

1

Fine tune your Backup Performance

- When installing a backup server for a large number of clients, check for the throughput of the storage disks (attached to the backup server) to handle concurrent reads and writes.
- If possible stagger your clients' backup timings over a period to reduce the load on your backup server storage disks.

A StoreGrid backup server can support hundreds of simultaneous clients and the backup performance is based on:

- 1) **The throughput of the storage attached to the backup server especially while handling concurrent reads and writes.**
- 2) **The backup server hardware's CPU (multi-CPU) speed/memory along with the bandwidth supported by the network connect to the backup server.**

2

Select the correct files to Backup

- Avoid selecting entire disks while selecting files to be backed up. Spend time with your clients to understand their backup needs and recommend a backup schedule.
- Avoid selecting temporary system files/directories while designing your backup schedule. Selecting the entire disk partition on which the OS is installed (e.g. C:\ in a Windows machine) will cause unnecessary changed file notification of operating system files to your backup software and reduce the backup performance.

3

Firewall settings and Backups

- Certain firewall software have settings that disconnect connections that are active for long durations. Check the firewall settings in your client side and see if that is causing backups to be disconnected.
- Some low end network switches or NAT and firewall devices may disconnect active connections because of excessive network traffic etc. You need to make sure you use good quality network switches, NAT and firewall devices for backups to work uninterrupted.

4 Optimize your first full Backup

- The first full backup of your client data can be large (sometimes 100s of GB!). If your backup server is in a remote location and the internet connectivity at the client end is not very high speed to handle transfer of such large volume of data, you should try and 'seed' the first full backup data using a local external drive. The external drive can be shipped to the backup server location for the first full 'seed' backup. This will save you and your customers a lot of time as well as bandwidth costs!

StoreGrid has a Local To Remote Migration feature to perform the initial 'seed' backup to local/USB/ external drives in the client installation.

5 Use Backup Time Windows

- If possible, schedule your client backups to run during time intervals when system resources are relatively free.
- For example, you could schedule your client machines to backup after business hours to improve client performance as well as reduce network usage during business hours.

StoreGrid supports creating backup windows for each backup schedule. This can be performed even remotely by the administrator by logging in to the StoreGrid client's web interface.

6 Encrypt client backups

- Always ensure that the client backups are protected with passwords.
- Create awareness about data security among your customers (e.g. through email newsletters) and urge them to preserve their backup encryption passwords in a secure location.

StoreGrid secures backup data with the advanced Blowfish algorithm with 448-bit military level encryption to secure the backup data.

7 System State Backups

- Creating a backup schedule for system states can save you a lot of time when recovering from system crashes and serve as a valuable tool in your managed services operations.
- If you wish to be able to restore the Windows Registry alone, schedule a Windows Registry backup separately along with System State Backup.
- When creating backups for the system state, ensure that the target backup location has adequate free disk space to accommodate growing OS files.

8 Backing up HUGE number of small files?

- In case your backup dataset consists of a large number of small files (e.g. 100,000 files of 1kb each), you can optimize backup performance by breaking up the dataset into multiple backup schedules and by running them in parallel.
- This ensure optimal usage of bandwidth as well as the storage throughput, thus speeding up your backups.

StoreGrid supports multiple concurrent backups from the client installation for optimal performance.

9 Local backup or Remote backup?

- In case you have a customer who prefers to have a local copy of the backup data so that restores can be done quickly, then instead of backing up directly to a remote online backup server, install a local backup server at the customer location and configure the clients to backup to the local backup server. And have this backup server replicate to a remote replication server periodically.
- A local backup server offers the ability to restore quickly from a local server and the flexibility to schedule frequent backups to the local backup server and a relatively in-frequent replication of backup data to the remote replication server.

StoreGrid supports this deployment of having a local backup server and a remote replication server.

10 Replicate. Replicate. Replicate.

- Replicate your backup server data to another server periodically for a second level of protection for your customer's data.
- Ensure that the clients (as well as the backup server) can directly restore from the secondary replication server in case the primary backup server fails.

StoreGrid client installations can restore directly from the StoreGrid replication server in case there is a data failure at the primary backup server.



Vembu Technologies powers the online backup and storage business of over 1100 Managed Service Providers, VARs and ISPs worldwide with its flagship backup product, StoreGrid.

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