

LTE Alarm List for EnodeB

SpecificProblem	EventType	ProbableCause
BatteryBackupTimeTooShort	EQUIPMENT_ALARM	BATTERY_FAILURE
BatteryMissing	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR

BatteryVoltageTooLowMainLoadDisconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
BatteryVoltageTooLowPrioLoadDisconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
Board Overheated	EQUIPMENT_ALARM	HIGH_TEMPERATURE

CircuitBreakerTripped	ENVIRONMENTAL_ALARM	FUSE_FAILURE
Configuration Version Corrupt	EQUIPMENT_ALARM	FILE_ERROR
Contact to Default Router X Lost	COMMUNICATIONS_ALARM	UNAVAILABLE

Credentials Validity Fault	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERR
Disconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION

Disk Volume C Full	EQUIPMENT_ALARM	DISK_PROBLEM
Disk Volume D Full	EQUIPMENT_ALARM	DISK_PROBLEM
EnclosureDoorOpen	ENVIRONMENTAL_ALARM	ENCLOSURE_DOOR_OPEN_M3100

EnclosureProductDataMismatch	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
EnclosureSmoke	ENVIRONMENTAL_ALARM	SMOKE
EnclosureSmokeDetectorFailure	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION

ET IP Hardware Fault	EQUIPMENT_ALARM	LINE_CARD_PROBLEM
FanFailure	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
File System Diagnostic Error	EQUIPMENT_ALARM	DISK_PROBLEM

GeneralHwError	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
GeneralSwError	PROCESSING_ERROR_ALARM	SOFTWARE_ERROR
Gigabit Ethernet Link Fault	COMMUNICATIONS_ALARM	LOSS_OF_SIGNAL

Hardware Failure Imminent	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
HighOperatingTemperatureMainLoadDisco nnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
IKE Peer Not Reachable	COMMUNICATIONS_ALARM	UNAVAILABLE

InconsistentConfiguration	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
Inter-PIU Link Fault	EQUIPMENT_ALARM	LINK_FAILURE
Invalid Ethernet Optical Module	EQUIPMENT_ALARM	REPLACEABLE_UNIT_TYPE_MISMATCH

IPsec Certificate Fault	COMMUNICATIONS_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERR
License Key File Fault	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERR

Loss of System Clock

EQUIPMENT_ALARM

REPLACEABLE_UNIT_PROBLEM

Loss of Tracking	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
LossOfMains	ENVIRONMENTAL_ALARM	COMMERCIAL_POWER_FAILURE
	ENVIRONMENTAL_ALARM	COMMERCIAL_POWER_FAILURE
LowBatteryCapacity	EQUIPMENT_ALARM	BATTERY_FAILURE

NTP Server Reachability Fault	COMMUNICATIONS_ALARM	UNAVAILABLE
NumberOfHwEntitiesMismatch	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
OperatingTemperatureTooHighBatteryDisconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION

OperatingTemperatureTooHighNoService	ENVIRONMENTAL_ALARM	TEMPERATURE_UNACCEPTABLE
OperatingTemperatureTooLowCommunicationLost	ENVIRONMENTAL_ALARM	TEMPERATURE_UNACCEPTABLE
Plug-In Unit General Problem	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM

Plug-In Unit HW Failure	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
Power Failure Right Slot	EQUIPMENT_ALARM	POWER_PROBLEM_M3100
ResourceAllocationFailure	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR

ResourceConfigurationFailure	PROCESSING_ERROR_ALARM	TIMEOUT_EXPIRED
RunningOnBatterySupply	ENVIRONMENTAL_ALARM	BATTERY_DISCHARGING
ServiceUnavailable	QUALITY_OF_SERVICE_ALARM	UNDERLYING_RESOURCE_UNAVAILABLE

Synch Reference Not Reliable	QUALITY_OF_SERVICE_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
Synch Reference Path HW Fault	EQUIPMENT_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
System Clock in Holdover Mode	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM

System Clock Quality Degradation	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
SystemOvervoltage	EQUIPMENT_ALARM	POWER_PROBLEM_M3100

SystemUndervoltage	EQUIPMENT_ALARM	POWER_PROBLEM_M3100
TemperatureSensorFailure	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
TU Synch Reference Loss of Signal	COMMUNICATIONS_ALARM	LOSS_OF_SIGNAL
Auto-Configuration of Board Not Possible	EQUIPMENT_ALARM	UNAVAILABLE
Automatic CV Creation Failed	EQUIPMENT_ALARM	UNAVAILABLE

BatteryBackupTimeTooShort	EQUIPMENT_ALARM	BATTERY_FAILURE
BatteryMissing	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
BatteryVoltageTooLowMainLoadDisconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
BatteryVoltageTooLowPrioLoadDisconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
Board Overheated	EQUIPMENT_ALARM	HIGH_TEMPERATURE
CircuitBreakerTripped	ENVIRONMENTAL_ALARM	FUSE_FAILURE
Clock Calibration Expiry Soon	QUALITY_OF_SERVICE_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
Configuration Version Corrupt	EQUIPMENT_ALARM	FILE_ERROR

Contact to Default Router 0 Lost	COMMUNICATIONS_ALARM	UNAVAILABLE
Contact to Default Router 1 Lost	COMMUNICATIONS_ALARM	UNAVAILABLE
Contact to Default Router 2 Lost	COMMUNICATIONS_ALARM	UNAVAILABLE
Credentials Enrollment Fault	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
Credentials Validity Fault	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
CurrentTooHigh	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
Disconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
Disk Volume C Full	EQUIPMENT_ALARM	DISK_PROBLEM
Disk Volume D Full	EQUIPMENT_ALARM	DISK_PROBLEM
Duplicate IP Address Fault	COMMUNICATIONS_ALARM	COMMUNICATION_PROTOCOL_ERROR
Duplicate IP Address Fault	COMMUNICATIONS_ALARM	COMMUNICATION_PROTOCOL_ERROR
Duplicate IP Address Fault	COMMUNICATIONS_ALARM	COMMUNICATION_PROTOCOL_ERROR
Emergency Unlock of Software Licensing	QUALITY_OF_SERVICE_ALARM	ALARM_INDICATION_SIGNAL
EnclosureDoorOpen	ENVIRONMENTAL_ALARM	ENCLOSURE_DOOR_OPEN_M3100
EnclosureProductDataMismatch	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
EnclosureSmoke	ENVIRONMENTAL_ALARM	SMOKE
EnclosureSmokeDetectorFailure	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
ET IP Hardware Fault	EQUIPMENT_ALARM	LINE_CARD_PROBLEM
ExternalAlarm	UNKNOWN_EVENT_TYPE	EXTERNAL_EQUIPMENT_FAILURE
ExternalLinkFailure	EQUIPMENT_ALARM	LINK_FAILURE
FanFailure	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
FanPowerSupplyFailure	EQUIPMENT_ALARM	POWER_PROBLEM_M
FeatureResourceMissing	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR

FeatureResourceMissing	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
FeatureResourceMissing	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
File System Diagnostic Error	EQUIPMENT_ALARM	DISK_PROBLEM
GeneralHwError	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
GeneralSwError	PROCESSING_ERROR_ALARM	SYSTEM_CALL_UNSUCCESSFUL
GeneralSwError	PROCESSING_ERROR_ALARM	TIMEOUT_EXPIRED
GeneralSwError	PROCESSING_ERROR_ALARM	SOFTWARE_DOWNLOAD_FAILURE
GeneralSwError	PROCESSING_ERROR_ALARM	SOFTWARE_ERROR
GeneralSwError	PROCESSING_ERROR_ALARM	SOFTWARE_DOWNLOAD_FAILURE
GeneralSwError	PROCESSING_ERROR_ALARM	SYSTEM_CALL_UNSUCCESSFUL
GeneralSwError	PROCESSING_ERROR_ALARM	TIMEOUT_EXPIRED
GeneralSwError	PROCESSING_ERROR_ALARM	SOFTWARE_ERROR
GeneralSwError	PROCESSING_ERROR_ALARM	SYSTEM_CALL_UNSUCCESSFUL
GeneralSwError	PROCESSING_ERROR_ALARM	TIMEOUT_EXPIRED
GeneralSwError	PROCESSING_ERROR_ALARM	SOFTWARE_DOWNLOAD_FAILURE
GeneralSwError	PROCESSING_ERROR_ALARM	SOFTWARE_ERROR

GeneralSwError	PROCESSING_ERROR_ALARM	SOFTWARE_DOWNLOAD_FAILURE
GeneralSwError	PROCESSING_ERROR_ALARM	SYSTEM_CALL_UNSUCCESSFUL
GeneralSwError	PROCESSING_ERROR_ALARM	TIMEOUT_EXPIRED
GeneralSwError	PROCESSING_ERROR_ALARM	SOFTWARE_ERROR
Gigabit Ethernet Link Fault	COMMUNICATIONS_ALARM	LOSS_OF_SIGNAL
Gigabit Ethernet Link Redundancy Fault	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
GpsConnectivityDownstreamFault	EQUIPMENT_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
GpsHardwareFault	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
GracePeriodExpires	QUALITY_OF_SERVICE_ALARM	THRESHOLD_CROSSED
GracePeriodStarted	QUALITY_OF_SERVICE_ALARM	THRESHOLD_CROSSED
Hardware Failure Imminent	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
HighOperatingTemperatureMainLoadDisconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
HwFault	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
HwFault	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
HwFault	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
IKE Peer Not Reachable	COMMUNICATIONS_ALARM	UNAVAILABLE
InconsistentConfiguration	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
InconsistentConfiguration	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
InconsistentConfiguration	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR

InconsistentConfiguration	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
InsufficientBatteryCharging	EQUIPMENT_ALARM	BATTERY_CHARGING_FAULT
Inter-PIU Link Fault	EQUIPMENT_ALARM	LINK_FAILURE
Invalid Ethernet Optical Module	EQUIPMENT_ALARM	REPLACEABLE_UNIT_TYPE_MISMATCH
IPsec Certificate Expiry	COMMUNICATIONS_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
IPsec Certificate Fault	COMMUNICATIONS_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
Large Number of Counters	QUALITY_OF_SERVICE_ALARM	PERFORMANCE_DEGRADED
License Key File Fault	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
License Key for Feature Missing	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
License Key for Feature Missing	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
License Mismatch	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
LicenseKeyMissing	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
LicenseKeyMissing	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR

LinkFailure	EQUIPMENT_ALARM	LINK_FAILURE
Local AA DB Installation Fault	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_E
Loss of Synch Reference Redundancy	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM

Loss of Tracking	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
LossOfMains	ENVIRONMENTAL_ALARM	COMMERCIAL_POWER_FAILURE
LossOfMains	ENVIRONMENTAL_ALARM	COMMERCIAL_POWER_FAILURE
LowBatteryCapacity	EQUIPMENT_ALARM	BATTERY_FAILURE
Maximum Number of Counters Exceeded	QUALITY_OF_SERVICE_ALARM	PERFORMANCE_DEGRADED
Network Synch Time from GPS Missing	COMMUNICATIONS_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
Network Synch Time from GPS Missing	COMMUNICATIONS_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
NoContact	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
NoContact	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
NoContact	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
NoContact	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
NTP Server Reachability Fault	COMMUNICATIONS_ALARM	UNAVAILABLE
NTP System Time Sync Fault	COMMUNICATIONS_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
NTP System Time Sync Problem	COMMUNICATIONS_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
NumberOfHwEntitiesMismatch	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
NumberOfHwEntitiesMismatch	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
OperatingTemperatureTooHighBatteryDisconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
OperatingTemperatureTooHighBatteryDisconnected	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
OperatingTemperatureTooHighCapacityReduced	ENVIRONMENTAL_ALARM	HIGH_TEMPERATURE
OperatingTemperatureTooHighNoService	ENVIRONMENTAL_ALARM	TEMPERATURE_UNACCEPTABLE
OperatingTemperatureTooLowCapacityReduced	ENVIRONMENTAL_ALARM	LOW_TEMPERATURE

OperatingTemperatureTooLowCommunicationLost	ENVIRONMENTAL_ALARM	TEMPERATURE_UNACCEPTABLE
Packet Server Availability Fault	COMMUNICATIONS_ALARM	UNAVAILABLE
Packet Server Availability Fault	COMMUNICATIONS_ALARM	UNAVAILABLE
Password File Fault	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_E
Plug-In Unit General Problem	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
Plug-In Unit HW Failure	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
Power Feeding Fault	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
PowerFailure	EQUIPMENT_ALARM	POWER_SUPPLY_FAILURE
ProblemsToScheduleSiMessages	QUALITY_OF_SERVICE_ALARM	CONGESTION
Remote IP Address Unreachable	COMMUNICATIONS_ALARM	UNAVAILABLE
ResourceAllocationFailure	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
ResourceAllocationFailure	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
ResourceConfigurationFailure	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
ResourceConfigurationFailure	PROCESSING_ERROR_ALARM	SYSTEM_CALL_UNSUCCESSFUL
ResourceConfigurationFailure	PROCESSING_ERROR_ALARM	TIMEOUT_EXPIRED
ResourceConfigurationFailure	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
ResourceConfigurationFailure	PROCESSING_ERROR_ALARM	TIMEOUT_EXPIRED
RetFailure	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
RunningOnBatterySupply	ENVIRONMENTAL_ALARM	BATTERY_DISCHARGING

Security Level Fault	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
ServiceDegraded	EQUIPMENT_ALARM	PERFORMANCE_DEGRADED
ServiceUnavailable	PROCESSING_ERROR_ALARM	UNDERLYING_RESOURCE_UNAVAILABLE
Signed Software Problem	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
Slave TU Out of Synchronization	EQUIPMENT_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
Sync Reference PDV Problem	QUALITY_OF_SERVICE_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
Synch Reference Not Reliable	QUALITY_OF_SERVICE_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
Synch Reference Path HW Fault	EQUIPMENT_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
System Clock Quality Degradation	EQUIPMENT_ALARM	REPLACEABLE_UNIT_PROBLEM
SystemOvervoltage	EQUIPMENT_ALARM	POWER_PROBLEM_M3100
SystemUndervoltage	EQUIPMENT_ALARM	POWER_PROBLEM_M3100
TemperatureAbnormal	ENVIRONMENTAL_ALARM	HIGH_TEMPERATURE
TemperatureAbnormal	ENVIRONMENTAL_ALARM	LOW_TEMPERATURE
TemperatureAbnormalPerformanceDegraded	ENVIRONMENTAL_ALARM	HIGH_TEMPERATURE
TemperatureExceptionalTakenOutOfService	ENVIRONMENTAL_ALARM	LOW_TEMPERATURE
TemperatureExceptionalTakenOutOfService	ENVIRONMENTAL_ALARM	HIGH_TEMPERATURE
TemperatureSensorFailure	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
TemperatureSensorFailure	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
TimingSyncFault	EQUIPMENT_ALARM	CLOCK_SYNCHRONISATION_PROBLEM
Trusted Certificate Installation Fault	QUALITY_OF_SERVICE_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
TU Hardware Fault	COMMUNICATIONS_ALARM	REPLACEABLE_UNIT_PROBLEM
TU Oscillator Temperature Fault	ENVIRONMENTAL_ALARM	TEMPERATURE_UNACCEPTABLE
TU Synch Reference Loss of Signal	COMMUNICATIONS_ALARM	LOSS_OF_SIGNAL

UnreliableResource	PROCESSING_ERROR_ALARM	CONFIGURATION_OR_CUSTOMIZING_ERROR
UnreliableResource	QUALITY_OF_SERVICE_ALARM	THRESHOLD_CROSSED
Upgrade Package Corrupt	EQUIPMENT_ALARM	FILE_ERROR
User-Defined Profiles File Error	PROCESSING_ERROR_ALARM	FILE_ERROR
VswrOverThreshold	EQUIPMENT_ALARM	EQUIPMENT_MALFUNCTION
Heartbeat Failure	Communications alarm	LAN Error/Communication Error

PerceivedSeverity	Managed Object	Alarm Print
MAJOR	BatteryBackup	
MAJOR	BatteryBackup	

MAJOR	PowerDistribution	
MAJOR	PowerDistribution	
MAJOR	PlugInUnit	

MAJOR	HwUnit	
MAJOR	ConfigurationVersion	
MAJOR	IpInterface	

MAJOR	Security	
MAJOR	EquipmentSupportFunction	
MAJOR	FanGroup	
MAJOR	HwUnit	

MAJOR	ManagedElement	
MAJOR	PlugInUnit	
MAJOR	Cabinet	

MAJOR	Cabinet	
CRITICAL	Cabinet	
MAJOR	Cabinet	

MAJOR	ExchangeTerminalIp	
MAJOR	FanGroup	
MAJOR	PlugInUnit	

MAJOR	HwUnit	
MAJOR	HwUnit	
MAJOR	GigaBitEthernet	

MAJOR	PlugInUnit	
MAJOR	PowerDistribution	
MAJOR	IkePeer	

MAJOR	SectorEquipmentFunction	
MAJOR	InterPiuLink	
MAJOR	GigaBitEthernet	

MAJOR	IPsec	
CRITICAL	Licensing	

CRITICAL

Synchronization

MAJOR	Synchronization	
MAJOR	HwUnit	
MAJOR	PowerSupply	
MAJOR	BatteryBackup	

MAJOR	IpSyncRef	
MAJOR	Cabinet	
MAJOR	BatteryBackup	
MAJOR	HwUnit	

MAJOR	HwUnit	
MAJOR	HwUnit	
MAJOR	PlugInUnit	

MAJOR	PlugInUnit	
MAJOR	Subrack	
MAJOR	EUtranCellFDD	

MAJOR	EUTRANCellFDD	
MAJOR	BatteryBackup	
MAJOR	EUTRANCellTDD	

MAJOR	Synchronization	
MAJOR	Synchronization	
MAJOR	Synchronization	

CRITICAL	Synchronization	
MAJOR	PowerSupply	

MAJOR	PowerSupply	
MAJOR	BatteryBackup	
MAJOR	TuSyncRef	
WARNING	Slot	
WARNING	ConfigurationVersion	

MAJOR	BatteryBackup	
MAJOR	BatteryBackup	
MAJOR	PowerDistribution	
MAJOR	PowerDistribution	
MAJOR	PlugInUnit	
MAJOR	HwUnit	
MAJOR	Synchronization	
MAJOR	ConfigurationVersion	

MAJOR	IpInterface	
MAJOR	IpInterface	
MAJOR	IpInterface	
WARNING	Security	
MAJOR	Security	
MINOR	RfPort	
MAJOR	Cabinet	
MAJOR	EquipmentSupportFunction	
MINOR	ExternalNode	
MAJOR	FanGroup	
MAJOR	HwUnit	
MAJOR	ManagedElement	
MAJOR	PlugInUnit	
MAJOR	IpAccessHostEt	
MAJOR	IpHostLink	
MAJOR	Ipv6Interface	
MINOR	Licensing	
MAJOR	Cabinet	
WARNING	Cabinet	
CRITICAL	Cabinet	
MAJOR	Cabinet	
MAJOR	ExchangeTerminalIp	
MINOR	AlarmPort	
MINOR	ENodeBFunction	
MAJOR	FanGroup	
MAJOR	Cabinet	
MINOR	RfPort	

MAJOR	SectorEquipmentFunction	
MAJOR	EUtranCellFDD	
MAJOR	PlugInUnit	
MAJOR	HwUnit	
MINOR	AntennaNearUnit	
MINOR	AntennaNearUnit	
MINOR	AntennaNearUnit	
MINOR	DeviceGroup	
MAJOR	HwUnit	
MINOR	AntennaNearUnit	
MINOR	AntennaNearUnit	
MINOR	AntennaNearUnit	
MINOR	DeviceGroup	

MINOR	DeviceGroup	
MINOR	DeviceGroup	
MINOR	DeviceGroup	
MAJOR	HwUnit	
MAJOR	GigaBitEthernet	
WARNING	GigaBitEthernet	
MAJOR	DeviceGroup	
MAJOR	DeviceGroup	
MINOR	CapacityFeatureLicense	
MINOR	CapacityFeatureLicense	
MAJOR	PlugInUnit	
MAJOR	PowerDistribution	
MINOR	AntennaNearUnit	
MINOR	DeviceGroup	
MINOR	RiPort	
MAJOR	IkePeer	
MINOR	AntennaUnit	
MINOR	DeviceGroup	
MINOR	RetSubUnit	

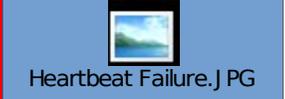
MINOR	RfPort	
MINOR	RiPort	
MAJOR	SectorEquipmentFunction	
MAJOR	MbsfnArea	
MINOR	AlarmPort	
MINOR	EcPort	
MINOR	BatteryBackup	
MAJOR	InterPiuLink	
MAJOR	GigaBitEthernet	
WARNING	IpSec	
MAJOR	IpSec	
WARNING	ManagedElement	
CRITICAL	Licensing	
MAJOR	IpSec	
MAJOR	Ipv6	
MAJOR	Licensing	
MAJOR	CapacityFeatureLicense	
MAJOR	OptionalFeatureLicense	

MINOR	RiPort	
MINOR	Security	
MINOR	Synchronization	

MAJOR	Synchronization	
MAJOR	HwUnit	
MAJOR	PowerSupply	
MAJOR	BatteryBackup	
MINOR	ManagedElement	
MAJOR	TuSyncRef	
MAJOR	GpsSyncRef	
MINOR	AuxPlugInUnit	
MINOR	AntennaNearUnit	
MINOR	AntennaNearUnit	
MINOR	AuxPlugInUnit	
MAJOR	IpSyncRef	
MAJOR	ManagedElementData	
MINOR	ManagedElementData	
MAJOR	Cabinet	
MAJOR	EquipmentSupportFunction	
MAJOR	BatteryBackup	
MAJOR	HwUnit	
MINOR	HwUnit	
MAJOR	HwUnit	
MINOR	HwUnit	

MAJOR	HwUnit	
MAJOR	PacketFrequencySyncRef	
MAJOR	PacketTimeSyncRef	
MINOR	Security	
MAJOR	PlugInUnit	
MAJOR	PlugInUnit	
MAJOR	PfmUnit	
MINOR	AuxPlugInUnit	
MINOR	EUtranCellFDD	
MINOR	Sctp	
MAJOR	EUtranCellFDD	
MAJOR	MbmsService	
MINOR	RetSubUnit	
MAJOR	SectorEquipmentFunction	
MAJOR	SectorEquipmentFunction	
MAJOR	EUtranCellFDD	
MAJOR	EUtranCellFDD	
MINOR	RetSubUnit	
MAJOR	BatteryBackup	

MAJOR	Security	
MINOR	EUtranCellFDD	
MAJOR	EUtranCellFDD	
WARNING	Security	
MAJOR	TimingUnit	
MAJOR	Synchronization	
MAJOR	Synchronization	
MAJOR	Synchronization	
CRITICAL	Synchronization	
MAJOR	PowerSupply	
MAJOR	PowerSupply	
WARNING	DeviceGroup	
WARNING	DeviceGroup	
MINOR	DeviceGroup	
MINOR	DeviceGroup	
MINOR	DeviceGroup	
MAJOR	BatteryBackup	
MINOR	HwUnit	
MAJOR	DeviceGroup	
MINOR	Security	
MAJOR	TimingUnit	
WARNING	TimingUnit	
MAJOR	TuSyncRef	

MINOR	EUtranCellFDD	
MAJOR	EUtranCellFDD	
MAJOR	UpgradePackage	
MAJOR	Security	
MINOR	RfPort	
CRITICAL	ONRM_ROOT_MO	

Description

This alarm is raised when a test on demand or periodic battery backup time test has indicated that the estimated remaining battery backup time is shorter than expected. The alarm indicates that the battery capacity is not sufficient and that the battery should be changed in order to fulfil the required backup time.

Generated because of a disconnected or faulty cable between the battery and the Battery Fuse Unit (BFU), or because of a faulty battery.

The alarm is raised when the main load is disconnected because of low battery voltage.
The disconnected level is defined by the attribute **mainLoadUnderVoltageDisconnect** .

The alarm is raised when the battery is disconnected because of low battery voltage.
The disconnect level is defined by the attribute **priorityLoadUnderVoltageDisconnect**

The alarm is issued when the temperature of a board becomes higher than the maximum allowed temperature.

This alarm is raised from MO HwUnit with hwUnitType Battery Fuse Unit (BFU). The alarm is raised when the battery is disconnected because of a tripped circuit breaker either by user intervention or as an automatic BFU safe guard.

The Configuration Version (CV) is corrupt.

The traffic on the network is disturbed. This can be caused by high traffic load, a hardware fault or wrong configuration of the network;
or The router itself is not answering the ping request;
or The IP address is invalid, or it is pointing to something other than a router.

The Node Credentials will expire in less than seven days.

The alarm is raised when the secondary node has lost contact with the primary node. The secondary node is dependent on the primary node for support system control.

This alarm is raised when a fan group that is expected to be present is disconnected.

The alarm is raised if there is no contact with a hardware unit that is expected to be present in the RBS

The alarm is issued if the amount of stored data on the distributed C volume becomes so large that the volume is full, or nearly full.

The alarm is issued if the amount of stored data on the distributed D volume becomes so large that the volume is full, or nearly full.

This alarm is raised when the cabinet door is opened.

This alarm is issued if attribute productData on managed object Cabinet is empty or if the attribute value differs from the copy store internally in the node. The alarm is raised if the Support Control Unit (SCU) is moved from another RBS to this RBS because the productData copy stored in the SCU/SUP(Support Part) differs from the original data stored in the Digital Unit LTE(DUL).

This alarm is raised when the smoke detector detects smoke in the cabinet. The cause of this can be a fire.

This alarm is raised when the smoke detector hardware is faulty.

Initial hardware tests have failed.

This alarm is raised when a fan is detected as faulty. The yellow led on the fan port is lit.

The file system has failed.

The alarm is raised if there is a hardware fault in the unit. The alarm indicates that the unit must be replaced , unrecoverable hardware fault.

General software error on the unit. This fault needs a correction-delivery. Unit affected are Support Control Unit (SCU), Support Alarm Unit (SAU), Battery Fuse Unit (BFU), and Power Supply Unit (PSU).

There is no configured link with operational state ENABLED.

The flash disk is almost worn out and must be replaced.

This alarm is raised when the main load has been disconnected because of high temperature in the PDU (1). A likely cause is one of the following:

- fault in the climate system;
- high environmental temperature;

The operational state for the IkePeer MO is DISABLED because an IKE Security Association (SA) could not be established with the IKE peer node. This can be for the following reasons:

- No response from the IKE peer node
 - Authentication failure
 - No proposal chosen

This alarm is raised because of, for example, an incorrect configuration of how the hardware, such as antenna near products, or radio equipment, are connected.

Cable between linked boards is missing, faulty or not properly connected.

Ethernet optical module is invalid or is not installed.

The operational state for the IpSec MO is DISABLED because:

- There is no IPsec certificate installed or
- There is no trusted certificate installed or
- The IPsec certificate has expired.

This alarm is raised when the LKF is corrupt or it is not valid for the node, or it has been deleted or it does not exist for other reasons.

The alarm is issued when no system clock is available in the node. The alarm provides information about the fault indicated in the corresponding primary alarm that can be: TU Hardware Fault

The alarm is issued if the system or radio clock enters "loss of tracking" mode in a Timing Unit (TU).

The alarm is raised when a Power Supply Unit (PSU) detects that the input voltage is too high or too low. The alarm is not raised if all PSUs detect wrong input voltage, only if a subset of the PSUs detect input voltage problem.

This alarm is raised when all Power Unit Supply (PSUs) detect a fault in the incoming power supply.

~~This alarm can be raised in three different situations. This is indicated by the alarm's additional text.~~

- Low voltage at intermittent charge

The battery voltage reached the configured limit intermittentChargeConnectVoltage while the battery was disconnected during intermittent charging.

- Insufficient discharged capacity

The alarm is raised if the estimatedBatteryStateOfHealth is less than the Minimum State Of Health at the end of a battery capacity test. This indicates that the battery has reached End-of-Life. The result of the battery test is FAILED.

- Insufficient recharged capacity

~~The alarm is raised if the batteries are not sufficiently recharged after a discharge. This indicates poor battery performance.~~

The alarm is issued when a Network Time Protocol (NTP) client detects a "not reachability" condition toward an NTP Server, which has been configured as an IP synchronization reference. The state of the faulty synchronization reference is changed to NOT_REACHABLE. The alarm remains as long as the reference server is not reachable.

This alarm is raised if a hardware unit that is not configured is detected in the system. A hardware unit is not configured if the corresponding Managed Object (MO) has not been created in the Managed Object Model (MOM).

The alarm is also raised if the number of fan groups detected by the system is less than the number configured fan groups.

The alarm additional text describes the cause of the alarm.

This alarm is raised when the battery is disconnected because of high battery temperature, according to the attribute batteryDisconnectTemp. The battery is reconnected when the battery temperature decreases. The alarm can be caused by:

- Disconnected battery temperature sensor;
 - A configuration fault;
- High environmental temperature or a fault in the climate system;
- Frequent battery discharge and charge, possibly in combination with high environmental temperature;
 - A battery temperature sensor fault;
 - Battery failure;

This alarm is issued by the HwUnit MO with hardware unit type Battery Fuse Unit (BFU). This alarm is raised when the battery is disconnected due to high BFU temperature. The battery is reconnected when the BFU temperature decreases again. The alarm can be caused by:

- A fault in the climate system or high environmental temperature
- BFU fault

The alarm is issued by the Managed Object (MO) HwUnit with hardware unit type Power Supply Unit (PSU). The alarm is raised when the PSU operating temperature is too high and the PSU is not able to provide any service. The PSU does not supply power to the RBS 6601.

This alarm is issued by the MO HwUnit with the hardware unit type Power Supply Unit (PSU). The alarm is raised when the PSU operating temperature is too low. The PSU is not able to communicate with the Digital Unit (DU). The PSU performance can be reduced .

- The alarm is issued when:
- All defined recovery attempts are performed for the PlugInUnit (PIU);
 - Contact with the PIU is lost for at least five minutes.

This alarm is issued when a Plug-In Unit is marked faulty after a hardware test of the board.

The alarm is issued if the –48V DC power supply to a Digital Unit Board (DU) is lost or is outside the allowed voltage range.

The possible causes of the alarm are as follows:

- A cable fault on the right side;
- A power supply fault on the right side;
- A voltage outside or close to the limit of the allowed voltage range;
- A hardware fault on the board.

The system fault message indicates missing or incompatible hardware.

Lack of hardware resources can, for example, be caused by request for:

- higher bandwidth than available;
- too many cells;

- missing or faulty licences.

Incompatible hardware is indicated when the Radio Unit (RU) or Remote Radio Unit (RRU) for the cell are either not compatible with each other or with the other RUs or RRUs connected to the DUL. The

AdditionalText Incompatible hardware resources is then displayed

The alarm is raised when the cell is activated and the resource allocation for the cell fails. This can be caused by a missing signal from the requested resource or by disabled (failed) resources during startup of the node.

This alarm is raised when the RBS is running on batteries. A possible fault is an AC mains failure forcing the RBS to run on battery supply.

This alarm occurs when a cell is disabled due to faults in underlying resources.

The Time Server is not locked to a valid synchronization source or the traffic on the IP network is disturbed. This can be caused by traffic load.

The alarm is issued if a "not reliability" condition on a supervised IP synchronization reference is detected by the MO, IpSyncRef or TimingUnit (TU). The value of the attribute, syncRefStatus for the faulty synchronization reference is changed to NOT_RELIABLE, if the condition is detected by the IpSyncRef MO, or to LOW_QUALITY, if the condition is detected by the TimingUnit MO.

The alarm is issued if the Timing Unit (TU) detects a loss of signal on a supervised synchronization reference.

In a node equipped with the Digital Unit (DU), the state of the faulty synchronization reference is changed to REF_PATH_FAILED_A, if the reference is connected to a primary DU and if the DU detects the loss of signal. The state is changed to REF_PATH_FAILED_B, if the reference is connected to a secondary DU and if the DU detects the loss of signal.

Faulty synchronization reference path of the TU (Timing Unit).

The alarm remains active as long as there is at least one synchronization reference that has a failed path. Normally, the fault must be attended to on site.

The alarm is issued if the system or radio clock enters holdover mode, which means that the Timing Unit (TU) is not locked to an external reference. This can be caused by the fault indicated in a corresponding primary alarm, which can be:

- TU Synch Reference Loss of Signal
 - Loss of Tracking
- Synch Reference Path HW Fault
 - Synch Reference Not Reliable
- PDH physical path termination: Plug-In Unit HW Failure, or ET IP Hardware Fault.
- SDH physical path termination: Plug-In Unit HW Failure, or ET IP Hardware Fault.
- IP Synchronization reference: NTP Server Reachability Fault, or Gigabit Ethernet Link Fault

The alarm is issued if the system or radio clock enters the free-running mode in a Timing Unit (TU):

Synchronization references are FAILED or DEGRADED;

Synchronization references are NOT_RELIABLE;

Synchronization references have LOW_QUALITY;

Synchronization references are LOSS_OF_TRACKING;

Synchronization references are either REF_PATH_FAILED_A or REF_PATH_FAILED_B;

This alarm is raised when the measured system voltage is above a defined level. The alarm levels are configured through the following attributes on Managed Object PowerSupply:

- systemOvervoltageAlarmLevel

- systemOvervoltageAlarmCeaseOffset

This alarm is raised when the system voltage falls below a defined level. The alarm levels are configured through the following attributes on the Managed Object PowerSupply :

- systemUndervoltageAlarmLevel
- systemUndervoltageAlarmCeaseOffset

This alarm is raised when a faulty battery temperature sensor is detected.

The alarm is issued if the Timing Unit (TU) cannot detect any signal at the input port for the dedicated synchronization reference. Normally, the fault must be attended to on site. The alarm indicates the most likely faulty board to start from with repairing actions

Alarm Cause: Fault in a synchronization reference cable, Fault in an external equipment that provides the synchronization reference signal to the TU or Fault in the Timing Unit hardware

Communication link problem, radio interface connection.

Possible source for the alarm is a faulty DU, cable, or RU.

The alarm also occurs if the SFP module is faulty, disconnected or does not support the required bit rate. The additional texts Faulty or Incompatible SFP Module or Missing SFP Module will then be displayed.

Communication link problem, radio interface connection.

Possible source for the alarm is a faulty DU, cable, or RU.

The alarm also occurs if the SFP module is faulty, disconnected or does not support the required bit rate. The additional texts Faulty or Incompatible SFP Module or Missing SFP Module will then be displayed.

The alarm is caused by a decrease of return loss below the sensitivity threshold because of problems in the antenna unit or antenna feeder.

fff
kkk
kkk

Impact

The battery backup time can be shorter than expected during the next power failure.

The RBS is not able to provide any service in case mains power fails.

The battery power backup system is disconnected and not available in case of mains power failure.

The RBS and the external equipment are shut down.

The RBS and the external equipment are shut down

The high temperature can damage the overheated board
and the traffic will be affected.

The battery backup is not available. The RBS is not able to provide service in case of main power failure.

The CV is not valid.

No impact, if at least one default router is reachable.

No traffic, if all default routers are unreachable.

If Node Credentials are not renewed before they expire, the node will be unable to operate on Security Levels 2 and 3. If the node is operating on Security Level 2 or 3 when expiry occurs, the Security Level will drop to level 1, and the alarm, **Security Level Fault** is issued.

performance but there is no risk of hardware unit damage. The secondary node is not informed about when the RBS is running on batteries. External alarms that originate from ports on Support Alarm Unit (SAU) and/or Support Control

The climate system does not work properly. There is risk of equipment overheating within the RBS cabinet.

The RBS is not able to communicate with or control the hardware unit. The hardware unit works in autonomous mode which results in reduced performance. The actual performance degradation depends on the type of hardware unit.

As a result of the fault, there might not be enough space to store important new data or to create new files on the C volume. Also, there might be not enough space for new upgrade packages.

As a result of the fault, there might not be enough space to store important new data or to create new files on the D volume. Also, there might be not enough space for new upgrade packages.

If a door is opened by an unauthorized person, there is an imminent risk of damage to the RBS in connection with the intrusion.

There is also a risk for temperature problems caused by disturbed airflow.

Correct cabinet Product Data (PID) is not available for the primary node or any secondary nodes in this RBS.

The RBS equipment and surroundings can be damaged by smoke or fire. People and property are in danger if there is a fire.

It is not possible to detect any smoke or fire in the RBS.

No traffic.

The climate system does not work properly. There is a risk of equipment overheating within the RBS cabinet.

Possible loss of node's functionality.

operly. Depending on the type of hardware unit the RBS serv

The unit cannot carry any climate or alarm functions.

Traffic disturbance.

The board will fail soon if it is not replaced.

All equipment connected to outputs, configured as main, is disconnected from power distribution. If the temperature does not decrease or even increases, the prioritized load is also disconnected.

IP Security (IPSec) traffic is not possible for this IkePeer MO and consequently not for any IpSecTunnel MO associated to it.

The requested sector cannot be used.

Loss of traffic capacity and loss of redundancy.

Note:

The alarm can be issued as a result of a maintenance activity.

Traffic disturbance.

No IPsec traffic processing is possible for any IkePeer MO with authenticationMethod set to CERTIFICATE.

Possible serious disturbances in the node, either immediately or after a restart. The licensed features are disabled and the licensed capacities are set to zero.

The traffic over the Synchronous Digital Hierarchy (SDH) or Plesiochronous Digital Hierarchy (PDH) interfaces is stopped or disturbed. Some slips or bit errors can occur since the clock is not locked to any timing reference and it cannot fulfill the required accuracy.

The likely cause is a fault in the main subrack on the Timing Unit (TU).

Traffic disturbance.

Power supply to the Radio Base Station (RBS) is reduced. Depending on configuration, the RBS can remain functional with one or more faulty PSUs.

There is no external power supply to the RBS. The severity of this alarm is related to the capacity of the battery backup system.

The battery capacity is lower than expected. The backup time at the next mains power failure is likely to be shorter than expected.

No impact on traffic, if there is a working standby synchronization reference.

Traffic disturbances can occur, if there is no working standby synchronization reference.

<hwUnitType>that is not configured detected: There can be service or performance degradation because hardware that is installed but not configured is not used properly by the system.

Too many configured fan groups: Not enough installed fan groups lead to cabinet climate problems. A faulty RBS configuration can also lead to service or performance degradation.

The battery power backup system is disconnected and not available in case of mains power failure. The RBS is not able to provide any service in case of mains power failure.

The consequence of the fault is that the battery power backup system is disconnected and not available in case of mains power failure. The RBS is not able to provide any service in case of mains power failure.

The power supply to the RBS is reduced. There is a risk the RBS stops providing service.

Possibly reduced performance in the RBS power system control functions. The power supply to the RBS can be reduced.

As a result of the fault, the traffic handled by the board is lost. The fault may need to be handled on site.

As a result of the fault, traffic handled by the board is lost.
The fault must be attended to on site.

The cause is that the software that handles the hardware
has found an unrecoverable hardware fault.

The power supply is not duplicated. Each Digital Unit board
receives its own power.

Note:

There is normally no alarm in this case, because there is
no power to send the alarm. However, an alarm might be
issued if the voltage level decreases slowly.

As a consequence of the fault, the Digital Unit board loses
power, and cannot carry any traffic.

The cell is not created.

The requested resource cannot be activated. The RBS cannot determine which resources to use for the cell.

The RBS stops providing service if AC mains power does not return before the battery backup power is consumed.

The cell is disabled and carries no traffic.

No impact on traffic, if there are standby synchronization references.

If no stand-by synchronization reference is available, the fault can stop or disturb the traffic or the network synchronization

Traffic is not disturbed.

Traffic is stopped or disturbed

AC/DC rectification or DC/DC conversion: a Power Supply Unit (PSU) delivers excessive voltage, or the input voltage is too high. If the system voltage continues to rise, the PSU will be shut down as a protection mechanism. The RBS can run on batteries if the defective PSU does not have redundant backup.

Direct -48 VDC power supply: incoming power supply voltage is too high. If the system voltage continues to rise, services fail and RBS equipment can be damaged.

If the system voltage drops further, the RBS and other equipment are shut down.

Battery overheating problems are not possible to detect and the batteries are not charged in the most efficient way. The battery is not disconnected from charging if it becomes overheated.

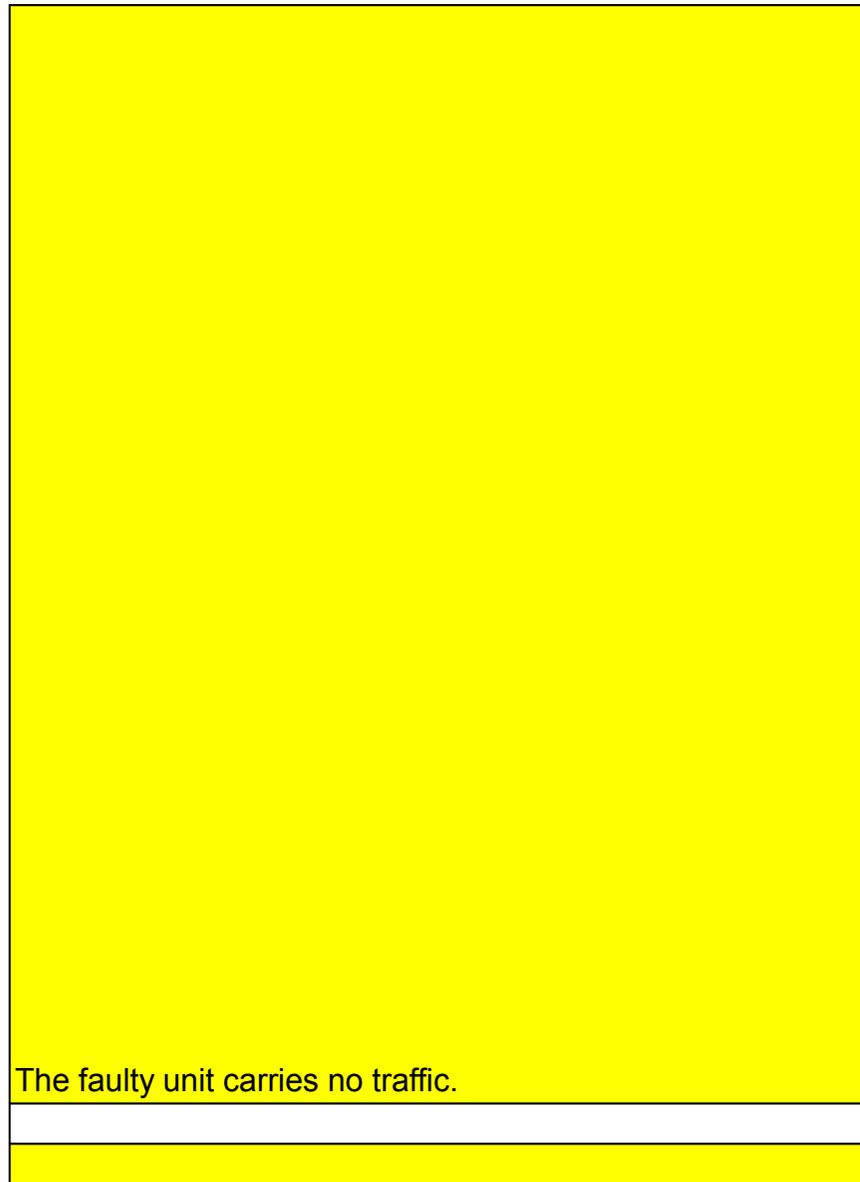
If no stand-by synchronization reference is available, the fault can stop or disturb the traffic or the network synchronization

frame.

The result is that the network synchronization



--



The faulty unit carries no traffic.

A return loss below the sensitivity threshold results in a disabled cell.

O&M Procedure

Use `readBatteryTestResult` to read the result of the latest battery test.
If the result status was `""failed""`, contact the Field Team in order to replace the battery.

Contact the Field Team in order to replace the battery.

Contact the Field Team in order to replace the battery.

Contact the Field Team in order to replace the battery.

Confirm: yes

4- Restart the DU:

acc 000100 manualrestart

restartRank: Select option RESTART_COLDWTEST. Type 3

Parameter 1 of 3, restartRank (enumRef-RestartRank):

Enter one of the following integers: 0:RESTART_WARM, 1:RESTART_REFRESH, 2:RESTART_COLD, 3:RESTART_COLDWTEST: 3

Contact Field support.

<RDS_IP_Address>

1.3- Load all MOs configured.
It all

1.4- Check the latest CVs created
cvls

1.5 - Choose the CV before the faulty CV (use CV which date is before the faulty):

1.6. Set this CV as Startable

1.1 Analyzing the Alarm

Perform the following steps at the maintenance center, to determine if any default router is reachable:

1. Investigate whether any other default router is reachable. A router is reachable, if there no alarm on it. Examine the value of the attribute defaultRouterXstate, where X stands for the default router number, on the MO IpInterface. If the attribute value is enabled, there is no alarm raised on that default router.

Note:

The instance of the MO IpInterface whose attribute is examined, must be the same as the instance that issues the alarm.

2. If no default router is reachable, contact Back Office support. If at least one default router is reachable, continue with the next step.

3. Wait at least two minutes to find out if there are temporary network problems.

4. If the alarm ceases, exit this procedure. If the alarm does not cease, contact Back Office support.

Contact the RAN Back Office.

Contact Field support.

Contact Field support.

Contact Field support.

N/A

If the alarm is issued only for Core MP board(s), investigate if there are old configuration versions that should be deleted. (Examine the attribute `faultTolerantCoreStates` in the MO `ManagedElement`.) If so, delete them.

Read the attribute `hdVolumeDFreespace`. Its value must be at least one megabyte greater than the value of the attribute `minimumHdVolumeDFreespace`.

get . `hdVolumeDFreespace`

- 1- Check whether there is any authorized personnel at the site. Follow the security routines.
- 2- Contact Field support.

Contact the RAN Back Office.

Contact Field support.

Contact Field support.

acc 000100 manualrestart

restartRank: Select option RESTART_COLDWTEST. Type 3

Parameter 1 of 3, restartRank (enumRef-RestartRank):

Enter one of the following integers: 0:RESTART_WARM, 1:RESTART_REFRESH, 2:RESTART_COLD, 3:RESTART_COLDWTEST: 3

restartReason: Select option UNPLANNED_O_AND_M_ISSUE. Type 3

Parameter 2 of 3, restartReason (enumRef-RestartReason):

Enter one of the following integers: 0:PLANNED_RECONFIGURATION, 1:UNPLANNED_NODE_EXTERNAL_PROBLEMS, 2:UNPLANNED_NODE_UPGRADE_PROBLEMS

Contact Field support.

Contact the RAN Back Office.

1- Identify and restart the faulty board. See Restart Board instructions for RBS 0001 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).

2- Check that the alarm has ceased.

3- If the alarm remains, identify and lock the faulty board. See Lock Board for instructions in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).

4- Contact Field Operation.

Contact Ericsson support to retrieve an upgrade package with correct resource configuration.

Confirm: yes

5- Restart the faulty board, using the instruction:

5.1- Restart the DU:

acc 000100 manualrestart

restartRank: Select option RESTART_COLDWTEST. Type 3

Parameter 1 of 3, restartRank (enumRef-RestartRank):

Enter one of the following integers: 0:RESTART_WARM, 1:RESTART_REFRESH, 2:RESTART_COLD,

Contact Field support.

Contact Field support.

8- If the value of the attribute authenticationMethod is PRESHARED_KEY, verify that the same pre-shared key is used in the IkePeer MO as on the IKE peer node. Install the pre-shared key in the IkePeer MO, using the action installPreSharedKey. If the alarm has ceased, exit this procedure. If the alarm remains, go to Step 13.

9- If the attribute authenticationMethod has the value CERTIFICATE, investigate whether a valid and correct trusted certificate is installed in the attribute installedTrustedCertificates in the IpSec MO. If there are no valid or correct trusted certificates, install a trusted certificate in the node by using the action installTrustedCertificates on the IpSec MO.

10- If the alarm has ceased, exit this procedure. If the alarm remains, continue with the next step.

11- Confirm that the installed IPsec certificate is correct by reading the attribute certificate in the IpSec

- 1- Check if the hardware, such as antenna near products or radio equipment, is correctly configured in the Managed Object Model (MOM).
- 2- Check that the alarm has ceased.
- 3- If the alarm remains, contact the RAN Back Office.

Contact Field support.

Contact Field support.

Contact the RAN Back Office.

license server (The emergency status should be: activated)

Or:

Arrange a new license for site and load it.

Install the new LKF in the node from the FTP or SFTP server. Use the action updateLicenseKeyFile on the MO Licensing:

Use the `ftp` command to download the archive of license from OSS to Nodeb:

6- Lock Digital Unit (DU) board. **NOTE: Lock DU stops all traffic on the site.**

bl 000100
Confirm: yes

7- Restart the DU:
acc 000100 manualrestart

restartRank: Select option RESTART_COLDWTEST. Type 3

Parameter 1 of 3, restartRank (enumRef-RestartRank):

Enter one of the following integers: 0:RESTART_WARM, 1:RESTART_REFRESH, 2:RESTART_COLD,
3:RESTART_COLDWTEST: 3

restartReason: Select option UNPLANNED_O_AND_M_ISSUE. Type 3

Parameter 2 of 3, restartReason (enumRef-RestartReason):

Enter one of the following integers: 0:PLANNED_RECONFIGURATION,
1:UNPLANNED_NODE_EXTERNAL_PROBLEMS, 2:UNPLANNED_NODE_UPGRADE_PROBLEMS,
3:UNPLANNED_O_AND_M_ISSUE, 4:UNPLANNED_CYCLIC_RECOVERY,
5:UNPLANNED_LOCKED_RESOURCES, 6:UNPLANNED_COLD_WITH_HW_TEST,
7:UNPLANNED_CALL_PROCESSING_DEGRADATION, 8:UNPLANNED_LOW_COVERAGE,
30:UPGRADE_BOARD_RESTART: 3

restartInfo: Write the name of this alarm

Parameter 3 of 3, restartInfo (string): Loss of System Clock

restartRank: Select option RESTART_COLDWTEST. Type 3

Parameter 1 of 3, restartRank (enumRef-RestartRank):

Enter one of the following integers: 0:RESTART_WARM, 1:RESTART_REFRESH, 2:RESTART_COLD,
3:RESTART_COLDWTEST: 3

restartReason: Select option UNPLANNED_O_AND_M_ISSUE. Type 3

Parameter 2 of 3, restartReason (enumRef-RestartReason):

Enter one of the following integers: 0:PLANNED_RECONFIGURATION,
1:UNPLANNED_NODE_EXTERNAL_PROBLEMS, 2:UNPLANNED_NODE_UPGRADE_PROBLEMS,
3:UNPLANNED_O_AND_M_ISSUE 4:UNPLANNED_CYCLIC_RECOVERY

Contact Field support.

Contact Field support.

Contact Field support.

Contact Transmission Team and check if there is any problem on the transmission path to this Enode-B.
If there is not problem on the transmission path, the next step is to contact the RAN Back Office.

Contact Field support.

restartRank: Select option RESTART_COLDWTEST. Type 3
Parameter 1 of 3, restartRank (enumRef-RestartRank):
Enter one of the following integers: 0:RESTART_WARM, 1:RESTART_REFRESH, 2:RESTART_COLD,
3:RESTART_COLDWTEST: 3

restartReason: Select option UNPLANNED_O_AND_M_ISSUE. Type 3
Parameter 2 of 3, restartReason (enumRef-RestartReason):
Enter one of the following integers: 0:PLANNED_RECONFIGURATION,
1:UNPLANNED_NODE_EXTERNAL_PROBLEMS, 2:UNPLANNED_NODE_UPGRADE_PROBLEMS,
3:UNPLANNED_O_AND_M_ISSUE 4:UNPLANNED_CYCLIC_RECOVERY

restartRank: Select option RESTART_COLDWTEST. Type 3

Parameter 1 of 3, restartRank (enumRef-RestartRank):

Enter one of the following integers: 0:RESTART_WARM, 1:RESTART_REFRESH, 2:RESTART_COLD,
3:RESTART_COLDWTEST: 3

restartReason: Select option UNPLANNED_O_AND_M_ISSUE. Type 3

Parameter 2 of 3, restartReason (enumRef-RestartReason):

Enter one of the following integers: 0:PLANNED_RECONFIGURATION,
1:UNPLANNED_NODE_EXTERNAL_PROBLEMS, 2:UNPLANNED_NODE_UPGRADE_PROBLEMS,
3:UNPLANNED_O_AND_M_ISSUE 4:UNPLANNED_CYCLIC_RECOVERY

Contact Field support.

Contact the RAN Back Office.

1- Restart RU

Example RRU-1 (sector 1): **lhsh BXP_0_1 restart coldwtest** or see file restart_board in column ALEX description

1- Check if the alarm LossOfMains on the PowerSupply Managed Object is raised in the RBS Element Manager and if the mains power is not available. In this case, the RBS stops running on battery supply when the mains power returns and therefore no further action is required.

- HwFault
- NoContact
- GeneralSwError
- PowerFailure
- TemperatureExceptionalTakenOutOfService
- LinkFailure
- InconsitentConfiguration
- ResourceConfigurationFailure

If there is no primary alarm in the RBS, the communication between the RBS and the MME is lost. If this

For all references with status, LOW_QUALITY, go to Step 4.

2. Examine the value of the attribute, NtpServerIpAddress in the MO, IpSyncRef, to identify the Time Server. Check if these NtpServerIpAddress are correct. If they are wrong, set the correct IP address and wait for alarm ceases.
3. Ensure that the Time Server has sufficient quality. If the alarm ceases, exit this procedure. If the alarm does not cease, go to Step 7.
 4. Remove all the synchronization references whose state is LOW_QUALITY, using the action, removeSyncRefResource in the MO, Synchronization.
5. Configure at least one new synchronization reference in accordance with the Network Synchronization Plan. Wait at least two minutes. If the alarm is issued again, continue with the next step. If the alarm is

Contact the RAN Back Office.

Contact Transmission Team and check if there is any problem on the transmission path to this Enode-B.
If there is not problem on the transmission path, the next step is to contact the RAN Back Office.

Confirm: yes

7- Restart the DU:
acc 000100 manualrestart

restartRank: Select option RESTART_COLDWTEST. Type 3

Parameter 1 of 3, restartRank (enumRef-RestartRank):

Enter one of the following integers: 0:RESTART_WARM, 1:RESTART_REFRESH, 2:RESTART_COLD,
3:RESTART_COLDWTEST: 3

restartReason: Select option UNPLANNED_O_AND_M_ISSUE. Type 3

Parameter 2 of 3, restartReason (enumRef-RestartReason):

Enter one of the following integers: 0:PLANNED_RECONFIGURATION,
1:UNPLANNED_NODE_EXTERNAL_PROBLEMS, 2:UNPLANNED_NODE_UPGRADE_PROBLEMS,
3:UNPLANNED_O_AND_M_ISSUE, 4:UNPLANNED_CYCLIC_RECOVERY,
5:UNPLANNED_LOCKED_RESOURCES, 6:UNPLANNED_COLD_WITH_HW_TEST,

Contact Field support.

Contact Field support.

Contact Field support.

3.RESTART_COLDWTEST.3

restartReason: Select option UNPLANNED_O_AND_M_ISSUE. Type 3

Parameter 2 of 3, restartReason (enumRef-RestartReason):

Enter one of the following integers: 0:PLANNED_RECONFIGURATION,

1:UNPLANNED_NODE_EXTERNAL_PROBLEMS, 2:UNPLANNED_NODE_UPGRADE_PROBLEMS,

3:UNPLANNED_O_AND_M_ISSUE, 4:UNPLANNED_CYCLIC_RECOVERY,

5:UNPLANNED_LOCKED_RESOURCES, 6:UNPLANNED_COLD_WITH_HW_TEST,

7:UNPLANNED_CALL_PROCESSING_DEGRADATION, 8:UNPLANNED_LOW_COVERAGE,

30:UPGRADE_BOARD_RESTART: 3

Solve the primary alarm, which can be:

- TU Synch Reference Loss of Signal
- Network Synch Time from GPS Missing
- Loss of Tracking
- Synch Reference Path HW Fault
- Packet Server Availability Fault
- Synch Reference Not Reliable
- Sync Reference PDV Problem
- PDH physical path termination: PDH Loss of Signal, PDH Loss of Frame, PDH Alarm Indication Signal, PDH Degraded Signal, or ET Hardware Fault.
- SDH physical path termination: Loss of Signal, Loss of Frame, MS Alarm Indication Signal, MS Degraded Signal, MS Excessive Bit Error Rate or ET Hardware Fault.
- IP Synchronization reference: NTP Server Reachability Fault, or Gigabit Ethernet Link Fault

The additionalText indicates the date with format yyyy-mm-dd, when the clock enters FREE_RUNNING_MODE and when the System Clock Quality Degradation alarm will be raised. The additionalText can be:

- DATE: expiry date of the calibration

2. Identify the position of the affected unit by checking:

- For AuxPlugInUnit: the attribute position or positionInformation
- For PlugInUnit: the attribute SlotId of the parent Slot MO

3. Identify where the cable is connected by checking the attribute RiPortId of the RiPort generating the alarm. The value is corresponding to the connector marking on the front of the unit.

4. Check the attribute remoteRiPortRef of the RiPort in order to determine the RiPort on the remote unit. Identify unit type and position in the same way as described above.

5. Depending on which unit generates the alarm, continue with one of the following steps:

- If the RiPort generating the alarm belongs to an RU shared by two RANs in a multistandard configuration, or if the RU is in a cascade chain with shared RUs, verify that both DUs are properly configured, and the DUs are not trying to set an RU cascade chain to each other.
- If the RiPort generating the alarm belongs to an RU, perform a restart of this unit
- If the RiPort generating the alarm belongs to a DU, restart the connected RU identified

Restart RRU

lhsh <ru> restart coldwtest

Cold restart DUS

acc 0 manualrestart

y
2
1

If not resolve, contact field operation

Field Operation

Replacing the Battery

To replace the battery, perform the following steps:

- 1- In the RBS EM, lock the BFU.
 - 2- Replace the battery according to the instructions in Replacing Power Units for RBS 6601 in LTE RAN Alex library (EN/LZN 785 0001 R3C).
 - 3- Unlock the BFU and check the RBS EM alarm list to see if the alarm clears.
 - 4- If the alarm reappears, then restart the BFU.
 - 5- If the alarm does not clear, then lock the BFU and put back the original battery.
- Contact Ericsson maintenance support.

Proceed with Section 3.2.

Note:

Never return any cable not showing visible damage to Ericsson, unless the alarm has been cleared due to the replacement of this particular cable.

3.2 Replacing the BFU

To replace the BFU, perform the following steps:

- 1- In the RBS EM, lock the BFU.
- 2- Replace the BFU according to the instructions in Replacing Power Units for RBS

Replacing the Battery

To replace the battery, perform the following steps:

- 1- In the RBS EM, lock the BFU. See instruction for RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).
- 2- Replace the battery according to the instructions in Replacing Power Units in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).
- 3- Unlock the BFU and check the RBS EM alarm list to see if the alarm clears.
- 4- If the alarm reappears, then restart the BFU.
- 5- If the alarm does not clear, then lock the BFU and put back the original battery.

Contact the next level of maintenance support.

Replacing the Battery

To replace the battery, perform the following steps:

- 1- In the RBS EM, lock the BFU for RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).
- 2- Replace the battery according to the instructions in Replacing Power Units.
- 3- Unlock the BFU and check the RBS EM alarm list to see if the alarm clears.
- 4- If the alarm reappears, then restart the BFU.
- 5- If the alarm does not clear, then lock the BFU and put back the original battery.

Contact Ericsson support.

- 4- Load all MOs configured.
It all

- 5- Lock Digital Unit (DU) board. Note: All traffic on E-nodeB will be stopped.
bl 000100
Confirm: yes

- 6- The field technician replaces the faulty board, using the instruction Replacing Digital Units (DU) for RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).

To resolve the alarm, perform the following procedure:

- 1- Reset the circuit breaker.
- 2- If the circuit breaker trips immediately, check for a short circuit in the system.
- 3- Replace the Battery Fuse Unit (BFU) for RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).
- 4- Check that the alarm has ceased.
- 5- If the alarm remains, consult the next level of maintenance support.

N/A

N/A

N/A

~~attribute climateSystemControl and fanControl.~~

- 3- Restart the secondary node DU.
- 4- Restart the primary node DU.
- 5- Change the cable that connects the secondary node DU in this node to the EC bus.

~~6001 in LTE RAN LTA Auxiliary (EN/LZN 785 0007 K3C).~~

- 2- Check that the alarm has ceased.
- 3- If the alarm remains, check that attribute climateSystem is correctly configured for this RBS 6601 and that the corresponding correct number of fan groups is installed in the RBS.
- 4- Check that the alarm has ceased.
- 5- If the alarm remains, check that the fans are properly connected

~~to superior unit.~~

- 6- Check that the alarm has ceased.
- 7- If the alarm remains, change the cable that connects the hardware unit to the EC bus or superior unit.
- 8- Check that the alarm has ceased.
- 9- If the alarm remains, identify and lock the faulty unit. See Lock Board for instructions.
- 10- Change the faulty unit. See Replacing Internal Supplementary Parts for instructions.

N/A

- 1- Close the RBS door.
- 2- Check that the alarm has ceased.

N/A

- 1- Check if there is a fire in the cabinet.
- 2- If there is no fire, the smoke detector can be faulty. Remove smoke detector from other site and test it on site that has alarm. Confirm that the alarm has ceased. Put the original smoke detector back and if the alarm remains, consult Ericsson support to change the smoke detector.

- 1- Change the smoke detector. See Replacing Internal Supplementary Parts for RBS6601 in LTE RAN L11A library (EN/LZN 785 0001 R3C)..
- 2- Confirm that the alarm has ceased.
- 3- If the alarm remains, put the original smoke detector back and consult Ericsson support.

N/A

- **Unlock Board** (Alex reference 40/1543-LZA 701 6008 Uen K or see .pdf beside)
- **Restart Board** (Alex reference 39/1543-LZA 701 6008 Uen N or see .pdf beside)
- **Replacing Fans and Climate Units** (Alex reference 17/1543-LZA 701 6001 Uen J or see .pdf beside)

1. Restart the Support Control Unit (SCU). See Restart Board for instructions.
2. Check that the alarm has ceased.
3. If the alarm remains, make a visual inspection of the fans.
4. If the alarm remains, lock the SCU. See Lock Board for instructions.
5. Change the fan. See Replacing Fans and Climate Units for instructions.

2.3-. Single Core MP

Perform the following steps:

- 1- Replace the board, using the instruction for replacing that board.
- 2- Restore the node, using the instruction Emergency Restoring a Configuration Version Backup

2.4- Redundant Core MP

This procedure is normally performed by Ericsson personnel only and it is described in detail in reference, which is an internal Ericsson document.

- 1- Change the board. See Replacing Alarm Units or Replacing Control Units instructions for RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).
- 2- Unlock the board. See Unlock Board instructions RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).
- 3- Check that the alarm has ceased.
- 4- If the alarm remains, put the original board back and consult Ericsson support.

N/A

- 11- Unlock the Gigabit Ethernet link by setting its administrativeState to UNLOCKED.
- 12- If the alarm is issued again, go to Step 17. If the alarm is not issued again, continue with the next step.
- 13- Lock the Gigabit Ethernet Link again.
- 14- Disconnect the temporary Gigabit Ethernet link and replace the Gigabit Ethernet Link permanently.
- 15- Unlock the Gigabit Ethernet link again.
- 16- Return to the procedure, Alarm Analysis.
- 17- Lock the Gigabit Ethernet Link again.
- 18- Disconnect the temporary Gigabit Ethernet Link and reconnect the original Gigabit

It all

5- Lock Digital Unit (DU) board. Note: All traffic on E-nodeB will be stopped.
bl 000100
Confirm: yes

6- The field technician replaces the faulty board, using the instruction Replacing Digital Units (DU) for RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).

7- Unlock Digital Unit (DU) board:

- 1- Check for other temperature-related alarms from RBS 6601 in LTE RAN 11A Alex library (EN/LZN 785 0001 R3C).
- 2- Investigate whether the problem is the result of high environmental temperature or a fault in the climate system.
 - 3- Resolve possible climate problem.
 - 4- Check that the alarm has ceased.
- 5- If the alarm remains, consult Ericsson support.

N/A

N/A

Perform the following steps:

- 1- Check that there is a cable connecting the primary and secondary Digital Unit (DU) boards. If the cable is missing connect a new cable.
- 2- If the alarm ceases, exit this procedure. If the alarm does not cease, continue with the next step.
- 3- Ensure that the cable between the DU boards are properly connected.
- 4- If the alarm ceases, exit this procedure. If the alarm does not cease, continue with the next step.
- 5- Clean the connections in both ends of the cable, disconnecting and reconnecting the cable. Check if cable is ok, if the cable is faulty, it needs to be replaced.

Small Form-Factor Pluggable (SFP) module.

- 2- If an SFP module is present, go to Step 4. If not, continue with the next step.
- 3- Insert an approved SFP module into the socket on the board. If the alarm ceases, exit this procedure. If not, continue with the next step.
- 4- Ensure that the SFP module is correctly connected, that it is securely inserted and that the Ethernet cable is correctly connected to the board. If the alarm ceases, exit this procedure. If not, continue with the next step.
- 5- Replace the SFP module with an approved SFP module. If the alarm ceases, exit this procedure. If not, continue with the next step.
- 6- Consult Ericsson support. Further actions are outside the scope of this procedure.

There can be a hardware fault on the board

N/A

N/A

1- The field technician ensures that the board is correctly installed and that any associated cables are connected.

If the alarm ceases, go to Step 8.

2- The board is faulty and needs to be replaced. Lock the board.

3- The field technician replaces the faulty board, using the instructions:

3.1- Perform a moshell connection to the RBS:

moshell <RBS_IP_Address>

3.2- Insert the rbs user and password

3.3- The following prompt appears:

<RBS_IP_Address> >

3.4- Load all MOs configured.

lt all

3.5- Lock Digital Unit (DU) board. **Note: All traffic on E-nodeB will be stopped.**

bl 000100

Confirm: yes

4- The field technician replaces the faulty board, using the instruction for Replacing Digital Unit (DU) RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).

5- Unlock Digital Unit (DU) board:

deb 000100

./mosshell <RBS_IP_Address>

4.2- Insert the rbs user and password

4.3- The following prompt appears:
<RBS_IP_Address> >

4.4- Load all MOs configured.
It all

4.5 Lock Digital Unit (DU) board. **Note: All traffic on E nodeB will be stopped**

2- Check the incoming power supply.

If the incoming power supply is absent, contact the incoming power supplier or the next level of maintenance support.

3- Check that the alarm has ceased.

If the incoming power supply is absent, contact the incoming power supplier.

2- Check the power source fuses.
Change any defective fuse.

3- Check that the alarm has ceased.

4- If the alarm remains, consult Ericsson support.

2.1- Refer to the test result of the last performed battery test using the readBatteryTestResult action. Verify that the test was properly performed and that the outcome was FAILED.

2.2- Check that the battery capacity test is properly configured in the BatteryBackup MO.
Check that the minimumStateOfHealth attribute is properly configured.

2.3- Check that no other RBS or other equipment is connected to the same battery.
Shared batteries must not be used if battery capacity tests are performed. The sharedBattery attribute must be properly configured.

2.4- Replace the battery. For instruction about how to replace the battery, see Replacing Power Units.

N/A

- ~~<hwUnitType> that is not configured detected~~
- Too many configured fan groups

1- Actions for <hwUnitType> That Is Not Configured Detected

To resolve the alarm, do the following:

1.1- Find the faulty unit.

1.2- Configure the hardware unit if it is needed.

1.3- Remove/disconnect the hardware unit that is not needed, see Lock Board, Replacing Fans and Climate Units, and Unlock Board for instructions.

1.4- Check that the alarm has ceased.

~~1.5- If the alarm remains, put the original unit back and consult Ericsson support.~~

6- Change the battery temperature sensor. If it is an internally placed battery, see Replacing Power Units for instructions (RBS 6601 in LTE RAN 11A Alex library - EN/LZN 785 0001 R3C).

. If the battery is placed in an external Battery Backup Unit (BBU), refer to Site documentation for instructions (RBS 6601 in LTE RAN 11A Alex library - EN/LZN 785 0001 R3C).

7- Check that the alarm has ceased.

8- If the alarm remains, check the battery condition. A battery test on demand can be

5- If the alarm remains, change the BFU. If it is an internally placed battery, see instruction Replacing Power Units for for RBS 6601 in LTE RAN 11A Alex library (EN/LZN 785 0001 R3C). If the battery is placed in an external Battery Backup Unit (BBU), refer to Site documentation for instructions.

6- If the alarm reappears shortly after changing the BFU, then the unit was probably not

- Replacing Fans and Climate Units

1. Check for other temperature related alarms from this RBS. Investigate if the problem could be a result of high environmental temperature or a fault in the climate system.
Resolve climate problem.
2. Check that the alarm has ceased.
3. If the alarm remains, restart the PSU. See Restart Board for instructions.
4. Check that the alarm has ceased.
5. If the alarm remains, identify and lock the faulty unit. See Lock Board for instructions.
6. Change the PSU. See Replacing Power Units for instructions.

- Replacing Fans and Climate Units

1. Check for other temperature related alarms from this RBS. Investigate if the problem could be a result of low environmental temperature or a fault in the climate system.
Resolve climate problem.
2. Check that the alarm has ceased.
3. If the alarm remains, restart the PSU. See Restart Board for instructions.
4. Check that the alarm has ceased.
5. If the alarm remains, identify and lock the faulty unit. See Lock Board for instructions.
6. Change the PSU. See Replacing Power Units for instructions.

N/A

2.3- The following prompt appears:
<RBS_IP_Address> >

2.4- Load all MOs configured.
It all

2.5- Lock Digital Unit (DU) board. **Note: All traffic on E-nodeB will be stopped.**
bl 000100
Confirm: yes

3.2- Insert the rbs user and password

3.3- The following prompt appears:
<RBS_IP_Address> >

3.4- Load all MOs configured.
It all

3.5- Lock Digital Unit (DU) board. **Note: All traffic on E-nodeB will be stopped.**
bl 000100

2 Action for EUTRANCellFDD and AdditionalText: Incompatible Hardware Resources

2.1. Lock the cell.

2.2. Change the incompatible RU or RRU. See Replacing Radio Units or Replacing Remote Radio Units for instructions.

2.3. Unlock the cell.

2.4. Check that the alarm has ceased.

2.5. If the alarm remains, consult Ericsson support.

Check if there is hardware faulty on Remote Radio Unit (RRU).

N/A

It depends of primary alarm and O&M instruction.

N/A

~~./mosnet <RBS_IP_Address>~~

4.2- Insert the rbs user and password

4.3- The following prompt appears:
<RBS_IP_Address> >

4.4- Load all MOs configured.
It all

~~4.5- Lock Digital Unit (DU) board. Note: All traffic on E nodeB will be stopped~~

N/A

N/A

2- In the RBS EM, lock the PSU.

3- Replace the PSU according to the instructions in Replacing Power Units for RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).

4- Unlock the PSU and check the RBS EM alarm list to see if the alarm clears.

5- If the alarm reappears, lock the PSU and reinstall the original PSU. For instructions, go to Section 1.2.

Note: Never return any PSU to Ericsson unless the alarm has been cleared after replacement of the unit.

1.2 Replacing Battery Fuse Unit (BFU)

1. Locate the faulty PSU (displays a red indicator).
2. In the RBS EM, lock the PSU.
3. Replace the PSU according to the instructions in Replacing Power Units for RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C).
4. Unlock the PSU, and check the RBS EM alarm list to see if the alarm clears.
5. If the alarm reappears, then lock the PSU and put back the original PSU. Contact the next level of maintenance support.

Note:

Never return a PSU to Ericsson, unless the alarm has been cleared after changing the unit.

1- Change the battery temperature sensor. If it is an internally placed battery, see instruction Replacing Fans and Climate Units for RBS 6601 in LTE RAN L11A Alex library (EN/LZN 785 0001 R3C)). If the battery is placed in an external Battery Backup Unit (BBU), refer to Site documentation for instructions.

2- Check that the alarm has ceased.

3- If the alarm remains, consult Ericsson support.

UNLOCKED.

Return to the procedure, Analyzing the Alarm.

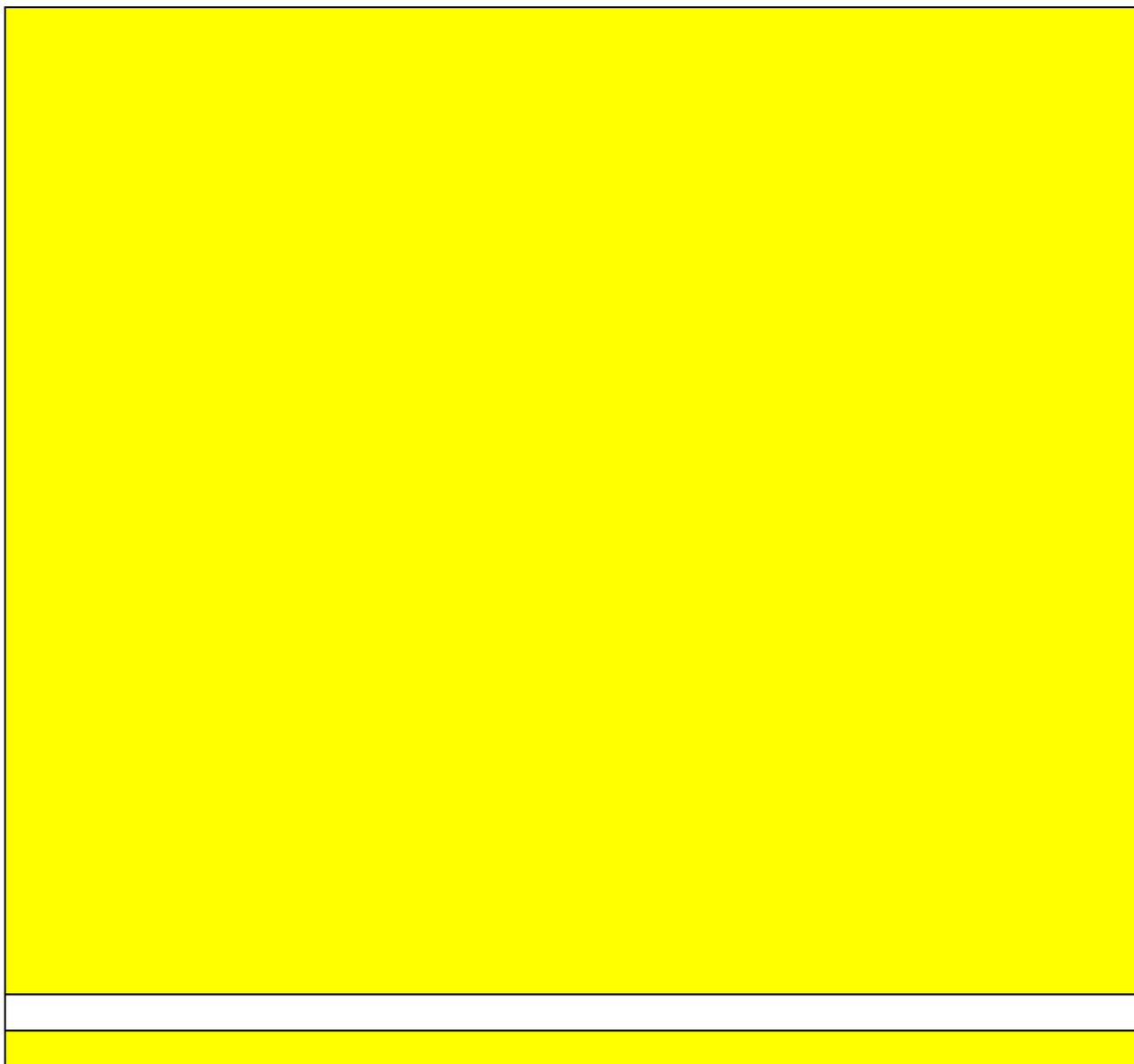
Verifying and Replacing the Board

Perform the following steps at the node:

Note:

After all steps involving hardware, wait at least two minutes to see if the alarm reappears.

1. The field technician ensures that the board is correctly installed and that any





ALEX Instructions

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1- In the Element Manager, Software view, select the additional tab UP to display all UPs.

relevant UP and select UP Properties from the shortcut menu. The UP Configuration window

3- Click Delete Package. A confirmation window appears.

Note1:

a CV connected to it, if the CV is in the rollback list, or is startable. First remove the CV fro



Lock Board



Unlock Board



Restart Board



Replacing Fans and
Climate Units

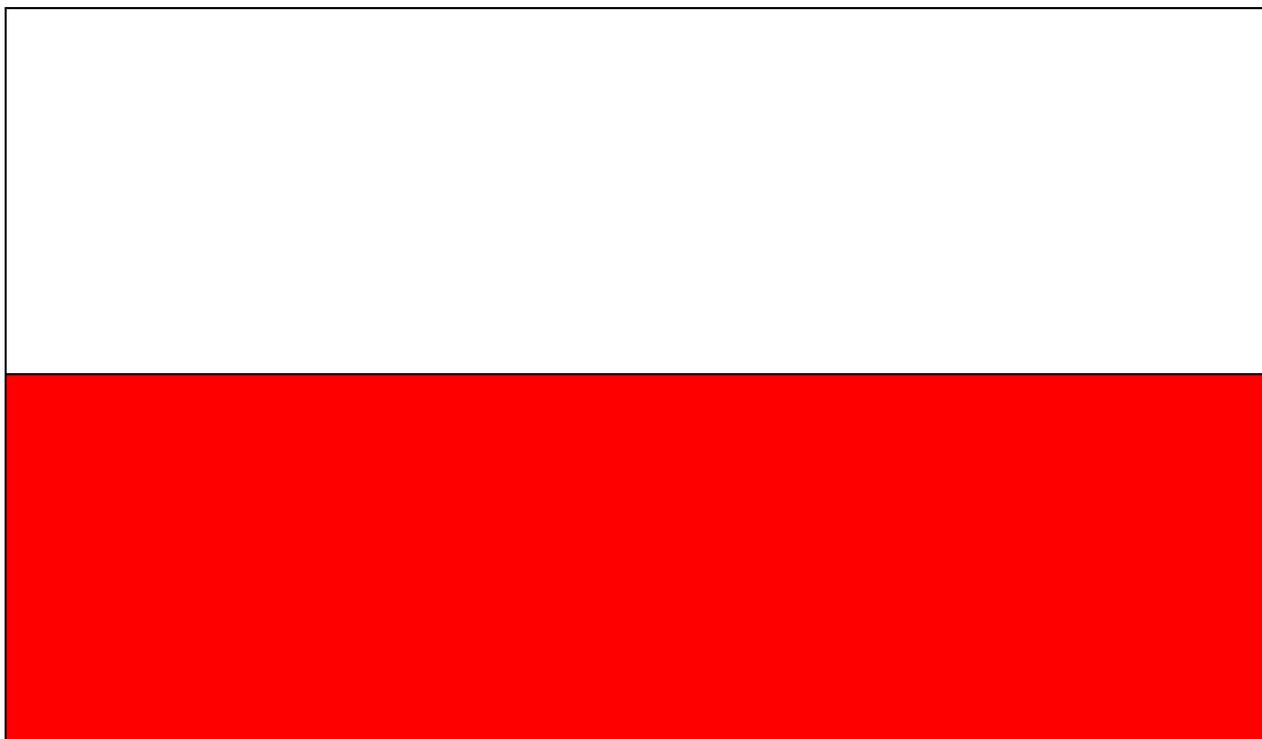
Note2:

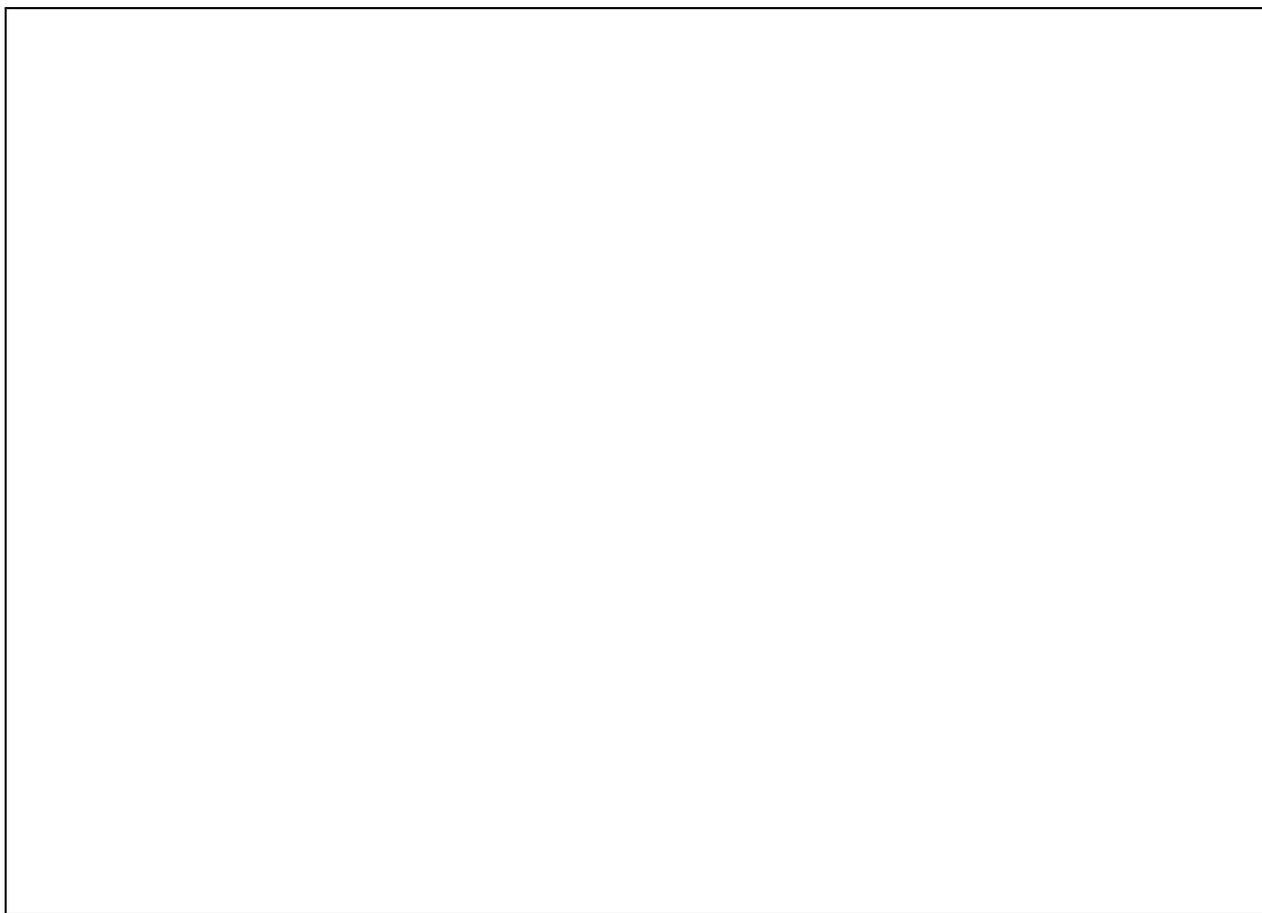
It is not possible to delete an UP, if there is a delta UP that is based on it. First delete the delta UP.

Note3:

It is not possible to delete an UP that is currently being used in the node.

4- In the confirmation window, click Yes.







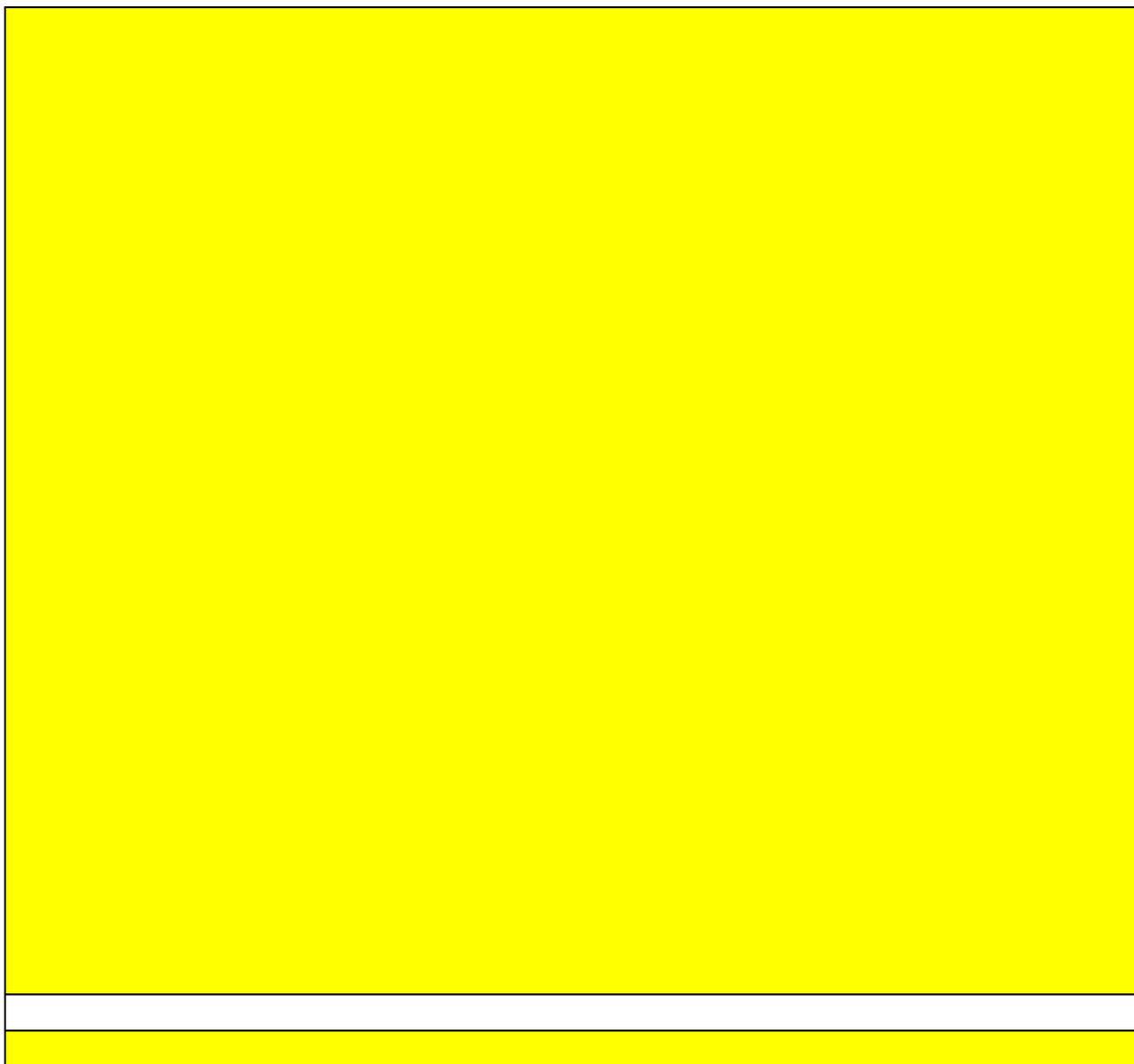
Restart Board



Restart Node







Additional information

was failed.

3- Check that the battery backup time test is properly configured in Managed Object (MO) BatteryBackup. Check that the minimumBackupTime is properly configured.

4- If any other RBS is connected to the same battery, verify that a battery time test was performed at the same time on the other RBS.

5- Check that no equipment, other than this RBS, is connected to the same battery.

6- Change the battery if needed. If it is an internally placed battery, see Replacing Power Units for instructions. If the battery is placed in an external Battery Backup Unit (BBU), refer to Site documentation for

N/A

N/A

N/A

6 UNPLANNED_COLD_WITH_HW_TEST

Restart ordered to perform HW tests.

7 UNPLANNED_CALL_PROCESSING_DEGRADATION

Restart ordered to improve Call Set Up or Call Drop Rate.

8 UNPLANNED_LOW_COVERAGE

Restart ordered to improve Cell Availability.

30 UPGRADE_BOARD_RESTART

Restart ordered to effectuate autoconfiguration of a plug-in unit.

This is only used for PlugInUnit MO.

N/A

N/A

N/A

N/A
N/A
N/A
N/A

3- Click Delete Package. A confirmation window appears.

Note:

It is not possible to delete an UP that has a CV connected to it, if the CV is in the rollback list, or is startable. First remove the CV from the rollback list, or from being startable.

Note:

It is not possible to delete an UP, if there is a delta UP that is based on it. First delete the delta UP.

menu. The UP Configuration window is displayed.

3- Click Delete Package. A confirmation window appears.

Note1:

It is not possible to delete an UP that has a CV connected to it, if the CV is in the rollback list, or is startable. First remove the CV from the rollback list, or from being startable.

Note2:

It is not possible to delete an UP, if there is a delta UP that is based on it. First delete the delta UP.

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A
N/A
N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

3 SystemFunctions=1,Licensing=1

=====
=====

Are you Sure [y/n] ? y

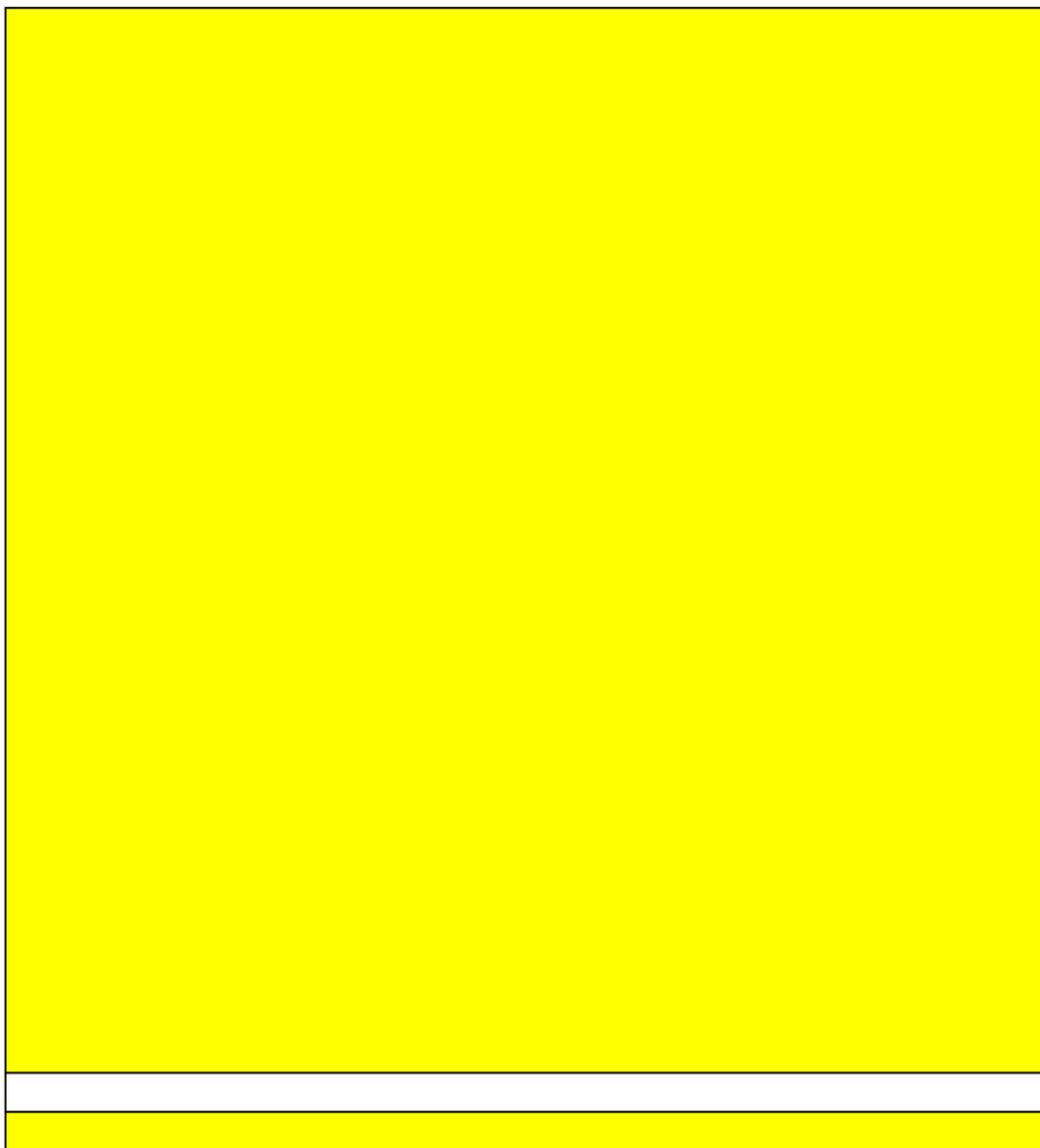
=====
=====

N/A

N/A
N/A
N/A
N/A

N/A
N/A
N/A
N/A

N/A



OK		2m3s	SLSPBT02
no	contact	0m13s	SLSPCC02
no	contact	9m41s	SLSPBF05
no	contact	6m44s	SLSPBF10
no	contact	0m13s	SLSPTC08
no	contact	3m28s	SLSPJS05
no	contact	3m23s	SLSPCV07
no	contact	0m17s	SLSPJN02
no	contact	0m18s	SLSPJS08
no	contact	0m18s	SLSPSM12
no	contact	0m23s	SLSPSM06
no	contact	0m17s	SLSPJN01
no	contact	3m24s	SLSPEM03
no	contact	0m13s	SLSPCC05
no	contact	0m23s	SLSPCV18
no	contact	0m20s	SLSPEM07
no	contact	0m11s	SLSPBL08
no	contact	0m12s	SLSPCN05
no	contact	0m18s	SLSPVT06
no	contact	0m18s	SLSPBT06
no	contact	3m28s	SLSPCI01
no	contact	0m23s	SLSPSU02
no	contact	0m13s	SLSPCG02
no	contact	3m28s	SLSPCL06
no	contact	3m23s	SLSP LJ06
no	contact	0m10s	SLSP LP02
no	contact	6m47s	SLSPVR04
no	contact	0m12s	SLSPJQ06
no	contact	0m18s	SLSPJS06
no	contact	6m37s	SLSPSM05
no	contact	3m27s	SLSPVA09
no	contact	6m27s	SLSPPI03
no	contact	0m23s	SLSPIT08
no	contact	0m17s	SLSPSM30
no	contact	0m12s	SLSPTC02
no	contact	0m10s	SLSPMN06
no	contact	0m20s	SLSPEM05
no	contact	0m18s	SLSPVT04
no	contact	0m12s	SLSPBL04
no	contact	3m18s	SLSPSD03
no	contact	0m20s	SLSPVS05
no	contact	0m13s	SLSBVL02
no	contact	0m3s	SLSBPC05
no	contact	0m3s	SLSBVM01
no	contact	0m5s	SLSBRR01

no	contact	0m13s	SLSPCC02
no	contact	9m41s	SLSPBF05
no	contact	6m44s	SLSPBF10
no	contact	0m13s	SLSPTC08
no	contact	3m28s	SLSPJS05
no	contact	3m23s	SLSPCV07
no	contact	0m17s	SLSPJN02
no	contact	0m18s	SLSPJS08
no	contact	0m18s	SLSPSM12
no	contact	0m23s	SLSPSM06
no	contact	0m17s	SLSPJN01
no	contact	3m24s	SLSPEM03
no	contact	0m13s	SLSPCC05
no	contact	0m23s	SLSPCV18
no	contact	0m20s	SLSPEM07
no	contact	0m11s	SLSPBL08
no	contact	0m12s	SLSPCN05
no	contact	0m18s	SLSPVT06
no	contact	0m18s	SLSPBT06
no	contact	3m28s	SLSPCI01
no	contact	0m23s	SLSPSU02
no	contact	0m13s	SLSPCG02
no	contact	3m28s	SLSPCL06
no	contact	3m23s	SLSP LJ06
no	contact	0m10s	SLSP LP02
no	contact	6m47s	SLSPVR04
no	contact	0m12s	SLSPJQ06
no	contact	0m18s	SLSPJS06
no	contact	6m37s	SLSPSM05
no	contact	3m27s	SLSPVA09
no	contact	6m27s	SLSPPI03
no	contact	0m23s	SLSPIT08
no	contact	0m17s	SLSPSM30
no	contact	0m12s	SLSPTC02
no	contact	0m10s	SLSPMN06
no	contact	0m20s	SLSPEM05
no	contact	0m18s	SLSPVT04
no	contact	0m12s	SLSPBL04
no	contact	3m18s	SLSPSD03
no	contact	0m20s	SLSPVS05
no	contact	0m13s	SLSBVL02
no	contact	0m3s	SLSBPC05
no	contact	0m3s	SLSBVM01
no	contact	0m5s	SLSBRR01