



Configuring System Management

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Information About Cisco VSG System Management

The Cisco Virtual Security Gateway (VSG) enables you to use command-line interface (CLI) configuration commands to do standard system management functions such as the following:

- Changing the hostname
- Configuring messages of the day
- Displaying, saving, and erasing configuration files
- Providing a single interface to all file systems including:
 - Flash memory
 - FTP and TFTP
 - Running configuration
 - Any other endpoint for reading and writing data
- Identifying users connected to the Cisco VSG
- Sending messages to single users or all users

Changing the Cisco VSG Instance Name

You can change the Cisco VSG instance name or prompt. If you have multiple instances of Cisco VSGs, you can use this procedure to uniquely identify each Cisco VSG.

Before You Begin

Before beginning this procedure, log in to the CLI in global configuration mode.

SUMMARY STEPS

1. `vsg# configure`
2. `vsg(config)# hostname host-name`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# configure</code>	Places you in global configuration mode.
Step 2	<code>vsg(config)# hostname <i>host-name</i></code>	Changes the host prompt. The <i>host-name</i> argument can have a maximum of 32 alphanumeric characters.

This example shows how to change the hostname (name of the Cisco VSG):

```
vsg# configure
vsg(config)# hostname metro
vsg(config)# exit
```

Configuring a Message of the Day

You can configure a message of the day (MOTD) to display at the login prompt.

- The banner message can be up to 40 lines with up to 80 characters per line.
- Use the following guidelines when choosing your delimiting character:
 - Do not use the delimiting character in the message string.
 - Do not use " and % as delimiters.
- The following tokens can be used in the message of the day:
 - \$(hostname) displays the hostname for the switch.
 - \$(line) displays the vty or tty line or name.

Before You Begin

Before beginning this procedure, log in to the CLI in configuration mode.

SUMMARY STEPS

1. vsg# **configure**
2. vsg(config)# **banner motd** [*delimiting-character message delimiting-character*]
3. vsg(config)# **show banner motd**

DETAILED STEPS

	Command or Action	Purpose
Step 1	vsg# configure	Places you in global configuration mode.
Step 2	vsg(config)# banner motd [<i>delimiting-character message delimiting-character</i>]	Configures an MOTD with the following limits: <ul style="list-style-type: none"> • Up to 40 lines • Up to 80 characters per line • Enclosed in a delimiting character, such as # • Can span multiple lines • Can use tokens
Step 3	vsg(config)# show banner motd	Displays the configured banner message.

This example shows how to configure an MOTD:

```
vsg# configure
vsg(config)# banner motd December 12, 2010 Welcome to the VSG
vsg(config)# show banner motd
December 12, 2010 Welcome to the VSG
```

Verifying the Cisco VSG Configuration

To verify the Cisco VSG configuration, enter the following commands:

Command	Purpose
vsg# show version	Displays the versions of system software and hardware that are currently running on the Cisco VSG.
vsg# show running-config	Displays the versions of system software and hardware that are currently running on the Cisco VSG.
vsg# show running-config diff	Displays the difference between the startup configuration and the running configuration.

Example of show version

```
vsg# show version
Cisco Nexus Operating System (NX-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2011, Cisco Systems, Inc. All rights reserved.
The copyrights to certain works contained herein are owned by
other third parties and are used and distributed under license.
Some parts of this software are covered under the GNU Public
License. A copy of the license is available at
http://www.gnu.org/licenses/gpl.html.
kickstart: version 4.2(1)VSG1(4) [build 4.2(1)VSG1(4)]
system: version 4.2(1)VSG1(4) [build 4.2(1)VSG1(4)]
kickstart image file is: [not present on supervisor]
kickstart compile time: 05/12/2013 17:00:00
system image file is: bootflash:/nexus-1000v-mz.VSG1.0.398.bin
system compile time: 05/12/2013 17:00:00 [05/12/2013 13:03:38]
Hardware
cisco Nexus 1000VF Chassis ("Nexus VSN Virtual Firewall")
Intel(R) Xeon(R) CPU with 1944668 kB of memory.
Processor Board ID T5056BB0072
Device name: vsg
bootflash: 2059572 kB
Kernel uptime is 1 day(s), 5 hour(s), 47 minute(s), 4 second(s)
plugin
Core Plugin, Virtualization Plugin, Ethernet Plugin
```

Example of show running-config

```
vsg# show running-config
!Command: show running-config
!Time: Sun May 12 17:42:59 2013
version 4.2(1)VSG1(4)
no feature telnet
no feature http-server
username adminbackup password 5 $1$Oip/C5Ci$oOdx7oJS1BCFpNRmQK4na. role network-operator
username admin password 5 $1$RU5OIPU7$SYvoK9S5rOMRE9WBWZLsA. role network-admin
username vsnbetauser password 5 $1$Fg4u8Mcf$xr8cSVV1gBb0ATZU8eVbB. role network-admin
banner motd #Nexus VSN#
```

```

ssh key rsa 2048
ip domain-lookup
ip domain-lookup
hostname vsg
snmp-server user admin network-admin auth md5 0x5ed3cfea7c44550ac3d18475f28b118b priv
0x5ed3cfea7c44550ac3d18475f28b118b localizedkey
snmp-server user vsnbetauser network-admin auth md5 0x11d89525029e4148a2a494a8e131f9ed
priv 0x11d89525029e4148a2a494a8e131f9ed localizedkey
vrf context management
ip route 0.0.0.0/0 10.193.72.1
vlan 1
port-channel load-balance ethernet source-mac
port-profile default max-ports 32
vdc vsg id 1
limit-resource vlan minimum 16 maximum 2049
limit-resource monitor-session minimum 0 maximum 2
limit-resource vrf minimum 16 maximum 8192
limit-resource port-channel minimum 0 maximum 768
limit-resource u4route-mem minimum 32 maximum 32
limit-resource u6route-mem minimum 16 maximum 16
limit-resource m4route-mem minimum 58 maximum 58
limit-resource m6route-mem minimum 8 maximum 8
interface mgmt0
ip address 10.193.73.118/21
interface data0
ip address 118.1.1.1/8
line console
boot kickstart bootflash:/nexus-1000v-kickstart-mzg.VSG1.0.1.bin sup-1
boot system bootflash:/nexus-1000v-mzg.VSG1.0.1.bin sup-1
boot kickstart bootflash:/nexus-1000v-kickstart-mzg.VSG1.0.1.bin sup-2
boot system bootflash:/nexus-1000v-mzg.VSG1.0.1.bin sup-2
ha-pair id 23
security-profile sp1
policy p1
rule r1
action 10 permit
policy p1
rule r1 order 10
vnm-policy-agent
policy-agent-image
registration-ip 0.0.0.0
shared-secret *****
log-level info

```

Example of show running-config diff

```

vsg# show running-config diff
*** Startup-config
--- Running-config
*****
*** 14,34 ****
banner motd #Nexus VSG#
ssh key rsa 2048
ip domain-lookup
ip domain-lookup
! switchname G-VSG-116-1
snmp-server user admin network-admin auth md5 0x5ed3cfea7c44550ac3d18475f28b118b priv
0x5ed3cfea7c44550ac3d18475f28b118b localizedkey
snmp-server user vsnbetauser network-admin auth md5 0x11d89525029e4148a2a494a8e131f9ed
priv 0x11d89525029e4148a2a494a8e131f9ed localizedkey
vrf context management
ip route 0.0.0.0/0 10.193.72.1
vlan 1
port-channel load-balance ethernet source-mac
port-profile default max-ports 32
! vdc G-VSG-116-1 id 1
limit-resource vlan minimum 16 maximum 2049
limit-resource monitor-session minimum 0 maximum 2
limit-resource vrf minimum 16 maximum 8192
limit-resource port-channel minimum 0 maximum 768
limit-resource u4route-mem minimum 32 maximum 32
--- 13,33 ----

```

```

banner motd #Nexus VSG#
ssh key rsa 2048
ip domain-lookup
ip domain-lookup
! hostname vsg
snmp-server user admin network-admin auth md5 0x5ed3cfea7c44550ac3d18475f28b118b priv
0x5ed3cfea7c44550ac3d18475f28b118b localizedkey
snmp-server user vsnbetauser network-admin auth md5 0x11d89525029e4148a2a494a8e131f9ed
priv 0x11d89525029e4148a2a494a8e131f9ed localizedkey
vrf context management
ip route 0.0.0.0/0 10.193.72.1
vlan 1
port-channel load-balance ethernet source-mac
port-profile default max-ports 32
! vdc vsg id 1
limit-resource vlan minimum 16 maximum 2049
limit-resource monitor-session minimum 0 maximum 2
limit-resource vrf minimum 16 maximum 8192
limit-resource port-channel minimum 0 maximum 768
limit-resource u4route-mem minimum 32 maximum 32

```

Displaying Interface Configurations

To display interface configurations, enter the following commands:

Command	Purpose
<code>vsg# show interface {type} {name} brief</code>	Displays a brief view of a specific interface configuration.
<code>vsg# show interface {type} {name}</code>	Displays a detailed version of a specific interface connection.
<code>vsg# show interface brief</code>	Displays a brief view of all interfaces.
<code>vsg# show running-config interface</code>	Displays the running configuration for all interfaces on your system.

Example of show interface brief

```
vsg# show interface brief
```

```
-----
Port VRF Status IP Address Speed MTU
-----
```

```
mgmt0 -- up 10.193.73.10 1000 1500
-----
```

```
Port VRF Status IP Address Speed MTU
-----
```

```
data0 -- up 10.10.10.10 1000 1500
vsg#
-----
```

Example of show interface

```
vsg# show interface mgmt 0
```

```
mgmt0 is up
Hardware: Ethernet, address: 0050.5689.3321 (bia 0050.5689.3321)
Internet Address is 172.23.232.141/24
MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
reliability 255/255, txload 1/255, rxload 1/255
```

```

Encapsulation ARPA
full-duplex, 1000 Mb/s
Auto-Negotiation is turned on
4961 packets input, 511995 bytes
0 multicast frames, 0 compressed
0 input errors, 0 frame, 0 overrun, 0 fifo
245 packets output, 35853 bytes
0 underrun, 0 output errors, 0 collisions
0 fifo, 0 carrier errors

```

Example of show interface brief

```
vsg# show interface brief
```

```

-----
Port VRF Status IP Address Speed MTU
-----
mgmt0 -- up 10.23.232.141 1000 1500
-----
Ethernet VLAN Type Mode Status Reason Speed Port
Interface Ch #
-----
Eth3/2 1 eth trunk up none 1000(D) --
Eth3/3 262 eth access up none 1000(D) --
-----
Interface VLAN Type Mode Status Reason MTU
-----
Veth81 630 virt access up none 1500
Veth82 630 virt access up none 1500
Veth224 631 virt access up none 1500
Veth225 1 virt access nonPcpt nonParticipating 1500

```

Example of show running-config interface

```
vsg# show running-config interface
```

```

!Command: show running-config interface
!Time: Sun Jul 17 16:29:08 2011
version 4.2(1)VSG1(2)
interface mgmt0
ip address 10.193.73.10/16
interface data0
ip address 10.10.10.10/24

```

Saving a Configuration

You can save the running configuration to the startup configuration, so that your changes are retained in the startup configuration file the next time you start up the Cisco VSG.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI in any command mode.

SUMMARY STEPS

1. vsg(config)# copy running-config startup-config

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg(config)# copy running-config startup-config</code>	Saves the running configuration to the startup configuration.

This example shows how to save a configuration.

```
vsg(config)# copy running-config startup-config
[#####] 100%
```

Erasing a Configuration

You can erase a startup configuration.

**Caution**

The **write erase** command erases the entire startup configuration with the exception of loader functions.

Before You Begin

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI.
- The following parameters are used with this command:
 - **boot**—Erases the boot variables and the mgmt0 IP configuration.
 - **debug**—Erases the debug configuration.

SUMMARY STEPS

1. `vsg(config)# write erase [boot | debug]`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg(config)# write erase [boot debug]</code>	Erases the existing startup configuration and reverts all settings to their factory defaults. The running configuration is not affected.

This is an example of write erase command:

```
vsg(config)# write erase debug
Warning: This command will erase the startup-configuration.
Do you wish to proceed anyway? (y/n) [y]
[#####] 100%
```


Navigating the File System

Specifying File Systems

The syntax for specifying a file system is <file system name>:[//server/].

Table 1: File System Syntax Components

File System Name	Server	Description
bootflash:	sup-active sup-local sup-1 module-1	Internal memory located on the active supervisor used for storing system images, configuration files, and other miscellaneous files. The CLI defaults to the bootflash: file system.
	sup-standby sup-remote sup-2 module-2	Internal memory located on the standby supervisor used for storing system images, configuration files, and other miscellaneous files.
volatile:	—	Volatile random-access memory (VRAM) located on a supervisor module used for temporary or pending changes.

Identifying Your Current Working Directory

You can display the directory name of your current location in the CLI.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI.

SUMMARY STEPS

1. vsg#pwd

DETAILED STEPS

	Command or Action	Purpose
Step 1	vsg#pwd	Displays the directory name of your current location in the CLI.

This example shows how to display the directory name of your current location in the Cisco VSG CLI:

```
vsg# pwd
bootflash:
```

Changing Your Directory

You can change directories in the CLI.

Before You Begin

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in any command mode.
- The Cisco VSG CLI defaults to the bootflash: file system.



Note Any file saved in the volatile: file system is erased when the Cisco VSG reboots.

SUMMARY STEPS

1. vsg#**pwd**
2. vsg#**cd***directory_name*

DETAILED STEPS

	Command or Action	Purpose
Step 1	vsg# pwd	Displays the directory name of your current CLI location.
Step 2	vsg# cd <i>directory_name</i>	Changes your CLI location to the specified directory.

This example shows how to display the directory name of the current Cisco VSG CLI location and how to change the CLI location to the specified directory:

```
vsg# pwd
bootflash:
vsg# cd volatile:
vsg# pwd
volatile:
```

Listing the Files in a File System

You can display the contents of a directory or file.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI in any command mode.

SUMMARY STEPS

1. `vsg# dir[directory]filename]`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# dir[directory]filename]</code>	Displays the contents of a directory or file. Ending an argument with a slash indicates a directory and displays the contents of that directory.

This example shows how to display the contents of a directory:

```
vsg# dir lost+found/
49241 May 01 09:30:00 2013 diagclient_log.2613
12861 May 01 09:29:34 2013 diagmgr_log.2580
31 May 01 09:28:47 2013 dmesg
1811 May 01 09:28:58 2013 example_test.2633
89 May 01 09:28:58 2013 libdiag.2633
42136 May 01 16:34:34 2013 messages
65 May 01 09:29:00 2013 otm.log
741 May 01 09:29:07 2013 sal.log
87 May 01 09:28:50 2013 startupdebug
Usage for log://sup-local
51408896 bytes used
158306304 bytes free
209715200 bytes total
```

Identifying Available File Systems for Copying Files

You can identify the file systems that you can copy to or from.

Before You Begin

Before using this procedure, you must be logged in to the CLI in EXEC mode.

SUMMARY STEPS

1. `vsg# copy ?`
2. `vsg# copy filename ?`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# copy ?</code>	Displays the source file systems available to the copy command.

	Command or Action	Purpose
Step 2	vsg# copy filename ?	Displays the destination file systems available to the copy command for a specific file.

This example shows how to display the source file systems available to the copy command and how to display the destination file systems available to the copy command for the specified file name:

```
vsg# copy ?
bootflash: Select source filesystem
core: Select source filesystem
debug: Select source filesystem
ftp: Select source filesystem
licenses Backup license files
log: Select source filesystem
nvram: Select source filesystem
running-config Copy running configuration to destination
scp: Select source filesystem
sftp: Select source filesystem
startup-config Copy startup configuration to destination
system: Select source filesystem
tftp: Select source filesystem
volatile: Select source filesystem

vsg# copy filename ?
bootflash: Select destination filesystem
debug: Select destination filesystem
ftp: Select destination filesystem
log: Select destination filesystem
modflash: Select destination filesystem
nvram: Select destination filesystem
running-config Copy from source to running configuration
scp: Select destination filesystem
sftp: Select destination filesystem
startup-config Copy from source to startup configuration
system: Select destination filesystem
tftp: Select destination filesystem
volatile: Select destination filesystem
```

Using Tab Completion

You can have the CLI complete a partial filename in a command.



Note

Before using this procedure, you must be logged in to the CLI in EXEC mode.

Command	Purpose
vsg# show file <i>fileSystemName:partialFileName<TAB></i>	<p>Completes the filename when Tab is pressed, if the characters you typed are unique to a single file.</p> <p>If not, the CLI lists a selection of filenames that match the characters you typed.</p> <p>You can then retype enough characters to make the filename unique. The CLI completes the filename for you.</p>

Command	Purpose
vsg# show file bootflash:c <TAB>	Completes the filename for you.

This example shows how to display a selection of available files when you press the Tab key after you have typed enough characters that are unique to a file or set of files:

```
vsg# show file bootflash:nex<Tab>
bootflash:nexus-1000v-dplug-mzg.VSG1.0.1.bin
bootflash:nexus-1000v-kickstart-mzg.VSG1.0.1.bin
bootflash:nexus-1000v-mzg.VSG1.0.1.bin
bootflash:nexus-1000v-mzg.VSG1.0.2.bin
```

This example shows how to complete a command by pressing the Tab key when you have already entered the first unique characters of a command:

```
vsg# show file bootflash:c<Tab>
-----BEGIN RSA PRIVATE KEY-----
MIICXgIBAAKBgQDSq93Br1Hcg3bX1jXDMY5c9+yZSST3VhuQBqogvCPDGeLecA+j
...
...
```

Copying and Backing Up Files

You can copy a file, such as a configuration file, to save it or reuse it at another location. If your internal file systems are corrupted, you could potentially lose your configuration. Save and back up your configuration files periodically. Also, before installing or migrating to a new software configuration, back up the existing configuration files.

Before You Begin

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI in any command mode.
- If you are copying to a remote location, make sure that your device has a route to the destination. Your device and the remote destination must be in the same subnetwork if you do not have a router or default gateway to route traffic between subnets.
- The ping command to make sure that your device has connectivity to the destination.
- Make sure that the source configuration file is in the correct directory on the remote server.
- Make sure that the permissions on the source file are set correctly. Permissions on the file should be set to world-read.



Note

Use the dir command to ensure that enough space is available in the destination file system. If enough space is not available, use the delete command to remove unneeded files.

SUMMARY STEPS

1. vsg# **copy**[source filesystem:]filename [destination filesystem:]filename

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# copy [source filesystem:]filename [destination filesystem:]filename</code>	Copies a file from the specified source location to the specified destination location.

This example shows how to copy a file from a specified source location and move it to a specified destination location:

```
vsg# copy system:running-config tftp://10.10.1.1/home/configs/vsg3-run.cfg
Enter vrf (If no input, current vrf 'default' is considered):
Trying to connect to tftp server.....
Connection to Server Established.
TFTP put operation successful
```

Creating a Directory

You can create a directory at the current directory level or at a specified directory level.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI in any command mode.

SUMMARY STEPS

1. `vsg# mkdir {bootflash: | debug: | volatile:} directory-name`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# mkdir {bootflash: debug: volatile:} directory-name</code>	Creates a directory at the current directory level.

This example shows how to create a directory called test in the bootflash: directory:

```
vsg# mkdir bootflash:test
```

Removing an Existing Directory

You can remove an existing directory from the flash file system.

Before You Begin

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI.

- This command is valid only on flash file systems.
- Before you can remove it, the directory must be empty.

SUMMARY STEPS

1. `vsg# rmdir {bootflash: | debug: | volatile:} directory_name`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# rmdir {bootflash: debug: volatile:} directory_name</code>	Removes a directory as long as the directory is empty.

This example shows how to remove the directory called test in the bootflash: directory:

```
vsg# rmdir bootflash:test
```

Moving Files

You can move a file from one location to another location.

Before You Begin

Before beginning this procedure, you must know or do the following:

- You are logged in to the CLI.
- The copy does not complete if there is not enough space in the destination directory.



Caution

If a file with the same name already exists in the destination directory, that file is overwritten by the file that you move.

SUMMARY STEPS

1. `vsg# move {source_path_and_filename} {destination_path_and_filename}`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# move {source_path_and_filename} {destination_path_and_filename}</code>	Moves a file from the source directory to the destination directory.

This example shows how to move a file from one directory to another in the same file system:

```
vsg# move bootflash:samplefile bootflash:mystorage/samplefile
vsg# move samplefile mystorage/samplefile
```

Deleting Files or Directories

You can delete files or directories on a Flash memory device.

Before You Begin

Before beginning this procedure, you must know or do the following:

- If you try to delete the configuration file or image specified by the CONFIG_FILE or BOOTLDR environment variable, the system prompts you to confirm the deletion.
- If you try to delete the last valid system image specified in the BOOT environment variable, the system prompts you to confirm the deletion.

SUMMARY STEPS

1. vsg# delete [bootflash: | debug: | log: | volatile:] *filename* | *directory_name*

DETAILED STEPS

	Command or Action	Purpose
Step 1	vsg# delete [bootflash: debug: log: volatile:] <i>filename</i> <i>directory_name</i>	Deletes a specified file or directory and everything in the directory.

This example shows how to delete the named file from the current working directory and how to delete a named directory and its content:

```
vsg# delete bootflash:dns_config.cfg
vsg# delete log:my-log
```

Compressing Files

You can compress (zip) a specified file using LZ77 coding.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI.

SUMMARY STEPS

1. vsg# show command > [path] *filename*
2. vsg# dir
3. vsg# gzip [path] *filename*

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# show command > [path] filename</code>	Directs show command output to a file.
Step 2	<code>vsg# dir</code>	Displays the contents of the current directory, including the new file created in the first step.
Step 3	<code>vsg# gzip [path] filename</code>	Compresses the specified file.

This example shows how to compress a specified file:

```
vsg# show system internal sysmgr event-history errors > errorsfile
vsg# dir
1480264 May 03 08:38:21 2013 1
77824 May 08 11:17:45 2013 accounting.log
4096 May 30 14:35:15 2013 core/
3220 May 09 16:33:05 2013 errorsfile
4096 May 30 14:35:15 2013 log/
16384 May 03 08:32:09 2013 lost+found/
7456 May 08 11:17:41 2013 mts.log
1480264 May 03 08:33:27 2013 nexus-1000v-dplug-mzg.VSG1.0.1.bin
20126720 May 03 08:33:27 2013 nexus-1000v-kickstart-mzg.VSG1.0.1.bin
45985810 May 01 14:30:00 2013 nexus-1000v-mzg.VSG1.0.1.bin
46095447 May 07 11:32:00 2013 nexus-1000v-mzg.VSG1.0.396.bin
1714 May 08 11:17:33 2013 system.cfg.new
4096 May 03 08:33:54 2013 vdc_2/
4096 May 03 08:33:54 2013 vdc_3/
4096 May 03 08:33:54 2013 vdc_4/
Usage for bootflash://
631246848 bytes used
5772722176 bytes free
6403969024 bytes total

vsg# gzip bootflash:errorsfile
vsg# dir
1480264 May 03 08:38:21 2013 1
77824 May 08 11:17:45 2013 accounting.log
4096 May 30 14:35:15 2013 core/
861 May 09 16:33:05 2013 errorsfile.gz
4096 May 30 14:35:15 2013 log/
16384 May 03 08:32:09 2013 lost+found/
7456 May 08 11:17:41 2013 mts.log
1480264 May 03 08:33:27 2013 nexus-1000v-dplug-mzg.VSG1.0.1.bin
20126720 May 03 08:33:27 2013 nexus-1000v-kickstart-mzg.VSG1.0.1.bin
45985810 May 01 14:30:00 2013 nexus-1000v-mzg.VSG1.0.1.bin
46095447 May 07 11:32:00 2013 nexus-1000v-mzg.VSG1.0.396.bin
1714 May 08 11:17:33 2013 system.cfg.new
4096 May 03 08:33:54 2013 vdc_2/
4096 May 03 08:33:54 2013 vdc_3/
4096 May 03 08:33:54 2013 vdc_4/
Usage for bootflash://
631246848 bytes used
5772722176 bytes free
6403969024 bytes total
```

Uncompressing Files

You can uncompress (unzip) a specified file that is compressed using LZ77 coding.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI.

SUMMARY STEPS

1. vsg# **gunzip** *[path]filename*
2. vsg# **dir**

DETAILED STEPS

	Command or Action	Purpose
Step 1	vsg# gunzip <i>[path]filename</i>	Uncompresses the specified file.
Step 2	vsg# dir	Displays the contents of a directory, including the newly uncompressed file.

This example shows how to uncompress a specified file:

```
vsg# gunzip bootflash:errorsfile.gz
vsg# dir bootflash:
1480264 May 03 08:38:21 2013 1
77824 May 08 11:17:45 2013 accounting.log
4096 May 30 14:35:15 2013 core/
3220 May 09 16:33:05 2013 errorsfile
4096 May 30 14:35:15 2013 log/
16384 May 03 08:32:09 2013 lost+found/
7456 May 08 11:17:41 2013 mts.log
1480264 May 03 08:33:27 2013 nexus-1000v-dplug-mzg.VSG1.0.1.bin
20126720 May 03 08:33:27 2013 nexus-1000v-kickstart-mzg.VSG1.0.1.bin
45985810 May 01 14:30:00 2013 nexus-1000v-mzg.VSG1.0.1.bin
46095447 May 07 11:32:00 2013 nexus-1000v-mzg.VSG1.0.396.bin
1714 May 08 11:17:33 2013 system.cfg.new
4096 May 03 08:33:54 2013 vdc_2/
4096 May 03 08:33:54 2013 vdc_3/
4096 May 03 08:33:54 2013 vdc_4/
Usage for bootflash://sup-local
631246848 bytes used
5772722176 bytes free
6403969024 bytes total
```

Directing Command Output to a File

You can direct command output to a file.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI in any command mode.

SUMMARY STEPS

1. vsg# **show running-config** > *[path | filename]*

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# show running-config > [path filename]</code>	Directs the output of the command to a path and filename.

This example shows how to direct the output of the command to the file `vsg1-run.cfg` in the `volatile:` directory:

```
vsg# show running-config > volatile:vsg1-run.cfg
```

Verifying a Configuration File Before Loading

You can verify the integrity of an image before loading it.

**Note**

The copy command can be used for both the system and kickstart images.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI in any command mode.

SUMMARY STEPS

1. `vsg# copy source_path_and_file system:running-config`
2. `vsg# show version image [bootflash: | modflash:| volatile:]`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# copy source_path_and_file system:running-config</code>	Copies the source file to the running configuration.
Step 2	<code>vsg# show version image [bootflash: modflash: volatile:]</code>	Validates the specified image.

This example shows how to copy the source file to the running configuration and validate the specified image:

```
vsg# show version image bootflash:nexus-1000v-mz.VSG1.0.401.bin
image name: nexus-1000v-mz.VSG1.0.401.bin
bios: version unavailable
system: version 4.2(1)VSG1(4) [build 4.2(1)VSG1(4)]
compiled: 5/9/2013 2:00:00 [5/09/2013 15:20:50]
```

Reverting to a Previous Configuration

You can recover your configuration from a previously saved version.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI in any command mode.

**Note**

Each time that you enter the `copy running-config startup-config` command, a binary file is created and the ASCII file is updated. A valid binary configuration file reduces the overall boot time significantly. A binary file cannot be uploaded, but its contents can be used to overwrite the existing startup configuration. Enter the `write erase` command to clear the binary file.

SUMMARY STEPS

1. `vsg# copy running-config bootflash: {filename}`
2. `vsg# copy bootflash: {filename} startup-configure`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# copy running-config bootflash: {filename}</code>	Reverts to a snapshot copy of a previously saved running configuration (binary file).
Step 2	<code>vsg# copy bootflash: {filename} startup-configure</code>	Reverts to a configuration copy that was previously saved in the bootflash: file system (ASCII file).

This example shows how to revert to a snapshot copy of a previously saved running configuration and how to revert to a configuration copy that was previously saved in the bootflash: directory:

```
vsg# copy running-config bootflash:January03-Running
vsg# copy bootflash:my-configure startup-configure
```

Displaying Files

To display information about files, enter the following commands:

Command	Purpose
<code>vsg# show file [bootflash: debug: volatile:] filename</code>	Displays the contents of the specified file.
<code>vsg# pwd</code>	Displays the current working directory.
<code>vsg# dir</code>	Displays the contents of the directory.

Command	Purpose
<code>vsg# show file filename [cksum md5sum]</code>	Provides the checksum or Message-Digest Algorithm 5 (MD5) checksum of the file for comparison with the original file. MD5 is an electronic fingerprint for the file.
<code>vsg# tail {path}[filename] {number-of-lines}</code>	Displays the requested number of lines from the end of the specified file. The range for the number-of-lines argument is from 0 to 80.
<code>vsg# show users</code>	Displays a list of users who are currently accessing the Cisco VSG.

Example of show file

```
vsg# show file bootflash:sample_file.txt
security-profile sp1
policy p1
rule r1
action 10 permit
policy p1
rule r1 order 10
```

Example of dir command

```
vsg# dir
Usage for volatile://
0 bytes used
20971520 bytes free
20971520 bytes total
```

Example of show file cksum command

```
vsg# show file bootflash:sample_file.txt cksum
750206909
```

Example of show file md5sum command

```
vsg# show file bootflash:sample_file.txt md5sum
aa163ec1769b9156614c643c926023cf
```

Example of tail command

```
vsg# tail bootflash:errorsfile 5
(20) Event:E_DEBUG, length:34, at 171590 usecs after Tue May 1 09:29:05 2013
[102] main(326): stateless restart
```

Example of show users command

```
vsg# show users
NAME LINE TIME IDLE PID COMMENT
admin pts/0 May 1 04:40 03:29 2915 (::ffff:64.103.145.136)
admin pts/2 May 1 10:06 03:37 6413 (::ffff:64.103.145.136)
admin pts/3 May 1 13:49 . 8835 (171.71.55.196)*
```

Displaying the Current User Access

You can display all users currently accessing the Cisco VSG.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI in EXEC mode.

SUMMARY STEPS

1. `vsg# show user`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# show user</code>	Displays a list of users who are currently accessing the Cisco VSG.

This example shows how to display a list of users who are currently accessing the Cisco VSG:

```
vsg# show users
NAME LINE TIME IDLE PID COMMENT
admin pts/0 Jul 1 04:40 03:29 2915 (::ffff:64.103.145.136)
admin pts/2 Jul 1 10:06 03:37 6413 (::ffff:64.103.145.136)
admin pts/3 Jul 1 13:49 . 8835 (171.71.55.196) *
```

Sending a Message to Users

You can send a message to all active users currently using the Cisco VSG.

Before You Begin

Before beginning this procedure, you must be logged in to the CLI.

SUMMARY STEPS

1. `vsg# send {session device} line`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>vsg# send {session device} line</code>	Sends a message to users currently logged in to the system. You can use the following keyword and argument: <ul style="list-style-type: none"> • <code>session</code>—sends the message to a specified pts/tty device type. • <code>line</code> is a message of up to 80 alphanumeric characters.

	Command or Action	Purpose
--	-------------------	---------

This example shows how to send a message to all users:

```
vsg# send Hello. Shutting down the system in 10 minutes.  
Broadcast Message from admin@vsg (/dev/pts/34) at 8:58 ...  
Hello. Shutting down the system in 10 minutes.
```

Feature History for System Management

Table 2: Feature History for System Management

Feature Name	Release	Feature Information
System management	5.2(1)VSG1(4.1)	This feature was introduced.

