

White Paper

Modernizing IT with Nutanix Enterprise Cloud and HPE GreenLake

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Introduction

The rise of the digital economy has been a primary driver for the adoption of public cloud services. As organizations become more dependent upon data for business success, IT must not only expedite service delivery, but must also place more emphasis on enabling the business to extract value from data. To that end, the digital economy has fundamentally changed the requirements for IT service delivery (as well as having changed the business perceptions about it). Organizations require IT infrastructure and services to be deployed faster—but those tasked with the job generally must achieve this ongoing objective with fewer resources. Why? Because increasing numbers of IT staff are now working with line-of-business teams to understand their technology needs.

Traditionally, IT has been tucked away in a room in the basement doing their own thing while trying their best to respond to every request coming from every corner of the organization, across all lines of business. But in today's frenetic business environment, IT must be more visible within the organization. For IT to be efficient and agile, now more than ever, they need to understand the objectives and business demands of the various lines of business across their organization. Ongoing communication and collaboration can help IT quickly, easily, and reliably provide each line of business with the appropriate infrastructure to support their specific application and infrastructure requirements. By allowing this essential group to be more strategic, enabling them to collaborate with others and deliver value, organizations will be empowered to rise above the IT challenges of many traditional organizations. By leveraging a cloud-like service delivery/consumption model, organizations are better able to align resources to specific lines of business that have a wide variety of application and infrastructure demands (i.e., sales, marketing, HR, finance, etc.).

The Need to Focus More on the Business

While modern IT organizations may pride themselves on being technologically advanced, if they aren't being responsive to the real-time needs of the business (i.e., understanding the requirements of lines of business throughout an organization), then all the technology investments won't matter. To help the business succeed, modern IT organizations must transition from being technology-focused to being business-focused.

To that end, IT personnel resources are vital (and in high demand) for helping fulfill the demands of the business—but there isn't enough talent (or budget) to scale an organization in line with its myriad of demands. The real issue is that IT is spending too much time managing individual infrastructure components. But there is a solution. If the need for IT to deal with these low value tasks could be eliminated, this overworked group would have time to focus on aiding line-of-business teams to receive the maximum value from their application environments.

The lack of IT resources (and the squandering of those resources) is fueling the growing adoption of cloud services. That said, while hybrid cloud has become the de facto standard for IT, on-premises infrastructure continues to play a major role in most organizations. Based on ESG research, nearly nine in ten organizations expect to run 50% or more of their workloads on-premises three years from now.¹

The Challenges of Modern IT

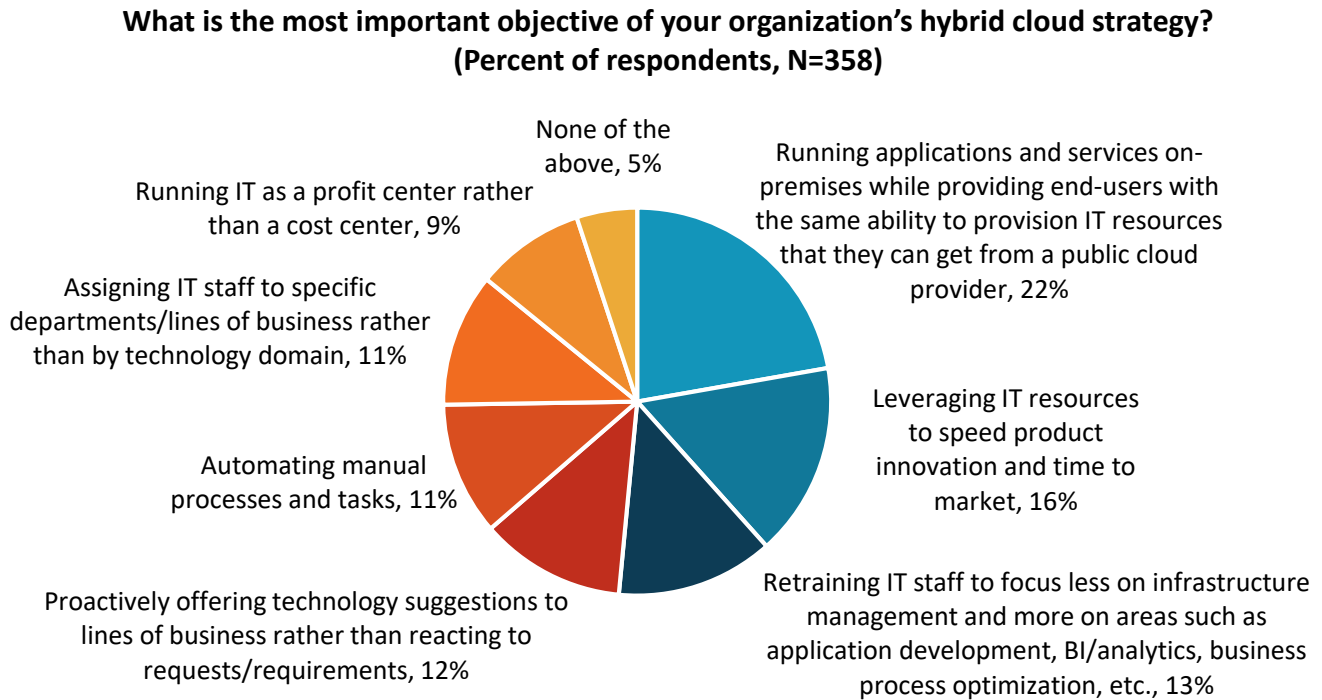
IT is being held to a new standard. Availability and resiliency are still of the utmost importance, but between line-of-business teams expecting IT to continuously support their changing technology needs in a timely manner, and the mandates for organizations to embrace hybrid cloud, things aren't getting any easier for already stretched IT departments.

According to ESG research, when IT professionals were asked about the most important objective of their organization's hybrid cloud strategy, 22% of respondents said that it was running applications and services on-premises while providing

¹ Source: ESG Master Survey Results, [Hybrid Cloud Trends](#), May 2019.

end-users with the ability to provision IT resources from a public cloud provider, 16% said leveraging IT resources to speed product innovation and time to market, and 13% answered retraining IT to focus more on higher value applications. Moreover, 12% answered that the most important objective was proactively working with line-of-business teams (see Figure 1).²

Figure 1. Replicating the Cloud Experience On-premises is a Top Hybrid Cloud Business Objective



Delivering a Cloud-like Experience with Hyperconverged Infrastructure

While the research shows that businesses are looking for the public cloud experience on-premises, with a desire for organizations to provision resources in a similar fashion, and with the speed and automation of the public cloud, organizations are turning to modernized infrastructure to fill that need. One such technology is hyperconverged infrastructure (HCI), which consolidates compute, storage, networking, and virtualization into an easy-to-consume, scale-out infrastructure. And while the technology has been around for almost 10 years, the last few years have seen adoption explode. With HCI, organizations have achieved improved scalability, improved total cost of ownership (TCO), easier deployments, simplified management, and increased agility.

While many of the current users of HCI have loved the operational benefits, keeping up with end-user demands will always be a challenge. This is paving the way for organizations to simplify even further. Organizations are beginning to look for ways to get more out of HCI and they’re looking to do it through managed services that enable a hybrid cloud experience to rapidly and consistently fuel innovation throughout the business, improve business agility, lower costs, and consistently provide the right level of control to ensure strict SLAs are met. By marrying HCI and managed services, organizations can reap the rewards of HCI, while alleviating a burden on IT to constantly innovate, update, and deliver when end-user demands are higher than IT can effectively deliver.

² Source: ESG Master Survey Results, [Hybrid Cloud Trends](#), May 2019.

Nutanix Enterprise Cloud Platform

The Nutanix Enterprise Cloud Platform delivers a complete IT infrastructure with the agility, scalability, and simplicity of the cloud and the security, performance, and cost predictability of a traditional on-premises infrastructure. The architecture is a scale-out virtual computing platform leveraging web-scale engineering principles innovated by leading cloud companies such as Google, Facebook, and Amazon. And organizations have trusted Nutanix for almost ten years to satisfy their application workloads, from end-user computing environments with VDI, to mission-critical database applications that serve as the backbone of the business. The highly distributed architecture creates a fully integrated compute, virtualization, and storage environment that is 100% software-defined. This integration eliminates the complexity of traditional SAN and NAS environments, as well as their reliance on costly, special-purpose hardware that commonly requires IT personnel with specialized skill sets.

With its fully distributed approach, Nutanix spreads all data and processes across the entire cluster, improving resource utilization, scalability, and performance predictability. Active data tiering automatically places frequently requested data in the highest performance storage tier. Additionally, data locality ensures that data is always near to the application—allowing for the serving of data directly from direct-attached storage and minimizing expensive network latency.

Partnering with HPE for a World-class Experience

Choice is a key differentiator for Nutanix—choice of hypervisors, hardware platforms, and consumption models. Nutanix prides itself on giving its customers freedom of choice. As a well-known leader in hyperconverged infrastructure solutions and cloud computing, Nutanix has long supported leading hypervisor brands (including Nutanix AHV, of course), and partnered with recognized names in servers, though one of the world's largest server vendors (HPE) had not been among them.

But that situation has been remedied—officially. Nutanix and HPE recognized the value of and need for working together to assist enterprises in transforming their data centers across two key areas: first, a portfolio of appliances consisting of HPE servers running the Nutanix software stack; and second, expanding HPE GreenLake to run the Nutanix Enterprise Cloud as-a-service to support enterprise demands.

These two global leaders are focused on prioritizing organizational agility and providing customers with flexibility and reliability as they continue their hybrid cloud journeys, whether leveraging a turnkey appliance or an as-a-service solution, or embracing modern applications technology, such as AI and IoT at the edge.

HPE GreenLake

HPE GreenLake is a fully managed, scalable IT infrastructure service offering a cloud-like consumption model for on-premises infrastructure. Organizations can benefit from a pay-as-go model, and easily scale—with the added advantage of an onsite buffer when extra capacity is needed. Organizations enjoy enterprise-grade support through the HPE Pointnext technology services organization, which assists organizations with their digital transformations.

With HPE GreenLake, organizations need no longer deal with a one-size-fits-all approach to supported technology. Now they can choose the most appropriate supported HPE and third-party technology based on their needs. Services are aligned to the unique requirements of the business, with HPE GreenLake providing support, metering, and management of capacity based on installed hardware. Pre-packaged options are also available for rapid deployment.

Because usage is metered, organizations only pay for what they consume on a monthly basis. Buffer capacity is installed in advance, ensuring resources are available when the business demands exceed expected capacity.

Nutanix Enterprise Cloud and HPE GreenLake

For nearly a decade, HPE has continually refined its comprehensive as-a-service methodology, leveraging the knowledge of more than 600 customers, and achieving a retention rate of over 99%. HPE appreciates that enterprise organizations have different requirements than those of midmarket companies, which is why HPE GreenLake supports a broad array of workloads-as-a-service that includes HPE and HPE partner technologies.

When it comes to deployment, HPE helps organizations determine the most appropriate approach: on-premises, in the cloud, or in a local co-location facility. HPE also gives organizations the option to customize their configurations in order to provide them with services that help cover any gaps in an organization's skills resources.

The Nutanix Enterprise Cloud is the latest addition to the HPE GreenLake portfolio of supported technology. In the spirit of providing customers with choice, Nutanix Enterprise Cloud embraces an as-a-service delivery model, meeting enterprise scalability expectations and demands, and helps reduce costs through a "license-free" hypervisor.

A Solution-based Approach

Working together, Nutanix and HPE have initially concentrated on three key solutions (with more to be added over time) that address the most common use cases:

- End-user computing (virtual desktop infrastructure)
- Databases
- Private cloud

End-user Computing Infrastructure

The frequently heard lament of not having enough IT resources resounds throughout many, if not all, organizations across industries. HPE GreenLake with Nutanix can help by assisting organizations to free up personnel from routine, labor-intensive tasks to work on value-added initiatives, while also enhancing the user experience. How? By providing faster and easier deployment and management of their virtual desktop infrastructure (VDI), as well as desktop-as-a service (DaaS) infrastructure.

HPE GreenLake with Nutanix offers organizations an effective means of distributing new applications via a software-as-a-service model (SaaS). Through SaaS, organizations are able to enjoy additional support for bring-your-own-device (BYOD) and choose-your-own-device (CYOD) programs, enabling IT to supply users with the applications they need—when they need them—and at the same time strengthening security. This makes for happier, more productive employees, frees up limited IT staff to participate in value-added initiatives, and improves security. It's a win-win-win situation all around.

What's more, a pay-as-you-go consumption model enables organizations to significantly decrease the total cost of operations since there are no upfront costs. Scaling is simple. Organizations can start small and quickly scale without having to re-architect. HPE GreenLake with Nutanix for end-user computing offers support for Citrix Virtual Apps and Desktops, and VMware Horizon View.

GreenLake with Nutanix for End-user Computing Infrastructure offers:

- Enhanced user experience.
- Simplified IT with additional support for BYOD/BYOC programs.

- Support for Citrix Virtual Apps and Desktops, and VMware Horizon View.
- Pay-per-use offering, billed monthly with no upfront costs.

Database Infrastructure

Many organizations use traditional infrastructure (discrete compute, network, and storage resources) to support their high-performance database operations. While this may appear efficient on the surface, upon further inspection the practice of manually managing siloed data center operations can create a highly inefficient cycle.

It shouldn't be surprising that manually managing a traditional, siloed data center is a labor-intensive, wholly inefficient exercise—provisioning can be slow and inaccurate; scaling can be arduous and frustrating; maintenance costs can quickly escalate; any business insights gleaned from data are usually negligible, and it does not allow for agility (which means business growth is trivialized). More importantly, manual management of siloed database operations supported by traditional infrastructure can present a very real risk to security due to human error.

Enter HPE GreenLake with Nutanix for Databases, with the capabilities to mitigate these all too familiar issues—consolidating disparate workloads into one efficient management platform by streamlining database deployment, management, and operations. With just one click, organizations can rapidly provision, clone, patch, refresh, and perform backups, while the pay-as-you-go model (billed monthly) drastically reduces expenses by eliminating upfront CapEx. The business is able to enjoy operational agility, while IT personnel are available to work on initiatives that can affect the bottom line.

GreenLake with Nutanix for Database Infrastructure offers:

- Consolidation of siloed workloads into just one management platform.
- One-click database deployment, management, and operations.
- Pay-per-use offering, billed monthly with no upfront costs.

Private Cloud Infrastructure

With the frenetic pace of business today, IT organizations must be agile, rapidly innovate, and swiftly bring their goods and services to market to be successful and maintain a competitive edge. IT teams don't have the luxury of time when making modifications to technology or supporting new infrastructures. They must act quickly and with certainty.

Although the public cloud would provide a workable solution to these common challenges (swiftly spinning up services), compliance regulations, data locality requirements, and security and performance issues make it fundamentally impossible for data to leave the premises.

Helping organizations deal with a seemingly bleak situation, HPE GreenLake with Nutanix for Private Cloud allows organizations to spin up cloud-based services from dedicated IT infrastructure inside the organization. How? Built on hyperconverged infrastructure (HCI) software that offers highly scalable, available, and efficient cloud services, the solution supports business-critical workloads by bringing together the agility of the public cloud with the security and flexibility of a private cloud—improving performance and reducing expenses.

GreenLake with Nutanix for Private Cloud Infrastructure provides organizations with the ability to reliably deliver applications and data at any scale, and provision, update, and perform disaster recovery with one click—while enabling end-user computing, database management, dev/test, ROBO environments, and big data analytics.

GreenLake with Nutanix for Private Cloud offers:

- Simple, one-click deployment, update, and disaster recovery lifecycle management.
- Integral artificial intelligence (AI) and adaptive machine learning (ML) to help regulate resources for performance optimization and utilization.
- Built-in security, data protection, backup, and disaster recovery to mitigate downtime and loss of data.
- Future-ready infrastructure to bring greater efficiency and further simplify IT.
- Pay-per-use offering delivered on-premises, billed monthly with no upfront costs.

The Bigger Truth

The next wave of digital transformation is about embracing new IT delivery models. While HCI has paved the way for improved operational efficiency and agility and provides a foundation to hybrid cloud, IT is still on the hook for meeting the ever-growing list of demands from end-users. The role of IT must become more strategic to the business. They must be in lock-step with line-of-business stakeholders to understand business objectives and ensure their expectations are exceeded. And by embracing an as-a-service delivery model, they will be setting themselves up for success.

Nutanix and HPE recognize the need to turn IT into the champions of the business and their new partnership shows just that. That was the motivating factor behind the strategic partnership between these two technology leaders and innovators. And while HPE and Nutanix may have been fierce competitors in the past, their latest partnership highlights what is most important to both: their customers. And customer-centricity will continue to be a driving force behind the partnership for years to come.

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