

Error Messages

AppleTalk Error Messages

Error Message

`%AT-6-ACQUIREMODE: [chars]: AppleTalk port
initializing; acquiring [chars]`

Explanation The port is determining the correct configuration. This message is generated when discovery mode is enabled and no other router has been detected.

Recommended Action Informational message only. No action required.

Error Message

`%AT-5-ADDRINUSE: [chars]: AppleTalk node warning;
address [atalk_address] already in use`

Explanation The initial hint address was in use. A search will be made for a valid address.

Recommended Action Notification message only. No action required.

Error Message

```
%AT-5-ADDRINVALID: [chars]: AppleTalk node warning;  
address [atalk_address] is invalid
```

Explanation The hint address specified for the port was not valid for its current configuration.

Recommended Action No action required; the hint is ignored and a random valid hint is automatically computed.

Error Message

```
%AT-6-ADDRUSED: [chars]: AppleTalk node up; using  
address [atalk_address]
```

Explanation No hint address or a bad hint address was specified. This message indicates which AppleTalk address will be used.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-2-ASSERTFAILED: AppleTalk assertion failed:  
[chars]
```

Explanation The software detected an inconsistency. Although considered a serious error, the router attempts to continue, but AppleTalk processing may be impaired.

Recommended Action Record the entire message and note any AppleTalk problems you are experiencing. Give this information to your technical support representative in a problem report.

Error Message

```
%AT-5-BADNEIGHBOR: [chars]:AppleTalk neighbor ignored;  
[node] is misconfigured
```

Explanation A neighboring router's AppleTalk configuration does not agree with this router's AppleTalk configuration. This can be because the neighbor's network range does not match this router's network range.

Recommended Action Modify either this router's or the neighboring router's configuration so that the network ranges agree.

Error Message

```
%AT-6-BADROUTE: Route to [atalk_net] has gone bad.
```

Explanation The system has not heard about a route within the required time-out period. Therefore, the route has been marked as bad. This may mean that a network has become unreachable for some reason—perhaps a broken connection. This message does not necessarily reflect an error condition.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-7-BUGREPORT: AppleTalk Bug: [chars]
```

Explanation The software detected an unexpected condition. The router takes corrective action and continues.

Recommended Action Record the entire message and note any AppleTalk problems you are experiencing. Give this information to your technical support representative in a problem report.

Error Message

```
%AT-3-CANTDEL: Cannot delete [chars] route [dec] by  
clearing; please remove by reconfiguration
```

Explanation The user has attempted to remove a route from the routing table using the command **clear appletalk route**. The command failed because the route was directly connected (that is, it was created by a configuration command).

Recommended Action Remove the route by reconfiguring the directly connected interface with which it is associated.

Error Message

```
%AT-5-COMPATERR1: [chars]: AppleTalk internet  
compatibility mode required by [node]
```

Explanation A neighboring router only supports extended AppleTalk networks with a cable range of 1 and with one assigned zone, for example, 25-25.

Recommended Action Upgrade routers that can support only the original AppleTalk specification, and observe the compatibility rules in the interim.

Error Message

```
%AT-5-COMPATERR2: AppleTalk neighbor incompatibility;  
[atalk_net] has multiple zones
```

Explanation Although this router has neighbors that require your internetwork to observe compatibility rules, a route has been learned that has multiple zone names defined. This condition can cause inconsistencies for nodes in your internet.

Recommended Action Upgrade routers that can support only the original AppleTalk specification, and observe the compatibility rules in the interim.

AppleTalk Error Messages

Error Message

```
%AT-5-COMPATERR3: AppleTalk neighbor incompatibility;  
[atalk_net] has wide cable-range
```

Explanation Although this router has neighbors that require your internetwork to observe compatibility rules, a route has been learned that has a wide (greater than 1) cable range. This condition can cause inconsistencies for nodes in your internetwork.

Recommended Action Upgrade routers that can support only the original AppleTalk specification, and observe the compatibility rules in the interim.

Error Message

```
%AT-6-CONFIGOK: [chars]: AppleTalk port enabled;  
verified [node]
```

Explanation The AppleTalk configuration was verified by consulting the indicated router.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-7-DEBUGMSG: AppleTalk Debug: [chars]
```

Explanation This message is generated by some **debug** commands to provide additional information about some condition in AppleTalk.

Recommended Action If you are experiencing problems in AppleTalk, show these messages to your technical support representative.

Error Message

```
%AT-3-DEFZONEERR: [chars]: AppleTalk port warning;  
default zone differs with [node]
```

Explanation This message is generated during the verification startup process when there is a disagreement between the default zone (the first zone defined after the **appletalk cable-range** command) and the router that confirmed the configuration. When an AppleTalk end node is first connected to a network, it joins this default zone until it is overridden.

Recommended Action Correct the configuration so that all routers are advertising the same default zone. Note that several router implementations are known to mismanage the default zone.

Error Message

```
%AT-6-DELROUTE: AppleTalk network deleted;  
[atalk_net] removed from routing table
```

Explanation Report that a route has aged out of the AppleTalk internetwork.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-5-DUPADDR: [chars]: AppleTalk port restarting;  
node address taken by [enet]
```

Explanation Another AppleTalk node on a common network interface has claimed the same AppleTalk address that this router was using. This error indicates a serious, unexpected problem. If this is a recurring problem, there may be a physical network problem in which the nodes are unable to hear each other.

Recommended Action This router will restart AppleTalk processing on the common network interface to resolve the address conflict. No action required.

AppleTalk Error Messages

Error Message

```
%AT-5-FDDICOMPAT: AppleTalk FDDI neighbor [atalk_net]
using obsolete FDDI addressing
```

Explanation Another router on an FDDI ring running AppleTalk is running a release of the router software previous to 9.0(2). Routers running software releases earlier than 9.0(2) use an encapsulation for AppleTalk on FDDI rings that is not compatible with the Apple FDDITalk preliminary proposal.

Recommended Action Notification message only. No action required.

Error Message

```
%AT-3-IFCONFLICT: [chars]: AppleTalk port disabled;
conflicts with port [chars]
```

Explanation An attempt was made to configure an interface to have the same or a conflicting AppleTalk address or cable range as another interface on the same router.

Recommended Action Verify that you are not specifying an AppleTalk address or cable range used previously on this router, and reconfigure the interface.

Error Message

```
%AT-5-INTCLEARED: [chars]: AppleTalk port restarting;
interface cleared
```

Explanation This message is generated by performing the EXEC command **clear interface** on an interface currently routing AppleTalk.

Recommended Action Notification message only. No action required.

Error Message

```
%AT-5-INTDOWN: [chars]: AppleTalk node down; Line  
protocol down
```

Explanation An AppleTalk hardware interface has been disabled because of a bad serial line, a configuration command, or a bad interface.

Recommended Action If the port has not been intentionally disabled, this message may reflect a hardware problem. If so, repair or replace the controller.

Error Message

```
%AT-5-INTRESTART: [chars]: AppleTalk port restarting;  
protocol restarted
```

Explanation This message is generated when a configuration change necessitates resetting the hardware interface. AppleTalk has reinitialized the port.

Recommended Action Notification message only. No action required.

Error Message

```
%AT-6-INTUP: [chars]: AppleTalk port restarting;  
Line protocol came up
```

Explanation An AppleTalk port that was previously shut down has been restarted.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-3-INVNBPCMD: Invalid NBptest command `[chars]'
```

Explanation An unrecognized command was given in the NBptest facility.

Recommended Action Enter a valid command.

Error Message

```
%AT-5-LOSTNEIGHBOR: [chars]: AppleTalk neighbor down;  
lost contact with [node]
```

Explanation A peer router has become unreachable.

Recommended Action Notification message only. No action required.

Error Message

```
%AT-3-MACIPBADCONF: ZONE-NAME: MacIP inoperable  
configuration, X.X.X.X
```

Explanation If the **appletalk event-logging** command is configured, this message appears on the console when a MacIP server cannot begin or recover operations because of an invalid IP address configuration. This only occurs when the configured MacIP server's IP address is not valid on the same cable of any operable IP interface. An AppleTalk zone of the MacIP server replaces ZONE-NAME. The MacIP server's configured IP address replaces X.X.X.X.

When this error occurs, the MacIP configuration is considered invalid and is deleted.

Recommended Action Advisory message. No action required.

Error Message

```
%AT-6-MACIPDOWN: ZONE-NAME: MacIP server shutting  
down, X.X.X.X
```

Explanation If the **appletalk event-logging** command is configured, this message appears on the console when a MacIP server is no longer operational for any reason. MacIP servers will shut down in response to MacIP configuration changes or errors, or a change in the condition or configuration of an AppleTalk or IP interface for which the MacIP server is providing service. An AppleTalk zone of the MacIP server replaces ZONE-NAME. The MacIP server's configured IP address replaces X.X.X.X.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-3-MACIPNOCABLE: ZONE-NAME: MacIP inoperable IP  
interface, X.X.X.X
```

Explanation If the **appletalk event-logging** command is configured, this message appears on the console when a MacIP server can no longer operate due to a change in the condition of the IP interface it serves. This can occur if IP routing is shut down on the interface or the IP address of the interface is changed so that the MacIP server's IP address is no longer valid on the same cable. An AppleTalk zone of the MacIP server replaces ZONE-NAME. The MacIP server's configured IP address replaces X.X.X.X.

Recommended Action Advisory message only. No action required.

Error Message

```
%AT-6-MACIPUP: ZONE-NAME: MacIP server operational,  
X.X.X.X
```

Explanation If the **appletalk event-logging** command is configured, this message appears on the console when a MacIP server has fully initialized and is ready to accept client requests. An AppleTalk zone served by the MacIP server replaces ZONE-NAME. The MacIP server's configured IP address replaces X.X.X.X.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-3-MCMISMATCH: [chars]: AppleTalk port warning;  
zone multicast differs with [node]
```

Explanation A computed multicast address disagrees with that provided by another AppleTalk router. The other AppleTalk router may be misconfigured or faulty.

Recommended Action Correct the problem at the other router.

Error Message

```
%AT-6-NBRDELETED: Neighbor entry for [atalk_net] has  
been deleted
```

Explanation This message is displayed upon successful completion of the EXEC command **clear appletalk neighbor**.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-6-NEIGHBORUP: [chars]: AppleTalk neighbor up;  
[node] has restarted
```

Explanation A neighboring router to which this router previously lost connectivity has reappeared on the network.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-3-NETDISAGREES: [chars]: AppleTalk port disabled;  
network incompatible with [node]
```

Explanation The port was disabled because the configured AppleTalk address or cable range on the interface conflicts with another router on the attached network.

Recommended Action Reconfigure the applicable routers.

Error Message

```
%AT-4-NETINVALID: [chars]: AppleTalk node down;  
conflicts with active internet
```

Explanation The configuration specified for the interface conflicts with the active AppleTalk internetwork. For example, a cable range is configured so that it overlaps an existing route but does not match the entry exactly.

Recommended Action Reconfigure the port so that it is consistent with the existing internetwork or take any other actions necessary to resolve the conflict. AppleTalk will periodically attempt to restart the port.

Error Message

```
%AT-6-NEWNEIGHBOR: [chars]: AppleTalk neighbor added;  
[node] is operational
```

Explanation The router discovered a new AppleTalk router.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-6-NEWROUTE: [chars]: AppleTalk network added;  
[atalk_net] via [node] ([dec] hop[char])
```

Explanation A new AppleTalk route has been learned. The message includes the source of the route and its distance in hops.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-6-NEWZONE: AppleTalk zone added; zone [chars]  
defined
```

Explanation A new AppleTalk zone has been created.

Recommended Action Informational message only. No action required.

Error Message

%AT-3-NOADDRSAVAIL: [chars]: AppleTalk node down; no addresses available

Explanation No free node could be found on the interface.

Recommended Action If there are fewer than 250 nodes on your AppleTalk network, call your technical support representative. Otherwise, you must split your AppleTalk network into smaller networks.

Error Message

%AT-3-NOBESTPATH: Could not compute best path for network [atalk_net]

Explanation A path to the specified network could not be found.

Recommended Action Call your technical support representative for assistance.

Error Message

%AT-6-NODEWRONG: [chars]: AppleTalk node [atalk_address] misconfigured; reply has been broadcast

Explanation An AppleTalk node has sent a GetNet Info request to this router specifying an invalid network number for the source of the GetNet Info request. This situation will occur when an AppleTalk end node is moved between networks and is therefore misconfigured for the current network.

Recommended Action Informational message only. No action required.

Error Message

%AT-1-NOMEM: Could not allocate memory for [chars] at line [dec] in [chars]

Explanation An internal software error has occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

%AT-6-NOPROXY: AppleTalk proxy deleted; zone [chars] freed network [atalk_net]

Explanation A previously configured NBP proxy has been deleted. The router will no longer convert NBP requests to a format understood by routers that support only the original specification of AppleTalk.

Recommended Action Informational message only. No action required.

Error Message

%AT-3-NOROUTE: No route to destination [atalk_address]

Explanation The router could not deliver a packet to a destination because it did not know where to send it.

Recommended Action If the destination is valid, you must determine why the router does not know the route (that is, the neighboring router may be withholding information).

Error Message

```
%AT-3-NOSRCADDR: [chars]: AppleTalk packet error;  
no source address available
```

Explanation An attempt to generate an AppleTalk packet from the router has failed because there is no valid AppleTalk source address available to identify this router in the packet.

Recommended Action Configure a port to have an address or cable range and verify that the port is operational.

Error Message

```
%AT-3-NOSUCHNBR: No such neighbor, [atalk_net]
```

Explanation The user tried to execute the EXEC commands **show appletalk neighbor** or **clear appletalk neighbor** with a nonexistent neighbor address.

Recommended Action Specify a valid neighbor address, that is, one that appears in the output of the **show appletalk neighbor** command with no arguments.

Error Message

```
%AT-5-NOSUCHROUTE: No such route [dec]
```

Explanation The user tried to execute the EXEC commands **show appletalk route** or **clear appletalk route** with a nonexistent route.

Recommended Action Specify a valid route, that is, one that appears in the output of the **show appletalk route** command with no arguments.

Error Message

```
%AT-3-NOTRUNNING: AppleTalk not running
```

Explanation You tried to show or change the AppleTalk configuration, but AppleTalk routing was not turned on.

Recommended Action Issue the **appletalk routing** configuration command prior to issuing any other AppleTalk configuration or display command.

Error Message

```
%AT-5-NOTSUPPORTED: [chars]: AppleTalk node down;  
line protocol not supported
```

Explanation The interface specified has an encapsulation method that does not support AppleTalk.

Recommended Action Notification message only. No action required.

Error Message

```
%AT-5-OLDMCI: [chars]: AppleTalk route cache  
disabled; firmware is obsolete
```

Explanation The firmware on the MCI controller card does not support AppleTalk fast switching.

Recommended Action No corrective action is required. Normal AppleTalk operation is permitted, but the fast switching cache is disabled for the associated port. If unexpected, verify that the MCI controller firmware for the interface specified in the error message is at level 1.7 or higher.

Error Message

```
%AT-6-ONLYROUTER: [chars]: AppleTalk port enabled;  
no neighbors found
```

Explanation No other AppleTalk routers were found on the network attached to the port.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-6-PATHADD: [chars]: AppleTalk [chars] path to  
network [atalk_net] added; via [node] (metric [dec])
```

Explanation A new AppleTalk path has been learned. The message includes the source of the path, its distance in hops, its metric, and the type of path.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-5-PATHCHANGE: Route to [atalk_net] is now using  
path of type [chars] on [chars] via [node]
```

Explanation The path to a network has changed either because the old path went down or the new path was better.

Recommended Action Notification message only. No action required.

Error Message

```
%AT-6-PATHDEL: AppleTalk [chars] path to [atalk_net]
via [node] has been deleted
```

Explanation A path has aged out of the AppleTalk network.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-6-PATHNOTIFY: [chars]: AppleTalk [chars] path to
[atalk_net] down; reported bad by [node]
```

Explanation A router has gone down somewhere on the AppleTalk network. The specified peer notified this router of the change.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-6-REGPENDING: NBP registration of [chars]@[chars]
pending
```

Explanation A name registration call is being performed.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-6-ROUTEDOWN: [chars]: AppleTalk network down;
port to [atalk_net] disabled
```

Explanation A connected route is being advertised as *down* (also known as *notify neighbor*) because the configured port is no longer operational.

Recommended Action Informational message only. No action required. If unexpected, correct the situation that caused the port to be disabled.

Error Message

```
%AT-6-ROUTENOTIFY: [chars]: AppleTalk network down;  
[atalk_net] reported bad by [node]
```

Explanation A router has gone down somewhere on the AppleTalk network. The specified peer notified this router of the change.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-6-ROUTEOK: [chars]: AppleTalk network up;  
[atalk_net] via [node] ([dec] hop[char])
```

Explanation A routing update has been received for a previously suspect route.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-5-RTMPSTATE: [chars]: [chars] RTMP Path to  
[atalk_net] via [node] now in [chars] state (metric  
[dec])
```

Explanation The state of a path has changed.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-3-SUBROUTINE_ERROR: AppleTalk error: [chars]
```

Explanation An internal error has occurred that violates a programming assertion in the AppleTalk networking module.

Recommended Action Save the text of the message, the output of the **show version** command, and a copy of the router configuration file. Call your technical support representative for assistance.

Error Message

```
%AT-3-ZONEDISAGREES: [chars]: AppleTalk port disabled;  
zone list incompatible with [node]
```

Explanation The configurations of one or more other routers are inconsistent with the configuration of this router.

Recommended Action Reconfigure the routers so they are all consistent.

Error Message

```
%AT-6-ZONEGC: AppleTalk zone deleted; zone [chars]  
released
```

Explanation The router has purged an unused zone from the zone table.

Recommended Action Informational message only. No action required.

Error Message

```
%AT-6-ZONEPROXY: AppleTalk proxy defined; zone [chars]  
using network [atalk_net]
```

Explanation This message reports the zone name and network number that are being advertised to support the **appletalk nbp-proxy** command.

Recommended Action Informational message only. No action required. One message is generated for each configuration command when proxy service is initiated.

BGP Error Message

Error Message

```
%BGP-3-NOMEMORY: No memory for [chars] entry,  
resetting
```

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

```
%BGP-3-RADIXINIT: Radix tree initialization failed
```

Explanation Initialization of Radix tree could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

BGP Error Message

BRI Error Messages

Error Message

%BRI-3-BADENCAP: Unit [dec], bad encapsulation in
idb->enctype = [hex]

%BRI-3-BADUNIT: Bad unit number [dec]

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%BRI-1-INITFAIL: Unit [dec], initialization timeout
failure

Explanation The hardware failed to initialize correctly.

Recommended Action Repair or replace the controller.

Error Message

%BRI-0-NOMEMORY: Unit [dec], no memory for [chars]

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

%BRI-3-ODDSTART: Interface [chars]

Explanation An internal software error has occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

%BRI-3-OUTENCAP: Unit [dec], bad output packet encapsulation: [hex]

Explanation An internal software error has occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

%BRI-3-OWNERR: Unit [dec], buffer ownership error

Explanation An Ethernet interface is malfunctioning, or an internal software error has occurred.

Recommended Action Repair or replace the controller.

ciscoBus Error Messages

Error Message

```
%CBUS-3-AIPCFG: Interface [chars], Cannot config  
interface, AIP MEM [hex],status [dec]
```

```
%CBUS-3-AIPINVLIM: Interface [chars], Invalid PLIM  
detected. Interface downed
```

```
%CBUS-3-AIPRSET: Interface [chars], Error ([hex])  
[chars] - aip_reset()
```

```
%CBUS-3-AIPRSETU: Unit [dec], Error ([hex]) [chars] -  
aip_reset()
```

Explanation A software error has occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%CBUS-3-BUFFER: Controller [dec], Error ([hex]),  
Buffersize = [dec], Bufferpool = [dec], number [dec]
```

Explanation An internal software error has occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%CBUS-3-CORRUPT: Controller [dec], wrote [hex],  
read [hex], loc [hex] - dci_memtest()
```

Explanation A hardware component failed an internal diagnostic test.

Recommended Action Replace the malfunctioning device.

Error Message

```
%CBUS-3-CTRACHECK: Unit [dec], Adapter Check Error  
([hex] [hex] [hex] [hex])
```

Explanation The Token Ring monitor firmware has detected a fatal error on the interface card.

Recommended Action Issue a **clear interface** command. If this message recurs, call your technical support representative for assistance.

Error Message

```
%CBUS-3-CTRCMDFAILED: Unit [dec], CTR Command [hex]  
Failed, [char] ([hex])
```

```
%CBUS-3-CTRCMDFAILED2: Unit [dec], CTR Command [hex]  
Failed, Code [hex]
```

Explanation A command from the system to the Token Ring interface failed to complete.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%CBUS-3-CTRINIT: Unit [dec], CTR Initialization  
Failed - [char]
```

Explanation The Token Ring interface failed its internal self-tests.

Recommended Action Issue a **clear interface** command. If this message recurs, call your technical support representative for assistance.

Error Message

```
%CBUS-3-CTRRAMTEST: Unit [dec], RAM Addressing Test  
Failed - [char]
```

Explanation The Token Ring interface failed its memory diagnostic tests.

Recommended Action Issue a **clear interface** command. If this message recurs, call your technical support representative for assistance.

Error Message

```
%CBUS-3-CTRRESET: Unit [dec], Error (%-04x) [char] -  
cbus_token_reset()
```

Explanation The Token Ring interface failed to complete a command that is part of the reset sequence.

Recommended Action Issue a **clear interface** command. If this message recurs, call your technical support representative for assistance.

Error Message

%CBUS-3-CTRUCHECK: Unit [dec], Microcode Check Error

Explanation The CTR microcode detected an unrecoverable error.

Recommended Action Issue a **clear interface** command. If this message recurs, call your technical support representative for assistance.

Error Message

%CBUS-3-DAUGHTER: Unit [dec], daughter controller
[dec]
failed [chars] test - interface disabled

Explanation A hardware component failed an internal diagnostic test. Test output and descriptions of ranges follow.

Unit [dec] (ranges 0-14):

Indicates the Multibus jumper setting for the ciscoBus controller, or in the Cisco 7000, a slot number.

daughter controller [dec] (ranges 0-3):

Indicates the ciscoBus relative slot number (0 to 3, or in the Cisco 7000, 0 to 4) of the daughter card that failed the test.

failed [chars] test ([chars]= memd read, memd write):

If the failed test was memd read, the processor was able to write to shared ciscoBus buffer memory from the ciscoBus registers, but was unable to read back that memory through special commands to the daughter card.

If the failed test was memd write, writes to MEMD through the daughter card were not verified successfully with reads through the ciscoBus controller.

The daughter card under test responds successfully to some commands (otherwise the software would have received a DAUGHTER_NO_RSP message), but its MEMD tests failed. The daughter card must be able to write to some MEMD addresses; otherwise, it cannot respond to any commands.

Recommended Action First check that the daughter controller card is properly seated in its Multibus and ciscoBus connectors. Next, swap daughter cards and check whether the error follows the daughter card or the slot. If the message recurs, call your technical support representative for assistance.

Error Message

```
%CBUS-3-DAUGHTER_NO_RSP: Unit [dec], daughter [dec],  
not responding [hex] - disabled
```

Explanation A hardware component failed an internal diagnostic test. Test output and descriptions of ranges follow.

Unit [dec] (ranges 0-14):

Indicates the Multibus jumper setting for the ciscoBus controller.

daughter controller [dec] (ranges 0-3):

Indicates the ciscoBus relative slot number (0 to 3, or in the Cisco 7000, 0 to 4) of the daughter card that failed the test.

The daughter card's hardware was recognized across the ciscoBus backplane, but the daughter card did not respond to the first command issued to it (version number).

Either the daughter card did not reset, the microcode on the card is in a hung state, or the card cannot fully communicate across the ciscoBus backplane (cannot read or write shared MEMD or does not get the MALU_ATTENTION signal across the ciscoBus).

Recommended Action First, make sure that the daughter card is properly seated in its Multibus and ciscoBus connectors. If this action does not solve the problem, call your technical support representative. The next actions are to replace the daughter card, then replace the ciscoBus controller, then replace the chassis. Follow each step until the system works correctly.

Error Message

```
%CBUS-3-FDDIRSET: Interface [chars], Error ([hex])  
[chars] -fddi_reset()
```

```
%CBUS-3-FDDIRSETU: Unit [dec], Error ([hex])  
[chars] - fddi_reset()
```

Explanation A hardware device did not respond appropriately to a request.

Recommended Action Make sure the device is functioning and is configured correctly.

Error Message

```
%CBUS-3-FSIPRSET: Interface [chars], Error ([hex])  
[chars] - fsip_reset()
```

Explanation An FSIP has not responded to a reset request from the route processor.

Recommended Action Check FSIP electrical connections, cable, and ciscoBus connections. An FSIP microcode reload will be required. If the check of electrical connections reveals no problems and the message recurs, call your technical support representative for assistance.

Error Message

```
%CBUS-3-HSSIRSET: Interface [chars], Error ([hex])  
[chars] - hssi_reset()
```

```
%CBUS-3-HSSIRSETU: Unit [dec], Error ([hex]) [chars] -  
hssi_reset()
```

Explanation A hardware component did not respond to a reset command.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%CBUS-3-INITERR: Interface [dec], Error ([hex])  
[chars] - cbus_init()
```

```
%CBUS-4-INTR Interface [dec], [chars] -  
cbus_interrupt()
```

Explanation A hardware device did not respond appropriately to a request.

Recommended Action Make sure the device is functioning and is configured correctly.

Error Message

```
%CBUS-3-MEC_OUTHUNG: Interface [chars] output hung,  
[hex], [chars], [chars]
```

Explanation Output hung on a ciscoBus Ethernet interface.

Recommended Action Correct any problems with the Ethernet cable, then manually re-enable the port.

Error Message

%CBUS-3-MIPSTAT: Out of buffers--losing status information for the MIP card

Explanation This error is a result of CPU starvation, typically caused by heavy fast switching activity. The counts displayed for the MIP card are incorrect.

Recommended Action Call your technical support representative for assistance.

Error Message

%CBUS-4-NOCOKIE: [chars]-[dec] controller missing configuration data - disabled

Explanation The controller type was derived from a hardware probe. The controller number indicates the ciscoBus relative slot number. The most likely problem is a missing or invalid MAC address cookie ROM. A less likely explanation is corrupted MEMD after the memd self-tests.

Recommended Action Call your technical support representative for assistance. It will be necessary to replace the cookie ROM.

Error Message

%CBUS-3-NOMEMORY: No memory for [chars]

Explanation The requested operation could not be accomplished because of a low memory condition or an unseated card in the Cisco 7000.

Recommended Action Reduce other system activity to ease memory demands. Check that all cards are properly seated. If conditions warrant, upgrade to a larger memory configuration.

Error Message

```
%CBUS-4-OUTHUNG: Interface [chars] output hung,  
restarting cBus[dec] controller - mci_output()
```

Explanation A ciscoBus controller took too long to respond to a command and was restarted by software.

Recommended Action If this message recurs, call your technical support representative for assistance. You might need to repair or replace the controller.

Error Message

```
%CBUS-3-RESETNXI: Reset of removed interface [hex]  
([chars])
```

Explanation An interface reset was attempted on an interface that was removed from the router. This message appears if you use the **shutdown** command to bring down a removed interface.

Recommended Action Informational message only. No action required.

Error Message

```
%CBUS-3-TESTFAIL: Unit [dec], failed [chars] test -  
interface disabled
```

Explanation A hardware component failed an internal diagnostic test.

Recommended Action Check switch settings on the interface cards. Check for proper unit numbers. Reset the cards. Replace the malfunctioning device.

Error Message

`%CBUS-3-TXALLOC: Error ([hex]) tx_allocate -
cbus_init()`

Explanation A hardware device did not respond appropriately to a request.

Recommended Action Make sure the device is functioning and is configured correctly.

CLNS Error Messages

Error Message

`%CLNS-4-AREALOST: Too many IS-IS areas--can't route to
area [chars]`

Explanation IS-IS allows only three area addresses per area. Multiple routers that have at least one area address in common merge all of their configured area addresses into a single set. This message is issued if the resulting set has more than three area addresses and indicates that there will be a loss of connectivity to the specified area.

Recommended Action Reconfigure the network so that the area has fewer area addresses, or split the area into multiple areas.

Error Message

%CLNS-4-EDATFAIL: Encapsulation failed, dst= [chars]

%CLNS-4-EESHFAIL: Interface [chars], encapsulation of ESH failed, HLEN [dec]

Explanation Either of these messages may occur when an interface is down and there is a static neighbor entry in the system's CLNS routing table. If this is not the case, the message indicates an internal software error.

Recommended Action Check the interface. If the interface is not down or there is no static neighbor entry for that interface, call your technical support representative for assistance.

Error Message

%CLNS-3-NSAPES: Invalid NSAP type in ES table: [hex]
for
[chars]

%CLNS-4-NSAPIS: Invalid NSAP type in IS table: [hex]
[dec]

%CLNS-4-REDIRECT: Redirect found for non-route entry,
dst= [chars], next-hop= [chars]

Explanation An internal software error has occurred.

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

COMP Error Messages

Error Message

%COMP-3-CONFIGBAD: Interface [chars] Compression internal configuration error

Explanation An internal software error has occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

%COMP-5-NOBUF: Interface [chars] [chars]

Explanation Interface serial0 Compression getbuffer failed, causing LAPB retransmissions.

Recommended Action Configure additional Large and Big Buffers.

Error Message

%COMP-3-SIZEBAD: Interface [chars] Decompression size error

%COMP-3-SYNCBAD: Interface [chars] Decompression sync error

%COMP-3-VERSIONBAD: Interface [chars] Compression Version mismatch expected [hex] received [hex]

Explanation One interface is configured for predictor compression, the other is not.

Recommended Action Configure both interfaces for predictor compression.

COMP Error Messages

Controller Error Messages

Error Message

```
%CONTROLLER-2-CRASHED: Interface Processor in slot  
[dec] not responding [hex]: shutting it down
```

Explanation A controller has stopped responding to commands over the cbus, so it has been put into shutdown mode.

Recommended Action Re-enable the controllers by issuing the **no shut** configuration command on all controllers on the card, or hotswap out the bad card and install the new one. You must still manually “no shut” the controllers.

Error Message

```
%CONTROLLER-3-REMLoop: Controller [chars], remote loop  
[chars] [chars]
```

Explanation A configurable controller has entered remote loopback.

Recommended Action No action required.

Error Message

```
%CONTROLLER-3-UPDOWN: Controller [chars] changed state  
to [chars]
```

Explanation A configurable controller has changed its state.

Recommended Action No action required.

CPU Card Error Message

Error Message

`%CSC2-4-BREAK: AUX port hung because 'Transmit Break'
would not clear`

Explanation The Universal Asynchronous Receiver/Transmitter (UART) in the console serial interface is malfunctioning.

Recommended Action Service the console serial port hardware.

DBUS Error Messages

Error Message

`%DBUS-3-BADEEPROM: Invalid EEPROM data found for card
in slot [dec], card disabled`

Explanation The ID EEPROM on the indicated card is not programmed correctly.

Recommended Action Call your technical support representative for a replacement.

Error Message

`%DBUS-3-CXBUSERR: Slot [dec], CxBus Error`

Explanation A processor has reported a bus error. The processor will be reset and not used until the next OIR event or microcode download, when it will be retested.

Recommended Action Reinstall the processor or download the microcode. If this message recurs, call your technical support representative for assistance.

CPU Card Error Message

Error Message

%DBUS-3-DAUGHTER_STATS: Slot [n] control [hex1],
status [hex2]

Explanation A processor has had some sort of an error. This message is sent out in conjunction with other error messages to provide additional information.

Recommended Action Call your technical support representative and report information about all error messages displayed.

Error Message

%DBUS-3-DBUSINTERR: Slot [dec], Internal Error

Explanation A processor has reported an internal error. The processor will be reset and not used until the next OIR event or microcode download, when it will be retested.

Recommended Action Reinstall the processor or download the microcode. If this message recurs, call your technical support representative for assistance. Currently no boards report this error.

Error Message

%DBUS-3-NOMAGIC: No magic number found in RP1 EEPROM

Explanation The structure that contains the system MAC address needed by the OIR facility cannot be found in the RP EEPROM. The RP needs to be returned for reprogramming.

Recommended Action Return the RP for reprogramming and call your technical support representative for assistance.

Error Message

%DBUS-3-SLOTCOMP: Slot [dec], dbus error, slot [hex] and complement [hex] do not match

Explanation A processor is reporting a mismatch between the contents of the slot register and its complement. This indicates a hardware failure in the diagnostic bus controller on that processor or on the diagnostic bus. The processor will be reset and not used until the next OIR event or microcode download, when it will be retested.

Recommended Action Call your technical support representative for assistance.

Error Message

%DBUS-3-UNKNOWN: Slot [dec], unknown controller type [hex], ignoring

Explanation A processor is reporting a controller type that is unknown to the system. The processor will not be used and needs to be repaired, or you have old system software that does not support a new interface type.

Recommended Action Call your technical support representative for assistance.

Error Message

%DBUS-3-WCSCTRLRERR: Slot [dec], WCS Controller Instruction Error

Explanation Writable Control Store (WCS) is the set of devices on each interface processor that contains the running microcode. It can be loaded either from the ROM on the interface processor or from the system by using the downloadable microcode facility. In this message, a processor

has reported a WCS Controller Instruction Error. The processor will be reset and not used until the next OIR event or microcode download, when it will be retested.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%DBUS-3-WCSERR: Slot [dec], WCS controller in error  
state [hex], resetting
```

Explanation The processor in slot [n] was reporting a WCS controller error. The processor will be reset and new microcode loaded. This error message will be encountered only while downloading microcode.

Recommended Action If this message recurs after the processor is reset and new microcode is loaded, call your technical support representative for assistance.

Error Message

```
%DBUS-3-WCSLDERR: Slot [dec], error loading WCS,  
status [hex] cmd/data [hex] pos [dec]
```

Explanation A processor has indicated an error condition while downloading microcode. The status, cmd/data, and pos numbers reflect the error condition, the last byte of microcode loaded, and the position in the file, respectively. If this error is encountered, the microcode download will be aborted and the ROM microcode will be loaded.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%DBUS-3-WCSPAREERR: Slot [dec], WCS Controller Parity Error

Explanation A processor has reported a WCS parity error. The processor will be reset and not used until the next OIR event or microcode download, when it will be retested.

Recommended Action Replace the processor or download microcode. If this message recurs, call your technical support representative for assistance.

DECnet Error Messages

Error Message

%DNET-3-HEARSELF: Hello type [hex] for my address from [dec].[dec] via [chars]

Explanation The system is receiving its own DECnet packets. Possible causes:

- A serial line is looped back.
- Another host with the same DECnet address is already present on the LAN.

Recommended Action Check the serial lines (if present) and the DECnet configuration.

Error Message

%DNET-4-MAPCON: Map entry [dec].[dec] conflicts with adjacency to [dec].[dec]

Explanation Your DECnet configuration is incorrect. A host that is specified as nonlocal is present on your local network.

Recommended Action Correct the configuration. Call your technical support representative if you need assistance.

Error Message

%DNET-3-NOMEMORY: No memory available for [chars]

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

DUAL Error Messages

Error Message

%DUAL-3-LINKSEXIST: Interface [chars] is going down and [dec] links exist

Explanation An interface is going down or is being removed from routing through IGRP but not all links (neighbors) have been removed from the topology table.

Recommended Action Call your technical support representative for assistance.

EGP Error Messages

Error Message

`%EGP-3-NOPDB: No pdb for [inet]`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

`%EGP-3-TOOBIG: Insufficient ([dec]) buffering for update message`

Explanation An EGP update message was too large to fit into a single buffer.

Recommended Action Call your technical support representative for assistance.

ENV Error Messages

Error Message

`%ENV-2-FLOW: Air flow appears marginal.`

Explanation A temperature reading indicates poor air flow

Recommended Action Attempt to resolve the air flow problem. If the problem is not resolved, call your technical support representative for assistance.

Error Message

`%ENV-1-SHUTDOWN: Environmental Monitor initiated shutdown.`

Explanation One of the environmental measurements has reached SHUTDOWN status. The system is about to shut down the processor to prevent damage to the hardware.

Recommended Action Attempt to resolve the temperature problem. If the problem is not resolved, call your technical support representative for assistance.

Error Message

`%ENV-2-TEMP: Ambient temperature measured [chars]. Shutdown at [chars]`

Explanation The ENV card indicates the temperature it measured and the temperature at which it will shut down.

Recommended Action Attempt to resolve the temperature problem. If the problem is not resolved, call your technical support representative for assistance.

Error Message

`%ENV-2-VOLTAGE: [chars] testpoint measured [chars]. Shutdown margin is [chars].`

Explanation The ENV card indicates which voltage it is measuring (for example, +5, +12, -5, -12), the amount of voltage that it measured, and the voltage at which the processor will shut down the system.

Recommended Action Attempt to resolve the voltage problem. If the problem is not resolved, call your technical support representative for assistance.

ENVM Error Messages

Error Message

`%ENVM-1-SHUTDOWN: Environmental Monitor initiated shutdown`

Explanation The system has reached a SHUTDOWN temperature level, and the router is being shut down to avoid any damage.

Recommended Action Attempt to resolve the temperature problem. If the problem is not resolved, call your technical support representative for assistance.

Error Message

`%ENVM-2-SUPPLY: Power Supply is Non-Operational`

Explanation A power supply is not working or has not been turned on.

Recommended Action Check that the power supply is turned on; if it is turned on and still does not operate, call your technical support representative for assistance.

Error Message

`%ENVM-2-TEMP: [chars] temperature has reached [chars] level at [dec](C)`

Explanation The temperature parameter shown has reached a warning or critical level and is approaching or has approached a condition that is outside of the acceptable range.

Recommended Action Attempt to resolve the temperature problem. If the problem is not resolved, call your technical support representative for assistance.

Error Message

%ENVM-2-VOLTAGE: [chars] volts has reached [chars] level at [chars](V)

Explanation The voltage parameter shown has reached a critical level and is now out of specification.

Recommended Action Verify the failure and call your technical support representative for repair or replacement.

FDDI Error Messages

Error Message

%FDDI-3-BADMUL: Unit [dec], Can't set FDDI mac address to hardware multicast address [enet]

Explanation Part of your FDDI hardware has failed.

Recommended Action Call your technical support representative for assistance.

Error Message

%FDDI-3-BADSLLOT: Unit [dec], Slot [dec] does not exist

Explanation The main processor detects an invalid slot location for one of the network interface cards. This should never happen.

Recommended Action Call your technical support representative about obtaining a replacement card.

Error Message

```
%FDDI-3-FDDIFAIL: Interface [chars], [chars], [chars]  
= [hex]
```

Explanation FDDI interface has failed.

Recommended Action Save the output of the error message and call your technical support representative for assistance.

Error Message

```
%FDDI-3-FDDIFAIL2: Interface [chars], [chars], [chars]  
= [hex], [chars] = [hex]
```

Explanation FDDI interface has failed. This is the second line of the preceding FDDIFAIL message. This line contains debug information.

Recommended Action Save the output of the error message and call your technical support representative for assistance.

Error Message

```
%FDDI-3-FDDIRSET: Interface [char], Error ([char]-04x)  
[chars] - fddi_reset()
```

Explanation FDDI-related command execution failure.

Recommended Action Call your technical support representative for assistance.

Error Message

%FDDI-3-FDDIRSETU: Unit [dec], Error ([char]-04x)
[chars] - fddi_reset()

Explanation FDDI-related command execution failure.

Recommended Action Call your technical support representative for assistance.

FDDISTAT Error Message

Error Message

%FDDISTAT-4-STATUS: FDDI state [chars] detected on
interface [chars]

Explanation An internal software error has occurred.

Recommended Action Call your technical support representative for assistance.

Frame Relay Error Message

Error Message

%FR-5-DLCICHANGE: Interface [chars] - DLCI [dec] state
changed to [chars]

Explanation The state of the Frame Relay PVC specified by the DLCI has changed.

Recommended Action Notification message only. No action required.

GRIP Error Message

Error Message

%GRIP-3-BADPATHS: Invalid number of paths [dec] for [dec]

Explanation An internal inconsistency has been detected in the XNS routing table structure.

Recommended Action Note the parameters associated with this message and call your technical support representative for assistance.

HD Error Messages

Error Message

%HD-1-BADENCAP:Unit [dec], bad encapsulation in idb->enctype = [hex]

%HD-1-BADRING: Bad [chars] ring size

%HD-3-BADUNIT: Bad unit number [dec]

Explanation An internal software error has occurred.

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

Error Message

%HD-0-INITFAIL: Unit [dec], initialization timeout failure,csr[dec]=[hex]

Explanation The hardware failed to initialize correctly.

Recommended Action Repair or replace the controller.

Error Message

%HD-5-LINEFLAP: Unit [dec] excessive modem control changes

Explanation Too many modem control interrupts have been received. the port has been disabled to prevent excessive use of the CPU.

Recommended Action Check the cable on the serial port.

Error Message

%HD-1-MEMERR: Unit [dec], memory error, csr0 = [hex]

Explanation A network serial interface detected a hardware problem.

Recommended Action Repair or replace the controller.

Error Message

%HD-0-NOMEMORY: Unit [dec], no memory for [chars]

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

%HD-3-ODDSTART: Interface [chars], Odd datagram
start = [hex], pak =[hex]

%HD-3-OUTENCAP: Unit [dec], bad output packet
encapsulation: [hex]

Explanation An internal software error has occurred.

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

Error Message

%HD-3-OWNERR: Unit [dec], buffer ownership error

Explanation An Ethernet interface is malfunctioning, or an internal software error has occurred.

Recommended Action Repair or replace the controller.

IGRP Error Message

Error Message

%IGRP-3-NOSOCKET: Unable to open socket for AS [dec]

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

IP Error Messages

Error Message

```
%IP-3-BADIPALIGN: Invalid alignment in packet for IP.  
[chars]=[hex]
```

Explanation The packet data structure is misaligned. This may result in a small amount of additional overhead in processing IP traffic.

Recommended Action Enter a **show hardware** command and report the output, along with this error message, to your technical support representative.

Error Message

```
%IP-4-CLASS: Bad IP address [inet] and mask [inet]  
in class_resolve()
```

```
%IP-3-DESTHOST: src=[inet], dst=[inet], NULL desthost
```

Explanation An internal software error has occurred.

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

Error Message

```
%IP-4-DUPADDR: Duplicate address [inet] on [chars],  
sourced by [enet]
```

Explanation Another system is using your IP address.

Recommended Action Change the IP address of one of the two systems.

IP Routing Error Messages

Error Message

`%IPRT-2-COMPRESS: Bad route_compress() call, sdb=[hex]`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

`%IPRT-3-NOMEMORY: No memory available for [chars]`

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

`%IPRT-3-TOOMANYNETS: Too many networks in [char] [dec] (limit [dec])`

Explanation Too many **network** subcommands have been entered for this routing protocol.

Recommended Action Advisory message only. No action required.

IPX Error Messages

Error Message

`%IPX-3-BADIGRPSATYPE: Unsupported SAP type for EIGRP being [chars] - type [hex]`

Explanation An unsupported SAP type has been detected.

Recommended Action Call your technical support representative for assistance.

Error Message

`%IPX-3-BADPATHS: Invalid number of paths [dec] for [hex]`

Explanation An internal inconsistency has been detected in the IPX routing table structure.

Recommended Action Note the parameters associated with this message. If possible, clear the IPX routing table by issuing the **clear ipx route** command. (This will result in lost connectivity until the routing table is rebuilt.) If the message recurs, note the parameters and call your technical support representative for assistance.

Error Message

`%IPX-3-NOMEMORY: Unable to allocate memory for [event]`

Explanation The system has failed to allocate memory for an event. The event variable will be one of the following procedures which attempts to allocate memory:

- SAP queue
- routing table
- SAP update
- SAP update queue entry
- RIP update queue entry

```
SAP heap sort  
pointer array  
RIP update  
EIGRP process  
route entry
```

Recommended Action Call your technical support representative for assistance.

LANCE Error Messages

Error Message

```
%LANCE-4-BABBLE: Unit [dec], babble error, csr0 = [hex]
```

Explanation An Ethernet interface is malfunctioning.

Recommended Action Repair or replace the controller.

Error Message

```
%LANCE-3-BADENCAP: Unit [dec], bad encapsulation in  
idbenctype = [hex]
```

```
%LANCE-3-BADUNIT: Bad unit number [dec]
```

Explanation An internal software error has occurred.

Recommended Action If either of these messages recurs, call your technical support representative for assistance.

Error Message

%LANCE-5-COLL: Unit [dec], excessive collisions.
TDR=[dec]

Explanation An Ethernet cable is broken or unterminated, or the transceiver is unplugged. The time delay reflectometer (TDR) counter is an internal LANCE counter that counts the time (in “ticks” of 100 ns each) from the start of a transmission to the occurrence of a collision. Since a transmission travels about 35 feet per tick, this value is useful in determining the approximate distance to a cable fault.

Recommended Action If the transceiver appears to be properly terminated, repair or replace the Ethernet interface card.

Error Message

%LANCE-1-INITFAIL: Unit [dec], initialization timeout
failure, csr[dec] = [hex]

Explanation The hardware failed to initialize correctly.

Recommended Action Repair or replace the controller.

Error Message

%LANCE-5-LATECOLL: Unit [dec], late collision error

Explanation An Ethernet transceiver is malfunctioning, the Ethernet is overloaded, or the Ethernet cable is too long.

Recommended Action Repair or replace the controller.

Error Message

%LANCE-5-LOSTCARR: Unit [dec], lost carrier.
Transceiver problem?

Explanation An Ethernet transceiver is unplugged or faulty.

Recommended Action Repair or replace the controller.

Error Message

%LANCE-1-MEMERR: Unit [dec], memory error, csr0 = [hex]

Explanation An Ethernet interface detected a hardware problem.

Recommended Action Repair or replace the controller.

Error Message

%LANCE-1-NOMEMORY: Unit [dec], no memory for [chars]

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

%LANCE-3-OWNERR: Unit [dec], buffer ownership error

Explanation An Ethernet interface is malfunctioning, or an internal software error has occurred.

Recommended Action Repair or replace the controller.

Error Message

%LANCE-3-SPURIDON: Unit [dec], spurious IDON interrupt

Explanation An Ethernet interface generated a spurious Initialization Done interrupt.

Recommended Action Repair or replace the controller.

Error Message

%LANCE-3-UNDERFLO: Unit [dec], underflow error

Explanation The Ethernet hardware is requesting data faster than the system can supply it. It might indicate that the system is at the limit of its performance.

Recommended Action A small number of underflows may not be a cause for concern. You can monitor underflows with the show interface command. Reducing the load on the router or installing a higher performance router should alleviate this problem.

IBM LAN Network Manager Error Messages

Error Message

%LANMGR-4-BADRNGNUM: Ring number mismatch on [chars], shutting down RPS.

Explanation The router has detected a conflict in assigned ring numbers for the specified Token Ring. The Ring Parameter Server (RPS) function has been shut down to prevent potentially incorrect information from being sourced onto the ring.

Recommended Action Check all bridges connected to this Token Ring and ensure that they are using the same assigned ring number.

Error Message

%LANMGR-4-BADUPCALL: Unexpected call ([chars]) from LLC2 for Bridge [hex]-[hex]-[hex].

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%LANMGR-4-OLDTRAMON: Cannot run RPS on [chars], Old TRAMON code.

Explanation The software on this interface cannot support the functions required for LAN Network Manager.

Recommended Action Call your technical support representative about a firmware upgrade for this interface card.

LAPB Error Messages

Error Message

%LAPB-4-CTRLBAD: Interface [chars], Invalid control field

Explanation A received FRMR reported a frame with an invalid control code.

Recommended Action Check the serial line and the devices attached to the line.

Error Message

%LAPB-4-FRAMEERR: Interface [chars], Frame error: CF [hex], VS[dec] [char] VR [dec], Reason [hex]

Explanation A FRMR frame was received, indicating that a protocol violation has been detected. The Reason field will be interpreted by generating INFOBAD, CTRLBAD, NITOOBIG, or INVNR messages immediately after this message; refer to the explanations for these messages for more information.

Recommended Action The protocol will recover by resetting the service. This will disrupt any network service on top of LAPB (for example, X.25 virtual circuits will be cleared). Follow the recommended action for any error message following the FRMR reports; if service becomes unacceptable, check the serial line and its attached devices.

Error Message

%LAPB-4-INFOBAD: Interface [chars], Info field not permitted

Explanation A received FRMR frame reported that an information field was present in a frame where no information field is allowed.

Recommended Action Check the serial line and the device attached to the line.

Error Message

%LAPB-4-INVNR: Interface [chars], Invalid NR value

Explanation A received FRMR reported a frame with an invalid N(R) value.

Recommended Action Verify that the equipment attached to the serial line is configured with the same K value (maximum number of outstanding I frames).

Error Message

%LAPB-4-N1TOOBIG: Interface [chars], N1 too large

Explanation A received FRMR reported an information frame that was too long.

Recommended Action Verify that the equipment attached to the serial line is configured with the same N1 value. Remember that N1 is in bits and includes the entire frame plus 16 bits of CRC, while some equipment may require either configuration in octets, the omission of the two CRC octets, and/or the omission of the three octets of LAPB control information.

Error Message

%LAPB-2-NOBUF: Interface [chars], no buffer available to [chars]

Explanation There was insufficient memory for the LAPB protocol engine to send a message.

Recommended Action This message is acceptable if it occurs infrequently, because the LAPB protocol is designed to handle loss of frames. Frequent occurrences can cause disruption of service. The system can be configured to ease memory demands or, if conditions warrant, the system can be upgraded to a larger memory configuration.

Error Message

%LAPB-3-NOINPIDB: Input idb not set

%LAPB-3-NULLPAK: Interface [chars], NULL packet ptr, rvr [dec], vs [dec], vr [dec]

Explanation An internal software error has occurred.

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

LAPB Error Messages

LAT Error Messages

Error Message

%LAT-3-BADDATA: Tty[t-line], Data pointer does not correspond to current packet

%LAT-3-BUFFULL: Tty[t-line], data buffer full with count [dec]

Explanation An internal software error has occurred.

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

Error Message

%LAT-3-NOSYNC: Tty[t-line], Output data ptrs out of sync with byte count

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

`%LAT-3-NULLIDB: Null IDB pointer with destination
[enet]`

`%LAT-3-QBSPACED: Queue block at [hex] not found for HI
connection`

`%LAT-3-REUSE: Tty[t-line], Attempt to re-use slot
array,
empty =[dec], fill = [dec]`

Explanation An internal software error has occurred.

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

Line Protocol Error Message

Error Message

`%LINEPROTO-5-UPDOWN: Line protocol on Interface
[chars], changed state to [chars]`

Explanation The data link level line protocol has changed state.

Recommended Action Notification message only. No action required.

Data Link Error Messages

Error Message

`%LINK-3-BAENCAP: Interface [chars] Bad encapsulation
code [dec]`

Explanation The lower level software was unable to write a MAC header for a datagram. A probable cause is configuration error.

Recommended Action Call your technical support representative for assistance.

Error Message

`%LINK-3-BAETHER: Interface [chars], Bad ethernet
encap code`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

`%LINK-3-BADMACREG: Interface [chars], non-existent
MACADDR registry for link [dec]`

Explanation An attempt to map a network level address to a MAC level address has failed.

Recommended Action Call your technical support representative for assistance.

Error Message

%LINK-2-BADVCALL: Interface [chars], undefined entry point

Explanation An internal software error has occurred. The high-level system code tried to use an unimplemented entry point with the virtual IDB driver.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%LINK-5-BOOTP: [chars] address [inet], resolved by [inet]

Explanation An interface's IP address was successfully learned dynamically through BootP. The first address is the learned IP address. The second IP address is the IP address of the BootP server that provided the information.

Recommended Action No action required.

%LINK-4-BRIDGECONFLICT: [char], encapsulated BPDU recvd from [enet]

Explanation An FCIT running in nonencapsulating transparent mode has detected an FDDI bridge running in encapsulation mode on the same fiber. This is an unstable situation and should be corrected. The incoming interface is displayed, along with the FDDI MAC address in canonical form.

Recommended Action Upgrade the errant interface to full transparent mode. Call your technical support representative for assistance.

Data Link Error Messages

Error Message

`%LINK-5-CHANGED: Interface [chars], changed state to [chars]`

Explanation The interface hardware has changed state.

Recommended Action Notification message only. No action required.

Error Message

`%LINK-4-FDDISTAT: Interface [chars], FDDI state [chars] detected`

Explanation There has been a state change on the FDDI ring.

Recommended Action Dependent on the specific error condition. Call your technical support representative for assistance.

Error Message

`%LINK-2-LINEST: No linestate vector for [chars]`

Explanation An internal software inconsistency has occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

%LINK-2-NOSOURCE: Source idb not set

%LINK-3-TOOBIG: Interface [chars], Output packet size of [dec] bytes too big

%LINK-2-UENCAP: Unknown line encapsulation code [dec]

Explanation An internal software error has occurred.

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

Error Message

%LINK-5-RARP: [chars] address [inet], resolved by [inet]

Explanation The Reverse Address Resolution Protocol (RARP) has resolved an IP address.

Recommended Action Notification message only. No action required.

Error Message

%LINK-3-REMLoop: Interface [chars], remote loop [chars] [chars]

Explanation The interface entered or exited a remote loopback.

Recommended Action Notification message only. No action is required.

Error Message

%LINK-5-SLARP: [chars] address [inet], resolved by [inet]

Explanation The Serial Line Address Resolution Protocol (SLARP) has resolved an IP address.

Recommended Action Notification message only. No action required.

Error Message

%LINK-3-UPDOWN: Interface [chars], changed state to [chars]

Explanation The interface hardware has gone either up or down.

Recommended Action If the state change was unexpected, check the configuration settings for the interface.

ChipCom Mailbox Error Messages

Error Message

%MAILBOX-3-BADDATA: Bad data in mailbox test, got [hex], expected [hex]

%MAILBOX-3-FLAGSTAT: Timeout while waiting for FLAGSTAT, status=[hex]

%MAILBOX-3-INITPC2: Timeout waiting for PC2 during initialization, status=[hex]

%MAILBOX-3-INTERR: Bad mailbox interrupt = [hex]

%MAILBOX-3-MAIL020: Timeout while waiting for MAIL020, status=[hex]

%MAILBOX-3-MAILFAIL: Mailbox failed to initialize

%MAILBOX-3-PC2: Timeout while waiting for PC2, status=[hex]

%MAILBOX-3-SPURINT: Spurious mailbox interrupt = [hex], MAIL020 not asserted

Explanation A hardware problem was detected in a ChipCom interface board.

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

MCI Error Messages

Error Message

%MCI-5-INPUTERR: Interface [chars] excessive input error rate

Explanation The input error rate was so high that the interface was temporarily disabled. The interface will be automatically reenabled in 30 seconds.

Recommended Action If this message recurs, check the communication lines.

Error Message

%MCI-4-NOCOKIE: MCI controller[dec] missing configuration data - disabled

Explanation The configuration PAL is missing.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%MCI-4-NOKEEPALIVE: Interface [chars] keepalive not sent

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

%MCI-5-OBSOLETE: Obsolete MCI firmware: can't route [chars] and bridge simultaneously

Explanation The firmware on your MCI controller card is out of date.

Recommended Action Upgrade your MCI firmware.

Error Message

%MCI-4-RSETFAIL: Interface [chars] failed to reset properly in[chars], code [hex]

Explanation A hardware device did not respond appropriately to a request. This generally indicates a hardware problem.

Recommended Action Call your technical support representative for assistance.

Error Message

%MCI-3-RXINDEX: Unit [dec], invalid RX index [dec]

Explanation The MCI did not answer a Multibus request. This generally indicates a hardware problem.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%MCI-3-SETUPERR: Unit [dec], Error ([hex]) on setup,  
index [hex],restarting controller - mci_interrupt()
```

Explanation A hardware device did not respond appropriately to a request. This generally indicates a hardware problem.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%MCI-4-TESTFAIL: Unit [dec] failed [chars] test,  
skipping
```

Explanation A hardware component failed an internal diagnostic test.

Recommended Action Call your technical support representative for assistance. You need to replace the malfunctioning component.

MK5025 Error Messages

Error Message

```
%MK5-3-BADENCAP: Unit [dec], bad encapsulation  
in idb->enctype = [hex]
```

```
%MK5-3-BADRING: Bad [chars] ring size
```

```
%MK5-3-BADUNIT: Bad unit number [dec]
```

Explanation An internal software error has occurred.

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

Error Message

%MK5-0-INITFAIL: Unit [dec], initialization timeout failure,csr[dec]=[hex]

%MK5-1-INITNOPPRIM: Unit [dec], initialization failure - No CSR1_PPRIM_INIT_CONF, csr1 = [hex]

%MK5-1-INITUERR: Unit [dec], initialization CSR1_UERR failure,csr1=[hex]

Explanation The hardware failed to initialize correctly.

Recommended Action Repair or replace the controller.

Error Message

%MK5-5-LINEFLAP: Unit [dec] excessive modem control changes

Explanation Too many modem control interrupts have been received. The port has been disabled to prevent excessive use of the CPU.

Recommended Action Check the cable on the serial port.

Error Message

%MK5-1-MEMERR: Unit [dec], memory error, csr0 = [hex]

Explanation A network serial interface detected a hardware problem.

Recommended Action Repair or replace the controller.

Error Message

`%MK5-0-NOMEMORY: Unit [dec], no memory for [chars]`

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

`%MK5-3-ODDSTART: Interface [chars], Odd datagram
start = [hex], pak =[hex]`

`%MK5-3-OUTENCAP: Unit [dec], bad output packet
encapsulation: [hex]`

Explanation An internal software error has occurred.

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

Error Message

`%MK5-3-OWNERR: Unit [dec], buffer ownership error`

Explanation An Ethernet interface is malfunctioning, or an internal software error has occurred.

Recommended Action Repair or replace the controller.

Error Message

%MK5-3-PLOSTERR: Unit [dec], provider primitive lost,csr0=[hex], csr1=[hex]

%MK5-3-PPRIMERR: Unit [dec], unexpected provider primitive, csr0=[hex], csr1=[hex]

%MK5-3-SPURPPRIMERR: Unit [dec], spurious provider primitive, csr0=[hex], csr1=[hex]

%MK5-3-UPRIMERR: Unit [dec], user primitive error, csr0=[hex], csr1=[hex]

Explanation A network serial interface detected a hardware problem.

Recommended Action Repair or replace the controller.

NIM Error Messages

Error Message

`%NIM-2-BADSLOT: Illegal reference to non-existent slot
[dec]`

`%NIM-2-BADSUBUNIT: Illegal reference to non-existent
subunit [dec] in slot [dec]`

`%NIM-2-DEADICHAINQ: Attempted to manipulate
uninitialized ichainQ in [chars]`

`%NIM-2-LOSTICHAINQ: Couldn't find idb [hex] in ichainQ
in [chars]`

`%NIM-2-NOHWADDRESS: All hardware addresses have been
allocated - maximum of [dec]`

Explanation An internal software error has occurred.

Recommended Action Call your technical support representative for assistance.

OIR Error Messages

Error Message

`%OIR-6-INSCARD: Card inserted in slot [dec],
interfaces administratively shut down`

Explanation The OIR facility has detected a newly inserted processor in slot [n]. The inserted interface will be shut down until it is configured by the user or, if an interface of that type was previously configured, it will be restored to its previous state.

Recommended Action Informational message only. No action required.

Error Message

```
%OIR-6-REMCARD: Card removed from slot [dec],  
interfaces disabled
```

Explanation The OIR facility has detected the removal of a processor from slot [n]. The interfaces on that processor will be administratively shut down and marked as removed. The routing table will be flushed of any routes through the removed interfaces.

Recommended Action Informational message only. No action required.

OSPF Error Messages

Error Message

```
%OSPF-4-BADLSATYPE: LOG_WARNING, MSG_PROCESS |  
MSG_TRACEBACK Invalid lsa type [dec] in LSA [dec],  
[dec] from [dec], OSPF_COMPLAIN-IVL
```

Explanation The router has received an LSA with invalid LSA Type. The cause is either memory corruption or unexpected behavior on a router.

Recommended Action From neighbor address, locate the problem router and reboot it. To determine what is causing this problem, call your technical support representative for assistance.

Error Message

```
%OSPF-3-NOBACKBONE: Flagged as being an ABR without a  
backbone
```

Explanation The router has been flagged as an Area Border Router (ABR) without backbone area in the router.

Recommended Action Restart the OSPF process.

OSPF Error Messages

Error Message

%OSPF-3-NOCONNDB: No database entry for connected address [int]

Explanation While calculating OSPF routes, the router could not find the Link State Advertisement that represents the connected route in the router.

Recommended Action Clear the ip routes in the routing table by entering the command **clear ip ro.**

Error Message

%OSPF-3-NOLSA: Failed to find this router LSA in [chars]

Explanation The router is not able to find its own Router Link State Advertisement. This can occur occasionally and self-correct. However, if this message recurs, restart the OSPF process.

Recommended Action Call your technical support representative for assistance.

Error Message

%OSPF-3-NOMEMORY: No memory for [chars]

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

%OSPF-6-NOSRCPDB: ex_route_callback(): Can't find the src protocol to redistribute net [inet] [inet]

Explanation OSPF has attempted to redistribute a route but could not find a valid source protocol.

Recommended Action No action is required.

X.25 PAD Error Messages

Error Message

%PAD-3-GETLINE: Tty[t-line], bad return code [dec]
fromx3_getline()

%PAD-2-INTR: [chars] called at interrupt level [hex]

%PAD-2-PUTSETUP: Tty[t-line], buffer already setup

Explanation An internal software error has occurred.

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

PPP Error Messages

Error Message

%PPP-4-CONFNAK: fsm_rconfnak([hex]) - possible
CONFNAK loop

Explanation The remote and local PPP cannot agree on a set of options that both can perform.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%PPP-6-LOOPED: The line appears to be looped back

Explanation The communications line appears to be echoing the characters that are sent to it.

Recommended Action Check your data communications equipment to make sure it is configured correctly.

Parser Error Messages

Error Message

%PARSER-3-BADSUBCMD: Unrecognized subcommand in
Function: [chars]
Command: `[chars]
Switch value: [dec]

%PARSER-3-CREATEINT: Can't create any more
subinterfaces

%PARSER-4-INVLDLINE: Invalid line in NV generation:
[chars]

%PARSER-4-LINKPOINT: Parser reached link_point

%PARSER-4-MULFUNCS: Unknown test in
test_multiple_funcs [char]

%PARSER-4-MULTIPLEIFS: interface_action: multiple ifs
present when unit_only set

%PARSER-3-NOLINK: no link_point [dec] in the [chars]
[chars] command chain

%PARSER-4-NUMHELP: general_number_short_help: Invalid
[chars] number flag

%PARSER-4-NVGEN: nvgen_token called but csb->nvgen not
set

%PARSER-4-PROTOADDR: protoaddr_action: Unknown
link_type [dec]

Explanation The parser has failed an internal software check.

Recommended Action Call your technical support representative for
assistance.

Error Message

`%PARSER-3-NOMEMORY: [chars]: no memory for [chars]`

Explanation A memory allocation failed, possibly because the router is out of memory, or because the parser is using more memory than it should.

Recommended Action If the router is running out of memory, reduce other system activity to ease memory demands. If the router has sufficient memory but the parser is low on memory, call your technical support representative for assistance.

Regular Expression Parser Error Message

Error Message

`%REGEXP-2-BADLIST: Regular expression access check
with
bad list [dec]`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

RIP Error Message

Error Message

%RIP-3-NOSOCKET: Unable to open socket

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

RSRB Error Messages

Error Message

%RSRB-4-BADLEN: Peer [chars], [chars], bad length [dec], trn [dec]

%RSRB-4-BADLENIP: Peer [dec]/[inet], [chars], bad length [dec],trn [dec]

Explanation An internal software error has occurred.

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

Error Message

```
RSRB-3-BADVERSIONFST: FST in: [chars]: version  
mismatch, mine [dec], theirs [dec]
```

```
%RSRB-3-BADVERSIONIF: IF in: [chars]: version  
mismatch,  
mine [dec], theirs [dec]
```

Explanation The remote end of a direct serial peer is running the wrong version of the system software. Either the local end, the remote end, or both are not up to date.

Recommended Action Call your technical support representative for an update.

Error Message

```
%RSRB-3-BADVERSIONTCP: [chars]: [dec]/[inet]: version  
mismatch, mine [dec], theirs [dec]
```

Explanation The remote end of a TCP remote peer is running the wrong version of the system software. Either the local end, the remote end, or both are not up to date.

Recommended Action Call your technical support representative for an update.

Error Message

%RSRB-4-BADVRE: Bad vre type

%RSRB-4-CONIPST: Peer [dec]/[inet], CONN, illegal
state
[dec]

%RSRB-4-CONNILLSTATE: Peer [dec]/[inet], CONN, illegal
state [dec]

%RSRB-4-CONNSTAT: Peer [dec]/[interface], IFin, bad
connection state [dec]

Explanation An internal software error has occurred.

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

Error Message

%RSRB-3-FSTERR: [char]: [char]: [inet], op [hex], len
[dec], trn [dec]

Explanation The remote end of a direct serial RSRB connection has detected a configuration problem or traffic that is not recognized by the configuration.

Recommended Action Examine the configuration on both sides of the serial connection for possible problems. Examine the traffic being offered for propagation with respect to the configuration. The destination target ring is denoted by the value of trn.

Error Message

%RSRB-3-HDRNOVRP: Peer [inet], HDR, no vrp

%RSRB-4-HDRRECV: Peer [dec]/[inet], HDR, recv state
invalid, not empty [dec]

%RSRB-3-HDRVRP: Peer [dec]/[inet], HDR, vrp state
wrong, [dec]

Explanation An internal software error has occurred.

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

Error Message

%RSRB-3-IFERR: [chars]: [chars]: [chars], op [hex],
len
[dec], trn [dec]

Explanation The remote end of a direct serial RSRB connection has
detected a configuration problem or traffic that is not recognized by the
configuration.

Recommended Action Examine the configuration on both sides of the
serial connection for possible problems. Examine the traffic being
offered for propagation with respect to the configuration. The destination
target ring is denoted by the value of trn.

Error Message

%RSRB-4-ILLPEER: Peer [chars] [[hex]], illegal state [dec]

%RSRB-4-LOCAL: Unit [dec], local/vring set simultaneously, vrn [dec]

Explanation An internal software error has occurred.

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

Error Message

%RSRB-3-NOMEMORY: Unit [dec], no memory for [chars]

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

%RSRB-3-NOTREM: Null idb and not remote

%RSRB-4-OPTNULL: Remopened and t NULL

%RSRB-4-PEERSTAT: Peer [chars], wrong state [dec]

Explanation An internal software error has occurred.

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

Error Message

%RSRB-3-SENDPUNTFST : [chars]: sent [chars] to
[dec]/[chars]

%RSRB-3-SENDPUNTIF: [chars]: sent [chars] to
[dec]/[chars]

Explanation The local end of a direct serial RSRB connection has detected a configuration problem or traffic that is not recognized by the configuration.

Recommended Action Examine the configuration on both sides of the serial connection for possible problems. Examine the traffic being offered for propagation with respect to the configuration.

SDLC Error Messages

Error Message

%SDLC-4-CTRLBAD: Interface [chars], Invalid control
field

Explanation A bad SDLC frame was received.

Recommended Action If this message recurs, check the SDLC serial line and the devices attached to it.

Error Message

%SDLC-4-DROPPED: Dropped X.25 packet from SDLC hold queue

Explanation An SDLC frame had to be dropped from the output hold queue, usually because of excessive congestion on the output link.

Recommended Action If this message occurs frequently, determine why your SDLC link is being overloaded with data and resolve the cause (typically by either increasing bandwidth to your SDLC line or reducing the load on your link).

Error Message

%SDLC-4-FRAMEERR: Interface [chars], Frame error: CF [hex], VS [dec] [char] VR [dec], Reason [hex]

Explanation A FRMR frame was received. This can be due to a noisy serial line, an overloaded SDLC device, or corrupted data.

Recommended Action If this message recurs, service the serial line and the devices attached to it.

Error Message

%SDLC-4-INFOBAD: Interface [chars], Info field not permitted

%SDLC-4-INVNR: Interface [chars], Invalid NR value

Explanation A bad SDLC frame was received.

Recommended Action If any of these messages recur, check the SDLC serial line and the devices attached to it.

Error Message

%SDLC-4-N1TOOBIG: Interface [chars], N1 too large

Explanation An information frame was received from the other end of the SDLC link that was larger than allowed with the N1 parameter on this link.

Recommended Action Either increase the value of the N1 parameter for this interface on the router or reduce the size of the maximum information frame sent by the other end of the link.

Error Message

%SDLC-2-NOBUF: Interface [chars], no buffer available to [chars]

Explanation Insufficient memory available.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%SDLC-4-NOFRMRSPACE: Cannot allocate a FRMR frame

Explanation The router needed to generate a FRMR frame but could not allocate the necessary memory for the frame.

Recommended Action The fact that memory is so low that it cannot allocate the frame is far more serious than the reason for generating the FRMR. Fix the cause of low memory, and if the problem still occurs, determine why the FRMR must be sent.

Error Message

`%SDLC-3-NOINPIDB: Input idb not set`

Explanation This is a software error. A frame was given to the SDLC handler to process, but the interface on which the frame arrived is not known.

Recommended Action Call your technical support representative for assistance.

Error Message

`%SDLC-3-NULLPAK: Interface [chars], NULL packet ptr, rvr [dec], vs [dec], vr [dec]`

Explanation An internal software error occurred in the router's SDLC processing system.

Recommended Action Call your technical support representative for assistance.

IP Security Error Messages

Error Message

`%SEC-3-NOMAX: No default for NLESO defined`

`%SEC-2-NOOPT: Box secured, no option on internal packet`

`%SEC-2-NOTSEC: First opt in tcb not BASIC security`

`%SEC-2-SECINS: Security opt in tcb not SECINSERT`

Explanation An internal software error has occurred.

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

IP Security Error Messages

Error Message

%SEC-4-TOOMANY: Box secured, too many options on internal packet

Explanation No room for all desired IP header options. Packet discarded.

Recommended Action Configure for fewer IP header options.

SLIP Error Messages

Error Message

%SLIP-2-BADQUOTE: Impossible quoted character [hex]

%SLIP-2-BADSTATE: Impossible input state [hex]

Explanation An internal software error has occurred.

Recommended Action If either of these messages recurs, call your technical support representative for assistance.

SNMP Error Messages

Error Message

`%SNMP-4-NOTRAPIP: SNMP trap source [chars] has no ip address`

Explanation The user has entered an **snmp-server trap-source** command. The interface requested for use as the source address has no address associated with it. The SNMP trap is being sent anyway, but without the source address that the user intended.

Recommended Action There are two possible solutions. Either enter a **no snmp-server trap-source** command to disable the request for a specific source IP address, or add an IP address to the interface referenced in the **snmp-server trap-source** configuration command.

Error Message

`%SNMP-3-SOCKET: can't open UDP socket`

Explanation The SNMP server was unable to open a port for receiving SNMP requests. This usually happens when the SNMP server is started using the **snmp-server community** configuration command on a router or communication server with an interface that has no IP address configured. Another possible cause is low memory.

Recommended Action Configure at least one interface with an IP address or specify the **no snmp-server** command to remove the SNMP server process. Call your technical support representative if problems persist or if it becomes necessary to add memory.

SSE Error Messages

Error Message

%SSE-3-BADMEMORY: SSE memory failure detected

Explanation A memory error has occurred.

Recommended Action Call your technical support representative for assistance.

Error Message

%SSE-2-HUNG: SSE hung -- [chars]

Explanation The SSE is hung.

Recommended Action Reboot the SSE.

Error Message

%SSE-3-NOMEMORY: No memory available for [chars]

Explanation An operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

STANDBY Error Messages

Error Message

```
%STANDBY-3-BDAUTH: Bad authentication from [inet],  
remote state [chars]
```

Explanation Two routers participating in the Hot Standby protocol disagree on the valid authentication string.

Recommended Action Use the **standby authentication** interface command to repair the Hot Standby protocol authentication discrepancy between the local system and the one whose IP address is reported.

Error Message

```
%STANDBY-3-NOBUFFER: No buffer available for sending  
HELLO
```

Explanation The Hot Standby protocol software was unable to allocate a packet buffer. The system may be out of memory.

Recommended Action Record the output from the following commands: **show proc mem** (repeated twice), **show mem**, **show buffers**, **show version**, **write terminal**. Provide this information to your technical support representative.

Error Message

`%STANDBY-3-NOMEMORY: No memory available for [chars]`

Explanation The system was unable to initialize the Hot Standby protocol on an interface. The system may be out of memory.

Recommended Action Record the output from the following commands: **show proc mem** (repeated twice), **show mem**, **show version**, **write terminal**. Provide this information to your technical support representative.

Error Message

`%STANDBY-3-NOSOCKET: Unable to open socket`

Explanation The system was unable to initialize an IP connection for the Hot Standby protocol.

Recommended Action Make sure that there is at least one interface configured to run IP.

STUN Error Messages

Error Message

%STUN-3-BADCONN: CONN: bad connection ([dec]), peer: [chars]

%STUN-3-BADLENOP: [chars]: bad len or unknown op, op [dec], len [dec]

%STUN-3-BADMAGIC: [chars]: wrong magic, mine [hex], theirs [hex] ([dec])

%STUN-3-BADMAGICTCP: [chars]: peer [chars], wrong magic, min [hex], theirs [hex]

%STUN-3-BADPASSIVEOPEN: passive open from [inet] ([dec]) -> [dec] failed

%STUN-3-CONNILLSTATE: CONN: Peer [chars], illegal state [dec]

Explanation An internal software error has occurred.

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

Error Message

%STUN-6-CONNOPENFAIL: CONN: peer [chars] open failed, [chars] [[dec]]

Explanation An attempt to connect to a remote TCP STUN peer has failed.

Recommended Action Verify that the remote peer is accessible from this router, that it is running software capable of supporting STUN, and that it is configured correctly.

Error Message

```
%STUN-6-ERR: [chars]: [chars]: [chars], op [hex], len  
[dec]
```

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

```
%STUN-3-NOPROTMEM: No memory for STUN protocol  
definition of [chars]
```

Explanation The system does not have sufficient memory to define a new STUN schema.

Recommended Action This error message should only print when the router is critically short of memory. Call your technical support representative for assistance.

Error Message

```
%STUN-6-OPENED: [chars]: peer [chars] opened,  
[previous state [chars]]
```

```
%STUN-6-OPENING: CONN: opening peer [chars], [dec]
```

```
%STUN-6-PASSIVEOPEN: passive open [inet]([dec]) ->  
[dec]
```

Explanation A connection attempt to a remote peer has completed successfully (OPENED, PASSIVE-OPEN) or is in the process of being opened (OPENING). This is good, expected behavior.

Recommended Action Informational message only. No action required.

Error Message

%STUN-6-PEERSHUTDOWN: shutting down peer [chars] on [chars]

Explanation A connection to a remote peer is being shut down. This is typically the result of user intervention in STUN reconfiguration or disabling. This is good, expected behavior.

Recommended Action Informational message only. No action required.

Error Message

%STUN-4-PEERSTATE: Peer [chars], wrong state [dec] ([dec])

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%STUN-6-RECONNECT: PHDR: reconnect from peer [chars]

Explanation A remote peer has reestablished a connection to this router.

Recommended Action Informational message only. No action required.

Error Message

```
%STUN-3-SENDPUNT: [chars]: sent [chars] to [chars]
```

```
%STUN-3-SENDPUNTTCP: [chars]: sent [chars] to  
([[dec]])[inet]
```

Explanation An internal software error has occurred.

Recommended Action If either of these messages recurs, call your technical support representative for assistance.

Error Message

```
%STUN-6-TCPFINI: peer [chars] closed [previous state  
[chars]]
```

Explanation A remote peer has closed a STUN connection with this router.

Recommended Action Examine the other router to see why it closed this connection with this peer. (This can be caused by normal events, such as reconfiguration.)

Error Message

```
%STUN-6-TCPPEERSHUT: [chars] [chars], [inet]([dec])
```

Explanation This route has closed a STUN connection with a remote peer.

Recommended Action Examine this router to see why it closed this connection with this peer. (This can be caused by normal events, such as reconfiguration.)

Subsystem Error Messages

Error Message

%SUBSYS-2-BADCLASS: Bad subsystem class [dec] - ignoring subsystem

Explanation A software consistency check failed.

Recommended Action Call your technical support representative for assistance.

Error Message

%SUBSYS-2-BADVERSION: Bad subsystem version number [dec] - ignoring subsystem

Explanation A software consistency check failed.

Recommended Action Call your technical support representative for assistance.

Error Message

%SUBSYS-2-MISMATCH: Kernel and subsystem version differ [dec.dec]

Explanation A software consistency check failed.

Recommended Action Call your technical support representative for assistance.

Error Message

`%SUBSYS-2-NOTFOUND: Subsystem [chars] needs subsystem [chars] to start`

Explanation A software consistency check failed.

Recommended Action Call your technical support representative for assistance.

Operating System Error Messages

Error Message

`%SYS-2-ALREADYFREE: Buffer [hex] already in free pool [chars]`

`%SYS-3-BADBLOCK: Bad block pointer [hex]`

`%SYS-3-BADDISP: Bad dispose code [hex] in [chars]`

`%SYS-3-BADFREEMAGIC: Corrupt free block at [hex] (magic [hex])`

Explanation A block of memory is corrupt at the location indicated.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

`%SYS-3-BADMAGIC: Corrupt block at [hex] (magic [hex])`

Explanation The free memory pool is corrupted.

Recommended Action Call your technical support representative for assistance.

Error Message

%SYS-2-BADPID: Bad pid [dec] for tty [t-line]

%SYS-2-BADPOOL: Attempt to return buffer with corrupt pool pointer, ptr= [hex], pool= [hex]

%SYS-2-BADPOOLMAGIC: Attempt to use pool pointer with corrupt header, pool= [hex]

%SYS-2-BADSHARE: Bad sharecount in [chars], ptr=[hex],count=[hex]

%SYS-2-BADSTACK: Process [chars] has trashed stack, old size [dec]

%SYS-6-BLKINFO: [chars]blk [hex], words [dec], alloc [hex][chars] RZ offset [dec], dealloc [hex], rfcnt [hex]

%SYS-2-CFORKLEV: cfork at level [dec]

Explanation An internal software error has occurred.

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

Error Message

%SYS-5-CONFIG: Configured from [chars] by [chars]

%SYS-5-CONFIG_I: Configured from [chars] by [inet]

%SYS-5-CONFIG_L: Configured via LNM from [enet]

%SYS-5-CONFIG_M: Configured via MOP from [chars] by [enet]

Explanation The router's configuration has been changed.

Recommended Action Notification messages only. No action required.

Error Message

`%SYS-5-CONFIG_NV: Non-volatile store configured from [chars] by [chars]`

`%SYS-5-CONFIG_NV_M: Non-volatile store configured via MOP from [chars] by [enet]`

Explanation The configuration was written successfully through the MOP protocol.

Recommended Action No action required.

Error Message

`%SYS-3-CONFIG_NV_ERR: Non-volatile store write error - configuration failed`

Explanation The write of the nonvolatile configuration failed.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message

`%SYS-2-DUPEXPORT: Duplicate export vector [chars] registration attempt`

Explanation An internal software error occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message

%SYS-2-FREEBAD: Attempted to free memory at [hex], not part of buffer pool

%SYS-2-FREEFREE: Attempted to free unassigned memory at [hex], alloc [hex] dealloc [hex]

%SYS-2-GETBUF: Bad getbuffer, bytes= [dec]

%SYS-3-HARIKARI: Process [chars] top-level routine exited

%SYS-2-HEADER: Attempt to return buffer with invalid buffer header, ptr= [hex]

Explanation An internal software error has occurred.

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

Error Message

%SYS-2-INLIST: Buffer in list, ptr= [hex]

%SYS-2-INLIST1: Buffer in list, ptr= [hex], caller= [hex]

%SYS-2-INPUTQ: INPUTQ set, but no idb, ptr=[hex]

%SYS-2-INSCHED: [chars] within scheduler

%SYS-2-INTSCHED: [chars] at level [dec]

%SYS-3-INUSEFREE: Block [hex] on free list [dec] in use

Explanation An internal software error has occurred.

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

Error Message

%SYS-3-INVMEMINT: Invalid memory action ([chars]) at interrupt level

Explanation This message indicates that a memory allocation or deallocation was attempted from an interrupt handler.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%SYS-2-LINKED: Bad enqueue of [hex] in queue [hex]

%SYS-2-LINKED: Bad p_dequeue of [hex] in queue [hex]

%SYS-2-LINKED: Bad p_requeue of [hex] in queue [hex]

%SYS-2-LINKED: Bad requeue of [hex] in queue [hex]

%SYS-2-LOWMEM: Low memory debug exception (limit = [dec] free = [dec])

Explanation The router is running short on memory.

Recommended Action It may be necessary to free some memory by exiting a program. If this message recurs, call your technical support representative for assistance.

Error Message

%SYS-2-NOBLOCK: [chars] with blocking disabled

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

```
%SYS-6-MTRACE: [chars]: addr, pc [hex], [hex] [hex],  
[hex] [hex], [hex] [hex], [hex] [hex], [hex] [hex],  
[hex] [hex], [hex] [hex], [hex]
```

Explanation The free memory pool is corrupted.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message

```
%SYS-6-NOBRIDGE: Bridging software not present
```

Explanation Your system is not equipped to be a bridge.

Recommended Action Install the bridging software option.

Error Message

```
%SYS-1-NOECO: WARNING: This 500-CS cannot run this  
version of software. Please contact Customer Service  
for upgrade information. tele: 1 (800) 553-NETS 1 (415)  
903-7208 email: cs-rep@cisco.com Hardware burned in  
address is %e
```

Explanation An Error Change Order (ECO) is needed.

Recommended Action Call your technical support representative for assistance.

Error Message

%SYS-2-NOMEMFRG: Memory fragmentation check debug exception (fragment size [dec])

Explanation The system detected an error checking memory fragmentation.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%SYS-2-NOMEMORY: No memory available for [chars] [dec]

Explanation An operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

%SYS-3-NOPROC: Process table full

%SYS-2-NOTDEAD: Re-killing process [chars], pid [dec]

%SYS-2-NOTQ: p_unqueue didn't find [hex] in queue [hex]

%SYS-2-NOTQ: unqueue didn't find [hex] in queue [hex]

%SYS-3-NULLIDB: Null idb in [chars]

Explanation An internal software error has occurred.

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

Error Message

`%SYS-2-NOPROCESS: No such process [dec]`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message

`%SYS-3-NZREFCNT: Block [hex] on free list [dec] with ref count [dec]`

Explanation A block of memory in the free pool is actually in use. The number of processes using the memory block is indicated.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

`%SYS-5-OUTSETUP: Configuration file [chars] accepted, aborting setup`

Explanation A configuration was accepted through the network, so the setup session will be aborted.

Recommended Action No action required.

Error Message

`%SYS-3-OVERRUN: Block overrun at [hex] (redzone [hex])`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, contact your technical support representative for assistance.

Error Message

`%SYS-1-OVERTEMP: System detected OVER TEMPERATURE condition.
Please resolve cooling problem immediately!`

Explanation The environmental monitor has detected a high temperature condition.

Recommended Action Make sure room temperature is not too high and that air flow to the card is not blocked. If this condition persists, the environmental monitor may shut the system down. Call your technical support representative for assistance, if necessary.

Error Message

`%SYS-2-QCOUNT: Bad dequeue [hex] count [dec]`

`%SYS-2-QCOUNT: Bad p_dequeue [hex] count [dec]`

`%SYS-2-QCOUNT: Bad p_unqueue [hex] count [dec]`

`%SYS-2-QCOUNT: Bad unqueue [hex] count [dec]`

`%SYS-2-QINSERT: Unable to add [chars] to queue - no elements`

`%SYS-4-REGEXP: [chars]`

Explanation An internal software error has occurred.

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

Error Message

%SYS-3-REGARG: Registry service [chars] has too many arguments

Explanation An internal software consistency check failed.

Recommended Action Call your technical support representative for assistance.

Error Message

%SYS-3-REGCREA2: Attempt to create registry service [chars] twice

Explanation An internal software consistency check failed.

Recommended Action Call your technical support representative for assistance.

Error Message

%SYS-3-REGNONE: Registry [dec] service [dec] doesn't exist - [chars]

Explanation An internal software consistency check failed.

Recommended Action Call your technical support representative for assistance.

Error Message

%SYS-5-RELOAD: Reload requested

%SYS-5-RESTART: System restarted -- [chars]

Explanation A reload or restart has been requested.

Recommended Action Notification messages only. No action required.

Error Message

%SYS-3-REGDFLT: Attempt to add default twice to registry service

Explanation An internal software consistency check failed.

Recommended Action Call your technical support representative for assistance.

Error Message

%SYS-3-REGTYPE: Registry service [chars] is wrong type, should be [dec]

Explanation An internal software consistency check failed.

Recommended Action Call your technical support representative for assistance.

Error Message

%SYS-2-RETBUF: Bad retbuffer, ptr= [hex]

%SYS-2-RETBUF1: Bad retbuffer, ptr= [hex],
caller= [hex]

%SYS-2-SELF: s_setblock() on own process

%SYS-2-SELFLINKED: Buffer [hex] linked to itself in
free pool [chars]

%SYS-2-SHARED: Attempt to return buffer with
sharecount
[dec],ptr= [hex]

%SYS-2-SHARED1: Attempt to return buffer with
sharecount [dec], ptr= [hex], caller= [hex]

%SYS-3-SOCKUNKN: Unknown socket protocol [dec]

%SYS-2-SPEC: Trying to set unknown special character
[dec] to [dec]

%SYS-6-STACKLOW: Stack for [chars] [chars] running
low, [dec]/[dec]

Explanation An internal software error has occurred.

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

Error Message

%SYS-2-SUPNOT: Can't create Registry [chars]

Explanation An internal software consistency check failed.

Recommended Action Call your technical support representative for
assistance.

Error Message

%SYS-5-TABLEERR: [chars] table [chars] damaged:
[chars]

Explanation An internal table entry has become corrupted.

Recommended Action Call your technical support representative for assistance.

Error Message

%SYS-3-TTYMEM: Tty[t-line], no memory to save tty
default parameters

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

%SYS-3-WRONGFREELIST: Block [hex], size [dec], on
wrong free list ([dec], [dec])

Explanation A freed buffer has been placed on the wrong list of free buffers.

Recommended Action If this message recurs, call your technical support representative for assistance.

TACACS Error Messages

Error Message

`%TAC-6-SENDTMO: Send type [dec] to [inet] timed out`

Explanation A background TACACS notification (enabled with the command **tacacs notify**) was not acknowledged by the TACACS server processor within the timeout period (5 minutes). The information contained in that notification has been lost. This may interfere with accounting or auditing on the server.

This condition arises when the TACACS server is misconfigured, has crashed, or has become unreachable via the network.

Recommended Action Check the TACACS server and the network attached to it.

Error Message

`%TAC-4-UNEXREP: Reply for non-existent request, [dec] on queue`

Explanation The TACACS facility received a message it was not expecting. This may occur when a TACACS server sends duplicate responses or when it responds to a request that has already timed out. It also may be due to an internal software problem.

Recommended Action If this message recurs, call your technical support representative for assistance.

TCP Error Messages

Error Message

`%TCP-2-BUFFER: Tty[t-line], buffering bug`

`%TCP-2-PUTBYTE: Tty[t-line], tcp_putbyte() with
blocking disabled`

Explanation An internal software error has occurred.

Recommended Action If either of these messages recurs, call your technical support representative for assistance.

Inbound Terminal Port Queuing Error Messages

Error Message

`%TMQ-3-NOTFOUND: TMQ, Attempt to delete entry not in
queue`

Explanation An attempt was made to delete an entry not in the queue.

Recommended Action Advisory message only. No action required.

Telnet Error Messages

Error Message

`%TN-2-BADLOGIN: Bad login string pointer [hex]`

`%TN-3-BADSTATE: Illegal state [dec]`

`%TN-3-READLINE: Unknown return code [dec] from
telnet_readline()`

Explanation An internal software error has occurred.

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

Token Ring Error Messages

Error Message

`%TR-3-ASYNCUSE: Unit [dec], [chars], async in use`

Explanation Another internal process is communicating with the given Token Ring interface.

Recommended Action Wait 1 minute and try again. If the condition persists, it probably indicates an internal software error. Call your technical support representative for assistance.

Error Message

```
%TR-4-BADADAPT: Unit [dec], adapter not responding  
[hex] [hex][hex] [hex]
```

Explanation The CSC-R Token Ring interface is not responding to initialization.

Recommended Action Check the CSC-R Token Ring card's configuration and make sure it is in the correct slot. The CSC-R card is a Multibus master; it must be part of a contiguous group of bus master cards that includes the CPU. In most configurations the CSC-R Token Ring interface will be the card immediately adjacent to the CPU. If the interface is in the correct slot, this message indicates a probable hardware failure. Call your technical support representative for assistance.

Error Message

```
%TR-3-BADBRDGPARGS: Unit [dec], bad bridge parameters:  
bridge_num=[dec], max_rd= [dec]\nthisring=[dec],  
targetring=[dec]
```

```
%TR-3-BADBUFFSIZE: Unit [dec], bad buffersize = [dec]
```

```
%TR-3-BADFIRM: Unit [dec], Tokenring firmware download  
failed\n got [hex], expected [hex], at address  
[hex].[hex]
```

```
%TR-3-BADFIRMTYPE: Unit [dec], bad firmware type code  
during [chars]. type=[hex], fw=[hex]
```

```
%TR-3-BADFUNC: Unit [dec], bad functional  
address=[hex], ring mode=[hex]
```

Explanation An internal software error has occurred.

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

Error Message

```
%TR-3-BADHEADER: RX - Unit [dec]: type [dec], size [hex], use [hex] flags [hex]
```

Explanation The system has detected corrupted data from the Token Ring interface card (CSC2R/1R and CSC-R16M only). There may be a hardware problem.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%TR-3-BADMUL: Unit [dec], Can't set TR address to hardware multicast address [enet]
```

Explanation An attempt was made to set the Token Ring interface MAC address to a reserved multicast address.

Recommended Action Check your configuration. Make sure that your XNS and/or Novell Token Ring addresses have not inadvertently been set to reserved multicast addresses.

Error Message

```
%TR-3-BADRNGNUM: Unit [dec], ring number ([dec]) doesn't match established number ([dec])
```

Explanation The number you have configured for the local ring does not match the value currently in use on the ring.

Recommended Action Check the configuration to make sure you used the correct ring number. If it is correct, check the configuration of all other bridges on the ring to make sure they are using the same ring number.

Error Message

`%TR-3-BADSLOT: Unit [dec], Slot [dec] does not exist.`

Explanation This error message pertains only to the Cisco 4000. It is seen when software tries to access (discover) a network interface module (NIM) that is not in slot 1, 2, or 3. The software stalls trying to access the nonexistent slot. This message could indicate a card error.

Recommended Action If this message recurs, call your technical support representative for assistance or a replacement card.

Error Message

`%TR-3-BADSTART: Unit [dec], Start completion and wrong idb state -state= [dec]`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

`%TR-3-BADUNIT: Bad unit number [dec]`

Explanation This error message pertains only to the IGS. When displayed, it indicates that the system cannot find the chipset registers where it expects them to be. This is most likely a hardware error.

Recommended Action If this message recurs, call your technical support representative for assistance. It will be necessary to check the hardware unit configuration.

Error Message

%TR-4-BKGND: Unit [dec], bkgnd int: last packet out
[dec]ms

%TR-4-BKGNDINT: Unit [dec], bkgnd int: [hex][hex]
[hex][hex][hex][hex] [hex][hex]

Explanation An internal software error has occurred.

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

Error Message

%TR-3-BOGUSDATA: [hex] [hex] [hex] [hex] [hex] [hex]
[hex] [hex]

Explanation This message displays the first eight bytes of frame data if the data length is invalid. It is the second part of the %TR-3-BOGUSLENGTH error message that follows.

Recommended Action See recommended action for the %TR-3-BOGUSLENGTH error message.

Error Message

%TR-3-BOGUSLENGTH: Unit [dec], bad input length [dec],
[chars] code.

Explanation This is the first message displayed when the frame data length is invalid. It is unique to the CSC-R16 Token Ring card for all system versions.

Recommended Action Display of both the %TR-3-BOGUSLENGTH and %TR-3-BOGUSDATA error messages indicates a serious problem on the interface between the Token Ring chipset, the SBE16 card, and the system driver. The engineering developers should be notified. Call your technical support representative for assistance.

Error Message

```
%TR-3-COMPFAIL: Unit [dec], Tbuf completion failure,  
result [hex]
```

```
%TR-3-FILTFAIL: Unit [dec], SRB filter set failed:  
[hex] [hex][hex] [hex] (blk 0x[hex]) downing
```

```
%TR-3-GETCONF: Unit [dec], get_config failed, result  
[hex] [hex]
```

Explanation An internal software error has occurred.

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

Error Message

```
%TR-3-INCOM: Unit [dec], incompatible firmware: system  
[hex], interface [hex]
```

Explanation The Token Ring interface contains firmware that is incompatible with the system software.

Recommended Action Call your technical support representative to upgrade the Token Ring Monitor firmware, the system software, or both.

Error Message

```
%TR-3-INITFAIL: Unit [dec], init failed. result  
code=[hex], error code=[hex]
```

Explanation The Token Ring hardware has failed to initialize properly.

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

Error Message

```
%TR-4-INTFAIL: Unit [dec] interface failure: [hex]  
[hex] [hex],idb state [dec]
```

Explanation The Token Ring Monitor firmware has detected a fatal error due either to an internal software problem or to a hardware failure.

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

Error Message

```
%TR-3-MADGETX: Unit [dec], lost packet using Transmit  
Descriptor.
```

Explanation This error message pertains only to the Cisco 4000. When displayed, it indicates that a packet was lost inside the Madge firmware, and the software lost the pointer to it.

Recommended Action This message indicates a software problem on the card. If this message recurs, call your technical support representative for assistance or a replacement card.

Error Message

```
%TR-3-MODEFAIL: Unit [dec], change mode failed. result  
code=[hex], error code=[hex]
```

```
%TR-3-MODFAIL: Unit [dec], tra_modify failed, result  
[hex] [hex]
```

```
%TR-3-NOFIRM: Unit [dec], no TMS380 firmware present.  
eagle=[hex], magic=[hex]
```

Explanation An internal hardware or software error has occurred.

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

Token Ring Error Messages

Error Message

%TR-3-NOMEMORY: Unit [dec], no memory for [chars]

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

Error Message

%TR-4-NOMOREPAGES: Unit [dec], Out of Pages for [chars].

Explanation This error message pertains only to the Cisco 4000. When displayed, it indicates that the ability to switch the receive buffers for the Token Ring has been halted due to an insufficient amount of memory.

Recommended Action Reduce other system activity to ease memory demands and then reset the Token Ring interface by entering a **clear interface tokenring** command. If these actions do not solve the problem, upgrade to a larger memory configuration or call your technical support representative for assistance.

Error Message

%TR-3-NOPAK: Unit [dec], Tbuf completion and no pakout

Explanation An internal hardware or software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

%TR-3-OLDTRIF: Obsolete firmware in multibus TR unit
[dec] - does not support fast switching

Explanation A firmware upgrade is needed.

Recommended Action Call your technical support representative for assistance.

Error Message

%TR-3-OPENFAIL: Unit [dec], open failed: check the lobe
cable DB-9 connection

Explanation The Token Ring interface was unable to insert itself into the ring. This is an indication of a busy or broken ring. The first character string in this error message indicates the stage of initialization at which the error occurred, and the second describes the error.

Recommended Action Try to open the interface again. This generally can be accomplished by issuing the **clear interface tokenring** command. If the error message recurs, call your technical support representative for assistance.

Error Message

%TR-3-OPENFAIL2: Unit [dec], open failed: check the
lobe cable connection.

Explanation The Token Ring interface was unable to insert itself into the ring, and the error code returned indicates a wiring problem.

Recommended Action Check the cable connecting the router to the Token Ring MAU, and try to open the interface again. This generally can be accomplished by issuing the **clear interface tokenring** command. If the error message recurs, call your technical support representative for assistance.

Token Ring Error Messages

Error Message

`%TR-3-PANIC: Unit [dec], panic [hex] [hex] [hex]`

Explanation The Token Ring monitor firmware has detected a fatal error that indicates an impending interface failure.

Recommended Action Copy the error message and the interface message exactly as they appear and then report them to your technical support representative.

Error Message

`%TR-3-PANICINF: Unit [dec], PI [hex] [hex] [hex]
[hex][hex] [hex]`

Explanation This message is similar to the `%TR-3-PANIC` error message, but indicates a nonfatal error. This message appears in very unusual situations that should not arise in normal operation.

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

Error Message

`%TR-3-PANICTYPE: Unit [dec], [chars] error`

Explanation This message is similar to the `%TR-3-PANIC` error message, but indicates a nonfatal error. This message appears in very unusual situations that should not arise in normal operation.

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

Error Message

`%TR-3-RESETFAIL: Unit [dec], reset failed, error code [hex]`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

`%TR-3-RESETFAIL2: Unit [dec], reset failed, auxiliary processor init failed`

Explanation This message isolates a particular RESETFAIL condition from several other reset failure conditions. It is unique to the CSC-R16 Token Ring card for all system versions and indicates a state problem.

Recommended Action Call your technical support representative for assistance.

Error Message

`%TR-3-RIFBADMAGIC: Invalid magic number ([hex]) in RIF [chars] table entry [hex]`

`%TR-3-RIFTBLTRASH: Trashed [chars] RIF table entry [hex] found and zeroed`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

```
%TR-3-SETBRIDGEFAIL: Unit [dec], set bridge failed  
(code %#x)
```

Explanation A hardware error has occurred. The source routing accelerator (SRA) chip on the Token Ring card could not be initialized.

Recommended Action Call your technical support representative for assistance or a replacement card.

Error Message

```
%TR-3-SETFAIL: Unit [dec], couldn't set interface to  
physical address [enet]
```

Explanation An illegal MAC address was specified for this interface.

Recommended Action Normally the Token Ring interface uses the burned-in address contained in a PROM on the board. However, certain protocol stacks require the MAC address to be modified to an illegal value. Check your configuration for possible problems. If this message recurs, call your technical support representative.

Error Message

%TR-3-SETFUNFAIL: Unit [dec], set functional address failed (code [hex])

%TR-3-SETGRPFALL: Unit [dec], set group address failed (code [hex])

%TR-3-SETOPTFAIL: Unit [dec], set open options failed (code [hex])

%TR-3-SMTSTATFAIL: Unit [dec], get_smt: get smt stats failed - result [hex]

Explanation An internal software error has occurred.

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

Error Message

%TR-4-SNKBRIDG: Unit [dec], removing invalid bridge

Explanation The system could not start a Token Ring source-route bridge because the interface in question does not have the appropriate Token Ring Monitor firmware or hardware.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%TR-3-STARTFAILED: Unit [dec], start failed, result  
[hex],reason [hex]
```

Explanation The Token Ring Monitor firmware attempted to insert the system into the ring, and the chipset detected a nonstandard fatal error.

Recommended Action This message indicates a problem with the Token Ring chipset hardware. Call your technical support representative for assistance.

Error Message

```
%TR-3-STARTFAILED2: Unit [dec], start failed,  
auxiliary processor init failed.
```

Explanation This error message isolates a particular STARTFAIL condition from several other reset failure conditions. It is unique to the CSC-R16 Token Ring card for all system versions and indicates a state problem.

Recommended Action Call your technical support representative for assistance.

Error Message

```
%TR-6-STATE: TR[dec]: Ring Status: [chars]
```

Explanation This message is displayed when the Token Ring's status has changed as determined by the chipset. This information also is used to automatically determine whether the interface is still usable to propagate network traffic.

Recommended Action Informational message only. No action required.

Error Message

```
%TR-3-STATFAIL: Unit [dec], get_static: get stats  
failed - Async: [hex] [hex] [hex] [hex]
```

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

```
%TR-6-STATRING: TR[dec]: Ring Status: [chars] [chars]  
([hex]) LIV [hex]
```

Explanation This message is displayed when the Token Ring's status has changed as determined by the chipset. This information also is used to automatically determine whether the interface is still usable to propagate network traffic. The meaning of each status code is shown in Table 4.

Recommended Action Check the Ring for the indicated condition.

Table 4 Token Ring Status Codes

Code	Explanation	Fatal
0x8000	Signal loss	Yes
0x4000	Hard error	Yes
0x2000	Soft error	No
0x1000	Transmit beacon	Yes
0x0800	Lobe wire fault	Yes
0x0400	Auto removal error	Yes
0x0100	Receive request removed	Yes
0x0080	Counter overflow	No
0x0040	Single station	No
0x0020	Ring recovery	No

Error Message

```
%TR-3-TRACMD: tra_cmd: unit [dec] bad state: cmd [hex]
[hex],result [hex] [hex] (blk [hex], iob
[hex])
```

```
%TR-4-UNKNOWNCOMP: Unit [dec], Unknown command
completion:cmd [hex], rslt [hex]
```

```
%TR-3-UNKNOWNNT2M: Unit [dec], Unknown t2m command
[hex] [hex]
```

Explanation An internal software error has occurred.

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

Error Message

`%TR-3-WIREFAULT: Unit [dec], wire fault: check the lobe cable MAU connection`

Explanation The Token Ring hardware is reporting a wire fault condition.

Recommended Action Check the cable connecting the router to the Token Ring MAU.

Tunnel Error Messages

Error Message

`%TUN-4-BADOUTMODE: Interface [chars] unsupported output mode [dec] [chars]`

Explanation The tunnel interface was set to an encapsulation mode that is not supported.

Recommended Action Report the problem to your technical support representative and correct your configuration.

Error Message

`%TUN-4-RECURDOWN: [chars] temporarily disabled due to recursive routing`

Explanation When routing the same payload protocol over a carrier protocol (tunneling IP over IP, for example), it is possible to misconfigure your network so that you will try to route to the tunnel destination address via the tunnel. This is usually caused by a misconfiguration of the tunnel or a temporary instability due to route flapping elsewhere in your network. It is important to take steps to ensure that routing information between the carrier networks and the payload networks is not allowed to mix. If the router discovers a recursive routing problem, it will temporarily shut down the tunnel interface for a few minutes so that the

Tunnel Error Messages

situation that is causing this problem can resolve itself as routing protocols converge. If the problem is caused by misconfiguration, the link may oscillate indefinitely.

Recommended Action No action required.

Error Message

`%TUN-4-RECURSHUT: [chars] administratively disabled
due to recursive routing`

Explanation If the recursive routing situation reported by the RECURDOWN message is not cleared up after ten bounces, the tunnel interface will be administratively shut down to avoid further flapping.

Recommended Action Determine the cause of the recursive routing situation, correct it, and then manually bring the interface back up using the **no shutdown** command.

Microcode Error Messages

Error Message

`%UCODE-3-BADCHKSUM: Bad checksum in [chars], found
[hex] expected [hex]`

Explanation The microcode file is corrupted in some way; the checksum computed after reading the file from Flash does not match the one in the file. The file will not be downloaded, and the onboard ROM microcode will be used instead.

Recommended Action Reload the microcode. If the message recurs, call your technical support representative for assistance.

Error Message

`%UCODE-3-HDRCORRUPT: Ucode header corrupted in [chars], found [hex] expected [hex]`

Explanation The microcode file is corrupted in some way; the checksum computed after reading the file from Flash does not match the one in the file. The file will not be downloaded, and the onboard ROM microcode will be used instead.

Recommended Action Reload the microcode. If the message recurs, call your technical support representative for assistance.

Error Message

`%UCODE-3-LDFAIL: Unable to download ucode [chars] in slot [dec], installed ucode loaded`

Explanation For some reason, the microcode file specified by the configuration is not suitable for downloading, or another error has occurred. The onboard ROM microcode will be loaded so the interface can remain operational.

Recommended Action Attempt to reload the microcode. If the message recurs, call your technical support representative for assistance.

Error Message

`%UCODE-3-NOFILE: Ucode file [chars] not found, installed ucode loaded in slot [dec]`

Explanation The file specified by the configuration was not found in Flash. The onboard ROM microcode will be loaded so the interface can remain operational.

Recommended Action Use **show flash** to determine if the file is located in Flash. If the file is there, attempt to reload the microcode. If the message recurs, call your technical support representative for assistance.

Microcode Error Messages

Error Message

%UCODE-3-OLDHARD: Ucode file [chars] requires [chars] version [dec].[dec] hardware or later

Explanation The microcode specified requires a more recent version of the hardware than it found. The onboard ROM microcode will be loaded instead.

Recommended Action Call your technical support representative for assistance.

Error Message

%UCODE-3-RDFAIL: Unable to read ucode file [chars] from flash

Explanation For some reason, the microcode file was not read from Flash. Flash might be locked by another process or otherwise unavailable.

Recommended Action Use the **show flash** command to determine whether Flash is in use and issue another **microcode reload** when Flash is free. If the message recurs, call your technical support representative for assistance.

Error Message

%UCODE-3-TOOBIG: File [chars] at length [dec] is too long for buffer size [dec]

Explanation The file is too large for the buffer. The onboard ROM microcode will be loaded.

Recommended Action If the error message recurs after the onboard ROM microcode has been loaded, call your technical support representative for assistance.

Error Message

`%UCODE-3-WRONGHARD: [chars] is [chars] ucode not [chars], microcode/hardware mismatch`

Explanation The specified microcode file is for a different interface processor than specified in the configuration. The user has made a configuration error. The onboard ROM microcode will be loaded.

Recommended Action Reenter your microcode configuration command after confirming the interface type and reload the microcode.

VINES Error Messages

Error Message

`%VINES-2-CONSISTENCY: Error [chars]`

Explanation The VINES code has run into a situation that should not happen. For example, an IPC port number needs to be allocated, but all 65535 port numbers are currently in use.

Recommended Action Call your technical support representative for assistance.

Error Message

`%VINES-2-CORRUPTENTRY: Detected a corrupted entry in the [chars] table`

Explanation The VINES code has detected that an internal table entry has become corrupted.

Recommended Action Call your technical support representative for assistance.

Error Message

`%VINES-2-DUPADDR: Duplicate address detected on
interface [chars]`

Explanation The router has detected that its VINES address is being used by another router.

Recommended Action Identify the other router that is using this address by manual inspection of the routers. Issue the command **vines routing recompute** on both routers. If a router does not support the recompute keyword, then on that router you must disable VINES, write the configuration to memory, reboot the router, and then reconfigure VINES.

Error Message

`%VINES-2-INVALIDPATH: Bad [chars] in path for neighbor
entry [v-name]`

Explanation While searching the neighbor table, the code determined that a pointer that should point to a VINES path structure actually points to some other structure.

Recommended Action Call your technical support representative for assistance.

Error Message

`%VINES-2-INVALIDROUTE: Bad [chars] in route for server
entry [v-name]`

Explanation While searching the routing table, the code determined that a pointer that should point to a VINES route structure actually points to some other structure.

Recommended Action Call your technical support representative for assistance.

Error Message

`%VINES-2-NEIGHBOR: vines_update called with null neighbor`

Explanation An internal software error has occurred.

Recommended Action If this message recurs, call your technical support representative for assistance.

Error Message

`%VINES-2-NOMEMORY: No memory available for [chars]`

Explanation The requested operation could not be accomplished because of a low memory condition.

Recommended Action Reduce other system activity to ease memory demands. If conditions warrant, upgrade to a larger memory configuration.

X.25 Error Messages

Error Message

`%X25-3-BADCONFIG: Interface [chars], X.25 [chars], current configuration retained.`

Explanation The interface's X.25 configuration is not valid; the existing configuration was not changed.

Recommended Action Verify the following:

- The interface's switched virtual circuit ranges do not overlap; for nonzero values, $lic \leq hic < ltc \leq htc < loc \leq hoc$. (For more information, refer to "Configuring Virtual Circuit Ranges" in the *Router Products Configuration Guide*.)

- If an incoming-only range is defined, check that it is numerically less than the two-way range.
 - If an outgoing-only range is defined, check that it is numerically greater than the two-way range.
 - No virtual circuit high/low parameter is zero unless its partner low/high parameter is also zero.
 - The default window sizes are less than the interface modulo.
-

Error Message

%X25-4-BADUPCALL: Interface [chars], Unexpected call ([chars]) from LLC2 DTE= [enet]

%X25-4-DEBUG_LCI: LCI deleted at interrupt time

%X25-2-ILLP4: Interface [chars], Illegal state [chars] when P4

%X25-3-INTIMEQ: Interface [chars], LCN [dec] already in timer queue, new time [dec]

%X25-3-NOLCI: Interface [chars], Delete: lci [dec] not found in [chars] table

%X25-3-NOTFINDBH: Can't find bfe host address [inet] to delete

%X25-3-NOTFINDI: Can't find address [inet] to delete

%X25-3-NOTFINDS: Can't find address [chars] to delete

%X25-3-SPURD1: Spurious D1 timer wakeup on LCI [dec]

Explanation An internal software error has occurred.

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

Error Message

%X25-4-LARGEPKSIZE: Interface [chars], [chars] packet sizes [dec]/[dec] too large; lower values will be negotiated.

Explanation The interface's default packet sizes or outgoing packet size facility values are too large to be carried by LAPB.

Recommended Action The router will negotiate lower packet size values automatically. The LAPB N1 value should be increased. For example, for an x.25 maximum packet size of 1024, modulo 8 x.25 operation will add 3 bytes of overhead and modulo 8 LAPB operation will add 4 bytes of overhead (the two bytes of CRC are defined to be included). This means that N1 must be at least 1031 bytes * 8 = 8248.

Error Message

%X25-3-PVCBAD: Interface [chars], PVC [dec], [chars]

Explanation A switched PVC cannot be connected. The final [chars] text string in the message represents the state of the PVC. These text strings can also appear in show x25-vc output. For more information, refer to the **show x25-vc** documentation in the *Router Products Command Reference* publication.

Recommended Action Validate the configuration of the PVCs at both ends of the connection, and reconfigure them if necessary.

Error Message

%X25-3-PVCDELETE: LCI for PVC [dec] being deleted!

Explanation A PVC was using an **x25 map** entry that was deleted or the interface configuration changed to make the PVC number illegal; this forces the deletion of the PVC.

Recommended Action No action required. Note that some attached equipment may object to an inability to use the deleted PVC.

X.25 Error Messages

Error Message

```
%X25-4-RANGEUNUSED: Interface [chars], [chars] VC  
range  
unused; set limits to zero
```

Explanation An outgoing-only or incoming-only virtual circuit range exactly overlaps the two-way virtual circuit range. This was the former method for specifying that a virtual circuit range was not used. The current method is to set the range limits to zero.

Recommended Action Use the privileged **write memory** command to write the configuration to memory. This will store the modified (zero) range limits.

Error Message

```
%X25-4-VCLOSTSYNC: Interface [chars], VC [dec] TCP  
connection [chars]
```

Explanation An X.25 circuit that is being tunneled over a TCP connection between routers was cleared ungracefully. The last [chars] text string in the message can take one of two forms. If the text string is “closed unexpectedly,” the router at the remote end of the connection has been rebooted, or the connection has failed. If the text string is “connection corrupted,” it is likely that the connection was made to a router running an older software release.

Recommended Action If the text string is “closed unexpectedly,” reestablish the connection after the remote router or intervening network is operational. If the text string is “connection corrupted,” upgrade the router at the other end of the connection to a more recent software release.

XNS Error Messages

Error Message

```
%XNS-3-BADPATHS: Invalid number of paths ([dec]) for  
[dec]
```

```
%XNS-2-BADROUTE: Error [chars] route - null table
```

Explanation An internal software error has occurred.

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

Other Error Messages

This section covers other types of error messages that you may encounter, such as bus, parity, timeout, unexpected, and unknown error messages.

These error messages result when the system image crashes, either from a hardware or a software failure. To access these messages, use the bootstrap program as described in the section “System Bootstrap Diagnostics” in either the *AGS+ Hardware Installation and Maintenance* or the *ASM-CS Hardware Installation and Maintenance* publications.

When you encounter a timeout, bus error, or unknown error message, you must run the **k** stack trace command at the bootstrap mode prompt (>).

In the following example, a timeout error message appears, the **k** stack trace command is run, but no stack trace results.

```
Timeout (control reg=0xCF10) Error, address: 0xFFFFFFFF8 \  
at 0x317D49E (PC)  
>k  
No stack to dump (NULL frame pointer)
```

In the following example an unknown error message appears, the **k** stack trace command is run, and a stack trace results.

```
Unknown (control reg=0x10) Error, address: 0xD0D0D0D at  
0x313DC22 (PC)
```



```

>k
Current PC: 0x313DC22
FP: 0xE6620 RA: 0x31411A8
FP: 0xE6634 RA: 0x3123D1C
FP: 0xE6650 RA: 0x312303A
FP: 0xE6668 RA: 0x3133664
FP: 0xE667C RA: 0x31337D2
FP: 0xE6694 RA: 0x31349DA
FP: 0xE66A0 RA: 0x3014B4C

```

Table 5 describes the fields in this sample stack trace.

Table 5 Stack Trace Fields

Field	Description
Current PC: 0x313DC22	Address at which the failure occurred. This address is also called the program counter (PC).
FP: 0xE6620	Stack frame pointer.
RA: 0x31411A8	Program counter of calling function saved in stack frame. This value is used to trace the flow of software function calls leading to the failure.

After you obtain the stack trace, use the **i** (initialize) command before you manually boot up the system image. Then use the **show version** command (when possible) to identify the software release and version number for use by technical staff.

On systems that have a hardware or a virtual (software) configuration register, and the boot bits (lowest four bits) are set to a value greater than 0, the system will repeatedly try to boot up the appropriate system image from resident ROMs, Flash memory, or a server over the network. If the booting is successful, the system prompt appears. You then can use the **show stack** command to obtain the stack trace.

In cases where the router crashes repeatedly, send a Break character from the console keyboard to obtain the bootstrap mode prompt. Then modify the configuration register boot bits to zero, enter the **i** (initialize) command, and manually attempt to bootstrap the system image. If it crashes, use the **k** stack trace command.

Error Message

```
Bus Error control register: [hex]
non-local memory transaction timeout
Bus Error, address: [hex] at [hex] (PC)
```

Explanation An invalid memory address is accessed, either because of a software bug or because a boot of an incompatible software image was attempted.

Recommended Action If the error occurred while trying to boot up a system image over the network or from reprogrammed Flash memory, a probable reason could be the use of a wrong or incompatible system image. Look in the appropriate documentation to find out which system image to use. If you still need assistance, contact your technical support representative with the following details:

- Name of the system image file used for booting (as obtained from the technical support representative)
- Product name and configuration
- **show version** output from any bootable ROM-based image available on the system (a bootstrap image, for example)

If the error occurred while trying to boot up a built-in ROM-based image, contact your technical support representative with the following details:

- Product name and configuration
- Any hardware/software upgrades that were made prior to the failure
- Anything else that you think will help your technical support representative diagnose the problem
- Any stack trace, if obtainable, using the **k** command at the bootstrap prompt (<)

Other Error Messages

If the error occurred while the system was operational, contact your technical support representative after gathering the following information:

- Any stack trace obtained using the **k** command at the bootstrap mode prompt (>); or if the system successfully rebooted itself, **show stack** output
 - **show version** output obtained after rebooting the system image in which the failure occurred
-

Error Message

```
Bus Error control register: [hex]
ram byte ([value]) parity error
Bus Error, address: [hex] at [hex] (PC)
```

Explanation Memory corruption or failure has occurred, most likely because of a hardware problem or by disturbances such as power line problems.

Recommended Action Reboot the system and observe whether the problem recurs. Also ensure that the power line has appropriate protection equipment. If the problem is a one-time occurrence, the cause could be a power line disturbance.

Error Message

```
Bus Error control register: [hex]
system overtemp
Bus Error, address: [hex] at [hex] (PC)
```

Explanation Temperature exceeded the operating range, most likely because of a ventilation, air-conditioning, or hardware problem.

Recommended Action Power off the system and give it time to cool. Check room ventilation and air conditioning. Also ensure that system air-flow grids are not blocked and that blowers are operational. Call your technical support representative if a blower needs replacement.

Error Message

Local Timeout (control reg=[hex]) Error, address:
[hex] at [hex] (PC)

Explanation An invalid memory address is accessed, either because of a software bug or because a boot of an incompatible software image was attempted.

Recommended Action Refer to the Recommended Action for the first “Bus Error control register” message in this section.

Error Message

Multibus Timeout (control reg=[hex]) Error, address:
[hex] at [hex] (PC)

Explanation An invalid memory address is accessed, either because of a software bug or because of incompatible microcode in a multibus card.

Recommended Action Reseat the card. If this message recurs, call your technical support representative for assistance.

Error Message

Parity (control reg=[hex]) Error, address: [hex] at
[hex] (PC)

Explanation Memory corruption or failure has occurred, most likely because of a hardware problem. Disturbances such as power line problems are also possibilities.

Recommended Action Reboot the system and observe whether the problem recurs. Also ensure that the power line has appropriate protection equipment. If the problem is a one-time occurrence, the cause could be a power line disturbance.

If this message recurs, call your technical support representative for assistance.

Other Error Messages

Error Message

```
Shared Memory Parity Error  
shared memory control register = [hex]  
error caused by slot [dec] access in byte(s) [dec]
```

```
Shared Memory Parity Error  
shared memory control register = [hex]  
error caused by MPU access in byte(s) [dec]
```

Explanation Shared (I/O) memory failure or corruption occurred during access by the processor. This problem is most likely due to a hardware failure or by disturbances such as power line problems.

Recommended Action Reboot the system and observe whether the problem recurs. Also ensure that the power line has appropriate protection equipment. If the problem is a one-time occurrence, the cause could be a power line disturbance.

Error Message

```
Unexpected exception to CPU vector [dec], PC = [hex]
```

Explanation Either a hardware or a software problem has occurred.

Recommended Action Refer to the Recommended Action for the first “Bus Error control register” message in this section.

Error Message

```
Unexpected vectored interrupt (vector offset [dec])
```

Explanation Either a hardware or a software problem has occurred.

Recommended Action Refer to the Recommended Action for the first “Bus Error control register” message in this section.

Error Message

Unknown (control reg=[hex]) Error, address: [hex] at
[hex] (PC)

Explanation Either a hardware or a software problem has occurred.

Recommended Action Refer to the Recommended Action for the first
“Bus Error control register” message in this section.
