

# InterCloud Systems Offers Seamless Cloud Services with MetaFabric Architecture and SDN

## Summary

### Organization:

InterCloud Systems

### Industry:

Managed services provider (MSP)

### Business Challenge:

Double the number of data centers and offer advanced cloud, SDN, and NFV services

### Technology Solution:

- Contrail Networking
- vSRX Services Gateway
- MX Series 3D Universal Edge Routers
- QFX Series Switches

### Business Results:

- Deployed a simple, open, and agile cloud network
- Allowed customers to easily order new network features and services
- Ensured a consistent user experience, independent of location
- Simplified management and lowered TCO

InterCloud Systems provides IT and network solutions to service providers and corporate enterprises through its cloud platforms and professional services. The company offers cloud and managed services, professional services, voice, data, and optical solutions. Its skilled engineering, design, installation, and maintenance teams have built and supported some of the most advanced enterprise, fiber, Ethernet, and wireless networks.

## Business Challenge

Many businesses look to InterCloud Systems for managed services and the cloud to gain IT agility, increase scalability, and lower operational costs. Many of InterCloud's service provider customers want an easy way to offer their end customers high-value, scalable infrastructure services, including firewall, intrusion prevention, and load balancing, as well as basic network connectivity. To accommodate customer demand for innovative cloud and infrastructure services, InterCloud needed to double its data center footprint and upgrade its cloud network to support SDN and Network Functions Virtualization (NFV).

"Businesses are looking to be more and more profitable and want to cut down on costs, but they don't want to give up efficiency," says Aqeel Asim, vice president at InterCloud Systems. "We wanted to be able to help our customers transition their infrastructure even though the cloud is always evolving."

*"We are building technology, not for today, but for the next five years to come and even further out. We wanted to be ahead of the market needs, and together with Juniper, we're able to deliver that path into the future."*

Aqeel Asim, Vice President, InterCloud Systems

## Selection Criteria

InterCloud embarked on a major undertaking to upgrade its overall network infrastructure. First up was to increase its number of data centers from four to eight, in order to create a seamless cloud. Currently, InterCloud operates sites in New York, New Jersey, San Francisco, and Silicon Valley, with plans to add data centers in Atlanta, Boston, Chicago, and London.

"These sites enable a multi-zone cloud architecture, allowing our customers to move their applications and data sets across the country using our dashboard," says Asim. "We want to provide a latency of less than 5 milliseconds to our customers, which is

why we're expanding into those new cities," he says. That way, if a customer has offices in three cities, it can use three different infrastructures and move applications from one zone to another without affecting its business."

InterCloud wanted to implement an open platform that could support cloud and other services without having to make constant upgrades and changes. "Rather than building a traditional cloud platform, we're trying to innovate and think about how a virtual cloud platform would need to be from a client's perspective," says Asim. "We want to know what the pain points are and how we can address them before we take a solution to market."

These goals meant that InterCloud had to look for a technology partner that could deliver it all: a flexible, scalable platform for cloud and other next-generation services.

## Technology Solution

"When people talk about the cloud environment, many people drop the ball when it comes to the network pieces of the cloud," says Ali Fayazi, vice president at InterCloud Systems. "To deliver a superior customer experience, you need a consistent network. InterCloud, together with Juniper, will be able to deliver this experience and make the path to the cloud smoother."

InterCloud uses Juniper Networks solutions as part of its cloud and managed services, and the company is also a Juniper Elite Partner, delivering Juniper-based solutions to its customers. Juniper's reputation for openness and innovation, including in SDN, is critical to InterCloud's ability to deliver innovative solutions to customers.

By employing Juniper Networks® MetaFabric™ Architecture—a simple, open, smart approach to building data centers composed of Juniper Networks QFX Series switching, MX Series 3D Universal Edge Routers, Contrail SDN, SRX Series Services Gateways, and automation and orchestration solutions—InterCloud can accelerate the deployment and delivery of apps within and across data centers. The MetaFabric Architecture delivers an agile and efficient network foundation for today's complex data centers and clouds, reducing the complexity of network deployment, operations, and management. The open architecture maximizes flexibility by integrating with any data center or cloud environment and avoiding vendor lock-in, while network intelligence saves time and improves application performance through analytics and actionable insights.

InterCloud uses Juniper Networks Contrail Networking, a simple, open, and agile SDN solution to automate the creation of virtual networks, which makes it easier to launch advanced services while boosting business agility and revenue growth. Contrail Networking works alongside the CloudStack and OpenStack open source cloud computing platforms used at InterCloud data centers.

MX Series 3D Universal Edge Routers interconnect InterCloud's data centers. QFX Series switches provide a highly scalable

Ethernet fabric system to accelerate performance and simplify the data center architecture with any-to-any connectivity. Juniper Networks vSRX and SRX Series Services Gateways protect InterCloud's data centers. SRX Series platforms deliver outstanding protection, performance, scalability, availability, and security service integration, while vSRX provides advanced cloud security, robust networking, and automated management in a virtual machine format to enable administrators to dynamically deploy and scale firewall protection.

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Aqeel Asim, Vice President, InterCloud Systems

## Business Results

NFV capabilities are part of InterCloud's app store, so customers can quickly and easily add cloud, network, and security services. "They don't have to wait weeks or months to buy a new firewall, load balancer, or router," says Fayazi. "They can just double-click in a template and within minutes those features or functions are available to them, reducing their time to market and allowing them to pay as they go."

Deploying Juniper Networks Junos® operating system across the switching, routing, and security environment has unlocked innovation and simplified operations for InterCloud and its customers as well. "Innovation is limited by a closed, proprietary system, because you might have a brilliant idea but the technology ties your hands in building for the future," says Fayazi. "With Junos OS, we have a single platform that can be used in the virtual environment as well as the physical gear. A customer doesn't have to relearn technology. By having an open platform, we can scale up and down, while the platform adapts to future technologies."

Juniper continues to be an essential element in InterCloud's innovation. "Any service or product that is delivered to the market is only as good as the support system and the people behind it, and we know that Juniper has always been there to support its customers and products, not only to make the sale, but to handhold the customer and take them to the future," says Fayazi.

## Next Steps

With Juniper at the foundation of its cloud services, InterCloud is better positioned for the future needs of its customers. "We are building technology, not for today, but for the next five years to come and even further out," Asim says. "We wanted to be ahead of the market needs, and together with Juniper, we're able to deliver that path into the future."

## For More Information

To find out more about Juniper Networks products and solutions, please visit [www.juniper.net](http://www.juniper.net).

## About InterCloud Systems

InterCloud Systems, Inc. is a single-source provider of end-to-end IT and next-generation network solutions to the service provider and corporate enterprise markets through cloud platforms and professional services. The company offers cloud and managed services, professional consulting services and voice, data and optical solutions to assist its customers in meeting their changing technology demands. Its engineering, design, installation, and maintenance services support the build-out and operation of some of the most advanced enterprise, fiber optic, Ethernet, and wireless networks. For more information, please visit [www.intercloudsys.com](http://www.intercloudsys.com).

## 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](http://www.juniper.net).

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