

Tech Outlook



HP's new converged systems and storage simplify data center deployments, enabling IT to focus on innovation, not integration.

The traditional model of designing, configuring and integrating best-of-breed components for data center infrastructure is becoming unsustainable. According to Gartner, the average enterprise will see data capacities grow more than 800 percent over the next five years. In addition to managing this exponential data

growth, organizations will be introducing new applications, harnessing big data analytics, and building out their virtualized infrastructures and cloud delivery models. But the complexities of traditional IT processes and practices make it difficult to keep up with this accelerated pace of change.

“Many organizations are looking to optimize the way they deliver IT

services,” said Matt Merriman, VP of Professional Services, ProSys. “They are looking to get out of the ‘systems integration’ business and focus on generating revenue, driving innovation and reducing risk, while at the same time cutting overall costs.”

New Converged Infrastructure solutions from HP help enable this new approach. The HP Converged Infrastructure product line includes compute, storage, networking and virtualization technologies along with a comprehensive approach to infrastructure management. A key component is the new HP ConvergedSystems portfolio — a family of integrated IT systems purpose-built for key workloads such as virtualization, big data and hosted desktops.

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Shifting Focus

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The new HP ConvergedSystems products enable organizations to bring workload-optimized systems into production in as little as 20 days. IT organizations can shift their focus from systems integration to delivering the applications that power the business.

HP has also introduced new solutions that provide a simpler, faster way to deliver and manage data. These include HP Converged Storage innovations to restore business productivity at record speed, significantly reduce the cost of flash-optimized application performance and simplify application mobility from public to private clouds.

“The new HP ConvergedSystem and HP Converged Storage offerings give organizations the speed, flexibility and scale to build out next-generation data centers that will drive business success,” Merriman said.

The Path to Virtualization

IT organizations are increasingly turning to converged systems to become more agile, reduce costs and drive greater innovation. IDC projects that spending on converged systems will increase more than three times faster than spending on traditional infrastructure solutions.

The new HP ConvergedSystem product line was built from the ground up for convergence using best-in-class servers, storage, networking and software from the HP Converged Infrastructure portfolio. Every product within the HP ConvergedSystem family has been pre-integrated and tested to support critical workloads “out of the box.”

“HP ConvergedSystems help reduce IT complexity through quick deployment, intuitive management and system-level support,” said Merriman. “These solutions minimize the resources needed to architect and refine solutions, lowering total cost of ownership and enabling faster time-to-value. At the same time, they reduce risk by providing optimized performance and intuitive management for virtualization, big data and the cloud.”

With HP ConvergedSystem for Virtualization, organizations can easily scale computing resources to meet business needs. Preconfigured, modular systems support 50 to 1,000 virtual machines at twice the performance, and at an entry price 25 percent lower than competitive offerings.

HP ConvergedSystem 100 for Hosted Desktops, based upon the award-winning HP Moonshot system, delivers a superior end-user experience compared to traditional virtual desktop infrastructure. This first PC-on-a-chip for the data center delivers six times faster graphics performance and 44 percent lower total cost of ownership.

“These solutions relieve the bottlenecks caused by traditional data center integration processes in today’s virtualized environments,” Merriman said. “IT can provision the resources needed for new applications and services in days rather than weeks or months, and rapidly build out web-scale data centers in a private cloud model.”

HP ConvergedSystems build on the experience HP gained with HP CloudSystem, the company’s purpose-built integrated platform for building and managing clouds. HP CloudSystem was recently rated as a top private cloud solution by Forrester Research.

Simplifying Data Protection and Retention

HP’s Converged Infrastructure solutions extend to the storage environment, enabling organizations to manage and protect ever-increasing volumes of data. HP Converged Storage modernizes and simplifies storage infrastructure with a single architectural approach to primary storage, data protection and retention. New enhancements to the HP Converged Storage portfolio deliver industry-leading performance and efficiency, making it possible for organizations to accelerate their transition to the new approach to IT.

HP StoreOnce Backup solutions enable customers to efficiently manage exponential data growth by protecting more data in less time, while reducing business risk and workflow disruption. HP StoreOnce Backup delivers more than four times the backup performance and up to 10 times faster recovery than its closest competitor.

HP StoreAll Archive helps organizations extract actionable insight from large-scale data repositories with simple, integrated search tools that are 100,000 times faster than traditional approaches. This solution also features open object storage interfaces that enable next-generation cloud storage applications to be deployed securely within the enterprise.

HP 3PAR StoreServ Storage brings new levels of affordability at half the cost and lower response times for organizations needing high-performance, flash-optimized storage solutions. It also provides advanced quality-of-service control for those who might otherwise be stalled by service-level inconsistencies during their deployment of virtualization and IT-as-a-Service for their most critical applications.

“These solutions work in concert to create a lower-cost, more agile storage environment,” said Merriman. “Organizations can consolidate and streamline their storage, while supporting decision-making through improved access and intelligent search capabilities. Together, HP Converged Storage and ConvergedSystems bring a new era of simplicity and flexibility to the data center.”

News Briefs

IT Risk Audits Fall Short, Study Says

Despite ongoing efforts to address information technology issues, companies continue to come up short in their IT audit functions, according to a new survey from global consulting firm Protiviti. The study reveals that a large percentage of organizations are not planning and instituting the IT audit coverage necessary to assure critical IT operations, evaluate risk and provide a secure, available IT environment.

According to the study, up to 42 percent of organizations fail to properly evaluate the risks involved with numerous IT initiatives, including security, governance, social media, cloud computing, analytics and more.

"In today's organizations, virtually every function is technology-dependent, which means companies face a greater number of challenges to ensure an efficient, secure IT environment," said Brian Christensen, Protiviti executive vice president of global internal audit. "Based on the study, it's apparent that there is a tremendous gap between where most companies are and where they should be in terms of managing IT risk and strengthening governance and controls. As audit plans are developed, these technology challenges should also be top-of-mind for internal audit."

Growth Anticipated for Wearable Computing

Wearable computing devices — particularly those worn on the wrist or as eyewear — will transform the way in which we interact with the rest of our devices, analysts say. A recent report from BI Intelligence forecast a \$12 billion market for wearable devices in five years, and IDC says gadgets such as Google's Glass could have a negative effect on tablet sales.

IDC says Glass, Google's web-enabled eyeglasses, will substitute some of the tasks users now handle with tablets and smartphones, such as getting directions or doing video chats. BI Intelligence says wearables such as fitness bands and web-enabled wristwatches will help users track time, fitness regimes, health indicators and daily routines.

To meet expected demand, Intel recently introduced Quark, a family of low-power processors designed for wearable computing devices in which lower power and reduced size take priority over higher performance.



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Filling the Gap



New technology using TV ‘white space’ to extend the reach of wireless broadband.

A new type of wireless transmission technology operating in the television “white space” spectrum shows promise for dramatically improving broadband Internet penetration into sparsely populated rural areas. Some experts say it could become a booming market that rivals Wi-Fi over the next few years.

The technology is commonly known as Super Wi-Fi. While standard Wi-Fi uses the 2.4GHz radio frequency, Super Wi-Fi uses lower-frequency signals — 54MHz to 698MHz — that travel farther and propagate more effectively over hills and around obstacles such as trees. Maximum range for the signals appears to be about six miles, with a maximum speed of around 10Mbps.

Despite the name, Super Wi-Fi is neither based on Wi-Fi technology nor endorsed by the Wi-Fi Alliance.

The name was coined by the Federal Communications Commission (FCC) when it approved the deployment of abandoned TV spectrum for wireless broadband in 2010, a year after the broadcast television industry switched from analog to digital transmission.

“Unleashing white-spaces spectrum has the potential to exceed even the many billions of dollars in economic benefit from Wi-Fi, the last significant release of unlicensed spectrum, and drive private investment and job creation,” former FCC Chairman Julius Genachowski said at the time.

The Old College Try

Despite the optimism, there are many obstacles to widespread Super Wi-Fi adoption in the near future.

Since it is not based on current Wi-Fi technology, existing Wi-Fi gear in phones, tablets and laptops won't work with the new white-space networks. Additionally, two different IEEE standards are being developed for Super Wi-Fi, and it is unclear which will ultimately prevail.

Nevertheless, the technology already has some significant backers, including Microsoft and Google. The two industry heavyweights are the lead players in a consortium called AIR.U that is involved in deploying Super Wi-Fi on college campuses across the country. The first such deployment took place at West Virginia University in July.

"Access to a broadband connection is becoming increasingly important," said Paul Mitchell, general manager/technology policy, Microsoft. "White spaces technology and efficient spectrum management have a huge potential for expanding affordable broadband access in underserved areas, and we are pleased to be partnering with AIR.U and West Virginia University on this new launch."

Rural Potential

The initial phase of the network provides free public Wi-Fi access for students and faculty at the Public Rapid Transit (PRT) platforms, a 73-car tram system that transports more than 15,000 riders daily. The university plans to add additional network access points in other locations around campus where students congregate or lack connectivity today. Future applications include public wireless access on the PRT cars and machine-to-machine wireless data links supporting control functions of the PRT System.

"Not only does the AIR.U deployment improve wireless connectivity for the PRT System, but also demonstrates the real potential of innovation and new technologies to deliver broadband coverage and capacity to rural areas and small towns to drive economic development and quality of life, and to compete with the rest of the world in the knowledge economy," said WVU Chief Information Officer John Campbell. "This may well offer a solution for the many West Virginia communities where broadband access continues to be an issue, and we are pleased to be able to be a test site for a solution that may benefit thousands of West Virginians."



The Next Step in Wireless

Cisco's Aironet 3700 Series is the next generation of wireless access points, supporting the new 802.11ac Gigabit Wi-Fi standard. Designed for high-density network environments that utilize mission-critical, high-performance applications, the Aironet 3700 provides data rates of up to 1.3 Gbps, roughly triple that offered by today's high-end 802.11n access points.



Contact ProSys to learn more.



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The Mobile Cloud



The convergence of mobile and cloud signals an important shift in computing models, and analysts say it could be the catalyst for significant IT innovation and growth.

The computing industry is in the midst of a fundamental transition, one likely to become as profound as the shift from mainframes to the personal computer. The convergence of mobile and cloud computing are creating a new platform — one that the IEEE Computer Society says has the potential to provide “unlimited computing resources.”

The mobile computing model has always been constrained by the memory, processing and power limitations of the devices. However, the cloud allows the bulk of data processing and storage to take place outside the device. The IEEE says the symbiosis between the two is creating a platform that will allow “better synchronization of data, improved reliability and scalability, increased ease of integration, anytime-anywhere access to business applications and collaborative services, rich user experiences, and an explosion of new services.”

Further combine mobile and cloud with big data and social technologies, and you get what IDC analysts are calling the “Third Platform,” a name coined in reference to the mainframe and PC platforms that preceded it. Gartner analysts refer to the trend as the “Nexus of Forces,” while the IEEE prefers “Mobile Cloud.” All seem to agree this new model will dominate almost every inch of the technology landscape in the foreseeable future and will provide the foundation for much of the IT growth and innovation expected in 2014.

“In 2014, we’ll see every major player make big investments to scale up cloud, mobile and big data capabilities, and fiercely battle for the hearts and minds of the developers who will create the solutions driving the next two decades of IT spending,” said Frank Gens, Senior Vice President and Chief Analyst at IDC. “Outside the IT industry, Third Platform technologies will play a leading role in the disruption of almost every other industry on the planet.”

Spending Surge

IDC predicts that worldwide IT spending will grow 5 percent year over year to \$2.1 trillion in 2014 — with the Third Platform driving much of that spending. The firm says spending on mobile/cloud technologies will grow 15 percent year over year and capture 89 percent of IT spending growth, with strong sales of smartphones and tablets and improved sales of storage, software and services.

Gartner predicts that mobile-cloud convergence will reach “mainstream status” in 2014 and will increasingly shape enterprise software purchasing trends.

“By 2017, Gartner estimates that new IT buying based on the Nexus of Forces will drive more than 26 percent of total enterprise software market revenue, up from 12 percent in 2012,” said Tom Eid, research vice president at Gartner. “This represents more than \$104 billion to new worldwide enterprise software revenue from cloud, information, mobile and social initiatives in 2017.”

Cloud spending, including cloud services and the technology to enable these services, will surge by 25 percent in 2014 to more than \$100 billion, IDC says. This growth is likely to spark a dramatic increase in the number of data cen-

ters as cloud players race to achieve global scale. As cloud-dedicated data centers grow in number and importance, the market for server, storage and networking components could experience a fundamental change.

Data Center Changes

Cloud service providers have traditionally favored highly componentized and commoditized data center designs.

IDC says that incumbent IT hardware vendors, who have struggled to sell into this market, will be forced to adopt a “cloud-first” strategy backed by new design innovations. This, in turn, should lead to growing demand for the software-defined data center, an emerging architectural approach that simplifies and speeds the provisioning and management of compute, storage and networking resources through policy-driven automation.

The software-defined data center expands the virtualization principles of abstraction, pooling and automation to encompass all data center resources and services. Deployment, provisioning, configuration and operation of the entire infrastructure is abstracted from hardware and implemented through software. That means data centers would no longer have to buy specialized hardware or hire consultants to install and configure the hardware in its specialized language — in short, creating just the type of agile, cost-saving infrastructure providers need to support dynamic cloud deployments.

A recent study conducted by TheInfoPro shows that spending on IT infrastructure will slow over the next several years as attention shifts to software-defined data centers. The hottest technology to be adopted will be cloud platforms, followed by automation and management functions required for production and virtualized data servers.

“As organizations move beyond virtualization of production workloads, attention is shifting toward the management and automation of the software-defined data center,” said Peter ffoulkes, TheInfoPro’s Research Director for Servers and Virtualization. “Over the next two years, the foundations for enterprise cloud computing will be deployed with cloud platforms standing out as the hottest technology and the most critical strategic decision to be made.”

“In 2014, we’ll see every major player make big investments to scale up cloud, mobile and big data capabilities, and fiercely battle for the hearts and minds of the developers who will create the solutions driving the next two decades of IT spending.”



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