State Government Deploys Private Cloud to Provide Services to Agencies

The State of Alaska deploys Cisco Unified Data Center solutions to enable shared services through the cloud, increasing operational efficiencies while reducing IT costs.

Executive Summary

State of Alaska

- **Industry:** State and Local Government
- **Population:** 722,718

CHALLENGE

- Delays in delivering information technology services to end-users
- Different departmental standards and procedures
- Overall operational inefficiencies and lack of unified teams within data center

SOLUTION

- Update the data center platform to more quickly provide services
- Deploy Cisco Unified Computing System to simplify data center operations and support cloud computing

RESULTS

- Enabled Alaska to provide hosted services to agencies and organizations statewide
- Increased IT department productivity by streamlining operations
- Increased speed of infrastructure deployment, enabling the State to provide services faster than ever before
- Reduced hardware purchases and power and cooling costs in the data center

Challenge

Alaska is the largest state in the United States by area; however is the least densely populated. Approximately half of Alaska's 722,718 residents live within the Anchorage metropolitan area. Despite its smaller population, the state requires a large information technology (IT) infrastructure to ensure all statewide departments and agencies are connected. Due to infrastructure and operational inefficiencies and widely distributed facility locations, Alaska's systems were taking many months sometimes years to deploy, resulting in a delay in services to its citizens.

In November 2010, Corey Kos became Alaska's enterprise architect, and one of his first actions was to evaluate the state's IT systems and processes. His initial assessment was that the infrastructure was very silo'ed and the model of delivering IT resources facilitated this separation.

"We would start new projects and buy hardware, and then buy more hardware for the next project. We were lacking an efficient use of resources," says Kos. "The biggest challenge was the time to deliver services. We had hardware which needed to be configured and stood up, but we could not get everything ready to deliver services at the rate end-users needed it."

Additional challenges facing the state included different departmental standards and procedures, overall operational inefficiencies and lack of unity in data center teams. Kos' previous experience with virtualization played a critical role in the way he approached Alaska's IT challenges. He looked at virtualization as a start, but believed that the IT team needed to become much more efficient to act as a true IT services provider for the state.

Solution

To begin planning for a new statewide data center and private cloud, Kos consulted independent research from Gartner on the advantages of fabric-based computing and analyzed how different architectures worked together. Cisco partner, World Wide Technology, hosted a hands-on training session on Cisco Unified Computing System™ (UCS™) at the Cisco Executive Briefing Center in Santa Clara, California. The ease-of-use, scalability, and performance convinced the state that Cisco® UCS and FlexPod™ were the best infrastructure options, exceeding the capabilities of commodity hardware.

With a Cisco Wide Area Network (WAN) in place, the state was able to better leverage UCS to provide unified service delivery for all applications to end-users. This end-to-end Cisco network ensures that the data and applications running on the network and through the data center are secure.

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Corey Kos
Enterprise Architect, State of Alaska

The state needed data center infrastructure that would permit greater agility and scale for operations. Cisco UCS delivered. As a unified data center system, Cisco UCS integrates industry-standard x86 blade servers, access and storage networking, virtualization, and management into a single system, eliminating redundant devices and layers of management complexity. A single management interface controls multiple chassis and thousands of virtual machines, reducing the complexity of highly-virtualized environments and thus increasing agility, scalability and employee productivity. The efficient design of Cisco UCS also accelerates and simplifies application deployment with greater reliability and security.

To speed implementation of their new data center infrastructure, the State chose the FlexPod solution. FlexPod is a pre-integrated and pre-tested combination of Cisco UCS computing, VMware virtualization, and NetApp storage products all connected through Cisco Unified Fabric to provide secure end-to-end delivery of IT services. FlexPod scales easily, is optimized for mixed application workloads, and can be pre-configured to support cloud environments.

This deployment marked the first time that Alaska used Cisco servers. Prior to experiencing Cisco UCS Kos was not a fan of blade technology. Kos says, "I thought commodity hardware would be enough, but as I learned more about the efficient design and performance of UCS it just made sense. In particular, the 'wire-once' philosophy stood out. The UCS platform is great because it is so easy to use and make adds and changes. The last time we put in a new chassis it only took ten minutes. Ease of use is priceless and allows us to move as quickly as is necessary in today's environment."

Results

The new data center platform has met all of the objectives Kos set as the State's new Enterprise Architect: decreasing the time to deliver services, increasing operational efficiencies, reducing expenses, and enabling Alaska employees to work more efficiently. Kos says, "Cisco UCS is meeting and exceeding my expectations. Before, from the time we specked the hardware until it was in production was three to six months. Now we can bring two servers a day online and currently have more than 200 servers deployed. The fact that we can deploy two or more servers per day is amazing compared to the prior benchmark." A recent deployment of Microsoft Exchange 2010 was faster than the estimated time to deploy on the former data center infrastructure.

"We are seeing significant cost savings in the hardware and data center space, due to a reduction in the number of server chassis and required cabling," says Kos. Additionally, as a result of the new data center technology the state has seen significant savings from its lower power and cooling bills.

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Product List

DATA CENTER

- Cisco-NetApp FlexPod
- Cisco Nexus 7010
- Cisco UCS 6140 Series Fabric Interconnects
- Cisco UCS Blade Chassis and B Series Blade Servers

Before deploying Cisco UCS the state offered only basic hosting services to clients. The new platform has allowed the state to introduce new models for IT services, allowing departments, agencies and organizations to customize the services they receive from the State and allowing the IT department to provide clients with a wide variety of managed or unmanaged services. "The speed of deployment and wide variety of options provides the various departments and agencies with a new level of satisfaction," says Kos. "As a result, there has been a large increase in the number coming to us for hosting services. We were also able to drop the rate we charge internally for services by nearly 50 percent. I expect that this number will continue to decrease as we increase the number of groups sharing the platform."

Another one of Kos' key goals for the new data center was to increase operational efficiencies across the board. Originally the IT department was extremely siloed by focus, department and agency. By simplifying the management environment using Cisco Unified Data Center platform, Kos streamlined the department making for a more efficient team. Team members were cross-trained so they can work on all aspects of the IT infrastructure, no longer limited to one particular area. "Thanks to UCS our team communicates better with each other on a more cohesive platform," says Kos. Today, with fewer manual deployment tasks and less integration work, Kos and his team have more time to focus on building new services and applications to help serve the citizens of Alaska.

Next Steps

The speed of the Unified Data Center infrastructure has actually led to an additional and unexpected benefit—the ability to accelerate migration of the data center to a new location, which is expected to decrease data center costs even further. Before implementing FlexPod, migration was a goal, but had not yet been scheduled. After completing a full data center failover, the team is now so confident in their new infrastructure, they have decided to press forward with an immediate migration.

For More Information

Find out more about the Cisco Unified Data Center platform at http://www.cisco.com/go/datacenter or Cisco UCS servers at http://www.cisco.com/go/UCS.