

Via Satellite's

Tech Focus REPORT

Transforming Network Operations

Inside today's Network Operations Centers, service providers can feel the strain of growth. There is more activity to monitor, more demands to meet and more chances to make mistakes. But with iDirect's SatManage in place, the NOC can be powerfully transformed. Learn how SatManage is helping service providers keep pace with business opportunity, strengthen operations and increase customer satisfaction.



As satellite service providers grow their business, they are confronted with several tough challenges – larger deployments, expanded geographic reach, more sophisticated network configurations and increased customer demands. Nowhere are these challenges felt more than inside the Network Operations Center (NOC), where a satellite business can buckle under the pressure of increased activity and technology proliferation.

iDirect's SatManage is designed to meet these challenges. SatManage is a powerful suite of Web-based software tools that integrate, monitor and automate hybrid networks and NOC-based applications. The solution is relied on by leading service providers worldwide to strengthen network operations, improve service quality, scale their operations and gain the intelligence necessary to optimize their business.

Keeping pace with growth

"Many network operators start out small and assume that as they expand, there will be linear growth in terms of staff needs and tools," explains Guy Adams, vice president of software development for SatManage. "But there are a number of thresholds where things change dramatically."

"When a network is only 100 circuits, a single operator can track them by name and know their idiosyncrasies," Adams adds. "If a network scales up to 250 circuits, suddenly an operator needs network management systems to track everything. Very soon, operators accumulate different technologies that don't talk to each other."

The explosion of disconnected systems is one of the biggest factors that detrimentally impacts a network operator's efficiency.

It can lead to a host of escalating problems. For example, it becomes enormously time consuming to track network data, and NOC technicians often have to compile reports manually. They can't easily view the full scope of their operations or study the granular details of individual networks over time to discover the source of recurring issues.

As NOC activity intensifies, service providers also begin to see limitations in their ability to respond to customers. Troubleshooting common network problems becomes a major resource constraint. And a lack of network visibility makes it difficult for service providers to guarantee Service Level Agreement (SLA) requirements.

Ultimately, if service providers cannot manage their NOC more effectively, it will limit their ability to grow their business and meet customer demands.

Technology integration

"When our customers implement SatManage, typically the first area where they see real value is collapsing the number of systems needed to operate a network down to a single authoritative source," says Adams.

"SatManage was used during the implementation of a network rollout for a large telco," continues Adams. "The operator had to run tests on every circuit before the network could become operational. The telco calculated that it would take the equivalent of seven years of man-hours to complete the circuit testing, given the number of disparate management systems. Using SatManage reduced that number to two weeks."

In situations like these, SatManage can immediately deliver major efficiency gains. And smaller gains over time – 20 percent here

Discovering SatManage

How can SatManage help service providers strengthen their operations? To learn more, watch this brief video and then browse through a tutorial of SatManage's rich set of features.



and 10 percent there – can be the difference between a profit or a loss on one year. Once operational costs have been reduced in this way, service providers become noticeably more competitive in winning future business.

Faster response, greater reliability

As service providers scale their business, there is a need to improve routine maintenance and troubleshooting, and expand network visibility.

To address this, SatManage automates critical tasks for issue detection, Level 1 support, preliminary fault diagnostics and trouble ticketing. Further, SatManage provides advanced reporting tools that monitor and analyze network traffic, signal strength, voice quality and other key metrics. “There are so many factors that impact reliability,” says Adams. “SatManage tracks all of them and equips service providers with the real-time and historical intelligence they need to get to the heart of performance issues.”

Meeting heightened customer expectations

Today, end users demand greater control of and visibility into their networks. They want to understand more clearly how they are consuming satellite bandwidth and what challenges they face concerning service reliability.

Using SatManage, service providers can develop a customized Web interface within a customer’s network. End users can view real-time patterns and understand historical trends that impact network cost and performance. This leads to more informed decisions and increased customer satisfaction. And it’s a high-value feature that service providers can upsell to their customers.

Service providers can also leverage the customer portal to improve the process of SLA reconciliation. Customers see for themselves where network performance has suffered and understand the root causes. This knowledge often leads customers to realize when they need to increase their bandwidth levels to support their needs.

Managing mobility

An emerging challenge facing many service providers today is the surge in mobility applications, especially in the maritime market. Managing mobile networks pits service

SatManage Key Capabilities



SatManage capabilities can transform a NOC into a powerful, automated intelligence center.

providers against long distances, unpredictable weather and the complexities of network devices travelling across geographic networks, satellite beams and teleports.

SatManage enables service providers to manage all of their mobile units through a single interface. They can track the location and status of every remote in real time through a global mapping system, which can be overlaid with weather conditions, satellite footprint information, radar and other data sources. This integrated approach provides the speed and control service providers require for mobility applications.

Confidence to grow

As service providers expand their business, they need to understand the direct impact this has on their NOC operations. And if they want to rise to the top of the industry as satellite opportunity expands, they need a way to manage the operational complexity that accompanies growth. SatManage can transform a NOC into a powerful,

SatManage is relied on by leading service providers worldwide to improve overall service quality and network operations, scale their operations and gain the intelligence necessary to optimize their business.

automated intelligence center, equipping service providers with all the tools they need to ensure a higher level of network reliability and customer satisfaction and plan the right business strategies for the future. ■

SatManage At a Glance

SatManage is offered through a core platform that integrates the solution's primary tools and five distinct add-on feature packages.

■ The Core Package serves as a base platform for SatManage subscribers and features the solution's primary capabilities, including a comprehensive range of visual correlation tools, advanced reporting capabilities and customisable centralized network monitoring dashboards. Service providers can gain immediate visibility into network performance measures to rapidly identify, respond to and prevent network degradation.

■ The Auto HelpDesk Package automatically detects issues, opens tickets and conducts preliminary fault diagnosis. It also handles complex tasks such as notifying customers of issues or resolutions to routine problems and sends updates on trouble tickets. The fully automated functions can eliminate the need for human involvement for up to 70 percent of faults.

■ The Traffic Analysis Package provides detailed visibility into data flows on the customer's network, performing data collection and processing for service providers to better understand the traffic patterns of their customers and make informed network decisions resulting in bandwidth efficiencies and cost savings.

■ The Customer Management Package enables service providers to share network performance data and management tools directly with customers through a customizable Web portal and have the ability to manage and provide live reports on the customer's SLAs.

■ The Mobility Package provides a set of tools for real-time tracking and managing of mobile remotes for service providers in the maritime, oil and gas, aviation, military defense, emergency response and other industries. An advanced mapping system features up-to-date satellite imagery, satellite footprints, real-time weather, radar and mapping tools that give service providers real-time snapshots of the health, status and exact location of each remote.

■ The NOC Toolset Package allows NOC engineers to monitor the status and performance of each remote router in their network and presents data in a user-friendly graphical format. Modules such as the Sun Outage Predictor and the Planned Outage Manager allow service providers to take pre-emptive measures to prepare for service outages and broadcast notifications to customers.

For more information on SatManage visit idirect.net/satmanage.

Customer Profile: SatManage Helps MTN Satellite Communications Tackle New Opportunity



MTN Satellite Communications (MTN) is a global provider of communications, connectivity and content services for more than 600 vessels and land-based VSAT terminals around the globe, including cruise ships, government and military installations, commercial ships, private yachts, offshore drilling and production sites, and ferries. MTN, one of the first companies to bring VSAT into the maritime market, integrated SatManage into its iDirect infrastructure in order to better manage its continued growth and the increasingly complex network deployments required by its customers.

"We have several hundred vessels on our iDirect network, which are supported by 30 different C- and Ku-band satellites for seamless connec-

Analyzer led to MTN using other SatManage features such as the Network Correlator and Signal Analyzer. These tools allow our customers and engineers to look at detailed performance statistics of satellite links, including signal strength, errors, availability and other granular data that modems feed into network management systems."

"We had access to all of this data for a long time, but didn't have a more efficient and effective way to visualize it on a large scale, especially with our growing customer base," McCarthy adds. "When looking at trends for an entire region across multiple ships, it's difficult to identify data patterns using spreadsheets and reports. SatManage correlates and color codes the data in a logical way, easily allowing us to spot trends"

SatManage has been an important part of our scalability strategy, helping us maintain a high quality of service as we grow.

tivity and eight teleports located worldwide, interconnected by our private MPLS backbone," says Kevin McCarthy, MTN's senior vice president of network engineering. "The challenge of monitoring hundreds of ships has become increasingly difficult. SatManage has helped us maintain a high quality of service as we grow."

Nearly three years ago, MTN implemented a custom version of SatManage's Traffic Analyzer in order to provide customers with a better way to see, understand and monitor their bandwidth usage. "Previously, we were only able to provide customers with bandwidth usage information broken down into major categories such as Internet, voice and corporate data, but we lacked granularity within each category. When a customer is faced with an expensive bandwidth purchasing decision, their first question is always, 'What specific applications, services and users are utilizing my bandwidth?' Before we employed SatManage, it was a difficult question for us to answer, often requiring extensive analysis by a network engineer," McCarthy says.

"Our customers, NOC personnel and sales teams all value the tool. It gives them insight into each ship's detailed bandwidth demands and is easily accessible through our Web portal," McCarthy says. "The success of Traffic

MTN also uses SatManage as a troubleshooting tool, allowing them to proactively detect and prevent problems. "SatManage has given us more visibility over our network at a macro level, allowing us to quickly spot issues and drill down to very granular details when necessary," McCarthy says. "A recent example of an issue that would have been difficult to spot without SatManage concerned the tracking system on one of our large teleport antennas. It would be nearly impossible to detect a subtle teleport antenna tracking issue by looking at one ship's signal strength. However, by correlating the data from dozens of ships over a period of several days with SatManage, we were able to notice similar fluctuations in signal strength throughout the data. This common fluctuation clearly indicated that the problem was at the teleport."

"One of the things that really attracted us to SatManage was the engineering team," McCarthy adds. "They were really sharp and clearly had quite a bit of experience in the industry. They were also very fast and responsive to our needs. Another attraction was the robust database behind the product and its tight integration with iDirect. Now that SatManage is part of iDirect, we are very excited about the future possibilities." ■