Product Bulletin

Solutions for Bandwidth Optimisation, Bonding and Networking

ViBE VRF's in Enterprise MPLS Deployments

Multiprotocol Label Switching (MPLS) is a mechanism in telecommunications networks that directs data from one network node to the next based on short path labels rather than long network addresses, avoiding complex lookups in a routing table and providing for a more efficient and flexible network offering to clients who operate an MPLS environment provided by their ISP.

MPLS typically only delivers effective QoS (quality of service) for voice and data across high cost, high bandwidth links. Therefore there will be occasions where a customer in an MPLS network requires ViBE connected sites to function effectively within this technology ecosystem. With ViBE's Virtual Route Forwarding (VRF) type functionality Enterprise MPLS customers can now introduce ViBE connected users into the network, irrespective of connectivity type and size, seamlessly getting the full benefits of ViBE where required and a comprehensive benefit from MPLS. All the ViBE features and functionality remain for the ViBE enabled members of the MPLS network.

Other ViBE functionality including RAIN Mode+ and ViBE Link Bonding are described in related product bulletins.

How does it work?

The challenge with achieving MPLS integration was due to the fact that traffic coming in from remote ViBE customer subnets, especially where those customer subnets overlapped with other customer subnets (as is usually the case), all traverse a single virtual ViBE tunnel interface. Because of this, there wasn't a mechanism to differentiate traffic from different customers with similar subnets AND still to then send the traffic onwards into the provider's core network with different VRF tags.

ViBE's VRF is effectively an enhancement functionality to that offered by VPN ID's (see separate product bulletin). ViBE's Virtual Route Forwarding integrates to MPLS networks by assigning the ViBE tunnel or tunnels a VLAN tag and associated routing rule. In turn the Access Router or Core router in the ISP's network will utilise this VLAN tag to assign all traffic to the required MPLS network. In so doing ViBE customers can now become part of a wider MPLS network where ViBE connectivity is not a pre-requisite. ViBE's VRF is also used in conjunction with policy based routing ensuring the traffic is routed and applied effectively. This functionality can also be used in data only environments as a low cost alternative to other MPLS solutions available.

All ViBE's VRF and associated routing can be set up for multiple customers on a single ViBE CORE server.

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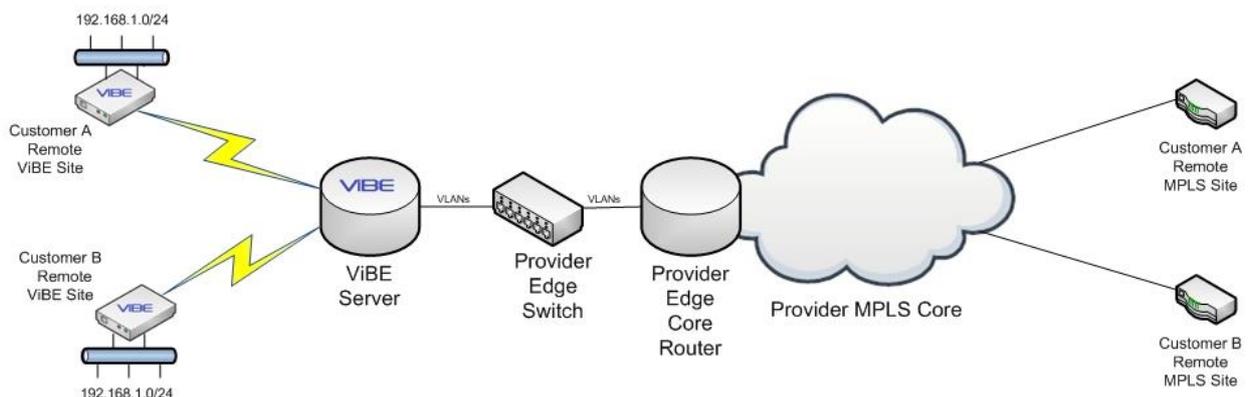
A key benefit of ViBE is its ability to optimise broadband connections (including ADSL) to carry a higher volume of VoIP calls (and data) simultaneously - and all at business class quality and full real-time prioritisation. The number of calls that ViBE can carry at once is dependent on the bandwidth available, but 20 concurrent calls p___ other data (email, web browsing and cloud-based applications) is possible based on an ups___ m bandwidth as low as 256Kbits per second. Furthermore the ability of ViBE to dynamically react to changes in bandwidth performance ensures links are never over-subscribed and QoS is maintained. No other VPN is able to deliver this whilst also offering the benefits normally associated with expensive corporate networks.

ViBE MPLS CONNECT
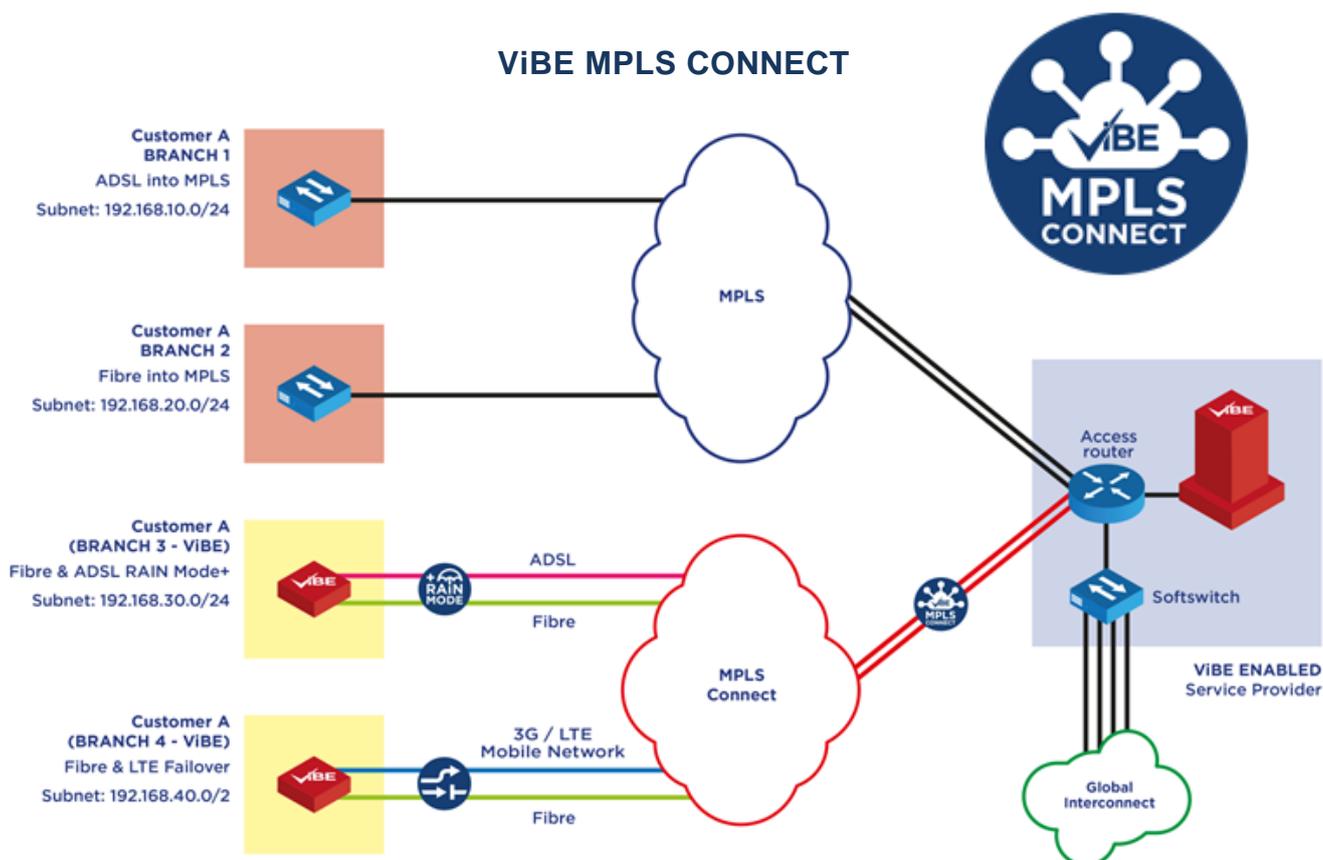
- Based on VPN technology.
- Delivers up to 5 times call concurrency.
- Business grade QoS on calls.
- Essential Call Access Control measures through EsP.
- Dynamic link suspension during high pure link quality.
- RAIN mode for service improvement and failover.
- Line bonding & bandwidth aggregation.
- Offers MPLS integration and additional customer features.

ViBE is a VPN technology that delivers bandwidth enhancement, designed to optimise the performance and quality of internet and WAN connections.

ViBE delivers a comprehensive range of networking functions and is a key enabling technology for the effective delivery of voice and data services'