



CHAPTER 8

Troubleshooting System Issues

This chapter describes how to troubleshoot Cisco Virtual Security Gateway (VSG) system issues.

This chapter includes the following sections:

- [Information About the System, page 8-1](#)
- [Problems with VM Traffic, page 8-2](#)
- [VEM Troubleshooting Commands, page 8-2](#)
- [VEM Log Commands, page 8-3](#)

Information About the System

The Cisco VSG provides firewall functionality for the VMs that have the vEths with port profiles created by the Virtual Supervisor Module (VSM). To allow the Cisco VSG to function properly, the Cisco VSG should have registered with a Cisco Virtual Network Management Center (VNMC) and the Cisco VSG's data interface MAC address should be seen by the VSM.

The example shows how to display information about the system:

```
vsg# show vsg
Model: VSG
HA ID: 218
VSG Software Version: 4.2(1)VSG1(1) build [4.2(1)VSG1(1)]
VNMC IP: 10.193.77.223
VSG-PERF-1_1#
VSG-PERF-1_1# show vnm-pa status
VNM Policy-Agent status is - Installed Successfully. Version 1.0(1j)-vsg
vsg#
```

Make sure that the Cisco VSG MAC address is learned by the VSM by entering the **show vsn details** command as follows:

```
vsm# show vsn detail
#VSN VLAN: 754, IP-ADDR: 200.1.1.10
  MODULE      VSN-MAC-ADDR  FAIL-MODE  VSN-STATE
      3    00:50:56:83:00:01    Close      Up

#VSN Ports, Port-Profile, Org and Security-Profile Association:
#VSN VLAN: 754, IP-ADDR: 200.1.1.10
  Port-Profile: profile-traffic, Security-Profile: sec-profile-perf, Org:
root/Tenant-perf-1.1
  Module Vethernet
      3  9
```

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vsm#

For more information, see the following documents:

- *Cisco Virtual Security Gateway, Release 4.2(1)VSG1(1)*
- *Cisco Virtual Network Management Center, Release 1.0.1 Installation*
- *Quick Start Guide for Cisco Virtual Security Gateway and Cisco Virtual Network Management Center.*

Problems with VM Traffic

When troubleshooting problems with intra-host VM traffic, follow these guidelines:

- Make sure that at least one of the VMware virtual NICs is on the correct DV's port group and is connected.
- If the VMware virtual NIC is down, determine if there is a conflict between the MAC address configured in the OS and the MAC addresses as assigned by VMware. You can see the assigned MAC addresses in the .vmx file.

When troubleshooting problems with inter-host VM traffic, follow these guidelines:

- Determine if there is exactly one uplink sharing a VLAN with the VMware virtual NIC. If there is more than one uplink, they must be in a port channel.
- Ping an SVI on the upstream switch by entering the **show intX counters** command.

VEM Troubleshooting Commands

This section includes the following topics:

- [Displaying VEM information, page 8-2](#)
- [Displaying Miscellaneous VEM Details, page 8-3](#)

Displaying VEM information

Use the following commands to display Virtual Ethernet Module (VEM) information:

- **vemlog**—Displays and controls VEM kernel logs
- **vemcmd**—Displays configuration and status information
- **vem-support all**—Displays support information
- **vem status**—Displays status information
- **vem version**—Displays version information
- **vemcmd show arp all**—Displays the ARP table on the VEM
- **vemcmd show vsn config**—Displays all the Cisco VSGs configured on the VEM and the Cisco VSG licensing status (firewall on or off).
- **vemcmd show vsn binding**—Displays all of the VM LTL ports to the Cisco VSG bindings
- **vemcmd show learnt**—Displays all of the VMs that have been learned by the VEM

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Displaying Miscellaneous VEM Details

These commands provide additional VEM details:

- **vemlog show last *number-of-entries***—Displays the circular buffer

This example shows how to display the number of entries in the circular buffer:

```
[root@esx-cos1 ~]# vemlog show last 5
Timestamp                Entry CPU  Mod Lv      Message
Oct 13 13:15:52.615416    1095   1    1  4 Warning vssnet_port_pg_data_ ...
Oct 13 13:15:52.620028    1096   1    1  4 Warning vssnet_port_pg_data_ ...
Oct 13 13:15:52.630377    1097   1    1  4 Warning svb_switch_state ...
Oct 13 13:15:52.633201    1098   1    1  8 Info    vssnet new switch ...
Oct 13 13:16:24.990236    1099   1    0  0      Suspending log
```

- **vemlog show info**—Displays information about entries in the log

This example shows how to display log entries:

```
[root@esx-cos1 ~]# vemlog show info
Enabled: Yes
Total Entries: 1092
Wrapped Entries: 0
Lost Entries: 0
Skipped Entries: 0
Available Entries: 6898
Stop After Entry: Not Specified
```

- **vemcmd help**—Displays the type of information you can display

This example shows how to display the vemcmd help:

```
[root@esx-cos1 ~]# vemcmd help
show card                Show the card's global info
show vlan [vlan]         Show the VLAN/BD table
show bd [bd]             Show the VLAN/BD table
show l2 <bd-number>     Show the L2 table for a given BD/VLAN
show l2 all              Show the L2 table
show port [priv|vsm]    Show the port table
show pc                  Show the port channel table
show portmac             Show the port table MAC entries
show trunk [priv|vsm]   Show the trunk ports in the port table
show stats               Show port stats
```

VEM Log Commands

Use the following commands to control the vemlog:

- **vemlog stop**—tops the log
- **vemlog clear**—Clears the log
- **vemlog start *number-of-entries***—Starts the log and stops it after the specified number of entries
- **vemlog stop *number-of-entries***—Stops the log after the next specified number of entries
- **vemlog resume**—Starts the log but does not clear the stop value

You can display the list of debug filters by entering the **vemlog show debug | grep vpath** command.

This example shows how to display the list of debug filters:

```
~ # vemlog show debug | grep vpath
```

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```
      vpath      ENWID P ( 95)      ENW      ( 7)
    vpathapi    ENWID P ( 95)      ENW      ( 7)
      vpathfm    ENWID P ( 95)      ENW      ( 7)
    vpathfsm    ENWID P ( 95)      ENW      ( 7)
  vpathutils    ENWID P ( 95)      ENW      ( 7)
    vpathtun    ENWID P ( 95)      ENW      ( 7)
~ #
```