-most popular servers:

* Web Server.
* Database Server.
* Email Server.
* Web Proxy Server.
* DNS Server.
* FTP Server.
* File Server.
* DHCP Server.

-most popular operating systems for a server:

-linux

-windows server

-unix

-iOS

-Ubuntu

-Microsoft Windows

-Mac OS

-server

-physical computer that a computer program runs on

-home directory

A home directory is **a file system**

**directory on a multi-user operating system containing files** for a given user of the system.

-IDE

-Integrated Development Environment

-Conda (package manager)

**Conda** is an [open-source](https://en.wikipedia.org/wiki/Open-source_software),[[2]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-conda.pydata-2) [cross-platform](https://en.wikipedia.org/wiki/Cross-platform),[[3]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-pydanny-3) [language-agnostic](https://en.wikipedia.org/wiki/Language-agnostic) [package manager](https://en.wikipedia.org/wiki/Package_manager) and environment management system. It was originally developed to solve package management challenges faced by [Python](https://en.wikipedia.org/wiki/Python_(programming_language)) [data scientists](https://en.wikipedia.org/wiki/Data_science), and today is a popular package manager for Python and [R](https://en.wikipedia.org/wiki/R_(programming_language)).[[4]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-4)[[5]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-networkworld-Jackson-DARPA-5) At first, [Anaconda Python distribution](https://en.wikipedia.org/wiki/Anaconda_(Python_distribution)) was developed by Anaconda Inc.; later, it was spun out as a separate package,[[6]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-6) released under the [BSD license](https://en.wikipedia.org/wiki/BSD_licenses).[[2]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-conda.pydata-2)[[7]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-penandpants-7)[[8]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-data-science-8)[[9]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-python-prog-9)[[10]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-python-10)[[11]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-yf-conda-11) The Conda package and environment manager is included in all versions of [Anaconda](https://en.wikipedia.org/wiki/Anaconda_(Python_distribution)), [Miniconda](https://en.wikipedia.org/wiki/Miniconda),[[12]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-12) and Anaconda Repository.[[13]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-AnacondaRepo-13) Conda is a NumFOCUS affiliated project.[[14]](https://en.wikipedia.org/wiki/Conda_(package_manager)#cite_note-14)

-Console: The part of a computer used for communicating between the user and the system

-FTP

-The **File Transfer Protocol** (**FTP**) is a standard [communication protocol](https://en.wikipedia.org/wiki/Communication_protocol) used for the transfer of [computer files](https://en.wikipedia.org/wiki/Computer_file) from a server to a client on a [computer network](https://en.wikipedia.org/wiki/Computer_network). FTP is built on a client–server model architecture using separate control and data connections between the client and the server.[[1]](https://en.wikipedia.org/wiki/File_Transfer_Protocol#cite_note-for-1) FTP users may authenticate themselves with a [plain-text](https://en.wikipedia.org/wiki/Plaintext) sign-in protocol, normally in the form of a username and password, but can connect anonymously if the server is configured to allow it. For secure transmission that protects the username and password, and encrypts the content, FTP is often [secured](https://en.wikipedia.org/wiki/File_Transfer_Protocol#Security) with [SSL/TLS](https://en.wikipedia.org/wiki/Transport_Layer_Security) ([FTPS](https://en.wikipedia.org/wiki/FTPS)) or replaced with [SSH File Transfer Protocol](https://en.wikipedia.org/wiki/SSH_File_Transfer_Protocol) (SFTP).

**-TFTP**

**Trivial File Transfer Protocol** (**TFTP**) is a simple [lockstep](https://en.wikipedia.org/wiki/Lockstep_(computing)) [File Transfer Protocol](https://en.wikipedia.org/wiki/File_Transfer_Protocol) which allows a [client](https://en.wikipedia.org/wiki/Client_(computing)) to get a file from or put a file onto a remote [host](https://en.wikipedia.org/wiki/Host_(network)). One of its primary uses is in the early stages of nodes booting from a [local area network](https://en.wikipedia.org/wiki/Local_area_network). TFTP has been used for this application because it is very simple to implement.

TFTP was first standardized in 1981[[1]](https://en.wikipedia.org/wiki/Trivial_File_Transfer_Protocol#cite_note-1) and the current specification for the protocol can be found in [RFC](https://en.wikipedia.org/wiki/RFC_(identifier)) [1350](https://datatracker.ietf.org/doc/html/rfc1350).

-Jupyter

-Project **Jupyter** is a project to develop open-source software, open standards, and services for interactive computing across multiple programming languages.

-Linux

([/ˈlɪnʊks/](https://en.wikipedia.org/wiki/Help:IPA/English), [*LIN-uuks*](https://en.wikipedia.org/wiki/Help:Pronunciation_respelling_key))[[11]](https://en.wikipedia.org/wiki/Linux#cite_note-pronunciation-2-14) is both an [open-source](https://en.wikipedia.org/wiki/Free_and_open-source_software) [Unix-like](https://en.wikipedia.org/wiki/Unix-like) kernel and a generic name for a family of [open-source](https://en.wikipedia.org/wiki/Operating_system) [Unix-like](https://en.wikipedia.org/wiki/Unix-like) operating systems based on the [Linux kernel](https://en.wikipedia.org/wiki/Linux_kernel),[[12]](https://en.wikipedia.org/wiki/Linux#cite_note-15) an [operating system kernel](https://en.wikipedia.org/wiki/Kernel_(operating_system)) first released on September 17, 1991, by [Linus Torvalds](https://en.wikipedia.org/wiki/Linus_Torvalds).[[13]](https://en.wikipedia.org/wiki/Linux#cite_note-16)[[14]](https://en.wikipedia.org/wiki/Linux#cite_note-17)[[15]](https://en.wikipedia.org/wiki/Linux#cite_note-18) Linux is typically [packaged](https://en.wikipedia.org/wiki/Package_manager) as a [Linux distribution](https://en.wikipedia.org/wiki/Linux_distribution) (distro), which includes the kernel and supporting [system software](https://en.wikipedia.org/wiki/System_software) and [libraries](https://en.wikipedia.org/wiki/Library_(computing)), many of which are provided by the [GNU Project](https://en.wikipedia.org/wiki/GNU_Project)

-Linux server

-A Linux server is a server built on the Linux open-source operating system.

- It offers businesses a low-cost option for delivering content, apps and services to their clients.

-Because Linux is open-source, users also benefit from a strong community of resources

and advocates.

-operating system

-operating systems are divided into two key components:

-kernel

-interface between applications and hardware

-when computer is booted, kernel is loaded into memory first

-users don’t have direct access to the kernel

-shell

-provides us access to the operating system

-every time we launch an application, we are providing

-API

-Application Programming Interface

-SSH

-Secure Shell Protocol

-the **Secure Shell Protocol** (**SSH**) is a [cryptographic](https://en.wikipedia.org/wiki/Cryptography) [network protocol](https://en.wikipedia.org/wiki/Network_protocol) for operating [network services](https://en.wikipedia.org/wiki/Network_service) securely over an unsecured network.[[1]](https://en.wikipedia.org/wiki/Secure_Shell#cite_note-rfc4251-1)

-Its most notable applications are remote [login](https://en.wikipedia.org/wiki/Login) and [command-line](https://en.wikipedia.org/wiki/Command-line_interface) execution.

-SSH was designed for [Unix-like](https://en.wikipedia.org/wiki/Unix-like) operating systems as a replacement for [Telnet](https://en.wikipedia.org/wiki/Telnet) and [unsecured](https://en.wikipedia.org/wiki/Computer_security) remote [Unix shell](https://en.wikipedia.org/wiki/Unix_shell) protocols, such as the Berkeley [Remote Shell](https://en.wikipedia.org/wiki/Remote_Shell) (rsh) and the related [rlogin](https://en.wikipedia.org/wiki/Rlogin) and [rexec](https://en.wikipedia.org/wiki/Remote_Process_Execution) protocols, which all use insecure, [plaintext](https://en.wikipedia.org/wiki/Plaintext) methods of authentication, like [passwords](https://en.wikipedia.org/wiki/Passwords).

-Since mechanisms like [Telnet](https://en.wikipedia.org/wiki/Telnet) and [Remote Shell](https://en.wikipedia.org/wiki/Remote_Shell) are designed to access and operate remote computers, sending the authentication tokens (e.g. username and [password](https://en.wikipedia.org/wiki/Password)) for this access to these computers across a public network in an unsecured way, poses a great risk of 3rd parties obtaining the password and achieving the same level of access to the remote system as the telnet user. Secure Shell mitigates this risk through the use of encryption mechanisms that are intended to hide the contents of the transmission from an observer, even if the observer has access to the entire data stream.

-SSH uses [public-key cryptography](https://en.wikipedia.org/wiki/Public-key_cryptography) to [authenticate](https://en.wikipedia.org/wiki/Authentication) the remote computer and allow it to authenticate the user, if necessary.[[3]](https://en.wikipedia.org/wiki/Secure_Shell#cite_note-rfc4252-3)

-definition of shell (from wiki)

**-shell** is a computer program that exposes an [operating system](https://en.wikipedia.org/wiki/Operating_system)'s services to a human user or other programs.

**-** In general, operating system shells use either a [command-line interface](https://en.wikipedia.org/wiki/Command-line_interface) (CLI) or [graphical user interface](https://en.wikipedia.org/wiki/Graphical_user_interface) (GUI), depending on a computer's role and particular operation.

**-** It is named a shell because it is the outermost layer around the operating system

-configuration management

Configuration management is a process for maintaining computer systems, servers, applications, network devices, and other IT components in a desired state.

-config

The config of a computer system is the way in which all its parts, such as the hardware and software, are connected together in order for the computer to work. Config is short for ' configuration'.

-CompTIA

-Computing Technology Industry Association, more commonly known as CompTIA, is an American non-profit trade association that issues professional certifications for the information technology industry. It is considered one of the IT industry's top trade associations

-console (for spyder, etc.)

-the default Python shell, where the commands are going to be executed.

-Jupyter\_Lab

-IDE for Jupyter notebook