

Data Center and Network

The FortressITX Data Center

Asia Web Solutions is located in the carrier-class FortressITX Data Center, a vast facility with its own network located in Clifton, New Jersey. The network runs on its own dark fiber ring connecting two redundant pops in 111th NYC and 165 Halsey (Equinix) NJ. Each fiber leg is capable of handling the entire network's traffic in case of a failure. Each leg can be upgraded to provide transport capacities up to 320Gbps totaling 640Gbps of available transport capacity. The core consists of Dual Cisco 6509 SUP720 Routers, fully meshed to multiple aggregation switches for maximum uptime. The multi-homed network is fueled by premium tier 1 carriers Above.net, NLayer (GlobalCrossing), Level3 and NYIIX peering.

Hardware and Network Technology

The FortressITX data center is a robust facility and the network is constructed with top-grade equipment and manned by skilled network engineers. Significant investments have been made in equipment from major vendors such as Cisco and Lucent. Using industry leading equipment that has a proven track record is the best choice, and is well worth the extra expense.

You can be assured that we use quality network hardware and that data center technicians work around the clock, using such technologies as ATM and BGP dynamic routing to ensure that all systems run efficiently and smoothly.

Connectivity and Node Reliability

FortressITX's connections to multiple backbone providers, and peering with many carriers on a regional and international basis, allows it to easily reach remote networks even in the case where a NAP may be unhealthy, or when a specific backbone connection is down. Intelligent routing decisions can always be made; for example, if we are trying to reach a remote network which is on the Sprint network, there's no reason to send it out to UUNET first.

By placing core nodes with quality providers, the Data Center is guaranteed a level of competent service. All of the network's core nodes employ SONET networks, which essentially provides a dual-redundant, counter-rotating ring technology, and in the event of a fiber cut, the SONET will automatically heal itself.

The facility staff work around the clock to ensure that the network is operating at optimum state. They continually review collected statistics to watch for traffic trends so that we can react with the proper routing adjustments and bandwidth addition.

Backbones, unreliability and the FortressITX solution

A backbone is a set of paths that local or regional networks connect to for long-distance interconnection. The connection points are known as network nodes or telecommunication data switching exchanges (DSEs). Many data centers rely on one backbone provider (such as UUNET, Sprint, or AT&T) for its connection to the rest of the Internet. As the data center grows, it usually buys more bandwidth from its existing backbone provider. This has the advantage of simplicity and consistency, but it has an unfortunate side effect - the data center has a single point of failure in backbone provider it has chosen. If the backbone fails, so does the data center and all its users go down with it.

As with most ISPs, FortressITX started out five years ago with a single connection to the Internet via one backbone provider in a leased facility. As the need of users grew, instead of buying larger access to a single provider, FortressITX started to interconnect with many other backbone providers, and other Internet Service Providers as well and now also maintains its own international backbone which in itself, is used by other providers.