

## Understanding Online Backup

Although the Netwise Hosting Blog already contains a lengthy and detailed article on the importance of online backup, it didn't really go far enough in helping users to understand backup as a technology - and how to use it.

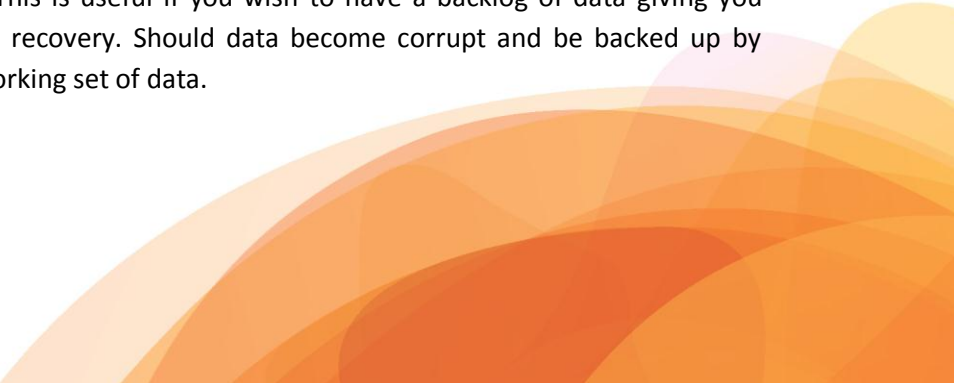
Online backup can essentially be broken down in a number of ways. Our first article primarily discussed the physical differences in various forms of backing up data. This included various popular methods, such as local backups, online backups and tape-drive backups etc. The different forms of backup were discussed in relation to how important off-site backups are in ensuring mission-critical data is kept secure. But as stated, after coming to the balanced conclusion that online backups are a quick and efficient way to keep your data out of harm's way, the discussion ended.

Now we can explore the world of online backups in more detail, with more information regarding how it's done and just how simple it can be to own a backup solution with Netwise Hosting.

First let's break down the various forms of online backup into their primary types. These are full backups, differential backups and incremental backups. You may find other more varied methods if searching online, but the three listed here are the largest to factor in when planning an online backup strategy.

Full backups are essentially what they sound like - complete and full uploads of all the data within your chosen directory to the remote system. This is used to establish baseline data for disaster recovery. A full backup is normally the first action to be undertaken when starting an online backup strategy. Because your online account is fresh and completely empty, a full backup allows the system to retain your data for updating at a later date.

The first method of full backup after you have set your baseline would be to continue with a single full backup every day, which would fully overwrite the original data replacing it with the new data. The major downfall here is the time taken to complete such a data transfer. Because not every file on the system will have changed from day-to-day, it would be a waste of time and resources to employ this method too often. It can be useful however for special backups should you wish to rewrite your baseline data, or if you wish to use a media rotation, of which all the relevant parameters can be set within your chosen backup software. This sets up a defined number of backups which enter a circular rotation. If you were to set up a 7 day rotation, you would have a separate set of backup data for each day of the week. Once you enter the 8th day, the 1st day's data would be overwritten (and so on). This is useful if you wish to have a backlog of data giving you greater flexibility over your disaster recovery. Should data become corrupt and be backed up by mistake, you can revert to the last working set of data.



The second of the primary methods is a differential backup. This should not be confused with an incremental backup which will be explained in more detail further into this article. A differential backup includes all of the data that has changed since the last full or incremental backup. This utilises two sets of data on your accounts. The first is the full set of data established as the baseline during a full backup. The second is the differential data, stored as a separate set of data and includes only the differences in information between the baseline and this new differential backup. This second set of data is then overwritten each time a new differential backup is completed, leaving the baseline untouched. All that is required to restore a system using this method is the full set of data and the differential set of data. This can also be setup as a media rotation schedule, should you desire.

The third of the listed methods is an incremental backup. This utilises just one set of data by including all changes to the baseline in the same set of data. This means that less space is used by employing just one set of data. Any changes or additions to data since the last full or incremental backup are added to the same set of data. This method of backup is fast, as only the changes are sent to your accounts.

It all comes down to choice, and how you wish to implement your own set of backup methods. The most successful backup routines often employ a mix of certain backup types depending on the situation at hand, however it should be understood that it is not good practice to mix differential and incremental backups together. The Netwise Hosting system also gives the option of compressing and/or encrypting your data, which further helps save space and gives far greater security.

You should also take note of calculating the space you require when purchasing an online backup solution. The space needed will vary depending on the type of solution (or combination of solutions) you opt for. For instance, a full backup media rotation will need several times more space (at the very least) than in the case of an incremental backup.

We recommend the use of Cobian Backup, which is a free open-source solution with all the tools and features of more expensive options. Other options can be found in this comprehensive list. If you would like any further information on the particular backup solutions provided by Netwise Hosting, feel free to visit our main site or contact us with more detailed queries.

Remember, our online backup solutions complement any dedicated server packages perfectly, and greatly help to reduce the risk of permanent critical data loss.

