Consolidated Communications Holdings, Inc.

Predictive management to help avoid business disruptions and remove need to set thresholds

Overview

Consolidated Communications
Holdings, Inc.
Mattoon, IL
www.consolidated.com

Solution components

- IBM® SmartCloud®
  Analytics-Predictive Insights
  – IBM InfoSphere® Streams
- IBM Tivoli® Netcool®/OMNIbus

Consolidated Communications Holdings, Inc. (Consolidated) is a leading communications provider in California, Illinois, Kansas, Missouri, Pennsylvania and Texas, offering IP-based digital and high-definition television, high-speed Internet, Voice over IP, carrier access, directory publishing and local and long-distance service.

The need

As director of Tools and Automation with the Consolidated Network Operations Center (NOC), Chris Smith knows that minor network issues can often turn into larger problems that disrupt service.

As a result, proactively detecting unusual network behavior is of paramount importance. However, manually setting thresholds and alerts for the company's existing performance management software required considerable time and effort, and did not provide enough early warning for staff to prevent operational issues.

"We want to improve our ability to detect issues as they are emerging so we can take action before service is disrupted," Smith says.

"IBM SmartCloud Analytics helped detect 100 percent of the major incidents that occurred, including silent failures, and helped us eliminate manual thresholds, which will result in a cost avoidance of USD300,000 annually."

—Chris Smith, Director, Tools and Automation, Consolidated Communications Holdings, Inc.

The solution

Smith sought a solution that could intelligently analyze 80,000 network statistics in near-real time, understand "normal" operational behavior automatically, and proactively identify changes that indicate a problem—all without having to set thresholds or develop service models.

After learning about IBM® SmartCloud® Analytics software, Smith signed up to participate in the product's beta test.

IBM InfoSphere® Streams software is embedded as the solution's analytic engine, quickly ingesting, analyzing and correlating the tens of thousands of network metrics collected from the performance management system every five minutes. IBM SmartCloud Analytics software then applies sophisticated algorithms, such as R analysis, developed by IBM Research to help administrators detect problems as they emerge. When anomalies occur, alerts are sent to IBM Tivoli® Netcool®/OMNIbus software for event management.

During the four-week beta test, the solution achieved the following:
- Detected an unscheduled maintenance activity—which otherwise would have gone undetected—that initiated a reboot of thousands of set-top boxes. "IBM SmartCloud Analytics detected the event and showed the overall impact to our network and the scope of the maintenance," says Smith.
- Revealed a configuration error in the company's Internet Protocol television (IPTV) delivery systems that caused devices to check in at a much higher frequency than desired. "The change in traffic patterns was small, but was detected by IBM SmartCloud Analytics and reported," says Smith. "This could have gone unnoticed and would have limited the scale of the system over time."
- Identified bandwidth changes on DNS [domain name system] servers that tracked back to a denial-of-service attack initiated from customers on the network. "This reporting led us to modify the configuration on devices that allowed the denial-of-service to happen," says Smith. "IBM SmartCloud Analytics helped detect 100 percent of the major incidents that occurred, including silent failures, and helped us eliminate manual thresholds, which will result in a cost avoidance of USD300,000 annually."

The benefit
- USD300,000 projected annual cost avoidance
- 100 percent detection of major incidents that occurred
- Advanced warning of problems, far earlier than traditional methods

For more information

To learn more about IBM SmartCloud Analytics solutions, please contact your IBM representative or IBM Business Partner, or visit the following website:
ibm.com/software/tivoli/solutions/it-operations-analytics