# **Streaming Services**

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With the ability to watch movies and shows on the Internet, many people are canceling their cable services and switching to streaming. (Except for the years when her grandmother lived with her, Michelle has never had cable.)

If you are interested in doing this however, there are things you will want to know before you cancel your service.

Firstly:

#### What Is a Streaming Service?

"An online provider of entertainment (music, movies, etc.) that delivers the content via an Internet connection to the subscriber's computer"

"a service that sends video, music, etc., over the internet so that people can watch or listen to it immediately rather than having to download it, or rather than having to watch or listen at a particular time when something is broadcast"

#### What Is a Streaming Device?

"Streaming media devices connect your TV or home theater to the internet, allowing you to stream content (video, music, movies and sports) through a streaming TV service provider or app."

"A streaming device is also known as a media streaming device or streaming stick. It allows you to stream entertainment content such as movies, TV shows, music, or photos straight to your TV, usually via an HDMI port on the back of our TV."

#### In English Please?

A streaming *service* is a company such as Netflix or Hulu you (may) pay a subscription to watch their selection of videos via the internet.

A streaming *device* is an object, such as Roku stick or Fire stick, you purchase that plugs into your existing TV so you can watch video through the device on your existing television (instead of having to watch on your laptop or tablet or purchasing a smart TV).

Even if you already have a streaming *device*, you may still need to pay for a streaming *service* to watch additional content. (That doesn't seem fair, but to misquote the Dread Pirate Roberts says, "Life isn't fair. Anyone who tells you differently is selling something.")

#### **Streaming Services**

Amazon Prime Apple TV Plus DirectTV Stream Disney Plus ESPN Plus Fubo TV HBO Max Hulu Netflix Peacock Paramount Pus Sling TV Starz

#### **Devices for Streaming**

Amazon Fire Stick Android TV Apple TV Blu-ray Players Google Chromecast Echo Show Laptop PS4 Roku Smart TV Tablet TiVo Xbox One

#### What Kind of Internet Plan Do I Need to Stream Shows?

You need a home Internet Broadband Plan with unlimited data. For the most part, unless your Internet comes from satellite (StarLink, Viasat, or HughesNet) you should most likely have unlimited data. BUT CHECK FIRST. (You don't want an additional bill!)

You will also want to know what speed your Internet connection is. Your ISP (Internet Service Provider) will tell you one thing, but you need to test it on your own.

Here are the baseline levels for streaming:

3 Mbps for Standard Definition (SD) 5 Mbps for High Definition (HD) 25 Mbps for HDR (High Dynamic Range) "The last time a TV show broadcast in SD was 2014, and most TVs started being manufactured in HD instead of SD around 2009 when the FCC mandated that all TV signals be transmitted digitally."

#### How Do I Test the Speed of My Internet Connection?

- 1. Open your web browser and go to: <u>https://www.speedtest.net</u>
- 2. Click **GO**.
- 3. Wait while it does its thing.
- 4. Look at your results. Don't panic! I'm about to explain them!



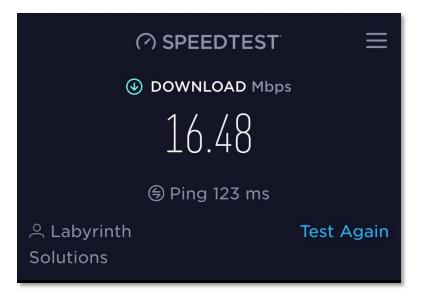
5. The thing you want to look at if you want to stream is **DOWNLOAD Mbps** (Megabits per second). That number is going to tell you if your Internet is fast enough to stream.

# The **bigger** your **DOWNLOADS** number, the better.

The smaller your **DOWNLOADS** number the more lag and other issues you are going to have.

The results to the right show Internet speeds that would be good for Standard Definition and High Definition, but not good for HDR.

You should run this test several times, because that will give you an idea of how stable your connection is.



If you get approximately the same numbers every time, you're probably going to be fine. But if you get wildly different numbers each time you test, it means you are may have difficulty streaming.

### How Do I Decide Any of This?

First, make note of:

#### What Shows Do I Watch All the Time?

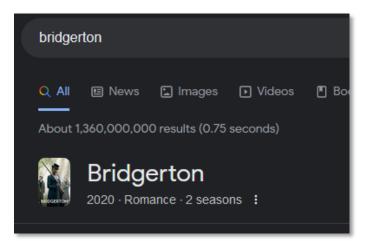
This is an important question. If all the shows you want to watch are on Disney Plus and HBO Max or any other expensive service, then it might end up being more expensive to stream than to keep your cable.

Then you have to discover:

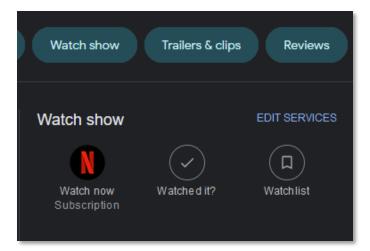
#### What Services Have My Favorite Shows?

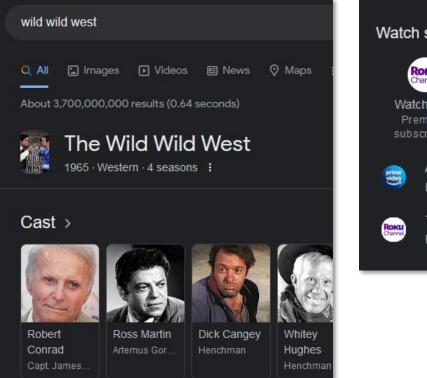
You're going to have to search. Luckily, Google has made this easy.

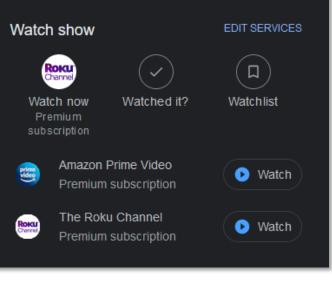
1. Open your web browser, go to Google, and enter the name of your show.



2. On the right side of the window look for Watch show or click the Watch Show button.







For sports, it's going to take a little more work if you don't already know where your teams play. You can google "sport + streaming" or "team + streaming" or look through the sites below.

https://www.nfl.com/ways-to-watch https://www.mlb.com/live-stream-games https://watch.nba.com/streaming-subscriptions https://www.nhl.com/tv https://www.curlingzone.com/television.php

# Live TV Streaming vs On-Demand vs Streaming Device

One of the benefits of most streaming services is that you can cancel and restart at any time (no contracts & penalties). Of course, this works out well for the streaming services, since most people forget to cancel services they are not using.

The downside is that to find all the shows you want, you will have to pay for multiple streaming services.

#### Your TV

The next thing you need to do is look at the available ports on your TV. If your TV doesn't have an HDMI port, then you are going to be limited in type of device you can use to stream. Further below you'll find pictures of the different types of ports and the cables that go into them.

If your TV has the correct hookups, you can stream from your laptop or desktop computer directly to your—no additional device needed. As long as you have the correct cables and ports, you just treat your television like a really big monitor. No additional devices are needed if you have a Smart TV that is already connected to the internet.

Roku is the only streaming device manufacturer that makes a device (the Roku Express+) that works with the red, yellow and white composite jacks found on older TVs.

Even if you have a Smart TV, or even if you have a smart devices, you may most likely still need multiple streaming services, to allow you access to all the programming you want to see.

#### Can I Stream Shows on Multiple Devices In My House?

The answer to this is—it depends upon the service. Some allow you to log into multiple devices, others only a single device at a time.

### What Kind of Electronics Stuff Do I Need?

If you have a tablet or a laptop, you should be able to watch any and all streaming services on that device.

If you want to watch on your existing TV (and it is not a Smart TV), you are going to need a device and possibly some cables.

First, look at the back of your television. See what kinds of ports (the slots you stick things into) you have. The newer your TV, the more ports you might have.

I recommend taking a picture of the back of your TV and then sitting down and sorting out the various ports you see (trying to stand behind the TV and figure things out leads to frayed tempers and possibly injuries.)

# **Cables & Ports**

#### Video / Monitor Cables

These are the cables that run from your computer to your monitor, or from your DVD player to your TV.







HDMI

VGA is the oldest type of cable, and was the standard for years and years. For a while, **DVI** cables were common, but they were soon replaced by HDMI or Displayport.

The difference between HDMI and Displayport is how many corners are nicked / indented. HDMI has two indented corners, Displayport has only one.



#### **Network Cable**

A network cable is used to connect your device to your modem and looks like an extra-wide phone cable. It can also be called a LAN or Ethernet cable.

#### **USB-C** Cables

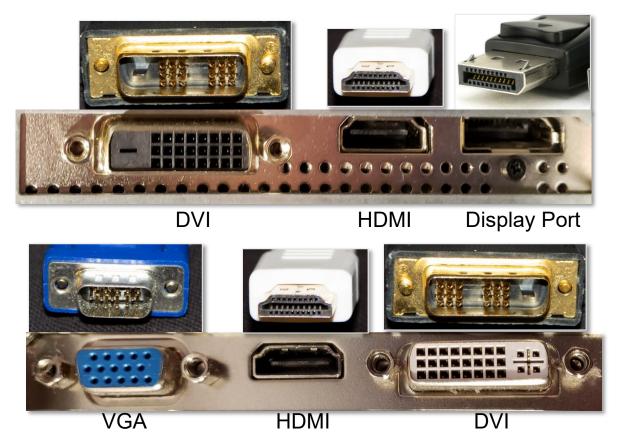
These are the new standard for Android phones, as well as for many new devices as well as docking stations for laptops. Unlike earlier USB cables, these are reversible, so you can't put them in upside down.





#### Ports

Here are some common cables and the ports into which they go.

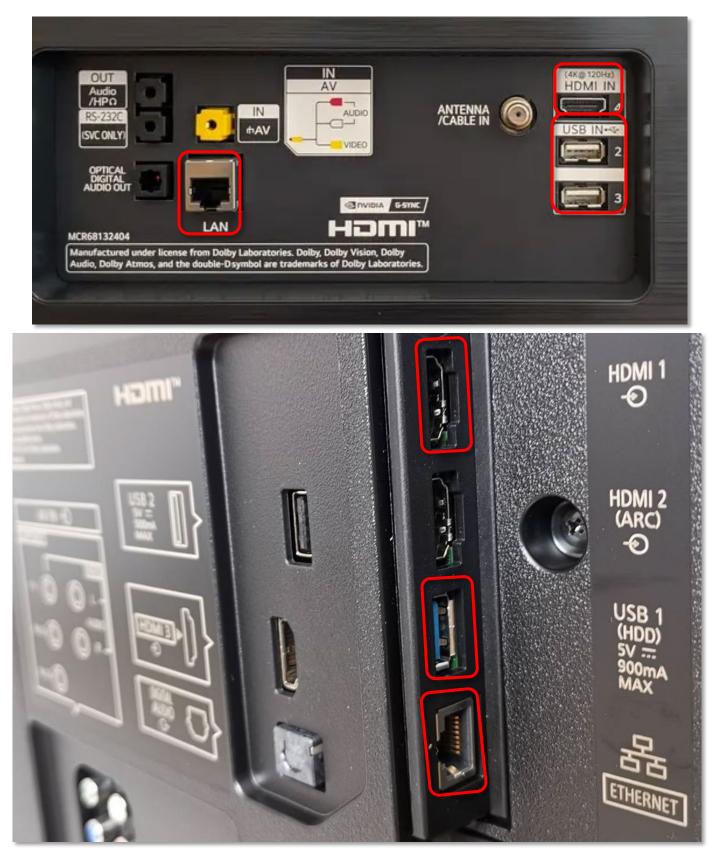


**Other Ports and Cables** 





Here are the backs of two different TVs to give you an idea of what you might be looking at/for.



Pay attention to which ports you use (HDMI 1) because that tells you which selection to make on your TV.

#### **Streaming Devices**



Above are some of the streaming devices you can plug into your TV.

Most new devices should have an HDMI plug, but make sure to verify either by making a comparison or checking the device specs. All of these devices plug into the back of your TV, and you control them with the remote that comes with the device.

If you have a smart TV, you can connect to many streaming services simply by plugging a network cable into the back of your television.

#### All the Devices Plugged Are In, Now What?

- 1. Turn on your TV.
- 2. Using your *TV remote*, switch to whatever port you plugged your device into (generally HDMI 1 or HDMI 2, but you should have noted which port you plugged the cable into).
- 3. With the *device remote*, log into your account for whatever service you want to use.

#### Accessing a Streaming Service

One thing that the services don't volunteer to tell you is that it is going to be a major annoyance to log into your streaming services on your TV, using the remote.

Why? Because you have to select each letter and number. One. At. A. Time.

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Enter vo	our passwo	ird										Need	help signing in:	Visit http:										
1 2			6				0						netflix.com											
q v			у			0	р		•••		• • • •													
a s	d f	g																						
•				b																				
!#&	u00E0	u				×	1																	
	Back			N	ext																			
Form	t Password?																							
Foigu	r Passworu?																							
														1	2	3	4	5	6	7	8	9	0	
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Before you settle down to log in to services on your TV, it would be a good idea to double check your login credentials (username and password) on your computer. Make sure you have those credentials with you when you go to log in.

You will need your username and password for every service you need to log into, so perhaps grab yourself a drink and sit down and prepare to spend some time entering all your credentials at once.

Once you're logged into a service, you will select that service on your screen, and then scroll through the options for that service to find what you want to watch.



## **Universal Remotes**

If you find the idea of a pile of remotes unappealing, there are devices (you may already have one) called Universal Remotes that allow you to control multiple devices from a single remote.

Below are some sites where you can browse reviews and options for universal remotes. However, setting up a universal remote (or multiple streaming services for that matter) might be a task you want to delegate to any teenager you happen to have in your life.

https://www.popsci.com/gear/best-universal-remotes/

https://www.tomsguide.com/us/best-universal-remotes,review-4464.html

https://www.nytimes.com/wirecutter/reviews/the-best-universal-remote-control/

## **Streaming Services**

(these prices are from winter 2022, and are just to give you an estimate of costs.)

#### Acorn

\$6.99 / month

#### Amazon Prime Video

Amazon Prime Up to 3 screens Ad-Free sometimes \$12.99 / Month and Up Up to 6 profiles

#### Apple TV Plus

Up to Six Screens Ad-Free \$4.99 / Month Up to Six Profiles

#### **Crunchyroll**

Anime Three simultaneous Streams Ad-Free

#### **DirectTV Stream**

Ads 30+ Channels \$69.99 / Month and Up

#### **Disney Plus**

Up to Four Screens Ad-Free \$7.99 / Month and Up Up to Seven Profiles

ESPN Plus \$6.99 / month

#### Fubo TV

96+ Channels Optional Ad-Free \$69.99 / Month and Up

#### HBO Max

Up to Three Screens Ad-Free Option \$9.99 Up to Five Profiles Offline Downloads

#### <u>Hulu</u>

Up to Two Screens (?) Optional Ad-Free \$6.99 / Month and Up Up to Six Profiles

#### Hulu + Live TV

Optional Ad-Free 75+ Channels \$69.99 / Month and Up

#### <u>Netflix</u>

Ad-Free Up to 4 Screens \$13.99 / Month and Up Up to Five Profiles

#### **Peacock**

Up to Three Screens Optional Ad-Free \$0 / Month and Up One Profile

#### Paramount Pus

Up to Three Screens Optional Ad-Free \$4.99 / Month and Up Up to Six Profiles

#### **Showtime**

\$10.99

#### <u>Sling TV</u>

96+ Channels \$35 / Month and Up Ads Up to three device streams DVR Storage

#### <u>Starz</u>

\$8.99

#### YouTube TV

Ads Up to 6 simultaneous streams 85+ Channels \$64.99 / Month and Up Best Sports Streaming Service for 2022 https://www.cnet.com/tech/services-and-software/best-sports-streaming-service

Guide to Streaming Video Services

https://www.consumerreports.org/streaming-video/guide-to-streaming-video-servicesa4517732799/

https://www.pcmag.com/picks/the-best-video-streaming-services

https://www.cnet.com/tech/home-entertainment/how-to-cut-the-cord/

https://www.businessinsider.com/guides/tech/best-streaming-service

https://www.wired.com/story/free-streaming-services/

https://www.techradar.com/best/best-tv-streaming-service-cord-cutting-compare

https://www.nielsen.com/us/en/insights/article/2009/the-switch-from-analog-to-digital-tv/

Netflix Party—is a Google Chrome and Microsoft Edge browser extension that will synchronize video playback and add group chat to Disney+, HBO Max, Hulu, and Netflix.

# **Technology Glossary**

#### Add-on

An accessory piece of software designed to increase the capability of the software to which it is appended.

#### **Address Bar**

In a web browser or windows explorer, it is a rectangle, usually towards the top of the window, that shows you the current location or address of your web page or file.

#### Address Book

#### See Contacts

#### Alexa

Amazon's virtual assistant.

#### Algorithm

A set-of rules to be followed in calculations or problem-solving operations. Algorithms are frequently used to manipulate data sets.

#### Android

Googles mobile operating system, built on open source software.

#### Anti-Virus

A program that protects you from malicious software. Most anti-virus programs have options for purchasing additional security measures such as firewalls, email scanning, etc.

#### App

Short for <u>Application</u>.

#### Apple ID

This is the username and password that you create with Apple to link a specific device to your Apple account. If you have an iPad and an iPhone, you use the same Apple ID with both of those devices.

#### Apple

Technology company that designs and develops hardware and software.

#### Application

An application is a piece of software that lets your device do something, like play music or give directions. An application is the same thing is a program.

#### Autocorrect

Auto correct is when your phone automatically changes what you were typing to what *it thought* you wanted to type.

#### Autoplay

When you visit a website and music or video starts playing without asking.

#### AVI

Audio Video Interleave. A multimedia format for audio and video files.

#### Backup

A copy of computer data that is taken and stored somewhere else, to be used in the event of data loss. **BCC** 

Blind carbon copy. Covertly send a copy of the message to a third party. The primary recipient cannot see the person was added.

#### Blockchain

Also Block Chain. A list of records (blocks) linked using cryptography. These records are a cryptographic hash of the previous block, a timestamp, and transaction data. Blockchains are generally used on a peer-to-peer network. Data in one block cannot be altered without changing all other blocks.

#### Bluetooth

A wireless technology that allows data to be shared over short distances using short-wave UHF radio signal.

#### Boolean

A system of logical propositions. Common Boolean operators: AND, OR, NOT, "", (). Based on the work of George Boole.

#### Browser Add-on

See Browser Extension.

#### **Browser Extension**

A small software module that is used to customize a web browser.

#### **Browser Hijack**

Where a malicious piece of software modifies a web browser's settings without your permission. **Browser** 

#### Browser

Short for <u>Web Browser</u>.

#### **Brute Force Attack**

Where a hacker tries many passwords for passphrases in an attempt to break into an account. The longer the password (or passphrase) the harder it is for someone to succeed with this type of attack. **Byte** 

A unit of digital information that consists of eight bits. A byte is the number of bits used to encode a single character of text.

#### Cache

Temporary storage space that allows your computer to quickly bring up information, such as previously viewed web pages.

#### Cambridge Analytica

A British political consulting firm that used misappropriated digital assets, data mining, and other processes to influence political elections around the world.

#### CC

Carbon copy. Send a copy of the message to someone else. The primary recipient can see this person received the message.

#### Cellular Data

The connection a cell phone makes to a cell tower that allows you to do things like surf the internet, download emails, and send MMS messages.

#### Cloud

Storage that is physically somewhere other than where you are. Cloud storage is generally accessible from multiple devices, because those files are stored on a hard drive that belongs to a company that hosts the cloud service. Cloud storage is like a self-storage unit for your electronic files, except you can access your stuff from anywhere.

#### Cloud Service

A service provided by a third party or company that allows you to provide access to files and applications remotely.

#### Codec

A device or program that encodes/decodes a data stream, such as an audio file, for storage.

#### Contacts / Contact List

A collection of screen names and the various data associated with them, such as email addresses and telephone numbers.

#### Cookie

A piece of data that a website saves on your computer. Cookies were designed to save user information such as preferences or logins but can sometimes be read by third parties. Cookies are also used to collect browsing data long-term.

#### Cortana

Microsoft's virtual assistant.

#### CPU

Central Processing Unit. The bit of a computer or electronic device that processes information.

#### Cryptocurrency

A digital asset that uses strong cryptography and is designed to work as a form of money. They used decentralized control, or a public financial database to keep track of who owns what.

#### Cryptography

Greek for "hidden writing", it is the study of secure communication—creating protocols to keep third parties from reading private messages.

#### Data Breach

The release of secure or private information. A data breach can be accidental or malicious, such as when an individual hacks into a system to steal information.

#### Database

An organized collection of information. Complicated databases link information between multiple tables allowing for analysis of the contained information. An address book is a basic database.

#### Denial of Service Attack (DOS)

A cyber-attack where the malefactor seeks to make a network resource (such as a website) unavailable by flooding the target with requests or visits.

#### Directory

A system that catalogs / organizes computer files.

#### Displayport

A high-quality audio-visual cable capable of transmitting HD and 4k.

#### DNŠ

Domain Name System. The phonebook of the Internet.

#### DNS Hijacking

Where a malefactor redirects visitors from a valid website to a different destination—often one that exists to steal data.

#### Domain Name

The string of text that identifies a place on the Web. A basic domain name is a word or abbreviation followed by a period followed by the domain extension: wvu.edu

#### Domain

The sometimes arbitrary grouping that designates what a website does or where it is based. The most common domains are .com .net .edu and .org. The domain is what you should check first when you want to verify the authenticity of a website.

#### Download

To move data and files from the internet or a server to your computer or mobile device.

#### DRM

Digital Rights Management. A format that protects electronic media from being illegally copied. **DVD** 

Digital Video Disc / Digital Versatile Disc. A digital optical disc data storage system.

#### DŬI

Digital Video Interface. A video display interface that connects your computer to your monitor.

#### **Email Header**

The portion of an email message that contains the routing information. The header can be used to help determine if a message is fraudulent.

#### Email

Email is an electronic letter sent from one email address to another email address. Email addresses always have an @ (at sign) in them. Sending an email on your phone requires the use of cellular data. Each email address is unique, and email addresses are often used as unique identifiers or login credentials by databases.

#### Emoji

Small images used to represent emotions, ideas, or expressions.

#### Emoticons

Representations of facial expressions using keyboard characters. These are used to portray moods or feelings. For example, a smiling face could be :) or  $\odot$ 

#### Encryption

The encoding of data so that only authorized persons or devices can read/view the information. The stronger the encryption, the more unlikely it is that a malfeasant could decode the intercepted data through a brute force attack.

#### EPUB

Electronic Publication. A digital book format that allows you to read your eBook on any electronic device. EPUB files are reflowable.

#### eReader

eBook reader that use black and white eInk screens that give a similar reading experience to physical books.

#### Ethernet

Wired networking technology that allows multiple computers to talk to one another via a protocol (set of rules). Ethernet is used when speed, stability, and security are needed.

#### EULA

End-User License Agreement. The legal contract between a software vendor and the user of that software. It specifies the rights and restrictions which apply to the use of the software.

#### External Storage

Devices that store data outside of a computer or other electronic device. They are often removable, such as USB thumb drives.

#### Facebook

An online media and networking company.

#### **Facial Recognition**

Technology capable of identifying or verifying a person from a digital image. Facial recognition can be used to unlock an electronic device.

#### **File Extension**

Also called a filename extension or file type, is the identifier suffix for a computer file name, and tells you the kind of program needed to open the file. By default, these extensions are hidden, but can still be used in search. If you change a file extension, that file will most often break.

#### Firewall

A security system that monitors incoming and outgoing network traffic to prevent unauthorized access to a system.

#### Folder

See <u>Directory</u>.

#### Follow

Choose to see another user's posts in their content feed.

#### **Force Stop**

A way to completely stop an app that is running in the background. An app that has been closed may still have bits active and collecting data.

#### GB

Gigabyte. A computer memory unit equal to 1000 megabytes. The prefix giga means 10<sup>9</sup>. **GIF** 

# Graphics Interchange Format. An image format that is often used in logos and animated pictures. **Google**

A technology company that specializes in services and products related to the internet.

#### GPS

Global Positioning System is a piece of hardware that allows a device to contact a satellite to determine the location of the device in latitude and longitude. On most devices, software makes these data points usable to the end user by placing them on a map.

#### GUI

Graphical User Interface (pronounced gooey). The windows, icons, menus, and pictures that allow you to interact with your computer using your mouse. Windows 10 and Mac OS (Big Sur) are operating system GUIs.

#### Hard Drive

A data storage devices that stores and retrieves digital data. In your computer, this is where all your programs are installed and files saved.

#### Hardware

The electronic components of a device; the bits you can touch. A cell phone, a keyboard, and a CPU are all hardware.

#### HD

High Definition. Generally a higher resolution and quality than standard definition video.

#### HDMI

High-Definition Multimedia Interface. Audio/video interface for transmitting uncompressed data. Cable that connects your computer to your monitor, or your DVD player to your TV.

#### HDR

High Dynamic Range. A photographic process where a camera takes multiple pictures at different exposures and combines them into a single image—this allows all areas of your image to be well-exposed, but can also look unreal if used too much.

#### Home Screen

The main screen of a computer or mobile device. Home screens are typically personalized by the user so that no two home screens will look alike.

#### Hotspot

A type of Wireless Access Point. A device that allows you access the internet from a public place. Hotspots are generally open and unsecured and you should assume any data you submit is visible to people with ill-intent.

#### Hover text

When you hold your cursor over a hyperlink, the document should display the URL for that link. This allows you to verify links.

#### http

Hypertext Transfer Protocol is how data is moved between a website and an end user.

#### https

Hypertext Transfer Protocol (Secure) is an encrypted form of http. This protects against interference or snooping by third parties.

#### iCloud

Apple's cloud service.

#### Icon

A graphic representation of a program, file or function.

#### **Information Security**

The protection of data and the mitigation of risks, generally on computer networks.

#### Install

A process that writes the code used to run the program (application) onto the hard drive of your device. Installing a piece of software embeds it into the device and allows it to work.

#### Internet

A system of inter-connected computer networks.

#### iOŚ

Apple's mobile operating system.

#### iPad

Apple's tablet computer, running iOS.

#### iPhone

Apple's cellular phone, running iOS.

#### iPod

Apple's music player. The iPod is general similar to an iPhone, only without cellular service.

#### ISBN

International Standard Book Number. A numeric commercial book identifier that is unique for every edition and variation of a book.

#### ISP

Internet Service Provider. Company you pay so you can have internet at home.

#### iTunes

Apple's music service.

#### JPG / JPEG

Joint Photographic Experts Group. A lossy compression format for digital images.

#### Keylogger

Keystroke logger (also keyboard capture). A piece of hardware or a software program that can record every key struck on the keyboard.

#### LAŇ

Local Area Network. A group of computers / devices that share a common communications line. **Location Bar** 

#### See <u>address bar</u>.

#### Location Services

Information from GPS, wireless access points, cell towers, and Bluetooth devices that helps your phone know where you are.

#### Lock Screen

The opening screen or interface of an operating system. A lock screen keeps unauthorized users from accessing the data and information on a device.

#### Lossless Compression

A form of data encoding that maintains the original quality of the file but at the cost of having a large file size.

#### Lossy Compression

A form of data encoding used to reduce file size at the cost of data quality.

#### Mbps

Megabits Per Second. The speed of your internet service.

#### Messenger

An app that allows users to send text messages and images to other users in a system.

#### Metadata

A data set that give you information about other data. A card catalog contains metadata.

#### **Micro-SD**

Micro-Secure Digital Card. Smaller size <u>SD card</u>, used in phones and lightweight devices. Comes with an adapter that allows for the transfer for files from a portable device to a computer. **MMS** 

Multimedia Messaging Service is a kind of text messaging that allows you to send text messages that contain pictures or audio, as well as messages longer than 160 characters or to multiple people.

#### MOBI

Mobipocket. The proprietary ebook format for the Amazon Kindle. MOBI files are reflowable. **Mobile Carrier** 

A wireless service provider that allows users to connect portable devices (such as phones) to the internet through a cellular service.

#### Mobile Data

Wireless internet access through a cellular data connection.

#### MP3

Moving Pictures Experts Group Layer-3. A coding format for digital audio.

#### MP4 / MPEG4

Moving Pictures Experts Group Layer-4. A coding format for digital multi-media, commonly video. **MPEG** 

Motion Picture Experts Group. A standard for encoding and compressing video.

#### Network

A group of computers connected for the purpose of sharing resources. A network can be as small as two computers or as vast as the Internet.

#### News Feed

The main page of Facebook, where you see content posted by users you have chosen to follow. These content can be text or images.

#### Notification

A message displayed by an electronic device to provide an alert, reminder, or other communication.

#### Online Chat

Real time communication over the internet through (generally short) text messages.

#### OS

Operating System. The base upon which software and apps are added. An Apple device generally uses iOS (iPhones) or macOS (laptop computers). PCs typically used the Windows OS, but there are other operating systems, such as Linux that can be installed. Non-Apple cell phones frequently use some form of the Android OS. How your device looks and works is dependent upon the operating system installed.

#### P2P

Peer-to-Peer

#### Passcode

This is the secret code to get into a specific device. If you have an iPhone and an iPad, they can have different passcodes. You can sometimes use a fingerprint instead of a passcode to get into a device.

#### Password Manager

A program that stores electronic passwords.

#### Password

The secret code to access a restricted resources. Passwords are usually required to use a minimum of eight characters, and contain special characters, such as numbers or upper case letters.

#### PayPal

A method of online money transfer and payments.

#### PDF

Portable Document Format. Once an Adobe proprietary format, now one of the most common formats for sharing digital documents.

#### **Peer-to-Peer**

A distributed that shares tasks or work between devices of the same level.

#### Phishing

A fraudulent attempt to gain personal or sensitive information, by sending an email or creating a website that pretends to be from a real company or person, but is not.

#### **Play Store**

Goggle's app store, where users can download or purchase programs to run on their Android devices. **PNG** 

Portable Network Graphics. A <u>lossless</u> compression type for digital images.

#### Podcast

A digital audio file made available on the Internet for downloading to a computer or mobile device, typically available as a series, new installments of which can be received by subscribers automatically.

#### Post

A message, comment, image, or other item that is placed on the internet, generally on a website.

#### **Predictive Text**

An input technology that guesses what you want to type both from what you are currently typing and, if you have allowed the software to learn, from what you have typed in the past. Predictive text makes typing faster and easier if you have good software on the back end.

#### **Privacv**

The information that is shared between your device and the external resources to which it is connected, as well as how that information is used, and with whom that information is shared.

#### Program

A program is a piece of software that lets your device do something like send a text message or video chat. A program is the same thing as an application.

#### **Public Network**

An electronic connection where the traffic between devices is visible to anyone.

#### Reflowable

An ebook format that layout depending upon the output device. MOBI and EPUB are reflowable formats, which means the number of words on the page change, depending upon the page / text size. **Reply All** 

A response to an electronic message that is returned to ALL recipients of the original message. Reply

A response to an electronic message.

#### Ripping

Extracting digital content from a container, such as a CD or DVD. Ripping a CD means that the music is copied without loss from the CD to your computer.

#### **ROT-13**

One of the most basic forms of encryption; a substitution encryption where characters are rotated 13 places.

#### Router

A networking device that forwards data between networks.

#### **RTFM**

Read The Fantastic Manual.

#### Scraping

Web scraping, web harvesting, web data extraction is extracting data from websites—gathering up information available on a public website.

#### SD

Standard Definition. The lowest quality rating for digital streaming.

#### SD Card

Secure Digital Card. Removable memory that is used in devices like cameras, because it can be easily switched out when full. Allows for easy transfer of files from device to computer without a cable.

#### Search

A computer command that allows you to find specific files on your computer that meet a designated category, such as file type, or date modified.

#### **Search Engine**

A software system designed to find information on the web. The results from a search engine can be webpages, files, or images. Generally, behind the scenes a program runs an algorithm that crawls through the web cataloging everything it sees. This catalog is then organized by a different program where pages are associated with various terms.

#### Security

Protecting electronic systems from theft or damage. This can be protection from physical theft, but often refers to electronic damage, where systems can be disrupted or data stolen.

#### Server

A device (or program) that allows you to access something not on the device you are physically touching. A mail server stores your email and drops it to your device upon request. A web server allows you to connect to the internet.

#### Settings

An app that allows you to customize your computer, device, or program.

#### Siri

Apple's personal assistant.

#### Smart Device

An electronic device that connects to other devices or the internet through a wireless protocol such as Bluetooth or Wi-Fi.

#### Smart TV

A television with a network port to allow you to watch streaming services (and other internet content) without having to use an additional device.

#### SMS

Short Messaging Service. A brief message that is sent from one phone number to another phone number. SMS does not use cellular data.

#### Snooping

Unauthorized listening in to data transmission.

#### Snopes

One of the first internet fact-checking resources, Snopes started as a site to debunk urban legends, but expanded into general fact-checking. (https://www.snopes.com/)

#### Social Media

Interactive computer technologies and websites that allow for the sharing of information. Facebook is the most famous social media site, and allows friends to connect automatically, but LinkedIn is another type of social networking site, that focuses on career and job networking.

#### Software

The programs that run on your computer or phone. Can also be called an application.

#### Sort

To organize information in a prescribed sequence, such as alphabetically, or oldest to newest.

#### Spam

Unsolicited electronic messages (especially advertising).

#### Spoofing

When a person or program pretends to be someone else, by falsifying data, to gain access to your account or data.

#### Spyware

A piece of malicious software that secretly installs itself to gather information about the user or device.

#### SSD

Solid State Drive. A storage device for your computer that saves data on chips instead of a mechanical platters.

#### **Status Bar**

A graphical element, usually at the top or bottom of a device's screen, that displays information about the state of the device. Some settings commonly found on the status bar are sound/volume, time, and battery life.

#### **Streaming Device**

An object, such as Roku stick or Fire stick, you purchase that plugs into your existing TV so you watch video through the device on your existing television.

#### Streaming Service

An online provider of entertainment (music, movies, etc.) that delivers the content via an Internet connection to the subscriber's computer

#### Sync

See synchronize.

#### Synchronize

When a file is synced, changes to that file are saved are pushed from one device to all other devices with access to that file, via a remote server.

#### Tag / Tagging

A keyword or term added to the metadata of a piece of information. In social media, when someone is tagged, they are alerted to a post made by another user.

#### Taskbar

A graphical user interface (GUI) that is typically along the bottom of your window, and usually shows you what programs are actively running as well as important information about the operating system. **TB** 

Terabyte. A measure of computer storage equal to 1000 gigabytes or trillion bytes. The prefix tera means 10<sup>12</sup>.

#### **Terms of Service**

The rules you agree to abide by when you sign up use an online service.

#### Text Message

A brief message that is sent from one phone number to another phone number via a protocol called SMS. Text messages are generally limited to 160 characters, and messages with more characters than that will be broken down into multiple messages when sent. Text messages are asynchronous: a message sent to someone whose phone is off is delivered when their phone is turned back on. Text messages generally do not require cellular data but do require a cellular connection.

#### **Thumb Drive**

USB Flash Drive

#### TIFF / TIF

Tag Image File Format. Lossless digital image format that was developed originally for scanners as an alternative to multiple proprietary formats.

#### Timeline

A display of items in chronological order. Twitter has a timeline; Facebook has a news feed.

#### TL;DR

Too Long, Didn't Read

#### TOS

Terms of Service

#### Trojans

A type of malicious computer virus that presents itself as a useful item, such as a document.

#### **Two-Factor Authentication**

This is a way to make both your device and your account more secure. When you log into your Apple ID on a new iPad (or iPhone) for the first time OR you log into iCloud from a computer you have never used before, Apple wants you to verify that YOU are the person attempting to access your account.

#### ТХТ

<u>Text message</u>.

#### Unfollow

To stop seeing a user's posts in your timeline or news feed. On Facebook, you can unfollow someone by still remain friends with them.

#### Uninstall

The removal or a software program or application from the operating system of a device. Although uninstall removes the visible aspects of a program, there are often bits and pieces of the program left behind.

#### **Unique Identifier**

A piece of data that is unique to a record. Telephone numbers and email addresses are often used as unique identifiers, because no two individuals have the same ones. Unique identifiers allow data records to be linked across databases.

#### Upload

To move files from your computer to a cloud service or network.

#### URL

Uniform Resource Locator is the address of a space on the web. Every website has a unique address, and that address can often tell you something about the web page you are visiting.

#### URL Bar

See <u>address bar</u>.

#### USB

Universal Serial Bus. This is the industry standard for cables that connect devices and their peripherals through a wire. This connection can be used for both communication and power. There are several types of USB connections: USB-A, USB-A 3.0, mini-USB, micro-USB, and the newest standard, USB-C.

#### **USB** Flash Drive

Also: USB thumb drive. A small USB data storage device that is removable, rewritable, and can be easily carried in a pocket.

#### User Data

Any type of data generated by people interacting with software programs. User data includes: Explicit Data, which is given by a user directly such as name, address, email, and phone number; Implicit Data, which is not provided by the user directly but gleaned through analysis of user interactions, such as pages visited, session duration, or type of device; and finally External Data which has been gathered from third parties with whom an organization has a relationship.

#### Username

Also called account name, login ID, user ID. The credentials you use to access an electronic resources, such as your computer or a website. Every account on a website or device must be unique to that service, so as to keep account information separate.

#### VGA

Video Graphics Array. A connector that takes video signal from a computer and takes it to the monitor (or projector).

#### Virtual Personal Assistant

A software program that preforms tasks or services based upon verbal commands. Some of the most well-known services are Siri and Alexa.

#### Viruses

A piece of malicious software that inserts itself into another software program that it uses to replicate itself. Ransomware is a software virus.

#### WAV

Waveform Audio File Format. An audio file standard for uncompressed audio.

#### Web

Also called the World Wide Web, this is an information space on the Internet that is accessible from devices such as computers, cell phones, and tablets, using a URL as the address.

#### Web Browser

A software program that allows you to access sites on the Internet, or web.

Web Cookie

See Cookie.

#### Website

a location connected to the Internet that maintains one or more pages on the World Wide Web **Wi-Fi** 

Short for wireless (the "fi" is an arbitrary syllable added on)

#### Widget

A graphical element that displays information or provides quick access to certain parts of an app. Mobile devices frequently have a weather widget that is linked to your weather app, and which tells you the current temperature and forecast.

#### **Wireless Access Point**

A device that allows your device to access the internet. If a wireless access point (or router) does not have a password, it is unsecure, and you should assume that anyone can see what you are doing on your device.

#### **Wireless Router**

A piece of hardware that allows devices to connect to the internet without being plugged into the wall. Your wireless at home should be password protected, so that strangers cannot access all devices in your home using that wireless network.

#### Wireless

A technology that allows computers to connect to a network and/or the internet without using a physical connection. Wireless is available in an area when a wireless access point (also called a hotspot) has been created and made accessible to devices. Public wireless is less secure and caution should be used (ie, don't make purchases or send private emails over a wireless network). Private wireless networks (such as in your home) should be secured with a password.

#### World Wide Web

An information system on the Internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.

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