

Innovation for the Future

Datto has built its reputation on innovative technology and a superior level of reliability. We feel these are the cornerstones of data protection, recovery and business continuity. In the innovation process we have introduced new concepts and proprietary technology.



These technologies are aimed at the pain points that solutions providers have with backing up, managing and restoring data both locally and in the cloud. When thinking about backup technology it's best to split the major parts into three categories: Protect, Manage, and Recover. This brief will address each category, its challenges, and the end mission of providing an efficient and safe environment for storage and recovery.

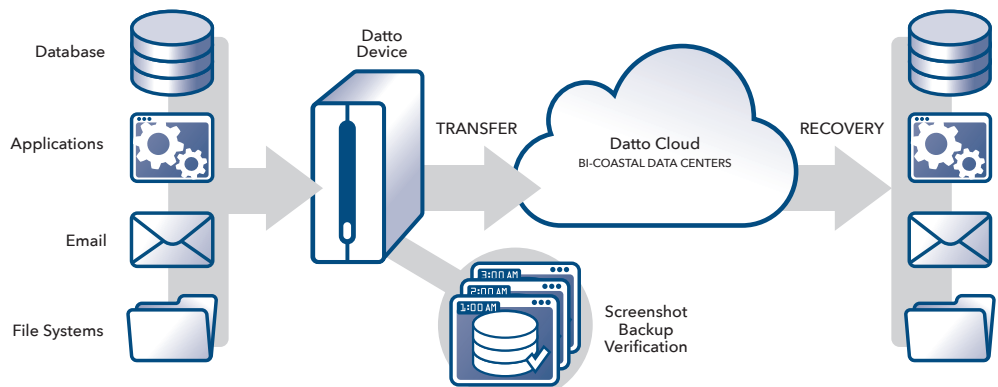
Protect

The first point of contact with data is the target machine, which refers to the workstation or server you are looking to backup. An important debate regarding backup is whether to take file and folder backups or image-based backups. File and folder backup is as simple as it sounds, where a backup would just save those files and folders. It's

easy in principle but can come with sneaky problems, like permissions. If you have permission to read a folder, but not the folder inside of that folder, then the backup would be incomplete. It also doesn't offer virtualization or Bare Metal Restore (BMR), which leaves a user with significant downtime when a disaster occurs.

Datto employs image-based backups, which take a full snapshot of the files, folders and operating systems. This snapshot is taken with a redundant backup engine; if the first image fails then a completely separate engine kicks in automatically. The first backup engine is VSS snapshotting; the second is the STC backup engine. The VSS backup engine is application aware, which means it tells the applications running that it is going to take a snapshot and to have all of the running processes to stop moving data to RAM. This greatly reduces the probability of corruption and ensures that files are captured fully at the time of the snapshot. Before the data is saved on the Datto BDR it is first de-duplicated, so only the changes are saved to the device. This protection is efficient and instant as snapshots are transferred locally over the local area network. Once the data hits the local device it is stored in a VMDK state. This is a critical component for restores and exporting images.

Hybrid Backup Overview



Manage

Datto devoted significant resources to researching and building a data management system that we call Inverse Chain Technology™. To truly understand Inverse Chain it's best to take everything you know about backup chains and throw it out the window. It just doesn't apply for us.

With Inverse Chain Backup, the first full backup or "base" is stored at the top of the chain and incremental are stored below the base. What does this inverted chain do for the user? First, it greatly reduces the size of the chain to allow the user to keep more data locally and leverage their hardware investment to its fullest. Second, snapshots are non-dependent which means they don't actually rely on each other or the base. So you can change retention or delete points at any time without resetting or taking a new base. All of these points are easily manageable from the device interface in the access recovery points page.

So what about bandwidth? This has been a choke point for sending data off-site since the cloud was invented. Datto feels confident in its ability to leverage bandwidth resources to their fullest. SpeedSync is our hyper fast cloud synchronization engine that allows users to get their mission critical data into the Datto cloud. SpeedSync offers parallel syncing which allows for multiple jobs to be sent off-site at the same time as well as on demand syncing which gives the user control of when and what speed data travels to the cloud. Finally, everything comes in a very intuitive and easy to use interface.

Recovery

This is by far the most important part of business continuity and can be the difference between a small disruption or a complete disaster with data loss and downtime. Datto is not only a provider of business continuity but also a customer and user of data protection software. We understand that in the time of need, fewer moving parts reduces the risk of failure. That's exactly why we save backups in a VMDK state; when you need to virtualize a system you just mount of the VM and connect in. It's that simple and takes less than 10 seconds on average to mount.

The process is exactly the same for the cloud virtualization. So whether it is a server failure or a site-wide disaster you can have systems up and running in almost no time at all. During Hurricane Sandy we had over 300 businesses running in our cloud simultaneously, and didn't miss a single SLA. Once virtualized your clients are able to run their businesses effectively and continue to take backups. When they are ready to failback you can perform a Bare Metal Restore right over the local network. We can even restore directly to virtual machines without any conversion.

Conclusion

Datto is founded on R&D. This should be a key factor for managed service providers (MSPs), in choosing a technology vendor to partner with. For Datto Partners, it means our ongoing research and development will continue to generate the most innovative technologies and solutions available. In turn, our Partners will always have the best products to offer their clients.

Why Datto? It's as simple as Trust, Technology, and Support.

Learn more at www.dattobackup.com/why-datto-infocenter or call a Datto Sales Exec at 888-294-6312.

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