Operational Traps

This chapter describes operational traps. If you need help in interpreting these traps, contact your customer service representative.

Traps are grouped alphabetically into sections in this chapter according to the software module in which they occur. Within each section, traps are listed in numerical order.

Within some software modules, gaps exist in the trap numbering sequence. This is because traps have been added or removed during the product life cycle. For instance, LCC traps begin with LCC_4 because LCC_1, LCC_2, and LCC_3 have been removed.

Comment Traps

This section lists traps generated by use of the **comment** command.

Trap Name **COMMENT_1001**

Trap Text

```
<string specified by user>
```

When the user is a human operator, the string can say anything. When the trap is invoked by scripts that run during installation, the string is one of the following:

1. `swchgver: Rebooting the network processor`
2. `WARNING: distribution to standby network processor got error. Consult your release note for more information.`
3. `VALIDATE ERROR: Inconsistencies in system installation: see trap log for more details`

Description This trap is generated by an operator, a support engineer, or a system script using the **comment** command. The installation scripts use this trap to notify you of system events associated with the installation of new hardware or software. (See the *LightStream 2020 NP O/S Reference Manual* for more information on the **comment** command.)

Action When the trap is invoked by a human operator, it will include a suggested action. When the trap is invoked by a script that runs during installation, match the trap text above to the action below:

1. No action is required.
2. Take the action suggested by the trap message.
3. Review the trap log and take the actions recommended for the informational traps you find there.

FCLoad Traps

This section lists traps for the FCLoad (function card load) module. FCLoad may be invoked by the system during the installation of new system software (as described in the *LightStream 2020 Upgrade Procedures for Platform Software*), and by the operator during the installation of new line cards (as described in the *LightStream 2020 Hardware Reference & Troubleshooting Guide*).

Trap Name **FCLOAD_2**

Trap Text `Slot <slot#>: loading flash image (<flash image name>)`

Description This trap is generated when a new flash image is loaded into the indicated card by an operator. Loading flash may be necessary when you are installing a card in an existing system (see the *LightStream 2020 Hardware Reference & Troubleshooting Guide*).

Related Traps FCLOAD_2021, FCLOAD_2011, FCLOAD_2012

Action None.

Trap Name **FCLOAD_20**

Trap Text `Slot <slot#>: flash load error`

Description This trap is generated when an error occurs during load of flash memory.

Related Traps FCLOAD_2020, FCLOAD_2021, FCLOAD_2022, FCLOAD_2023

Action Check the trap log for the related informational traps, which provide more detailed information about the error. Take the actions recommended for the related traps.

GIDD Traps

This section lists traps for the Global Information Distribution Daemon (GIDD).

Trap Name **GIDD_1001**

Trap Text `Unable to dynamically allocate memory:<text>`

Description This trap indicates that the node has run out of memory.

Causes Generally, this trap is generated when the number of end stations in the network exceeds 10,000, the maximum number of end stations and IP addresses used by the ARP cache per LS2020.

There are also instances when this trap is generated because of a lack of free memory on the NP.

Action If the number of end stations in the network exceeds 10,000, you need to reduce the number of host addresses seen by the LS2020 network to a value below 10,000.

If this trap is displayed for a network with less than 10,000 end stations, you must reduce the number of CLI processes running on the NP that generated the trap.

Step 1 From the bash prompt of a root login, display the list of processes running on that NP by issuing the **ps -ax** command.

Step 2 There should be only one instance of the CLI running. If that is not the case, issue the **quit** command at the CLI prompt.

If the number of CLI processes is one or none and this trap continues to be generated in an LS2020 network with fewer than 10,000 end stations, capture the output display of several iterations of the **ps -ax** command and contact Cisco customer service.

LCC Traps

This section lists traps for the Line Card Control (LCC) process.

Trap Name **LCC_4**

Trap Text

```
Warning: attempt to configure an incompatible protocol on port
<port#>
```

Description This trap indicates that an attempt was made to configure an edge port on a trunk card or a trunk port on an edge card, but the change has been rejected by the software.

Causes This message is generated only when an attempt is made to change to an incompatible port type. Card type (trunk or edge) is derived from the lowest-numbered configured port on the card: if the lowest-numbered port is an edge, then the card is an edge. Therefore, if an attempt is made to change a port other than the lowest-numbered port, the change is rejected and the LCC_4 trap is generated. If the change is made to the lowest-numbered configured port, the LCC_5 trap is generated.

Action To change the port type, reconfigure the card type. See the *LightStream 2020 Configuration Guide* for information on configuring cards.

Trap Name **LCC_5**

Trap Text

```
Warning: port protocol overriding configured card type on port
<port#> - card will be rebooted
```

Description This trap indicates that the lowest-numbered port on the card was changed from an edge to a trunk or from a trunk to an edge. Because card type (trunk or edge) is derived from the type of the lowest-numbered configured port, the line card control process automatically updates the EEPROM to reflect the change and the card is rebooted. When the line card restarts, it should reflect the change to the lowest-numbered port.

Causes The lowest-numbered configured port may have been changed to a different type (either from edge to trunk or from trunk to edge.)

This trap can also be generated when a new line card is inserted in a chassis, if the EEPROM setting as shipped from manufacturing is different from the configured setting.

Action The line card automatically reconfigures and restarts with no operator intervention.

If this trap recurs, run diagnostics on the line card. (Refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for information.)

Trap Name **LCC_10**

Trap Text

```
Warning LC reported error <error> on port <port#>
```

Where `<error>` = one of the following:

<error>	Cause/Description	Action

`Illegal Command`
`Illegal Table`
`Illegal Alloc`
`Unknown Task`
`Unknown Table`
`Bad Port`
`Data Overflow`
`Unspecified`
`Illegal Index`
`Eeprom Not Initialized`
`Illegal Value`
	There is a software problem.	Call your customer service representative.

`Tsu Hardware`	There is a hardware problem on the line card.	Troubleshoot the line card hardware. (See the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for instructions.)
`Illegal Bitrate` `Illegal Framesize`	There is a configuration problem.	Check the setting of the attribute. (See the *LightStream 2020 Configuration Guide*.) If the attribute value is within the legal range, contact your customer service representative.
`Mismatched Cards`	There is an incompatible line card/access card pair.	Check your line card and access card for the port, and change the appropriate card.
`No resources`	There is a temporary resource shortage (for example, the system may have run out of buffers used to communicate with the line card).	Re-issue the most recent configuration change to the card in question. (For example, if you have recently enabled a port, you must either re-issue the command you used or update the configuration again, as appropriate.)
`Port in use`	There is a temporary resource shortage from which the system will recover automatically.	No action is required.
`Illegal NIT`	An illegal network interface type (NIT) or loop mode is specified for the port. (The legal network interface types are DTE, DCE, and DCE_ttloop.)	Reset the port using the CLI commands **set port <card#.port#> inactive** and **set port <card#.port#> active**.

Trap Name **LCC_11**

Trap Text

```
Warning LC reported error illegal physical port type on port
<port#>
```

Description This trap indicates that the physical port type is not on the list of supported port types for the line card.

Causes For low-speed modules: jumper settings on the access card may be incorrect.

For all module types: the version of software running on the line card may not support the hardware. (This could happen, for instance, if you installed a new type of access card without first updating your line card software.)

Action For low-speed modules: check jumper settings on the access card and correct if needed. See the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for information on setting jumpers.

For all module types: check the line card software version by examining the Description field displayed when you enter the CLI **show port <port#> all** command. Upgrade your software if necessary. See the *LightStream 2020 Network Operations Guide* for information on the **show port** command. See the relevant release note for information on upgrading your software.

Trap Name **LCC_12**

Trap Text `Node <node name> Port <port#> entering internal loop mode`

Description This trap reports that the port has entered internal loop mode.

Causes The CLI **set port <port#> loop** command has been issued to run an internal loopback test on the port. (See the *LightStream 2020 Network Operations Guide* for information on looping ports.)

Action None.

Trap Name **LCC_14**

Trap Text `Node <node name> Port <port#> entering remote loop mode`

Description This trap reports that the port has entered remote loop mode.

Causes The CLI **set port <port#> loop** command has been issued to run a remote loopback test on the port. (See the *LightStream 2020 Network Operations Guide* for more information on looping ports.)

Action None.

Trap Name **LCC_15**

Trap Text `Node <node name> Port <port#> unlooped`

Description This trap reports that the port has exited loop mode.

Causes The CLI **set port <port#> unloop** command has been issued to stop the loopback test on the port. (See the *LightStream 2020 Network Operations Guide* for information on unlooping ports.)

Action None.

Trap Name **LCC_16**

Trap Text `Node <node name> Port <port#> is experiencing a high error rate`

Description This trap reports that the port has a high receive or transmit error rate.

Causes This trap is sent when a port's receive or transmit error rate exceeds its error threshold.

Action Examine the node to determine why the error rate is high. See the *LightStream 2020 Network Operations Guide* and the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for more information on possible causes.

Trap Name **LCC_18**

Trap Text `Node <node name> Card <slot#> has inaccessible or invalid EEPROM`

Description This trap indicates that there is a problem with the card's EEPROM.

Causes EEPROM may have been physically damaged or removed; its contents may have been corrupted; or the information it contains may be incorrect.

Action Contact your customer service representative or refer to the *LightStream 2020 Hardware Reference and Troubleshooting Guide.*

MMA Traps

This section describes traps generated by the master management agent (MMA).

Trap Name **MMA_1**

Trap Text
```
Reloading configuration database.
```

Description This trap indicates that the MMA has read the local configuration database on the NP hard disk and is distributing the information to relevant software processes.

Causes The MMA reads the local configuration database when the system is started up or rebooted, the NP is rebooted, the backup NP becomes primary, or when the MMA process itself is restarted due to a process error.

Action None.

NDD Traps

This section lists traps for the Neighborhood Discovery Daemon (NDD).

Trap Name **NDD_1**

Trap Text
```
Network Processor <slot#> becoming primary NP.
```

Description This trap indicates the slot number of the NP that is operating as the primary NP (if you have two NPs in your system).

Action None.

Trap Name **NDD_2**

Trap Text
```
Network Processor <slot#> becoming backup NP.
```

Description This trap indicates the slot number of the NP that is operating as the backup NP (if you have two NPs in your system).

Action None.

Trap Name **NDD_3**

Trap Text
```
Line Card <node name:slot#> (<card type>) up.
```

Description This trap indicates that a particular line card has come up.

Action None.

Trap Name **NDD_4**

Trap Text
```
Line Card <node name:slot#> (<card type>) down (switch up/down
failure).
```

Description This trap indicates the deactivation or failure of a running line card. The trap can be caused by an operator action such as card removal or deactivation or running diagnostics on the card. It can also be caused by a line card failure.

Action If the operator didn't provoke the trap, run diagnostics on the specified line card, and replace the card if it fails diagnostics. (Refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for instructions.)

Trap Name **NDD_5**

Trap Text

```
Line Card <node name:slot#> (<card type>) down (ERMP failure <ERMP
code>).
```

Description

This trap indicates the deactivation or failure of a running line card. The trap can be caused by an operator action such as card removal or deactivation or running diagnostics on the card. It can also be caused by a line card failure.

ERMP codes that probably indicate a failure or deactivation of the line card:

- 0x401: keepalive-failure

  The NP stopped receiving messages from the line card.

- 0x405: rtx-failure

  The NP was unable to get a message accepted and acknowledged by the line card.

- 0x406: remote-keepalive-failure

  The NP received a report from the line card that the line card could not receive messages from the NP.

Other ERMP codes:

- 0x404: close

  The device at the remote end of the connection did a controlled close (for example, a neighbor NP rebooted).

- 0x403: failure

  Internal protocol failure. Report this event to your customer service representative.

Action

If the operator did not provoke the trap, then run diagnostics on the specified line card. Replace the card if it fails diagnostics. (See the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for instructions.)

Trap Name **NDD_6**

Trap Text

```
System Process <process type> exited unexpectedly (status
<value>).
```

Description

This trap indicates that the specified process exited unexpectedly. NDD will restart the process automatically, or it will reboot the NP to re-initialize the entire system.

Action

Usually, no action is required.

If this trap occurs repeatedly, either because different processes exit or because the same process exits multiple times, contact your customer service representative.

Trap Name **NDD_7**

Trap Text

```
Line Card Control Process for <node name: slot#> exited
unexpectedly (status <value>).
```

Description

This trap indicates that the LCC process on the specified card exited unexpectedly. The process will be restarted automatically by NDD.

Action

Usually, no action is required. However, if this trap occurs repeatedly, either because different processes exit or because the same process exits multiple times, contact your customer service representative.

Trap Name **NDD_8**

Trap Text

```
Network Processor <node name: slot#> rebooting (detected failure
of primary NP)
```

Description In a switch with two NPs, this trap is generated by the backup NP when it notices that the primary, or active, NP is no longer available. After issuing this trap, the backup NP reboots, then returns to service as the node's new primary NP. This is generally followed by an NDD_1 trap.

Action Troubleshoot the NP that failed. (See the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for instructions.)

Trap Name **NDD_10**

Trap Text

```
Mismatch between programmed chassis id (<ID# from eeprom>) and
configured chassis id (<ID# from configuration>)
```

Description This trap indicates that the MIB variable chassisId does not match the chassis ID programmed in EEPROMs on the midplane. The chassis ID is programmed into two EEPROMs on the midplane as part of the manufacturing process; the same ID is stored in the configuration database for the chassis.

Causes The chassis ID has not been configured correctly in the database, or the midplane has been replaced and the correct chassis ID has not been programmed into the midplane EEPROM.

Procedure

1. Check the value of the chassisID MIB object, using either the CLI or the configurator. See the *LightStream 2020 CLI Reference Guide* for information on using the CLI. See the *LightStream 2020 Configuration Guid*e for information on using the configurator.
2. Determine the value in the midplane EEPROM by using the **sysver** command (see the *LightStream 2020 Hardware Reference & Troubleshooting Guide*).
3. If the configured value doesn't match the EEPROM value, enter the correct chassis ID through the configurator or the CLI.
4. If the two chassis IDs match, contact your customer service representative because the EEPROM may be damaged or corrupted.

Trap Name **NDD_11**

Trap Text

```
Mismatch between programmed midplane chassis IDs in redundant
switches (<chassis ID in slot A> versus <chassis ID in slot B>)
```

Description This trap indicates that the two EEPROMs on the midplane contain different chassis ID numbers. It can occur only in a node with two switch cards.

The chassis IDs in the two EEPROMs must be identical (but otherwise unique) within the LightStream 2020 network.

Cisco Systems, Inc. assigns a chassis ID to every LightStream 2020 chassis. The chassis ID is written to the two EEPROMs in the factory. One EEPROM is connected to and accessible from the switch card in slot A; the other EEPROM is connected to and accessible from the switch card in slot B.

Action Determine the correct chassis ID and change one or both of the chassis IDs in the EEPROMs so that the two IDs match. For detailed instructions, refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide*.

Trap Name **NDD_1000**

Trap Text

```
PROCESS-FATAL ERROR: <error message>
```

Description This trap generally indicates that the NP has rebooted the node because it was unable to run a software process.

Action Contact your customer service representative.

NPIP Traps

This section lists traps for the Network Processor Internet Protocol (NPIP) module that provides IP service.

Trap Name **NPIP_3**

Trap Text
```
configuration error: the internal IP network overlaps with the
Ethernet IP network
```

Description This trap indicates that a configuration error has been made: the network numbers of the LS2020's primary IP address and the NP Ethernet IP address are the same.

Action
1. Check the settings for the primary IP address, NP IP Mask, NP IP address, and NP IP mask attributes. Refer to the *LightStream 2020 Configuration Guide* for information on correctly setting these attributes.
2. Fix the appropriate attribute values and update the node's configuration.

Trap Name **NPIP_4**

Trap Text
```
configuration error: the internal IP network address is the same
as the ethernet IP address
```

Description This trap indicates that the following configuration error has been made: the internal IP network address and the Ethernet IP address have been assigned to the same value.

Procedure
1. Check the Primary IP address and the NP IP address attributes. Refer to the *LightStream 2020 Configuration Guide* for information on correctly setting these attributes.
2. Fix the appropriate attribute value and update the node's configuration.

Trap Name **NPIP_5**

Trap Text
```
configuration error: the default router is not on the same IP
network as the ethernet interface
```

Description This trap indicates that the default router has not been configured correctly.

Procedure
1. Check the Default Router attribute. Refer to the *LightStream 2020 Configuration Guide* for information on correctly setting this attribute.
2. Fix the attribute value and update the node's configuration.

Trap Name **NPIP_6**

Trap Text
```
configuration error: the primary and secondary NP IP addresses
are not on the same IP network
```

Description This trap indicates that the primary and secondary NP IP addresses have not been configured correctly.

Procedure
1. Check the Primary IP address and the Secondary IP address attribute values. Refer to the *LightStream 2020 Configuration Guide* for information on correctly setting these attributes.
2. Fix the appropriate attribute value and update the node's configuration.

NPTMM Traps

This section lists traps for the NP TCS Monitoring Module (NPTMM).

Trap Name **NPTMM_2**

Trap Text

```
Bulk Power Supply <A or B> has been removed
```

Description This trap indicates that one of the two bulk power supplies has been removed.

Action No action is required; however, the node will be without power supply redundancy until the supply is replaced.

Trap Name **NPTMM_6**

Trap Text

```
<parameter name> of card <slot#> is outside of the normal range
```

Where

```
<parameter name> can be any of the following:
TEMPERATURE#1
TEMPERATURE#2
PADDLE CARD TEMPERATURE#1
PADDLE CARD TEMPERATURE#2
TCS VCC VOLTAGE
VCC VOLTAGE
SCSI VOLTAGE (FOR NP)
VEE VOLTAGE
VPP VOLTAGE
BULK VOLTAGE
```

Description The specified value, monitored by the TCS, is outside of its normal range.

Procedure

1. For the temperature-related traps, verify that the ambient temperature in the room is within the range specified in the *LightStream 2020 Site Planning and Cabling Guide*. Verify that the blowers are operating properly and that the air intakes on the LightStream 2020 chassis are not blocked. Also verify that all cards, bulkheads, filler panels, covers, and components are in place, as required for proper operation of the cooling system. See the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for more troubleshooting information.
2. For the voltage-related traps, contact your customer service representative.

Trap Name **NPTMM_8**

Trap Text

```
Card <slot#> POST Failed; Download Is Not Initiated
```

Description This trap indicates that the power-on self test (POST) failed and that there might be a hardware problem.

Procedure

1. Review the results of the POST. (See the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for instructions.)
2. Reset the specified card and rerun the POST.
3. If the problem persists, run diagnostics on the specified card. If the card fails or will not come up, replace it. (See the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for replacement instructions.)
4. If the card passes POST and diagnostics (but you get this trap), contact your customer service representative.

Trap Name **NPTMM_9**

Trap Text

```
Card <slot#> Download Failed More Than <number of times download
failed, default=2> Times; New Download Is Not Initiated
```

Description This trap indicates the download of the specified card has failed multiple times. This means there may be a hardware problem.

Action Run diagnostics on the specified card. If the diagnostics fail or if the card will not come up, replace the card. (See the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for instructions.)

If the card passes diagnostics (but you get this trap), contact your customer service representative.

Trap Name **NPTMM_10**

Trap Text

```
Chassis ID inconsistency [FATAL error] (switch <A or B> programmed
to <configured chassis ID> instead of expected <EEPROM chassis
ID>)
```

Description This trap indicates that the configured value for the chassis ID does not match the value stored in the EEPROM on the midplane. A system reboot immediately follows this error.

Causes An incorrect value may have been entered during configuration.

The EEPROM on the midplane may be faulty.

Procedure

1. Check the value of the chassisID MIB object, using either the CLI or the configurator. See the *LightStream 2020 CLI Reference Guide* for information on using the CLI. See the *LightStream 2020 Configuration Guid*e for information on using the configurator.
2. Determine the value in the midplane EEPROM by using the **sysver** command (see the *LightStream 2020 Hardware Reference & Troubleshooting Guide*).
3. If the configured value doesn't match the EEPROM value, enter the correct chassis ID through the configurator or the CLI.
4. If the two chassis IDs match, contact your customer service representative because the EEPROM may be damaged or corrupted.

Trap Name **NPTMM_11**

Trap Text

```
PROCESS FATAL ERROR: <code>
```

Description This trap indicates that a fatal software error has occurred.

Action Contact your customer service representative.

Trap Name **NPTMM_14**

Trap Text

```
Bulk Power Supply <A or B> Failed
```

Description One of the bulk power supplies failed. Your node will be without power supply redundancy until the failed supply is replaced.

Action No action is required; however, the node will be without power supply redundancy until the failed power supply is replaced.

To remove and replace the failed power supply, see the *LightStream 2020 Hardware Reference & Troubleshooting Guide*.

One power supply can completely power the LightStream 2020 switch.

Trap Name **NPTMM_16**

Trap Text

```
Cannot support fast cutover with swaccdrvr version # <version>,
rebooting
```

Description This trap indicates that the switch card cutover is going to cause a system reboot because the version of the SWACC driver on the NP can't cut over to the backup switch card without rebooting the system.

This message is logged after an NPTMM_23 trap.

Causes The NP kernel is out of date.

Action None. However, if you want to upgrade the NP kernel, call your customer service representative.

Trap Name **NPTMM_17**

Trap Text

```
Assuming unsynced environment for cutover to switch <A or B>,
rebooting...
```

Description This trap indicates that the NP has to reboot the system in order to perform the cutover from one switch card to the other.

This message can be logged after an NPTMM_22 trap.

Causes You may have a Release 1 switch card. Release 1 switch cards don't have clock synchronization circuitry. (You always receive this trap message when cutover involves a Release 1 switch card.)

If your system contains one or more Release 2 switch cards, there may be a problem with the clock synchronization circuitry.

Action If you have a Release 1 switch card, no immediate action is required. After it reboots, your system should function properly. However, in order to restore redundancy of your switch cards, you must troubleshoot your other switch card.

If problems persist after the reboot, troubleshoot the switch cards.

For information on troubleshooting, refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide*.

Trap Name **NPTMM_18**

Trap Text

```
Attempted illegal operator-initiated cutover to switch <A or B>
```

Description This trap indicates that the planned switch card cutover could not be performed because there was a problem with the backup switch card.

Causes The backup switch card may have a clock problem.

The backup switch card may have been removed from the slot.

Action If the backup switch card is present, see the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for troubleshooting and replacement instructions.

Trap Name **NPTMM_19**

Trap Text

```
Can't alter b-is-primary bit on Switch B
```

Description This trap indicates that the NP could not change a bit on the backup switch card used by the function cards to determine which switch is active. Therefore, the backup switch card cannot be used as the active switch card.

This message occurs in conjunction with switch cutover messages, such as NPTMM_23.

Causes There is a hardware problem on the switch card in slot B.

Action Troubleshoot (and replace if necessary) the switch cards. Refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide.*

Trap Name **NPTMM_20**

Trap Text

```
FATAL ERROR: Secondary switch clock bad, cutover failed,
rebooting...
```

Description This trap indicates that the NP could not perform an unplanned switch card cutover because it detected a problem on the backup switch card. This message is followed by a system reboot.

Causes This is one of the messages that can follow an NPTMM_25 trap. When it occurs in conjunction with that message, it means that both switch cards have a problem.

The backup switch card may have a hardware problem with its clock signal. The signal is either intermittent or not present.

The backup switch card may have been removed from its slot.

Action Troubleshoot (and replace if necessary) the switch cards. Refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for instructions.

If the switch cards do not appear to be the problem, troubleshoot the NP. Refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for instructions.

Trap Name **NPTMM_21**

Trap Text

```
FATAL ERROR: Secondary switch clock is bad, can't cutover,
rebooting...
```

Description This trap indicates that the NP could not perform an unplanned switch card cutover because it detected a problem on the backup switch card. This message is followed by a system reboot.

This is one of the messages that can follow an NPTMM_26 trap. When it occurs in conjunction with that message, both switch cards have a problem.

Causes The backup switch card may have a hardware problem with its clock signal. The clock signal on the backup switch card is intermittent or not present.

The backup switch card may have been removed from its slot.

Action Troubleshoot (and replace if necessary) the switch cards. Refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for instructions.

Trap Name **NPTMM_22**

Trap Text

```
Initiating unplanned cutover to switch <A or B>
```

Description This trap indicates that the NP has initiated an unplanned cutover to the backup switch card because it could not access certain TCS registers.

This is one of the messages that can follow an NPTMM_26 trap.

This message can occur in conjunction with an NPTMM_17 message.

Action None.

Trap Name **NPTMM_23**

Trap Text

```
Initiating planned NP lossless cutover to switch <A or B>
```

Description This trap indicates that the NP is initiating cutover to the backup switch card in response to an operator request. This trap indicates that the request occurred when the switch clocks were synchronized.

After this message is logged, one of two trap messages is logged, NPTMM_16 or NPTMM_27.

Action None.

Trap Name **NPTMM_24**

Trap Text
```
NP TCS SLAVE version cannot support fast Switch cutover
```

Description This trap indicates that the version of the TCS slave on the NP cannot perform an unplanned switch card cutover without rebooting the system. (The message is displayed only during system initialization.)

Action None. However, if you want the newer version of the TCS slave, call your customer service representative.

Trap Name **NPTMM_25**

Trap Text
```
NP Switch clock loss from switch <A or B> detected
```

Description This trap indicates that the NP has detected a problem with the clock signal received from the active switch card. After this trap message is logged, one of three trap messages is logged: NPTMM_20, NPTMM_31, or NPTMM_32.

Action See the action required for the associated trap: NPTMM_30, NPTMM 31, or NPTMM_32.

Trap Name **NPTMM_26**

Trap Text
```
NP detected action register failure while on switch <A or B>
```

Description This trap indicates that the NP could not read or write a TCS register during normal operations. After this trap message is generated, one of three trap messages is generated: NPTMM_21, NPTMM_22, or NPTMM_17.

Causes There may be a hardware or firmware problem in the TCS system.

Action See the action required for the associated trap: NPTMM_17, NPTMM_21, or NPTMM_22.

Trap Name **NPTMM_27**

Trap Text
```
Planned lossless cutover failed due to ioctl error
```

Description This trap indicates that the planned switch card cutover failed due to a problem on the active NP.

Causes This message is logged after an NPTMM_23 trap.

Action Contact your customer service representative.

Trap Name **NPTMM_28**

Trap Text
```
Planned cutover to switch <A or B> requested in unsync
environment, rebooting...
```

Description This trap indicates that the NP could not perform the planned cutover to the backup switch card because it detected that the switch card clocks were not synchronized. This message is followed by a system reboot.

Causes You may have a Release 1 switch card. Release 1 switch cards do not have clock synchronization circuitry. (You always receive this trap message when cutover involves a Release 1 switch card, even if the other switch card is a Release 2 version.)

There may be a problem with the clock synchronization circuitry on a Release 2 switch card.

Action If the chassis contains at least one Release 1 switch card, no action is required. After the system reboots itself, it should function properly. However, in order to restore redundancy of your switch cards, you need to troubleshoot your other switch card.

If problems persist after the reboot, troubleshoot the switch cards. For information on troubleshooting, refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide*.

Trap Name **NPTMM_29**

Trap Text
```
Slot state rx message too small
```

Description This trap indicates that an internal software error has occurred.

Action Call your customer service representative.

Trap Name **NPTMM_30**

Trap Text
```
Unable to determine an available Switch (<error code>)
```

Description This trap indicates that the NP could not determine which switch card is active, based on a periodic query of several hardware and firmware resources on the switch cards.

Causes The TCS system may have a problem.

One of the switch cards may have a problem.

Action Contact your customer service representative with the error code.

Trap Name **NPTMM_31**

Trap Text
```
Unplanned, lossy cutover to switch <A or B> occurred
```

Description This trap indicates that the NP has successfully completed an unplanned cutover to the backup switch card. The cutover was caused by a problem on the previously active switch card,

This message can follow an NPTMM_25 trap. When it occurs in conjunction with that message, it means that you have a new active switch card and that your other switch card needs to be examined.

Action To restore redundancy of your switch cards, you need to troubleshoot your other switch card that failed. Refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide*.

Trap Name **NPTMM_32**

Trap Text
```
Unplanned cutover to switch <A or B> occurred in unsync
environment, rebooting...
```

Description This trap indicates that the NP could not perform an unplanned cutover to the backup switch card because it found that the switch card clocks were not synchronized. This message is followed by a system reboot.

This message can follow an NPTMM_25 trap. When it occurs in conjunction with that message, it means that you have a new active switch card and that your other switch card needs to be fixed.

Causes You may have a Release 1 switch card. Release 1 switch cards do not have clock synchronization circuitry. (You always receive this trap message when cutover involves a Release 1 switch card.)

There may be a problem with the clock synchronization circuitry on a Release 2 switch card.

Action After the system reboot, your system should function properly. However, in order to restore redundancy of your switch cards, you need to troubleshoot your other switch card. Refer to the *LightStream 2020 Hardware Reference & Troubleshooting Guide*.

Trap Name **NPTMM_33**

Trap Text
```
Slot <slot#> State Changed From <state> To <state>
```

Description This trap indicates that the switch card in the specified slot has changed from one state to another. The possible states are EMPTY, FAILED, UP, and DOWN.

Causes A slot changes to the EMPTY state if it is removed from the slot. A card changes to the FAILED state if it can't communicate over the TCS. A card changes to the UP state if it becomes operational and to the DOWN state if it ceases to be operational.

If there is a change to the FAILED state, the trap occurs with the NPTMM_26 or NPTMM_30 trap.

Action If the state has changed to FAILED or DOWN, investigate and if necessary troubleshoot the switch card. See the *LightStream 2020 Hardware Reference & Troubleshooting Guide* for details. Also see the action required for the associated traps, NPTMM_26 and NPTMM_30.

Watchdog Traps

This section lists traps for the NP Watchdog Timer Manager (watchdog) process.

Trap Name **WATCHDOG_1**

Trap Text
```
Neighborhood discovery daemon failure, rebooting system.
```

Description This trap indicates that NDD has failed and that the watchdog process is rebooting the system to restart NDD. Once NDD is restarted, it restarts all other processes.

The NDD process monitors all processes in the network and restarts them automatically when necessary. The watchdog process is used to monitor the status of NDD itself and to determine when NDD needs to be restarted.

Action Normally, no action is required. If this trap occurs repeatedly, contact your customer service representative.