



EMC | RUN BUSINESS-CRITICAL ORACLE E-BUSINESS SUITE ON VMWARE® AND INTEL® TECHNOLOGY

THE LEADER IN INFORMATION MANAGEMENT

Information is one of an organization's most important assets, and EMC Corporation (EMC) provides the technologies and tools that help release the power of that information. EMC works with organizations around the world to help them design, build, and manage flexible, scalable, and secure information infrastructures.

The company employs nearly 40,000 people worldwide, with approximately 400 sales offices and scores of partners in more than 60 countries around the globe, which makes it the world's largest sales and service force focused on information infrastructure.

This dominant position in the technology space enabled explosive growth of EMC's revenue, product line, and customer base over a five-year period. To help manage this growth and operate as efficiently as possible, EMC leveraged a host of behind-the-scenes software applications including—most critically—the Oracle E-Business Suite (Oracle EBS).

A Case Study on EMC's
Virtual Infrastructure.

CASE STUDY SUMMARY

INDUSTRY
Information Technology

CHALLENGE
Oracle E-Business Suite is critical to 90-95% of EMC's business functions

SOLUTION
VMware® Infrastructure and Intel® Xeon® processor-based servers create a reliable and highly available platform for the Oracle E-Business Suite.

A comprehensive suite of integrated, global business applications, Oracle EBS helps companies with everything from enterprise resource planning to product lifecycle management and customer relationship management.

"Oracle EBS is embedded in every process that EMC carries out," says Ramesh Razdan, senior director for enterprise technology services at EMC. "It wouldn't be an overstatement to say that it affects 90-95 percent of our business functions."

With such a critical system, reliability and availability take on new levels of importance. "Availability is not just important, it is an absolute requirement," says Razdan. "We have to ensure that the applications run on the best possible infrastructure that is available. Period."



"AVAILABILITY IS NOT JUST IMPORTANT, IT IS AN ABSOLUTE REQUIREMENT FOR OUR ORACLE E-BUSINESS SUITE. WE HAVE TO ENSURE THAT OUR ORACLE APPLICATIONS RUN ON THE BEST POSSIBLE INFRASTRUCTURE AVAILABLE."

- Ramesh Razdan, Senior Director for Enterprise Technology Services, EMC Corporation

THE BEST INFRASTRUCTURE FOR BUSINESS-CRITICAL APPLICATIONS

For EMC, the best possible infrastructure was a virtual platform constructed using VMware software running on Intel-powered hardware.

VMware vSphere, the industry's most reliable platform for virtualization, optimizes IT service delivery and delivers the highest levels of application service agreements—with the lowest total cost per application workload—by decoupling business-critical applications from the underlying hardware. This provides unprecedented flexibility and reliability, while offering the highest levels of availability and responsiveness for all applications and services.

Meanwhile, Intel processors support and optimize vSphere's virtualization functionality. Intel® Xeon® processors based on Intel® Core™ microarchitecture integrate hardware for virtualization into all key server components including Intel® Virtualization Technology (Intel® VT), helping IT organizations consolidate more applications and heavier workloads on each server to improve

"PERFORMANCE OF ORACLE EBS – HAS BEEN EVERYTHING WE EXPECTED IT TO BE, AND USER EXPERIENCE HAS BEEN VERY POSITIVE. WE DIDN'T WANT TO COMPROMISE IN ANY AREAS OF OUR VIRTUALIZATION EFFORTS"

- Ramesh Razdan, Senior Director for Enterprise Technology Services, EMC Corporation

flexibility, reliability, and total cost of ownership (TCO). As the basis of Intel's most advanced server technology, Intel Core microarchitecture improves virtualization performance across every part of the server platform.

"Everyone recognized the clear benefits that VMware and Intel could bring to the table," says Razdan. "There wasn't much hesitancy when we decided to move forward with virtualization."

THE ROAD TO 100 PERCENT VIRTUALIZATION

To date, EMC has used vSphere to create more than 500 virtual machines—300 in production, and 200 in nonproduction—that run on Intel Xeon-powered servers and support its Oracle EBS deployment.

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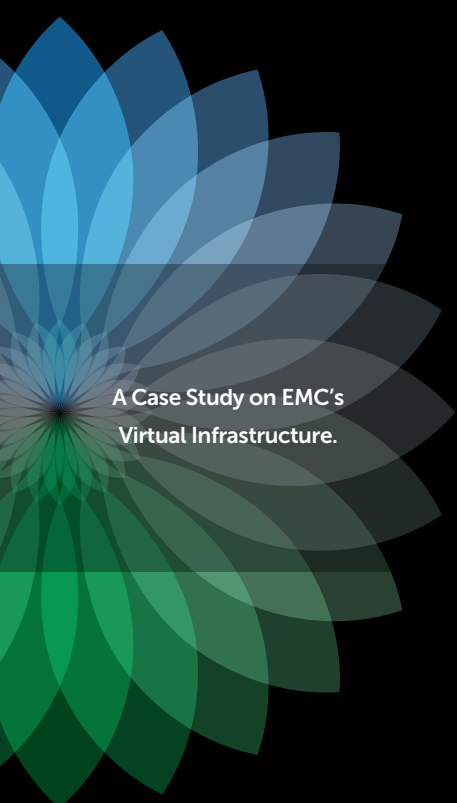
“EMC HAS AN OVERALL GOAL OF VIRTUALIZING ITS ENTIRE INFRASTRUCTURE. USING VMWARE AND INTEL SOLUTIONS TO VIRTUALIZE OUR ORACLE E-BUSINESS SUITE IS A VERY BIG AND VERY SIGNIFICANT STEP TOWARDS THAT OBJECTIVE.”

- Ramesh Razdan, Senior Director for Enterprise Technology Services, EMC Corporation

In switching from a physical infrastructure to a virtual infrastructure, EMC has been able to maintain the high level of performance that it required for Oracle EBS. “We were not going to compromise in any areas, and we didn’t,” says Razdan. “Performance of Oracle EBS – now that it’s running virtually on VMware and Intel technology—has been everything we expected it to be, and user experience has been very positive.”

Additionally, the combination of VMware and Intel technology has ensured high availability of Oracle EBS. “The built-in redundancy of a virtual infrastructure brings enhanced availability to our Oracle applications,” says Razdan. “Since going virtual, we haven’t experienced any significant unplanned downtime and have been able to virtually eliminate planned downtime. That means our employees – everyone from the professional services team to the sales force – can count on having ready access to Oracle EBS, so that they can focus on doing their jobs. That makes us a stronger company.”

As an added benefit, EMC has also been able to realize significant cost savings from its virtualization efforts. Over a period of 12 months, EMC has calculated that virtualization has reduced costs by



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VMWARE AND INTEL AT WORK

VMware vSphere, featuring:

- VMware ESX™ 3.5, running on Dell R900 servers with Intel Xeon processors

DEPLOYMENT ENVIRONMENT

Guest operating systems

Sun Solaris on the database tier; Red Hat Linux on the application tier

Mission-critical applications running in production on virtual machines

Oracle E-Business Suite 11.5.10 and R12

Storage

EMC Symmetrix DMX and Symmetrix V-Max storage, with:

- EMC TimeFinder
- EMC Powerpath
- EDL Backups
- Dynamic SRDF
- EDL Backup
- ACE Load Balancer

82 percent due to decreased server expenditures, power and cooling resources, rack space and overall data center space. “That’s just the icing on the cake, really,” says Razdan.

Based on its success using virtualization with its most business-critical applications, EMC aims to move towards 100 percent virtualization within the organization. “EMC has an overall goal of virtualizing its entire infrastructure: tier 1, tier 2—everything,” says Razdan. “Using VMware and Intel solutions to virtualize Oracle EBS is a very big and very significant step towards that objective.”



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