Iceland's VMware Provider Delivers the Country's First Software-Defined IT Infrastructure

Summary

Customer:
Nýherji Iceland

Industry:
 Information Technology

Business Challenge:
Nýherji, the largest VMware supplier in Iceland with more than 1,000 clients, needed a state-of-the-art network in order to:

· Keep pace with the growth of its business and its customers' evolving IT requirements
· Implement SDN to transform its operational environment
· Create a reference architecture for virtualized solutions, using VMware and Juniper Networks technology
· Continue to be perceived as the "cloud connector" in Iceland

Technology Solution:
The solution was built using a MetaFabric architecture consisting of:
· MX104 3D Universal Edge Router
· QFX5100 line of switches
· MX240 3D Universal Edge Router

Business Results:
· Seamless, effective integration with its broader VMware environment
· An open SDN-ready network that can be referenced for its own customers
· Reduced TCO and a power-efficient data center
· A high-density 10GbE solution

Nýherji is one of Iceland's largest providers of information technology solutions, offering hardware, software, consultancy, and technical services. Nýherji has over 1,000 clients, and provides them with power-efficient IT infrastructure, either onsite or in its own data center, interconnected by its own network core. It also provides Internet access along with more advanced security services such as firewalling, intrusion detection, and spam filtering. Nýherji is a long-established company that can trace its roots back over half a century. It was publicly listed in 1995, and now employs over 400 staff in offices located in Iceland and Sweden.

The heart of Nýherji´s services is to offer IT as a service (ITaaS) to its customers. That means it needs to be able to offer robust IT opportunities within all aspects of the business, including high-performance security, network infrastructure, terminal devices, hardware, software, storage, and backup. As Guðmundur Arnar Sigmundsson, manager of network solutions at Nýherji, explains, "Our goal is for Nýherji to become the first name that people think of in Iceland when they think of IT infrastructure. That means being able to offer the best solutions to our customers."

Nýherji is the local partner of a number of major technology firms, including VMware, in which it specializes. Nýherji supports over 50 percent of the VMware market in Iceland with thorough local expertise. Nýherji's experts include engineers with the most prestigious certification offered by VMware, which is VMware Certified Design Expert (VCDX).

Business Challenge

Nýherji wanted to upgrade its network in order to keep ahead of its business growth and the evolving requirements of its customers such as faster services, and it saw this as an opportunity to take advantage of SDN technology. It realized that SDN could help transform its operational environment by automating its standard network, lowering its costs, and moving to fully automated provisioning for customers. Customers are now able to finish network configuration in minutes instead of hours. Nýherji's goal was to build the first true SDN network in the country.

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Guðmundur Arnar Sigmundsson, Manager of Network Solutions, Nýherji

"We can create a software-defined data center where we can bring up a new machine in minutes rather than days or weeks," Sigmundsson says. "We needed to build a network that could match that level of speed, control, and flexibility."

As a specialist in VMware data center technology, it was also very important to Nýherji that any network solution adhered to open standards and could easily be integrated into VMware's systems such as NSX, which is VMware's network virtualization platform for the software-defined data center (SDDC).

Technology Solution

Nýherji went through an extensive RFQ process to select a new network supplier that could address its comprehensive set of technical and business requirements. After an exhaustive review of responses, it recognized that Juniper offered the most robust and future-proof solution to meet its goals, including SDN adoption and VMware NSX platform integration.

Juniper Networks® QFX Series switches are designed to consume the lowest possible power while optimizing space, thereby reducing data center operating costs, which is one of Nýherji's major business offerings to its customers.

"We spoke with all the major networking vendors," Sigmundsson says, "and Juniper was the one that ticked all the boxes. It was particularly important for us not to be locked into a proprietary solution, and Juniper has a long track record of advocating and implementing open network solutions. Additionally, we saw great benefits from Juniper's proven integration with VMware's NSX."

Nýherji built out its new network and moved towards its goal of creating the first SDN core network in Iceland using several Juniper Networks platforms, deployed in alignment with MetaFabric™ architecture. It used the highly resilient Juniper Networks MX104 3D Universal Edge Router to create its Internet edge, Juniper Networks QFX5100 line as core MPLS switches, and is deploying Juniper Networks MX240 3D Universal Edge Router in the WAN core in a Virtual Chassis configuration. The network runs across 10GbE interfaces with the option to upgrade to higher speeds in the future, providing investment protection.

The MX Series platforms are virtualization-ready edge routers that offer investment protecting the bandwidth, subscribers, and services scale that is needed to meet the rapidly growing demands of enterprise and service provider networks. The QFX5100 switches are high-performance, high-density platforms designed for top-of-rack, end-of-row, and spine-and-core aggregation deployments in modern data centers. They can be deployed as 1GbE, 10GbE, or 40GbE access devices in a variety of resilient and operationally efficient configurations.

Nýherji is also working on a proof-of-concept demonstration to show VMware's NSX interworking with its new Juniper network. NSX lets Nýherji treat the physical Juniper network as a pool of transport capacity, with network and security services attached to virtual machines with a policy-driven approach.

Business Results

Nýherji has already experienced significant operational benefits from its new network. Juniper's Virtual Chassis feature allows Nýherji to configure and manage two boxes as one, cutting its operational workload in half. Having the same Juniper Networks Junos® operating system across all platforms has simplified the work of its operations team. The team also enjoys Juniper's "commit and confirm" capability, allowing it to automatically roll back to a previous configuration or reconfirm that there has been no human provisioning error.

Nýherji has taken advantage of Juniper's extensive online training facilities, including access to a virtual lab environment, as well as face-to-face technical education. "Juniper's support and knowledge transfer really stands out compared to others in the industry. They have been quick to share their real-world experience with software-defined networking, which helps us architect in preparation for SDN. Working with Juniper has been really positive," Sigmundsson says.

Now the network is connected with tens of gigabits to terabits of capacity, and Nýherji's customers are benefiting from much higher performance without sacrificing reliability. "The virtualized architecture of our Juniper switching platforms, running over a standard Linux KVM hypervisor, means the network operating system operates independent of the hardware, making it more robust and scalable," Sigmundsson says. "We think of ourselves as a reference for our own customers, and now we can show the market how to build open, high-performance, and software-defined networks."

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Next Steps

Nýherji's first goal is to migrate all of its existing infrastructure onto the Juniper network. With a solid network foundation in place, its future plans include a new data center and the introduction of new services, including supercomputing as a service and its own VMware cloud service. With the new network showing positive results, Nýherji now plans to offer Juniper technology to its own customers in the Icelandic market, making it the first Juniper partner located in Iceland.

As Larus Hjartarson, a VMware Certified Design Expert at Nýherji, says, "Juniper's open network architecture, integrated with VMware's NSX, will enable a software-defined network that we can orchestrate in conjunction with the software-defined

data center. SDN will allow us to bring a new generation of VMware-based cloud services to the market in Iceland, reduce our operational costs with network automation, and pass on that business value to our customers."

For More Information

To find out more about Juniper Networks products and solutions, please 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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