EXECUTIVE SUMMARY

Large datacenters are under increasing pressure to become flexible providers of IT services. In traditional industries such as telecommunications, manufacturing, and financial services, legacy distributed systems are being consolidated primarily to reduce management cost, gain business agility, and improve system utilization. In life sciences (e.g., pharmaceuticals, healthcare), the challenge is more likely to be a significant increase in data to be processed and stored. Other segments, such as government and retail, are increasingly interested in integration with citizens and customers, respectively.

Hewlett-Packard's Utility Data Center is a highly integrated and consolidated environment that can be efficiently managed to provide IT services on demand. In contrast to storage subsystem consolidation or server subsystem consolidation, the HP initiative is datacenter-wide. The HP Utility Data Center infrastructure is a complete environment for hosting enterprise applications and managing a systems area network. When an HP Utility Data Center is implemented, all processing, storage, and network resources can be allocated and reallocated via the Utility Controller portal interface. With drag-and-drop simplicity, resources can be rerouted without personnel being asked to move hardware and recable components. Simply put, installing an HP Utility Data Center means "wire once, reallocate many."

Traditional IT infrastructure has been a static, brittle, and costly proposition for most enterprises. To ensure that sufficient resources are available to support growth, IT planners have traditionally overbuilt and underutilized the datacenter resources or infrastructure. Datacenter infrastructure has evolved into a complex collection of legacy systems that are hard to understand and manage in a uniform fashion. Skyrocketing management and services costs make datacenters extremely costly from a capital and operational perspective.

Moreover, datacenter requirements have changed. Business processes are becoming more integrated within the enterprise. IT investments are now evaluated by their impact on business value, that is, the profitability of the enterprise, gains in market share, and gains in customer satisfaction. Today's enterprise is far more dependent on the availability of IT service to conduct business. Business managers expect to buy IT services on an as-needed basis. These new requirements demand a flexible datacenter architecture.

IDC believes that the complexity of IT infrastructure will be successfully masked by encapsulating systems and subsystems in a virtual environment. Virtual environments are software-enabled collections of processors, storage systems, and networks that appear to each user as a single, unified system. Virtual environments streamline access to applications and to data. Virtual access software makes applications available to end users on any type of workstation and across any type of network media.

The HP Utility Data Center solution is a part of HP's Adaptive Enterprise strategy. In a nutshell, HP believes that all enterprises are under increasing pressure to be agile...
and adaptive in their marketplaces. Many non-IT characteristics will describe successful, adaptive enterprises — for example, the ability to uncover customer needs or the ability to bring new or modified products to market quickly.

It is HP’s contention that successful adaptive enterprises will share in common an IT infrastructure that delivers IT services on demand quickly when companies make adaptations to their business plans. In an adaptive enterprise, IT deployment is never an inhibitor to introducing new product, service, or customer care initiatives. The datacenter of an adaptive enterprise can scale quickly to support growing markets that demand expanded IT services.

Figure 1 broadly shows the elements that comprise the HP Utility Data Center. Processing elements (i.e., servers) may run any operating system, and the networking and storage elements may be obtained from HP or from other suppliers. HP utility controller software manages the interconnect technology that integrates processing, storage, and networking, and provides a console for datacenter managers to activate or reallocate resources to new enterprise workloads. HP’s venerable OpenView provides enterprise-level management with traditional systems, security, and asset management capabilities. In addition, OpenView provides better integration of business process with IT infrastructure. OpenView supports Web services and mobility management as well.

**Figure 1**

**HP UTILITY DATA CENTER**

**Consulting and integration services**

- **hp utility data center**
  - **hp utility controller software**
  - **Processing elements**
    - hp-ux
    - solaris
    - windows
    - linux
  - **Networking elements**
  - **Storage elements**
    - hp-xp
    - eva
    - emc

**Utility fabric**

OpenView

Source: HP, 2003
HP also provides IT planners with consulting services that identify a gradual and guaranteed path to a complete Utility Data Center deployment. HP service professionals are prepared to assess existing infrastructure and expected workloads and then chart a path to UDC. HP can supply UDC-certified components that can be put to immediate use and later woven together into a full UDC. Software, network, storage, processing, and services offerings are all included in this offering.

IDC ANALYSIS: OPPORTUNITIES AND CHALLENGES

IDC believes that the UDC provides HP with the opportunity to help corporate IT departments move to the next phase in computing — utility provisioning of IT services. At the same time, HP patience will be challenged as IT departments slowly weigh their options for keeping or upgrading IT infrastructure during difficult economic times. Users will want to evaluate new competitors offering utility frameworks and look to proofpoints to gain trust that such a complex infrastructure is, in fact, flexible and easier to manage. HP is a mature player in the market, long term, and the paradigm shift to utility computing is, after all, a long-term (10-year) transition.

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