

Itron Builds a Smarter Infrastructure with Cisco Smart Call Home

Cisco SMARTnet Service with Smart Call Home capability provides real-time device diagnostics, alerts, and remediation to help ensure network uptime.

EXECUTIVE SUMMARY	
	
ITRON INC. - Industry: Energy - Location: Global headquarters Liberty Lake, WA - Revenue: US\$2.5 billion	
CHALLENGE Manage and automate remote support operations for their global data center expansion	
SOLUTION Activated Smart Call Home on Cisco Catalyst 6500 Series Switches around the world to provide continual device diagnostics, alerts, and remediation advice	
RESULTS - Reduced incident resolution time by up to three hours - Internal ROI estimated at 10-15 percent over outsourced service - Increased network stability and uptime on mission-critical network, delivering vital utilities to millions of end customers	
PRODUCT AND SERVICES LIST - Cisco Catalyst 6509 LAN Switch - Cisco SMARTnet Service with Smart Call Home activated on covered devices	

Itron Inc. is the world's leading provider of intelligent metering, data collection, and utility software solutions to the global energy and water industries. The company provides solutions based on machine-to-machine (M2M) automation and intelligence to utility companies worldwide, using a smart grid architecture to optimize the delivery and use of energy and water. To power its complex applications environment, Itron deployed 475 servers across its data centers, supporting more than 8000 energy and utility companies in 130 countries. However, as the company's business has grown rapidly, the demands on its data center infrastructure have escalated as well.

Meeting the Data Center Challenge

To meet its expanding distributed data center requirements, Itron recognized that it needed to find a "smarter" way to intelligently manage and automate its remote support operations. Itron was using M2M automation to manage and support its core business, and wanted to build a service network using the same network intelligence to enhance its global, remote service operations. When Itron began to look for an infrastructure partner, the company wanted one that could support this vision. Itron was using Smart Call Home device diagnostic intelligence in its core business. The company realized that this feature, included with Cisco® SMARTnet® Service at no additional cost, could be applied to its global operations. In July 2008, the company activated the Cisco Smart Call Home application that captures proactive diagnostics on its Cisco Catalyst® 6500 Series LAN Switches

located around the world and that automatically communicates to remote service support systems at Itron. If a network device issue should occur, Cisco Smart Call Home automatically diagnoses the problem at the device, opens a service request at Cisco, and sends knowledge-based remediation advice to Itron's engineers and Cisco technical support staff who can immediately act on the problem.

"We needed a smarter infrastructure to provide the same level of service and availability we expect out of our enterprise applications today," says Rob Routt, senior network engineer at Itron. "The infrastructure needs to support a wide range of endpoints and needs to scale exponentially. If we can leverage M2M diagnostics, this saves time and manpower, and maximizes our ability to keep up with the inevitable infrastructure sprawl."

“By adding intelligence to the network infrastructure, ... and educating the consumer on how to control their usage and costs with some of this information, saving power and natural resources becomes a reality.”

— Rob Routt, Senior Network Engineer, Itron, Inc.

The Smart Call Home solution provided an automated support and resolution system to help the company manage local and remote support demands.

Global Solution

Cisco Smart Call Home provides continual proactive diagnostics to monitor Itron's 11 Cisco Catalyst 6500 Series LAN Switches located globally as part of its core network infrastructure. These switches support a broad range of vital applications that Itron employees and customers depend on every day, including usage data and alerts from electricity, gas, water meters, and other endpoints on its vast customer network.

Smart Call Home's diagnostic rules processing application analyzes device messages from the Cisco Catalyst 6500 Series LAN Switches and initiates the necessary Cisco service requests. Smart Call Home also provides real-time alerts and notifications accompanied by detailed device diagnostics to the Itron network engineers and Cisco experts, to expedite resolution. Smart Call Home enables Itron to discover and mitigate potential network issues more quickly, often before the network is affected. This proactive support solution also saves time and money on issue resolution and helps set the stage for intelligently supporting Itron's future business and data center growth.

Immediate Benefits

Reduce Resolution Time

The solution is reducing resolution time for network incidents by up to three hours, even if a problem occurs during non-work hours. In the past, Itron's IT engineers would have to collect diagnostics themselves manually or spend time trying to pull log files from switches to send to Cisco engineers. Incidents involving interaction with the Cisco Technical Assistance Center (TAC) that previously took several hours to resolve now take only 30 minutes. The result is faster resolution and the assurance of improved network uptime for Itron and their customers.

Easier Network Management

Network management, including routine network administration and upgrades, has become easier as well, because Cisco Smart Call Home provides a customizable homepage with details about supported devices and their locations on the network. With this one centralized location, Smart Call Home information is available to all Itron support engineers around the world. If a network issue occurs, administrators can easily access diagnostic and troubleshooting details, and apply a fix to other network devices before the problem happens again.

Smart Scalability

Smart Call Home supports a range of Cisco routers, switches, storage, security, and data center network devices that will allow Itron to extend this new “smarter” support model to more devices throughout their network. Itron plans to deploy Cisco Smart Call Home as a standard capability on all supported devices in their network. For Itron, beyond simply supporting the applications used by end users, the infrastructure also needs to scale exponentially. Rob Routt, senior network engineer at Itron, says: “In other words, as our business continues to grow, we need to be ready for the sprawl of the network and be able to support this growth. One way we will do this is with Smart Call Home. It will assist in the rapid growth and support of this new infrastructure. We can meet increasing demands and deliver more value with what we have.”

Increased Return on Investment

By helping Itron employees work more efficiently, the Cisco solution has helped the company maintain personnel levels in its IT group, despite rapid growth in the company overall and in the scope of the network. Because staff are more productive, Itron can get more value from its network investment and deliver greater value to its customers. Routt estimates that Itron has realized a 10 to 15 percent return on investment since activating Smart Call Home, compared to using an outsourced service or other embedded network monitoring features.

More Value to Customers

By applying the same smart approach to its own infrastructure that Itron uses to support smart grid customers, Routt and his team have peace of mind in knowing that their mission-critical network will remain consistently available to ultimately deliver vital utilities to millions of end customers, while providing the best possible performance.



A Greener Future

“A lot of what we’re trying to do with the smart grid is the same thing we’re implementing on our own network: that 24 hours a day I don’t have to worry about what’s going on,” says Routt. “I know that Cisco Smart Call Home is going to be there for the core devices, the crown jewels, of the network.”

Perhaps most importantly, Itron’s M2M service automation solution helps the company serve customers better by dealing with network downtime, outages, and other issues proactively, in many cases before a problem occurs.

“By adding intelligence to the network infrastructure, our customers will be able to leverage alerts, usage, trending, event correlation, and possibly identity-based security and reporting,” says Routt. “In the end, this will

mean more accurate billing, better abilities to plan for power shortages and overages, and a much more accurate and timely way to provide their services. If we tie this into educating the consumer on how to control their usage and costs with some of this information, saving power and natural resources becomes a reality.”

Conclusion

Smart Call Home has been an integral part of Itron’s new smarter systems support approach that has helped the company meet its management goals of easing network administration, enhancing proactive monitoring of critical networks and supporting regional data centers throughout the United States. Smart Call Home has allowed Itron to better serve its customers by dealing with network downtime incidents proactively often before these incidents occur. This vision of M2M and smart infrastructure supports the idea that automation and the information stored in the network itself should be used to make systems more aware of problems as they occur, as well as generating data on how to enhance services as these run through networks. Cisco’s vision for Smart Call Home aligns with that of Itron: both are integrating network intelligence into their products, providing automated monitoring and proactive reporting, which allow for smarter management and greater efficiency.

For More Information

For more information about Cisco services, visit www.cisco.com/go/services, or contact your Cisco service account manager.

This interview for this story was conducted and documented by **Chadwick Martin Bailey**, and sponsored by Cisco Systems.

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