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Pay-per-use Private Clouds Strategic for Data Centers

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Abstract: As hybrid cloud environments become the de facto standard for IT, businesses focus on modernizing their on-premises infrastructure to make it more "cloud-like" in experience. To accomplish this goal, IT vendors are increasingly offering on-premises infrastructure as-a-service that businesses can procure on a per-usage basis. And in some cases, the vendor takes on some of the maintenance tasks. For a majority of uses, these solutions provide benefits beyond traditional infrastructure.

Key Highlights

- 84% agreed: "Data center modernization is a top IT priority."[1]

- 72% described on-premises pay-per-use (or as-a-service) infrastructure solutions as providing tangible or transformational benefits beyond that of traditional systems.

- The most commonly realized benefit of on-premises pay-per-use (or as-a-service) infrastructure solutions was the ability to improve IT personnel experience and/or retention (50%).
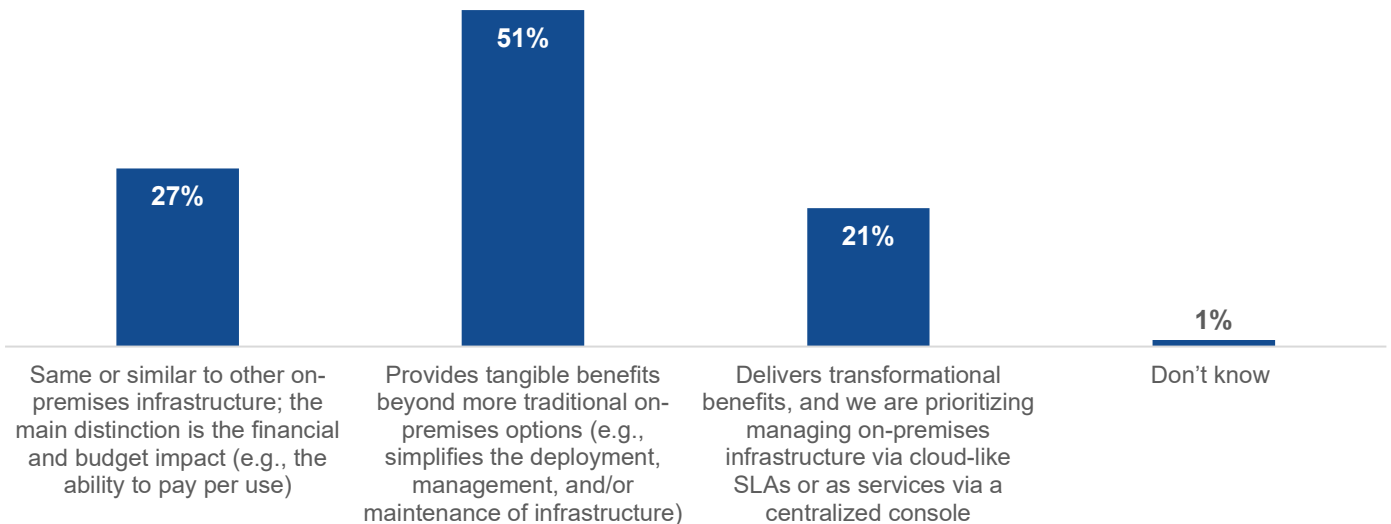
The Need to Simplify Data Center Operations Drives Organizations to Shift Away from Traditional Infrastructure

In a recent research study, the Enterprise Strategy Group surveyed 380 organizations in North America on their plans regarding their IT infrastructure. As IT organizations race to accelerate operations and scale infrastructure to support increased demands from the business, the cost and complexity of legacy infrastructure hinders their progress. While public cloud adoption can reduce the administrative burden, multiple factors—such as cloud cost concerns, a need for increased control, or data locality and sovereignty requirements—fuel a need for data center operations.

The need to accelerate operations while keeping certain workloads and data sets on premises has increased the prioritization of data center modernization. In fact, 84% of organizations agreed that data center modernization is a top IT priority. Modernization can take many forms, but success in modernization requires infrastructure that does more than just support digital initiatives. It must be able to accelerate time to value as well.

To this end, IT vendors known for data center infrastructure, such as Dell Technologies, HPE, Hitachi Vantara, NetApp, and Pure Storage, have begun offering infrastructure either as a service or available to be consumed via a pay-per-usage model. These solutions vary by vendor. For the purposes of this study, the solutions were defined as those in which vendors provide infrastructure, often defined by a specified service-level agreement (SLA) and with excess growth capacity or "headroom" that exceeds the organization's immediate needs. All or part of the cost of that infrastructure is paid on a regular (often monthly) basis based on usage. But the agreement is not a lease.

Again, these solutions can vary based on available options and capabilities, but in general they are on-premises infrastructure solutions that:

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[1] Source: Enterprise Strategy Group Research Report, *Private AI, Virtualization, and Cloud: Transforming the Future of Infrastructure Modernization*, July 2025. All data in this brief has been taken from this research report.

- Are acquired without a traditional large upfront capital expenditure. Future infrastructure scale/capacity can be procured on a per-usage basis immediately as the vendor deploys a level of extra headroom on premises that the user does not pay for until it is accessed. With some solutions, payments are recognized as capital expenditures. Others are recognized as operational expenditures, and some solutions offer the option to choose between Capex or Opex.

- Can be acquired as a preconfigured infrastructure solution with predefined SLA or tiers of SLAs. Some solutions can also be customized to meet the SLAs of specific use cases.

- Can be available as a service, where the vendor performs much of the on-premises infrastructure maintenance tasks. Or it can be purely a financial option, where the users take responsibility for management and maintenance.

- Can be available with integrated platform and automation features that provide a more cloud-like operational experience.

For IT decision-makers, it is important to note that different solutions will provide different capabilities, which increases the importance of evaluating multiple vendors. Among users of these solutions, 72% described these solutions as providing tangible or transformational benefits beyond that of traditional systems (see Figure 1).

Figure 1. Public Cloud Technology Leads List of Preferred Options for Data Center Clouds

You indicated your organization uses on-premises infrastructure solutions via a consumption-based or as-a-service model. Which of the following best describes your perception of managing these solutions? (Percent of respondents, N=110)

51%	Provides tangible benefits beyond more traditional on-premises options (e.g., simplifies the deployment, management, and/or maintenance of infrastructure)
27%	Same or similar to other on-premises infrastructure; the main distinction is the financial and budget impact (e.g., the ability to pay per use)
21%	Delivers transformational benefits, and we are prioritizing managing on-premises infrastructure via cloud-like SLAs or as services via a centralized console
1%	Don't know

Source: Enterprise Strategy Group, now part of Omdia

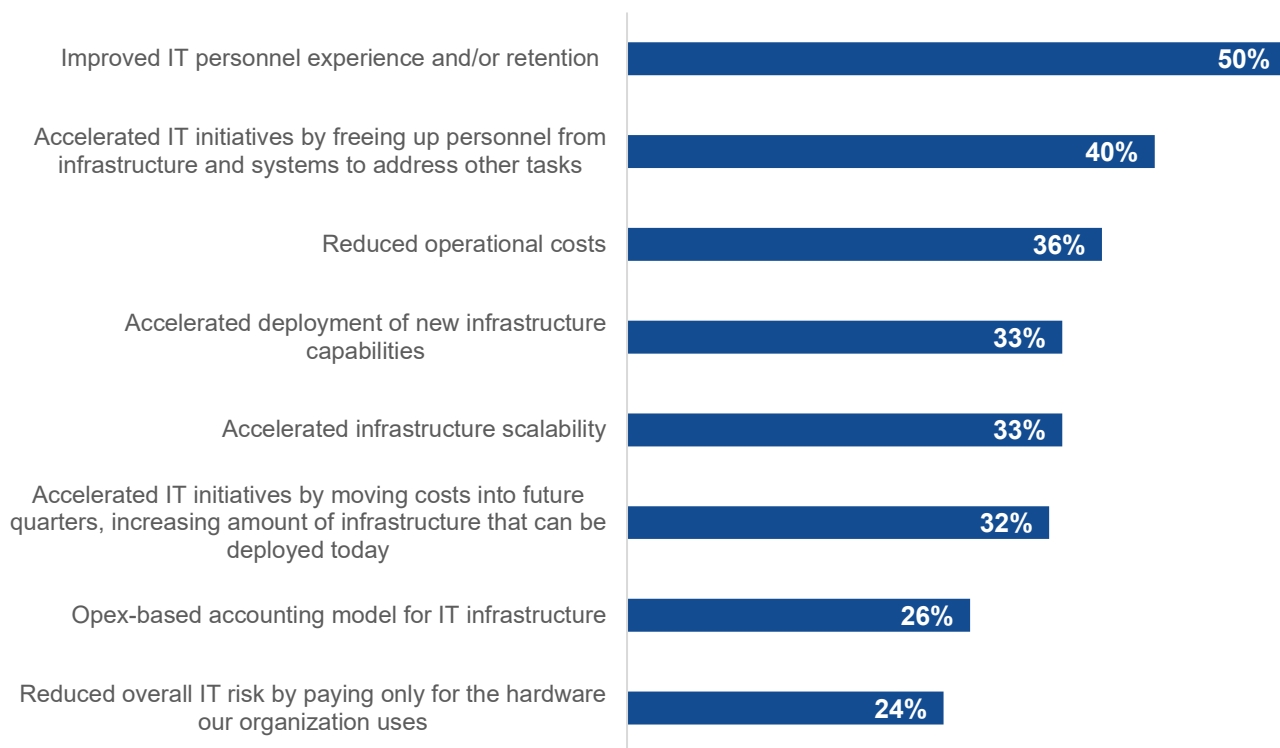## Pay Per Use and As a Service Accelerate Data Center Operations

When it comes to adoption, 29% of organizations identified themselves as using on-premises as-a-service or pay-per-use infrastructure solutions. Another 21% of organizations identified as being in a pilot or proof-of-concept phase, and 26% identified their organizations as having plans to deploy in the next 24 months.

When users were asked to identify the most significant benefits their organization realized as a result of leveraging these infrastructure solutions, the most common response was the ability to improve IT personnel experience and/or retention (cited by 50%), followed by the ability to accelerate IT initiatives by reducing the burden on internal personnel (40%), and reduced overall operational costs (36%). Based on the responses, the benefits to operational efficiency and simplicity surpassed the financial-only benefits—such as accelerating IT initiatives by freeing up budgets with the movement of the cost of growth into future quarters (32%) and the ability to apply an Opex-based accounting model for IT infrastructure.

This data suggests that solutions that provide the ability to leverage on-premises infrastructure via an as-a-service-like experience (where the vendor assumes more of the maintenance tasks), those benefits will be more pronounced than those from solutions where the offering is simply a pay-per-use financial agreement, and management and maintenance is the same as traditional infrastructure.

Figure 2. On-premises As-a-service Infrastructure Simplifies and Accelerates IT Ops

You indicated your organization uses on-premises infrastructure solutions via a consumption-based or as-a-service model. What are the most significant benefits, if any, your organization has experienced or expects to experience by leveraging a consumption-based model for data center storage or HCI? (Percent of respondents, N=110, three responses accepted)

Improved IT personnel experience and/or retention	50%
Accelerated IT initiatives by freeing up personnel from infrastructure and systems to address other tasks	40%
Reduced operational costs	36%
Accelerated deployment of new infrastructure capabilities	33%
Accelerated infrastructure scalability	33%
Accelerated IT initiatives by moving costs into future quarters, increasing amount of infrastructure that can be deployed today	32%
Opex-based accounting model for IT infrastructure	26%
Reduced overall IT risk by paying only for the hardware our organization uses	24%

Source: Enterprise Strategy Group, now part of Omdia

Analyst Take

IT infrastructure is a means to an end. When business is defined by technology, accelerating IT operations translates to accelerated time to value for business initiatives. The rise of AI will make this reality even more pronounced.

Given the ever-increasing demand for IT infrastructure and services and the increased pressure on internal personnel, traditional management and maintenance of hardware is quickly becoming unsustainable. According to this research, only 20% of organizations wish to procure, manage, and maintain their on-premises infrastructure the traditional way; the remaining 80% desire something different.

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The public cloud is a powerful tool to simplify the operational burden on internal personnel, but it is not an answer for everything. Increased cost concerns, along with data locality and sovereignty requirements, necessitate on-premises infrastructure. For IT decision-makers, these findings reveal that organizations are reaping significant rewards thanks to deploying on-premises infrastructure as a service—rewards that surpass those of traditional infrastructure deployments. When evaluating on-premises modernization options, expand the consideration pool to these as-a-service and pay-per-use options to see how they can accelerate your own operations and reduce the burden on your internal teams, freeing them up for more worthwhile activities.