Flexible & Efficient Off-Site Synchronization

AgentSync

AgentSync is Datto's proprietary technology that manages the quick, efficient, and secure transfer of datasets on the local BDR appliance to the Datto cloud. The real value of the technology, in combination with its auto-mated controls, is that it empowers users to configure synchronization processes to meet the needs of their network. AgentSync is designed to overcome bandwidth challenges and facilitate custom retention schedules in dynamic IT environments.

Flexibility

Throttling: Set bandwidth limits for specific durations so that off-site syncing does not compete for resources with business applications (e.g. Mon-Fri, 9AM-5PM = set 750KBps maximum)*

Prioritization: Determining the order in which agents sync to the cloud ensures that mission critical systems are replicated to the cloud first (i.e. High, Normal, Low).

Custom Replication Schedule: Say backups are taken every hour, but only replicated offsite every 3 hours. Unlike most competitors, AgentSync does not need to replicate a compilation of 3 separate hourly backups off-site. Instead, it only replicates the exact data change that has occurred during that 3 hour timeframe, resulting in faster and smaller replications.

Streaming Mode: When the hard drives of the local BDR appliance are either full or faulty, the standard step of creating local send-files can be skipped so that snapshots can be replicated directly to the cloud.

Security

Encrypted Connection: Transfer of data to off-site nodes is performed over Secure Shell (SSH) using the Blowfish cipher. Upon receipt, data is merged into an AES-256 bit encrypted ZFS file system.**
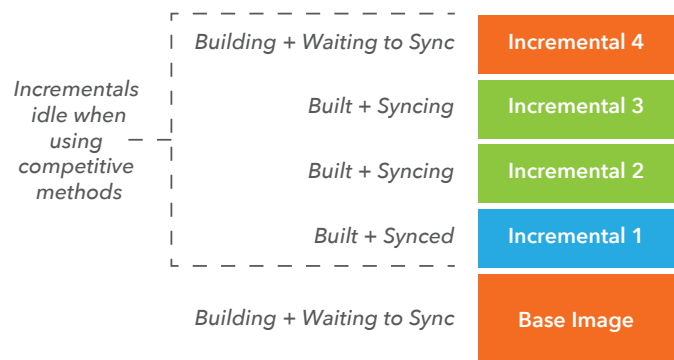
Data Integrity

Three Checkpoints: Perfect data replication is verified during the following processes: (a) MD5 sum hash upon completion of the send-file build (b) rsync detects bit flips in transmission and retransmits any inconsistencies (c) integrity checks are performed when merging in with the existing ZFS dataset in the cloud.

Efficient Use of Time & Bandwidth

Traditionally, when backups were prepared for replication they were compressed into a send-file and then synced to the cloud one-by-one in chronological order. This meant that Backup#2 could not sync until Backup#1 had finished syncing, and Agent#2 could not sync until Agent#1 had finished syncing.

Parallel Syncing: The real magic of AgentSync is its ability to simultaneously sync multiple incrementals across multiple agents. While large backups are being prepared for replication, other smaller incrementals are free to start syncing. This means that, during the timeframe specified for off-site replication, even the most bandwidth challenged users can rest assured that they are always getting the most out of their internet connection.

Parallel Syncing of Incremental Snapshots

Incrementals idle when using competitive methods		
	Building + Waiting to Sync	Incremental 4
	Built + Syncing	Incremental 3
	Built + Syncing	Incremental 2
	Built + Synced	Incremental 1
	Building + Waiting to Sync	Base Image

*Minimum end user bandwidth requirement: 1Mb of upload speed for every 1TB of raw/used data to be protected

**Agent data encrypted prior to cloud syncing cannot be decrypted off-site without the partner entering their private key in the partner portal

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**Business Continuity
Built From the Ground Up**

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