Subscriber Data Management

Alarm Dictionary

910-6539-001 Revision B

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Tekelec

Table of Contents

List of Tables

Chapter

1

Introduction

This chapter provides general information about manual organization, the scope of this manual, its targeted audience, how to get technical assistance, and how to locate customer documentation on the Customer Support site.

Topics:

About this document

This document provides SDM alarm information including recovery procedures.

Scope and audience

This document provides SDM alarm information, including alarm number, description, and severity, the alarm group, the effect of the alarm, the action to take, and how the alarm clears.

This document is intended for operators that are responsible and qualified for the subject matter of this document.

Document organization

This document is organized into these chapters and alarm sections:

- *Introduction*
- *SDM Alarms*

  - *Framework alarms*
  - *System Manager alarms*
  - *OAMP alarms*
  - *SIP server alarms*
  - *HLR server alarms*
  - *SS7 - Stack Manager alarms*
  - *SS7 - Generic Alarms*
  - *SS7 - MTP2 layer alarms*
  - *SS7 - MTP3 layer alarms*
  - *SS7 - SCCP layer alarms*
  - *SS7 - TCAP layer alarms*
  - *SS7 - MAP layer alarms*
  - *SS7 - SG alarms*
  - *SS7 - MR alarms*
  - *SS7 - RY Alarms*
  - *SS7 - SAAL alarms*
  - *SS7 - M3UA alarms*
  - *SS7 - TUCL alarms*
  - *Node Manager alarms*
  - *SIP provisioning alarms*
  - *HSS provisioning alarms*
  - *IMS/LTE HSS*
  - *SIP UA alarms*

Referenced information located within the same document is linked and can be reached by clicking the hyperlink.

For references pointing outside of the current document, use these guidelines:

General:

- Locate the referenced section in the Table of Content of the referenced document.
- If not otherwise indicated in the reference, determine the section name that contains the reference and locate the same section name in the referenced document.
- Place the PDF files in one folder or on a disc and use the powerful Adobe PDF search functions to locate related information in one or more documents simultaneously.

Alarms

- *SDM Alarms Dictionary*

Product, features, concepts

- *SDM Product Description*

Monitoring, maintenance, or troubleshooting:

- Procedures: *Monitoring, Maintenance, Troubleshooting User Guide*
- Entities: *Monitoring, Maintenance, Troubleshooting Reference Manual*

Subscriber provisioning:

- Procedures: *Subscriber Provisioning User Guide*
- Entities: *Subscriber Provisioning Reference Manual*

System configuration:

- Procedures: *System Configuration User Guide*
- Entities: *System Configuration Reference Manual*

User Interfaces:

- *User guides*
  - How to use the user interface
  - How to set up users (permissions, groups, services)

- *Reference manuals*
  - About the user interfaces
  - Entities for setting up users

To determine the components of the complete documentation set delivered with the software, refer to the *SDM Documentation Roadmap* delivered with each documentation set.

Documentation Admonishments

Admonishments are icons and text throughout this manual that alert the reader to assure personal safety, to minimize possible service interruptions, and to warn of the potential for equipment damage.

Table 1: Admonishments

	DANGER: (This icon and text indicate the possibility of *personal injury*.)
	WARNING: (This icon and text indicate the possibility of *equipment damage*.)
	CAUTION: (This icon and text indicate the possibility of *service interruption*.)

Related publications

For a detailed description of the available SDM documentation, refer to the *SDM Documentation Roadmap* included with your SDM documentation set.

Customer Care Center

The Tekelec Customer Care Center is your initial point of contact for all product support needs. A representative takes your call or email, creates a Customer Service Request (CSR) and directs your requests to the Tekelec Technical Assistance Center (TAC). Each CSR includes an individual tracking number. Together with TAC Engineers, the representative will help you resolve your request.

The Customer Care Center is available 24 hours a day, 7 days a week, 365 days a year, and is linked to TAC Engineers around the globe.

Tekelec TAC Engineers are available to provide solutions to your technical questions and issues 7 days a week, 24 hours a day. After a CSR is issued, the TAC Engineer determines the classification of the trouble. If a critical problem exists, emergency procedures are initiated. If the problem is not critical, normal support procedures apply. A primary Technical Engineer is assigned to work on the CSR and provide a solution to the problem. The CSR is closed when the problem is resolved.

Tekelec Technical Assistance Centers are located around the globe in the following locations:

Tekelec - Global

Email (All Regions): support@tekelec.com

- **USA and Canada**

  Phone:

  1-888-FOR-TKLC or 1-888-367-8552 (toll-free, within continental USA and Canada)

  1-919-460-2150 (outside continental USA and Canada)

TAC Regional Support Office Hours:

8:00 a.m. through 5:00 p.m. (GMT minus 5 hours), Monday through Friday, excluding holidays

- **Caribbean and Latin America (CALA)**

Phone:

USA access code +1-800-658-5454, then 1-888-FOR-TKLC or 1-888-367-8552 (toll-free)

TAC Regional Support Office Hours (except Brazil):

10:00 a.m. through 7:00 p.m. (GMT minus 6 hours), Monday through Friday, excluding holidays

  - **Argentina**

    Phone:

    0-800-555-5246 (toll-free)

  - **Brazil**

    Phone:

    0-800-891-4341 (toll-free)

    TAC Regional Support Office Hours:

    8:00 a.m. through 5:48 p.m. (GMT minus 3 hours), Monday through Friday, excluding holidays

  - **Chile**

    Phone:

    1230-020-555-5468

  - **Colombia**

    Phone:

    01-800-912-0537

  - **Dominican Republic**

    Phone:

    1-888-367-8552

  - **Mexico**

    Phone:

    001-888-367-8552

  - **Peru**

    Phone:

    0800-53-087

  - **Puerto Rico**

    Phone:

    1-888-367-8552 (1-888-FOR-TKLC)

  - **Venezuela**

    Phone:

0800-176-6497

- **Europe, Middle East, and Africa**

  Regional Office Hours:

  8:30 a.m. through 5:00 p.m. (GMT), Monday through Friday, excluding holidays

  - **Signaling**

    Phone:

    +44 1784 467 804 (within UK)

  - **Software Solutions**

    Phone:

    +33 3 89 33 54 00

- **Asia**

  - **India**

    Phone:

    +91 124 436 8552 or +91 124 436 8553

    TAC Regional Support Office Hours:

    10:00 a.m. through 7:00 p.m. (GMT plus 5 1/2 hours), Monday through Saturday, excluding holidays

  - **Singapore**

    Phone:

    +65 6796 2288

    TAC Regional Support Office Hours:

    9:00 a.m. through 6:00 p.m. (GMT plus 8 hours), Monday through Friday, excluding holidays

Emergency Response

In the event of a critical service situation, emergency response is offered by the Tekelec Customer Care Center 24 hours a day, 7 days a week. The emergency response provides immediate coverage, automatic escalation, and other features to ensure that the critical situation is resolved as rapidly as possible.

A critical situation is defined as a problem with the installed equipment that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical situations affect service and/or system operation resulting in one or several of these situations:

- A total system failure that results in loss of all transaction processing capability
- Significant reduction in system capacity or traffic handling capability
- Loss of the system's ability to perform automatic system reconfiguration
- Inability to restart a processor or the system

- Corruption of system databases that requires service affecting corrective actions
- Loss of access for maintenance or recovery operations
- Loss of the system ability to provide any required critical or major trouble notification

Any other problem severely affecting service, capacity/traffic, billing, and maintenance capabilities may be defined as critical by prior discussion and agreement with the Tekelec Customer Care Center.

Locate Product Documentation on the Customer Support Site

Access to Tekelec's Customer Support site is restricted to current Tekelec customers only. This section describes how to log into the Tekelec Customer Support site and locate a document. Viewing the document requires Adobe Acrobat Reader, which can be downloaded at www.adobe.com.

1. Log into the *Tekelec Customer Support* site.

   Note: If you have not registered for this new site, click the **Register Here** link. Have your customer number available. The response time for registration requests is 24 to 48 hours.

2. Click the **Product Support** tab.
3. Use the Search field to locate a document by its part number, release number, document name, or document type. The Search field accepts both full and partial entries.
4. Click a subject folder to browse through a list of related files.
5. To download a file to your location, right-click the file name and select **Save Target As**.

Chapter

2

SDM Alarms

Topics:

SDM alarms use the following ranges:

- Framework alarms: Range 00000-04199
- System manager alarms: Range 06100-06999
- OAMP alarms: Range 07000-07099
- SIP server alarms: Range 08000-08099
- HLR server alarms: Range 09000-09199
- SS7 - stack manager alarms: Range 10100-10199
- SS7 - generic alarms: Range 10200-10299
- SS7 - MTP2 layer alarms: Range 10300-10399
- SS7 - MTP3 layer alarms: Range 10400-10499
- SS7 - SCCP layer alarms: Range 10500-10599
- SS7 - TCAP layer alarms: Range 10600-10699
- SS7 - MAP layer alarms: Range 10700-10999
- SS7 - SG alarms: Range 10900-10999
- SS7 - MR alarms: Range 11100-11199
- SS7 - RY alarms: Range 11200-11299
- SS7 - SAAL alarms: Range 11300-11399
- SS7 - M3UA alarms: Range 11400-11499
- SS7 - TUCL alarms: Range 11600-11699
- SS7 - Node manager alarms: Range 14000-14099
- SS7 - SIP provisioning alarms: Range 15000-15099
- SS7 - HSS provisioning alarms: Range 16000-16099
- SS7 - IMS/LTE-HSS provisioning alarms: Range 17000-17299
- SS7 - SIP UA alarms: Range 18000-18099

Framework alarms

Framework alarms use the range 00000-04199.

38 - CliInitiatedBackupInProgress

Alarm Group

Framework

Severity

Warning

Description:

A backup has been requested manually and is now in progress.

Effect

Make sure that backup are done in low traffic condition.

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

38 - CliInitiatedBackupComplete

Alarm Group

Framework

Severity

Warning

Description:

Backup is now completed.

Effect

This alarm will appear in history alarm when backup is completed.

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

39 - CliInitiatedRestoreInProgress

Alarm Group

Framework

Severity

Warning

Description:

Restore has been requested manually and is now in progress.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

40 - SynchronizingStandbyDatabase

Alarm Group

Framework

Severity

Warning

Description:

Standby blade is currently synchronizing with the active one.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

40 - SynchronizingStandbyDatabaseComplete

Alarm Group

Framework

Severity

Warning

Description:

Synchronization is completed. System now running in HA mode.

Effect

This alarm will appear in the history alarm.

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

41 - OperatorInitiatedClearAllAlarm

Alarm Group

Framework

Severity

Warning

Description:

Clear all alarms as been sent manually

Effect

This alarm will appear in the history alarm.

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

53 - AutomaticBackupInProgress

Alarm Group

Framework

Severity

Warning

Description:

Clear all alarms as been sent manually

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

300 - CpuLoadMinor

Alarm Group

Framework

Severity

Minor

Description:

The load on the CPU has exceeded the threshold value.

Effect

The system is experiencing a high load level. System performance may be adverserly affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

301 - CpuLoadMajor

Alarm Group

Framework

Severity

Major

Description:

The load on the CPU has exceeded the threshold value.

Effect

The system is experiencing a high load level. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

302 - ProcessLoadAverage1MinuteMinor

Alarm Group

Framework

Severity

Minor

Description:

The 1 minute load average for the CPU has exceeded the threshold value.

Effect

The system is experiencing a high load level. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

303 - ProcessLoadAverage1MinuteMajor

Alarm Group

Framework

Severity

Major

Description:

The 1 minute load average for the CPU has exceeded the threshold value.

Effect

The system is experiencing a high load level. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

304 - ProcessLoadAverage5MinuteMinor

Alarm Group

Framework

Severity

Minor

Description:

The 5 minute load average for the CPU has exceeded the threshold value.

Effect

The system is experiencing a high load level. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

305 - ProcessLoadAverage5MinuteMajor

Alarm Group

Framework

Severity

Major

Description:

The 5 minute load average for the CPU has exceeded the threshold value.

Effect

The system is experiencing a high load level. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

306 - ProcessLoadAverage15MinuteMinor

Alarm Group

Framework

Severity

Minor

Description:

The 15 minute load average for the CPU has exceeded the threshold value.

Effect

The system is experiencing a high load level. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

307 - ProcessLoadAverage15MinuteMajor

Alarm Group

Framework

Severity

Major

Description:

The 15 minute load average for the CPU has exceeded the threshold value.

Effect

The system is experiencing a high load level. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

308 - MemoryUsedMinor

Alarm Group

Framework

Severity

Minor

Description:

The total memory used has exceeded the threshold value.

Effect

The system is consuming a higher than usual amount of memory. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

309 - MemoryUsedMajor

Alarm Group

Framework

Severity

Major

Description:

The total memory used has exceeded the threshold value.

Effect

The system is consuming a higher than usual amount of memory. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

310 - SwapUsedMinor

Alarm Group

Framework

Severity

Minor

Description:

The swap memory used has exceeded the threshold value.

Effect

The system is consuming a higher than usual amount of memory. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

311 - SwapUsedMajor

Alarm Group

Framework

Severity

Major

Description:

The swap memory used has exceeded the threshold value.

Effect

The system is consuming a higher than usual amount of memory. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all service blades are correctly in service. Otherwise additional system capacity may need to be added, if so, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

312 - NicLoadPublicIfMinor

Alarm Group

Framework

Severity

Minor

Description:

The total bandwidth of traffic on the public network interface has exceeded the threshold value.

Effect

The system is experiencing a high level of network traffic. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all nodes on the network are correctly configured.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

313 - NicLoadPublicIfMajor

Alarm Group

Framework

Severity

Major

Description:

The total bandwidth of traffic on the public network interface has exceeded the threshold value.

Effect

The system is experiencing a high level of network traffic. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all nodes on the network are correctly configured.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

314 - NicInDiscardPublicIfMajor

Alarm Group

Framework

Severity

Major

Description:

The number of incoming discarded packets on the public network interface has exceeded the threshold value.

Effect

The system is experiencing a high value of discarded incoming network packets. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all nodes on the network are correctly configured.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

315 - NicOutDiscardPublicIfMajor

Alarm Group

Framework

Severity

Major

Description:

The number of outgoing discarded Framework packets on the public network interface has exceeded the threshold value.

Effect

The system is experiencing a high value of discarded outgoing network packets. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all nodes on the network are correctly configured.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

316 - NicInErrorPublicIfMajor

Alarm Group

Framework

Severity

Major

Description:

The number of incoming error packets on the public network interface has exceeded the threshold value.

Effect

The system is experiencing a high value of discarded incoming network packets. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all nodes on the network are correctly configured.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

317 - NicOutErrorPublicIfMajor

Alarm Group

Framework

Severity

Major

Description:

The number of outgoing error packets on the public network interface has exceeded the threshold value.

Effect

The system is experiencing a high value of discarded outgoing network packets. System performance may be adversely affected.

Action

Verify that threshold value is not set too low. Verify that all nodes on the network are correctly configured.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

318 - ProcessCpuLoad

Alarm Group

Framework

Severity

Major

Description:

One thread of one process has been using more than 95% of CPU for 5 minutes and has been killed by the monitoring framework.

Effect

Once the process is killed, it will restart automatically. This has no effect since the system always runs in High Availability mode, in which case the redundant processes take over.

Action

Contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

2019 - ConnectionLost (Left)

Alarm Group

Framework

Severity

Minor

Description:

This means that the slot that reports the error has no more communication with the left switch (switch in slot 7).

Effect

Slot is only reachable by its right interface.

Action

Verify the connector on the network interface. Verify the interface is functioning properly. Verify if the left switch is still running. If problem persist, contact the Tekelec *Customer Care Center* for assistance.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

2019 - ConnectionLost (Right)

Alarm Group

Framework

Severity

Minor

Description:

This means that the slot that reports the error has no more communication with the right switch (switch in slot 8).

Effect

Slot is only reachable by its left interface.

Action

Verify the connector on the network interface. Verify the interface is functioning properly. Verify if the left switch is still running. If problem persist, contact the Tekelec *Customer Care Center* for assistance.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

2205 - ErrorCannotStartGeographicReplication

Alarm Group

Framework

Severity

Warning

Description:

The Geographic redundancy mechanism cannot be restarted after a Restore Database operation is performed.

Effect

The system is not geographically protected. A connection may be lost with the geo-redundant site or the geo-redundant site might no longer be working.

Action

Verify that the IP connection on the replication link is functional (You should be able to ping the GeoReplication VIP of the peer site). If the link is the problem, fix the replication link and restart the system to re-activate geo-redundancy.

If it is not a connection problem or to restart the system, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

2207 - GeographicReferenceSiteRunningUnprotected

Alarm Group

Framework

Severity

Critical

Description:
In a geo-redundant deployment, two sites are geographically synchronized, one of the sites runs in Reference Protected mode while the other runs in Replica mode. This alarm is critical and is raised in the case where the reference system is first started, but the replica is still not properly connected.

Effect

The system is not geographically protected. A connection may be lost with the geo-redundant site or the geo-redundant site might no longer be working.

Action

Verify that the IP connection on the replication link is functional (You should be able to ping the GeoReplication VIP of the peer site). If the link is the problem, fix the replication link and the geo-redundancy should restart automatically.

Otherwise, the peer site may not be working correctly. Verify the status of the peer site. If the peer site is recovered, geo-redundancy should restart automatically.

Clear
This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the Replica is properly connected and Geographic reference site is running protected.

2210 - StandbyGeographicDbHistoryLost

Alarm Group

Framework

Severity

Minor

Description:

This alarm is raised when the standby blade has restarted while the georedundant connection is lost.

Effect

The standby blade DB logs have been erased.

Action

Make sure to recover the geo-redundant connection before switching over to this blade.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

2211 - GeographicDbHistoryLost

Alarm Group

Framework

Severity

Critical

Description:

This alarm is raised when the georedundant connection is lost and the database logs, created when the connection was lost, no longer exist. This alarm is usually raised after a switch-over occurs after the alarm 2210 was raised.

Effect

Geo-redundancy is automatically stopped.

Action

Recover geo IP connection and restart the site.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

2300 - Geored_tunnel_SCTP_COMM_LOST

Alarm Group

Framework

Severity

Critical

Description:

Geored Tunnel SCTP communication is lost (state%1).

Effect

Connection to the georedundant system is not possible.

Action

- If there is no active system controller on the peer, recover it to reset this alarm.
- If all the SCTP connection to the peer are down (alarm 2302), recover at least one connection to reset this alarm.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified (by clear alarm ID 2301).

2301 - Geored_tunnel_SCTP_COMM_UP

Alarm Group

Framework

Severity

Critical

Description:

Geored Tunnel SCTP communication is UP (state=%1).

Effect

Connection to the Georedundant system is restored.

Action

No action necessary.

Received

The System SCTP module will send this notification when the association goes up.

Clear

This alarm clears alarm 2300.

2302 - Geored_tunnel_SCTP_ADDR_UNREACHABLE

Alarm Group

Framework

Severity

Major

Description:

Geored Tunnel SCTP address(%1) is unreachable (error=%2).

Effect

None, as long as there is at least one remaining path that is up (if there is no remaining path, Critical Alarm 2300 will be raised).

Received

The System SCTP module will send this notification when one of the association path is down.

Action

There is a communication problem on this SCTP path with the peer. Restore this path by troubleshooting the associated network.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified (by clear alarm ID 2303 or 2304).

2303 - Geored_tunnel_SCTP_ADDR_AVAILABLE

Alarm Group

Framework

Severity

Major

Description:

Geored Tunnel SCTP address(%1) is now available (error%2).

Effect

None, an additional path in the multi-homing Georedundant connection is now available

Action

No action necessary

Received

The System SCTP module will send this notification when one of the association paths is recovered.

Clear

This alarm clears alarm 2302.

2304 - Geored_tunnel_SCTP_ADDR_CONFIRMED

Alarm Group

Framework

Severity

Major

Description:

Geored Tunnel SCTP address(%1) is confirmed (error=%2).

Effect

None. There is now one more path in our multi-homing georedundant connection.

Action

No action necessary

Received

The System SCTP module will send this notification for all alternate's association path when the tunnel is established.

Clear

This alarm clears alarm 2302.

4031 - SynchronizingWithGeographicSiteDatabase

Alarm Group

Framework

Severity

Warning

Description:

Replica site is currently synchronizing with reference site.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4033 - ErrorNegociatingGeoRedundancyRole

Alarm Group

Framework

Severity

Warning

Description:

This alarm is raised if the site failed to negotiate geo-redundancy role with peer site.

Effect

Geo-redundancy will be stopped.

Action

Verify geo-redundancy configuration on both site. Make sure that the last reference site is started first. If configuration is fixed, restart the site. If problem persist or to restart the system, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4034 - ErrorIntermittentConnectionWithGeographicLocation

Alarm Group

Framework

Severity

Warning

Description:

This alarm is raised if connection with geo-redundant peer has been established and then lost 5 times at start/stop.

Effect

Geo-redundancy will be stopped.

Action

Verify connection and restart the shelf to re-enable georedundancy. If problem persist or to restart the shelf, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4035 - ConnectionLostWithGeographicLocation

Alarm Group

Framework

Severity

Warning

Description:

This alarm is critical and is raised when the communication with geo-redundant site is lost.

Effect

Geo-redundancy is out of service.

Action

Verify connection with peer site; Verify that peer site is still working. If problem persist, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4037 - CannotFoundLastGeoGraphicReference

Alarm Group

Framework

Severity

Warning

Description:

This alarm is raised if the site cannot connect to the last reference georedundancy site saved in the database.

Effect

Geo-redundancy will be stopped.

Action

Start the last reference peer site first or contact the Tekelec *Customer Care Center* to force this site to start as reference.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4038 - StoppingGeoGraphicRedundancy

Alarm Group

Framework

Severity

Warning

Description:

This alarm is raised if geo-redundancy is being stopped.

Effect

Geo-redundancy is stopped.

Action

Verify the communication link with peer. Verify that peer is functional. If the peer site is stopped, make sure that the peer was not holding the last reference DB. If problem persist, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4040 - GeoIntegrityPeriodTimeout

Alarm Group

Framework

Severity

Warning

Description:

The system has remained more than twenty-four hours in UnassignedEnabled, UnassignedDisabled or PendingReference.

Effect

Geo-redundancy is stopped.

Action

If Geo-Redundancy has previously been disabled, this alarm is only for informational purpose. Otherwise, verify geo-redundancy configuration; verify communication with peer site; shelf must be restarted to re-activated geo-redundancy; in that case, contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4041 - MissingGeoReplicationVip

Alarm Group

Framework

Severity

Warning

Description:

Error, the geo-redundancy has been enabled but no VIP of type GeoReplication has been defined. Therefore, geo-redundancy cannot be enabled and will go to a stopped state.

Effect

Geo-redundancy will enter a stopped state and therefore will not be activated. The system will not be geographically protected.

Action

Add a VIP of type Geo-Replication and contact the Tekelec *Customer Care Center* to restart the system to reenable geo-redundancy.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4042 - GeoRedundancyStopped

Alarm Group

Framework

Severity

Warning

Description:

Geo-redundancy is activated but has switched to Stopped state. Possible reasons are:

- The system failed to mount Geo Replication VIP
- Synchronisation has failed with the Reference site
- The Reference site cannot be reached
- System has lost connection with peer site during initial synchronization
- Integrity timeout has expired while site was unassignedDisabled, unassignedEnabled or pendingReference

Effect

Geo-redundancy is no longer working. The site must be restarted in order to reactivate geo-redundancy.

Action

Contact the Tekelec *Customer Care Center*.

Verify the following:

- the cause of the event
- the connection with the peer site
- the sanity with the peer site. If the peer site is running and is reference, restart thelocal site and it will go to replica state. This operation will overwrite the local site subscribers database with the content of the reference site's database. If you want to restart the site as reference:
- make sure the peer site is not running
- stop the site
- clear geo-redundancy status
- start again the site

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4043 - GeoDisableWarning

Alarm Group

Framework

Severity

Warning

Description:

Geo-redundancy has been disabled by a user operation.

Effect

Geo-redundancy is no longer working. Geo-redundancy can be re-enabled and resumed within the next 2 hours. After that, the site will need to be restarted to reactivate geo-redundancy.

Action

Verify the reason why Geo-redundancy has been disabled. In the case where Geo-redundancy should be activated,enable and resume geo-redundancy within a maximum of 24 hours, otherwise contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4044 - SynchronizingLogsGeographicSiteDatabase

Alarm Group

Framework

Severity

Warning

Description:

The site is currently replaying database logs with the geo-redundant site after the connection has been reestablished.

Effect

The system is being synchronized with the georedundant site.

Action

This alarm is simply for informational purposes. No further action is required.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

4045 - SynchronizingLogsProcessLogs

Alarm Group

Framework

Severity

Warning

Description:

Latest database transactions with geographic database site ProcessLogs error.

Effect

After a switchover or a short connection loss in a geo-redundant configuration, the system replays (re-executes) the database logs with the Geo-redundant site's database. This alarm indicates that the database log replay has failed. Some Write operations done onto the database during the switchover or connection loss may have been lost if this alarm is raised.

Action

Contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator or the system will automatically clear it once the condition has been rectified.

4104 - SchemaDiff

Alarm Group

Framework

Severity

Critical

Description:

The database schema of the current blade doesn't match with the schema on the active System Controller blade.

Effect

The data will be out-of-sync due to data replication failure.

Action

Contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

System Manager alarms

System Manager alarms use the range 06100-06999

6119 - ShelfRestart

Alarm Group

System Manager

Severity

Warning

Description:

The shelf is starting up or has restarted.

Effect

None

Action

None if the restart was expected. For an unexpected restart, the problems might be due to power failure or failure of both System Controller slots.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

6135 - ServiceFailover

Alarm Group

System Manager

Severity

Warning

Description:

A failure occurs on a service that works in PureFT redundancy mode (i.e. CoreSystemController, ChassisManagement) forcing a switchover.

Effect

None

Action

The service should restart automatically. If not, manual intervention is required. See user guide to see how to restart a service. Contact the Tekelec *Customer Care Center* for logs analysis.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

6136 - ServiceSwitchover

Alarm Group

System Manager

Severity

Warning

Description:

A manual switchover of active Framework CoreSystemController was initiated by the operator on slot X.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

6137 - ServiceManualSwitchover

Alarm Group

System Manager

Severity

Warning

Description:

A manual switchover of active CoreSystemController is initiating by the operator on slot X

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

6140 - ServiceOOS

Alarm Group

System Manager

Severity

Critical

Description:

Service Z on slot X of shelf W is out of service.

Effect

Service Z on slot X of shelf W is out of service.

Action

Try to manually start service on Slot X. If does not start successfully, contact the Tekelec *Customer Care Center* for assistance.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

6142 - TooManySystemController

Alarm Group

System Manager

Severity

Critical

Description:

Trying to start more than two system controllers.

Effect

Cannot have more than two CoreSystemController running on the same system.

Action

Removed Extra CoreSystemController before trying to start it. Contact the Tekelec *Customer Care Center* for assistance.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

6144 - TraceActivated

Alarm Group

System Manager

Severity

Warning

Description:

Debug traces have been activated by a user operation for the specified module.

Effect

Debug traces have been activated and have been written on the local slot into the folder /blue/var/trace/. Debug trace can dramatically reduce system performance and stability and should never be enabled in normal operating condition.

Action

Verify with the Tekelec *Customer Care Center* that the debug trace is required. If not, deactivate debug trace.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

6145 - CoreDumpDetected

Alarm Group

System Manager

Severity

Major

Description:

A new core dump file has been detected under /blue/var/debug.

Effect

A process has failed. The system may work abnormally.

Action

Contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

6146 - ServiceLocked

Alarm Group

System Manager

Severity

Warning

Description:

This alarm is raised when the Tekelec personnel has locked a Service instance in order to perform safely maintenance activity on the SBC.

Effect

The service takes an unassigned HA role and is now out of service. An out of service alarm is also raised. This alarm is automatically cleared when the service is unlocked.

Action

This alarm is only for informational purposes and will be cleared when the service is unlocked.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

OAMP alarms

OAMP alarms use the range 07000-07099.

7009 - ActiveSubscribersThresholdReached

Alarm Group

OAMP

Severity

Warning

Description:

Active subscribers license warning.

Effect

None

Action

Increase threshold or buy license.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

7010 - ActiveSubscribersMaxReached

Alarm Group

OAMP

Severity

Critical

Description:

Active subscribers license violation.

Effect

None

Action

Buy license.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

7011 - TotalSubscribersThresholdReached

Alarm Group

OAMP

Severity

Warning

Description:

Total subscribers license warning.

Effect

None

Action

Increase threshold or buy license.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

7012 - TotalSubscribersMaxReached

Alarm Group

OAMP

Severity

Critical

Description:

Total subscribers license violation.

Effect

None

Action

Buy license.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

7052 - SprSubscribersMaxReached

Alarm Group

Oamp

Severity

Critical

Description:

The maximum number of SPR subscribers authorized by the license is reached.

Effect

None

Action

Informational message only.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

7053 - SprSubscribersThresholdReached

Alarm Group

Oamp

Severity

Warning

Description:

SPR subscribers license warning.

Effect

None

Action

Informational message only.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

SIP server alarms

SIP server alarms use the range 08000-08099.

8030 - IpAddressFailure

Alarm Group

SIP Server

Severity

Critical

Description:

Unable to create SIP IP address.

Effect

The SipServer IP address could not be created. The SipServer may not be operational.

Action

Verify that IP address specified for SipServer is correct and restart Hlr service.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

8034 - ConfigurationFailure

Alarm Group

SIP Server

Severity

Critical

Description:

SipServer configuration error.

Effect

An error was detected in the SipServer configuration. The SipServer is most likely not operational.

Action

Verify that the configuration of the SipServer is correct and restart Hlr service.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

8042 - MaxPendingHlrRequestsReached

Alarm Group

SIP Server

Severity

Critical

Description:

The maximum number of pending internal requests issued by SIP to HLR application has been reached.

Effect

SIP messages received are rejected by SIP application (internal requests are NOT sent to HLR appliation).

Action

If the overload condition persists, check if the system is otherwise operating normally. If it is, please contact your Tekelec Sales representative to order a system expansion.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

8043 - MaxPendingHlrRequestsThresholdReached

Alarm Group

SIP Server

Severity

Warning

Description:

The threshold for the number of maximum HLR pending requests issued by SIP has been reached.

Effect

This is a warning for the operator that the HLR cannot respond fast enough to the internal SIP requests.

Action

If the overload condition persists, check if the system is otherwise operating normally. If it is, please contact your Tekelec Sales representative to order a system expansion.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

8044 - StackDisabled

Alarm Group

SIP Server

Severity

Critical

Description:

The Sip Server stack has been disabled by the operator.

Effect

When this alarm is raised, the SIP server will answer 503 error messages to ALL requests received.

Action

Enable the Sip Server stack if SIP traffic is needed and ngHLR system is operational.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

8045 - ActiveSipSubscribersMaxReached

Alarm Group

SIP Server

Severity

Critical

Description:

The number of active SIP Server subscribers, i.e. registration bindings, has reached the maximum number of active SIP Server subscribers allowed by the license.

Effect

There is no traffic impact.

Action

The customer must upgrade its license in order to accommodate its traffic model. To do so, contact the Tekelec Sales Team.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

8046 - ActiveSipSubscribersThresholdReached

Alarm Group

SIP Server

Severity

Warning

Description:

The threshold for the number of SIP server active subscribers, i.e. registration bindings, has been reached.

Effect

There is no traffic impact.

Action

The customer shall upgrade its license in the near future in order to accommodate its traffic model.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

HLR server alarms

HLR server alarms use the range 09000-09199.

9008 - StandbySynchronization

Alarm Group

HLR Server

Severity

Warning

Description:

StandbySynchronization

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

9009 - MapMemoryAllocationFailure

Alarm Group

HLR Server

Severity

Warning

Description:

MapMemoryAllocationFailure

Effect

None

Action

Contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

9038 - OverloadControlCpu

Alarm Group

HLR Server

Severity

Major

Description:

Hlr Overload Control: the Cpu usage is higher than the threshold (value=%1, threshold=%2).

Effect

The HLR will refuse all new transactions (incoming or outgoing) for the next 200ms.

Action

Contact the Tekelec *Customer Care Center* to diagnose the problem. The most probable cause is that the maximum capacity has been reached for the system's configuration. The solution in that case would be to add more HLR services.

Clear

This alarm cannot be cleared manually by the Network Operator. The system will automatically clear it once the condition has been rectified.

9039 - OverloadControlDlg

Alarm Group

HLR Server

Severity

Major

Description:

Hlr Overload Control: all available transaction already open (value=%1, max=%2).

Effect

The HLR will refuse all new transactions (incoming or outgoing) until the transaction queue is below the overload threshold.

Action

Contact the Tekelec *Customer Care Center* to diagnose the problem. The most probable cause is that the maximum capacity has been reached for the system's configuration. The solution in that case would be to add more HLR services.

Clear

This alarm cannot be cleared manually by the Network Operator. The system will automatically clear it once the condition has been rectified.

9040 - OverloadControlUOS

Alarm Group

HLR Server

Severity

Major

Description:

The HLR CPU or queue overload is continuously in and out of the overload condition.

Effect

The TCAP service will be put out of service (for all HLR instance) for the next 10 sec.

Action

Contact the Tekelec *Customer Care Center* to diagnose the problem, the most probable cause is that the maximum capacity has been reached for the system's configuration, the solution in that case would be to add more Hlr services.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

9051 - HlrTransactionLevel1Alarm

Alarm Group

HLR Server

Severity

Minor

Description:

Alarm to monitor the number of transactions.

Effect

Set when the number of transactions reaches 50% of the 4000 available transactions.

Action

Contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

9052 - HlrTransactionLevel2Alarm

Alarm Group

HLR Server

Severity

Major

Description:

Alarm to monitor the number of transactions.

Effect

Set when the number of transactions reaches 75% of the 4000 available transactions.

Action

Contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

9053 - HlrTransactionLevel3Alarm

Alarm Group

HLR Server

Severity

Critical

Description:

Alarm to monitor the number of transactions.

Effect

Set when the number of transactions reaches 95% of the 4000 available transactions.

Action

Contact the Tekelec *Customer Care Center*.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

9137 - FeatureActivated

Alarm Group

HLR Server

Severity

Warning

Description:

This alarm is raised each time a feature/function of the Hlr has been activated (see description in next column for the list of features/functions). It is also raised each time the VLR link congestion feature goes from Disabled to Enabled and every time the IsdCompressed_percent/PrnSuppresse d_percent parameters are modified.

Effect

One of the following features/functions has been activated:

- SSR function
- Enhanced control of SCCP Routing parameters
- Update of SCCP Calling Address Only for Update Location

Or the VLR link congestion feature has gone from Disabled to Enabled or the IsdCompressed_percent/Prn Suppressed_percnt parameters have been modified.

For the ngHLR's behaviour when these features/functions are active/enabled, refer to the "Subscriber Signaling Router", "Enhanced Control of SCCP Routing (phase 1)" and "VLR link congestion" descriptions in the SDM Product Description.

Action

This alarm is simply for informational purposes to indicate to the Network Operator that a feature/function of the Hlr has been activated (see description in the Effect column for the list of features/functions). No further action is required.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

9138 - FeatureDeactivated

Alarm Group

HLR Server

Severity

Warning

Description:

This alarm is raised each time a Framework feature/function of the Hlr has been deactivated (see description in next column for the list of features/functions).

Effect

One of the following features/functions has been deactivated:

• SSR function
• Enhanced control of SCCP Routing parameters
• Update of SCCP Calling Address Only for Update Location

Or the VLR link congestion feature has gone from Disabled to Enabled or the IsdCompressed_percent/Prn Suppressed_percnt parameters have been modified.

Action

This alarm is simply for informational purposes to indicate to the Network Operator that a feature/function of the Hlr has been deactivated (see description in the Effect column for the list of features/functions). No further action is required.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

9143 - SriRoutingActivated

Alarm Group

HLR Server

Severity

Warning

Description:

SriRoutingActivated

Effect

The SRI Routing function is active.

Action

The alarm is simply for informational purposes to indicate to the Network Operator that the SRI Routing function is active. No further action is required.

Clear

This alarm can be acknowledged and cleared manually by the Network Operator. It can only be cleared from within the CLI.

9144 - SriRoutingDeactivated

Alarm Group

HLR Server

Severity

Warning

Description:

SriRoutingDeactivated

Effect

The SRI Routing function is not active.

Action

The alarm is simply for informational purposes to indicate to the Network Operator that the SRI Routing function is not active. No further action is required.

Clear

This alarm can be acknowledged and cleared manually by the Network Operator. It can only be cleared from within the CLI.

9250 - MnpActivated

Alarm Group

HlrServer

Severity

Warning

Description:

This alarm is raised when the Mobile Framework Number Portability (MNP) function is activated manually by the operator, or during the Hlr startup sequence if the MNP function is already activated (state is stored in the database).

Effect

The MNP function is active.

Action

This alarm is simply for informational purposes to indicate to the Network Operator that the MNP function is active. No further action is required.

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

9251 - MnpDeactivated

Alarm Group

HlrServer

Severity

Warning

Description:

Number Portability has been deactivated.

Effect

The MNP function is not active.

Received

MNP has been deactivated.

Action

This alarm is for informational purposes to indicate to the Network Operator that the MNP function is not active. No further action is required.

Clear

This alarm cannot be cleared manually by the Network Operator. The system will automatically clear it once the condition has been rectified.

9252 - MnpDbMismatchTypeA

Alarm Group

HlrServer

Severity

Warning

Description:

Number ported to another OLO.

Effect

None.

Action

Gather the relevant information in the corresponding log(s) (/blue/var/log/current.xml) of the active SystemController blade and take the appropriate corrective action.

Clear

This alarm can be manually cleared by the Network Operator from within the WebCI and CLI.

9253 - MnpDbMismatchTypeB

Alarm Group

HLR Server

Severity

Warning

Description:

Number is NOT ported in the network corresponding to the RgN.

Effect

None.

Action

Gather the relevant information in the corresponding log(s) (/blue/var/log/current.xml) of the active SystemController blade and take the appropriate corrective action.

Clear

This alarm can be manually cleared by the Network Operator from within the WebCI and CLI.

9254 - MnpDbMismatchTypeC

Alarm Group

HlrServer

Severity

Warning

Description:

Number ported to another OLO that is different from the Mobile Operator indicated by the RN.

Effect

None.

Action

Gather the relevant information in the corresponding log(s) (/blue/var/log/current.xml) of the active SystemController blade and take the appropriate corrective action.

Clear

This alarm can be manually cleared by the Network Operator from within the WebCI and CLI.

SS7 - Stack Manager alarms

Stack Manager alarms use the range 10100-10199.

10102 - GenericSS7SmEmergencyAlarm

Alarm Group

SS7 - Stack Manager

Severity

Major

Description:

This alarm is raised if a SS7 Bucket has exceeded the threshold.

Effect

The bucket has reached over the threshold of the available resource.

Action

Contact the Tekelec *Customer Care Center* for an investigation of the source of the problem, which could be a leak.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10103 - GenericSS7Alarm

Alarm Group

SS7 - Stack Manager

Severity

Critical

Description:

This alarm can be raised in the following two different scenarios:

Scenario 1:

This alarm is raised when a SS7 Bucket has exceeded the threshold for too long.

Scenario 2:

This alarm is raised when the Interphase device driver (SS7 card) is not detected by the Operating System.

Effect

Scenario 1:

The bucket has reached over the threshold of the available resources for the last 3 consecutive minutes. The ngHLR will be restarted

automatically.

Scenario 2:

The Tekelec Operating System cannot detect a blade's SS7 card and consequently the HLR service running on that blade won't restart.

Action

Scenario 1:

After the restart of the ngHLR, the available resource should be back to normal. Contact the Tekelec *Customer Care Center* for an investigation of the source of the problem.

Scenario 2:

- In the case where the MTP2 Layer is used, remove and re-install the blade. The blade on which the SS7 card cannot be detected must be physically removed from the SDM Chassis and at least 10 seconds must pass before re-installing the blade back into the chassis.
- In the case where only SIGTRAN is used (the MTP2 or SAAL Layers won't be used), disable the SS7Mtp2Layer and SS7SaalLayer in the configuration of the HLR service's ServiceInstance Option.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10105 - SS7NodeReady

Alarm Group

SS7 - Stack Manager

Severity

Warning

Description:

The Node is ready to be enabled.

Effect

The HLR service will start activating its HA functionality and SS7 stack layers.

Action

None, this message is for informational purposes.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10106 - SS7NodeEnabled

Alarm Group

SS7 - Stack Manager

Severity

Warning

Description:

The HLR service succesfully started its Framework HA functionality and SS7 stack layers.

Effect

The HLR service is started succesfully and is now ready for operation.

Action

None, this message is for informational purposes.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10107 - SS7NodeNotEnabled

Alarm Group

SS7 - Stack Manager

Severity

Warning

Description:

A problem occured during the initialization of the HLR service.

Effect

The HLR service will restart on that blade.

Action

None

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10108 - SS7NotAllRyUP

Alarm Group

SS7 - Stack Manager

Severity

Critical

Description:

Connectivity problem were found during Stack initialization, the HLR service will restart.

Effect

The HLR service will restart on that blade.

Action

The reason for the unsuccesfull start must be investigated. It may be possible to recover by stopping and restarting the HLR services on all the blades.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - Generic Alarms

SS7 generic alarms use the range 10200-10299.

10200 - CLEAR_OLD_ALARMS

Alarm Group

SS7 - Generic Alarms

Severity

Warning

Description:

CLEAR_OLD_ALARMS

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10212 - LCM_EVENT_SMEM_ALLOC_FAIL

Alarm Group

SS7 - Generic Alarms

Severity

Major

Description:

Static memory alloc fail

Effect

None

Action

This alarm must be manually cleared.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10213 - LCM_EVENT_DMEM_ALLOC_FAIL

Alarm Group

SS7 - Generic Alarms

Severity

Major

Description:

Dynamic memory alloc fail

Effect

None

Action

This alarm must be manually cleared.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - MTP2 layer alarms

SS7 MTP2 layer alarms use the range 10300-10399.

10300 - LSD_EVENT_ENTR_CONG

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Minor

Description:

Link entered congestion due to: management initiated or unknown reason.

Effect

None

Action

Adds capacity

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10301 - LSD_EVENT_EXIT_CONG

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Minor

Description:

Link leaving congestion due to: management initiated or unknown reason.

Effect

Will clear alarm 10300.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10302 - LSD_EVENT_PROT_ST_UP

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Major

Description:

Link is up at physical level.

Effect

Will clear alarm 10303.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10303 - LSD_EVENT_PROT_ST_DN

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Major

Description:

Link is down at MAC layer: due to management initiated or unknown reason.

Effect

Link is down.

Action

Verify physical connectivity with the far end office. See troubleshooting section 13.3 (ss7) of the user guide.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10311 - LSD_EVENT_REMOTE_CONG_START

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Minor

Description:

Remote end congestion (SIB received) started for unknown reason.

Effect
None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10312 - LSD_EVENT_REMOTE_CONG_END

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Minor

Description:

Remote end congestion stopped.

Effect

Will clear 10311.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10313 - LSD_EVENT_RX_REMOTE_SIPO

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Warning

Description:

Remote end processor outage started.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10314 - LSD_EVENT_RX_REMOTE_SIPR

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Warning

Description:

Remote end processor outage stopped

Effect

Will clear alarm 10313.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10315 - LSD_EVENT_TX_WINDOW_CONG_START

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Warning

Description:

Window congestion start.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10316 - LSD_EVENT_TX_WINDOW_CONG_END

Alarm Group

SS7 - MTP2 Layer Alarms

Severity

Warning

Description:

Window congestion stop.

Effect

Will clear alarm 10315.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - MTP3 layer alarms

SS7 MTP3 layer alarms use the range 10400-10499.

10400 - LSN_EVENT_PROT_ST_UP

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Major

Description:

Link is up.

Effect

Will clear alarm 10401.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10401 - LSN_EVENT_PROT_ST_DN

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Major

Description:

Link is down.

Effect

Link is down.

Action

Verify lower layer (MTP1 & MTP2). See troubleshooting section 13.3 (ss7) of the user guide.

OR

Verify lower layer (MTP1 & MTP2); try to manually activate the link. See troubleshooting section 13.3 (ss7) of the user guide.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10404 - LSN_EVENT_LOC_INH_ACK

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Warning

Description:

Link inhibited locally.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10405 - LSN_EVENT_REM_INH_ACK

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Warning

Description:

Link inhibited remotely.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10406 - LSN_EVENT_LOC_UNINHED

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Warning

Description:

Link uninhibited locally.

Effect

Will clear alarm 10404.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10407 - LSN_EVENT_REM_UNINHED

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Warning

Description:

Link uninhibited by remote end.

Effect

Will clear alarm 10405.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10411 - LSN_EVENT_RMT_BLKD

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Warning

Description:

Link remotely blocked.

Effect

Link is down.

Action

Try to unblock the far end.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10412 - LSN_EVENT_RMT_UNBLKD

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Warning

Description:

Link remotely unblocked.

Effect

Will clear alarm 10411.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10413 - LSN_EVENT_LOC_BLKD

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Warning

Description:

Link locally blocked.

Effect

Link is down.

Action

Try to locally unlock the link.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10414 - LSN_EVENT_LOC_UNBLKD

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Warning

Description:

Link locally unblocked.

Effect

Will clear alarm 10413.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10415 - LSN_EVENT_PAUSE

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Critical

Description:

DPC is not reachable.

Effect

All messages to this destination will be lost.

Action

Check route, combinedLinkset and linkset for for this dpc. Call far end office to see why DPC is unreachable.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10416 - LSN_EVENT_RESUME

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Critical

Description:

DPC is now reachable.

Effect

Will clear alarm 10415.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10417 - LSN_EVENT_CONG

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Minor

Description:

Concerned DPC network congested.

Effect

A DPC has experience congestion.

Action

Add capacity to this DPC.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10418 - LSN_EVENT_STPCONG

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Minor

Description:

Concerned DPC stop network congestion.

Effect

Will clear alarm 10417.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10419 - LSN_EVENT_RMTUSRUNAV

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Warning

Description:

Concerned DPC remote user unavailable.

Effect

Remote user (map, sccp, etc.) DPC is unavailable.

Action

Check far end.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10433 - LSN_EVENT_INV_OPC_OTHER_END

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Major

Description:

Invalid OPC configured on other end.

Effect

None

Action

Check far end OPC.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10434 - LSN_EVENT_INV_SLC_OTHER_END

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Minor

Description:

Invalid SLC configured on other end.

Effect

None

Action

Check far end SLC.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10439 - LSN_EVENT_DATA_DRP

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Major

Description:

Invalid DPC.

Effect

MTP3 layer not coming up because of an invalid DPC.

Action

Check if DPC is correctly configured.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10440 - LSN_EVENT_LSET_ACTIVE

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Major

Description:

Linkset is up.

Effect

Will clear alarm 10441.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10441 - LSN_EVENT_LSET_INACTIVE

Alarm Group

SS7 - MTP3 Layer Alarms

Severity

Major

Description:

Linkset is down.

Effect

All links to this linkset are down.

Action

Try to bring links associated to this linkset into service.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - SCCP layer alarms

SS7 SCCP layer alarms use the range 10500-10599.

10500 - LSP_EVENT_USER_INS

Alarm Group
SS7 - SCCP Layer Alarms

Severity
Critical

Description:
SccpUsap is in service.

Effect
Will clear alarm 10501.

Action
None, this message is for informational purpose.

Clear
This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10501 - LSP_EVENT_USER_OOS

Alarm Group
SS7 - SCCP Layer Alarms

Severity
Critical

Description:

SccpUsap is out of service.

Effect

SCCP routing out of service.

Action

Make sure TCAP sap is activated. If not, activate it. If the alarm persists, contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10505 - LSP_EVENT_HOP_VIOLATION

Alarm Group

SS7 - SCCP Layer Alarms

Severity

Warning

Description:

Hop counter violation.

Effect

HLR received a message with the hop count greater than the hop count setting in SCCP network sap.

Action

Make sure the hop count configuration is ok in SCCP. Network sap.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10506 - LSP_EVENT_ERROR_PERFORMANCE

Alarm Group

SS7 - SCCP Layer Alarms

Severity

Warning

Description:

1. SCCP Error Performance as per Q.752 Framework (dialogue allocation failure).
2. SCCP Error Performance as per Q.752 (SSN unequiped).
3. SCCP Error Performance as per Q.752 (no translation for this specific address).
4. Invocation of dialogue has failed at SCCP level.
5. SCCP Error Performance (remote SP is unavailable).

Effect

1. Message lost.
2. HLR received message with SSN that is not in is routing table.
3. HLR received message with Global Title that is not in its routing table.
4. Message lost.
5. The remote signaling point is not available.

Received: Alarm from:

SCCP

AlarmName:

LSP_EVENT_ERROR_PERFORMANCE [262]

AlarmDescription:

SCCP Error Pe CauseDescription:rformance

CauseName:

LSP_CAUSE_RMT_SP_INACC [291]

CauseDescription:

no extraInformation available./SCCP/0/LSP_CAUSE_RMT_SP: nwId=[], sw=[], dpc=[], ssn=[]

AlarmInformation

Remote sp inaccesible.

Action

Check the trafiic on the network and the state of the peers nodes. For software releases 4.1 and higher, verify if there are overload alarms raised. If the problem persists, contact the Tekelec *Customer Care Center*.

Check far end SCCP, and network configuration leading to it.

CauseDescription:

Remote sp inaccesible.

CauseName:

LSP_CAUSE_RMT_SP_INACC [291]

AlarmName:

LSP_EVENT_ERROR_PERFORMANCE [262]

Clear

This alarm cannot be cleared manually by the Network Operator, the system will automatically clear it once the condition has been rectified.

10508 - LSP_EVENT_RMT_SCCP_UNEQUIP

Alarm Group

SS7 - SCCP Layer Alarms

Severity

Warning

Description:

Remote SCCP unequipped.

Effect

None

Action

Check far end SCCP.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - TCAP layer alarms

SS7 TCAP layer alarms use the range 10600-10699.

10601 - LST_EVENT_MSG_FAIL

Alarm Group

SS7 - TCAP Layer Alarms

Severity

Major

Description:

This event is generated if an attempt to allocate/deallocate/add/remove a message buffer (dynamic memory) fails.

Effect

None

Action

Verify the state of the node and check for other alarms. If the traffic is not affected, clear the alarm. If the problem persists, contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10602 - LST_EVENT_ALOC_FAIL

Alarm Group

SS7 - TCAP Layer Alarms

Severity

Major

Description:

This event is generated if an attempt to allocate/deallocate a static buffer fails.

Effect

None

Action

Verify the state of the node and check for other alarms. If the traffic is not affected, clear the alarm. If the problem persists, contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10609 - LST_EVENT_ALOC_DLGID_FAIL

Alarm Group

SS7 - TCAP Layer Alarms

Severity

Major

Description:

This event is generated if no dialogue ID can be allocated for the new dialogue (component/data) request. This happens if the entire dialogue ID range is in use.

Effect

None

Action

Clear dialogs if the operation is available. Check the traffic on the network and the state of the peers nodes. For software releases 4.1 and higher, verify if there are overload alarms raised. If the problem persists, contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

10611 - LST_EVENT_MAX_CFG

Alarm Group

SS7 - TCAP Layer Alarms

Severity

Major

Description:

This event is generated if the maximum resource, configuration limit is reached, and no new resource (dialogue/invoke) can be allocated.

Effect

None

Action

Check the traffic on the network and the state of the peers nodes. For software releases 4.1 and higher, verify if there are overload alarms raised. If the problem persists, contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - MAP layer alarms

SS7 MAP layer alarms use the range 10700-10799

10701 - LMA_EVENT_ALOC_DLGID_FAIL

Alarm Group

SS7 - MAP Layer Alarms

Severity

Major

Description:

This event is generated if no dialogue ID can be allocated for the new dialogue (component/data) request. This happens if the entire dialogue ID range is in use.

Effect

None

Action

Check the traffic on the network and the state of the peers nodes. For software releases 4.1 and higher, verify if there are overload alarms raised. If the problem persists, contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - SG alarms

SS7 SG alarms use the range 10900-10999.

10903 - LSG_EVENT_FAILURE

Alarm Group

SS7 - SG Alarms

Severity

Warning

Description:

Generated when an error is encountered within the standby copy of the system manager while processing update messages from the active copy of the system manager.

Effect

None

Action

The standby copy of the System Manager must be made Out Of Service on receiving this alarm as it has lost synchronization with it's active counterpart.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - MR alarms

SS7 MR alarms use the range 11100-11199.

11100 - LMR_EVENT_MEMBUF_NOT_AVAIL

Alarm Group

SS7 - MR Alarms

Severity

Major

Description:

Memory not available.

Effect
None

Action

Verify the state of the node and check for other alarms. If the traffic is not affected, clear the alarm. If the problem persists, contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - RY Alarms

SS7 RY alarms use the region 11200-11299.

11201 - LRY_USTA_ERR

Alarm Group

SS7 - RY Alarms

Severity

Critical

Description:

Keep Alive timeout.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11204 - LRY_USTA_UP

Alarm Group

SS7 - RY Alarms

Severity

Critical

Description:

Channel up to remote processor.

Effect

Will clear alarm 11205.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11205 - LRY_USTA_DN

Alarm Group

SS7 - RY Layer Alarms

Severity

Critical

Description:

Channel down to remote processor with ChannelID=1.

Effect

RY channel down between two entities.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - SAAL alarms

S7 SAAL alarms use the range 11300-11399.

11300 - LSA_EVENT_PROT_ST_UP

Alarm Group

SS7 - SAAL Layer Alarms

Severity

Major

Description:

Link is up at MAC layer.

Effect

Will clear alarm 11301.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11301 - LSA_EVENT_PROT_ST_DN

Alarm Group

SS7 - SAAL Layer Alarms

Severity

Major

Description:

Link is down at MAC layer due to: management initiated or unknown reason.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11302 - LSA_EVENT_BEG_CONG

Alarm Group

SS7 - SAAL Layer Alarms

Severity

Warning

Description:

Congestion begin.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11303 - LSA_EVENT_END_CONG

Alarm Group

SS7 - SAAL Layer Alarms

Severity

Warning

Description:

Congestion end.

Effect

Will clear alarm 11302.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - M3UA alarms

SS7 M3UA Alarms use the range 11400-11499.

11403 - LIT_EVENT_SCT_COMM_DOWN

Alarm Group

SS7 - M3UA Layer Alarms

Severity

Major

Description:

The SCTP association has lost communication.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11404 - LIT_EVENT_ESTABLISH_OK

Alarm Group

SS7 - M3UA Layer Alarms

Severity

Major

Description:

The SCTP association is established successfully.

Effect

Will clear alarm 11403.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11405 - LIT_EVENT_ECLOSE_OK

Alarm Group

SS7 - M3UA Layer Alarms

Severity

Major

Description:

End Point closed successfully.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11406 - LIT_EVENT_EOPEN_OK

Alarm Group

SS7 - M3UA Layer Alarms

Severity

Major

Description:

Opening End Point is successful.

Effect

Will clear alarm 11405.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11407 - LIT_EVENT_ASP_NOT_ACTIVE

Alarm Group

SS7 - M3UA Layer Alarms

Severity

Major

Description:

The remote PSP or the local ASP is not ready to receive data.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11408 - LIT_EVENT_ASP_ACTIVE

Alarm Group

SS7 - M3UA Layer Alarms

Severity

Major

Description:

The ASP is ready to process signalling traffic for a particular AS.

Effect

Will clear alarm 11407.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11409 - LIT_EVENT_AS_NOT_ACTIVE

Alarm Group

SS7 - M3UA Layer Alarms

Severity

Major

Description:

The AS has moved to the AS-DOWN state.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11410 - LIT_EVENT_AS_ACTIVE

Alarm Group

SS7 - M3UA Layer Alarms

Severity

Major

Description:

The AS has moved to the AS-ACTIVE state.

Effect

Will clear alarm 11409.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11411 - LIT_EVENT_PC_UNAVAILABLE

Alarm Group

SS7 - M3UA Layer Alarms

Severity

Critical

Description:

The remote Signalling Point is unavailable.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11412 - LIT_EVENT_PC_AVAILABLE

Alarm Group

SS7 - MUA Layer Alarms

Severity

Critical

Description:

The remote Signaling Point is available.

Effect

Will clear alarm 11411.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SS7 - TUCL alarms

SS7 TUCL alarms use the range 11600-11699.

11610 - TuclTxqCongestionSet

Alarm Group

SS7 - TUCL Layer Alarms

Severity

Minor

Description:

Transmit queue congestion start.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11612 - TuclTxqCongestionClear

Alarm Group

SS7 - TUCL Layer Alarms

Severity

Minor

Description:

Transmit queue congestion stop.

Effect

Will clear alarm 11612.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11613 - TuclResCongestionSet

Alarm Group

SS7 - TUCL Layer Alarms

Severity

Minor

Description:

Resource congestion start.

Effect

None

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11615 - TuclResCongestionClear

Alarm Group

SS7 - TUCL Layer Alarms

Severity

Minor

Description:

Resource congestion stop.

Effect

Will clear alarm 11613.

Action

None, this message is for informational purpose.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

11616 - TuclSCTPPeerAddressAvailable

Alarm Group

SS7 - TUCL Layer Alarms

Severity

Minor

Description:

One of the multi-homing peer address is now available.

Effect

Will clear alarm 11617.

Action

None, this message is for informational purpose.

Clear

This alarm is a clear.

11618 - TuclSCTPPeerAddressMadePrimary

Alarm Group
SS7 - TUCL Layer Alarms

Severity

Minor

Description:

The multi-home peer address was made primary.

Effect

This alarm indicate what multi-home peer address is use as the primary.

Action

None, this message is for informational purpose.

Clear

This alarm can not be clear.

Node Manager alarms

Node Manager alarms use the range 14000-14099.

14000 - DiskSpaceWarning

Alarm Group

Node Manager Alarms

Severity

Warning

Description:

DiskSpaceWarning

Effect

The partition specified has exceeded the specified disk space threshold (60% full).

Action

Free up some disk space. Refer to "Viewing the Disk Space Usage" in the SDM Monitoring, Maintaining, Troubleshooting User Guide.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

14001 - DiskSpaceMinor

Alarm Group

Node Manager Alarms

Severity

Minor

Description:

DiskSpaceMinor

Effect

The partition specified has exceeded the specified disk space threshold (80% full).

Action

Free up some disk space. Refer to "Viewing the Disk Space Usage" in the SDM Monitoring, Maintaining, Troubleshooting User Guide.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

14002 - DiskSpaceMajor

Alarm Group

Node Manager Alarms

Severity

Major

Description:

DiskSpaceMajor

Effect

The partition specified has exceeded the specified disk space threshold (95% full).

Action

Free up some disk space. Refer to "Viewing the Disk Space Usage" in the SDM Monitoring, Maintaining, Troubleshooting User Guide.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SIP provisioning alarms

SIP provisioning alarms use the range 15000-15099.

15023 - SipSubscribersMaxReached

Alarm Group

SIP Provisioning Manager

Severity

Critical

Description:

The number of provisioned SIP subscribers, i.e. AORs, has reached the maximum number of total SIP subscribers allowed by the license.

Effect

The current and the subsequent provisionning AOR requests are rejected.

Action

Buy license.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

15024 - SipSubscribersThresholdReached

Alarm Group

SIP Provisioning Manager

Severity

Warning

Description:

The threshold for the number of provisioned SIP subscribers, i.e. AORs, has been reached.

Effect

There is no traffic impact.

Action

Increase treshold or buy license.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

HSS provisioning alarms

HSS provisioning alarms use the range 16000-16099.

16129 - HssSubscribersMaxReached

Alarm Group

HSS Provisioning Manager

Severity

Critical

Description:

The number of provisioned HSS subscribers has reached the maximum number of total HSS subscribers allowed by the license.

Effect

The current and the subsequent provisionning HSS requests are rejected.

Action

Buy license

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

16130 - HssSubscribersThresholdReached

Alarm Group

HSS Provisioning Manager

Severity

Warning

Description:

The threshold for the number of provisioned HSS subscribers has been reached.

Effect

There is no traffic impact.

Action

Increase treshold or buy license.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

16132 - SlfSubscribersMaxReached

Alarm Group

HSS Provisioning Manager

Severity

Critical

Description:

The number of provisioned SLF subscribers has reached the maximum number of total SLF subscribers allowed by the license.

Effect

The current and the subsequent provisionning SLF requests are rejected.

Action

Buy license.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

16133 - SlfSubscribersThresholdReached

Alarm Group

HSS Provisioning Manager

Severity

Warning

Description:

The threshold for the number of provisioned SLF subscribers has been reached.

Effect

There is no traffic impact.

Action

Increase treshold or buy license.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

16135 - AaaSubscribersMaxReached

Alarm Group

HSS Provisioning Manager

Severity

Critical

Description:

The number of provisioned AAA subscribers has reached the maximum number of total AAA subscribers allowed by the license.

Effect

The current and the subsequent provisionning AAA requests are rejected.

Action

Buy license.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

16136 - AaaSubscribersThresholdReached

Alarm Group

HSS Provisioning Manager

Severity

Warning

Description:

The threshold for the number of provisioned AAA subscribers has been reached.

Effect

There is no traffic impact.

Action

Increase treshold or buy license.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

IMS/LTE HSS

IMS/LTE HSS alarms use the range 17000-17299.

17001 - LostPeerConnection

Alarm Group

IMS/LTE HSS

Severity

Major

Description:

The connection between the IMS/LTE HSS and a peer node is down.

Effect

The IMS/LTE HSS service may not be operational.

Action

Verify that the state of the network or verify that the peer node is in service.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

17002 - CongestionDetected

Alarm Group

IMS/LTE HSS

Severity

Warning

Description:

The IMS/LTE HSS has detected congestion in the Diameter network traffic.

Effect

Level 1 means that messages are received but we send an immediate DIAMETER_TOO_BUSY response. Level 2 means that messages are discarded without a response.

Action

Verify that the Diameter nodes in the network are properly configured.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

17017 - NoHandlerInstance

Alarm Group

IMS/LTE HSS

Severity

Warning

Description:

There is an outgoing message (PPR, RTR, PNR/ CLR, DSR, IDR) which is supposed to be sent to a SCSCF/ MME/SGSN with the given host/realm, but no IMS/LTE HSS instance has been found to which that S-CSCF/MME/SGSN is connected.

Effect

As a result, the message is discarded.

Action

Verify if the S-CSCF/MME/SGSN is connected to the IMS/LTE HSS; if so, disconnect and reconnect that SCSCF/ MME/SGSN.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

17102 - AAACongestionDetected

Alarm Group

IMS/LTE HSS

Severity

Warning

Description:

The number of messages received has caused the AAA message handling to be affected.

Effect

Level 1 means that messages are received but we send an immediate RADIUS_TOO_BUSY response. Level 2 means that messages are discarded without a response.

Action

No action. If this alarm is raised often on a regular basis, contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

17200 - DnsCongestionDetected

Alarm Group

IMS/LTE HSS

Severity

Warning

Description:

The number of messages received has caused the DNS message handling to be affected.

Effect

Level 1 means that messages are received but we send an immediate ServFail response. Level 2 means that messages are discarded without a response.

Action

No action. If this alarm is raised often on a regular basis, contact the Tekelec *Customer Care Center*.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

SIP UA alarms

SIP UA alarms use the range 18000-18099

18002 - TimeslotOverflow

Alarm Group

SIP UA

Severity

Major

Description:

The SIP UA has encountered an error while performing refresh of registrations.

Effect

Some SIP UA registrations may temporarily expire.

Action

Verify the configuration of the FMC-SIP feature. If possible, lengthen SipUa registration expiry time.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

18003 - RegisterExpiresTooSmall

Alarm Group

SIP UA

Severity

Minor

Description:

The registration expiry time received by the SIP UA is lower than the acceptable limit.

Effect

SIP UA registrations will expire prior to being refreshed. Service degradation will occur.

Action

Lengthen the registration expiry time of the SIP peer node.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

18004 - CscfTimeout

Alarm Group

SIP UA

Severity

Critical

Description:

A SIP UA registration attempt encountered a network error or a timeout.

Effect

Request timeout (no answer received from registrar).

Action

Verify the network connections between nodes.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

18022 - ConfigurationFailure

Alarm Group

SIP UA

Severity

Critical

Description:

There is an error with the configuration of the SIP UA.

Effect

The SIP UA service may not be operational or only partially operational.

Action

Verify that the configuration of the SIP UA is correct and restart Hlr service.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

18023 - IpAddressFailure

Alarm Group

SIP UA

Severity

Critical

Description:

Failed to create SIP UA IP address.

Effect

The SIP UA IP address could not be created. The SipUa may not be operational.

Action

Verify that IP address specified for SIP UA is correct and restart Hlr service.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

18025 - ActiveSipSubscribersMaxReached

Alarm Group

SIP UA

Severity

Critical

Description:

The number of active SIP UA subscribers, i.e. registration bindings, has reached the maximum number of active SIP subscribers allowed by the license.

Effect

There is no traffic impact.

Action

Buy license.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

18026 - ActiveSipSubscribersThresholdReached

Alarm Group

SIP UA

Severity

Warning

Description:

The threshold for the number of SIP UA active subscribers, i.e. registration bindings, has been reached.

Effect

There is no traffic impact.

Action

Increase threshold or buy license.

Clear

This alarm can be cleared manually by the Network Operator once it has been acknowledged and once the condition has been rectified.

Glossary

C

CPU   Central Processing Unit

D

DB   Database

DPC   Destination Point Code

DPC refers to the scheme in SS7 signaling to identify the receiving signaling point. In the SS7 network, the point codes are numeric addresses which uniquely identify each signaling point. This point code can be adjacent to the EAGLE 5 ISS, but does not have to be.

O

OLO   Other Licensed Operator

R

RN   Routing Number

S

SCCP   Signaling Connection Control Part

SIP   Session Initiation Protocol

SLF   Subscription Locator Function