Tejas Networks India Ltd.

FAQ

If the query is still not cleared, please call the Eastern TAC Number +91 9831829143

A1:- What IP address should be given to the node which are Ring or linear fashion.

The Node should have the following pattern of IP address :-

Node 1:- Ethernet IP :- 192.168.1.1
Router ID :- 192.168.200.1

Node 2:- Ethernet IP :- 192.168.2.1
Router ID :- 192.168.200.2

Node 3:- Ethernet IP :- 192.168.3.1
Router ID :- 192.168.200.3
And so on .

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A2:- Required parameters for Communication for 2 nodes.

The required parameters for 2 nodes two nodes to communicate are:-

(1) (1) Go to Provisioning → STM Ports → Specific Port (eg:- STM1-1-3-1)
Make Admin Up
In ECC Byte Selection , make DCC-M
In TIM Action , make TIM ignore.
Then Submit and Accept the changes to take effect.

Make the same changes for all the ports.

(2) (2) Go to Provisioning → Go to OSPF parameters → Make Global OSPF and Ethernet OSPF Enable,

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A3:- How to change the IP Address of the Laptop

To change the IP address of the Laptop , go to the following path ,
Start → Setting → Network and Dial Up Connection → Double click on Local Area Connection → Properties → Internet Protocol (TCP/IP) Properties → Give the required IP address , subnet mask and Default Gateway.

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A4:- How to Login to the Node .

To Login to the node :-
Suppose the IP address of your node is 192.168.1.254
Set the IP address of your Laptop to
IP :- 192.168.1.100
Subnet mask:- 255.255.255.0
Default Gateway:- 192.168.1.254 → this is the Ethernet IP address of node.

Once the IP is set , open the Internet Explorer and in the address bar type the following line
http://192.168.1.254:20080 and Press enter
User Name:- tejas
Password:- j72e#05t

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A5:- How to Login to Remote Node.

To Login to remote node check the following setting in the node: -
Set the gateway in the laptop , the gateway should be the Ethernet IP of the Local Node.

Now in Local node , Go to Fault Management → Diagnosis → OSPF Monitoring Page → Neighbor.
This page should show the Router ID of the remote node and the state should be FULL.
In the Address bar of Internet explorer Page , type the Router ID of the remote node
Example :- if the remote node Router ID is 192.168.200.2 then type the following line
http://192.168.200.2:20080

username:- tejas
Password:- j72e#05t

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This is the screen of the Remote node.

A6:- How to check the communication of laptop with the Node is correct.

To check the communication of laptop with Node go the following things:-

In your Laptop go to
Start → Run → Type CMD → Press Enter.

A new Window will open,
Type the Following command in the Command Prompt :-

(1) (1) ipconfig
The output should be some thing like this

Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix . : india.tejasnetworks.com
IP Address. . . . . : 192.168.0.211
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.1

(2) (2) ping the node with the following command:-
ping 192.168.1.1

The output should be like this :-

C:\DOCUME~1\SANTOSHS>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.3.255: bytes=32 time<10ms TTL=63
Reply from 192.168.3.255: bytes=32 time<10ms TTL=63
Reply from 192.168.3.255: bytes=32 time<10ms TTL=63
Reply from 192.168.3.255: bytes=32 time<10ms TTL=254

Ping statistics for 192.168.3.255:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

If the output is not like this , then the either the cable is not connected properly or The IP in the laptop configured properly.

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A7:- What are the basic configuration required for a node.

(1) (1) For STM Ports

Click on Provisioning ----> STM Ports ----> STM1-3-1 (in case of MC1 for 1st port)---->
1) Admin Status: **Admin Up**
2) ECC byte selection: **DCC_M**
3) TIM Action : **tim_ignore**

Submit changes and Accept the Modifications.

Click on Provisioning ----> STM Ports ----> AU4-3-1-1-1---->
Signal Label: **tug_structure**
TIM Action : **Ignore TIM**

Submit changes and accept the Modifications

Make the same changes for all the STM ports

(2) (2) For OSPF Parametrs

Click on Provisioning (main menu) -----> Click on OSPF Parameters
OSPF Globle: **Enable**
OSPF Ethernet: **Enable**

Submit changes and Accept the Modifications. (System will go to the warm-reboot state and after 3 minutes, you can login to the system)

(3) (3) Timing Setting

Click on Timing Manager (main menu) --->
QL Mode : Enable and then submit
Click on Nominate Clock Sel
Clock Reference :Port
Clock reference Port :STM1-1-3-1 (eg.in case of CP /MC1)
Priority : 1

Click on View clock select to verify the clock status.

Submit the changes and do the same steps, If you want to nominate more than one Clock source.

Click on Nominate Clock Sel.
Provide the second reference source
Assign the second priority to it and verify the same by clicking on view clock select .

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A8:- How to create a cross connect.

Click on Provisioning (main menu) -----> Click on Cross connect --->Click on Add Cross connect
Cross connect capacity = **VC12**
Circuit Identifier = **User dependent**
Source port = **STM1-3-1**
source time slot **(K,L,M)** = **select from the menu** (TUG Structure)
destination port = **E1-4-1 (If trib card is in 4th slot and we are using 1st port)**
Destination time slot = ---
Enable Source protection and select the TUG Structure.
Submit the changes and accept the modifications.
Repeat the above same steps for other E1

For E3 /DS3 configuration first configure port for either E3 /DS3 as per the requirement .
Click on Provision (main menu) --> Click on Cross connect-->Click on Add Cross connect->
Cross connect capacity = **VC3**
Source port = **STM1-3-1**
source time slot **(K)** = select from the menu **(TUG Structure)**
destination port = **E3 /DS3 port in respective slot**
Destination time slot = ---
Enable Source protection and select the TUG Structure.
Submit the changes and accept the modifications.

Click on Provision (main menu) -----> Click on **E1/E3** ports
Admin Status = **adminUp**
Submit the changes and make all E1(required) ports admin status to AdminUp.

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A9:- How to create a Ethernet Cross Connect.

Click on Provisioning (main menu) -----> Click on Ethernet ports
Admin Status = **adminUp**
Link Integrity = **Enable at both ends.**
Auto Negotiation = **Enable or Disable depending on end eqpt configuration**
Flow Control = **Manual TX-Rx**
Circuit Identifier = **User dependent /Convenient**

Submit the changes and make required ports admin status to AdminUp.

Click on Provision (main menu) -----> Click on VCG Group ---> VCG -slot no - x
Admin Status : **adminUp**
LCAS : **Enable (Has to be enabled at both ends)**
Framing Type : **GFP at both the ends. Both ends should have same framing type**
VCAT : **Enable**
Operating Granularity: **VC-12 / VC-3 depending on customer requirement**.

Click on Provision (main menu) in MC1 -----> Click on VCG Group ---> VCG-4-101 ---> Add New VC
Circuit Identifier : **User convenient**

Work Port : **1 (Eg.STM1-1-3-1 in case of CP /MC1)**
Protect : **Assign required port**
Reversion Mode : **Revertive with WTR of 1 min**
K,L,M : **Select the Assigned TUG structure** .
Submit the changes and keep on adding the required VC-12's.

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A11:- Setting your Internet Explorer

Open Internet Explorer → Go to Tools → Internet Options → Connections → set the following
(1) (1) Make Never Dial a connection
(2) (2) In LAN Setting
Make Auto Detect Setting , and remote setting by un-ticking on proxy setting.
(3) (3) Then select OK

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A12:- How to check the alarms

Click on Fault Management (Main Menu) ----> Alarms -----> See the current Alarms
Click on Fault Management (Main Menu) ----> Events -----> See the History of Alarms
Click on Fault Management (Main Menu) ----> Events -----> Show All Alarms -----> See the History of All Alarms

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A13:- How to configure the Orderwire

Create OrderWire Segment-→Give any two digit Segment no.(ex. 12)

Segment No: **12**
Carrier Byte : **E1**
Port1 **Select the STM Optical Aggr. Port 1**
EOW admin status for port1: **Enable**
Port2 **Select the STM Optical Aggr. Port 2**
EOW admin status for port2: **Enable**

and then Press Submit.

Now Set the Order Wire No. as follows:
Provisioning → **OrderWire**-→
OrderWire No: **Any Three Digit no. (ex. 123)**
Ring Timeout: **60 sec**
Matching Impedance: **600 Ohms + 2.16 u F**

and press Submit.

Pl. Note: The Segment No. for all the Nodes connected through the Optical Fibres should be same(i.e two digit no.)
For Selective Calling: # Segment No. Orderwire no. (ex. #12123)
For Omni-Bus Calling: # Segment No. 251. (ex. #12251)

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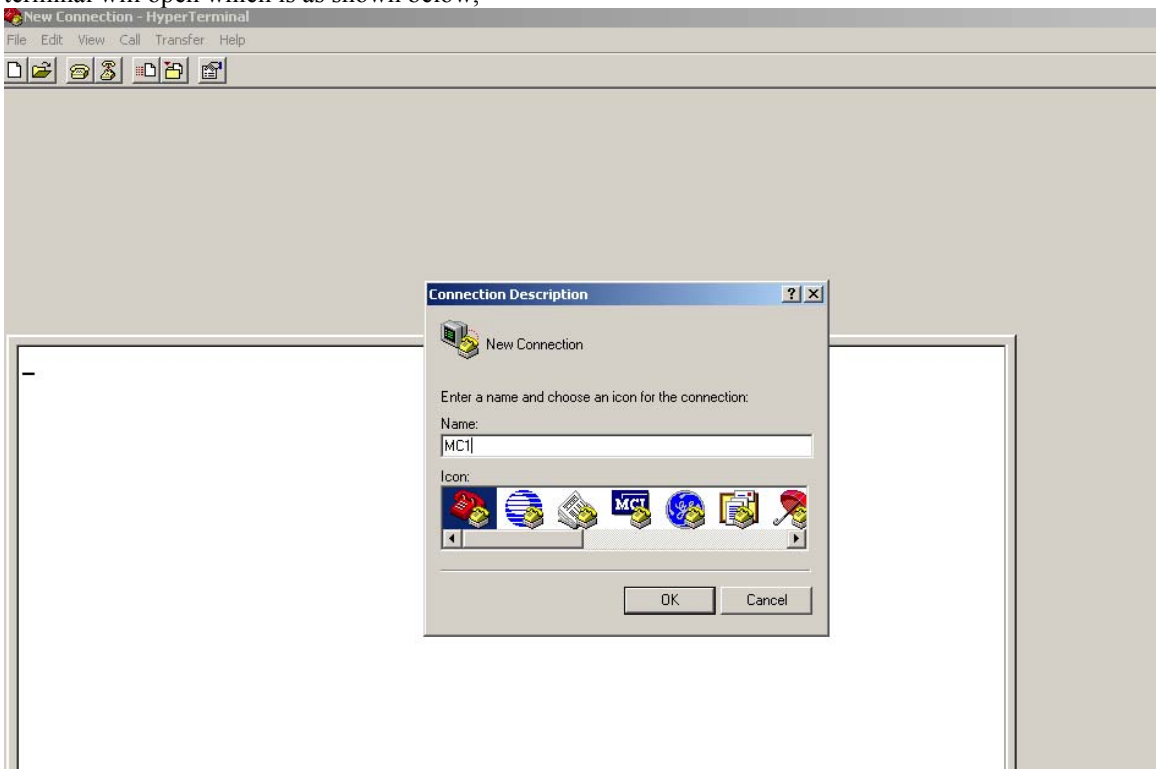
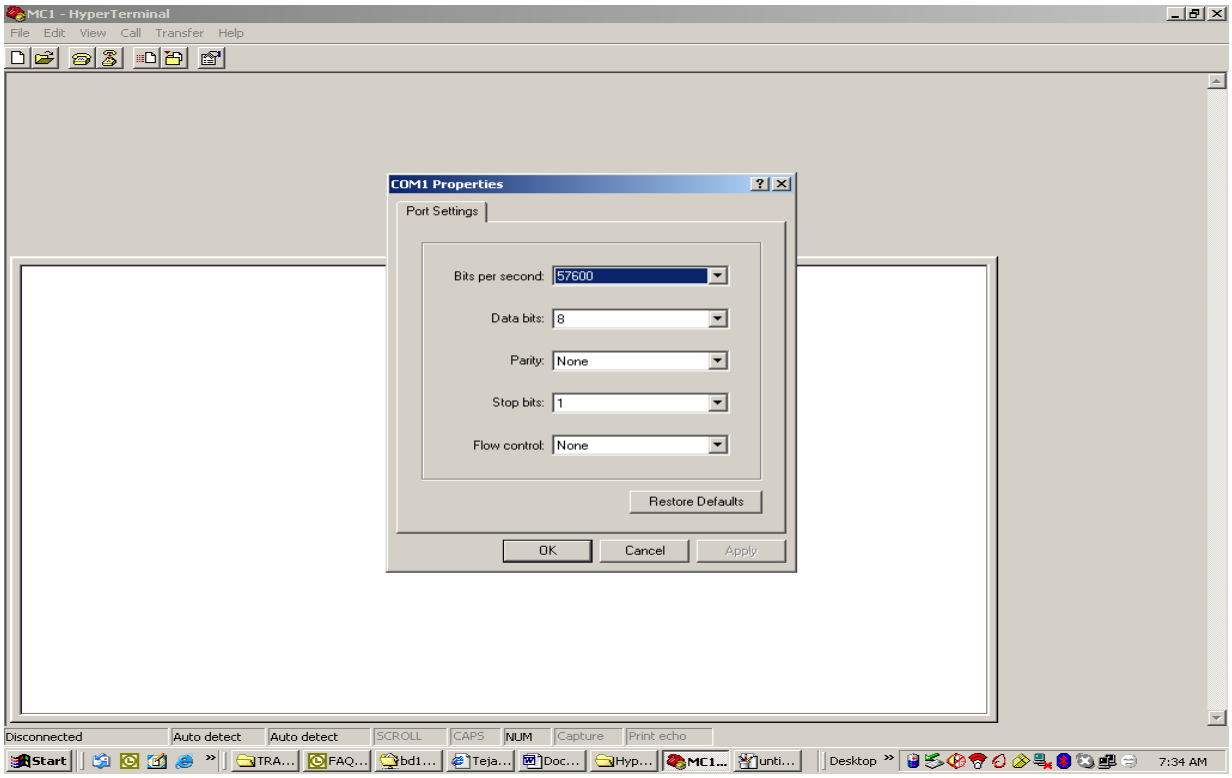
A14:- How to configure hyper terminal and the cable Pin outs for Console connection.

Go to Start → Program → Accessory → Communication → Hyper terminal , a new window of Hyper terminal will open which is as shown below,



Provide the required name and select OK for the same

The second window will be like this



Select Restore Defaults and then change the bits per second to 57600.
And then select OK
This will set the Hyper terminal for the console access.

Now connect the Diag cable (One end RJ45 and one end RS232 port – 9 pin connector)
The RS232 side will go to the Computer COM port
And the RJ45 end will connect to the DIAG port , for
MC1 - The base card has this port
CP- The base card has this port
MC4L- The SCU card has this port
MC16- The XCC card has this port.

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A15:- How to check the IP address of the node and what IP to provide the Computer

Once you connect the Hyper terminal , the login and password will be asked by the console.

The user and password can be asked by the TEJAS SUPPORT Engineer in case of emergency.

The command to find the IP address for the system
For MC1/MC4L/CP :- Give the command
ifconfig eth0
the inet address in the second line specifies the IP address of the node

For MC16:- Give the following command

telnet 127.2.254.1 2023
Username:-
Password:-
Ifconfig eth1
the inet address in the second line specifies the IP address of the node

The Output is as shown:-

```
eth0      Link encap:Ethernet  HWaddr 00:04:95:05:A6:31
          inet addr:192.168.3.122  Bcast:192.168.3.255  Mask:255.255.255.0
          UP BROADCAST RUNNING ALLMULTI MULTICAST  MTU:1500  Metric:1
          RX packets:2167852 errors:6 dropped:0 overruns:0 frame:6
          TX packets:16529 errors:11 dropped:0 overruns:0 carrier:11
          collisions:1 txqueuelen:100
          RX bytes:154742674 (147.5 MiB)  TX bytes:2398681 (2.2 MiB)
          Base address:0xe00
```

Please provide the IP address of the computer in same subnet in the same network as the System , for the above example :-
Give the following IP address , Subnet mask and Default Gateway for the computer:-
IP address:- 192.168.3.100
Subnet mask :- 255.255.255.0
Default Gateway:- 192.168.3.122 (this is same as the local IP Address of the node).

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Alarm Understand Document

Alarms:-

(1) (1) LOS on

(a) (a) STM Port :-

Type	Critical
Alarm Colour	RED
Alarm Name	Loss Of Signal
Alarm Description	The TX from the other node is not getting received.
Alarm Indication	(a)On Alarm Window, it will show Critical alarm with Particular STM port as Object. (b)On the STM card the RED led on the RX of the card. (c) On the alarm display, RED critical LED should glow.
Alarm Clearance	(a)Check the Power at the RX of the Port (b)Clean the Fiber and port with alcohol (c)Check the Patch cord connecting the System and Optical Distribution Panel.

(b) (b) PDH Port:-

Type	Major
Alarm Colour	Orange
Alarm Name	Loss Of Signal
Alarm Description	The TX from the other node is not getting received on the PDH port
Alarm Indication	(a)On Alarm Window, it will show major alarm with Particular PDH port as Object. (b) On the alarm display, Orange Major LED should glow.
Alarm Clearance	(a)Check the cable connectivity from the other node (b)Check the Cable connecting the E1 card and the DDF (c)Check the patch panel , if there is any problem , replace the DDF if possible.

(2) (2) LOF :-

Type	Major
Alarm Colour	Orange
Alarm Name	Loss Of Frame
Alarm Description	LOF will come due to hardware failure or Signal Degrade condition on STM port.
Alarm Indication	(a)On Alarm Window, it will show major alarm with Particular SDH port as Object. (b) On the alarm display, Orange Major LED should glow.
Alarm Clearance	(a)Put Self Loop to the SDH Port and Check for Port failure (b)Check Optical Power and Performance for Perticular SDH port (c)Check the Patch Cord

(3) (3) AIS

(a) (a) For AU

Type	Major
Alarm Colour	Orange
Alarm Name	AU-AIS (Administrative Unit – Alarm Indication Signal)
Alarm Description	This Alarm is raised when LOS , MS-AIS,AU_LOP, exists on a upstream neighboring Node , having Cross connecting on the same level.
Alarm Indication	(a)On the alarm view , AU-AIS will appear on that particular Object (b) On the Alarm display , a Orange – Major will appear.
Alarm Clearance	(a) If this alarm is present , that means there is some alarm in the neighboring node , which has be cleared. (b) Check the Optical port with Loop back

(b) (b) For TU

Type	Major
Alarm Colour	Orange
Alarm Name	TU-AIS (Tributary Unit – Alarm Indication Signal)
Alarm Description	This Alarm is raised when LOS , MS-AIS,AU_LOP, TU , TIM , Signal Label exists on a upstream neighboring Node , having Cross connecting on the same level.
Alarm Indication	(a)On the alarm view , TU-AIS will appear on that particular Object (b) On the Alarm display , a Orange – Major will appear.
Alarm Clearance	(a) If this alarm is present , that means there is some alarm in the neighboring node , which has be cleared. (b) Check the Optical port or TU12 Loop back with Loop back

(4) (4) RDI

(a) (a) Line RDI / MS-RDI

Type	Critical
Alarm Colour	RED
Alarm Name	Remote Defect Indication – Line
Alarm Description	This Alarm indicates that the Remote system has LOS/LOF/Exec Error rate on the STM Port.
Alarm Indication	(a)On the alarm view , RDI-Line will appear on that particular Object (b) On the Alarm display , a RED – Critical will appear.
Alarm Clearance	(a) Check the Other end node for Loss on STM Port. (b) Check the Optical port Loop back

(b) (b) AU- RDI

Type	Major
Alarm Colour	Orange
Alarm Name	Remote Defect Indication – AU
Alarm Description	This Alarm indicates that the Remote system has LOF/AIS/LOP on the AU of the particular Port.
Alarm Indication	(a)On the alarm view , RDI will appear on that particular Object (b) On the Alarm display , a Orange-Major will appear.
Alarm Clearance	(a) Check the Other end node for alarms on that particular AU (b) Check the Optical port Loop back

(c) (c) TU-RDI

Type	Major
Alarm Colour	Orange
Alarm Name	Remote Defect Indication – TU
Alarm Description	This Alarm indicates that the Remote system has LOF/AIS/LOP on the TU of the particular Port.
Alarm Indication	(a)On the alarm view , RDI will appear on that particular Object (b) On the Alarm display , a Orange-Major will appear.
Alarm Clearance	(a) Check the Other end node for alarms on that particular TU (b) Check the Optical port Loop back

(5) (5) Disk Full

Type	Major
Alarm Colour	Yellow
Alarm Name	Disk is 90% full
Alarm Description	The internal file system , finds no space to fill new files.
Alarm Indication	(a)On the alarm view , File system almost full will appear. (b) On the Alarm display , a Yellow Alarm- Minor
Alarm Clearance	(a) Give a Warm Reboot to the system , and check the alarm after the reset is over (b) Contact Tejas TAC support.

(6) (6) System Clock holdover

Type	Warning
Alarm Colour	Yellow
Alarm Name	System clock is switched to holdover mode
Alarm Description	(a)The alarm is raised when , a forced switch is offered to a failed clock (b)The offset of the clock is more than $\pm$ 17ppm.
Alarm Indication	(a)On the alarm view , system clock in holdover mode (b) On the Alarm display , a Yellow alarm – Minor
Alarm Clearance	(a) Check the priority of clock of the clock and the restore the failed clock. (b) Contact Tejas TAC support.

(7) (7) System in Free running

Type	Major
Alarm Colour	Orange
Alarm Name	System in free running mode
Alarm Description	If there is no clock nominated
Alarm Indication	(a)On the alarm view , system clock in free running (b) On the Alarm display , a Yellow Alarm- Minor
Alarm Clearance	(a) Nominate a clock (b) Contact Tejas TAC support.

(8) (8) Card missing or removed

Type	Major
Alarm Colour	Orange
Alarm Name	Card is removed
Alarm Description	The card is removed or some other type of card is being plugged in .
Alarm Indication	(a)On the alarm view , Card missing or removed (b) On the Alarm display , a Orange Alarm-Major
Alarm Clearance	(a) Either delete the card from inventory or place the same card in the slot. (b) Contact Tejas TAC support.

(9) (9) ALS alarm

Type	Major
Alarm Colour	Orange
Alarm Name	Automatic Laser shutdown
Alarm Description	The alarm says that the laser is shutdown due to fiber cut
Alarm Indication	(a)On the alarm view , ALS Triggered – Laser shutdown will show. (b) On the Alarm display , a Orange Alarm- Minor
Alarm Clearance	(a) Restore the Fiber. (b) Make ALS disable.

(10) PLM

Type	Major
Alarm Colour	Orange
Alarm Name	Path Label Mismatch
Alarm Description	The received and Transmitted Signal label does not matches
Alarm Indication	(a)On the alarm view , PLM on that particular Object (b) On the Alarm display , a orange – Major
Alarm Clearance	(a) Set the Transmit Signal label to desired value on the node 2 (b) Contact Tejas TAC support.

(11) Signal Label Uneq

Type	Major
Alarm Colour	Orange
Alarm Name	Received Signal Label is Unequiped
Alarm Description	Path label received is Unequiped
Alarm Indication	(a)On the alarm view , Uneq on the particular Object would be observed. (b) On the Alarm display , a orange – Major
Alarm Clearance	(a) Set the Transmit Signal label to desired value on the node 2 (b) Contact Tejas TAC support.

(12) TIM

Type	Major
Alarm Colour	Orange
Alarm Name	Trace Identifier Mismatch
Alarm Description	Trace received from the second node does not match the Expected Trace identifier
Alarm Indication	(a)On the Alarm view , a TIM on particular Object (b)On the Alarm display , a orange – Major
Alarm Clearance	(a)Set the expected trace same as the received (b) Contact Tejas TAC support.

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