


Building Materials Company Virtualizes SAP Applications

Pacific Coast Building Products operates its SAP applications on Unified Computing System with VMware.

EXECUTIVE SUMMARY
<p>Pacific Coast Building Products</p> <ul style="list-style-type: none"> • Manufacturing and Distribution • Rancho Cordova, California • 3000 Employees 
<p>Challenge:</p> <ul style="list-style-type: none"> • Build highly available SAP application environment • Minimize operational costs • Increase business agility
<p>Solution:</p> <ul style="list-style-type: none"> • Implemented Cisco Unified Computing System and provisioned server blades as VMware ESX hosts • Deployed SAP NetWeaver Portal applications and SAP BusinessObjects as virtual machines
<p>Results:</p> <ul style="list-style-type: none"> • Increased redundancy of SAP application environment • Decreased per-chassis cable count from 15 to 4 • Accelerated server provisioning from one week to 30 minutes



Challenge

Pacific Coast Building Products, Inc. sells building products for residential, commercial, and industrial construction to builders and contractors in the western United States and Canada, and also provides installation and transportation services. The family of companies includes Basalite Concrete Products, Pabco Building Products, Pacific Coast Building Services, Pacific Coast Supply, Pacific Coast Jet Charter, and Pacific Coast Transportation Services.

Information technology (IT) is integrated throughout the Pacific Coast enterprise, helping to increase the efficiency of business processes ranging from product design and manufacturing to sales and operations. A centralized IT organization provides services for Pacific Coast's 80 offices throughout the western United States, which connect to the main data center over a Multiprotocol Label Switching (MPLS) network. The company relies on a variety of SAP applications, including the SAP NetWeaver Portal applications and SAP BusinessObjects.

To conserve space and simplify management, the IT team has virtualized approximately 90 percent of the company's Microsoft Windows servers, including those used for SAP applications. When it came time to replace the blade servers, Pacific Coast sought a new platform that would support growth. "With our previous virtualization platform, every new server we added required ten 1-Gigabit Ethernet cables and five Fibre Channel cables, which increased costs and complicated troubleshooting," says Matt Okuma, enterprise architect, Pacific Coast Building Products. "We wanted a platform that would simplify provisioning and management of our SAP applications in a virtualized environment."

“With our previous platform, cabling and configuring a new VMware ESX server took a week or two. With the Cisco UCS, we can provision a new server for SAP applications within 30 minutes.”

—Matt Okuma, Enterprise Architect, Pacific Coast Building Products

Solution

After evaluating several leading computing platforms, Pacific Coast selected the Cisco® Unified Computing System™ (UCS), which combines compute, network, storage access, and virtualization in a cohesive system managed as a single entity. “We especially liked the wire-once concept of the Cisco UCS,” says Okuma. “We also liked the integration between Cisco UCS Manager and VMware vCenter, which would give us visibility into the individual virtual machines on each blade server.”

The Cisco UCS is currently configured with two fully redundant chassis, each containing two Cisco UCS B200 M1 server blades. The four server blades currently support 75 virtual machines. Both chassis, plus any new chassis the company adds in the future, connect to the Ethernet network and the IBM XIV Fibre-Channel storage system through a single pair of Cisco 6100 Fabric Interconnects. This arrangement avoids the costs of separate cables, network interface cards, host bus adapters, and switch ports for each chassis.

Applications that currently operate as virtual machines on the company’s Cisco UCS include:

- SAP NetWeaver Portal applications, including Employee Self-Service Portal, Manager Self-Service, and E-Recruiting
- SAP BusinessObjects
- SAP Virsa
- SAP Solution Manager
- Document imaging system
- Timekeeping applications

Pacific Coast moves virtualized SAP applications to the Cisco UCS using VMware Storage vMotion.

Results

High Availability for SAP Applications

Compared to separate physical servers, the Cisco UCS helps to increase SAP application availability. “During testing, we were not able to make the Cisco UCS fail, even after shutting down individual power supplies, fans, fiber connections, and network interface cards,” says Okuma. Factors contributing to high availability include:

- **Redundancy:** The virtualized 10 Gigabit Ethernet connections on the Cisco UCS provide more throughput than the company’s physical VMware ESX servers, and more redundancy, increasing application uptime for SAP applications.
- **Email notification of system events:** The IT team receives emails when critical events occur, a feature of the Cisco UCS Call Home feature. Automated notification accelerates awareness and response of issues that could otherwise affect the user experience.
- **Visibility into individual virtual machines:** Visibility into performance of individual virtual machines helps the IT team more quickly identify and remediate application performance issues.

Accelerated Provisioning

As Pacific Coast continues to grow, the IT department can very quickly provision new application servers. “With our previous platform, cabling and configuring a new VMware ESX server took a week or two,” says Okuma. “With the Cisco UCS, we can provision a new server for SAP applications within 30 minutes.”

One source of the increased efficiency is simplified cabling. In the previous environment, each blade enclosure required ten Gigabit Ethernet cables and five Fibre Channel cables, each of which had to be painstakingly labeled. Now, all server blades in all Cisco UCS chassis connect to the data and storage networks through a single pair of Cisco 6100 Fabric Interconnects, wired with two Ethernet and two Fibre Channel cables. “We cabled the Cisco UCS once, and haven’t had to touch the cables since,” says Okuma.

Cisco UCS Manager service profiles save more time during provisioning. The IT team used Cisco UCS Manager to create a service profile for VMware ESX hosts, including parameters to boot from the SAN. After creating a service profile for a specific application, the IT team can apply it to a new server blade with just a few clicks, enabling very rapid provisioning. “If we need to add capacity, we can do it far more quickly with the Cisco UCS than we could with our previous virtualization platform,” says Randy Subryan, enterprise architect, Pacific Coast Building Products. “We’re definitely more agile with the Cisco UCS.”

The Cisco UCS not only accelerates server provisioning, it also decreases new server costs. “We’ll pay less to add compute capacity to the Cisco UCS, because we’ll only need to provision a new server blade, not additional cables, network interface cards, and host bus adapters,” Subryan says.

“We have a relatively small IT team, and the Cisco UCS Manager helps us operate our SAP application environment efficiently by managing all blades from one interface.”

—Randy Subryan, Enterprise Architect, Pacific Coast Building Products

Simplified SAP Application Development

Faster provisioning is especially useful for SAP application environment. The IT team continually sets up and decommissions development servers for SAP NetWeaver Portal applications, SAP BusinessObjects, and custom Java-based applications. “Using Cisco UCS and VMware makes it much faster to provision a temporary development server than when we used standalone servers,” Subryan says.

Increased Operational Efficiency

The Cisco UCS significantly reduces per-server power and cooling costs. Management is also more efficient: “We have a relatively small IT team, and the Cisco UCS Manager helps us operate our SAP application environment efficiently by managing all blades from one interface,” says Subryan.

Next Steps

Pacific Coast plans to consolidate more applications on the Cisco UCS, including Cisco Unified Communications. Deploying Cisco Unified Communications Manager and Cisco Unity Connection[®] voicemail on the Cisco UCS will reduce the number of physical servers, for more savings on space, power, cooling, and management.

The company is also considering implementing additional Cisco Data Center 3.0 technologies to further increase operational efficiency. For example, the IT team has completed a proof of concept with the Cisco Nexus® 5000 Switch, connecting it to the Cisco UCS to support Fibre Channel over Ethernet (FCoE), the first step toward a unified data center fabric. Pacific Coast might also implement Cisco Wide Area Application Services (WAAS) in the data center and branches to accelerate centralized file and print services and optimize WAN bandwidth.

PRODUCT LIST

Data Center

- Cisco Unified Computing System with B200 M1 Server Blades
- Security
- Cisco Security Monitoring and Response System (MARS)
- Cisco ASA Adaptive Security Appliance 5510

For More Information

To find out more about the Cisco Unified Computing System, visit <http://www.cisco.com/go/ucs>.

To find out more about Cisco Data Center 3.0 solutions, visit <http://www.cisco.com/go/datacenter>.



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