This Technology Spotlight examines how Pure Storage can assist IT organizations with hybrid cloud storage models that can be consumed as a service, reducing risk and complexity for the business and IT.

Digital Infrastructure Resiliency Drives Interest in New As-a-Service Cloud Operating Models

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Written by: Susan Middleton, Research Vice President, Flexible Consumption and Financing Strategies for IT Infrastructure; and Rob Brothers, Program Vice President, Datacenter and Support Services

Introduction

IDC's research demonstrates that enterprise organizations are prioritizing digital infrastructure resiliency as a foundational element of their IT strategy. These organizations are looking for richer levels of visibility, cross-platform control, advanced data management, and protection that spans the entire edge to core continuum, and cloud-based as-a-service (XaaS) models are a great way to achieve those insights. IDC predicts by 2024, over 75% of infrastructure in edge locations will be consumed and/or operated via an as-a-service model, as will more than half of datacenter infrastructure. Pure Storage is continuing to shift its strategy to address this new environment and bring solutions to market that match customers' evolving demands. At a high level, Pure Storage offers customers an elastic infrastructure that resides within a secure on/off-premises environment and provides insights into public and private cloud workloads. Businesses are attractive to cloud service providers because of the pay-per-use model, the rapid provisioning and scalability of capacity, and the reduced life-cycle management of infrastructure. IDC observes that the adoption of as-a-service shifts customers to a cloud operating model that can fuel digital transformation.

AT A GLANCE

KEY STATS

Recent IDC research reveals a potential surge in as-a-service offers; in fact, 73% of enterprises intend to use them by the end of 2022.

WHAT'S IMPORTANT

IT staff can now focus on driving business innovation rather than day-to-day hybrid storage administrative duties.

Situation Overview

The emerging digital infrastructure ecosystem will increasingly be built on a cloud foundation that focuses on ensuring ever-faster delivery of an innovative, frictionless infrastructure including hardware, software, resource abstraction, automation, AI/ML, and consistent ubiquitous, scalable operations across all clouds whether it resides in your datacenter, colocation facility, service provider, or edge location. As cloud adoption accelerates, organizations are grappling with the complexity of managing all these new ecosystems that span multiple platforms and locations. The increased use of AI/ML ensures IT organizations will identify and align with those critical key performance indicators (KPIs) that will impact business outcomes. Deep proactive and predictive analytics across infrastructure cost, health, compliance, and performance will make it easier to detect trends and automate responses that increase resiliency and flexibility.

As a service and as-a-service models are financial packages that enable the cloud experience. They can be located on or off premises, are hybrid in nature, and help manage complex cloud storage. These solutions allow companies to focus on business initiatives rather than day-to-day operations by transferring the risk of operating and owning the assets to the asset provider. IDC notes an increasing demand in the as-a-service segments of cloud spending. Combining shared cloud as-a-service and dedicated cloud as-a-service growth, these two markets will account for most of all cloud spending throughout the forecast period, growing from 55.7% in 2021 to 64.1% in 2025. These segments will also see the fastest growth in spending, with a five-year CAGR of 21.3%.

In October 2021, IDC surveyed 829 respondents worldwide to understand the top drivers for infrastructure investment. Figure 1 illustrates the demand for these solutions with 73% of those surveyed saying they strongly agree or agree with the statement that they will adopt a more flexible "pay as you go" infrastructure. What drives customers to these solutions has changed in recent years — previously, it was to move toward an opex way of spending, but today, it's about getting a cloud experience both off and on premises and getting access to state-of-the-art hardware, software, and services at a lower initial cost. One of the current misnomers in the industry is that cloud is not an on-premises solution — companies think of cloud as a location, when it is an operating model that can exist virtually anywhere.

FIGURE 1: *Plans to Use Flexible Pay-as-You-Go Opex Consumption Purchasing*

Q *Please rate your level of agreement with the statement: We plan to use flexible, pay-as-you-go opex consumption–driven models for the majority of our digital infrastructure and cloud purchasing by the end of 2022.*
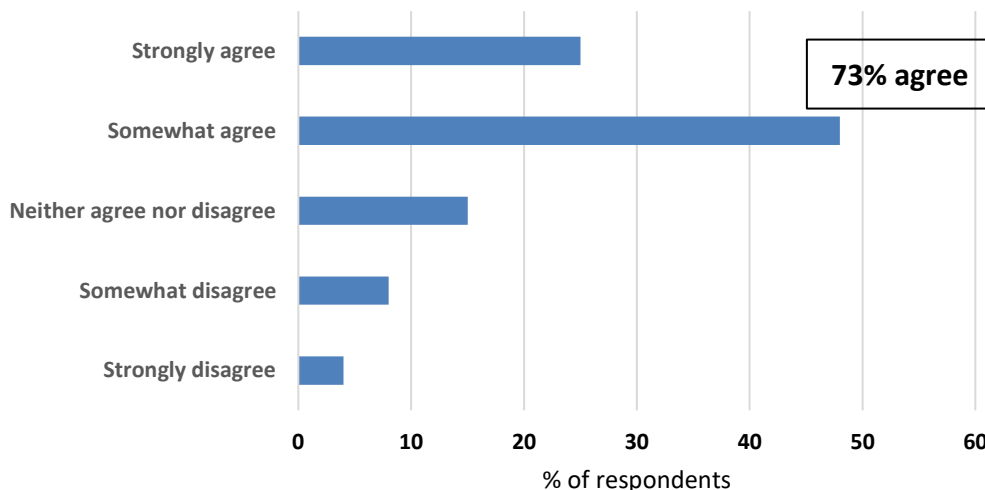
n = 829

Note: Data represents the weighted responses by region for those respondents that ranked their response as a 4 or 5 (agree/strongly agree).

Source: IDC's Future Enterprise Resiliency and Spending Survey, Wave 10, October 2021

As-a-Service Drivers and Attributes

Reducing risk within the enterprise storage environment is key — this risk is not only in the ownership of the asset but the day-to-day administration of that asset to make sure the company extracts the maximum value and experience out of that investment. Additional IDC surveys reveal other drivers and attributes that organizations consider when adopting these models.

Those drivers and attributes are:

» Working with a trusted partner that understands their environments and business goals

» Cloud functionality on premises as well as off premises

» Adopting the latest technology (and staying with it) at a predictable cost, with a lower cost to entry

» Helping reduce the complexity of managing infrastructure and enable IT to focus on driving business outcomes

» Reducing IT staff workloads on day-to-day support of infrastructure

» Providing intelligence that accelerates decision making and responsiveness

» Streamlining the time to spin up new capacity and reduce the procurement cycles

Risk and risk mitigation are an important aspect to these solutions, and we recommend that organizations ask themselves the following questions:

» Should we keep employees trained on the latest storage software and features, or do we rely on the vendor or partner to make sure that we are using all aspects of the asset to support these solutions? Should we risk using our own resources to support these solutions, or do we rely upon the vendor who knows the product the best?

» Should we continue to struggle with overprovisioning or underprovisioning for bursty or unpredictable workloads? Or rely on a vendor or partner with predictive analytics tools to help with capacity requirements?

» Is the system properly secured with the latest patches? Do we leave that to our resources (team), or do we trust the vendor to make sure we are compliant and secure?

More often, customers are pushing that risk burden back to the vendor. Figure 2 shows the advantages these offers bring to the enterprise and IT organization.

FIGURE 2: *Why Use Consumption-Based Models*

Q *What is the main reason(s) your organization decided to use or is contemplating using consumption-based infrastructure?*
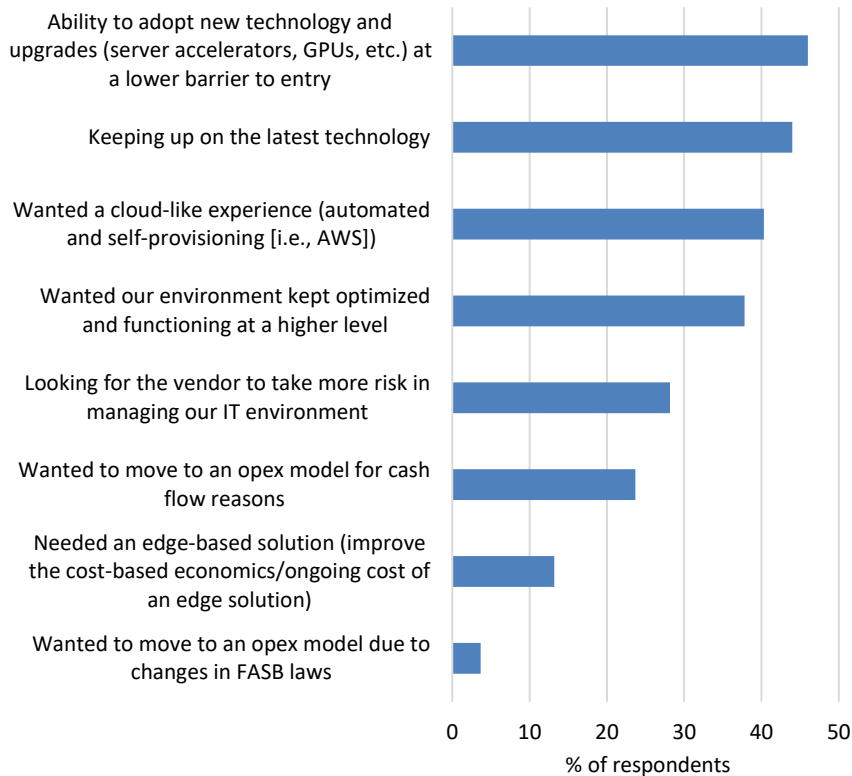
New tech at a lower cost to entry dominates the rationale for these solutions, followed by a cloud-like experience. Think about solutions that need to be refreshed more often.

Source: IDC's Consumption-Based Infrastructure Market Trends Survey, September 2020

These as-a-service models work for a myriad of different solutions and workloads. When asked what technology solutions they would use in as-a-service models, 47% of the respondents selected primary storage (with secondary storage solutions at 41%). The top workloads are data analytics (especially at the edge) and data management. To increase growth and adoption, it will be important to focus on how to manage these multiple cloud solutions to get the most value and reliability.

Global conditions are driving a huge acceleration in digital transformation. Whatever form your digital road map is taking, Evergreen//One can provide a robust solution for your data with the experience and economics of the public cloud and the security and resilience of an on-premises solution.

Beyond the workloads and adoption advantages, most organizations that adopt as-a-service models also recognize the business benefits. IDC surveys demonstrate that the top business-related benefits of as-a-service models influencing IT decision makers are:

» Improved system optimization and application performance

» Better IT agility that enables faster development and deployment of workloads at scale

» Ability to scale to meet business demand (The COVID-19 pandemic taught us that organizations have to be able to pivot quickly. The better optimized their environment, the faster they could react.)

Pure Storage Abilities

Evergreen//One is a flexible storage subscription service, unifying and accelerating data management across on premises and the public cloud. Customers can consume foundational block, file, and object storage services underpinned by proprietary Pure technology. There is no hardware to purchase or large commitment of storage capacity required up front. Customers can reserve as little as 50TiB of storage capacity at a discounted rate, with access to unlimited on-demand as a service thereafter.

The offer can be extended beyond on-premises to the public cloud with Cloud Block Store, where customers can consume storage directly from the public cloud within the Azure and AWS Marketplaces. So users can have one subscription across on premises, colocation/managed services, and/or the public cloud, enabling an uncomplicated unified experience across all deployments that matter to customers. The offer has the following benefits:

» Subscribing to a service reduces operational risk. Pure is providing a service underpinned by SLAs and is taking on the responsibility to manage and evolve the deployed solution. This not only mitigates risk but it frees up internal resources to work on more strategic projects.

» Evergreen//One is flexible, is agile, and helps customers to alleviate the risk associated with overprovisioning and underprovisioning.

» With its Evergreen extensible architecture, Evergreen//One helps eliminate disruptive upgrades and maintenance and continuously keeps customer environments current to meet their SLAs.

» The Evergreen//One catalog highlights service tiers designed to align with enterprise workload requirements and simplify subscription management by allowing customers to select the specific tiers required for their applications rather than simply choosing block, file, or object services. This model provides a level of flexibility similar to hyperscaler models.

One of the goals for Evergreen//One is to provide a cloud experience similar to what hyperscalers provide. But a major advantage that Pure has over the cloud providers is Pure1. Hyperscalers don't have the equivalent of Pure1. They can monitor, but they can't predict. And they don't have the proactive capability that Pure1 brings. Pure1 powered by Meta is an AI-driven platform for predictive service management. From one place, customers can monitor and manage all their data service platforms (e.g., on-premises [FlashArray] or in hybrid cloud environments [Cloud Block Store]).

Conclusion

The success of as-a-service models is derived by the depth of services vendors provide to create a cloud-like experience. Within these solutions, the vendor is responsible for maintaining and supporting the assets. This includes life-cycle services like assessing, planning, designing, implementing, supporting, managing, and proper disposition and replacement of the assets. Within those life-cycle services, the vendor must create an experience for the customer that matches or, better yet, is superior to the public cloud. Reducing IT staff workload on routine tasks (such as patching, monitoring, and troubleshooting) is a key benefit for IT, and this enables the IT staff to focus on creating business value and improved outcomes.

As organizations continue to look for ways to improve productivity, as-a-service models represent a way for IT teams to support new workloads and business requirements with confidence. This enables business resiliency and agility efforts all within budget requirements. These are the reasons that IDC predicts that by 2025, 60% of enterprises will fund LOB and IT projects through opex budgets, matching how vendors provide their services with a focus on outcomes that are determined by SLAs and KPIs. The adoption of as-a-service models like Evergreen//One enables organizations to focus on outcomes instead of infrastructure.

About the Analysts

Susan Middleton, Research Vice President, Flexible Consumption and Financing Strategies for IT Infrastructure

Susan Middleton leads IDC's worldwide research on IT equipment, software, and services financing markets. As Research VP for IDC's Flexible As-a-service and Financing Strategies for IT Infrastructure research, her analysis provides insight from both a supply-side and a buyers' point of view. Ms. Middleton's core research coverage includes the evolution of procurement models from purchasing, leasing, and financing to the new as-a-service models, also known as flexible as-a-service. Based on her analysis and expertise on procurement strategies and IT equipment life cycles, Ms. Middleton's research helps vendors and buyers understand the top drivers of the new flexible as-a-service models and the impact of these new buying behaviors on long-term IT equipment values and forecasts.

Rob Brothers, Program Vice President, Datacenter and Support Services

Rob Brothers is a Program Vice President for IDC's Datacenter and Support Services program, as well as a regular contributor to the Infrastructure Services and Financial Strategies Programs. He focuses on worldwide support and deployment services for hardware and software and provides expert insight and intelligence on how enterprises should be addressing key areas for datacenter transformation and edge deployment and management strategies. IT hardware services covered include IoT devices, converged infrastructures, storage, servers, client devices, networking equipment, and peripherals.

MESSAGE FROM THE SPONSOR

About Pure

Pure is redefining the storage experience and empowering innovators by simplifying how people consume and interact with data. Pure remains focused on customers, delivering products that drive success along with procurement models that meet the needs of businesses. Across a customer base that exceeds 10,000 globally, Pure maintains a Net Promoter Score of 85 – in the top 1% of all B2B companies.

Please visit *https://www.purestorage.com/products/staas/pure-as-a-service* to find out how Evergreen//One can provide the operational and financial flexibility required to mitigate business risk and deliver enterprise-grade storage services via a single subscription.

IDC Custom Solutions

The content in this paper was adapted from existing IDC research published on www.idc.com.