BellSouth Uses Magnum 4K-Series Switches in Multi-computer Database System

Highly-Reliable Application for Wireless Network

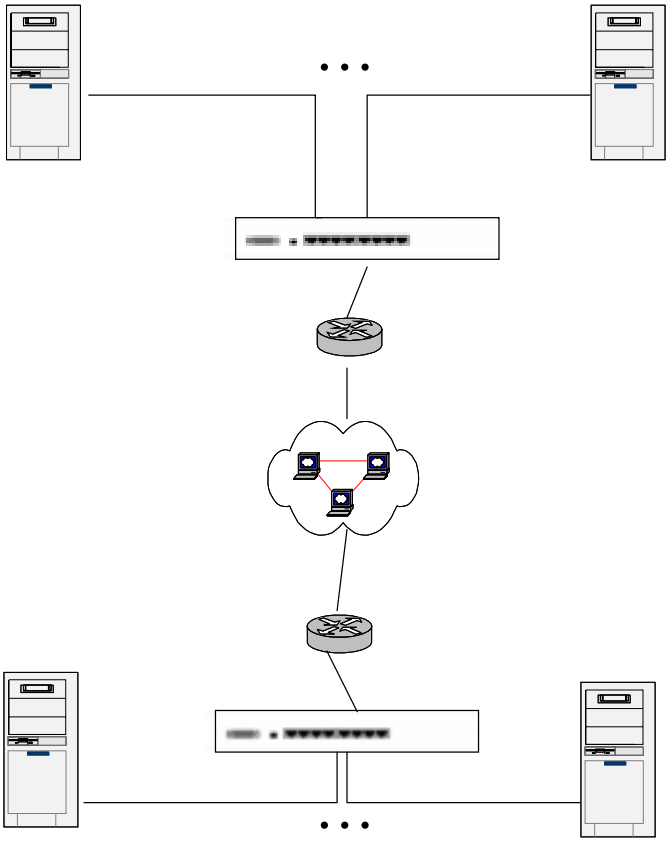
Technology Today

For a Wireless Carrier, initiating a wireless call requires that the calling party's subscriber records must have the ability to be accessed. The records are confidentially kept in a computer system database, containing service features, billing data, personal security codes, roaming history, and other pertinent information about the subscribers wireless service. As the call goes to another wireless line, the called party's record similarly must be accessed in order to properly process and connect the call.

The records for all wireless subscribers are maintained in a large database computer called the (HLR) Home Locator Registry. In order for a call to complete, instant access to the HLR must always be available. To ensure that happens, two complete computing center facilities physically separated in buildings a few miles a apart, that have redundant high-availability computer systems are in 24/7/365 continuous operation. Each is equipped with a HLR to serve all requests and the two are connected by dedicated communication lines (a private WAN) to keep the redundant HLR records synchronized. In each HLR center, it is required that an Ethernet LAN inter-connect the multiple computers and the communications lines to enable the network to run properly.

About BellSouth

BellSouth Corporation is a communications services organization headquartered in Atlanta, Ga. The company provides telecommunications, wireless, and wireless long distance communications, Internet, and data services worldwide. Bell South provides wireless voice and data services to 20 million subscribers and covers 93% of the urban business population.



(BellSouth Network Before)

The Challenge

As Bell South's number of subscribers and their wireless call volume has grown, the need for increased capacity and redundancy in the HLR private WAN has grown also. Historically, a 16-port 10/100 Ethernet hub had been sufficient at each HLR center. However, the need for multiple 8-port Ethernet switches at each site to break the HLR LAN into multiple redundant pieces was now required. The newly specified switches needed to operate from redundant –48VDC power sources, and have NEBS certification. This was necessary because they were to be installed for mission-critical applications and could not risk the chance of hardware failure.

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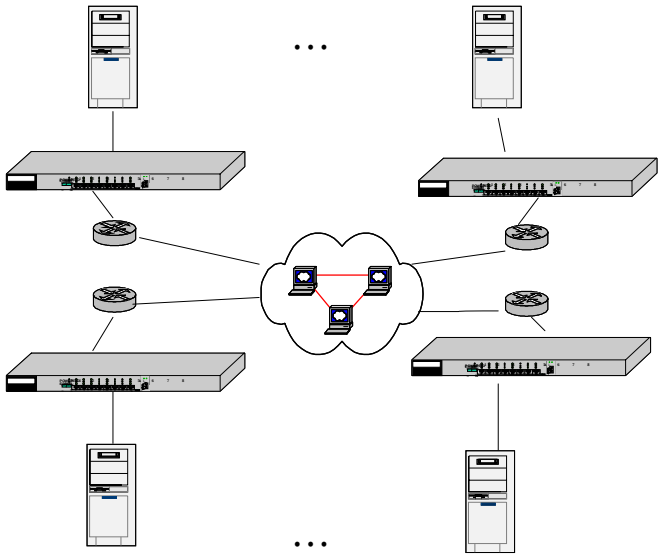
The Solution

Bell South selected Magnum 4K8R Ethernet switches for the HLR LAN facilities because each is configured with a dual-source –48VDC power supply, and could be reverse mounted in 23" Telco racks. By having the "Reverse" model, that specific feature placed the connectors in the rear and the LEDs in front for a clean installation and convenient monitoring of status information, which in normal use is more convenient and logical for viewing. The high reliability (over 100k hours MTBF), low emissions (Class B) and NEBS certification more than fulfilled the stringent CO requirements and helped ensure the uptime of such services. With multiple 4K8s configured in a redundant HLR LAN at each location, increased reliability and greater interconnect bandwidth were achieved.



(BellSouth Network with Magnum 4K8 Switches)

About Magnum 4K-Series Switches

The Magnum 4K-Series Ethernet 10/100Mb Switches boost the performance of Ethernet LANs, with the flexibility of both twisted pair and a bonus fiber port. The 4K-Series are NEBS Certified and available at 8, 16, 24, and 40 ports and at both 10/100Mb speeds. All ports are switching and support full and half-duplex communication paths. Furthermore, they have an auto-ranging internal power supply (-48VDC) and can be configured with fiber ports.

The fiber-built-in media capability is ideal for integrating future-proof fiber cabling into the LAN structure. The 4K-Series come in reverse models with user ports and the power input in the rear to allow an orderly networking facility. The Magnum 4K-Series are very suitable for small-to-medium size organizations with multiple workgroups, remote offices, and network traffic centers.

About GarrettCom, Inc.

GarrettCom is the leading supplier of Carrier Class Ethernet LAN products. GarrettCom designs, manufactures and markets a comprehensive line of ETSI and NEBS-Certified hubs, switches, and compact PCI board-level LAN products for use in data and telecommunications systems worldwide. For more information on GarrettCom and its products, please visit www.GarrettCom.com

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