STEALTH SOFTWARE

STEALTH REPLICATOR

The Stealth Data Replication tool copies files from existing Stealth Content Store (SCS) blob storage to a new storage device without the need for a SharePoint migration. This will be faster and without any downtime for the Sharepoint environment. It is able to replicate on a Content Database level, so it is also more flexible than using a plain hardware migration.

Use Cases

Adding a new storage device

This is usually the case, when an additional backup location is needed or a company wants to have another storage device in a different region for faster access.

A new storage device is added to the existing one, with the help of the Concurrent Provider. This provider allows for writing files to several storage devices at the same time (concurrently). However the newly added provider doesn't have the files which were previously written to the existing one. The data replication tool enables copying those file easily to the new provider so both contain exactly the same files.

Changing an existing storage device

The Stealth Replication tool can also be used to switch from an unwanted storage device to another device. For example when a customer wants to change vendor.

However, the new storage device must use the same connection type as the existing one. Usually all cloud platforms support the S3 standard by now, so this would be the common connection in this situation. For example, if the existing storage device is AWS it will use the S3 connector, which you can also be used to store on Hitachi Content Platform (HCP) and most other storage platforms.

Migration vs. Replication

Performance

The performance of both tools was measured by replicating/migrating 10GB of files with different sizes in a standard SharePoint 2016 environment.

Duration, CPU and disk performance were measured during each process on both SharePoint and SQL server.

The graphs on the left side show the performance during migration and the right side shows the replication using the STEALTH Software replication tool.

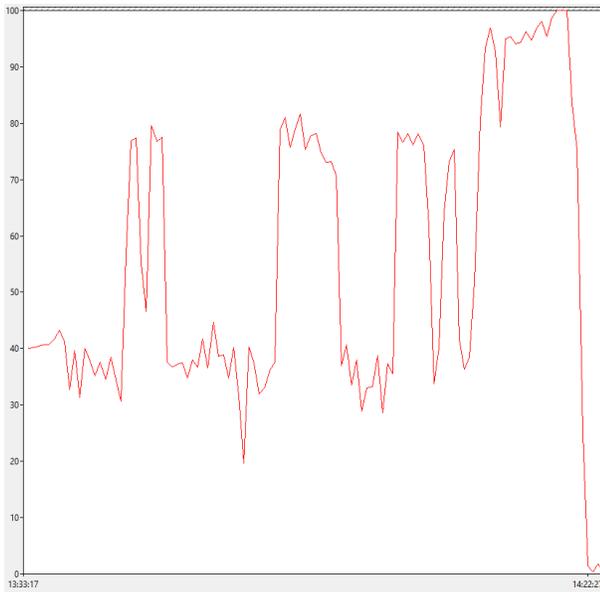## CPU performance on the SharePoint server:
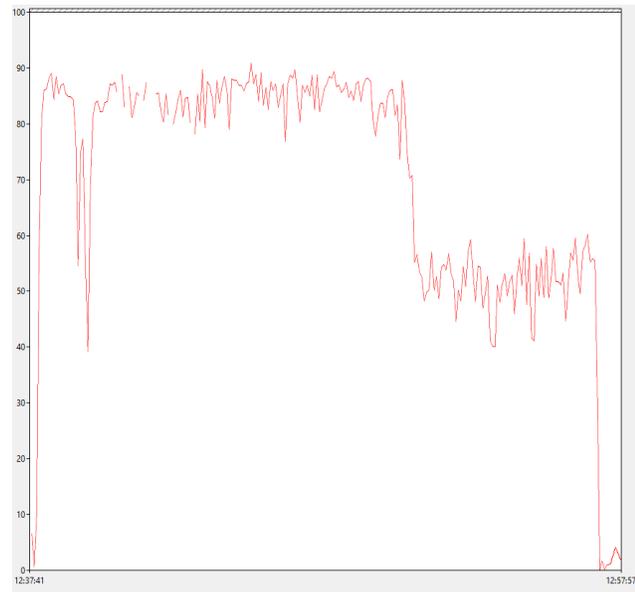

Figure 1: CPU performance during migration

Figure 2: CPU performance during replication

The CPU performance during the replication process on the SharePoint server is higher compared with the migration process. This is due to the efficiency of the replication tool. While the migration process took 50 minutes to handle the files, the replication did the same amount in 30 minutes, almost half the time. It's also a much steadier process, as the migration caused many performance spikes. The second part of the replication process, where the new information is written to the SQL database also has much less impact on the CPU, as seen on the right graph below.
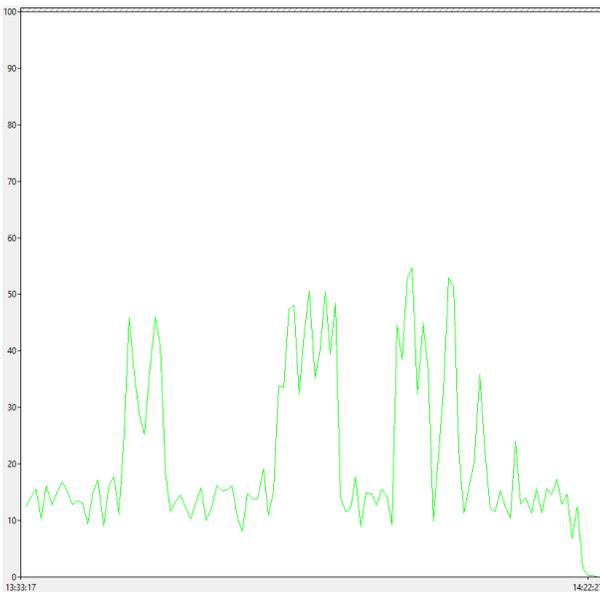
Disk performance on the SharePoint server:

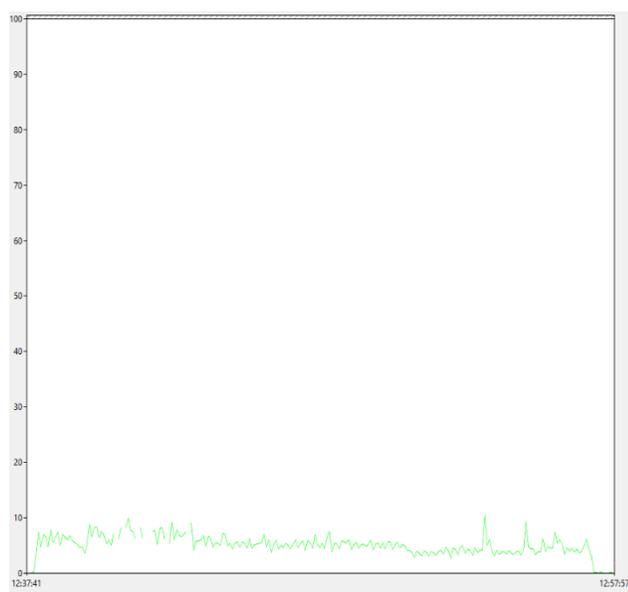Figure 3: Disk performance during migration

Figure 4: Disk performance during replication

The disk performance during the migration process on the SharePoint server is clearly higher compared to the replication process. The replication requires hardly any work on disk, while the migration disk graph indicates a lot of spikes, as already seen with the CPU performance.

Comparison

The following table compares the Stealth Replication tool to the official Microsoft migration method, listing pros and cons for both applications. Most points listed will also apply to other 3rd party migration tools.

STEALTH Software is the only vendor, able to replicate data at a file level without the SharePoint overhead.

Replication	Migration
- Area (specialized on data replication and provider changes, not for migration)	+ Area (can also migrate from other SharePoint versions or environments)
+ Speed (twice as fast as migration, perfect for SharePoint farms with a lot of data)	- Speed (slower than replication, can take days to complete on large projects)
+ Performance (steady hardware usage almost no impact on disk and SQL server)	- Performance (spiking performance, only better on Share-Point server CPU)
+ Robustness (continues and logs possible errors / unreadable files)	- Robustness (stops when files are not readable, only continues when fixed)
+ Usability (user friendly GUI, easy to use, good documentation)	- Usability (command-line tool, only few commands documented)
+ Overhead (operating on file level without SharePoint, only one SQL operation)	- Overhead (all operations are going through SharePoint and SQL)
+ Flexibility (can be paused and resumed at any time during the replication process)	- Flexibility (cannot be paused and resumed during the migration process)