-click **File System**.
3. Click the **Save Configuration** tab.
4. Deselect **AutosaveToNvramEnabled** — this option is enabled by default.
5. In **Action**, choose **copyConfigToNvram**.
6. On the toolbar, click **Apply**.

Displaying USB file information using EDM

About this task

Displays the general information of the files on a USB flash device.

Procedure

1. From the navigation tree, click **Edit**.
2. Click **File System**.
3. Click the **USB Files** tab.

Chapter 5: Related Resources

Support

Go to the Avaya Support website at <http://support.avaya.com> for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Documentation

See *Documentation Reference for Avaya Ethernet Routing Switch 3600 Series, NN47213-101* for a list of the documentation for this product.

For more information about new features of the switch and important information about the latest release, see *Release Notes for Avaya Ethernet Routing Switch 3600 Series, NN47213-400*.

For more information about how to configure security, see *Configuring Security on Avaya Ethernet Routing Switch 3600 Series, NN47213-504*.

Training

Ongoing product training is available. For more information or to register, see <http://avaya-learning.com/>.

Enter the course code in the **Search** field and click **Go** to search for the course.

Course code	Course title
8D00020E	Stackable ERS and VSP Products Virtual Campus Offering

Viewing Avaya Mentor videos

Avaya Mentor videos provide technical content on how to install, configure, and troubleshoot Avaya products.

About this task

Videos are available on the Avaya Support website, listed under the video document type, and on the Avaya-run channel on YouTube.

Procedure

- To find videos on the Avaya Support website, go to <http://support.avaya.com> and perform one of the following actions:
 - In **Search**, type `Avaya Mentor Videos` to see a list of the available videos.
 - In **Search**, type the product name. On the Search Results page, select **Video** in the **Content Type** column on the left.
- To find the Avaya Mentor videos on YouTube, go to www.youtube.com/AvayaMentor and perform one of the following actions:
 - Enter a key word or key words in the **Search Channel** to search for a specific product or topic.
 - Scroll down Playlists, and click the name of a topic to see the available list of videos posted on the website.

 **Note:**

Videos are not available for all products.

Searching a documentation collection

On the Avaya Support website, you can download the documentation library for a specific product and software release to perform searches across an entire document collection. For example, you can perform a single, simultaneous search across the collection to quickly find all occurrences of a particular feature. Use this procedure to perform an index search of your documentation collection.

Before you begin

- Download the documentation collection zip file to your local computer.
- You must have Adobe Acrobat or Adobe Reader installed on your computer.

Procedure

1. Extract the document collection zip file into a folder.
2. Navigate to the folder that contains the extracted files and open the file named `<product_name_release>.pdx`.

3. In the Search dialog box, select the option **In the index named <product_name_release>.pdx**.
4. Enter a search word or phrase.
5. Select any of the following to narrow your search:
 - Whole Words Only
 - Case-Sensitive
 - Include Bookmarks
 - Include Comments
6. Click **Search**.

The search results show the number of documents and instances found. You can sort the search results by Relevance Ranking, Date Modified, Filename, or Location. The default is Relevance Ranking.

Subscribing to e-notifications

Subscribe to e-notifications to receive an email notification when documents are added to or changed on the Avaya Support website.

About this task

You can subscribe to different types of general notifications, for example, Product Correction Notices (PCN), which apply to any product or a specific product. You can also subscribe to specific types of documentation for a specific product, for example, Application & Technical Notes for Virtual Services Platform 7000.

Procedure

1. In an Internet browser, go to <https://support.avaya.com>.
2. Type your username and password, and then click **Login**.
3. Under **My Information**, select **SSO login Profile**.
4. Click **E-NOTIFICATIONS**.
5. In the GENERAL NOTIFICATIONS area, select the required documentation types, and then click **UPDATE**.

GENERAL NOTIFICATIONS

1/5 Notifications Selected

End of Sale and/or Manufacturer Support Notices	<input type="checkbox"/>
Product Correction Notices (PCN)	<input checked="" type="checkbox"/>
Product Support Notices	<input type="checkbox"/>
Security Advisories	<input type="checkbox"/>
Services Support Notices	<input type="checkbox"/>

UPDATE >>

6. Click **OK**.
7. In the PRODUCT NOTIFICATIONS area, click **Add More Products**.

PRODUCT NOTIFICATIONS

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1 Notices

8. Scroll through the list, and then select the product name.
9. Select a release version.
10. Select the check box next to the required documentation types.

PRODUCTS	My Notifications
Virtual Services Platform 7000	VIRTUAL SERVICES PLATFORM 7000 Select a Release Version All and Future Administration and System Programming <input type="checkbox"/> Application Developer Information <input type="checkbox"/> Application Notes <input type="checkbox"/> Application and Technical Notes <input checked="" type="checkbox"/> Declarations of Conformity <input type="checkbox"/> Documentation Library <input checked="" type="checkbox"/> SUBMIT >>
Virtualization Provisioning Service	
Visual Messenger™ for OCTEL® 250/350	
Visual Vectors	
Visualization Performance and Fault Manager	
Voice Portal	
Voice over IP Monitoring	
W310 Wireless LAN Gateway	
WLAN 2200 Series	
WLAN Handset 2200 Series	

11. Click **Submit**.