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.

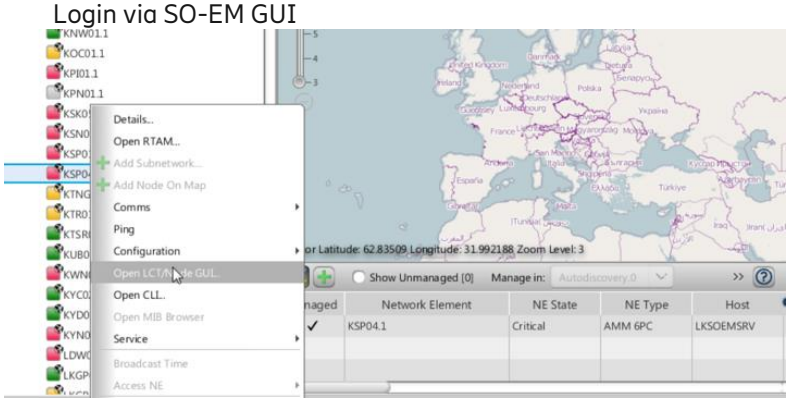
C: Procedure

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.

Login via SO-EM GUI



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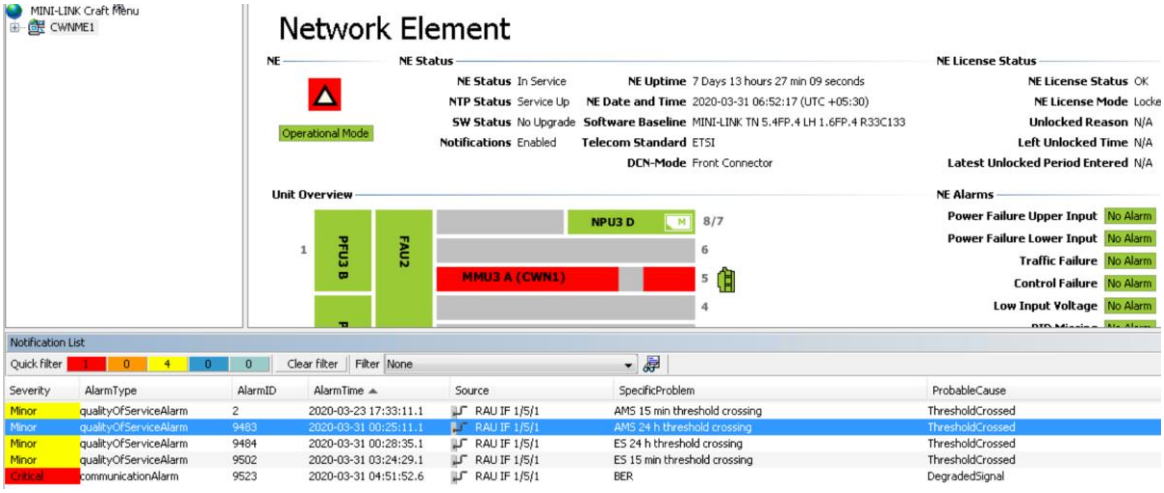
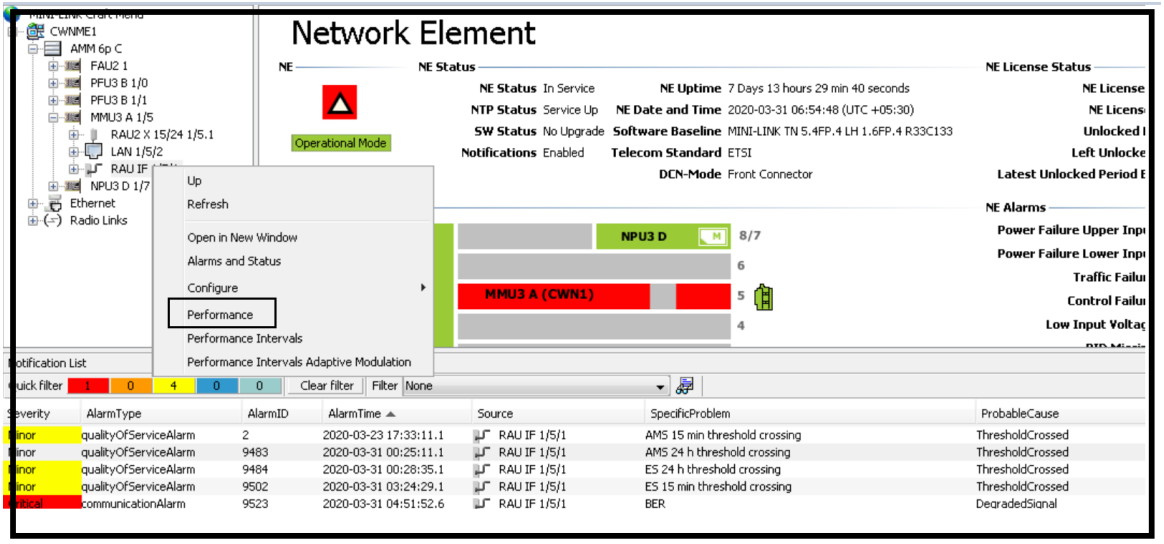
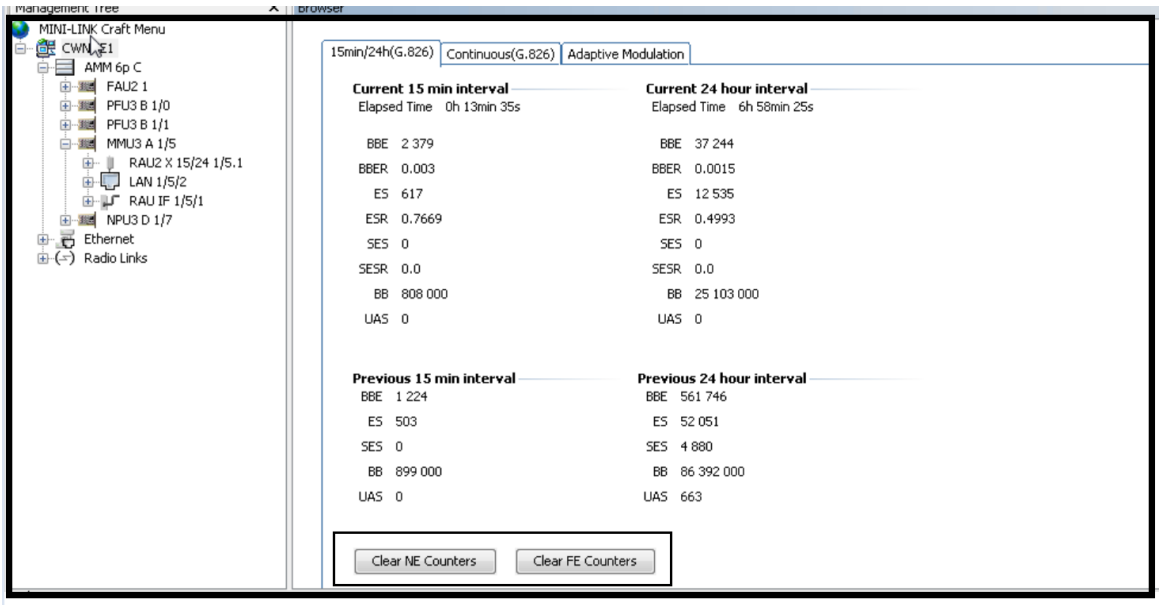
Login via craft

Example Node having alarm

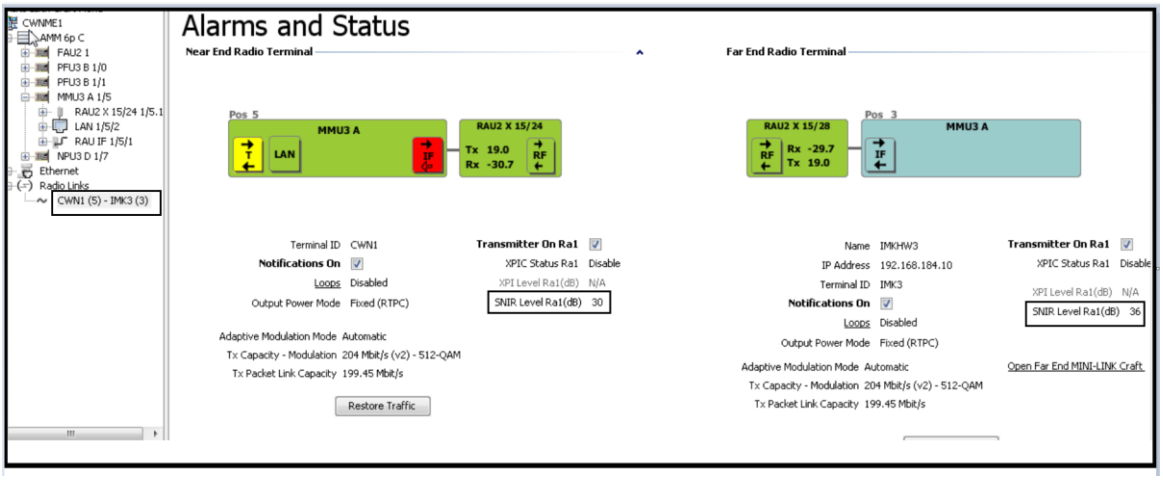


2. Perform a RAU IF performance reset as mentioned below:





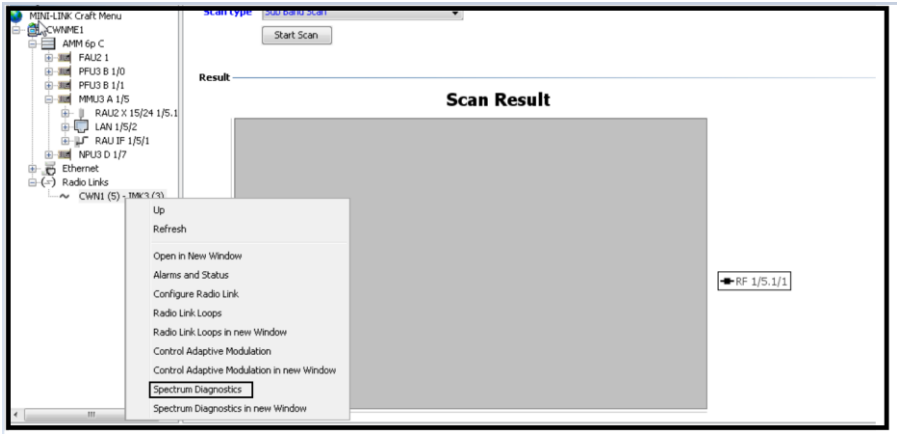
3. Check the status, if alarm is cleared, monitor the link error for next 24 hours.
4. If alarm is not cleared and SES 15 min threshold crossing alarm appear on the node within 15 minutes, then check the SNIR of the link.



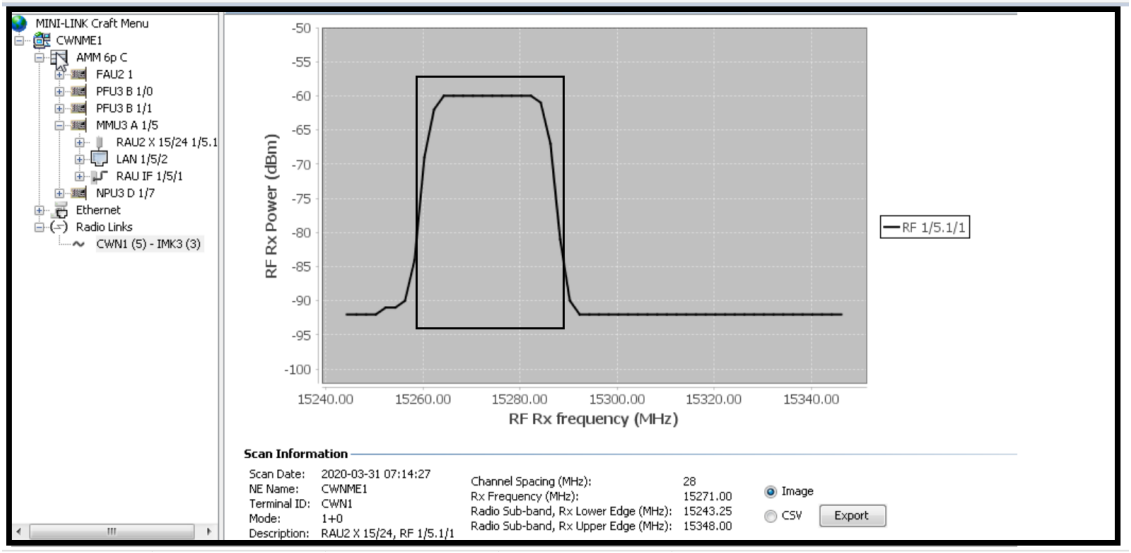
5. SNIR should be approximately 40. If it is less than that go for further steps to troubleshoot

Note: Some minor Error cases SNIR might be 40 approximately. That is exceptional.

A Frequency scan test:

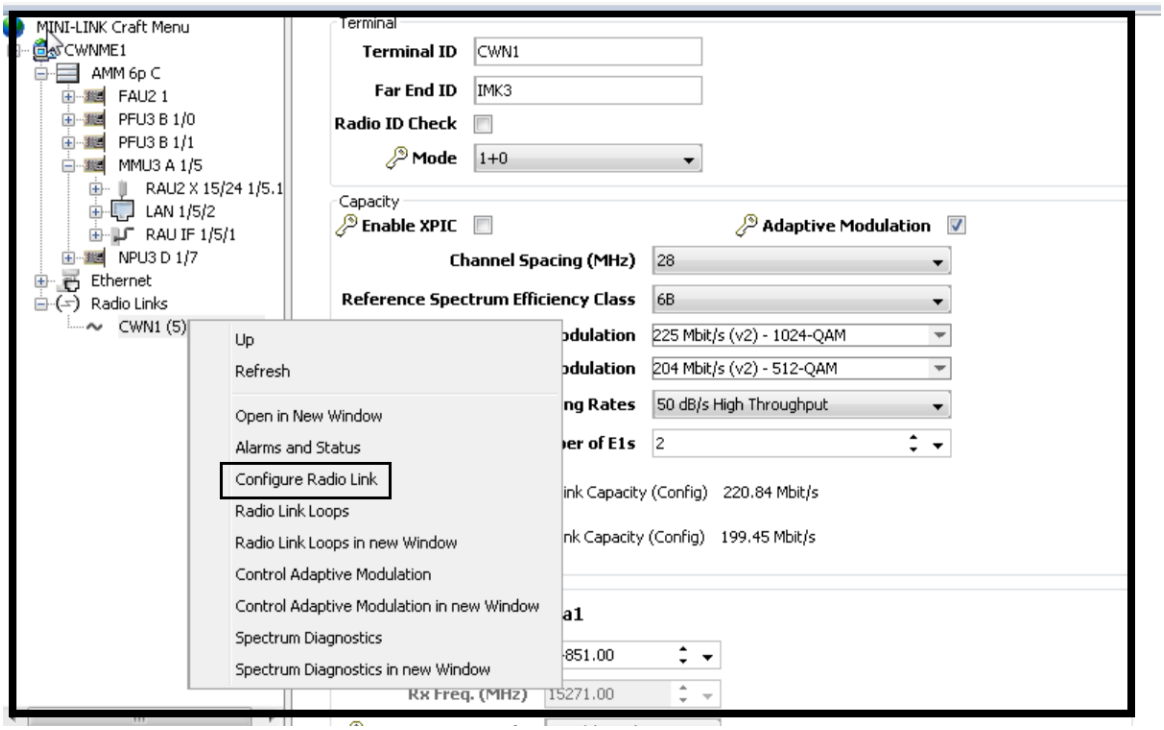


Check the result graph (Frequency Vs Rsl):



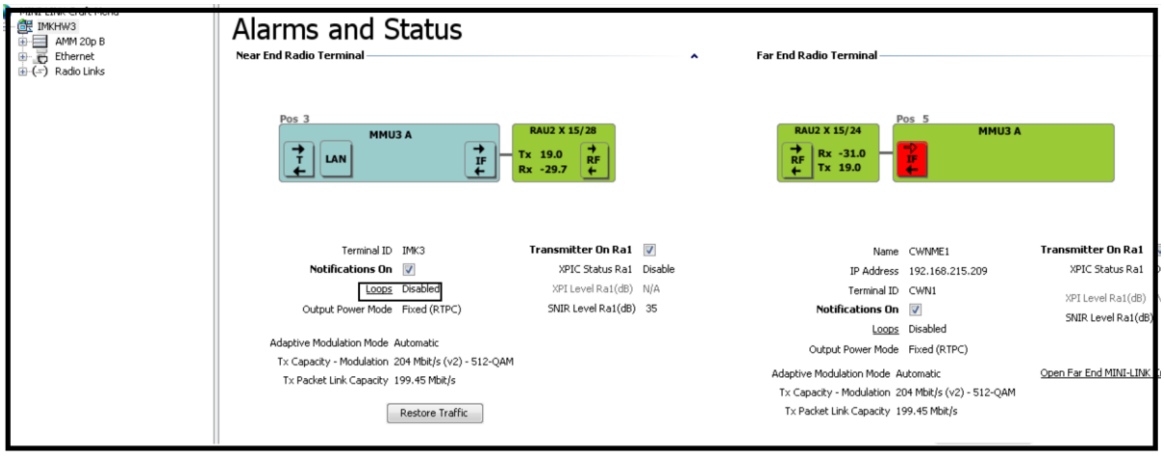
Here interference found between 15259 to15290 MHz. Please check the configured Rx Frequency on the link. If configured Rx frequency is in the range of plus 28Mhz from 15290 and minus 28MHz from 15259, then we can declare as frequency interference on the link. We can suggest them to check with the planning team to get new frequency.

Configured Rx frequency is 15271 MHz as snap attached below:

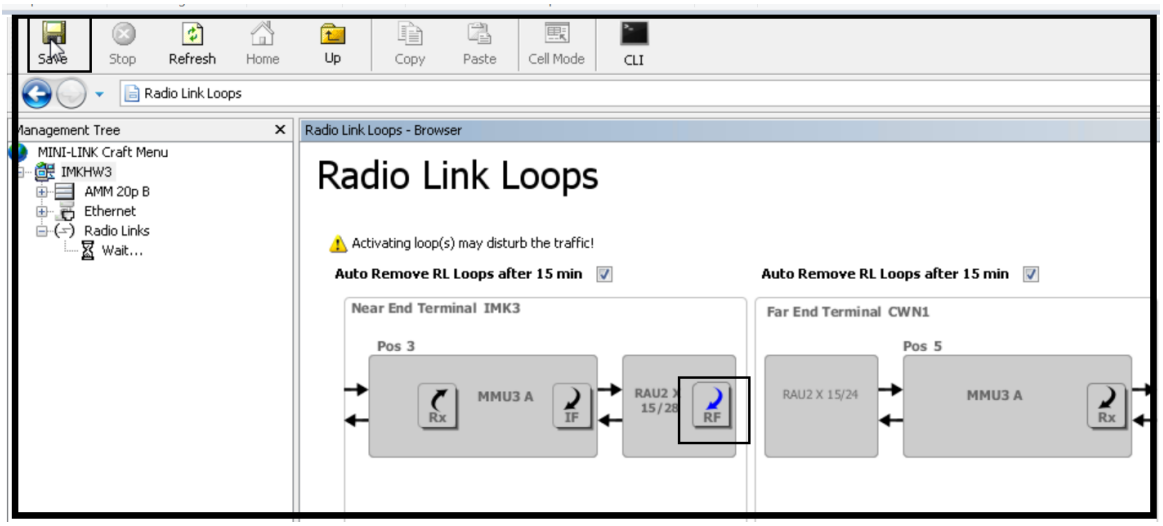


B If interference not found from both ends, then go for further test at both ends.

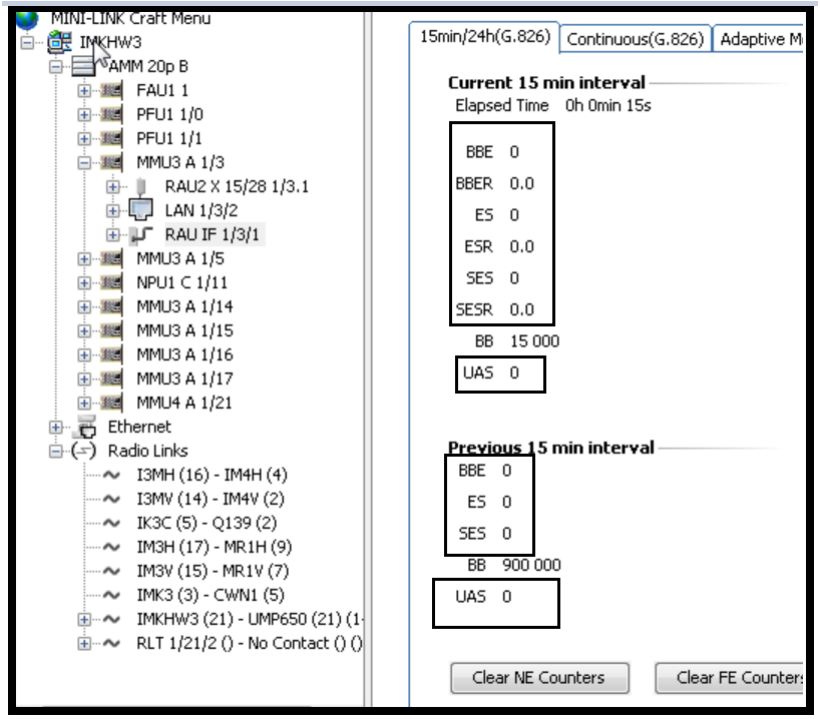
RF and IF loop test:



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.



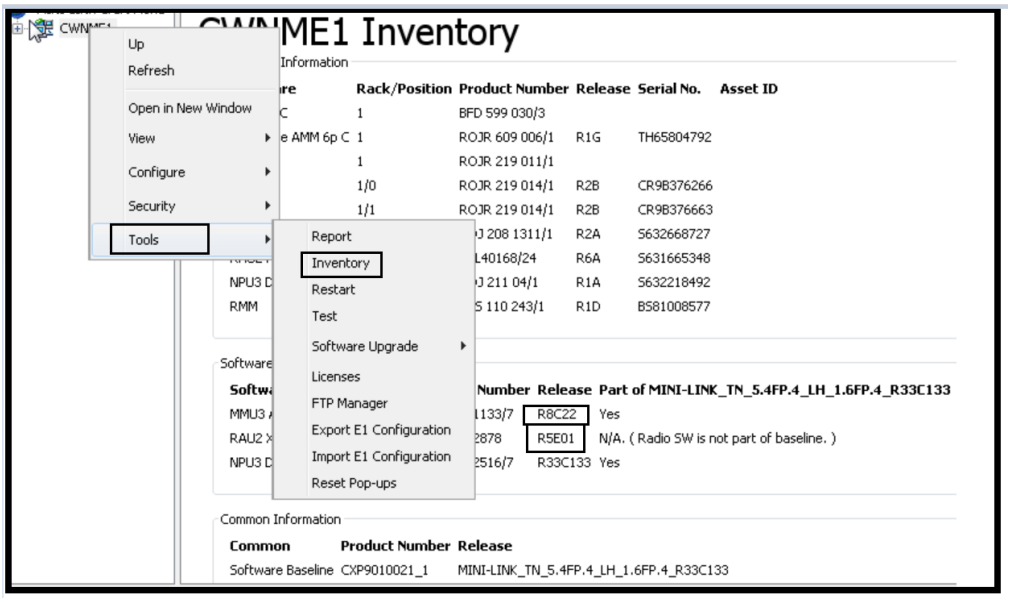
Errors in link:



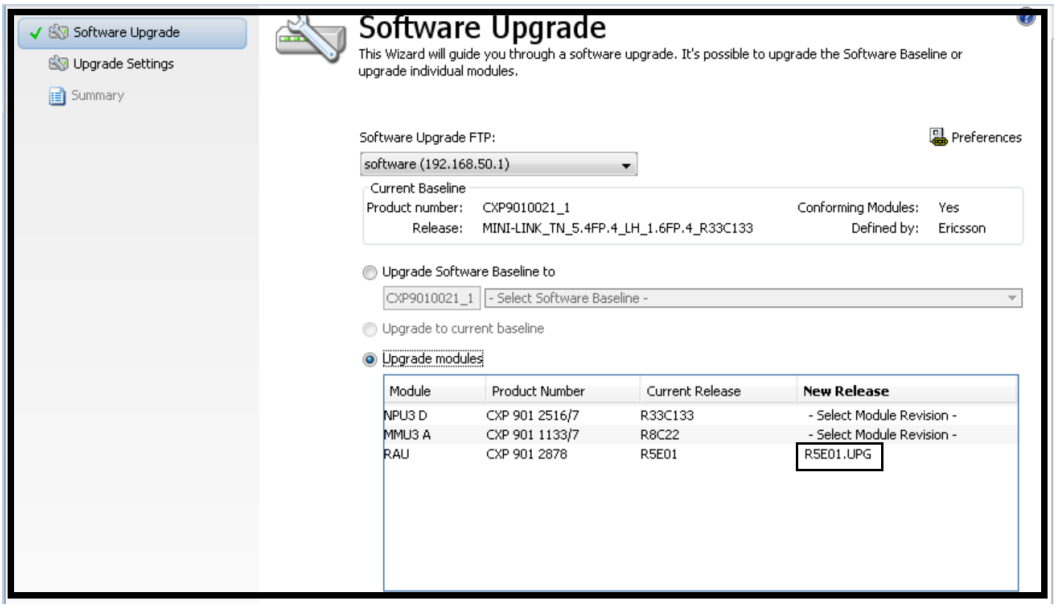
If any errors found then do hardware change one by one, Issue may resolve when clear the IF connector issue at where we are getting errors.

Replacing RAU/MMU process:

a. 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.



b. Check the compatibility of new radio/MMU, it must be compatible with the software on the connected MMU.
c. If new Radio/MMU is not compatible with the SBL on the connected MMU, software MMU/AMM must be upgraded.
d. 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.
e. 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.
f. If RAU upgrade is required, connect the node with FTP server having required software type of RAU.
g. 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.



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.

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.