

Case Study

Industry: Hospitality and Tourism

Resort and Conference Center

Project: Network for large campus over existing phone lines

Major challenge: Reliable network linking far-flung locations without disturbing the landscaping.



The background.

A popular resort and conference center sprawls across nearly 2000 acres in the foothills of the Allegheny mountains. The resort caters to families as well as conferences, and offers a wide range of activities including golf, tennis, and swimming. The vast facility includes a main building housing a hotel and a conference center as well as a number of outlying buildings for recreational and office facilities. To support its extensive operations, the resort decided to upgrade its network infrastructure.

The requirements.

The resort required an extensive data network covering vast acreage. Although the resort's current network bandwidth requirements were minimal, it had plans to expand its network use and needed the capacity to handle future bandwidth demands.

The network infrastructure had to offer:

- Inconspicuous installation—A high priority in this installation was to extend the network infrastructure to include outlying structures. This needed to be done with the least possible excavation and disturbance to the resort's landscaping and golf courses.
- Reliability—To minimize the risk of network faults and failures and to maximize uptime and reliability.
- A futureproof design—To not only satisfy initial demand but also to accommodate future technologies.
- Security—Because the network would be connected to the Internet and additionally was expected to handle point-of-sale transactions, tight security was paramount.
- Network management—The network had to be easy for the resort's employees to manage.

The solution.

The resort chose Black Box for the project because of our vast experience in installing networks under difficult conditions.

Although fiber optic cable is usually considered to be the best choice for interbuilding links, it was not considered to be a good choice here because of excavation requirements.

Direct wireless or laser network connections were also briefly considered but quickly discarded both because of the long distances involved and because of the many trees and hills that would interfere with signals.

Fortunately, our experts quickly realized that 25- and 50-pair trunk cables were already installed to the remote buildings. These cables were originally installed to support the phone system, but many of the wire pairs were unused.

Black Box proposed a solution that used SDSL for network connections across the free copper pairs in the existing phone cabling. This not only met the resort's requirement that excavation be kept to an absolute minimum, but it saved money because it used infrastructure that was already in place.

SDSL over phone wires cannot be considered to be a long-range solution in the same way that fiber optic infrastructure is. However, SDSL was certainly more than adequate for the resort's purposes by providing reliable network connections without disrupting the landscape. The resort plans to upgrade to fiber optic cable at its outlying buildings at a time when they excavate for other reasons.

The resort's main building received a high-speed fiber optic infrastructure at this installation. Additionally, Black Box installed a Cisco® firewall for security and trained the resort staff to manage the network.

Black Box provided this lovely resort with a high-performing network without disturbing the landscaping—a picture-perfect solution!



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