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Examining the impact of link failures and network performance on a 6to4, 6rd, CHANC and D4across6 tunneling-based networks using various routing protocols

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Abstract

The article discusses the importance of failure recovery in communication networks to ensure smooth and dependable service. It states that the performance of real-time applications has been negatively affected for years due to failed links, and thus it is crucial to address the issue to prevent collapse and cascading failures for both users and service providers. The paper then goes on to analyze the performance of a network by simulating

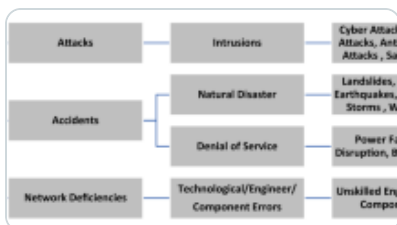
the failure and recovery of network links for different time periods using the 6rd, CHANC, D4across6 and 6to4 tunneling network. Different routing protocols and tunneling techniques are employed to evaluate the performance of the network for the specific type of applications (i.e. video streaming and real-time voice). It also looks at different metrics, including data transfer rate, dropped traffic, and network convergence. Furthermore, the study delves into the examination of the route table properties of various routers and the IPv4 backbone when links between them experience repeated failures and recoveries. The purpose of this analysis is to anticipate network performance and to ensure network availability and accessibility of traffic through forecasting the network's ability to survive and recover from link failures.

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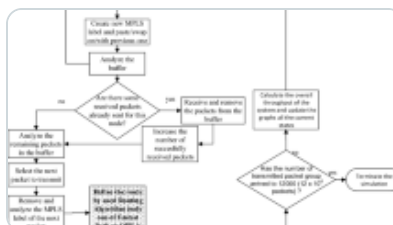
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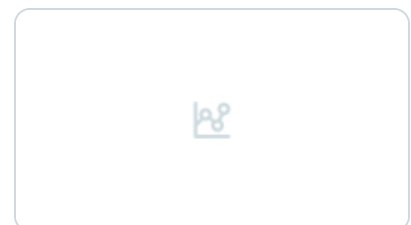
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Ethics declarations

Conflict of interest

The author claims no research, authorship, or publishing conflicts of interest.

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