

IT Infrastructure Provider Builds High-Performance Data Center

Cervalis implemented Nexus platform for industry-leading customer service and operational excellence.

EXECUTIVE SUMMARY
<p>CERVALIS</p> <ul style="list-style-type: none"> • Data Center Service Provider • Shelton, Connecticut • 70 Employees
<p>BUSINESS IMPACT</p> <ul style="list-style-type: none"> • Preserved existing operational expertise • Differentiated service by enabling higher application performance • Gained flexibility to meet different customer requirements • Prepared to offer new types of managed services



Business Challenge

Cervalis provides IT infrastructure solutions, including managed hosting, managed security, managed storage, networking and telecommunications, business continuity and rapid recovery, and collocation. The company locates its data centers in strategic locations in the northeastern United States to offer customers high performance, high availability, and business resiliency.

To handle business growth, Cervalis decided to build a third 150,000-square-foot data center in Passaic County, New Jersey, supplementing the existing facilities in Dutchess County, New York and Stamford, Connecticut. “We wanted a scalable switch platform that we could rely on for many years,” says Robert Carlson, vice president of solution design and delivery for Cervalis. “We also needed the technology to support emerging customer requirements, such as high performance for applications distributed across multiple servers, replicating virtual machines between data centers for business continuity, and hosting virtual desktops.”

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—Robert Crespi, Vice President and Chief Information Officer, Cervalis

Solution and Results

Cervalis found its solution in Cisco Data Center Business Advantage solutions, including the Cisco Nexus® platform. “Cisco Nexus switches deliver leading performance and reliability, and our IT teams don’t have to learn an entirely new operating system because the NX-OS is very similar to the Cisco IOS Software they already know,” says Robert Crespi, vice president and chief information officer at Cervalis.

In the New Jersey data center, Cervalis implemented a Cisco® Nexus 7000 Switch in the core. In each customer server cage, Cervalis provisions the Cisco Data Center Business Advantage solutions that meet the business need, such as Cisco Nexus 5020 Switches, Cisco Nexus 2248 Fabric Extenders, Cisco ACE 4710 Application Control

Engines for SSL load balancing, and Cisco ASR 1000 Aggregation Services Routers for Cervalis' managed security service. A Cervalis customer that offers a web service using multiple database servers, for example, connects all servers through the same Cisco Nexus 5020 Switch using Cisco Nexus 2248 Fabric Extenders. "Without the Cisco Nexus 2248, providing enough ports to meet the customer's need would have been far more expensive," Crespi says. Cervalis also uses Cisco Nexus 5020 and 2248 switches in its other two data centers, while continuing to use the existing Cisco Catalyst® 6509 Switches at the core.

Main benefits of the Cisco Nexus platform for Cervalis include:

- **Extension of staff expertise:** Cervalis IT staff are very proficient with the Cisco IOS Software, and the NX-OS used in Cisco Nexus switches is so similar that the staff needed no additional training. "Customers choose Cervalis not only because of our performance and availability, but also our operational excellence," says Crespi. "Using the Cisco Nexus platform in our new data center enables us to preserve our existing expertise, which our customers especially appreciate when we're helping them troubleshoot in the middle of the night."
- **High application performance:** Server-to-server communications is becoming more popular, increasing the importance of network bandwidth, according to Carlson. With the new Cisco Nexus architecture, customer servers communicate at high speeds and connect to the core over 10 Gigabit Ethernet.
- **High availability:** Advanced technology in the Cisco Nexus platform helps ensure application availability. For example, using the Cisco Nexus switch In-Service Software Upgrade (ISSU) capability, Cervalis can upgrade switch software without interrupting service to customers. In addition, the virtual PortChannel (vPC) feature of Cisco Nexus 7000 and 5000 Switches provides redundancy and much faster recovery from link failures than possible with Spanning Tree Protocol. In Cervalis' other data centers, the Virtual Switching System (VSS) capability of Cisco Catalyst Switches provides similar benefits.
- **Cost savings:** The high port density of the Cisco Nexus 5000 and 2000 platforms reduces the number of switches that Cervalis needs to purchase, manage, and power. The company will reduce costs further when it begins using the Fibre Channel over Ethernet (FCoE) support in the Cisco Nexus 5020 Switches to consolidate separate cabling and switch ports to connect servers to the data network and storage.
- **Foundation for new managed services:** Cervalis plans to take advantage of the Cisco Nexus platform to offer new services, such as a data replication service between data centers. "The Cisco Nexus platform not only supports virtualization within our data centers, but also between our data centers," Carlson says. The enablers are Cisco virtual PortChannel (vPC) and Overlay Transport Virtualization (OTV) technology on the Cisco Nexus 7000, which move customers' virtual machines between data centers without using problem-prone Spanning Tree Protocol. Another planned service is virtual desktop hosting, which will enable Cervalis customers to reduce costs by purchasing inexpensive thin clients instead of PCs with integrated storage.

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—Robert Carlson, Vice President of Solution Design and Delivery, Cervalis

For More Information

To find out more about the Cisco Nexus family of switches, visit: www.cisco.com/go/nexus

To find out more about Cisco Data Center Business Advantage solutions, visit: www.cisco.com/go/dc



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