Backup Instructions - Computer Club

How to preserve your data

Why do we need to?

- Sometimes files on a Computer just become damaged or mysteriously disappear
- Worse still a Computers Hard Drive can become damaged for no obvious reason
    - The average life is said to be 4y depending on usage or how carefully it's treated
    - Sometimes it's a lot less than 4y
    - Sometimes it fails with no warning and sometimes the error messages give you early warning
- What happens when the Hard Drive fails?
    - Sometimes we get blank screens when we start up
    - Sometimes Windows asks you to wait while it fixes start up – but never does
    - The simple truth is that your Windows program is also damaged and when the computer tries to run it – It can't
    - So everything on that drive is probably lost, sometimes you can pay for file recovery but there are no guarantees and it is expensive.
    - Sometimes you get lucky and only the system files are damaged, and you can resolve it by re installing your operating system. Sometimes this means re formatting the drive which will lose all of your data. Sometimes a Repair Disk can help you and avoid this loss of data.

What happens now?

You will probably need to do the following

- **Phone PC World? Phone me?**
- **We may all ask the same questions**
- First question, have you got a system repair disk handy? STEP 1
- Second question, do you have a windows image? STEP 2
- Third question, have you been backing up your data? STEP 3

What's a repair disk?

It's a DVD with enough programs on it to spark your computer back into life so that we can just do enough to get you up and running again. You can also use a Memory Stick or Flash Drive or Pen Drive.

This is how we make one

Create a System Repair Disk DVD (There is an alternative for those without a DVD Drive)

The steps are simple

1. Place a DVD into the computers Optical Disk Drive (DVD Tray) and close it
2. Search Backup Settings from the search box in the bottom left of the screen.
3. You will see an option in the centre of the screen that says 'Go to Backup and Restore (Windows 7)'
4. Click on the option
5. On the left of the new window is a small list of actions one being 'Create a System Repair Disk'
6. The following screen will pop up. It will show the Drive letter. In my case it's H: in your case it could be different. As long as it shows the BD-ROM which is another name for your DVD Drive, you can move on to the next stage. If it can't find a drive, then it may have a fault, in which case you cannot proceed.

If you get to this stage, click on Create the disk.
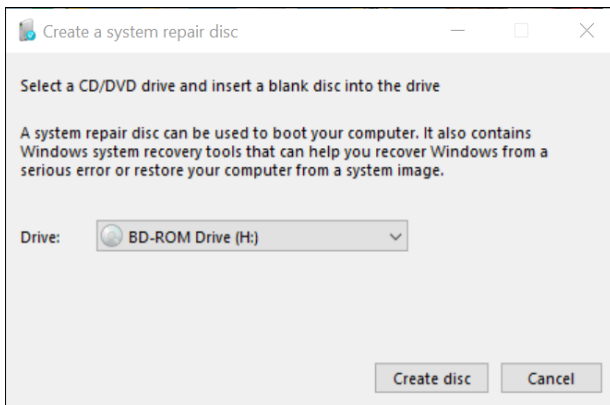
It will take about five minutes.

When complete, remove the DVD for the tray. You will now need to put it into an envelope. Mark the envelope with the words

"Repair Disk
Computer Description (e.g. HP Laptop)
Date
Windows 10 (or whatever version you are backing up)."
Put it somewhere that you will find it easily should you need it.

In use, should your computer fail to boot up, i.e. fail to start properly and you can't logon.
- With the power on, open the DVD tray and insert your disk.
- Close the tray.
- Turn the power off, wait 10 seconds and then Power ON

In many cases the computer will try to start up from the DVD. Sometimes it won't.

Either way you will probably need help from here. At least you have the tool to start the repair.

This disk holds all the files, drivers and programs to run your computer in a limited way until you can resolve the original problem.

If all else fails, you can borrow one of these.

If you only have a USB port and no DVD drive

To create a USB recovery drive

1. From the taskbar, search for **Create a recovery drive** and then select it. You might be asked to enter an admin password or confirm your choice.
2. When the tool opens, make sure **Back up system files to the recovery drive** is selected and then select **Next.**
3. Connect a USB drive to your PC, select it, and then select **Next > Create.** A lot of files need to be copied to the recovery drive, so this might take a while. I would suggest a 30 Gigabyte drive. This will allow you to repair the Windows system should the need arise. If you use a smaller drive you may be limited to using a reduced tool set.
4. Mine needed at least 16GB. If you would like to use the drive for other storage, I suggest that you partition the drive. That will require your drive to be formatted as an NTFS file system and not FAT16 or FAT32 etc. Can be tricky.
5. On the next screen make sure that 'backup files to recovery drive is ticked'

So now I have a USB repair drive, I put it in the slot, turn on the laptop and hopefully it will start to run.

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It will whiz a load of data across your screen and eventually it will give you an option to recover from a WindowsImageFile

If you have been doing regular backups the chances are that you have one of these. Depending on your settings though it may be an old copy

Depending on age it may even pre-date windows 10. This isn't a problem, but it makes recovery long winded as you will need to reload Windows 10 from Microsoft online.

First things first though
We need to create an up to date WindowsImageFile

If you create one on your backup drive it will overwrite any existing version. If you want to keep the old version, make a folder for it and move it into the folder. It takes up a lot of space though.

## Making a WindowsImageFile Backup

Our next stage is to create a perfect copy of your computer's Hard Disk Drive (HDD). This is the most important part of the process in that should your Hard Drive fail, it will allow you to replace the drive and restore it back to its condition at the point that you last created this Image. In many cases this is the only way of recovering your Windows 10 Operating System without full installation from disks which can be a long process for Windows 10 users who downloaded the upgrade. It will also recover and software that you had installed such as Microsoft Office.

It is not necessary to carry out this operation frequently. Only when you make a significant change to your computer that cannot be restored by the restoration of your personal data. A good example is an Operating System Upgrade to Windows 10. There are no disks to restore from. Another example is the installation of specialist software that can't be re-installed from disks or similar. This does not apply to your own files, folder, pictures, videos etc. We will deal with these when we backup your personal data. Very large Windows Updates are also a good point at which to create a new WindowsImage.

Club members have been advised to generate a new WindowsImageFile each time that your backup runs, it's not essential but it avoids the risk of you forgetting to do it.
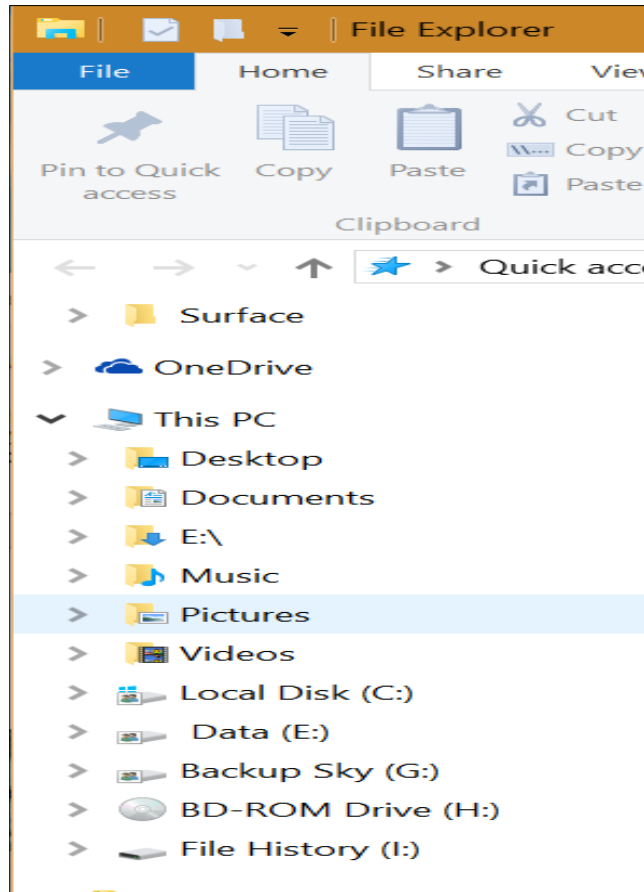
The steps are as follows.

1. Connect your Portable Hard Disk Drive to your computer
2. Make sure that you can see it in your list of Drive locations.
3. To do this, first click the File Navigator Icon on your Task Bar. That's the one that looks like a folder.
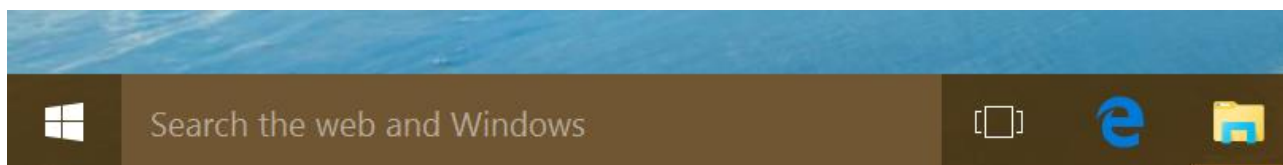
4. Scroll down until you can see your drives listed. They are identified by a Letter.

5. If you can see the drive that you connected, then you are ready to move on to the next step. So, return to the Backup and Restore (Windows 7) Screen referred to earlier.

6. Select the option from the left of the Backup and Restore screen to 'Create a system image'
7. You will be asked where you want to create the system image and the computer will search for connected backup drives
8. Select option 'On a hard disk'
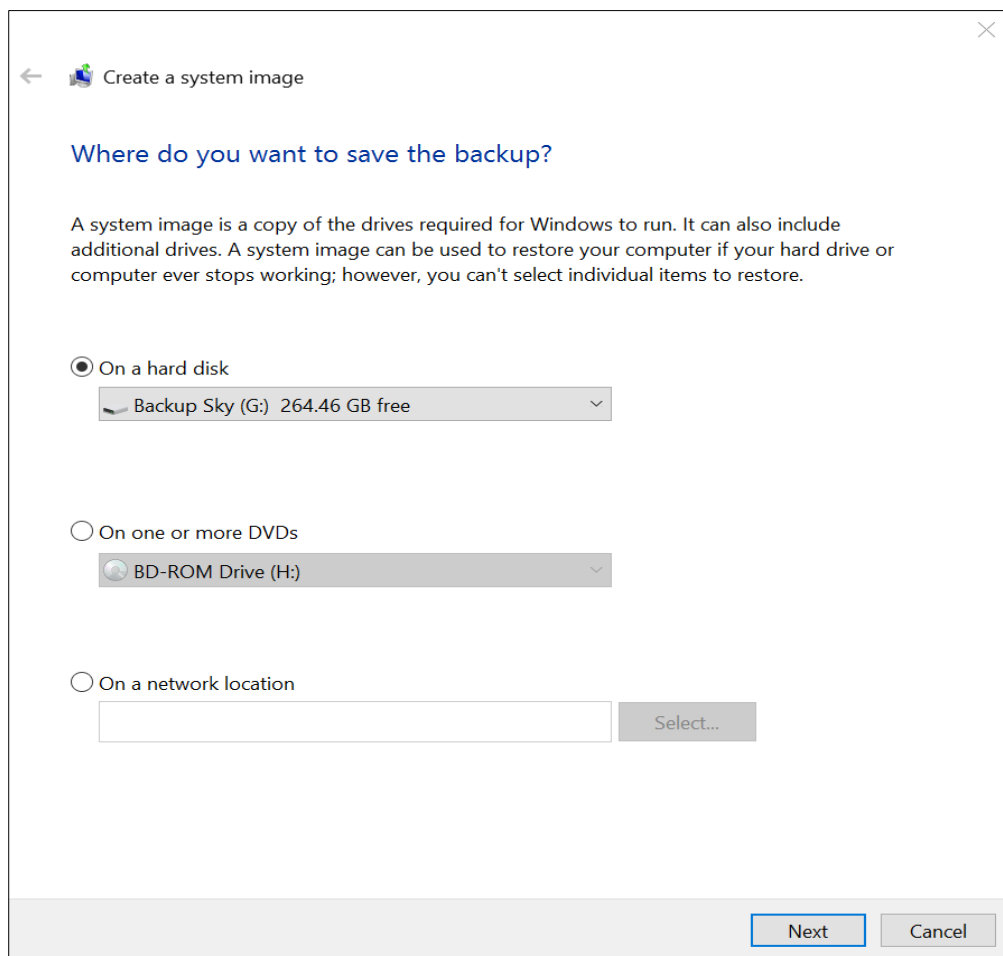
9. Then from the Drop-Down List, select the drive letter of your storage device. Mine was (G:)
10. Click Next
11. You will then be asked, which drive you want to include. This will usually default to the C: drive. If not, click on the (C:)(System) tick box. Note that the display tells you how much space that you need and how much space is available. If there is not enough space, this image will not be created.
12. Click Next
13. If all looks well and the screen shows the correct backup location and the correct drives to be backed up, you can click to start the backup. Otherwise, cancel and begin again.

This process can take about 20 minutes, maybe a lot more.

Once complete check the drive to make sure that a folder named 'WindowsImageFile' has been created.

So, should the day arrive where your Hard Disk Drive fails. You can replace it with a new one, boot your PC from the repair disk, and use that, to load the image that you created. This will give you a working computer. But remember that it will only restore what you had on your computer on the date that this file was created.
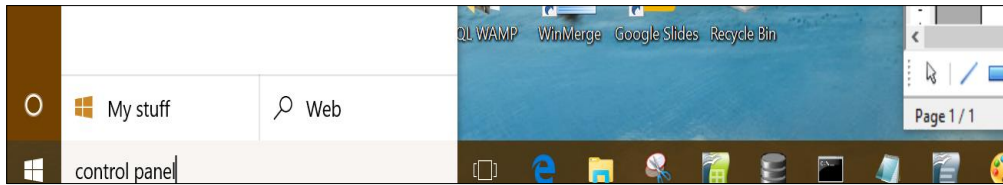

So, you need to restore your most recent personal data.
You have been storing your most recent personal data haven't you?
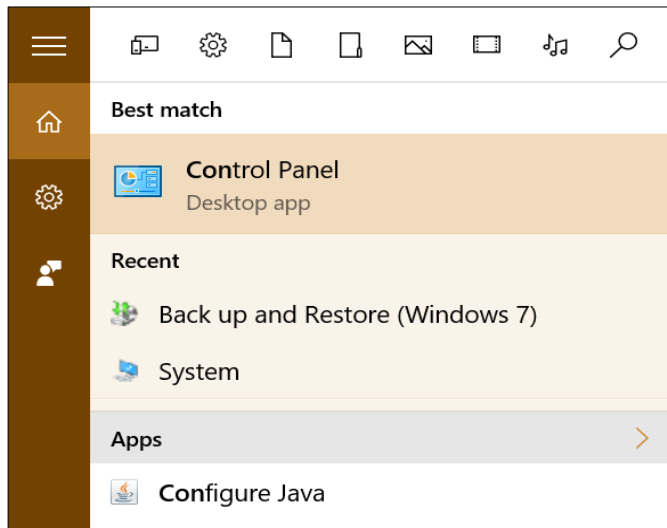If not, this is how to do it.

The Windows Backup Regime

First open the control panel
Type 'control panel' into search box in bottom left corner
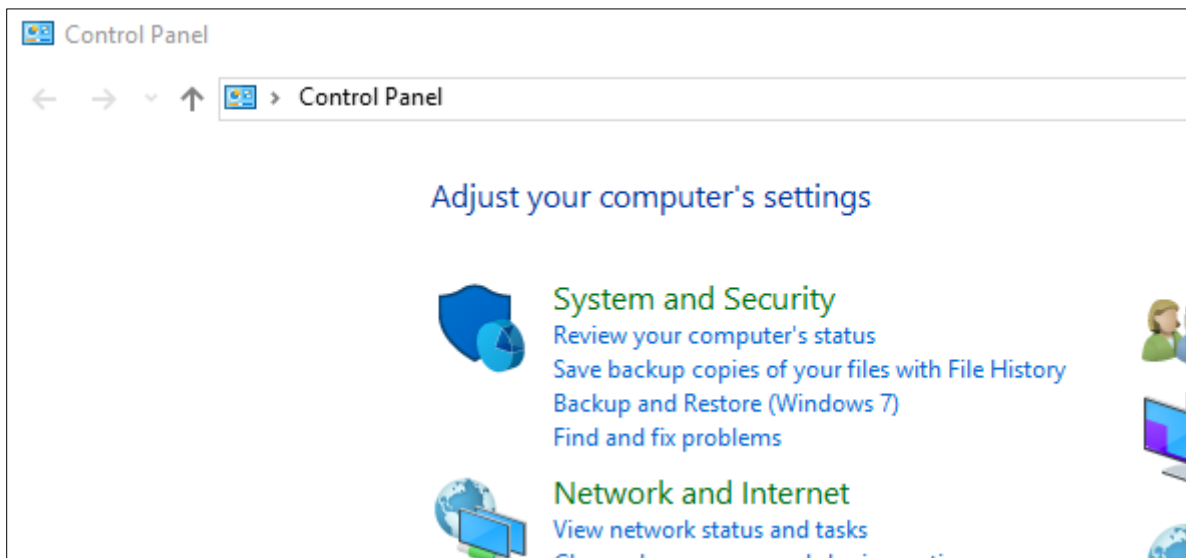
Usually you only need to type the first few characters and a list appears on the left of the screen At the top will be the Control panel App

Make sure that it says 'Desktop App' below it.
You will see a section named 'System and Security'
Under this you will see 'Backup and Restore (Windows 7)
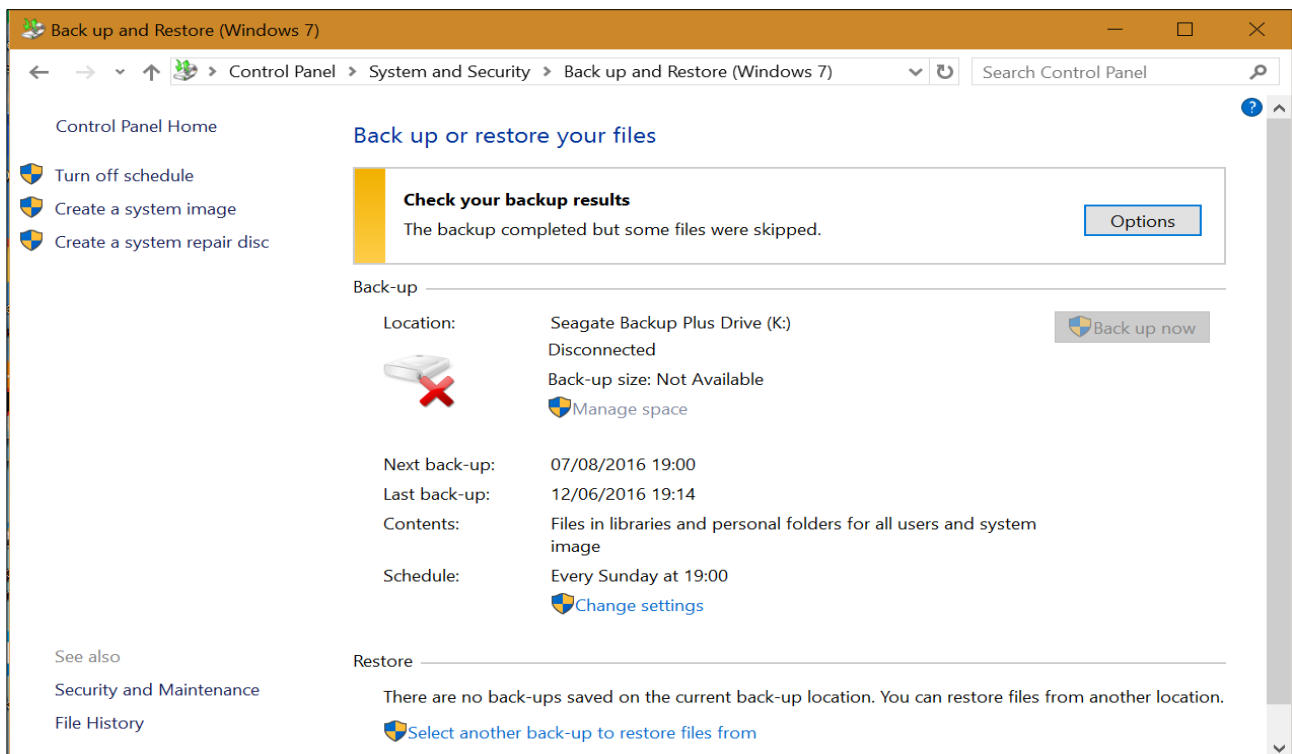Choose this option a shown below

If your screen looks different, try right clicking with the mouse pointer in the bottom left of the screen. A menu will appear. Hopefully Control Panel will appear on the Menu. As these are configurable yours may be different.

After selecting the backup option, the following screen will appear

We will now create a scheduled backup of your personal files

How to create scheduled backups of your personal data

Whenever we edit or create new documents on our computer we change the contents of our personal data folders. The same when we delete documents. These may be images, videos, word documents etc.

If you are a regular computer user this may happen every day, otherwise it may be a weekly event or less frequently.

Either way, you need to get into the habit of backing up your files at least once a week or more frequently.

This will ensure that your precious contents can be restored if your computer breaks or is lost.

The steps are simple, and we will use the Portable Hard Disk Drive on which we created our WindowsImageFile. So plug it in, and check that you can see it on your PC as explained above.
Once again, we go to the Backup and Restore option on Control Panel.

Follow these steps.

1.   The first step is to change the settings. Its shown in the backup section under Schedule

Check your backup results

The backup completed but some files were skipped.

Back-up

Location:	Seagate Backup Plus Drive (K:)
	Disconnected
	Back-up size: Not Available
	🛡 Manage space
Next back-up:	07/08/2016 19:00
Last back-up:	12/06/2016 19:14
Contents:	Files in libraries and personal folders for all users and system image
Schedule:	Every Sunday at 19:00
	🛡 Change settings

Restore

2. When we click on it we are asked to wait
3. Then we get to choose where we store the backup. Choose the drive letter of your Portable Hard Drive.
4. Click Next
5. Then we get to choose which folders we want to backup. Select the option that says 'Let Me Choose'

← 🖳 Set up backup

What do you want to back up?

○ Let Windows choose (recommended)

Windows will back up data files saved in libraries, on the desktop, and in default Windows folders. Windows will also create a system image, which can be used to restore your computer if it stops working. These items will be backed up on a regular schedule.

◉ Let me choose

You can select libraries and folders and whether to include a system image in the backup. The items you select will be backed up on a regular schedule.

6. Next
7. Our folder options are now listed
8. Click the Right Pointing Arrow next to Local Disk (C:) for more options

∨ 🖥 Computer
    › ☐ 💾 Local Disk (C:)

What do you want to back up?

Select the checkbox of the items that you want to include in the backup.

- ☐ 📁 easeus_tb_cloud
- ❯ ☐ 📁 ESD
- ☐ 📁 Logs
- ☐ 📁 PerfLogs
- ❯ ☐ 📁 Program Files
- ❯ ☐ 📁 Program Files (x86)
- ❯ ☑ 📁 ProgramData
- ❯ ☐ 📁 Recovery
- ❯ ☐ 📁 System Volume Information
- ❯ ☐ 📁 System.sav
- ❯ ☑ 📁 Users
- ❯ ☐ 📁 wamp64

☐ Include a system image of drives: Unnamed drive, (C:)

A system image is a copy of the drives required for Windows to run. You can use it to restore your computer if it stops working.

9. This expands the list
Note above that I have chosen a single folder, you will need to select your own individual folders or let Windows choose for you if you are not sure what to do.

10. **Remove** the Tick from 'Include a System image of drives' (OPTIONAL – Club members advised to keep the tick in place unless you have a full understanding of the process and already have a WindowsImageFile)

- ☐ 📁 easeus_tb_cloud
- ❯ ☐ 📁 ESD

☑ Include a system image of drives: Unnamed drive, (C:)

A system image is a copy of the drives required for Windows to run. You can use it to restore your computer if it stops working.

| Next | Cancel |

11. Click Next

12. Review Your selections on the screen and if all is well click 'Save settings and run backup'

When Windows first creates a backup of your files it will copy all files that you included in the backup. After that it will only backup files that have been added or changed in some way. At periodic intervals a complete new set will be created. When the time to restore your data files comes around, the system will default to the latest copy of all of the files, but you can trawl back for earlier copies.

Other Considerations

The above steps are the minimum necessary to get your computer running after a major failure. Many people don't bother until it's too late. The choice is yours, the WindowsImageFile may one day save you £100 for a new Windows 10 copy. Only you can estimate the value of your personal data.

Mail Systems

If you use a webmail service such as hotmail, btinternet, gmail, iCloud, all of your mail is likely to be stored remotely by your service provider and does not require backing up.

If you use AOL, Microsoft Office Outlook, Windows Live Mail or another similar mail client that required a program to install on your computer to make it work. Especially if you know that it's a POP3 mail client, you may well have a folder or special file on your PC that you need to backup with your personal data. In fact, Outlook has its own Backup button to save old emails. If you are not sure whether your mail system will be backed up, please ask me.

Scheduled backups

It is important to make sure that you have a schedule setup for your backups to run automatically. I think that the default is Sunday at 7pm once a week. You can change this.
From the Backup and Restore Window choose 'Change Settings' Follow the process through to where you select whether Windows should choose what to backup or yourself. Click Next and you will see an option to Change Schedule The options are simple You can choose Frequency, Day and Time.

You should ensure that your computer is turned on at the appointed day and time for the backup to take effect. There is no guarantee that the backup will run if your computer is switched off when the backup is due to be run. Windows incorporates a task scheduler. There are settings that define what the system should do if the computer is off when the backup is due. There are also settings that ensure that the computer wakes from sleep when a backup is run. We will cover this in a separate session. Until then the rule is 'Turn it on when due'

Windows File History Backup

This was introduced by Microsoft in Windows 8 to replace the traditional Windows 7 Backup and Restore as discussed above. The latter though remains very popular. File History is an excellent tool and most users should take advantage of it, it's free and works well and is simple to setup and use.

Setting up

To enable this feature, go to The Backup and Restore Screen referred to earlier. You will see an option called 'File History'

Before you start using File History to back up your files, you'll need to set up a drive in the same way that we referred to earlier. File History only saves copies of user folders by default but there is a feature that allows you to add or remove any folder.
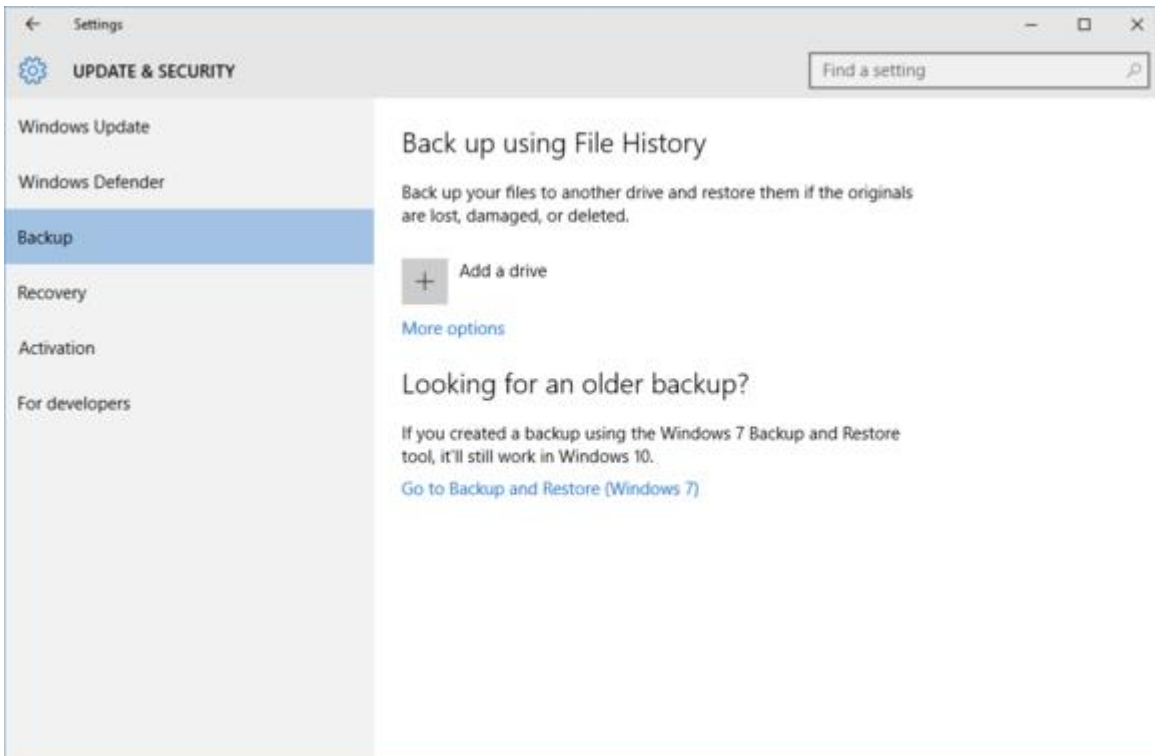
Once you're there, connect your external hard drive to Windows and then click the "+" next to *Add a drive*. You'll see a prompt to choose an external drive, choose the one you want, and that's it. An on/off slider will now appear under a new heading called "Automatically back up my files." Turn it on. File History is now archiving your data
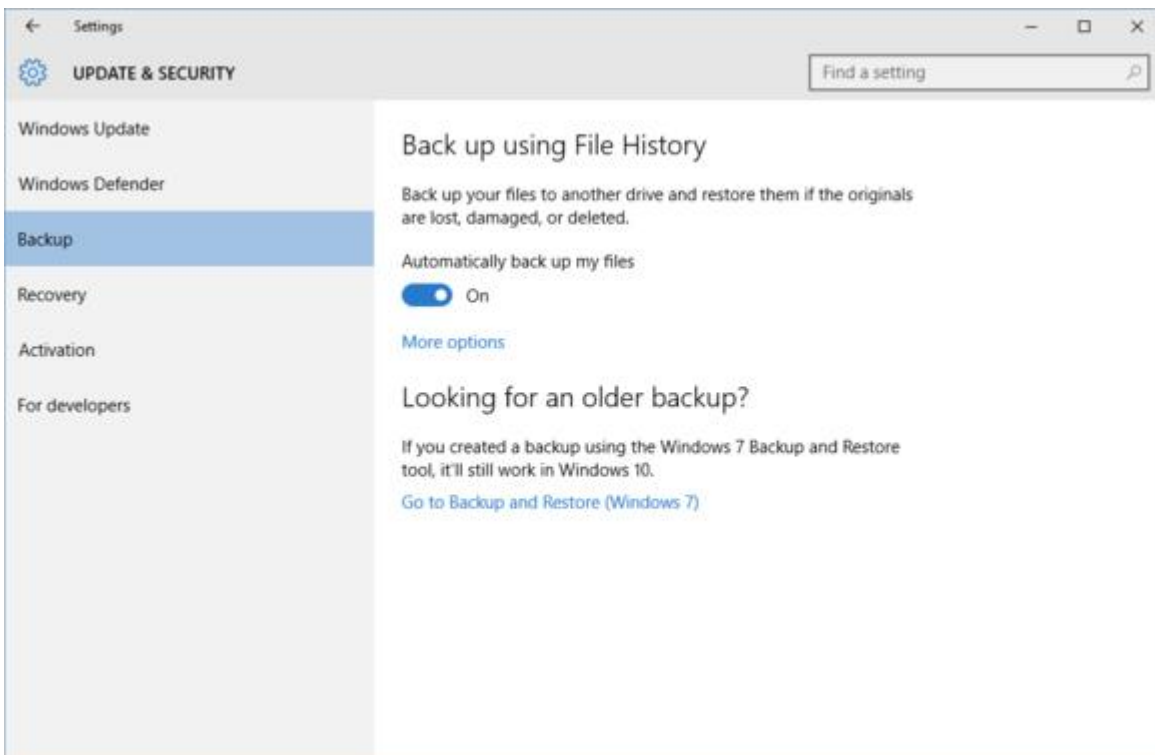

Click on *More options* to change File History's defaults.

This is useful as it allows you to select folders that you may now wish to backup, it also tells you how much space you will need to get things started

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To add other folders to File History, or to remove some, click on *More options* under the on/off slider and scroll down to "Back up these folders." I suggest that you use the C:/Users Folder. This will backup your personal files as long as this is the area where you are saving them.
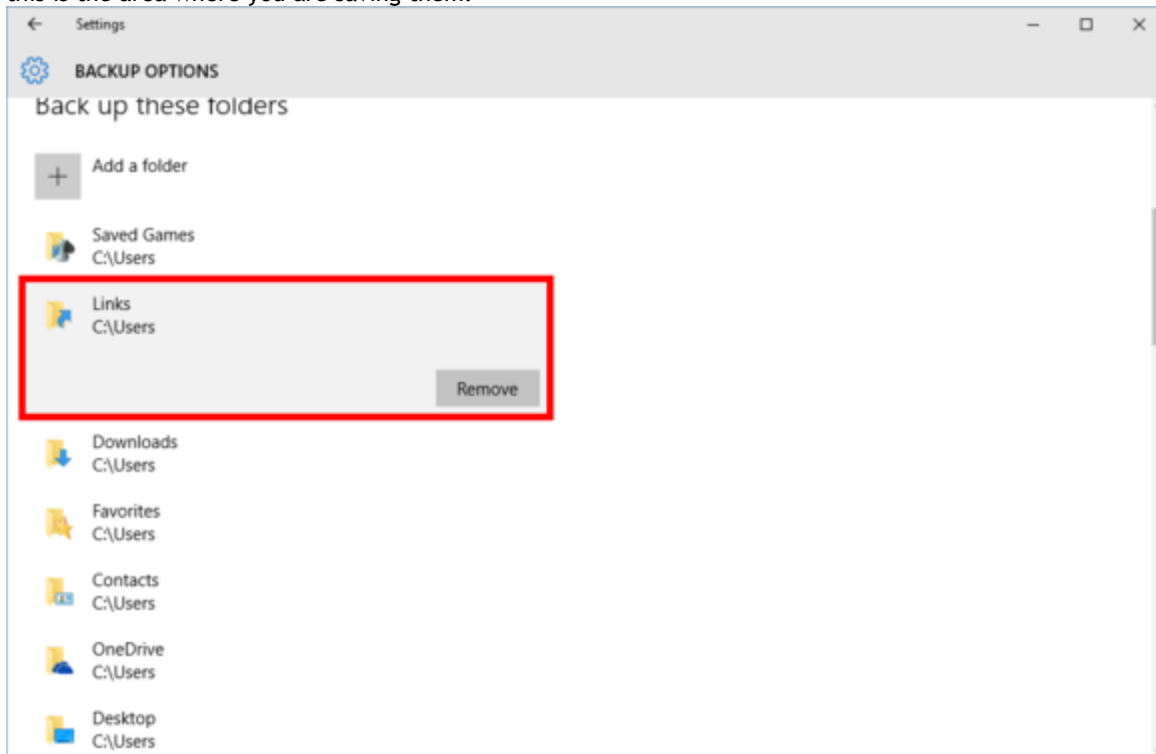
Below that list you can also create a list of folders to specifically exclude or stop backing up to the currently selected drive and choose another one. You can also select how often File History backs up your files—the default is every hour—and how long Windows stores your revisions. An example here would be Dropbox and OneDrive folders. You don't really need to waste space by backing this up.

Once File History is enabled, a neat new trick to access older versions of a file is to right-click on it in File Explorer, and then select *Properties*. In the new window that opens, select the *Previous Versions* tab for quick access to archival versions of your file.

Restore files or folders using File History

File History regularly backs up versions of your files in the Documents, Music, Pictures, Videos, and Desktop folders and the OneDrive files available offline on your PC. Over time, you'll have a complete history of your files. If the originals are lost, damaged, or deleted, you can restore them. You can also browse and restore different versions of your files. For example, if you want to restore an older version of a file (even if it wasn't deleted or lost), you can browse through a timeline, select the version you want, and restore it.

Follow these steps to restore files or folders using File History.

1. **Search 'Restore your files with File History'.** When open you will see a screen similar to the following
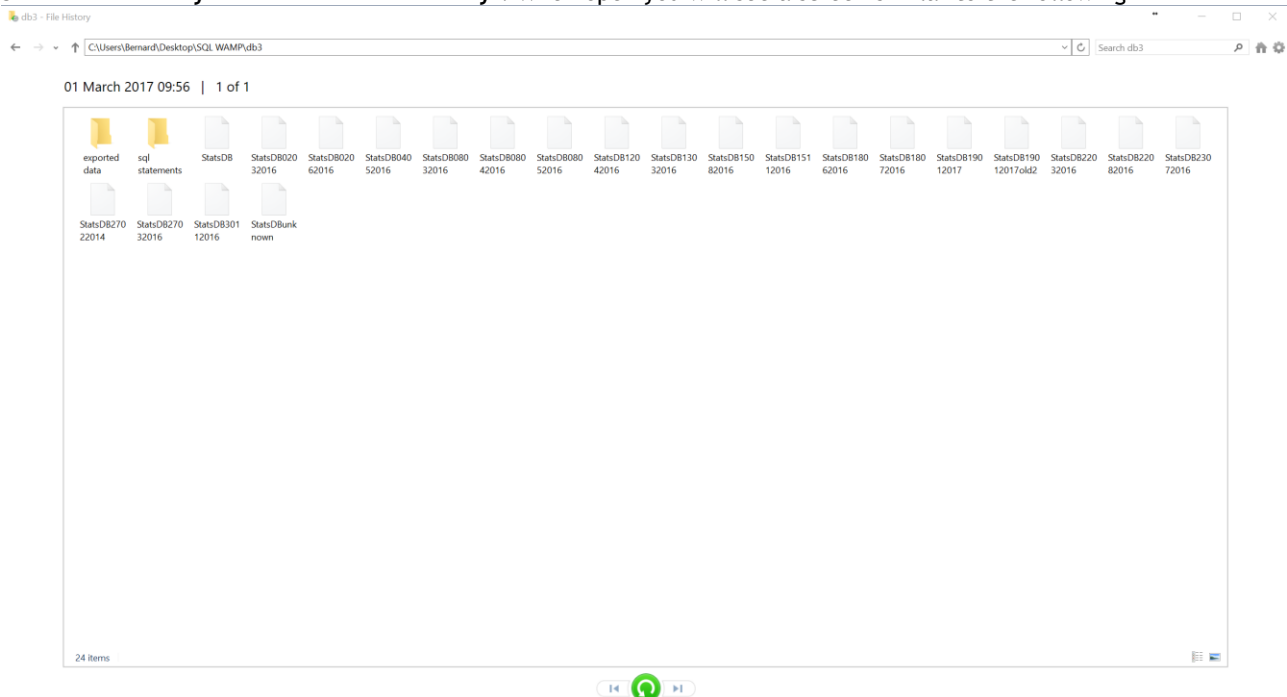
2. Browse to the folder/file location that you wish to restore

3. Select what you want to restore to its original location, and then select the Green Restore button at the bottom of the screen.

4. Having selected a file there is an option to scroll back through earlier versions just in case the most recent is flawed in some way.

   If you want to restore your files to a different location than the original, right-click the **Restore** button, select **Restore To**, and then choose a new location.

As a final point, while File History is great, don't rely on it 100%. Things can go wrong so you need to have at least one other backup system in place.
I have the Windows 7 Backup, File History and Cloud Storage just to ensure that my most important files are protected.

As a final, final point watch out for messages that warn you that your Backup Drive is full. If it is, you need to make some space by deleting older backups. If you need help with this, please let me know.

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