ESCAPE
ALL LIMITATIONS

"We asked the network administrator to load the Unitrends recovery CD, and the system was back online in a ***fraction of the time*** *it would have taken to troubleshoot the original problem."*

—Luke Simpson
Ward and Uptigrove

"It's a relief to finally have a solid base on which to ***grow our disaster recovery plan."***

—Baltazar Palha
CSA Transportation

UNITRENDS

Backup & Data Protection Buyer's Guide:
What You Need to Know

When it comes to data protection, what matters most?

Lots of things. You want the freedom to choose the types of data, applications, and computing platforms you protect. You want to seal off that data from security threats. You need space to house that data—the right space now with room to grow. You want to support older solutions as you evolve your technology environment to modern strategies, at a pace that suits your business. And you need the ability to reach out for that data at a moment's notice without overstressing your network. In short, you need it all.

Look for:

- *Heterogeneity*
- *Scalability*
- *Full integration*
- *Retention longevity*
- *Rapid recovery*
- *Flexible deployment*
- *Web, single-pane-of-glass interface*

Like the Weather

Ah, the existential questions of life: "Will it rain?""Is my data safe?"

What's an information specialist to do when the only constant is change? With a slew of options all promising the best coverage money can buy, getting the right backup and recovery solution for your business can get downright confusing.

The trick lies in understanding a convergence of evolving cirucmstances and technologies that affect the safety forecast for your information assets. The truth is, the biggest pitfall to selecting data protection is a lack of knowledge. And, while a few brave souls barely plan for an unfortunate event, those who do, may lack the complete set of facts for making that decision.

So, what's worth knowing?

Big Enough Umbrella

Your business changes, and with it, your computing climate. As your operational needs shift, so do the systems that support those operations, the applications that serve your end users, and the way you store your data—with your vision of where you plan to take your computing environment in both the near- and long-term. Despite the fact that change will most certainly occur, many data protection vendors offer short-term savings through solutions you can buy cheap, but that get expensive over time as your technology changes.

So, while you might be saving money initially, you end up spending more to make that short-sighted backup and recovery approach work as your computing requirements vary. To avoid opting into a dead-end solution, it's important to understand the bigger picture, or the bigger umbrella, if you will.

Software, Hardware, or Cloud?

First and foremost, data protection is all about preparing for the unforeseen, so you can respond effectively. That considered, the best approach focuses not only on the method and efficiency of your backup plan, but also on recovery itself because, without the ability to restore your data quickly (RTO) and completely (RPO), there's no point in performing backups in the first place.

At a glance, three divergent technologies lie at your disposal when it comes to creating a data backup and recovery strategy. These include software-managed, hardware-managed, or cloud-managed backup. Cruise the internet, and you'll stumble on the virtues for each of these, as touted by their respective vendors. So it's a no-brainer right? Wrong.

Before you buy, take a look not only at the benefits, but also the drawbacks for each of these approaches.

Shun hidden costs:

- *Maintenance*
- *Increased staff*
- *Per-client*
- *Functionality*
- *New release*
- *Forklift upgrades*
- *Multi-point solutions*
- *Failed recovery*

Software alone as a backup strategy can look seductively cheap, with the promise that you can load it onto one of your existing servers and call it a sunny day. More likely, you'll need to invest in a dedicated server and operating system, a storage controller, and plenty of space for your backups. It may surprise you even more to find that you'll also need to upgrade your network to accommodate the added traffic current backup technologies generate. The fact is, software-only solutions create a whole new workload for your system administrators when it comes to integration and maintenance.

Hardware-based solutions provide solid advantages, but can pose problems of their own. For instance, if you back up to tape, NAS, or SAN, you'll find that, similar to a software-only solution, hardware-centered backup strategies can tie you to recurring expenses of their own. Depending on the price of the storage medium, adding space can get costly. And, while tape strategies can offer a cheap solution to this build-out approach, they are fairly unmanageable in terms of restoring data in the event of loss. Gartner Group and Storage Magazine cite failure from 50-77% for all tape backups when it comes to restoring data.

Cloud-based, or online, backup uses pooled resources to lower operational costs, making it an exceptional value from a storage perspective. It becomes less attractive, however, when it comes to recovery. Granted, while the cloud provides more reliability than tape-backup, its restore rates are still painfully slow. If you only had to plan for a one-in-one-million chance of disaster, a cloud-only solution might be fine, but what about typical disruptions, such as accidental data deletions or a stolen laptop? The painful truth is this: If you've got many terabytes of data and you lose even a fraction thereof, you'll be spending weeks or even months restoring that data from a cloud.

Network-intensive backup

Hardware-intensive backup

Network-intensive restore

Demand full support:

- *SAN, NAS, DAS*
- *Operating systems*
- *OS versions*
- *Applications*

Backup Space and Bandwidth: Striking a Balance

A common method of defense for information that's transmitted over a public network is to encrypt it. Encryption fortifies data against unauthorized access by encoding it, reducing patterns that would otherwise make it more vulnerable to hackers during transmission. While encryption provides a valuable means of safeguarding data, it works counter to deduplication and compression, both of which seek to trim the amount of data you back up. That trimming effort cuts back on cost by reducing bandwidth traffic. Ideally, you want to incorporate both these technologies into your data protection solution. Doing this the right way requires well integrated technology—something you won't find from just any data protection solution.

The Replication Tradeoff

By now, you've learned that intelligently protecting your data involves a deeper understanding of converging technologies and their tradeoffs. The biggest tradeoff lurks in how you manage replication—the logical synchronization of backup over a LAN or WAN—something most backup and recovery vendors won't share with you.

Array-based replication is what many storage area networks (SANs) support. With SANs, you purchase upgrades to enable one SAN to replicate to another. This array-based replication locks you into a single storage provider, so every time you need to add storage to accommodate your accumulating data, you pay that storage vendor for another SAN. In this case, the hidden cost is in the hardware you need to keep buying to keep pace with data growth.

Host-based replication uses software that resides on the computer you want to backup. This software copies data from that "source" computer to another computer, the "target". Host-based replication places an extreme load on the source computers, eating up bandwidth. Unless you want to make substantial upgrades to your network so your backups will work, your processing reality is sure to become a never-ending string of cloudy days.

The Virtualization Tradeoff

Vendors heralding agent-only virtualization backup using 15-minute snapshots tend to keep hush about the way host systems grind to a hair-raising halt from the load placed on them with just one or two virtual machines. The right way to support virtualization is to use agents while scaling your backup solution to handle different approaches as your virtual infrastructure grows. To do this, you should have choices such as Untrends provides, ranging from native VCM (VMware Control Block) solutions to interoperability with third-party backup solutions designed specifically for virtualization, the likes of Vizioncore, Veeam, esXpress.

"We used a file level restore from our incremental forever backup and had them ***up and running in a few minutes."***

—Philip Moya
San Antonio Kidney Disease Center

"The Unitrends solution has been ***an absolute life saver."***

—Jackie Miller
360 Federal Credit Union

What Good is Backup without Recovery?

The point of backups is, of course, preserving data so you can restore it under any circumstance. While you may never need to endure a major weather event, you will likely experience more typical data losses, where files are deleted or a system fails. When that moment arrives, you want to get your data back, fast.

The path to this sort of rapid recovery is to couple cloud-based computing with an on-premise backup appliance to preserve your information technology infrastructure and serve as a gateway point to a cloud-based disaster recovery service. That on-premise appliance will deliver not only local backup but also dedicated, in-flight deduplication, a valuable resource savings. Once you load the cloud with your initial set of data, this in-flight deduplication compresses and deduplicates it before sending it upstream to the cloud. In-flight deduplication occurs with no impact to the clients (i.e., servers, PCs, workstations, and notebooks) protected by the on-premise backup appliance. The overall result: more data can be protected than can physically move over the WAN in any given time. You can synchronize hundreds of gigabytes and more to the cloud each day with a relatively small amount of bandwidth, protecting your data in an optimal way.

STAY DRY	WITH UNITRENDS
Affordable Scalability	Subscribe to licensing that adapts to your business climate, scaling up, down, or out, according to your unique data protection needs.
Holistic Heterogeneity	Protect all your platforms and applications—from older OS versions to Netware BareMetal storage optimization—with a single, integrated solution that delivers, seamlessly.
Fluid Flexibility	Deploy Unitrends Enterprise Backup software as a virtual appliance, protect your virtual and physical environments, and add cloud backup to maximize coverage.
Turnkey Replication	Leveraging OpenVPN, Unitrends' replication technology creates a secure tunnel, resists network failures, and uses advanced checkpoint controls to recover from network drop.
Exceptional Support	Customer-obsessed Unitrends stands behind its products, 24x7. The way we see it, we're your partner in data protection.

*"**Files are easily restored** when IT gets a request to retrieve an accidentally deleted file."*

—Roger Strickland
Center for Disability Rights

*"Unitrends' speed of implementation, direct approach to backup administration, and ability to backup and restore very quickly makes it a **valuable tool in my IT tool belt."***

—David Kennedy
Financial Asset Management Systems

Let it Rain

Arming yourself with the right set of facts and knowing there are no quick fixes to complex issues will help you make the right decisions when it comes to data protection. And trust your gut. Get the coverage you need for all your platforms and applications. Make sure that solution will scale over time to fit both your changing business needs and your wallet. Don't settle for a solution that's lopsided rather than one that integrates the best of the software, hardware, and cloud worlds. Once you do this, you can rest assured you've got the right umbrella to weather any storm.