WHITE PAPER

# The Paths to a Successful Cloud Migration—And What To Do Once You're There

The Best One for You Depends on
**Capabilities, Scope, and Strategy.**

## Data Migration to the Public Cloud is Here to Stay.

### Consider the Following:

- 29% of companies surveyed migrate data continually, and 25% migrate daily.

- 55% of companies are using cloud storage services and slightly more (59%) are trimming their on-premises storage budgets to shift to public cloud spending.

- 61% of companies are already using the cloud for data protection.

**One of the most important decisions an organization can make** is if/when/how it migrates infrastructure and applications to the cloud. How and in what configuration depends on multiple factors, the greatest being the organization's long-term vision for growth.

There is not a one-size-fits-all solution, but total scalability and flexibility are critical assets for any company aiming to remain competitive, as are having the right security and service levels. Combined, these features empower organizations to drive collaboration and innovation, enable access to new applications and analytics, while increasing capacity to take on increased workloads.

In this white paper, explore your migration options, what you can do once your organization is on the cloud, the roles within your organization that see the most value from each option—and learn how Pure Storage solutions support your needs.

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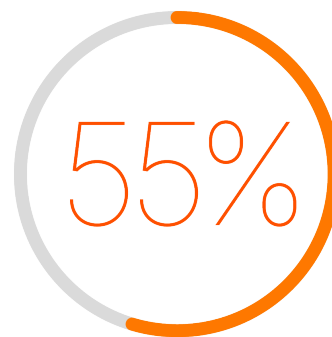
## 55% of companies are using **cloud storage services.**

## 61% of companies are already using the cloud for **data protection.**

## Consider a move to the cloud—the why and how

Cloud means agility, elasticity, and consumption-based. Through these characteristics, organizations can flexibly access, manipulate, and analyze their data in ways never deemed feasible. Cloud storage and combined services make this possible, through either cloud infrastructures on-premises or public cloud like offerings like Amazon Web Services (AWS). In fact, AWS now has more than 200 services available—making it a cloud of choice for many consumers.

An Accenture survey of more than 200 C-Suite leaders of large organizations found that nearly all, or 90%, have adopted the cloud in some form and by 2025, as many as 95% of enterprise workloads will be on the cloud.

Organizations often migrate to the public cloud to get "out" the datacenter business—to focus on running and building the applications that provide direct value to the business, not the hardware infrastructure that enables them.

The convenience of accessing the cloud is also notable given the tools and services needed by employees can be spun up and scaled as needed. Applications can react to the users instead of being limited to available infrastructure.

Just as the cloud gives companies the ability to scale up its workforce, it also creates opportunities to scale up its business. By having greater resources, productivity will increase which gives companies the ability to take on additional work, to innovate and experiment, and to achieve greater performance.

Some considerations when looking at the cloud include:

- **Your organization is on-premises** now and wants to go to the public cloud
- **You want to use both on-premises and the cloud** for certain reasons—and need the flexibility and mobility to choose between or even move within the two.
- **You want to use the cloud for different applications** or isolated use cases, such as DevTest or disaster recovery (DR).
- **There are two distinct migration approaches available** to companies of all sizes. They are:
- **Rehosting:** When a company migrates all applications to the cloud without disrupting current workflows and without future use of on-premises infrastructure.
- **Replatforming:** A hybrid model in which a company utilizes both on-premises and cloud storage for flexibility and mobility, allowing it to tailor certain services and tools necessary for its business.

### Rehosting

Rehosting is often described as a forklift approach to cloud migration. That is, it directly "lifts" an organization's on-premises applications and data and moves it to the cloud without any modifications to the code. This approach is often favored by large organizations that want to migrate with speed and minimal or no disturbance to its existing workflow.

Indeed, by the end of 2021, more than half of all global enterprises already using the cloud will adopt an "all-in" cloud strategy and will move everything to the cloud.
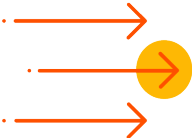
**Benefit of rehosting**

The benefits of rehosting are many. They include:

**Cost efficiency.** Because the process is fast and simple, it does not require additional development or management.

**Speed.** This is important in preventing workflow disruptions and when organizations plan multiple migrations over a short period of time.

**No application changes.** Most applications migrate without any significant code changes, which also eliminates future development costs.

**Architecture agnostic.** No major changes to infrastructure are needed, which eliminates costly development and testing as well.

**Easier compliance and security management.** Because applications are not changing, all compliance and security properties remain unchanged.

**The ability to leverage automation.** Tools such as AWS Application Discovery Service and AWS Server Migration Service are available in the rehosting process.

**Solves urgent pain points.** Because it is quick and direct, rehosting is optimum in an emergency, such as a sudden evacuation or disaster that will impact the on-premises infrastructure.

Chief Information Officers (CIOs) and Chief Financial Officers (CFOs) tend to see the greatest value from rehosting. Because it does not require rebuilding a new infrastructure, there are limited buildout and testing costs following the migration. Employee training is also limited because applications remain identical. Finally, because migration is quick and seamless, downtime is less likely.

## Replatforming

Replatforming is designed for organizations that want a hybrid solution—i.e., the ability to access certain applications or data both on the cloud and on premises. In this case, having the flexibility and mobility between each is important. To date, 82% of companies have a hybrid cloud strategy.

The reason for this approach is often cost. Organizations have made a significant investment in on-premises infrastructure, so replacing it wholesale is often not fiscally responsible. However, they also find they need to find ways to respond, adapt, and scale-up according to industry trends to remain competitive while also maintaining a high level of data security.

A hybrid solution integrates compute, storage, networking, and virtualization resources and enables workflow collaboration and access across public and private clouds. This allows organizations to customize their resource management and to create solutions that are most critical to their business needs.

Replatforming is a hybrid solution that offers companies the ability to access certain applications or data both on the cloud and on premises.
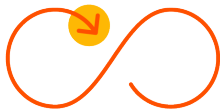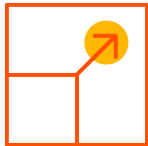
## Benefit of replatforming

The benefits of replatforming include:

**Flexibility.** Replatforming does not require an exact match between the new cloud server and the previous on-premises environment. That gives users the ability to scale up as desired, allowing the cloud environment to grow accordingly.

**Cloud scale and compute.** Besides scalability and flexibility, the hybrid model gives organizations the ability to pick and choose which features it considers essential, such as auto-scaling, managed storage, infrastructure as code, and data processing services, and which ones are peripheral from both the on-premises and cloud environments.

**Creates a test environment for rehosting.** Organizations that do not have the budget to choose rehosting, or are happy with their existing infrastructure, can utilize re-platforming to methodically prepare their workforce to work on the cloud and platform-as-a-service database enablement. This will be put to good use once it comes time for the organization to migrate more of its infrastructure to the cloud.

**Maintaining legacy applications.** Some legacy applications will not migrate to the cloud. Replatforming therefore allows users to maintain access to them via on-premises servers.

Application architects are among those who are most likely to see the benefit of this hybrid solution. Typically, they want to avoid the complexities of migrations and are looking for an option that is least disruptive. They also want the ability to tailor applications while maintaining an infrastructure they can rely on for the future.

Storage admins are also naturally concerned about cloud migrations and can benefit from the flexibility of a cloud or hybrid infrastructure approach.

# Once on the cloud, open opportunities for DevTest and Disaster Recovery

Once the data migration is complete, the cloud creates opportunities for organizations that were previously impossible—namely, developmental testing (DevTest) and disaster recovery (DR).

## What is DevTest?

Development testing, or DevTest, in software development is the integration of both the development and testing phases so that the codes of both are automatically tested. This way, problems can be addressed immediately. One of the main benefits is saving time, since 12% of a developer's time is spent on testing, which can add up to 250 hours in a typical year.

**Among the benefits of DevTests are:**

- **Higher code quality** due to continuous testing of new codes.
- **Shortened time to market** for new features or bug fixes.
- **Greater control** over the testing process, from creation and planning to execution and resolution, and product quality.
- **Increased productivity** using real-time results for greater analysis.

## What is Disaster Recovery?

Disaster recovery (DR) is an organization's process that prepares its IT infrastructure to recover from different natural or manmade disasters, such as cyberattacks, equipment failure, flooding, and more. The purpose of DR plans is to have agreed-upon procedures and processes in place that will ensure business continuity should a disaster affect, or threaten, the infrastructure.

Among the elements of a sound disaster recovery plan are testing and the Recovery Time Objective (RTO). RTO helps inform the amount of downtime the organization can handle in a disaster, and the amount of data it can lose. Repeated testing of security and data protection procedures is necessary in order to ensure that the company can successfully overcome a disaster or any kind of security breach.

The importance of disaster recovery cannot be overstated. Breaches cost organizations almost $4 million on average and ransomware can cause more than 16 days of downtime. For good reasons, operational continuity is the third-highest trend impacting infrastructure operations in 2021.

# Enhance your migration, DevTest, and DR processes with Pure Storage

Pure Storage gives organizations the power to build a hybrid cloud solution with Amazon Web Services (AWS) to allow effortless access to private and public cloud data and data mobility. Pure Storage solutions offer high reliability, efficiency, and performance by running existing enterprise applications with industrial-strength block storage running natively on the cloud.

In a hybrid infrastructure, Pure Storage solutions enable mobility and protection across both environments. Users can connect to storage and access applications within the cloud just as they would in a traditional on-premises environment.

Pure Storage solutions integrate for scalable storage, disaster recovery, data protection, data migration, and automated capacity management.

## Pure as-a-Service™ and Pure Storage Cloud Block Store™

Pure as-a-Service is a licensing model that includes Pure Cloud Block Store on AWS, which helps your organization with whichever path you choose for the cloud.

Pure as-a-Service gives organizations the ability to operate a hybrid cloud for both on-premises and public cloud data. The pay-as-you-go model means that you can access more storage whenever needed, from an emergency to an immediate business workload.

## Pure Cloud Block Store provides a consistent experience across your diverse ecosystem

Pure Cloud Block Store unites different ecosystems across both your private and public cloud and helps you implement a modern disaster recovery strategy with data protection.

Through Pure, organizations have access to data compression, thin provisioning and deduplication which helps use less cloud storage infrastructure. The continuous uptime of Pure Cloud Block Store makes synchronization between replicas and core data sets easier as well as mobility between environments. The result is better collaboration for teams distributed around the world who may be working on the same project.

Other features of Pure Cloud Block Store:

- **Provides high availability and resiliency** within an AWS Availability Zone (AZ) or between multiple AZs in different AWS Regions while maintaining a consistent user experience.
- **Keeps data replicas in sync** with data sets.
- **Maintains data integrity** with always-on encryption.
- **Integrates with leading cloud service providers** like AWS to address diverse and ever-changing needs.
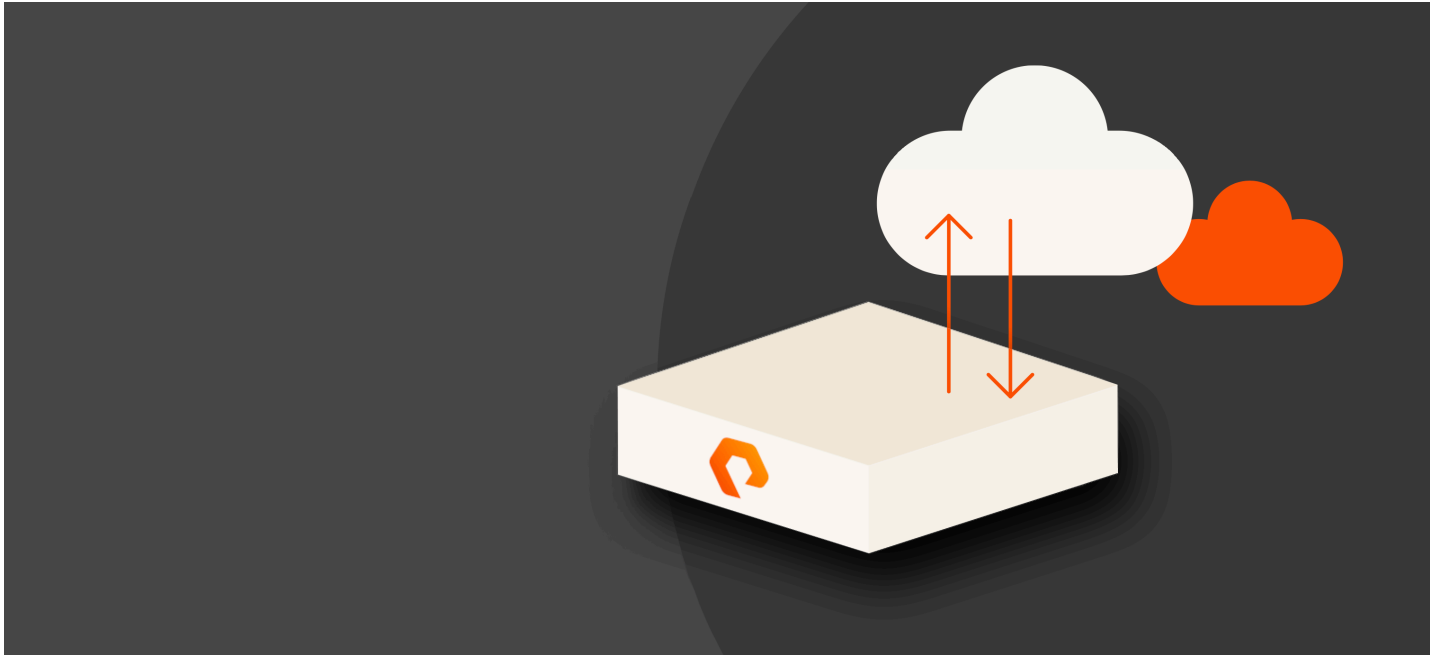
**Explore Pure Storage solutions including Pure Cloud Block Store, available in AWS Marketplace**

Pure delivers a modern data experience that empowers organizations to run their operations as a true, automated, storage as-a-service model. Pure Storage solutions are available in **AWS Marketplace.**

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