MOP For NE_COMMU_BREAK Alarm Troubleshooting

Table of contents:

A. Introduction

This document outlines the step-by-step process involved in MOP for NE_COMMU_BREAK Alarm Troubleshooting.

B. PRECHECK

- *Need to check the node reachability status of the node on which the alarm is observed and opposite end.*
- *Check the current alarms at both the ends for any hardware related alarms such as HARD_BAD, HARD_ERR, BD_STATUS, BD_OFFLINE, WRG_BD_TYPE etc. If the alarm exists then need to arrange field support with spare hardware such as IF board, ODU, IF cable and tested login accessories.*
- *If both the nodes are reachable then need to proceed to the next step else need to arrange filed support with spare hardware such as IF board, ODU, IF cable and tested login accessories.*

❖ *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.*

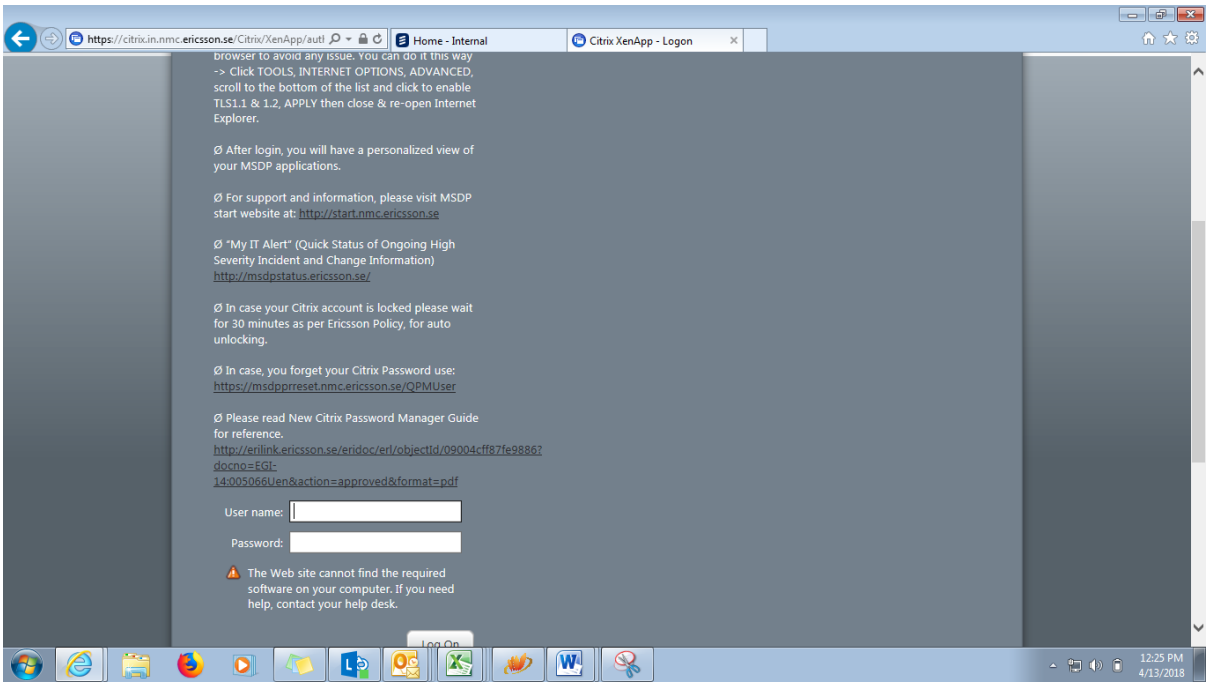
Current Alarms before activity

C. Procedure:

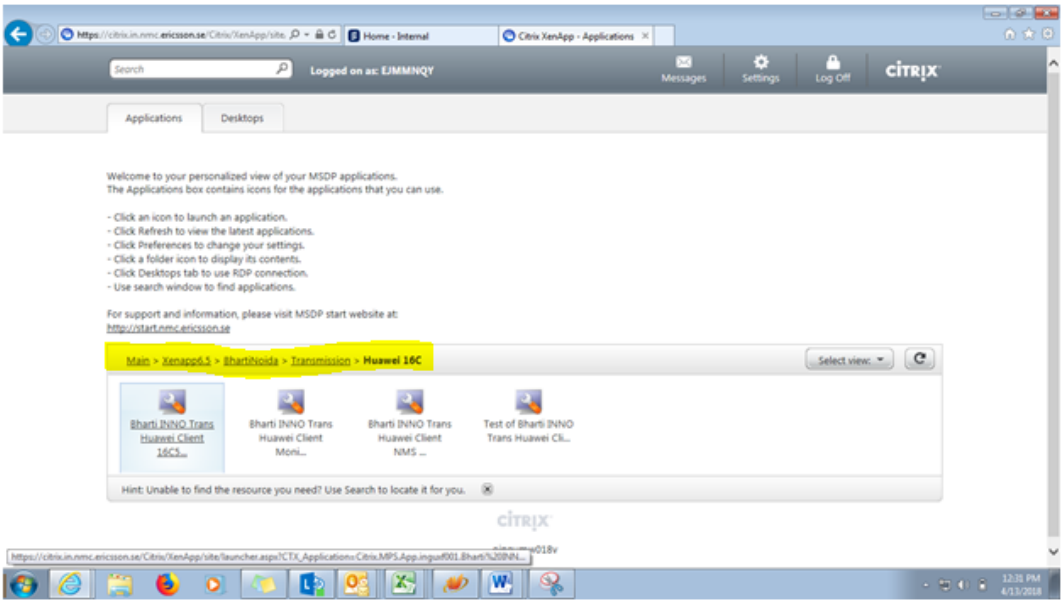
Steps for NE_COMMU_BREAK Alarm Clearance: -

1. Login MSDP through below mentioned link.
https://citrix.in.nmc.ericsson.se/

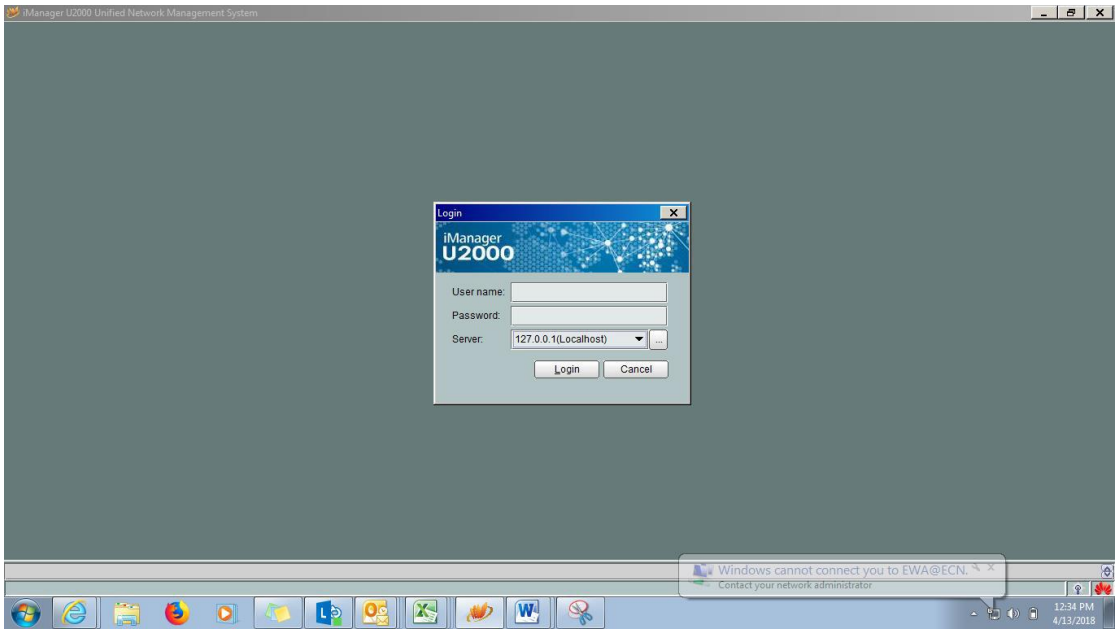
2. Provide CITRIX username and password.



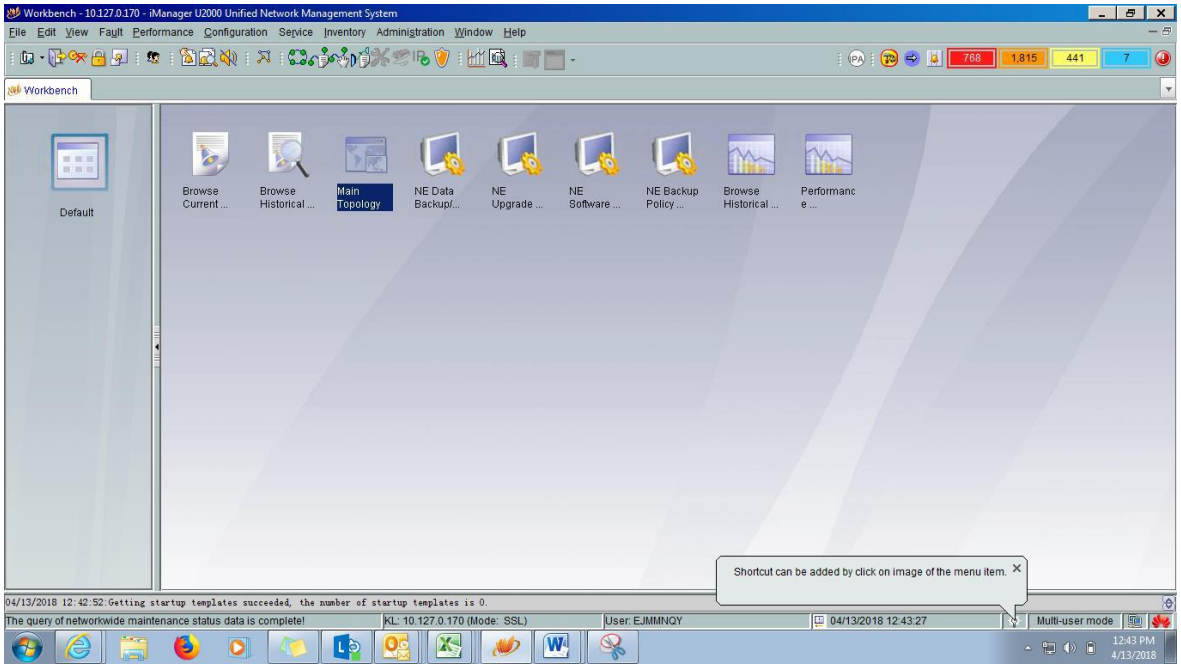
3. Click on "Xenapp6.5 >> BhartiNoida >> Transmission >> Huawei 16C/17C/18C >> Bharti INNO Trans Huawei client.



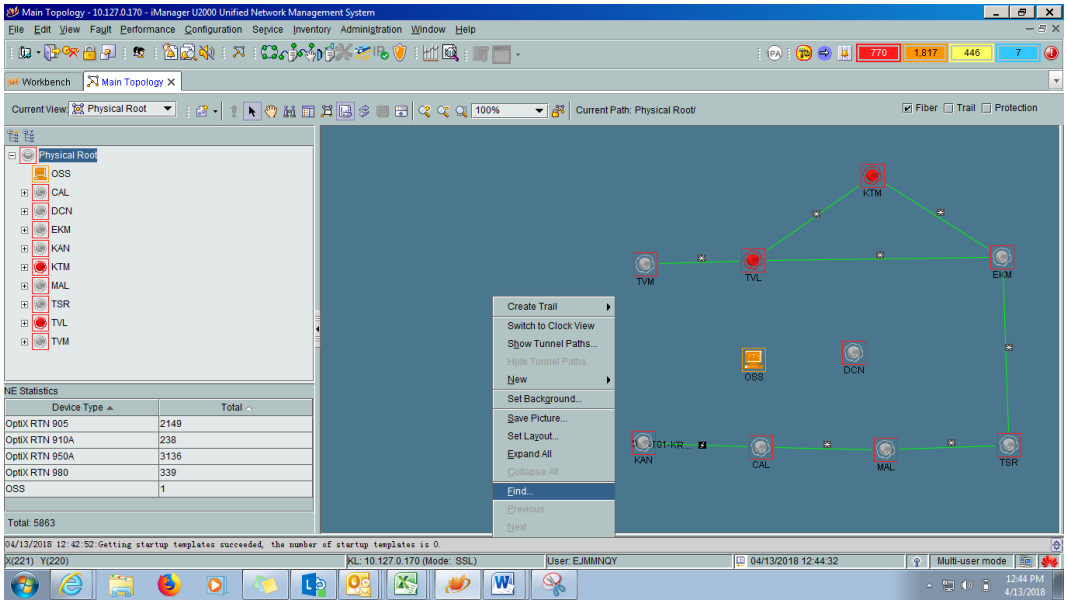
4. Now Huawei is launched enter the credentials and server IP of the circle must log in.



5. Click on "Main Topology" to open the Topology.



6. Right Click on the server and click on "FIND" to find the node.



Principle:

The NE_COMMU_BREAK alarm is generated when the communication between an NE and the U2000 is interrupted.

Traffic Impact:

The NE cannot be managed on the U2000.

Possible Causes:

Cause 1: The communication between the gateway NE that the NE connects to and the U2000 fails. Hence, the NE communication fails.
Cause 2: The SCC of the NE is faulty.
Cause 3: The fiber between the NE and the gateway NE that the NE connects to is broken.
Cause 4: The network scale is large so that the ECC communication between NEs exceeds the limit of the processing capability of the NE.
Cause 5: The NE is connected to a VRP-based PTN GNE. If the GNE connects to the U2000 over the IP protocol but cannot connect to the U2000 over the QX protocol, the NE will become unreachable to the U2000 whereas the GNE remains reachable.

Detailed Steps:

- Cause 1: The communication between the gateway NE that the NE connects to and the U2000 fails. Hence, the NE communication fails.
  1. Check whether the gateway NE reports the GNE_CONNECT_FAIL alarm. If yes, stop the alarm. For details about stopping the alarm, see GNE_CONNECT_FAIL.
  2. View the current alarms on the U2000 to check whether the alarm stops. If the alarm persists, proceed to the next step.
- Cause 2: The SCC of the NE is faulty.

  Check the indicators on the panel of the SCC. If the indicators are abnormal, you can infer that the SCC is faulty. For details about the indicators, see Table 1. Reset the SCC. If the indicators are still abnormal, replace the SCC. For details about the operations, see Replacing the SCC board in the *Parts Replacement* of the equipment.
- Cause 3: The fiber between the NE and the gateway NE that the NE connects to is broken.

  Measure the fiber with an OTDR meter. Check whether the fiber is broken and the broken section of the fiber according to the fiber attenuation curve. Replace the fiber if the fiber is broken.

  NOTE:

  For the usage of the OTDR meter, see the operation guide of the OTDR.
- Cause 4: The network scale is large so that the ECC communication between NEs exceeds the limit of the processing capability of the NE.

  NOTE:

  Check whether the planning of the ECC routes is proper. When the number of NEs on a network exceeds 100, the network must be divided into ECC networks to avoid overload of the ECC communication.

  1. Divide a subnet of a large scale into several subnets of small scales.

     NOTE:

     - Allocate adjacent networks to a subnet according to the principle of managing networks by layers and areas.
     - It is recommended that the number of NEs in a subnet does not exceed 64.
  2. Select proper common NEs as gateway NEs in a subnet.

     NOTE:

     When there are multiple loops and links, set the equipment that is located in sections with most loops and links as gateway NEs. In this manner, the situation that large

amount of management information is transmitted through the DCC with narrow band and broad channel is avoided so as to prevent the DCN from being congested.

3. Disable the ECC connections between redundant subnets.
   - Disable the interworking between ECC subnets, which is achieved through the extended ECC (automatic or manual).
   - Disable the interworking between ECC subnets, which is achieved through the STM-N electrical or optical interfaces.

- Cause 5: The NE is connected to a VRP-based PTN GNE. If the GNE connects to the U2000 over the IP protocol but cannot connect to the U2000 over the QX protocol, the NE will become unreachable to the U2000 whereas the GNE remains reachable.

  The GNE can query non-gateway routes. If the GNE is using IP protocol, switch to the QX protocol.

  - If the alarm persists, Please get support from BO-TXN Support.

Table 1 Indicator description of the SCC board

Indicator	Name	Status	Description
STAT	Board Hardware Indicator	On (green)	The board works normally.
		On (red)	A critical alarm occurs on the board.
		On (yellow)	A minor alarm occurs on the board.
		Off	The board is not powered on.
PROG	Board Software Indicator	On (red)	Memory check failed/loading unit software failed/the FPGA file is lost/the unit software is lost.
		Blinking (red)	100ms on and 100ms off.
			BOOTROM check failed.
		Blinking quickly (green)	100ms on and 100ms off.
			Writing FLASH.
		Blinking slowly (green)	300ms on and 300ms off.
			BIOS booting/loading FPGA/loading unit software.

Table 1 Indicator description of the SCC board

Indicator	Name	Status	Description
		On (green)	The board software or software for FPGA is uploaded successfully, or the board software is initialized successfully.
SRV	Service Alarm Indicator	On (green)	Service is normal, no service alarm occurs.
		On (red)	A critical or major alarm occurs in the service.
		On (yellow)	A minor or remote alarm occurs in the service.
		Off	No service is configured.
ALMC	Alarm cut indicator	On (yellow)	Currently in permanent alarm cut-off status.
		Off	Give sound warning upon alarm.

D. Post Activity Health Check:

Please check alarm will be clear and services also restored after confirmation from all stakeholders.

E. Fallback Procedure:

Need to shift the board to another free slot and configure the services manually.