

MPLS: Providing Connectivity When and Where You Need It

Combine any-to-any connectivity with high performance, security, flexibility and scalability. Strategically integrate disparate networks into a single, seamless global solution. Leverage the favorable return on investment and total cost of ownership characteristics associated with IP Virtual Private Networks (IPVPNs). What makes all of this possible? Multiprotocol Label Switching (MPLS). MPLS is a standardized protocol and comprehensive networking technology that blends the best of IP routing and ATM switching. In AT&T's view, no other single network architecture offers all of the properties of MPLS. In short, MPLS represents a new and important generation in wide area networking.

Did you know?

- The demand for MPLS has accelerated throughout 2003. Furthermore, analysts project MPLS deployments to continue experiencing significant growth through 2007. They project that MPLS will serve as the dominant approach to network-based IPVPNs.
- MPLS offers numerous benefits: advanced application support with Class of Service (COS) and Quality of Service (QoS) mechanisms, network scalability through any-to-any connectivity, and communications flexibility through its support of secure IPVPNs.
- AT&T was the major first networking provider to deliver MPLS services with the initial customer implementation in early 1999. Today, most major carriers have either deployed or announced plans to deploy MPLS.
- In the last year, AT&T invested over \$300M in its global network, thereby creating a single, seamless MPLS-enabled infrastructure.
- Forrester, in March 2003, described AT&T as "the best in the VPN business," with MPLS-based services representing a key component in AT&T's overall IPVPN portfolio.
- Four key analysts have rated AT&T first in IPVPNs. AT&T's IPVPN portfolio has been recognized first in performance, functionality, international coverage and breadth of services.

Frequently Asked Questions

Q. How does MPLS Work?

A. MPLS is a standardized protocol and comprehensive networking architecture. MPLS enables data to be transmitted efficiently across a network infrastructure utilizing a technique known as "label switching." In short, a "label" is appended to each data packet as it enters the network from your environment. This tag uniquely identifies that packet as belonging to your specific IPVPN. Upon reaching its destination, the tag is removed, thereby returning the data packet to its original, unaltered state – the process is seamless and unnoticeable to your end-users.

Q. Is MPLS secure?

A. MPLS security is similar to that provided by Frame Relay/ATM. It is designed to provide a highly secure networking environment, while minimizing the risks associated with many potential threats. For example, MPLS “tunnels” – called label-switched paths (LSPs) – are not subject to spoofing, a common technique used by Internet hackers. Although MPLS-based services are securely provisioned across the carrier’s network, some enterprises may prefer to employ additional security measures as a complement to MPLS, such as encrypted tunnels utilizing technologies such as IPSec or SSL.

Q. Why MPLS as the technology of choice?

A. In order to replicate the characteristics inherent in MPLS, service providers must adopt a “patchwork” approach that utilizes a variety of disparate protocols and techniques. Such an approach lacks the scalability, reliability, and simplicity afforded by MPLS. AT&T believes that providers, who are either unwilling and/or unable to invest in MPLS, may hamper their ability to deliver enterprise-class IP VPN services.

MPLS serves as a key component of AT&T’s IP VPN portfolio, a comprehensive suite of services designed to address a broad range of enterprise-class networking needs. AT&T’s approach to delivering services improves your networking experience by helping to design, deploy, manage and evolve with your complex networking requirements. Dependent upon your unique requirements and objectives, MPLS may well serve a primary role in your enterprise’s network solution.

