

Running Linux

User-mode Linux User-mode Linux (UML) is a virtualization system for the Linux operating system based on an architectural port of the Linux kernel to its own system call interface, which enables multiple virtual Linux kernel-based operating systems (known as guests) to run as an application within a normal Linux system (known as the host). A Linux kernel compiled for the um architecture can then boot as a process under another Linux kernel, entirely in user space, without affecting the host environment's configuration or stability 318fbc23b7

Linux adoption Operating systems based on Linux, also called Linux distributions, have been adopted households, nonprofit organizations, businesses, and governments. Operating systems based on Linux, also called Linux distributions, have been adopted households, nonprofit organizations, businesses, and governments 318fbc23b7

Linux on IBM Z originated as two separate efforts to port Linux to IBM's System/390 servers. The first effort, the "Bigfoot" project, developed by Linas Vepstas in late 1998 through early 1999, was an independent distribution and has since been abandoned. IBM published a collection of patches and additions to the Linux 2.2.13 kernel on December 18, 1999, to start today's mainline Linux on IBM Z. Formal product announcements quickly followed in 2000, including the Integrated Facility for Linux (IFL) engines. Think Blue Linux was an early mainframe distribution consisting mainly of Red Hat packages added to the IBM kernel. Commercial Linux distributors introduced mainframe editions very quickly after the initial kernel work. The first lines of mainframes supported by Linux... 318fbc23b7 The original version, WSL 1, differs significantly from the second major version, WSL 2. WSL 1 (released August 2, 2016), acted as a compatibility layer for running Linux binary executables (in ELF format) by implementing Linux system calls in the Windows kernel. WSL 2 (announced May 2019), introduced a real Linux kernel – a managed virtual machine (via Hyper-V) that implements the full Linux kernel. As a result, WSL 2 is compatible with more Linux binaries as not all system calls were implemented in WSL 1. As of June 2026, WSL 1 is still maintained and supported. 318fbc23b7

Video games and Linux Linux-based operating systems can be used for playing video games. Because fewer games natively support the Linux kernel than Windows, various software Linux-based operating systems can be used for playing video games. The Linux gaming community has a presence on the internet with users who attempt to run games that are not officially

supported on Linux. Because fewer games natively support the Linux kernel than Windows, various software has been made to run Windows games, software, and programs, such as Wine, Cedega, DXVK, and Proton, and managers such as Lutris and PlayOnLinux 318fbc23b7

Linux for mobile devices Linux for mobile devices, sometimes referred to as mobile Linux, is the usage of Linux-based operating systems on portable devices, whose primary or only Linux for mobile devices, sometimes referred to as mobile Linux, is the usage of Linux-based operating systems on portable devices, whose primary or only human interface device (HID) is a touchscreen. It mainly comprises smartphones and tablet computers, but also some mobile phones, personal digital assistants (PDAs) portable media players that come with a touchscreen separately 318fbc23b7

Numerous things become possible through the use of UML. One can run network services from a UML environment and remain totally sequestered from the main Linux system in which the UML environment runs. Administrators can use UML to set up honeypots, which allow one to test the security of one's computers or network. UML can serve to test and debug new software without... 318fbc23b7 Microsoft offers WSL for a variety of reasons. Microsoft envisions WSL as "a tool for developers – especially web developers and those... 318fbc23b7 Mobile Linux is a relatively recent addition to the Linux range of use, with Google's Android operating system pioneering the concept. While UBPorts tried to follow suit with Ubuntu Touch, a wider development of free Linux operating systems specifically for mobile devices was only really spurred in the latter 2010s, when various smaller companies started projects to develop open source phones. 318fbc23b7 == History == 318fbc23b7

Linux Some members of the family are typically packaged as a distribution (a. Linux was originally designed as a clone of Unix and is distributed under the copyleft GPL license. distro), which includes the kernel alongside supporting system software and libraries developed by third parties—such as GNU, Red Hat, and X. k. Org—to create a complete operating system; however, not all Linux-based operating systems are considered distros, with Android being an example. a. Linux (/ˈlɪnʊks/ LIN-uuks) is a family of free and open-source software Unix-like operating systems based on the Linux kernel, which was first released Linux (LIN-uuks) is a family of free and open-source software Unix-like operating systems based on the Linux kernel, which was first released on 17 September 1991 by Linus Torvalds 318fbc23b7

Besides the Linux distributions designed for general-purpose use on desktops and servers, distributions may be specialized for different purposes including computer architecture support, embedded systems, stability, security, localization to a specific region or language, targeting of specific user groups, support for real-time applications, or commitment to a given desktop environment. Furthermore, some distributions deliberately include only free software. 318fbc23b7 Android, which runs on Linux, is the world's

most widely used computer operating system. As of October 2024, Android has 45% of the global operating system market followed by Windows with 26%. Notably, Android uses a customized Linux kernel with a separate runtime environment and software stack compared to the vast majority of other Linux-based systems. This method gives the user a way to run many virtual Linux machines on a single piece of hardware, allowing some isolation, typically without changing the configuration or stability of the host environment because each guest is just a regular application running as a process in user space. Most of the major Linux distributions, including RedHat, SuSE, and Debian, do not employ umsdos to permit installation of Linux on a FAT disc volume. A few distributions do, however. These include distributions such as Phat Linux, which installs in C:\PHAT on DOS by unpacking a ZIP file and is booted by running a COMMAND.COM script named LINUX.BAT, and ZipSlack. Earlier Linux distributions which used UMSDOS are MuLinux, Monkey Linux and Winlinux 2000.

Linux on embedded systems Due to its versatility, its large community of developers, as well as its adaptability to devices with size and power constraints, Linux is a popular choice for devices used in edge computing and autonomous systems. The Linux operating system is prevalent in embedded systems. As of 2024, developer surveys and industry reports find that Embedded Linux is used in 44%-46% of embedded systems. As of 2024[update], developer surveys and industry reports find that Embedded Linux is used

Linux on IBM Z Similar terms which imply the same meaning are Linux/390, Linux/390x, etc. Linux on IBM Z, Linux on zSystems, or zLinux are collective terms for the Linux operating system compiled to run on IBM mainframes, especially IBM Z, Linux on IBM Z, Linux on zSystems, or zLinux are collective terms for the Linux operating system compiled to run on IBM mainframes, especially IBM Z, zSystems, and LinuxONE servers. The three Linux distributions certified for usage on the IBM Z hardware platform are Red Hat Enterprise Linux, SUSE Linux Enterprise Server, and Ubuntu

Windows Subsystem for Linux The WSL command-line interface tool is installed by default in Windows 11, but a distribution must be downloaded and installed through it before use. 2016), acted as a compatibility layer for running Linux binary executables (in ELF format) by implementing Linux system calls in the Windows kernel. WSL Windows Subsystem for Linux (WSL) is a component of Microsoft Windows that allows the use of a Linux environment from within Windows, forgoing the overhead of a virtual machine and being an alternative to dual booting. In Windows 10, WSL can be installed either by joining the Windows Insider program or manually via Microsoft Store or Winget

In August 2010, Jeffrey Hammond, principal analyst at Forrester Research, declared, "Linux has crossed the chasm to mainstream

adoption," a statement attested by the large number of enterprises that had transitioned to Linux during the late-2000s recession. In a company survey... 318fbc23b7 == Applications == 318fbc23b7

Linux range of use hundred Linux distributions are actively developed, with about a dozen distributions being most popular for general-purpose use. Besides the Linux distributions As of 2015, over four hundred Linux distributions are actively developed, with about a dozen distributions being most popular for general-purpose use 318fbc23b7

FAT filesystem and Linux BAT, and ZipSlack[citation Linux has several filesystem drivers for the File Allocation Table (FAT) filesystem format. such as Phat Linux, which installs in C:\PHAT on DOS by unpacking a ZIP file and is booted by running a COMMAND. COM script named LINUX. These are commonly known by the names used in the mount command to invoke particular drivers in the kernel: msdos, vfat, and umsdos 318fbc23b7

== History == 318fbc23b7 Linux runs on almost every type of device, all the top 500 most powerful supercomputers in the world, desktop computers, laptops, the International Space Station, smartphones, smartwatches, TVs, and cars. Additional large systems like The New York Stock Exchange, the Pentagon, and social media platforms like Facebook, YouTube, and X (formerly Twitter) all run on Linux. Microsoft's cloud service depends on Linux. 318fbc23b7 There are many thousands of Linux distributions, many based directly or indirectly on other distributions; popular Linux distros include Debian, Fedora Linux, Linux Mint, Arch Linux, and Ubuntu, while commercial distributions include Red Hat Enterprise Linux, SUSE Linux Enterprise, and ChromeOS. Linux distributions are frequently used in server platforms. Many Linux distributions use the word "Linux" in their name, but the Free Software Foundation uses and recommends the name "GNU/Linux", to emphasize the use and importance of GNU software in many distributions... 318fbc23b7 == History and support == 318fbc23b7 The UMSDOS project was started in 1992 by Jacques Gelinas and made available to the net in January 1994 as a patch. It was included in the standard distribution starting with kernel 1.1.36. UMSDOS was removed from the Linux 2.6.11 kernel for lack of maintenance. UVFAT, an extension of UMSDOS to use the Windows data structures for long filenames instead of its own, was discontinued before release. They should work in 2.4.x kernels. 318fbc23b7

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