

White Paper

Five Key Factors to Consider for HCI Data Protection

Sponsored by: Veeam

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IN THIS WHITE PAPER

Exponential growth in data, dramatic changes in business models, and compelling need for scale and speed are some of the monumental challenges confronting modern enterprises, which must embrace IT transformation (ITX) as a fundamental strategy. ITX involves embracing best-of-class technologies and a holistic architecture that includes the core, edge, and the cloud. One of these powerful tools to modernize the datacenter is hyperconverged infrastructure (HCI), a scale-out and software-defined system that has been experiencing rapid growth in the past few years.

The reasons behind HCI's popularity are numerous, including use of nonproprietary and industry-standard hardware, elimination of three-tiered SAN architecture, lower capex and opex, ease of deployment, simplicity of management, scalability, performance, and powerful features. HCI offers simplicity of deployment and management by integrating compute, storage, and network, and in one case, a hypervisor is included into a single turnkey solution.

As customers deploy an increasing number of applications on HCI, data protection (DP) solutions for HCI have become more critical. To reduce management complexity and risk, most HCI customers prefer data protection solutions that are tightly integrated with their HCI systems. Such an integration greatly simplifies management and automation of backup, recovery, and archive operations. Furthermore, customers want their data protection solutions to seamlessly work with virtual machines (VMs) that are hosted on HCI systems as well as standard environments composed of self-selected components. Veeam's backup solutions work with a wide range of hyperconverged solutions from leading vendors such as Dell EMC, VMware, Nutanix, Cisco, HPE, and NetApp to provide robust data protection, availability, compliance, risk mitigation, replication, and disaster recovery.

This white paper specifically focuses on how Veeam aims to create business value for enterprise customers by ensuring the "data protection, data recoverability, data availability, and data management" – to use Veeam's own words – within hyperconverged infrastructure.

METHODOLOGY

Veeam commissioned IDC to conduct primary research into the requirements and adoption of trends of data protection with HCI in March 2019. IDC surveyed 300 respondents – all HCI users – worldwide, with half of the respondents from North America and the other half from Europe. We had a representative mix of industries, and company sizes ranged from small companies (with 100 employees) to very large organizations (with more than 10,000 employees). Three-quarters of the organizations were from midsize enterprises (with 500-9,999 employees).

This white paper highlights the findings from the survey conducted by IDC and intends to help IT managers understand how modern production infrastructure (HCI) and modern data protection are interdependently beneficial to each other and their organizations while providing maximum business and operational benefits.

SITUATION OVERVIEW

Five key findings identified from the survey are discussed in the sections that follow.

Finding Number 1: HCI Is Rapidly Replacing Legacy Infrastructure

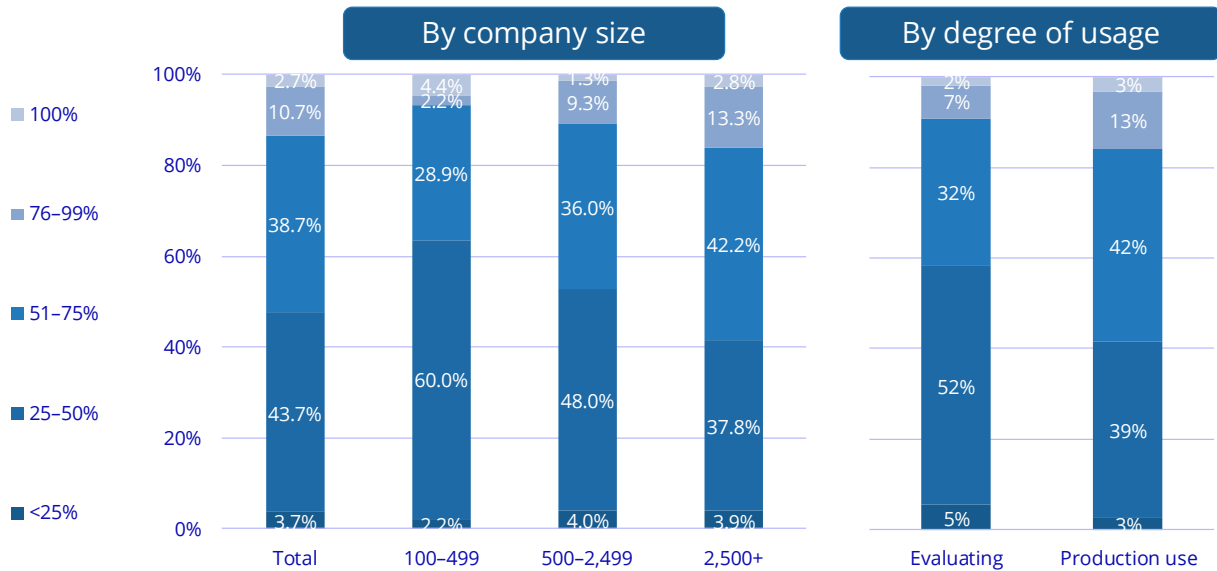
Respondents appear bullish when asked the degree to which HCI is replacing traditional infrastructure. On average, respondents expect to put more than half (54%) of compute resources on HCI. Furthermore, 63% of respondents are using HCI for production application, whereas the remaining respondents used HCI for evaluation/testing modes (see Figure 1). This is a compelling testimony to HCI's capabilities. The deployment of HCI varied somewhat by size of organization, with larger organizations indicating a higher adoption rate than smaller firms. The overall rate did not vary significantly by region.

This finding also reinforces that organizations expect to rely on a mixed approach of HCI and standard environments composed of self-selected components for their production infrastructure, which will then force either two parallel approaches to data protection or the mandate to use the same VM backup capabilities across the infrastructure. Obviously, the first choice is not preferable since VMs can migrate and thus will be subjected to varying RPO/RTO and SLA policies. By having a single solution such as Veeam that works across heterogeneous platforms, customers can ensure consistent and reliable accommodation of SLAs.

FIGURE 1

Share of Total Compute Resources Replaced by HCI

Q. What percentage of compute resources were/will be replaced by HCI within your organization?



n = 300

Note: On average, respondents have replaced (or are expected to replace) 54% of their compute resources with HCI. This amount is higher for large organizations and lower for small organizations. HCI replaces a higher amount of resources for those in production.

Source: IDC's *Veeam and HCI Survey*, March 2019

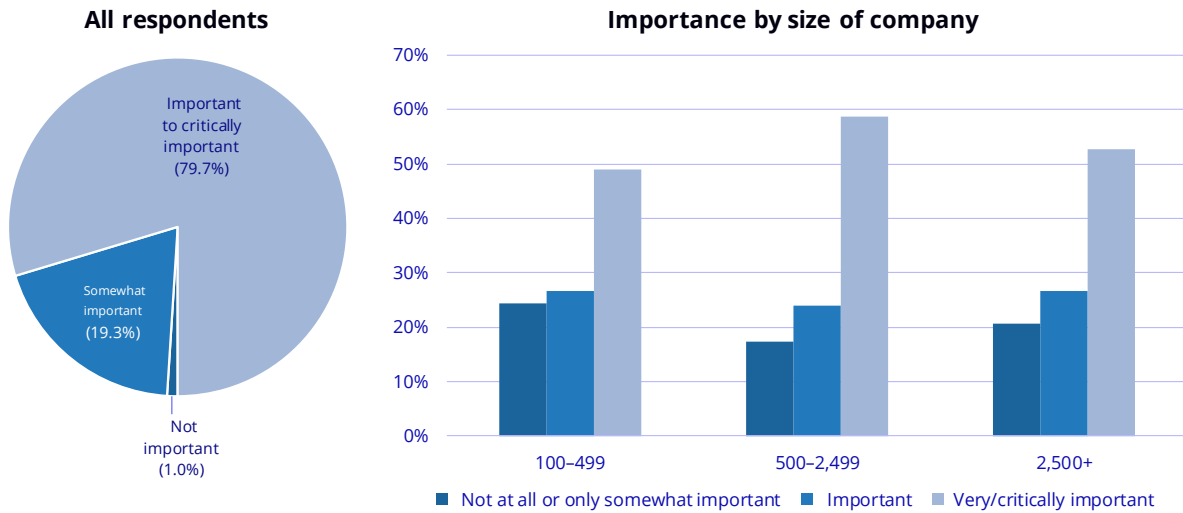
Finding Number 2: Data Protection Is a Critical Need for HCI

An overwhelming number (80%) of organizations said that built-in data protection for HCI is a crucial factor while evaluating HCI (see Figure 2). The survey findings were very consistent across all size of organizations. This shouldn't be surprising, as the findings in Figure 1 reveal how HCI is being increasingly used to deploy production applications within the datacenter.

FIGURE 2

Importance of Including Data Protection When Considering HCI

Q. *How important is it for your HCI solution to include a built-in or prepackaged data protection solution in your consideration of HCI offerings?*



n = 300

Note: 80% of respondents believe that it is important or critical that HCI solutions they are considering include a built-in or prepackaged data protection solution. Smaller companies are slightly less likely to view this as important than their larger peers.

Source: IDC's *Veeam and HCI Survey*, March 2019

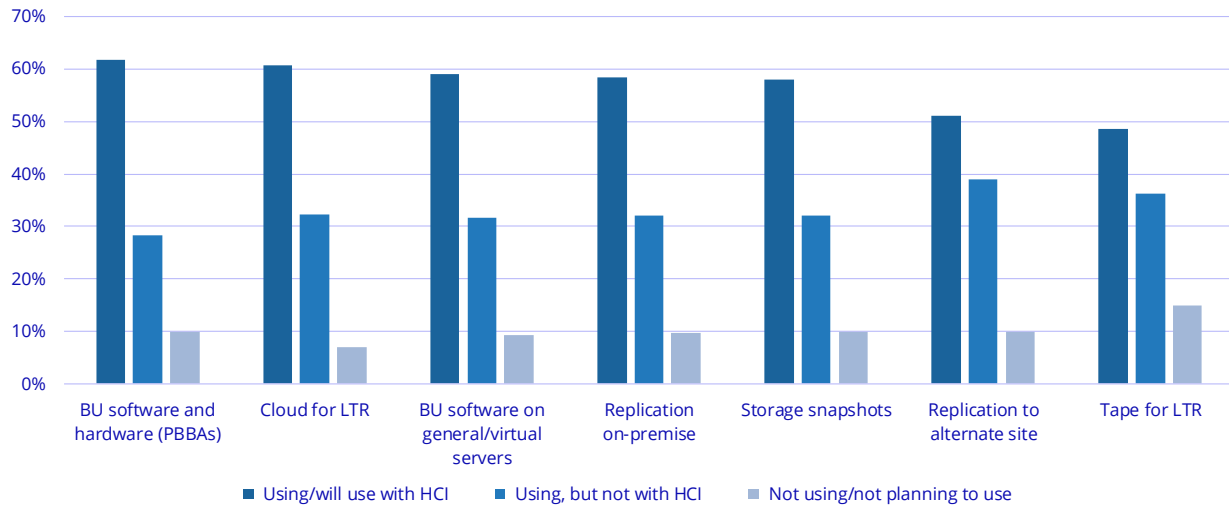
Finding Number 3: Data Protection Needs Are Not Monolithic

Data protection requirements varied widely in our survey, with no single data protection mechanism being universally deployed. Organizations use numerous data protection technologies for HCI as they do for traditional infrastructure. The myriad of solutions include backup/recovery software, purpose-built backup appliances (PBBAs), replication, snapshots, and cloud computing (see Figure 3). IT organizations choose different products with unique data protection capabilities to address a wide variety of data loss threat use cases. Thus customers are looking for agile and flexible data protection solutions that are rich in features.

FIGURE 3

Types of Data Protection Solutions in Use

Q. Which data protection technologies do you use in your organization, and which are (or will be) used for you HCI deployments?



n = 300

BU = back up; PBBA = purpose-built backup appliance; LTR = long-term retention

Note: All respondents use some type of third-party data protection with HCI or expect to do so after the HCI evaluation process. Types of data protection solutions in use (or expected to be used) with HCI vary widely from the use of traditional backup methods to appliances to cloud and more. No one type of data protection for HCI stands out as statistically more prevalent than others.

Source: IDC's *Veeam and HCI Survey*, March 2019

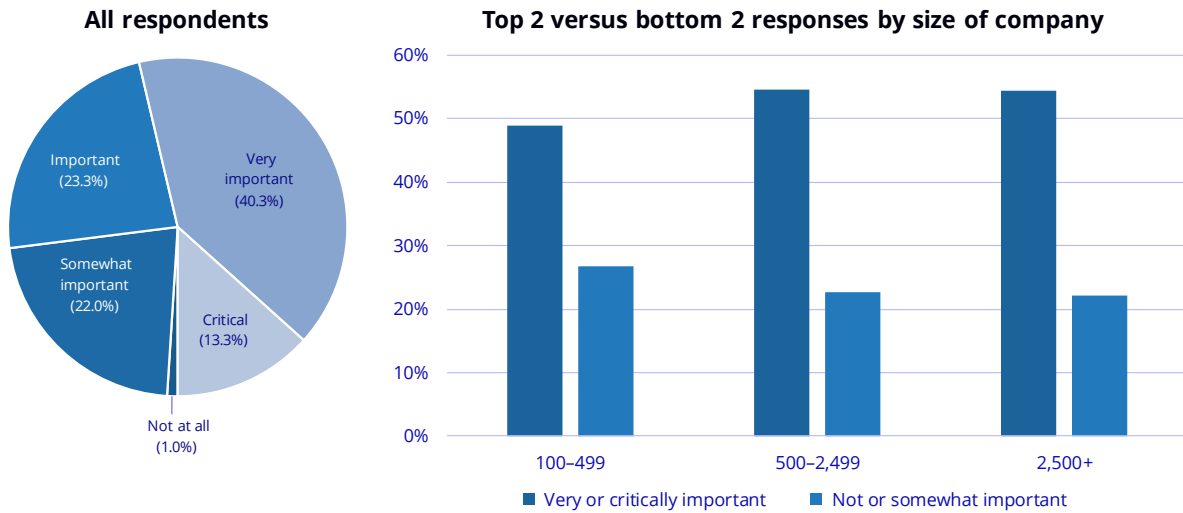
Finding Number 4: HCI Should Be Integrated with Existing Data Protection Solutions

IT organizations don't think of HCI as an island of infrastructure, and they don't want to deploy standalone management tools either. Instead, IT managers want HCI to be integrated with their traditional infrastructure, including the existing data protection methodologies and policies. Instrumentation, manageability, and seamless ease of use are consistent drivers of IT modernization and DP modernization – HCI addresses the former, whereas data protection software addresses the latter. Three out of four respondents believe that HCI compatibility with existing data protection software is important, extremely important, or critical. Furthermore, more than half of respondents (54%) feel that such an integration is extremely important or critical (see Figure 4). Enterprises must realize that different HCI vendors have varying degrees of integration with data protection software. Some vendors may just involve certification, and others may involve deep integration where the products are veritably merged into one. Such native integrations of HCI and data protection software offer the maximum operational and business benefits.

FIGURE 4

Importance of HCI Compatibility with Existing DPR

Q. How important is compatibility of your existing backup solution for virtual environments when choosing HCI offerings?



n = 300

Note: Almost 54% of respondents view an HCI solution's compatibility with existing data protection and recovery software as very important or critical. This number is slightly lower for smaller organizations, where IT departments may be more flexible.

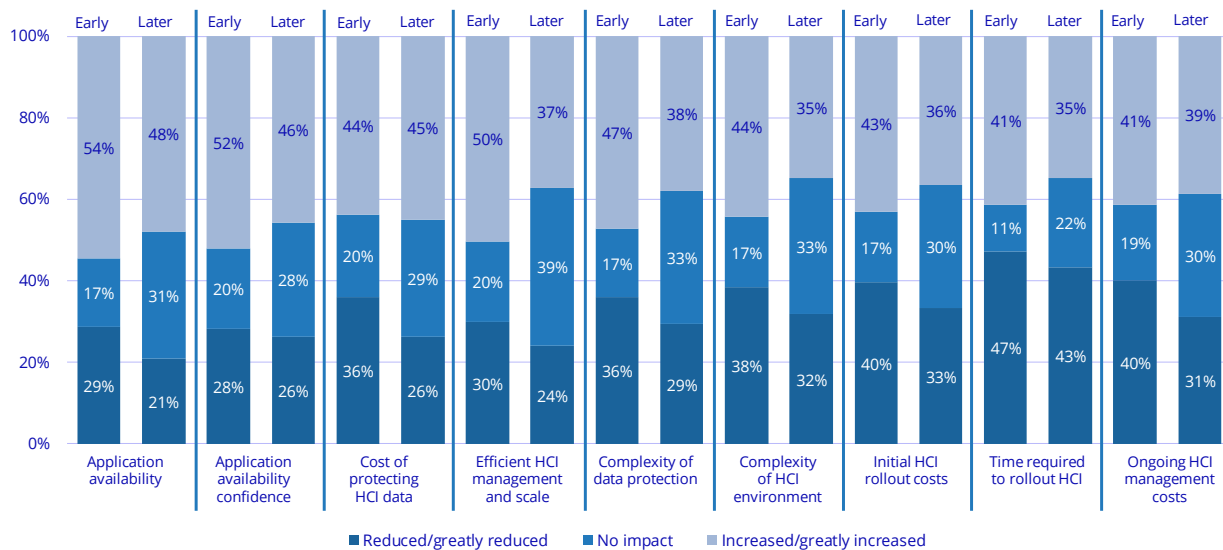
Source: IDC's *Veeam and HCI Survey*, March 2019

Finding Number 5: Early Integration of HCI and Data Protection Yields Greater Benefits

Rather than considering backup/recovery as an afterthought, smart enterprises include data protection early in the HCI roll out (see Figure 5). Customers that adopted such early planning reported significant cost benefits, better application availability, and much lower complexity in the architecture of both data protection and HCI solutions. Furthermore, with early planning, HCI customers saw significant reduction in time to deployment and ongoing management costs.

FIGURE 5

Impact of Including Data Protection in the HCI Rollout Process



n = 300

Source: IDC's *Veeam and HCI Survey*, March 2019

FUTURE OUTLOOK

Considering Veeam

Founded in 2006, Veeam is a private company that is a leading provider of backup, recovery, and replication solutions for virtual, physical, and cloud infrastructure. Veeam's simple, reliable, and flexible platform secures and protects data in various operating systems (Windows and Linux) and hypervisors (VMware, Hyper-V, and Nutanix AHV) for different applications (Exchange, SQL, SAP HANA, Oracle, etc.) in datacenters and multicloud environments (AWS and Azure).

The *Veeam Availability Platform* includes the following primary products: Veeam Backup & Replication, Veeam ONE, and Veeam Availability Orchestrator. Veeam ONE is a tool designed for monitoring and capacity management of an entire environment from a single console. Veeam Availability Orchestrator enables consistent workflows and runbooks for routine data restoration, disaster recoveries, and platform migrations.

Veeam provides "data protection, data retention, and data availability" – to use Veeam's own words – for virtual, physical, and cloud workloads and enables visibility and mobility of data across private, public, and hybrid clouds. Management through a single console, automation, proactive monitoring, and intelligent diagnostics make IT operations simple and efficient. Veeam's software can test and verify every backup and every virtual machine for recoverability, which is an invaluable service in the backup world. Customers can also leverage Veeam's DataLabs, which allows developers and operations teams to use productionlike workloads to validate updates, security vulnerabilities, forensics, and GDPR compliance.

Veeam partners with a wide range of enterprise hardware and software vendors, thus creating a powerful ecosystem of tools and solutions. Veeam also partners with key HCI vendors such as Nutanix, Dell Technologies, Cisco, and HPE, as well as traditional datacenter component vendors such as NetApp, Pure Storage, and Lenovo. For example, Nutanix and Veeam just announced a new hyperconverged data protection solution called Nutanix Mine *with Veeam* that enables customers to manage their HCI environment and backup operations from a single management console. By implementing Veeam with HCI, users can leverage a consistent data protection strategy and management stack across all application platforms, and implementation can be both on-premise and in multicloud/hybrid cloud environments.

CHALLENGES/OPPORTUNITIES

Veeam must continue its innovation and mutually beneficial partnerships. Veeam's most recent integration with Nutanix is a bold and a strategic move that could be replicated with other HCI and storage vendors, as suggested by Veeam's recent *with Veeam* announcement. Veeam should also emphasize big data and analytics to help customers create virtual data lakes out of backed up and replicated data. When data becomes a gold mine of insights that drive business initiatives, Veeam and its customers win.

CONCLUSION

HCI is a rapidly growing element of IT infrastructure, especially for on-premise application deployments, and will host more than one-third of production applications within a year. Thus data protection remains as important for HCI as it is for traditional infrastructure. To simplify management, reduce risk, and guarantee compliance, IT organizations desire data protection solutions that are seamlessly integrated with their HCI solutions. Those organizations that bring data protection into the HCI solution early on realize greater benefits in terms of better application availability, less complexity, and lower cost. Implementing Veeam with HCI offers IT organizations the opportunity to standardize data protection across their environment and leverage Veeam's rich and robust features.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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