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Network Survivability for Multiple Probabilistic Failures

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Abstract: Network service recovery from multiple correlated failures is a major concern given the increased level of infrastruc- ture vulnerability to natural disasters, massive power failures, and malicious attacks. To properly address this problem, a novel path protection solution is proposed to jointly incorporate traffic engineering and risk minimization objectives. The framework assumes probabilistic link failures and is evaluated against some existing multi-failure recovery schemes using network simulation.