Cisco UCS Delivers World-Record Oracle PeopleSoft Benchmark Results

Performance Brief
January 2015

Highlights

World-Record Results

- Cisco demonstrates performance leadership with world-record Oracle PeopleSoft benchmark results.

Scalable Performance

- The Oracle PeopleSoft Human Resources Management System (HRMS) 9.1 FP2 benchmark results for the Self-Service section of the benchmark demonstrate world-record performance and linear scalability. These results give you direct evidence of the degree to which you can scale your Cisco Unified Computing System™ (Cisco UCS®) deployments as the number of users of your human resources management system grows.
- The world-record-setting Self-Service and Payroll Batch Extra-Large Data Model benchmark results show you how quickly you can accomplish batch payroll tasks.

Cisco Solutions for Your Business

- The Cisco® solution behind these world records, incorporating EMC VNX storage, demonstrates the exceptional performance you can expect in your business.

The last thing you want is human resources software that impedes your business agility. We make Oracle PeopleSoft Human Resources Management Systems speed and simplify your business operations.

The capability to address the most complex business requirements quickly is essential to success. Oracle PeopleSoft gives you access to the information you need and the Cisco Unified Computing System™ (Cisco UCS®) gives it to you fast. So fast that Cisco UCS delivers world-record performance on Oracle PeopleSoft Human Resources Management Systems (HRMS) 9.1 FP2 Self-Service (online transaction processing [OLTP]) and Self-Service and Payroll Batch benchmarks.

Human Resources at the Speed of Business

Cisco UCS has long demonstrated performance leadership on Oracle business applications. Cisco leadership now extends to Oracle PeopleSoft with world-record results on the Oracle PeopleSoft HRMS 9.1 FP2 benchmark for the Self-Service (Table 1) and Self-Serve and Payroll Batch (Table 2) sections of the benchmark. With more world-record results like these, you can be assured that your choice to run Oracle business applications on Cisco infrastructure is a wise decision.

Table 1. Oracle PeopleSoft HRMS 9.1 FP2 Self-Service Benchmark Results

Number of Users	Average Search Time (Seconds)	Average Save Time (Seconds)	Transactions per Minute	Availability
12,000	0.294	0.139	2400	January 15, 2015
16,000	0.324	0.155	3200	
20,000	0.353	0.167	4000	

Table 2. Oracle PeopleSoft HRMS 9.1 FP2 Self-Service and Payroll Batch Extra-Large Data Model Benchmark Results

Number of Employees	Minutes	Payments per Hour	Availability
500,480	21.95	1,368,055	January 15, 2015

Self-Service Benchmark

The Oracle PeopleSoft HRMS 9.1 FP2 Self-Serve (OLTP) benchmark is a three-tier application that simulates HTML page clicks that guide the user through a particular scenario: for example, the process of promoting an employee. The kit requires the tester to process several sets of 14 transactions:

- Update home address
- Update home phone
- View benefits summary
- Benefits change life
- View paycheck
- Update direct deposit information
- Addition of profile by employee
- View employee information
- Initiate termination
- Initiate promotion
- Initiate employee salary change
- Add employee
- Hire employee
- Add a position

Self-Service and Payroll Batch Benchmark

The Self-Service and Payroll Batch benchmark measures the time needed to run five payroll application business processes on one database to represent an extra-large organization. During the benchmark processing, five sets of transactions are completed:

- Create a pay sheet
- Calculate payroll
- Confirm payroll
- Print advice forms
- Create a direct deposit

Then a massive single update to the Oracle database occurs (in a production environment this would be performed at night).

Configuration

The benchmark configuration used a Cisco UCS B460 M4 Blade Server running Oracle Database 11g 11.2.0.3 on Oracle Linux 6.3. Two Cisco UCS B200 M3 Blade Servers, each with 256 GB of memory, ran the Oracle PeopleSoft application. A single Cisco UCS B200 M3 Blade Server, also with 256 GB of memory, was used as a web server. All the Cisco UCS blade servers were connected to an EMC VNX5500 Storage System through Fibre Channel over Ethernet (FCoE) supported by Cisco UCS virtual interface cards (VICs).

- **The Cisco UCS B460 M4 Blade Server** is a full-width, double-height blade server designed for high-performance computing and high I/O and storage-capacity demands. Powered by four Intel® Xeon® processor E7-4800 series CPUs, the server supports up to 6 terabytes (TB) of main memory and up to 12 Small Form-Factor (SFF) disk drives. The server uses Cisco UCS VICs to provide high-bandwidth and low-latency cluster connectivity with support for up to 256 virtual devices. The tested configuration consists of one Cisco UCS B460 M4 Blade Server with four Intel Xeon processor E7-24890 v2 15-core CPUs (60 cores total),1 TB of memory, and two Cisco UCS VIC 1240 cards.
- **The Cisco UCS B200 M3 Blade Server** is a half-width, single-height blade server designed to balance a broad set of workloads: from IT and web infrastructure to distributed databases. The Cisco UCS B200 M3 Blade Servers are powered by two versatile Intel Xeon processor E5-2600 series CPUs and can support up to 768 GB of memory and up to two internal SFF disk drives. For these tests, both the web and the application servers were configured with two Intel Xeon processor E5-2697 v2 CPUs, each with 12 cores, 256 GB of memory, and a Cisco UCS VIC 1240.
- **Cisco UCS 6296 96-Port Fabric Interconnects** provide high-bandwidth, low-latency connectivity for servers and centralized management for all connected devices, including all three Cisco UCS blade servers with Cisco UCS Manager. These devices provide active-active redundancy, high performance, and exceptional scalability for the large number of nodes typical in big data clusters. Cisco UCS Manager enables rapid and consistent server integration using Cisco UCS service profiles. Cisco UCS service profiles automate ongoing system maintenance activities such as firmware update operations across the entire cluster

as a single operation, advanced monitoring, and the option to raise alarms and send notifications about the health of the entire cluster.

- **EMC VNX5500 Storage Systems** provide dynamic and scalable unified storage. EMC VNX storage offers several software and hardware features for optimal deployment of mission-critical enterprise applications. These storage platforms support both block- and file-based external storage access using a variety of access protocols. The EMC VNX storage family supports 2.5-inch SAS drives in a 2-rack-unit (2RU) disk array enclosure (DAE) that can hold up to 25 drives, making it one of the densest offerings in the industry.

Conclusion

The Oracle PeopleSoft HRMS benchmark is designed to provide verifiable performance metrics across a broad range of PeopleSoft HRMS workloads. With these world-record results, Cisco, EMC, and Oracle demonstrate the performance characteristics of real-life representative workloads. The work we have done together provides a template for you to use in obtaining exceptional performance for your business.

For More Information

- Learn more about Cisco UCS performance.
- Learn more about Oracle applications on Cisco UCS.

Disclosures

Cisco measured the performance of all three components of the Oracle PeopleSoft HRMS benchmark. The disclosures for the three components are available at the following locations:

- Self-Service (OLTP) results (three user levels: 12,000, 16,000, and 20,000 only)
- Self-Service (user level: 18,000) and Payroll Batch (concurrency level: 128 Extra Large for 500,000 employees) together
- Payroll Batch (three concurrency levels: 32 Medium, 64 Large, and 128 Extra Large for 500,000 employees only)

As of January 15, 2015, the Self-Service and Payroll Batch results reported here were the top results among those reported at: http://www.oracle.com/us/solutions/benchmark/apps-benchmark/peoplesoft-167486.html

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