

The SDDC On-Ramp to Hybrid Cloud

The IT infrastructure market has long sought to balance the simplicity and control advantages of centralized architectures with the modular flexibility of distributed approaches. In today's increasingly cloud-centric enterprise IT environment, innovations on the centralized model are making hyperconverged infrastructure (HCI) one of the hottest new concepts.

HCI systems combine compute, storage, networking, and basic systems management in a highly automated unit. But HCI is hardly your father's mainframe. These highly integrated platforms duplicate many of the functions of cloud infrastructure in a scalable and easily manageable on-premises package.

For many companies, the combination of cloudlike features such as automation and self-provisioning in a single, rack-mounted appliance is making HCI one of the safest on-ramps to cloud computing. The market reflects this interest: Gartner expects HCI to grow at a compound annual growth rate of 48% through 2021. That's three times as fast as the overall server market.

When it comes to IT, most decision-makers are adopting the architecture for the right reasons—to improve IT agility and enable digital transformation, according to a new IDG survey. Although the respondents still have some questions—their perceived value of HCI varies, depending on users' stage in the journey to the cloud, and they are somewhat concerned about compatibility with on-premises and cloud infrastructure as well as skills requirements—most of them are firm believers in HCI.

In fact, more than three-quarters of the senior executives surveyed said they expect HCI to play a crucial role in IT infrastructure strategy over the next 12 months. Senior managers are the most bullish on HCI's potential, with 82% viewing HCI as critical, versus 69% among other titles.

Agility Drives Adoption

HCI has come along at a time when IT organizations must focus on agility to an unprecedented degree. Senior executives say making IT faster, more flexible, and more responsive trumps other priorities such as cost reduction, data protection, and IT automation. This finding isn't surprising: Being more agile can help protect against disruption and achieve the benefits of digital transformation.

Agility helps elevate IT's role to that of a reliable and responsive business partner—and cloud computing is a key element of this evolution. Features such as virtual machine self-provisioning and software as a service (SaaS) help reduce time-to-productivity and give users what they want when they want it. Instead of waiting days or weeks for infrastructure to become available, developers can service their own needs.

"Procurement, planning, deployment, and onboarding are very easy," says Bob Madaio, vice president of Infrastructure Solutions Marketing at Hitachi Vantara. "A few clicks, and your system is up and running."

As an on-ramp to hybrid cloud, HCI offers the flexibility to test cloud environments in a controlled manner before moving infrastructure more fully to a cloud architecture. Indeed, hybrid cloud is a principal driver of HCI adoption: 40% of organizations have already leveraged hyperconvergence to ease hybrid cloud deployment, and another 45% plan to do so.

HCI provides the cloud-related benefits of automation and tight integration between components in a single package. This has payoffs in simplicity and security, which is the second-most-cited driver of HCI deployment. In a hybrid cloud environment, HCI's scalability is also a prime benefit; two-thirds of the surveyed executives cited this factor as being critical.



In addition, automated management reduces delays and makes IT resources more broadly available on demand.

Best of Private and Public Cloud

IT organizations are looking to leverage hyperconverged infrastructure to move closer to the right mix of private and public cloud for increasing responsiveness to market needs while maintaining control and security. Software-defined infrastructure that can be deployed either on-premises or in a public cloud removes the barriers of costs and complexity to maximize the benefits of hybrid cloud architecture.

Integrated software-defined data center (SDDC) cloud infrastructure that combines HCI systems with network virtualization and automation for operation and lifecycle management delivers ready-to-consume IT services with native capability to stretch your data center in a public cloud. Highly agile, available, and programmable multitenancy enables IT transformation for modern enterprises.

“Digital businesses need systems that can support scalable and highly available cloud infrastructure,” says Madaio. “As customers continue to modernize IT operations to support these digital transformations, the need for faster application development and deployment on a stable, reliable platform is paramount.”

Some executives have questions about integration, training, management, and reliability. However, as awareness improves and new products come to market, those reservations are likely to dissipate rapidly, considering HCI’s many advantages. These include:

- **Simplified IT operations, systems, and consumption models based on a single, scalable, and compatible platform**
- **The ability to run production workloads on HCI while pushing archival data into the cloud for analytics or low-cost backup**
- **Better performance, thanks to tight integration of processing, memory, storage, and networking components**
- **Lower up-front and ongoing storage costs, since I/O for any single virtual machine can be distributed across an entire cluster of HCI servers, meaning that aggregate bandwidth can be combined**
- **Scale-up and scale-down capabilities for matching workloads with platforms, including public cloud**

Hitachi Vantara’s HCI Solutions

Hitachi Vantara’s Unified Compute Platform HC is a simple, efficient, and reliable hyperconverged platform that meets the collective IT needs of business applications, databases, analytics, virtual desktops, and cloud-hosting solutions. For organizations looking to embrace hybrid cloud, Hitachi Vantara’s Unified Compute Platform RS delivers integrated SDDC cloud infrastructure to accelerate business outcomes and lower TCO while providing the flexibility to run apps from anywhere.

Visit www.hds.com/hyperconverged for more information.

The Bottom Line

Cloud computing has triggered a reassessment of IT architectures driven by the economics of vertical integration and massive scale. It has been a proof of concept for the benefits of large-scale virtualization, automation, and dynamic scalability, and customers want to enjoy those same features in their data center environments. These capabilities have the collateral advantages of enabling businesses to customize their workloads without the security and manageability risks that distributed systems entail.

In short, HCI increases the agility of IT organizations, particularly those that are prepared to make major commitments to the cloud—and this maps perfectly to IT’s current priorities.

Organizations exploring a multicloud strategy for business agility and continuity have the flexibility to deploy rack-scale hyperconverged infrastructure as a hybrid cloud foundation.

For more information, visit www.hds.com/hyperconverged