Compaq unites global workforce with PeopleSoft

To better meet the needs of its customers, Compaq Computer Corporation acquired two major technology companies in the late 1990s. With these acquisitions came the challenge of integrating and managing not only three disparate employee populations around the world, but also the diverse Human Resource Management Systems (HRMS) that were deployed to support them. An integrated HRMS solution must meet the robust application needs of Compaq and its business affiliates in over 60 countries and comply with international regulatory demands and business requirements. In addition, it must be flexible to address changing business and management needs. To meet this challenge, Compaq selected and deployed PeopleSoft as its new world-wide HRMS solution.

Today, the solution is used to maintain employee head-count, feed financial systems, pay the Compaq workforce and meet the human resource requirements of the employee population. In the
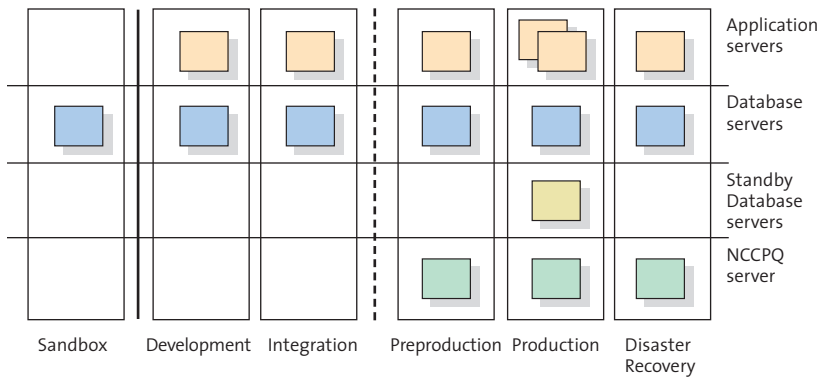
U.S., the PeopleSoft framework also enabled deployment in 2000 of a self-service application that allows employees to make changes to their own personal and business data real-time via the intranet.

The business challenge

To deploy this robust application, Compaq needed to establish a technical infrastructure that not only supported the needs of 70,000 active employees world-wide and 500 users, but also met reporting and management needs at a corporate level. In addition, it had to provide mission-critical reliability for continuous access, because at stake are key functions, such as paying employees or getting immediate access to healthcare coverage information when a child is seriously ill. "There's just no room for downtime," said Caroline Atherton, vice president of Corporate Rewards and Human Resources Information Services at Compaq.

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Compaq and PeopleSoft

Application
servers

Database
servers

Standby
Database
servers

NCCPQ
server

Sandbox   Development   Integration   Preproduction   Production   Disaster
Recovery

Compaq *ProLiant* servers for PeopleSoft environments

Compaq's testing strategy progresses system enhancements and new configurations through a series of prototype environments, from an out-of-box "sandbox" environment through a pre-production environment, to ensure security, stability and reliability before any change or patch goes into production.

The technology solution

To deliver the reliability, scalability and manageability demanded by its requirements, Compaq implemented the entire production system on high-performance Compaq *ProLiant*™ servers running an Oracle database on Microsoft Windows NT 4.0. This product environment is laid out in a three-tier client/server architecture with application servers, data warehouse servers and a single database server located in Houston. Users worldwide install their client systems from a local distribution server, which copies files necessary for the client to use PeopleSoft from their local hard drive. They can then access reporting tools, scripts and documentation over the WAN from the Houston-based file and application servers. Production Data Warehouse Servers, also located in Houston, are updated nightly.

This architecture meets Compaq's diverse technology requirements for this mission-critical solution:

Centralization
Compaq deployed a system that enabled its hundreds of diverse applications to be replaced by one. With all previous and enhanced functionality now available via the PeopleSoft application and PeopleTools, Compaq anticipates support savings in the millions of dollars. For example, programmers now need expertise in just one version of one application, reducing training and documentation costs. PeopleSoft users save time with just one place to go for information and are less dependent on paper.

Employees benefit, too. As a result of the PeopleSoft framework, Compaq implemented an employee and contingent worker self-service application in 2000, which allows North American employees to make real-time modifications via the intranet to their own personal and business information. As a result, manual data entry errors are dramatically reduced, because there is now just one point of entry.

In addition, the architecture deployed provides just one source of master data, increasing timeliness and accuracy of information. A powerful, scalable Compaq *ProLiant* 8500 server efficiently services all of the database requests for the entire global system. By centralizing around a single database, the entire solution is more cost-effective to operate and maintain and more agile to meet changing business requirements.

Security

"Protecting the personal information of our employees is a high priority for Compaq," said Atherton. "We've taken every step available to us to make this system as secure as possible and to maintain data privacy." Compaq enhanced the native security features of PeopleSoft with encryption technology from Braintree, which extends password protection capabilities to meet Compaq's stringent requirements for features such as three-strike password entry and frequent mandatory password changes. The company also implemented Secured Socket Layering, which protects data traveling in and out of the data warehouse from unauthorized access.

High availability

Compaq deployed a technical infrastructure that provides multiple layers of redundancy and fault tolerance to ensure 24x7 access around the world. Compaq *ProLiant* servers offer an array of redundant, hot-plug hardware features from fans to drives, eliminating downtime for service. For system-wide redundancy, RAID 5 storage, a standby database server and a complete, real-time mirrored remote disaster recovery system all help to ensure rapid recovery should a failure occur — whether small- or large-scale. In addition, Compaq combined those redundancy features and disaster protection procedures with a rigorous testing protocol that prevents potential problems from ever being deployed in the production environment.

High performance

Compaq *ProLiant* servers provide outstanding performance for the system's users, who demand fast response. Compaq's infrastructure is designed to further optimize performance for key users. Users outside HR access data from the data warehouse, which is updated nightly, conserving production system performance for critical functions.

The Compaq PeopleSoft technical team is in sync with the industry in its analysis of *ProLiant* servers for deployments like its own. Compaq and Microsoft platforms together deliver the enterprise performance and availability demanded by business-critical environments. "You can do it on a UNIX server, but your deployment can be just as successful and more cost-effective on Compaq *ProLiant* servers," said John Deinnocentis, information consultant at Compaq.

Manageability

With a single, centralized database server, the Compaq system is easier to manage, maintain and operate. Compaq also takes advantage of Compaq Insight Manager (CIM), the built-in management tools that ship with all *ProLiant* servers, to conduct manual system health checks and prevent potential hardware problems. CIM also integrates seamlessly with BMC PATROL, which Compaq uses for exception alerting and capacity planning.

Scalability

A single *ProLiant* database server supports 70,000 active employees around the world, with 500 users accessing the system each day. "So far, earnings and deductions data has grown the fastest, and adding capacity to the file server has been easy," said Matt Emery, manager of HR Systems. "We monitor our usage so that we add capacity proactively and transparently, before we come up short."

Compaq and PeopleSoft
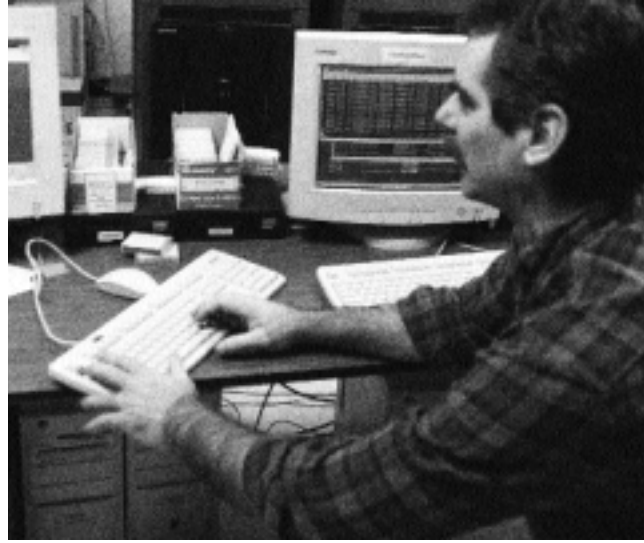
Summary

Compaq is considering plans to upgrade its PeopleSoft system to PeopleSoft 8 in 2002. The conversion will take the system from a client/server architecture to one that is completely Web-based, enhancing the self-service and language support features of the system.

Today, the Compaq HRMS implementation provides this diverse, global company with a powerful single, centralized system for managing information about its most important resource: employees. Based on proven, industry-leading Compaq hardware, the high-availability solution has integrated a newly expanded workforce and is helping the company manage its continued growth. Every aspect of the Compaq human resource processes have been streamlined.

Helping employees help themselves

Enhancements to Compaq's PeopleSoft deployment are underway to provide additional Web-based workforce and managerial self-service capabilities in North America. Interaction, a third-party software solution from Interlynx Technologies, enables employees and contingent workers to update basic personal and business information over the intranet or by a telephone interactive voice response system. Users are authenticated via NT Logon, and the application determines which components of the application they are permitted to view and update. Additional functions are available to administrators for auditing, PIN resets and usage reporting.

The team is also working with tools supplied in PeopleSoft's development toolkit to provide interim managerial self-service transactions until PeopleSoft 8.0 is fully implemented. The application uses Compaq's enhanced Logon authentication process for security.

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