2021 REPORT

Accelerating Applications in a Hybrid Cloud

Insights from a survey of IT professionals

PURESTORAGE®

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Introduction: A Shifting Mindset Toward Hybrid

A cloud-centric or cloud-first mindset was for years the predominant approach to application modernization. Many companies started from the assumption that any new application initiative should, by default, be undertaken as a public cloud project. Unless there was a compelling reason to keep an application on premises, moving to the cloud was seen as the key to accelerating application delivery and availability.

In recent years, however, that mindset has shifted. More than half of IT decision makers say they have moved a workload back from the public cloud to run on premises again, for a wide variety of reasons.[1] There seems to be a growing realization that not all applications belong in the public cloud, and that a hybrid-first approach—one that considers the merits of accelerating each application either in the cloud or on premises—makes more sense.

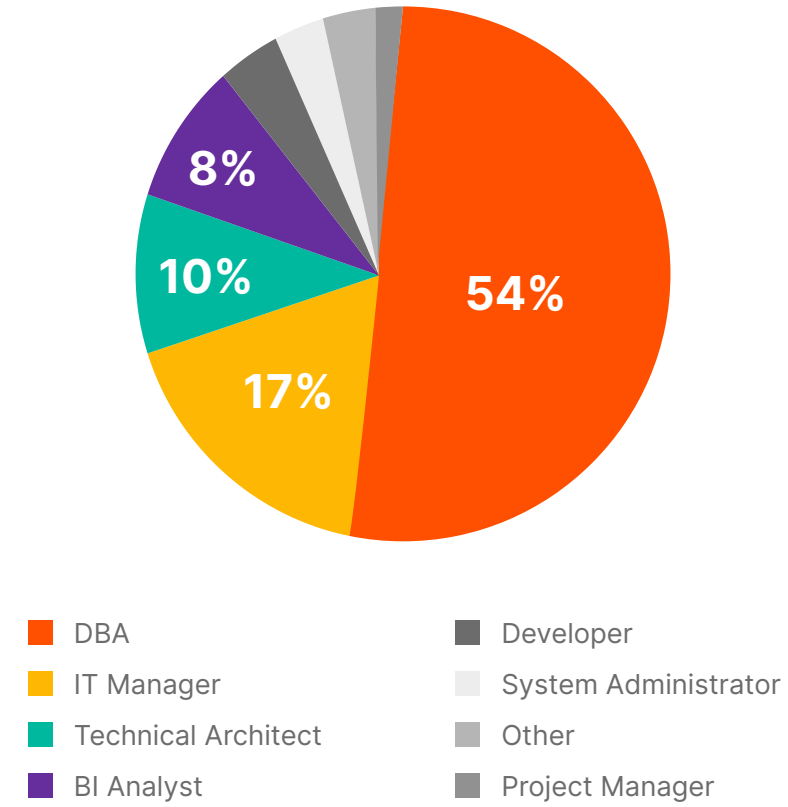
Part of this shift of mindset toward hybrid-cloud solutions has to do with recognizing that not all the benefits of the cloud require a *public* cloud. Many of the technologies that allow the public cloud to accelerate applications can also be adopted on premises in a private cloud, sometimes with even better results. And when your on-premises technologies are well aligned with your public-cloud choices, then your hybrid-cloud strategy can accelerate your applications while taking advantage of the best of both worlds.

We wanted to better understand the state of the hybrid cloud and the mindset of the people managing it today. We engaged Prowess Consulting to conduct a global survey of 271 IT professionals. This report presents what we learned.[2]

Meet the Respondents

The survey targeted senior executives, managers, and technical leaders—those who are fully or partially responsible for sourcing, managing, and using data solutions for their organization. Most of the survey respondents were from North America (78%), with the rest split between the Europe, Middle East, and Africa (EMEA) and Asia Pacific (APAC) regions (11% and 10%, respectively). Both large and small organizations are well represented, with 31% working in companies of more than 5,000 employees and 28% in companies of less than 50 employees. Those surveyed represent a broad cross-section of industries, from technology to retail to financial services. And their job roles range widely, including IT managers, technical architects, and a large share of database administrators (DBAs).

Primary Roles of Survey Respondents



The Hybrid Cloud Is Now Evenly Split Between Public Cloud and On-Premises

If you are running half of your total workloads in the public cloud, that puts you in line with the IT professionals surveyed. While the answers ranged from just 1% to 100%, on average workloads are now split almost evenly between cloud and on premises. What we have today, then, is pretty close to a 50/50 hybrid cloud.

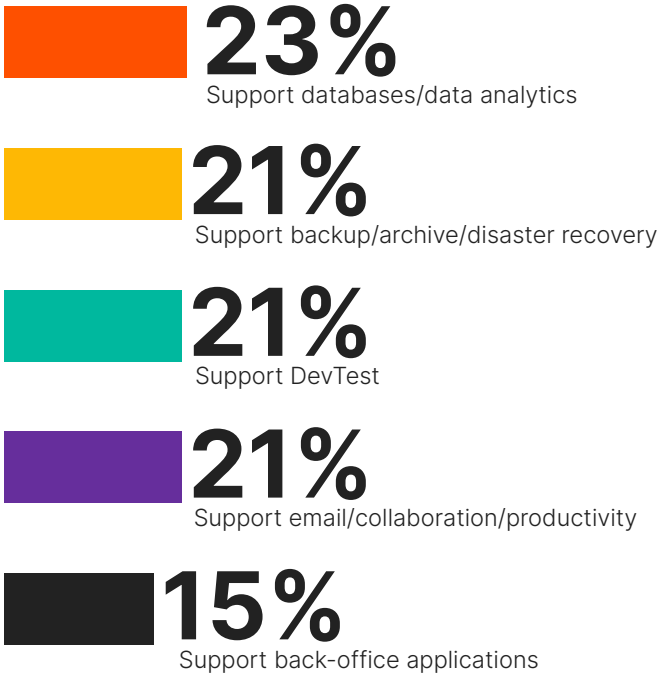
48%

of total workloads are running in the public cloud

All Kinds of Applications Are Moving to the Cloud

According to our survey participants, databases and data analytics are supported in the public cloud most widely, while back-office applications are the least likely to be running in the cloud. What's striking about the responses, however, is the degree to which all kinds of applications are supported in the cloud at very nearly the same rate. This tells us there is no consensus that certain types of applications are inherently better suited for the cloud. Each organization is making different choices based on its own specific circumstances.

Percent of Organizations Supporting Different Applications in the Cloud



Organizations Use the Cloud for Multiple Application Types

How many different kinds of applications does your organization support in the public cloud? The surveyed IT professionals chose 3.25 application categories on average. So if you're not choosing to focus on just one kind of application, but instead you're moving multiple application types to the cloud simultaneously, you're not alone.

Which application types does your organization support in the cloud?

Check all that apply.

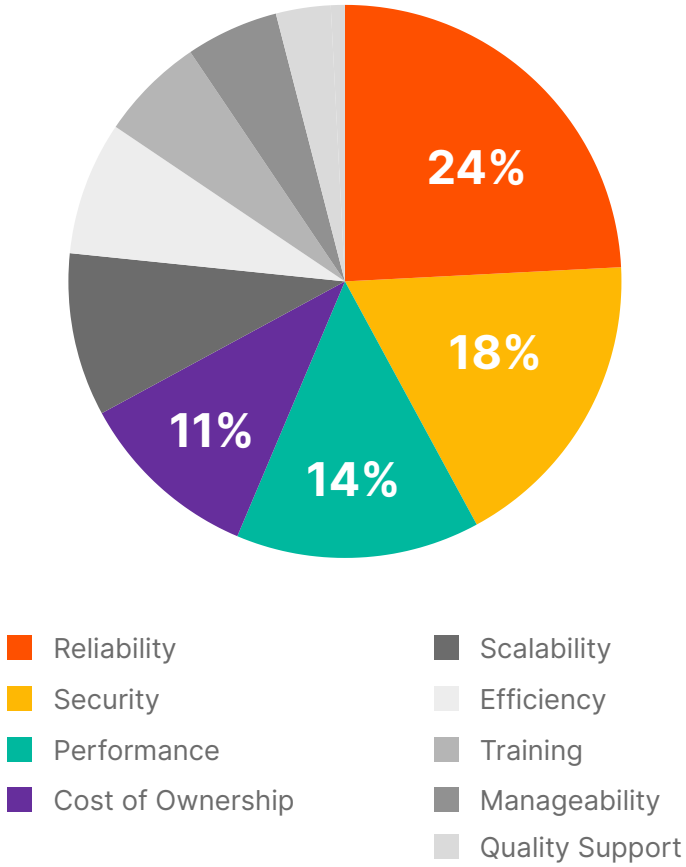
- ☐ Databases/data analytics
- ☐ DevTest
- ☐ Backup/archive/disaster recovery
- ☐ Email/collaboration/productivity
- ☐ Back-office applications

On average 3.25 workloads were selected

Reliability Is Key for Any Cloud Storage Solution

The single most important criterion when evaluating public cloud storage solutions, according to those surveyed, is reliability. Reliability is especially important for tier-1 applications—those core applications that are vital to running the organization—including database-management systems (DBMSs) such as Microsoft SQL Server. In a hybrid-cloud environment, you need both reliable public-cloud services and reliable on-premises storage solutions.

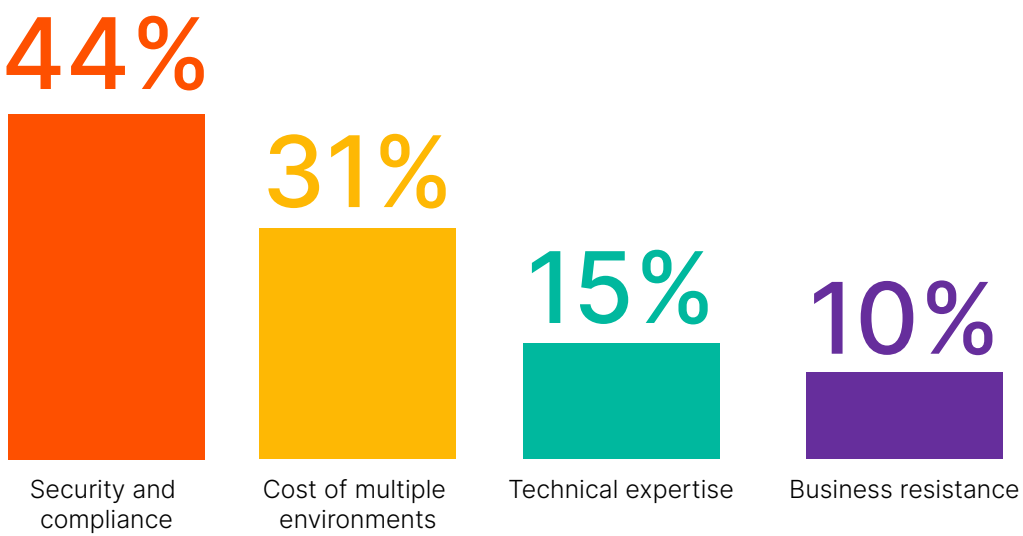
Most Important Factor when Choosing a Cloud Storage Solution



Security and Compliance of Applications Are the Biggest Challenges

It's likely that the security and compliance of your applications are at the top of your list of challenges, as they were for those surveyed. Security is a moving target that requires constant vigilance, and compliance regulations vary dramatically by industry, by geographic location, and by company. There is no single solution for everyone's security and compliance challenges, so you need solutions with the flexibility to adapt to your particular situation.

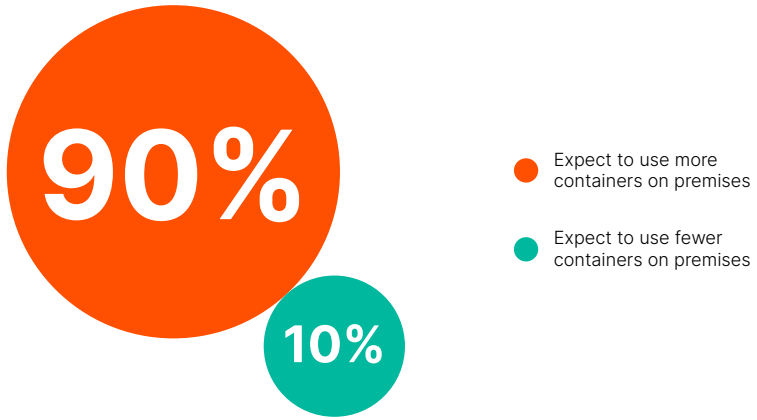
Most Challenging Aspect of a Hybrid Environment



Containers Will Be in Wide Use in Data Centers Soon

What kind of changes do you expect to see in your data center in the next year or two? Opinions are split about whether to expect more virtual machines (VMs) or fewer, but there's plenty of agreement about two things: there will be fewer bare-metal servers and more containers in private clouds. Containerized architectures are likely seen as a more cloud-friendly way to organize on-premises computing, and as a way to enable mobility for workloads across the divide in a hybrid environment. You should be getting ready for more containers in your hybrid environment, if you're not already.

Almost Everyone Expects More Containers in the Next Two Years



Expect Continued Migration to the Public Cloud

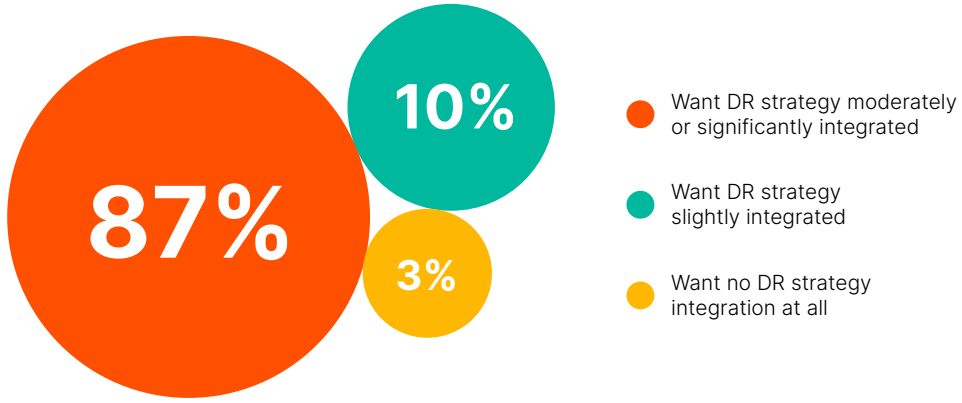
Your migration of applications to the public cloud has probably not ended. Most respondents said that they expect the percentage of cloud-based workloads at their organizations to grow over the next 18 months, and almost no one expects it to decline. The migration of workloads to the public cloud has not leveled off, and an increase of 20% over the next year and a half seems likely.[3] You might want to plan for a hybrid environment that is more than half public cloud. Applications that run in containers are good candidates for migrating to the cloud.

Most Expect Continued Migration of Applications to the Public Cloud

Disaster Recovery Should Be Integrated with a Hybrid-Cloud Strategy

Survey respondents almost unanimously said that they believe that strategies for disaster recovery (DR) and for hybrid cloud should be integrated. Most want these strategies integrated moderately or significantly. It's only logical in a hybrid environment to look for ways to use replication and redundancy between the cloud and on-premises systems to guard against catastrophic losses of data and applications—especially tier-1 applications—in a disaster scenario. You would be wise to have a disaster-recovery plan in place that takes advantage of your hybrid cloud.

It's Nearly Unanimous: Integrate Disaster Recovery with Hybrid Strategy



Achieve True Hybrid-Cloud Agility

Workloads are continuing to migrate to the cloud. But in a hybrid world, applications need to be mobile, able to move easily to and from the cloud and the edge. The rise in the use of containers will help accelerate this application mobility. Pure Storage® can help.

You demand reliability. Pure's reliability is proven by our Net Promoter Score (NPS) ranking year after year in the top one percent for business-to-business (B2B).[4]

You're moving to containers. The Portworx® platform by Pure provides a fully integrated data-services platform for applications running on Kubernetes containers.

You need disaster recovery. Pure Cloud Block Store™ block storage, part of the FlashArray™ product family, addresses your requirements for availability, agility, and automation.

Break through with always-on, always-fast, always easy-to-manage data-management solutions for all your workloads. Drive productivity and operational efficiencies—and eliminate under-performing workloads, costly downtime, slow response times, and complexity.

Accelerate your data.

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[1] In a study of IT organizations, 55% of IT decision makers (ITDMs) identified that they had moved a workload back from the public cloud to run on premises. Source: ESG. "Data Storage Trends in an Increasingly Hybrid Cloud World." 2020. https://research.esg-global.com/reportaction/DataStorageTrendsMar2020/Marketing.

[2] Note that some percentages might not add up to 100% due to rounding.

[3] Those expecting an increase in cloud-based workloads were divided between 37% expecting a small increase and 34% expecting a large increase of more than 20%.

[4] For the fifth year in a row, Pure Storage scored a Net Promoter Score (NPS) in the top 1% of industry B2B scores. Pure Storage. "Demystifying Net Promoter Scores". March 2, 2020. https://blog.purestorage.com/products/demystifying-net-promoter-scores/.