Internet

You will need internet access for your home server and the devices connecting to it. Your Internet Service Provider (ISP) is the primary factor leading to the quality and stability of your server connection.

Connection

Outside of your hardware, your internet connection dictates how many people can access your server as well as their connection quality, stability and uptime. There are many different consumer options for connecting your home to the World Wide Web.

stylus_laser_pointeR	**Fiber** One of the fastest connections available, this uses flashing light to transmit data over long distances.
Cable	**Cable** Fast and cost-effective, this connection uses television infrastructure to transmit data to an internet provider.
satellite_alt	**Satellite** Available even in remote areas, this connection occurs through satellites in orbit around the planet.
Wifi_tethering	**Wireless Broadband** This allows devices to connect to a wireless network broadcast over a large area by an service provider.
settings_phone	**DSL** One of the first consumer options, this connection uses telephone infrastructure to transmit data.

Signal_cellular_alt

Mobile Broadband

Quickly gaining in popularity, this internet option uses wireless cellular data infrastructure to create a local area network for your devices.

Hardwired internet connection – such as cable or fiber – are preferred because they are more reliable. Wireless connections – like satellite and mobile broadband – can be heavily reliant on other external factors like congestion and weather.

Exact upload and download speed requirements will depends on what services you're hosting, as well as how many people will be accessing them. Hosting a home server serving your immediate family, here is a good starting point:

Download

Download

Minimum: 200Mbps

Recommended: 1,000Mbps

This will be most important for downloading data from the internet – such as multimedia, metadata and updates. Internet bandwidth will be shared between every internet-connected device in your home, so it's important to have enough to go around.

Upload

Upload

Minimum: 20Mbps

Recommended: 200Mbps

This will primarily be used to share multimedia and files outside of your home – like friends, family on the World Wide Web. Residential internet connections often provide significantly lower upload bandwidth than download under the assumption that you will not be running a personal server.

Gigabit connection speeds are recommended for hosting media servers, but low-bandwidth websites that don't serve many images or videos may perform acceptably at slower speeds.

Depending on your Internet service provider and connection type, there may be restrictions on how data can be transmitted outside your network.

Self-Hosting

You are not breaking any laws by self-hosting a server at home. However, not all ISPs expressly permit web hosting from residential internet connections. While a few embrace self-hosting, many others choose not to advertise the feature. Unfortunately, ISPs are increasingly blocking the ability to host a Web server from home.

Each Internet Service Provider has their own rules and regulations about server hosting on residential contracts. Business contracts are more costly, but often explicitly allow web-hosting and provide features explicitly to support it.

Your provider may have additional stipulations regarding the nature of the content you can host. Self-hosting personal services may draw less attention than for-profit commercial storefronts or public discussion forums. Controversial content may be explicitly censored as a result of your Internet Service Provider contract.

> Before proceeding, you must understand the terms of your agreement with your internet service provider.

Restricted Access

If your ISP blocks web server hosting, there are still options to connect while away from home. These vary in cost, complexity and contractual concerns:

Contract	**Commercial Contract** When feasible, purchasing a business plan with your ISP may expressly permit web hosting. This may be available at your current residence and would provide added benefits – such as a static IP address.
Private_connectivity	**CloudFlare Tunnel** This method allows your server to communicate with the CloudFlare service without needing to directly connect it to the World Wide Web. This circumvents the block by channeling web-based traffic through the CloudFlare remote servers first. They explicitly forbid using this service for transferring multimedia.

Vpn_lock

Virtual Private Network

Hosting your own VPN server – or utilizing the one built into your router – will allow your devices to remotely connect to your Local Area Network. This means that your devices can interact with your server as if you were at home.

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