Texas County Deploys New Data Center to Optimize Operations

Denton County deploys Cisco Unified Computing System to increase data center scalability and compute power.

Executive Summary

Denton County

- **Industry:** SLG
- **Location:** Texas
- **Number of IT Employees:** 50

CHALLENGE

- Support increased demand for data center space
- Build new data center with latest technology
- Increase physical space and cooling capacity in data center

SOLUTION

- Deployed pilot program to test new technology
- Updated data center technology in both data centers

RESULTS

- Improved IT team productivity due to new system's ease of use
- Increased compute power and scalability
- Enabled redundancy and disaster preparedness options

Challenge

Denton County is located in Texas, and is part of the Dallas–Fort Worth metroplex (including small parts of both cities). The county is also one of the fastest-growing in the United States. As of the 2010 census, its population was 662,614.

IT has played an increasingly important role in county operations and business. Today approximately 50 people are employed in the IT department. This number has doubled since 2011 as the team has taken on more responsibility such as records management.

The biggest challenge that the IT department faced is keeping up with the rapid growth of the county and demand for network services and servers. In the past, the IT team would build a few new servers annually; however, it was a long and arduous process. This way of adding servers did not allow them to keep up with demand.

In today's government environment, jobs are dependent on IT services, and IT is now mission critical. This means that the IT team must be able to ensure the reliability and availability of servers. The IT team was running out of physical space in its data center and did not have sufficient cooling capacity to add more servers.

The team began researching building a new data center and installing the latest data center technology to ensure that space and reliability would never be an issue for the Denton County staff.

Solution

Once the county decided to build a new data center, the IT team began reading white papers and doing research on the latest technology. The team also attended Cisco Live to learn more about Cisco® data center solutions and what would be needed from a network infrastructure perspective. The team also visited the data center in Allen, Texas to see how it was built and travelled to the Cisco campus in Richardson, Texas to look at all of the possibilities.

"It came down to getting the most technology for our money and the ability to easily expand the core infrastructure to utilize new technologies. As we grow, the data center gives us the ability to look at new technologies to drive efficiencies. The technology helps us meet daily and future demands from citizens and employees," says Don Click, senior infrastructure manager for Denton County.

Prior to updating the data center, the county conducted a small pilot demonstration of Cisco Unified Computing System™ (UCS®). UCS, a unified data center, eliminates redundant devices and layers of management complexity and creates a secure private cloud environment. The efficient design of Cisco UCS also accelerates and simplifies application deployment with greater reliability and security.

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Kevin Carr, director of technology services, Denton County

Product List

Data Center

- Cisco Unified Computing System (UCS)
- Cisco Nexus 7000 Series Switches
- Cisco Nexus 5000 Series Switches
- Cisco UCS B200 M3 Blade Server
- Cisco UCS C210 M2 General-Purpose Rack Server
- Cisco 5100 Series Blade Server Chassis

The IT team immediately appreciated the functionality of the technology and the ease of manipulating the virtual machines. "The overall ability to do what they needed to do was made easier using the Cisco UCS platform. The pilot became a key catalyst that allowed the IT team to deploy UCS in its new data center and for all virtual environments. The team was particularly impressed with how easy it is to bring up and manage servers," says Kevin Carr, director of technology services for Denton County.

The initial plan was just to use Cisco UCS in the county's redundant data center; however, after seeing the speed and user interface of UCS, the county moved all production services to it and still has considerable extra capacity.

Results

The IT team and Cisco had only approximately 45-60 days to bring the data center online and make sure that all the bugs were worked out. This deadline put a lot of pressure on the team to get everything operational quickly. However, despite this tight deadline, the data center was up and running in just two weeks. This was a big accomplishment for the IT organization.

The IT team saw immediate benefits following the deployment of UCS. For example, the team was able to redesign and deploy its network in a couple of days, whereas it used to take a couple of months. "Cisco has done a good job of making certain that the technology talks to one another. This makes the management and integration of the components much easier," says Carr.

Having the new data center in place has enabled the IT team to apply more redundancy and disaster recovery options to help ensure the security of the data. The IT team is no longer worried about running out of capacity, which allows for easier operations with the county staff. In addition to new, built-in redundancies and space, the speed and robustness of the network are now significantly improved from what it was two years ago.

"The people I talk to are astounded by the fact that we put that much compute power in the data center. I want us to be able to handle anything that comes down the line for the next 10 years without having to get a new data center. We do not get funding that often, so it is important that our new technology lasts for a long time and keeps up with future demands," says Carr.

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.