

Tejas Solutions for Wholesale Ethernet

Future Ready. Today



Ethernet

Background: Ethernet services have now emerged as the fastest growing connectivity products in a wholesale provider's portfolio. As per a recent report by Vertical Systems Group, Business Ethernet services are expected to hit \$40.2Bn by 2014 with double digit growth expected in all major regional markets during this period. A significant driver for the growth of wholesale Ethernet services is next-generation backhaul deployments by large mobile operators migrating to more data intensive networks for 3.5G, WiMax and LTE. Wholesale Ethernet has also seen rapid uptake for inter-connecting large data centers hosting high-bandwidth content servers, and to provide an alternate path to Carrier customers seeking additional network redundancy. In addition to traditional telecom operators, large public utilities and critical infrastructure firms in rail transportation, power transmission, oil and natural gas are leveraging their optical fiber assets to develop new wholesale revenue streams on Carrier Ethernet networks.

Tejas Solutions: Tejas offers a complete portfolio of Carrier Ethernet aggregation equipments for scalable Ethernet wholesale offerings based on the PBB standard. Tejas' Carrier Ethernet functionality includes end-to-end management and monitoring of Ethernet services based on IEEE 802.1ag (CFM) and ITU Y.1731 standards. Traffic engineered connections using PBB-TE/MPLS-TP with sub-50ms service resilience (ITU G.8031/G.8032) can be established for mission-critical backhaul or transport of performance sensitive real-time or constant bit rate services. Seamless inter-operability with an existing IP/MPLS core network is guaranteed. Tejas supports the full suite of Carrier Ethernet standards on both SDH/SONET (TJ1000 MSPP family) and native Ethernet transport (TJ2000 family) platforms to enable Ethernet service delivery on incumbent and greenfield wholesale networks.

Value Proposition: The popularity of wholesale Ethernet services is putting an onus on equipment suppliers to help their service provider customers define well differentiated offerings. Tejas has introduced several value-added features in our Carrier Ethernet products that enable wholesale customers to tailor their solutions and define advanced service flavors.

Tejas Value-added Feature	Benefit	Example Wholesale Service(s)
Connection-Oriented Packet technology	Offer deterministic and reliable circuits for services stringent with performance requirements (delay, jitter etc)	VoIP, Circuit Emulation, Synchronization circuits, IPTV transport
Sub-50ms protection on linear, packet ring and multi-ring topologies	Tiered resiliency offerings with a "gold class" sub-50ms protection switching for carriage of mission-critical applications	Core point-to-point services, VoIP, Class-4 and Class-5 Packetized voice, Circuit-emulation services, select Layer-2 and Layer-3 VPNs
Traffic Engineered Multipoint and Multicast	Define "Express Lane" packages over user-defined paths for services where network latency/jitter etc have to be minimized	Multipoint Layer-2 VPNs, Multipoint Layer-3 VPNs, IP-TV, Video conferencing
Layer-3 awareness	Maintain end-to-end QoS for Layer 3 services by interpreting IP fields	IP VPNs
Rich OAM and In-service Performance Monitoring suite	Ability to offer premium SLA-backed services that monitor parameters like end-to-end delay, jitter and packet loss	Core point-to-point services, VoIP, Class-4 and Class-5 Packetized voice, Circuit-emulation services, select Layer-2 and Layer-3 VPNs
IGMP Snooping	Bandwidth efficiency and rapid channel provisioning through selective transmission of channels	IP-TV (with Multicast)
Traffic shaping	Enable optional burstability for bandwidth (CIR/EIR)	All Services
Hierarchical QoS	Granular traffic shaping and congestion management based on applications, services and tunnels	Core point-to-point services with Intra-service QoS, Residential Triple-play packages
Aggregation of Ethernet over PDH circuits, Ethernet over C/DWDM, Ethernet over Copper, Ethernet over fiber and Ethernet over SDH/SONET	True pervasive wholesale Ethernet service delivery for geographically dispersed customer sites	All Services
MEF certification	Standardized service delivery with no inter-operability issues	All Services