



## EXECUTIVE SUMMARY

NaviSite, Inc.  
Hosting Service Provider  
Andover, Massachusetts  
650 Employees

### CHALLENGE:

- Lower customers' costs for Oracle applications management with usage-based billing
- Differentiate service performance, availability, and disaster recovery
- Scale cost-effectively and easily to meet dynamic requirements

### SOLUTION:

- Moved Oracle managed application services to Cisco Unified Computing System™ (UCS)

### RESULTS:

- Consolidated Oracle application stack in one system, simplifying management
- Achieved high performance across applications and database
- Reduced cost to host and manage Oracle applications

# Hosting Service Provider Manages Oracle Applications in Cloud

NaviSite transforms Oracle application delivery with Cisco Unified Computing System infrastructure.

## Challenge

NaviSite, Inc. is a provider of complex hosting, application management, and managed cloud services for the enterprise market. Nearly 1400 customers use NaviSite services, delivered from state-of-the-art data centers supported by approximately 650 IT professionals.

Since 1997, NaviSite has been hosting, managing, and maintaining customers' Oracle applications, including Oracle E-Business Suite, Oracle's PeopleSoft Enterprise, Hyperion, Siebel CRM, Oracle Business Intelligence Foundation, and JD Edwards EnterpriseOne. "We tell customers, 'You use the application and focus on adding value to your business, and we'll take care of everything else,'" says Roger Schwanhauser, senior vice president of enterprise and application services for NaviSite. Customers like NaviSite's service-based model because it typically lowers total cost of ownership, increases service levels to business and IT users, minimizes the risk in managing applications, and increases return on investment from Oracle applications. In June 2010, Oracle named NaviSite a Platinum Partner, the highest status in the Oracle PartnerNetwork (OPN).

NaviSite changes its hosting model periodically to take advantage of technology advances. Most recently, the company purchased and maintained dedicated servers for each customer's Oracle applications and Oracle Real Application Cluster (RAC), and customers purchased Oracle database licenses either from NaviSite or directly from Oracle. When customers began asking if they could pay for resources actually used instead of the entire server, NaviSite decided to virtualize the Oracle presentation layer and deliver it from the cloud, while continuing to operate the database tier, Oracle 11g RAC, on a physical server.

To offer a cloud service for business-critical Oracle applications, NaviSite needed a platform with high performance, high availability, and security in a multitenant environment. "We wanted to create a single platform for hosting and managing heterogeneous Oracle applications, and give our customers the flexibility to scale up or down as their usage patterns changed," says Schwanhauser.

## Solution

After evaluating competitive platforms based on hardware costs, licensing costs, and number of customers supported, NaviSite selected the Cisco Unified Computing System (UCS), which combines compute, networking, storage, and virtualization in a cohesive system managed as a single entity. “The Cisco UCS distinguishes itself for hosting virtualized Oracle applications because of its high RAM capacity, 192 GB,” says Schwanhausser. “Our experience is that performance issues in multicustomer environments result from memory constraints, not processor constraints.” Another advantage of the extended memory in the Cisco UCS is that Oracle RAC 11g R2 allows customers to store the database in memory, increasing application performance.

NaviSite had already deployed Cisco UCS for its enterprise cloud service, NaviCloud. The system consists of five chassis, distributed between NaviSite’s Massachusetts and California data centers. NaviSite’s Oracle applications environment has the capacity for 15 distinct customer Oracle applications on two full-width Cisco UCS B250 M2 Blade Servers in two chassis, each with 192 GB RAM. To meet growing customer demand for the service, NaviSite will soon add a third blade in another chassis, increasing the number of application instances to 25. “Our customers like the fact that the entire Oracle stack can reside on the same system, even though the applications are virtualized and Oracle RAC is not,” Schwanhausser says.

All server blades in all chassis receive connectivity through a single pair of Cisco UCS 6100 Fabric Interconnects. The fabric interconnects attach over 10 Gigabit Ethernet to a Cisco Nexus 7000 Series Switch at the core, and over Fibre Channel to IBM XIV Storage.

## Results

### Attractive Business Case for Oracle Customers

Traditionally, Oracle application service providers have based their fees on the number of servers, disk space, user makeup, and modules. By hosting Oracle applications on the Cisco UCS, NaviSite can charge based on actual usage, an attractive model for customers because they can scale resources up or down dynamically based on the current need. “A customer that uses Oracle E-Business Suite and acquires another company doesn’t need to buy more server hardware, or even notify us,” says Schwanhausser. “Instead, customers simply increase or decrease system and support resources as their usage patterns change. We could not have offered dynamic scalability so efficiently on a platform other than Cisco UCS.”

*“The Cisco UCS distinguishes itself for hosting virtualized Oracle applications because of its high RAM capacity, 192 GB.”*

— **Roger Schwanhausser, Senior Vice President**, Delivery and Application Services, NaviSite, Inc.

## High Availability

Customers are also attracted to NaviSite's service-level agreements (SLAs) for availability, which NaviSite can offer because of the ease of moving Oracle RAC and Oracle applications within the Cisco UCS. If a blade server should fail, the NaviSite IT team can provision another blade in just minutes by using Cisco UCS Manager to apply a service profile containing configuration information about server hardware, interfaces, fabric connectivity, and server and network identity. Then the NaviSite IT team uses virtualization technologies to move the virtual machines to the freshly configured blade. The virtual machine's network and security policies accompany the virtual machine as it moves between blades, a capability of the Cisco Nexus 1000V Switch software.

## High Performance for Oracle Applications

Using Cisco UCS Manager, NaviSite created optimal configurations for each Oracle application in three variations for small, medium, and large deployments. "Performance tests for Oracle applications and Oracle RAC on Cisco UCS have been excellent," Schwanhauser says.

## Cost-Effective Scalability

The Cisco UCS will scale cost-effectively as NaviSite extends its Oracle applications hosting service to more customers, and as existing customers add more Oracle applications. "The cost of hosting an Oracle database instance on the Cisco UCS will decrease by 10 percent when we add a third server blade to the Cisco UCS, by another 10 percent when we add a fourth blade, and by an additional 20 percent when we add a fifth," Schwanhauser says.

The cost savings are pronounced in larger environments. "We calculated that operating 300 PeopleSoft servers on Cisco UCS costs 20 percent less than on blade servers," says Vishal Sharma, senior director of cloud computing, NaviSite.

## Next Steps

NaviSite plans to add other production business applications to the Cisco UCS. As demand increases, the IT team can easily scale the system easily by adding more chassis and blade servers. All chassis and blades that NaviSite subsequently adds will receive connectivity through the same pair of Cisco 6100 Fabric Interconnects, eliminating additional cable and switch port costs for new servers, and greatly accelerating new server provisioning.

## For More Information

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

To find out more about Cisco Data Center 3.0 solutions, visit: [www.cisco.com/go/dc](http://www.cisco.com/go/dc).

To find out more about Cisco and Oracle data center solutions, visit: [www.cisco.com/go/oracle](http://www.cisco.com/go/oracle).

## PRODUCT LIST

### Data Center

- Cisco Unified Computing System
  - Cisco UCS B200 Blade Server
  - Cisco UCS B250 M2 Blade Server
  - Cisco UCS 6120 Fabric Interconnect
- Cisco Nexus 7010 Switch
- Cisco Catalyst 6513 Switch
- Cisco Nexus 1000V Series Switch
- Cisco ASR 1002 and 1004 Aggregation Services Router
- Cisco ASA 5500 Series Adaptive Security Appliance with Firewall Services Module



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