

# New Data Center Deployment Enables Business Growth



## Executive Summary

### Consert Inc.

- Energy
- San Antonio, Texas
- 60 employees

### Challenge

- Support new commercial product deployment and growing customer base
- Manage real-time load data in high-volume, high-transaction environment
- Simplify data center management with unified console

### Solution

- Cisco Unified Computing System (UCS) provides scalable, reliable server platform
- Cisco UCS B230 Blade Servers offer best-in-class virtualization and expanded memory
- Cisco UCS Manager and integration with VMware, NetApp ease management

### Results

- Integrated smoothly with existing data center components
- Freed up management time, allowing focus on more critical operational issues
- Enabled business growth with new platform for product commercialization

Consert Inc. uses Cisco Unified Computing System to expand and optimize its real-time load management solutions.

## Challenge

Headquartered in San Antonio, Texas, Consert Inc. develops real-time load management solutions that help electric utilities and consumers set, monitor, and reduce energy consumption. Since it was founded in 2008, the company has grown substantially, nearly doubling its staff in the latter half of 2010 alone.

With a number of pilot programs taking place throughout the country, Consert began preparing for the deployment of its first commercial product. It realized, however, that a crucial component of this new offering was not quite ready: the data center. “We have thousands of endpoints that communicate in real-time to our remote data center in Baltimore,” says Todd Horsman, Consert’s vice president of operations. “We needed to be able to manage that data in large volumes, in a highly transactional, highly available environment.”

The company also needed to prepare for expansion and heavier demands on its existing infrastructure. “Our data center will eventually need to support millions of houses and megawatts of electricity on the grid,” says Eron Nicholson, a senior engineer at Consert. “We needed hardware that was reliable, scalable, and secure enough to support both our users and the integrity of our data.”

Consert’s previous environment not only lacked the necessary RAM and processing power, it was also hard to manage. “We could not expand without adding another whole chassis, which required more networking and storage,” adds Nicholson. “Our goal was to find a solution that offered unified management, as well as the ability to start with a minimal deployment.”



“The Cisco UCS platform has enabled Consert to go to that commercial level. As our company, as well as our load resources, continue to grow in the marketplace, I’m confident that UCS will continue to move us forward and take us where we need to go.”

– **Todd Horsman**,  
Vice President of  
Operations, Consert Inc.

## Solution

Cisco Unified Computing System™ (UCS™) offers a robust, easily manageable server platform perfectly suited to Consert’s needs. Not only is Cisco® UCS capable of supporting a significant memory bank, which is critical because Consert’s transactions are all memory-bound, it also offers the most competitive cost per unit. “The Cisco UCS B230 Blade Servers had the best combination of number of processing cores and amount of memory that we could find, both for the price and density within the chassis,” says Nicholson.

When Consert’s team began moving forward with its implementation, they were amazed by how quick and simple setup and management are with Cisco UCS Manager. “We were able to get the racks up, configured, and actually have virtual machines running within about three days from when we took the products out of the box,” says Nicholson. A mere two weeks later, the entire data center environment was up and running. “I’ve never before in my career been able to go from bare metal to application deployment in anything close to that timeframe,” says Horsman.

Consert now has a fully redundant data center environment, backed by a Cisco UCS multilink configuration. All 16 of its Cisco UCS blade servers run VMware as well as NetApp products. The Cisco affiliation with these virtualization and storage technologies made integration particularly smooth, notes Nicholson. With low-latency, lossless 10-Gigabit Ethernet, Cisco UCS also provides an easily scalable unified networking fabric for the company.

## Results

One of the most notable benefits of Consert’s Cisco UCS deployment has been simplified server management. “In the past, we had some challenges with the overall maintenance of the blades ... where UCS, in contrast, has been much more intuitive. It manages itself much better,” says Horsman. Now that the team can manage all of its data center components together in Cisco UCS Manager, Consert has more time to address critical operational issues.

Cisco UCS is also optimally designed for Consert’s fully virtualized, memory-bound environment. “All the real-time telemetry data coming in from our endpoints can now be made available to us in memory, which is phenomenal,” says Horsman. “The configuration and supportability of the UCS platform, as compared to individual chassis, have also been a great benefit to us.”

Both Horsman and Nicholson are thrilled to have a server platform that they can now easily scale along with their business. “The Cisco UCS platform has enabled Consert to go to that commercial level,” says Horsman. “As our company, as well as our load resources, continue to grow in the marketplace, I’m confident that UCS will continue to move us forward and take us where we need to go.”

## Product List

### Data Center Solutions

- Cisco Unified Computing System (UCS)
  - Cisco UCS B230 M1 Blade Servers

## Next Steps

Consert is currently deploying its new pilot customers onto the UCS platform. With a number of deals continuing down the pipeline, the team eventually anticipates having customers that will require their own hardware in the Concert system. Says Nicholson, "We'll be able to add another dedicated chassis and segment traffic so that customers can feel secure knowing that their data is stored separately. With Cisco UCS, we're now prepared for any type of situation."

## Technical Implementation

In addition to the Cisco UCS, the data center contains four quadrants with 540 server racks apiece. Each quadrant connects to the core through a pair of Cisco Nexus 7010 Switches at the distribution layer. Within each quadrant, rows contain ten pods with three server racks apiece. Each pod has one or two Cisco Nexus 2000 Series Fabric Interconnects, which aggregate into a pair of Cisco Nexus 5000 switches for each row. The Cisco Nexus 2148, 2248, and 2232 Fabric Extenders connect to servers using a wide variety of fibre-optic cables as well as 1000BaseT and Twinax copper cables. IBM blade servers connect to the Cisco Nexus 5000 by way of Cisco Nexus 4000 Blade Switches.

## For More Information

To find out more about Cisco Unified Computing, visit: [www.cisco.com/go/ucs](http://www.cisco.com/go/ucs).

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