Administering the Cisco Analog Video Gateway

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Whenever possible, configuration and management of the Cisco Analog Video Gateway module should be configured using the Video Surveillance Operations Manager (VSOM) graphical user interface.

This chapter contains the following information for administering the Cisco Analog Video Gateway module application:

Note
- The tables in these sections show only common router and network module commands.
  - To view a complete list of available commands, type **?** at the prompt

    Example: `Router(config-if)#` **?**

  - To view a complete list of command keyword options, type **?** at the end of the command

    Example: `Router#` **service-module video-service-engine ?**

- The commands are grouped in the tables by the configuration mode in which they are available. If the same command is available in more than one mode, it can act differently in each mode.

Shutting Down and Starting Up the Cisco Analog Video Gateway Application

To start up or shut down the network module or the Cisco Analog Video Gateway application that runs on the module, use **shutdown** and **startup** commands as needed from Table 2.

Note
- Some shutdown commands can potentially disrupt service. If command output for such a command displays a confirmation prompt, confirm by pressing **Enter** or cancel by typing **n** and pressing **Enter**. Alternatively, prevent the prompt from displaying by using the **no-confirm** keyword.

- Some commands shut down the module or application and then immediately restart it.

Table 2   Common Shutdown and Startup Commands

Configuration Mode	Command	Purpose
`Router#`	**service-module video-service-engine** *slot***/0 reload**	Shuts down the module operating system gracefully, and then restarts it from the boot loader.
`Router#`	**service-module video-service-engine** *slot***/0 reset**	Resets the hardware on a module. Use only to recover from shutdown or a failed state. ⚠️ **Caution** Use this command with caution. It does *not* provide an orderly software shutdown, and it can impact file operations that are in progress.
`Router#`	**service-module video-service-engine** *slot***/0 session**	Accesses the specified network module and begins a module configuration session.
`Router#`	**service-module video-service-engine** *slot***/0 shutdown**	Shuts down the module operating system gracefully. Use this command sequence when removing or replacing a hot-swappable module during online insertion and removal (OIR).
`Router#`	**service-module video-service-engine** *slot***/0 status**	Displays configuration and status information for the module hardware and software.
`Router(config)#`	**shutdown**	Shuts down the entire system (host router and network module) gracefully.
`VSE-Module bootloader>`	**boot**	Starts the boot loader, boot helper, or application.
`VSE-Module(offline)>`	**reload**	Performs a graceful halt and reboot of the module operating system.

Table 2   Common Shutdown and Startup Commands (continued)

Configuration Mode	Command	Purpose
`VSE-Module>`	**reboot**	Shuts down the module without first saving configuration changes, and then reboots the module from the boot loader.
`VSE-Module>`	**reload**	Shuts down the module gracefully, and then reboots the module from the boot loader.
`VSE-Module>`	**shutdown**	Shuts down the module application gracefully, and then shuts down the module.

Backing Up and Restoring Configurations

To back up or restore configuration settings or to manage previous backups, use commands listed in Table 3.

Table 3   Common Backup and Restore Commands

Configuration Mode	Command	Purpose
`VSE-Module(config)>`	**backup revisions**	Specifies the number of previous backups to keep on the server. A value of zero causes all previous backups to be removed and only the current one kept.
`VSE-Module(config)>`	**backup server**	Configures an external FTP backup server for storage.
`VSE-Module(offline)>`	**backup category**	Performs a backup of the configuration files to a backup server.
`VSE-Module(offline)>`	**backup revisions**	Specifies the number of previous backups to keep on the server. A value of zero causes all previous backups to be removed and only the current one kept.
`VSE-Module(offline)>`	**backup server**	Configures an external FTP backup server for storage.
`VSE-Module(offline)>`	**restore**	Restores the system to its factory default configuration or to the specified backup.
`VSE-Module(offline)>`	**show backup**	Displays information about previous backups and about the configured backup server.
`VSE-Module>`	**show backup**	Displays information about previous backups and about the configured backup server.

Verifying System Status

To verify the status of an installation, upgrade, or downgrade, or to troubleshoot problems, use verification and troubleshooting commands as needed from Table 4.

Note Among keyword options for many **show** commands is the provision to display diagnostic output on your screen or to pipe it to a file or a URL.

Table 4 Common Verification and Troubleshooting Commands

Configuration Mode	Command	Purpose
`Router#`	**ping**	Pings a specified IP address to check network connectivity (does not accept a hostname as destination).
`Router#`	**show arp**	Displays the current Address Resolution Protocol (ARP) table.
`Router#`	**show clock**	Displays the current date and time.
`Router#`	**show configuration**	Displays the current boot loader configuration as entered by means of the **configure** command.
`Router#`	**show controllers video-service-engine**	Displays interface debug information.
`Router#`	**show diag**	Displays standard Cisco IOS diagnostics information, including information about Cisco Analog Video Gateway.
`Router#`	**show hardware**	Displays information about network module and host-router hardware.
`Router#`	**show hosts**	Displays the default domain name, style of name lookup, list of name-server hosts, and cached list of hostnames and addresses
`Router#`	**show interfaces**	Displays information about all hardware interfaces, including network and disk.
`Router#`	**show interfaces video-service-engine**	Displays information about the module side of the router-module interface.
`Router#`	**show ntp status**	Displays information about Network Time Protocol (NTP).
`Router#`	**show processes**	Displays a list of the application processes that are running.
`Router#`	**show running-config**	Displays the configuration commands that are in effect.
`Router#`	**show startup-config**	Displays the startup configuration.

Table 4   Common Verification and Troubleshooting Commands (continued)

Configuration Mode	Command	Purpose
`Router#`	**show tech-support**	Displays general information about the host router that is useful to Cisco technical support for problem diagnosis.
`Router#`	**show version**	Displays information about the loaded router-software or network module-boot loader version and also hardware and device information.
`Router#`	**test scp ping**	Pings the network module to check network connectivity.
`Router#`	**verify**	Displays version information for installed hardware and software.
`VSE-Module>`	**ping**	Pings a specified IP address to check network connectivity (does not accept a hostname as destination).
`VSE-Module>`	**show arp**	Displays the current Address Resolution Protocol (ARP) table.
`VSE-Module>`	**show clock**	Displays the current date and time.
`VSE-Module>`	**show config**	Displays the current boot loader configuration as entered by the **configure** command.
`VSE-Module>`	**show hosts**	Displays the default IP domain name, lookup style, name servers, and host table.
`VSE-Module>`	**show interfaces**	Displays information about the network module interfaces.
`VSE-Module>`	**show ntp status**	Displays information about Network Time Protocol (NTP).
`VSE-Module>`	**show processes**	Displays a list of the application processes that are running.
`VSE-Module>`	**show running-config**	Displays the configuration commands that are in effect.
`VSE-Module>`	**show software directory download**	Displays the contents of the downgrade or download directory on the download FTP file server.
`VSE-Module>`	**show software download server**	Displays the name and IP address of the configured download FTP file server.
`VSE-Module>`	**show software licenses**	Displays license information for installed packages.
`VSE-Module>`	**show software packages**	Displays version information for installed packages.
`VSE-Module>`	**show software versions**	Displays version information for installed software.
`VSE-Module>`	**show startup-config**	Displays the startup configuration.

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Table 4   Common Verification and Troubleshooting Commands (continued)

Configuration Mode	Command	Purpose
VSE-Module>	**show tech-support**	Displays general information about the network module that is useful to Cisco technical support for problem diagnosis.
VSE-Module>	**show trace**	Displays the contents of the trace buffer.
VSE-Module>	**show version**	Displays information about the loaded router-software or network module-boot loader version and also hardware and device information.
VSE-Module>	**software remove**	Removes downloaded files (all files, downloaded package and payloads, or stored downgrade files created during an upgrade).

Diagnostics and Logging Options

To configure logging options for Cisco Analog Video Gateway, use logging commands as needed from Table 5.

Note Among keyword options for many **log** and **trace** commands is the provision to display diagnostic output on your screen or to save it to a file or a URL.

Table 5   Common Logging Commands

Configuration Mode	Command	Purpose
VSE-Module>	**log console monitor**	Configures error logging by means of console logging (logged messages are displayed on the console).
VSE-Module(config)>	**log console**	Configures error logging by means of console logging (logged messages are displayed on the console).
VSE-Module(config)>	**log server**	Configures error logging by means of a system-log (syslog) server (syslog is an industry-standard protocol for capturing log information for devices on a network).

Diagnostics are of two types:

- System log (syslog)—Syslog is an industry-standard protocol for capturing the following events:
  - Fatal exceptions that cause an application or system crash, during which normal error-handling paths are typically nonfunctional
  - Application run-time errors that cause unusual conditions and configuration changes

  The syslog file size is fixed at 10 MB. Syslog configurations survive a power failure.

- Traces—Trace logs capture events related to the progress of a request through the system.

  Trace logs survive a CPU reset; trace configurations survive a power failure. Log and display these with the **trace** commands.

To generate and display syslog and trace diagnostics, use trace commands as needed from Table 6.

Table 6   Common Trace Commands

Configuration Mode	Command	Purpose
SE-Module>	**clear trace**	Clears logged trace events for specified modules.
SE-Module>	**log trace**	Logs configured traces to the network module (can be done locally or remotely).
SE-Module>	**no trace**	Disables tracing for specified modules, entities, or activities.
SE-Module>	**show errors**	Displays error statistics by module, entity, or activity.
SE-Module>	**show trace**	Displays trace settings.
SE-Module>	**show trace buffer**	Displays the contents of the trace buffer.
SE-Module>	**show trace store**	Displays the contents of the traced messages that are stored.
SE-Module>	**trace**	Enables tracing (that is, generates error reports) for specified modules, entities, or activities.

Adding a DNS Server (Optional)

Cisco Analog Video Gateway uses a cache-only domain name system (DNS) server that listens on port 53 for both User Datagram Protocol (UDP) and Transmission Control Protocol (TCP) packets. A typical use for such a server is to enable the application to continue operation in a branch office when the WAN is down and the server is on the other side of the WAN in an enterprise or service-provider data center.

The DNS server cache policy is to automatically revalidate a cached entry when its time to live (TTL) expires, and to discard an entry only when the parent DNS server is accessible and no longer contains the name. This differs from most DNS caches, which simply discard an entry when the TTL expires.

Note
- Steps 1 and 2 opens the host router CLI and accesses the network module. The remaining steps configure the module return you to the host router CLI.

- Open, close, and clear a module session as described in the "Opening and Closing a Network Module Session" section on page 14.

SUMMARY STEPS

From the Host-Router CLI

1. **service-module video-service-engine** *slot***/0 session**

From the Service-Module Interface

2. **configure terminal**

3. **hostname** *hostname*

4. **ip domain-name** *domain*

5. **ip name-server** *<ip-address>* [*<ip-address>* …]

6. **exit**

7. **show hosts**

8. **write**

9. **Control-Shift-6 x**

From the Host-Router CLI

10. **service-module video-service-engine** *slot***/0 session clear**

DETAILED STEPS

	Command or Action	Purpose
	From the Host-Router CLI	

Step 1	`service-module video-service-engine` *slot*`/0 session`
	
	Example:
	`Router# service-module video-service-engine 2/0 session`
		Opens a Cisco Analog Video Gateway module session.

	From the Service-Module Interface	

Step 2	`configure terminal`
	
	Example:
	`VSE-Module> configure terminal`
		Enters global configuration mode on the module.

Step 3	`hostname` *hostname* **Example:** `VSE-Module(config)> hostname hostname1`	Specifies the DNS server hostname. The default is Router.
Step 4	`ip domain-name` *domain* **Example:** `VSE-Module(config)> ip domain-name domain1.com`	Defines a default domain name for use in completing unqualified hostnames (names without a dotted-decimal domain name).
Step 5	`ip name-server` *ip-address* [*<ip-address>* …] **Example:** `VSE-Module(config)> ip name-server 10.0.0.0`	Specifies the IP address for one or more DNS servers. The argument is as follows: • *ip-address*—Server IP address

Step 6	`exit`
	
	Example:
	`VSE-Module(config)> exit`
		Exits global configuration mode on the module.

	Command or Action	Purpose

Step 7	`show hosts`
	
	Example:
	`VSE-Module> show hosts`
		Displays the default domain name, style of name lookup, list of name-server hosts, and cached list of hostnames and addresses.

Step 8	`write`
	
	Example:
	`VSE-Module> write`
		Saves the new running configuration of the module.

Step 9	Press **Control-Shift-6 x**.	Closes the module session.
	From the Host-Router CLI	

Step 10	`service-module video-service-engine` *slot*`/0`
	`session clear`
	
	Example:
	`Router# service-module video-service-engine 1/0`
	`session clear`
		Clears the module session for the specified module. When prompted to confirm this command, press **Enter**.

Additional References

The following sections provide references related to the Cisco Analog Video Gateway application.

Related Documents

Related Topic	Document Title
Cisco Analog Video Gateway and the Video Surveillance Solution	• *Release Notes for the Cisco Video Management and Storage System* • *Connecting Cisco Analog Video Gateway Network Modules to the Network* • *Cisco Analog Video Gateway Installation and Upgrade Guide* • *Cisco Analog Video Gateway XML API Guide* • *Connecting Cisco Video Management and Storage System Enhanced Network Modules to the Network* • *Cisco Video Management and Storage System Installation and Upgrade Guide* • *Cisco Video Management and Storage System CLI Administrator Guide* • *Connecting Cisco Integrated Storage System Enhanced Network Modules to the Network* • *Cisco Integrated Storage System Installation and Upgrade Guide* • *Cisco Integrated Storage System CLI Administrator Guide* • *Open Source License Notice*
Cisco IOS software	*Cisco IOS Software*
Network modules	*Installing Cisco Network Modules in Cisco Access Routers*
Technical documentation, including feedback and assistance	*What's New in Cisco Product Documentation* (including monthly listings of new and revised documents)

Technical Assistance

Description	Link
For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at: Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.	http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html
Cisco Feature Navigator website	http://www.cisco.com/go/cfn Use Cisco Feature Navigator to find information about platform support and Cisco IOS and Catalyst OS software image support. An account on Cisco.com is not required.
Cisco Software Center website	http://www.cisco.com/public/sw-center/