

Proven Data Center Infrastructure Wins More Customers for CONEXIS



Executive Summary

- **Customer Name:** CONEXIS
- **Industry:** Healthcare benefits administration
- **Location:** Irving, CA
- **Number of Employees:** 500

Challenge

- Deliver on customer SLAs
- Build resilience and redundancy of data center systems
- Reduce IT costs and maintenance

Solution

- Deploy Cisco Unified Fabric to deliver virtualized computing, cohesive networking, and tight security

Results

- Met SLAs, while enhancing security infrastructure to satisfy HIPAA requirements
- Cut server and switch count by over 80 percent, and reduced time to implement server from weeks to 15 minutes
- Helped win new business by adopting advanced technology solutions

Cisco Unified Fabric provides state-of-the-art basis for business growth and customer confidence.

Challenge

Every business needs a solid IT and networking infrastructure, and when downtime costs money, infrastructure matters even more. CONEXIS, a healthcare benefits administrator, guarantees service-level agreements (SLAs) to its customers. Its call center, networks, and data center need to deliver complete reliability so CONEXIS' agents can always pull up the information they need to do their jobs.

More than 25,000 organizations of all sizes, from local businesses to many of the largest employers in the United States, trust CONEXIS to administer their benefits programs. In addition, the company has recently expanded its services to support state healthcare exchanges.

The need for a world-class infrastructure drove CONEXIS to migrate from a few Cisco components to comprehensive Cisco® Unified Fabric and Unified Communication solutions. From its data center to its telephony platform, CONEXIS has been swapping out other technologies for Cisco solutions, including advanced Cisco Unified Computing System™ (UCS®) solutions, to take advantage of growth opportunities in its fast-changing market. In particular, CONEXIS chose to cut costs and significantly simplify provisioning and maintenance by migrating from the Avaya PBX platform to the VoIP-based Cisco Unified Communications Manager (CallManager) running on Cisco UCS servers.

“Cisco Unified Data Center solutions deliver rock-solid infrastructure and seamless support, so we don't get finger-pointing between vendors,” says Kenya McDaniel, senior director of IT infrastructure at CONEXIS. “Whenever Cisco releases a new product, we know they've tested it and stand by it with top-quality support.”



“Most customers tell us the prime reason they selected us was our infrastructure: its stability, capability, and scalability, along with the fact that we adhere to industry best practices ... Cisco data center solutions help ensure our success and the success of our customers.”

– Kenya McDaniel
Senior Director of IT
Infrastructure
CONEXIS

Solution

With its technology partner, Netera, CONEXIS deployed a proven, Cisco Unified Fabric environment that smoothly integrates computing, networking, security, management, and storage.

CONEXIS leverages VMware for server virtualization. It began using six physical HP servers as its ESX hosts and migrated to three UCS 5100 Series Blade Server Chassis, including one at each of its data centers, with full Cisco UCS B200 Blade Servers. The UCS servers run CONEXIS' entire server infrastructure: everything from Microsoft Exchange to Cisco CallManager to proprietary benefits-management applications. CONEXIS still has several SQL servers that it does not want to virtualize, so it physically racks and cables them using Cisco Nexus® 2000 switches.

Cohesive fabric of network connections

Migrating to the Cisco Nexus 7000 Series Switches as its core switching platform allowed CONEXIS to get 20 GB of uplink bandwidth from each floor to the network core with 20 times the bandwidth of its previous system. Cisco UCS 6100 Series Fabric Interconnects provide a fibre-based management and communication backbone that connects all chassis and blades into a single, highly available management domain. This fabric also connects to Cisco 5508 wireless LAN controllers, Cisco 1200 Series Access Points for wireless support, and Cisco 2700 Wireless Location Appliances, and provides SAN connectivity for all blades within the domain.

At its collocation facility, CONEXIS houses public-facing resources behind Cisco ASA Adaptive Security Appliance firewall network edges, with Cisco Nexus 5000 Series Switches acting as the termination point. CONEXIS also uses Cisco Nexus 3000 Series Switches as an access layer or termination point for its remaining physical servers and uplinks those to Nexus 5000 switches and then to Nexus 7000 switches.

Cisco CallManager connects to the data center using Cisco Nexus 1000V Series Switches, virtual machine access switches operating inside the VMware ESX hypervisors.

Security from data center to desktop

As a healthcare administrator, CONEXIS must comply with U.S. Health Insurance Portability and Accountability Act (HIPAA) requirements and encrypt all data in motion. Using the Cisco Nexus platform, CONEXIS implemented Cisco TrustSec®, an intelligent access control solution that provides switch port-level encryption to protect data confidentiality and integrity over the LAN.

CONEXIS would have had to encrypt sensitive data on users' hard drives, but instead it uses Cisco Virtual Desktop Infrastructure (VDI), leveraging thin clients to keep data in the data center. Today, 70 percent of CONEXIS' 500 users work with Citrix XenDesktop virtual desktops and Citrix XenApp virtual applications, smoothly supported by Cisco UCS. Approximately 220 employees are using thin clients from HP and Wyse. The company's laptop users only have wireless access, which automatically encrypts their network traffic. Traditional desktop users, such as developers, use Cisco AnyConnect® secure mobility client as an internal VPN into the ASA firewall. Staff can also access virtual resources on their own iPhones or iPads using their corporate credentials.

To further enhance its security, CONEXIS recently adopted the Cisco Identity Services Engine (ISE), a next-generation identity and access control policy platform. “ISE is allowing us to do a lot of things in security that we've always wanted to do but just couldn't, because



those processes were manual,” says McDaniel. “ISE provides an automated identity solution that has increased our visibility into our network, just in time to help us handle BYOD demands.”

Decreasing need for system management

CONEXIS manages its B200 Blade Servers with Cisco UCS Manager, and leverages it to add new connectivity, as it did during the migration to Cisco CallManager and the 1000V switch. But for the most part, CONEXIS rarely needs to use UCS Manager: the UCS infrastructure reduced the number of switches per floor from nine switches to two Cisco Catalyst® 4500 chassis and just two Nexus 2000 switches for its remaining physical servers. This new smaller footprint greatly minimizes network management requirements.

CONEXIS built its own storage infrastructure, using the Cisco Unified Fabric and NetApp FAS3240 storage systems for its SAN. The result is almost identical to the FlexPod for VMware solution that Cisco and NetApp now offer.

Results

Reducing complexity and cost by virtualizing on UCS

Before moving to an all-Cisco infrastructure, CONEXIS used to need a month or two to get a new server ordered and installed. “Now, it’s literally 15 minutes for us to stand up another virtualized server,” says McDaniel. “End-to-end connectivity and the scalability with the UCS interconnects mean I can add an additional 20 chassis without having to troubleshoot connectivity issues or even bring on new servers.”

In addition to saving time, Cisco UCS solutions save CONEXIS money. By using the Nexus 7000 to create a virtual device context (VDC), CONEXIS was able to halve the number of switches in its data center. At its colocation facility, it achieved a 14:1 reduction.

On the server side, CONEXIS had already virtualized on Dell and HP servers, but when it migrated to the UCS platform, it was able to halve its physical server footprint down to three units by putting more memory in the blades, as well as achieve 98 percent virtualization.

“The increased memory density and ability further virtualize our data center enabled us to significantly reduce our licensing costs, while gaining additional capacity,” says McDaniel. “It’s been a strong win in both the cost savings and operational flexibility columns for our team.”

Scaling up service, not maintenance needs

With Cisco UCS, redundant power and connectivity deliver a rock-solid solution with very few moving parts. “We have not had an outage in our UCS environment since we stood up the UCS chassis, so we’re not losing business, time, or money,” says McDaniel.

Though McDaniel’s team comprises only a senior network administrator, a junior LAN engineer, and two help desk staff, it maintains 500-plus virtual servers, two physical data centers, a disaster recovery site, SAN, email connectivity, and all the other elements in an enterprise network. The team has not had to touch the Cisco fabric interconnects since they were set up more than two years ago.

And though the server footprint has grown threefold since the UCS implementation, the team has not had to go back and re-cable anything, add connectivity, or take out old equipment. Even maintaining security is easy: Cisco TrustSec relieves IT staff of the burden of retrofitting and encrypting at the application layer.

Product List

Data Center Solutions

- Cisco UCS B200 M2 Blade Servers
- Cisco UCS 6100 Series Fabric Interconnects

Routing and Switching

- Cisco Nexus 7000, 5000, 3000, 2000, 1000V Series Switches

Security

- Cisco AnyConnect Secure Mobility Client

Wireless and Mobility

- Cisco 5508 Wireless LAN Controller
- Cisco 1200 Series Access Point
- Cisco 2700 Wireless Location Appliance

Network Management

- Cisco Unified Communications Manager (CallManager)
- Cisco Unified Computing System Manager

Security and VPN

- Cisco Identity Services Engine (ISE)
- Cisco ASA Adaptive Security Appliance

Applications

- VMware
- Microsoft Exchange
- Citrix XenDesktop and XenApp

Storage

- NetApp FAS3240

Saving resources and winning new business

CONEXIS went from using 87 percent of its uninterruptible power supply (UPS) resources to 42 percent, thanks to virtualization. For example, just by switching from the Avaya phone system to Cisco CallManager, McDaniel's team was able to power off 25 Dell 2U servers (two full racks) and run the phone system on two new blades slotted into existing UCS chassis.

CONEXIS has won several new major clients thanks in large part to the Cisco infrastructure. Prospects made onsite visits to see CONEXIS' infrastructure and satisfy themselves that it had the capacity and scalability to handle their work and then gave CONEXIS the business.

"Most customers tell us the prime reason they selected us was our infrastructure: its stability, capability, and scalability, along with the fact that we adhere to industry best practices all the way down to our Cisco CallManager solution," says McDaniel. "Cisco data center solutions help ensure our success and the success of our customers."

For More Information

To find out more about Cisco Unified Data Center, please visit:

www.cisco.com/go/unifieddatacenter.

To find out more about Cisco Unified Computing System (UCS), please visit:

www.cisco.com/go/ucs.

To find out more about Cisco Nexus, please visit: www.cisco.com/go/nexus.



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