HP ProLiant BL460c achieves #1 performance spot on Siebel CRM Release 8.0 Benchmark Industry Applications running Microsoft, Oracle

HP ProLiant BL685c takes #2 spot

HP Leadership

» The HP ProLiant BL460c server blade continues to provide enterprise-class features for high performance and reliability without compromising energy efficiency or density.

The ProLiant BL685c server blade delivers no-compromise performance and expansion in the densest four processor server blade form factor available.

Customer Value

What are the benefits of using HP ProLiant servers and the Siebel benchmark?

These benchmarks simulated real-world requirements of a large organization, consisting of 5,200 and 4,700 concurrent active users in a call center environment. The test system demonstrated that Oracle's Siebel CRM Release 8.0 architecture and HP ProLiant BL460c and BL685c server blades form very powerful business solutions.

Siebel on HP Blades. These benchmarks also demonstrated the versatility and flexibility of HP blades hardware. The #1 benchmark started with two identical ProLiant BL460c server blades and one HP Integrity rx6600 server. The servers supporting Siebel Application components ran Microsoft Windows 2003 Server EE, while the server supporting the Oracle 10gR2 DB ran HP-UX 11iv3.

Low network utilization. The Siebel CRM Release 8.0 Smart Web Architecture and Smart Network Architecture efficiently managed the network with low network utilization — consuming only 4.34 Kbps per user for the ProLiant BL460c and 4.45 Kbps per user for the ProLiant BL685c.

The Siebel CRM Release 8.0 Smart Database Connection Pooling and Multiplexing allowed the database to efficiently service 5,200 concurrent users and the supporting Siebel CRM Release 8.0 server application services with only 460 database connections for the ProLiant BL460c and the database to service 4,700 concurrent users with only 462 database connections for the ProLiant BL685c.

Key Points

- HP ProLiant leadership continues with the BL460c server blade holding the #1 Microsoft Windows result on Oracle's Siebel CRM Release 8.0 Benchmark blades with 5,200 users.

- In addition, the #2 spot is also held by HP with the ProLiant HP BL685c server blade with 4,700 users.

- The ProLiant BL460c defeated the IBM System x3850 by 33% more number of users while the ProLiant BL685c had 20.5% more users than IBM!

Figure 1. Comparison of performance results of the HP ProLiant BL460c dual-processor Quad-Core server blade and ProLiant BL685c four-processor Quad-Core server blade to the IBM x3850 four-processor Dual-Core server in the Oracle Siebel CRM Release 8.0 Benchmark Industry Applications.
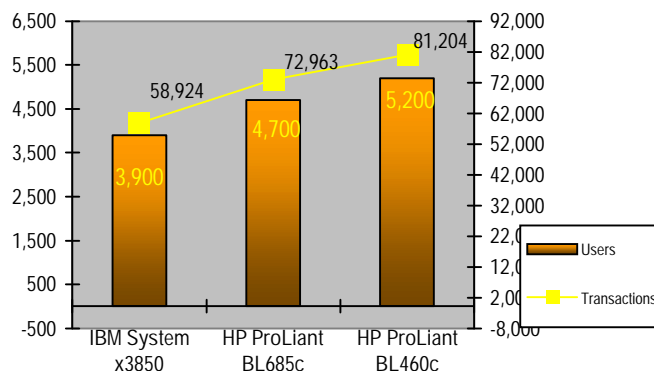
The HP ProLiant BL460c defeated the IBM x3850 by 1,300 more users (33%) and 22,280 more transactions (37.8%)!

Vertical scalability. The Siebel CRM Release 8.0 Application Server showed excellent scalability on both HP ProLiant server blades. Many users can be supported with minimal hardware. The ProLiant BL460c offers up to a 33% performance advantage when compared to other two-socket competitors utilizing Siebel with Oracle and Microsoft.

Technology for better business outcomes

HP takes #1 and #2 performance

HP, in conjunction with Microsoft and Oracle Corp., has completed two Siebel 8.0 benchmarks on infrastructures designed to deliver a high-performance and cost-effective solution for midsized users of Siebel software. The tested configurations were built on HP BladeSystem infrastructures running Microsoft Windows 2003 Server Enterprise Edition and Oracle backend databases. Completed as part of the CRM 8.0 Platform Sizing and Performance Program (PSPP), these benchmarks, validated by Oracle Corp., demonstrated that enterprises requiring up to 5,200 concurrent CRM application users can confidently deploy their CRM software in a complete HP BladeSystem infrastructure and gain the advantage of an easily-managed, cost-effective infrastructure solution optimized for efficiency and change. HP BladeSystem infrastructures provide a complete, self-contained environment for Siebel applications, integrating multiple, modular components including blade servers, storage, and virtual LAN networking within a shared, intelligent infrastructure and powered by common, adaptive management.

These PSPP benchmarks are excellent indications of the capacity of the HP ProLiant BL460c and ProLiant BL685c server blades in a controlled environment and an important data point in assisting HP in sizing real customer environments.

Benchmark comparison

Table 1. Result summary of the HP ProLiant BL460c and ProLiant BL685c to the IBM System X3850 on the Siebel CRM Applications Release 8.0

Application server	ProLiant BL460c	ProLiant BL685c	IBM x3850
Configuration	2 x 3.16GHz Intel Xeon Quad-Core (8 CPU Cores); 32GB RAM; Microsoft Windows 2003 Server Enterprise Edition, 32-bit, Hyperthreading enabled, Oracle 10gR2 Database Server v10.2.0.2.0	4 x 3.0GHz AMD Opteron Dual-Core CPUs (8 CPU Cores); 32GB RAM; Microsoft Windows 2003 Server Enterprise Edition, 32-bit, Hyperthreading enabled; Oracle 10gR2 Database Client v 10.2.0.2.0	4 x 3.0GHz Intel Xeon MP Dual-Core (8 CPU Cores); 32GB RAM; Microsoft Windows 2003 Server Enterprise Edition, 32-bit, Hyperthreading enabled; Oracle 10gR2 Database Server v10.2.0.1.0
No. of users	5,200	4,700	3,900
Business Transactions Throughput/Hour	81,204	72,963	58,924
Projected Daily Transactions	649,632	583,704	471,392
% CPU Utilization (Application)	84	88	86
Memory (GB) Utilization (Application)	26	24	23
Network Utilization for Browser Traffic	26.06 Mbps/5,200 users	20.43 Mbps/4,700 users	11.36 Mbps/3,900 users
Network Utilization per user	4.34 Kbps	4.45 Kbps	2.98 Kbps

All results as of 8-21-08. For details on all configurations, see:
 http://www.oracle.com/apps_benchmark/html/white-papers-siebel.html

HP ProLiant BL460c White Paper: http://www.oracle.com/apps_benchmark/doc/hp-siebel8-5200-pspp-on-windows-2003.pdf

HP ProLiant BL685c White Paper: http://www.oracle.com/apps_benchmark/doc/hp-siebel8-4700-pspp-on-windows-white-paper.pdf

IBM White Paper: http://www.oracle.com/apps_benchmark/doc/IBM_Siebel8_3900_PSPP_Windows_Final.pdf

What makes it work

ProLiant BL460c server blade: The CRM 8.0 #1 performance results were achieved with one HP ProLiant BL460c server blade configured as the application tier with 2 x 3.16GHz Intel Xeon Quad-Core processors with 32GB memory, maintaining a CPU utilization of 84% while running Microsoft Windows 2003 Server Enterprise Edition, 32-bit, with Hyperthreading enabled. One HP ProLiant BL460c blade server with 2 x 3.16GHz Intel Xeon X5460 Quad-Core processors with 16GB of memory was used as the database server running the Oracle 10gR2 Database v10.2.0.0. One HP ProLiant BL460c server blade was used as the web server with 2 x 3.16GHz Intel Xeon X5460 Quad-Core processors. This compact enterprise solution demonstrates outstanding throughput, processing 81,204 complex business transactions per hour. Complete configuration details are listed in Appendix A.

ProLiant BL685c server blade: The CRM 8.0 #1 performance results were achieved on this benchmark with one HP ProLiant BL685c server blade configured as the application tier with 4 x 3.0GHz AMD Opteron Dual-Core processors with 32GB memory, maintaining a CPU utilization of 88% while running Microsoft Windows 2003 Server Enterprise Edition, 32-bit, with Hyperthreading enabled. One HP Integrity rx6600 server with 4 x 1.6GHz Intel Itanium 2 Dual-Core processors with 32GB of memory was used as the database server running the Oracle 10gR2 Database v10.2.0.0. One HP ProLiant BL460c server blade was used as the web server with 2 x 3.10GHz Intel Xeon Dual-Core processors. Again, this compact enterprise solution demonstrates outstanding throughput, processing 72,963 complex business transactions per hour. Complete configuration details are listed in Appendix B.

The ProLiant Advantage

The HP ProLiant BL460c server blade continues to provide enterprise-class features for high performance and reliability without compromising energy efficiency or density. With features equal to standard 1U rack mount servers, the two-processor, multi-core HP ProLiant BL460c server blade combines power-efficient compute power and high density with expanded memory and I/O for maximum performance The ProLiant BL460c server blade now features the latest models of Intel Xeon 5200, 5300, and 5400 series processors with optional hot-plug hard drives, mirrored memory, online spare memory, memory interleaving, and much more to ensure high availability. The BladeSystem c7000 enclosure supports up to 16 BL460c server blades with Intel Xeon processors, 2 more servers than the IBM BladeCenter.

The ProLiant BL460c server blade key benefits include:

- Concentrated compute power
- Deployment versatility in an efficient dense form factor
- Industry-leading management and configuration tools

The ProLiant BL460c server blade is designed for large enterprise data centers, mainstream/mid-sized data centers and departments and branch offices.

3

The HP ProLiant BL685c server blade delivers no-compromise performance and expansion in the densest four processor server blade form factor available. With up to four AMD Opteron 8000 Series processors, 64GB of DDR2 memory, two-hot plug serial hard-drives, four embedded Gigabit NICs and three I/O expansion slots, the HP ProLiant BL685c delivers the density you want with the performance you need to handle the most demanding enterprise class applications.

The ProLiant BL685c server blade key benefits include:

- 4P performance and expansion in a server blade
- Design and availability features you can depend on
- Industry-leading management and configuration tools

The ProLiant BL685c server blade is designed for large enterprise data centers, mainstream/mid-sized data centers, and departments and branch offices, and is ideal for multi-tiered enterprise applications such as SAP, PeopleSoft, Siebel, Oracle, and JDE, server consolidation, large database applications, ERP, CRM, mail and messaging and business integration applications, and High Performance Computing (HPC) applications that require a large memory footprint and 64-bit software capability; EDA, petrochemical, life, and material science applications.

The advantages of the partnership between HP and Oracle

The Oracle Applications Standard Benchmark is focused on ERP applications and represents a mixed workload intended to model the most common transactions operating on the most widely used enterprise application modules. Definitions of transactions that compose the benchmark load were obtained through collaboration with functional consultants and are representative of typical customer workloads, with batch transactions representing 25% of the total workload. HP, unlike several competitors, uses this real-world benchmark to focus on customer core transactions.

Strategic partners for over 25 years, HP and Oracle have more than 140,000 joint customers. Our accomplishments together are numerous. Here are just a few:

- A strong breadth and depth of platform, software, and services offerings
- Joint development, testing, and optimization
- Performance and price/performance leadership validated by industry and Oracle Applications benchmarking
- HP Consulting and Integration Services deliver solutions for Enterprise Integration and Service-Oriented Architecture with Oracle Fusion Middleware
- HP is a leading Oracle Applications Infrastructure Partner
- There are 13 HP/Oracle solution and demo centers worldwide
- Oracle Fusion Middleware is showcased in HP's SOA Competency Centers around the world
- The partners provide executive alignment that starts at the top and runs through both organizations

HP and Oracle aim to address today's business challenges by enabling the synchronization of infrastructure, applications, services, and business processes – from suppliers through to customers – to help organizations reduce the cost of change, reduce total cost of ownership, simplify IT management complexity, and rapidly implement solutions that provide a competitive advantage.

Partnership between HP and Siebel

HP is the leading platform provider for customers implementing Siebel applications. HP and Oracle understand what drives your business. With Oracle's Siebel System applications, we focus on deploying flexible CRM solutions for your environment and fine-tuning them, while providing the best performance with your infrastructure. The HP and Oracle's Siebel Applications enable you to increase the lifetime value of your customers, decrease your total cost of ownership, and leverage your existing technologies and business assets – allowing you to respond quickly to ever changing customer needs.

Recognizing the bottom-line benefits of being customer-driven, today's chief executives are focusing their IT investments on Customer Relationship Management (CRM) applications to enable their organizations to deliver a superior customer experience. Siebel Systems offers best-in-class software for customer relationship management, derived from more than 3,500 customer deployments, and has documented hundreds of industry-specific best practices for more than 20 industries and industry segments and embedded them directly into Siebel eBusiness Applications.

HP market leadership[1]

HP ProLiant servers and server blades are a vital part of the HP success story. For the 47th consecutive quarter, HP ProLiant is the x86 server market share leader in both factory revenue and units, shipping 1 out of every 3 servers in this market.[2]

- HP's x86 revenue share was 11.7 points higher than its nearest competitor, Dell.
- HP remains the leading provider of AMD Opteron processor-based servers and server blades, with a 35.8% of factory revenue share.

For the 24th consecutive quarter, 6 years, HP is the #1 vendor in worldwide server shipments. HP shipped 1 out of every 3 servers worldwide as HP captured 33.6 percent total unit shipment share.

- HP shipped over 165,000 more servers than #2 Dell.
- HP shipped over 400,000 more servers than #3 IBM and 8.1 times as many as #4 Sun.

HP proven performance

Proven performance is part of the reason that HP is #1 in server shipments. HP has posted hundreds of benchmark results on the most commonly used benchmarks on hundreds of ProLiant servers and blades, helping customer to identify reasons to be confident in HP.

---

1 Source: IDC Worldwide Quarterly Server Tracker May 2008
2 Includes Compaq ProLiant from Q196 through Q202 and HP ProLiant from Q302 through Q306.

For more information

HP ProLiant BL460c server blade: www.hp.com/servers/proliant/bl460c
HP ProLiant BL685c server blade: www.hp.com/servers/proliant/bl685c

HP ProLiant IBM System x3850: www.ibm.com/servers/x3850

HP ProLiant storage solutions: www.hp.com/go/serial and
http://h18004.www1.hp.com/products/servers/platforms/storage.html

HP performed the benchmark project at the HP Enterprise Solutions Partner Labs in Houston, TX. Performance and solutions engineers from HP, Microsoft, and Siebel participated in the benchmark efforts. For full technical details and disclosure:
http://www.siebel.com/products/performance_benchmark/index.shtm

For complimentary sizing and configuration support from HP, please contact the HP Siebel Solutions Center at siebel.hp@hp.com.

For further information on HP and Siebel Systems working together to deliver industry-leading solutions, please visit: http://www.hp.com/go/siebel

Appendix A

The following configurations were used in this benchmark:
ProLiant BL460c server blade benchmark:

PSPP Components

- Siebel CRM Release 8.0 Industry Applications

- Microsoft Windows 2003 Server Enterprise Edition

- HP-UX 11iv3

- Oracle 10gR2 Database Server v10.2.0.2.0

Gateway/Application Server

- 1x2-way HP ProLiant BL460c configured with:
  - 2 x 3.16GHz Intel Xeon (X5460) Quad-Core CPUs (8 CPU Cores)
  - 32GB RAM
  - Microsoft Windows 2003 Server Enterprise Edition, 32-bit, Hyperthreading enabled
  - Oracle 10gR2 Database Client v 10.2.0.2.0
  - Siebel CRM 8.0 SIA [20204] ENU

Database Server

- 1x4-way HP Integrity rx6600 server configured with:
  - 4 x 1.6GHz Intel Itanium 2 Dual-Core CPUs (8 CPU Cores)
  - 32GB RAM
  - HP-UX 11iv3, 64-bit, Hyperthreading Enabled
  - Oracle 10gR2 Database Server v10.2.0.2.0

Web Server

- 1x2-way HP ProLiant BL460c configured with:
  - 2 x 3.10GHz Intel Xeon Dual-Core CPUs (4 CPU Cores)
  - 4GB RAM
  - Microsoft Windows 2003 Server Enterprise Edition, 32-bit, Hyperthreading enabled
  - Microsoft IIS 6.0
  - Siebel CRM 8.0 SIA [20204] ENU

HP LoadRunner Controller

- 1x HP ProLiant DL360 G4 configured with:
  - 2 x 2.8GHz Intel Xeon Dual-Core CPUs
  - 4GB RAM
  - Microsoft Windows Server 2003 Enterprise Edition SP1
  - LoadRunner version 8.1

HP LoadRunner Host

- 1x HP ProLiant DL360 G4 configured with:
  - 2 x 2.8GHz Intel Xeon Dual-Core CPUs
  - 4GB RAM
  - Microsoft Windows Server 2003 Enterprise Edition SP1
  - LoadRunner version 8.1

Appendix B

The following configurations were used in this benchmark:
ProLiant BL685c server

PSPP Components

- Siebel CRM Release 8.0 Industry Applications

- Microsoft Windows 2003 Server Enterprise Edition

- HP-UX 11iv3

- Oracle 10gR2 Database Server v10.2.0.2.0

Gateway/Application Server

- 1x4-way HP ProLiant BL685c configured with:
  - 4 x 3.0GHz AMD Opteron Dual-Core CPUs (8 CPU Cores)
  - 32GB RAM
  - Microsoft Windows 2003 Server Enterprise Edition, 32-bit, Hyperthreading enabled
  - Oracle 10gR2 Database Client v 10.2.0.2.0
  - Siebel CRM 8.0 SIA [20204] ENU

Database Server

- 1x8-way HP Integrity rx6600 server configured with:
  - 4 x 1.6GHz Intel Itanium 2 Dual-Core CPUs (8 CPU Cores)
  - 32GB RAM
  - HP-UX 11iv3, 64-bit, Hyperthreading enabled
  - Oracle 10gR2 Database Server v10.2.0.2.0

Web Server

- 1x2-way HP ProLiant BL465c configured with:
  - 2 x 2.6GHz AMD Opteron Dual-Core CPUs (4 CPU Corés)
  - 4GB RAM
  - Microsoft Windows 2003 Server Enterprise Edition, 32-bit, Hyperthreading enabled
  - Microsoft IIS 6.0
  - Siebel CRM 8.0 SIA [20204] ENU

HP LoadRunner Controller

- 1x HP ProLiant DL360 G4 configured with:
  - 2 x 2.8GHz Intel Xeon Dual-Core CPUs
  - 4GB RAM
  - Microsoft Windows Server 2003 Enterprise Edition SP1
  - LoadRunner version 8.1

HP LoadRunner Host

- 1x HP ProLiant DL360 G4 configured with:
  - 2 x 2.8GHz Intel Xeon Dual-Core CPUs
  - 4GB RAM
  - Microsoft Windows Server 2003 Enterprise Edition SP1
  - LoadRunner version 8.1