Managing Large Backhaul Networks with the Tellabs® 8000 Intelligent Network Manager

Tellabs® Global Services improved operational efficiencies by integrating a new management system into existing operations support systems.

Project Summary

A major U.S. wireless operator enlisted Tellabs Global Services to integrate the Tellabs® 8600 Managed Edge System and Tellabs® 8000 Intelligent Network Manager (INM) into the carrier's backhaul network. The Tellabs 8000 INM had to interface with IBM® Tivoli® Netcool® fault management system, which served as the primary control interface in the carrier's Network Operations Center (NOC). In addition, Tellabs Global Services worked with the wireless carrier to plan and install a backup Tellabs 8000 INM in a separate data center.

The carrier had a tight schedule to prove a business case developed to support mobile backhaul cost reductions. The carrier wanted to deploy the multiservice routers to help minimize its backhaul costs, based largely on circuits leased from other service providers. By implementing dynamic bandwidth sharing in its 3G network, the carrier can reduce the number of required T1 lines by up to 50%. In addition, the Tellabs system can support the carrier's 3G and 4G services with Ethernet backhaul capabilities.

Partnering with Tellabs Global Services was critical to meeting the carrier's deployment schedule and to proving its business case. Tellabs helped the carrier speed time-to-market, mitigate risk of data loss and improve operational efficiencies by integrating the Tellabs intelligent manager into the existing operations support system (OSS).

Deployment Details

The wireless carrier chose the Tellabs 8600 system, because of the product's maturity and its large presence in the cellular backhaul market. While some manufacturers had only recently entered the mobile backhaul market, Tellabs had already offered its product for several years. In fact, the wireless carrier had conducted lab tests using the equipment over 2 years prior.

The Tellabs 8000 INM's ability to control a large network with many nodes was also important decision to the carrier. Another decisive factor was Tellabs' strong services expertise required for management system deployment and integration.

The Tellabs 8000 Intelligent Network Manager helps you provision service up to five times faster than other systems

Tellabs Management System Services

Tellabs Global Services quickly tailored services to meet the carrier's unique management system requirements. Services provided included:

- Design Services: consulting with the carrier on management system requirements and security issues
- Database software installation and configuration
- Tellabs 8000 INM system software installation and configuration
- System Acceptance Test
- Northbound Integration (NBI) Services: deploy necessary hardware and software to support the NBI, as well as integration and test of the system
- Tellabs 8000 INM software update assistance
- Redundancy Service: redundant management system architecture and design documentation, implementation, hardware and software configuration, identification of failure scenarios, and failover tests
- Develop customized Method of Procedure documents
- Knowledge Transfer Service: Tellabs worked with carrier on Tellabs 8000 INM administrative activities and the redundancy switchover process

The Management System Services Engagement

Tellabs Global Services worked with the carrier for about a year and a half before the carrier began deploying Tellabs 8600 system commercially. Some of Tellabs' initial responsibilities included working with the carrier's IT department to select server models and address security requirements.

"The carrier's management network was firewalled off from the people operating the Tellabs 8000 INM," explained Kevin Scurlock, network consultant at Tellabs. To minimize the amount of firewall modifications required and enable access to the Tellabs INM, the carrier deployed a solution based on virtual desktop technology from Citrix®. As a result, the firewall only required one small change.

Another advantage of this approach is that the Tellabs 8000 INM software was not required on every user's workstation. "Instead, it's installed only once on Citrix and shared among many users as needed," Scurlock said.

During the months preceeding the first Tellabs 8600 system rollout, and a few months after the rollout began, Tellabs Global Services devoted several full-time technical consultants to the carrier.

During this period, Tellabs Global Services integrated a northbound interface with the Netcool system. "We needed to be able to forward groups of alarms to the Netcool system so they could be seen in the NOC," recalled Mike Scott, the Tellabs executive account director. "We needed to provide advanced Ethernet diagnostic capabilities. We had to have the ability to do packet loop testing, measuring packets sent and packets received and tracking the number of missing packets. This enabled them to look at conditions in the network and do troubleshooting."

The wireless carrier also wanted a redundant management system in another part of the country. Tellabs Global Services installed additional Tellabs 8000 INM equipment, termed a "warm standby" solution, in the second location.

Tellabs Global Services completed all requirements according to the carrier's schedule. As a result, Tellabs Global Services helped the carrier meet its target date for proving the business case and implementing the initial mobile backhaul rollout.

The Future

The carrier's schedule required 50% completion of its Tellabs 8600 system rollout within one year. During this period, Tellabs Global Services worked with the carrier, providing program management, engineering, node design, network design, network integration, Tellabs 8000 INM software upgrade assistance and traffic migration.

Moving forward, the Tellabs 8000 INM can enable the wireless carrier to manage other Tellabs equipment. The interfaces already developed between the Tellabs 8000 INM and the Netcool system in the carrier's NOC will help minimize the time and effort required to deploy new equipment.

Tellabs Global

Tellabs Global Services delivers quantifiable results that help you succeed. Our deep expertise and specialized services are designed to reduce costs, optimize performance, minimize risk, and speed time-to-market. We solve the complex business, technical and operational challenges you face in deploying advanced networks — anywhere in the world. Tellabs Global Services' reputation for providing a better customer experience is the result of an open and honest approach, the ability to provide an objective viewpoint, and dedication to customer satisfaction.

About Tellabs

Tellabs innovates to deliver the mobile Internet and help our customers succeed. That's why 43 of the top 50 global communications service providers choose our mobile, optical, business and services solutions. We help them get ahead by adding revenue, reducing expenses and optimizing networks.

North America

Tellabs
One Tellabs Center
1415 West Diehl Road
Naperville, IL 60563
U.S.A.
+1 630 798 8800
Fax: +1 630 798 2000

Asia Pacific

Tellabs
3 Anson Road
#14–01 Springleaf Tower
Singapore 079909
Republic of Singapore
+65 6215 6411
Fax: +65 6215 6422

Europe, Middle East & Africa

Tellabs
Abbey Place
24–28 Easton Street
High Wycombe, Bucks
HP11 1NT
United Kingdom
+44 871 574 7000
Fax: +44 871 574 7151

Latin America & Caribbean

Tellabs
1401 N.W. 136th Avenue
Suite 202
Sunrise, FL 33323
U.S.A.
+1 954 839 2800
Fax: +1 954 839 2828