

Lab – Backup Data to External Storage

Objectives

Backup user data.

Part 1: Use a local external disk to backup data

Part 2: Use a remote disk to backup data

Background / Scenario

It is important to establish a backup strategy that includes data recovery of personal files.

While many backup tools are available, this lab focuses on the Microsoft Backup Utility to perform backups to local external disks. In Part 2, this lab uses the Dropbox service to backup data to a remote or cloud-based drive.

Required Resources

- PC or mobile device with Internet access

Part 1: Backing Up to a Local External Disk

Step 1: Getting Started With Backup Tools in Windows

Computer usage and organizational requirements determine how often data must be backed up and the type of backup to perform. It can take a long time to run a backup. If the backup strategy is followed carefully, it is not necessary to back up all files every time. Only the files that have changed since the last backup need to be backed up.

Microsoft Windows includes backup tools that can be used to backup files. In versions earlier than Windows 8, you could use Backup and Restore to backup your files. Windows 8.1 ships with File History which can be used to back up the files in the Documents, Music, Pictures, Videos, and Desktop folders. Over time, File History builds a history of your files, allowing you to go back and recover specific versions of a file. This is a helpful feature if there are damaged or lost files.

Windows 7 and Vista ship with a different backup tool called **Backup and Restore**. When an external drive is selected, Windows 7 will offer the chance to use the new drive as a backup device. Use Backup and Restore to manage backups.

To access the Backup and Restore utility in Windows 7, follow the steps below:

- Connect an external drive.
- Execute the Backup and Restore by using the following path:

Start > Control Panel > Backup and Restore

To get started with File History in Windows 8.1, follow the steps below:

- Connect an external drive.
- Turn on File History by using the following path:

Control Panel > File History > click Turn on

Note: Other operating systems also have backup tools available. Apple OS X includes Time Machine while Ubuntu Linux includes Déjà Dup, by default.

Step 2: Backing up the Documents and Pictures folders

Now that the external disk is connected and you know how to find the backup tool, set it up to back up the Documents and Pictures folders every day, at 3 a.m.

- a. Open **Backup and Restore** (Windows 7) or **File History** (Windows 8.x).
- b. Select the external disk you want to use to receive the backup.
- c. Specify what you want to be backed up to the disk. For this lab, choose the **Documents** and **Pictures** folders.
- d. Set up a backup schedule. For this lab, use daily at 3 a.m.
Why would you choose to perform backups at 3 a.m.?

- e. Start the backup by clicking the **Save settings and run backup**.

Part 2: Backing Up to a Remote Disk

Step 1: Getting Familiar With Cloud-Based Backup Services

Another option for a backup destination is a remote disk. This might be a complete cloud service, or simply a NAS connected to the network, remote backups are also very common.

- a. List a few of cloud-based backup services.
I personally run a NAS that runs QNAP services. Google drive is another common one, especially in education. Dropbox is another common one.
- b. Research the services you listed above. Are these services free?
QNAP is free but as the user runs their own server you pay for hardware. Google drive is free but you can pay for a larger drive. Drop box also is free but has premium memberships.
- c. Are the services listed by you platform dependent?
Only QNAP as it requires specific hardware which could be defined as a platform.
- d. Can you access your data from all devices you own (desktop, laptop, tablet and phone)?
Yes, all of the services have mobile apps and access through web browser.

Step 2: Using Backup and Restore to Back Up Data to the Cloud

Choose a service that fits your needs and backup your copy of your Documents folder to the cloud. Notice that Dropbox and OneDrive allow you to create a folder on your computer that acts as a link to the cloud drive. Once created, files copied to that folder are automatically uploaded to the cloud by the cloud-service client that is always running. This setup is very convenient because you can use any backup tools of your choice to schedule cloud backups. To use Windows Backup and Restore to back up your files to Dropbox, follow the steps below:

- a. Visit <http://dropbox.com> and sign up for a free Dropbox account.
- b. When the account is created, Dropbox will display all the files stored in your account. Click **your name** and click **Install** to download and install the appropriate Dropbox client for your operating system.

- c. Open the downloaded program to install the client.
- d. After the installation is complete, the Dropbox client will create a folder named Dropbox inside your Home folder. Notice that any files copied into the newly created folder will be automatically copied to Dropbox's cloud-hosted servers.
- e. Open **Windows Backup and Restore** and configure it to use the new Dropbox folder as a backup destination.

Reflection

1. What are the benefits of backing up data to a local external disk?
If your drive fails you still have your files. Furthermore it allows for greater accesability as you could take it with you depending on your setup.
2. What are the drawbacks of backing up data to a local external disk?
Depends on the external disk. A well encrypted raid system can be very safe. The only real drawback bitrate can limit upload and download speeds. Furthermore an inexperience used could improperly handle the external drive leading to faults in the data.
3. What are the benefits of backing up data to a cloud-based disk?
If your drive fails you still have your files. Furthermore it allows for greater accesability as you can access your information from the internet.
4. What are the drawbacks of backing up data to a cloud-based disk?
Bit rate limits upload and download speeds and depending on your internet plan data can be expensive. Connecting anything to the internet also significantly increase the risk of the device being compromised. Also the cloud service is beyond your control and thus they could mishandle your information or have a leak.