


INFORMATION FOR SUCCESS

Oracle Enterprise Manager
March 2009





ORACLE IS THE INFORMATION COMPANY



As you read this foreword, one thing I am sure about is that your business depends on applications to deliver goods and services. Oracle, as the leader in applications and software infrastructure technology is keenly aware of the importance of applications to your business and we strive to help you drive down the cost of managing applications while providing superior experience for the users of your applications.

Oracle Enterprise Manager is Oracle's solution for managing your applications. Whether you purchased Oracle packaged applications or you deployed custom-built applications using Oracle technology, Oracle Enterprise Manager offers unique capabilities to manage them across the entire Oracle stack. It employs a unique top-down approach to help you achieve:

- Higher user satisfaction – through understanding end-user experiences and the impact of IT issues
- Greater agility – through managing the entire application lifecycle
- Lower operational costs -- through intelligent diagnostics and automated IT processes

Oracle Enterprise Manager provides solutions for all your application management needs including:

- Comprehensive cross-tier application performance management
- Extensive configuration management
- Broad application quality management
- Complete software lifecycle management

I would like to invite you review a selection of our customer references. These companies have realized significant benefits ranging from higher quality of service to greater business agility to lower IT operations costs and we are confident that your company can also realize similar benefits with Oracle Enterprise Manager.

Richard Sarwal
SVP, Product Development, Oracle Enterprise Manager

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CUSTOMER SUCCESS STORIES

**Oracle Customer:
Edmunds Inc.**

Santa Monica, CA
www.edmunds.com

Industry:

Professional Services

Employees:

385

Oracle Products & Services:

- Oracle Enterprise Manager
 - Diagnostics Packs
 - Configuration Management Packs
 - System Monitoring Plug-ins
- Oracle Fusion Middleware
- Oracle Database
- Oracle Real Application Clusters

Edmunds Inc. Improves Management and Performance of Grid and Service-Oriented Architecture

“With Oracle Enterprise Manager, we have not only improved our grid and SOA management capabilities, but have extended the performance information that we can provide to our internal customers.”

— **Sheng-Te Yang**, Director, Application Services, Edmunds Inc.

Edmunds Inc. was founded in 1966 for the purpose of publishing new and used automotive pricing guides to assist automobile buyers. In 1995, the company launched the first automotive information Web site, Edmunds.com. Today, Edmunds Inc. publishes four Web sites: Edmunds.com, Inside Line, CarSpace.com and AutoObserver.com. The company’s mission is to empower automotive consumers.

Challenges

- Create a centralized, consistent management solution for all systems and platforms.
- Gain the ability to track, maintain, and correlate hardware/software changes to incidents.
- Create a centralized system for monitoring and managing service level agreements (SLAs)
- Deploy a centralized system for managing a distributed service-oriented architecture (SOA) environment and BPEL orchestration

Solutions

- Implemented Oracle Enterprise Manager to improve the efficiency and effectiveness of service level management, application performance management, and configuration management
- Automated change management, reducing Edmunds’ IT maintenance burden
- Enhanced service level management with a user-friendly dashboard that enables IT staff to have greater visibility into and understanding of system performance
- Enabled valuable insight into day-to-day changes in Edmunds’ large IT environment with Oracle Enterprise Manager’s configuration management packs
- Gained the ability to quickly identify and address system bottlenecks
- Automated patching process and gained the ability to run updates across multiple servers, improving grid management effectiveness

Oracle Customer:
**Johns Hopkins University Applied
 Physics Laboratory**
 Laurel, MD
 www.jhuapl.edu

Industry:
 Education & Research

Annual Revenue:
 US\$680 million

Employees:
 4,150

Oracle Products & Services:

- Oracle Enterprise Linux
- Oracle Database
- Oracle Fusion Middleware
- Oracle E-Business Suite
- Oracle Enterprise Manager
 - Provisioning Pack for Database
 - Change Management Pack
 - Configuration Management Pack for Database
 - Diagnostic Pack
 - Tuning Pack

Johns Hopkins University APL Streamlines IT Management and Reduces Provisioning Time by 97%

“Oracle Enterprise Manager helped to standardize our process for provisioning and patching in a completely automated, repeatable, and reliable manner. As a result, we have been able to reduce costs, increase staff productivity, and ensure compliance.” — **Raymond Payne**, Principal Architect, Oracle Infrastructure, Johns Hopkins University Applied Physics Laboratory

The Johns Hopkins University Applied Physics Laboratory (APL) is a not-for-profit university-affiliated research center. It serves as a technical resource for the U.S. Department of Defense, National Aeronautics and Space Administration (NASA), and other government agencies. A division of Johns Hopkins, APL works on more than 400 programs that protect the homeland and advance the nation’s vision in research and space science.

Challenges

- Reduce time and effort associated with applying quarterly critical patch updates (CPU), which have to be applied within a month of their release
- Enable the organization to more efficiently provision new servers and software across various tiers—Oracle Enterprise Linux, Oracle Database, Oracle Fusion Middleware, and Oracle E-Business suite
- Ensure APL’s new grid infrastructure is compliant with established security and configuration standards

Solutions

- Implemented Oracle Enterprise Manager Grid Control, leveraging its grid automation capabilities to reduce costs
- Created a standard process to provision and patch databases in a completely automated, repeatable, and reliable manner
- Reduced the total amount of server provisioning time by 97% using Oracle Enterprise Manager Provisioning Pack
- Leveraged Oracle’s automated provisioning functionality to reduce the time required to provision databases across platforms and versions from 2.5 hours to 20 minutes
- Increased productivity of database administrators (DBAs) by providing the unattended patching procedure, allowing them to invest time in more strategic activities
- Deployed Oracle Database Enterprise Management Diagnostic Pack and Tuning Pack, which save significant time in detection and resolution of performance and tuning issues
- Automated compliance management, and streamlined configuration management with Oracle Enterprise Manager Change Management Pack, ensuring compliance with corporate and security standards

Oracle Customer:**Telstra**

Melbourne, Australia

www.telstra.com

Industry:

Communications

Annual Revenue:

US\$18 billion

Employees:

49,000

Oracle Products & Services:

- Oracle Enterprise Manager
- Oracle Database

Telstra Set to Save with Centrally Managed Infrastructure

“Completing the Oracle Enterprise Manager 10g deployment on time and below budget was just the beginning of the cost avoidance we’re realizing for hardware and improved manageability.” — **David Russell**, Acting Group Manager, Technical Services, Telstra

More than 9.9 million fixed line and 8.9 million mobile customers rely on Telstra’s telecommunications services, making it one of Australia’s best-known brands. As the only integrated communications company serving every corner of the continent, Telstra uses the best of cutting-edge technology to constantly improve its services, internally and externally.

The company became the first enterprise in the world to use Oracle Enterprise Manager 10g. In addition to keeping tabs on Oracle databases and custom applications, Oracle Enterprise Manager 10g monitors underlying technologies such as network, operating systems, servers, and storage.

A recent assessment conducted by Mainstay Partners, an independent consulting firm, found Oracle Enterprise Manager 10g helped Telstra to achieve significant financial and strategic benefits. Mainstay estimates Telstra’s total benefits from the deployment to be US\$1.9 million (AU\$2.4 million). In addition, Telstra’s ability to further standardize and automate its system management has improved information delivery throughout the enterprise.

Proactive Management

Telstra Administrators and Managers access the Oracle Enterprise Manager Web-based console through a single login point to monitor a centralized management environment. The system ensures secure access, which may be tailored to individual user needs without additional client software.

Mainstay’s assessment notes that with the around-the-clock, managed environment database management is more consistent and administrators are better equipped to diagnose issues before they become problems. Oracle Enterprise Manager constantly monitors Telstra’s systems, reports issues in real-time before they reach the critical stage, and alerts administrators to take proactive measures to protect and improve the system. Oracle Enterprise Manager may also check for idle resources, automatically provisioning them whenever they can contribute to improved performance. The control environment also provides tools to help diagnose bottlenecks.

Mainstay found that the ability to monitor the array of infrastructure products through a single view has reduced costs associated with error-prone and manually intensive tasks. In addition, the standardized database management policies and procedures the system facilitates have made resource use more efficient.

Optimal Environment

Today, Telstra’s CPUs monitored by Enterprise Manager now average utilization levels of 33%. Oracle Enterprise Manager’s close tracking and monitoring of disk capacity and usage improved database disk space utilization as well, allowing Telstra to avoid significant storage costs. Unallocated disk space can now be put to use for temporary storage, backups, and managing loads.

The system automatically discovers and provisions idle resources, making it easier to deliver capacity on demand, and third-party assessment services are no longer needed for environments managed by Enterprise Manager.

The system automation has freed up administrators' time previously spent developing and managing homegrown scripts. Current scripts are based on Oracle Enterprise Manager standards, which standardize jobs, run across multiple servers in the centralized control environment. Administrators can focus on higher-level projects and upgrading their skills. In certain areas, system automation has allowed Telstra to increase the number of databases managed without hiring additional staff.

Lower Infrastructure Costs

Telstra's business units no longer need to set up separate management environments, given the obvious advantages of monitoring service levels and performance, automating tasks, and performing backup and recovery in a unified way across groups of computers. Through Oracle Enterprise Manager Release 2, Telstra is now able to take advantage of functions that deploy and provision Oracle databases in Oracle Real Application Clusters (RAC) and non-RAC environments in a matter of hours. Among other features, the upgrade also provides monitoring capabilities for storage devices such as NetApp Filers, EMC, network security and load-balancer devices such as Big-IP, and non-Oracle databases such as SQL Server.

Telstra Corporation Limited is the largest telecommunications company in Australia. It provides fully integrated landline and mobile voice, internet and data services to residential and business customers across Australia and New Zealand. It also provides advertising, directory, and cable television services through subsidiaries and affiliates.

Oracle Customer:**Comic Relief**

London, England

www.comicrelief.com

Industry:

Professional Services

Annual Revenue:

US\$136 million

Employees:

120

Oracle Products & Services:

- Oracle Enterprise Manager
- Oracle Load Testing for Web Applications

Key Benefits:

- More than doubled the amount of donations taken with help of pre-campaign testing
- Processed 450,000 transactions during 7-hour period, peaking at 54 transactions per second
- Ensured that the organization's e-commerce site would be able to meet anticipated demand
- Ensured that the IT infrastructure could handle traffic processed by all 9,800 call center agents, almost triple the number in 2005

Comic Relief Raises US\$94 Million with Help of Web Application Testing

“On Red Nose Day, our Web site is one of the busiest e-commerce sites in the world. By testing thoroughly beforehand with Oracle Application Testing Suite, we can ensure availability to hundreds of thousands of donors during a critical few hours.” — **Charlotte Melén**, Web Technology Manager, Comic Relief

One of the most widely recognized charity brands in the United Kingdom, Comic Relief has always been an early adopter of new technology. With the rise of broadband, Comic Relief decided to emphasize its Red Nose Day Web site as the main channel through which people could access information and make donations. Red Nose Day is a U.K.-wide fundraising event organized by Comic Relief every two years, which culminates in a night of comedy and thought-provoking documentary films. It is the biggest television fundraising event in the U.K. calendar.

The campaign has grown tremendously in recent years. In 2003, the Red Nose Day site processed more than US\$5.4 million (£3.6 million) in donations, and by 2005 this figure had grown to more than US\$12 million (£8 million).

“Early on, we realized that the demands we were going to place on our technical infrastructure were unique. We needed to guarantee that people visiting the site would be able to get the information they needed and make their donations quickly and easily,” said Charlotte Melén, Web technology manager, Comic Relief.

In 2007, Comic Relief raised US\$30 million (£20 million) online with total donations for the entire campaign reaching US\$94 million (£63 million). More than 450,000 individual transactions were processed during the critical seven-hour telethon. At peak times, volume reached 54 transactions per second.

By using Oracle Application Testing Suite in advance to simulate many thousands of users accessing the Web site at one time, Comic Relief was confident that its infrastructure would be able to handle the tremendous demands it would experience during the event.

Testing for Traffic Spikes

The Red Nose Day campaign site needed to be fun, exciting, and informative. It was also the perfect channel for people to make donations. It had to be simple and easy for people of all abilities to use, but also secure and effective for the charity. Comic Relief also needed to make sure that its call center agents were able to collect donors' money quickly and effectively using the same Web-based system.

The major concern for the charity was density of activity. The bulk of its donations would be received in a very short period of time—just seven hours. The charity knew its site would be one of the busiest e-commerce sites in the world during this period. It could not afford any down time.

From past experience, Comic Relief knew the volume of donation traffic is stimulated by the emotional content of the TV program; therefore, not only did the infrastructure have to cope with a huge volume of traffic, it also had to be able to handle large spikes in traffic throughout a very short time period.

In line with the growth of the campaign year-over-year, the Red Nose Day IT infrastructure has evolved to meet the demand. In 2003, there were no call center agents using a Web-based portal. By 2005, more than 3,500 agents were using the organization's Web portal, and in 2007, more than 9,800 agents accessed the portal across 76 call centers.

"By testing our infrastructure thoroughly and systematically with Oracle Application Testing Suite, we were able to go into Red Nose Day 2007 feeling confident that our systems could cope with both the volume and the spikes in Web traffic," Melén said.

Identifying and Removing Bottlenecks

Comic Relief used Oracle's Rapid Bottleneck Identification (RBI) methodology to identify potential bottlenecks that would have a negative impact on the end-user experience. Using a modular, iterative approach to load testing, testers focus on performance issues one at a time, fixing problems as they go. By using this approach, Comic Relief was able to improve the overall application quality and enhance the experience of people donating through the Web site.

Oracle Application Testing Suite gave Comic Relief the ability to define and manage the whole testing process, validate the application functionality, and ensure that the applications would perform under the anticipated demand.

Why Oracle?

Comic Relief had previously used Oracle Application Testing Suite to test and optimize the infrastructure for Sport Relief—Comic Relief's sister national fundraising event. This reassured Comic Relief that the technology was capable of testing the application to the optimum level prior to the event.

Melén explained, "We chose Oracle Application Testing Suite because it's the leading test application on the market. We also have an excellent relationship with Oracle. We don't have a test manager in-house, so having Oracle consultants on-hand to help with the testing process is a tremendous help to us".

Oracle also provides database solutions for Comic Relief, which helps to ensure consistency and continuity across and between applications. This means that Oracle can also identify any additional database requirements during the testing process.

Implementation Process

Comic Relief worked with Oracle consultants to implement Oracle Application Testing Suite onsite. Every test campaign goes through a set process starting with performance and tuning and then moving on to load and stress testing. This process typically takes about two weeks.

By working closely with the Oracle team, Comic Relief benefits from Oracle's experience in interpreting the test results—a process that is as important as the tests themselves. Oracle is able to advise as to where Comic Relief needs to re-run its tests and suggest additional resources it may need to put in place.

Moving forward, Comic Relief will start tests for the 2009 Red Nose Day campaign. As 98% of all donation traffic will go through the Web application, it is essential that Comic Relief continues to stretch and test its capacity to ensure that the site can meet the expected demand.

“We're hoping to double what we saw in 2007. We'll be increasing our number of call center agents, and we'll be testing for peaks of 150 transactions per second to ensure we can handle an expected 750,000 transactions in six hours,” Melén said.

“I would advise anyone putting in place a business-critical Web application to test thoroughly. It's a key quality assurance measure to show whether or not an application will perform under traffic. We certainly could not run our campaigns without such rigorous testing,” Melén concluded.

Comic Relief was established in 1985 by comedians who wanted to do something to help others. It is a charity that aims to help vulnerable people suffering poverty and injustice both in the United Kingdom and abroad. Comic Relief has two primary fundraising campaigns; Red Nose Day and Sport Relief.

Oracle Customer:
Christelijke Mutualiteit
 (Mutualité Chrétienne)
 Brussels, Belgium
 www.cm.be

Industry:
 Healthcare

Employees:
 5,000

Oracle Products & Services:
 • Oracle Enterprise Manager

Christelijke Mutualiteit Improves System Availability and Performance with Enterprise Management Solution

“Oracle Enterprise Manager allows us to monitor and manage the availability and performance of our IT infrastructure with ease.” — **Peter Stessels**, Database System Services Manager, Christelijke Mutualiteit

With 4.5 million members, Christelijke Mutualiteit (LCM) is Belgium’s largest health insurance organization. LCM is a federation with 21 regional branches that serve members through a network of 900 offices. LCM prides itself on a value-added service approach, placing strong emphasis on personal contact with the organization’s members.

Challenges

- Ensure the stability of the organization’s IT systems, which process more than a million transactions each day
- Implement a tool to monitor, measure, manage, and report on availability and performance of IT systems
- Transform overall IT systems management from a reactive to a proactive approach

Solutions

- Implemented Oracle Enterprise Manager Grid Control to proactively monitor the status of all business applications, databases, and application servers, enhancing performance and reducing downtime
- Provided at-a-glance monitoring of the availability and performance of IT systems, enabling response times of less than one second for 80% of all operations
- Provided the metrics necessary to manage each component of the organization’s IT infrastructure, enabling Christelijke Mutualiteit / Mutualité Chrétienne to achieve its availability and performance objectives with less than one day of down time per system per trimester
- Gained the ability to gather metrics to create reports for management that detail IT performance and availability

Oracle Customer:**NetApp, Inc.**

Sunnyvale, CA

www.netapp.com

Industry:

High Technology

Annual Revenue:

US\$3.3 billion

Employees:

7,645

Oracle Products & Services:

- Oracle Fusion Middleware
- Oracle Enterprise Manager Provisioning Pack for Database Provisioning Pack for Oracle Middleware

NetApp, Inc. Uses Automated Provisioning to Reduce Manual Effort Time from a Few Weeks to a Few Clicks

“With Oracle Enterprise Manager, we are now able to meet corporate standards 100% of the time. And, our pre-patched gold images, enabled by Oracle Enterprise Manager, save time and resources.”

— **Alok Arora**, Director, Enterprise Integration and Architecture, NetApp, Inc.

NetApp, formerly Network Appliance, creates innovative storage and data management solutions that help its customers accelerate business breakthroughs and achieve outstanding cost efficiency. NetApp’s dedication to principles of simplicity, innovation, and customer success has made it one of the fastest-growing storage and data management providers today.

Challenges

- Reduce two-week time frame needed for IT group to create a complex multitier service-oriented architecture (SOA) deployment with components spanning various hosts
- Provision new deployments for a growing number of internal customers quickly, efficiently, and in a manner that complies with corporate standards
- Improve day-to-day work life for IT staff by reducing amount of time needed to roll out patches developed during each patching cycle, a process that took between 8 and 10 weeks

Solutions

- Utilized Oracle Enterprise Manager Provisioning Pack for Oracle Middleware, NetApp to expedite provisioning of new SOA deployments with gold images that enable administrators to provision deployments via a single management console
- Created a standard process to provision/patch Fusion Middleware in a completely automated, and reliable manner—reducing manual effort from a few weeks to a few clicks
- Created test benches based on production installations—allowing NetApp to apply patches on these test systems and then deploy them to multiple production systems
- Enabled NetApp to deploy standard Fusion Middleware component images based on features licensed, and to have a standard process that leads to best-practice deployments with no configuration drifts from corporate standards
- Enabled the IT staff to direct its attention to more strategic initiatives
- Provided IT staff with processes and procedures that enable them to meet unpredictable demands from customers

Oracle Customer:**Sistema de Retiro para Maestros**

San Juan, Puerto Rico

www.srm.gobierno.pr

Industry:

Public Sector

Annual Revenue:

\$17.1 million

Employees:

368

Oracle Products & Services:

- Oracle Database Enterprise Edition
- Oracle Enterprise Manager
 - Oracle Configuration Management Pack
 - Oracle Tuning Pack
 - Oracle Diagnostics Pack
- Oracle Real Application Clusters
- Oracle Fusion Middleware
- Oracle Developer Suite

Oracle Partner:**Nexgen Business Solutions**

www.nexgenbs.com

Sistema de Retiro para Maestros Achieves Total Operating Visibility with New IT Infrastructure

“We experienced a radical change since implementing a technological infrastructure with Oracle solutions. Operations are now automated, which assures the continuity and improved excellence of the system’s services and fiscal health.”

— **Omar Ramos**, IT Security Official, Sistema de Retiro para Maestros

The Sistema de Retiro para Maestros is a corporation of the government of Puerto Rico. Its mission is to attend to the needs of the country’s teachers. This system provides economic security to teachers through the effective administration of a pension fund that guarantees income after retirement.

Challenges

- Establish a technological infrastructure that allows visibility and total transparency into operations related to the teachers’ retirement fund
- Centralize information in a robust, highly available database to provide rapid and reliable access to financial information throughout the organization
- Integrate the operating system with the Treasury system to automate processes related to loans, collections, and transfers to the 80,000 beneficiaries
- Eliminate slow and inefficient manual processes

Solutions

- Worked with Nexgen Business Solutions to establish a scalable technological infrastructure with high availability and application functionality
- Leveraged Oracle Fusion Middleware to achieve visibility and total operating transparency throughout the organization
- Centralized information in a robust and reliable database with Oracle Database Enterprise Edition
- Used Oracle Real Application Clusters in two nodes to integrate systems interfacing with the Treasury systems, accelerating loan, collection, and automatic transfer operations
- Reduced IT maintenance costs by \$170,000 per year, with the help of Oracle Configuration Management Pack
- Deployed Oracle Diagnostic Pack and Oracle Tuning Pack to ensure timely prevention and solution of IT problems
- Implemented Oracle Enterprise Manager Grid Control as an application monitoring tool—improving the functionality and availability of the system
- Eliminated manual processes, avoiding the duplication and loss of information

Oracle Customer:**R.L. Polk & Co.**

Southfield, MI

www.polk.com

Industry:

Professional Services

Employees:

1,650

Oracle Products & Services:

- Oracle Database
- Oracle Real Application Clusters
- Oracle Enterprise Manager
- Oracle Data Guard
- Oracle Automatic Storage Management
- Oracle Clusterware
- Oracle Identity Management
- Oracle Portal
- Oracle Discoverer

Key Benefits:

- Realized significant cost savings on hardware by implementing an enterprise-wide grid architecture
- Improved system scalability and reliability
- Accelerated data delivery to internal and external customers
- Streamlined management of large, complex databases
- Improved security and eased regulatory compliance with an integrated identity management system

R.L. Polk & Co. Improves Performance and Speed of Data Delivery to Boost Competitive Edge

“Our internal customers are seeing phenomenal differences in the speed at which data is available to them. Any new system—including customer-facing systems—we build will be deployed on Oracle Database 10g and Oracle RAC.”

— **Kevin Vasconi**, Chief Information Officer, R.L. Polk & Co.

R.L. Polk & Co. has served the automotive industry since 1922, providing a variety of analytical and statistical data services. The company collects and compiles data from more than 240 different sources, including state agencies, automotive manufacturers, financing companies, and a variety of providers of lifestyle and demographic data. R.L. Polk’s customers require fast access to this actionable data to make important sales, marketing, and planning decisions.

R.L. Polk maintains a four-terabyte data warehouse with data on 500 million unique vehicles and 250 million unique households. As the automotive industry continues to grow, the company has witnessed an exponential growth in the creation of data—making it ever more challenging to maintain the high performance levels of its large databases.

R.L. Polk realized it needed to make a change to preserve its competitive advantage in the marketplace, amid significant industry, regulatory, and technology change. Previously, R.L. Polk ran its databases on a mainframe, which was very reliable but did not allow the company to deliver data in real-time to its customers.

“To be truly competitive, to provide the kind of value our customers want, and to continue to drive the economic engine of our company, we needed to move to a real-time paradigm,” said Kevin Vasconi, chief information officer, R.L. Polk & Co. “So, we decided to rebuild the core data engine of the company.”

In late 2004, R.L. Polk embarked on a comprehensive business process reengineering program called re-FUEL and decided to replace its mainframe system with an open environment based on Oracle Database 10g and Oracle Real Application Clusters 10g.

The company worked with its wholly owned subsidiary, RLPTechnologies, and Capgemini to develop the new system.

Making the Move to Grid – Enhanced Flexibility

R.L. Polk had a lot of experience with large, symmetric multiprocessing (SMP) servers, which had always proved reliable. However they were very expensive and only allowed R.L. Polk to deliver data in batches.

“We looked at the capabilities of grid computing, the benefits of a service-oriented architecture, and some of the new capabilities that Oracle was bringing out,” Vasconi said. “We wanted to build a system that incorporated these concepts and would have a shelf life of 15 to 20 years. To truly establish R.L. Polk as a technology innovator and meet the demands of our customers, we didn’t feel we could take the conservative option.”

R.L. Polk implemented Oracle Database 10g and Oracle Real Application Clusters 10g on four Dell PowerEdge 6850 servers with Intel Xeon dual-core processors running on Red Hat Enterprise Linux. The company is running two databases across the cluster; each has four instances.

“With commodity servers, we can add capacity at \$8,000 increments instead of \$50,000 to \$100,000 increments. This gives us flexibility and helps us manage risk. That’s what the grid gives us. We can conservatively estimate a 30% savings from moving a clustered UNIX platform onto an Intel- and Linux-based grid using Oracle Database 10g. When we migrate other parts of the business off mainframes, we predict at least a 40% return on investment.”

Darrin Deeter, manager of data architecture at RLPTechnologies added, “The Oracle grid gives us scalability in both directions--so we can scale down to a smaller implementation or scale up to support a larger implementation.”

This capability was important, as RLPTechnologies will take the practices developed during R.L. Polk’s system reengineering and market them to other companies in other industries.

From Batch to Real-time

R.L. Polk had been providing data in batches to its customers for years. By implementing Oracle Database 10g and Oracle RAC 10g, the company is now able to deliver data in real-time.

“We had built a lot of processes around batch, and we didn’t want the technology to drive our business model. We want the capability to drive our business model, because it’s the right thing to do,” Vasconi explained. “The business we are in requires us to get accurate and specific data to our customers as quickly as possible. Batch is contrary to that; it starts to reduce some of that value.”

R.L. Polk has a tiered warehouse strategy, in which the Oracle system drives the company’s core data engine, which then feeds data downstream to other databases supporting various applications. The core data engine houses data on vehicle sales, manufacturing, purchases, registration, and other demographic information. It grows in size by approximately 20 million new vehicles each year.

“A car is basically a rolling computer. It generates a lot of data,” said Vasconi. “The data growth we are experiencing is huge, and will only get more voluminous in the coming years. This makes it challenging to get actionable data to our customers in a timely manner.”

With the grid computing architecture from Oracle, R.L. Polk can take a piece of raw data the moment it enters the company and process it to make it available in a data warehouse or data mart, rather than wait to build a critical mass of data that is released in a batch. Tests to date show improvements of up to 70% in data-file processing speed. Further, the system can process 42 transactions per second, nearly twice as fast as R.L. Polk’s design goal of 25 transactions per second.

At least 40 of the 50 applications R.L. Polk has in the marketplace run on Oracle data warehouses. At this time, internal facing applications are primarily the ones running on the new Oracle 10g environment, but R.L. Polk is moving toward putting more customer-facing applications on this platform too.

“We have had great success with our internal facing systems. Our internal customers are seeing phenomenal differences in when the data is available to them. Any new system--including customer-facing systems--we build will be deployed on Oracle Database 10g and Oracle RAC,” Vasconi said.

R.L. Polk provides a number of online applications to its customers to allow them to do their own data mining and report generation. For example, its Insight product allows subscribing automobile manufacturers to do their own data explorations by geography, market segments, or dealership boundaries. They can also conduct month-over-month comparisons to other manufacturers and see how sales are trending. Another application allows automobile manufacturers to identify owners of vehicles that have been recalled.

R.L. Polk plans to expand its Oracle environment.

“Our vision is to have one large RAC grid supporting our customer-facing applications and another large RAC grid supporting our back-end functionality,” noted Doug Miller, director of database and applications support groups for R.L. Polk.

R.L. Polk is also in the process of setting up its European office on a similar system.

“We have high hopes about the future of Oracle RAC at R.L. Polk,” Miller said.

Improving Reliability and Ease of Management

Oracle RAC allows R.L. Polk to isolate the workload onto any of its four servers, allowing it to perform maintenance without causing downtime for customers.

“In our business, we can’t afford to have downtime,” Miller said. “Oracle RAC enhances our reliability and gives us a lot of flexibility to perform routine maintenance.”

R.L. Polk also leverages Oracle Enterprise Manager 10g to manage its grid environment. The company has achieved system performance and reliability gains by simplifying the management of its broad Oracle footprint. R.L. Polk has been able to save significant database administration time through Oracle’s automated system administration capabilities.

“The management tools that Oracle brings to the table make our job easier,” Vasconi said. “They allow us to focus our time and attention on other priorities.”

Miller added, “It doesn’t matter how many server databases you have, Oracle Enterprise Manager keeps an eye on all of it. It makes it like one big, seamless environment. It is extremely helpful as we do our application level tuning.”

“You could not support an environment like this without the alerting capabilities of Oracle Enterprise Manager,” said Deeter.

R.L. Polk is also using Oracle Recovery Manager (RMAN) for data backups. The product has compression capabilities that allow it to make the size of backups smaller, saving tape space. It also provides a centralized view of all backups.

Strengthening Security and Compliance

As regulatory requirements have increased in recent years, many organizations have had to build various access control mechanisms into their databases and applications. As it began to build its new system, R.L. Polk knew it needed to design it with a scalable access control mechanism, because the company did not want to have to retrofit its system down the road.

“We designed our system with security and access control at the core, using Oracle Identity Management,” Vasconi explained.

“We actually encrypted our XML message stream internally between our application services. As a data company, security, data privacy, and access control are very important to us.”

Oracle Identity Management provides R.L. Polk with Web single sign-on, identity administration, and comprehensive reporting and auditing capabilities.

Why Oracle?

“The main drivers behind us moving to Oracle RAC were scalability, lower cost, and improved availability,” said Miller.

“Oracle was very instrumental as we developed and rolled out our new system,” Vasconi said.

“We have a special relationship with Oracle, which I value. There are a lot of people at Oracle who are committed to making sure we are successful.”

Implementation Process

R.L. Polk decided to build its new core data engine on Oracle Database 10g and Oracle RAC 10g at the end of 2004. In January 2005, the company began to reengineer its business processes. Working with Oracle, RLPTechnologies, and Cap Gemini, R.L. Polk had its cluster running by March 2005. In April 2006, R.L. Polk launched the entire system into production parallel mode.

Because of the high degree of quality the company needs to maintain in its end products, it is currently testing the system side-by-side with its existing solution to make sure it is meeting all quality requirements. R.L. Polk is targeting the end of 2006 to do a full cut over into production, though some aspects of the core data engine are already running in production.

Advice from R.L. Polk & Co.

- When trying to sell a management team on the idea of grid computing, stress the business return on investment--what it will mean to the bottom line.
- Cut your teeth on a pilot project that is doable and that has impact.

R.L. Polk & Co. is the premier provider of automotive information and marketing solutions to the automotive world and its related industries--automotive and commercial vehicle manufacturers and dealers, automotive aftermarket companies, insurance companies, finance companies, media companies, advertising agencies, consulting organizations, government agencies, and market research firms.

Oracle Customer:
City of Evanston
 Evanston, IL
 www.cityofevanston.org

Industry:
 Public Sector

Annual Revenue:
 US\$235 million

Employees:
 1,000

Oracle Products & Services:

- Oracle Database
- Oracle Application Server
- Oracle Enterprise Manager
 - Oracle Service Level Management Pack
 - Oracle Diagnostics Pack
 - Oracle System Monitoring Plug-in for Hosts

City of Evanston Ensures Application Uptime and User Satisfaction with Enterprise Monitoring Tool

"I don't understand how organizations would not use this tool. Oracle Enterprise Manager allows me to do the work that would typically take several employees to complete." — **Richard Mertz**, Enterprise Systems Architect and Administrator, City of Evanston, IL

The City of Evanston, IL, located just north of Chicago, is diverse in many ways, much to the delight of its visitors and more than 74,000 residents. Home to Northwestern University, Evanston has a variety of excellent higher educational opportunities, as well as a successful public school system.

Challenges

- Improve application performance and database management
- Decrease frequency and duration of outages
- Implement a mechanism to alert IT team if a Web application is down—to ensure constituents and employees have 24/7 access to data
- Streamline patch management
- Manage database backup and recovery

Solutions

- Implemented Oracle Enterprise Manager to allow IT team to more closely monitor system performance and ensure 24/7 uptime for permitting, licensing, inspections, utility payment, JDEdwards EnterpriseOne and GIS applications, among others
- Used Oracle Enterprise Manager to enable one database administrator to independently manage 25 databases, 26 servers, and 24 Web applications, while still allowing time for other mission-critical activities
- Accelerated alert delivery—from several hours to real time—when applications are down, to rectify outages immediately, even on nights and weekends
- Monitor outsourced Web applications, which users still access via the Evanston's Web site
- Helped prevent outages by providing alerts when the system is about to run out of disk space
- Created confidence among user base that applications will always be up and running when needed

Oracle Customer:
City University London
 London, England
 www.city.ac.uk

Industry:
 Education & Research

Annual Revenue:
 US\$277 million

Employees:
 2,126

Oracle Products & Services:

- Oracle Database
- Oracle Application Server
- Oracle Real Application Clusters
- Oracle Enterprise Manager

City University London Builds High-Performance, Low-Cost, Scalable Infrastructure with One-Stop Support

“Oracle’s virtual infrastructure and self-managing environment will enable us to set new standards in service quality, availability, and performance for City’s academic staff and students.”

— **Carl Stokes**, Director - IT Operations and Infrastructure, City University London

Rated fifth for the employability of its graduates in the 2008 Times Good University Guide, City University London is rated the U.K.’s sixth most popular for student applications. The university also scores highly for student satisfaction and the percentage of students achieving a first- or upper-second degree.

Challenges

- Build an infrastructure capable of scaling to provide 24/7 access for thousands of simultaneous users to CitySpace, City’s online learning solution and most business-critical application
- Improve user response times and significantly reduce risk of downtime while lowering technology cost of ownership

Solutions

- Tested migration of CitySpace to Oracle Database with Real Application Clusters-based grid computing environment, finding it capable of scaling for a 100% increase in traffic during peak exam periods without loss of performance
- Set to cut hardware costs by 50% and eliminate single points of failure by switching from single big box instance to a cluster of five low-cost servers acting as a virtual computing resource
- Leveraged flexible grid infrastructure that enables processing power to shift dynamically to CitySpace at busy periods
- Gained the ability to manage 30% annual growth in user numbers cost-effectively by adding new nodes as required
- Positioned to cut system management time by 50% by replacing manual tools with Oracle Enterprise Manager’s automated solution for the entire environment, including middleware, databases, hardware, networking, storage, and third-party applications
- Benefited from Oracle Enterprise Manager’s out-of-the-box diagnostic tools to optimize CitySpace performance while increasing DBA productivity for innovation and development

- Positioned to migrate to Linux to maximize price-performance and to benefit from Oracle's integrated support for Linux
- Positioned to improve uptime to 99.95% and cut user response times by 50%

Oracle Customer:**Wipro Technologies**

Bangalore, India

www.wipro.com

Industry:

Professional Services

Annual Revenue:

US\$4.3 billion

Employees:

99,965

Oracle Products & Services:

- Oracle Fusion Middleware
- Oracle SOA Suite
- Oracle Web Services Manager
- Oracle BPEL Process Manager
- Oracle Enterprise Manager
Tuning Pack
Diagnostics Pack

Wipro Technologies Helps Its Customers to Rollout New Services More Quickly

“Using Oracle Enterprise Manager and the Oracle SOA Suite, we were able to efficiently and effectively implement an SOA utility platform for a large North American automotive manufacturer, improving SOA management capabilities and providing complete visibility into service level agreements.”

— **Mohan Udyavar**, Enterprise Architect, Wipro Technologies

Wipro Technologies, a division of Wipro Limited is the first PCMM Level 5 and SEI CMM Level 5 certified global IT services organization. As one of the largest product engineering and support service providers worldwide, Wipro provides comprehensive research and development services; and IT solutions and services, including systems integration; information systems outsourcing; package implementation; software application development; and maintenance services.

Challenges

- Increase the competitive advantage for large North American automotive manufacturer by improving business process agility and enhancing the customer experience
- Deploy IT management tools that allow the company to create service contracts, monitor agreements, and track design times to meet service level agreements
- Allow the auto manufacturer to securely expose IT services

Solutions

- Deployed Oracle SOA Suite to roll out new services quickly while leveraging existing IT investments
- Managed the implementation, -including services owned by various business units, stakeholders, and vendors
- Developed a business-to-consumer portal that allowed Wipro’s customers to access information online, including proactive vehicle service alerts, recall information, campaign information, and credit card reward points
- Leveraged Oracle Enterprise Manager’s host management capabilities to provide the ability to proactively analyze IT infrastructure service performance and capacity planning
- Built a composite application to aggregate account information from disparate business units in 90 days with Oracle SOA Suite, versus one year with traditional J2EE development
- Provided development productivity gain of 40% over traditional J2EE development

- Deployed Oracle Enterprise Manager Diagnostic Pack, allowing the automotive manufacture to identify problem areas in a single view, saving time
- Used Oracle Web Services Manager to ensure that consumers accessing services have the appropriate authorization to do so



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