

Converged Infrastructures Deliver the Full Value of Virtualization

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**Satisfied with your virtualization efforts?
You could be.**

How does an organization modernize IT and get more out of infrastructure resources? That's a question many CIOs ask themselves. With hundreds or even thousands of physical hardware resources, increasing complexity and massive data growth, you need new, reliable ways to deliver IT services in an on-demand, flexible and scalable fashion. You also must address requests for faster delivery of business services, competition for resources and trade-offs between IT agility and vendor lock-in.

To meet the demands of the business, you've probably adopted some level of virtualization and implemented a private or hybrid cloud strategy to improve IT services, increase efficiency, improve flexibility and reduce the cost of delivering services. If so, you're in good company.

However, migrating business-critical applications to virtualized environments and to private or hybrid clouds has risks, with concerns around service level agreements (SLAs), performance, availability and scalability. You need predictable platform reliability to move your business-critical workloads with confidence, as well as automation to simplify operations. To get the full benefits of virtualization while minimizing risks, some CIOs are turning to converged infrastructures from a single vendor as a turnkey solution.

Reality Check: Server Sprawl and Other Virtualization Spinouts

Virtualization has become mainstream, a core component of enterprise data center environments. But several infrastructure challenges in virtualized environments can create headaches for your IT staff and prevent you from reaping the full benefits of virtualization.

Virtual Machine Sprawl

Virtual machine or VM sprawl impacts applications and SLAs in terms of performance, backup and replication. And it can make deploying, monitoring and maintaining a complete infrastructure more difficult. With more virtual machines, there is more complexity and there may be a lack of visibility and coordination between IT functional teams covering servers, storage, networks and applications. It is critical to have a management tool that will provide a view into the utilization and health of the component systems and that will automate the tasks associated with provisioning and maintaining resources. Another area that should be considered is taking automation a step further: Enable end users to self provision resources through service catalogs, as well as monitor and set quotas on VMs, to more efficiently manage infrastructure as a whole.

Long Deployment Time

A converged infrastructure system integrates server, storage, network and software as one preconfigured, pretested stack. The main objective behind this solution is to take the complexity, time and cost out of the current approaches to deployment. And it provides a much easier and faster approach to implementing and managing compute solutions within a virtualized environment. With an automated solution, you can deploy applications faster, shrink lead times, and shift IT staff from daily maintenance to new business initiatives. You can then consolidate maintenance and support and have a single vendor to call for your service and support needs. The converged infrastructure reduces your implementation risk and costs, and collapses your deployment time from months to days.

Overloading or Overprovisioning

When server, network or storage capacity becomes overloaded, bottlenecks appear across multiple servers and performance suffers. Managing the infrastructure is a time-consuming operation across



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numerous administrative teams. To avoid the risk of overloading or servicing frequent requests for hardware, some organizations overprovision hardware to ensure adequate capacity. However, that approach is costly because you're deploying and supporting additional infrastructure you may not need. An automated solution streamlines infrastructure management, including inventory, provisioning, operations, monitoring and data protection.

Underutilization

To avoid service disruption, fast-growing IT environments usually acquire hardware to support new initiatives before previous investments are fully utilized. This approach also increases the data center footprint and power and cooling costs. A converged infrastructure improves the utilization of IT

resources while automating management within virtualized environments.

Virtualizing Business-Critical Applications

Prior to virtualization, organizations would typically have a single business-critical application running on a single server. However, when servers are virtualized, resources are shared, business-critical application performance may suffer, and the required SLAs might not be realized. The right automation tool can orchestrate the administration and task workflows required to support virtualized business-critical applications and maintain SLAs.

Recovery of Business-Critical Data

Here again, it's understandable to have concerns about recovering business-critical data in virtualized environments in a timely fashion. Virtualization may prevent you from meeting the recovery time objectives that your business requires.

Since overcoming these challenges is critical for a successful cloud strategy, you may want to look at other options

Modernize IT With Converged Infrastructure

End-to-end automation from Hitachi Unified Compute Platform Director software makes it easier to manage your environment and enables you to deploy applications faster. [Learn More.](#)

to support virtualized environments, so your organization can reap the benefits of IT modernization while managing the risk. That's where fully integrated, converged infrastructure systems should be considered.

Reality Check: Converged Infrastructure Systems Deliver the Full Value of Virtualization

To relieve the virtualization headaches that come with homegrown environments, see what converged infrastructures offer with flexible and robust platforms for quickly capitalizing on cloud benefits. Converged infrastructure systems for virtualization ensure the consistency and level of control required for business-critical workload environments. Converged infrastructure systems are integrated solutions composed of servers, storage, networking components, hypervisor and unified orchestration software. They're pretested to optimize performance and then preconfigured to your organization's requirements, which can dramatically reduce deployment time.

Converged infrastructure systems save you the time, expense and complexity around architecting, building, testing and deploying virtualized infrastructures. Choosing a converged infrastructure system transfers those challenges, along with their associated risks, cost and time, to the certified vendor. So, the selection of hardware, software and integration work is already completed, and your solution can be up and running quickly.

The shift to converged infrastructure is happening fast. Soon, over half of data center hardware will be purchased as a converged infrastructure. You can bring the most critical workloads to a cloud environment with a converged infrastructure that provides predictable reliability, quick time to value, and the ability to rapidly expand your private cloud environment as your

requirements evolve. Converged infrastructure improves the utilization of IT resources while automating management within virtualized environments.

A converged infrastructure system from Hitachi Data Systems can give you the virtualization performance, scalability and reliability you need. But more importantly, it provides automated, unified orchestration to simplify management, monitoring and provisioning.

The Shift to
Converged
Infrastructures

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Hitachi Data Systems Puts the Vroom in Virtualization

Hitachi Unified Compute Platform (UCP) is a turnkey solution that's preconfigured at the factory and delivered to your site racked, cabled and configured, with all the software preloaded. It can be up and running in five days or less after it hits the data center floor.

Infrastructure automation via Hitachi Unified Compute Platform Director software automates the administration and task workflows required to support Hitachi UCP. The innovative automation tool simplifies inventory, provisioning, operations, monitoring and data protection. It significantly reduces time to value and operational costs for even the most demanding applications. UCP Director enables faster deployment of cloud infrastructure and efficient resource allocation, which prevents overprovisioning, optimizes your utilization and, with automation, reduces current time and cost spent on routine administrative processes.

With the additional integration of the cloud automation suite from Hitachi Data Systems, UCP Director automates, simplifies and accelerates the build-out of robust private cloud infrastructures. It allows IT organizations to enable their users to define their resource needs and provision them from catalogs from a self-service portal. It

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assures that the underlying server, storage and networking resources are in place and aligned to the appropriate business service levels and business needs. The innovative software efficiently and reliably automates the management of all components and operating software as collective resources.

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Hitachi Data Systems Can Help

Hitachi Data Systems can help you improve IT agility, lower infrastructure costs and move to the cloud with predictable reliability, accelerated value and exceptional flexibility. Together, we achieve these results by creating an automated, tightly integrated, turnkey platform that provides the infrastructure you need and the reliability and speed your enterprise demands.

Hitachi UCP provides a robust option to fit your environment and the changing landscape of business and information technologies. It supports your business needs today and lets you establish a flexible foundation for the data center of the future. Interested in learning more? Make the call today to understand how quickly you can start seeing the benefits of HDS converged infrastructures.

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