



WaveStar® Integrated Transport Management Subnetwork Controller (ITM-SC) Release 11.3

Alarm Messages and Trouble Clearing Guide

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Lucent Technologies - Proprietary

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Notice

Every effort has been made to ensure that the information in this document was complete and accurate at the time of printing. However, information is subject to change.

Mandatory customer information

Overview EMC/ESD Safety

The EMC/ESD boundary has been defined at Rack/Subrack level. The principle is based on the "Faraday Cage" theory. If there are doors, then the doors must be closed. With every rack/subrack an ESD (electrostatic discharge) earth socket and an ESD sticker are supplied. On the Rack frame ETSI an ESD bonding point for an ESD wrist strap is present. It is mounted in a way that it's always accessible for installation, normal operation and maintenance activity.

Wrist Strap

The wrist strap must be worn when opening the Subrack doors.

Electrostatic Sensitive Devices

The equipment described in this guide contains static sensitive devices. Electrostatic Discharge Precautions should be taken when operating or working on this equipment.

Special handling precautions apply whenever installing or removing parts of the equipment include:

- Leaving components or equipment in original packaging until required for use.
- Removing plug-in units with previously discharged hands (e.g. using grounded wrist straps connected to the ESD Bonding Point on the Cabinet).
- Returning items for repair in suitable antistatic packaging.

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GL Glossary

GL-1



About this information product

Purpose The purpose of the Alarm Messages and Trouble Clearing Guide (AMTCG) is to provide the maintenance personnel with all information necessary to solve the alarms in a specific Network Element (NE), using the Integrated Transport Management-Subnetwork Controller (ITM-SC). The AMTCG is a network oriented manual and will be shipped to all sites where an ITM-SC is available. The philosophy behind the maintenance of NEs within a network is that the network is already installed, configured and service has been provided to the network after first installation.

Reason for reissue First issue.

Safety labels Safety guidelines are not applicable for the ITM-SC.

Intended audience This document is intended for maintenance personnel who take care of the daily activities on NEs, using the ITM-SC.

Maintenance personnel have to perform the following:

- Identify alarms and/or performance degradation
- Gather information about the alarms and/or performance degradation
- Interpret alarm information: alarm location alarm priority (service affecting)

- correlate alarms tasks: set priorities in case of multiple alarms
- Resolve alarms: determine strategies for correcting alarms and the consequences of these strategies; determine when best time to correct problems (depending on alarm severity); make an action plan to correct alarms or performance degradation; divide tasks for execution of action plan
- Request to re-route traffic when sources are not available
- Instruction to replace system parts
- Instruction to perform specific measurements that can be used for analyzing the problem
- Check results of action plan and instructions
- Restore the original network configuration when re-routing was necessary to correct the problem
- Perform preventive maintenance: gather performance data for preventive maintenance; schedule tests/self-tests; switch to protection parts if necessary to take corrective action.

How to use this information product

The Alarm Messages and Trouble Clearing Guide (AMTCG) is divided into a number of chapters.

This guide is divided into the following chapters:

- About this guide: Brief description over how to use this guide.
- Alarm Messages: This chapter holds an alphabetic list of all alarms for the *WaveStar*[®] ITM-SC
- Glossary: In this chapter all the special terms and all the abbreviations and acronyms, used in this manual, are listed.

Conventions used

The samples of windows shown in this guide are examples of typical windows. The contents (text) on a window as well as the window itself may differ from the window displayed on the ITM-SC.

This guide will use the following notations



Suggests the possibility of a personal injury



CAUTION

Suggests the possibility of service interruption



WARNING

Suggests the possibility of equipment damage or software corruption

Important! Gives supplementary information

Related documents

The following documents are network element (NE) related:

- For more detailed information of an NE system, technical characteristics, features, cross-product interworking and system planning and engineering, refer to the: Applications and Planning Guide
- For information on physical installation of an NE and for connecting the cabling, refer to the: NE Installation Guide
- For information on provisioning and maintenance of the NE with the use of the Craft Interface Terminal (CIT), refer to the: User Operation Guide

The following documents are Subnetwork Controller related:

- For more detailed information of the ITM-SC, technical characteristics, features, cross-product interworking and system planning and engineering, refer to the: *WaveStar*[®] ITM-SC Applications and Planning Guide
- For information on installation of the ITM-SC, refer to the: *WaveStar*[®] ITM-SC Installation Guide
- For information on how to give users access to the ITM-SC and to backup and restore databases, refer to the: *WaveStar*[®] ITM-SC Administration Guide
- For information on provisioning of the NEs with the use of the ITM-SC, refer to the: *WaveStar*[®] ITM-SC Provisioning Guide
- For information on maintenance of the NEs with the use of the ITM-SC refer to the: *WaveStar*[®] ITM-SC Maintenance Guide.

The following table lists the documents included in the *WaveStar*[®] ITM-SC documentation set, and related engineering drawings.

Document title	Document code
<i>WaveStar</i> [®] ITM-SC Release 11.3 Applications and Planning Guide	109549840 (365-312-536R11.3)
<i>WaveStar</i> [®] ITM-SC Release 11.3 Installation Guide	109549857 (365-312-537R11.3)
<i>WaveStar</i> [®] ITM-SC Release 11.3 Maintenance Guide	109549865 (365-312-538R11.3)
<i>WaveStar</i> [®] ITM-SC Release 11.3 Administration Guide	109549873 (365-312-539R11.3)
<i>WaveStar</i> [®] ITM-SC Release 11.3 Alarm Messages and Trouble Clearing Guide	109549881 (365-312-540R11.3)
<i>WaveStar</i> [®] ITM-SC Release 11.3 Customer Documentation on CD-ROM	109549832 (365-312-541R11.3)

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1 ITM-SC Alarm Messages

Overview

Purpose This chapter contains a description of all alarms related to ITM-SC failures. It gives instructions for correcting failures, and it also provides maintenance personnel with procedures for tracing possible faults in the ITM-SC.

Reference to ITM-SC administrator When the term System Administrator is used, always a reference to the ITM-SC System Administrator ("i2kadmin") is made. In general no actions of the actual System Administrator ("root") of the platform are required.



About Alarm Messages

Format of alarm descriptions

Each alarm message is described in a table. The alarm message descriptions are listed in alphabetical order by the message text reported by the EMS.

Alarm Data	What it means
Mnemonic	Shows the fault Identifier.
Information	Explains the alarm and supplies additional information about the function of the equipment.
Severity	States the default severity of the alarm message. An alarm message can have the following severities: <ul style="list-style-type: none"> • PROMPT • DEFERRED • INFORMATION.
Category	Describes the type of failure, focusing on the origin of the failure. <ul style="list-style-type: none"> • MANAGEMENT messages indicate a lack of communication or control of the EMS by the Transmission System. • EMS messages relate to the EMS itself, such as EMS database failures or communication failures with an NMU.
Local results	Describes visual and audible indicators generated at the place the fault occurs, for example, unit LED is on. These indicators are always generated at the NE location. <p>Use this information to inform the Maintenance Technician about what to expect, and what to check before performing corrective actions. Depending on the severity of the alarm, one of the following LEDs on the user panel is on: PROMPT, DEFERRED or INFO.</p> <p>The LED description for each alarm message depends on the default severity. If the default severity is changed then this information is not valid anymore.</p> <p>Station Alarm Interface information is not given on individual alarm messages. Using the Station Alarm Interface depends on the settings and configuration at your location.</p>

Alarm Data	What it means
Cause	Refers to the cause of the alarm and gives more information about why the message was generated. Gives more details on the origin of the fault which helps you to understand and solve difficult problems.
Actions	States actions that may help solve the problem, or suggests running certain tests for further failure origin investigation. The Maintenance Operator can combine these actions into a trouble ticket and delegate them to the Maintenance Technician.
Note	Alerts the Maintenance Operator on side effects and things that need to be kept in mind when doing the corrective action.



A disk has failed

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_DISK_FAILED
Information	The indicated disk has failed.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The disk is no longer usable.
Cause	Power may have been removed from the disk. The disk may have been removed. The disk may have a hardware problem.
Actions	Ask the system administrator to investigate what the cause of the problem is and take corrective action.
Note	



A protection switch occurred on a cross connection

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	PROTECTION_SWITCH_EVENT
Information	A protection switch has occurred on a VC12, VC3 or VC4 cross connection at the indicated NE.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	None. Information that a protection switch has occurred at a NE only.
Cause	An automatic switch or a manual command caused traffic to be swapped between the worker and protection sides of the cross connection.
Actions	Check the protection switch information screens for the indicated NE to obtain further details.
Note	



Abnormal EMS shutdown

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ABNORMAL_EMS_SHUTDOWN
Information	The EMS stopped managing the network due to a failure in the management system.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	The network is no longer managed via this EMS.
Cause	An overload occurred in the EMS.
Actions	Ask System Administrator to restart EMS.
Note	



Add Protection operation aborted due to peer link failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_REQUEST_ABORTED_ADD
Information	Add Protection failed to complete due to the peer to peer link failing.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The Add Protection operation is incomplete. Until peer connectivity is re-established, the peers may be in an inconsistent geographic redundancy state due to the operation partially completing.
Cause	Peer to peer link failing.
Actions	None. For information only.
Note	



A LAN card on the indicated client is reporting TCP/IP problems

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_TCPIP_PROBLEMS
Information	The indicated LAN card on the indicated client is reporting TCP/IP errors.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The ITM-SC may have performance problems.
Cause	There may be a faulty wire/connection in the TCP/IP LAN or faulty LAN card.
Actions	If the symptoms persist, then investigate what is causing the TCP/IP problems.
Note	



Alarm History log on NE deleted while attempting to read

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ALRM_HIST_LOG_DELETED_ON_READ
Information	The alarm history log on the NE was deleted when the ITM-SC attempted to retrieve its contents during re-association.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Alarm information stored in the NE alarm history log has been lost. The ITM-SC has initiated a full re-evaluation of fault status for the NE. This means that the ITM-SC will retrieve details of all alarms raised on the NE at the time of re-association. However, the alarm raise or clear times of some alarms raised or cleared during loss of association may not be recovered.
Cause	This is due to an interface error which arose when the ITM-SC attempted to retrieve its contents during re-association.
Actions	None. Re-evaluate fault status will be performed automatically.
Note	



Alarm History log on NE has been reset

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ALRM_HIST_LOG_RESET
Information	The alarm history log on the NE has been deleted and reset since the last recovery.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The NE Alarm history log may not hold a complete record of alarm information since last recovered. The ITM-SC has initiated a full re-evaluation of fault status for the NE. This means that the ITM-SC will retrieve details of all alarms raised on the NE at the time of re-association. However, the alarm raise or clear times of some alarms raised or cleared during loss of association may not be recovered.
Cause	The alarm history log on the NE has been deleted and reset since the last recovery.
Actions	None. Re-evaluate fault status will be performed automatically.
Note	



Alarm History Recovery aborted

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ALRM_HIST_RCVRY_ABORT
Information	Alarm raise of clear notifications reported by a NE during Alarm History Recovery have been received intermittently out of sequence at the ITM-SC.
Severity	PROMPT (default)
Category	MANAGEMENT
Alarm indications	Association with the NE has been released. The Alarm History Recovery for this NE has been automatically disabled.
Cause	This is due to either too many alarms being received at the same at the ITM-SC, or intermittent reading and overflowing of the NE alarm history log during recovery.
Actions	Re-enable association with the NE ensuring Alarm History Recovery is disabled. This will re-evaluate all outstanding alarms on the NE without attempting to read the NE alarm history log.
Note	Their correct raise and clear times cannot be retrieved.



An unauthorized access attempt has been made

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_ILLEGAL_ACCESS
Information	An unauthorized attempt was made to access the indicated server.
Severity	PROMPT (default)
Category	EMS
Alarm indications	Someone unauthorized may be trying to access the indicated server.
Cause	Someone unauthorized may be trying to access the indicated server.
Actions	Check the system log file for details. Notify your security representative.
Note	



Association Loss Switch operation aborted due to peer link failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_REQUEST_ABORTED_ASSOC_LOSS
Information	Association Loss Switch failed to complete due to the peer to peer link failing.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The geographic redundancy operation is incomplete. Until peer connectivity is re-established, the peers may be in an inconsistent geographic redundancy state due to the operation partially completing.
Cause	Peer to peer link failing.
Actions	None. For information only.
Note	



Association released by Disable Management operation

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	MANUAL_RELEASE
Information	Communication with a previously managed NE has been manually disabled.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Alarm indications in the originator of the alarm message.
Cause	The communication to a previously managed NE has been disabled.
Actions	None.
Note	



Association released due to the NE database being busy

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	CTLOVERALSTATE_BUSY
Information	The ITM-SC's attempt to associate with the NE has failed during the check to determine whether the database is busy.
Severity	PROMPT (default)
Category	MANAGEMENT
Alarm indications	The NE is not being managed by the ITM-SC.
Cause	The NE is performing some internal activity, which is causing the database state to be busy.
Actions	Drop the association and try again later.
Note	



Association released due to software version mismatch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	SOFTWARE_VERSION_MISMATCH
Information	NE software version mismatch.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Alarm indications generated in the originator of the alarm message.
Cause	The version of the NE software is not supported by the current release of the EMS.
Actions	Verify the version of the NE software. Check that the version of the NE software matches the expected version by the EMS release.
Note	Contact Lucent Technologies Customer Technical Support if the version of the NE software does not match the expected version by the EMS release.



Automatic GR switch taking place - NE being switched to secondary

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_AUTO_SW_START
Information	A NE is undergoing an automatic switch of management to the secondary ITM-SC as the current ITM-SC has lost the association with the NE and cannot reassociate with it.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Secondary ITM-SC is trying to gain management control of the NE, current ITM-SC has geographic redundancy management status of 'No Control'.
Cause	Loss of association with the NE for a confirmed period of time, automatic geographic redundancy switch to secondary ITM-SC has started.
Actions	Alarm raised to indicate the management control of a NE is being switched from the current ITM-SC. If secondary ITM-SC cannot perform a successful MIB upload from the NE then management control will be returned to the current ITM-SC.
Note	Alarm raised on the primary system.



Cannot resolve GR state - link forced to failed state

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_STATE_ILLEGAL
Information	Extreme error. When established the link between peer ITM-SC systems, errors were encountered which the rules for state resynchronization could not resolve.
Severity	PROMPT (default)
Category	EMS
Alarm indications	Peer to peer link goes to failed state.
Cause	Most likely cause is database restore of one of a pair of peers with an inconsistent database to the other. Other possible cause is a software bug.
Actions	System Administrator should examine EMS error log to determine which node caused the error.
Note	If the cause of the error is not obvious and cannot easily be resolved, Lucent Technologies Customer Technical Support should be contacted.



CIT login detected

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	CIT_LOGIN
Information	A CIT user has logged into a NE.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	A CIT user has logged into a NE and may change its configuration.
Cause	
Actions	Check CIT Access List to determine whether login is legitimate. Log out may be forced if required.
Note	



Communication with NE released due to the failure of NE type check

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	NE_TYPE_FAILURE
Information	On attempting to associate with a NE, the ITM-SC's check of the NE type failed.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The association with the NE is dropped and the NE is unmanageable by the ITM-SC.
Cause	The NE that ITM-SC is attempting to associate with is of a different type to that expected.
Actions	Check the NSAP address of the NE. If wrong, delete the NE and repeat the operation. Alternatively if the NSAP is correct, delete the NE and repeat the operation specifying the correct NE type.
Note	Contact Lucent Technologies Customer Technical Support if the NE type check still fails and the NSAP address is correct.



Confirmed loss of link to Peer ITM-SC

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_PEER_LINK_LOSS
Information	The connection used to send information between peer ITM-SC has been lost for the 'Confirmed Link Loss Period' (default 5 minutes).
Severity	PROMPT (default)
Category	EMS
Alarm indications	ITM-NM data updates no longer transferred to peer manager. The local ITM-SC will attempt to gain management of the NEs that it is protecting for the remote ITM-SC, and similarly the remote ITM-SC will be doing the same.
Cause	The communications line has been damaged or equipment at either end is faulty. Also the remote ITM-SC may not be operational.
Actions	Check the connection between peer ITM-SCs. If the fault is repaired, communications between the peer ITM-SCs will be restored. If you do not want the peer ITM-SCs to attempt automatic switches due to loss of peer to peer communication, get a user on the peer system to disable geographic redundancy for the NEs involved.
Note	



Connection to Peer ITM-SC refused: Incompatible software versions

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_BAD_SW_VERSIONS
Information	On link establishment the peers detected different software versions.
Severity	PROMPT (default)
Category	EMS
Alarm indications	No geographic redundancy protection is available from that peer.
Cause	One (but not both) peer has been upgraded to an incompatible software version. Geographic redundancy is impossible until both peers are running the same software version again.
Actions	System Administrator should upgrade the out of date ITM-SC to the new software version.
Note	



Creation of NE failed

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	NE_CREATE_NODE_FAIL
Information	The attempt to create the NE failed.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The NE has not been configured as requested and is unmanageable by the ITM-SC.
Cause	The NE was unable to configure itself in line with the configuration sent by the manager.
Actions	Check that the configuration is compatible with the NE.
Note	Contact Lucent Technologies and provide information about the NE type and the configuration.



Creation of NE from template or pre-provisioning failed

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	DB_INVALID_MIBSTATE_RE_ASSOC
Information	The NE has not configured itself in line with the request sent by the manager.
Severity	PROMPT (default)
Category	MANAGEMENT
Alarm indications	The NE is no longer managed by the ITM-SC.
Cause	The template or pre-provisioning data sent to the NE was not compatible with the NE type.
Actions	For a pre-provisioned NE or user-defined template, reconfigure it according to the NE type. For a factory-defined template, if possible create a user-defined template from it and then configure this template.
Note	



Current list absolute limit exceeded

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LIST_ABS_LIMIT_EXCEEDED
Information	The maximum number of alarms stored in the EMS Current Alarm list exceeds a configured value. This limit is set by the System Administrator.
Severity	DEFERRED (default)
Category	EMS
Alarm indications	The operation of the EMS is affected. If the absolute limit is exceeded, 15% of the cleared alarms are moved from the Current Alarm List to the History List automatically.
Cause	This is generated to indicate that the Current Alarm List is full.
Actions	Instantaneous alarm. No clearing action required.
Note	Contact your System Administrator if the absolute limit should be reconfigured to another value.



Current list threshold exceeded

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LIST_THOLD_EXCEEDED
Information	The alarms stored in the EMS Current Alarm List exceeds a configured value. This limit is set by the System Administrator.
Severity	DEFERRED (default)
Category	EMS
Alarm indications	The effects in the long term affect the operation of the EMS.
Cause	This is generated to indicate that the Current Alarm List is becoming full.
Actions	The cleared alarms should be deleted from the Current Alarm List manually. The extent of the deletion depends upon maintenance strategies, for example, deleting all cleared alarms that have been in the Current Alarm List for a certain length of time. This should be done as part of routine EMS maintenance. When the alarm store size has dropped to 75% of the threshold value, this alarm is cleared.
Note	Contact your System Administrator if the warning threshold should be reconfigured to another value.



Database archive failed - archive timed out

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ON_LINE_ARCHIVE_FAIL_TIMEOUT
Information	An archive request has failed due to the archive process timing out.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	If archive to tape, tape should not be stored.
Cause	Either the Informix archive process (tbtape) took more than 1 minute to start or the archive took longer than 12 minutes.
Actions	If situation persists, shut ITM-SC down and perform an immediate archive.
Note	



Database archive failed - insufficient bandwidth to remote host

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ON_LINE_ARCHIVE_FAIL_BANDWIDTH_LOW
Information	An archive request has failed due to insufficient bandwidth to the remote host.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	If archive to tape, tape should not be stored.
Cause	Insufficient bandwidth to remote host where database archive is to be stored.
Actions	Increase bandwidth to remote host
Note	-



Database archive failed - insufficient disk space available

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ON_LINE_ARCHIVE_FAIL_DISK_SPACE
Information	An archive request has failed due to insufficient disk space in the file system containing the specified archive directory.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	If archive to tape, tape should not be stored.
Cause	Insufficient disk space in the file system containing the specified archive directory.
Actions	Create more space in the file system containing the specified archive directory (e.g. by deleting old archives). If this is not possible, select another directory with sufficient space.
Note	-



Database archive failed - MIB upload/download in progress or NE controller card busy

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ON_LINE_ARCHIVE_FAIL_MIB_CTL_BUSY
Information	An archive request has failed due to MIB upload or download in progress or network controller card busy.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	If archive to tape, tape should not be stored.
Cause	MIB upload or download in progress or NE controller card busy.
Actions	Check MIB unlocked and NE controller card not busy and either wait for next periodic archive or request an immediate archive.
Note	



Database archive to tape failed - non-database archive on the tape

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ON_LINE_ARCHIVE_FAIL_TAR
Information	An archive request has failed due to the tape in the tape device containing a non-database archive.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	If archive to tape, tape should not be stored.
Cause	The tape in the tape device containing a tape archive from another subsystem.
Actions	Replace the tape in the tape device with either a new tape or a tape which was previously used for database archives.
Note	



Disable Protection operation aborted due to peer link failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_REQUEST_ABORTED_DISABLE
Information	Disable Protection failed to complete due to the peer to peer link failing.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The Disable Protection operation is incomplete; until peer connectivity is re-established, the peers may be in an inconsistent geographic redundancy state due to the operation partially completing.
Cause	Peer to peer link failing.
Actions	None. For information only.
Note	



Detection of incomplete alarm information

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	INCOMPLETE_ALARM_INFO_DETECTED
Information	An alarm raise or clear notification reported by a managed NE has been received out of sequence at the ITM-SC.
Severity	PROMPT (default)
Category	MANAGEMENT
Alarm indications	One or more alarm raise or clear notifications from the NE have been lost.
Cause	This may be due either to problems with the DCN network, or too many alarms reported at the same time.
Actions	Update the MIB Image of the NE with Alarm History Discovery disabled. This will re-evaluate all outstanding alarms on the NE. Note their correct raise and clear times cannot be retrieved.
Note	



Detection of incomplete alarm information during Alarm History Recovery

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	INCOMPLETE_ALARM_HIST_RCVRY
Information	An alarm raise or clear notification reported by a NE during Alarm History Recovery has been received out of sequence at the ITM-SC.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	A re-evaluation of fault status is automatically performed for that NE. The alarm raise or clear times of some alarms raised or cleared during loss of association may not be recovered.
Cause	This could be due to an overflow of the NE alarm history log during loss of association. Otherwise this may be due either to problems with the DCN network, or too many alarms reported at the same time.
Actions	None. Re-evaluate fault status will be performed automatically.
Note	



Enable Management operation failure - Association Released

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ASSOC_FAILURE
Information	Management with a previously managed NE cannot be enabled.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Alarm indications in the originator of the alarm message.
Cause	Card failure. Removal or severance of one or more optical fibres. LAN interface failure. LAN terminating impedance removed. Additional equipment installed on a shared LAN.
Actions	Identify the cause of the alarm and correct it.
Note	



Enable Protection operation aborted due to peer link failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_REQUEST_ABORTED_ENABLE
Information	Enable Protection failed to complete due to the peer to peer link failing.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The Enable Protection operation is incomplete; until peer connectivity is re-established, the peers may be in an inconsistent geographic redundancy state due to the operation partially completing.
Cause	Peer to peer link failing.
Actions	None. For information only.
Note	



Expired alarms deleted

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	EXP_ALARMS_DELETED
Information	Periodic deletion of history alarms which have been cleared for longer than a user configurable time (default = 10 days).
Severity	DEFERRED (default)
Category	EMS
Alarm indications	Expired alarms are removed from the history list.
Cause	Cleared alarms in the history list expiring.
Actions	Instantaneous alarm - no clearing.
Note	The deletion of expired alarms can be disabled.



Failed to associate with new node

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	NEW_NODE_ASSOC_FAILED
Information	Communication to a new created NE is not possible.
Severity	DEFERRED (default)
Category	MANAGEMENT
Alarm indications	It is not possible to manage the new NE.
Cause	Some impediment is stopping correct communication between the EMS and the NE.
Actions	<p>Check for communications addresses being correct.</p> <p>Check for correct gateway NE identification.</p> <p>Check that line port units of all NEs through which the Data Communication Channel (DCC) is needed are in service.</p> <p>Check that the new NE has all cards installed properly and that the correct version of software is installed on the new system controller card of the NE.</p>
Note	



Failed to associate with previously managed node

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	EXISTING_NODE_ASSOC_FAILED
Information	Communication with a previously managed NE has stopped working.
Severity	PROMPT (default)
Category	MANAGEMENT
Alarm indications	It is not possible to manage the NE.
Cause	Card failure. Removal or severance of one or more optical fibres. LAN interface failure. LAN terminating impedance removed. Additional equipment installed on a shared LAN.
Actions	Identify the cause of the alarm and correct it.
Note	



Failed to recover association

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ASSOC_RECOVERY_FAILED
Information	Communication between the EMS and a NE cannot be recovered.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Management communications to the two involved parties ceases until the association is recovered.
Cause	Addresses incorrect following card replacement Breakages of optical fibres which stops DCC communications Ethernet connections failure Ethernet termination impedances removed or incorrect causing data reflections on the LAN.
Actions	Identify the cause of the alarm and correct it.
Note	



Filesystem has exceeded its allocated maximum disk space

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_FSHIGHWATER_EXCEEDED
Information	The total “blocks in use” of a filesystem exceeds the higher threshold.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The filesystem is running out of space.
Cause	The files in the filesystem have taken up all their allocated disk space.
Actions	Contact the system administrator.
Note	



Filesystem has exceeded its allocated maximum number of files

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_INODEHIGHWATER_EXCEEDED
Information	The total “I-Nodes in use” of a filesystem exceeds the higher threshold.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The filesystem is running out of I-nodes.
Cause	There are too many files for the filesystem to handle.
Actions	Contact the system administrator.
Note	



Filesystem is approaching its upper limit for number of files

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_INODELOWWATER_EXCEEDED
Information	The total “I-nodes in use” of a filesystem exceeds the lower threshold.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	The filesystem is close to running out of I-nodes.
Cause	There are too many files in the filesystem.
Actions	Contact the system administrator.
Note	



File system is approaching the upper limit for disk space

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_FSLOWWATER_EXCEEDED
Information	The total “blocks in use” of a file system exceeds the lower threshold.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	The file system is close to running out of disk space.
Cause	The files in the file system are taking up too much space.
Actions	Contact the system administrator.
Note	



File system is unmounted

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_FSUNMOUNTED
Information	A file system is no longer mounted.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The file system can no longer be accessed.
Cause	A file system is no longer mounted.
Actions	Contact the system administrator to find out why the file system is no longer mounted.
Note	



Free swap space is running low

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_SWAP_LOW
Information	The amount of pseudo-swap in use has risen above a pre-determined limit.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The ITM-SC may fail due to a lack of memory.
Cause	The system is running out of memory.
Actions	Ask the system administrator to investigate what the cause of the problem is and take corrective action.
Note	



GR operation aborted due to peer link failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_REQUEST_ABORTED
Information	A geographic redundancy operation failed to complete due to the peer to peer link failing.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The geographic redundancy operation is incomplete; until peer connectivity is re-established, the peers may be in an inconsistent geographic redundancy state due to the operation partially completing.
Cause	Peer to peer link failing.
Actions	None. For information only.
Note	



GR Protection Disabled for NE on peer link re-establishment

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_PROT_DISABLED_RESYNC
Information	The geographic redundancy Protection has been disabled for the NE on the peer ITM-SC while the peer to peer link was disconnected, the protection has now been disabled on both ITM-SCs.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The Geographic Redundancy NE Information screen now shows the node as having protection disabled.
Cause	You disabled geographic redundancy protection for the NE while the peer link was disconnected.
Actions	None. For information only.
Note	



GR Protection removed on NE while peer link down

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_PROT_REMOVED_NO_LINK
Information	A geographic redundancy protection has been removed on an element while the peer to peer link was down.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	If the peer was the secondary for that NE, when the peer is re-established, protection will be added back for the NE unless protection has also been removed on the primary manager.
Cause	A protection is removed for a NE while the peer to peer link is down.
Actions	Warning message to indicate that difficulties may be experienced later.
Note	



History list absolute limit exceeded - oldest 15% alarms deleted

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	HLIST_ABS_LIMIT_EXCEEDED
Information	The maximum number of alarms stored in the EMS History list exceeds a configured limit set by the system administrator.
Severity	DEFERRED (default)
Category	EMS
Alarm indications	The operation of the EMS is affected. If the absolute limit is exceeded, 15% of the oldest of the cleared alarms are deleted from the history list automatically.
Cause	This is generated to indicate that the History list is full and that the oldest 15% of alarms have been deleted as a consequence.
Actions	Instantaneous alarm. No clearing action required.
Note	Contact your system administrator if the warning threshold should be re-configured to another value.



History list threshold exceeded

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	HLIST_THOLD_EXCEEDED
Information	The alarms stored in the EMS History list exceeds a configured value. This limit is set by the System Administrator.
Severity	DEFERRED (default)
Category	EMS
Alarm indications	In the long term this problem could affect the operation of the EMS.
Cause	This is generated to indicate that the History list is becoming full.
Actions	Alarms should be deleted from the History list manually. The extent of the deletion depends upon maintenance strategies, for example, deleting all cleared alarms that have been in the History list for a certain length of time. This should be done as part of routine EMS maintenance. When the alarm store size has dropped to 75% of the threshold value, this alarm is cleared.
Note	If no action is taken “History list absolute limit exceeded” alarm-message is generated. Contact your system administrator if the warning threshold should be reconfigured to another value.



Interface error

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	INTERFACE_ERROR
Information	A protocol error occurred on association with the element, and the association was released.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Association failed.
Cause	The element is not compatible with the ITM-SC.
Actions	Attempt a manual enable of the association.
Note	Contact the Lucent Technologies Customer Technical Support if the problem persists.



Invalid mibState for GR recovery by MIB upload

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	INVALID_MIBSTATE_GR_RECOVERY
Information	The geographic redundancy facility has automatically initiated an MIB upload, which cannot be performed because the NE is in the wrong state.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The ITM-SC repeatedly drops the association with the NE and then attempts to re-associate.
Cause	The NE may have reset.
Actions	Investigate why the geographic redundancy switch was requested with the NE in the incorrect state. Remove the NE from the geographic redundancy scheme, re-associate with the NE, then put the NE back into the geographic redundancy scheme.
Note	



ITM-NM association lost

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	DACSCAN_ASSOCIATION_LOST
Information	The connection used to communicate between ITM-NM and ITM-SC is broken.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	Request may no longer be received from ITM-NM and events may no longer be notified to ITM-NM.
Cause	The communications medium has been damaged or termination equipment at either end is faulty.
Actions	Check continuity of the communication medium and check the state of termination equipment. If the fault is repaired communication is re-established between ITM-NM and ITM-SC.
Note	



ITM-SC now managing NE as the result of a manual GR switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_SWITCHED_MANUAL
Information	On the peer ITM-SC, you requested a manual geographic redundancy switch of control of the NE to this ITM-SC.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The NE is now being managed by this ITM-SC and has an geographic redundancy state of Actively Managing, control of the NE is only handed back to the peer ITM-SC after a Retrieve operation on the peer ITM-SC.
Cause	An action on the primary peer ITM-SC for the NE.
Actions	Warning message to indicate that the ITM-SC is now managing an additional NE.
Note	Raised on the secondary ITM-SC for the NE.



ITM-SC now managing NE as the result of an automatic GR switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_SWITCHED_AUTO_ASSOC
Information	Management control of the NE has been passed to this ITM-SC from the primary ITM-SC as a result of an automatic geographic redundancy switch due to association loss on the primary ITM-SC.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The NE is now being managed by this ITM-SC and has an geographic redundancy state of Actively Managing, control of the NE is only handed back to the peer ITM-SC after a Retrieve operation on the peer ITM-SC.
Cause	The primary ITM-SC has been unable to gain association with the NE for a confirmed period of time.
Actions	Warning message to indicate that the ITM-SC is now managing an additional NE.
Note	Raised on the secondary ITM-SC for the NE.



ITM-SC now managing NE as the result of a automatic GR switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_SWITCHED_AUTO_LINK
Information	The ITM-SC has gained management control of the NE as a result of an automatic geographic redundancy switch due to loss of the peer to peer communications link.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The NE is now being managed by this ITM-SC and has a geographic redundancy management state of Actively Managing, control of the NE is only handed back to the peer ITM-SC after a Retrieve operation on the peer ITM-SC.
Cause	The peer to peer communications link has been out of service for a confirmed period of time.
Actions	Warning message to indicate that the ITM-SC is now managing an additional NE.
Note	Raised on the secondary ITM-SC for the NE.



Link to peer ITM-SC removed by user

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_PEER_LINK_REMOVED
Information	The connection used to send information between peer ITM-SC has been removed following a user request.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	The peer no longer appears in the GR Manager Information Screen.
Cause	You requested removal of the peer to peer link.
Actions	None. For information only.
Note	



Loss of link to peer ITM-SC

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_PEER_LINK_DOWN
Information	The connection used to send information between peer ITM-SCs is broken.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	ITM-NM data updates no longer transferred to the peer manager. After the 'Confirmed Link Loss Period' has elapsed (the default is 5 minutes) the peer manager attempts to gain control of the NEs of this manager.
Cause	The communications line has been damaged, equipment at either end is faulty, or the remote ITM-SC is not operational.
Actions	<p>Check the connection between peer ITM-SCs. If the fault is repaired communications between the peer ITM-SCs are restored.</p> <p>If you do not want the peer ITM-SCs to attempt automatic switches due to loss of peer to peer communication, use the peer system to disable geographic redundancy for the NE(s) involved.</p>
Note	



Management of NE returned to Primary ITM-SC

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_RET_TO_PRIM
Information	Management of the NE has been returned to the primary ITM-SC as the result of a geographic redundancy Retrieve operation.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The current ITM-SC is now not trying to manage the NE. Association has been dropped.
Cause	On the primary ITM-SC, you requested the operation.
Actions	None.
Note	



Managing NE after GR Retrieve

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_RETRIEVED
Information	On the current ITM-SC, you performed a geographic redundancy Retrieve operation for the NE and now the current ITM-SC is managing it.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The local ITM-SC is now associated to the node and managing it. This may have caused a number of alarms to appear from the NE.
Cause	User action on the current ITM-SC.
Actions	None.
Note	



Manual Switch operation aborted due to peer link failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_REQUEST_ABORTED_MANUAL
Information	Manual Switch failed to complete due to the peer to peer link failing.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The Manual Switch operation is incomplete; until peer connectivity is re-established, the peers may be in an inconsistent geographic redundancy state due to the operation partially completing.
Cause	Peer to peer link failing.
Actions	None. For information only.
Note	



Maximum archive attempts exceeded

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ON_LINE_ARCHIVE_RETRIES_EXCEEDED
Information	The maximum number of archive attempts has been exceeded for a scheduled periodic archive.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	If archive to tape, tape should not be stored.
Cause	Archive device in use or insufficient resources.
Actions	If situation persists, shut ITM-SC down and perform an immediate archive.
Note	



MIB Download failed

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	MIB_DNLOAD_FAIL
Information	The MIB download has failed.
Severity	PROMPT (default)
Category	MANAGEMENT
Alarm indications	The MIB of the NE has been lost.
Cause	The NE did not accept the MIB that was downloaded.
Actions	Attempt another download or re-create the NE.
Note	Contact Lucent Technologies Customer Technical Support if the 12NC of the NE software does not match the 12NC as expected by the EMS release.



More NEs are licenced than the platform can support

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	TOO_MANY_NES_LICENCED
Information	There are more NEs licenced than the platform can support. The number of NEs that the platform can support is indicated.
Severity	PROMPT (default)
Category	EMS
Alarm indications	There are more NEs licenced than can be managed.
Cause	There are more NEs licenced than the platform can support.
Actions	Contact Lucent Technologies Customer Technical Support.
Note	



NE Clock not adjusted due to the excessive load detected on the network

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	NE_CLOCK_SYNC_FAIL_NETWORK_LOAD
Information	An excessive load was detected on the network. The NE clock was not adjusted as it could not be accurately synchronized in these circumstances.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	If the NE has lost synchronization with the rest of the network to a significant extent then erroneous or invalid Performance Monitoring Data will be received.
Cause	This may be caused by one or more NEs on the path to the NE being synchronized being heavily loaded or there being a large amount of traffic on the path through the network that the synchronization message used.
Actions	If this alarm repeatedly occurs ensure the synchronization sequence is being initiated at an appropriate (i.e. quiet) time of day. The offset added to minimum round trip times can be increased if it is impractically low for this network. Investigate if there is faulty or overloaded equipment in the network. Ultimately it may be necessary to reconfigure part of the network to overcome the problem.
Note	Accurate NE Synchronization is also necessary for the support of TCM emulation.



NE Clock not adjusted due to the instability detected in the network

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	NE_CLOCK_SYNC_FAIL_NETWORK_UNSTABLE
Information	A significant instability was detected in the network. The NE clock was not adjusted as it could not be accurately synchronized in these circumstances.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	If the NE has lost synchronization with the rest of the network to a significant extent then erroneous or invalid Performance Monitoring Data will be received.
Cause	This may be caused by one or more NEs on the path to the NE being synchronized being intermittently busy or there being bursts of traffic on the path through the network that the synchronization message used.
Actions	If this alarm repeatedly occurs ensure the synchronization sequence is being initiated at an appropriate (i.e. quiet) time of day. The maximum variation allowed in message round trip times can be increased if it is impractically low for this network. Investigate if there is faulty or overloaded equipment in the network. Ultimately it may be necessary to reconfigure part of the network to overcome the problem.
Note	Accurate NE synchronization is also necessary for the support of TCM emulation.



NE control lost - secondary system unable to gain association after auto switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_CONTROL_LOST
Information	An automatic geographic redundancy protection switch has failed due to association loss on the current ITM-SC. The protecting secondary ITM-SC has also failed to make association with the NE.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Current ITM-SC has management control of the NE.
Cause	Following an automatic switch, the secondary manager could not associate with the NE.
Actions	Investigate why both managers are unable to associate with the NE.
Note	

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NE control lost on secondary after auto switch - agent busy

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_LOST_AGENT_BUSY
Information	An automatic geographic redundancy protection switch, due to association loss on the current ITM-SC, has failed as the protecting secondary ITM-SC has also failed to make association with the NE due to agent busy.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Current ITM-SC has management control of the NE.
Cause	Following an automatic switch, the secondary manager could not associate with the NE due to agent busy.
Actions	Investigate why both managers are unable to associate with the NE.
Note	



NE control lost on secondary after auto switch - association down

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_LOST_ASSOC_DOWN
Information	An automatic geographic redundancy protection switch, due to association loss on the current ITM-SC, has failed as the protecting secondary ITM-SC has also failed to make association with the NE due to association down.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Current ITM-SC has management control of the NE.
Cause	Following an automatic switch, the secondary manager could not associate with the NE due to association down.
Actions	Investigate why both managers are unable to associate with the NE.
Note	



NE control lost on secondary after auto switch - invalid 12NC

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_LOST_INVALID_12NC
Information	An automatic geographic redundancy protection switch, due to association loss on the current ITM-SC, has failed as the protecting secondary ITM-SC has also failed to make association with the NE due to invalid 12NC.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Current ITM-SC has management control of the NE.
Cause	Following an automatic switch, the secondary manager could not associate with the NE due to invalid 12NC.
Actions	Investigate why both managers are unable to associate with the NE.
Note	



NE control lost on secondary after auto switch - invalid NE state

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_LOST_INVALID_STATE
Information	An automatic geographic redundancy protection switch, due to association loss on the current ITM-SC, has failed as the protecting secondary ITM-SC has also failed to make association with the NE due to invalid NE state.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Current ITM-SC has management control of the NE.
Cause	Following an automatic switch, the secondary manager could not associate with the NE due to invalid NE state.
Actions	Investigate why both managers are unable to associate with the NE.
Note	



NE control lost on secondary after auto switch - no association available

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_LOST_NO_ASSOCIATION
Information	An automatic geographic redundancy protection switch, due to association loss on the current ITM-SC, has failed as the protecting secondary ITM-SC has also failed to make association with the NE due to no association being available.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Current ITM-SC has management control of the NE.
Cause	Following an automatic switch, the secondary manager could not associate with the NE due to no association available.
Actions	Investigate why both managers are unable to associate with the NE.
Note	



NE control lost on secondary after auto switch - primary timed out

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_LOST_PRI_TIMED_OUT
Information	An automatic geographic redundancy protection switch, due to association loss on the current ITM-SC, has failed as the primary ITM-SC has timed out waiting for the protecting secondary ITM-SC to make association with the NE.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Current ITM-SC has management control of the NE.
Cause	Following an automatic switch, the primary manager timed out waiting for the secondary manager to associate with the NE.
Actions	Investigate why both managers are unable to associate with the NE.
Note	



NE control lost on secondary after auto switch - timed out

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_LOST_TIMED_OUT
Information	An automatic geographic redundancy protection switch, due to association loss on the current ITM-SC, has failed as the protecting secondary ITM-SC has also failed to make association with the NE due to time out.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Current ITM-SC has management control of the NE.
Cause	Following an automatic switch, the secondary manager could not associate with the NE due to time out.
Actions	Investigate why both managers are unable to associate with the NE.
Note	



NE management lost to secondary ITM-SC - automatic switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_AUTO_SW_MAN_COMPLETE
Information	A NE has undergone an automatic switch to a peer manager.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Management of the NE has been automatically switched to the peer ITM-SC which now has control of the NE.
Cause	Loss of association to the NE.
Actions	None. For information only.
Note	



NE management lost to secondary ITM-SC - manual switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_MAN_SW_MAN_COMPLETE
Information	A NE has been manually switched to a peer manager.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Management of the NE has been manually switched to the peer ITM-SC which now has control of the NE.
Cause	You performed a manual switch of the NE.
Actions	None. For information only.
Note	



NE time drift still excessive following NE clock adjustment

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	NE_CLOCK_SYNC_FAIL_DRIFT_EXCESSIVE
Information	The NE clock was adjusted as no significant load or instability was detected on the network, but a subsequent check showed the NE had not been synchronized correctly.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	If the NE has lost synchronization with the rest of the network to a significant extent then erroneous or invalid Performance Monitoring Data will be received.
Cause	This may be caused by one or more NEs on the path to the NE being synchronized being intermittently busy or there being bursts of traffic on the path through the network that the synchronization message used.
Actions	If this alarm repeatedly occurs ensure the synchronization sequence is being initiated at an appropriate (i.e. quiet) time of day. The time drift allowed in an NE's clock and the number of queries sent to a NE can be increased if they are impractically low for this network. Investigate if there is faulty or overloaded equipment in the network. Ultimately it may be necessary to reconfigure part of the network to overcome the problem.
Note	Accurate NE Synchronization is also necessary for the support of TCM emulation.



No user response was received

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	USER_CONF_TIMEOUT
Information	No response to a user confirmation request.
Severity	DEFERRED (default)
Category	MANAGEMENT
Alarm indications	Alarm indications in the originator of the alarm message.
Cause	You failed to respond in time to a prompt from the EMS for the preferred synchronization mechanism following an association recovery.
Actions	None.
Note	If you do not respond, the EMS defaults to the MIB upload mechanism following an association recovery.



Number of jobs running has exceeded the info alarm threshold

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	SJS_INFOTHRSHOLD_EXCEEDED
Information	System performance will be affected because the total number of active jobs exceeds the information alarm threshold.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	No unnecessary tasks should be started.
Cause	The system is running too many tasks.
Actions	Do not start any unnecessary tasks until the alarm is cleared.
Note	



Number of running jobs has exceeded the prompt alarm threshold

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	SJS_PROMPTTHRESHOLD_EXCEEDED
Information	System performance will be severely affected because the total number of active jobs exceeds the prompt alarm threshold.
Severity	PROMPT (default)
Category	EMS
Alarm indications	No unnecessary tasks can be started.
Cause	The system is running too many tasks.
Actions	If situation persists, stop any unnecessary tasks.
Note	



On-line archive failed due to tape or device error

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ON_LINE_ARCHIVE_FAIL_TAPE
Information	An archive request has failed due to tape or device error.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	If archive to tape, tape should not be stored.
Cause	Device error or tape error.
Actions	Check device and tape then either wait for next periodic archive or create an immediate or scheduled archive.
Note	



On-line archive refused

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ON_LINE_ARCHIVE_REFUSED
Information	An immediate archive request has been refused by the Archive Broker.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	If archive to tape, tape should not be stored.
Cause	Archive device in use or insufficient resources.
Actions	Request immediate archive.
Note	



On-line archive succeeded

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	ON_LINE_ARCHIVE_SUCCESS
Information	A periodic or immediate archive request has been successfully executed.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	
Cause	A periodic or immediate archive request has succeeded.
Actions	None. For information only.
Note	



Protection removed on peer link establishment

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_PROT_REMOVED_RESYNC
Information	Following establishment of the peer to peer link, protection was removed for the NE automatically.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	NE removed from the protecting domain on the (secondary) ITM-SC system.
Cause	NE is protecting domain on secondary manager but not in protected domain on primary manager. Removed from protection to make system consistent.
Actions	If desired, add NE back in the protection on primary manager.
Note	



Remove Protection operation aborted due to peer link failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_REQUEST_ABORTED_REMOVE
Information	Remove Protection failed to complete due to the peer to peer link failing.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The Remove Protection operation is incomplete; until peer connectivity is re-established, the peers may be in an inconsistent geographic redundancy state due to the operation partially completing.
Cause	Peer to peer link failing.
Actions	None. For information only.
Note	



Retrieve operation aborted due to peer link failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_REQUEST_ABORTED_REVERT
Information	Retrieve failed to complete due to the peer to peer link failing.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The retrieve operation is incomplete; until peer connectivity is re-established, the peers may be in an inconsistent geographic redundancy state due to the operation partially completing.
Cause	Peer to peer link failing.
Actions	None. For information only.
Note	



Secondary ITM-SC failed to manage NE after association loss GR switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_ASSOC_LOSS_SW_UPLOAD_FAILED
Information	The secondary ITM-SC could not complete an MIB upload operation for the NE which had been switched automatically due to association loss on the primary ITM-SC, management control has been returned to the primary system.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Management control of the NE protected under geographic redundancy has been passed back to the primary ITM-SC. The secondary ITM-SC has stopped trying to manage the NE.
Cause	The secondary ITM-SC could not complete an MIB upload operation from the NE after successfully gaining an association with the element.
Actions	Check that the primary ITM-SC is able to manage the NE. Investigate why the secondary ITM-SC could not manage the element.
Note	Alarm raised on both the primary and secondary managers.



Secondary timed out attempting to associate to NE - Automatic Switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_SEC_AUTO_SW_TIMEOUT
Information	Following an automatic switch, the secondary manager was unable to make an association with the NE.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	For an automatic switch due to loss of association, management of the NE is transferred back to the primary manager and the secondary manager stops trying to associate to the NE. For an automatic switch due to loss of peer to peer link, the secondary manager attempts to associate to the NE; this alarm is for information only.
Cause	Following an automatic switch, the secondary manager could not associate with the specified NE.
Actions	Investigate why the secondary manager could not associate with the NE.
Note	



Secondary timed out attempting to associate to NE - Manual Switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_SEC_MAN_SW_TIMEOUT
Information	Following a manual switch, the secondary manager was unable to make an association with the NE.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Management of the NE is transferred back to the primary manager and the secondary manager stops trying to associate to the NE.
Cause	Following a manual switch, the secondary manager could not associate with the specified NE.
Actions	<p>Investigate why the secondary manager could not associate with the NE.</p> <p>If there is no management path to the NE then investigate the routing of DCC paths to the NE and check management paths of the secondary ITM-SC to the NE.</p> <p>If the NE is down then wait until the NE is up again.</p> <p>If the NE data is corrupt then investigate locally with the aid of an ITM-CIT.</p>
Note	



Synchronization failed

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	SYNC_FAILURE
Information	The re-synchronization between the element and the ITM-SC has failed.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Association failed.
Cause	Synchronization between the element and ITM-SC failed.
Actions	Attempt a manual enable of the association.
Note	Contact the Lucent Technologies Customer Technical Support if the problem persists.



The A/C power has failed

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_POWERFAIL
Information	The A/C power input to the UPS has failed. The UPS is running off batteries. The system shuts down if the A/C power to the UPS is not restored soon.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS is now running on battery power.
Cause	The UPS is not receiving any external power.
Actions	Ask the system administrator to check the system log for more details.
Note	



The Informix read cache hit rate is low

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_READ_CACHE_RATE_LOW
Information	The Informix read cache hit rate is lower than recommended.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	The Informix on-line system and ultimately the ITM-SC may experience performance problems.
Cause	The Informix read cache is not being used efficiently.
Actions	If the symptoms persist, then contact Lucent Technologies Customer Technical Support.
Note	



The Informix write cache hit rate is low

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_WRITE_CACHE_RATE_LOW
Information	The Informix write cache hit rate is lower than recommended.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	The Informix on-line system and ultimately the ITM-SC may experience performance problems.
Cause	The Informix write cache is not being used efficiently or the server is not very busy.
Actions	If the server is not very busy, raise the thresholds. If the buffer is not correctly sized, re-size it. If the symptoms persist, then contact Lucent Technologies Customer Technical Support.
Note	It is possible that this alarm occurs when the network is relatively quiet. The alarm is there to indicate that the Informix database buffer cache hit-rates should be checked. The alarm is triggered when the hit rate falls below some configurable threshold. This can happen if the server in question is not very busy, or the buffer cache is not correctly sized.



The ITM-SC could not manage an NE after manual GR switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_MAN_SW_UPLOAD_FAILED
Information	The ITM-SC could not complete a MIB upload operation for the NE which had been switched manually from the primary ITM-SC. Management control has been returned to the primary system.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	Management control of the NE protected under geographic redundancy has been passed back to the primary ITM-SC. The current ITM-SC has stopped trying to manage the NE.
Cause	The current ITM-SC could not complete an MIB upload operation from the NE after successfully gaining an association with the element.
Actions	Investigate why the ITM-SC could not manage the element.
Note	Alarm raised on the secondary manager.



The ITM-SC unable to manage an NE after automatic peer link loss GR switch

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_LINK_LOSS_SW_UPLOAD_FAILED
Information	The ITM-SC is unable to complete an MIB upload operation for a NE for which it is trying to gain management control due to the failure of the peer to peer communications link. The ITM-SC periodically re-attempts to manage the element until the operation succeeds or the peer to peer link is re-established.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The ITM-SC periodically re-attempts the MIB upload operation for the NE. The NE has a geographic redundancy management state of "Expecting Management".
Cause	The current ITM-SC could not complete an MIB upload operation from the NE after successfully gaining an association with the element.
Actions	Investigate why the ITM-SC cannot manage the element.
Note	Alarm raised on the secondary manager.



The Physical volume has stale physical extents

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	RM_PV_STALE_PES
Information	The physical volume is reporting stale physical extents.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The ITM-SC may fail due to a hardware problem with the physical volume.
Cause	There is a problem with the physical volume. This may be due to the power supply, the connection to the device, or a media problem.
Actions	Ask the system administrator to investigate what the cause of the problem is and take corrective action.
Note	



The Transport Mode of the NE could not be set to SDH

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	UNABLE_TO_SET_TRANSPORT_MODE
Information	On association recovery the NE could not be set to SDH mode.
Severity	PROMPT (default)
Category	MANAGEMENT
Alarm indications	The association with this node has been released.
Cause	Setting the transport mode causes a reset of the node. This node has no software in its backup store to recover after the reset.
Actions	Use the CIT to download code into the backup store and then enable the association from ITM-SC.
Note	



The UPS battery voltage is high

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_BATTERY_VOLTAGE_HIGH
Information	The UPS has detected a high battery voltage.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS may fail.
Cause	There may be a fault with the UPS battery.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS battery voltage is low

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_BATTERY_VOLTAGE_LOW
Information	The UPS has detected a low battery voltage.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS may fail.
Cause	There may be a fault with the UPS battery.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS monitor daemon is not running or has a configuration problem

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_NOT_RUNNING
Information	The UPS monitor daemon is not running or has a configuration problem. Ask the system administrator to check the system log for more details.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS monitor daemon cannot shut down the system properly if there is a power failure.
Cause	The UPS monitor daemon is not running, or is not configured correctly.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS has a battery failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_BATTERY_FAILURE
Information	The UPS has detected a battery failure.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS may fail.
Cause	There may be a fault with the UPS battery.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS has a charger fault

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_CHARGER_FAULT
Information	The UPS has detected a charger fault.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS battery may not being charged.
Cause	There may be a fault with UPS charger.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS has a current overload

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_CURRENT_OVERLOAD
Information	The UPS has detected a current overload.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS may fail.
Cause	There may be a fault with UPS or too many devices connected to it.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS has an inverter failure

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_INVERTER_FAILURE
Information	The UPS has detected an inverter failure.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS may fail.
Cause	There may be a fault with UPS inverter.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS has no battery

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_NO_BATTERY
Information	The UPS has detected that there is no UPS battery installed.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS will fail if the AC power fails.
Cause	The UPS battery is not installed or is installed incorrectly.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS is overheating

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_TOO_HOT
Information	The UPS has detected a high ambient temperature.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS may switch itself off.
Cause	There may be a fault with the UPS, or the temperature around the UPS is too high.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS output voltage is high

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_OUTPUT_VOLTAGE_HIGH
Information	The UPS has detected a high output voltage.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS may switch itself off.
Cause	There may be a fault with the UPS or the power supply to it.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS output voltage is low

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_OUTPUT_VOLTAGE_LOW
Information	The UPS has detected a low output voltage.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS may switch itself off.
Cause	There may be a fault with the UPS or the power supply to it.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS cannot communicate with the UPS monitor daemon

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_BAD_COMMS
Information	The UPS cannot communicate with the UPS monitor daemon via its device.
Severity	INFORMATION (default)
Category	EMS
Alarm indications	If this is the only UPS, then the system is vulnerable to a power failure.
Cause	There may be a poor connection between the UPS and the server.
Actions	Ask the system administrator to check the system log for more details.
Note	



The UPS tty has failed

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	LM_UPS_TTY_FAIL
Information	The UPS <i>tty</i> device has failed - requires repair.
Severity	PROMPT (default)
Category	EMS
Alarm indications	The UPS may not be able to communicate with the UPS monitor daemon.
Cause	There may be a fault with the UPS <i>tty</i> , or the connection between the UPS and the server.
Actions	Ask the system administrator to check the system log for more details.
Note	



There is a discrepancy in node name between ITM-SC and the NE

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	INCONSISTENT_NODE_NAME
Information	The system has detected that the node name used in the ITM-SC is different from that stored in the NE.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	
Cause	The node name has been changed by the CIT.
Actions	Change node name back at the CIT.
Note	



Unable to communicate to NE after GR Retrieve

Alarm meaning The table below gives the meaning of the alarm.

Alarm Data	What It Means
Mnemonic	GR_NE_RETRIEVED_NO_ASSOC
Information	On the current ITM-SC you performed a geographic redundancy Retrieve operation for the NE and the current ITM-SC has resumed control of it. However the communications between the ITM-SC and the NE have not recovered.
Severity	INFORMATION (default)
Category	MANAGEMENT
Alarm indications	The local ITM-SC is trying to gain association with the NE. If it is unable to make association for 10 minutes the NE switches to the protecting ITM-SC.
Cause	The local ITM-SC may not be able to communicate with the NE, or the NE may be slow in responding to the association attempts.
Actions	Check whether the NE is now associated. If not check the communication path to the NE. Also check whether there is a problem with the MIB state of the NE.
Note	





Glossary

NUMERICS

5ESS

Number 5 Electronic Switching System

5TAD

Five Tributary Add-Drop subrack

9TAD

Nine Tributary Add-Drop subrack

12 digit Numerical Code (12NC)

Used to as the unique identifier of an item or product. The first ten digits identify an item. The eleventh digit specifies the particular variant of the item. The twelfth digit indicates the revision issue. Items for which the first eleven digits are the same are functionally equal and may be exchanged.

A AAU

Alarm Adapter Unit. Radio Relay circuit pack that is used for the collection of external alarms and remote control of external equipment.

AC

Alternating Current

ACU

Alarm Collection Unit. Radio Relay circuit pack that collects of equipment alarms, analogue measurements from internal monitoring points and calculation data.

ADM

Add-Drop Multiplexer

Administrative Unit (AU)

Carrier for TUs

Administrative-Unit Pointer (AU PTR)

Indicates the phase alignment of the VC-n with respect to the STM-N frame. The pointer position is fixed with respect to the STM-N frame.

Administrator

See ITM-SC System Administrator.

Agent

Performs operations on managed objects and issues events on behalf of these managed objects. All SDH managed objects will support at least one agent. Control of distant agents is possible via local "Managers".

Alarm

The notification (audible or visual) of a significant event. See also Event.

Alarm Indication Signal (AIS)

Code transmitted downstream in a digital Network that shows that an upstream failure has been detected and also alarmed if the upstream alarm has not been suppressed. Also called to as All OneS.

Alarm Severity

An attribute that defines the priority of the alarm message. The way in which alarms are processed depends on the severity.

Aligning

Using a pointer to indicate the head of a virtual container, e.g. to create an Administrative Unit (AU) or a Tributary Unit (TU).

ALS

Automatic Laser Shutdown

Alternate Mark Inversion (AMI)

A line code that employs a ternary signal to convert binary digits. In this line code successive binary ones are represented by signal elements that are normally of alternately positive and negative polarity but are equal in amplitude, binary zeros are represented by signal elements that have zero amplitude.

American Standard Code for Information Interchange (ASCII)

A standard 8-bit code that is used to exchange information among data processing systems and associated equipment.

Anomaly

A difference between the actual and the desired operation of a function.

ANSI

American National Standards Institute

APS

Automatic Protection Switching

AS

Alarm Suppression assembly

Assembly

Gathering together of payload data with overhead and pointer information (an indication of the direction of the signal).

Association

A logical connection between manager and agent through which management information can be exchanged.

Asynchronous

See Non-synchronous.

ATC

Auxiliary Transmission Channel

ATM

Asynchronous Transfer Mode

ATPC

Automatic Transmit-Power Control

AU

Administrative Unit

AU4AD

Administrative Unit 4 Assembler/Disassembler

AUG

Administrative Unit Group

AUTO

Automatic

Automatic Transmit Power Control (ATPC)

Reduces the power output from the transmitter during normal propagation conditions and increases the power output to maximum during fading periods to try to maintain the nominal level of receiver input.

Autonomous Message

A message transmitted from the controlled NE to the ITM-SC that was not a response to a command that originated in the ITM-SC.

B B3ZS

Bipolar 3-Zero Substitution

B8ZS

Bipolar 8-Zero Substitution

BBTR

Backplane Bus TRansceiver

BC

Board Controller

BCC

Board Controller Complex

BIN

BINary

BIP

Bit-Interleaved Parity

BISDN

Broadband Integrated Services Digital Network

Bit Error Ratio (BER)

The ratio of bits received in error to bits sent.

Bit Interleaved Parity (BIP)

A method of error monitoring that uses a specified number of bits (BIP-8)

BLD OUT LG

Build-Out Lightguide

Board Controller Local Area Network (BC-LAN)

The internal local area network that provides communications between the Line Controller circuit pack and board controllers on the circuit packs that are associated with a high-speed line.

Branching

Interconnection of independent line systems.

Broadband Communication

Voice, data, and/or video communication at greater than 2 Mbit/s rates.

BUSTR

BUS Transmitter and Receiver

C CAS

Channel Associated Signaling

CAT

CATastrophic

CC

Cross-Connection, Cross-Connect

CCIR

See ITU-R.

CCITT

See ITU-T.

CCS

Common Channel Signaling

CEPT

Conférence Européenne des Administrations des Postes et des Télécommunications

Channel

A sub-unit of transmission capacity within a defined higher level of transmission capacity, e.g. a CEPT-4 (140 Mbit/s) within a 565 Mbit fiber system.

CIR

Committed Information Rate

Circuit

A combination of two transmission channels that permits bidirectional transmission of signals between two points to support a single communication.

CIT

Craft Interface Terminal

Clear Channel (Cl. Ch.)

A provisionable mode for the 34 and 140 Mbit/s tributary outputs that causes parity violations not to be monitored or corrected before the 34 and 140 Mbit/s outputs are encoded.

Client

Computer in a computer network that generally offers a user interface to a server. See also Server.

CMI

Coded Mark Inversion

CO

Central Office

Co-resident

A hardware configuration where the ITM-SC and ITM-NM applications can be independently active at the same time on the same hardware and software platform without interfering with each other's functioning.

Common Object Request Broker Architecture (CORBA)

CORBA allows applications to communicate with one another no matter where they are located or who has designed them.

Concatenation

A procedure whereby a multiplicity of Virtual Containers are associated with each other with the result that their combined capacity can be used as a single container across which bit-sequence integrity is maintained.

Configuration Management (CM)

Subsystem of the ITM-SC that, among other things, configures the network and processes messages from the network.

CONN PCB

Connector Printed Circuit Board

Container (C)

Carries plesiochronous signal, the "payload".

CP

Circuit Pack

Craft Interface Terminal (CIT)

Local manager for SDH NEs.

CRC

Cyclic Redundancy Check

Cross-Connect Map

Connection map for an SDH NE; contains information about how signals are connected between high speed time slots and low speed tributaries. See also Squelch Map.

Cross-Polarization Interference Cancellation

This feature permits both orthogonal polarizations of one Radio Frequency carrier to be used simultaneously, which provides greater spectral efficiency.

CTP

Connection Termination Point

CV

Code Violation

D Data Communication Channel (DCC)

The embedded overhead communication channel in the SDH line. The DCC is used for end-to-end communication and maintenance. It carries alarm, control, and status information between NEs in an SDH network.

Data Communication Equipment (DCE)

Provides the signal conversion and coding between the data terminating equipment and the line. The DCE may be separate equipment or a part of the data terminating equipment.

Data Terminating Equipment (DTE)

Originates data for transmission and accepts transmitted data.

Database Administrator

A user who administers the database of the ITM-SC application. See also User Privilege.

DC

Direct Current

DCF

Data Communications Function

DCN

Data Communications Network

DCS

Digital Cross-connect System

DDF

Digital Distribution Frame

Dedicated Protection Ring (DP-Ring)

A protection method used in some NEs.

Default Value Provisioning

The original values are preprogrammed at the factory. These values can be overridden using local or remote provisioning.

Defect

A limited interruption of the ability of an item to perform a required function. The defect may or may not lead to maintenance action this depends on the results of additional analysis.

Demultiplexing

A process applied to a multiplexed signal to recover signals combined within it and restore the distinct individual channels of these signals.

Digital Link

A transmission span such as a point-to-point 2 Mbit/s, 34 Mbit/s, 140 Mbit/s, VC12, VC3 or VC4 link between controlled NEs. The channels within a digital link are insignificant.

Digital Section

A transmission span such as an STM-N or 565 Mbit/s signal. A digital section may contain multiple digital channels.

DIL

Dual In Line

Directory-Service Network Element (DSNE)

A designated NE that is responsible for administering a database that maps NE names (node names) to addresses (node Id). There can be one DSNE per (sub)network.

Disassembly

Splitting up of a signal into its constituents as payload data and overhead (an indication of the direction of a signal).

Domain

The domain of an ITM-SC is the set of all SDH NEs that are controlled by that particular ITM-SC.

Downstream

At or towards the destination of the considered transmission stream, i.e. in the direction of transmission.

DPLL

Digital Phase-Locked Loop

DPS

Data communication Packet Switch

DR

Digital Radio

DRI

Dual-Ring Interworking

DS-n

Digital Signal, Level n

DTMF

Dual-Tone Multi-Frequency

Dual Homing

An STM-1/STM-4 ring with AM-1 Plus equipment can be dual homed on a ring consisting of Metropolis® ADM (universal) Metropolis® ADM (Compact shelf) or WaveStar® ADM 16/1. Also STM-16 rings can be dual homed with the ADM Metropolis® (Universal shelf).

Dual-Node Interworking

Dual Node Interworking (DNI) is a configuration of two ring networks that share two common nodes. DNI allows a circuit with one termination in one ring and one termination in another ring to survive a loss-of-signal failure of the shared node that is currently carrying service for the circuit.

DUS

Do not Use for Synchronization

DWDM

Dense-Wavelength Division Multiplexing

E EC-n

Electrical Carrier, Level n

ECC

Embedded Control Channel

EDFE

Ethernet Dropped Frames Errors

EH&S

Environmental Health and Safety

EINB

Ethernet Incoming Number of Mbytes

Electronic Industries Association (EIA)

A trade association of the electronic industry that establishes electrical and functional standards.

Element Management System (EMS)

See Integrated Transport Management Subnetwork Controller.

EMC

ElectroMagnetic Compatibility

EMI

ElectroMagnetic Interference

EONB

Ethernet Outgoing Number of Mbytes

EOW

Engineering Order Wire

Equivalent Bit Error Ratio (EBER)

The calculated average bit error rate over a data stream.

Errored Second (ES)

A performance monitoring parameter.

ES

End System

ESD

ElectroStatic Discharge

ESPG

Elastic Store & Pointer Generator

ETSI

European Telecommunication Standardisation Institute

Event

A significant change. Events in controlled NEs include signal failures, equipment failures, signals exceeding thresholds, and protection switch activity. When an event occurs in a controlled NE, the controlled NE will generate an alarm or status message and send it to the ITM-SC.

Event Management (EM)

Subsystem of the ITM-SC that processes and logs event reports of the network.

Externally Timed

An operating condition of a clock in which it is locked to an external reference and uses time constants that are altered to quickly bring the local oscillator's frequency into approximate agreement with the synchronization reference frequency.

Extra Traffic

Unprotected traffic that is carried over the protection channels when that capacity is not used for the protection of service traffic.

F Far End Block Error (FEBE)

An indication returned to the transmitting node that an errored block has been detected at the receiving node. A block is a specified grouping of bits.

Far End Receive Failure (FERF)

An indication returned to a transmitting NE that the receiving NE has detected an incoming section failure.

FAS

Frame Alignment Signal

FAW

Frame Alignment Word

FC

Full contact Connector

FCC

Federal Communications Commission

FDDI

Fiber Distributed Data Interface

FEP

Front End Processor

Free Running

An operating condition of a NE in which its local oscillator is not locked to any synchronization reference and uses no storage techniques to sustain its accuracy.

G GARP

Generic VLAN Registration Protocol

Gateway Network Element (GNE)

Passes information between other NEs and management systems via a Data Communications Network.

Gbit/s

Gigabits per second

Geographic Location

Location of the ITM-SC server. the geographic location is entered as part of the installation procedure of an ITM-SC.

Geographic Redundancy (GR)

Allows protection of management for a NE by assigning the NE to two ITM-SCs. The first primary ITM-SC usually manages the NE and is now in the protected domain. If the primary ITM-SC or the link between the NE and the primary ITM-SC fails, the secondary ITM-SC will automatically take over management of the NE and is now in the protecting domain. The two ITM-SCs are connected by a peer to peer link, which they use to pass Geographic Redundancy management information to each other. This link must be established before any NE can be protected by Geographic Redundancy.

GFP

Generic Framing Procedure

Global Wait to Restore Time

The time to wait before switching back to the timing reference occurs after a timing link failure has cleared. This time applies for all timing sources in a system hence the name global. This can be between 0 and 60 minutes, in increments of one minute.

GNE

Gateway NE - A NE that passes information between other NEs and operations systems via a data communications network.

GUI

Graphical User Interface

GVRP

Generic VLAN Registration Protocol

H HE

Host Exchange

High Density Bipolar 3 code (HDB3)

Line code for e.g. 2 Mbit/s transmission systems.

High level Data Link Control (HDLC)

Protocol in the data-link layer of the OSI reference model.

Higher order Path Adaptation (HPA)

Function that adapts a lower order Virtual Container to a higher order Virtual Container by processing the Tributary Unit pointer which indicates the phase of the lower order Virtual Container Path Overhead relative to the higher order Virtual-Container Path Overhead, and assembling/disassembling the complete higher order Virtual Container.

Higher order Path Connection (HPC)

Function that provides for flexible assignment of higher order Virtual Containers within an STM-N signal.

Higher order Path Termination (HPT)

Function that terminates a higher order path by generating and adding the appropriate Virtual-Container Path Overhead to the relevant container at the path source and removing the Virtual-Container Path Overhead and reading it at the path sink.

HMI

Human Machine Interface

HO

High Order

Holdover

An operating condition of a clock in which its local oscillator is not locked to an external reference but uses storage techniques to maintain its accuracy with respect to the last known frequency comparison with a synchronized reference.

Host Name

Name of the server on which the ITM-SC is running.

HP-UX

Unix Operating System for a Hewlett Packard platform.

HS

High Speed

I I/O

Input/Output

ICB

Interconnection Box

ICP

InterConnection Panel

IEC

International Electrotechnical Committee

IEEE

Institute of Electrical and Electronic Engineers

IF

Intermediate Frequency

IFT

InterFace Terminal

Integrated Transport Management Craft Interface Terminal (ITM-CIT)

Local manager for SDH NEs in a subnetwork. Also called the to as Craft Interface Terminal.

Intermediate System (IS)

A system that routes/relays management information. An SDH NE may be a combined Intermediate and end system.

IPS

Inter Processor Status

IS

In-Service

IS-IS Routing

The NEs in a management network, route packets (data) between each other using an IS-IS level protocol. The size of a network that is running IS-IS Level 1 is limited, and therefore certain mechanisms are employed to facilitate the management of larger networks. For STATIC ROUTING, it is possible to disable the protocol over the LAN connections and thereby effectively cause the management network to be partitioned into separate IS-IS Level 1 areas. In order for the ITM-SC to communicate with a specific NE in one of these areas, the ITM-SC must identify the Gateway NE through which this specific NE is connected to the LAN. All packets to this specific NE are routed directly to the Gateway NE by the ITM-SC, before being re-routed (if necessary) within the Level 1 area. For DYNAMIC ROUTING an IS-IS Level 2 routing protocol is used that allows a number of Level 1 areas to interwork. The NEs that connect an IS-IS area to another area are set to run the IS-IS Level 2 protocol within the NE and on the connection to other NEs. Packets can now be routed between IS-IS areas and the ITM-SC does not have to identify the Gateway NEs.

ISDN

Integrated Services Digital Network

ISO

International Standards Organisation

ITM-SC Administrator

See ITM-SC System Administrator.

ITM-SC System Administrator

A user of the ITM-SC application with System Administrator privileges. See also User Privilege.

ITU

International Telecommunications Union

ITU-R

International Telecommunications Union - Radio standardization sector. Formerly known as CCIR: Comité Consultatif International Radio; International Radio Consultative Committee.

ITU-T

International Telecommunications Union - Telecommunication standardization sector. Formerly known as CCITT: Comité Consultatif International Télégraphique & Téléphonique; International Telegraph and Telephone Consultative Committee.

J Jitter

Short term variations of amplitude and frequency components of a digital signal from their ideal position in time.

L LAN

Local Area Network

LBA

Lightwave Booster Amplifier.

LBO

Line Build Out - An optical attenuator that guarantees the proper signal level and shape at the receiver input.

LCAS

Link Capacity Adjustment Scheme

LCN

Local Communications Network

LDI

Linear Drop/Insert (Add-Drop)

LED

Light Emitting Diode

LEN

Local Exchange Node

LF

Low Frequency

LH

Long Haul

License key

An encrypted code that is required to enable the use of specific modules in the ITM-SC. Valid license keys can be obtained from your provider.

Line

Transmission line; refers to a transmission medium, together with the associated high speed equipment, that are required transport information between two consecutive NEs, one of which originates the line signal and the other terminates the line signal.

Line Build Out (LBO)

An optical attenuator that guarantees the proper signal level and shape at the receiver input.

LO

Low Order

LOF

Loss Of Frame

LOM

Loss Of Multiframe

Loop Timing

A timing mode in which the terminal derives its transmit timing from the received line signal.

LOP

Loss Of Pointer

LOS

Loss Of Signal

Lower order Path Adaptation (LPA)

Function that adapts a PDH signal to a synchronous network by mapping the signal into or de-mapping the signal out of a synchronous container.

Lower order Path Connection (LPC)

Function that provides for flexible assignment of lower order VCs in a higher order VC.

Lower order Path Termination (LPT)

Function that terminates a lower order path by generating and adding the appropriate VC POH to the relevant container at the path source and removing the VC POH and reading it at the path sink.

LPU

Line Port Unit

LPU155

Line Port Unit 155 Mbit/s

LRX

Line Receiver

LS

Low Speed

LTA

Line Terminal Application

LTX

Line Transmitter

LTX/EML

Line Transmitter with Electro-absorption Modulated Laser

M MAF

Management Application Function

Management Connection

Identifies the type of routing used (STATIC or DYNAMIC). If STATIC is selected, Management Connection allows the gateway NE to be identified. See also IS-IS Routing.

Management Information Base (MIB)

The database in the NE. Contains the configuration data of the NE. A copy of each MIB is available in the ITM-SC and is called the the MIB image. Under normal circumstances the MIB and MIB image of one NE are synchronized.

Manager

Is capable of issuing network management operations and receiving events

Manager

Capable of issuing network management operations and receiving events. The Manager communicates with the Agent in the controlled NE.

Manufacturer Executable Code (MEC)

NE system software in binary format that is downloaded to one of the stores can be executed by the system controller of the NE.

Mapping

Gathering together of payload data with overhead, i.e. packing the PDH signal into a Virtual Container.

MDI

Miscellaneous Discrete Input

MDO

Miscellaneous Discrete Output

Mediation Device (MD)

Allows for exchange of management information between Operations System and NEs.

MEF

Maintenance Entity Function (in NE)

MEM

System MEMory unit

Message Communications Function (MCF)

Function that provides facilities for the transport and routing of Telecommunications Management Network messages to and from the Network Manager.

Metropolis® ADM MultiService Mux

A network multiplexer that is designed to flexibly multiplex plesiochronous and/or STM-1 tributary port signals into STM-4 or STM-16 line port signals.

MF

Mediation Function

MFS

Multi Frame Synchronization signal

MIB

The Management Information Base is the database in the node. The MIB contains the configuration data of the node. A copy of each MIB is available in the EMS and is called the MIB image. Under normal circumstances, the MIB and MIB image of one node are synchronized.

MIB image

See Management Information Base.

Midspan Meet

The capability to interface between two lightwave NEs of different vendors. This applies to high speed optical interfaces.

MLAN

MultiLAN

MMI

Man-Machine Interface Also called Human Machine Interface (HMI)

MO

Managed Object

Motif

X-Windows System supplied by Open Software Foundation.

MS

Multiplexer Section

MSOH

Multiplex Section Overhead. Part of the SOH (Section Overhead). Is accessible only at line terminals and multiplexers.

MSP

Multiplex Section Protection. Provides capability of switching a signal from a working to a protection section.

MTBF

Mean Time Between Failures

MTBMA

Mean Time Between Maintenance Activities

MTIE

Maximum Time Interval Error

MTPI

Multiplexer Timing Physical Interface

MTTR

Mean Time To Repair

Multiplexer Section OverHead (MSOH)

Part of the Section Overhead. Is accessible only at line terminals and multiplexers.

Multiplexer Section Protection (MSP)

Provides capability of switching a signal from a working to a protection section.

Multiplexer Section Shared Protection Ring (MS-SPRING)

A protection method used in multiplex line systems.

Multiplexer Section Termination (MST)

Function that generates the Multiplexer Section Overhead in the transmit direction and terminates the Multiplexer Section Overhead in the receive direction.

Multiplexer Timing Source (MTS)

Function that provides the timing reference to the relevant component parts of the multiplex equipment and represents the SDH NE clock.

Multiplexing

A procedure by which multiple lower order path layer signals are adapted into a higher order path, or by which the multiple higher order path layer signals are adapted into a multiplex section.

N NE

NE. The NE is comprised of telecommunication equipment (or groups/parts of telecommunication equipment) and support equipment that performs NE functions. A NE has one or more standard Q-type interfaces.

NEF

NE function

NEM

NE manager

Network Element (NE)

A NE is comprised of telecommunication equipment (or groups/parts of telecommunication equipment) and support equipment that performs NE functions. A NE has one or more standard Q-type interfaces. A NE can be directly managed by a management system. See also Node.

Network Element Equivalent (NEE)

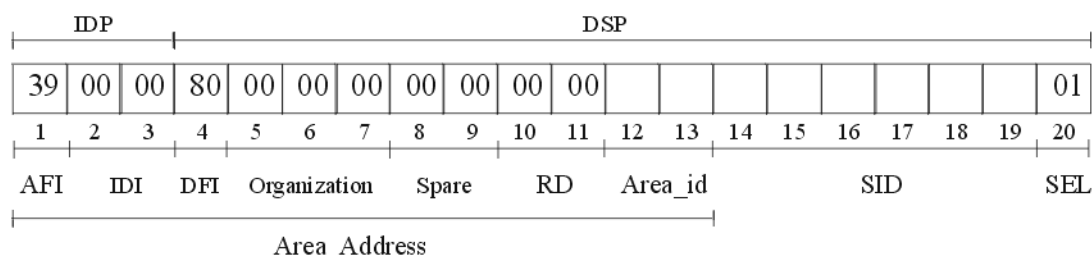
The functionality, database size and processing power that are required from the ITM-SC are different for each type of NE that is supported. Therefore each type represents a certain amount of NE Equivalent.

Network Mediation Unit (NMU)

Collects fault and alarm events from transmission equipment. The ITM-SC can forward alarms to the NMU. The NMU can forward alarms to an Operations System.

Network Service Access Point (NSAP)

An end system address of the System Controller according to ISO 8348 AD2. The format is ISO_DCC_LUCENT, which has the following structure:



Where

Field	Description	Length	Fixed Values
IDP	Initial Domain Part	3 octets	-
DSP	Domain Specific Part	17 octets	-
AFI	Authority and Format Identifier	1 octet	39
IDI	Initial Domain Identifier	2 octets	00 00
DFI	DSP Format Identifier	1 octet	80
Organization		3 octets	00 00 00
Spare		2 octets	00 00
RD	Routing Domain	2 octets	00 00
Area_id		2 octets	Provisionable
SID	System Identification	6 octets	-
SEL	NSAP Selector	1 octet	01
Area_Address	All Octets from AFI to Area_id	13 or 3 octets	-

NMC

Network Maintenance Center

NMS

Network Management System

NNE

Non-SDH NE

NNI

Network Node Interface

Node

A node or NE is defined as all equipment that is controlled by one system controller.

Node

Defined as all equipment that is controlled by one system controller. A node can not always be directly managed by a management system. See also NE.

NOMC

Network Operation Maintenance Channel

Non-revertive switching

In non-revertive switching, there is an active and standby high-speed line, circuit pack, etc.

When a protection switch occurs, the standby line, circuit pack, etc., is selected causing the old standby line, circuit pack, etc., to be used for the new active line, circuit pack, etc. The original active line, circuit pack, etc., becomes the standby line, circuit pack, etc. This status remains in

effect when the fault clears. Therefore, this protection scheme is “non-revertive” in that there is no switch back to the original status in effect before the fault occurred.

Non-revertive switching

In non-revertive switching there is an active and a standby high speed line, circuit pack, etc. When a protection switch occurs, the standby line, circuit pack, etc. is selected which causes the old standby line, circuit pack, etc. to be used for the new active line, circuit pack, etc. The original active line, circuit pack, etc. becomes the standby line, circuit pack, etc. This status remains in effect when the faults clears. Therefore, this protection scheme is non-revertive in that there is no switch back to the original status that was in effect before the fault occurred.

Non-synchronous

The essential characteristic of timescales or signals such that their significant instants do not necessarily occur at the same average rate.

Not Protected Domain

The Not Protected Domain for the ITM-SC contains all the NEs that are managed by that ITM-SC and are not currently protected by another ITM-SC. If the ITM-SC fails, the NEs in this domain are not managed by any ITM-SC. See also Geographic Redundancy.

NPI

Null Pointer Indication

NRZ

Non-Return to Zero

NSA

Non-Service Affecting

NUT

Non pre-emptible Unprotected Traffic

NVM

Non-Volatile Memory

O OA

Optical Amplifier

OAA case tools

A software package/tool to aid the process of requirements, analysis, design and implementation of object orientated systems.

OAM&P

Operations, Administration, Maintenance and Provisioning

OC-n

Optical Carrier, Level n

ODF

Optical Distribution Frame

ODU

Optical Demultiplexer Unit

OFS

Out of Frame Second

OI

Optical Interface

OMU

Optical Multiplexer Unit

OOF

Out Of Frame

OOS

Out Of Service

Operations System (OS)

The Operations System is the system that provides operations, administration and maintenance functions.

Operator

A user of the ITM-SC application with Operator privileges. See also User Privilege.

Optical Line System (OLS)

A high-capacity lightwave system that is designed to multiplex eight optical signals with different wavelengths into one combined signal through an optical fiber. There is a difference of 1.5 micrometer in wavelength between two multiplexed signals.

OS

Operations System - A central computer-based system that is used to provide operations, administration and maintenance functions.

OSB

Optical Splice Box

OSF

Open Software Foundation Operations System Function

OSF/Motif

The WaveStar® ITM-SC application has an X-windows graphical representation and the components used in the “Graphical User Interface” are OSF/Motif compliant, these components that are comprise of items such as: scrollbars, menus, radio buttons, etc.

OSI

Open Systems Interconnection

OW

(Engineering) Order Wire

P PABX

Private Automatic Branch eXchange

Paddle Board - Peripheral Control and Timing link (PB-PCT)

A small circuit board used in a 5ESS exchange for protection switching and optical to electrical conversion of the PCT-link.

Path

A logical connection between one termination point at which a standard format for a signal at the given rate is assembled and from which the signal is transmitted, and another termination point at which the received standard frame format for the signal is disassembled.

Path AIS

Path Alarm Indication Signal - A path-level code that is sent downstream in a digital network as an indication that an upstream failure has been detected and alarmed.

Path Overhead (POH)

The Virtual-Container Path Overhead provides integrity of communication between the point of assembly of a Virtual Container and its point of disassembly.

Path Terminating Equipment

NEs in which the path overhead is terminated.

PC

Personal Computer

PCB

Printed Circuit Board

PCM

Pulse Code Modulation

PCT-link

Peripheral Control and Timing-link

PDH

Plesiochronous Digital Hierarchy

Peer ITM-SC

ITM-SC at the other end of the peer-to-peer link.

Peer to Peer link

Connection between two ITM-SCs with Geographic Redundancy. The link is used to co-ordinate the management of a NE. See also Geographic Redundancy.

Performance Monitoring (PM)

Measures the quality of service and identifies degrading or marginally operating systems (before an alarm is generated).

Peripheral Control and Timing Facility Interface (PCTFI)

A proprietary physical link interface that supports the transport of 21 * 2 Mbit/s signals.

PI

Physical Interface, Plesiochronous Interface

PIR

Peak Information Rate

PJE

Pointer Justification Event

Platform

Family of equipment and software configurations that are designed to support a particular Application.

Plesiochronous Network

A network that contains multiple subnetworks, each of which is internally synchronous and operates at the same nominal frequency, but the timing of any of the subnetworks may be slightly different at any particular instant.

PLL

Phase Lock Loop

PM

Performance Monitoring - Measures the quality of service and identifies degrading or marginally operating systems (before an alarm is generated).

PMA

Performance Monitoring Application

Pointer

An indicator whose value defines the frame offset of a virtual container with respect to the frame reference of the transport entity on which the Virtual Container is supported.

POTS

Plain Old Telephone Service

PP

Pointer Processing

PPC

Pointer Processor and Cross-connect

Primary ITM-SC

ITM-SC that is usually managing a NE. If the primary ITM-SC fails, management of the NE is passed over to the secondary ITM-SC. A NE should be provisioned normally on the primary ITM-SC and then be configured for use on the secondary ITM-SC. See also Geographic Redundancy.

Primary Reference Clock (PRC)

The main timing clock reference in SDH equipment.

Protected Domain

The protected domain for an ITM-SC contains all the NEs for which this manager is the primary ITM-SC and which are protected by another secondary ITM-SC. See also Geographic Redundancy.

Protecting Domain

The protecting domain for an ITM-SC contains all the NEs for which this manager is the secondary ITM-SC. See also Geographic Redundancy.

Protection

Extra capacity (channels, circuit packs) in transmission equipment that is not intended to be used for service, but rather to serve as backup against equipment failures.

Provisioning

Assigning a value to a system parameter.

PSA

Partially Service Affecting

PSDN

Public Switched Data Network

PSF

Power Supply Filter

PSF-SIP

Power Supply Filter; originally designed for an Italian customer.

PSN

Packet-Switched Network

PSTN

Public Switched Telephone Network

PT

Protected Terminal Power-supply filter and Timing circuit pack

PVID

Port VLAN ID

Q Q-LAN

Thin Ethernet LAN (10BaseT) that connects the manager to gateway NEs so that management information can be exchanged between NEs and management systems.

QAF

Q-Adapter Function (in NE)

QOS

Quality Of Service

Quality Level (QL)

The quality of the timing signal(s) that are provided to clock a NE. The level is provided by the Synchronization Status Marker which can accompany the timing signal. If the System and Output Timing Quality Level mode is “Enabled”, and if the signal selected for the Station-Clock Output has a quality level below the Acceptance Quality Level, the NE “squashes” the Station-Clock Output Signal, which means that no signal is forwarded at all. Possible levels are:
- PRC (Primary Reference Clock) - SSU_T (Synchronization Supply Unit - Transit) - SSU_L (Synchronization Supply Unit - Local) - SEC (SDH Equipment Clock) - DUS (Do not Use for Synchronization).

R RA

Regenerator Application

Radio Protection Switching system (RPS)

The main function of the RPS is to handle the automatic and manual switching from a main channel to a common protection channel in an N+1 system.

Radio Relay (RR)

A point-to-point Digital Radio system to transport STM-1 signals via microwaves.

RCU

Rigid Connect Unit

RCVR Data Distribution Unit (RCVR)

Radio Relay circuit pack that distributes of the protection channel and the low-priority traffic in the receiver side.

RDDU

RCVR Data Distribution Unit

RDI

Remote Defect Indicator. Previously known as Far End Receive Failure (FERF).

RDI

Ring Drop/Insert (Add-Drop)

RDSV

Running Digital Sum Violations

Receive-direction

The direction towards the cross-connect.

REGEN

Regenerator

Regenerator Loop

Loop in a NE between the Station Clock Output(s) and one or both Station Clock Inputs, which can be used to dejitterize the selected timing reference in network applications.

Regenerator Section Termination (RST)

Function that generates the Regenerator Section Overhead (RSOH) in the transmit direction and terminates the RSOH in the receive direction.

REI

Remote Error Indication. Previously known as Far End Block Error (FEBE).

Relay Unit (RU)

Radio Relay circuit pack whose main function is to perform protection switching when the Alignment Switch in the demodulator unit is unable to perform protection switching.

Restore Timer

Counts down the time (in minutes) during which the switch waits to let the worker line recover before switching back to it. This option can be set to prevent the protection switch continually switching if a line has a continual transient fault. This field is greyed out if the mode is non-revertive.

Revertive Switching

In revertive switching, there is a working and protection high speed line, circuit pack, etc. When a protection switch occurs, the protection line, circuit pack, etc. is selected. When the fault clears, service reverts back to the original working line.

RF

Radio Frequency

RFI

Remote-Failure Indicator

RGU

ReGenerator Unit

Route

A series of contiguous digital sections.

RPS

Ring Protection Switching

RSM

Remote Switching Module

RSOH

Regenerator-Section OverHead; part of the SOH.

RZ

Return to Zero

S SA

Service Affecting Synchronous Adapter

SAI

Station Alarm Interface

SC

Square coupled Connector

SD

Signal Degrade

SDH

Synchronous Digital Hierarchy. Definition of the degree of control of the various clocks in a digital network over other clocks.

SDH-TE

SDH - Terminal Equipment

SEC

SDH Equipment Clock

Secondary ITM-SC

Backup ITM-SC for a NE should the primary ITM-SC fail. A NE should be provisioned normally on the primary ITM-SC and then be configured for use on the secondary ITM-SC. See also Geographic Redundancy.

Section

A transport entity in the transmission media layer that provides integrity of information transfer across a section layer network connection by means of a termination function at the section layer.

Section Adaptation (SA)

Function that processes the AU-pointer to indicate the phase of the VC-3/4 POH relative to the STM-N SOH and assembles/disassembles the complete STM-N frame.

Section Overhead (SOH)

Capacity added to either an AU-4 or to an assembly of AU-3s to create an STM-1. Always contains STM-1 framing and can contain maintenance and operational functions. SOH can be subdivided into MSOH (multiplex section overhead) and RSOH (regenerator section overhead).

SEF

Support Entity Function (in NE)

Self-healing

A network's ability to automatically recover from the failure of one or more of its components.

Server

Computer in a computer network that performs dedicated main tasks that require generally sufficient performance. See also Client.

Service

The operational mode of a physical entity that indicates that the entity is providing service. This designation will change with each switch action.

Severely Errored Frame Seconds (SEFS)

A performance monitoring parameter.

Severely Errored Second (SES)

A second that has a binary error ratio. SES is used as a performance monitoring parameter.

Severity

See Alarm Severity

SH

Short Haul

SI

Synchronous Interface

SIB

Subrack Interface Box

SLC

Subscriber Loop Carrier

SLM

Signal Label Mismatch

Smart Communication Channel (SCC)

An HDLC messaging channel between the SDH-TE and the 5ESS host node. Similar to the DCC messaging channels that are located in the STM-N section overhead.

SML

Service Management Level

SMN

SDH Management Network

SMS

SDH Management Subnetwork

SNC/I

SubNetwork Connection (protection) / Inherent monitoring

SNC/NI

SubNetwork Connection / Non Intrusive monitoring

SNR

Signal to Noise Ratio

Soft Windows

PC emulator package for HP platforms.

SOH

Section Overhead. Capacity added to either an AU-4 or to an assembly of AU-3s to create an STM-1. Always contains STM-1 framing and can contain maintenance and operational functions. SOH can be subdivided in MSOH (Multiplex Section OverHead) and RSOH (Regenerator Section OverHead).

SONET

Synchronous Optical Network

Space Diversity (SD)

Reception of the Radio signal via mirror effects on Earth.

SPB2M

Subrack Protection for 2 Mbit/s Board

Specification and Design Language (SDL)

This is a standard formal language for specifying (essentially) finite state machines.

SPI

SDH Physical Interface Synchronous-Plesiochronous Interface

SSM

Synchronization Status Marker

Standby

The operational mode of a physical entity that indicates that the entity is not providing service, but standby. This designation changes with each switch action.

Standby

The operational mode of a physical entity that indicates that the entity is not providing service but is on standby. This designation will change with each switch action.

Station Clock Input (SCI)

An external clock may be connected to a Station Clock Input.

Station Clock Output (SCO)

A clock signal that can be used for other systems.

STM

Synchronous Transport Module Building block of SDH.

STM

Synchronous Transport Module building block of SDH

STP

Spanning Tree Protocol

Stretched Ring (STRING)

An open ring in which each node is an Add-Drop Multiplexer. The end nodes operate with one equipped high-speed line.

STS

Synchronous Transport Signal; used in SONET.

STVRP

Spanning Tree with VPN Registration Protocol

Subnetwork

A group of interconnected/interrelated NEs. The most common connotation is an SDH network in which the NEs have Data Communications Channels (DCC) connectivity.

Supervisor

A user of the ITM-SC application with Supervisor privileges. See also User Privilege.

Supervisory Unit (SU)

Radio Relay circuit pack that gives comprehensive supervision and control facilities to the user by collecting information from the Alarm Collection Units and Alarm Adapter Units.

SVCE

Service

Switching Module (SM)

An access module from the 5ESS switch.

Synchronization Supply Unit (SSU)

A circuit pack that recovers and reshapes the clock signal in order to filter out jitter. Local (SSU_L) and Transit (SSU_T) types are available.

Synchronous

The essential characteristic of time-scales or signals such that their corresponding significant instants occur at precisely the same average rate.

Synchronous Digital Hierarchy (SDH)

A hierarchical set of digital transport structures that is standardized for the transport of suitably adapted payloads over transmission networks.

Synchronous Equipment Management Function (SEMF)

Function that converts performance data and implementation-specific hardware alarms into object-oriented messages for transmission over the DCC and/or the Q-interface. The SEMF also converts object-oriented messages that are related to other management functions so that they can pass across the S reference points.

Synchronous Network

The synchronization of synchronous transmission systems with synchronous payloads to a master Network clock that can be traced to a single reference clock.

Synchronous Transport Module (STM)

The information structure that is used to support (section layer) connections in SDH.

System Administrator

A user of the computer system on which the ITM-SC application can be installed. See also User Privilege.

System Controller (CTL)

ISM circuit pack that controls the configuration of an Intelligent Synchronous Multiplexer system.

System Controller (SC)

A circuit pack that controls and provisions all units. It also contains the data communication packet switch functionality that is necessary for routing of management information between NEs and their management system.

T TCA

Threshold Crossing Alarm

TCP/IP

Transmission Control Protocol/Internet Protocol

TDEV

Timing DEVIation

TDM

Timing Division Multiplexing

Template

A collection of parameters that define a specific NE configuration. A template gives the user the opportunity to configure parameters in a NE with a single operation. The template is re-usable and allow the user to configure the parameters in many NEs in the same way. A set of default templates is provided, and the user can create new templates and edit or delete user-created ones. Note that a template is always associated with one specific NE type and can not be used

for other NE types.

TERM

Terminal Multiplexer

TGU

Timing Generator Unit

TI

Timing Interface

TLM

TeLeMetry Unit

TLP

Terminal with Line Protection

TMN

Telecommunications Management Network

TPU

Tributary Port Unit

TPU-PCT

Tributary Port Unit - Peripheral Control and Timing link

TPU155

Tributary port Unit 155 Mbit/s

TPU2

Tributary port Unit 2 Mbit/s

TPU34/45

Tributary port Unit 34/45 Mbit/s

Transmit-direction

The direction outwards from the cross-connect.

Trellis Code Modulation

A combined coding and modulation scheme for improving the reliability of a digital transmission system without increasing the transmitted power or the required bandwidth.

TRF

TRansFer unit

Tributary

A signal of a specific rate (2 Mbit/s, 34 Mbit/s, 140 Mbit/s, VC12, VC3, VC4, STM-1 or STM-4) that may be added to or dropped from a line signal.

Tributary Unit (TU)

An information structure that provides adaptation between the lower order path layer and the higher path layer. Consists of a VC-n plus a tributary unit pointer TU PTR.

Tributary Unit Pointer (TU PTR)

Indicates the phase alignment of the VC with respect to the TU in which it resides. The pointer position is fixed with respect to the TU frame.

TSA

Time Slot Assignment

TSI

Time Slot Interchange

TTP

Trail Termination Point

TUG

Tributary Unit Group

U UAS

UnAvailable Seconds

UIM/X

A package that is used for developing the WaveStar® ITM-SC GUI for X-windows.

ULDT

Ultra Long Distance Transmission

Unavailable Seconds

A performance monitoring parameter.

Uninterruptable Power Supply (UPS)

Allows connected computer equipment to gracefully shutdown and therefore prevents damage in the case of a power failure. Also absorbs dips in the power supply.

Universal Co-ordinated Time (UTC)

An indication of the time of an event that is independent of the time-zone in which the event occurred. The local time can be calculated from the Universal Co-ordinated Time.

Upgrade

An upgrade is the addition of new capabilities (feature). An upgrade requires new software and may require new hardware.

UPL

User Panel

Upstream

At or towards the source of the considered transmission stream, i.e. in the direction that is opposite to the direction of transmission.

User Privilege

A permission of a user that allows to perform actions on the computer system on which the ITM-SC application runs. There are the following different types of users:

User Type	User name	Permissions
System Administrator this is NOT an ITM-SC user	root (fixed)	maintain platform .
Database Administrator this is NOT an ITM-SC user	informix (fixed)	maintain database .
ITM-SC System Administrator	i2kadmin (fixed)	maintain ITM-SC application , maintain Network Element templates , maintain MEC files on the ITM-SC, set default ITM-SC parameters .
Supervisor	free choice	perform all data retrieval functions , perform all alarm suppression functions , perform configuration changes .
Operator	free choice	perform all data retrieval functions , perform all alarm suppression functions .

V Value

A number, text string, or other menu selection that is associated with a parameter.

VF

Voice Frequency

Virtual Container (VC)

Container with a path overhead.

VLAN

Virtual LAN

VPN

Virtual Privat Network

W Wait to Restore Time (WRT)

The time to wait before switching back after a failure has cleared in a revertive protection scheme. This time can be between 0 and 15 minutes, in increments of one minute.

WAN

Wide Area Network

Wander

Long term variations of amplitude frequency components (below 10 Hz) of a digital signal from their ideal position in time. Wander can result in buffer problems at a receiver.

WaveStar® Integrated Transport Management Subnetwork Controller (ITM-SC)

Manager for SDH NEs in a subnetwork. Also called an Element Management System.

WaveStar® Network Management System (NMS)

Manager for SDH NEs in a network. Formerly known as DACScan-T.

WDM

Wavelength Division Multiplexing

What You See Is What You Get (WYSIWYG)

Information as displayed on the screen will appear in the same way on printed output.

Wideband Communications

Voice, data, and/or video communication at digital rates from 64 kbit/s to 2 Mbit/s.

Windows

Graphical User Interface on PC systems.

Working

Label attached to a physical entity. In the case of revertive switching the working line or unit is the entity that carry service under normal operation. In the case of non-revertive switching this label has no particular meaning.

WS

WorkStation

WSF

Work Station Facility

X X-Terminal

Workstation that can support an X-Windows interface

X-Windows

Graphical User Interface on Unix Systems.

XMTR

Transmitter

XMTR Switch Unit

Radio Relay circuit pack that performs connections for protection switching and transmission of low priority traffic on the protection channel.

XPIC

Cross Polarization Interference Cancellation

XSU

XMTR Switch Unit