

A BUYER'S GUIDE TO STORAGE



Nine Must-Ask Questions



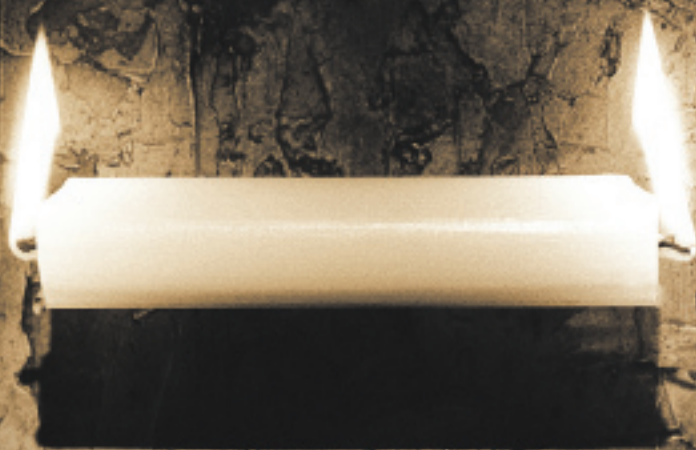
1. What does your vendor really mean when they talk about scalability?

You ask if it can scale, and they say yes. But you find out later that scaling means one thing to you and something else to them.

To you, scaling means adding both capacity and performance without adding complexity or undue cost.

To them, scaling might mean adding a second system with a segmented or separate storage pool. But when you add a second system, you aren't scaling – you're being penalized for growth.

You should be able to add capacity and performance without starting over from scratch with a brand new system. Imagine if you could scale what you already have, without having to do a data migration or purchase more system models, more software licenses, and more services. You can if you start with the right system.



2. Does your system let you consolidate storage applications?

A lot of companies use both NAS and SAN systems, and most vendors will “consolidate” them by gluing systems together. This approach can work but it will create more system complexity, which in turn creates more service revenues for the vendor.

Whether you use NAS and SAN together or deploy them separately, a truly consolidated system begins at design conception. A consolidated system exploits a common storage pool and works under a single team, using a single architecture, hardware, and set of management tools.

Most systems can't offer different levels of service for different workloads. They can't prioritize resources or handle production and test environments at the same time. But some systems can, and those are the ones that are truly consolidated.



3. Is your system easy to operate and manage?

While no one ever promises you their storage system will be “plug-and-play,” they’re often not up front about just how much time and know-how it will take to operate and manage a system.

Vendors have a choice. They can take the time and do the research to truly understand usability challenges, and they can design their software and systems to meet customers’ needs by automating data layout, provisioning, and system management.

Or they can ignore all that and come up with system designs that are elaborate, difficult, expensive to operate, and downright user-hostile.

Systems requiring less time and experience to install, configure, and manage also require less investment in labor, support, services, and training over the long term. Every compromise your vendor makes on the path to true usability lowers their expenses and raises yours.



4. Does quality storage have to be so expensive?

In today's storage market, there's no shortage of inexpensive systems. And there's no shortage of powerful, high-end systems. But very few systems deliver enterprise-grade capacity and performance at a reasonable price. Why is that?

A few reasons. High-end systems tend to use expensive components that excel at very narrow tasks. These systems are usually built on "monolithic" designs that use a complicated infrastructure or specialized hardware, which makes buying and scaling them an expensive proposition.

A system that uses less expensive components and then "teaches" those components to do bigger and better jobs through clever design can deliver affordable high performance and reliability. And it can scale modularly, which costs a lot less.

You've probably heard that you'll need purpose-built systems to do different storage jobs, or extra hardware or software to attain high availability. That's true for a lot of systems. But it isn't true for them all.

Sometimes you can get multiple, flexible, scalable tiers of storage on a single platform, at a cost well below the average for an enterprise-class system. You just need to know where to look.



5. What do vendors mean when they talk about “flexibility”?

Too often, “flexibility” is nothing more than a marketing slogan that ends up meaning your budget should have the “flexibility” to buy more purpose-built solutions the next time your business needs change.

What it should mean is this: the ability to do NAS or SAN or a combination of the two, all within the same peripheral resource. The ability to have multiple tiers of storage on one system. Database or archive. All, one, or many.

A purpose-built system might be good at what it does, but that’s all it does. So if you buy a backup-to-disk system and suddenly need to deploy a few terabytes for transaction processing, you’re out of luck. But if you’ve got a system that can cost-effectively store archives and also deliver good transaction-processing performance – that’s true flexibility.

Flexibility also should mean usability. And usability means lower service and maintenance costs.

It’s no wonder that, for many vendors, flexibility starts and ends with their product brochures.

LIMIT 2 HOURS

EXPIRED

40 50 60 70 80 90 100

6. Does maintenance have to cost so much?

System maintenance is a cash cow for many storage-system vendors. You're safe as long as your system is under warranty, but look out when year three or four comes around—your warranty expires and suddenly you're paying through the nose for service.

If you have a single, unified system under a single maintenance license, your costs go down dramatically. You can increase capacity and performance by adding hardware, without increasing software costs.

If you have a system that's easy to install, configure, and manage, you don't have to pay exorbitant professional service fees. With guided maintenance procedures, you can do the everyday stuff yourself.

Maintenance costs are an expected part of doing business and owning an enterprise storage system. But you can pick your battles. Spend your money on services you actually need—and start with a system that doesn't need that many.



7. Is all of your storage highly available? Are you sure?

Many vendors have a clever way around the high availability question. They'll say they have HA systems, but only their most expensive models will have the feature. Or they'll say you can have HA with your current system – if you just buy another controller and more software.

Don't be fooled. A true high-availability system has some very distinctive features:

It has fully redundant active components, so that any active component can fail and the system will continue to operate.

It lets you replace active components, live, without losing data access or incurring downtime.

It gives all data, no matter what the tier, at least one level of protection from drive failure.

It actively monitors itself so that it can detect (and fix) data errors *before* a crisis hits.

A true HA system offers all those benefits – and not just on its high-end model.



8. How much are you paying for software?

On some competitive systems, you pay for software according to how many terabytes of storage you're handling. On some you pay by the controller. If you need to scale to a more powerful controller (or controller pair), you have to re-license the software on the new controllers. Even if you only pay an upgrade license, it will still cost a pretty penny.

Any way you slice it, you'll save money on software if you don't have to keep buying it. That means having a system that can expand without being replaced, that can add capacity and performance without adding controllers.

This isn't just a fantasy scenario. In some companies, it's already a reality.



9. Is your storage vendor making your job easier?

What's your vendor's priority? Is it producing systems that they understand, that they know how to deploy, configure, and manage, and that they can make a killing on by selling software, services, and follow-on hardware?

Or is your vendor interested in helping solve your problems, lowering your costs, and simplifying the management of your system?

An outstanding vendor makes storage easier for you.

Easier to manage, grow, and change.

Easier to buy, configure, and maintain.

Easier on your wallet.

Just ... easier.

Nine things every storage system should offer:

- Scalability
- True consolidation
- Real ease-of-use
- Reasonable pricing
- Flexibility
- Self-management
- High availability
- Affordable software
- Innovation

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