

COMPAQ

ORACLE®

Alpha Warehouse **one** Pre-packaged Systems

for Business Intelligence

Start small.

*Grow beyond **ONE** terabyte*



*A family of Business
Intelligence building
blocks for Oracle8™
based data warehouses*

Building a data warehouse is complex and time-consuming. It demands skilled, scarce, and costly professional resources. What if a major building block — the hardware/software platform — arrived onsite ready to run? With the operating system loaded. With components integrated and tested. With every cable and connector in place. The result? Deployment risks minimized. Deployment time significantly reduced. And — perhaps most important of all — your skilled resources could stay focused on the overall project. That's what Alpha Warehouse **one** is all about: *reducing risk, speeding deployment, maintaining focus.*

The Alpha Warehouse **One** family — *a choice for all your data warehousing needs*

In 1997, DIGITAL and Oracle broke through the million-dollar barrier with Alpha Warehouse **one** — a fully featured Oracle8 data warehouse with one terabyte of disk and tape storage and a footprint under one square yard. Now, following close consultation with its customers, Compaq and Oracle have expanded the Alpha Warehouse **one** family to offer a comprehensive choice of options for all your data warehousing requirements.

Added Value in Action

Packaged in a space-saving, easy-to-maintain rack-mount cabinet, each Alpha Warehouse **one** platform contains 64-bit RISC processors, DIGITAL UNIX operating system, memory, high-performance StorageWorks™ RAID subsystems, networking gear, power supplies, and virtually every cable and connector needed to tie it all together.

What's more, each platform is assembled, integrated, and tested at our ISO 9001 manufacturing facility. When it arrives at your site, you can begin loading your database immediately.

Our value-added implementation capabilities make the planning, configuring, and ordering of complex data warehouse systems faster and easier. For you, this means reducing the risk associated with installing large, complex systems while keeping the tasks of consultants and staff focused on business instead of installation.

Start small.

The family can be separated into two distinct groupings endorsed by Oracle to run Oracle8: Alpha Warehouse **one** systems based on the AlphaServer™ 4100, and Alpha Warehouse **one turbo** systems, based on the AlphaServer 8400.

Alpha Warehouse **one** systems

- Alpha Warehouse **one builder** — an entry-level configuration with the fastest AlphaServer 4100 processor, easy to scale and upgrade to the functionality of a full-fledged Alpha Warehouse **one**

- Alpha Warehouse **one** — the high-capacity, low cost data warehouse platform based on an AlphaServer 4100 with four processors and 1TB storage

Alpha Warehouse **one turbo** systems

- Alpha Warehouse **one turbo builder** — the introductory high performance system with two of the fastest AlphaServer 8400 processors, easy to scale and upgrade to the full functionality of an Alpha Warehouse **one turbo**

- Alpha Warehouse **one turbo** — the high-capacity, top performance data warehouse platform with six AlphaServer 8400 processors and 1TB storage



Alpha Warehouse **one** solutions provide vast amounts of data storage, first-class performance, affordably low pricing and low running costs. Each of these four systems has been tested and pre-configured to provide an ideal hardware platform for an Oracle8-based data warehouse.

The entry-level **builder** models can be easily upgraded to keep ahead of your requirements as your data warehousing needs grow and develop, and all four members of the family can be clustered for even higher capacity and performance.

All Alpha Warehouse **one** family systems are delivered "ready to load" Oracle8 in a fully integrated hardware and system software package. In addition, Compaq offers a range of optional services including software integration and storage management consultancy to ensure a smooth and totally risk-free implementation.

Compaq and Oracle have a history of proven experience designing and installing data warehouses, with hundreds of Oracle8 data warehouse systems installed around the world. So when you choose a member of the Alpha Warehouse **one** family, you can be confident that it has been fully tested and proven to provide exceptionally reliable service and to meet your needs for today and tomorrow.

A range of packages

Alpha Warehouse **one** family systems are built from standard products and driven by DIGITAL UNIX®. Based on powerful 64-bit Alpha processors, they utilize fully addressable memory that allows users to take advantage of the unique 64-bit capabilities. The family incorporates a variety of standard and optional features to give you a totally robust solution: RAID 5 storage, redundant power supplies, redundant disk controllers, automatic backup software, and high availability options. All are standard features on the one terabyte versions and optional on **builder** models.

The power of Alpha processor technology, together with industry-standard StorageWorks™ modular storage, provides unparalleled price/performance. On Alpha Warehouse **one** systems, integrated near-line and on-line

technology provides the most cost-effective media for each of the data warehouse's different data storage needs. New and heavily-used data is held on fast disk storage, on-line, while older and less frequently accessed data is moved to low-cost tape, near-line.

With Alpha Warehouse **one turbo** models, all data is held on disks for very high-speed access, rather than a combination of disk and tape.

Compaq offers a unique family of storage products to provide a fully balanced system: not only disks and individual tape drives but tape libraries, optical storage and solid state disks, PLUS the expertise to build a tested, balanced system to meet your specific current and future needs.



*Grow beyond
ONE terabyte*

The Alpha Warehouse **one** family —

Alpha Warehouse **one** systems Featuring the AlphaServer 4100

Alpha Warehouse **one** builder

An entry-level system with a simple “building block” approach that allows you to upgrade in easy steps.

Complex queries and calculations — add extra memory

••• Add extra CPUs to support more users

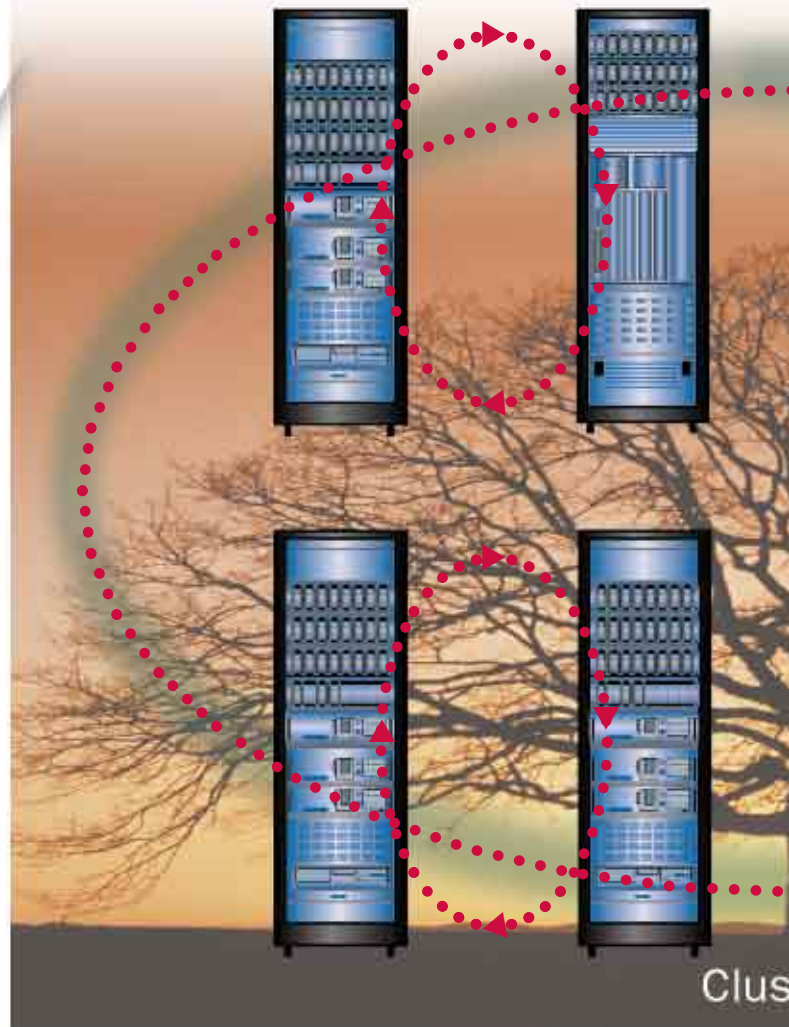
••• Add extra storage to increase capacity

Alpha Warehouse **one**

A fully configured Data Warehouse system offering 1TB storage capacity, high power, and excellent performance at very low cost.

To support more users, increase performance, speed, and availability, just cluster with other AlphaServer based systems.

*Over time, you can grow to a full Alpha Warehouse **one** configuration without having to waste any components.*



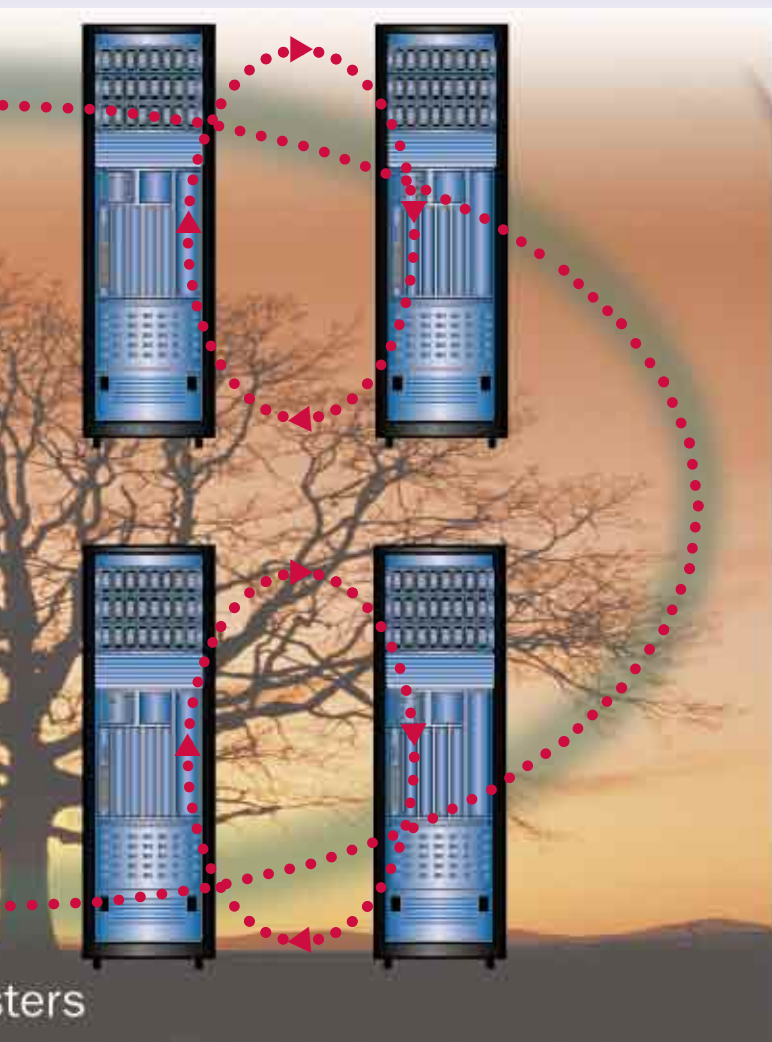
Clus

Clustered Alpha Warehouse **one**

Cluster Alpha Warehouse **one** with up to 7 other AlphaServer based systems for increased performance and availability in power and

Growing to keep ahead of your needs

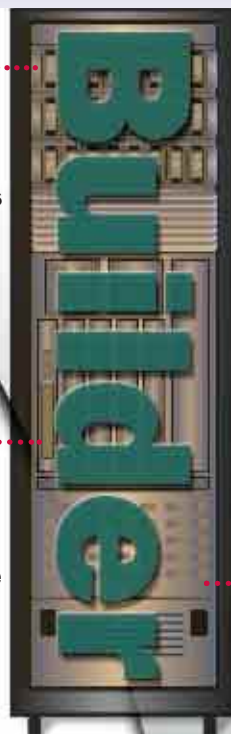
Alpha Warehouse **one turbo** systems Featuring the AlphaServer 8400



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CPUs to
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Add
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increase
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Alpha Warehouse **one turbo** builder

An entry-level, high-performance system with a simple "building block" approach that allows you to upgrade in easy steps.

.....
Complex queries
and calculations
— add extra
memory

Alpha Warehouse **one turbo**

A fully configured Data Warehouse system offering 1TB capacity, and the ultimate in computing power.

To support more users, increase performance, speed, and availability, just cluster with other AlphaServer based systems.

ed Alpha **one** systems

one family members with
r systems for the ultimate
availability.

*Over time, you can grow to a full Alpha Warehouse **one turbo** configuration without having to waste any components.*

Data Warehousing

the key to greater productivity

You need to be able to make more productive use of one of your company's most important assets: information about your customers, products, and business processes. Chances are, you already have all the data you need on customers' usage and buying patterns to make important strategic decision. The difficulty is getting at that information in an easily usable and understandable format. Data Warehousing is the answer.

The power of **memory**

System	Time taken to process query	Times faster	Rows scanned	Rows result
32-bit Oracle	1 hour, 1 minute, 32 seconds	—	170 million	14,500
32-bit Oracle and Star Schema	8 seconds	60 x	14,500	14,500
64-bit Oracle and Star Schema and 6 GB Memory	3 seconds	1,200 x	14,500	14,500

The 64-bit Oracle system with Star Schema and 6 GB memory was able to return the same correct answer as the simple 32-bit Oracle system — but 1200 times faster!

An Oracle8 data warehouse organizes your corporate data into an integrated repository of information. Company decision-makers can easily search and manipulate data previously locked away in large transaction processing systems. Because of the new views of information it opens up — and the new connections it reveals between disparate areas of data — an Oracle8 data warehouse gives organizations the power to:

- Maximize profitability from existing customers by better understanding buying patterns and identifying new trends
- More accurately target marketing programs to gain new profitable customers
- Improve customer retention
- Develop and position new products and pricing quicker
- Reduce fraud

At the same time, because decision makers can perform their own analyses, the strain on IT resources is reduced.

64-bit Compaq AlphaServer systems such as the Alpha Warehouse **one** family deliver far greater speed than 32-bit hardware platforms. There are two reasons for this: first, their lightning-fast processors; second, their Very Large Memory (VLM) capabilities, optimized for an Oracle database, which allow vast amounts of data to be held in fast RAM.

An example from the consumer packaged goods industry shows how Oracle Very Large Memory addressing on a Compaq AlphaServer can dramatically reduce the time required to answer a specific query. The client needed to analyze its shelf-space allocation. The task was to return a 12-month time series showing the share of 20 oz. packs of breakfast cereal sold in Connecticut supermarkets over a year.

The more complex the database query, the more users will benefit because data held in RAM can be accessed far more quickly than if it is read from disk — up to 1200 times faster, in fact. (See table)

To cope with future growth, Oracle8 enables the memory in Alpha Warehouse **one** family systems to be increased in size — up to 28 GB on the Alpha Warehouse **one turbo** system.



Growing, *staying available with clusters*

Data warehouses inevitably grow over time and more hardware needs to be added. With the Alpha Warehouse **one** family, you can simply add another machine by clustering it. The TruCluster™ system on DIGITAL UNIX™ enables up to eight AlphaServer systems of any size to be linked together to create a single system environment — without taking the system down or throwing away any of the components. The TruCluster behaves like a single, highly responsive system and, if one fails, another server in the cluster will immediately assume its workload, automatically reconnect clients, and fail over shared storage.

This will ensure that users can always get fast access to the data they need.

- By adding additional servers to the cluster, you can upgrade in cost-effective increments to suit the needs of your business, increasing the number of processors, RAM, and storage as required

The Memory Channel high-bandwidth interconnect delivers high-performance node-to-node communications that capitalize on the exceptional capabilities for Oracle8 VLDB (Very Large Data Base) implementation

- Compaq and Oracle systems offer the fastest automatic failover in the business, providing the levels of availability vital for business-critical applications.

Proven 64-bit computing now

Compaq has over 6 years' experience in 64-bit computing and, together with Oracle, was the first company to deliver full 64-bit systems across its entire product range: not just the processor, but the operating system, memory addressing, and thousands of tested applications and databases from the world's top software companies.

Eliminate costly migration

This means that there is no costly migration path to full 64-bit systems — with the members of the Alpha Warehouse **one** family, you already have a full 64-bit system on day **one**.

Service excellence

Compaq's customers have given our services organization top ratings for Technical Performance and Overall Satisfaction. To ensure that the Alpha Warehouse **one** Family fits smoothly into your computing environment, Compaq makes available a full range of integration and support services from its award-winning team.



