Topic: LAB report

OVERVIEW

Study of how individual failure of a line card affects the connectivity of the network

Use Survivability Analysis to identify cases where the failure of a specific line card results in loss of connectivity. This is done by sharing the line by risk shared group. The main goal of carrying out the lap test is to ensure survivability of network connection across the network

We will use lab 2 to ensure that under no single link failure, circumstances whether that will affect the voice quality

Objective

LAB1

1. To examine the network interrelation and how a failure of a single line card affect connectivity in the network. This will be achieved by use of lap test

2. Use Survivability Analysis to identify cases where the failure of a specific line card results in network loss .this must be done with a great care to give out a reliable conclusion

3. For any cards whose failure results in connectivity loss, reconnect some of the dependent links to different cards to avoid the problem. This is done to eliminate the issue of test repetition

4. Use Survivability Analysis to verify the suggested solution.

LAB2

1. Use survivability analysis to understand cases that will bring up SLAs violation

2. Use survivability analysis to identify individual failure cases reported by SLAs and understand the cause of delay violation

3. Connect the misconfigured IGP metric that prevent traffic flow from using shorter path during some failure issues

Conclusion

Failure of one card connected will affect the connectivity of the outgoing link. This can be solved by adding a new line card to both Boston and Portland rooters'. Use of rooters will break the dependency between outgoing links by connecting one link to a new line

When we use rooters to reconnect and eliminating dependency, we realize that the failure of one line does not affect the connectivity

In the second lab test, we identified failure cases that caused the break of voice SLAS. This can be corrected by running a survivability test on a modified network model to ensure that the correction will not introduce new survivability