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MOP for Ceragon Excessive BER on TDM-LIC STM1/OC3 port Fault management

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A. Introduction

This document outlines the step-by-step process involved in Ceragon Excessive BER on TDM-LIC STM1/OC3 port Fault management

B. PRE-CHECK

- *Node must be reachable then need to proceed to the next step else need to arrange filed support with local login accessories & spare hardware such LIC-T155 ACR.*
- *PCM path or end to end media path along with port details should be available.*

❖ *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.*

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Current Alarms before activity

IP20:-

#	Time	Severity	Description	User Text	Origin
1	14-01-2020 13:11:12	Red	Remote communication failure		Radio: Slot 5, Port 1
2	14-01-2020 13:11:05	Red	Radio loss of frame		Radio: Slot 5, Port 1
3	10-01-2020 15:55:02	Red	Loss-of-frames alarm on TDM service		STM-1/OC-3: Slot 10, Port 1, Instance 55
4	10-01-2020 15:55:02	Red	Loss-of-frames alarm on TDM service		STM-1/OC-3: Slot 10, Port 1, Instance 34
5	10-01-2020 15:55:02	Red	Loss-of-frames alarm on TDM service		STM-1/OC-3: Slot 10, Port 1, Instance 13
6	10-01-2020 15:53:49	Red	Loss Of Signal (LOS) on TDM-LIC TDM port		E1/T1: Slot 3, Port 3
7	10-01-2020 15:53:49	Red	Loss Of Signal (LOS) on TDM-LIC TDM port		E1/T1: Slot 3, Port 2
8	10-01-2020 15:53:49	Red	Loss Of Signal (LOS) on TDM-LIC TDM port		E1/T1: Slot 3, Port 1
9	10-01-2020 15:54:58	Yellow	Remote Defect Indication (RDI) received on TDM-LIC VC12VC11		STM-1/OC-3: Slot 10, Port 1, Instance 55
10	10-01-2020 15:54:58	Yellow	Remote Defect Indication (RDI) received on TDM-LIC VC12VC11		STM-1/OC-3: Slot 10, Port 1, Instance 34
11	10-01-2020 15:54:57	Yellow	Remote Defect Indication (RDI) received on TDM-LIC VC12VC11		STM-1/OC-3: Slot 10, Port 1, Instance 13
12	15-01-2020 09:50:34	Yellow	RFU RX level out of range		Radio: Slot 5, Port 1
13	10-01-2020 15:53:51	Yellow	E1/DS1 Unexpected signal on TDM-LIC TDM port		E1/T1: Slot 3, Port 7
14	10-01-2020 15:53:51	Yellow	E1/DS1 Unexpected signal on TDM-LIC TDM port		E1/T1: Slot 3, Port 6
15	10-01-2020 15:53:51	Yellow	E1/DS1 Unexpected signal on TDM-LIC TDM port		E1/T1: Slot 3, Port 5

IP10:-

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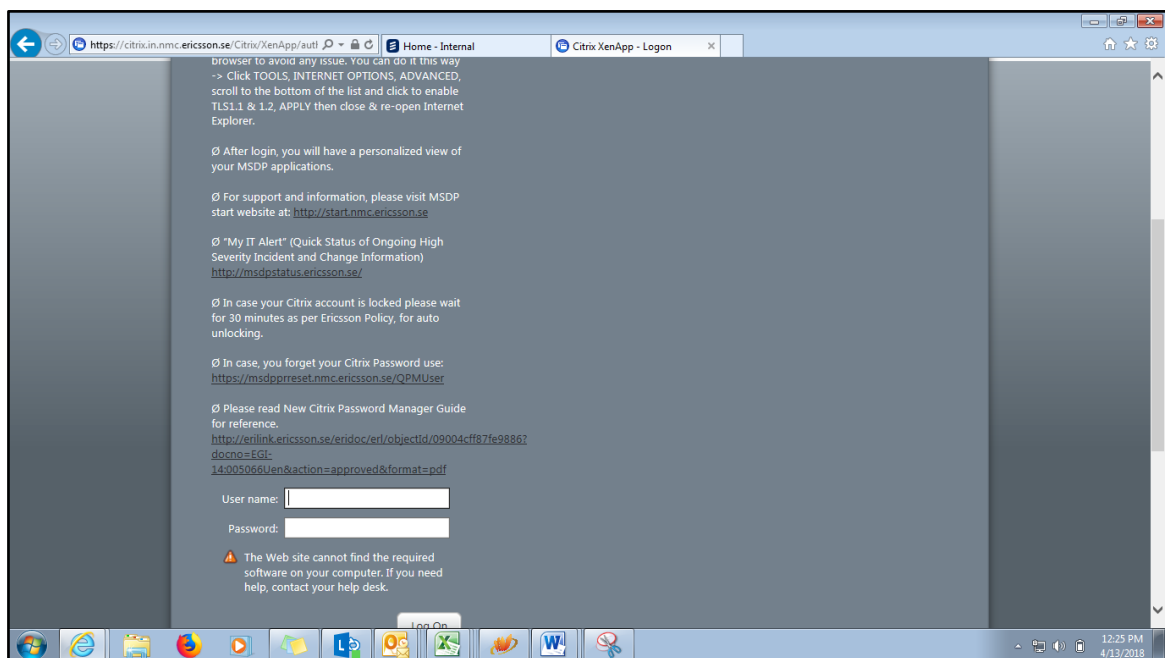
Date & Time	Severity	Module	Description
03-Jan-20 01:47:50	Red triangle	IDU	Radio loss of frame
14-Dec-19 16:44:01	Red triangle	IDU	Remote communication failure
03-Jan-20 01:47:50	Red triangle	IDU	Gigabit Ethernet loss of carrier on port #1
30-Oct-19 11:57:41	Yellow triangle	IDU	Fan failure
14-Dec-19 16:43:49	Yellow triangle	RFU	Tx mute
14-Jan-20 08:10:10	Yellow triangle	RFU	Rx level out of range
15-Jan-20 09:20:12	Yellow triangle	IDU	IDU extreme temperature conditions

C. Procedure:

STEPS FOR Ceragon E1/DS1 excessive BER on port alarm clearance

- Login MSDP through below mentioned link.
<https://citrix.in.nmc.ericsson.se/>
- Provide CITRIX username and password.

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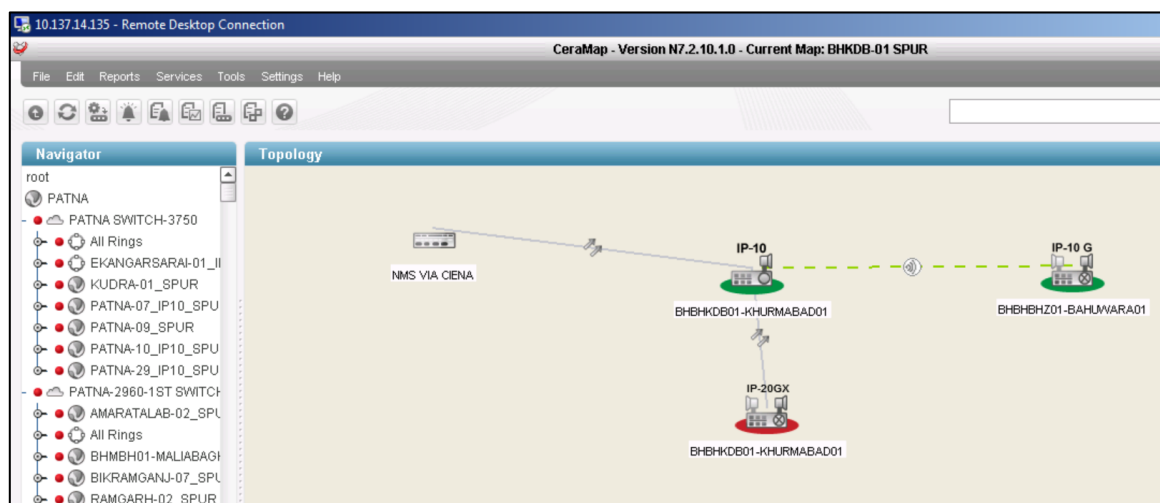
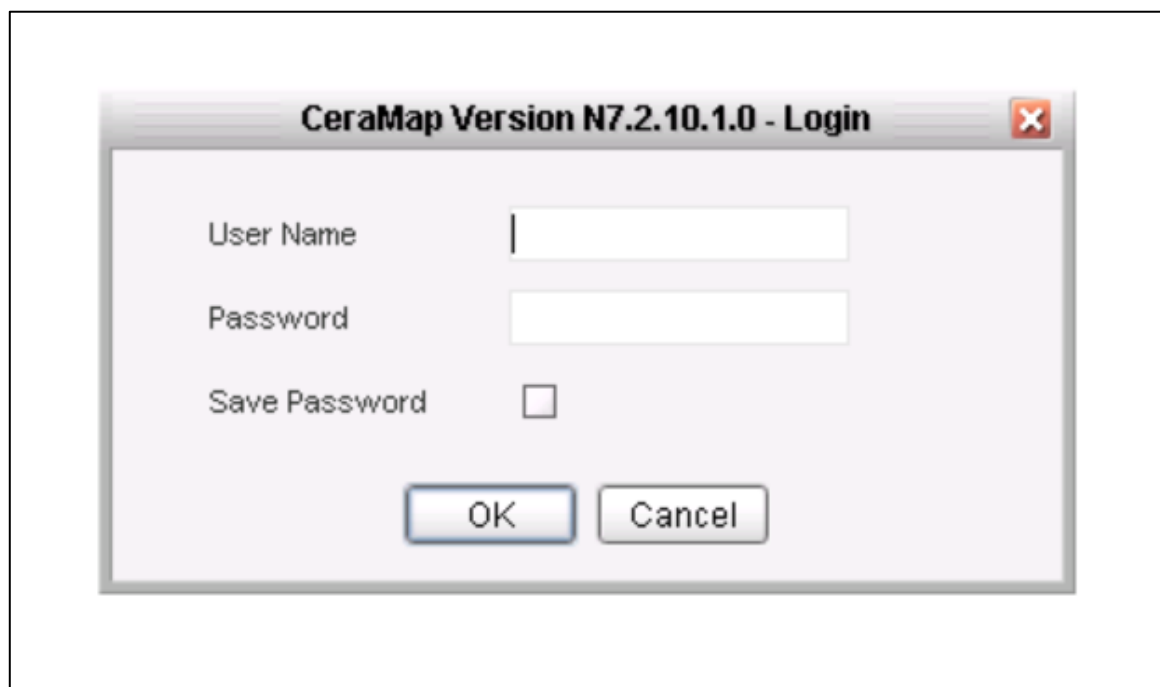


- ***Click on Main > Xenapp6.5 > Bharti Noida > Bharti INNO Remote Desktop Client.***



- ***Now login the RDP with RDP IP & credentials.***
- ***Launch the Cera map & login with credentials.***

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- **Search the required Node ID in Cera Map & open the node by clicking on Open Node GUI.**
- **Login Ceragon NODE locally via web browser through IP.**
- **Provide IDU username and password.**

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The screenshot shows a web browser window with the following details:

- Tabs:** - Slot 1 X, 10.204.211.212 - Login X, 10.64.140.35 - JHCSN01: New Session X, 10.64.59.3...
- Address Bar:** 10.204.211.212
- Page Title:** Login
- Form Fields:**
 - User Name:
 - Password:
- Buttons:** Apply, Clear

Principle:

The Excessive BER on TDM-LIC STM1/OC3 port alarm indicates STM port is down.

Possible Causes:

- 1) Line is not properly connected.***
- 2) External equipment is faulty.***

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Steps for alarm clearance:

- For IP-10 Go to **Diagnostics and maintenance>Loopback>SDH Line**.
For IP20 Go to **TDM > Diagnostics>SDH/SONET>STM-1/OC-3 Ch. Loopback**
- For IP-10 Select **Loopback towards system** then apply.
For IP20 Select **Card**, Click on **edit & Loopback type towards system** then apply

IP-10

The screenshot shows the CERAGON web interface for IP-10. The browser tabs include '10.64.139.202 - New Session - Slot 1', '10.64.79.104 - SDH Line - Slot 1', '10.64.93.2 - BHANG02: SDH Loopback', and '10.64.59.36 - BHBAR10: New Session'. The address bar shows '10.64.79.104'. The page title is 'SDH Line - Slot 1'. The left sidebar shows a navigation tree with 'Diagnostics & Maintenance' expanded, and 'Loopback' selected. The main content area shows the 'STM-1 Loopback' configuration. The 'Timeout (minutes)' is set to 1. The 'Name' field contains 'STM-1/OC-3 line loopback'. The 'State' dropdown is set to 'Loopback towards system'. There are 'Apply' and 'Refresh' buttons.

IP-20

The screenshot shows the CERAGON web interface for IP-20. The browser tabs include '10.64.139.202 - New Session - Slot 1', '10.64.79.104 - SDH Line - Slot 1', '10.64.93.2 - BHANG02: SDH Loopback', and '10.64.59.36 - BHBAR10: New Session'. The address bar shows '10.64.93.2/responder.fcgi?winid=13&deviceid=0'. The page title is 'BHANG02: SDH Loopback'. The left sidebar shows a navigation tree with 'Diagnostics' expanded, and 'SDH/SONET' selected. The main content area shows the 'SDH Loopback' configuration. A table lists the loopback configurations:

Slot ID	Port Number	Loopback type	Counter
Slot 4: LIC-T155 ACR	STM-1/OC-3: Slot 4, Port 1	Off	0
Slot 7: LIC-T155 ACR	STM-1/OC-3: Slot 7, Port 1	Off	0

Below the table is an 'Edit' button. A modal window titled 'SDH Loopback - Mozilla Firefox' is open, showing the configuration parameters for 'Slot 4: LIC-T155 ACR'. The 'Loopback type' dropdown is set to 'Towards system'. There is an 'Apply' button. The modal also shows 'Status Parameters' and 'Configuration Parameters' sections.

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- ***If alarm cleared then need to check hard loop from field on STM***
- ***If alarm also cleared during hard loop then need to replace patch-cord or check connected equipment.***

#	Time	Severity	Description	User Text	Origin
1	27-03-2020 08:22:23	Red triangle	Loss Of Signal (LOS) on TDM-LIC STM1/OC3 port		STM-1/OC-3: Slot 4, Port 1
2	27-03-2020 08:22:23	Red triangle	Loss Of Frame (LOF) on TDM-LIC STM1/OC3 port		STM-1/OC-3: Slot 4, Port 1
3	27-03-2020 08:22:23	Red triangle	Excessive BER on TDM-LIC STM1/OC3 port		STM-1/OC-3: Slot 4, Port 1

#	Time	Severity	Description	User Text	Origin
020	03:04:52	Yellow triangle	Loopback on TDM-LIC STM1/OC3 port		STM-1/OC-3: Slot 4, Port 1

- ***If alarm not cleared during Soft/Hard Loop then need to change slot or card***

D. Post Activity Health Check:

Need to check the service status & STM related alarm.

E. Fall Back Procedure: -



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