Wireless Technology Developer and Provider Enables Global Growth

Qualcomm breaks down barriers to going global by using Cisco routing, switching, unified communications and collaboration technologies.

EXECUTIVE SUMMARY

QUALCOMM INCORPORATED

- Wireless Technology
- San Diego, California, United States
- ~16,100 Employees

BUSINESS CHALLENGE

- Remove barriers to globalization
- Improve secure collaboration among distributed engineering teams
- Support increased operations while reducing costs

NETWORK SOLUTION

- End-to-end Cisco solution including Cisco Routing, Switching, Unified Communications, and Collaboration technologies powered by the new Cisco ASR 1000 Series.

BUSINESS RESULTS

- Enabled high-performance collaboration among distributed engineering teams.
- Lowered management operations burden and reduced costs.

Business Challenge

Qualcomm Incorporated (Qualcomm) is the world leader in next-generation mobile technologies. For 25 years, Qualcomm ideas and inventions have driven the evolution of wireless communications, connecting people more closely to information, entertainment and each other. Today, Qualcomm technologies are powering the convergence of mobile communications and consumer electronics, making wireless devices and services more personal, affordable and accessible to people everywhere.

Research and development is at the epicenter of Qualcomm's role in the rapid adoption and growth of 3G and next generation wireless around the world. In 2009 they invested 23% of their revenues or $2.44 billion in R&D. In fact, their current intellectual property portfolio consists of ~ 77,700 patents granted and pending.

To support Qualcomm's ongoing efforts to expand as a global development organization they needed to improve collaboration among distributed engineering teams, reduce costs by consolidating resources, and maintain security over intellectual property; all without impacting application performance.

At the time Qualcomm employed half a dozen different routing platforms across their global WAN infrastructure. This required configuring multiple physical devices to provide the required services in the WAN core and branch office environments. As a result, they were faced with operational complexities including differing levels of familiarity among engineering teams, variable performance and feature support. They were frustrated by multiple problems. The inability to apply software updates without disrupting operations was causing costly downtime. The need for constant re-calculation of bandwidth points to ensure that incremental requirements could be addressed and the lack of

separation between control and data plane resources on the existing routing platform was hampering performance and productivity. The inconsistency of supported features based on different platforms was also challenging.

With the increased focus on providing a highly available 24/7 infrastructure, Qualcomm needed to simplify the operations of their WAN infrastructure. At the same time, newly deployed real-time collaborative applications such as TelePresence increased bandwidth and service requirements. It was obvious to Qualcomm that their goals required a new solution.

Borderless Network Solution

To achieve the reliability, performance, and security that Qualcomm needed, they chose an end-to-end Cisco global IT solution that includes Routing, Switching, Unified Communications, and Collaboration technologies. Their global WAN solution is built upon Cisco's ASR 1000 Aggregation Services Router.

The Cisco ASR 1000 Series is designed to create a new paradigm for the WAN edge, and as a part of the Cisco Borderless Network vision, they offer business-critical resiliency with intelligent services flexibility to allow enterprise businesses to accelerate their growth potential. It solves enterprise WAN challenges including the need for higher infrastructure performance, high WAN infrastructure availability, increased security for data protection and compliance, and service delivery without compromising application performance.

Qualcomm deployed a redundant pair of ASR 1006's at their global WAN headend in San Diego and redundant pairs of ASR1002's at many of their global and domestic satellite offices in North America, Europe, China, Asia/Pac, and India. They also leveraged the ASR 1000 platform to enable enhanced collaboration via Qualcomm's TelePresence network in engineering offices across the globe.

"We needed to be able to provide a platform that was capable of delivering a secure, high-quality experience for real-time applications such as IP Telephony and TelePresence, regardless of the user's location. The scalability of the ASR 1000 platforms and operational consistency across the entire ASR 1000 family has allowed us to do that cost-effectively while streamlining operational management," says Zeeshan Sabir, Director of IT Infrastructure, Qualcomm.

> "Our new WAN infrastructure allows us to securely collaborate across multiple teams, in multiple time zones and is an integral component of our solution to improve application performance over the WAN. In other words, we can focus on what we do best: Create breakthrough technology that connects people and enriches lives."
>
> **—Zeeshan Sabir, Director of IT Infrastructure, Qualcomm**

Business Results

Today Qualcomm has a secure, highly reliable, high performance network that enables their engineers to collaborate creatively and effectively from any location. By leveraging the Cisco solution, Qualcomm was able to increase the performance and capacity of their WAN routing platform to 20Gbps.

The ASR 1000 platform is the emerging standard in their global WAN and allows for consistent configuration, maintenance, and service offerings. As a result, the frustrations they'd experienced due to the operational complexities and performance variances of their previous solution have been eliminated.

In addition, the ASR 1000 has enabled Qualcomm to reduce unplanned as well as planned downtime through the use of In Service Software Updates (ISSU) and true control and forwarding plane separation. The new solution keeps management burden low and uptime high.

“The Cisco ASR 1000 platform gives us feature and hardware consistency that has simplified our management and reduced our operating costs. As we expand globally our need to operate 24/7 increases. The Cisco ASR 1000 Series helps us meet those demands. For example, the In Service Software Updates offer great improvements towards the uptime we need for non-stop operations,” says Sabir.

The ASR 1000 platform also provides consistent support across the entire ASR 1000 family for firewall features at line rate for security as well as Hierarchical Quality of Service (HQoS) to ensure quality of experience for collaboration applications.

“Our vision is to continue growing as one of the world’s leading global development organizations. The ASR 1000 Series is helping us achieve that vision,” says Sabir. “With the new infrastructure our distributed engineering teams are collaborating more securely and effectively than ever and we’ve reduced our operational costs while improving our overall application performance.”

PRODUCT LIST
Routing and Switching
• ASR 1002
• ASR 1006

For More Information

To find out more about the Cisco Aggregation Services Routers, go to: http://www.cisco.com/go/asr

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