

Internet Service Exchange: A Network Better by Design

Benefits of the ISX

- Fast connectivity
- Reliability for your Internet presence
- Direct access to hundreds of networks
- Extremely scalable bandwidth
- Extensive partnering opportunities
- World-class services and staff

The best location on the Internet for mission-critical, bandwidth-intensive applications

AboveNet Communications developed the world's first Internet Service Exchange™ (ISX™) as a unique and powerful network designed for everyone who does business on the Internet. Using a centralized network topology, the ISX brings together Internet Service Providers (ISPs) and content providers in a lightning-fast networked environment. Unlike simple Internet server farms, the unique architecture of the ISX expedites the delivery of content to end users while reducing the potential for packet loss in its direct 'one-hop' network environment.

No longer do Internet businesses need to concern themselves with peering, BGP routing, and all the other aspects of building and maintaining a network. By simply joining the ISX, your business gains access to an unparalleled number of peering arrangements and a wide array of other technical benefits. Four key initiatives are the foundation of the AboveNet ISX:

- A simplified topology
- Clean bandwidth
- Intelligent routing
- Open performance statistics

Simplified Topology: Accelerating the Internet

The Internet's meshed topology is a result of its origin as an interconnection of existing networks. This decentralized, intermeshed architecture helps to guarantee a connection and delivery, but does not ensure the fastest and most efficient delivery. When the Internet consisted of e-mail, FTP, and other less media-intensive applications, this topology made sense, but today's bandwidth-intensive, cutting-edge applications require a lower latency, faster bandwidth network.

The 'hub and spoke' topology of the AboveNet ISX simplifies and centralizes the network, reducing the number of facilities needed, requiring fewer router hops between destinations, and therefore improving performance. Reducing the number of hops required also helps to increase reliability and speed traffic. As traffic increases, this cleaner, faster network helps to ensure scalability. AboveNet's investment in extra capacity therefore benefits virtually every member of the ISX.

To enhance the topology of its network, AboveNet has forged key peering relationships with hundreds of networks, including all the Tier 1 providers. Because of this unparalleled number of peering relationships, AboveNet can deliver most packets directly to their destination network via a single network hop—reducing latency and decreasing packet loss for the fastest, cleanest connectivity available.



Clean Bandwidth

Other networks take the 'hot potato' approach to routing—passing packets off their network as quickly as possible—because passing packets onto someone else's network at the first opportunity reduces their costs. But that approach also increases the number of hops a packet must take to get to its destination, which increases latency and lowers the quality of bandwidth. As a result, that approach is poorly suited to supporting bandwidth-intensive, mission-critical applications such as streaming media or e-commerce.

The AboveNet ISX takes an alternative approach to packet routing. Because AboveNet has the fastest, most reliable network available, packets are routed as far as possible on its network—best exit routing—even though this approach increases overall network costs. AboveNet is able to provide premium bandwidth with fewer hops and lower latency, delivering customers' packets faster and more reliably than any other network.

Intelligent Routing

The problems of Internet congestion and sluggishness can be summed up in two words: packet loss. BGP (Border Gateway Protocol) is a protocol for exchanging routing information between gateway hosts, but cannot determine the degree of packet loss occurring on the providers' network. To combat this problem, AboveNet developed Asynchronous Allocation of Packets (ASAP), a technology that enhances the BGP multi-home routing procedures.

ASAP automatically monitors all of AboveNet's major providers' and peers' direct and indirect connections on a real-time, 24-hour basis. If congestion, and resultant packet loss, is detected on any of the links that directly affect customers' performance, AboveNet can temporarily and automatically move traffic away from the congested link. Its advanced technology and methodology proactively

monitors and manages the routing of network traffic. AboveNet consistently maintains 100% headroom on all connections to absorb the additional bandwidth load when rerouting.

Open Statistics on Network Performance

AboveNet is so confident of its network performance that all information is made openly available on AboveNet's Web site at www.above.net/traffic. At any time, the public can view statistics on network performance and see detailed status information on each link in the AboveNet network. No other network makes its performance information publicly available. Additionally, AboveNet provides each client with a private Web site detailing the client's use of the AboveNet network.

Delivering Technology and Relationships for Efficient Business

Through these four initiatives, AboveNet enables the deployment of scalable, bandwidth-intensive applications that further its clients' business goals. The superior quality of the connectivity available through the ISX supports the mission-critical needs of today's businesses.

Perhaps even more beneficial is the development of partnerships and the exchange of services that AboveNet facilitates among ISX members. AboveNet's open network access point (NAP) policy allows any ISP located in the ISX to peer with any other AboveNet ISP or content provider. ISX members have access to a wide selection of best-of-breed solutions providers to meet their every need. Because AboveNet is not providing these services, clients can easily change solutions providers as requirements change without having to relocate their equipment. The combined benefits of premium bandwidth and opportunities for new business relationships make the AboveNet ISX the best location in which to do business on the Internet.

About AboveNet

AboveNet Communications Inc., a wholly-owned subsidiary of Metromedia Fiber Network, Inc. is a leading provider of high-performance managed co-location and Internet connectivity solutions for ISPs, ASPs, Fortune 500 companies, and Web content providers and developers. With its extensive peering relationships and ISO 9002 certification, AboveNet provides high quality co-location and connectivity services through its Internet Service Exchange™ (ISX™) model maximizing the Internet experience for consumers and producers of content around the world.



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