



Enterprise Wireless Backhaul

BakBone Software[®] connects multiple facilities with high-capacity wireless backhaul connectivity

About BakBone Software

BakBone Software[®] is an international storage management software company with headquarters in San Diego, CA. The company develops and globally distributes high-performance software solutions to the network storage and open systems markets.

The Need

BakBone Software[®] needed to quickly establish a high-speed link between their new headquarters building and their data center. The two locations are more than 6 miles apart and separated by terrain that presented line-of-sight (LOS) challenges.

The Solution

BakBone Software[®] chose the Atlas 5010™ Wireless Ethernet Bridge for its high-performance and ease of installation. Line-of-sight challenges were solved by using a one-hop path to circumvent the obstacles.

The Successful Outcome

BakBone Software[®] was very pleased with the performance and fast deployment in a situation that was incredibly time sensitive. They continue to use the Atlas 5010™ links even though the fiber connection is now installed. When the fiber link occasionally fails the Atlas 5010™ links provide redundancy as well as the ability to quickly restore the connection to the data center.

The Challenges

While in the midst of moving their headquarters across town, BakBone encountered a major problem. The fiber connection they were having installed in the new building ran into some problems and was going to be delayed for months. The estimated down time was not acceptable. They needed a fast and easy solution to connect the new headquarters to their data center so that they could continue to operate their business while they waited for the fiber installation to be completed in the new building.

They were presented with another challenge when it was determined that the 6-mile expanse between the two buildings had line-of-sight (LOS) problems. The connection for the new headquarters office requires the ability to pass multiple connections of VLAN traffic at speeds greater than 20 Mbps.

The Solution

To overcome the LOS issues, it was necessary to use two point-to-point links for a one-hop solution that effectively “went around” the LOS obstacles. Backbone decided to deploy the Atlas 5010™ Wireless Ethernet Bridge due to its exceptional performance and ease of installation as well as their ability to provide speeds of up to 45 Mbps and transparently pass 1600 byte-size frames.

“The Trango Atlas link is blazing fast!”

Lonnie M. Wills
CIO and Vice President

For the first link from the data center, which extended more than 1,500 feet, they chose to deploy the Atlas 5010-INT models which features integrated 23 dBi antennas. For the final link to the new office building, which spans more than 5 miles, they deployed the Atlas 5010-EXT models and connected each with 3-foot diameter 31 dBi external dish antennas. The entire link successfully passed all of Bakbone’s data and Internet access traffic via multiple VLANs and VPN connections.

Integration

Bakbone Software[®] hired a third-party integrator to assume all the responsibilities of the project. The integrator was new to Trango deployments and therefore required training on the Atlas platform. After receiving a two-hour training course from Trango staff, the integrator was able to successfully install the four Atlas 5010™ radios without issues.

The Successful Outcome

Performance Test

Both Atlas 5010™ links were operational from initial setup without presenting any problems. The link performance was evaluated by downloading a 3-gigabyte file from the data center to the new headquarters. The link’s throughput averaged 20 Mbps and at times yielded speeds exceeding 30 Mbps with concurrent Internet access. The test was concluded

by connecting the link to the Exchange servers at the Data Center while simultaneously performing another large download. The results were outstanding.

Conclusion

Bakbone Software[®] was highly pleased with the excellent performance and easy installation of the Trango solution during an incredibly time-sensitive situation. Bakbone continues to utilize the wireless backhaul link even though their fiber connection is now installed and working. When the fiber link occasionally fails the Atlas 5010[™] backhaul links provide redundancy as well as the ability to quickly restore the connection to the data center.

To quote Bakbone Software[®], "The Trango Atlas link is blazing fast!"

Setup Details

Data Center

1. (MU) Network port connects to a high-end Cisco switch with a small Cat-5 jumper
2. Radio port connects to the Atlas radio with a 10 feet, shielded twisted pair, Cat-5 cable

Relay Building

1. (RU) Radio port uses 10 feet of shielded, twisted pair, Cat-5 cable
2. (RU) Network port connects to the other (MU) Network port via a Cat-5 cross-over cable
3. (MU) Radio port uses 10 feet of shielded, twisted pair, Cat-5 cable
4. Both J-box and cross-over cable resided inside a shed on top of a 5 story building

New Headquarters

1. (MU) Radio port uses 200 feet of shielded, twisted pair, Cat-5 cable
2. Network port connects to a high-end Cisco switch with a small Cat-5 jumper

About Trango Atlas 5010[™]

The Atlas 5010[™] is a 5.8 GHz point-to-point Wireless Ethernet Bridge that delivers sustained throughput of up to 45 Mbps, ranges up to 40+ miles and has outstanding features such as dual-polarity antennas and ARQ and FEC for interference mitigation .



The link offers outstanding features including Orthogonal Frequency Division Multiplexing (OFDM) to modulate the signal across the airwaves. The Atlas 5010[™] provides exceptional performance and value as a high-capacity backhaul solution for Enterprise and Municipal connectivity, SCADA systems, IP video surveillance systems, and "last mile" connectivity solutions (Internet, T1 and leased lines).

About BakBone Software[®]



BakBone Software[®] is an international storage management software company that develops and globally distributes high-performance software solutions to the network storage and open systems markets.

BakBone's[®] suite of near-line archival and backup/restore software provides scalable data protection from the workgroup to the enterprise. The software includes market leading application support, configuration flexibility and network storage functionality.

Founded in March 2000, BakBone's[®] products are utilized by companies on six continents for clients such as Shell, Sony, Bellsouth, Mitsubishi Motors, AT&T, IBM, Daimler Chrysler, Toyota and Los Alamos Laboratories. The products are distributed through a worldwide network of OEMs and solution providers.