

Case Study

Dakota Carrier Network (DCN)

Dakota Carrier Network (DCN) is North Dakota's leading internet service provider (ISP), owned by 15 North Dakota-based independent telecommunications companies representing 85 percent of all telephone exchanges in North Dakota.

About DCN:

Created in 1996, Dakota Carrier Network is owned by 15 North Dakota-based independent telecommunications companies representing 85 percent of all telephone exchanges in North Dakota and more than 90 percent of the state's total surface area. Together, DCN and its owner companies currently have more than 40,000 miles of fiber optic cable in service, reaching every community in North Dakota. DCN's corporate headquarters is in Fargo, North Dakota, and its network operations center (NOC) is in Bismarck, North Dakota.

About Centina Systems:

Centina Systems is the global leader in strategic service assurance and innovative network performance solutions. The company focuses on helping operators and enterprises worldwide support both established and emerging services and business models, through unparalleled end-to-end visibility into the operational performance of their infrastructure.

Centina's vSure® family of assurance and management solutions have redefined the market approach to assurance, incorporating features like enhanced SLA management, real-time, visual data analytics, customizable reports and dashboards for dynamic network views, and an integrated, plug-and-play architecture that provides actionable intelligence across hundreds of device-types and multiple types of networks.

Overview:

Dakota Carrier Network (DCN) is North Dakota's leading internet service provider (ISP), owned by 15 North Dakota-based independent telecommunications companies representing 85 percent of all telephone exchanges in North Dakota.

DCN selected Centina's vSure solution to help them assure service level agreements (SLAs) with Tier 1 mobile operators for mobile backhaul services. The solution also offered added reporting value for existing DCN customers within the government, financial, higher education and medical industries.



"Our existing systems were confined by a fixed structure that limited our ability to provide reports with the depth and detail required to meet the needs of our customers," said Jesse Heck, Director of Operations at DCN. "vSure empowers our customers by providing them visibility into their own services, enabling them to self-diagnose issues. Since deploying vSure, it has allowed us to not only meet our mobile operator customers' SLA obligations, but also grow our mobile backhaul business and reduce operations costs."

Challenges:

DCN's existing systems were confined by a fixed structure that limited their ability to provide reports with the depth and detail required to meet the needs of their customers.

DCN specifically needed:

- A dynamic and modular solution that was quick and easy to deploy
- Detailed reporting capabilities for their mobile customers' enterprise customers
- The ability to provide customers with visibility into the health of their services
- To assure and improve their mobile backhaul performance and reduce operational costs

While other service assurance systems on the market have some beneficial capabilities such as self-discovery and ease of integration, they often lack the type of instant, in-depth and flexible reporting capabilities that are essential to operators like DCN as they look to assure SLAs.

Specifically, these solutions typically do not support real-time reporting, multi-point reporting or the ability to create customizable reports. The retrieval of important operations, administration, and maintenance (OAM) stats also may be delayed by the management systems or protocols individual network elements rely on. The lack of these capabilities limits how quickly and effectively operators can understand and respond to network issues.

Such systems also may be missing some features that would allow them to fit more seamlessly into existing operations. For example, some of them lack a dashboard or splash page view for operational ease, and may not be easy to integrate with other existing network operations and monitoring systems.

This dearth of capabilities would make it very difficult to meet DCN's needs as highlighted above.

Selecting vSure:

vSure was a perfect match for DCN because it is able to meet their needs in the following ways:

- Reduce operational costs and improve efficiencies through automation
- Improve DCN's ability to offer very tailored SLAs to customers
- Enhance the granularity and accuracy of service performance thereby reducing revenue leakage due to SLA non-compliance
- Proactively monitor services with real-time portals and dashboards to network operations, sales, customers and member companies.

vSure also supports many key capabilities other systems lack:

- **Real-time SLA monitoring.** Operators need to know what's happening on the network as it is happening, and real-time SLA monitoring helps DCN predict if SLA terms are going to be violated before it actually happens.
- **Customizable reports.** Distinct groups within an operator organization, such network operations, sales or other teams, need to quickly review and act on data most relevant to their specific missions. vSure can generate different reports highlighting and distilling the data each group is most interested in to help an organization like DCN respond more effectively at every level.
- **Multi-point reporting.** To fully understand the scope and effect of a network incident, operators like DCN need the capability, inherent in vSure, to draw data from points across widely dispersed networks and services more complex than basic point-to-point services.
- **OAM stats.** With vSure, operational, administration and maintenance stats are retrievable directly from network nodes, so DCN does not have to wait for these stats to be routed through other management systems and protocols.
- **Dashboard/splash page interface.** Having a dashboard interface gives DCN an easy and dynamic way to view and control its management and monitoring functions.
- **Integration within existing systems.** Management systems do not exist in a void, and operators like DCN have established legacy environments, requiring any new systems to essentially be plug-and-play.

DCN's network operations and sales teams also each had their own needs and requirements of a service assurance monitoring system. For example, the network operations group wanted data on frame loss and port utilization in real-time, as well as topology service segment details. Meanwhile, DCN's sales group was more interested in getting data on aspects of topology and bandwidth saturation errors that would be useful in helping them review and renew customer contracts. vSure's dashboard simplicity and customizable reporting capability helped satisfy each group's distinct needs.

Other Key Selection Criteria:

DCN was attracted to a number of key benefits that vSure offered:



Dynamic, modular architecture.

vSure has a more flexible architecture that allows operators to effectively monitor and report on new services



Detailed reporting and analytics.

vSure offers detailed SLA performance reporting for key Ethernet service quality metrics (SQMs) such as availability, delay, jitter, throughput and packet loss.

The platform provides advanced, customized and scheduled reports that provide information from the vSure Ethernet Assurance platform along with data from external systems, offering powerful and consolidated views across the network and operational support systems infrastructure.



Multi-vendor hardware environment.

vSure was designed specifically to address the multi-vendor reality of today's service provider networks. By leveraging key industry standards such as MEF, IEEE 802.1ag and ITU Y.1731, vSure can be deployed to support performance monitoring and reporting of services across multi-vendor networks.



Holistic view of the network.

vSure Ethernet Assurance offers service providers a rich user interface with the ability to see the current status of services at-a-glance.

To learn more about how vSure helps operators improve network performance and customer experience, contact Fujitsu at FNCInsideSales@fnc.fujitsu.com.



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