

The smart buyer's guide to flash

Find out whether flash storage is
right for your business

Introduction

With the integration of new technologies, your approach to storage is critical to controlling business outcomes. The number of hybrid and flash storage options out there can be overwhelming. How can you figure out which solution works best with the infrastructure you have and fits your hybrid cloud strategy and budget to support innovation now and into the future?

This guide lays out key information and answers common questions about flash storage so you can make the best possible decision for your business.

Smart tip #1

Drive down costs

Limited budgets and pressure to optimize resources make cost a major factor in your decision-making process. To maximize performance and business resilience while maintaining low costs, keep the following factors in mind to get the most value from your next storage solution.

[See how adopting a “software-defined-everything” approach helps Blue Chip increase flexibility and reduce cost >](#)

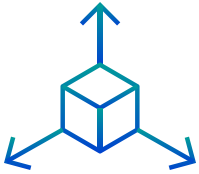
Openness and support for multi-vendor environments

Simplification is the name of the game when it comes to managing storage in heterogenous environments. Before you get too far into rethinking all of your storage hardware, consider that strategic storage choices are often more about the software foundation you select.

Look for a software-defined flash solution with an open, end-to-end architecture that can be deployed in any environment. This flexibility will help you modernize today's workloads and position you for future deployments. And you'll save time and money by reducing complexity of management, monitoring and virtualization.



[Read blog: Preparing for your journey to hybrid multicloud by modernizing the storage infrastructure you already have >](#)



Workload scalability

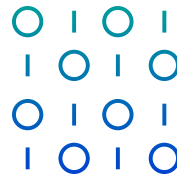
Don't get a van when a compact car will do. You'll save money by choosing a storage solution with right-sized products for your workloads and near-term strategy goals but with [flexible capacity to help you manage data growth](#). Look for a mature suite of solutions that let you compare multiple products with different capacities.



Storage installation needs

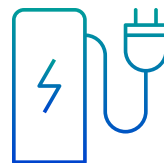
Flash storage requires less space to store the same amount of data. When you invest in flash, you can save money by cutting back on costs associated with additional space and management requirements.

[Read blog: Storage made simple for hybrid multicloud >](#)



Computing resources

Flash solutions can actually cut back on overall IT expenses. With high speeds that eliminate storage-related infrastructure bottlenecks, end-to-end NVMe flash storage lets you support larger workloads.



Resource efficiency and management

Because flash modules use even less power than hard drives, they have lower energy expenses. Some solutions offer flexible capacity and consumption-based pricing so that you only pay for what you use. Overall, you'll save time and resources by choosing a hybrid cloud storage solution that allows you to centrally [manage and optimize](#) all of your heterogenous storage environments.

[Learn more about using virtualization to centralize storage management >](#)

Smart tip #2

Prioritize performance

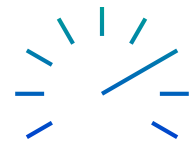
To meet demands and effectively manage the increasing volume of data flowing into your business, your storage needs to be fast, flexible and efficient.

Accelerate performance

Faster data access is always better for business. The high speeds of flash storage, combined with end-to-end NVMe technology, can give companies the power to quickly mine deeper insights and respond to customers almost instantaneously — all while using fewer resources.

Learn more about how NVMe works to provide the reliability across computer memory, storage and networking that's critical to enterprise storage.

[Download: NVMe Over Fibre Channel for Dummies >](#)



Harness existing applications

As you strive for better performance, you might consider replacing your applications or doing expensive and time-consuming optimizations just to seek out small improvements. But flash storage lets you boost performance while using your existing applications, no overhaul needed.



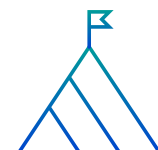
Data reduction

To improve storage efficiency, look for a solution with data reduction technologies, like pattern removal, deduplication and compression. Thin provisioning and space-efficient snapshots are additional functions that make the most of your storage capacity. The first compression cycle should work well enough so a second one won't be needed.



Maturity

Flash storage has capabilities, new protocols and data services that match and often surpass those of disk-based offerings. As a reliable storage solution, flash is increasingly considered to be the new storage standard.



Smart tip #3

Plan for the future

Modernize existing storage. Support new applications and deployments.

Hybrid cloud flexibility

Hybrid cloud environments offer undeniable advantages, but they also come with unique challenges. With public clouds, you may see increased system latency caused by data being delivered over long distances. The performance of private clouds can suffer due to complex system architectures. The top speeds and high performance of flash can address these challenges.



The right flash solution will give you the flexibility to deploy your apps and data where it makes most sense and a consistent experience across hybrid cloud deployments.

[Explore hybrid cloud storage options >](#)

Real-time analytics

When your competitors are making point-of-sale suggestions and analyzing transactions as they occur, you can't afford to fall behind. So, if you haven't made the leap to real-time analytics, you'll need to do it soon. Stay competitive and speed innovation with a storage system like NVMe flash that pulls information from multiple sources in microseconds.



Virtual desktops

Virtual desktop infrastructure (VDI) helps you improve data security, lower costs and give employees access to their files from any device. But to make this technology successful, you need strong system performance. Flash not only delivers high-performance standards and lowers the cost per desktop, it also handles the extreme spikes in data traffic that are common with VDI implementations.



Container storage

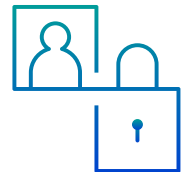
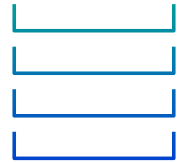
Containers provide the agility to shift application workloads quickly, scale up for demand, or shut down when not needed. To use containers in production, the data behind these applications and microservices needs to be persistent, with consistent performance and the ability to respond to rapid workload shifts.

In a container environment, the underlying storage infrastructure you choose should unify traditional and container workloads, be open and agile to support modern workloads, cloud-native applications and public cloud integration, and provide data cyber resiliency features.

[Learn more about storage for containers >](#)

Security and resiliency

In today's world of cyberattacks, you need to make sure your data is available and encrypted and that your organization is 100% compliant, especially as you transition to a hybrid multicloud environment. Look for high availability flash storage solutions that can support system wide encryption, securing data wherever it resides without affecting performance.



Take the next steps

Here are some key considerations when purchasing flash storage to bring your hybrid cloud strategy to life and strengthen business continuity.

- 1 How will this solution perform as data volumes increase?
- 2 Does this solution deliver low latency and high performance?
- 3 Does this solution have a method for preventing shutdowns and slowdowns during background cleanup tasks?
- 4 Can I harness existing applications?
- 5 Does the solution allow me to deploy apps and data where it makes most sense?
- 6 How easily can I move my data back and forth in cloud environments?
- 7 How is storage performance monitored?
- 8 Can the solution protect my data wherever it resides in the hybrid multicloud?
- 9 How do the data reduction technologies affect performance?

As your data volume grows, you may face more challenges when it comes to storing, accessing and harnessing all of it. Flash is an ideal solution for meeting growing performance demands while bringing speed, scalability and savings to your business. IBM's mature portfolio of software-defined flash solutions fits a range of budgets, workloads and performance profiles.

Discover the right flash solution for your business.

[Explore IBM Flash Storage solutions >](#)

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