

MPLS VPN – A Secure Network Solution for BFSI and FMCG Companies

Organisations today are increasingly moving towards virtual private networks (VPN) to safeguard their existing networks. This is particularly true in the BFSI and FMCG industries. With its any-to-any connectivity, outsourced routing model, QoS and SLAs, multi-protocol label switching (MPLS) is a secure and efficient option for VPN. Companies can use it to connect computers and devices in their branches spread across a wide geographic area.

If you have ever ordered a product online from a far-off retailer and then tracked the progress of your package, you may have noticed the seemingly illogical stops it makes in different cities before reaching your home.

This is similar to the way an Internet Protocol (IP) routing for Internet connectivity functions. When an Internet router gets an IP packet, there is no instruction on how it should reach its destination and how it should be treated on its way.

Every router has to make an independent decision to forward each packet as per the packet's network layer header. Therefore, every time a packet reaches a router, the router needs to 'decide' where to send the packet next. It has to do so by taking cues from complex routing tables.

The process repeats at each hop throughout the route until the packet ultimately reaches its destination. All those jumps and the individual decisions for routing affect the performance, especially in time-sensitive apps like VoIP and video-conferencing, which are commonly used in all industries today. Businesses, especially in the BFSI and FMCG domains, need a better alternative for their wide area networks (WANs).

Remedy in MPLS

Multi-protocol label switching (MPLS) addresses this issue by setting up predetermined and efficient routes. With MPLS, when a packet initially enters the network, it gets assigned to a certain forwarding equivalence class (FEC) specified by tagging on a short bit sequence to the packet.

Every router within the network has a table to help in handling the packets of specific FECs. When a packet gets into the network, routers do not have to conduct any header analysis. The subsequent routers use the label as an index into the table, which offers them a new FEC pertaining to that packet.

This process enables the MPLS network to handle packets with special traits in a consistent way. The packets that transmit real-time traffic, including voice and video, can be conveniently mapped to low-latency routes through the network. This is not easy in a network with conventional routing.

Quality of Service (QoS) is a key benefit for businesses in the FMCG and BFSI sector preferring MPLS VPN. When you subscribe to MPLS solutions from a trusted service provider, you will get numerous levels of QoS. This implies that your organisation can specify minimum thresholds for latency, jitter and packet loss for all kinds of traffic – voice, video, e-mail, transfer of bulk files and others. As an example, the MPLS network can be set to give preference to latency-responsive traffic over less-responsive traffic.

Outsourced routing is another advantage with an MPLS network. The service provider manages the routing of WAN, and the organisation subscribing to the service does not need to involve its own WAN engineers for the task. As regards the operational factor, MPLS is simpler than managing a big, conventionally routed network.

A business also gets **any-to-any connectivity** with MPLS. Applications such as video and voice have any-to-any patterns, and MPLS makes it simple to interlink sites with each other to manage such traffic patterns.

MPLS VPN connections come with documented **service level agreements (SLAs)** containing delivery guarantees. It gets installed within the promised time, and the network availability matches what is promised on paper. This is better than a consumer-grade Internet connection which is generally provided on a 'best-endeavour' basis.

For BFSI and FMCG businesses that need to transact using protected servers and HTTPS websites, MPLS VPN is a secure connectivity option.

These organisations have multiple branches spread across states, and they can use a strong MPLS network to keep them securely connected. As new branches open, MPLS can cost-effectively and safely add more sites to the WAN. It enables a high bandwidth between the head office and satellite offices for speedy processing of transactions.

Summarised below are some more advantages of MPLS VPN for both BFSI and FMCG companies:

- The entire network becomes integrated and secure with a private routing protocol that is exclusive to MPLS
- Real-time applications including video conferencing, voice over IP (VoIP) and business-critical bank apps get special support in an MPLS VPN
- MPLS VPN stays attuned with domain security issues
- Both IP-based and non-IP-based physical security systems can be connected through WAN
- Certain applications on the network can be prioritised for optimal utilisation of the bandwidth
- MPLS VPN also provides a SIP trunk-to-trunk overflow attribute that allows for more multi-location voice survivability and a more unified communications infrastructure
- By moving to MPLS VPNs, organisations can also bring down the number of hubs in their network, and this dramatically reduces their network maintenance costs.

MPLS VPN employs advanced encryption and tunnelling. This allows the computers in an office to establish secure and end-to-end connections on any wired or wireless Internet-enabled network. Consult a Tata Tele Business Services representative to know more about the benefits of MPLS VPN for your company.