HYBRID CLOUD DONE RIGHT WITH AUTOMATED HYPERCONVERGED INFRASTRUCTURE

Hybrid cloud has increasingly become the IT environment of choice, mixing the best of public cloud and on-premises infrastructure for optimal efficiency and agility. But that means you must take your time to understand your options and select the best infrastructure platform for hybrid cloud. More and more often, that means disaggregated hyperconverged infrastructure.

The appeal of cloud computing as a cost-efficient, agile, scalable and flexible way to deliver IT services is now an undeniable fact. And, for more and more organizations, the optimal way of deploying cloud-based services in an increasingly complex and interdependent IT environment is with hybrid cloud. By merging the best of cloud computing and traditional on-premises solutions, you can keep your options open to deploy resources and deliver services in the best way possible.

That's why hybrid cloud adoption has skyrocketed. Research pegs the global hybrid cloud market at nearly $100 billion by 2023, representing a robust 17% compound growth rate.[1] The reasons why hybrid cloud has taken off and reshaped the IT service delivery model are well established: agility, scalability, cost efficiency, security and more. But hybrid cloud will not be possible – certainly not to the level of adoption it has enjoyed – unless you reimagine and rearchitect the underlying IT infrastructure used to build and manage hybrid cloud and your workloads. Specifically, hyperconverged

[1] "Hybrid Cloud Market—Global Forecast to 2023," MarketsandMarkets, August 2019

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infrastructure (HCI) has emerged as the hardware-software platform of choice, combining pre-integrated and pretested compute, storage, networking and hypervisor in an appliance format for easy deployment and seamless scaling. "There's no getting around the fact… that increased complexity comes along with hybrid cloud. This is why HCI is such a good match," according to an article on Hyperconverged.org.[2] "The promise of HCI is reduced complexity, since all your computing, storage, networking and the hypervisor are combined into one package that's guaranteed to work out of the box."

And now you have an even better option: disaggregated HCI and VMware Cloud Foundation, which is optimized for the emerging trend of software-defined everything. Disaggregation refers to seamless interoperability of an integrated HCI appliance with external SAN storage. This allow a more flexible approach to scaling and resource utilization than with older HCI designs based on fixed-node configurations.

Disaggregated architecture of HCI and SAN storage is a great option if you're looking to extend the benefits of your earlier HCI implementations to take advantage of what is now considered state-of-the-art in IT architecture:

hybrid cloud. An integrated cloud platform of HCI and SAN storage provides the right foundation to meet applications' service-level agreements and the flexibility to scale compute and storage independently.

WHY I.T. ORGANIZATIONS WANT HYBRID CLOUD – AND WHY THEY NEED HCI AND VMWARE CLOUD FOUNDATION

For IT organizations looking to do everything from roll out new applications to ensure system-wide resiliency, scalability, performance and security, the stakes have never been higher. The increasing complexity of IT environments means that tough priorities must be set, and IT decisions must align with those priorities.

Those priorities probably include faster delivery of IT services and applications – in the cloud, on premises or both – and ensuring a more stable production platform. They also may require the creation and delivery of a more flexible operating environment, as well as nondisruptive maintenance of existing systems.

Clearly, no organization can go down the road of massive IT architecture overhauls with costly, complex, risky and time-consuming rip-and-

[2]"Hybrid Cloud and Hyperconvergence Offer the Best of Both Worlds," Hyperconverged.org, Jan. 26, 2018

replace projects. Instead, IT leaders must deliver on the exciting potential of cloud computing

without disrupting longstanding, strategic and well- functioning on-premises systems. With more and more frequency, that means hybrid cloud. And with more and more frequency, hybrid cloud demands HCI as a stable, flexible and scalable platform. HCI provides protection of existing investments in SAN storage systems, without creating new silos.

One reason for that is hybrid cloud is actually a moving target. Organizations want to preserve what is working but, at the same time, move more workloads to the cloud because of its economy, flexibility and agility. Increasingly, strategic use cases like business continuity, OLTP, compliance and data protection are being migrated to the cloud while continuing to have strong connections to on-premises systems where legacy data often resides.

The other key trend that drives further adoption of HCI for hybrid cloud is the increasing popularity of software-defined data centers. Powerful and multifeatured software tools like VMware Cloud Foundation allow data center administrators to use VMware's popular virtualization tools – vSphere (compute), vSAN (storage) and NSX (networking and security) – to disaggregate infrastructure for easier management, faster deployment and increased flexibility.

VMware Cloud Foundation provides a comprehensive set of infrastructure services in a software-defined platform while also integrating cloud management and improved security. And best of all, it can be implemented both on premises and via a cloud service – in other words, in a hybrid cloud environment.

WHY DISAGGREGATED HCI IS THE WAY TO GO

With the rapidly growing popularity of HCI for a variety of workloads, above and beyond hybrid cloud, it's easy to get lost in the evaluation process to sort through the different options. Clearly, not all HCI solutions are designed, implemented or managed the same way.

Disaggregation, however, is a powerful and useful concept to help IT decision-makers arrive at the best HCI solutions approach. It gives infrastructure architects the flexibility to design the right configurations for their workloads and use resources more efficiently. Disaggregation also is important because, although HCI deployments are designed to reduce complexity from the classic three-tier component model to a tightly integrated, pretested and validated stack, that transition doesn't happen overnight. Disaggregation allows you to make the transition at your own pace and scale compute and storage layers independently to match application requirements.

Most importantly, disaggregation through VMware Cloud Foundation helps IT teams achieve the goal of simplification at all levels: deployment, scale-up and -out, management and data migration, which are critical in hybrid cloud environments. A single management interface is essential to operate virtualized infrastructure in both private and public cloud environments as well as on premises.

Automation on day-zero provisioning and configuration allows faster provisioning of HCI clusters to allow faster time to deployment and more rapid return on investment. Features such as automated lifecycle management, deep visibility into HCI clusters, auditability and unified management are expected from mature cloud infrastructure solutions.

Whether you are building a single hybrid cloud or integrating hybrid cloud as part of an expansive multicloud environment, you'll need a common set of management tools to achieve those goals. And, of course, you'll need best-of-breed solutions: tightly integrated hardware components, powerful virtualization tools and a range of cloud-friendly functions such as automation, analytics, security, configuration management and more.

HITACHI'S APPROACH TO HCI

While IT decision-makers have many HCI solution options to choose from, the choice can be made easier and instill greater confidence by partnering with providers that collaboratively build and support tightly integrated solutions at the hardware, software and tools levels.

Hitachi Unified Compute Platform (UCP) RS uses Hitachi's HCI appliance, Intel's Optane persistent memory and SSD technology, and VMware Cloud Foundation to deliver a simple, scalable software-defined solution optimized for hybrid cloud environments.

By designing the system from the ground up, the engineering teams at Hitachi, Intel and VMware

have created a flexible system that can be quickly and easily deployed, either for a greenfield implementation or to scale out an existing platform, which is ideal for rapidly expanding hybrid cloud initiatives.

By integrating VMware Cloud Foundation with Hitachi's HCI appliance, which benefits substantially from Intel's high-performance Optane storage and memory components, Hitachi minimizes time-consuming and complex on-floor integration tasks. And its disaggregated architecture gives you the flexibility to deploy HCI for hybrid cloud at your own pace in a simplified, easily scalable platform.

Hitachi UCP RS with VMware Cloud Foundation drives faster delivery of IT services in both on-premises and cloud environments, while allowing a more stable production platform with built-in resilience, optimized data protection and disaster recovery, and full visibility into hardware performance and behavior with Hitachi's UCP Advisor tool.

The flexible operating environment eliminates costly and complex vendor lock-in by eliminating infrastructure component silos for compute, storage or networking. And Intel's lightning-fast storage supports even the most demanding hybrid cloud workloads across both hyper-converged and SAN data stores.

Finally, the tightly integrated solution facilitates nondisruptive maintenance of existing systems through rolling, automated upgrades and high-visibility monitoring and management of data centers.

CONCLUSION

Not only is hybrid cloud here to stay, but it has rapidly ascended to the top of many IT executives' to-do lists for strategic IT initiatives. The reasons why – cost efficiency, agility, flexibility, manageability and security – also demand a new mindset when it comes to hybrid cloud infrastructure platforms.

HCI, whether as a pure-play HCI appliance or as a disaggregated, software-defined model shaped by VMware Cloud Foundation, is the way to go for new and updated hybrid cloud implementations.

Hitachi Vantara, in concert with its partners VMware and Intel, offers a number of HCI options to help you deploy the right solution for your hybrid cloud, regardless of your current infrastructure or philosophy on where, how and when to deploy hybrid cloud for key workloads.

For more information on the Hitachi, Intel and VMware HCI solution, please visit:

www.hitachivantara.com/hyperconverged

www.hitachivantara.com/cloudfoundation