

39 Troubleshooting

Introduction

This chapter provides information on troubleshooting OmniStack hardware and software.

The sections within this chapter describe problems or errors you may encounter during OmniStack hardware and software installation, configuration, or operation. Subsections within these categories reflect unique problems and provide recommended corrective action(s).

Detecting Problems

The OmniStack provides several different mechanisms used to detect problems.

Hardware problems can be detected through:

- LEDs (OK1)
- PING tests
- NMS error reporting (for example, inoperative ports)
- User Interface (UI) error messages

Refer to Chapter 1, “OmniStack Switches” for descriptions of LED states. You can also refer to Chapter 23, “IP Routing,” for information on verifying connectivity via the **ping** command. For an explanation of NMS errors, refer to separate NMS online documentation. UI error messages are described later in this chapter.

Software problems can be detected through:

- LEDs (OK2)
- NMS error reporting
- User Interface (UI) error messages

Refer to Chapter 1, “OmniStack Switches” for descriptions of LED states. For an explanation of NMS errors, refer to separate NMS online documentation. UI error messages are described later in this chapter.

Reporting Problems

In some cases, you may not be able to correct a problem that occurs (for example, a module failure). In such cases, you should contact:

Alcatel Technical Support

Alcatel Internetworking
26801 West Agoura Road
Calabasas, CA 91301

Telephone: 1-800-995-2696 (Domestic) 818-878-4507 (International)

Facsimile: 818-878-3505

Web: www.ind.alcatel.com/support

Email: support@ind.alcatel.com

Software Problems

The following paragraphs describe problems you may encounter with OmniStack software.

Can't Install Software

If you encounter problems during software installation, most likely you will see error messages that indicate the problem.

If you cannot install the software, you can use the Boot Line feature to download files via ZMODEM or a computer attached to a SLIP line.

You can also temporarily set boot parameters and load from Boot Line in an attempt to load under different settings (refer to Appendix A, "The Boot Line Prompt"). For more information about loading software via ZMODEM, refer to Chapter 4, "Installing Switch Software."

Operational Problems

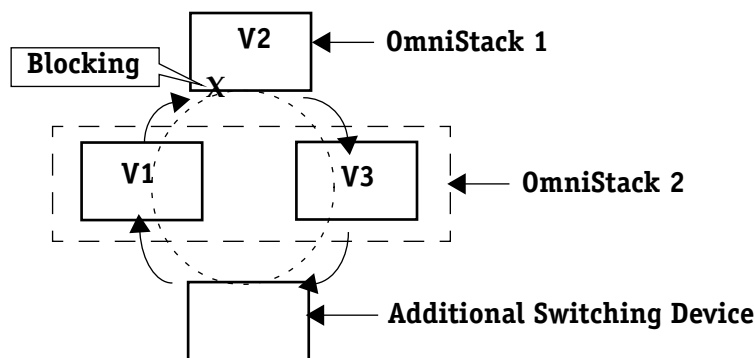
The following paragraphs describe operational problems you may encounter.

Deadlocked VLAN

Occasionally, the VLAN may deadlock. This may be a result of the process that you used when you set up the VLANs.

If you have a setup with four boxes, like the following figure shows, the VLAN can enter a deadlock.

In the example illustrated below, there are two OmniStack devices: OmniStack 1 (configured with one VLAN) and OmniStack 2 (configured with two VLANs). There is also an additional switching device that connects to the OmniStack 2 VLANs.



Deadlocked VLAN Example

In this situation, V2 in OmniStack 1 is in a loop because it has not learned that it has connected to a device with two virtual bridges (i.e., V1 and V3) which are both located in OmniStack 2. Since V2 detects a loop, it invokes blocking on the port connected to V1, which results in a deadlock. V1 and V3, located in OmniStack 2, can still communicate and traffic still moves from V2 in OmniStack 1 to V3 in OmniStack 2. However, traffic will not exit V3.

To determine if this problem has occurred in your setup, you can use the **vi** command to display information about a specific port. Enter **vi** followed by the *slot/port* numbers. For example:

```
vi 3/1
```

If the problem exists, the system will show the port in 'Blocking' mode and not in 'Forwarding' mode.

Probable Cause

You did not configure the network from the point furthest away from the point of connection.

Solution

To solve the problem, you should always start configuration from the device that is the furthest away from the point of connection. Therefore, in the illustration above, you should start the change from V2 at the top of the figure. By configuring the OmniStack 1 first, you can set it up to see two VLANs and therefore, use two Spanning Trees. This prevents the looping.

Problems with IP Applications

You may have enabled routing on a VLAN, but have problems with PING and other IP applications.

Probable Cause

When routing is enabled on a VLAN, packets will not be forwarded unless the Spanning Tree Status for the port on which you wish to forward to has progressed from Listening to Learning to Forwarding.

You can determine if Spanning Tree Protocol has entered the Forwarding state for a port by viewing port status. Refer to Chapter 15, "Configuring Bridging Parameters," for information on Spanning Tree Status.

Solution

Spanning Tree algorithms put the ports into the correct state.

There may be propagation delays when the Spanning Tree passes protocol information throughout a bridged network. This is normal as bridge ports wait for new topology information and for the lifetime of frames being forwarded using the old topology to expire. Immediate transitions from port state to port state should not be expected.

If the port is in the blocking mode, then the Spanning Tree has detected a loop and the blocking is a desired, preventive measure invoked by the Spanning Tree algorithm.

You should not attempt to alter the port state or remove the Spanning Tree. If you attempt to move a port from non-participation to the forwarding state, you take the risk of introducing data loops.

Once in the Forwarding state, PINGs and other IP applications should function properly.

Protocol Problems

You may notice an abnormal number of errors in a particular protocol. You can view protocol errors by using the networking commands. Refer to Chapters 11 and 12 for more information on the networking commands.

Probable Cause

Incompatible versions of the protocol are running on stations in the network.

Solution

Check the version of the protocol and verify that you are using the same version on all stations in the network. For example, you may be required to run Spanning Tree, Revision C on all stations.

Also, check the parameter values that you set for the protocol.

Hardware Problems

The following paragraphs describe problems you may encounter with the OmniStack hardware.

Amber Color in LEDs

During power-up, the switch goes through a Power-On Self Test (POST). Results of the test are reflected in the OK1 and OK2 LEDs on the switch; specifically, OK1 indicates hardware failures, while OK2 indicates software failures.

The first time you start the switch, the OK1 LED will blink in amber once to indicate start mode. OK2 LED will blink in green rapidly to indicate image loading. Thereafter, OK2 should blink slower in green to indicate operational mode.

Probable Cause

Hardware failure or software failure.

Solution

If the amber LED displays on a switching module, replace the module with a known, good module.

If the amber LED displays on the switch, shut down the OmniStack and call Alcatel Technical Support.

Non-Blinking OK2 LED

When the OmniStack is operating properly, the OK2 LED blinks green. When the OK2 LED displays a steady green light, this is an indication of problems.

Probable Cause

The switch or the software is malfunctioning. Typically the problem cannot be resolved by rebooting.

Solution

Shut down the OmniStack and call Alcatel Technical Support.

TEMP LED is Amber

When the OmniStack is operating properly, the TEMP LED is off. When the TEMP LED displays amber, this is an indication of problems.

Probable Cause

If the TEMP LED is amber, the internal temperature of the OmniStack has exceeded operating limits.

Solution

Turn off the OmniStack and wait until it has completely cooled down.

Check the immediate environment and ensure that the switch is not located in an area where it can be overheated by other heat-producing devices. Also, ensure that the switch is located in an area where there is ample room for air flow around the chassis.

If the environment is satisfactory, check the internal cooling fans. The switch is shipped with redundant fans that start automatically when you power up the unit. Try powering up and listen for the fan motors. Also, you should feel a slight air flow near the chassis. If either of the fans is not working, power down and contact Alcatel Technical Support.

Error Messages

This section provides error messages that you may encounter at the OmniStack's User Interface (UI).

Understanding Error Messages

Error messages reflect hardware or software problems that the switch encountered during initialization, configuration, or operation.

In some instances, the messages that display at the UI show the C program function name. For example:

cmSetTTYO: Illegal port requested

where cmSetTTY represents the function, and O indicates that parameters are passed. This information is for internal debugging purposes.

In this section, the phrase, *xxx*, in error messages represents a value that is specific to that message. For example, in the message, “**board type xxx**”, the specific board type displays in the error message.

Correcting Errors

In most cases, you will not be able to correct error conditions that result because of internal hardware or software malfunctions. You should contact Alcatel Technical Support when you receive these messages. Refer to *Reporting Problems* on page 39-1.

You can correct error conditions that result because incorrect parameter values were entered during configuration. The tables below list error messages to which you can respond.

Module Startup/Shutdown Error Messages	
Message	Corrective Action
False Shutdown: restarting to handle queued msgs	This message does not reflect an error condition. No action required.
P3 diags failed...	Message results when the switch fails diagnostic tests. Contact Alcatel Technical Support.
Download failed	Contact Alcatel Technical Support.
No reply from VSE driver board-up request	Contact Alcatel Technical Support.
No reply from MBox	Contact Alcatel Technical Support.
cmDoStateVseUp(): bad board type:	Contact Alcatel Technical Support.
Bad driver init status came back	Contact Alcatel Technical Support.
No reply from VSE	Contact Alcatel Technical Support.

Serial Port Configuration Error Messages

Message	Corrective Action
Problem deleting SLP port <i>xxx</i> , errno= <i>xx</i>	Reboot the system, then use the Boot Line configuration to force SLIP down at the boot line (refer to Appendix A, “The Boot Line Prompt”).
Can’t modify SLIP if it’s not up! current mode= <i>xxx</i>	Reconnect the SLIP line; reconfigure using the slipc command at the UI interface.
Problem changing SLIP remote IP addr to <i>xxx</i>	Check the remote IP address by using the slipc command at the UI interface.
Couldn’t setup SLIP port <i>slxxx</i> on <i>xxx</i>	Reboot the switch.

The slots in the messages within the following table are all zero based. That is, slot 1 equals slot 0.

Chassis Error Messages	
Message	Corrective Action
Unknown mod type <i>xxx</i> in slot <i>xxx</i>	Remove the module from slot.
Board <i>xxx</i> needed to be restarted at <i>xxx</i>	The switch appears dead. Replace the switch with a known good switch.
Chassis mgr discovered <i>xxx</i> has a problem!	The software has discovered a dead task. The system will reboot automatically.
System seems to have (perhaps) recovered. A reboot may not be unwise, however.	The system encountered an unexpected condition. Reboot the system.
cm_Mod_Event(): the slot wasn't empty	The system is confused. Clear the system by rebooting it.
ERROR: can't read ID info from MPM in slot <i>xxx</i> ...shutting down chassis manager	This may indicate a bad switch. Try power cycling.
Please run cmConfigEPROM <i>xxx</i> and reboot	This may indicate a bad switch. Try power cycling.
Can't read ID info from slot. <i>xxx</i> fail...	This may indicate a bad switch. Try power cycling.
cm_Mod_Event(): slot was already empty!	Reboot the system.
Problem reading ID PROM on module <i>xxx</i>	Try power cycling. If the problem remains, remove the module and try another slot.
ID PROM on module <i>xxx</i> has unknown format number <i>xxx</i>	Try power cycling. If the problem remains, remove the module and try another slot.
Real-Time Clock not set yet! Starting at zero.	Reset the clock by using the dt command at the UI interface.
Unknown modem stop bits= <i>xxx</i>	Change stop bits by configuring bootline (refer to Appendix A, "The Boot Line Prompt").

Chassis Error Messages (continued)	
Message	Corrective Action
Couldn't read reset count, returning 0	This message appears only once if the configuration file is removed.
Couldn't read chassis description, setting default	Enter a new chassis description by pulling down the <u>D</u> evice, <u>C</u> hassis... options in the Network Management software or entering the syscfg command at the UI interface.
cmSavePortInfo() successful	This message does not indicate an error.

Module Connection Error Messages	
Message	Corrective Action
interrupt: Link Error Monitor ALERT on xxx/xxx PHY-xxx	If this message shows up once or twice, it probably means that someone is plugging a new cable in slot/port xxx/xxx, physical connector xxx. If it displays more frequently, then there is probably a bad connection on slot/port xxx/xxx, physical connector xxx, caused by either dirty connectors or bad cabling. Try cleaning the connections or replacing the cabling.