

弹性分组环（RPR）技术提升城域以太网的效率(2) PDF转换可能丢失图片或格式，建议阅读原文

https://www.100test.com/kao_ti2020/137/2021_2022__E5_BC_B9_E6_80_A7_E5_88_86_E7_c98_137495.htm RPR ups efficiency of metro Ethernet(2) Another major advantage of RPRs dual-rotating ring design is that Ethernet traffic is sent in both directions on the ring to achieve the maximum bandwidth utilization. Unlike older ring-based data networks such as token ring or FDDI, RPR uses a spatial reuse mechanism. Rather than requiring traffic to traverse the entire ring even though a destination node is only a hop away, RPR sends it there directly, keeping the rest of the ring bandwidth available for use by other stations on the network. To further enhance the network efficiency and support multimedia applications, the IEEE has included a classification scheme and a fairness algorithm in the RPR specification. This guarantees that jitter- and delay-sensitive traffic is always given higher-priority access to the network. Meanwhile, best effort (Internet type) data traffic is ensured equal access and a “ fair ” share of the remaining ring bandwidth. RPR also uses statistical multiplexing so that bandwidth can be oversubscribed, while establishing committed information rate (CIR) and peak-rate thresholds on a per-application basis. This guarantees each enterprise application a CIR and the ability to burst up to the peak rates when bandwidth is available. With such a mechanism, each department is charged only for using extra bandwidth rather than being billed for a larger, nailed-up circuit, regardless of use. Widespread corporate adoption of RPR will help

usher in the cost-effective transport of popular Ethernet and IP communications services. RPR transport will provide efficient bandwidth protection, accommodate bursty data traffic and provide the quality of service needed for these advanced packet applications.

(End) 弹性分组环 (RPR) 技术提升城域以太网的效率(2)

RPR双旋转环设计的另一个优点是，以太网的数据流在环上是双向传送的，以获得最大的带宽利用率。它与较老的基于环的数据网（如令牌环或FDDI）不一样，RPR使用了空间复用机制。它不要求流量跨越整个环（即使离目的地节点只有一跳之遥），而是直接发送流量，将环其余部分的带宽留给网上其他站使用。为了进一步提高网络效率和支持多媒体应用，IEEE已经将分级方案和公平算法包含在RPR规范中。这就保证了对抖动和延迟敏感的流量始终给予较高的访问网络的优先权。同时，最大努力（因特网类型）的数据传输也保证有平等的访问和“公平”分享剩余环的带宽。RPR也采用统计复用，因而带宽能被超额定购，同时建立了在每个应用程序基础上的约定信息速率（CIR）和峰值速率门限。这就保证了每个企业应用程序有一CIR以及在有带宽可用时提升峰值速率。有了这样的一个机制，每个部门只按使用超额的带宽计费，而不是不管用不用都按更大的、定死的电路计费。公司广泛采用 RPR 将有助于引入成本有效的传输流行的以太网和 IP 通信服务。RPR 传输将提供高效的带宽保护，适应脉冲式的数据流量，以及提供那些高级分组应用程序所需的服务质量。100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com