

Confidentiality Class	External Confidentiality Label	Document Type	Page
Ericsson Internal		Method of Procedure	1 (10)
Prepared By (Subject Responsible)	Approved By (Document Responsible)	Checked	
EWZAAEP K Durai			
Document Number	Revision	Date	Reference
		2020-03-31	



MOP- SES 24 h Threshold crossing alarm clearance OEM Ericsson

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A: Introduction

This document outlines the systematic process involved in clearing SES 24 h threshold crossing alarm clearance on node.

B: PRECHECK

1. Check if impacted site node ping is available, if not align FE immediately.
2. If FE alignment required, he should be having required hardware.
3. FE should be having necessary software on his laptop, necessary node login tools.
4. Please take the microwave link configuration at both ends.
5. Please get the VLAN information, which was tagged on the link at both ends.
6. Please take manual back up of traffic routing.
7. If partial outage is there from any node, and while rectification activity, other sites also can go down for time being, ensure to have proper approval for outage window for all dependent sites for working node.

C: Procedure

Alarm Description: Severe Error Seconds threshold crossing for 24 hours composite performance monitoring on the link.

Applicable for RAU IF (1+0, 1+1, 2+0)

Applicable for switch (1+1)

Applicable for RLP (1+1)

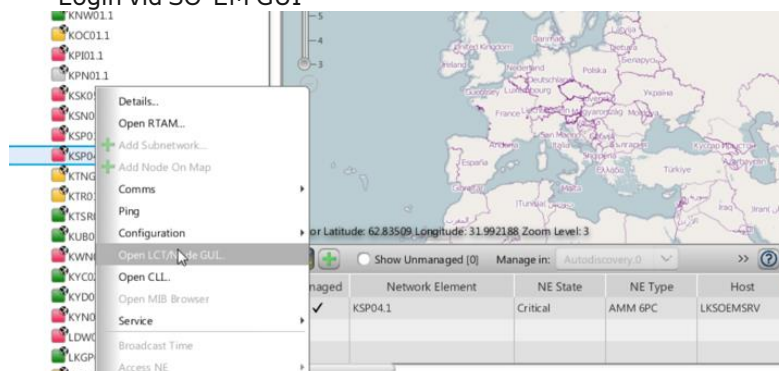
Applicable for BONDING (2+0)

1. If node is managed, then open node using SO-EM GUI or directly from Mini-Link Craft using node IP.

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Login via SO-EM GUI



Login via craft

MINI-LINK Craft 19.Q4

NE Filter: TEZ014.2 (192.169.217.99)

IP/Host: 192.168.215.209

User: admin_user

Password: ••••••••

SNMP Authentication: MD5

SNMP Privacy: None

Logging on...

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Version: R38A04

Example Node having alarm

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MINI-LINK Craft Menu
CWNME1

Network Element

NE Status: In Service
NE Uptime: 7 Days 13 hours 27 min 09 seconds
NTP Status: Service Up
NE Date and Time: 2020-03-31 06:52:17 (UTC +05:30)
SW Status: No Upgrade
Software Baseline: MINI-LINK TN 5.4FP.4 LH 1.6FP.4 R33C133
Notifications: Enabled
Telecom Standard: ETSI
DCN-Mode: Front Connector

NE License Status: OK
NE License Mode: Locked
Unlocked Reason: N/A
Left Unlocked Time: N/A
Latest Unlocked Period Entered: N/A

NE Alarms:

- Power Failure Upper Input: No Alarm
- Power Failure Lower Input: No Alarm
- Traffic Failure: No Alarm
- Control Failure: No Alarm
- Low Input Voltage: No Alarm

Unit Overview:

1 PRU3 B FAU2 NPU3 D 8/7 MMU3 A (CWN1) 6 5 4

Notification List

Severity	AlarmType	AlarmID	AlarmTime	Source	SpecificProblem	ProbableCause
Minor	qualityOfServiceAlarm	2	2020-03-23 17:33:11.1	RAU IF 1/5/1	AMS 15 min threshold crossing	ThresholdCrossed
Minor	qualityOfServiceAlarm	9483	2020-03-31 00:25:11.1	RAU IF 1/5/1	AMS 24 h threshold crossing	ThresholdCrossed
Minor	qualityOfServiceAlarm	9484	2020-03-31 00:28:35.1	RAU IF 1/5/1	ES 24 h threshold crossing	ThresholdCrossed
Minor	qualityOfServiceAlarm	9502	2020-03-31 03:24:29.1	RAU IF 1/5/1	ES 15 min threshold crossing	ThresholdCrossed
Critical	communicationAlarm	9523	2020-03-31 04:51:52.6	RAU IF 1/5/1	BER	DegradedSignal

2. Perform a RAU IF performance reset as mentioned below:

MINI-LINK Craft Menu
CWNME1

Network Element

NE Status: In Service
NE Uptime: 7 Days 13 hours 29 min 40 seconds
NTP Status: Service Up
NE Date and Time: 2020-03-31 06:54:48 (UTC +05:30)
SW Status: No Upgrade
Software Baseline: MINI-LINK TN 5.4FP.4 LH 1.6FP.4 R33C133
Notifications: Enabled
Telecom Standard: ETSI
DCN-Mode: Front Connector

NE License Status: OK
NE License Mode: Locked
Unlocked Reason: N/A
Left Unlocked Time: N/A
Latest Unlocked Period Entered: N/A

NE Alarms:

- Power Failure Upper Input: No Alarm
- Power Failure Lower Input: No Alarm
- Traffic Failure: No Alarm
- Control Failure: No Alarm
- Low Input Voltage: No Alarm

Unit Overview:

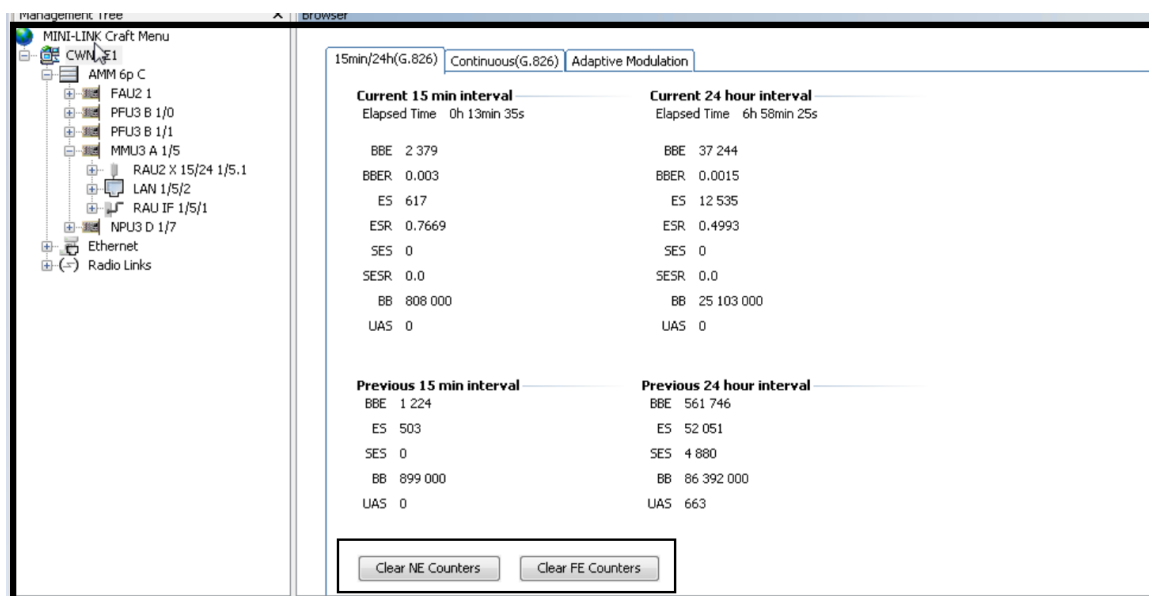
1 PRU3 B FAU2 NPU3 D 8/7 MMU3 A (CWN1) 6 5 4

Notification List

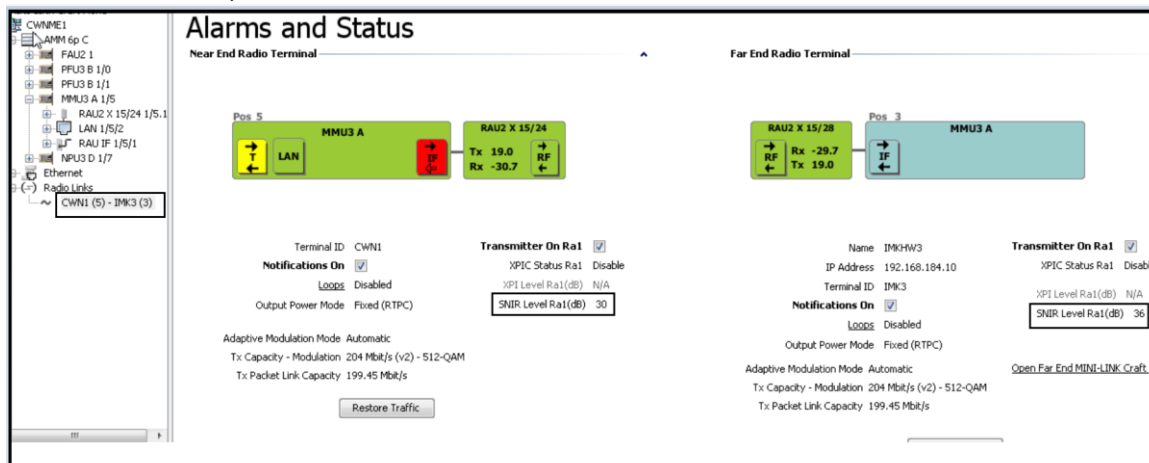
Severity	AlarmType	AlarmID	AlarmTime	Source	SpecificProblem	ProbableCause
Minor	qualityOfServiceAlarm	2	2020-03-23 17:33:11.1	RAU IF 1/5/1	AMS 15 min threshold crossing	ThresholdCrossed
Minor	qualityOfServiceAlarm	9483	2020-03-31 00:25:11.1	RAU IF 1/5/1	AMS 24 h threshold crossing	ThresholdCrossed
Minor	qualityOfServiceAlarm	9484	2020-03-31 00:28:35.1	RAU IF 1/5/1	ES 24 h threshold crossing	ThresholdCrossed
Minor	qualityOfServiceAlarm	9502	2020-03-31 03:24:29.1	RAU IF 1/5/1	ES 15 min threshold crossing	ThresholdCrossed
Critical	communicationAlarm	9523	2020-03-31 04:51:52.6	RAU IF 1/5/1	BER	DegradedSignal

Performance

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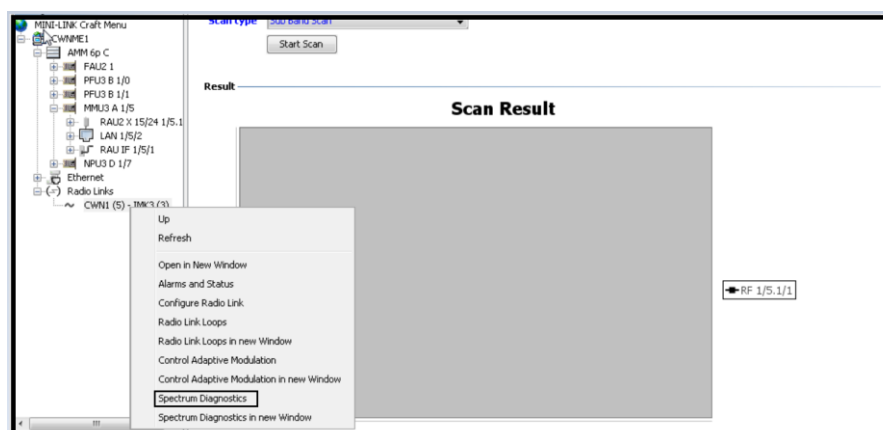


3. Check the status, if alarm is cleared, monitor the link error for next 24 hours.
4. If alarm is not cleared and SES 15 min threshold crossing alarm appear on the node within 15 minutes, then check the SNIR of the link.

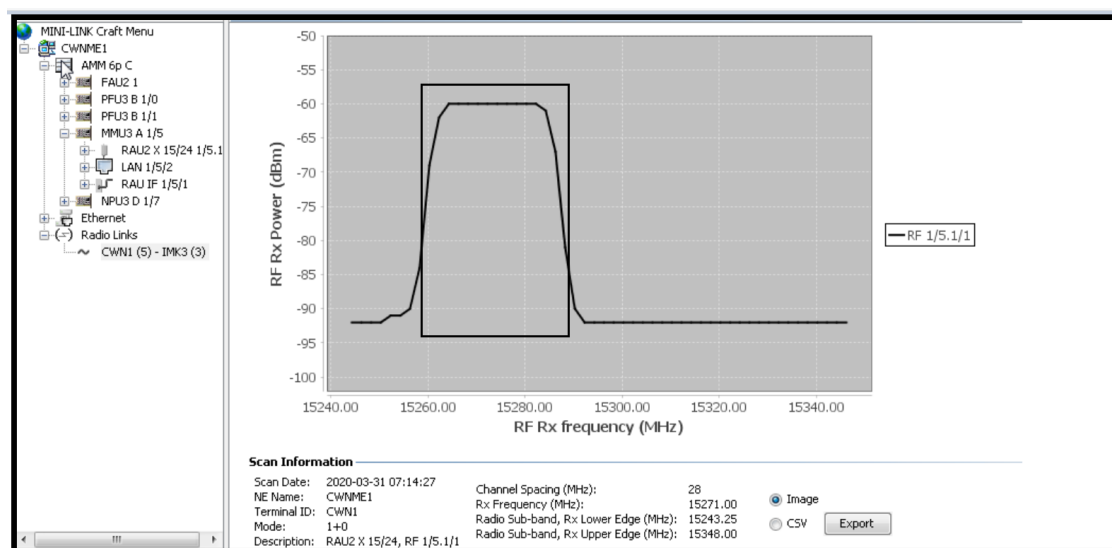


5. SNIR should be approximately 40. If it is less than that go for further steps to troubleshoot
- Note: Some minor Error cases SNIR might be 40 approximately. That is exceptional.
- A Frequency scan test:

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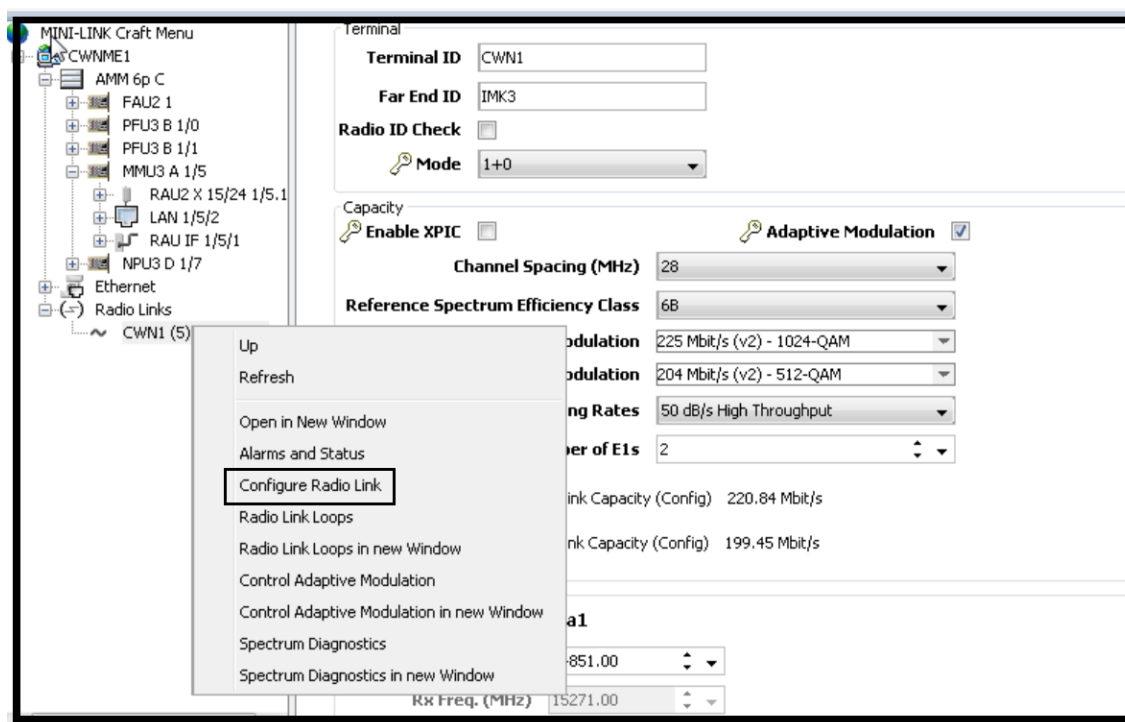


Check the result graph (Frequency Vs Rsl):



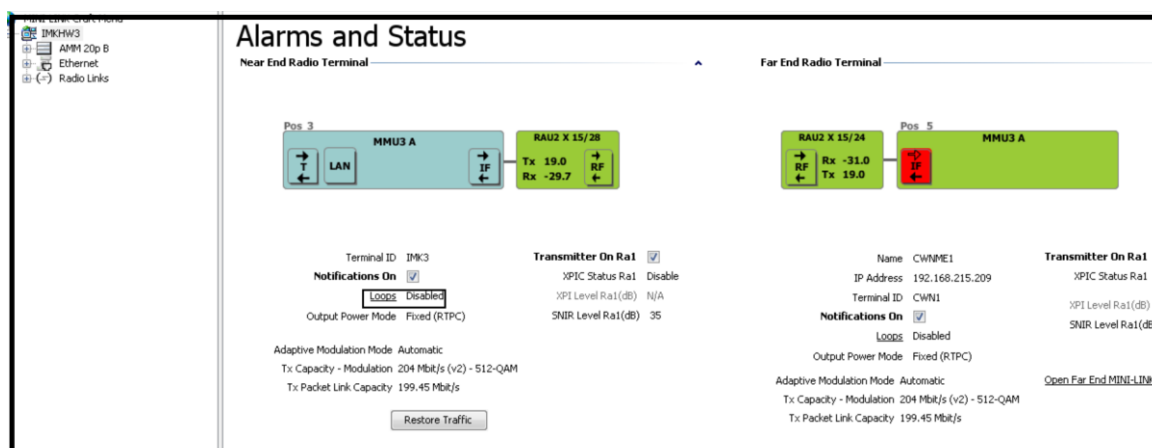
Here interference found between 15259 to 15290 MHz. Please check the configured Rx Frequency on the link. If configured Rx frequency is in the range of plus 28MHz from 15290 and minus 28MHz from 15259, then we can declare as frequency interference on the link. We can suggest them to check with the planning team to get new frequency. Configured Rx frequency is 15271 MHz as snap attached below:

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B If interference not found from both ends, then go for further test at both ends.

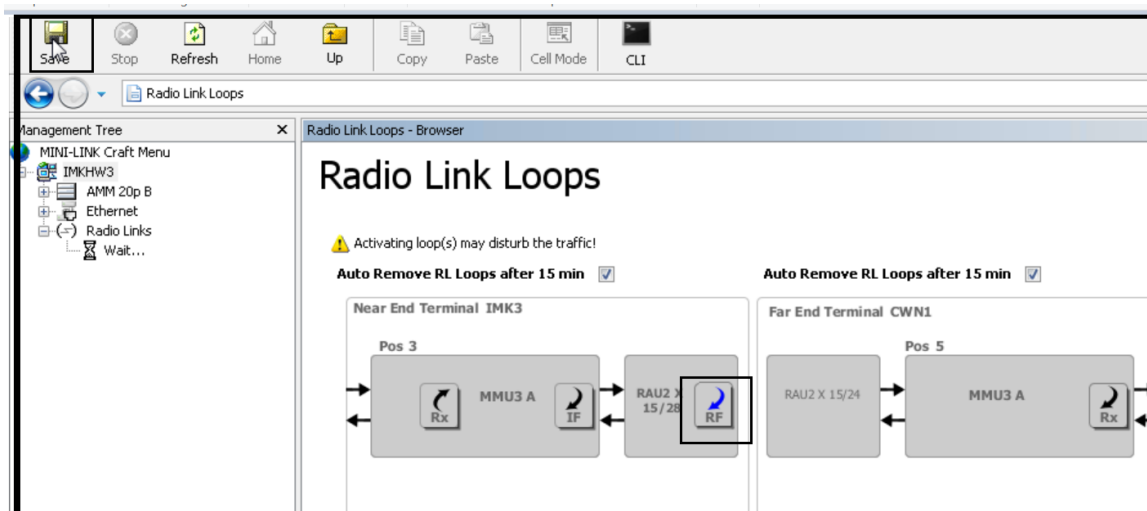
RF and IF loop test:



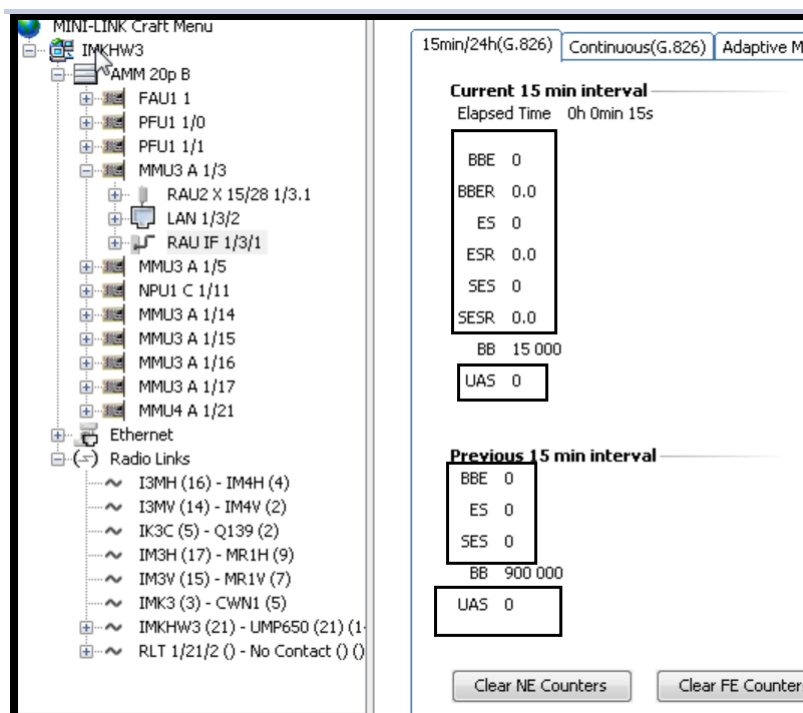
Select RF loop and save it. Then check the Receiving level of the link, alarms on the link and errors on the link.

Note: Rx level should be 40 to 60, alarms free and errors free on the link. If any mismatch please change the hardware accordingly (MMU, RAU & IF cable or IF connector) at same end. For confirming MMU issue we can use IF loop also in the same way.

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Errors in link:

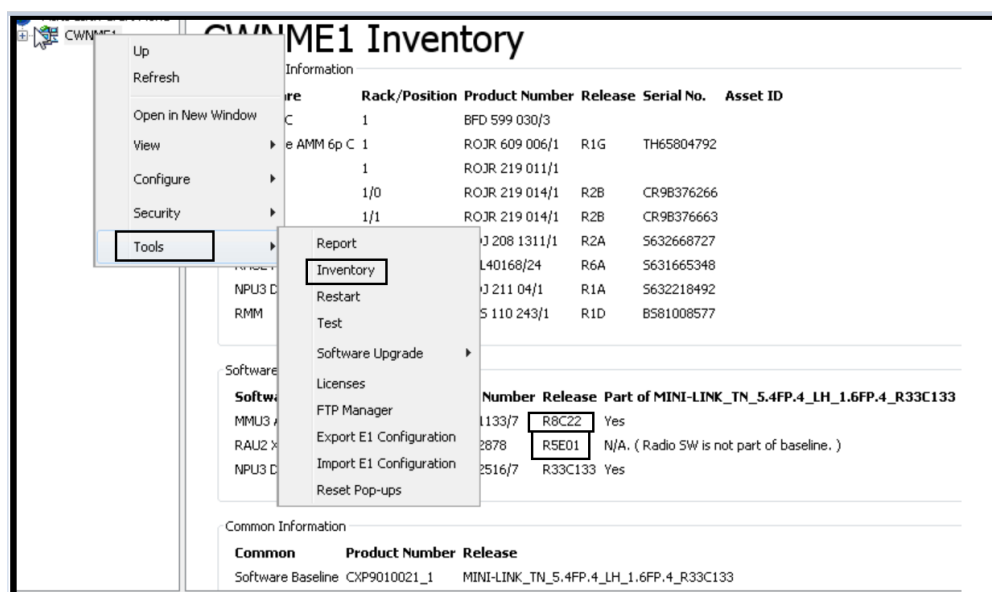


If any errors found then do hardware change one by one, Issue may resolve when clear the IF connector issue at where we are getting errors.

Replacing RAU/MMU process:

- Identify Current Hardware and Software, For the same go to Inventory Window of node. Get the information of RAU type, R-State and software version of old radio.

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- Check the compatibility of new radio/MMU, it must be compatible with the software on the connected MMU.
- If new Radio/MMU is not compatible with the SBL on the connected MMU, software MMU/AMM must be upgraded.
- Check if the new radio supports the configuration with respect to the selected maximum modulation and the channel spacing. If the new radio does not support the current configuration, before doing the replacement, change the configuration of link that the new radio can support.
- For Replacing the Radio, first disconnect the IF cable from MMU, Replace the RADIO. Reconnect the station radio cable to the MMU. The radio is automatically configured to the same settings as the old radio.
- If RAU upgrade is required, connect the node with FTP server having required software type of RAU.
- In the node go to software upgrade window. Select the new release software as per recommendation and compatibility. Once downloaded, activate the same and check the status of RAU in inventory window.

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Software Upgrade

This Wizard will guide you through a software upgrade. It's possible to upgrade the Software Baseline or upgrade individual modules.

Software Upgrade FTP: software (192.168.50.1)

Current Baseline
 Product number: CXP9010021_1
 Release: MINI-LINK_TN_5.4FP.4_LH_1.6FP.4_R33C133

Conforming Modules: Yes
 Defined by: Ericsson

☐ Upgrade Software Baseline to
 CXP9010021_1 - Select Software Baseline -

☐ Upgrade to current baseline

☒ Upgrade modules

Module	Product Number	Current Release	New Release
NPU3 D	CXP 901 2516/7	R33C133	- Select Module Revision -
MMU3 A	CXP 901 1133/7	R8C22	- Select Module Revision -
RAU	CXP 901 2878	R5E01	R5E01.UPG

Note: In this example we are not changing any hardware as already found interference. This snapshot is for where we need to upgrade a RAU software.

- h. Do the configuration as old if need, Now verify the hop is working properly.
- i. Verify SES 24 h threshold crossing alarm is cleared from both near end and far end nodes for the link.

D: Post Check

1. Check alarm should be cleared from node.
2. No new alarm should be generated on node.
3. All services should be restored.

E: Fall Back Procedure

Since MOP is for clearing Errors on the link, so Fall-back procedure is not required.

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Please note that the method of procedure is prepared as the current scenario, available devices, and deployed software version. So activity steps and impact can vary depending upon the scenario.in that case we will further communicate.