

How Cisco Actively Manages Voice Availability and Quality

BUSINESS BENEFITS

- Accelerated issue detection
- Discovered misconfigured dial plan
- Identified call-routing vendor's equipment as the source of dropped calls
- Accelerated troubleshooting

"We now have a holistic and systemic view of the unified communications environment, which enables us to detect and fix minor problems before they become major."

David Neustedter, Unified Communications Design Engineer

Cisco IT automates daily testing of all voice elements in the global network.

Cisco IT strives to identify and remediate problems that affect voice quality *before* they affect productivity or the customer experience. This goal presents a challenge in the Cisco network, because a call or conversation might touch any of 15 Cisco® Unified Communications Manager clusters around the world, and travel through multiple Cisco Catalyst® switches and Cisco Integrated Services Routers along the way. The problem could be anywhere. Custom scripts, which Cisco IT used previously, take a long time to learn and are labor-intensive.

In 2007, Cisco IT began proactively monitoring and troubleshooting the voice environment using the Cisco Unified

Communications Management Suite. Cisco Unified Operations Manager generates approximately 200,000 "synthetic calls" every day to proactively discover any connection difficulties. Cisco Unified Service Monitor measures actual voice quality, as collected by Cisco Unified IP Phones and sensors deployed throughout the network.

Voice service availability has increased. The synthetic calls have enabled Cisco IT to detect and troubleshoot intermittent outages, traditionally a challenge because the outages are difficult to recreate, and users tend not to complain if they get through on the next attempt. Cisco IT has also used the Management Suite to identify a misconfigured dial plan, and to discover a media translation issue affecting softphones.

Troubleshooting is faster. Typically, more than 99.9 percent of calls across the Cisco network complete with high voice quality. When Cisco Unified Service Monitor reports showed that just 96 percent of calls had acceptable quality in Research Triangle Park, North Carolina, Cisco IT used Cisco Unified Service Monitor to identify the places in the network where the problem was occurring. The issue was an incorrect Quality of Service (QoS) setting. Only 10 of 2000 switches had this issue, so Cisco IT would likely have never noticed the problem without the comparisons possible using both software tools.

FOR MORE INFORMATION

To read the entire case study or additional Cisco IT case studies on a variety of business solutions, visit Cisco on Cisco: Inside Cisco IT www.cisco.com/go/ciscoit.

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