HP BladeSystem for Oracle® Optimized Warehouse

Unmatched data warehouse performance in a preconfigured, ready-to-run package

Making decisions can do two things—drive your business or drive you crazy. Which one, is up to you.

Decisions drive business. And decisions—the good ones, at least—are driven by timely, accurate information. But deciding how to store, access and ultimately utilize that information, especially at the speed needed to stay ahead of your competition, can drive you crazy. The technology choices are nearly endless. The potential for mismatched and under-performing combinations is high. And the time and cost to assemble, test and tune all the right pieces—well, you don't want to think about that.

Instead, think about a pre-configured, high-performance data engine—a scalable, optimized infrastructure specifically configured as the platform for your data warehouse. That's the HP BladeSystem for Oracle Optimized Warehouse (BladeSystem OOW).

Performance and efficiency

The foundation for a superior data warehouse is the infrastructure that supports it. That's why HP chose to build the Oracle Optimized Warehouse on the HP BladeSystem c-Class.

BladeSystem brings together the essential elements of a data warehouse infrastructure—compute, storage, interconnect, management—into a modular, self-optimizing unit. This cuts power and cooling costs by 40 percent, cable count by 94 percent and it delivers unmatched performance in the 1 to 4TB (terabyte) data warehouse market segment.

Compared to other 1 to 4TB Oracle Optimized Warehouse solutions, the BladeSystem OOW delivers 250 percent better I/O (input/output) performance and does it using 65 percent less power per megabyte of I/O[1]. And, as you might expect, delivering performance of this magnitude in

a pre-configured, ready-to-run package is no accident. It's the result of exhaustive testing, detailed tuning and the right choices of HP hardware.

For example, the choice of the HP 4X DDR InfiniBand HCA and Switch Module for BladeSystem allows data to move directly between the memory of the server blades and the storage blades. This translates to extremely fast data transfer, low latency and minimal burden on other infrastructure resources.

The same holds true with the choice of the HP 1/10Gb Virtual Connect Ethernet Module. With HP Virtual Connect you get all the benefits of conventional integrated Ethernet switching—port aggregation, failover, stacking and more. But, unlike a conventional switch, HP Virtual Connect looks like a pass-thru device to your network. This simplifies management and can make adding the BladeSystem OOW to an existing network as simple as plugging in a cable.

Headache-free deployment

Potential becomes reality when it's implemented. That's why HP and Oracle collaborated to develop a network of value-add resellers (VAR) with world-class expertise in data warehouse and business intelligence (BI) solutions. These VARs can deliver a ready-to-run HP BladeSystem OOW to your doorstep or tailor a complete BI infrastructure on top of BladeSystem OOW to meet your exact needs.

The decisions that drive your business are still yours to make, but they need not drive you crazy any longer. For more information on the HP BladeSystem for Oracle Optimized Warehouse or to locate a local authorized HP/Oracle VAR, visit us at www.hp.com/go/owi

Benefits at a glance

HP BladeSystem is simply a smarter way to build your data warehouse infrastructure

- Consolidated from the start to reduce acquisition and operational costs
- HP Thermal Logic to pool and share power and cooling to improve energy efficiency
- HP Insight Control to manage infrastructure and automate routine tasks from a single console
- HP Virtual Connect to reduce cables by 94 percent without adding switches to manage

HP BladeSystem for Oracle Optimized Warehouse, 1TB single enclosure

2 Compute Nodes

HP ProLiant BL460c
2 x Intel XEON
16GB RAM
2 x 72GB SFF SAS HDD
2 x HP InfiniBand HCA
Red Hat® Enterprise Linux® 5
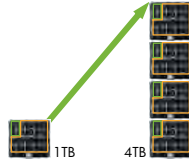
**Oracle Database
Enterprise Edition**

7 Storage Nodes

HP ProLiant BL465c
1 x AMD Opteron
2GB RAM
2 x 146GB SFF SAS HDD
2 x HP InfiniBand HCA
Red Hat® Enterprise Linux® 5

HP StorageWorks SB40c
6 x 146GB HDD

HP BladeSystem c7000 Enclosure

Solution highlights

1TB   4TB

HP BladeSystem for Oracle Optimized Warehouse

- Fastest and most energy-efficient Oracle Optimized Warehouse in the 1 to 4 terabyte market[1]
- Preconfigured, preinstalled and tested for trouble-free deployment
- Built on Oracle Database Enterprise Edition with Real Application Clusters (RAC) and Partitioning
- Modular approach allows for rapid scaling from 1 terabyte to 4 terabytes
- Simplified ordering and deployment through a network of world-class data warehouse VARs

HP 4X DDR InfiniBand for HP BladeSystem c-Class

- Up to 20 gigabits per second signaling rate (16 gigabits per second data rate) in each direction
- Latency as low as 1.3 microseconds for MPI ping-pong
- HP 4X DDR IB Dual-port Mezzanine HCA is based on the new ConnectX technology from Mellanox
- Each HP 4X DDR IB Switch Module provides 16 downlinks and 8 uplinks. Two switch modules provide 16 uplinks.

HP 1/10Gb Virtual Connect Ethernet Module for HP BladeSystem c-Class

- Simplify networks—reduces cables up to 94 percent without adding switches to manage
- Simplify server connections—makes system administrators self sufficient and frees LAN and SAN administrators from common server tasks
- Change servers in minutes, not days—add, move and replace servers on-the-fly without affecting your LAN or SAN
- Total control to move workloads fast without impacting LAN, SAN or the people who manage them

HP Insight Control Environment (ICE) for Linux

- Linux management solution with discovery, imaging, deployment, and monitoring for growing multi-system Linux environments
- Integrates "best of breed" HP and open source technologies into the HP SIM platform, with access to future innovations
- Utilizes common open source software for monitoring and management with auto-configuration of Nagios for user productivity
- ICE-Linux is a standard HP-supported product for worldwide usage, backed by HP

[1] Comparison based on published I/O performance of 620 MB/sec and estimated power consumption of 2180 watts for Oracle Optimized Warehouse for Dell (1TB) versus HP measured I/O performance of 1700MB/sec and peak power consumption of 1891 watts for HP BladeSystem OOW (1TB).

Technology for better business outcomes

To learn more, visit www.hp.com/go/owi

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