



ESG WHITE PAPER

Dell Technologies Delivers on as-a-Service with APEX Data Storage Services

Organizations are Improving the Way They Consume Data Center Infrastructure

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Introduction

A business's ability to succeed in capturing new opportunities depends directly on how efficiently and effectively it leverages its data and technology to improve operations and customer engagement. In a recent ESG research study, nearly every IT organization surveyed (98%) said they are in some phase of digital transformation.¹

ESG research shows that businesses seeking to transform themselves digitally do so because they want to become more efficient (reported by 56% of respondents), deliver a better customer experience (cited by 40%), and/or develop new data-centric products and services (36%). To ensure the success of these digital initiatives, however, IT organizations must often accelerate their application and infrastructure modernization efforts.

However, accelerating IT initiatives is difficult to do in an era plagued by increasingly complex and diverse technologies, plus mounting skill shortages as technology demands pull expert resources away from infrastructure toward other IT fields such as application development and data science. Other common challenges today include under/over provisioning-related worries, CapEx increases, painful technology refresh cycles, unpredictable data growth, frequently changing business requirements, and cloud confusion/complexity.

To truly transform, organizations must offload lower-value IT activities and allow their IT teams to concentrate on what matters. One option is to shift from a traditional capital-centric buying model to an as-a-Service model.

According to ESG research, 48% of IT decision makers indicated that they prefer a consumption-based model when procuring data center infrastructure, 42% preferred the traditional model, and 10% had no preference. That 48% represents a notable increase in interest in using a consumption-based model, up six percentage points versus in 2020.

Businesses are quickly turning to as-a-Service models for IT infrastructure. Fortunately, a leader in technology and customer support—[Dell Technologies](#), through its APEX Data Storage Services offering—is expanding its broad portfolio into new offering models, giving customers new ways to manage, access, and consume technology.

Mounting Complexity and Skill Shortages Are Driving IT Transformation

Even as digital initiatives maximize a business's ability to thrive, the added burden they create is often too much for traditional IT technologies and practices to support in the long run.

Three-quarters of surveyed IT decision makers told ESG they believe IT is more complex than it was just two years ago. That rise in complexity combined with IT skill shortages is a forcing function for IT transformation.

Multiple factors are causing the increase in IT complexity (see Figure 1). Over a third (38%) of survey respondents identified concerns over their volume of data storage as a factor behind the complexity increase, while 29% reported that they have a major digital transformation program underway, and it is driving the increases in IT complexity that they are experiencing.

On the skills side of the equation, more than one in three organizations (34%) reported having problematic skill shortages in IT architecture and planning, and 17% said they are experiencing skill shortages in the area of storage administration.² As mentioned, IT hiring patterns appear to be transitioning away from domain experts such as storage admins and toward IT generalists—62% of respondents told ESG that the majority of positions they had open were for generalists rather than

¹ Source: ESG Research Report, [2021 Technology Spending Intentions Survey](#), January 2021. All ESG research references and charts in this white paper have been taken from this research report unless otherwise noted.

² Source: ESG Master Survey Results, [2021 Technology Spending Intentions Survey](#), December 2020.

domain experts such as storage administrators.³ These challenges are compelling IT organizations to look for ways to simplify and focus on what matters most to the business as a whole.

Figure 1. Top Ten Drivers of IT Complexity



Source: Enterprise Strategy Group

Think of it this way: Before you turn on the water in your house, did you have to decide what pipes to buy or what type of pump to install? Did you need to install a valve in the yard? With electricity, did you have to figure out which wires, insulation, and transformer were best? We don’t do those things; we simply buy our water and electricity as services.

Storage is also a service now. People receive value from this utility model. It’s simple, and it frees up resources to focus on other work. This is why ESG is now observing modern businesses shifting from managing infrastructure components and architecting their environments toward buying infrastructure as-a-Service.

Transformational Benefits of Storage as-a-Service

The benefits of the as-a-Service model for data center and storage infrastructure are obvious, which is why adoption is increasing. When ESG asked IT decision makers about their data center modernization efforts, 25% of the respondents said that transitioning to a consumption-based IT model that allows them to pay for IT according to utilization is one of the

³ Source: ESG Master Survey Results, [2019 Data Storage Trends](#), November 2019.

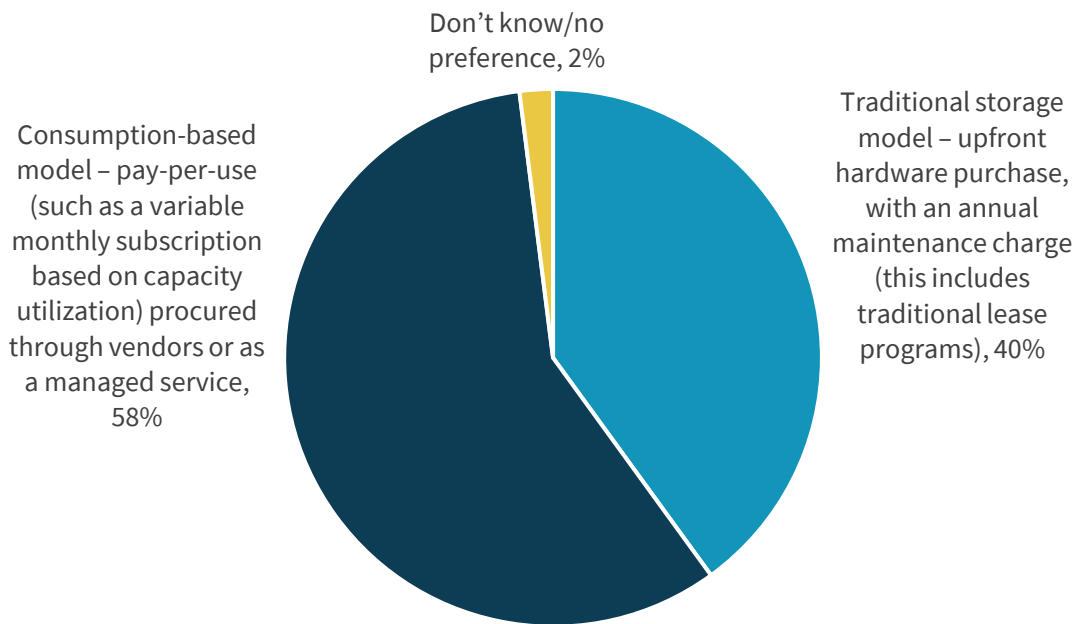
areas in which they expect to make the most significant investments in the next 12–18 months.⁴ This percentage is up from 18% in the previous year.⁵

Storage as-a-Service (STaaS) is the place to start given the crucial role storage technology plays in determining application performance and innovating with data. An additional factor to consider is the growing complexity organizations are experiencing with their storage environments due to the increased diversity of storage technologies, the challenge of increasing volumes of data, and the complexity of that data.

Figure 2 highlights the strong interest in STaaS, not just via a consumption-based buying model.⁶

Figure 2. Storage Buying Preferences Support Interest in Managed Pay-per-use

Assuming the net-cost was the same, which of the following would be your (personally) preferred payment model for on-premises storage infrastructure? (Percent of respondents, N=372)



Source: Enterprise Strategy Group

As-a-Service models are already a part of data center infrastructure environments. Over half (59%) of ESG survey respondents reported that they procured at least 25% of their on-premises storage through some form of pay-per-use.⁷ It does not have to be “all or nothing,” but organizations that aren’t considering this approach or planning to implement it to handle at least a small portion of their data storage requirements are missing out.

⁴ Source: ESG Master Survey Results, [2021 Technology Spending Intentions Survey](#), December 2020.

⁵ Source: ESG Master Survey Results, [2020 Technology Spending Intentions Survey](#), January 2020.

⁶ Source: ESG Master Survey Results, [2019 Data Storage Trends](#), November 2019.

⁷ *ibid.*

Why Organizations Choose Storage as-a-Service

Here are some of the benefits of STaaS that ESG has identified. It can:

- Simplify and/or offload IT architecture and planning activities, reducing risk.
- Accelerate IT and digital business initiatives to respond to business and market changes more dynamically.
- Reduce the burden on IT architecture, planning, and procurement resources, freeing them up for other tasks.
- Reduce the burden on (and free up) IT operations and infrastructure management resources.
- Deliver elastic resources that can scale up and down to align with business needs.
- Enable an organization to transition to an OpEx model and move assets off the balance sheet.
- Shift IT costs into later quarters, freeing up more budget money for additional transformation activities now.
- Enable an organization to adopt a cloud operating model with cloud consumption/cloud economics.

Why Not Choose as-a-Service?

According to ESG research, the most common reason that some organizations still use a traditional CapEx model is that it is corporate policy (cited by 44%). The second most common reason is that their current budget structure makes it too difficult to adopt as-a-Service offerings (37%), and the third most common reason is that STaaS is viewed as too expensive.⁸

Often, the idea of STaaS being too expensive stems from a comparison of the capital expense of hardware to the full as-a-Service cost. Some organizations neglect to account for the benefits of freeing personnel for other activities and forget about the costs related to all the work that goes into each forklift tech refresh cycle.

If there are not sufficient growth opportunities in your organization and you have predictable, low-growth application demands, then sticking with traditional capital purchasing may be the lower-cost option. For basically every other organization, STaaS may be the better choice.

Data Center Infrastructure Delivered in an as-a-Service Model Complements a Broader Cloud Strategy

Public cloud services are part of any cloud environment, but supplementing them with infrastructure that is consumed in an as-a-Service model can mitigate a number of common challenges organizations experience with public cloud providers. STaaS deployed in customer data centers or colocation facilities can reduce egress fees, eliminate the need for data repatriation, and provide a way to leverage newer infrastructure technologies sooner. STaaS also offers more security/control, offering the ability to maintain existing security products and procedures, eliminating gaps that can occur in a transition to off-premises infrastructure. STaaS also often provides lower latency, supports regulatory adherence, and enables IT to use enterprise-class storage features that are available on an array but not in the cloud.

In a recent ESG research study, IT decision makers that identified their organization as “cloud first,” meaning their organization deploys new applications using public cloud services unless someone makes a compelling case to deploy it on-premises, were asked to provide more context around what qualified as “cloud-first” (Figure 3).⁹ Specifically, these IT

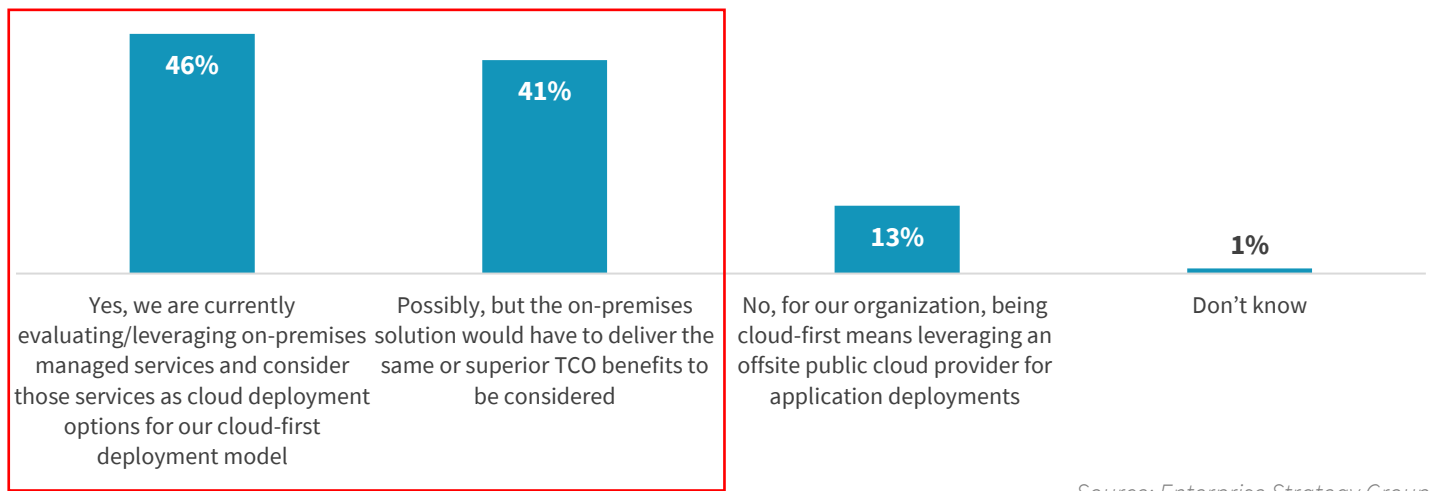
⁸ Source: ESG Master Survey Results, [2019 Data Storage Trends](#), November 2019.

⁹ Source: ESG Master Survey Results, [2021 Data Infrastructure Trends](#), August 2021.

decision makers in “cloud-first” organizations were asked whether an on-premises managed infrastructure service, such as STaaS, would meet their organization’s requirements for “cloud-first” deployments. Nearly half (46%) of respondents stated that they were evaluating/leveraging on-premises managed services and considered them as cloud deployment options for their organizations cloud-first deployment model, and an additional 41% said this type of service possibly qualify under their organization’s cloud-first deployment model, assuming it offers similar or better TCO benefits to the public cloud.

Figure 3. 87% Identify that On-premises Managed IaaS May Qualify for “Cloud-first” Deployments

You described your organization as having a cloud-first policy when it comes to new application deployment. Would an on-premises infrastructure service procured by your organization in a cloud-like manner (e.g., as a service with an OpEx consumption-based payment model) and deployed and managed by a third-party provider in your data center meet your requirements for application placement as “cloud-first”? (Percent of respondents, N=159)



Source: Enterprise Strategy Group

Even among “cloud-first” organizations, the potential benefits of STaaS solutions beyond those of the major public cloud providers has begun to resonate. The additional option to deploy STaaS in a colocation facility, particularly if that facility is cloud-adjacent (meaning it is located in close physical proximity to the data centers utilized by public cloud providers), provides additional flexibility benefits to organizations interested in simplifying operations even further or wishing to take advantage of public cloud-based services. Leveraging a cloud-adjacent colocation facility for STaaS enables organizations to grow their business and expand operations without the burden of standing up additional data center facilities. The value of these services increases significantly if deployments can span multiple geographies. Cloud adjacency also enables low-latency multi-cloud connectivity to the organizations, partners, and ecosystems that deliver the most value, without any egress fees, significantly reducing the risk of being “locked in” to a particular provider.

While most organizations’ experience with public cloud services is generally positive, data repatriation still happens—often because necessary due diligence or refactoring weren’t done prior to the public cloud migration. The challenges that lead to repatriating data—related to security, cost, performance, and availability—can be mitigated with Storage as-a-Service deployed on-premises or in a colocation facility.

Storage as-a-Service with Dell Technologies APEX Data Storage Services

Dell Technologies APEX Data Storage Services allows organizations to focus on their data and their preferred business outcomes rather than the infrastructure. Dell Technologies is not only an established leader in storage technology; it is also known for service and delivery capabilities, and it is world renowned for its just-in-time manufacturing and logistics model.

Experience such as that is invaluable when the goal is to deliver predictable, enterprise-level global technology services. This is not an offering from a new startup. Dell Technologies is an established and trustworthy IT leader.

With APEX Data Storage Services, the storage infrastructure will be deployed on-premises in the user's preferred data center location or in a Dell-managed colocation facility but will be fully owned and maintained by Dell Technologies. Storage capacity is then provisioned via a self-service portal in the Dell Technologies APEX Console. Users select the deployment location, type of data service they desire, the performance tier, capacity, and the term, and Dell Technologies will then manage the rest. Users pay monthly for a chosen base capacity and pay the same rate on a \$/TB/Hr basis for any additional capacity utilized. Capacity can also be scaled up or down based on business needs. Dell Technologies also promotes that APEX Data Storage Services can be up and running quickly in as few as 14 days.

Benefits of APEX Data Storage Services

By leveraging APEX Data Storage Services, organizations and businesses can dramatically reduce the internal operating burden of managing infrastructure. As a result, organizational resources can more effectively be allocated to focus on business outcomes rather than managing infrastructure. The result offers a wide range of business benefits, including:

- **Reduce the burden on personnel and operations** – Strong technical talent is at a premium given widespread skill shortages across multiple technical fields. Offloading infrastructure planning, maintenance, and support frees personnel, allowing talent to reallocate their time to higher value tasks. APEX Data Storage Services can also be deployed offsite at a Dell-managed colocation facility, through a partnership with Equinix, in addition to or instead of on-premises deployment. The option to leverage APEX Data Storage Services in colocation facilities further simplifies deployment and further eases the burden on in-house resources.
- **Reduce infrastructure risk** – Planning, technology transitions, troubleshooting, and support activities all create risk for IT organizations and the businesses they support. As a managed service, APEX Data Storage Services effectively eliminates the risk of under-provisioning infrastructure which can occur with a CapEx model. With APEX Data Storage Services, the base commitment capacity can also be raised (for a lower rate) at any point in the contract without extending the term, offering increased benefits as needs scale. As the technology designer, Dell Technologies has a wealth of knowledge to pull from about how their technology performs in a wide variety of application infrastructure environments. Not only is much of the risk offloaded to Dell Technologies with APEX Data Storage Services, but the associated risk should also be reduced, given the larger body of knowledge available to Dell Technologies.
- **Accelerate digital initiatives** – With APEX Data Storage Services, infrastructure is no longer a bottleneck for growth. By paying only for what you use and having the ability to provision more via a self-service portal, new projects no longer require massive capital outlays or time-consuming infrastructure deployments to get started. As a result, digital initiatives can move at the pace desired by the business, not one dictated by infrastructure availability.
- **Achieve multi-cloud connectivity** – Another benefit from the partnership with Equinix is that APEX Data Storage Services can be deployed offsite at Dell-managed colocation facilities adjacent to the major public cloud providers, such as AWS, Google Cloud, and Azure. As a result, data located on APEX Data Storage Services can be made accessible to applications located on those cloud platforms while still meeting performance, scale, and availability needs and without incurring egress fees.
- **Accelerate geographic expansion** - APEX Data Storage Services has expanded its support to geographies outside of North America. For global businesses or organizations seeking to accelerate business expansion, APEX Data Storage Services can simplify and accelerate those initiatives.

- **Simplify off-premises disaster recovery** – With the option to deploy APEX Data Storage Services offsite at colocation facilities, APEX Data Storage Services can simplify the management and maintenance of offsite disaster recovery infrastructure environments.
- **Reduce risk of data and data management activities** - Data security and regulatory compliance are top business concerns and are typically made more complex as infrastructure spans multiple locations, such as public cloud environments, that can limit visibility. Security design and implementation are core parts of APEX Data Storage Services, offering secure access control, threat management, cryptography, system auditing, and accountability. When deployed offsite, physical security is an essential tenet of Equinix colocation services, with industry-standard certifications such as ISO, SOC, and NIST.

The Bigger Truth

When you make a CapEx purchase, you and your organization assume the responsibility to ensure the infrastructure can not only deliver the capabilities necessary for your applications today, but often three, four, and even five years in the future as well. In times when data and application growth were much lower, that was an easier proposition. Today, there are likely far more valuable uses of time. This is why the market is shifting towards consumption-based approaches for infrastructure.

With an as-a-Service offering, such as APEX Data Storage Services, planning, management, and support activities get much easier or become offloaded altogether. And if your application environment scales faster or slower than expected, much of the risk falls on Dell Technologies to adapt, not on your organization.

Dell Technologies has been observing the market and watching its customers' interest evolve and grow. It understands what's going on in the landscape. The timing makes sense. Dell Technologies also has a very broad portfolio of infrastructure solutions that will become a part of its APEX portfolio and they are all market-leading offerings for data protection, servers, hyperconverged infrastructure, and more. Dell Technologies will include them all in its APEX as-a-Service portfolio—manageable through one console. That is quite a differentiator versus other storage vendors.

Dell Technologies is innovating to enable its customers to focus on maximizing the value of their data and their applications and not on maintaining and supporting the hardware. The result accelerates initiatives and increases agility to respond faster to market demands, but ultimately it offers greater freedom to focus on what matters most to the business. If you're thinking about Storage as-a-Service, it's important to remember that “buying cloud” does not necessarily mean you're buying something in a data center far away. Dell Technologies is actually taking a data-first approach versus a cloud-first approach. The cloud isn't a destination where everything goes; it's a hybrid model that should include a combination of hyperscalers and on-premises solutions. To learn more, visit DellTechnologies.com/APEX-Storage.

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