C H A P T E R **12**

Troubleshooting Cisco vWAAS

This chapter describes how to identify and resolve operating issues with Cisco vWAAS, and contains the following sections:

Resolving Diskless Startup and Disk Failure

Under rare conditions, the Cisco vWAAS VM may boot into diskless mode if other VMs on the host VM server do not release control of system resources or the physical disks become unresponsive. The Cisco vWAAS device raises a **disk_failure** critical alarm for disk01 and the **show disk details** EXEC command shows disk01 as Not used until replaced.

To recover from this failure, follow these steps:

Step 1 Re-enable the disk:

```
vwaas# config
vwaas(config)# no disk disk-name disk00 shutdown force
vwaas(config)# exit
```

Step 2 Reload Cisco vWAAS:

```
vwaas# reload
```

Troubleshooting Cisco vWAAS Device Registration

You must register each vWAAS device with the Cisco WAAS Central Manager. If a Cisco vWAAS device is not registered with the Cisco WAAS Central Manager, the **Not Registered Alarm** (Figure 12-1) is displayed when you use the **show alarms** command.

Figure 12-1   *Display for show alarms Command: Not Registered Alarm*

```
vWAAS# show alarms

Critical alarms:
--------------
None

Major alarms:
------------
       Alarm ID          Module/Submodule        Instance
     ---------------     ----------------      --------------
     1 not registered      vwaas/model          vwaas/model   <----- Not registered alarm
. . .

Minor alarms:
------------
None
```

Verifying Cisco vWAAS Virtual Interfaces

Two virtual interfaces are available on Cisco vWAAS devices, the Cisco WAAS Central Manager and the Cisco WAAS CLI:

To display Cisco vWAAS virtual interfaces on the Cisco WAAS Central Manager, choose **Device > Configure > Network > Network Interfaces** to display the window shown in Figure 12-2.

Figure 12-2   *Network Interfaces for Device Window*
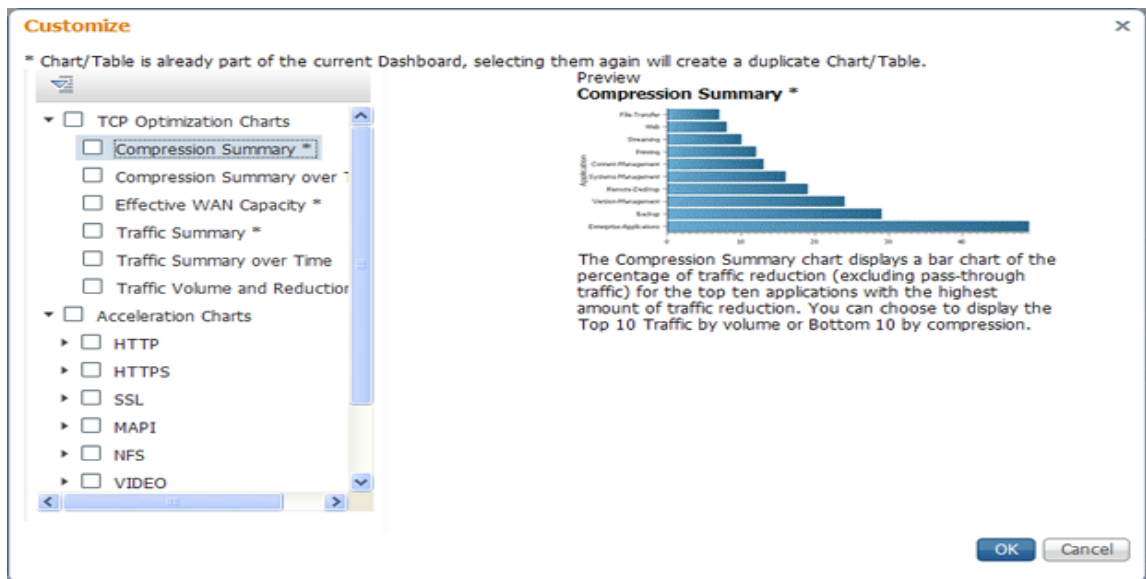
For the Cisco WAAS CLI, use the **show running-config interface** command to display the virtual interfaces. For additional details on the virtual interfaces, use the **show interface virtual 1/0** command or the **show interface virtual 2/0** command.

Troubleshooting Cisco vWAAS Networking

If you see no connections on the Cisco vWAAS device, use VMware VSphere Client to view the networking configuration and to check if the Cisco vWAAS device is connected to the correct vSwitch.

To use the VMware VSphere Client to trace Cisco vWAAS connectivity from the device page, follow these steps:

Step 1   Identify which network label the network adapter is connected to.

Step 2   Determine the virtual switch that this network is connected to.

Step 3   Determine the physical NIC that is a member of this virtual switch.

Step 4   Verify that the configuration is correct.

Step 5   Verify that the virtual switch settings are correctly configured to reach the network.

Step 6   Verify the configured IP address, netmask, default gateway, and primary interface. For more information on these parameters, see Verifying Cisco vWAAS Virtual Interfaces, page 12-2.

Step 7   From the Cisco vWAAS device, ping the default gateway and the Cisco WAAS Central Manager to verify that they are reachable.

Troubleshooting an Undersized Alarm

If the appropriate memory and hard disk resources are not allocated to the Cisco vWAAS device, the Undersized alarm is displayed when you run the **show alarms** command. Figure 12-3 shows an example of this.

Figure 12-3   Sample Output for show alarms Command: Undersized Alarm

```
vWAAS# show alarms

Critical alarms:
---------------
None

Major alarms:
------------
      Alarm ID          Module/Submodule        Instance
    -------------       ----------------       --------------
    1 undersized          vwaas/model            memory          <----- Undersized alarm
. . .

Minor alarms:
------------
None
```

Table 12-1 describes the fields in the **show alarms** command output.

Table 12-1   Field Descriptions for show alarms Command

Field	Description
Critical Alarms	Critical alarms affect the existing traffic through the Cisco WAE and are considered fatal. The Cisco WAE cannot recover and continue to process traffic. **Note** Cisco WAS and Cisco vWAAS provide three levels of alarms: critical, major, and minor. For more information on alarms and the **show alarms** command, see *Cisco Wide Area Application Services Command Reference*.
Major Alarms	Major alarms indicate a major service (such as the cache service) has been damaged or lost. Urgent action is necessary to restore this service. However, other node components are fully functional and the existing service should be minimally impacted. **Note** Cisco WAS and Cisco vWAAS provide three levels of alarms: critical, major, and minor. For more information on alarms and the **show alarms** command, see *Cisco Wide Area Application Services Command Reference*.
Alarm ID	Type of event that caused the alarm.
Module/Submodule	The software module affected.
Instance	The object that this alarm is associated with. As shown in Figure 12-3, the instance for this alarm is *memory*. The **Instance** field does not have predefined values; each Instance value is application specific.

You will not see the Undersized alarm if you are using valid OVA files to deploy Cisco vWAAS. If you see the Undersized alarm, delete the Cisco vWAAS VM and redeploy it using a valid OVA file.