

# Storage Technology

Unit R012 - Understanding tools, techniques, methods and processes for technological solutions

# Storage Methods

- **Once** the data has been **collected** it needs to be **stored** in a sensible location.
- This data might be stored in
  - The **cloud**
  - **Physical** devices
    - **Hard Drives**
    - **Solid state drives**
    - **Optical devices**
    - **Flash memory**

# The Cloud

- The **cloud** is where **data** will be **stored** in secure areas **online**.
- This could be through providers like:
  - Dropbox
  - Microsoft OneDrive
  - Google Drive
- It is made up of a **lot** of **servers** and has a **large storage** capacity and this can be **accessed** from **anywhere** providing you have an internet connection.



OneDrive



Dropbox



Google Drive

# The Cloud

- **Cloud storage** allows for **large files** like music, videos and image collections to be **stored online**.
- This means that the **user requires less storage space** on their device.
- An **issue** that might arise with cloud storage is **security**. Accounts could be **hacked**, so it is wise to consider what exact data is put into the cloud.



OneDrive



Dropbox



Google Drive

# Physical Devices: Hard Drives

- **Hard Drives** uses spinning magnetic disks to store **huge amounts of data**. Modern devices use **HDDs** measured in **GB** and **TB**.
- Files can be **read, edited, re-written** or **deleted** but they have the potential to **break**, due to their **moving parts**.
- Uses include:
  - **Storing the operating system**
  - **Storing files/software** when the computer is not in use or turned off.



# Physical Devices: Solid State Drives

- **Solid state drives** uses flash memory to **store software** and **large amounts of data**. They are generally found in **mobile technology**. Usually measured in **GB**.
- There are **no moving parts**, which means that they are **faster** and more **robust** than hard drives.
- Uses include:
  - **Storing the operating system**
  - **Storing files/software** when the computer is not in use or turned off.



# Physical Devices: Optical Devices

- **Optical devices** are **CDs/DVDs/Blu-Rays** that allow data to be stored onto them.
- On some devices data can be **read** or **written** only on some others it can be **read**, **written** and **re-written** and **deleted**. These are shown with **R** after the type of disk or **RW**, for example: **CD-R** or **CD-RW**.
- Uses include:
  - **Storage** of **data** to be **moved** to other computers
  - **Storage** for **software** to be **installed** on a computer
  - **Storage** for **data** that has been **backed** up.



# Physical Devices: Flash Memory

- **Flash memory** is used in **memory sticks** or **memory cards**.
- They are used to **store** and **transfer** data **between computers** and between devices like **cameras** to computers.
- Uses include:
  - **Saving** small **files** onto memory sticks
  - **Saving photographs** on cameras
  - **Saving contact details** in phones.

