

# Using ACLI and EDM on Avaya Virtual Services Platform 7200 Series and 8000 Series

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# **Chapter 1: Introduction**

# **Purpose**

This document provides information on features in VSP Operating System Software (VOSS). VOSS runs on the following product families:

- Avaya Virtual Services Platform 4000 Series
- Avaya Virtual Services Platform 7200 Series
- Avaya Virtual Services Platform 8000 Series

This document describes how to use the Avaya Command Line Interface (ACLI) and Enterprise Device Manager (EDM) interfaces to configure the features and functions on the Avaya Virtual Services Platform 7200 Series and 8000 Series switches.

For information on using the ACLI and EDM on the Avaya Virtual Services Platform 4000 Series, see *User Interface Fundamentals for Avaya Virtual Services Platform 4000 Series*, NN46251-103.

Examples and network illustrations in this document may illustrate only one of the supported platforms. Unless otherwise noted, the concept illustrated applies to all supported platforms.

# Related resources

# **Documentation**

See the *Documentation Reference for Avaya Virtual Services Platform 7200 Series and 8000 Series*, NN47227-100 for a list of the documentation for this product.

# **Training**

Ongoing product training is available. For more information or to register, you can access the Web site at <a href="http://avaya-learning.com/">http://avaya-learning.com/</a>.

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  - In Search, type the product name. On the Search Results page, select Video in the Content Type column on the left.
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  - 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:

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### About this task

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### **Procedure**

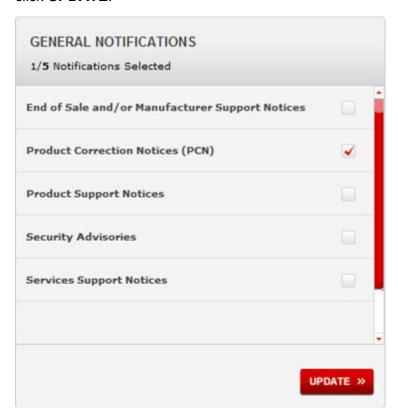
- 1. In an Internet browser, go to https://support.avaya.com.
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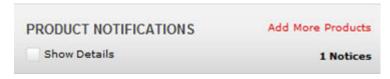
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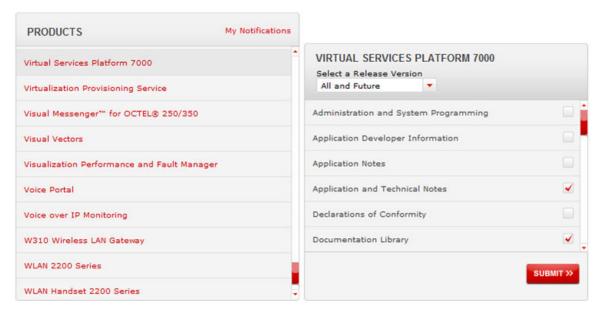


- 6. Click OK.
- 7. In the PRODUCT NOTIFICATIONS area, click Add More Products.



8. Scroll through the list, and then select the product name.

- 9. Select a release version.
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# 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 cproduct 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.

# **Chapter 2: New in this release**

The following sections detail what is new in Using ACLI and EDM on Avaya Virtual Services Platform 7200 Series and 8000 Series, NN47227-103.

# **VOSS 4.2.1**

# **Features**

There are no feature-related changes.

# **VOSS 4.2**

### **Features**

See the following section for information about feature-related changes.

### Channelization

VOSS 4.2 release adds support for channelization of 40 Gbps ports on Avaya Virtual Services Platform 8000 Series. Some commands now support a sub-port parameter to show or configure a specific channel.

# **LEDs update for Enterprise Device Manager**

VOSS 4.2 release updates Enterprise Device Manager (EDM) to display a port LED as dark pink if a protocol is down. For more information on LED colors, see Device Physical View on page 25.

# Other changes

There are no other changes.

# Chapter 3: Avaya Command Line Interface fundamentals

This section describes the Avaya Command Line Interface (ACLI).

ACLI is an industry standard command line interface that you can use for single-device management across Avaya products.

To manage multiple devices through one interface, install Configuration and Orchestration Manager (COM) on a remote server. For more information on COM documentation, see <a href="http://support.avaya.com">http://support.avaya.com</a>.

# **ACLI** command modes

ACLI has six major command modes in this release. You start your session on the switch in User EXEC mode. From User EXEC mode, you can enter Privileged EXEC mode. From Privileged EXEC mode, you can enter Global Configuration mode. From Global Configuration mode, you can enter one of the remaining modes.

Each mode provides a specific set of commands. While in a higher mode, you can access most commands from lower modes, except if they conflict with commands of your current mode.

The following list describes the command modes:

- User EXEC mode—the initial mode of access. Only a limited number of commands are available in the User EXEC mode. Most EXEC commands are one-time commands, such as show commands, which show the current configuration status. The EXEC commands are not saved across restarts.
- Privileged EXEC mode—access this mode from the User EXEC mode. The user name and
  password combination determines your access level in the Privileged EXEC mode and higher
  modes. Enter enable to access this mode from the User EXEC mode. As with the User EXEC
  mode commands, most EXEC commands are one-time commands, such as show commands,
  which show the current configuration status. The Privileged EXEC mode commands are also
  not saved across restarts.
- Global Configuration mode—access this mode from the Privileged EXEC mode. Enter config {terminal|network} to access the Global Configuration mode. Use this mode to make changes to the running configuration. If you save the configuration, these settings survive a restart of the system.

Interface Configuration mode—access this mode from the Global Configuration mode.

Enter interface {GigabitEthernet {slot/port[/sub-port] [-slot/port[/sub-port]][,...]}> | loopback <1-256> | mgmtEthernet mgmt | mlt <1-512> | vlan <1-4059>} to access the Interface Configuration mode. Use this mode to modify either a logical interface, such as a virtual local area network (VLAN), or a physical interface, such as a port or slot. You can configure the following interfaces:

- GigabitEthernet
- Loopback
- mgmtEthernet
- MLT
- VLAN
- Router Configuration mode—access this mode from the Global Configuration mode. Enter router {bgp|isis| ospf| rip| vrf WORD<1-16> | vrrp} to access the Router Configuration mode. Use this mode to modify a protocol. You can configure the following protocols:
  - BGP
  - IS-IS
  - OSPF
  - RIP
  - VRF
  - VRRP
- Application Configuration mode—access this mode from the Global Configuration mode. Enter application to access the Application Configuration mode. Use this mode to access the SLA Monitor application.

From either the Global Configuration mode or the Interface Configuration mode, you can save all of the configuration parameters (global, interface, and router) to a file. The default name for the configuration file is config.cfg. You can also use alternative file names.

You can enter most of the show commands from the User EXEC mode. In most cases, you can also enter the show commands in all of the upper-level command modes. If you need to enter a particular command mode to access a show command, the procedure prerequisites will state the required mode.

The following table lists the ACLI command modes, the prompt for each mode, and explains how to enter and exit each mode. The prompt is prefaced by the system name, for example:

- VSP-7254XSQ:1#
- VSP-7254XTQ:1(config-bgp)#
- VSP-8284XSQ:1>
- VSP-8404:1(config-if)#

Table 1: ACLI command modes

Command mode	Prompt	Command mode or enter/exit mode
User EXEC	>	This mode is the default command mode and does not require an entrance command. To exit the ACLI, enter logout.
Privileged EXEC	#	Enter enable to access the Privileged EXEC mode from the User EXEC mode. Enter disable to exit the Privileged EXEC mode, and enter the User EXEC mode. To exit the ACLI, enter logout.
Global Configuration	(config)#	From the Privileged EXEC mode, enter configure, followed by either terminal or network to access the Global Configuration mode. Enter exit to exit the Global Configuration mode, and enter the Privileged EXEC mode. To exit the ACLI, enter logout.
Interface Configuration	(config-if)# (config-mlt)#	Entry into this command mode depends on the type of configured interfaces. From the Global Configuration mode, enter interface {GigabitEthernet {slot/port[/sub-port][-slot/port[/sub-port]][,]}>   loopback <1-256>   mgmtEthernet mgmt   mlt <1-512>   vlan <2-4059>} to access the Interface Configuration mode. Enter exit to exit the Interface Configuration mode and enter the Global Configuration mode. To return to the Privileged EXEC mode, enter end. To exit the ACLI, enter logout.
Router Configuration	(config-bgp)# (config-isis)#	Entry into this command mode depends on the configured
	(config-ospf)#	protocols. Enter router {bgp  isis  ospf  rip  vrf
	(config-rip)#	WORD<1-16>   vrrp} to access the Router Configuration mode

Table continues...

Command mode	Prompt	Command mode or enter/exit mode
	(router-vrf)# (config-vrrp)#	from the Global Configuration mode. Enter exit to exit the Router Configuration mode and enter the Global Configuration mode. To return to the Privileged EXEC mode, enter end. To exit the ACLI, enter logout.
Application Configuration	(config-app)#	Enter application to access the Application Configuration mode from the Global Configuration mode. Enter exit to exit the Application Configuration mode, and enter the Global Configuration mode. To return to the Privileged EXEC mode, enter end. To exit the ACLI, enter logout.

# Default user names and passwords

The following table contains the default user names and passwords that you can use to log on to the switch using the Avaya command line interface (ACLI). For more information about how to change passwords, see *Configuring Security on Avaya Virtual Services Platform 7200 Series and 8000 Series*, NN47227-601.

Table 2: ACLI default user names and passwords

User name	Password	Description
rwa	rwa	read-write-all
rw	rw	read-write
ro	ro	read-only
11	11	layer 1
12	12	layer 2
13	13	layer 3

If you enable enhanced secure mode, the user names and passwords are different than the default values documented in the preceding table. For more information on enhanced secure mode, see *Administering Avaya Virtual Services Platform 7200 Series and 8000 Series*, NN47227-600

# Important:

The default passwords and community strings are documented and well known. Avaya strongly recommends that you change the default passwords and community strings immediately after you first log on. For more information about changing user names and passwords, see

Configuring Security on Avaya Virtual Services Platform 7200 Series and 8000 Series, NN47227-601.

# Documentation convention for the port variable

Commands that require you to enter one or more port numbers on the switch use the parameter {slot/port[/sub-port][-slot/port[/sub-port]][,...]} in the syntax. The following list specifies the rules for using {slot/port[/sub-port][-slot/port[/sub-port]][,...]}.

- {slot/port[/sub-port]} Identifies a single slot and port. If your platform supports channelization for 40 Gbps ports and the port is channelized, you must also specify the sub-port in the format slot/port/sub-port. For example, 1/1 indicates the first port on slot 1. 1/41/1 indicates the first channel on slot 1, port 1.
- {slot/port[/sub-port][-slot/port[/sub-port]][,...]}— Identifies the slot and port in one of the following formats: a single slot and port (slot/port), a range of slots and ports (slot/port-slot/port), or a series of slots and ports (slot/port,slot/port,slot/port). If your platform supports channelization for 40 Gbps ports and the port is channelized, you must also specify the sub-port in the format slot/port/sub-port. For example, 1/1–1/3 indicates ports 1 to 3 on slot 1, or 1/41/1,1/41/3 indicates the first and third channels of port 1, slot 41.

# **Command completion**

The ACLI provides potential command completions to the command string. Completions are provided by using a ? or by using the ACLI autocompletion feature:

- question mark (?)
- ACLI autocompletion

# ? command completion

The ? command completion is available for any valid command. By typing a command and using a ? as the last argument in the command, the system returns a list of possible command completions from the point of the ?. A short description is provided with each possible completion.

### Example

If you enter the following command:

```
Switch:1(config-isis) #redistribute ?
```

ACLI provides a list of completions for the redistribute ? command.

```
Switch:1(config-isis) #redistribute ?
direct isis redistribute direct command
ospf isis redistribute ospf command
rip isis redistribute rip command
static isis redistribute static command
```

All the parameters listed under redistribute indicate sub-context commands.

You must use one of the available completions, and if necessary, use the command completion help again to find the next completion.

When you see <cr> (Carriage Return/Enter Key) in the list with the additional choices, this means that no additional parameters are required to execute the ACLI command. However, the additional choices listed could be peer commands or sub-context commands.

For example, the parameters listed under redistribute direct? are peer commands. One can enter these peer commands on the same line as the root command, for example redistribute direct enable. However, the <cr> indicates that one can enter the redistribute direct command only and this command does not require any additional parameters at this level.

# **ACLI** autocompletion

ACLI autocompletion is a feature that you can use to automatically fill in the unique parts of a command string rather than typing the entire command. Autcompletion makes the ACLI experience easier and prevents mistakes in spelling that force you to re-enter the command.

Autocompletion completes the token in the command as soon as it becomes unique.

The **Tab** key autocompletes the command without executing the command, and places the cursor immediately after the last character. The **Enter** key autocompletes the command and executes it.

### **Example**

To enable redistribution of isis direct routes.

```
Switch:1(config-isis) #redistribute direct
```

When you use redistribute ?, you see four possible sub-context commands.

```
direct
static
ospf
rip
```

If you type the following without pressing **Enter**:

```
Switch:1(config-isis) #redistribute direct m
```

and press the **Tab**, the system completes the command to the following point:

```
redistribute direct metric
```

Two possible completions exist. You can type **-t**, and then press **Tab** to finish the command:

```
Switch:1(config-isis) #redistribute direct metric-type
```

# **Chapter 4: ACLI procedures**

This chapter contains information about common ACLI tasks. You can access ACLI during runtime to manage the switch.

# Logging on to the software

# Before you begin

• The first time you connect to the switch, you must log on to ACLI using the direct console port.

### About this task

After you first connect to ACLI you can log on to the software using the default user name and password. For more information about the default user names and passwords, see <u>Default user</u> <u>names and passwords</u> on page 15.

### **Procedure**

- 1. At the login prompt, enter the user name.
- 2. At the password prompt, enter the password.

# Viewing configurations

You can view the running configuration using the show command.

### **Procedure**

1. Enter Privileged EXEC mode:

enable

2. View running configuration:

```
show running-config
```

### Example

```
VSP-8284XSQ:1#show running-config
Preparing to Display Configuration...
#
```

```
# Thu Feb 05 18:38:02 2015 UTC
#!end
config terminal
#BOOT CONFIGURATION
boot config flags ftpd
boot config flags telnetd
# end boot flags
auto-recover-delay 10
#CLI CONFIGURATION
telnet-access sessions 3
password password-history 3
#SYSTEM CONFIGURATION
ip name-server primary 10.1.1.1
sys msg-control control-interval 30
sys msg-control
```

# Changing user modes in ACLI

Perform this procedure to change user modes in ACLI.

# Before you begin

· You must log on to ACLI.

### About this task

You can enter shortened versions of the commands, if the letter combination is unique.

### **Procedure**

1. Access the Privileged EXEC mode:

enable

2. Access the Global Configuration mode:

```
configure terminal
```

3. Access the Interface Configuration mode:

```
interface {GigabitEthernet {slot/port[/sub-port][-slot/port[/sub-port]][,...]}| loopback <1-256>| mgmtEthernetmgmt|mlt <1-256>| vlan <1-4059>}
```

4. Access the Router Configuration mode:

```
router {bgp [0-65535] | isis [enable] | ospf [enable] | rip [enable [vrf WORD<1-511>]] | vrf WORD<0-16> | vrrp}
```

5. Access the Application Configuration mode:

```
application
```

### **Example**

Access Privileged EXEC mode:

Switch:1> enable

Access Global Configuration mode:

Switch: 1#configure terminal

Access Interface Configuration mode for a VLAN:

Switch:1(config) #interface vlan 2

Access Router Configuration mode for BGP:

Switch:1(config-if) # router bgp

Exit back to Global Configuration mode:

Switch:1(router-bgp) # exit

Access Router Configuration mode for isis:

Switch:1(config-if) #router isis

Exit back to Global Configuration mode:

Switch:1(config-isis)#exit

Access Router Configuration mode for OSPF:

Switch:1(config) #router ospf

Exit back to Global Configuration mode:

Switch:1(router-ospf) # exit

Access Application Configuration mode:

Switch:1(config) # application

Exit back to Privileged EXEC mode:

Switch:1(config-app) # end

Exit back to User EXEC mode:

Switch: 1#disable

Exit the system:

Switch:1>exit

# Variable definitions

Use the data in the following table to use the interface command.

Variable	Value
GigabitEthernet {slot/port[/sub-port][-slot/port[/sub-port]][,]}	Logs on to the GigabitEthernet Interface Configuration mode.
	Identifies the slot and port in one of the following formats: a single slot and port (slot/port), a range of slots and ports (slot/port-slot/port), or a series of slots and ports (slot/port,slot/port,slot/port). If your platform supports channelization for 40 Gbps ports and the port is channelized, you must also specify the sub-port in the format slot/port/sub-port.
loopback <1-256>	Logs on to the loopback Interface Configuration mode. Use <1-256> to specify which interface to configure.
mgmtEthernet mgmt	Logs on to the mgmtEthernet Interface Configuration mode. Use <i>mgmt</i> for management configurations.
mlt <1-512>	Logs on to the multi-link trunking (MLT) Interface Configuration mode. Use <1-512> to specify which MLT to configure.
vlan	Logs on to the Virtual Local Area Network (VLAN) Interface Configuration mode. Use <1-4059> to specify which VLAN to configure.

Use the data in the following table to use the router command.

Variable	Value
isis [enable]	Enter IS-IS Router Configuration mode. The command router isis allows you to enter IS-IS Router Configuration mode. After the configuration, use router isis enable to enable IS-IS globally.
ospf	Enter OSPF Router Configuration mode. The command router ospf allows you to enter OSPF Router Configuration mode. After the configuration, use router ospf enable to enable OSPF globally.

Table continues...

Variable	Value
rip	Enter RIP Router Configuration mode. The command router rip allows you to enter RIP Router Configuration mode. After the configuration, use router rip enable to enable RIP globally.
vrf WORD<1-16>	Enter Virtual Router Forwarding (VRF) Router Configuration mode. Specify the VRF name to configure. The command router vrf WORD<1-16> allows you to enter VRF Router Configuration mode.
vrrp	Enter Virtual Router Redundancy Protocol Router Configuration mode.

# Saving the configuration

After you change the configuration, you must save the changes to the module. Save the configuration to a file to retain the configuration settings.

# About this task

File Transfer Protocol (FTP) and Trivial File Transfer Protocol (TFTP) support IPv4 addresses only.

### **Procedure**

1. Enter Privileged EXEC mode:

enable

2. Save the running configuration:

save config [backup WORD<1-99>] [file WORD<1-99>] [verbose]

### **Example**

Switch:1> enable

Save the configuration to the default location:

Switch: 1# save config

Identify the file as a backup file and designate a location to save the file:

Switch: 1# save config backup 46.140.54.40/configs/backup.cfg

# Variable definitions

Use the data in the following table to use the save config command.

Variable	Value	
backup WORD<1-99>	Saves the specified file name and identifies the file as a backup file.	
	WORD<1-99> uses one of the following formats:	
	• a.b.c.d: <file></file>	
	/intflash/ <file></file>	
	The file name, including the directory structure, up to 1 to 99 characters.	
file WORD<1–99>	Specifies the file name in one of the following formats:	
	/intflash/ <file></file>	
	• a.b.c.d: <file></file>	
	The file name, including the directory structure, up to 1 to 99 characters.	
verbose	Saves the default and current configuration. If you omit this parameter, the command saves only parameters you change.	

# Chapter 5: Enterprise Device Manager fundamentals

This section details Enterprise Device Manager (EDM).

EDM is a Web-based graphical user interface (GUI) you can use to configure a single switch. EDM runs from the switch and you can access it from a web browser. You do not need to install additional client software, and you can access it with all operating systems.

To manage multiple devices through one interface, install Configuration and Orchestration Manager (COM) on a remote server. For more information on COM documentation, see <a href="http://support.avaya.com">http://support.avaya.com</a>.

# **Enterprise Device Manager access**

To access EDM, open http://<deviceip>/login.html or https://<deviceip>/login.html from either Microsoft Internet Explorer or Mozilla Firefox. Ensure you use a supported browser version. For more information, see *Release Notes for VSP Operating System Software*, NN47227-401.

# **!** Important:

- You must enable the Web server from ACLI (see <u>Configuring the Web server using ACLI</u> on page 31) to enable HTTP access to the EDM. If you want HTTP access to the device, you must also disable the Web server secure-only option. The Web server secure-only option, allowing for HTTPS access to the device, is enabled by default. Avaya recommends that you take the appropriate security precautions within the network if you use HTTP
- EDM access is available to read-write users only

If you experience any issues while connecting to the EDM, check the proxy settings. Proxy settings may affect EDM connectivity to the switch. Clear the browser cache and do not use proxy when connecting to the device. This should resolve the issue.

# Default user name and password

The following table contains the default user name and password that you can use to log on to the switch using EDM. For more information about changing the passwords, see Configuring Security on Avaya Virtual Services Platform 7200 Series and 8000 Series, NN47227-601.

Table 3: EDM default username and password

Username	Password
admin	password



# Important:

The default passwords and community strings are documented and well known. Avaya strongly recommends that you change the default passwords and community strings immediately after you first log on. For more information about changing user names and passwords, see Configuring Security on Avaya Virtual Services Platform 7200 Series and 8000 Series, NN47227-601.

# **Device Physical View**

After you access EDM, the first screen displays a real-time physical view of the front panel of the device. From the front panel view, you can view fault, configuration, and performance information for the device or a single port. You can open this tab by clicking the Device Physical View tab above the device view.

You can use the device view to determine the operating status of the various ports in your hardware configuration. You can also use the device view to perform management tasks on specific objects. In the device view, you can select a port or the entire chassis. To select an object, click the object. EDM outlines the selected object in yellow, indicating your selection.

The conventions on the device view are similar to the actual device appearance. The port LEDs and the ports are color-coded to provide status. Green indicates the module or port is up and running, red indicates the module or port is disabled, dark pink indicates a protocol is down, and amber indicates an enabled port that is not connected to anything. The chassis LEDs appear on the far left.

# **EDM** window

The following figure shows the different sections of the EDM window:

 navigation tree—Located in the navigation pane on the left side of the window, the navigation tree displays all the available command tabs in a tree format. A row of buttons at the top of the navigation tree provides a quick method to perform common functions.

- menu bar—Located at the top of the window, the menu bar shows the most recently accessed primary tabs and their respective secondary tabs.
- toolbar—Located just below the menu bar, the toolbar gives you quick access to the most common operational commands such as Apply, Refresh, and Help.
- work area—Located on the right side of the window, the work area displays the dialog boxes where you can view or configure parameters on the switch.

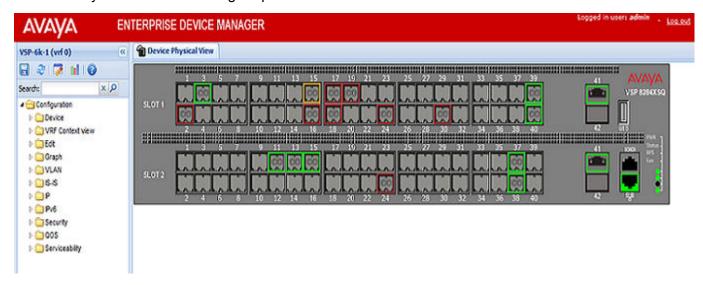


Figure 1: EDM window

# **Navigation tree**

You can use the navigation tree to see what commands are available and to quickly browse through the command hierarchy. A row of buttons at the top of the navigation tree provides a quick method to perform common functions.

The following table describes the buttons that appear at the top of the navigation tree.

**Table 4: Navigation pane buttons** 

Button	Name	Description
	Save Config	Saves the running configuration.
2	Refresh Status	Refreshes the Device Physical View.
<b>&gt;</b>	Edit	Edits the selected item in the Device Physical View.

Table continues...

Button	Name	Description
ned	Graph	Opens the graph options for the selected item in the Device Physical View.
	Help Setup Guide	Opens instructions about how to install the Help files and configure EDM to use the Help files.

Expand a folder by clicking it. Some folders have subfolders such as the Edit folder, which has the Port, Diagnostics, and SNMPv3 subfolders.

Within each folder and subfolder, there are numerous tabs. To open a tab, click it. The selected tab appears in the menu bar and opens in the work area. The following table describes the main folders in the navigation tree.

**Table 5: Navigation tree folders** 

Menu	Description
Device	Use the Device menu to refresh and update device information or enable polling.
	<ul> <li>Preference Setting — Enable polling or hot swap detection. Configure the frequency to poll the device.</li> </ul>
	Refresh Status — Use this option to refresh the device view.
	<ul> <li>Rediscover Device — Use this to trigger a rediscovery to update all of the device information.</li> </ul>
VRF Context view	Use the VRF Context view to switch to another VRF context view when you use the embedded EDM. GlobalRouter is the default view at log in. You can configure both Global Router (GRT) and Virtual Routing and Forwarding (VRF) instances when you launch a VRF context view. You can open only five tabs for each EDM session.
Edit	Use the Edit menu to view and configure parameters for the chassis or for the currently selected object. The selected object can be a port. You can also use the Edit menu to perform the following tasks:
	check and update security settings for the device
	run diagnostic tests
	<ul> <li>change the configuration of the file system, NTP, service delivery, and SNMPv3 settings for the device</li> </ul>

Table continues...

Menu	Description
Graph	Use the Graph menu to view and configure EDM statistics and to produce graphs of the chassis or port statistics.
VLAN	Use the VLAN menu to view and configure VLANs, spanning tree groups (STG), MultiLink Trunks/LACP, SMLT, and SLPP.
IS-IS	Use the IS-IS menu to view and configure IS-IS, Shortest Path Bridging MAC (SPBM) and statistics.
IP	Use the IP menu to view and configure IP routing functions for the system, including TCP/UDP, OSPF, RIP, VRRP, RSMLT, DHCP Relay, UDP forwarding, IS-IS and Policy.
IPv6	Use the IPv6 menu to view and configure IPv6 routing functions, including TCP/UDP, tunnels, and OSPF.
Security	Use the Security menu to view and configure policies, filters, and protocols such as RADIUS, SSH, and EAPOL.
QOS	Use the QOS menu to view and configure QoS mapping tables, filters, profiles, and policy statistics.
Serviceability	Use the Serviceability menu to view and configure RMON alarms and view the RMON alarm log and history log. You can use this menu to enable or disable RMON history or statistics on all ports.

# Menu bar

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

- The top row displays the tabs you can open through the navigation tree. These primary tabs appear in the sequence that you open them.
- After you click a primary tab, the secondary tabs associated with it appear in the bottom row. Click a secondary tab to open it in the work area.

In both the top and bottom rows of the menu bar, arrows appear on the left and right sides if the number of tabs exceeds the available space. Click either arrow to scroll to the tab that you want to select.

To reduce the number of tabs on the top row, you can click the X on the top right of a tab to remove it from the row. The following figure shows a samble menu bar.



Figure 2: Menu bar

# **Toolbar**

The toolbar buttons provide quick access to commonly used operational commands. The buttons that appear vary depending on the tab you select. However, the Apply, Refresh, and Help buttons are on almost every screen. Other common buttons are Insert and Delete. The following list detail the common toolbar buttons.

- Apply—Use this button to execute all edits that you make.
- · Refresh—Use this button to refresh all data on the screen.
- Help—Use this button to display online help that is context sensitive to the current dialog box.
- Insert—Use this button to display a secondary dialog box related to the selected tab. After you
  edit the configurable parameters, click the Insert button in the dialog box. This causes a new
  entry to appear in the dialog box of the selected tab.
- Delete—Use this button to delete a selected entry.

The following figure shows a sample toolbar.



Figure 3: Toolbar

# Work area

The work area is the main area on the right side of the window that displays the configuration dialog boxes. Use the work area to view or configure parameters on the switch.

The following figure is a sample work area showing the dialog box for the Port 1/3 General, Interface tab. If you want to compare the information in two dialog boxes, you can undock one, then open another tab. For more information about undocking a tab, see <u>Undocking and docking tabs</u> on page 37.

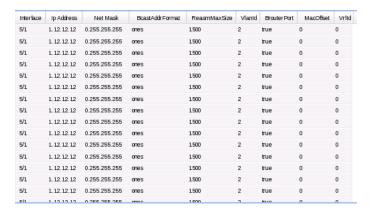


Figure 4: Work area

# **EDM** user session extension

If the EDM user session remains unused for a duration of ten minutes, the user is prompted with a dialog box with the message *Your session will expire in about 5 minute(s)*. Would you like to extend the session?.

If there is no response from the user, the EDM automatically ends the session with a message *Your session has expired* and logs out the user. If the user wants to continue using the EDM, he has to login again.

# **Chapter 6: EDM interface procedures**

This chapter contains procedures for starting and using Enterprise Device Manager (EDM). The software is built-in to the switch, and you do not need to install additional software.

# Configuring the Web server using ACLI

Perform this procedure to enable and manage the Web server using the Avaya Command Line Interface (ACLI). After you enable the Web server, you can connect to EDM.

HTTP and FTP support both IPv4 and IPv6 addresses, with no difference in functionality or configuration. The TFTP server supports both IPv4 and IPv6 addresses. The TFTP client is not supported, only the server.

### About this task

This procedure assumes that you use the default port assignments. You can change the port number used for HTTP.

# Important:

If you want to allow HTTP access to the device, then you must disable the Web server secureonly option.

### **Procedure**

1. Enter Global Configuration mode:

enable
configure terminal

2. Enable the Web server:

web-server enable

3. Display the Web server status:

show web-server

# Variable definitions

Use the data in the following table to use the web-server

Variable	Value
def-display-rows <10-100>	Configures the number of rows each page displays, between 10 and 100.
enable	Enables the Web interface. To disable the Web server, use the no form of this command:
	no web-server [enable]
help-tftp <word 0-256=""></word>	Configures the TFTP or FTP directory for Help files, in one of the following formats: a.b.c.d:/  peer:/ [ <dir>]. The path can use 0–256 characters. The following example paths illustrate the correct format:  • 47.17.82.25:/VSP_help  • 47.17.82.25:/</dir>
http-port <80-49151>	Set web server HTTP port.
https-port <443-49151>	Set web server HTTPS port.
password {ro   rw   rwa} WORD<1-20> WORD<1-20>	Configures the logon and password for the Web interface, where the first WORD<1-20> is the new logon and the second WORD<1-20> is the new password.
secure-only	Enables secure-only access for the web server.

# **Connecting to EDM**

# Before you begin

- Ensure that the switch is running.
- · Note the IP address of the switch.
- Ensure you use a supported browser version. For more information, see Release Notes for VSP Operating System Software, NN47227-401.

### About this task

Perform this procedure to connect to EDM to configure and maintain your network through a graphical user interface.

### **Procedure**

 In the address bar, enter the IP address of the system using the following formats: https:// <IP\_address> (default) or http://<IP\_address>.



By default the Web server is configured with the secure-only option, which requires you to use https to access EDM. To access EDM using http, you must disable the secure-only option. For more information about configuring the secure-only option, see Configuring the Web server using ACLI on page 31.

- 2. In the **User Name** box, type the user name. The default is admin.
- 3. In the **Password** box, type a password. The default is password.
- 4. Click **Log On**.

For information about changing the Log On credentials, see *Configuring Security on Avaya Virtual Services Platform 7200 Series and 8000 Series*, NN47227-601.

# Configuring the Web management interface

# Before you begin

· The Web server is enabled.

### About this task

Configure the Web management interface to change the usernames and passwords for management access to the switch using a Web browser.

HTTP, FTP, and TFTP server supports both IPv4 and IPv6 addresses, with no difference in functionality or configuration.

### **Procedure**

- 1. In the navigation tree, open the following folders: **Configuration > Security > Control Path**.
- Click General.
- 3. Click the Web tab.
- 4. Complete the **WebUserName** and **WebUserPassword** fields to specify the user name and password for access to the Web interface. You use the other fields to specify the path and file name for the Web Help files and to assign the number of rows in the Web display.
- 5. Click Apply.

# Web field descriptions

Use the data in the following table to use the **Web** tab.

Name	Description
HttpPort	Specifies the HTTP port for web access. The default value is 80.
WebUserName	Specifies the username from 1–20 characters. The default is admin.
WebUserPassword	Specifies the password from 1–20 characters. The default is password.

Table continues...

Name	Description
SecureOnly	Controls whether the secure-only option is enabled. The default is enabled.
HelpTftp/Ftp_SourceDir	Configures the TFTP or FTP directory for Help files, in one of the following formats: a.b.c.d:/  peer:/ [ <dir>]. The path can use 0–256 characters. The following example paths illustrate the correct format:  • 47.17.82.25:/VSP help</dir>
	• 47.17.82.25:/
DefaultDisplayRows	Configures the Web server display row width between 10–100. The default is 30.
LastChange	Shows the last Web-browser initiated configuration change.
NumHits	Shows the number of hits to the Web server.
NumAccessChecks	Shows the number of access checks performed by the Web server.
NumAccessBlocks	Shows the number of access attempts blocked by the Web server.
LastHostAccessBlocked	Shows the IP address of the last host access blocked the Web server.
NumRxErrors	Shows the number of receive errors the Web server encounters.
NumTxErrors	Shows the number of transmit errors the Web server encounters.
NumSetRequest	Shows the number of set-requests sent to the Web server.

# Using the chassis shortcut menu

# About this task

Perform the following procedure to display the chassis shortcut menu.

### **Procedure**

- 1. In the Device Physical View, select the chassis.
- 2. Right-click the chassis.

# Chassis shortcut menu field descriptions

Use the data in the following table to use the Chassis shortcut menu.

Name	Description
Edit	Edits chassis parameters.
Graph	Graphs chassis statistics.
Refresh Status	Refreshes the status of the chassis and MDAs.
Refresh Port Tooltips	Refreshes the port tooltip data of the system. The port tooltip data contains the following variables: Slot/Port, PortName, and PortOperSpeed.

# Using the port shortcut menu

### About this task

Perform this procedure to display the port shortcut menu.

### **Procedure**

- 1. In the Device Physical View, select a port.
- 2. Right-click the selected port.

# Port shortcut menu field descriptions

Use the data in the following table to use the port shortcut menu.

Name	Description
Edit General	Configures the general options for the port.
Edit IP	Configures the IP options for the port.
Graph	Displays the statistics for the port.
Enable	Enables the port.
Disable	Disables the port.

# Using a table-based tab

### About this task

Change an existing configuration using a table-based tab. You cannot edit grey-shaded fields in the table.

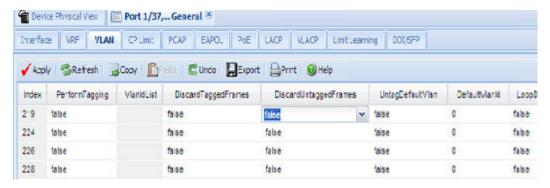


### Note:

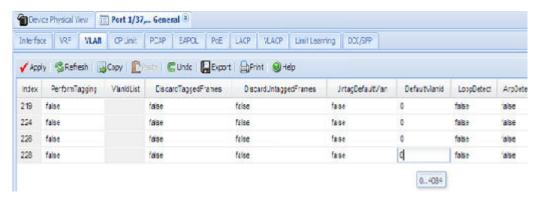
You can expand the appropriate folders for any feature you are configuring and select a tablebased tab. The following procedure is an illustration on how to use a table-based tab.

### **Procedure**

- 1. In the Device Physical View, select multiple ports.
- 2. In the navigation tree, open the following folders: **Configuration > Edit > Port > General**.
- 3. Click the **VLAN** tab. A table-based tab appears displaying the VLAN information.
- Select a table-based tab.
- 5. Double-click a white-shaded field to edit the value.
- 6. Click the arrow in the list field to view the options, and select the appropriate value.



7. In a text-entry field, double-click and edit the value.



8. Click **Apply** to save the configuration changes.

# Monitoring multiple ports and configuration support

# About this task

You can monitor or apply the same configuration changes to more than one port by using the Multiple Port Selection function. You can use the standard menu or the shortcut menu to edit the configuration settings using the Multiple Port selection. Selected ports appear within a yellow outline on the Device Physical View.

### **Procedure**

On the Device Physical View, perform one of the following to select multiple ports.

- Click and drag to select multiple adjacent ports.
  - Ensure that you click outside the first port in the group and drag the mouse pointer over the group.
- Press Ctrl and click to select multiple ports.

# Note:

Note: If you are using an embedded Enterprise Device Manager (EDM), you can select a maximum of 24 ports. However, there is no port limitation for COM users.

# Opening folders and tabs

# About this task

Perform this procedure to navigate in EDM.

### **Procedure**

- 1. In the navigation tree, click the **Configuration** folder.
- 2. Click the subfolder, for example, the **VLAN** folder.
- 3. In a folder or subfolder, click a tab to open that tab.

# **Undocking and docking tabs**

### About this task

Perform this procedure to undock a tab. You can undock tabs to have more than one tab visible at a time.

### **Procedure**

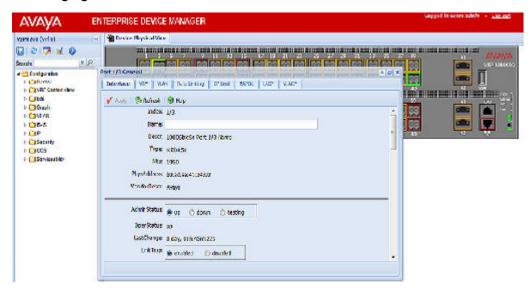
- 1. In the navigation tree, click a tab.
- 2. In the menu bar, click and drag a tab to undock it.
- 3. In the top right corner of the tab, click the pages button to dock the tab.

# **Example of undocking and docking tabs**

### **Procedure**

1. Click the **Device Physical View** tab.

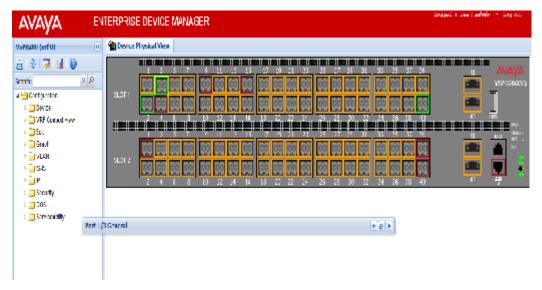
- 2. In the Device Physical View, select a port. In this example, right-click port 3.
- 3. In the Port shortcut menu, click **Edit General**.
- 4. Click and drag the Port 1/3 General tab wherever you want on the screen as shown in the following figure.



- 5. To reposition the tab anywhere on the screen, click and drag the title bar.
- 6. To manipulate the tab, click on the buttons in the top-right of the dialog box.

▲ a ×

7. Click the up arrowhead to minimize the tab as shown in the following figure.



- 8. Click the down arrowhead button to restore the tab to its original size.
- 9. Click the pages button to dock the tab back into the menu bar.

10. Click the X button to close the tab.

# **Installing EDM help files**

While the EDM GUI is bundled with the switch software, the associated EDM help files are not. To access the help files from the EDM GUI, you must install the EDM help files on a TFTP or FTP server in your network. The EDM application supports the Mozilla FireFox, version 32 and Microsoft Internet Explorer, version 8.0 browsers. Use one of these browsers. EDM performs better on Mozilla Firefox.

Use the following procedure to install the EDM help files on a TFTP or FTP server.

### **Procedure**

- 1. Download the EDM help file from Avaya.
- 2. On a TFTP or FTP server reachable from the switch, create a directory called **VSP\_Help**. Ensure that you configure the switch with the host user name and password if you use FTP.
- 3. Unzip the EDM help zip file into the directory created in step 2.
- 4. Select Configuration > Security > Control Path from the EDM navigation tree.
- 5. Click General.
- Click Web.
- 7. Enter the IP address of the file server and the path to the help files in the **HelpTFTPSourceDir** field, for example, 192.0.2.15:/home/VSP\_Help/.

# **Chapter 7: File management in EDM**

This chapter contains procedures for managing files with Enterprise Device Manager (EDM). Use the File System tab to perform the following tasks:

- Copy a file.
- Check the amount of memory used and the number of files stored in the internal flash memory.
- Verify the name, size, and storage date of each file present in the internal flash memory.

# Copying files

### About this task

Perform this procedure to copy a file.

### **Procedure**

- 1. In the navigation tree, open the following folders: **Configuration > Edit**.
- 2. Click File System.
- 3. In the **Source** field, specify the file you want to copy in one of the following form:
  - · /intflash/filename
- 4. In the **Destination** field, specify the file you want to copy in one of the following form:
  - · /intflash/filename
- 5. In the Action field, click start.
- 6. Click **Apply** to start copying the files.

The results of the copy action appear in the Result field.

# Viewing file storage information

### About this task

Perform this procedure to view the file storage information for the switch. This displays the name of the storage, the number of bytes used, and the number of bytes free.

### **Procedure**

- 1. In the navigation tree, expand the following folders: **Configuration > Edit**.
- 2. Click File System.
- 3. Click the **Device Info** tab.

# Displaying internal flash files

Display information about the files on the internal flash.

### **Procedure**

- 1. In the navigation tree, expand the following folders: **Configuration > Edit**.
- 2. Click Chassis.
- 3. Click the Flash Files tab.

# Flash Files field descriptions

Use the data in the following table to use the **Flash Files** tab.

Name	Description
Name	Specifies the directory name of the flash file.
Date	Specifies the creation or modification date of the flash file.
Size	Specifies the size of the flash file.

# **Displaying USB file information**

### About this task

Display information about the files on a USB flash device to view general file information.

## **Procedure**

- 1. In the navigation pane, expand the following folders: Configuration > Edit.
- 2. Click Chassis.
- Click the USB Files tab.

# **USB Files field descriptions**

Use the data in the following table to use the **USB Files** tab.

Name	Description
Name	Specifies the directory name of the file.
Date	Specifies the creation or modification date of the file.
Size	Specifies the size of the file.

# **Glossary**

Avaya command line interface (ACLI)

A textual user interface. When you use ACLI, you respond to a prompt by typing a command. After you enter the command, you receive a system response.

Configuration and Orchestration Manager (COM) A management system in the network, which manages multiple network devices by offering Web-based user-interfaces to the user. You must purchase and install COM separately from the individual product.

**Enterprise Device Manager (EDM)** 

A Web-based embedded management system to support single-element management. EDM provides complete configuration management functionality for the supported devices and is supplied to the customer as embedded software in the device.

graphical user interface (GUI)

A graphical (rather than textual) computer interface.

Trivial File Transfer Protocol (TFTP)

A protocol that governs transferring files between nodes without protection against packet loss.