

In All The Colors Of The Rainbow



Incumbent Carriers

Bynet
DATA COMMUNICATIONS LTD

RAD

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L2VPN (VPLS) Services

VPLS (Virtual Private LAN Services) is a class of VPN that allows the connection of multiple sites (any-to-any) in a single bridged domain over provider-managed MPLS networks. It is based upon MPLS where forwarding is L2 based (MAC, VLAN), namely bridging, rather than the 'traditional' (RFC2547) L3 based service.

VPLS enables Layer 2 Ethernet Virtual Private Network (VPN) service with any-to-any connectivity, across IP/MPLS public networks. VPLS is to become a standard-based solution with standardization led by L2VPN Work Group of IETF.

Bynet Data Communications is using its expertise in deploying MPLS based services to support ILECs in the plan and deployment of full scale VPLS infrastructure, teaming with the leading vendors in this market. The full solution includes Core, Edge, Aggregation and Access layers. As part of its solution Bynet incorporates advanced VPLS based NTU's developed by Rad Data Communications.

VPLS from the Customer's Perspective

The technology allows any-to-any connectivity, so that all sites appear to be on the same Ethernet LAN. The interface between the CLE and the PE is an Ethernet line providing very low cost access. Since the technology offers full separation between customer's networks, there is no need for IP addressing for each site on the VPN to be coordinated with the service provider. Every customer can keep his internal network addressing scheme.

VPLS from the Provider's Perspective

VPLS is implemented over MPLS, therefore it allows the reuse of the provider's existing MPLS infrastructure. Layer 2 based service means:

- Layer 3 agnostic – Service for legacy protocols (IPX, SNA etc.) can be easily provided.
- No need for first line technicians trained in complex routing issues.
- Clear demarcation of functionality between the service provider (Bridging) and customer (Routing) allowing easy troubleshooting of customer problems.
- More simple security mechanisms required than IP based service.
- Hierarchical topology avoids scalability problems which are part of other layer 2 VPNs.

