



Troubleshooting and System Messages

This appendix describes how to troubleshoot the CSM-S and system messages.

Troubleshooting

CSM-S error messages may be received and reported in the system log (syslog). This section describes these messages. When a CSM-S is out of service, the module still replies to ARP requests but will not reply to pings.

System Messages

This section lists the system log (syslog) messages supported in the CSM-S.

The SSL daughter card will also generate system messages. The log levels are the same as those shown for the CSM.



Note

The SSL daughter card messages have a prefix of “STE” instead of “CSM_SLB.”

The Cisco IOS software message logs contain the warning level with this syntax:

`CSM_SLB_level-code`

[Table C-1](#) lists the level codes.

Table C-1 Error Message Level Codes

Message Level	Code
LOG_EMERG	0 /* system is unusable */
LOG_ALERT	1 /* action must be taken immediately */
LOG_CRIT	2 /* critical conditions */
LOG_ERR	3 /* error conditions */
LOG_WARNING	4 /* warning conditions */
LOG_NOTICE	5 /* normal but signification condition */

Table C-1 Error Message Level Codes (continued)

Message Level	Code
LOG_INFO	6 /* informational */
LOG_DEBUG	7 /* debug-level messages */

When syslog messages are received, they are preceded by one of the following banners (where # is the slot number of the CSM-S module):

Error Message CSM_SLB-3-IDB_ERROR Unknown error occurred while configuring IDB

Explanation The MFSC could not create the internal interfaces for the CSM-S.

Recommended Action Either this version of the MFSC or the IDPROM were incorrectly programmed. Reprogram the MFSC or the IDPROM.

Error Message CSM_SLB-3-OUTOFMEM Module [dec] memory error

Explanation This a general memory problem of the control module. The memory problem may lead to more serious operational problems in the CSM-S if it persists.

Recommended Action Run a memory check, or increase the memory size.

Error Message CSM_SLB-3-PORTCHANNEL Portchannel allocation failed for module [dec]

Explanation This problem occurs when there are more CSM-S modules inserted into the chassis than configured or the slot number where the module was inserted was higher than anticipated.

Recommended Action Move the CSM-S module to a lower slot number to resolve the problem.

Error Message CSM_SLB-3-RELOAD Module [dec] configuration reload failed

Explanation The MSFC could not reload the existing configuration into the CSM-S module that came online. The cause of the problem may be the CLI error checking of the CSM-S.

Recommended Action Check the status of the CSM-S module such as diagnostic failure or version mismatch.

Error Message CSM_SLB-3-UNEXPECTED Module [dec] unexpected error

CSM_SLB-3-REDUNDANCY Module [dec] FT error

CSM_SLB-4-REDUNDANCY_WARN Module [dec] FT warning

CSM_SLB-6-REDUNDANCY_INFO Module %d FT info

```
CSM_SLB-3-ERROR Module [dec] error
CSM_SLB-4-WARNING Module [dec] warning
CSM_SLB-6-INFO Module [dec] info
```

Explanation These messages are generic headlines for error or warning messages. Additional details are located in the information string.

Recommended Action None.

Error Message CSM_SLB-3-VERMISMATCH Module [dec] image version mismatch

Explanation This is a version mismatch between the MFSC and the CSM-S code. This condition only occurs with the MFSC software versions before the 12.1(8)EX release or CSM-S software versions before the 2.1(1) release.

Recommended Action Upgrade or downgrade the MFSC version to match the CSM-S version to allow the CSM-S to come online.

Error Message CSM_SLB-4-ARPCONFIG Module [dec] ARP configuration error

Explanation There is an error in creating or removing static ARP configuration.

Recommended Action Recheck your ARP configuration.

Error Message CSM_SLB-4-ERRPARSING Module [dec] configuration warning
SLB-REGEX: Syntactic error in regular expression <x>.
SLB-REGEX: Parse error in regular expression <x>.

Explanation This is an error-checking message for the URL, cookie, or header regular expression matching.

Recommended Action Check the input matching strings.

Error Message CSM_SLB-4-INVALIDID Module [dec] invalid ID
CSM_SLB-4-DUPLICATEID Module [dec] duplicate ID

Explanation This is an error-checking message between two modules when one module is calling another module.

Recommended Action Check the errors at the CLI level, which should prevent these errors from appearing.

Error Message CSM_SLB-4-PROBECONFIG Module [dec] probe configuration error

Explanation The CSM-S does not have enough memory to support the specified probe configuration.

Recommended Action Remove some of the probes from the server farm.

Error Message CSM_SLB-4-REGEXMEM Module [dec] regular expression memory error
 SLB-LCSC: Error detected while downloading URL configuration for vserver %s.
 SLB-LCSC: Error detected while downloading COOKIE policy map for vserver <x>.
 SLB-LCSC: Error detected while downloading COOKIE <x> for vserver <x>.
 SLB-LCSC: There was an error downloading the configuration to hardware
 SLB-LCSC: due to insufficient memory. Use the 'show ip slb memory'
 SLB-LCSC: command to gather information about memory usage.

Explanation These errors may occur if you configured complex URL, cookie, or header matching expressions. The CSM-S has a limited amount of space to compute the matching strings. Currently, the limit of 10 keywords (for example, “name*”) are allowed per virtual server.

Recommended Action Combine (or remove) the expression strings to work around this problem.

Error Message CSM_SLB-4-TOPOLOGY Module [dec] warning

Explanation The CSM-S is detecting a “bridge loop” in the network.

Recommended Action Check the bridging device and the bridge-mode configurations of the multiple CSM-S modules located in the network.

Error Message CSM_SLB-4-VERWILDCARD Received CSM-SLB module version wildcard on slot

Explanation The CSM-S sends this message when you enter a debug command on the CSM-S console to work around the image version mismatch condition described in the previous error message.

Recommended Action This error is a debug condition only.

Error Message SLB-DIAG: WatchDog task not responding.
 SLB-DIAG: Fatal Diagnostic Error %x, Info %x.
 SLB-DIAG: Diagnostic Warning %x, Info %x.

Explanation Various diagnostic problems were encountered during the board boot procedure.

Recommended Action Check for a CSM-S hardware failure or corrupted software in the Flash memory.

Error Message SLB-FT: Heartbeat intervals are not identical between ft pair.
 SLB-FT: heartbeat interval is identical again
 SLB-FT: The configurations are not identical between the members of the fault tolerant pair.

Explanation These errors occur as a result of a misconfiguration between two redundant CSM-S modules.

Recommended Action Check the fault-tolerant configuration attributes and the real server and server farm configurations.

Error Message SLB-FT: Standby is not monitoring active now.

Explanation This problem is the result of a version mismatch of the fault-tolerance protocol between two versions of the CSM-S. The standby CSM-S stays as standby and does not take over as active if the primary CSM-S fails. The CSM-S does not support hitless (HA) upgrades in this situation.

Recommended Action Make sure that the fault-tolerance protocol versions match.

Server and Gateway Health Monitoring

Error Message SLB-LCSC: No ARP response from gateway address A.B.C.D.

Explanation The configured gateway A.B.C.D. did not respond to ARP requests.

Error Message SLB-LCSC: No ARP response from real server A.B.C.D.

Explanation The configured real server A.B.C.D. did not respond to ARP requests.

Error Message SLB-LCSC: Health probe failed for server A.B.C.D on port P.

Explanation The configured real server on port P of A.B.C.D. failed health checks.

Error Message SLB-LCSC: DFP agent <x> disabled server <x>, protocol <x>, port <x>

Explanation The configured DFP agent has reported a weight of 0 for the specified real server.

Error Message SLB-LCSC: DFP agent <x> re-enabled server <x>, protocol <x>, port <x>

Explanation The configured DFP agent has reported a non-zero weight for the specified real server.

Diagnostic Messages

Error Message SLB-DIAG: WatchDog task not responding.

Explanation A critical error occurred within the CSM hardware or software.

Error Message SLB-DIAG: Fatal Diagnostic Error %x, Info %x.

Explanation A hardware fault was detected. The hardware is unusable and must be repaired or replaced.

Error Message SLB-DIAG: Diagnostic Warning %x, Info %x.

Explanation A non-fatal hardware fault was detected.

Fault Tolerance Messages

Error Message SLB-FT: No response from peer. Transitioning from Standby to Active.

Explanation The CSM detected a failure in its fault-tolerant peer and has transitioned to the active state.

Error Message SLB-FT: Heartbeat intervals are not identical between ft pair.
SLB-FT: Standby is not monitoring active now.

Explanation Proper configuration of the fault-tolerance feature requires that the heartbeat intervals be identical between CSMs within the same fault-tolerance group, which is currently not the case. The fault-tolerance feature is disabled until the heartbeat intervals have been configured identically.

Error Message SLB-FT: heartbeat interval is identical again

Explanation The heartbeat intervals of different CSMs in the same fault-tolerance group have been reconfigured to be identical. The fault-tolerance feature will be re-enabled.

Error Message SLB-FT: The configurations are not identical between the members of the fault tolerant pair.

Explanation In order for the fault-tolerance system to preserve the sticky database, the different CSMs in the fault-tolerance group must be identically configured, which is not currently the case.

Regular Expression Errors

Error Message SLB-LCSC: There was an error downloading the configuration to hardware
SLB-LCSC: due to insufficient memory. Use the 'show ip slb memory'
SLB-LCSC: command to gather information about memory usage.
SLB-LCSC: Error detected while downloading URL configuration for vserver %s.

Explanation The hardware does not have sufficient memory to support the desired set of regular expressions. A different set of regular expressions must be configured for the system to function properly.

Error Message SLB-REGEX: Parse error in regular expression <x>.
SLB-REGEX: Syntactic error in regular expression <x>.

Explanation The configured regular expression does not conform to the regular expression syntax as described in the user manual.

Error Message SLB-LCSC: Error detected while downloading COOKIE policy map for vserver <x>.

SLB-LCSC: Error detected while downloading COOKIE <x> for vserver <x>.

Explanation An error occurred in configuring the cookie regular expressions for the virtual server. This error is likely due to a syntactic error in the regular expression (see below), or there is insufficient memory to support the desired regular expressions.

XML Errors

When an untolerated XML error occurs, the HTTP response contains a 200 code. The portion of the original XML document with the error is returned with an error element that contains the error type and description.

This example shows an error response to a condition where a virtual server name is missing:

```
<?xml version="1.0"?>
<config>
  <csm_module slot="4">
    <vserver>
      <error code="0x20">Missing attribute name in element
vserver</error>
    </vserver>
  </csm_module>
</config>
```

The error codes returned also correspond to the bits of the error tolerance attribute of the configuration element. Returned XML error codes are as follows:

```
XML_ERR_INTERNAL           = 0x0001,
XML_ERR_COMM_FAILURE      = 0x0002,
XML_ERR_WELLFORMEDNESS    = 0x0004,
XML_ERR_ATTR_UNRECOGNIZED = 0x0008,
XML_ERR_ATTR_INVALID     = 0x0010,
XML_ERR_ATTR_MISSING     = 0x0020,
XML_ERR_ELEM_UNRECOGNIZED = 0x0040,
XML_ERR_ELEM_INVALID     = 0x0080,
XML_ERR_ELEM_MISSING     = 0x0100,
XML_ERR_ELEM_CONTEXT     = 0x0200,
XML_ERR_IOS_PARSER       = 0x0400,
XML_ERR_IOS_MODULE_IN_USE = 0x0800,
XML_ERR_IOS_WRONG_MODULE = 0x1000,
XML_ERR_IOS_CONFIG       = 0x2000
```

The default error_tolerance value is 0x48, which corresponds to ignoring unrecognized attributes and elements.

