

System Error Messages for the Cisco AS5800 Universal Access Server

This document lists and describes Cisco IOS system error messages for the Cisco AS5800 Universal Access Server for Cisco IOS Release 11.3(3)AA. The system software sends these error messages to the console during operation and, optionally, to a logging server on another system. Not all system error messages indicate problems with your system. Some are purely informational, while others may help diagnose problems with communications lines, internal hardware, or the system software. For a complete list of error messages for Cisco IOS Release 11.3, see the online document at: <http://www.cisco.com/univercd/cc/td/doc/product/software/ios113ed/sem/index.htm>. For a complete list of error messages for Cisco IOS Release 11.3T, see the online document at: <http://www.cisco.com/univercd/cc/td/doc/product/software/ios113ed/113t/sem113t.htm>.

How to Read System Error Messages

The messages are organized according to the particular system facility that produces the messages. The facility sections appear in alphabetical order, and within each facility section, messages are listed alphabetically by mnemonic. Each error message is followed by an explanation and a recommended action.

System error messages begin with a percent sign (%) and are structured as follows:

```
%FACILITY-SUBFACILITY-SEVERITY-MNEMONIC: Message-text
```

FACILITY is a code consisting of two or more uppercase letters that indicate the facility to which the message refers. A facility can be a hardware device, a protocol, or a module of the system software lists the system facilities codes.

SUBFACILITY is a code that is relevant only in Channel Interface Processor (CIP) error messages. There are currently no CIP error messages in this section.

SEVERITY is a single-digit code from 0 to 7 that reflects the severity of the condition. The lower the number, the more serious the situation. Table 2 lists the severity levels.

MNEMONIC is a code that uniquely identifies the error message.

Message-text is a text string describing the condition. This portion of the message sometimes contains detailed information about the event, including terminal port numbers, network addresses, or addresses that correspond to locations in the system memory address space. Because the information in these variable fields changes from message to message, it is represented here by short strings enclosed in square brackets ([]). A decimal number, for example, is represented as [dec]. Table 3 lists the representations of variable fields and the type of information in them.

Table 1 Facility Codes

Code	Facility
AAA	TACACS+ Authentication, Authorization, and Accounting security
AIP	ATM Interface Processor
ALIGN	Memory optimization in Reduced Instruction-Set Computer (RISC) processor
AMDP2	Presidio Ethernet & Laguna Fast Ethernet
APPN	Advanced Peer-to-Peer Networking
ARAP	Apple Remote Access Protocol
ASPP	Asynchronous Security Protocol
AT	AppleTalk
ATM	Asynchronous Transfer Mode
BAP	PPP Bandwidth Allocation Protocol (BAP)
BGP	Border Gateway Protocol
BRI	Integrated Services Digital Network (ISDN) Basic Rate Interface
BRIMUX	AS5200 BRIMUX board
BSC	Binary Synchronous Communications mode
BSTUN	Block serial tunneling
C1600	Cisco 1600 platform
C3600	Cisco 3600 platform
C5RSP	Cisco Catalyst 5000 platform
CBUS	ciscoBus controller
CDM	Cable Data Modem subsystem
CI	75xx platform chassis interface
CIP facility	Channel Interface Processor
CIRRUS_PM	Slow speed async/sync port module
CLEAR	Clear facility
CLNS	OSI Connectionless Network Service
CLS	Cisco Link Services
CLSDR	Cisco Link Services Driver
COMP	Point-to-point compression
CONTROLLER	Controller
CPAD	Compression service adapter
CPM	Combo Port Module device driver
CSC2	CSC2/CSC3 CPU cards
CT3	Channelized T3 port adapter
DBUS	Data bus
DIALER	Dial-on-demand routing
DLC	Data-link control

Code	Facility
DLSw	Data-link switching
DMA	Direct memory access
DNET	DECnet
DRP	Director Response Protocol
DSPU	Downstream physical unit
DSX1	Channelized E1 (Europe) and T1(US) telephony standard
DUAL	Enhanced Interior Gateway Routing Protocol
DVMRP	Distance Vector Multicast Routing Protocol
EGP	Exterior Gateway Protocol
ENT_API	Entity MIB API
ENV	Environmental monitor card
ETHERNET	Ethernet for the C1000 series
FDDI	Fiber Distributed Data Interface
FLASH	Flash nonvolatile memory
FR	Frame Relay
FTC_TRUNK	Cisco 3801 platform
GRIP	Xerox Network Systems (XNS) Routing Protocol
HD	HD64570 serial controller
HOOD	LAN controller 100VG-AnyLAN interface
HP100VG	100VG-AnyLAN PA driver
HUB	Cisco Ethernet hub
IBM2692	IBM Token Ring chip set
IFS	IOS File System
IGRP	Interior Gateway Routing Protocol
ILACC	ILACC driver
INTERFACE_API	Binary API for the interface descriptor block
IP	Internet Protocol
IPC	Interprocess Communication
IPFAST	IP fast switching
IPRT	Internet Protocol routing
IPX	Internetwork Packet Exchange Protocol
IP-SNMP	Simple Network Management Protocol specific to IP
ISDN	Integrated Services Digital Network
LANCE	Local Area Network Controller Ethernet
LANE	LAN Emulation
LANMGR	IBM LAN Network Manager
LAPB	X.25 Link Access Procedure, Balanced
LAT	DEC Local Area Transport
LEX	LAN extension

How to Read System Error Messages

Code	Facility
LINEPROTO	Line Protocol
LINK	Data link
LLC2	Logical Link Control type 2
LNMC	LAN network manager
LPD	Line printer daemon
MAILBOX	ChipCom mailbox support
MBRI	Multi-BRI port module
MCI	Multiport Communications Interface
MK5	MK5025 serial controller
MPA68360	VIP Multi-channel Port Adapter
MROUTE	Multicast route
MUESLIX	Mx serial application-specific integrated circuit (ASIC)
NIC100	NIC100 driver
NIM	Network interface module
OSPF	Open Shortest Path First
PA	Port adapter
PAD	X.25 packet assembler/disassembler
PARSER	Parser
PIM	Protocol-independent multicast
PPP	Point-to-Point Protocol
QA	Queue and accumulator
QLLC	Qualified Logical Link Control
QUICC	MC68360 Quad Integrated Communications Controller
RADIUS	Remote Access Dial-In User Service (RADIUS) facility
RADIX	Radix facility
RCMD	Remote commands
RIP	IP Routing Information Protocol
RSP	Route Switch Processor
RSRB	Remote source-route bridging
S4T68360	Four port synchronous serial adapter based on the 68360 processor
SCHED	Scheduler
SDLC	Synchronous Data Link Control
SDLLC	SDLC/Logical Link Control type 2 (LLC2) translation
SEC	IP security
SERVICE_MODULE	Service Module
SLIP	Serial Line Internet Protocol
SMRP	Simple Multicast Routing Protocol
SNAPSHOT	Snapshot dial-on-demand routing

Code	Facility
SNMP	Simple Network Management Protocol
SNMP_MGR	SNMP Proxy
SSE	Silicon switching engine
STANDBY	Hot Standby Router Protocol (HSRP)
STUN	Serial tunneling
SUBSYS	Software subsystems
SWITCH	Switch interface
SYS	Operating system
SYSMGT	System management
TAC	Terminal Access Controller Protocol Access Control System
TBRIDGE	Transparent bridging
TCP	Transmission Control Protocol
TMQ	Inbound terminal port queuing
TN	Telnet
TN3270	TN3270 protocol
TR	Token Ring
TUN	Tunnel
UCODE	Microcode
UNIX	UNIX
UTIL	Utility
VINES	Banyan VINES
VIP	Versatile Interface Processor
VPN	Virtual Private Dialup Network
X25	X.25

Table 2 Error Message Severity Levels

Level	Description
0 – emergency	System unusable
1 – alert	Immediate action needed
2 – critical	Critical condition
3 – error	Error condition
4 – warning	Warning condition
5 – notification	Normal but significant condition
6 – informational	Informational message only
7 – debugging	Appears during debugging only

Error message severity levels correspond to the keywords assigned by the logging global configuration commands that define where and at what level these messages appear. The default is to log messages to the console at the debugging level (7). For more information, see the system configuration chapter and descriptions of the logging command in the appropriate Cisco IOS configuration guide and command reference publications.

Table 3 Representation of Variable Fields in Error Messages

Representation	Type of Information
[dec]	Decimal number
[hex]	Hexadecimal number
[chars]	Character string
[int]	Integer
[unsigned long]	Unsigned Long

Error Messages

Error Message

%DIALSHELF-3-EVENT: Unknown event [dec] for slot [dec]

Explanation The software generated an unknown event for the specified slot. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%DIALSHELF-3-INVALIDMSG: [chars] ([dec])

Explanation The router shelf received an invalid message from the DSC in the dial shelf. This is a software error or compatibility issue. Check the software versions on the router shelf and the DSC.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%DIALSHELF-3-MSG: Unknown message type [dec] from DSC

Explanation The router shelf received an unknown message from the DSC in the dial shelf. This is a software error or compatibility issue. Check the software versions on the router shelf and the DSC.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%DIALSHELF-3-SLOTSTATUS: Invalid change from [chars] ([dec]) to [chars] ([dec]) for slot [dec]

Explanation The software detected an invalid state change for the specified slot. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%DIALSHELF-2-TIMEOUT: [chars] slot [dec] after [dec] secs in state [chars]

Explanation The specified dial shelf slot timed out as per the message. Either a software or a hardware component has failed.

Recommended Action Try removing and reinserting the card. If that does not help, try a different card. If problem persists, contact your technical support representative.

Error Message

%DIALSHELF-2-UNDEFCARD: Card type [dec] in [chars]

Explanation The software does not have a driver for the card in specified slot.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%DSCCLOCK-3-FAIL: The System Primary Clock is down. Moving to HOLDOVER state and waiting to see if it comes up

Explanation This message is generated whenever the current primary clock goes bad. The TDM clock circuit goes into HOLDOVER mode and a holdover timer is started to see if the bad clock turns good within the holdover time.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-NOMEMORY: Failed to allocate memory for the DSC clocks

Explanation The clock switching software has failed to allocate memory while adding a clock.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-5-SWITCH1: Clock moving to NORMAL from FREERUN, selected clock is on slot [dec] port [dec] line [dec]

Explanation The primary TDM clock, which has been running off the local oscillator of DSC in FREERUN mode, has switched to the line clock coming in via the specified trunk.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-SWITCH2: Clock moving to FREERUN from HOLDOVER

Explanation The current primary TDM clock has been deleted and hence the system primary has switched to the DSC local oscillator, which is the current highest priority good clock. Phase continuity is maintained during the switchover.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-SWITCH3: Clock moving to NORMAL from HOLDOVER, selected clock is on slot [dec] port [dec] line [dec]

Explanation The current primary TDM clock has been deleted and hence the system primary has switched to the clock coming in via the trunk specified by the slot/port, which is the current highest priority good clock. Phase continuity is maintained during the switchover.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-SWITCH4: Switching to the user configured clock on slot [dec] port [dec] line [dec]

Explanation The TDM primary clock is switching from the default clock to the user configured clock coming in via a trunk. Phase continuity is maintained during the switchover.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-SWITCH5: Switching to the clock on slot [dec] port [dec] line [dec]

Explanation The TDM primary clock is switching to the clock coming in via the trunk specified, most likely after the router-shelf and hence feature boards reload. The phase of the output TDM clock is forced to align with the input reference during the switchover.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-SWITCH6: Switching to the clock on slot [dec] port [dec] line [dec] as the current primary has gone bad

Explanation The TDM primary clock has switched to a backup clock coming in via the specified trunk as the current primary clock has gone bad.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-SWITCH7: Moving to NORMAL mode from HOLDOVER mode, clock is slot [dec] port [dec] line [dec]

Explanation The TDM primary clock which is in HOLDOVER mode and whose source was a trunk port, has switched to the same trunk port and moved to NORMAL mode with a phase alignment between input source clock and output TDM reference clock. Most likely the router-shelf and hence the feature boards have reloaded.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-SWITCH8: Moving to NORMAL mode from HOLDOVER mode without phase correction, clock is slot [dec] port [dec] line [dec]

Explanation The source trunk port of the TDM primary clock which had gone bad, has turned good again before the holdover timer expiry. Hence the primary has moved from HOLDOVER to NORMAL state without phase correction between input trunk reference and the output TDM clock.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-SWITCH_ERROR1: Failed to select any clock as the system clock. Remaining in HOLDOVER mode

Explanation The clock selection algorithm has failed to select any clock as the TDM primary clock.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCCLOCK-3-UP: The System Primary Clock is up. Moving to NORMAL state from HOLDOVER

Explanation The TDM primary clock which had gone bad, has turned good within the holdover time. Hence the TDM primary clock switches to the NORMAL mode from the HOLDOVER mode.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCEXTCLK-5-SWITCH1: Clock moving to NORMAL from FREERUN, selected clock is external clock on DSC

Explanation The primary TDM clock, which has been running off the local oscillator of DSC in FREERUN mode, has switched to the external network reference clock being fed from the DSC front panel.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCEXTCLK-3-SWITCH3: Clock moving to NORMAL from HOLDOVER, selected clock is external clock on DSC

Explanation The current primary TDM clock has been deleted and hence the system primary has switched to the clock coming in via the external network reference clock on the DSC front panel, which is the current highest priority good clock. Phase continuity is maintained during the switchover

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCEXTCLK-3-SWITCH4: Switching to the user configured external clock on DSC

Explanation The TDM primary clock is switching from the default clock to the user configured clock coming in via the DSC front panel clock feed. Phase continuity is maintained during the switchover.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%DSCEXTCLK-3-SWITCH5: Switching to the external clock on DSC

Explanation The TDM primary clock is switching to the clock coming in via the DSC front panel, most likely after the router-shelf and hence feature boards reload. The phase of the output TDM clock is forced to align with the input reference during the switchover.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%DSCEXTCLK-3-SWITCH6: Switching to the external clock on DSC as the current primary has gone bad`

Explanation The TDM primary clock has switched to a backup clock coming in via the DSC front panel external clock feed as the current primary clock has gone bad.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%DSCEXTCLK-3-SWITCH7: Moving to NORMAL mode from HOLDOVER mode, selected external clock on DSC`

Explanation The TDM primary clock which is in HOLDOVER mode and whose source was a the DSC front panel clock, has switched to the same clock and moved to the NORMAL mode.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%DSCEXTCLK-3-SWITCH8: Moving to NORMAL mode from HOLDOVER mode without phase correction, selected external clock on DSC`

Explanation The DSC front panel clock which is the source of the current TDM primary clock and which had gone bad, has turned good again before the holdover timer expiry. Hence the primary has moved from HOLDOVER to NORMAL state without phase correction between input reference and the output TDM clock.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%DSC_ENV-1-CRITICAL: Slot [dec], [chars] [int] [chars]`

Explanation The card environmental parameters specified are outside the “normal” range of operation.

Recommended Action Check blowers and ambient room temperature

Error Message

`%DSC_ENV-0-SHUTDOWN: Slot [dec], [chars] [int] [chars]`

Explanation The card environmental parameters specified are outside the “normal” range of operation.

Recommended Action Check blowers and ambient room temperature

Error Message

```
%DSC_ENV-2-WARNING: Slot [dec], [chars] [int] [chars]
```

Explanation The card environmental parameters specified are outside the “normal” range of operation.

Recommended Action Check blowers and ambient room temperature

Error Message

```
%DSI-3-AGENTSTATUS: Invalid change from [chars] ([dec]) to [chars] ([dec])  
for slot [dec]
```

Explanation The software detected an invalid state change for the specified slot’s mbus agent. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

```
%DSI-3-AGENTSTSCHNG: From [chars] ([dec]) to [chars] ([dec]) for slot [dec]
```

Explanation The software detected an mbus agent state change for the specified slot.

Recommended Action No action is required. Message is informational.

Error Message

```
%DSI-2-BADPORT: Out of range PCI port [dec]
```

Explanation The software specified an out-of-range port on the dial shelf interconnect board. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

```
%DSI-3-EVENT: Unknown event [dec] for slot [dec]
```

Explanation The software generated an unknown event for the specified slot. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

```
%DSI-3-SLOTSTATUS: Invalid change from [chars] ([dec]) to [chars] ([dec])  
for slot [dec]
```

Explanation The software detected an invalid state change for the specified slot. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%DSI-3-SLOTSTSCHNG: From [chars] ([dec]) to [chars] ([dec]) for slot [dec]

Explanation The software detected a state change for the specified slot.

Recommended Action No action is required. Message is informational.

Error Message

%EXPRESSION-3-BADTYPE: Found data type [hex] in expression (should be [chars] type)

Explanation While evaluating an expression an operand was found with an unexpected datatype. Evaluation of this expression has been aborted.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%EXPRESSION-3-FAILASSERT: Assertion failed: [chars]

Explanation An operation within the Expression MIB subsystem encountered a data value that is out of range, or of an unexpected value indicative of a logic error within the subsystem.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%FB-3-AGENTSTATUS: Invalid change from [chars] ([dec]) to [chars] ([dec]) for slot [dec]

Explanation The software detected an invalid state change for the specified slot's mbus agent. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%FB-2-BADPORT: Out of range PCI port [dec]

Explanation The software specified an out-of-range port on the feature board. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

%FB-3-EVENT: Unknown event [dec] for slot [dec]

Explanation The software generated an unknown event for the specified slot. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

```
%FB-6-OIR: Card in slot [dec] [chars]
```

Explanation A dial shelf feature card was inserted or removed from the specified slot. This is an informative message.

Recommended Action No action is required.

Error Message

```
%FB-3-SLOTSTATUS: Invalid change from [chars] ([dec]) to [chars] ([dec])  
for slot [dec]
```

Explanation The software detected an invalid state change for the specified slot. This is a software error.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

```
%FBINFO-3-CRASH: Feature board in slot [int] crashed
```

Explanation The feature board in the slot indicated crashed and sent a CRASH_START message to the DSI. The DSI is now waiting for the rest of the crash information from the line card to be sent via the MBUS (stack trace, context, version, etc.). This should happen in a few milliseconds after receiving the CRASH_START message. The DSI software has not otherwise been notified of the line card crash -- that will happen after all the crash information has been sent to the DSI. In the unlikely event that the subsequent crash information messages are not received by the DSI within a reasonable time limit (perhaps 10 secs), the DSI will print a TIMEOUT error message indicating that and tell the rest of the DSI software that the feature board has crashed.

Recommended Action Report this defect with as much information about the feature board in question including the output of show context summary, show context slot N and show tech-support N as well as the usual show tech-support from the RS.

Error Message

```
%FBINFO-3-INVDEV: Invalid feature board number in MBUS callback (LC=[int])
```

Explanation The feature board crash information subsystem on the DSI was called from the MBUS subsystem with an invalid DEVICE identifier. The DEVICE in this case is supposed to be the slot number of the line card, but it was out of range. This indicates a software defect in the system.

Recommended Action Report this defect with as much information about the MBUS subsystem as possible. There is no adverse effect to the DSI -- it ignores the bad callback and continues. If the problem persists, reboot the router. It is unlikely but possible that the problem is due to bad MBUS hardware somewhere in the system -- most likely the DSI MBUS module.

Error Message

```
%FBINFO-3-INVSTATE: Feature board crash server in bad state (LC=[int],  
state=[int]), MSGDEF_LIMIT_MEDIUM
```

Explanation The feature board crash information subsystem for the feature board indicated it is in an unknown state. This is due to a software defect in that subsystem.

Recommended Action Report this defect with as much information about the MBUS subsystem and the feature board crash information subsystem possible.

Error Message

`%FBINFO-3-NOPROCESS: Failed creating feature board complete process`

Explanation When creating the crash complete process for the crash information subsystem the `create_process` call failed. This should not happen. It is probably due to a software defect or hardware failure. This failure should only happen during initialization.

Recommended Action Rebooting the system should fix this. If the condition persists on subsequent reloads of the system, a bug should be filed and the system should be reloaded with a different image.

Error Message

`%FBINFO-3-TIMEOUT: Timeout waiting for crash info from slot [int]`

Explanation The crash information complete timer expired. When a feature board crashes, it sends information to the DSI for debugging and analysis. When the `START OF CRASH` message is received, a timer is set for approx 10 seconds. The line card has 10 seconds to send all the crash information to the DSI. This is not a crash dump -- this is a small amount of information that usually includes context, stack trace, etc. It is less than 8K bytes of information. If an `END OF CRASH` information message is not received before the timer goes off, the crash information record is closed (contains partial information), this message is displayed, and the rest of the system is notified that the feature board crashed (at which point it is probably reloaded). If the feature board sends more crash information after the timer goes off and before the system resets the feature board additional `UNIXMSG` error message might be displayed.

Recommended Action No action is required specifically because this message was displayed. Because the feature board was crashing there might be other defects to report. If this message is seen without a feature board crashing report this defect with the output of the usual commands including `show tech-support` on the RS, on the feature board that didn't crash but was mentioned in this error message.

Error Message

`%FBINFO-4-TRUNC: Crash record ([int]=[chars]) truncated (expected=[int], actual=[int])`

Explanation A feature board crashed and was sending crash information to the RS. The RS received a `CRASH RECORD START` message that indicated the data would be "expected" bytes long. Before that many bytes were received, the RS received another `CRASH RECORD START` message indicating the start of another record. The current record is marked as truncated, and the next record is received, but the anomaly is noted in this error message. This is a problem, but because what started this process was a line card crashing, this might only be a symptom of another underlying problem.

Recommended Action Report this defect with as much information about the MBUS subsystem and the line card crash information subsystem possible.

Error Message

`%FBINFO-4-UNIXMSG: Unexpected crash info msg type ([chars]) in state [chars] (LC=[int])`

Explanation The feature board crash information subsystem received an unexpected message for the state it is in. The state and message type are given in the error message. This does not have any adverse effect on the DSI since it ignores and/or recovers from this occurrence. Because the sender of these messages is a feature board that is crashing, it is not completely unbelievable that this might

happen. The source of the crash on the line card is more interesting. If this occurs without a line card crashing, it is due to a stray/errant MBUS message that should be pursued. This could also be due to a dropped MBUS message.

Recommended Action Find the source of the crash on the feature board if one was crashing when the message occurred. If no feature board was crashing, report this defect with as much information about the MBUS subsystem and the feature board crash information subsystem as possible. If this message persists, rebooting the router might help remove this message.

Error Message

```
%IFS-3-FS_CREATE_FAIL2: Failed to create [chars] simple file system, [chars]
```

Explanation An internal software error occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%IFS-3-FS_CREATE_FAIL: Failed to create [chars] file system, [chars]
```

Explanation An internal software error occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%IFS-3-FS_MISSING_FUNCTIONS: '[chars]' file system missing required functions, not created
```

Explanation Some file systems require a certain set of function to be present in order to be usable. This file system does not support all the mandatory functionality.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%MBUS-2-FIRMWARE: RAM version download to slot [dec] failed
```

Explanation The RAM version of the MBUS agent firmware could not be downloaded “to specified slot. This may be a software or hardware bug.”

Recommended Action Submit a bug with as much information as possible including the console output at the time of the error.

Error Message

```
%MBUS-3-MSGTOOBIG: Message type [int] to [int] has length [int] (exceeds [int]), MSGDEF_LIMIT_MEDIUM
```

Explanation Software called send_mbus_msg with a length greater than 254. “This is a software bug.”

Recommended Action Submit a bug with as much information as possible including the console output at the time of the error.

Error Message

`%MBUS-2-NORESPONSE: From [chars] agent. [chars]`

Explanation The interface to the MBUS agent firmware has gone deaf. “This is a software bug.”

Recommended Action Submit a bug with as much information as possible including the console output at the time of the error.

Error Message

`%MBUS-6-STATECHANGE: New state is '[chars]'`

Explanation This is an informational message. The DSI changed state with respect to MBUS control and became either a master or a slave. In a dial shelf with just one DSI, it must always be a master.

Recommended Action No action is required.

Error Message

`%MBUS-3-UNKNOWN_REGISTER: Status change message for register [hex] in slot [dec], value = [hex]`

Explanation The MBUS agent for the specified slot reported a status change for a register that is no longer being monitored.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%MBUS_SYS-3-ENQUEUE: Failed to queue message from slot [dec] stream [dec], MSGDEF_LIMIT_MEDIUM`

Explanation Failed to enqueue a message from the interrupt for process level software. The message will be dropped. This points to a potential problem in the mbus process level message handling. This can occur if there are problems with the mbus process specifically or there maybe general IOS process related issues. This may also happen if the mbus process is not scheduled for extended periods of time and there is heavy MBUS traffic.

Recommended Action If this is a persistent problem, either the mbus process is dead or there are other IOS related problems. Consider rebooting the GRP if possible.

Error Message

`%MBUS_SYS-3-MAXSIZE: Message from slot [dec] stream [dec] of length [dec] max message size [dec]`

Explanation Message from a slot exceeded maximum message size and hence will be dropped. This should not happen during normal operations.

Recommended Action Verify health of MBUS using `show mbus counters` and the `show mbus can-error` commands. If any particular card shows errors and this condition persists, try reloading the card if possible. The error counts in the `show mbus` commands can be cleared using `clear mbus-statistics`.

Error Message

```
%MBUS_SYS-3-MSGTOOBIG: MBUS message length too big (dev=[int], type=[int], len=[int]), MSGDEF_LIMIT_MEDIUM
```

Explanation Software tried to send a message with a length greater than 254.

Recommended Action Submit a bug with as much information as possible including the console output at the time of the error.

Error Message

```
%MBUS_SYS-3-NOBUFFER: Message from slot [dec] in stream [dec] dropped, MSGDEF_LIMIT_MEDIUM
```

Explanation Message from the slot was dropped as there were no MBUS buffers available. Either the messages are coming too fast or the process level message handling is not draining messages quickly enough.

Recommended Action This condition should correct itself. Check if the GRP is being inundated by messages from the chassis. If the condition persists, consider rebooting the GRP.

Error Message

```
%MBUS_SYS-3-NOCHANNEL: Failed to allocate MBUS channel for over 10 secs, MSGDEF_LIMIT_MEDIUM
```

Explanation No MBUS channel could be allocated for sending messages. There is either very heavy MBUS traffic or there is a hardware problem. If there is temporary heavy traffic, the condition will clear itself. In case of hardware errors either the mbus agent has died or the hardware interface to the mailbox is not draining messages. Resetting the processor (including agent) may clear the problem. If the problem persists the card probably has hardware problems and needs diagnosis.

Recommended Action Power cycle the card. If problem persists the card probably has a hardware problem.

Error Message

```
%MBUS_SYS-3-REASSEMBLY: Error slot [dec], stream [dec] [chars], MSGDEF_LIMIT_MEDIUM
```

Explanation A reassembly error was detected for the given slot/stream combination. Either the slot/stream combination was incorrect (so it gave an invalid reassembly buffer index) or the first/last (or last few) packet(s) was/were lost. The message will be dropped which may cause errors for the application running over MBUS.

Recommended Action This condition should correct itself. No action is required.

Error Message

```
%MBUS_SYS-0-REGISTRY: Failed to create registry [chars] [chars]
```

Explanation The specified registry could not be created. This is a catastrophic error for this feature. This needs a developer's intervention for a solution.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

`%MBUS_SYS-3-SEQUENCE: Sequencing error (slot [dec], stream [dec]): expected [dec], received [dec], MSGDEF_LIMIT_MEDIUM`

Explanation An incorrect sequence number was detected in a multi packet message. This could happen if the source packetized the message incorrectly (unlikely) or one/more packets got dropped.

Recommended Action Check if there is excessive MBUS activity, copious printing from a line card etc. The command `show mbus counters` can provide lost message count.

Error Message

`%MBUS_SYS-3-TIMEOUT: Timeout on mbus request. Dest = [int], type = [int], addr = 0x[hex], MSGDEF_LIMIT_MEDIUM`

Explanation Failed to receive a response from a mbus request. This could be either a request for a eeprom field or a register read.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

`%MBUS_SYS-3-TXERR: Failed to transmit MBUS message for over 10 secs, MSGDEF_LIMIT_MEDIUM`

Explanation Message could not be transmitted since all the transmit buffers are full for over 10 seconds. This may be a temporary problem if there is heavy MBUS traffic. Otherwise it is probably a hardware problem. Either the mbus agent is not responding or the hardware interface is not generating interrupts.

Recommended Action If this is a persistent problem power cycle the card. If the problem still continues it is likely to be a hardware problem and needs diagnosis.

Error Message

`%MBUS_SYS-3-UNEXPECTED: Unexpected response key = [int], current key = [int], MSGDEF_LIMIT_MEDIUM`

Explanation Received an unexpected response to a read register or read eeprom.

Recommended Action Copy the error message exactly as it appears, and report it to your technical support representative.

Error Message

`%MICA-3-BADIMAGE: Cannot download version [chars] on module [dec]`

Explanation The block information that is necessary to download modem firmware was missing for the indicated firmware version.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

```
%MICA-3-BADMODEM: Modem [dec] went bad
```

Explanation Run-time checks for modem health determined that the indicated modem was no longer functional due to a hardware or software error.

Recommended Action If the message recurs, copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

```
%MICA-3-BADMODULE: Module in socket [dec] is of unknown type  
(board-id=[dec])
```

Explanation The modem module in the socket indicated by the message is bad, possibly because the serial EEPROM on the module is misprogrammed.

Recommended Action Copy the error message exactly as it appears on the console or in the system log. Issue the **show tech-support** command to gather data that may provide information to determine the nature of the error. If you cannot determine the nature of the error from the error message text or from the **show tech-support** output, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

```
%MICA-3-BADRXOPCODE: Bad mail message opcode from modem [dec]: opcode =  
0x [hex]
```

Explanation A message was received from the indicated modem which had an illegal opcode.

Recommended Action If the message recurs, copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

```
%MICA-3-BADTXOPCODE: Bad tx mail message opcode = 0x [hex]
```

Explanation A message was attempted to be transmitted to the indicated modem which had an illegal opcode.

Recommended Action If the message recurs, copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

```
%MICA-3-CONTIGUOUS: Contiguous packet sent for transmit
```

Explanation A software error occurred resulting in an unexpected packet being set up for transmission and the packet was dropped.

Recommended Action If the message recurs, copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%MICA-3-CRASH: Runtime error on MICA module [dec]

Explanation A software error occurred on the modem firmware executing on the indicated modem module.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%MICA-6-INIT: Modem module [dec] initialized

Explanation The indicated modem module was successfully initialized.

Recommended Action No action is required.

Error Message

%MICA-3-MSMUNEXPEVT: Modem [dec] [chars] Unexpected Event: [chars].

Explanation The modem state machine received an unexpected event while in the state indicated by the error message.

Recommended Action If the message recurs, copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%MICA-3-NAK: NAK from modem [dec] in state [dec] -- payload 0x[hex]

Explanation A message sent to the indicated modem was rejected.

Recommended Action If the message recurs, copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%MICA-3-NOENTRIES: Exhausted [chars] DMA entries for module [dec]

Explanation The software structures that are used to drive the DMA engines were temporarily exhausted while attempting the task indicated in the error message; the task was aborted as a result.

Recommended Action If the message recurs, copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%MICA-3-NOIDB: No IDB structure for modem [dec]

Explanation A software structure was found in an unexpected state during run-time for the indicated modem.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%MICA-3-NOMAILLEMENTS: Exhausted free mail elements`

Explanation The software structures that are used to receive and transmit messages from the MICA modems were temporarily exhausted.

Recommended Action If the message recurs, copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%MICA-3-NOPPPCTX: No PPP context structure for modem [dec]`

Explanation A software structure was found in an unexpected state during run-time for the indicated modem.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%MICA-3-NORXPAK: Static receive paktype unavailable`

Explanation A software structure was found in an unexpected state during run-time for the indicated modem.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%MICA-3-NOTPLX: Bad vendor id from PLX 9060SD -- value was 0x[hex]`

Explanation A hardware error occurred involving the PCI interface chip.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%MICA-3-NOTTY: No TTY structure for modem [dec]`

Explanation A software structure was found in an unexpected state during run-time for the indicated modem.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%MICA-3-PORTWARE: Bad version [chars] portware: [chars]`

Explanation Modem firmware of the indicated version, bundled into the modem card image, did not pass the sanity tests done to verify a firmware image.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%MICA-3-PWDNLDTO: Portware download timed out for module [dec]`

Explanation The diagnostic message that is expected back from a MICA modem after successful download and initialization of the modem firmware was never received.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%MICA-3-RESTART: Attempting restart of modem module [dec]`

Explanation The indicated modem module suffered a run-time error and had to be reset and an attempt is now being made to restart the modem module.

Recommended Action No action is required.

Error Message

`%MICA-3-WRONGMODULE: Module in socket [dec] (board-id=[dec]) is not [chars] module`

Explanation The modem module in the socket indicated by the message is inappropriate for the modem card it is on.

Recommended Action Copy the error message exactly as it appears on the console or in the system log. Issue the **show tech-support** command to gather data that may provide information to determine the nature of the error. If you cannot determine the nature of the error from the error message text or from the **show tech-support** output, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

`%SYSCTLR-5-AUTH_FAILED: MD5 digest does not match, SDP packet received from, [int] rejected`

Explanation A SDP hello packet was received from shelf, which is not trusted.

Recommended Action Either specify the correct SDP password and/or destination on the shelf from which this message was received

Error Message

```
%SYSCTLR-3-BAD_CALL: Invalid parameter/mangled pointer  
routine: [chars], file: [chars], line: [dec]
```

Explanation An internal software error occurred.

Recommended Action If any of these messages recur, call your technical support representative for assistance.

Error Message

```
%SYSCTLR-6-BAD_IP_ADDR: Found Shelf [dec] with an invalid IP address  
[chars]
```

Explanation System Controller found a Shelf with an invalid ip address

Recommended Action Check the IP address set on the Shelf

Error Message

```
%SYSCTLR-3-DISCOVER_SOCKET_BIND: socket bind failed
```

Explanation An internal software error occurred.

Recommended Action If any of these messages recur, call your technical support representative for assistance.

Error Message

```
%SYSCTLR-3-DISCOVER_SOCKET_OPEN: socket open failed
```

Explanation An internal software error occurred.

Recommended Action If any of these messages recur, call your technical support representative for assistance.

Error Message

```
%SYSCTLR-3-DUPLICATE_SHELF: SDP packet with duplicate shelf-id [dec]  
received from [chars], already discovered  
elf located at [chars]
```

Explanation Two shelves with same shelf-id are configured in the system.

Recommended Action Change the shelf-id for one of the shelf.

Error Message

```
%SYSCTLR-3-INVALID_SDP_VERSION: SDP packet received by system controller  
contained invalid version number.
```

Explanation Check that shelf is running compatible version of SDP

Recommended Action If any of these messages recur, call your technical support representative for assistance.

Error Message

%SYSCTLR-3-SDP_TIMER_ERROR: No context associated with the expired SDP timer

Explanation An internal software error occurred.

Recommended Action If any of these messages recur, call your technical support representative for assistance.

Error Message

%SYSCTLR-3-SHELF_PROTO: Shelf id protocol error

Explanation An internal software error occurred.

Recommended Action If any of these messages recur, call your technical support representative for assistance.

Error Message

%SYSCTLR-4-SNMP_NOT_RESPONDING: Shelf [dec] not reachable via SNMP

Explanation Shelf indicated above is not responding to SNMP requests.

Recommended Action Check the snmp configuration for the above shelf and also check correct community string is specified in configuration command system-controller community on the system controller.

Error Message

%TRUNK-3-BADCLOCK: selected clock on slot [dec] port [dec] is bad. Please choose another one

Explanation The clock status as reported by the framer is bad.

Recommended Action Please choose another good clock.

Error Message

%TRUNK-3-BADFW: Invalid framer firmware code file.

Explanation The software has detected an invalid framer firmware image that cannot be downloaded.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%TRUNK-3-BADMSG: Bad doorbell message type to framer: [dec]

Explanation An invalid or undefined message type was sent to the framer processor.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%TRUNK-3-HBEAT: No longer receiving heartbeats from framer CPU.

Explanation Communication from the framer processor to the trunk card processor has stopped. The framer processor is no longer passing status to the trunk card processor nor accepting messages from the trunk card processor.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%TRUNK-3-INITFAIL: Trunk card initialization failed due to: [chars]

Explanation Trunk card initialization has failed due to the specified reason.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%TRUNK-3-MSGTMOUT: Timed out waiting for framer CPU to respond.

Explanation The framer processor did not reply to the read request during a specified amount of time.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

Error Message

%TRUNK-3-NOMSGS: Cannot send message to framer; no more messages available

Explanation The memory buffer for message passing between the trunk card and framer processors has been exhausted. Either the messages are not being picked up or are being generated too quickly.

Recommended Action Copy the error message exactly as it appears on the console or in the system log, call your Cisco technical support representative and provide the representative with the gathered information.

