

Compaq Parallel Database Cluster
Model PDC/O2000 for Oracle8
Parallel Server Release 8.0.5

QUICKSPECS

MODELS

Compaq Parallel Database Cluster Model PDC/O2000 for Oracle8 Parallel Server Release 8.0.5

PDC/O2000
Ethernet Kit - Enhanced
162952-B21

Overview

Compaq Parallel Database Cluster solutions provide high availability, scalability, and manageability for applications and data in a business-critical environment. The Compaq Parallel Database Cluster Model PDC/O2000 for Oracle8 Parallel Server Release 8.0.5 is a hardware and software configuration specifically designed and tested for use with the Oracle8 Server Release 8.0.5 and Oracle8 Parallel Server option Release 8.0.5 in support of database opportunities such as data warehousing, web Back-end databases, custom database application development, packaged applications and database migration from other platforms.

Description

The Compaq Parallel Database Cluster Model PDC/O2000 for Oracle8 Parallel Server Release 8.0.5 (PDC/O2000) allows a two to six node cluster of Windows NT-based Compaq servers to simultaneously share a single Oracle database. Certified for Oracle8 Server Release 8.0.5 and Oracle8 Parallel Server option Release 8.0.5, PDC/O2000 integrates Compaq's unique Operating System Dependent (OSD) enabling software with Compaq's industry standard, fault-resilient hardware:

- Compaq ProLiant Servers (Please refer to the PDC/O2000 Certification Matrix for supported ProLiant Server models in the PDC/O2000 cluster configurations)
- Compaq RA4000 Storage subsystem as shared storage.
- Ethernet as dedicated cluster Interconnect

Compaq provides an Enhanced Ethernet Cluster Kit for the PDC/O2000 configurations, which contain the Compaq OSD modules for Oracle Parallel Server, an Administrator Guide, and configuration posters.

The PDC/O2000 configurations have been certified with Compaq RAID Array RA4000 as shared storage. All the active components of the Compaq RAID Array RA 4000 Storage Subsystem are redundant and hot replaceable which provides high system availability. Additionally, Dual HBA fail-over support through the use of Compaq Redundancy Manager software provides redundant data paths from the host to ensure higher availability and No single Point of Failure. The PDC/O2000 configuration supports multiple redundant Fibre Channel Arbitrated Loops (FCAL) with Short Wave GBICs and multi-mode Fibre optic cabling.

Maximum Availability, Minimum Cost

The PDC/O2000 exploits fully redundant and optimized Windows NT Server-based Compaq ProLiant servers and other highly reliable, industry-standard hardware. It provides significantly improved uptime and lower operating costs than multiple single-server or proprietary database implementations.

Increased Throughput and Simplified Management with Oracle Software

All nodes within the PDC/2000 Cluster share a single Oracle database. Oracle Parallel Server software increases throughput to the Oracle database by coordinating each server's access to the data and allows the entire cluster to be managed from a single workstation—providing increased performance and simplified management of the database.

Automatic online recovery

In the event of a node failure, the remaining nodes can continue to have access to the database. Meanwhile, users on the failed node can switch to another node and continue processing. The remaining nodes automatically recover all of the transactions performed by the applications before the failure occurred, ensuring data integrity.

Data integrity and database consistency

Each copy of the Oracle database is allocated its own mirrored, multi-segment redo logs that store transactions not yet written to the database. If a node or an Oracle copy fails, the remaining nodes use the redo log from the failed node to bring the database back to a consistent state. The Oracle distributed Lock Manager ensures data consistency and supports multi-initiator access to the shared storage environment.

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HARDWARE CONFIGURATION ELEMENTS

- Compaq ProLiant Servers (two to six nodes of the same model. Please refer to the PDC/O2000 Certification Matrix for supported ProLiant Server models in the PDC/O2000 cluster configurations.
- Compaq Raid Array RA4000 as shared storage
- 100BaseTX Ethernet Interconnect

COMPONENTS

Servers

The PDC/O2000 cluster supports 2 to 6 nodes of Compaq ProLiant server. Please refer to the PDC/O2000 Certification Matrix for supported ProLiant Server models in the PDC/O2000 configurations.

PDC/O2000 Cluster must be identically configured, including:

- All the servers within a PDC/O2000 cluster must belong to the same server model.
- *Minimum memory:* Each ProLiant server in the PDC/O2000 Cluster must have a minimum of 256 MB of memory and a minimum of 512 KB L2 cache per processor.
- *Balanced servers:* The servers within a PDC/O2000 cluster must be balanced. That is, each server must have the same type and number of processors, the same amount of primary and secondary cache, and the same type and amount of memory.

Storage

The PDC/O2000 cluster configurations have been certified with Compaq Raid Array RA4000 as shared storage. This innovative storage solution from Compaq provides the capacity, scalability and performance needed for the explosive data growth in the enterprise. The StorageWorks Raid Array can scale from several GB to over 1.6 TB per server slot allowing you to purchase only the storage capacity you need today and feel confident that you have enough bandwidth to easily expand in the future. For additional information on Compaq StorageWorks Raid Array 4000 please see:

<http://www.compaq.com/products/storageworks/raidstorage/FibreChannelSSindex.html>

The PDC/O2000 cluster configuration supports multiple Fibre Channel Arbitrated Loops (FCAL) with Short Wave GBIC and multi-mode Fibre optical cable. The RA4000s are connected using a 7-port or 12-port Compaq Fiber Channel Storage hub.

Cluster Interconnect

The PDC/O2000 cluster support the following cluster interconnects:

- Ethernet PCI adapters in conjunction with a 100BaseTX Ethernet hub/switch

Cluster Kits

The PDC/O2000 cluster requires the PDC/O2000-8.0.5 Ethernet Kit – Enhanced (PN 162952-B21-English only), which contains:

- Compaq's OSD software components
- User installation and Administrators Guide for Cluster Specific components, including site preparation information
- PDC/O2000 Configuration Poster.

Supported Operating Systems

The PDC/O2000 supports Windows NT Server Enterprise Edition and Windows NT Server 4.0 with service pack 3, 4 or 5.

QUICKSPECS

COMPONENTS *(continued)*

Service and Support

Compaq Customer Services organization has participated in the definition and delivery of supporting services for the PDC/O2000 product. Please call 1-800- 289-9052 to request the details on available services for the hardware, the software and the clusters. Or you may access the WEB at <http://www-mcs.shr.dec.com/release/allcsp.htm> for the associated release material on services.

Compaq servers and storage systems are protected by Compaq Services including a three-year limited warranty, 7 x 24 hardware technical phone support and on-line support through CompuServe, Prodigy, America Online and the Internet. Certain restrictions and exclusions apply. Consult the Compaq Customer Support Center at 1-800-345-1518 for details.

For more information on support offerings for your Compaq hardware, contact your Compaq Authorized Service Provider.

Compaq Custom Systems

Compaq Custom Systems can deliver a pre-configured PDC/O2000 cluster to a customer or channel location. For additional hardware and software configuration information, contact your local Custom Systems representative. For a complete understanding of Custom Systems capabilities and list of local offices see the following web location.

<http://www.compaq.com/solutions/customsystems/proliant/database.html>