

Comparative assessment of Cloud Backup products on backup time

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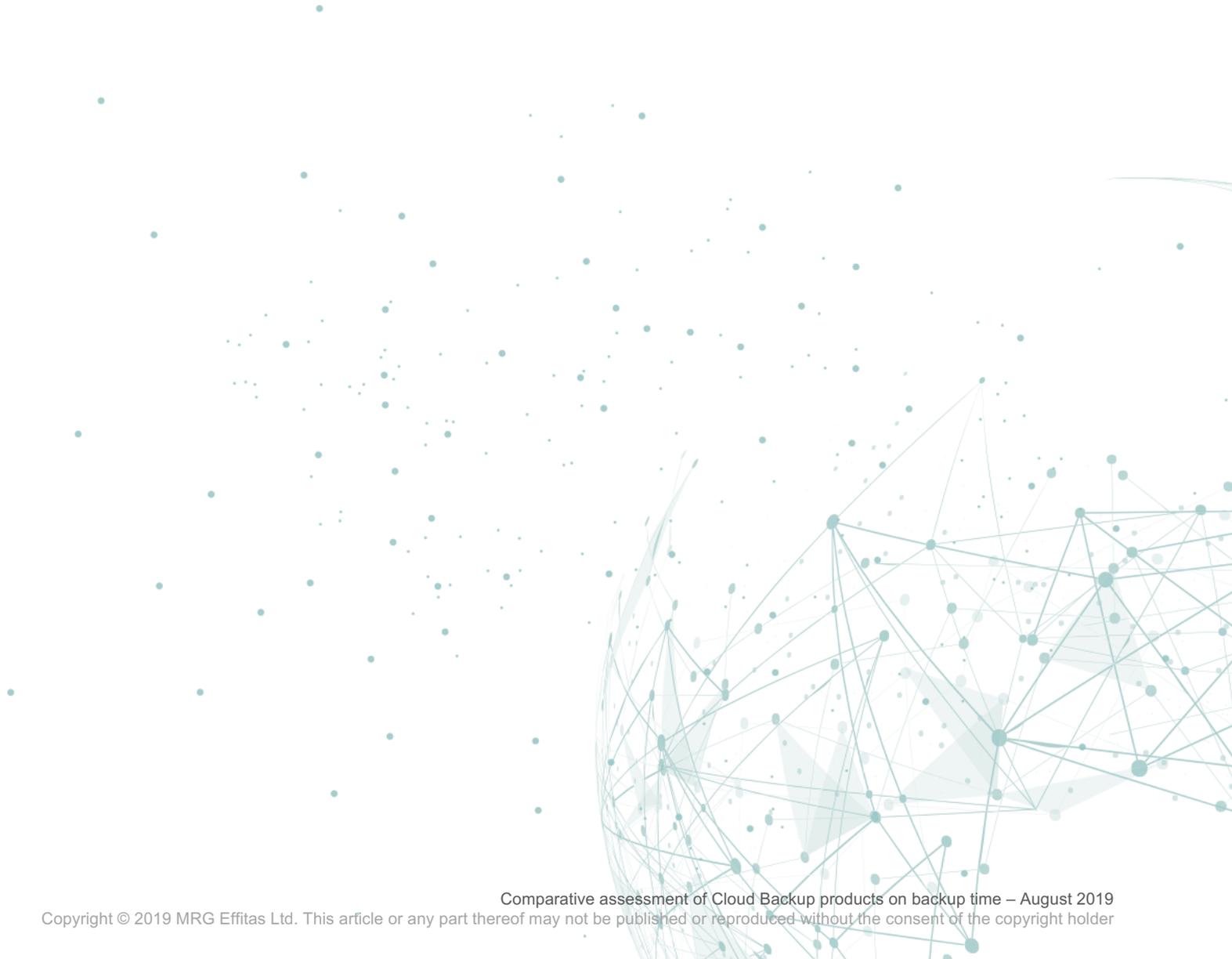
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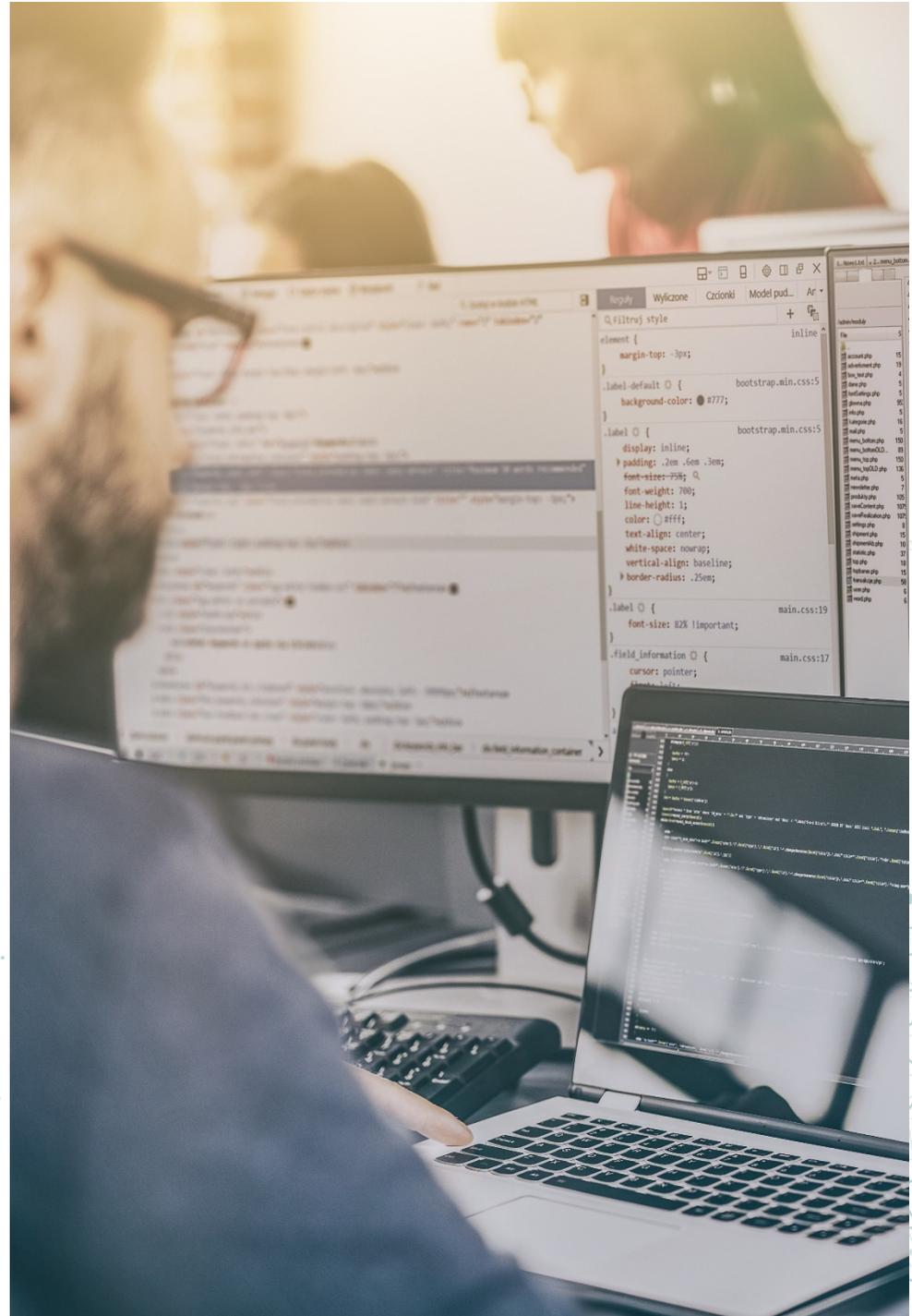


Introduction

The purpose of this MRG Effitas' report is to provide an independent comparative assessment of a group of cloud backup products.

The methodology employed in this test maps closely to Real World use. Our core focus was on the cloud backup time.

For this Assessment, Acronis commissioned Effitas Ltd. to compare the backup time of its cloud backup product against three competitor products.



Executive Summary

This comparative test report is designed to serve as a reflection of product backup time levels because cloud backup products should be fast and usable.

When conducting these tests, we tried to simulate typical user behaviour. As such, we paid particular attention to products' capabilities and limitations. It is very important to note that the best choice for an average user is to keep things very simple and fast, and for the product not to present too many confusing settings or questions. Accordingly, we used every backup application with its default settings.

From the backup time perspective, the upload speed and location are important. We dedicated fix maximum upload speed line to 100 Mbit/s and the location was Europe. We used the same sample set in each test cases.

Tested products:

- Acronis True Image 2020
- Backblaze Personal backup
- Carbonite Safe – One Computer
- IDrive Personal

Conclusion

Based on the backup time results and from the supported features view, we can conclude that **Acronis True Image 2020** is the best application of the tested products.

From the perspective of file-level backup time, **Acronis True Image 2020** was the fastest application.

Carbonite and Backblaze do not offer the option to perform full system or local disk backup and save it in the cloud, so only Acronis True Image 2020 and IDrive Personal were featured in the dual protection test phase. **Acronis True Image 2020** was the fastest in this test.

Tests Employed

In this assessment, we ran the following tests:

Backup to Cloud

In this test phase, we measured the backup time in two different test cases.

Full backup

In this scenario we simulated the full system backup with 20 Gigabytes of files because this is the minimum requirement of a clean Windows 10x64. Special file types were used because of the limitation of some products. Each application was tested with the same files.

Incremental backup

We increased the clean system with an extra 1 Gigabyte of user files and measured the backup time to cloud. Each application was tested with the same files.

Dual Protection

Acronis True Image 2020 and IDrive Personal support the 3-2-1 backup strategy from the tested applications. This strategy means having at least three total copies of your data, 2 of which are local but on different mediums and at least one copy on the cloud.

In this test, we measured the full system local backup time plus the time to replicate the local backup to the cloud.

External SSD was used for this test and both applications were tested with the same C drive which means that the same files were used.

Cloud Backup Applications Tested

- **Acronis** True Image 2020 Build 20770
- **Backblaze** Personal backup 6.10.337
- **Carbonite** Safe – One Computer 6.3.5 build 8094
- **IDrive** Personal 6.7.1.49

The bold company names are used as a caption in the results page.

Test environment

The maximum 100 Mbit/s upload speed line was dedicated for each test. The test location was in Europe. The same Windows 10 x64 based laptop was used for all test cases with the same hardware and network parameters. Each product had a dedicated physical machine.

Sample types used to conduct the tests

Backup to Cloud

- **Full backup**
Different file types were used for the test. All products supported the selected file types. The sample set size was 20 GB. The full list of file types used is in the appendix.
- **Incremental backup**
User files were used. Sample set size was 1 GB. The full list of file types used is in the appendix.

Dual Protection

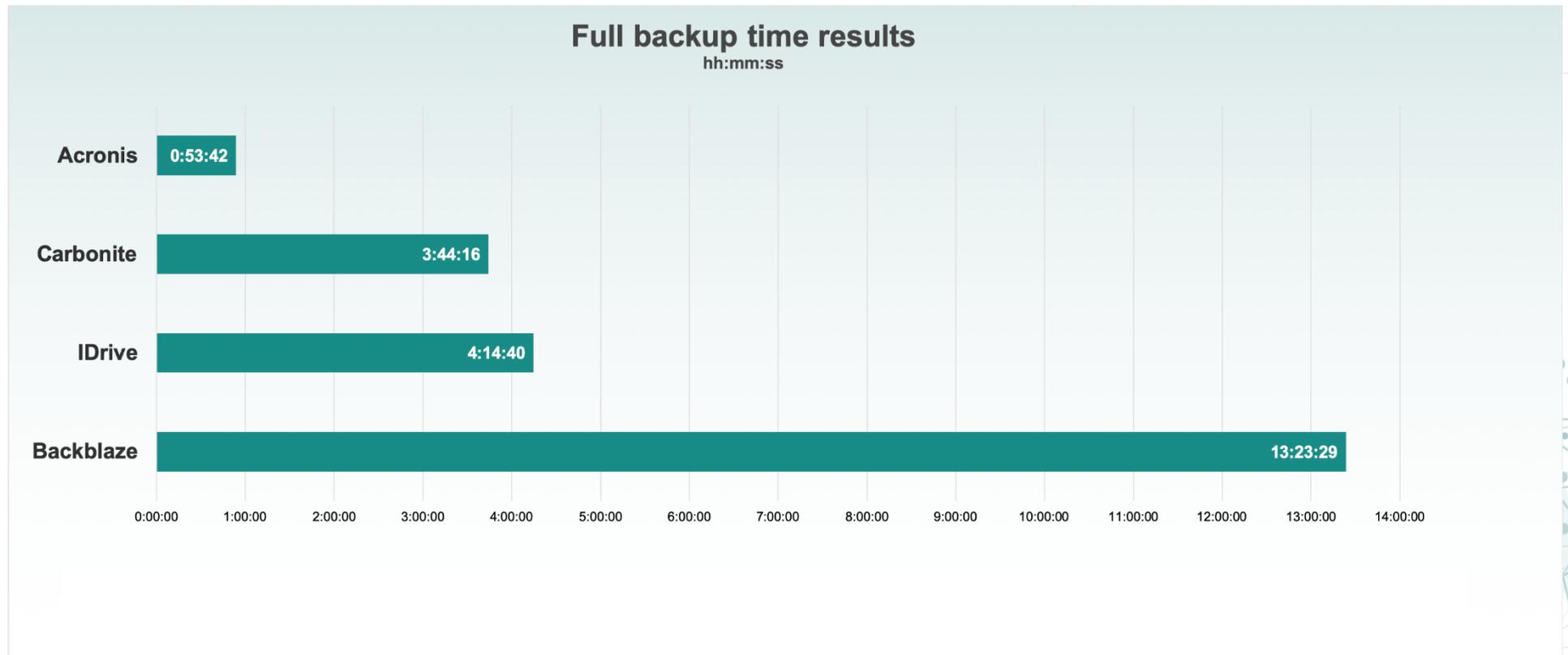
The same machine was used for this test. The full C drive was backed up. The volume size was 35 GB.

Test Results

The tables below show the results of testing the cloud backup applications. Every backup time result is the average of three measurements.

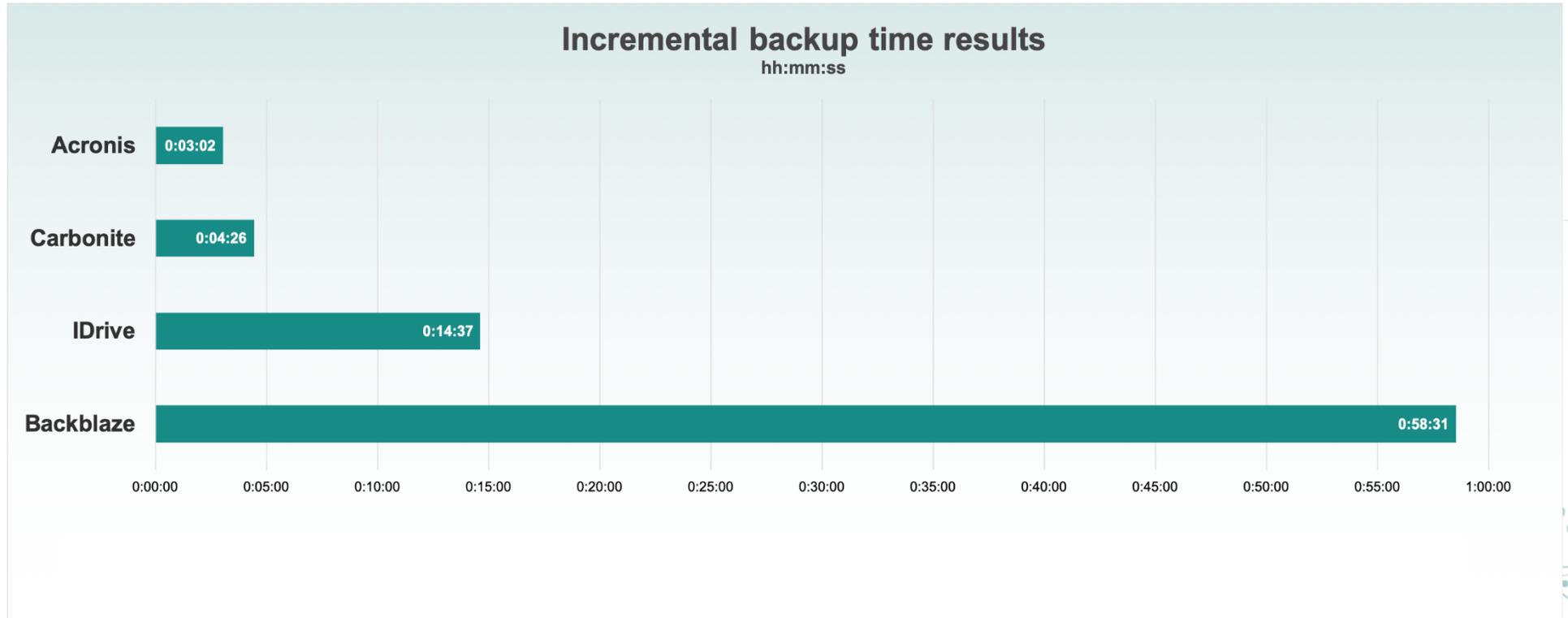
Backup to Cloud / Full Backup test results

The table below shows the backup time for 20 GB of files. The sequence is shown from the fastest to the slowest.



Backup to Cloud / Incremental Backup test results

The table below shows the backup time for 1 GB of files. The sequence is shown from the fastest to the slowest.

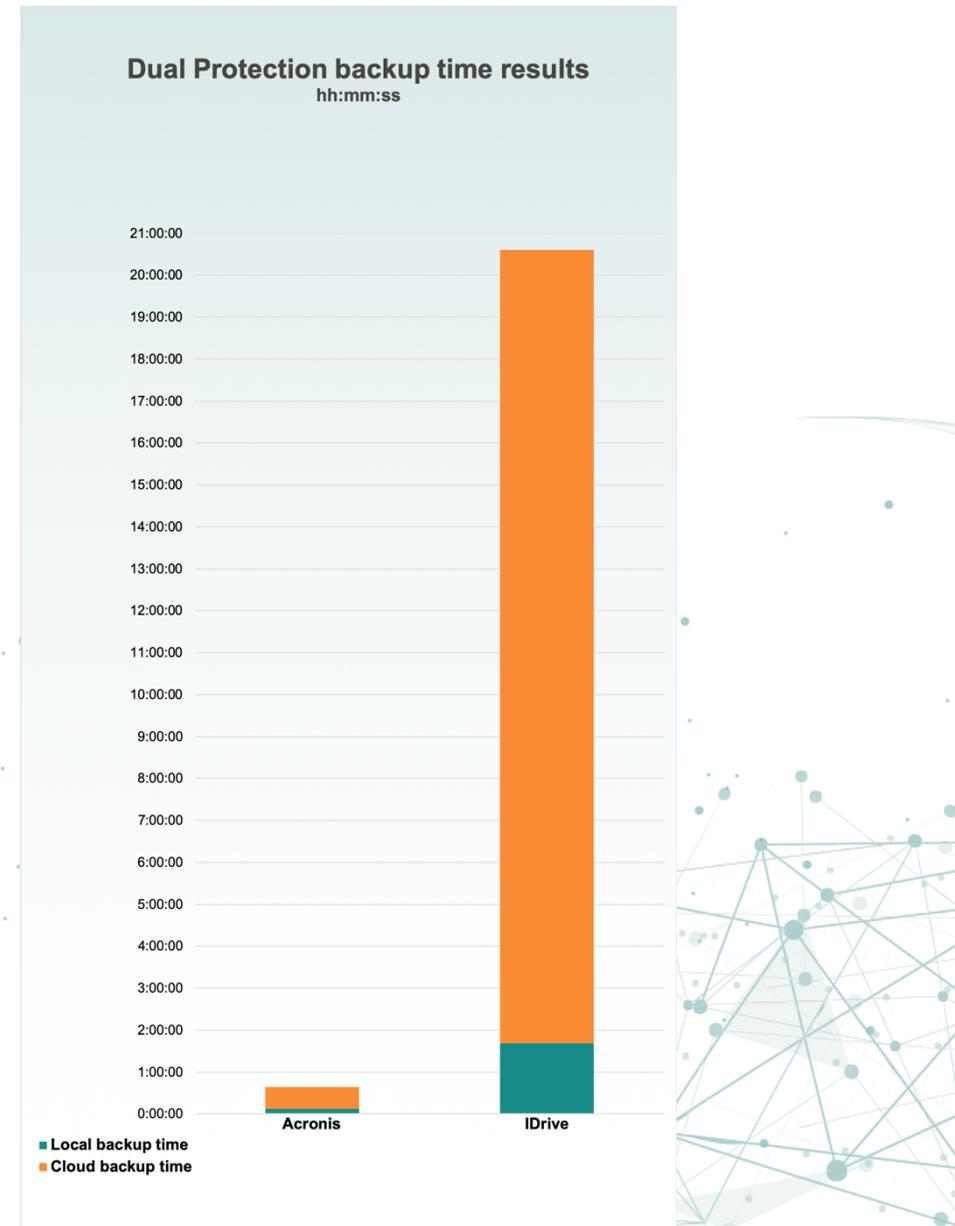


Dual Protection Backup Test Results

The tables show the full C drive (35 GB) local backup time + replication of local backup to cloud time. The sequence is shown from the fastest to the slowest.

Acronis and IDrive support this method.

	Acronis	IDrive
Local backup time (hh:mm:ss)	00:07:37	01:41:16
Cloud backup time (hh:mm:ss)	00:31:12	18:54:36
Total Backup time (hh:mm:ss)	00:38:49	20:35:52



Conclusion

Based on the backup time results and from the supported features view, we can conclude that **Acronis True Image 2020** is the best application of the tested products.

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Carbonite and Backblaze do not offer the option to perform full system or local disk backup and save it in the cloud, so only Acronis True Image 2020 and IDrive Personal featured in the dual protection test phase. **Acronis True Image 2020** was the fastest in this test.

Product comparison

We checked the implemented backup features and compared these features against each other.

Acronis True Image 2020

Acronis True Image 2020 provides simple ways to back up the entire PC, specific disk, partitions, or individual files and folders. Backups can be saved locally or to the Acronis cloud.

One of the most important features in the current version is the Acronis Dual Protection. Acronis makes the protection process easy and efficient by replicating local backups in the cloud automatically so that the user always has an off-site copy available for recovery. Once the user successfully completes the first backup, the backup and replication occur simultaneously.

Acronis True Image has been an established backup tool for years and with its enhanced backup technology the new backup format delivers a better overall performance, enabling faster browsing of cloud backups, improved speed for backups and recovery, and data deduplication. Acronis surely takes the lead in this contest.

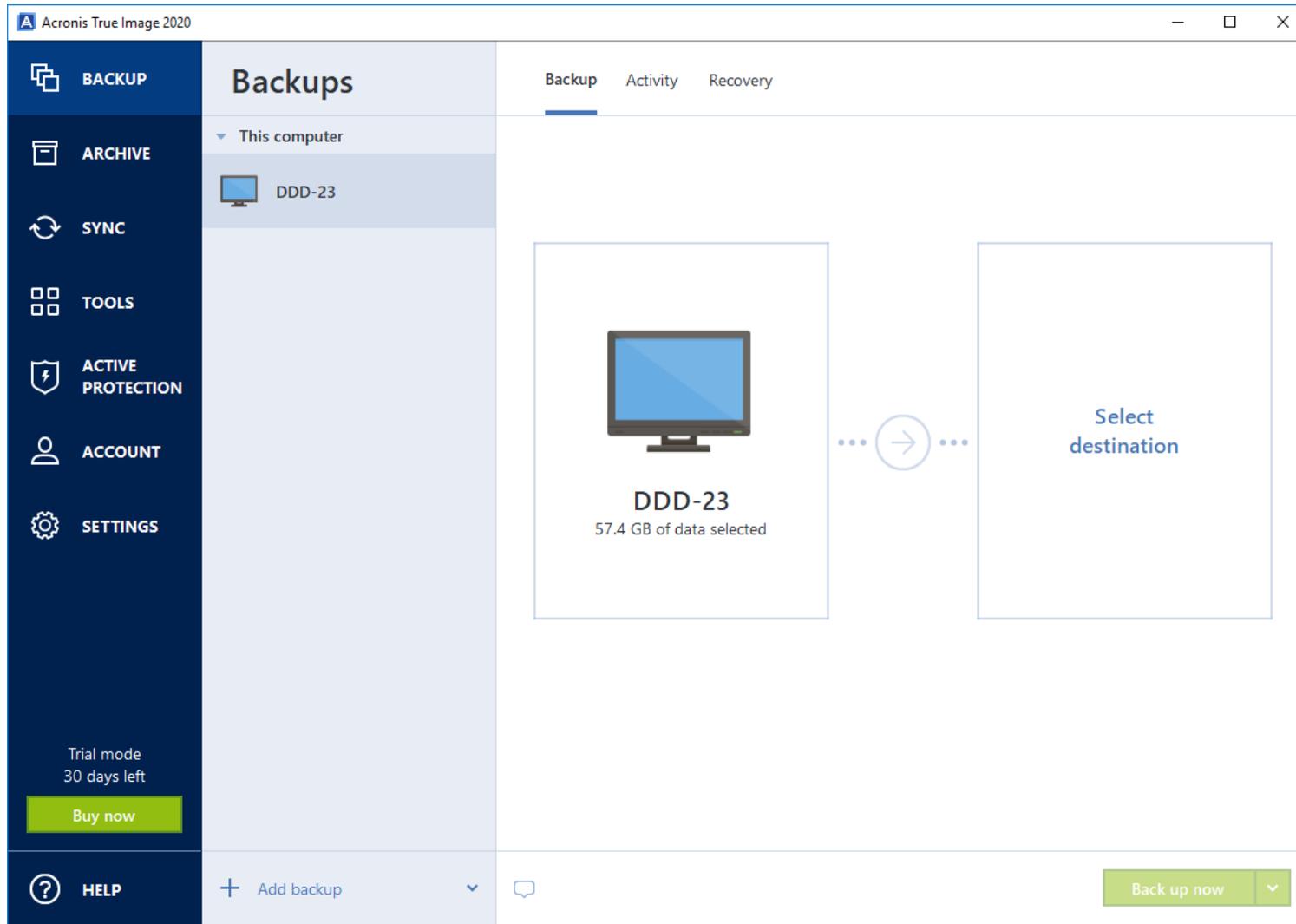


Figure 1 – Home screen

Backblaze Personal backup

Backblaze Personal backup is a backup software that supports continuous user and some other file backup only to the cloud. It is an easy-to-use tool. The first backup to the cloud starts automatically after the installation. In the settings, the user can define excluded folders and file types. The windows folder can't remove from the exclusion list.

The local backup option and the full system backup is also missing from the software itself.

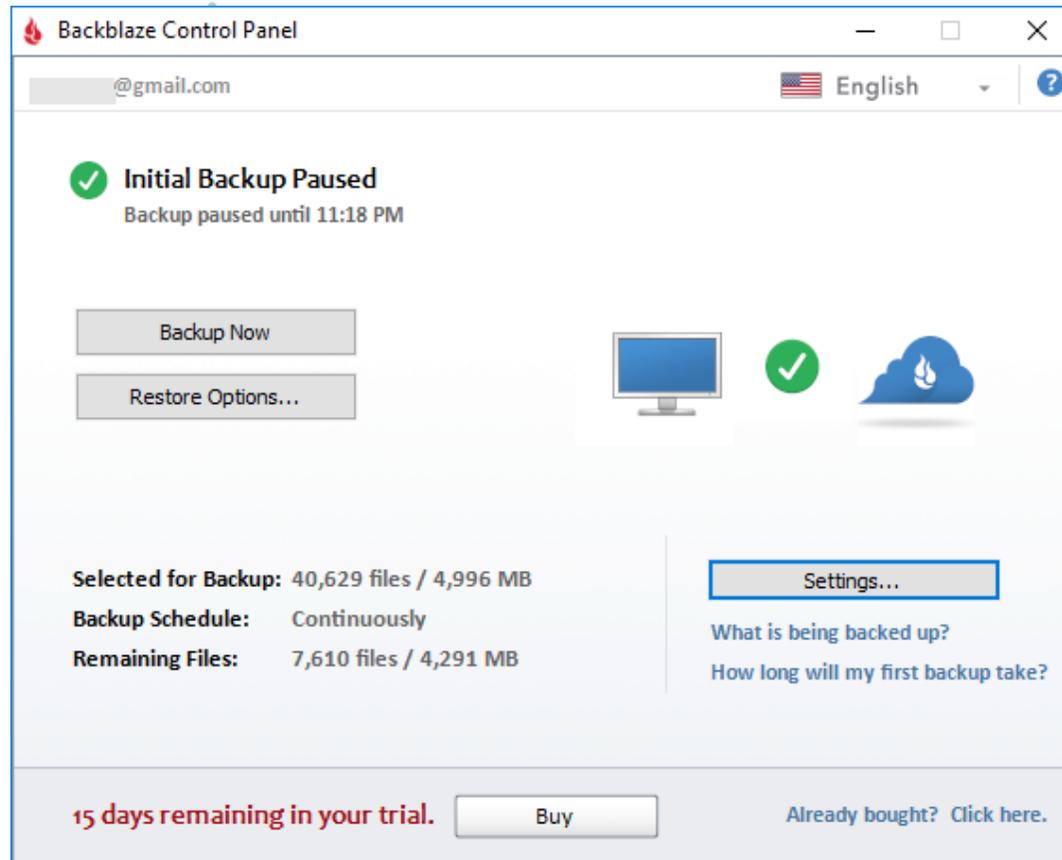


Figure 2 – Home screen

Carbonite Safe – One Computer

Carbonite Safe backup is a backup software that supports continuous user and some other file backup only to the cloud. It is another easy-to-use tool with minimal setting options. The first backup to the cloud starts automatically after the installation. A coloured dot on the file or in the folder shows that is it uploaded or not to the cloud.

The local backup option and the full system backup is also missing from the software itself.

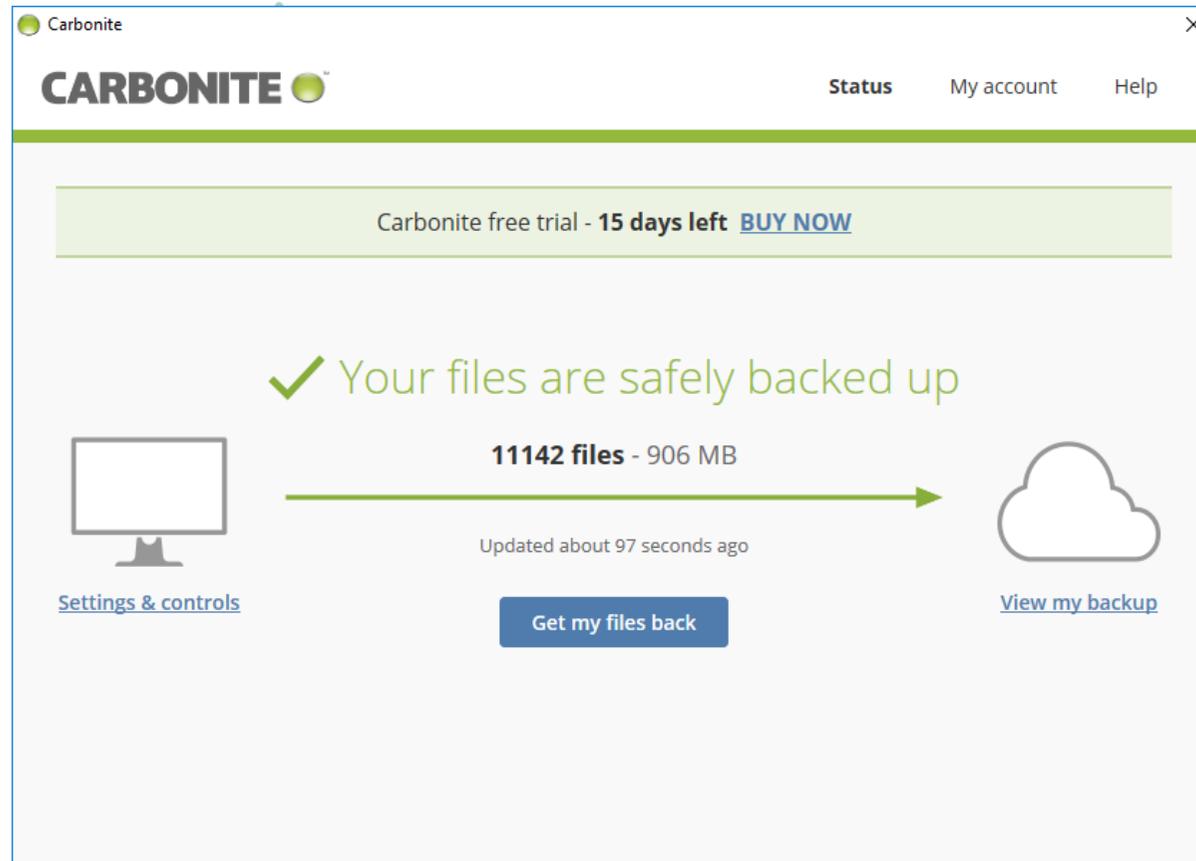


Figure 3 – Home screen

IDrive

IDrive is a hybrid cloud data backup service – it's also an online storage service and a file-syncing service. It supports the full disk image backup locally, and replication of it to the cloud.

In spite of the missing the requirement for a third-party tool to create an emergency rescue disk, IDrive backup is still a practical choice for many home users. However, in our tests, IDrive was almost the slowest application to backup data to the cloud.

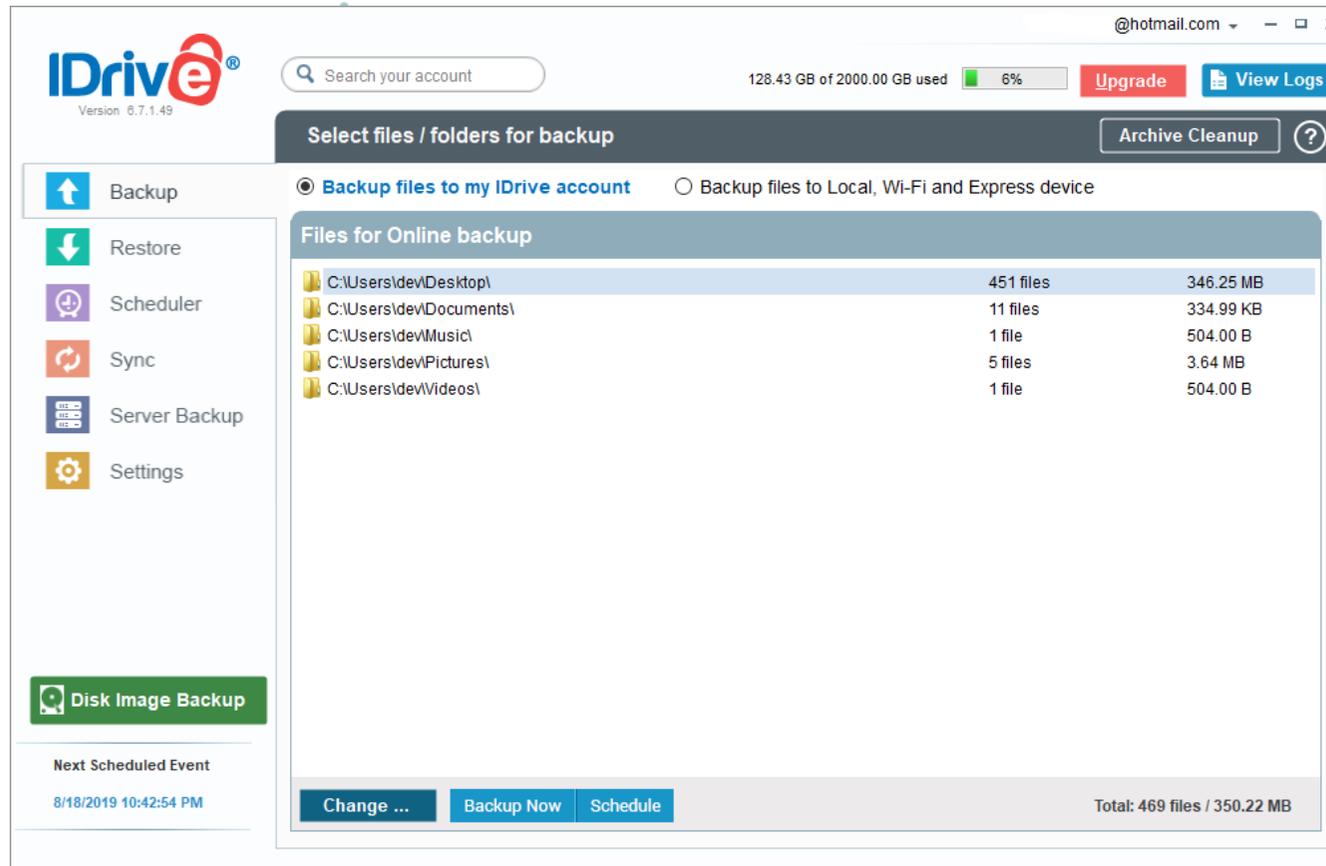


Figure 4 – Home screen

Appendix

Methodology used in the assessment

1. The tests were conducted using the same hardware and network configuration.
2. Windows 10 64-bit operating system was used.
3. Testing was conducted with all systems having internet access. The upload speed was limited to 100 Mbit/s.
4. Each individual test for each backup application was conducted from a location in Europe.
5. All backup applications were fully-functional trial versions.
6. All testing was conducted during Q3 2019.
7. An individual cloud backup application was installed into to OS using default settings.
8. Every test time result is the average of three timing measurements.

Physical machine specification:

Four Dell Latitude E6420 laptops were used. Each backup application had a dedicated machine.

- CPU: i5-2520M
- Memory: 4 GB
- Storage: 120 GB SSD
- For the dual protection test an external Samsung SSD T5 Model was used

Methodology used in Backup to Cloud / Full Backup test

1. 20 gigabytes, 22251 files were used. It's equal to the clean Windows 10 x64 minimum file size.
2. From the file size view we used small, average and large files from 10 bytes to 100 megabytes.
3. Only the Acronis support almost all file types from the tested products in file-level backup. It means that the selected file types had to support by all product. It was necessary to assure that all product use exactly the same files.
4. Used file types: txt, doc, docx, xls, xlsx, ppt, pptx, jpg, png, pdf, zip.
5. The sample set was copied locally to the C drive.
6. The backup application was started to back up the sample set to the cloud.
7. During the test, the Windows performance monitor and Task manager were run.
8. Backup time was measured.

Methodology used in the Backup to Cloud / Incremental Backup test

1. 1 gigabyte, 43 files were used.
2. Used file types: mp3, pdf, png, docx, jpg, zip.
3. The sample set was copied locally to the C drive.
4. The backup application was started to backup the sample set to the cloud.
5. During the test, the Windows performance monitor and Task manager were run.
6. Backup time was measured.

Methodology used in Dual Protection test

1. The full C drive size was 35 gigabytes.
2. The backup application was started to back up the whole C drive to the external SSD.
3. During the test, the Windows performance monitor and Task manager were run.
4. Backup time was measured.