

ESG RESEARCH SUMMARY

HCI Adoption Is Driven by a Need to Bring Cloud Operations On-premises and Accelerate Innovation

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Overview

ESG recently completed a survey of 2,000 IT decision makers to understand whether, and to what degree, organizations' comprehensive technology transformations are reinforcing broad and deep competitive advantages. [The study](#) focused on organizations' progress delivering modern digital end-user experiences, innovating with data, and more flexibly delivering IT services. Organizations making the most progress across all three of these areas were categorized as Technology Accelerators and ESG observed that these organizations do in fact outperform their peers lagging in these transformations (Technology Reactors) in many areas.

A subset of 612 IT decision makers directly involved in managing hyperconverged infrastructure (HCI) at their organizations are the focus of this summary. The survey asked these respondents how the use of HCI is delivering benefits for their organizations. ESG also sought to understand if, and to what degree, HCI is providing a foundation for the organizations to achieve their on-premises as-a-Service and cloud operations goals. The research showed that organizations using HCI to support the majority of their on-premises workloads, referred to as "HCI Accelerators," are:

- Reducing time spent on infrastructure deployment by 40% and reducing ongoing system management task time by 41%.
- Using HCI-enabled time savings and automation, particularly in day-2 operations, to deliver 59% more of their total IT environment as-a-Service.
- Using as-a-Service to speed cloud project completion, application development timelines, and get to market faster.
- More likely than those using HCI more selectively to drive a high degree of infrastructure management tool consolidation (27% versus 20%) across their entire environment, allowing them to explore more hybrid operating models.

Measuring HCI Adoption

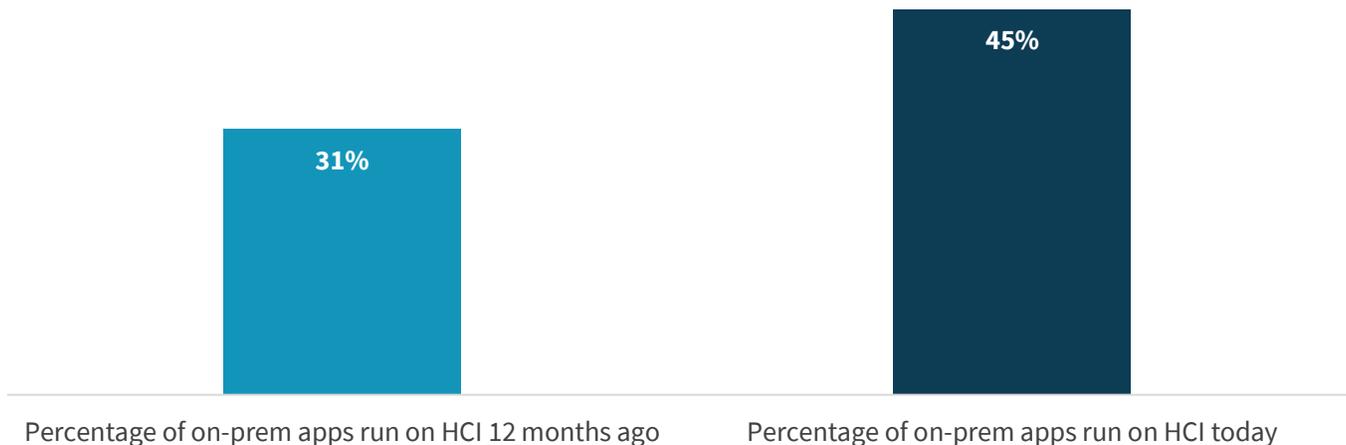
ESG's survey asked respondents to describe what percentage of their on-premises applications ran on HCI both 12 months ago and today. Twelve months ago, respondents reported that an average of 31% of their on-premises applications ran on HCI, and today that number has grown to 45% (see Figure 1). It's clear that adoption of HCI is trending up. ESG believes two complementary trends are at play:

- HCI has moved beyond niche workload use cases and has become accepted as an infrastructure platform for general use.
- As organizations look to advance their as-a-Service delivery of on-premises infrastructure, they have recognized the need for highly automated infrastructure management and scaling workflows to deliver a cloud experience to end-users.

HCI users today run 45% of their on-premises applications on those platforms.

Figure 1. HCI Adoption Trends

Approximately what percentage of your company's on-premises applications were supported by hyperconverged infrastructure platforms 12 months ago? What percentage are today? (Mean)



Source: Enterprise Strategy Group

HCI offers several advantages over traditional infrastructures. HCI radically simplifies a data center's architecture by fusing the components—the hypervisor, server, and storage—into a single appliance called a node. This radical redesign carries with it a few key considerations:

- **Manageability:** With hyperconverged infrastructure, workloads all fall under a common administrative console. HCI's ability to consolidate the management of numerous IT functions like deduplication, backup, and the migration of VMs between nodes into a single management platform unlocks a tremendous amount of administrator efficiency.
- **Scalability:** Because of the node-based architecture, it is very easy to scale hyperconverged infrastructure. Organizations can simply add or subtract nodes to match resource demand. This eliminates the painful fork-lift upgrades, migrations, and time-consuming integrations typically required with traditional infrastructure and helps the organization deliver IT services faster.

These differences are exactly the type of infrastructure characteristics organizations need to deliver a cloud experience on-premises.

HCI Simplicity and Agility are the Foundation of On-premises as-a-Service Enablement

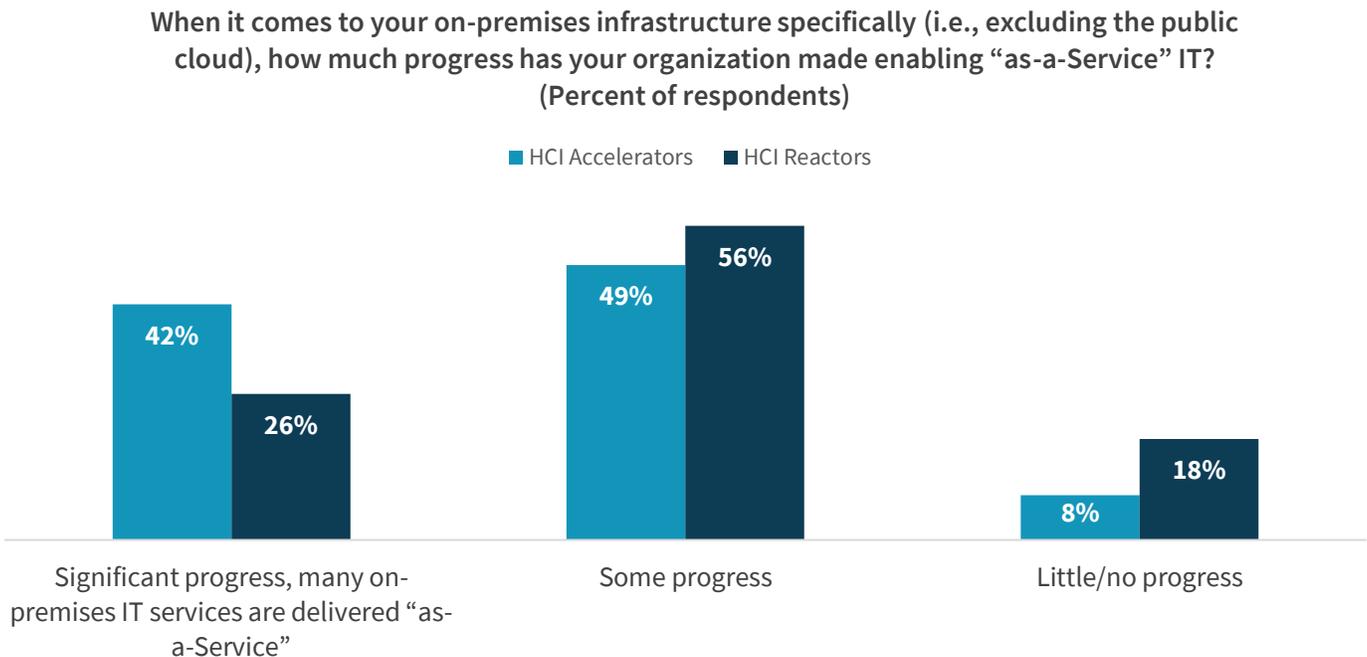
As-a-Service consumption models are typically defined as any IT service that can be provisioned rapidly in a self-service manner and is paid or accounted for on a regular interval (typically monthly) based on usage. Many organizations are navigating to this type of operations and OpEx model in their on-premises environment.

However, to do so successfully, organizations have found they need a simpler, more flexible, more agile, and more scalable infrastructure, or else the user experience in the private cloud will not meet the standard set by modern public cloud services. Legacy infrastructure does not provide the orchestration and automation of day-2 operations, like software updates, provisioning, and configuration changes, to deliver.

HCI, with its consolidated management console and ability to scale quickly and easily, offers a compelling approach to on-premises as-a-Service delivery and many organizations seem to have come to this realization. When we asked how much progress organizations have made delivering on-premises IT as-a-Service, it's clear that HCI Accelerators are seeing more success than HCI Reactors (i.e., those using HCI for half or less of their on-premises workloads). More than two-fifths of Accelerators (42%) report significant progress delivering IT as-a-Service compared to just 26% of Reactors (see Figure 2).

Further proof that HCI Accelerators are making progress adopting as-a-Service operations models is in the data. HCI Accelerators report that 60% of their total IT environment is delivered as-a-Service, on average. Those using less HCI in their environment only deliver 37% of their IT environment as-a-Service.

Figure 2. Achievement of On-premises As-a-Service Delivery by HCI Adoption



Source: Enterprise Strategy Group

Hybrid Cloud Enablement

Hybrid cloud achievement is dependent on choice: Organizations can select the cloud environment, private or public, that provides the best fit for their workloads. Looking at the research data in the context of HCI, there is a clear connection between HCI use and hybrid cloud enablement.

First, HCI Accelerators are simplifying their infrastructure management tool portfolios: they were much more likely than Reactors to have significantly consolidated the number of tools in use over the last 12 months (27% versus 20%). Interestingly, and somewhat surprisingly, despite a trend toward management simplicity, high HCI adopters also report that their organizations evaluate many environments—both public and private—for new workloads (73% versus 64%).

ESG believes that reaching critical mass in terms of HCI use helps organizations standardize on infrastructure management tools. This removes a major management burden on IT and allows them to focus more effort on workload placement evaluations and selecting the right environment for workloads deployed. With a better opportunity to select the right cloud for their workloads, these organizations' environments tend to be more hybridized.

Cloud Outcomes HCI Accelerators Achieve

HCI serves as the infrastructure foundation that supports both on-premises cloud operations and hybrid cloud enablement. And the data indicates that HCI Accelerators see a significant payoff.

One payoff relates to cloud project completion. HCI Accelerators appear to have much more agility completing cloud migrations and projects. ESG asked if organizations were seeing faster cloud onboarding or migrations as a result of on-premises as-a-Service enablement. Eighty-five percent of HCI Accelerators said they were.

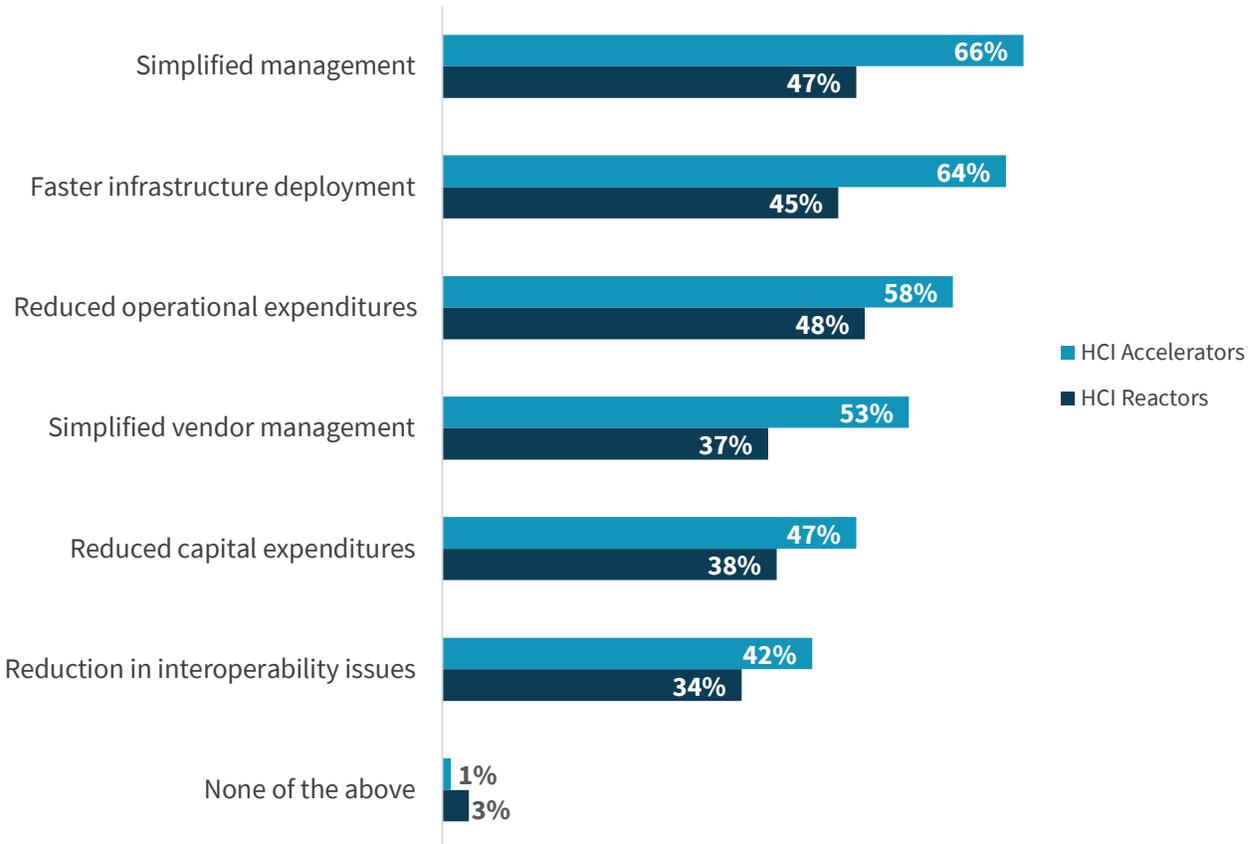
ESG also asked respondents to consider the cloud migration and development projects their organization had undertaken in the past 12 months and to estimate the percentage completed ahead of schedule, on schedule, and behind schedule. HCI Accelerators reported 28% of cloud projects had been completed ahead of schedule, compared to the 24% of projects reported by Reactors. This represents a statistically significant difference.

Direct Benefits of HCI

Given the solution characteristics of HCI, it is not surprising to note that the majority of all users say their organization has realized benefits in the areas of simplified management (54%), reduced operational expenditures tied to labor (52%), and faster infrastructure deployment times (52%). Additionally, it is important to note that the greater the adoption of HCI by an organization, the more likely it is to achieve each of these benefits. HCI Accelerators are seeing benefits much more often than HCI Reactors (see Figure 3).

Figure 3. Benefits of HCI Adoption

What have been the most significant benefits your company has realized by deploying a converged and/or hyperconverged infrastructure technology solution(s)? (Percent of respondents)



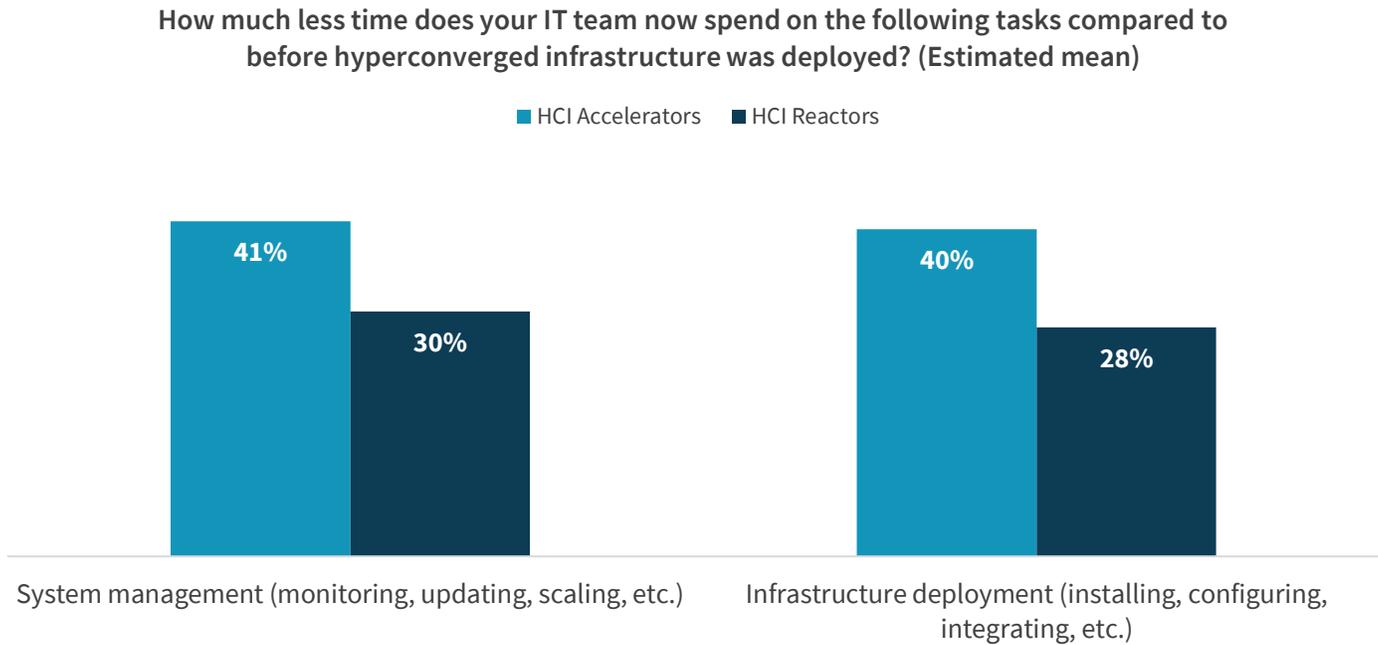
Source: Enterprise Strategy Group

Measuring the Scale of HCI Improvements

The research not only addressed the benefits of HCI use, but also the size of the benefit. For example, respondents were asked how much less time the IT team spends on system management tasks like infrastructure monitoring, updating, and scaling now versus before HCI was being used. In the aggregate, respondents reported a 35% reduction in time. Similarly, respondents were asked how much time the IT team has saved on infrastructure deployment with HCI (i.e., system installation, configuration, and integration) compared to before HCI was in use. Here, respondents estimated a 34% time savings. In both cases, the scale of the benefit relative to legacy infrastructure platforms is significant.

Going a layer deeper into the data, we see a familiar trend: HCI Accelerators are seeing a bigger impact. Time savings in both areas was notably larger: 41% savings reported for system management and 40% savings for infrastructure deployment (see Figure 4).

Figure 4. Scale of Time Savings by HCI Adoption



Source: Enterprise Strategy Group

HCI for Innovation

Looking at the research data in the context of HCI, another compelling correlation exists between HCI adoption and organizational innovation.

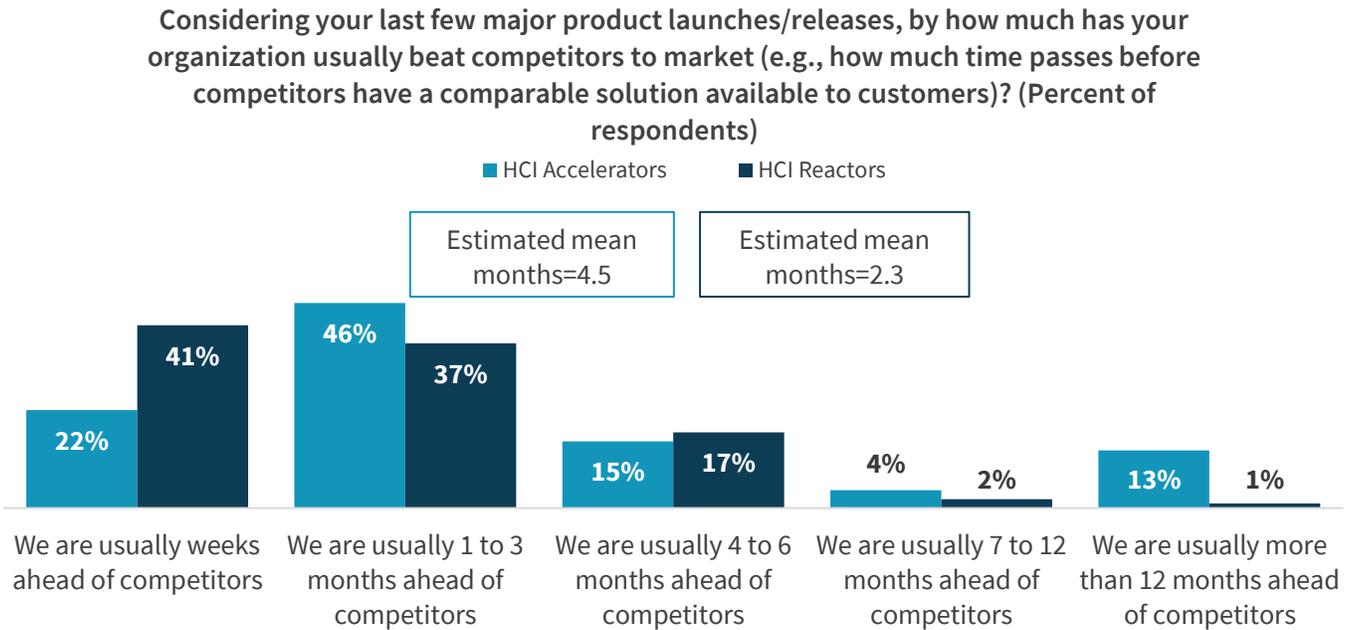
Developer Enablement

It’s clear that HCI has a big impact on IT agility that ripples throughout other areas of the organization. For example, ESG’s larger study showed that Technology Accelerators have reduced app development and deployment cycle times by ~3 business weeks on average. ESG believes the use of HCI is a major contributor to that reduction in time.

As vendors like Dell Technologies, in partnership with VMware, develop cloud-native acceleration solutions like VMware Tanzu on Dell EMC VxRail, ESG expects to see this benefit expand with organizations being better positioned to adopt and scale Kubernetes infrastructure delivery. However, it is worth noting that Dell is not ignoring legacy applications. Its platform covers both cloud-native applications and traditional applications, allowing organizations to achieve consistency throughout the environment.

Beating Competitors to Market

Another measure of innovation gets at an organization’s ability to bring products and services to consumers faster than their competitors. ESG asked respondents if as-a-Service speeds time to market. HCI Accelerators reported it did more often than HCI Reactors (67% versus 57%). In fact, when respondents were asked to consider the last few product launches and releases at their organizations, respondents at HCI Accelerators reported a much higher level of organizational agility. On average, they report beating competitors to market by 4.5 months, nearly 2x the time-to-market advantage reported by HCI Reactors (see Figure 5).

Figure 5. HCI Accelerators Speed Time to Market


Source: Enterprise Strategy Group

The Bigger Truth

HCI adoption has been trending up dramatically over the last 12 months. Organizations are flocking to the technology due to the simplicity, efficiency, automation, and orchestration of day-0, -1, and -2 operations. These benefits give organizations the agile infrastructure platform needed to deliver their on-premises IT as-a-Service more successfully and position themselves to successfully navigate hybrid cloud complexity. In turn, cloud operations, both on-premises and in hybrid scenarios, help organizations save time, money, and speed innovation. ESG believes this is why the data shows HCI Accelerators are more agile in terms of time to market, delivering their products to market more than one quarter earlier than competitors on average.

Whether looking at IT-centric benefits like staff time to manage and scale infrastructure or business-centric benefits like time to market, HCI delivers a compelling return to organizations as a foundation for cloud operations.

How Dell Technologies Can Help

Whether you are accelerating data center modernization, deploying a hybrid cloud, or creating a developer-ready Kubernetes platform, VxRail delivers a turnkey experience that enables continuous innovation. Joint engineering between Dell EMC and VMware leads to a seamless, curated, and optimized hyperconverged experience. This deep integration, combined with the simplicity of VxRail HCI System Software and the performance of next-generation PowerEdge servers, provides an ideal platform across core, edge, and cloud.

Optimize your infrastructure, cut complexity and costs, and secure your business with APEX Cloud Services, powered by VMware. Now you can deploy consistent, secure infrastructure and operations for your workloads across public and private clouds. Dell Technologies provides the flexible IT that improves the agility of organizations to overcome obstacles and seize opportunities and does so in a manner tailored to each organization's acquisition and consumption strategy.

In partnership with VMware, Dell Technologies has engineered multiple VMware Tanzu on Dell EMC VxRail solutions, from a flexible reference architecture to a fully automated turnkey solution, so you can adopt Kubernetes your way. Tanzu on VxRail helps make developing your cloud-native strategy easy by leveraging consistent infrastructure and operations to support faster application development, scalability, and lifecycle management to ensure you are using the latest Kubernetes tools and features.

Together, Intel and Dell Technologies are driving innovation and next-generation capabilities with the broadest portfolio of trusted client and enterprise solutions for cloud and data management; enabling businesses to move faster, innovate more, and operate efficiently.

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