

CLOUD-BASED VOIP PROVIDER, FONALITY, DIALS UP JUNIPER NETWORKS INFRASTRUCTURE

Summary

Company: Fonality

Industry: Service Provider

Challenges: Support the exacting performance demands of delivering cloud-based voice and unified communications

Selection Criteria: High-performance edge network that scales to the demands of cloud-based voice and unified communications

Solution:

- MX Series 3D Universal Edge Routers
- J Series Services Routers
- SRX Series Services Gateways

Results:

- Ensures quality of experience for customers
- Meets rapidly growing customer demand
- Improves performance, scalability and agility at the edge
- Leverages Junos operating system for greater operational simplicity

Many businesses are turning to cloud-based services to eliminate the need to own and operate complex IT equipment at their offices. One hot area for cloud services is business communications, as small and medium businesses in particular are turning to hosted solutions for voice over IP (VoIP) and unified communications (UC).

Challenges

“Work has really gone from being a location to an activity,” says Wes Durow, chief marketing officer at Fonality. Fonality is leading the way to cloud-based communications. With Fonality, customers have advanced communications capabilities such as conference bridges, unified messaging, chat, voicemail and email, presence management, and contact center—without the hassle or cost of deploying legacy on-premise IP systems.

“Voice is a business-critical application,” says Tristen Lee, director of infrastructure at Fonality. “Our customers require that every time they pick up the phone, they get dial tone. Dial tone is the sound of reliability.”

Selection Criteria

“To deliver VoIP reliably in the cloud, we have to have a network that is scalable and high performance,” continues Lee. “Scalability is non-negotiable.”

“When VoIP was in the early stages of development 10 to 15 years ago, Juniper Networks was an engineer’s first choice for the network deployment,” says Lee. “It’s still our first choice today.”

Fonality has long used Juniper Networks routers at the network edge. Driven by rapid growth, the Texas-based provider is upgrading from Juniper Networks® J Series Services Routers to Juniper Networks MX Series 3D Universal Edge Routers.

Solution

Lee is a big believer in the inherent simplicity that comes from flattening legacy three-tier network architectures. “Traditional hierarchical models don’t lend themselves to VoIP, because they have inherent limitations in performance and scalability,” says Lee. “Juniper allows us to flatten our network and create horizontal scalability, which allows VoIP to become a viable application for business.”

Juniper Networks MX Series 3D Universal Edge Routers function as a universal edge platform that can support multiple types of business, mobile and residential services. The MX Series routers are designed to scale on the three dimensions—bandwidth, subscribers and services—that service providers need. Fonality uses Juniper Networks MX80 3D Universal Edge Router to meet its scale, performance, availability, and service agility requirements.

“The key to providing voice in the cloud is scalability and performance,” says Lee. “Juniper provides the horizontal scalability, so all of the intelligence is in one place.”

The MX Series routers are powered by Juniper Networks Junos® operating system, which streamlines network operations and improves the availability, performance and security of the network. Advanced routing features include traffic segmentation and virtualization in MPLS, ultra-low latency multicast, as well as comprehensive security and quality-of-service (QoS) implementation to accelerate delivery of time-sensitive applications and services. The carrier-class reliability and high availability features on the MX Series include graceful restart, nonstop routing (NSR), MPLS fast reroute (FRR), unified in-service software upgrade (ISSU), and VPLS multihoming.

Fonality continues to use Juniper Networks J6350 Services Router in its corporate network. The company also uses Juniper Networks SRX Series Services Gateways to provide firewall and security services in its corporate network. The SRX Series Services Gateways are high-performance security, routing and network solutions. SRX Series devices are based on Junos OS, which delivers security and advanced protection services. Fonality uses Juniper Networks SRX240 Services Gateway, which supports up to 1.5 Gbps firewall, 300 Mbps IPsec VPN and 250 Mbps IPS.

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Tristen Lee,
Director of Infrastructure, Fonality

Results

“Today’s small and medium-sized businesses expect the same applications that were previously only available to large enterprises,” says Lee. “Fonality delivers voice, unified communications, mobility, and contact center applications in a way that is easy to use, simple to manage, and affordable to deploy. Juniper makes that possible with a network that’s scalable, high performance, and affordable.”

“What Juniper has done to collapse the network, to simplify the network, to consume less power, to move to a cloud-ready platform has helped us innovate,” says Durow.

Using MX Series routers at the edge has given Fonality the performance, scalability and reliability it needs. “Juniper allows us to build a flat network and put all services into the same network layer, and give everyone access to the same capabilities,” says Lee. “The key

to voice in the cloud is horizontal scaling. You are democratizing the network by putting all the applications on the same level of service.”

While Fonality has plenty of network capacity to support future growth, as business grows, it can easily scale services. “One of the things we like about the MX80 is the ability to add 10GbE where it’s needed,” says Lee. “I don’t attempt to predict when thresholds will be crossed, but it is important to have that capability in the edge when it’s needed.”

Using the MX Series routers also gives Fonality greater flexibility in network engineering and operations. For example, the Fonality network is peered with multiple ISPs, and the engineering team can make route changes easily if there is congestion or network latency downstream. “With the MX Series, we can do network operational routing changes with minimal risk and without impacting the customer,” says Lee. Ultimately, that flexibility allows Fonality to deliver a better quality of experience to customers.

Junos OS has also contributed to the reliability and operational simplicity of the network. “Juniper is unique in that all of the network functionality is integrated into one operating system,” says Lee. “Security, quality of service, and switching and routing functionality are managed in one place. By making the operating system more usable, you reduce the learning curve and the probability of human error. The majority of network faults occur because of human error.”

Next Steps and Lessons Learned

Fonality is continuing to roll out MX80 routers at the edge and also is investigating the use of the SRX Series Services Gateways for its operational network.

“Juniper is aligned with the Fonality business proposition,” says Lee. “We’re easy to use, simple to manage and affordable to deploy. And Juniper is scalable, powerful and affordable.”

For More Information

To find out more about Juniper Networks products and solutions, visit www.juniper.net.

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.

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