State Increases Efficiency through Department Virtualization

State of Indiana implements Cisco Unified Computing Systems (UCS) for streamlined workflow.

Executive Summary

State of Indiana, Information Technology Services Department
- **Industry:** State Government
- **Location:** Indiana

CHALLENGE
- Increase virtualization in the Office of Technology
- Find cost-effective way to split out various traffic types
- Implement scalable system to support growth without piling on servers

SOLUTION
- Evaluated offerings from four major vendors
- Chose and installed Cisco Unified Computing Systems
- Initiated in-house upgrades and additional implementations

RESULTS
- Over 50 percent virtualization
- Rapid response to several surges in demand
- Paved way to virtualize more technologies in department because of success and flexibility of UCS

Challenge

The State of Indiana is the 16th most populous state in the United States and is located in the Midwestern and Great Lakes region. The Indiana Office of Technology's mission is to provide cost-effective, secure, consistent, and reliable enterprise technology to its partner agencies throughout the state. The office strives to bring the best and most appropriate technology solutions to bear on state technology applications as well as to improve and expand government services provided electronically.

Although the department did not have serious issues with its previous environment, the department kept getting word that some better, more efficient options would help the department streamline efforts. "For a while we were unaware that there were better options than what we were running at the time," says Bob Clarke, manager of enterprisesServices at the Indiana Office of Technology. "Once we began exploring other options, we realized that we weren't operating to our highest standards so we put in the time to explore what other options were out there."

Once the state's IT department realized that better options were available, it began to see opportunities and reasons to move ahead with implementation of new technologies. Traffic was increasing in the servers, and the IT department wanted to separate management and guest traffic. The department was also experiencing long gap periods for installation of adaptors and such, because it would have to constantly order hardware and wait for the components to be shipped and delivered before making adjustments within the system. Being very experienced with virtualization and taking a look at its current technologies, the department quickly realized that further hardware virtualization was the route to explore.

Solution

Because no glaring problems occurred in Indiana's previous environment, moving forward to invest in new products required quite a bit of effort on the front end. "It was a tedious process to convince upper management to change the standard so we could invest in another platform," says Clarke. "Management had us look into IBM, HP, Dell, and Cisco blades. We talked to and had site visits from each vendor about offerings and cost to make sure we were fully exploring all options."

The State of Indiana ended up choosing the Cisco Unified Computing System™ (UCS®) both for consistency in the data center but also because of the benefits that UCS could offer. Cisco® UCS allows Indiana to unify computing, networking, management, virtualization, and storage access into a single integrated architecture. In addition to decreasing the number of devices that the IT department had to purchase, deploy, and maintain, the IT department was impressed with the service profiles, the anonymous nature of the blades, and the ability to have another level of virtualization.

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Product List

DATA CENTER
- Cisco Unified Computing System (UCS)
- 6196 and 6248 Fabric Interconnects
- 5108 Chassis
- B230M2 Blades
- Cisco Nexus 5548 Switches
- Cisco Nexus 7010 Switches
- Cisco Nexus 1000v Switches
- Cisco MDS Multilayer Director Switch

COLLABORATION
- Cisco UC 9.1
- CUWL Pro and Std Licensing
- Cisco TelePresence®
- SX20, MX3000, TX9000, and EX90 endpoints
- VCSControl and VCSExpressway
- Cisco Webex®
- Cisco Contact Center Express and Enterprise

LAN SWITCHING
- Cisco Catalyst 2960, 3560, 3750, 4500, 6500, and ONS Switches

ROUTING
- Cisco Catalyst 1900, 2900, 3900, and 7600 Series Switches

WIRELESS
- Cisco WiSM and 5800 Series Controllers
- Cisco 1131 and 1600 APs

SECURITY AND MANAGEMENT
- Cisco 5505, 5520, 5540, and 5550 ASA Firewalls
- Cisco IPS 4240 Intrusion Prevention Sensor
- Cisco Secure ACS
- Cisco ACE
- Cisco Prime Infrastructure/LMS

"Once Cisco came in to help us set it up, we got things going right away," says Clarke. "I remember Cisco walked us through all the interfaces at the beginning, but now we don't spend much time inside the UCS manager, because things are running smoothly."

Cisco assisted with the initial setup, and the IT department took care of all upgrades and additional implementations in-house. The department built physical and virtual servers to be identical, which allows the department to be flexible. Cisco UCS stood out from the other systems, because it was able to pass the hardware and service profiles through and still be able to save the state of the server. The system takes the department to another level of virtualization: hardware virtualization. UCS gives it the opportunity to grow quickly without having to deal with a lot of cabling.

Results

Since the upgrade, Indiana's IT office has been completely modernized. The Cisco UCS solution allows the office to rapidly respond to surges in demand and has paved the way to getting more applications virtualized. "The implementation of UCS has allowed us to be more agile," says Clarke. "We have been able to build both physical and virtual servers to be identical, which has given us a lot of flexibility and cut down significantly on implementation time."

In addition to a streamlined workflow within the department, the agencies that IT works with have experienced a greater ease-of-use because downtime and service issues have significantly decreased since the implementation. In the event that a service issue arises, the IT department has more time to respond because the technology "health check-ups" are coming back clean, allowing the department staff to focus more on responding to the few help tickets that come in.

Cisco UCS has also lifted a burden from the staff in regards to cabling. "I am not sure that we would have been able to support the growth that we have seen with the way were cabling in the past," says Clarke. "We now have the ability to fit a ton of resources into a small area. That's one of the things that we have all really enjoyed is the ability to grow our capabilities without having to search for more physical space."

The State of Indiana is currently hovering just above 50 percent virtualization and is hoping to hit 90 percent in the near future.

For More Information

To find out more about the Cisco Unified Computing System, go to: http://www.cisco.com/en/US/products/ps10265/index.html.