

论文

基于MPLS和DiffServ的域内网络资源配置方法

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摘要

服务质量(QoS)和流量工程(TE)是在当今网络中提供实时应用业务的两种重要技术。多协议标记交换(MPLS)在IP网QoS提供和TE功能实现中起了关键作用。该文首先介绍了基于MPLS的网络配置基本方法,然后提出了一种在基于MPLS和DiffServ相结合的网络中基于约束的域内静态网络资源配置方法,给出了相关的数学模型,并进行了相应的仿真,仿真结果表明该方法能在网络开销增加较少的情况下,有效地均衡网络负荷。

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Intra-domain Network Resource Allocation Method Based on MPLS and DiffServ

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Abstract

Quality of Service (QoS) and Traffic Engineering (TE) capabilities are two important techniques in today's networks for supporting real-time applications. Multi Protocol Label Switching (MPLS) plays an important part in IP networks for providing QoS and TE features. A general method to configure network based on MPLS is firstly introduced, then, a method to allocate network resource based on constraints at the DiffServ domain in IP network is proposed. The mathematical model and simulation of the method is given too. The simulation results show that the proposed method can balance the network load while the increase of the network cost is little.

Key words [Differentiated Service \(DiffServ\)](#) [Multi Protocol Label Switching \(MPLS\)](#) [Label Switching Path \(LSP\)](#) [Traffic Engineering \(TE\)](#) [Linear Programming \(LP\)](#) [Network resource allocation](#)

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