The Essentials Series: Strategies for Cloud Storage, Data Protection, and Disaster Recovery

Leveraging the Cloud for Storage and Disaster Recovery: Three Practical Strategies

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Leveraging the Cloud for Storage and Disaster Recovery: Three Practical Strategies

How will you incorporate cloud storage into your storage and data protection plans? Let's look at three common models—and some variations—that fit the bill for various types of business needs.

Keep Everything in the Cloud

One approach is to simply stop storing data locally and to keep it all in the cloud. You'll work with it directly in the cloud—often through a VPN connection or by means of client software installed on your client computers—and the data is simply protected all the time by the vendor's storage network. It's rare to see businesses rely solely on cloud storage for *all* their storage needs, but for certain categories of data, it can make a lot of sense.

There are some potential downsides. Depending on your Internet connection, accessing data in this fashion may be slower. If the data can only be accessed through a server application—such as a database server—then storing the data only in the cloud may not be practical. Cloud storage space costs, so storing a great deal of data may be more expensive than you can afford. However, be sure to also consider the costs of protecting that data when it's living locally, because you won't have to pay that overhead when the data is solely in the cloud.

This is, frankly, a pretty rare approach—at least in terms of storing *all* of a company's data. That would be expensive and probably impractical. That's why it's more common to see hybrid approaches that use the cloud more judiciously and strategically—something we'll get to in a moment.

Use the Cloud as a Backup

Another approach is to simply use the cloud as a giant backup device. Typically, this involves installing an appliance or software in your data center. That device is responsible for capturing the data, compressing and de-duplicating it, and transmitting it to the cloud. Appliances such as the i365 EVault Plug-n-Protect and Barracuda Networks' Barracuda Backup Service, are examples of this kind of appliance.

You continue to use your data locally. You're only relying on the cloud as a backup—a convenient, more automated way to get backups off-site than those antiquated magnetic tapes. If you need to recover data—either a single file or an entire server—you retrieve the needed data from the cloud. In the event that you need to recover a *lot* of data, your vendor may offer you the option of having it shipped to you. If that's an appealing idea (and it can make recovery faster if you have a slower Internet connection), be sure you choose a vendor that offers that option.

This is a very common model; the majority of the cloud storage vendors out there are primarily selling this model and calling it "disaster recovery" (technically, it isn't, for reasons I pointed out in the previous article). And this is a good model if it fits your needs. However, it puts all your data into one class, and assumes that you can tolerate some level of downtime for all your data. That isn't always the case for every business, which is where hybrid approaches come in.

Hybrid Approaches

Not all data, as I wrote in the previous article in this series, is created equal. That's why hybrid storage approaches are more common: They recognize that some kinds of data will need to be treated differently than others. Once you classify your data, you can choose a hybrid approach for each category, balancing cost, protection, potential downtime, and ease of access.

Onsite-Prime

In this model, you rely primarily on on-site data, and use the cloud only for backups. However, for certain critical categories of data, you might use the cloud as primary storage. Doing so makes that data more readily accessible from multiple locations, and ensures that you won't ever experience any downtime with regard to that data.

Cloud-Prime

In this variation, you keep most of your data primarily in the cloud, and access it directly from there. However, you also keep a local copy on-site. In the event that the cloud is unavailable—because you've lost your Internet connection, for example—you can use the local copy of the data as a backup.

For this model to work, your cloud storage provider needs to be able to replicate data *down* to you, rather than *up* from you to the cloud. In other words, as you work with data in the cloud, that data needs to silently stream down to some local storage device in the background so that it's up to date should you need to use it.

Other Hybrid Approaches

There's really no "line" when it comes to building your own hybrid approach. Keep some data live in the cloud, use the cloud to back up other data, and keep local backups of some cloud-based data. You can paint the picture however you want to in order to meet your specific business needs.

This is, in fact, the *value of planning ahead.* You can take the time to consider the different types of data you have, consider how important it is to you, and consider how much you want to invest in protecting each different category of data. You can then assemble the precise cloud storage and data protection plan that most exactly fits your needs.

Hybrid Details

I do want to caution you as you consider a hybrid approach because you want to carefully avoid creating a model that, combined with a particular vendor offering, creates *more management overhead* for you. A hybrid approach means multiple ways of dealing with data; for some vendors, that means offering you multiple solutions that may or may not integrate tightly or be managed as a single unit. If you're considering a hybrid approach, try to find a vendor that can offer you a *single* solution that implements the approach you want. You'll find that management becomes less intensive and easier, helping to ensure that your hybrid approach is successful.

Do be aware that some vendors *componentized* their product offerings; that's not quite the same thing as separate solutions. In other words, when you buy a car, you may want options like leather seats and cruise control, but you want them all installed and integrated into the final product. You don't want the car to arrive with no seats, and then receive a crate containing the seats later for you to "integrate" yourself. Talk with vendors to understand whether they're offering you completely separate, standalone point solutions, or whether they can offer you a fully-integrated product and service solution that has the options you need.

Conclusion

Cloud storage offers exciting new options for data protection and disaster recovery. With careful advanced planning, you can ditch those old backup tapes while providing better protection and faster recovery for your data—including broader accessibility, and even options for off-site disaster recovery, such as the "warm site" recovery model I described. All you need to do is:

- Take some time to think about and understand the data in your organization

- Work with vendors to understand the options they offer

- Create a customized model that meets your budget, data protection, and disaster recovery needs

We no longer have to put up with the constraints that tape backups have imposed on us for years; we can have the data protection capabilities our businesses have always needed— thanks to the cloud.

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