

IBM Power Systems for Oracle Retail Applications

IBM Power Systems – the smart choice for your Oracle Retail Applications deployment

Providing flexibility, scalability, and adaptability for competitive and fast-moving retail environments with IBM Power Systems servers and IBM PureFlex Systems

Bringing new services to market faster via joint IBM and Oracle testing, planning, and support

Delivering proven POWER7+ performance for Oracle Retail applications

Exploiting superior economics with PowerVM virtualization

Delivering higher quality services with PowerHA and AIX

Performance redefined

Everyone knows what ‘performance’ meant for IT in the past, but today’s IT landscape is evolving rapidly and performance requirements have changed as well. Built on the foundation of POWER® processor technology, IBM Power Systems™ servers, IBM PureFlex™ System, and blades continue to excel and extend industry leadership in performance running UNIX® applications like Oracle Retail applications.

As the landscape changes, and processes become more interrelated and complex, IT is being called upon to solve challenging new problems and measure them in new ways. Today’s IT solutions must be measured against business performance with emphasis on higher service levels and delivering results in a more cost effective manner. IBM has the systems, AIX® operating system, and expertise to help clients implement Oracle Retail applications projects that make their IT an enabler of innovation and a catalyst for business change.



Deliver services faster, with higher quality and superior economics

Today's IT performance means delivering services faster, with higher quality and with superior economics. The emerging measures of IT performance are around agility and the ability to help the business capitalize on new opportunities. IT is expected to do more with less and find the lowest cost solutions possible. New measurements focus on building an infrastructure that can support rapid changes in business volume and manage business risk more effectively—all while providing higher service levels to users.

The IBM and Oracle alliance

Since 1986, Oracle and IBM have been providing customers with compelling joint solutions, combining Oracle's technology and application software with IBM's complementary hardware, software and services solutions. More than 140 000 joint clients benefit from the strength and stability of the Oracle and IBM alliance, which offers technology, applications, services, and hardware solutions that mitigate risk, boost efficiency, and lower total cost of ownership.

IBM is a Diamond Partner in the Oracle Partner Network, delivering the proven combination of industry insight, extensive real-world Oracle applications experience, deep technical skills and high performance servers and storage to create a complete business solution with a defined return on investment. From application selection, purchase and implementation to upgrade and maintenance, we help organizations reduce the total cost of ownership and the complexity of managing their current and future applications environment while building a solid base for business growth.

Power architecture

Today's businesses require a new approach to process the vast amount of data created from connected devices and their users. This "big data" must be analyzed and insights delivered in real-time to be effective. Systems must be optimized to each unique workload to deliver maximum competitive advantage.

POWER7+™ processors provide the foundation for designing workload optimized systems in conjunction with software and expert domain knowledge. To achieve maximum performance, POWER7+ processor-based systems are designed with workload optimizing technologies. For example, Intelligent Threads technology dynamically switches the processor threading mode to deliver optimal performance for different workloads.

Power is virtualization without limits

Businesses use virtualization not only to reduce the costs and maximize their IT infrastructure investments, but also to provide more flexibility, higher application availability and improved response time to business needs. The unique capabilities of PowerVM™ virtualization are enabling businesses to efficiently and reliably consolidate their workloads¹, delivering very high levels of sustained server utilization—80 percent to 90 percent in some cases—while delivering greater flexibility in deploying the workloads. PowerVM is built on the advanced RAS (reliability, availability and serviceability) features, extreme scalability and leadership performance² of the IBM Power Systems platform, based on the outstanding POWER7+ processors.

PowerVM offers Micro-Partitioning® with the ability to run up to 20 partitions per processor core, and dynamically move processor, memory, and I/O resources between partitions to support changing workload requirements. The priorities and allocated resources of logical partitions (LPAR), dedicated or micro-partitioned, can be finely controlled in PowerVM on a partition by partition basis, thereby supporting the deployment of workloads for best resource usage and minimized software licensing costs.

PowerVM Live Partition Mobility enables active partitions to be moved between servers—no matter what size of partition you are running—virtually eliminating application downtime for planned systems maintenance. Live partition mobility can also move workloads between POWER6® and POWER7+ processor-based servers thereby enabling a technology refresh in the data center without an application outage.

IBM AIX 7.1

AIX 7 is an open-standards-based UNIX OS that is designed to comply with the Open Group's Single UNIX Specification Version 4. The latest version of AIX is binary compatible with previous versions of the AIX operating system, including AIX 6™, AIX 5L™ and even earlier versions of AIX. This means that applications that ran on earlier versions will continue to run on AIX—guaranteed³.

AIX 7 expands vertical scalability to support partitions with 256 processor cores and 1024 threads to handle the largest workloads. New Terabyte segment support is available which leverages memory management capabilities of POWER7+ processors designed to improve memory performance. A new firmware feature, called Dynamic Platform Optimizer, is available on both Power 770 model MMD, Power 780 model MHD, as well as Power 795. This feature monitors processor and memory affinity and adjusts workload placement to optimize performance in a virtualized consolidated environment.

AIX 7 also includes many new enhancements for virtualization, clustering, security administration, and system manageability. Oracle Retail supports AIX 6, and AIX 7 is in a phased rollout across several modules including the Retail Merchandising System. For more information about AIX 7.1 follow the link in the "For more information" section near the end of this document.

Oracle Retail

One of the key challenges in retail is to centralize, consolidate and maximize the value of the vast amount of information available. Retailers need to make the connections between items, locations and suppliers, track purchase orders, monitor deal income, manage replenishment settings, execute pricing decisions, and aggregate transaction information into stock ledger reporting levels. As the central source of all information, merchandising solutions provide organizations with an accurate view of perpetual inventory and financial performance.

Oracle Retail Merchandising System

Oracle Retail Merchandising is a market leading integrated merchandising solution for retailers of all sizes. This solution enables many of the largest retailers in the world to better manage, control and perform crucial day-to-day merchandising activities with ease. From new product introduction to financial inventory valuation, Oracle Retail Merchandising provides retailers with a complete end-to-end solution and is the most comprehensive and integrated solution for global retailing. It provides:

- Foundation Data Management
- Multi-Channel Inventory
- Comprehensive Cost Tracking
- Robust Supplier Deal Management
- Multiple Replenishment Methods and Mass Maintenance
- Centralized Inventory Management
- Retail Stock Ledger
- Globalization
- Alternative Business Models
- Documented Business Processes and Implementation Tools
- Complete, Seamless Integration

Measuring effectiveness

Oracle Retail Merchandising helps automate and improve productivity by providing a unified view of merchandise operations. This comprehensive single set of accurate information is used by merchants, planners, marketing, and financial teams. Standard, out of the box integration, provides retailers with complete visibility to accurate information—from purchase to payment with Integrated Merchandise Management. An agile, scalable, and proven foundation, Oracle Retail Merchandising can execute a broad range of core merchandising activities. By streamlining business processes across the organization, retailers cut inventory and administration costs, improve customer service and enable more advanced ways of working—gaining true competitive advantage.

For a complete list of Oracle Retail applications features and enhancements please visit the links in the “For additional information” section at the end of this document. Figure 1 provides a graphical overview of the current Oracle Retail applications modules.

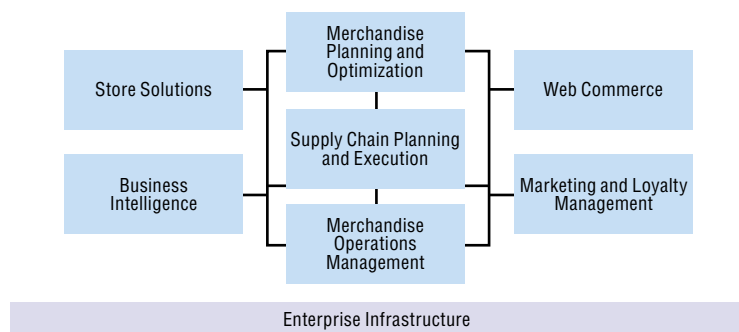


Figure 1. Oracle Retail product groups

Best practices

The scalability and flexibility of IBM and Oracle joint solutions are provided again with best-of-breed solution architectures for running Oracle Retail Merchandising System on Power Systems platforms (Figures 2 and 3). Joint solution testing, client-site deployment experience and continued joint development efforts combined, produce reliable architectures your company can trust. IBM and Oracle skilled resources are ready to help you determine the best module choices from the Oracle Retail portfolio and the appropriate Power Systems servers you will need to get your business running smoothly and within your budget.

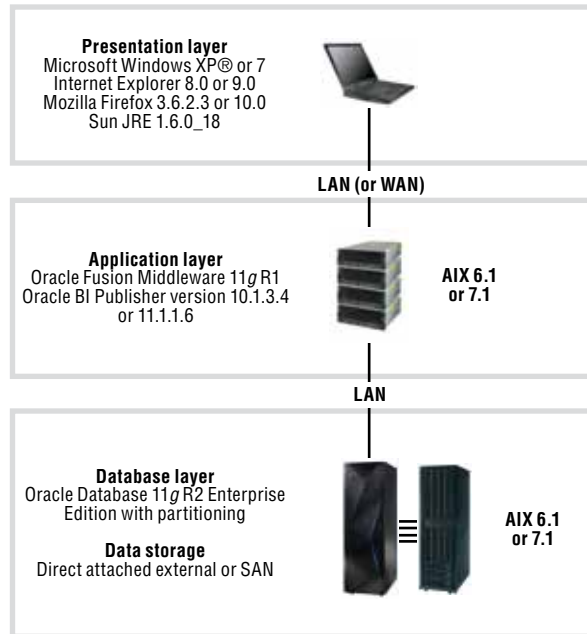


Figure 2. Hardware and software architecture for RMS 13.2.5

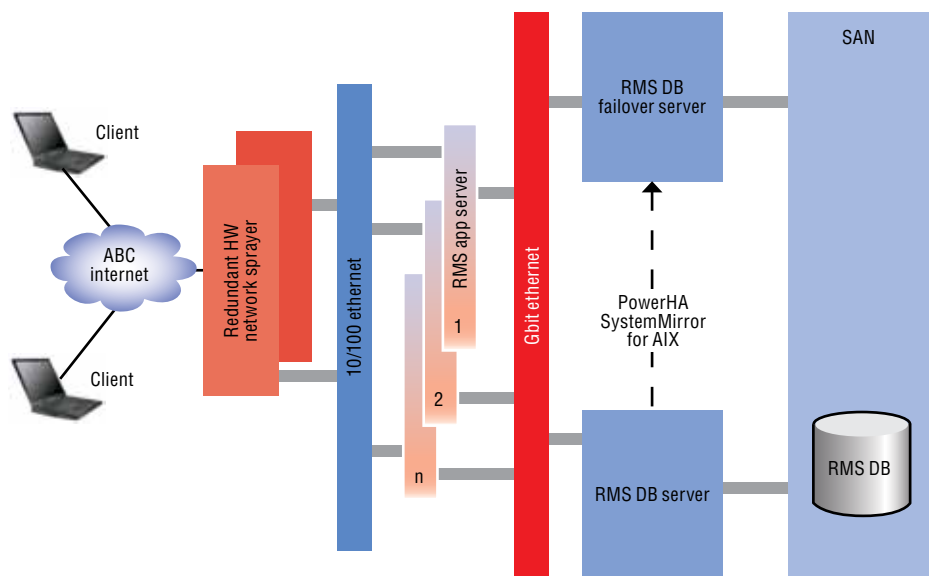


Figure 3. Deployment architecture

Scale right with Oracle Retail applications running on Oracle Database 11g and Oracle Real Application Clusters

Oracle Database 11g and Oracle Real Application Clusters (Oracle RAC) run Oracle Retail applications in a parallel database environment that takes advantage of the processing power of multiple interconnected computers, operating as cluster. In an Oracle RAC environment, all nodes run concurrent Oracle Database instances and process transactions against shared data on the database. If a clustered server fails, Oracle Database continues running on the remaining servers. This standard Oracle RAC characteristic, combined with the superb reliability characteristics of the IBM Power Systems platform, makes this combination an excellent choice for customers looking for a highly available operating environment.

The IBM Power Systems family offers you the flexibility of scaling out and scaling up within a single Oracle RAC implementation. Infrastructures that scale out rely on many smaller servers where capacity is increased by adding servers. Scaling up relies on fewer servers that can be upgraded with more processors to add capacity. Power Systems servers offer the flexibility to scale out with smaller servers for smaller workloads and scale up and out with fewer larger servers for larger workloads helping to deliver services faster based on your business need. Oracle Retail applications support active-active and active-passive high availability solutions. In fact, many retail customers have successfully deployed Oracle Retail applications utilizing IBM PowerHA SystemMirror. Power Systems solutions benefit from decades of IBM experience in designing and deploying high availability hardware and software. PowerHA SystemMirror for AIX disk clustering solutions are available to help keep your systems—and your business—running 24x7x365.

Sizing and capacity planning Oracle Retail applications on Power Systems

Oracle has an established sizing-estimation process for the Oracle Retail applications based on performance tests and experience with clients who are using the applications. IBM can help facilitate the sizing process and will work closely with Oracle to create a properly designed architecture. For more information about requesting a sizing estimate for an Oracle Retail applications deployment, please visit: ibm.com/erp/sizing

Retailer Size	Small	Medium	Large	Very Large
Platform	2 x Power 740	2 x Power 750 or 2 x Power 770	2 x Power 770 or 2 x Power 780	2 x Power 780 or 2 x Power 795

Table 1: Approximate Power Systems platform requirements

Power Systems Capacity on Demand

With Capacity on Demand from IBM Power Systems, it's easy to activate dormant processor and memory resources within your system, without taking your system or application down. This feature enables retailers to cost efficiently adjust compute resources, up or down, to the seasonal changes and requirements of your business. Whether your need is temporary or permanent; the solution is fast, it's easy and it's available today.

Power is sustainable IT infrastructure

Many companies are running into floor space and energy challenges in their data center due to the explosion in data and growth in IT applications. Analysts have projected that up to 70% of large enterprise clients will face the need for major changes to their data centers in the next few years. It is becoming critical for these clients to begin to create a more sustainable and cost efficient IT infrastructure. In addition to being socially responsible, energy efficiency yields real business benefits.

The POWER7+ processor-based systems deliver extraordinary new capability to expand an enterprise's IT capability without expanding their floor space or even energy consumption. As an example the Power 795 delivers over four times the compute capacity of the Power 595 in the same space and energy envelope. POWER7+ technology can potentially quadruple the capabilities of a data center without having to change the size, configuration or power and cooling infrastructure. IT operations energy management has become increasingly important as the price of energy increases and system deployments grow beyond the capacity of current facilities to supply their power and cooling needs. Power Systems energy management solutions to monitor and control energy usage can help you to manage energy efficiency for IT operations centers along with traditional areas of interest such as performance, reliability, and availability. IBM Power Systems include innovative solutions which support virtualization and server consolidation efforts that are proven to help conserve energy usage and manage costs.

Power is management with automation

With IBM Systems Director on Power Systems, businesses not only get a complete picture of their systems and how well they are operating, but also the tools to deploy, optimize and maintain these systems at maximum effectiveness and efficiency. The result is optimized workload performance, energy efficiency and cost control. On Power Systems, server virtualization management is integrated with network and storage management for complete resource control.

For more information

To explore other Power Systems and Oracle solutions or to find out more about other joint solutions from IBM and Oracle, please contact an IBM sales representative at 1-866-426-9989, or visit us at:

ibm.com/solutions/oracle

ibmandoracle.com

For more information about the IBM Power Systems family, visit:

ibm.com/systems/power

For more information about IBM AIX version 7.1, visit:

ibm.com/systems/power/software/aix/v71

For more information about Oracle Retail Applications, visit:

oracle.com/us/products/applications/Retail



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When referring to storage capacity, total TB equals total GB divided by 1000; accessible capacity may be less.

¹ PowerVM case studies available at:

ibm.com/systems/power/success/index.html

² Power Systems benchmark results available at:

ibm.com/systems/power/hardware/benchmarks/index.html

³ More information on the binary compatibility of AIX can be found at:

ibm.com/systems/power/software/aix/compatibility/