Epic

Title: Network Redundancy

Description:

The goal of this initiative is to enhance network reliability and minimize downtime by implementing robust redundancy mechanisms across critical network paths. This includes ensuring automatic failover capabilities for hub-spoke connections to maintain seamless operations during link failures, and optimizing internet connectivity at NJDC by replacing the existing bundled TATA DIA link with a more cost-effective single DIA link, without compromising performance or reliability.

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User Stories

User Story 1: Hub-Spoke Path Redundancy

As a network administrator,

I want to implement automatic failover for hub-spoke network connections,

So that there is a seamless transition to backup links during packet loss, high latency, or primary link failures, minimizing downtime and ensuring uninterrupted services.

Acceptance Criteria:

Automatic failover mechanism tested and verified.

Seamless transition observed during simulated link failures.

Network monitoring alerts for failover events configured.

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User Story 2: NJDC Internet Redundancy Optimization

As a network engineer,

I want to replace the existing TATA DIA bundled link (DIA + MPLS) with a standalone TATA DIA link,

So that we can achieve cost savings while maintaining reliable internet connectivity for NJDC operations.

Acceptance Criteria:

Existing bundled link successfully decommissioned.

Single TATA DIA link implemented and tested for connectivity and performance.

No disruptions to NJDC services during the transition.

Sprint Plan for Network Redundancy Epic

Sprint 1: Automatic Failover Implementation for Hub-Spoke Path

Timeline: 2 Weeks

Scope:

Configure automatic failover mechanisms on hub-spoke paths.

Conduct baseline tests to measure packet loss, latency, and primary link stability.

Set up monitoring tools for real-time detection of primary link failures.

Simulate primary link failures and test seamless transition to backup connections.

Document configurations and test results.

Sprint 2: NJDC Internet Optimization

Timeline: 2 Weeks

Scope:

Coordinate with TATA to procure and set up the standalone DIA link.

Migrate NJDC traffic from the existing bundled TATA DIA link (DIA + MPLS) to the new standalone DIA link.

Perform end-to-end testing for internet performance, reliability, and redundancy.

Decommission the old bundled link after successful migration.

Sprint 3: Final Validation and Monitoring

Timeline: 1 Week

Scope:

Perform comprehensive tests across all redundancy setups (hub-spoke failover and NJDC internet).

Validate seamless failover across all critical paths during simulated failure events.

Fine-tune network monitoring tools for accurate reporting and alerts.

Conduct a knowledge transfer session for operations teams to ensure smooth handover.