

Tunnel Routing



- ▶ Ease the complexity of corporates' data consolidation
- ▶ Resolve VPN's single link failure and achieve load balancing
- ▶ Aggregate and make the best use of bandwidth for single-connection applications, such as VoIP, video conference, and streaming media
- ▶ Cost-effective in trunking inexpensive ADSL to replace leased lines
- ▶ Provide uninterrupted communication among multiple segments of LANs
- ▶ Support Dynamic IP in TR deployment
- ▶ Simplify deployment procedures in complicated remote network environment



With the incredible growth of the Internet, enterprises have started running business globally, so that management of distributed data becomes very important. Data consolidation emerged in 1990s offering an integrated and efficient data management solution. Up to now, data consolidation is not only dedicated to the industry of Telecommunication, Finance and Insurance, but also spreads out across a variety of fields. Hence, a fast, secure and reliable network is in high demand to ensure stable and persistent communication among headquarters and branch offices.

Tunnel Routing Technology

Xtera's patented Tunnel Routing technology offers a solution for site-to-site multi-WAN trunking for VPN (or single-connection applications such as VoIP, video conference, streaming media) load balancing and fault tolerance to address the disadvantage of single point of failure.

Aggregate Bandwidth

For a single connection, the patented Tunnel Routing Sequencing technology can efficiently transfer VPN packets via multiple WAN links to achieve bandwidth aggregation. By trunking inexpensive broadband lines, customers can expand their VPN and Intranet connectivity at lowest total cost.

Load Balancing

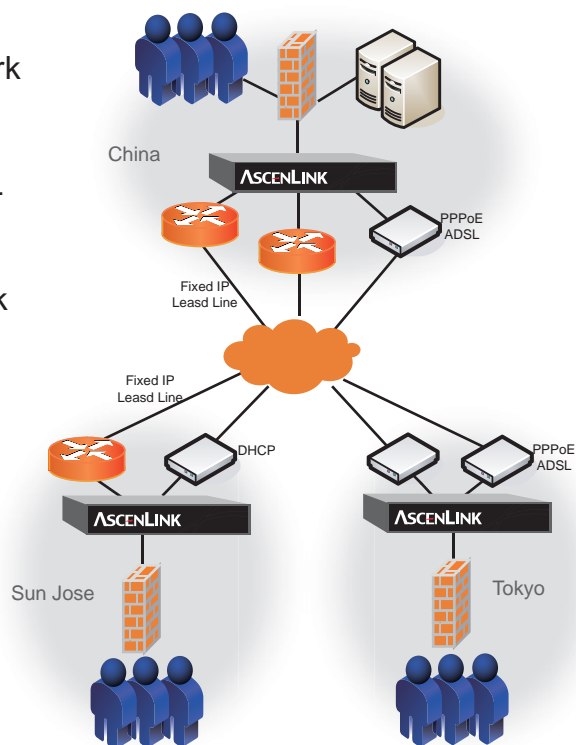
With real-time load balancing algorithms, AscenLink Tunnel Routing engine directs each VPN packet to the best available link. In the other word, it enhances network availability and makes VPN transmission more efficient.

Fault Tolerance

WAN Link Health Detection (WLHD) function can accurately monitor WAN link status in real time to avoid service interruption caused by WAN link failure. Therefore, transmission of packets can continue without interruption to ensure all packets reaching the destination. With tunnel routing technology, accuracy and reliability are guaranteed for both the sender and receiver, while the network resources are thoroughly utilized.

Support Dynamic IP Network Environment

The ability to support Tunnel Routing in a network with dynamic IP addresses enables enterprises to achieve uninterrupted and load balanced VPN network with only a few in-expensive ADSL links. The combined features render AscenLink Tunnel Routing unparalleled to all other products on the market, particularly in dynamic IP network environments.

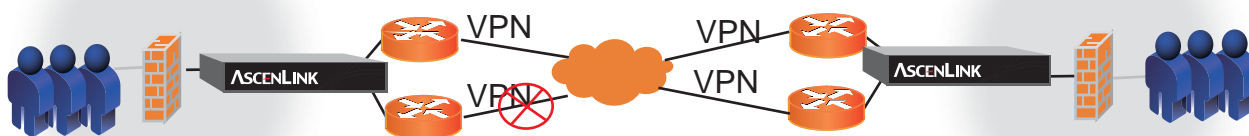


Application of Tunnel Routing

Extend VPN bandwidth and assure persistency of VPN data transmission and load balancing

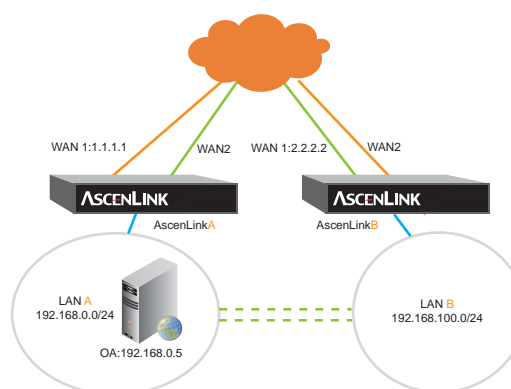
Traditionally, two types of connections - private leased line or VPN (IPsec or MPLS VPN) are available to ensure secure data transmission. However, the drawbacks such as single point of failure, limited bandwidth, or unable to perform load balancing could result in data interchange failure and data loss for the company.

Tunnel Routing is designed to resolve single link failure. Not only can it spread VPN packets across multiple WAN links, but also can it perform fault tolerance on those links to ensure reliable VPN connectivity. In other words, one can create VPN connections across the two sites over multiple WAN links, achieving the benefits of VPN load balancing, fault tolerance, and bandwidth aggregation.



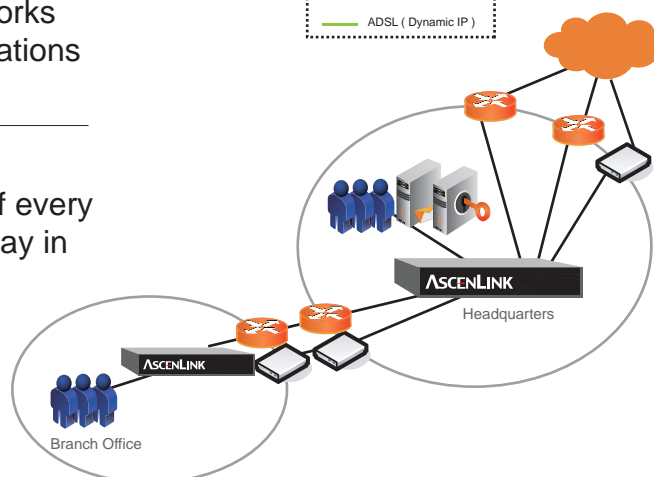
Enhance network availability and aggregate bandwidth to provide uninterrupted services

Enable single-connection applications (such as VoIP, video conference and streaming media) packets to transfer over multiple WAN links and achieve load balancing. Aggregate multiple WAN links to achieve bigger bandwidth. In addition, fault tolerance feature makes transmission smooth and uninterrupted.



Connect multiple and disjointed LANs with public networks to establish Intranet

The network topology on the right illustrates the idea. Without a VPN gateway, tunnel is established by AscenLink's tunnel Routing feature. It forms an Intranet by connecting several private networks through Internet links to achieve communications via private IP addresses.



Central Routing

With Central Routing, the Internet access of every branch office can rely on the Internet gateway in headquarters. The headquarters can easily manage and control the Internet access of each branch office by policy-based rules. Thus, the overhead of Internet links for each branch office is saved.

About Xtera Communications

Xtera Communications is a US based company, founded in Texas in 1998, and specializes in network backbone infrastructure and network edge devices between WAN and LAN. A global leader in optical transport and IP networking, Xtera is the onestop provider of solutions from Internet backbone to user-end WAN traffic management. Visit www.xtera.com for more information.

About Xtera's IP Division

AscenVision Technologies was founded in August, 2000, and acquired by Xtera in October, 2007 and became Xtera's IP Division. The IP Networking Division uses innovative L4-L7 switching technologies to provide comprehensive, world-class solutions for network management, security, and performance. Visit www.xtera-ip.com for more information.



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