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论文

网状WDM网中双链路失效的共享路径保护设计

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摘要
该文研究了WDM网状网中双链路失效问题,在假定所有链路共享风险链路组(Share Risk Link Group, SRLG)分离的条件下,提出了一种动态共享路径保护(Dynamic Shared-Path Protection,DSPP)算法。DSPP能根据网络状态动态调整链路代价,为每条业务请求选择一条最小代价的工作路由和两条最小代价且SRLG分离的保护路由。仿真表明,DSPP不仅能完全保护双链路失效,并且能在资源利用率、阻塞率和保护切换时间之间进行性能折衷。

关键词 网状WDM网 共享风险链路组 双链路失效 共享路径保护

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Shared-Path Protection Design for Double-Link Failures in WDM Mesh Networks

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Abstract
In this paper, a Dynamic Shared-Path Protection (DSPP) algorithm is proposed for double-link failures in WDM mesh networks on the condition that all links are assumed to be Share Risk Link Group (SRLG) disjoint. DSPP can dynamically adjust the link-cost according to the current state of the network, and it searches a minimum cost primary path and two minimum cost and SRLG-disjoint backup paths for each connection request, Under dynamic traffic with different load, the performances of DSPP have been investigated via simulations. The results show that DSPP not only can completely protect double-link failures but also can make the tradeoffs between the resource utilization ratio, blocking ratio, and protection-switching time.

Key words WDM mesh networks Share risk link group Double-link failures Shared-path protection

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