Resilliency

Abstract—Network resiliency is essential for ensuring continuous and reliable service delivery in the face of failures, attacks, or unexpected events. As networks become more complex and critical to daily operations, designing resilient architectures and mechanisms is paramount. This topic explores strategies and technologies that enhance network robustness, including redundancy, fault tolerance, rapid recovery, and adaptive reconfiguration. Emphasis is placed on proactive monitoring, automated response, and the integration of intelligent systems to detect and mitigate disruptions. By advancing network resiliency, organizations can minimize downtime, maintain service quality, and support the evolving demands of modern digital infrastructures.

I. RESILIENCY EXPERIMENT 1

This section presents the first experiment conducted to evaluate the role of resiliency in network automation. The experiment focuses on the integration of advanced fault tolerance and rapid recovery mechanisms within the Zero-touch Service Management (ZSM) framework. The objective is to assess how these technologies contribute to optimizing network operations and enabling autonomous decision-making processes [1].

REFERENCES

[1] D. B. Rawat and C. Bajracharya, "Software Defined Networking for Reducing Energy Consumption and Carbon Emission," in *SoutheastCon 2016*, pp. 1–2, 2016. doi: https://doi.org/10.1109/SECON.2016.7506640.