Emulex Driver for VMware ESX 4.1

FC Version 8.2.1.30.1-58vmw

User Manual

P006141-01A Rev. A

One Network.
One Company.
Connect with Emulex.

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Installation

Driver Information

Supported Features

- Supports FC in-band management
- Dynamic and persistent parameter setting using the Emulex® OneCommand™ Manager application version 5.0 as part of a master kit: enabling GUI-based driver configuration including:
    - Out-of-band diagnostics (loopback and diagnostics dump)
    - LUN (logical unit number masking
    - Virtual port support

  See the OneCommand Manager application User Manual for a complete list of supported features.
- Supports the following protocols:
    - FCoE (Fibre Channel over Ethernet)
    - Fibre Channel initiator mode
    - SCSI-FCP
    - FCP-2
- SNIA-CTP compliant SMI-S 1.1 provider
- Supports the following topologies:
    - FC-AL (Fibre Channel Arbitrated Loop)
    - Point-to-point
    - Fabric with auto-topology negotiation
- Supports 1, 2, 4, 8 and 10 Gb/s capable adapters with auto-rate negotiation. (1 Gb/s is not supported on 8 Gb/s adapters.)
- Tested with up to sixteen adapter ports
- Support for Common HBA API
- Batch firmware download capability
- PCI hot plug support (vendor-specific)
- Vital Product Data (VPD) support
- NPIV (N_Port ID Virtualization) support

New Features in this Release

- There are no new features introduced in this release.

Prerequisites

- There are no prerequisites at this time.

Compatibility

- This driver does not support the OneConnect family of adapters. It supports only LightPulse adapters.

- For a complete list of adapters that are compatible with this driver, see the driver's Downloads page on the Emulex Web site. For compatible firmware versions, see the Downloads page for the specific adapter.

Things to Know Before You Download

- This is an inbox driver. There are no downloads or download instructions.

Known Issues

- Refer to the product release notes for the latest information.

Installing the Driver

All Emulex drivers referenced in this manual ship inbox.

Uninstalling the Driver

This driver cannot be uninstalled, however it can be upgraded.

Installing the Utility

Follow these instructions to install the Emulex OneCommand Manager application utility.

To install the utility:

1. Log in as ‘root’.
2. Copy the elxocmcorekit-<*kit version*>.x86_64.rpm file to a directory on the install machine.
3. CD to the directory to which you copied the rpm file.
4. Install the rpm file. Type:

   `rpm -U elxocmcore-esx41-<kit version>.x86_64.rpm`

   For example:

   `rpm -U elxocmcore-esx41-5.0.68.5-1.x86_64.rpm`

   The hbacmd utility is also located in this directory.

Note: For VMware ESX Server systems, the firewall on the ESX Server must be opened to manage systems remotely using TCP/IP. To enable TCP port #23333, run the following commands:

esxcfg-firewall --openPort 23333,tcp,in,ocmanager
esxcfg-firewall --openPort 23333,tcp,out,ocmanager

To verify that the correct port is open, run the following command:

esxcfg-firewall -q

The TCP port number can be changed. If it is not changed, the default is 23333.

Refer to the VMware Server Configuration Guide for more details on how to configure the ESX firewall.

Uninstalling the Utility

Follow these instructions to uninstall the OneCommand Manager application utility.

To uninstall the utility:

1. Log in as ‘root’.
2. Type "rpm -qa | grep elx" to verify that this kit is installed. This command should list "elxocmcore-esx41-<*version*>" for the current release.
3. Type:

   `rpm -e elxocmcorekit-esx41-<kit version>`

Configuration

Introduction

You can configure the driver parameters using native ESX tools or the Emulex OneCommand Manager application (OCM). This document describes how to configure parameters using native ESX tools. For a more comprehensive description of ESX tools, refer to the VMware Web site at www.vmware.com. If you have further questions, contact a VMware technical support representative. Refer to the Emulex OneCommand Manager application User Manual for more information about the utility.

Configuration Methods Using Native ESX Tools

There are two ways to configure the driver parameters:

- Permanently (global)
- Permanently (per adapter)

Note: OCM also supports temporary driver parameter settings in addition to permanent. Refer to the OneCommand Manager application User Manual for more information.

Permanent Configuration Methods

Permanent configuration requires that the new values be saved in the ESX environment. These changes are considered permanent because they stay in effect across system reboots.

To make changes that impact all adapters in the system (global changes), follow these steps. See “Driver Configuration Parameters” on page 6 for parameter names and values. Parameter values are hexadecimal and decimal.

1. From the Console Operating System (COS) terminal window type:

   `esxcfg-module -s “param=value param2=value...” <driver_name>`

   The <*driver_name*> is obtained from the `vmkload_mod -l` call. Look for the “lpfc” prefix.

2. Reboot the server. Type:

   `reboot`

Note: VMware does not officially support unloading the driver via vmkload_mod -u. If you must unload the driver, contact VMware technical support.

Note: NPIV port creation and deletion are performed by VMware's Infrastructure Client, vSphere client or Virtual Center Server from VMware. Refer to the VMware documentation for more information.

Example of Permanent Global Configuration

The following example sets lun_queue_depth to 20 (default is 30) for all Emulex adapters in your system.

1. Locate the parameter in Table 1 on page 6.
2. Set the permanent value. Type:

   `esxcfg-module -s “lpfc_lun_queue_depth=20” lpfc820`

3. Reboot the server. Type:

   ```
   reboot
   ```

   The new setting is used when the driver reloads.

   To verify the setting type:

   ```
   esxcfg-module -g lpfc820
   ```

Example of Permanent Per Adapter Configuration

The following example sets lun_queue_depth to 20 (default is 30) for adapter #1.

1. Set the adapter-specific value. Type:

   ```
   esxcfg-module -s "lpfc1_lun_queue_depth=20" lpfc820
   ```

2. Reboot the server. Type:

   ```
   reboot
   ```

   The new setting is used when the driver reloads.

   To verify the setting type:

   ```
   esxcfg-module -g lpfc820
   ```

The following example sets lun_queue_depth to 20 (default is 30) for adapter #1 and lun_queue_depth to 10 (default is 30) for adapter #2.

1. Set the adapter-specific value. Type:

   ```
   esxcfg-module -s "lpfc1_lun_queue_depth=20
   lpfc2_lun_queue_depth=10" lpfc820
   ```

   Note: Type command all on one line without a carriage return.

2. Reboot the server. Type:

   ```
   reboot
   ```

   The new settings are used when the driver reloads.

   To verify the settings type:

   ```
   esxcfg-module -g lpfc820
   ```

Dynamically Adding LUNs and Targets

For instructions on dynamically adding LUNs and targets, refer to VMware's SAN Config documentation, "Using Rescan" section.

Emulex Driver Configuration Parameters

All adapter-specific parameters have an lpfc*X*_ prefix (where *X* is the driver instance number); for example, setting lpfc0_lun_queue_depth=20 makes 20 the default number of maximum commands which can be sent to a single logical unit (disk) for lpfc instance 0.

Dynamic parameters do not require a system reboot for changes to take effect.

Table 1: Driver Configuration Parameters

Variable	Default	Min	Max	Dynamic	Comments
lpfc_hba_queue_depth	8192	32	8192	No	Maximum number of FCP commands that can queue to an Emulex adapter. The value cannot exceed what the adapter supports.
lpfc_restrict_login	0	0=Off	1=On	No	Enables logins to other virtual initiators.
lpfc_ack0	0	0=Off	1=On	No	Use ACK0 for class 2.
lpfc_cr_count	1	1	255	No	Number of I/O completions after which an interrupt response is generated.
lpfc_cr_delay	0	0	63	No	Number of milliseconds after which an interrupt response is generated.
lpfc_discovery_threads	32	1	64	No	Specifies the maximum number of PLOGI commands that can be outstanding for a discovery.
lpfc_enable_da_id	0	0	1	No	Deregister Emulex objects registered with the NameServer.
lpfc_fcp_class	3	2	3	No	FC class for FCP data transmission.
lpfc_fdmi_on	0	0	2	Yes	False (0) if disabled. (1) or (2) if enabled depending on type of support needed.
lpfc_link_speed	0	0=auto select 1=1 Gb/s 2=2 Gb/s 4=4 Gb/s 8=8 Gb/s		No	Sets link speed. **Note:** Not supported for FCoE.
lpfc_log_verbose	0x0	0x0	0xffffffff	Yes	(bit mask) Extra activity logging.
lpfc_lun_queue_depth	30	1	128	Yes	Default max commands sent to a single logical unit (disk).
lpfc_max_luns	256	0	65535	No	Specifies the maximum number of LUNs per target. A value of 20 means LUNs from 0 to 19 are valid. Note that ESX only supports a maximum of 256 scsi devices per server.

Table 1: Driver Configuration Parameters (Continued)

Variable	Default	Min	Max	Dynamic	Comments
lpfc_max_scsicmpl_time	0	0	60000	Yes	Limits SCSI command completion time to control I/O queue depth. The default 0 means SCSI layer control maintains control. Value is in milliseconds.
lpfc_pci_max_read	0	0 = driver default 512 = 512 bytes 1024 = 1024 bytes 2048 = 2048 bytes 4096 = 4096 bytes		No	The maximum number of bytes transferred per pci DMA read. The default (0) means the driver automatically determines the correct value.
lpfc_peer_port_login	0	0	1	No	NPIV: Allows peer VPorts to log into each other.
lpfc_scan_down	1	0=Off	1=On	No	Select method for scanning ALPA to assign a SCSI ID.
lpfc_topology	0	0x0=loop then P2P 0x1=internal loopback 0x2=P2P only 0x4=loop only 0x6=P2P then loop		No	FC link topology (defaults to loop, if it fails attempts point-to-point mode). **Note:** Not supported for FCoE.
lpfc_use_adisc	0	0=Off	1=On	Yes	Send ADISC instead of Port Login (PLOGI) for device discovery or Registered State Change Notification (RSCN).
lpfc_devloss_tmo	10	1	255	Yes	Number of seconds a remote port can be lost before it is removed from the host's state.
lpfc_sg_seg_cnt	64	64	256	Reboot	Number of scatter-gather elements per scsi I/O.
lpfc_sli_mode	0	0	3	No	Host-to-Port interface mode used. Default (0) means auto-negotiate.
lpfc_enable_hba_reset	1	0	1	No	Enable Resets to Port. On by default.
lpfc_enable_hba_heartbeat	1	0	1	No	Enable periodic heartbeat commands to Port. On by default.

Table 1: Driver Configuration Parameters (Continued)

Variable	Default	Min	Max	Dynamic	Comments
lpfc_use_msi	0	0 = use INTX (min) 1 = use MSI 2 = use MSi-X (max)		No	Selects which interrupt mode to use. By default, the driver uses INTX. Consult Emulex before using. Not all Emulex adapters support MSI modes.

Creating a Fibre Channel Remote Boot Disk

For instructions on creating a Fibre Channel remote boot disk, refer to the VMware SAN Configuration Documentation, “Chapter 6, Using Boot from SAN with ESX Server Systems.”

Working with Virtual Ports (Vports)

Creating, Deleting and Displaying VPorts

The Emulex driver for VMware supports NPIV by default. The only management API for creating and deleting a VPort comes from ESX and the creation of an NPIV-enabled virtual machine. Virtual ports in the driver discover the fabric just like the physical port and are subject to the same SAN delays. As the number of VPorts increase, the amount of time it takes to complete remote port discovery increases as each VPort executes synchronous discovery and the VPorts are created sequentially. If your NPIV-enabled virtual machines are configured to power-on automatically, you could experience longer delays than normal when completing the power on sequence. This is normal for NPIV virtual machines.

Note: Ensure you are using the latest recommended firmware for VPort functionality. Check the Emulex Web site for the latest firmware.

Note: Loop devices and NPIV are not supported on the same port simultaneously. If you are running a loop topology and you create a VPort, the VPort’s link state is offline. VMware ESX only supports fabric mode.

Note: You can only create virtual ports on 4 Gb/s, 8 Gb/s adapters. You cannot create virtual ports on 1 Gb/s and 2 Gb/s adapters and FCoE adapters.

Note: The OneCommand Manager application sees all VPorts created by the driver, but the utility has read-only access to the VPorts.

Troubleshooting

Introduction

There are several circumstances in which your system may operate in an unexpected manner. The Troubleshooting section explains many of these circumstances and offers one or more workarounds for each situation.

Unusual Situations and their Resolutions

General Situations

Table 2: General Driver Situations

Situation	Resolution
Port link fails to come up.	If an FC link fails to come up, verify that an 8 Gb/s adapter is not attempting to connect to a 1 Gb/s device. Only 2, 4 and 8 Gb/s devices are supported on 8 Gb/sec adapters. For LP21000 adapters, ensure the adapter is not in maintenance mode and that it is not running the manufacturing firmware.
lpfc driver fails to recognize an adapter and logs "unknown IOCB" messages in the system log during driver load. The adapter is running outdated firmware.	Upgrade the adapter firmware to the minimum supported revision listed in the installation guide (or newer).
System panics when booted with a failed adapter installed.	Remove the failed adapter and reboot.

lpfc Log Messages

Introduction

Log messages are organized into logical groups based on code functionality within the Fibre Channel driver. Each group consists of a block of 100 log message numbers. Most groups require a single block of 100 message numbers, however some groups (INIT, FCP) require two blocks.

The groups and the associated number ranges are defined in the Message Log table below.

Table 3: Message Log Table

LOG Message Verbose Mask Definition	From	To	Verbose Bit	Verbose Description
LOG_ELS	0100	0199	0x1	ELS events
LOG_DISCOVERY	0200	0299	0x2	Link discovery events
LOG_SLI	0300	0399	0x800	SLI events
LOG_MBOX	0300	0399	0x4	Mailbox events
LOG_TEMP	0340	0347	0x100	Temperature sensor events
LOG_INIT	0400	0499	0x8	Initialization events
Reserved	0500	0599		
LOG_FCP_ERROR	0700	0799	0x1000	Log FCP errors, not underruns
Reserved	0800	0899		
LOG_NODE	0900	0999	0x80	Node table events
Reserved	1000	1199		
LOG_MISC LOG_FCoE	1200	1299	0x400	Miscellaneous and FCoE events
LOG_LINK_EVENT	1300	1399	0x10	Link events
Reserved	1400	1599		
LOG_LIBDFC	1600	1699	0x2000	IOCTL events
LOG_VPORT	1800	1832	0x4000	NPIV events
LOG_EVENT	1900	1999	0x10000	Message events
LOG_ALL_MSG	0100	1699	0xffffffff	Log all messages

Message Log Example

The following is an example of a LOG message:

```
Jul  2 04:23:34 daffy kernel: lpfc 0000:03:06.0: 0:1305 Link Down
Event x2f2 received Data: x2f2 x20 x110
```

In this example LOG message:

- lpfc 0000:03:06.0: identifies the identifies the pci location of the particular lpfc hw port.
- 0: identifies Emulex adapter 0.
- 1305 identifies the LOG message number.

Note: If the word 'Data:' is present in a LOG message, any information to the right of 'Data:' is intended for Emulex technical support/engineering use only.

ELS Events (0100 - 0199)

elx_mes0111: Dropping received ELS cmd

DESCRIPTION: The driver decided to drop an ELS response ring entry.
DATA: (1) ulpStatus (2) ulpWord[4] (3) ulpTimeout
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0113: An FLOGI ELS command <elsCmd> was received from DID <did> in Loop Mode

DESCRIPTION: While in loop mode an unknown or unsupported ELS command was received.
DATA: None
ACTION: Check the device DID.

elx_mes0115: Unknown ELS command <elsCmd> received from NPORT <did>

DESCRIPTION: Received an unsupported ELS command from a remote NPORT.
DATA: None
ACTION: Check the remote NPORT for a potential problem.

elx_mes0122: FDISC Failed <WWPN>. Fabric Detected Bad WWN

DESCRIPTION: The fabric failed an FDISC request because the initiator WWN was invalid.
DATA: None
ACTION: This error could indicate an OS, fabric, or driver error. Double check all WWN settings. If the problem persists, contact Technical Support.

elx_mes0124: Retry illegal cmd <cmd> retry <count> delay <msecs>

DESCRIPTION: An ELS command completed with a status of illegal command.
DATA: None
ACTION: None required. The driver should recover from this event.

elx_mes0125: FDISC Failed (x%x). Fabric out of resources

DESCRIPTION: The fabric rejected an FDISC because the switch can not support any more virtual ports.
DATA: lsRjtError
ACTION: Reconfigure the switch to support more NPIV logins. If the problem persists, contact Technical Support.

elx_mes0126: FDISC failed <error> reason <error>

DESCRIPTION: The VPort's fdisc failed.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0127: ELS timeout

DESCRIPTION: An ELS IOCB command was posted to a ring and did not complete within ULP timeout seconds.
DATA: (1) elscmd (2) remote_id (3) ulpcommand (4) ulpIoTag
ACTION: If no ELS command is going through the adapter, reboot the system. If the problem persists, contact Technical Support.

elx_mes0133: PLOGI: no memory for reg_login

DESCRIPTION: Memory allocation error.
DATA: (1) nlp_DID, (2) nlp_state, (3) nlp_flag, (4) nlp_rpi
ACTION: Check system resources. Unload any unused modules.

elx_mes0134: PLOGI: cannot issue reg_login

DESCRIPTION: The REG_LOGIN following a PLOGI failed.
DATA: (1) node DID (2) node state (3) node flags (4) node rpi
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0135: PLOGI: cannot format reg_login

DESCRIPTION: The REG_LOGIN format process failed.
DATA: (1) node DID (2) node state (3) node flags (4) node rpi
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0136: PLOGI completes to NPORT <DID> with no NDLP

DESCRIPTION: A PLOGI completed without a driver NDLP node.
DATA: (1) remote DID (2) IO status (3) IO word4 (4) IoTag
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0137: No Retry ELS command <elsCmd> to remote NPORT <did>: Out of Resources: Error <error>

DESCRIPTION: The driver is not retrying an ELS command due to an error.
DATA: (1) cmd (2) did (3) IO status (4) IO word4
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0138: ELS rsp: Cannot issue reg_login for <did>

DESCRIPTION: The driver cannot issue the reg_login for a remote node.
DATA: (1) remote DID (2) node flags (3) node state (4) node rpi
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0140: PLOGI Reject: invalid nname

DESCRIPTION: Invalid node WWN provided.
DATA: None
ACTION: Check the WWNN/WWPN configuration of the remote NPort that sent the PLOGI. If the problem persists, contact Technical Support.

elx_mes0141: PLOGI Reject: invalid pname

DESCRIPTION: Invalid port WWN provided.
DATA: None
ACTION: Check the WWNN/WWPN configuration of the remote NPort that sent the PLOGI. If the problem persists, contact Technical Support.

elx_mes0142: PLOGI RSP: Invalid WWN

DESCRIPTION: The PLOGI sent to the port by a remote port had an invalid WWN.
DATA: None
ACTION: None required.

Link Discovery Events (0200 - 0299)

elx_mes0200: CONFIG_LINK bad hba state <hba_state>

DESCRIPTION: A CONFIG_LINK mbox command completed and the driver was not in the correct state.
DATA: None
ACTION: Software driver error. If the problem persists, contact Technical Support.

elx_mes0203: Devloss timeout on WWPN <address> NPort <nlp_DID>

DESCRIPTION: A remote NPort that was discovered by the driver disappeared for more than lpfc_devloss_tmo seconds.
DATA: (1) nlp_flag (2) nlp_state (3) nlp_rpi
ACTION: None required, if the device generating this message is not a target to which the adapter is connected. If this is the case, this error does not affect the data integrity of the I/O between the adapter and the attached storage and can be ignored.

elx_mes0206: Device discovery completion error

DESCRIPTION: This indicates that an uncorrectable error was encountered during device rediscovery after a link up. Fibre Channel devices are not accessible if this message is displayed.
DATA: None
ACTION: Reboot the system. If the problem persists, contact Technical Support. Run with verbose mode on for more details.

elx_mes0207: Device <DID> (<WWN>) sent invalid service parameters. Ignoring device.

DESCRIPTION: Invalid service parameters were received from DID. Ignoring this remote port.
DATA: (1) d_id (2) wwn
ACTION: Verify the remote port's configuration. If the problem persists, contact Technical Support. Run with verbose mode on for more details.

elx_mes0222: Initial FLOG/FDISKI timeout

DESCRIPTION: The driver sent the initial FLOGI or FDISK to the fabric and never got a response back.
DATA: None
ACTION: Check the fabric configuration. The driver should recover from this and continue with device discovery.

elx_mes0223: Timeout while waiting for NameServer login

DESCRIPTION: The login request to the NameServer was not acknowledged within RATOV.
DATA: None
ACTION: Check the fabric configuration. The driver should recover from this and continue with device discovery.

elx_mes0224: NameServer Query timeout

DESCRIPTION: Node authentication timeout, node Discovery timeout. A NameServer Query to the fabric or discovery of reported remote N_Ports is not acknowledged within R_A_TOV.
DATA: (1) fc_ns_retry (2) fc_max_ns_retry
ACTION: Check the fabric configuration. The driver should recover from this and continue with device discovery.

elx_mes0226: Device discovery completion error

DESCRIPTION: This indicates that an uncorrectable error was encountered during device (re)discovery after a link up. Fibre Channel devices will not be accessible if this message is displayed.
DATA: None
ACTION: Reboot the system. If the problem persists, contact Technical Support. Run with verbose mode on for more details.

elx_mes0227: Node Authentication timeout

DESCRIPTION: The driver has lost track of what N_PORTs are being authenticated.
DATA: None
ACTION: None required. The driver should recover from this event.

elx_mes0228: CLEAR LA timeout

DESCRIPTION: The driver issued a CLEAR_LA that never completed.
DATA: None
ACTION: None required. The driver should recover from this event.

elx_mes0230: Unexpected timeout, hba link state <state>

DESCRIPTION: The adapter link down timer expired.
DATA: (1) new link state
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0231: RSCN timeout

DESCRIPTION: The driver has lost track of what N_PORTs have RSCNs pending.
DATA: (1) fc_ns_retry (2) lpfc_max_ns_retry
ACTION: None required. The driver should recover from this event.

elx_mes0232: Continue discovery with <num_disc_nodes> PLOGIs to go

DESCRIPTION: The driver is waiting for the nodelist to empty during cleanup.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0233: Nodelist not empty

DESCRIPTION: Driver unloaded or hotplug detected a node still in use.
DATA: None
ACTION: None required

elx_mes0236: Pending Link Event during discovery: State <state>

DESCRIPTION: Driver unloaded or hotplug detected a node still in use.
DATA: None
ACTION: None required. The driver should recover from this event

elx_mes0241: NameServer Rsp Error

DESCRIPTION: The driver's GID_FT request was returned with an error from the fabric.
DATA: (1) Rsp (2) ReasonCode (3) Explanation (4) vport fc_flag
ACTION: This could indicate a configuration issue in the fabric. If the problem persists, contact Technical Support.

elx_mes0246: RegLogin failed

DESCRIPTION: The firmware returned a failure for the specified RegLogin.
DATA: (1) D-d (2) mbxStatus (3) hbaState
ACTION: This message indicates that the firmware could not perform a RegLogin for the specified Did. There may be a limitation on how many nodes the adapter can see.

elx_mes0249: Cannot issue Register Fabric login, Err <error>

DESCRIPTION: The driver cannot register the new fabric login with the FW.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0251: NameServer login: no memory

DESCRIPTION: Could not allocate memory for the NDLP structure.
DATA: None
ACTION: Add more memory to the system or run less of a load on it. This error could indicate a memory leak in the system. If the problem persists, contact Technical Support.

elx_mes0252: Cannot issue NameServer login

DESCRIPTION: The driver cannot issue a PLOGI to the Nameserver.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0253: Register VPI: Can<92>t send mbox

DESCRIPTION: Could not issue the REG_LOGIN command for this VPort.
DATA: None
ACTION: None required.

elx_mes0254: Register VPI: no memory

DESCRIPTION: The driver failed to allocate memory for a REG_VPI mailbox command.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0255: Issue FDISC, no IOCB.

DESCRIPTION: The driver tried to issue an FDISC, but no IOCBs were available.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0256: Issue FDISC, cannot send IOCB

DESCRIPTION: The driver tried to send an FDISC, but the issue_IOCB failed.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0257: GID_FT Query error: <status> <retries>.

DESCRIPTION: The GID_FT request failed with status <status> retry count <retries>
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0258: Register Fabric login error <status>.

DESCRIPTION: The mailbox command to register the fabric login failed.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0259: No NPIV Fabric support

DESCRIPTION: The FLOGI response indicates no NPIV support in the fabric.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0260: Register NameServer error: <status>.

DESCRIPTION: The driver failed to register the Nameserver login with the FW <status>
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0261: Cannot Register NameServer login

DESCRIPTION: The driver cannot register a Nameserver login with the FW.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support

elx_mes0262: No NPIV Fabric support

DESCRIPTION: A VPort detected no NPIV support and did not send an FDISC.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0263: Discovery Mailbox error: state <state> sparam <buffer> cfglink <buffer>.

DESCRIPTION: The driver processed a link up and failed to set the state.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0264: No NPIV fabric support.

DESCRIPTION: The driver could not reenable a VPort - no NPIV fabric support.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0266: Issue NameServer Req <cmd> err <rc>

DESCRIPTION: The driver tried to issue a NameServer command and failed.
DATA: (1) fc_flag (2) fc_rscn_id_cnt
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0267: NameServer GFF Rsp <rsp> Error <status ulpword4>.

DESCRIPTION: The driver detect a GFF_ID Rsp failure.
DATA: (1) fc_flag (2) fc_rscn_id_cnt
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0268: NS cmd <cmd> Error <status ulpword4>

DESCRIPTION: The driver detect a Nameserver request failure.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0271: Illegal State Transition: Node <did> event <evt> state <state>.

DESCRIPTION: The driver received an event on a node that was illegal for its current state.
DATA: (1) node rpi (2) node flag
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0272: Illegal PLOGI State Transition: Node <did> event <evt> state <state>.

DESCRIPTION: The driver received an event on a node in state PLOGI that was illegal.
DATA: (1) node rpi (2) node flag
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0273: Unexpected discovery timeout

DESCRIPTION: The driver detected an unrecognized discovery timeout event, VPort state <state>.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0282: did <did> ndlp <ndlp> usgmap <nlp_usg_map> refcnt <refcount>

DESCRIPTION: The driver found this node pending while cleaning up a VPort.
DATA: None
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

Mailbox Events (0300 - 0339)

elx_mes0300: READ_LA issue failure.

DESCRIPTION: The driver failed to issue a Read Link Attention mailbox command.
DATA: (1) reason code
ACTION: This error could indicate a software driver. If the problem persists, contact Technical Support.

elx_mes0303: Ring <ringno> handler: portRspPut <portRspPut> is bigger then rsp ring <portRspMax>

DESCRIPTION: The port rsp ring put index is larger than the size of the rsp ring.
DATA: None
ACTION: This error could indicate a software driver, firmware or hardware problem. Contact Technical Support.

elx_mes0304: Stray mailbox interrupt, mbxCommand <mbxcommand> mbxStatus <mbxstatus>

DESCRIPTION: Received a mailbox completion interrupt and there are no outstanding mailbox commands.
DATA: None
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, report the error to Technical Support.

elx_mes0306: CONFIG_LINK mbxStatus error <mbxStatus> HBA state <hba_state>

DESCRIPTION: The driver issued a CONFIG_LINK mbox command to the adapter that failed.
DATA: None
ACTION: This error could indicate a firmware or hardware problem. Contact Technical Support.

elx_mes0310: Mailbox command x%x timeout

DESCRIPTION: A mailbox command was posted to the adapter and did not complete within 30 seconds.
DATA: (1) hba_state (2) sli_flag (3) mbox_active
ACTION: This error could indicate a software driver or firmware problem. If no I/O is going through the adapter, reboot the system. If the problem persists, report the error to Technical Support.

elx_mes0312: Ring <ring> handler: portRspPut <index> is bigger than rsp ring <index_max>

DESCRIPTION: The driver detected a response ring index that is bigger than the ring maximum. This is a hard error.
DATA: None
ACTION: This error could indicate a software driver or FW error. If the problem persists, contact Technical Support.

elx_mes0315: Ring <ringno> issue: portCmdGet <local_getidx> is bigger then cmd ring <max_cmd_idx>.

DESCRIPTION: The port cmd ring get index is greater than the size of cmd ring.
DATA: None
ACTION: This error could indicate a software driver, firmware or hardware problem. Contact Technical Support.

elx_mes0317: iotag <ulp_IoTag> is out of range: max iotag <max_iotag> wd0 <wd0>

DESCRIPTION: The IoTag in the completed IOCB is out of range.
DATA: None
ACTION: This error could indicate a software driver, firmware or hardware problem. Contact Technical Support.

elx_mes0318: Failed to allocate IOTAG. last IOTAG is <last_allocated_iotag>

DESCRIPTION: The driver cannot allocate an IoTag. The last used value is displayed. This message indicates the adapter HBA I/O queue is full. Typically this happens when heavy I/O is running on a low-end (3 digit) adapter.
DATA: None
ACTION: Emulex suggests that you upgrade the adapter.

elx_mes0319: READ_SPARAM mbxStatus error <mbxStatus> hba state <hba_state>

DESCRIPTION: The driver issued a READ_SPARAM mbox command to the adapter that failed.
DATA: None
ACTION: This error could indicate a firmware or hardware problem. Contact Technical Support.

elx_mes0320: CLEAR_LA mbxStatus error <mbxStatus> hba state <hba_state>

DESCRIPTION: The driver issued a CLEAR_LA mbox command to the adapter that failed.
DATA: None
ACTION: This error could indicate a firmware or hardware problem. Contact Technical Support.

elx_mes0321: Unknown IOCB command

DESCRIPTION: Received an unknown IOCB command completion.
DATA: (1) type (2) ulpCommand (3) ulpStatus (4) ulpIoTag (5) ulpContext)
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0323: Unknown Mailbox command <mbxCommand> Cmpl

DESCRIPTION: An unknown mailbox command completed.
DATA: None
ACTION: This error could indicate a software driver, firmware or hardware problem. Contact Technical Support.

elx_mes0324: Config port initialization error, mbxCmd <mbxCommand> READ_NVPARM, mbxStatus <mbxStatus>.

DESCRIPTION: A read nvparams mailbox command failed during port configuration.
DATA: None
ACTION: This error could indicate a software driver, firmware or hardware problem. Contact Technical Support.

elx_mes0330: IOCB wake NOT set.

DESCRIPTION: The completion handler associated with the IOCB was never called.
DATA:(1) timeout (2) timeleft/jiffies
ACTION: This error could indicate a software driver, firmware or hardware problem. If the problem persists, contact Technical Support.

elx_mes0332: IOCB wait issue failed

DESCRIPTION: The driver failed to issue a timed IOCB.
DATA: (1) failure code
ACTION: No action needed. If the problem persists, contact Technical Support.

elx_mes0334: Unknown IOCB command

DESCRIPTION: Received an unknown IOCB command completion.
DATA: (1) type (2) ulpCommand (3) ulpStatus (4) ulpIoTag (5) ulpContext)
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support.

elx_mes0335: Unknown IOCB command

DESCRIPTION: Received an unknown IOCB command completion.
DATA: (1) ulpCommand (2) ulpStatus (3) ulpIoTag (4) ulpContext)
ACTION: This error could indicate a software driver or firmware problem. If the problem persists, contact Technical Support

elx_mes0338: IOCB wait timeout error - no wake response

DESCRIPTION: The driver waited for an I/O for as long as it could and is generating an error.
DATA: (1) timeout (2) wake signal
ACTION: None required. If the problem persists, contact Technical Support.

elx_mes0340: Adapter temperature is OK now

DESCRIPTION: Adapter temperature has reverted to normal range.
DATA: Temperature in Celsius
ACTION: None required, informational.

elx_mes0341: Ring <ring> Cannot find buffer for an unsolicited iocb. tag <iotag>

DESCRIPTION: The driver is out of HBQ buffers for an unsolicited response I/O. Discarding I/O.
DATA: None
ACTION: This error could indicate a software driver problem or firmware error. If the problem persists, contact Technical Support.

elx_mes0342: Ring <ring> Cannot find buffer for an unsolicited iocb. tag <iotag>

DESCRIPTION: The driver is out of HBQ buffers for an unsolicited response I/O. Discarding I/O.
DATA: None
ACTION: This error could indicate a software driver problem or firmware error. If the problem persists, contact Technical Support.

elx_mes0343: Ring <ring> Cannot find buffer for an unsolicited iocb. tag <iotag>

DESCRIPTION: The driver is out of HBQ buffers for an unsolicited command I/O. Discarding I/O.
DATA: None
ACTION: This error could indicate a software driver problem or firmware error. If the problem persists, contact Technical Support.

elx_mes0344: Ring <ring> Cannot find buffer for an unsolicited iocb. tag <iotag>

DESCRIPTION: The driver is out of HBQ buffers for an unsolicited command I/O. Discarding I/O.
DATA: None
ACTION: This error could indicate a software driver problem or firmware error. If the problem persists, contact Technical Support.

elx_mes0345: Resetting board due to mailbox command timed out.

DESCRIPTION: The driver is resetting the adapter's port because a mailbox command timed out.
DATA: None
ACTION: This error could indicate a software driver problem or firmware error. If the problem persists, contact Technical Support.

elx_mes0346: Ring <ring> handler: unexpected ASYNC_STATUS evt_code <evt_code>

DESCRIPTION: The driver received an asynchronous event for which it did not register.
DATA: None
ACTION: This error could indicate a software driver problem. If the problem persists, contact Technical Support.

elx_mes0347: Adapter is very hot, take corrective action.

DESCRIPTION: Adapter temperature is above normal range.
DATA: Temperature in Celsius
ACTION: Shut down and remove the adapter. Contact Technical Support.

elx_mes0348: NameServer login: node freed

DESCRIPTION: The driver attempted to send a PLOGI to the Nameserver, but the node has been released.
DATA: None
ACTION: This error could indicate a software driver problem. If the problem persists, contact Technical Support.

elx_mes0349: rc should be MBX_SUCCESS

DESCRIPTION: The driver issued a mailbox command from an interrupt context and the command failed.
DATA: None
ACTION: This error could indicate a software driver problem. If the problem persists, contact Technical Support.

elx_mes0352: Unexpected completion on IoTag x%x. IOCB no in use.

DESCRIPTION: The driver completed an I/O, but the I/O state is marked not in use. The driver will fail to complete the I/O and cause an error.
DATA: (1) ringno (2) ulpWord[4] (3) ulpContext (4) ulpWord[7]
ACTION: None required. The upper software layers above the driver should recover from this. If the problem persists, contact Technical Support.

elx_mes0353: iotag x%x is out of range: max iotag x%x wd0 x%x

DESCRIPTION: The driver has an IOCB with an IoTag that is out of range. The driver will fail to complete the I/O and cause an error.
DATA: None
ACTION: None required. The upper software layers above the driver should recover from this. If the problem persists, contact Technical Support.

elx_mes0354: Release of in-use iocbq.

DESCRIPTION: The driver tried to release an IOCBQ to its free-list, but the IOCBQ was marked used.
DATA: (1) IoTag (2) ulpCommand (3) ulpContext
ACTION: The driver will panic. Contact Technical Support.

elx_mes0356: Missing IOCBQ for completion on IoTagx%x. IOCB not in use.

DESCRIPTION: An FCP I/O completed, but the driver could not find the corresponding IOCBQ.
DATA: (1) ulpWord[0] (2) ulpWord[1] (3) ulpWord[2] (4) ulpWord[3] (5) ulpWord[4] (6) ulpWord[5] (7) ulpWord[6] (8) ulpWord[7]
ACTION: This could be a driver problem. If the problem persists, contact Technical Support.

elx_mes0357: Out of IOCBq Buffers. Failing completion.

DESCRIPTION: An FCP I/O completed, but the driver could not get an IOCBQ to copy the data.
DATA: None
ACTION: This event should be transient, but could be a driver problem. If the problem persists, contact Technical Support.

elx_mes0358: Found iocbq in_use set in free list.

DESCRIPTION: The driver tried to get an IOCBQ for an I/O, but the IOCBQ was marked used.
DATA: (1) IoTag (2) ulpCommand (3) ulpContext
ACTION: The driver will panic. Contact Technical Support.

Initialization Events (0400 - 0499)

elx_mes0400: Phys Attribute Count Exceeded, Max <max>, Actual <actual>

DESCRIPTION: The driver detected a driver attribute set beyond its range.
DATA: None
ACTION: This error could indicate a software driver or firmware error. If the problem persists, contact Technical Support.

elx_mes0402: Cannot find virtual addr for buffer tag on ring <ring>

DESCRIPTION The driver cannot find the virtual address mapping to a dma buffer.
DATA: None
ACTION: This error could indicate a software driver or firmware error. If the problem persists, contact Technical Support.

elx_mes0403: lpfc_devloss_tmo attribute cannot be set to <value>, allowed range is [min, max]

DESCRIPTION: The driver detected a set on the devloss attribute as out of range.
DATA: None
ACTION: Lower the set value to the allowable range and try again. If the problem persists, contact Technical Support.

elx_mes0404: Only allocated <cnt> iocbs of expected <cnt> count. Unloading driver.

DESCRIPTION: The driver could not allocated all expected IOCBs and is unloading.
DATA: None
ACTION: Reboot the system. If the problem persists, contact Technical Support.

elx_mes0405: lpfc_link_speed attribute cannot be set to <value>, allowed values are <list>

DESCRIPTION: A management entity tried to set the link speed to an unsupported value. The driver made no changes.
DATA: None
ACTION: This error could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes0406: Adapter maximum temperature exceeded <temp>, taking this port offline

DESCRIPTION: The driver received a critical temp event from the port and is taking the port offline.
DATA: (1) event (2) ws0 (3) ws1
ACTION: Contact Technical Support to determine the appropriate action. This message could inidate a bad adapter or a cooling problem in the system.

elx_mes0410: Cannot find virtual addr for mapped buf on ring <ringno>.

DESCRIPTION: The driver cannot find the specified buffer in its mapping table. Thus, it cannot find the virtual address needed to access the data.
DATA: (1) phys (2) next (3) prev (4) postbufq_cnt
ACTION: This error could indicate a software driver or firmware problem. If the problem persists contact Technical Support.

elx_mes0421: MSI-X request_irq failed <error>, continuing with MSI.

DESCRIPTION: The driver could not get an MSI-X vector, trying MSI
DATA: None
ACTION: This error could indicate a lack of OS support. If the problem persists, contact Technical Support.

elx_mes0423: Vport Attribute Instance Error. Defaulting lpfc_<attr> to <value>, error value <value> allowed range is <min, max>

DESCRIPTION: The driver detected an out-of-range value on a VPort attribute and defaulted it to a good value.
DATA: None
ACTION: Read the allowed range and set the attribute again. If the problem persists contact Technical Support.

elx_mes0424: Vport Attribute Count Exceeded, Max <max>, Actual <actua>

DESCRIPTION: The driver detected too many attributes in the set operations. The driver ignored all sets beyond <max>.
DATA: None
ACTION: Check the number of parameters modified per VPort.

elx_mes0425: lpfc_<attr> attribute cannot be set to <value>, allowed range is [min, max]

DESCRIPTION: The driver detected an attribute set value that is out-of-range on the physical port.
DATA: None
ACTION: Read the allowed range and set the attribute again. If the problem persists contact Technical Support.

elx_mes0436: Adapter failed to init, timeout, status reg <status>

DESCRIPTION: The adapter failed during powerup diagnostics after it was reset.
DATA: None
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0437: Adapter failed to init, chipset, status reg <status>

DESCRIPTION: The adapter failed during powerup diagnostics after it was reset.
DATA: None
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0438: Adapter failed to init, chipset, status reg <status>

DESCRIPTION: The adapter failed during powerup diagnostics after it was reset.
DATA: None
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0439: Adapter failed to init, mbxCmd <mbxCommand> READ_REV, mbxStatus <mbxStatus>

DESCRIPTION: Adapter initialization failed when issuing a READ_REV mailbox command.
DATA: None
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0440: elx_mes0440: Adapter failed to init, READ_REV has missing revision information

DESCRIPTION: A firmware revision initialization error was detected.
DATA: None
ACTION: Update the firmware. This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0442: Adapter failed to init, mbxCmd <mbxCommand> CONFIG_PORT, mbxStatus <mbxStatus>

DESCRIPTION: Adapter initialization failed when issuing a CONFIG_PORT mailbox command.
DATA: (1) hbainit
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0443: Adapter failed to set maximum DMA length mbxStatus <status>

DESCRIPTION The driver tried to set the max DMA read transfer and failed.
DATA: (1) additional status
ACTION: This error could indicate a software driver or firmware error. If the problem persists, contact Technical Support.

elx_mes0444: Firmware in SLI <sli_ver> mode. Max_vpi <max_vpi>

elx_mes0446: Adapter failed to init, mbxCmd <mbxCommand> CFG_RING, mbxStatus <mbxStatus>, ring <num>

DESCRIPTION: Adapter initialization failed when issuing a CFG_RING mailbox command.
DATA: None
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0447: Adapter failed to set maximum DMA length mbxStatus <status> data <data>

DESCRIPTION: The driver tried to alter the max DMA length in the hardware and failed. The DMA length is not changed.
DATA: None
ACTION: This error could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes0448: Adapter failed to init, mbxCmd <mbxCommand> READ_SPARM, mbxStatus <mbxStatus>

DESCRIPTION: Adapter initialization failed when issuing a READ_SPARM mailbox command.
DATA: None
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0449: Phys Attribute Instance Error. Defaulting lpfc_#attr to %d, error value %d, allowed range is ["#minval", "#maxval"]

DESCRIPTION: Sysfs attribute value written exceeds attribute range.
DATA: (1) attribute name (2) value written (3) error value (4) minimum value (5) maximum value
ACTION: Write a value within the supported range.

elx_mes0450: lpfc_%attr attribute cannot be set to %d, allowed range is [%min, %max]

DESCRIPTION: Sysfs attribute value written exceeds attribute range.
DATA: (1) attribute name (2) value written (3) minimum value (3) maximum value
ACTION: Write a value within the supported range.

elx_mes0451: Enable interrupt handler failed

DESCRIPTION: The driver attempted to register the adapter interrupt service routine with the host operating system, but failed.
DATA: None
ACTION: This error could indicate a hardware or driver problem. If the problem persists, contact Technical Support.

elx_mes0453: Adapter failed to init, mbxCmd <mbxCommand> READ_CONFIG, mbxStatus <mbxStatus>

DESCRIPTION: Adapter initialization failed when issuing a READ_CONFIG mailbox command.
DATA: None
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0454: Adapter failed to init, mbxCmd <mbxCommand> INIT_LINK, mbxStatus <mbxStatus>

DESCRIPTION: Adapter initialization failed when issuing an INIT_LINK mailbox command.
DATA: None
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0456: Adapter failed to issue ASYNCEVT_ENABLE mbox status <status>

DESCRIPTION: The driver failed to register for async events with the port firmware.
DATA: None
ACTION: None required. The driver should continue to run. If the problem persists contact Technical Support.

elx_mes0457: Adapter Hardware Error

DESCRIPTION: The driver received an interrupt indicating a possible hardware problem.
Data: (1) status (2) status1 (3) status2
ACTION: This error could indicate a hardware or firmware problem. If the problem persists, contact Technical Support.

elx_mes0459: Adapter heartbeat failure, taking this port offline

DESCRIPTION: The driver did not receive a heartbeat response from the port in the time allotted. The driver is taking the adapter offline.
DATA: None
ACTION: This error could indicate a software driver or firmware error. Contact Technical Support.

elx_mes0462: Too many cmd / rsp ring entries in SLI2 SLIM

DESCRIPTION: The configuration parameter for scan-down is out of range.
DATA: (1) totiocb (2) MAX_SLI2_IOCB
ACTION: This is a software driver error. If the problem persists, contact Technical Support.

elx_mes0464: Max DMA Set failed - could not alloc memory

DESCRIPTION: The driver could not allocate memory for a DMA Read set - operation aborted.
DATA: None
ACTION: This error could indicate a software driver or firmware error. If the problem persists, contact Technical Support.

elx_mes0471: Enable interrupt handler failed

DESCRIPTION: The driver tried to request an IRQ following a PCI slot reset and failed.
DATA: None
ACTION: This error could indicate a system or OS error. If the problem persists, contact Technical Support.

elx_mes0472: PCI channel I/O permanent failure

DESCRIPTION: The driver has detected a PCI bus error and is disabling the adapter port.
DATA: None
ACTION: This error could indicate a system or OS error. If the problem persists, contact Technical Support.

FARP Events (0600 - 0699)

None.

FCP Traffic History (0700 - 0799)

elx_mes0700: Bus Reset on target <tgt_id> failed

DESCRIPTION: The SCSI layer called for a bus reset and Target <tgt_id> failed its target reset.
DATA: None
ACTION: This error could indicate a software driver, firmware, or target error. If the problem persists, contact Technical Support.

elx_mes0704: SCSI Layer tried to abort a completed cmd <address> ID <id> LUN <lun> snum <serial number>

DESCRIPTION: The SCSI layer issued an ABTS for a command the driver has already completed.
DATA: None.
ACTION: This could be an operating system or driver issue. If the problem persists, contact Technical Support.

elx_mes0706: Failed to allocate command buffer

DESCRIPTION: There was not enough memory on the system to allocate a command buffer.
DATA: None
ACTION: This error could indicate a heavily loaded system or a memory leak. If the problem persists, contact Technical Support.

elx_mes0708: Memory alloc error in proc handler

DESCRIPTION: Driver's procfs handler failed to allocate memory.
DATA: None
ACTION: This could be a driver issue. If the problem persists, contact Technical Support.

elx_mes0713: SCSI layer issued Device LUN/Target Reset (%d, %d) return <x%x> status x%x reset x%x

DESCRIPTION: A device reset has completed on (tgt, lun). Status values are displayed.
DATA: None
ACTION: Resets could result from failed I/O and are OS-specific. If the problem persists, contact Technical Support.

elx_mes0714: SCSI layer issued bus reset

DESCRIPTION: The SCSI layer is requesting the driver to abort all I/Os to all targets on this adapter.
DATA: (1) ret
ACTION: Check the state of the targets in question. If the problem persists, contact Technical Support.

elx_mes0715: Bus Reset I/0 flush failure: x%x IOs outstanding after %d secs

DESCRIPTION: There is pending I/O after a bus reset. The count and time are displayed. The driver fails the reset after causing a retry
DATA: None
ACTION: If the problem persists, contact Technical Support.

elx_mes0717: FCP command <cmd> residual underrun converted to error

DESCRIPTION: A scsi command completed with no valid sense data but an underrun.
DATA: (1) req bufflen (2) resid (3) underflow
ACTION: This could be an issue at the storage array. If the problem persists, contact Technical Support.

elx_mes0718 - Unable to dma_map_single request_buffer: <dma_error>

DESCRIPTION: An error occurred while sending a command, and the command will be retried.
DATA: None
ACTION: If the problem persists, contact Technical Support.

elx_mes0719: LUN/TARGET reset I/0 flush failure: cnt x%x

DESCRIPTION: There is pending I/O after a LUN/TARGET reset. The count is displayed. The driver fails the reset causing a retry.
DATA: None.
ACTION: If the problem persists, contact Technical Support.

elx_mes0720: FCP command <cmd> residual overrun error

DESCRIPTION: A scsi command completed with an overrun.
DATA: (1) req bufflen (2) resid
ACTION: This could be an issue at the storage array. If the problem persists, contact Technical Support

elx_mes0721: LUN Reset rport failure: msec <time wait jiffies> rdata <pointer>

DESCRIPTION: The driver issued a LUN RESET task management command but it didn't complete in the time allotted. The driver is failing the LUN RESET request.
DATA: None
ACTION: This error could indicate a driver error or SAN error. If the problem persists, contact Technical Support.

elx_mes0748: Abort handler timed out waiting for abort to complete:ret <status> D <target id> LUN <lun id>

DESCRIPTION: The abort handler timed out waiting for abort to complete.
DATA: None
ACTION: None required.

Node Table Events (0900 - 0999)

elx_mes0915: Register VPI failed: <mbxstatus>

DESCRIPTION: The driver failed to register a VPI on a new VPort.
DATA: None
ACTION: This error could indicate a software driver or firmware error. If the problem persists, contact Technical Support.

Security Events (1000 - 1099)

elx_mes1001: Adapter failed to init, mbxcmd <cmd> INIT_LINK, mbxstatus <status>

DESCRIPTION: Adapter failed to initial the link and is returning status.
DATA: None
ACTION: Ensure the link is plugged in and the fabric port is operational. If the problem persists, contact Technical Support.

Elx_msg1005 AUTHENTICATION_FAILURE Nport:<port>

DESCRIPTION: The system detected DHCHAP authentication failure on a port.
DATA: nlp_DID
ACTION: Verify authentication settings and keys on local and remote port.

Elx_msg1006 Bad Name tag in auth message < message >

DESCRIPTION: DHCHAP Authentication process failed when an invalid tag was detected.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1007 Bad Name length in auth message < message >

DESCRIPTION: DHCHAP Authentication process failed when an invalid name was detected.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1008 Bad Number of Protocols <message>

DESCRIPTION: DHCHAP Authentication process failed due to an unexpected protocol number.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1009 Bad param type <message>

DESCRIPTION: DHCHAP Authentication process failed when an invalid protocol was detected.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1010 Bad Tag 1 <message>

DESCRIPTION: DHCHAP Authentication process failed when a bad tag was detected.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg 1011 Auth_neg no hash function chosen

DESCRIPTION: DHCHAP Authentication process failed when an incorrect hash function was specified.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1012 Auth_negotiate Bad Tag <message>

DESCRIPTION: DHCHAP Authentication process failed due to a bad tag for auto negotiation.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg 1013 Auth_negotiate no DH_group found

DESCRIPTION: DHCHAP Authentication process failed when an incorrect or missing DH Group was detected.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1014 dhchap challenge bad name tag <message>

DESCRIPTION: DHCHAP Authentication process failed when an incorrect Challenge name tag was detected.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1015 dhchap challenge bad name length <message>

DESCRIPTION: DHCHAP Authentication process failed due to an unexpected Challenge name length.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1016 dhchap challenge Hash ID not Supported <message>

DESCRIPTION: DHCHAP Authentication process failed due to an uncorroborated Challenge Hash ID.
DATA: message
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1017 dhchap challenge could not find DH Group

DESCRIPTION: DHCHAP Authentication process failed due to an uncorroborated Challenge Group.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_mes1021 ERROR: attempted to queue security work, when no workqueue created

DESCRIPTION: The driver encountered a missing queue required for processing security information.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1028 Start Authentication: No buffers

DESCRIPTION: The authentication failed because some memory resources were not allocated.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1029 Reauthentication Failure

DESCRIPTION: The driver encountered errors and there was a failure to re-authenticate.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg 1031 Start Authentication: Get config failed

DESCRIPTION: The authentication failed due to an error during port configuration.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1032 Start Authentication: get config timed out

DESCRIPTION: The node authentication was aborted due to a time out while waiting for port configuration to complete.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1035 Transport ID does not match - Rejecting Challenge.

DESCRIPTION: Security Authentication failed due to a contradictory Transport ID.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_mag1036 Authentication transaction reject - re-auth request reason <reason> exp <explaination>

DESCRIPTION: An authentication was rejected and requested again due to the reason as displayed with the explanation.
DATA: (1) reason (2) explanation.
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1037 Authentication transaction reject - restarting authentication, reason <reason> exp <explaination>

DESCRIPTION: An authentication process was rejected, then restarted and authentication requested again due to the reason as displayed with the explanation.
DATA: (1) reason (2) explanation.
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1039 Not Expecting Reply - rejecting. State <state>

DESCRIPTION: An unanticipated reply was received during authentication and was subsequently rejected.
DATA: (1) auth_state.
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1040 Bad Reply trans_id- rejecting. Trans_id < trans_id > Expecting: < trans_id>

DESCRIPTION: An unexpected transaction ID was received during authentication and was subsequently rejected.
DATA: (1) auth_state.
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_ msg1049 Authentication is enabled but authentication service is not running

DESCRIPTION: Discovery failed because DHCHAP Authentication was enabled while no authentication service was established.
DATA: None
ACTION: Start the authentication daemon (fcauthd).

Elx_ msg1050 Authentication mode is disabled, but is required by the fabric

DESCRIPTION: Discovery failed because the switch fabric required authentication, but authentication was not configured or the authentication mode for this port pair is disabled.
DATA: None
ACTION: Configure the driver to authenticate with the switch or disable authentication on the switch to this port.

Elx_msg1053 Start Authentication: Security service offline

DESCRIPTION: The authentication failed because security service was not available.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Elx_msg1055 Authentication parameter is disabled, but is required by the fabric

DESCRIPTION: A FLOGI failed because the fabric has indicated that authentication is required, but authentication has not yet been configured or enabled on the adapter.
DATA: None
ACTION: Configure authentication on this adapter.

Elx_msg1057 Authentication transaction reject. reason <reason> exp <explaination>

DESCRIPTION: An authentication was rejected and requested again due to the reason displayed with the explanation.
DATA: (1) reason (2) explanation
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

Miscellaneous and FCoE Events (1200 - 1299)

elx_mes1201: Failed to allocate dfc_host

DESCRIPTION: The driver attempted to add a new host to its management list and failed.
DATA: None
ACTION: This is a fatal error, the driver will unload.

elx_mes1209: C_CT Request error

DESCRIPTION: CT Response error in IOCTL
DATA: (1) outdmp flags (2) buf size
ACTION: The IOCTL fails. If the problem persists, contact Technical Support.

elx_mes1211 genreq alloc failed\n");

DESCRIPTION: Resource allocation failure.
DATA: return code
ACTION: Kernel memory resources are too low. Add more memory to the system or run less of a load on it. This error could indicate a memory leak in the system. If the problem persists, contact Technical Support.

elx_mes1213 FCoE cmd overflow: off <#> + cnt <#> > cmdsz <#>

DESCRIPTION: The application has tried to read more data than originally requested.
DATA: (1) response offset (2) size (3) cmd size
ACTION: Application may have sent an invalid command. Contact Technical Support.

elx_mes1214 Can not issue FCoE cmd SLI not active: <#> rc= -EACCESS

DESCRIPTION: The SLI layer has not been initialized.
DATA: offset
ACTION: Restart the adapter.

elx_mes1215 Can not issue FCoE cmd: not ready or not in maint mode

DESCRIPTION: The FCoE command cannot be issued because the external link is unplugged, the link is down or the FCoE is not in maintenance mode.
DATA: (current offset) (2) return code
ACTION: Plug in the external cable or set FCoE in maintenance mode.

elx_mes1216 FCoE IOCB failed: off <#> rc <#>

DESCRIPTION: The FCoE command generated by the application has failed.
DATA: (1) offset (2) return code
ACTION: None required. The application should retry the command. If the problem persists, contact Technical Support.

elx_mes1223 menlo_write: couldn't alloc genreq

DESCRIPTION: Resource allocation failure.
DATA: None
ACTION: Kernel memory resources are too low.

elx_mes1230 Could not find buffer for FCoE cmd:off <#> indmp <addr> off <#>

DESCRIPTION: Could not find the resources associated with this FCoE command.
DATA: (1) current offset (2) buffer desc pointer (3) size
ACTION: Reload the driver when it is convenient.

elx_mes1238 FCoE IOCB failed: off <#> rc=<#>

DESCRIPTION: The command generated by the driver to check the FCoE has failed.
DATA: (1) offset (2) return code
ACTION: Make sure the link is up or the adapter has set menlo in maintenance mode.

elx_mes1246 FCoE chip is running golden firmware. Update FCoE chip firmware immediately <fw_type>

DESCRIPTION: The FCoE is running the golden firmware.
DATA: firmware-type
ACTION: Reset the FCoE to operational mode and disable maintenance mode.

elx_mes1247 FCoE chip is running diagnostic firmware. Operational use suspended. <fw_type>

DESCRIPTION: The FCoE is running a diagnostic.
DATA: firmware-type
ACTION: Reset the FCoE to operational mode.

elx_mes1248 FCoE chip is running unknown firmware. <fw_type>

DESCRIPTION: The FCoE is running unknown firmware.
DATA: firmware-type
ACTION: Reset the FCoE to operational mode. If this does not resolve the problem, load the latest FCoE firmware. If the problem persists, contact Technical Support.

elx_mes1249 Invalid FRU data found on adapter. Return adapter to Emulex for repair.

DESCRIPTION: The FRU data on the FCoE chip is invalid.
DATA: firmware-type
ACTION: Reset the FCoE to operational mode. If this does not resolve the problem, load the latest FCoE firmware. If the problem persists, contact Technical Support, as you may need to send the adapter back to Emulex for repair.

elx_mes1250 Menlo command error. code=<#>

DESCRIPTION: The IOCB driver sent to check the FCoE state has a bad header size.
DATA: return code
ACTION: Reset the FCoE to operational mode. If the problem persists, contact Technical Support.

elx_mes1251 Menlo command error. code=<#>

DESCRIPTION: The IOCB driver sent to check the FCoE state has failed, there are no resources.
DATA: return code
ACTION: Reset the FCoE to operational mode. If the problem persists, contact Technical Support.

elx_mes1252 Menlo command error. code=<#>

DESCRIPTION: The IOCB driver sent to check the FCoE state has failed.
DATA: return code
ACTION: Reset the FCoE to operational mode. If the problem persists, contact Technical Support.

Link Events (1300 - 1399)

elx_mes1300: Link Down Event in Loopback

DESCRIPTION: The driver received a link down event while in loopback mode.
DATA: (1) link event tag (2) driver event tag (3) VPort state (4) VPort flags
ACTION: This event should not be occurring. Contact Technical Support.

elx_mes1303: Link Up Event <eventTag> received

DESCRIPTION: A link up event was received. It is also possible for multiple link events to be received together.
DATA:(1) fc_eventTag (2) granted_AL_PA (3) UlnkSpeed (4) alpa_map[0]
Detail: If link events received, log (1) last event number received, (2) ALPA granted, (3) Link speed (4) number of entries in the loop init LILP ALPA map. An ALPA map message is also recorded if LINK_EVENT verbose mode is set. Each ALPA map message contains 16 ALPAs.
ACTION: If numerous link events are occurring, check the physical connections to the Fibre Channel network.

elx_mes1305: Link Down Event <eventTag> received

DESCRIPTION: A link down event was received.
DATA: (1) fc_eventTag (2) hba_state (3) fc_flag
ACTION: If numerous link events are occurring, check the physical connections to the Fibre Channel network. If the problem persists, contact Technical Support.

elx_mes1306: Link Up Event in loop back mode <event_tag> received

DESCRIPTION: The driver received a link up in loopback mode.
DATA: (1) fc_eventTag (2) granted_AL_PA (3) LinkSpeed (4) alpa_map[0]
ACTION: None required - this is a nonmaskable notification.

elx_mes1308: FCoE Maint Mode Link up Event <event> rcvd

DESCRIPTION: The driver received a link up event from the FcoE Port.
DATA: (1) fc_eventTag (2) port_state (3) fc_flag
ACTION: None required - this is a nonmaskable notification.

elx_mes1309: Link Down Event <event> received

DESCRIPTION: The driver received a link down event from the port.
DATA: (1) fc_eventTag (2) port_state (3) fc_flag
ACTION: None required - this is a nonmaskable notification. If the problem persists, contact Technical Support.

elx_mes1310: Link Up Event npiv not supported in loop topology

DESCRIPTION: The driver is attempting to use NPIV, but the link came up in loop mode and NPIV is not supported.
DATA: None
ACTION: Check your port connect and ensure it is connected to a fabric.

IOCTL Events (1600 - 1699)

None.

VPort Events (1800 - 1832)

elx_mes1800 Could not issue unreg_vpi

DESCRIPTION: The driver attempted to unregister a vpi, but failed.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1802 HBQ <index> : local_hbqGetIdx <index> is > than hbqp->entry_count <count>

DESCRIPTION: An error occurred when processing queue related to an adapter in a particular slot.
DATA: (1) hbqno (2) local_hbqGetIdx (3) entry_count
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1803 Bad hbq tag. Data: <tag> <count>

DESCRIPTION: An error occurred when processing queue related tags for an adapter in a particular slot.
DATA: (1) tag (2) buffer_count
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1804 IOCB x%x failed. No vport

DESCRIPTION: The driver tried to issue an I/O on a vport, but the I/O has an invalid VPort association.
DATA: None
ACTION: The driver will fail this I/O. If the problem persist, contact Technical Support.

elx_mes1805 Adapter failed to init.Data: <command> <status> <queue num>

DESCRIPTION: An error occurred when processing queue related tags for an adapter in a particular slot.
DATA: (1) mbxCommand (2) mbxStatus (3) hbaqno
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1806 Mbox <command> failed. No vport.

DESCRIPTION: A mailbox command could not be communicated because there was no VPort associated with the mailbox command.
DATA: mbxCommand
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1807 IOCB <value> failed. No vport

DESCRIPTION: An IOCB command could not be communicated because there was no VPort associated with the mailbox command.
DATA: ulpCommand
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1808 Create VPORT failed: NPIV is not enabled: SLImode <mode>

DESCRIPTION: The driver failed to create a port because the adapter was in wrong mode or was not capable of NPIV.
DATA: (1) sli_rev
ACTION: Load the driver with NPIV enabled on an adapter that supports SLI-3.

elx_mes1809 Create VPORT failed: Max VPORTs (<vpi>) exceeded.

DESCRIPTION: The driver failed to create a port because the maximum number of ports supported by the driver will be exceeded.
DATA: (1) max_vpi
ACTION: None required. The driver can not create any more VPorts.

elx_mes1810 Create VPORT failed: Cannot get instance number.

DESCRIPTION: The driver failed to allocate resources for an adapter and could not assign an instance number.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1811 Create VPORT failed: vpi x<vpi>

DESCRIPTION: The driver failed to create a port and had to eliminate all its resources.
DATA: vpi
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1812 vport_delete failed: Cannot delete physical host

DESCRIPTION: An attempt to delete a port failed because it was to delete a physical port and not a virtual port. Only VPorts on physical ports can be deleted on an NPIV system.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1813 Create VPORT failed. Cannot get sparam.

DESCRIPTION: The port could not be created because it could not be initialized possibly due to unavailable resources.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1814: Create VPORT failed. vname allocation failed

DESCRIPTION: The driver could not allocate memory for the VPort name when creating a VPort.
DATA: None
ACTION: This error could indicate a driver issue. If the problem persists, contact Technical Support.

elx_mes1815 Could not issue unreg_did (default rpis)

DESCRIPTION: Attempt to unregister RPI failed.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1818 VPort failed init, mbxCmd <mailbox command> READ_SPARM mbxStatus <mailbox status> , rc = <status>

DESCRIPTION: A pending mailbox command issued to initialize port, failed.
DATA: (1) mbxCommand (2) mbxStatus (3) rc
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1819 Unrecognized lpfc_sli_mode parameter: <mode>

DESCRIPTION: The SLI mode has been set to an invalid value. The only valid values for the SLI mode are 0, 2, and 3.
DATA: (1) lpfc_sli_mode
ACTION: Correct the lpfc_sli_mode driver parameter setting. Valid values are 0, 2, and 3.

elx_mes1820 Unable to select SLI-3. Not supported by adapter.

DESCRIPTION: The adapter is not capable of operating in a given mode.
DATA: None
ACTION: SLI-3 mode is only available on some adapters. Do not attempt to force the SLI mode to 3 on adapters that do not support SLI-3 mode. This is an informational message. Adapters that do not support SLI-3 will be configured to run in SLI-2 mode, but it is recommended to use the auto setting (0).

elx_mes1821 Create VPORT failed. Invalid WWN format

DESCRIPTION: The port could not be created due to an invalid WWNN or WWPN format.
DATA: None
ACTION: Provide a valid WWN when creating Vports.

elx_mes1822 Invalid <name>: <xx: xx: xx: xx: xx: xx: xx: xx>

DESCRIPTION: An invalid WWN was used when creating a VPort.
DATA: (1) type_name (2) wwn[1] (3) wwn[3] (3) wwn[5] (4) wwn[7]
ACTION: Provide a valid WWN when creating a VPort.

elx_mes1823 Create VPORT failed. Duplicate WWN on HBA.

DESCRIPTION: The port could not be created because it would duplicate an existing WWNN adapter address. The resources for the port had to be discarded.
DATA: None
ACTION: Provide a WWN that is unique.

elx_mes1824 NPIV enabled: Override lpfc_sli_mode parameter (<mode>) to auto(0)

DESCRIPTION: The lpfc_enable_npiv and lpfc_sli_mode driver parameter settings conflict.This is an informational message that indicates that the lpfc_enable_npiv and lpfc_sli_mod parameter settings are not compatible. The adapter must be configured for SLI-3 mode to support NPIV.
DATA: (1) lpfc_sli_mode
ACTION: Set the SLI mode to 0 or 3 or, if SLI-2 mode is required, then disable NPIV.

elx_mes1825 Vport Created.

DESCRIPTION:. This message is displayed to indicate that a port was created in the system. It is displayed at this level to ensure it is always appears at all log levels.
DATA: None
ACTION: None required, informational.

elx_mes1826 Vport Disabled.

DESCRIPTION: The port had to be disabled in the system.
DATA: None
ACTION: None required, informational.

elx_mes1827 Vport Enabled.

DESCRIPTION: The port had to be enabled after possible recovery from some errors.
DATA: None
ACTION: None required, informational.

elx_mes1828 Vport Deleted.

DESCRIPTION: A Vport was deleted.
DATA: None
ACTION: None required, informational.

elx_mes1829 CT command failed to delete objects on fabric.

DESCRIPTION: A command issued to the fabric to delete an associated resource for an object such as for a port, failed.
DATA: None
ACTION: This could indicate a software driver error. If the problem persists, contact Technical Support.

elx_mes1830 Signal aborted mbxCmd <command>

DESCRIPTION: A pending mailbox command was aborted because the thread received a signal.
DATA: None
ACTION: Retry the attempted command. If the problem persists, contact Technical Support.

elx_mes1831 Create VPORT Interrupted.

DESCRIPTION: The port creation process was unexpectedly interrupted at a critical time and the operation was unsuccessful.
DATA: None
ACTION: Retry the command. If the problem persists, contact Technical Support.

elx_mes1832 Delete VPORT can not proceed at this time due to SCSI layer busy.

DESCRIPTION: An attempt to delete a port failed because it was deemed unsafe as the system was not in a proper state, such as link down or the SCSI layer has not released all the targets associated with the port.
DATA: None
ACTION: Retry the command. If the problem persists, contact Technical Support.

elx_mes1835: Vport discovery quiesce failed: vpi <vpi> state <state> fc_flags <fc_flags>num_nodes <count> wait msecs <num>

DESCRIPTION: The driver waited the maximum amount of time for FC discovery to complete and did not detect a successful conclusion.
DATA: None
ACTION: This could indicate a problem with the driver or with the SAN. If the problem persists, contact Technical Support.

elx_mes1840: Could not issue unreg_login(all_rpis) status <status>

DESCRIPTION: The driver tried to unregister all rips assigned to a VPort and failed.
The status indicates the reason.
DATA: None
ACTION: This could indicate a driver or firmware issue. If the problem persists, contact Technical Support.

IOCTL Events (1900 - 1999)

elx_mes1920: Exec format error, Dropping Link state event

DESCRIPTION: The driver is dropping a link event because it could not find the dfchost handling this CT event.
DATA: None
ACTION: This could be a driver issue. If the problem persists, contact Technical Support.

elx_mes1923: Exec format error, Dropping rscn event

DESCRIPTION: The driver is dropping an rscn event because it could not find the dfchost handling this CT event.
DATA: None
ACTION: This could be a driver issue. If the problem persists, contact Technical Support.

elx_mes1926: Exec format error

DESCRIPTION: The driver is failing the loopback test because it could not find the dfchost to handle this loopback request.
DATA: None
ACTION: This could be a driver issue. If the problem persists, contact Technical Support.

elx_mes1927: Exec format error, Dropping temp event

DESCRIPTION: The driver is failing a temperature event from the device because it could not find the dfchost to handle this event.
DATA: None
ACTION: This could be a driver issue. If the problem persists, contact Technical Support.

elx_mes1928: Exec format error, Dropping dump event

DESCRIPTION: The driver is failing a dump event from the device because it could not find the dfchost to handle this event.
DATA: None
ACTION: This could be a driver issue. If the problem persists, contact Technical Support.

elx_mes1929: Exec format error

DESCRIPTION: The driver is failing a loop_get_xri event from the management agent because it could not find the dfchost to handle this request.
DATA: None
ACTION: This could be a driver issue. If the problem persists, contact Technical Support.

elx_mes1934: ENOMEM DMA coherent resource unavailable

DESCRIPTION: The driver failed to allocate coherent memory for a DMA operation. The IOCTL command fails.
DATA: None
ACTION: The driver could be in a low memory state. If the problem persists, contact Technical Support.

elx_mes1935: Loopback test did not receive any data.

DESCRIPTION: A loopback test ran but did not receive any data in the response. The test will fail.
DATA: None
Action: Repeat the test. If the problem persists, contact Technical Support.

elx_mes1936: ENOMEM Kernel resource unavailable

DESCRIPTION: The driver is trying to run a loopback test and failed to get the needed DMA resources. The loopback test fails.
DATA: None
ACTION: This error could indicate a driver issue. If the problem persists, contact Technical Support.

elx_mes1944: ENOMEM kernel memory resource unavailable

DESCRIPTION: The driver is processing an IOCB timeout event and can't allocate kernel memory for the event. The timeout is getting dropped.
DATA: None
ACTION: This error could indicate a driver issue. If the problem persists, contact Technical Support.

elx_mes1949: ENOEXEC NULL parameter passed to function

DESCRIPTION: The driver was passed a NULL pointer to a loopback request and is failing the request.
DATA: None
ACTION: This could indicate a problem with the driver or the management agent. If the problem persists, contact Technical Support.

elx_mes1950: ENOMEM IOCB resource not available

DESCRIPTION: The driver is processing a loopback request but could not get a command IOCB. The driver is failing the request.
DATA: None
ACTION: The driver could be in a low memory state. If the problem persists, contact Technical Support.

elx_mes1951: ENOMEM MBUF resource not available

DESCRIPTION: The driver is processing a loopback request, but could not get a buffer resource. The driver is failing the loopback request.
DATA: None
ACTION: The driver could be in a low memory state. If the problem persists, contact Technical Support.

elx_mes1952: ENOMEM DMA resource not available

DESCRIPTION: The driver is processing a loopback request, but could not get a DMA resource. The driver is failing the loopback request.
DATA: None
ACTION: The driver could be in a low memory state. If the problem persists, contact Technical Support.

elx_mes1957: EPERM Illegal BDE count <num_bdes>

DESCRIPTION: The driver is processing an unsolicited event and found too many BDEs specified.
DATA: (1) num_bdes
ACTION: There is an error. If the problem persists, contact Technical Support.