Xenolith – Technical Details

Data Encryption

All data is encrypted before being transmitted to the vault, and data is stored encrypted. The encryption key is known only by the end-user (or the person installing the backup client software) and not by the IT-reseller, the MSP, or Sterling Data. This ensures maximum security because the stored data cannot be accessed without proper credentials. Ultimately, the security and safety of the stored data lie with the end-user. If they lose the encryption key, a restore will be impossible. This gives the service provider full deniability of knowledge of what is being backed up, even under the Patriot Act.

Remote Support

The installation of the client software can be fully automated, including assigning of usernames, passwords but not the encryption keys. The management and monitoring of the clients is done through the Sterling Data Management Console, providing detailed information on every aspect of the platform, a group of accounts, or an individual account. Using 'remote commands', system administrators are able to execute any task without logging in directly to the clients for starting, stopping, canceling backups and restores, setting selections, changing scheduling, and any other command that can be done from the client GUI. The Remote Connection Gateway functionality makes it possible to take over the GUI as if you were working on the client machine.

Light-Weight Client

Running a light-weight client requires minimum system RAM and CPU resources, leaving them available for other processes:

- ✓ **No requests to the server for meta-information:** The Backup Register resides at the client, with an up-to-date copy at the server.

- ✓ **Add-only database techniques:** The Backup Register is organized in such a way that there are no modifications in the databases, other than new records at the end of the tables. The Backup Register Synchronization sends only the last part of the database.

- ✓ **No local disk cache needed:** Only the Backup Register needs some disk space.

- ✓ **Low memory footprint:** In a typical situation the client uses not more than 30MB memory.

- ✓ **Low processor usage:** The native C++ code is optimized to run using very limited amount of CPU power and has no resources wasted by Java or .NET Framework. The software is supported by trained staff available to help you with all your issues 24 x 7.

Backups & Archives

The software supports two kinds of retention (the number of versions of a file that are being kept), by either number of days or number of sessions. A 28-day retention means that all versions of a file of the last 28 days will be kept. If a file was not changed in the last 28 days, the most recent version will be kept. The more versions of a file are kept the more storage will be used. The actual usage heavily depends on the file type. The client software automatically cleans all unused versions of slices of a file after making the backup.

Archiving is supported by making it possible to mark sessions as 'archived' (e.g. by the end of the month). Such a session will never be cleaned and therefore stays forever in the backup. This emulates having backup tapes in a safe of every last day of the month, giving the possibility of going back in time for years, without having to keep all versions of the backup.