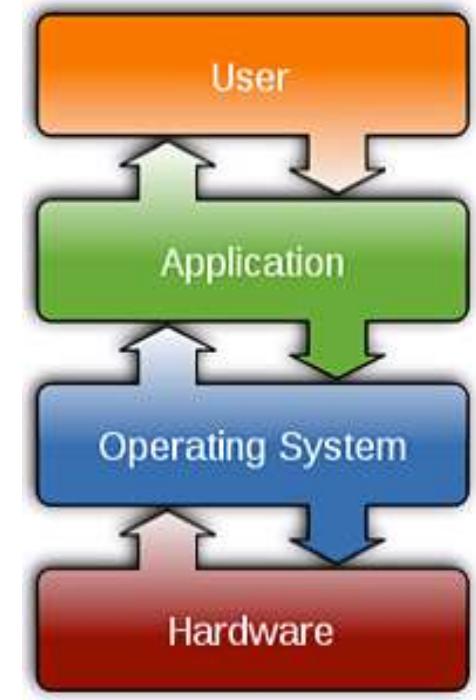




Bok, JongSoon
javaexpert@nate.com
<https://github.com/swacademy/fss>

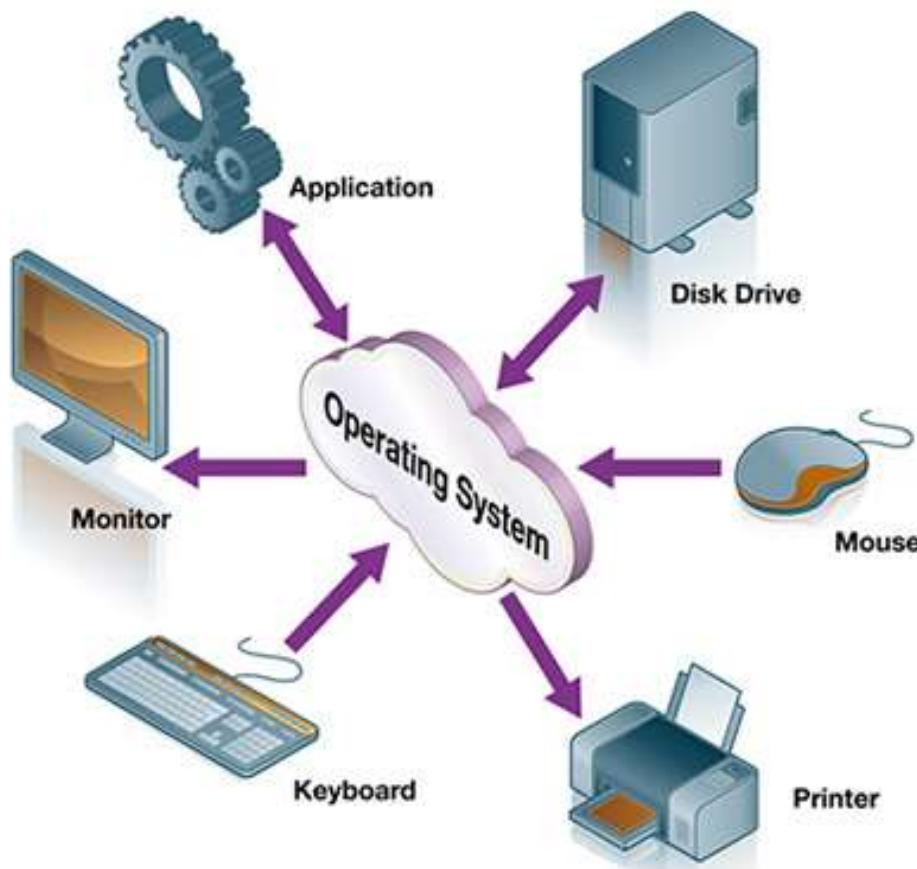
Operating System

- Is an interface between the hardware and the user for the management and sharing of the resources of the system.
- Every general-purpose computer must have an operating system to run other programs.



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Operating System (Cont.)

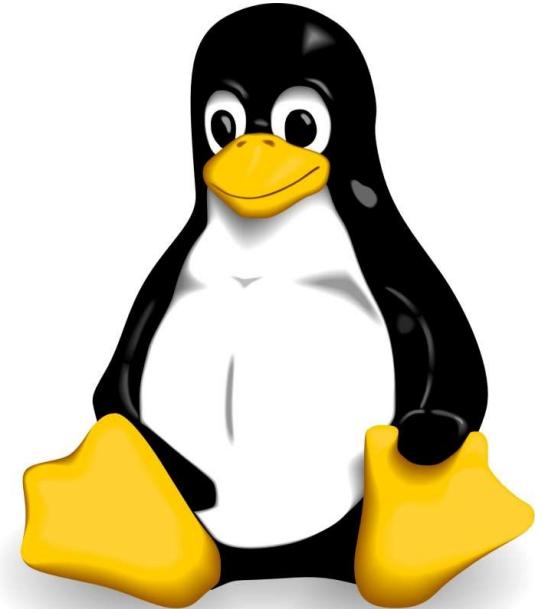


History of OS

- The First Generation (1940 to early 1950s)
 - ENIAC + NO OS
- The Second Generation (1955 ~ 1965)
 - IBM Mainframe + GMOS
- The Third Generation (1965 ~ 1980)
 - DEC PDP-1 + MULTICS
- The Fourth Generation (1980 ~ Present Day)
 - PCs + DOS/Windows/macOS

Linux...

- Is an open source operating system based or Unix environment.
- Multi-user, Multitasking, Multiprocessor.
- Has the X Window GUI.
- Is very similar to other operating systems, such as Windows and macOS.
- But something sets Linux apart from these operating systems.



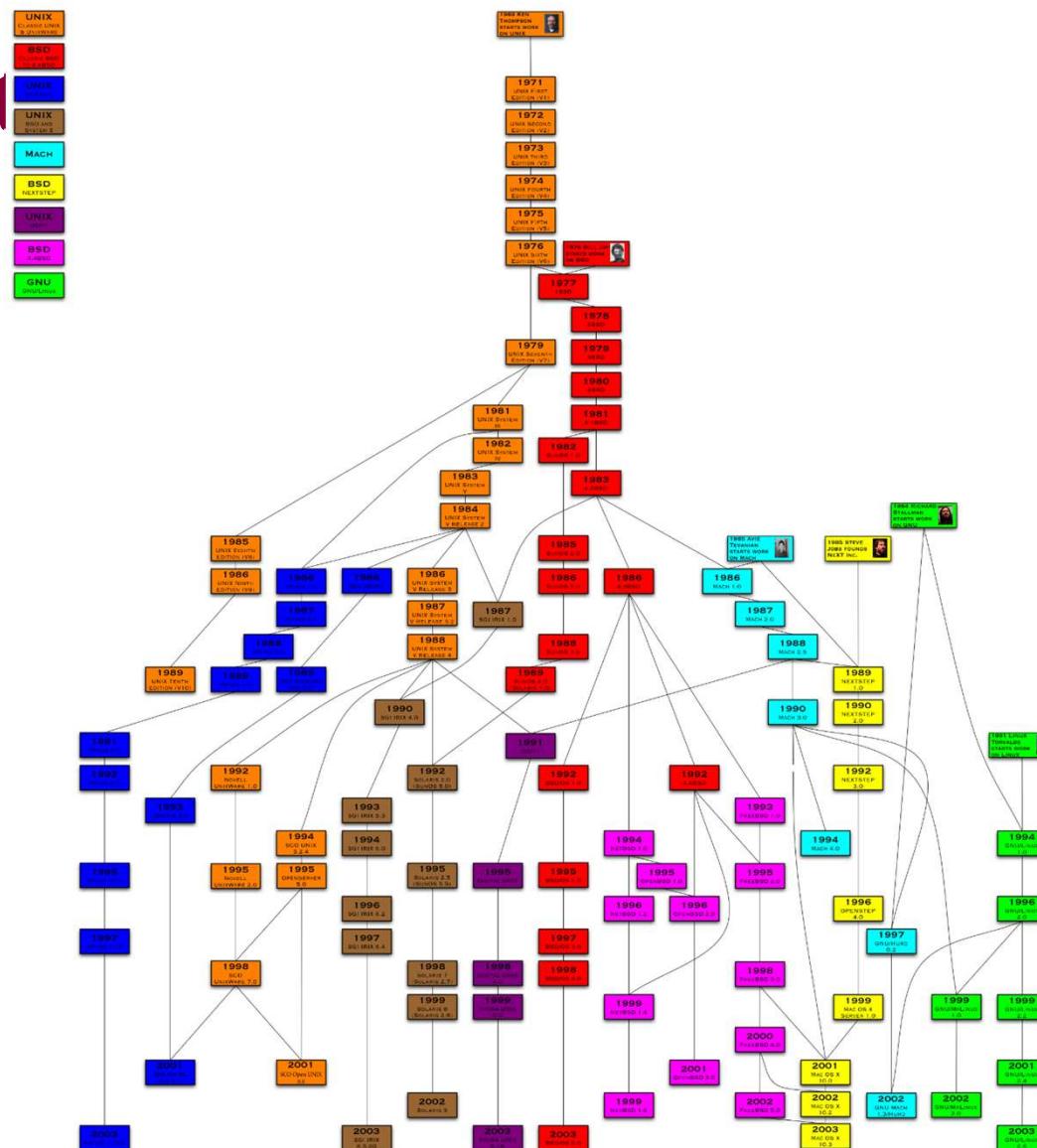
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Linux... (Cont.)

- As an open operating system, Linux is developed collaboratively.
- Source Code is available.
- Means no one company is solely responsible for its development or ongoing support.
- Begins as a server OS and has become useful as a desktop OS, can also be used on all of these devices.



Linux... (Cont)



<http://www.netneurotic.de/mac/unix/images/UNIX.png>



Linux... (Cont.)

■ <https://www.kernel.org/>

The Linux Kernel Archives



About Contact us FAQ Releases Signatures Site news

Protocol Location
HTTP <https://www.kernel.org/pub/>
GIT <https://git.kernel.org/>
RSYNC <rsync://rsync.kernel.org/pub/>

Latest Release
6.6.4 

mainline:	6.7-rc4	2023-12-03	[tarball]	[patch]	[inc. patch]	[view diff]	[browse]		
stable:	6.6.4	2023-12-03	[tarball]	[pgp]	[patch]	[inc. patch]	[view diff]	[browse]	[changelog]
stable:	6.5.13 [EOL]	2023-11-28	[tarball]	[pgp]	[patch]	[inc. patch]	[view diff]	[browse]	[changelog]
longterm:	6.1.65	2023-12-03	[tarball]	[pgp]	[patch]	[inc. patch]	[view diff]	[browse]	[changelog]
longterm:	5.15.141	2023-12-03	[tarball]	[pgp]	[patch]	[inc. patch]	[view diff]	[browse]	[changelog]
longterm:	5.10.202	2023-11-28	[tarball]	[pgp]	[patch]	[inc. patch]	[view diff]	[browse]	[changelog]
longterm:	5.4.262	2023-11-28	[tarball]	[pgp]	[patch]	[inc. patch]	[view diff]	[browse]	[changelog]
longterm:	4.19.300	2023-11-28	[tarball]	[pgp]	[patch]	[inc. patch]	[view diff]	[browse]	[changelog]
longterm:	4.14.331	2023-11-28	[tarball]	[pgp]	[patch]	[inc. patch]	[view diff]	[browse]	[changelog]
linux-next:	next-20231208	2023-12-08							[browse]

Other resources

Git Trees	Documentation	Kernel Mailing Lists
Patchwork	Wikis	Bugzilla
Mirrors	Linux.com	Linux Foundation

Social

Site Atom feed
Releases Atom Feed
Kernel Planet



The Relationship between Linux and GNU

■ GNU(Operation System Project)

- Richard Stallman
- Published September 27, 1983 in the USENET newsgroup.
- Established by the Free Software Foundation (FSF) in 1985.
- Software such as **GCC**, **glibc**, **GDB**, **coreutils**, **binutils**, and **bash** were produced.
- GNU can be combined with various types of kernels.
 - Linux (GNU/Linux)(1991), FreeBSD(1993), Linux-Libre(2012), GNU Hurd(GNU/Hurd)(2015)
- 1989, GNU General Public License (GNU GPL) announced.

■ Linux

- Linus Torvalds
- Published September 7, 1991 in the USENET newsgroup.
- Linux kernel is distributed under the GNU GPLv2 license.

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Linux... (Cont.)

- As per the latest report from Top 500, Linux now runs on all the fastest 500 supercomputers in the world¹.
- Also runs on embedded systems such as mobile phones, tablet computers, network routers, building automation controls, televisions and video game consoles.



1. <https://www.stackscale.com/blog/most-powerful-supercomputers-linux/>

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Linux... (Cont.)



- Typically, Linux is packaged in a format known as a *Linux distribution*(or *distro*) for desktop & server use.
- Linux distributions include the Linux *kernel*, supporting utilities and libraries and usually a large amount of application software to fulfill the distribution's intended use.



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Linux... (Cont.)

- The Four Web Bigshots, Google, Amazon, Twitter and Facebook; They All Use Linux.
- Nuclear Submarines running on Linux.
- Linux on Air Traffic Control Systems.
- Linux helping in Power Particle Physics Research.
- Linux powers The New York Stock Exchange.

Linux... (Cont.)

- In-Vehicle-Infotainment And Communications Systems Of Toyota runs Linux.
- High-Tech Road Traffic Control running on Linux.
- Linux powers Japan's Bullet Trains.
- The Most Powerful Supercomputers Today Run Linux.



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Linux... (Cont.)



Dell Inspiron Mini 9 and 12



Garmin Nuvi 860, 880, and 5000



Google Android Dev Phone 1



TiVo Digital Video Recorder



HP Mini 1000



Lenovo IdeaPad S9



Motorola MotoRokr EM35 Phone



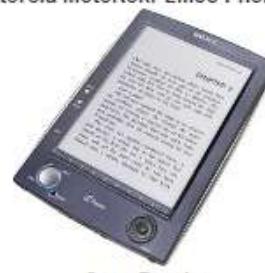
Volvo In-Car Navigation System



One Laptop Per Child XO2



Sony Bravia Television



Sony Reader



Yamaha Motif Keyboard

Linux... (Cont.)



NimbRo-OP Humanoid TeenSize Open Platform

<http://www.itworld.co.kr/slideshow/86037>

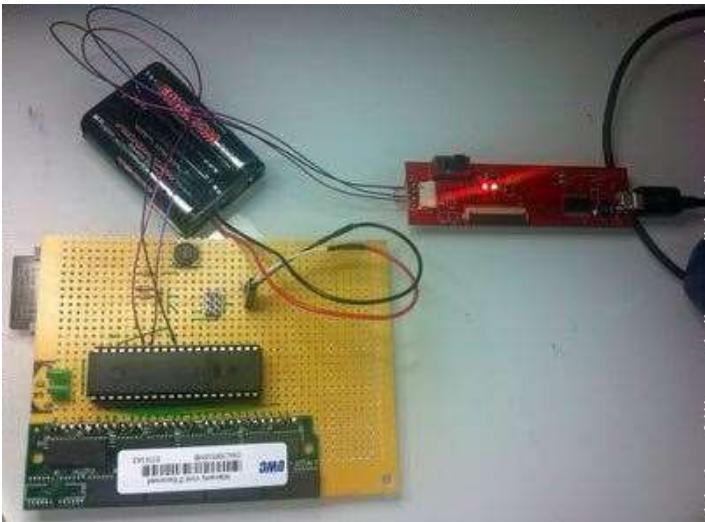
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Linux... (Cont.)



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Linux... (Cont.)



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Linux Key Components

커널

- 운영 체제의 핵심 기능 제공

대몬(Daemon)

- 시스템 또는 사용자에게 추가 지원 제공

애플리케이션

- 텍스트 편집기, 웹 브라우저, 데이터베이스 등의 프로그램 포함

데이터 파일

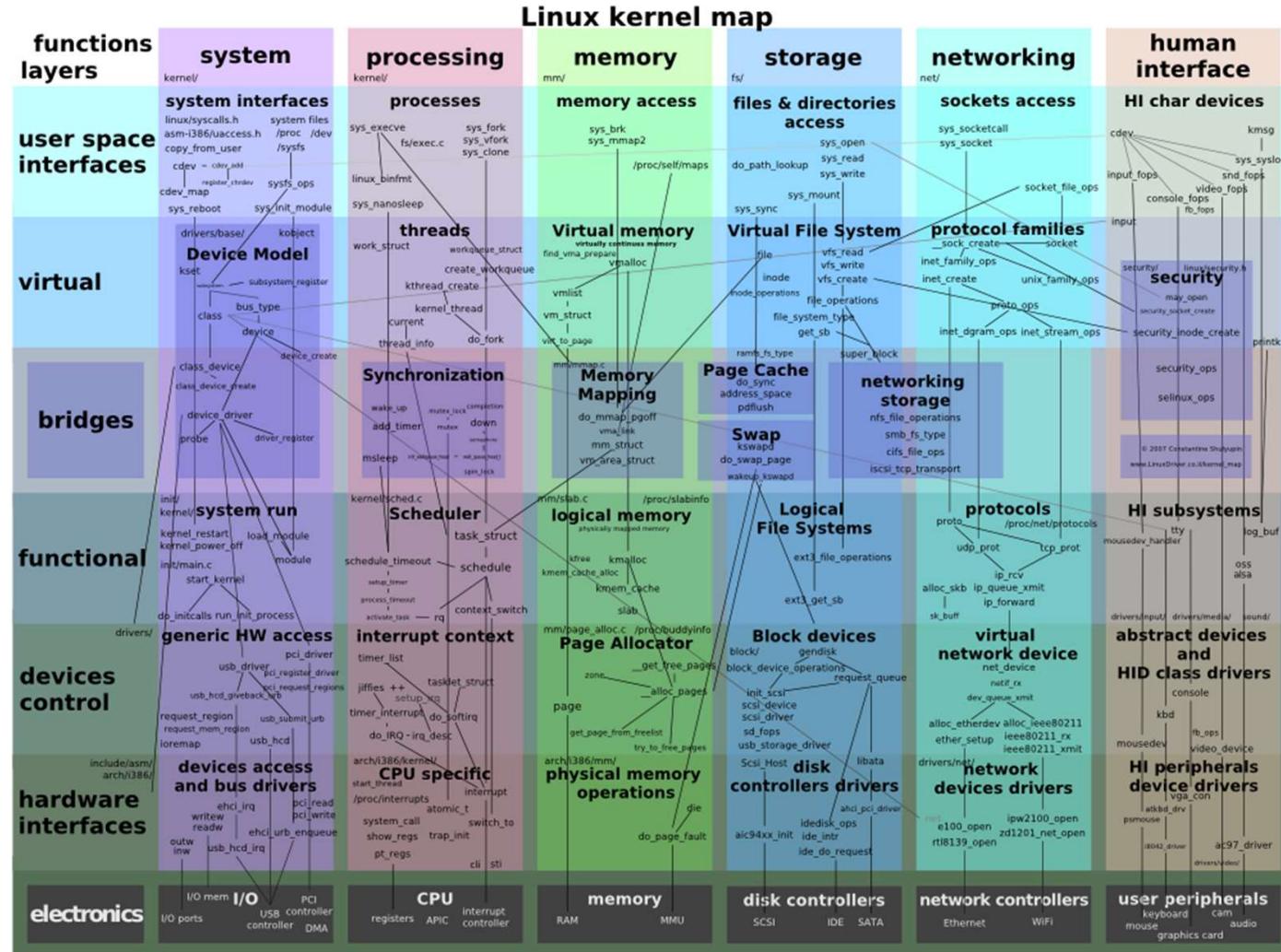
- 텍스트 파일, 음악 파일, 이미지 파일 등의 사용자 콘텐츠 포함

구성 파일

- 텍스트 파일에 저장된 Linux, 서비스, 애플리케이션용 설정 포함

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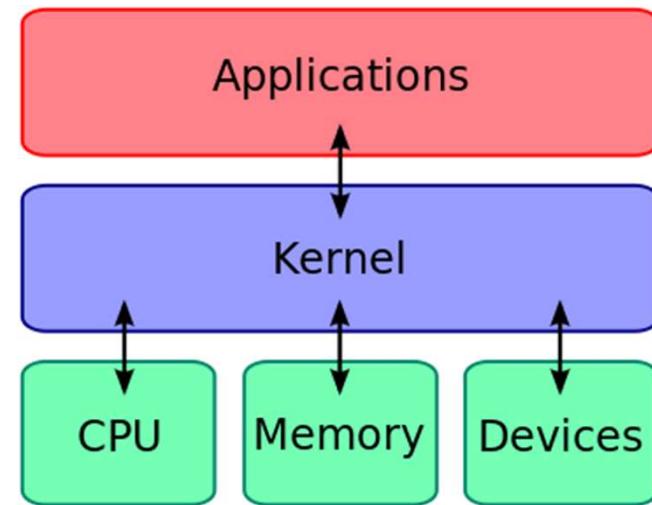
Kernel



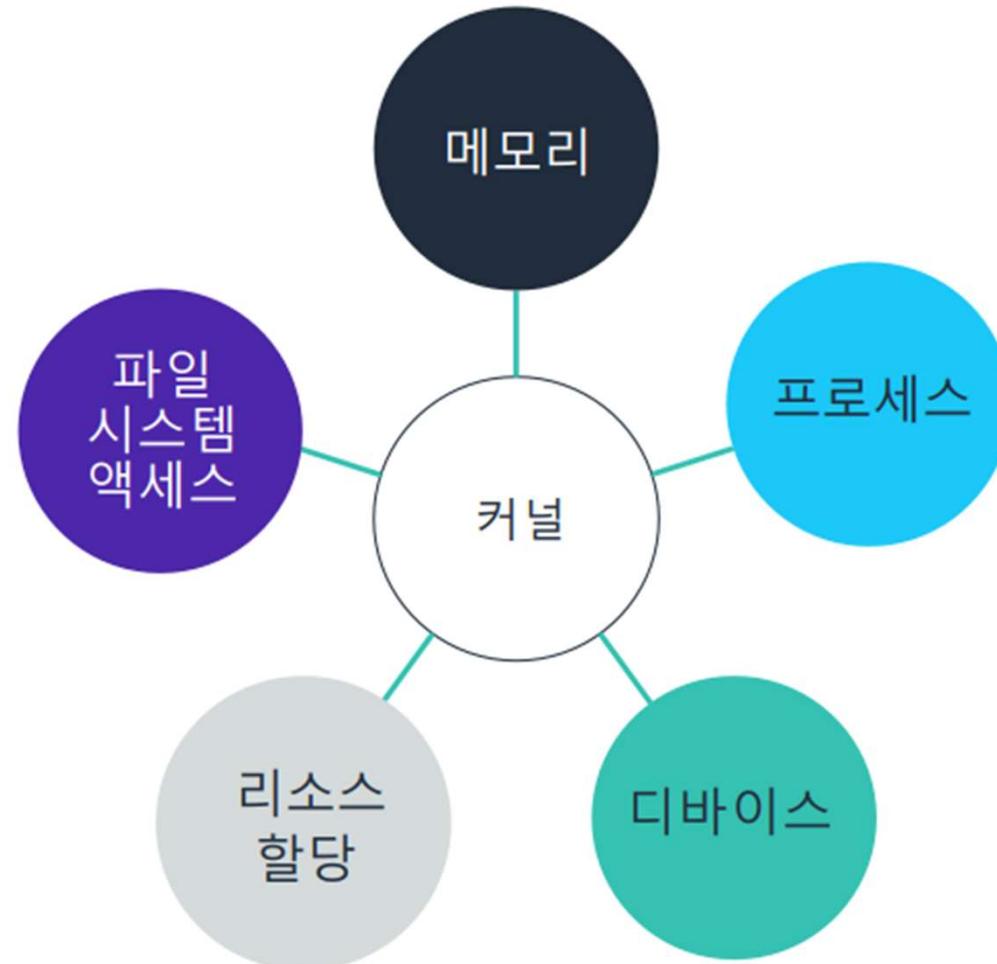
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Kernel (Cont.)

- Is a fundamental part of a modern computer operating system.
 - Process Management System
 - File Management System
 - Hardware Interface



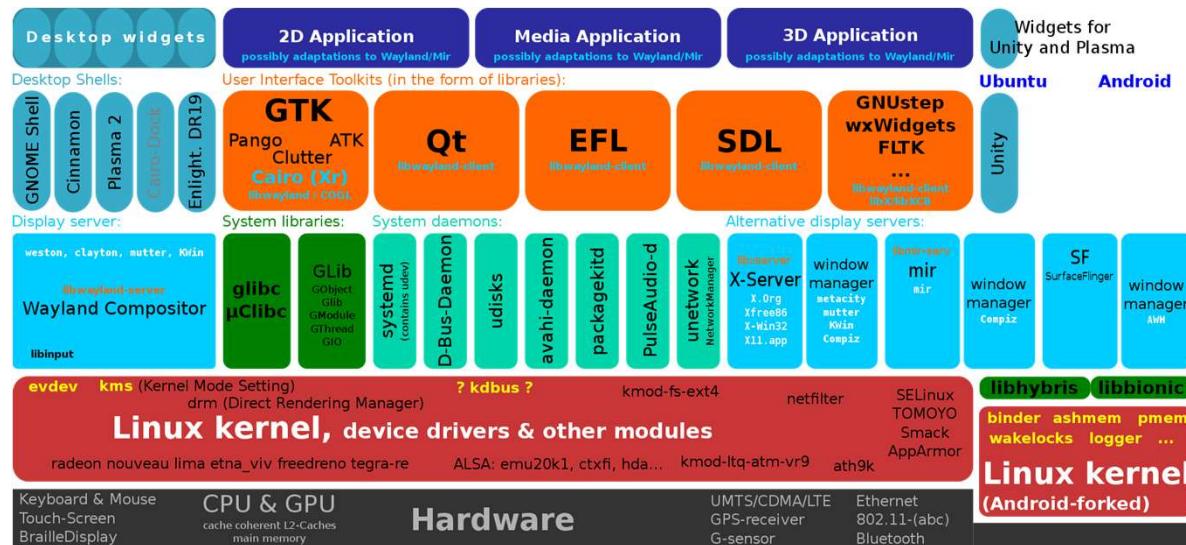
Kernel (Cont.)



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Daemon

- Computer Program running in the background
- Interactive User can't control.
- Generally System Service's role
- Generally Process names ending with the letter **d**
 - syslog**d**
 - ssh**d**
 - http**d**



https://ko.wikipedia.org/wiki/%EB%8D%B0%EB%AA%AC_%28%EC%BB%B4%ED%93%A8%ED%8C%85%29

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Application

- Software that provides various functions to help users perform multi-tasks or jobs.
- i.e.
 - Word Processor
 - Web Browser
 - Email Client
 - Media Player



Data Files

■ File contains information used by the program and may also contain other data.

■ i.e.

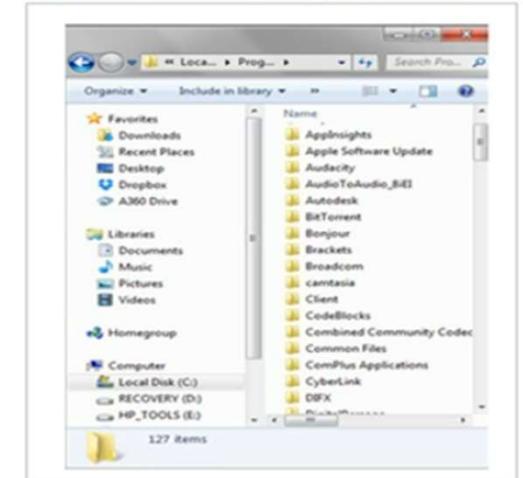
- Music File
- Text File
- Image File



Data Files In Binary

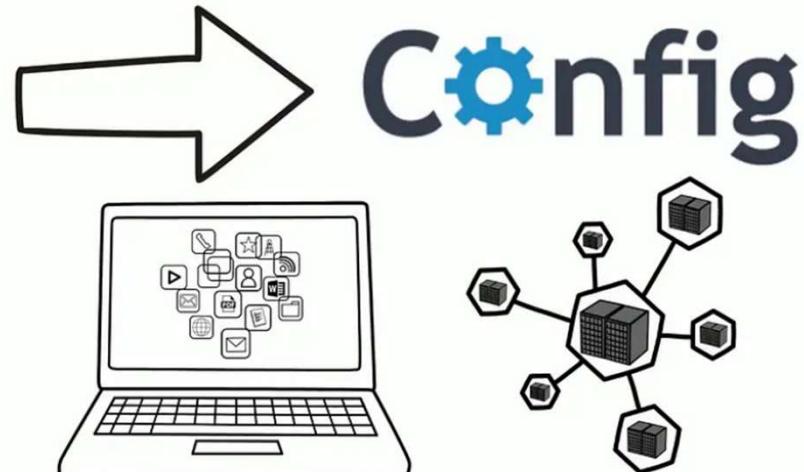
```
01111001 01101111  
01110101 00100000  
01110010 01101111  
01100011 01101011  
01111001 01101111  
01110101 00100000  
01110010 01101111  
01100011 01101011
```

OS Presents Logical View



Configuration Files

- Is a special type of file that contains initial settings or stores System Program values.
- Some configuration files run several commands at startup.
- Common configuration file extensions
 - .cnf
 - .conf
 - .cfg
 - .cf
 - .ini



Linux Interface

■ CLI

- Command Line Interface
- Uses less hardware resources
- Automation possible with script
- Provides more options
- Linux Server mostly uses CLI

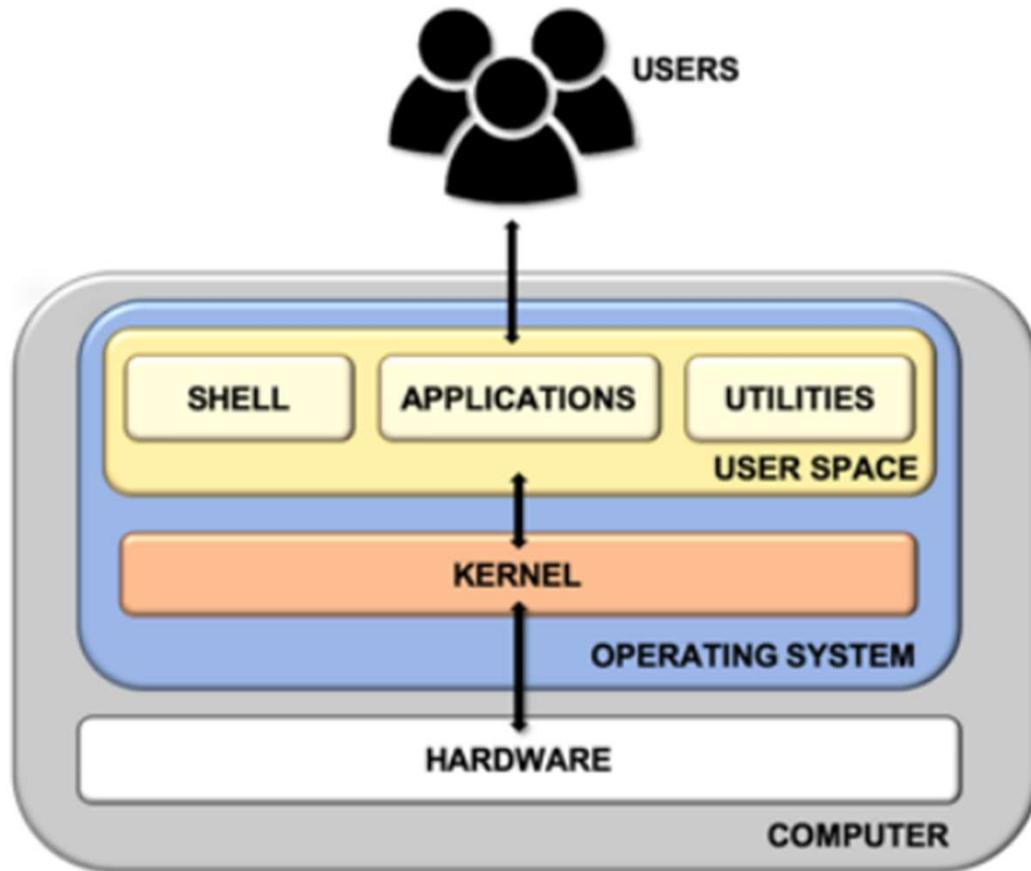
■ GUI

- Graphical User Interface
- Intuitive, visual navigation
- Linux, Windows, macOS
- Desktop or Workstation mostly uses GUI



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Shell



<https://www.futurelearn.com/info/courses/linux-for-bioinformatics/0/steps/202947>

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History

- An OS ***Kernel***(The core of the Linux operating system) first released on October 5, 1991.
- By **Linus Benedict Torvalds**(born December 28, 1969)
- A Finn computer science student at the University of Helsinki.



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History (Cont.)

- On August 25, 1991, made the following announcement to the Usenet group comp.os.minux:

I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since April, and is starting to get ready. I'd like any feedback on things people like/dislike in minix¹, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) (among other things).

1. The, Minix, Torvalds referred to is a variant of the UNIX operating system, <http://www.minix3.org/>
Source from : <https://groups.google.com/forum/#!msg/comp.os.minix/dINtH7RRrGA/SwRavCzVE7gJ>



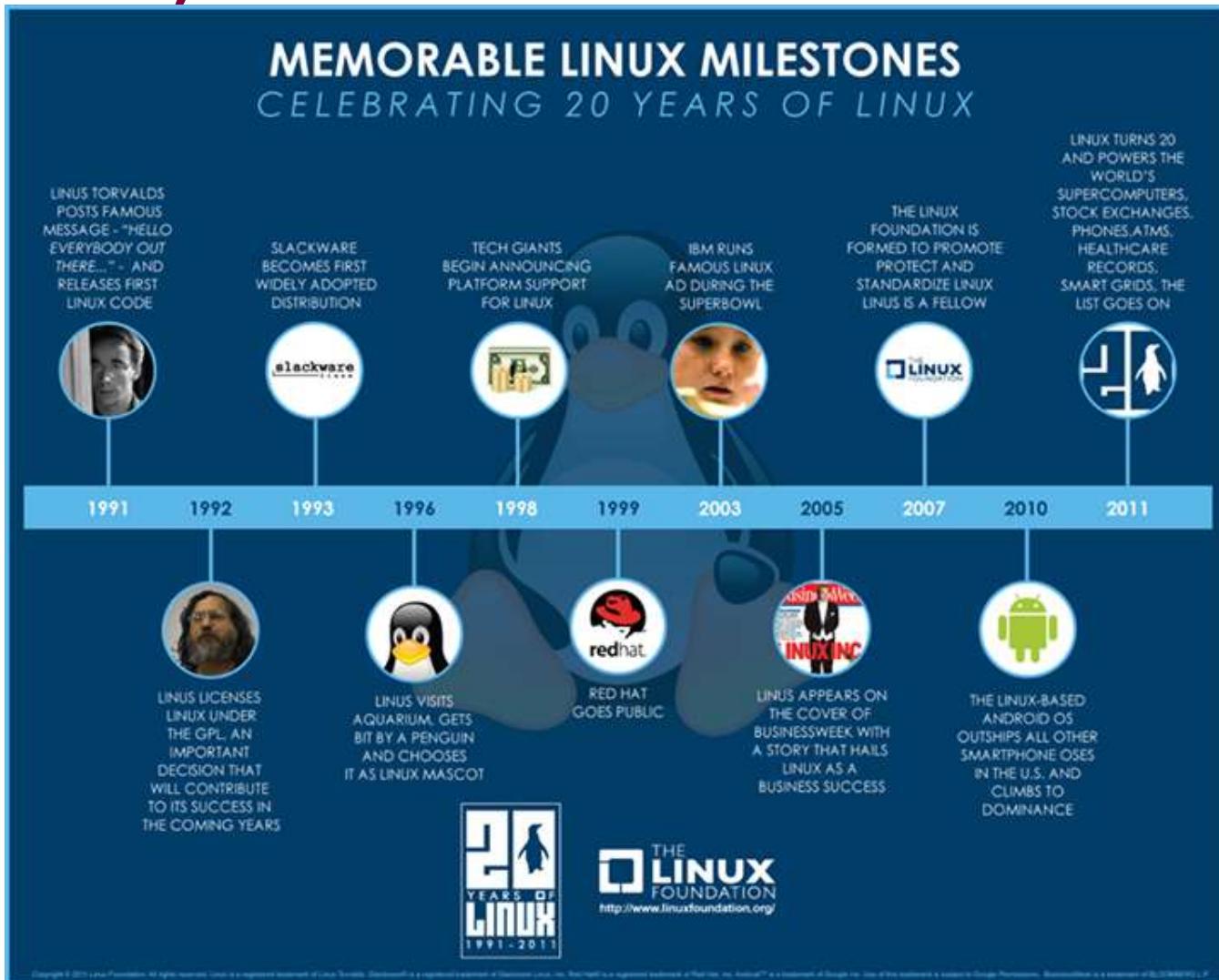
History (Cont.)

- Torvalds wanted to run on the x86-based consumer PCs of the day.
- *GNU(GNU Is Not Unix)*¹ tools first put together by Richard Stallman in 1983.
- Stallman's GNU tools were from a project to create an operating system as well.
- Was founded “The Linux Foundation”² in 2007.

¹ <http://www.gnu.org/gnu/manifesto.html>

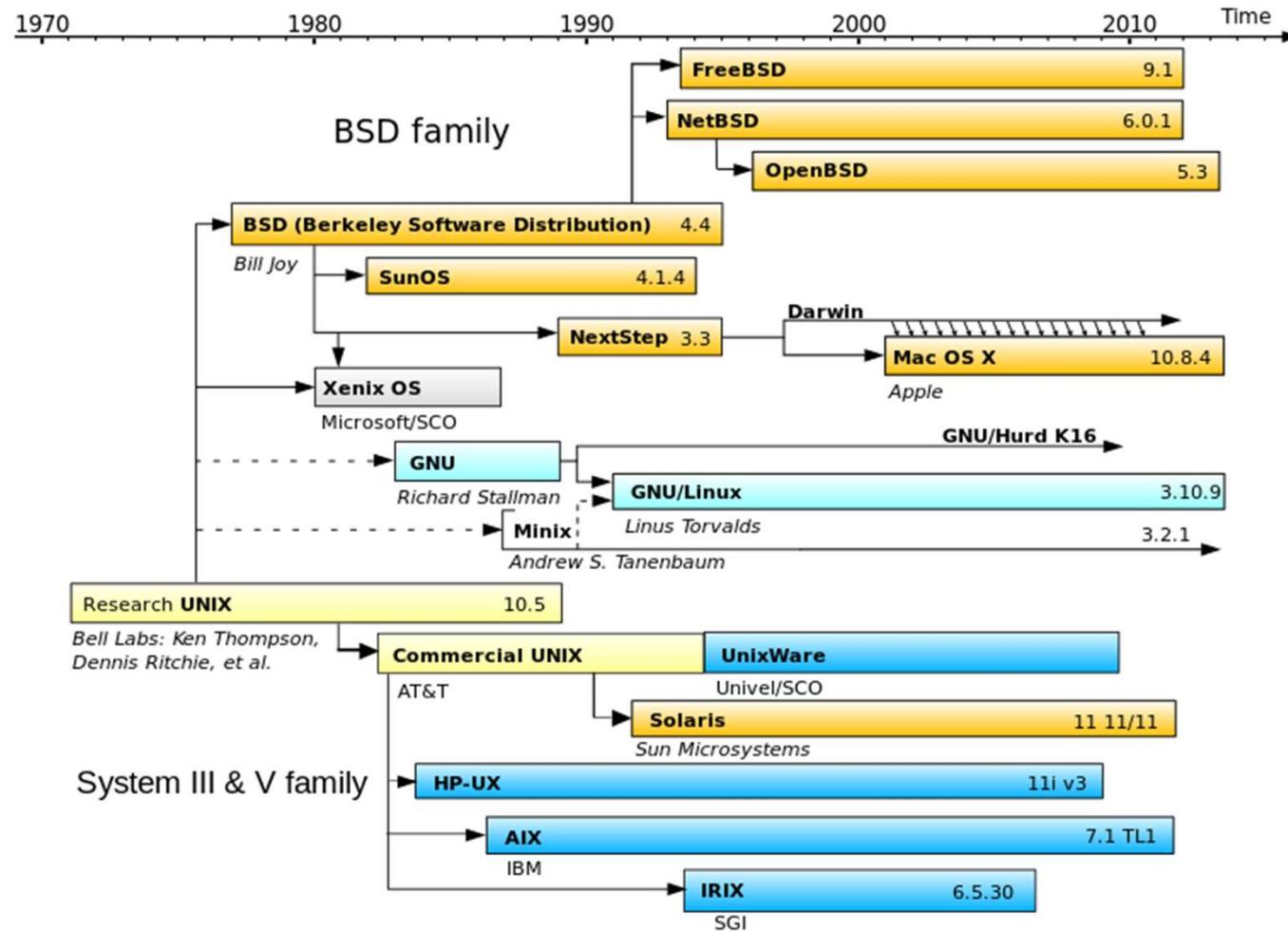
² <http://www.linuxfoundation.org/>

History (Cont.)



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History (Cont.)



Philosophy of Linux

Openness

Efficiency

Stability

Significant Impact on Modern OSs in Several Keys

- Open Source Philosophy
- Stability and Reliability
- Security Focus
- Versatility and Portability
- Command-Line Interface(CLI)
- Containerization and Virtualization
- Community Collaboration
- Cost-Efficiency

Linux Distributions

■ <https://distrowatch.com/>

The screenshot shows the homepage of DistroWatch.com. At the top, there's a search bar and a navigation menu with links to English, Español, Français, Deutsch, Português, Bosanski, 日本語, and 한국어. Below the header, there are several sections:

- 3CX VoIP PBX**: An advertisement for 3CX VoIP PBX featuring a person holding a red phone handset.
- MX Linux**: A news item from July 29, 2021, about the Development Release of MX Linux 21 Beta 1. It mentions Debian-based desktop distribution, Xfce 4.16 desktop, and new features like LVM support and UEFI live system boot menus.
- Linux Lite**: A news item from July 28, 2021, about the Development Release of Linux Lite 5.6 RC1.
- 3CX**: An advertisement for 3CX PBX systems, asking if they still cost \$20 per extension.

On the right side of the page, there's a large orange "ubuntu" logo.

Linux Distributions (Cont.)

■ <https://lwn.net/>

The screenshot shows the LWN.net website interface. At the top, there's a header with a logo of a penguin holding a book, the text "Welcome to LWN.net [LWN.net] x +", and a search bar with fields for "User:" and "Password:", and buttons for "Log in", "Subscribe", and "Register". Below the header, the main content area has a title "Welcome to LWN.net". A sidebar on the left contains links for "Content" (Weekly Edition, Archives, Search, Kernel, Security, Distributions, Events calendar, Unread comments), "LWN FAQ", and "Write for us". The main content area features several news items:

- [\$] LWN.net Weekly Edition for July 29, 2021** [Kernel] Posted Jul 28, 2021 14:59 UTC (Wed) by ris. This item discusses a set of stable kernels released on July 29, 2021, including versions 5.13.6, 5.10.54, 5.4.136, 4.19.199, 4.14.241, 4.9.277, and 4.4.277.
- Inside this week's LWN.net Weekly Edition** [Security] Posted Jul 28, 2021 14:47 UTC (Wed) by ris. This item covers security updates for Wednesday, mentioning Fedora, Mageia, openSUSE, Red Hat, and SUSE.
- Security updates for Tuesday** [Security] Posted Jul 27, 2021 15:14 UTC (Tue) by ris. This item covers security updates for Tuesday.

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Linux Distributions (Cont.)

■ <https://www.linux.org>

The screenshot shows the homepage of Linux.org. At the top, there's a navigation bar with links for Forums, What's new, Linux Tutorials, Members, Download Linux, Newsletter, Credits, Log in, Register, and Search. Below the navigation, the main content area displays several articles in a grid format:

- Linux Cluster – Basics** (JUL 28): Jarret B posted yesterday at 5:40 PM. The post discusses basic understanding of clustering and making a small virtual cluster. It has 335 replies and 0 comments.
- LFCS – Login Scripts** (JUL 12): Jarret B posted Jul 12, 2021. The post explains what happens when a user logs into a system, mentioning login scripts that can be manipulated. It has 2,790 replies and 2 comments.
- Portable Raspberry Pi 400** (APR 23): Jarret B posted Apr 23, 2021. The post announces the release of the Raspberry Pi 400, which is encased in a keyboard. It has 17,472 replies and 0 comments.
- LFCS – Managing Software – Ubuntu** (MAY 03): Jarret B posted May 3, 2021. The post discusses managing system software on Ubuntu, referencing previous coverage for CentOS. It has 15,046 replies and 0 comments.
- Flatpak and WhatIP** (APR 05): Jarret B posted Apr 5, 2021. The post covers Flatpak and WhatIP, tools for managing software packages. It has 12,510 replies and 0 comments.

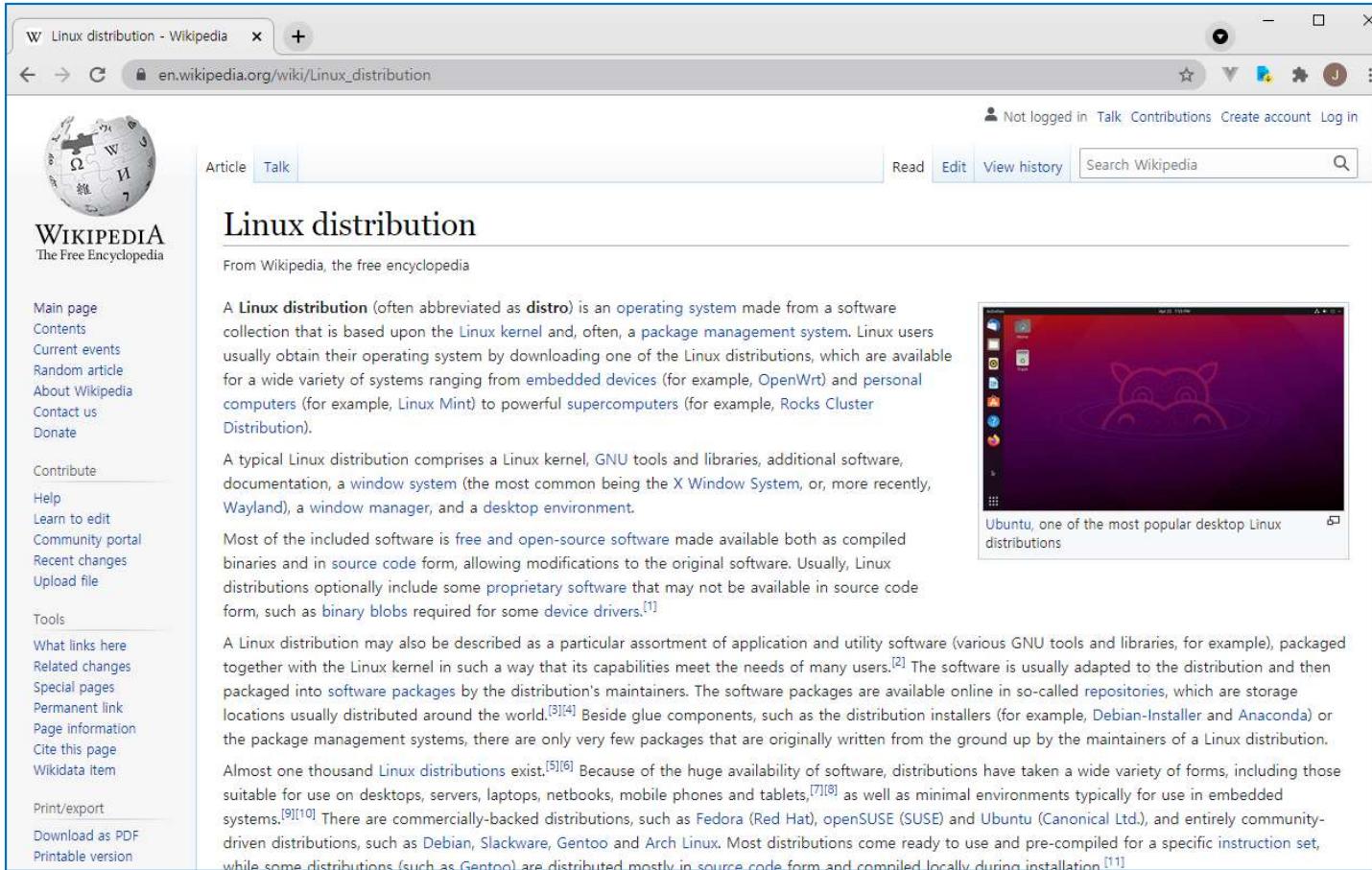
On the right side of the page, there are several sidebar elements:

- \$100 Digital Ocean Credit**: An advertisement for Digital Ocean offering a free VM to test out Linux.
- Members online**: Shows that 561 members are currently online, with 2 guests and 559 total users.
- SHOCKBYTE**: An advertisement for Shockbyte featuring "WORRY-FREE GAME HOSTING" and "Best Minecraft Server Hosting".
- Latest posts**: A list of recent activity:
 - Wayland + NVIDIA + Fedora experience so far (Latest: TheProf - 16 minutes ago)
 - General Linux
 - cursor is gone (Latest: Alexzee - Today at 1:55 AM)
 - Command Line

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Linux Distributions (Cont.)

- https://en.wikipedia.org/wiki/Linux_distribution



The screenshot shows a web browser displaying the English Wikipedia article titled "Linux distribution". The page has a standard Wikipedia layout with a sidebar on the left containing links like "Main page", "Contents", and "Help". The main content area is titled "Linux distribution" and describes it as an operating system made from a software collection based on the Linux kernel. It mentions various types of distributions for different purposes. A sidebar image shows the Ubuntu desktop environment with its characteristic purple gradient background and the Tux mascot.

Linux distribution

From Wikipedia, the free encyclopedia

A **Linux distribution** (often abbreviated as **distro**) is an operating system made from a software collection that is based upon the Linux kernel and, often, a package management system. Linux users usually obtain their operating system by downloading one of the Linux distributions, which are available for a wide variety of systems ranging from embedded devices (for example, OpenWrt) and personal computers (for example, Linux Mint) to powerful supercomputers (for example, Rocks Cluster Distribution).

A typical Linux distribution comprises a Linux kernel, GNU tools and libraries, additional software, documentation, a window system (the most common being the X Window System, or, more recently, Wayland), a window manager, and a desktop environment.

Most of the included software is free and open-source software made available both as compiled binaries and in source code form, allowing modifications to the original software. Usually, Linux distributions optionally include some proprietary software that may not be available in source code form, such as binary blobs required for some device drivers.^[1]

A Linux distribution may also be described as a particular assortment of application and utility software (various GNU tools and libraries, for example), packaged together with the Linux kernel in such a way that its capabilities meet the needs of many users.^[2] The software is usually adapted to the distribution and then packaged into software packages by the distribution's maintainers. The software packages are available online in so-called repositories, which are storage locations usually distributed around the world.^{[3][4]} Beside glue components, such as the distribution installers (for example, Debian-Installer and Anaconda) or the package management systems, there are only very few packages that are originally written from the ground up by the maintainers of a Linux distribution.

Almost one thousand Linux distributions exist.^{[5][6]} Because of the huge availability of software, distributions have taken a wide variety of forms, including those suitable for use on desktops, servers, laptops, netbooks, mobile phones and tablets,^{[7][8]} as well as minimal environments typically for use in embedded systems.^{[9][10]} There are commercially-backed distributions, such as Fedora (Red Hat), openSUSE (SUSE) and Ubuntu (Canonical Ltd.), and entirely community-driven distributions, such as Debian, Slackware, Gentoo and Arch Linux. Most distributions come ready to use and pre-compiled for a specific instruction set, while some distributions (such as Gentoo) are distributed mostly in source code form and compiled locally during installation.^[11]

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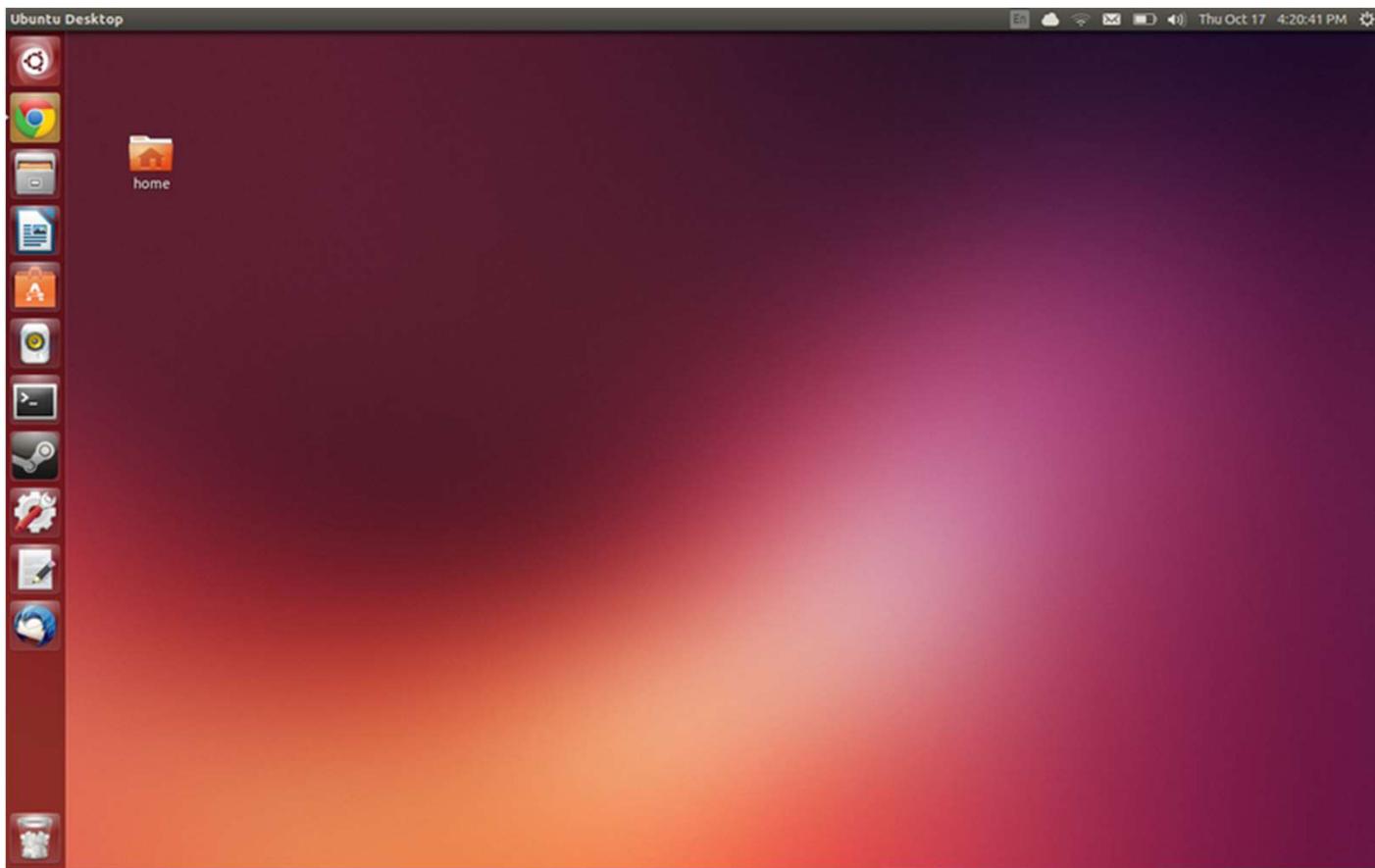
Linux Distributions (Cont.)

■ Debian



Linux Distributions (Cont.)

■ Ubuntu



Linux Distributions (Cont.)

■ Linux Mint



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Linux Distributions (Cont.)

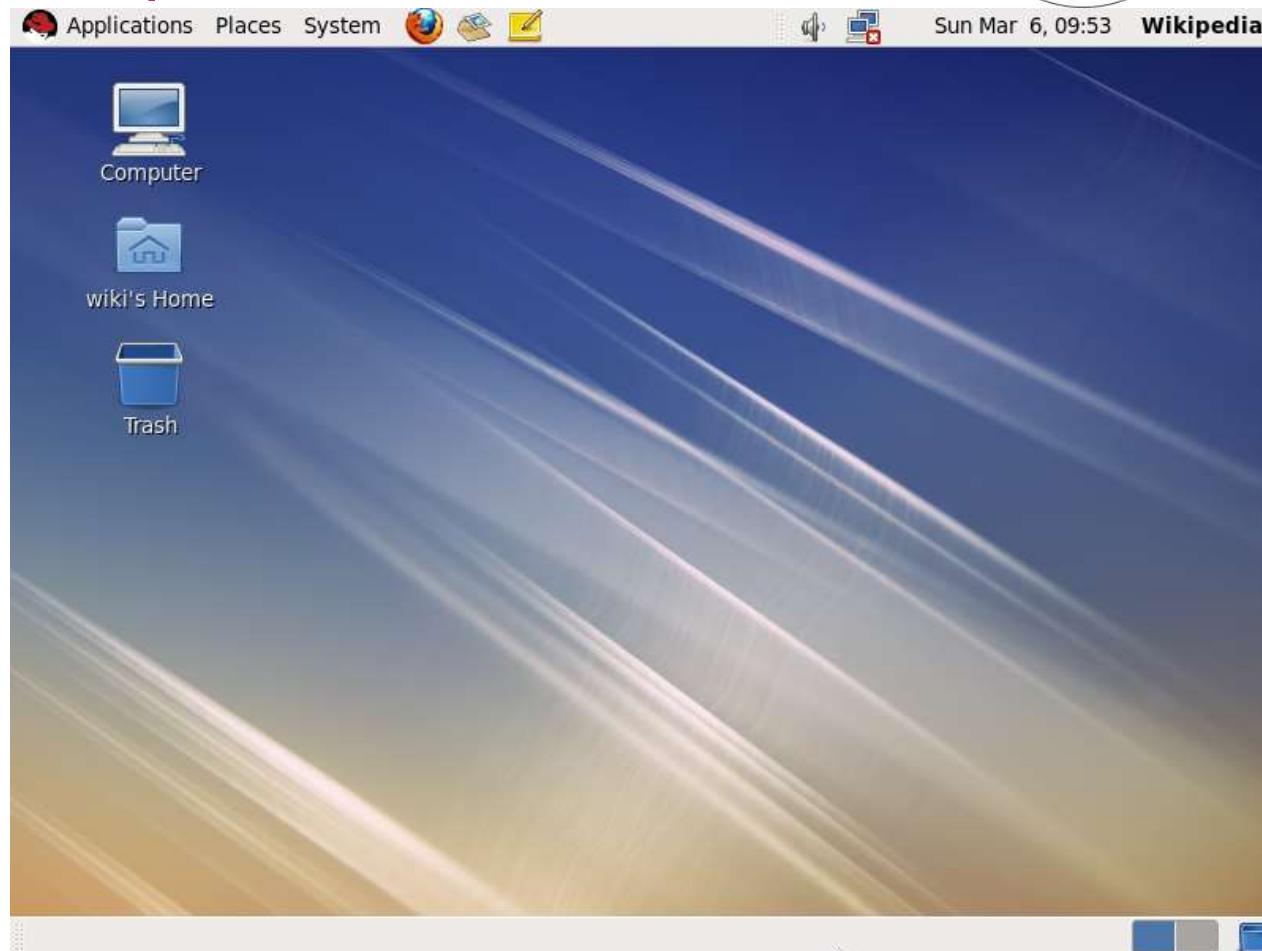
■ Fedora



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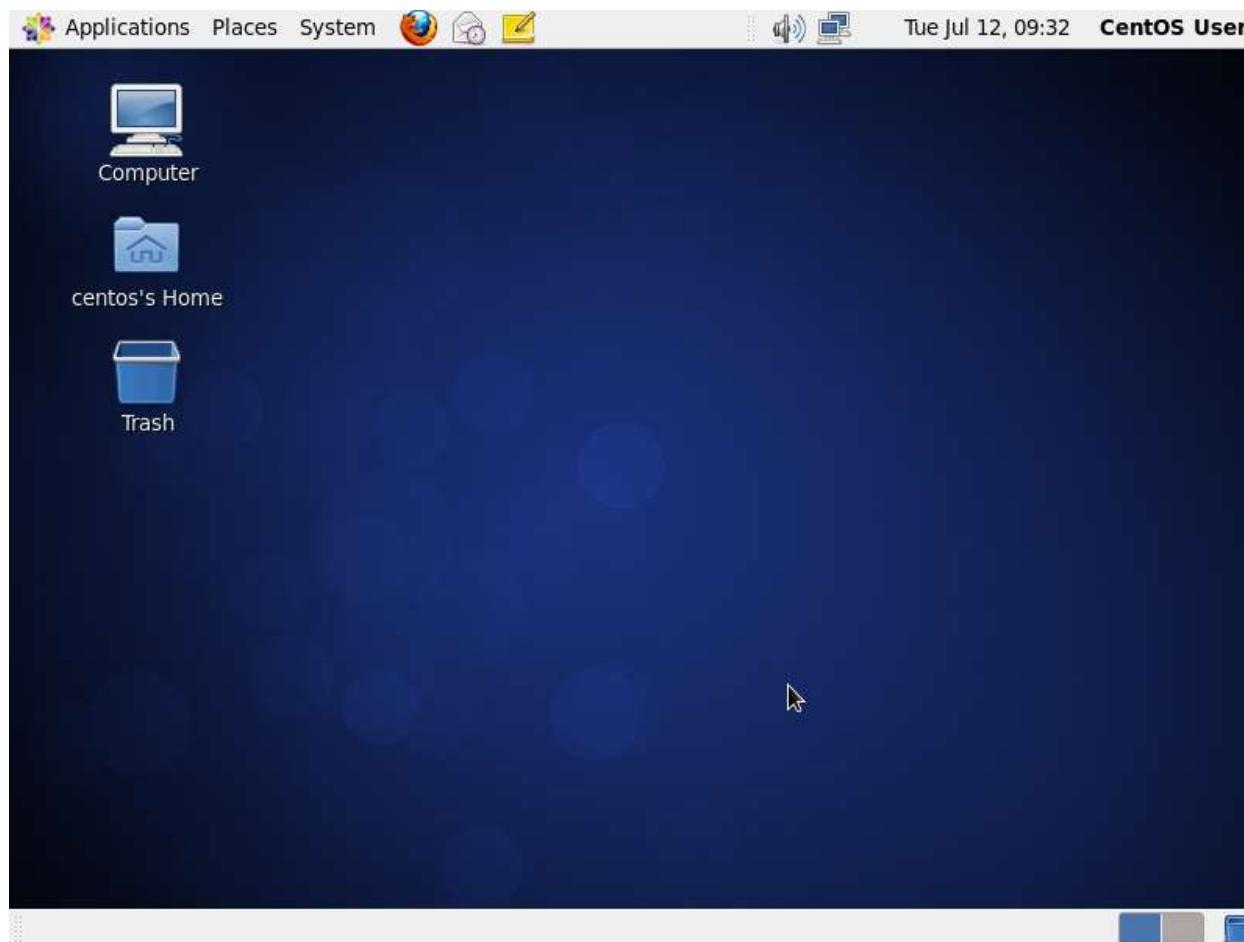
Linux Distributions (Cont.)

■ Red Hat Enterprise Linux



Linux Distributions (Cont.)

■ CentOS



Linux Distributions (Cont.)



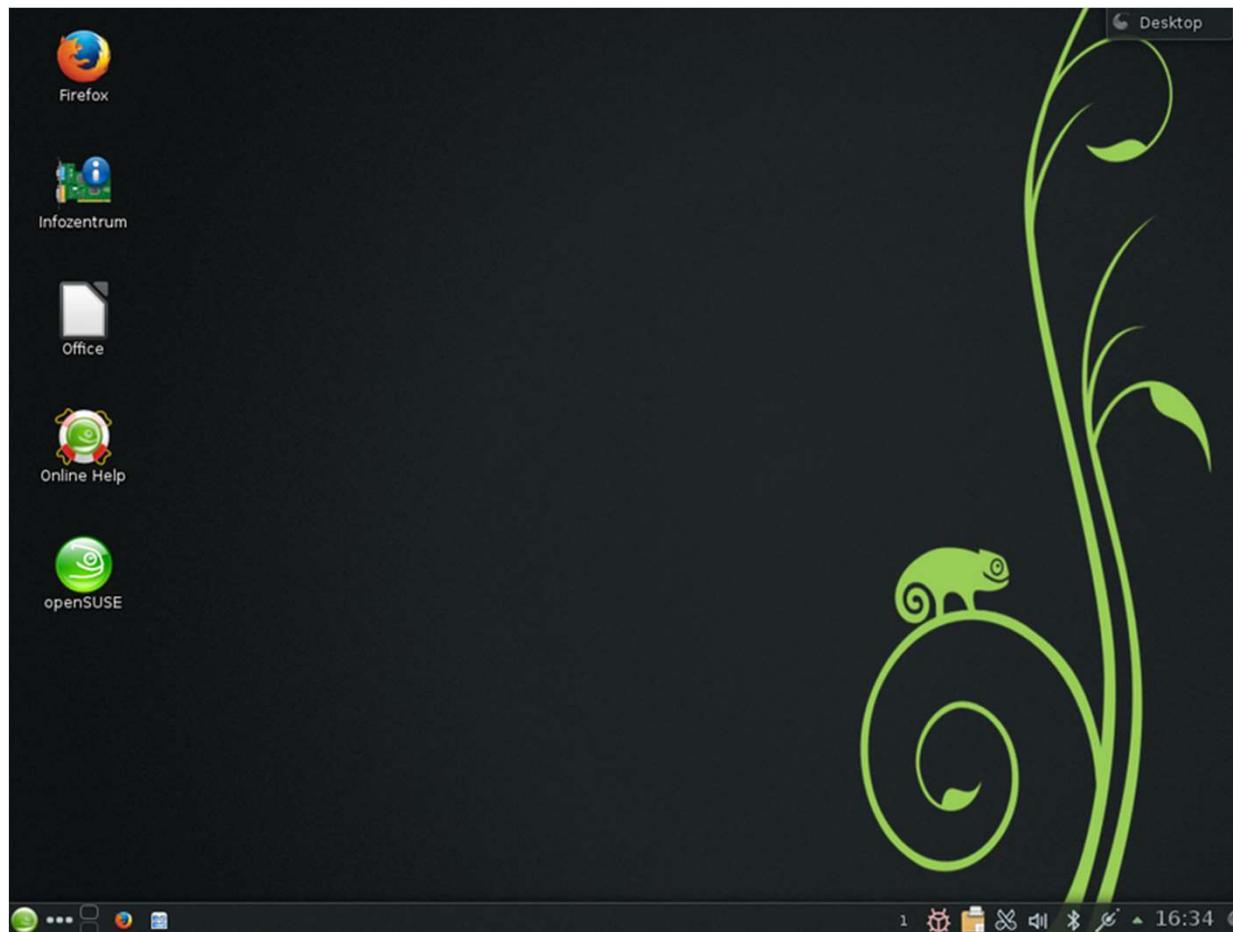
■ Mandriva Linux



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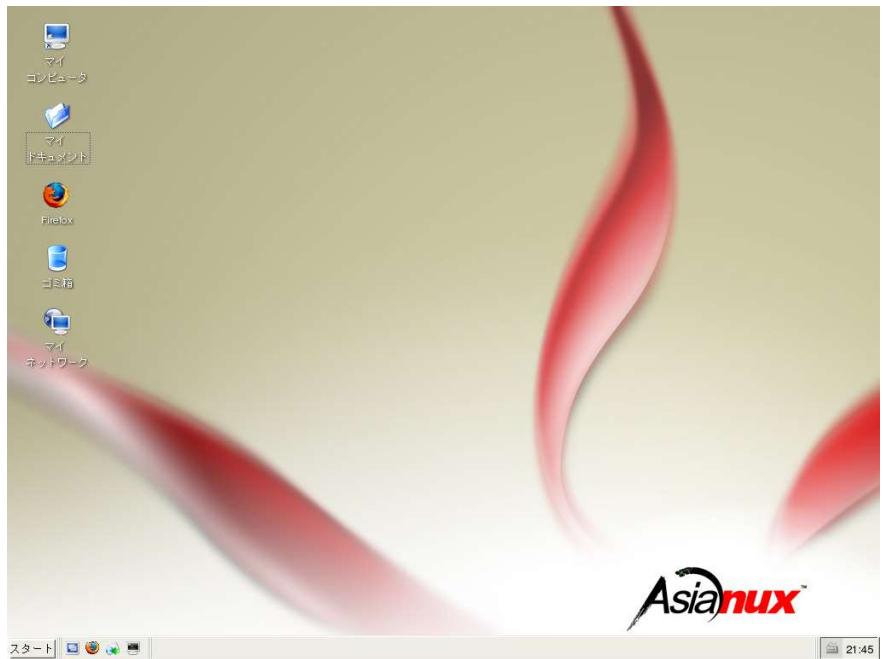
Linux Distributions (Cont.)

■ openSUSE



Linux Distributions (Cont.)

■ Asianux



About Asianux | www.asianux.co × +

asianux.com

↑ Slide Up

Asianux™

About Asianux

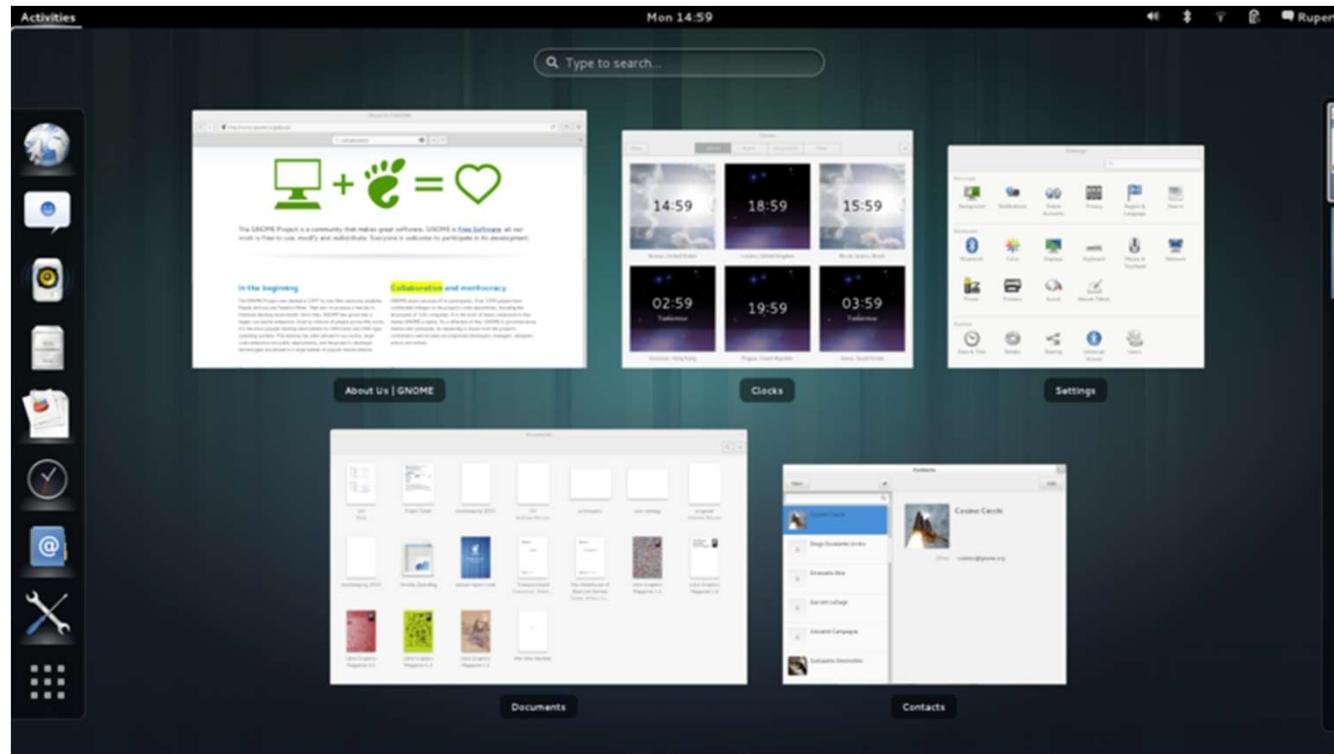
In September 2015, the Asianux Project has been dissolved.
Thank you for your support for our project.
Cybertrust Japan Co., Ltd.(formerly MIRACLE LINUX CORPORATION) has still
distributed Linux OS in Japan as "MIRACLE LINUX".
<https://www.cybertrust.co.jp/miracle-linux/>

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Linux Graphical Desktop Environments

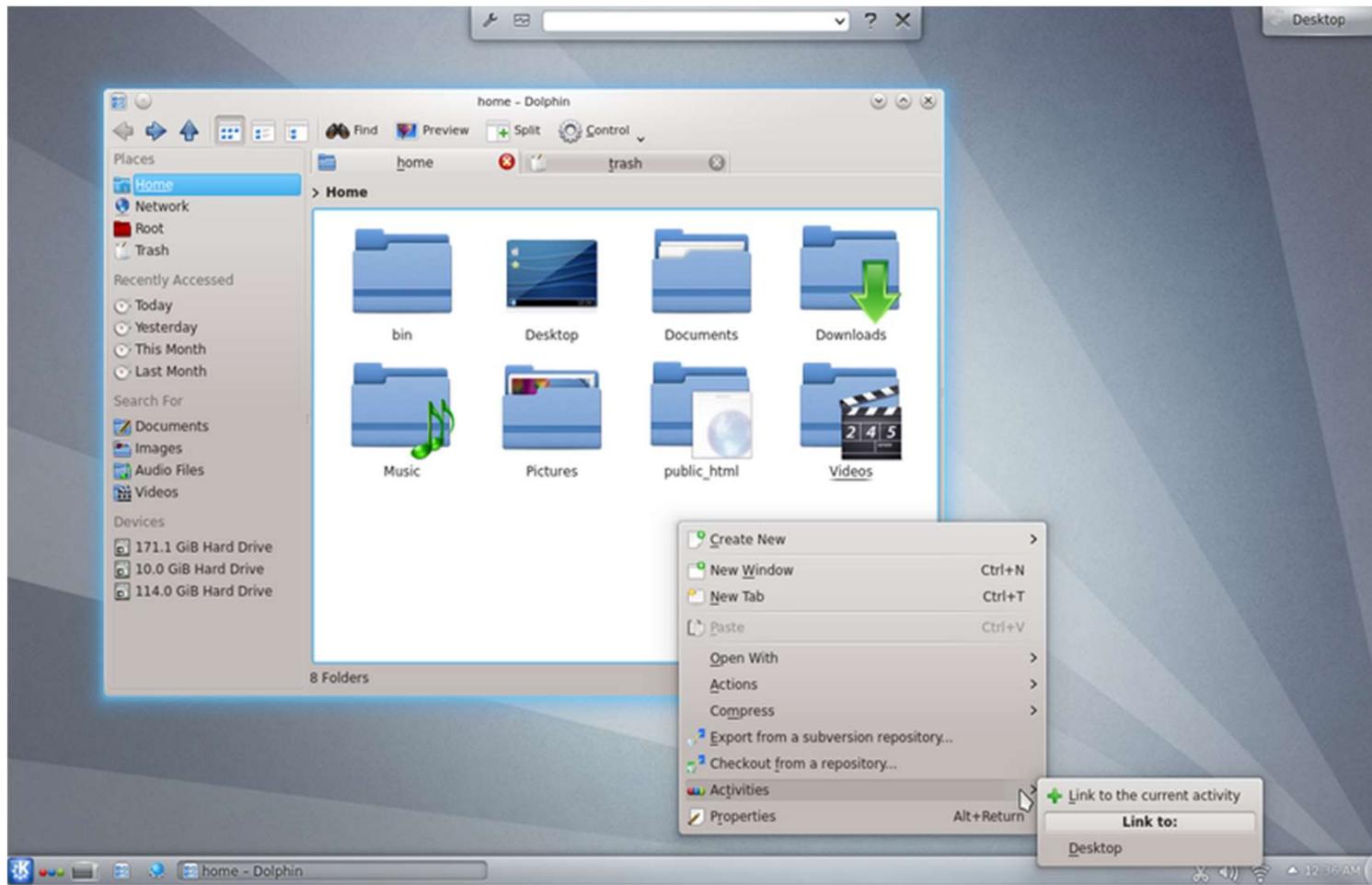
-GNOME Shell



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Linux Graphical Desktop Environments

-KDE Plasma



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Linux Graphical Desktop Environments

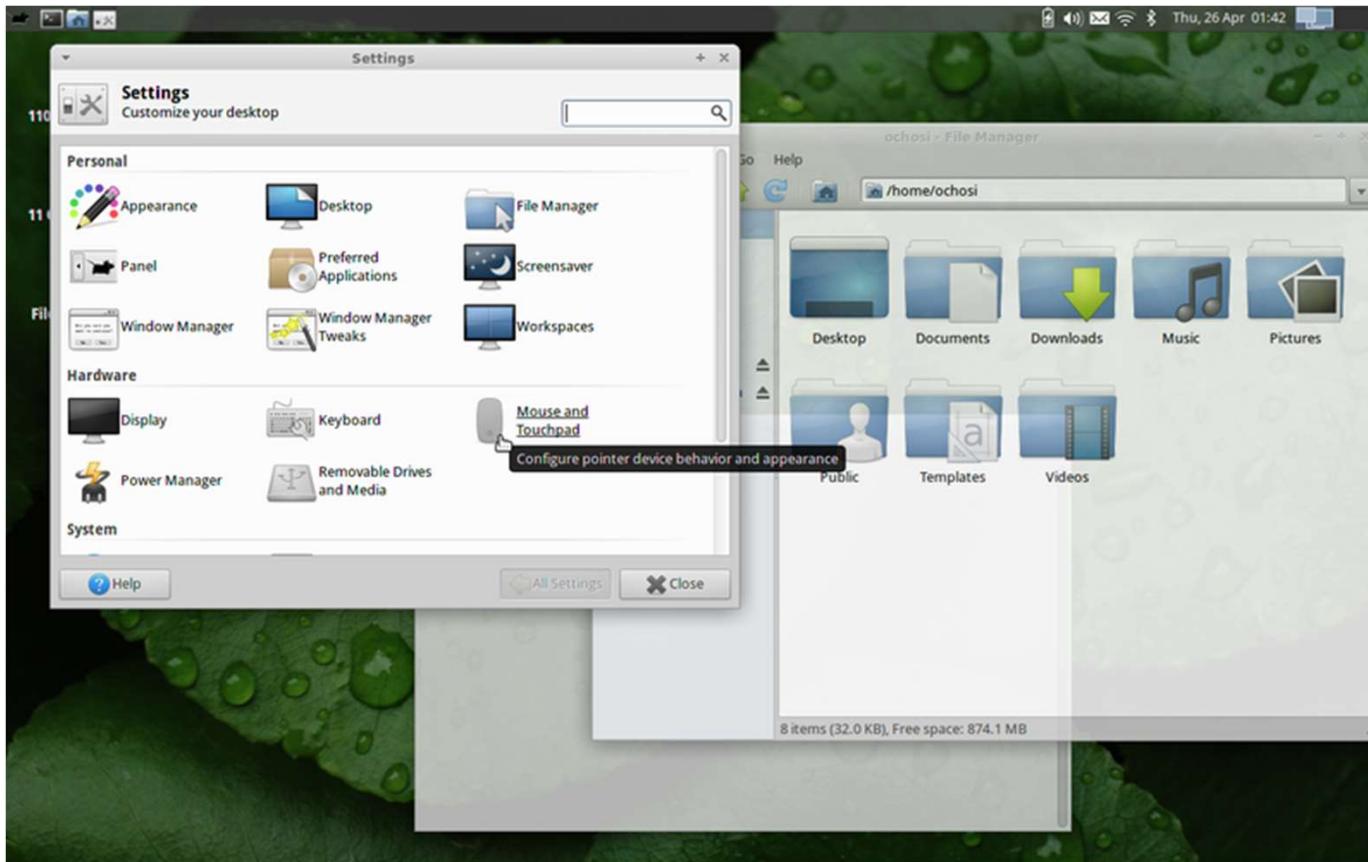
-Unity



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Linux Graphical Desktop Environments

-Xfce



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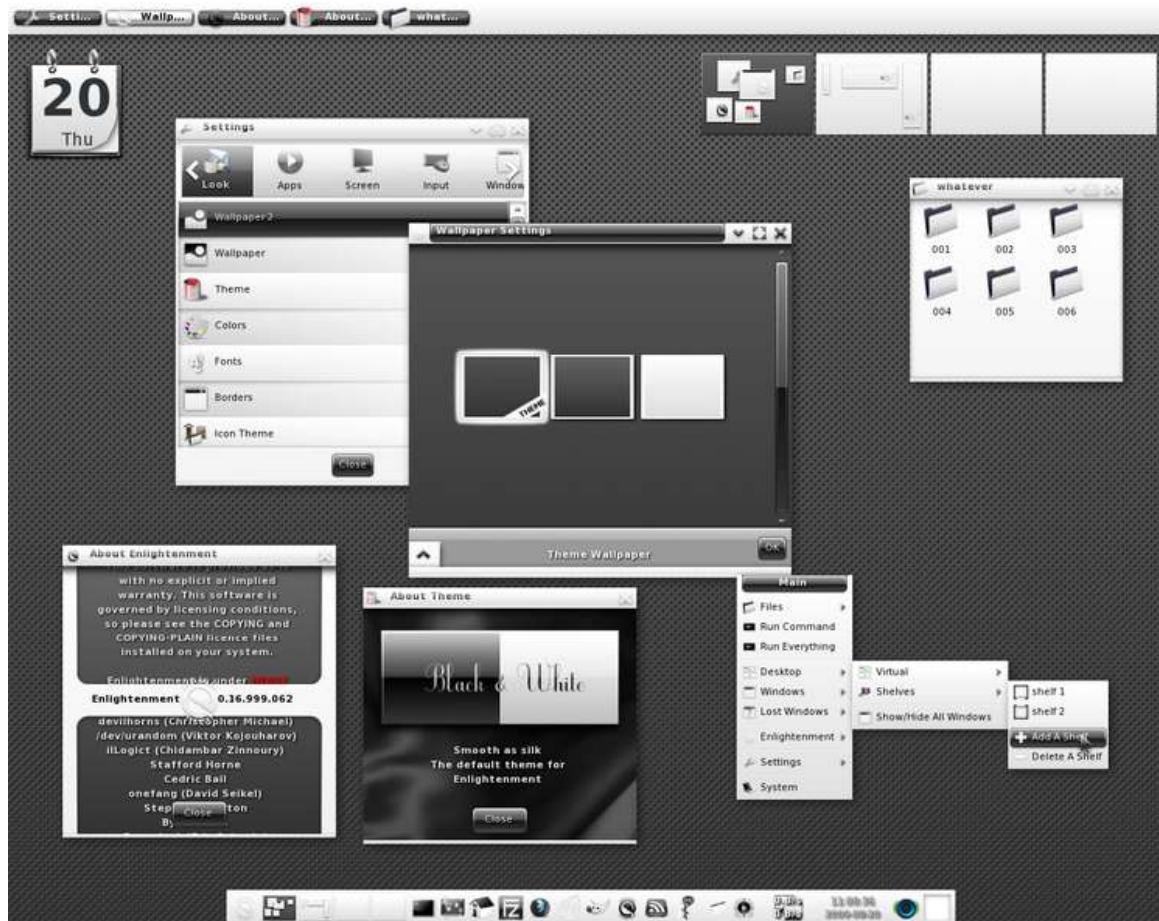
Linux Graphical Desktop Environments

-LXDE



Linux Graphical Desktop Environments

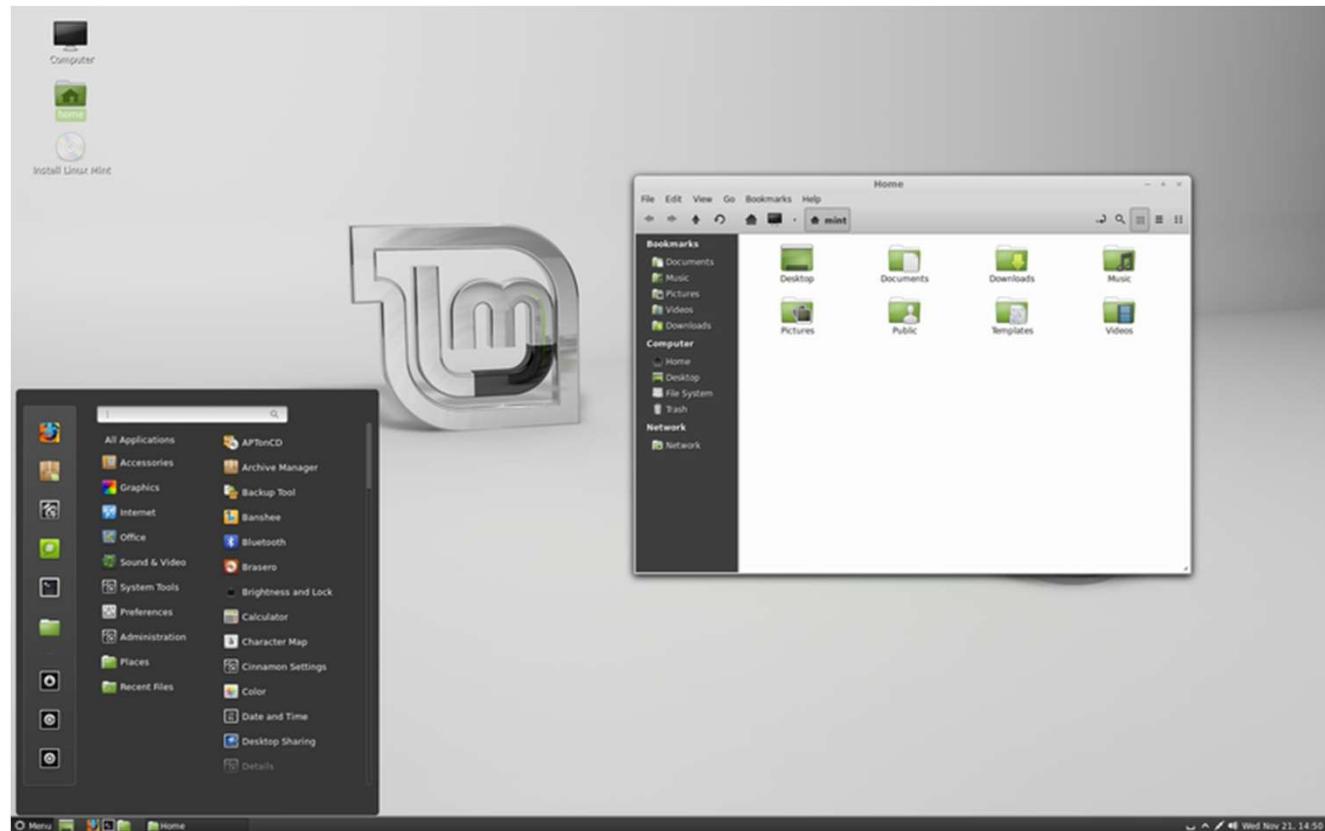
-Enlightenment



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Linux Graphical Desktop Environments

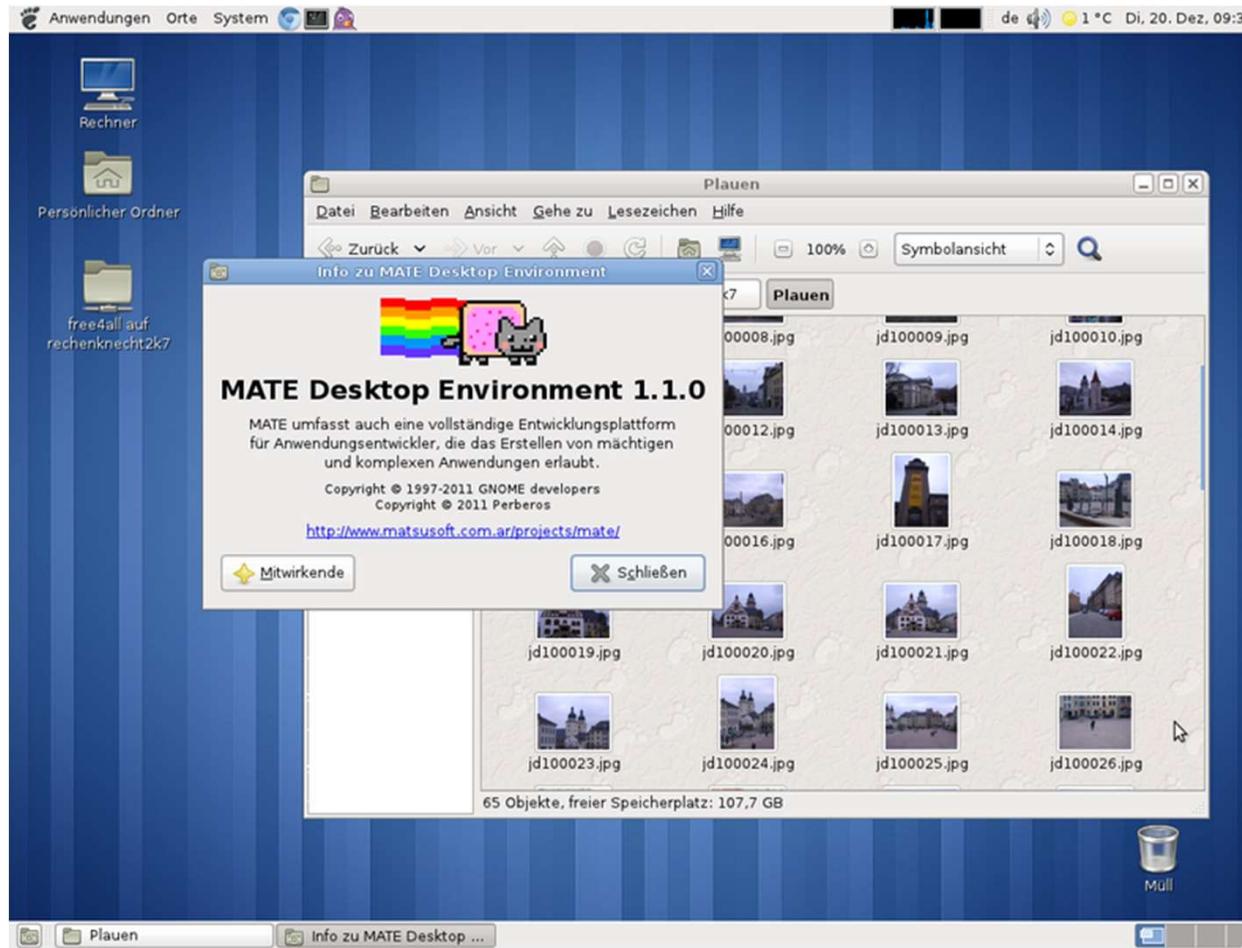
-Cinnamon



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Linux Graphical Desktop Environments

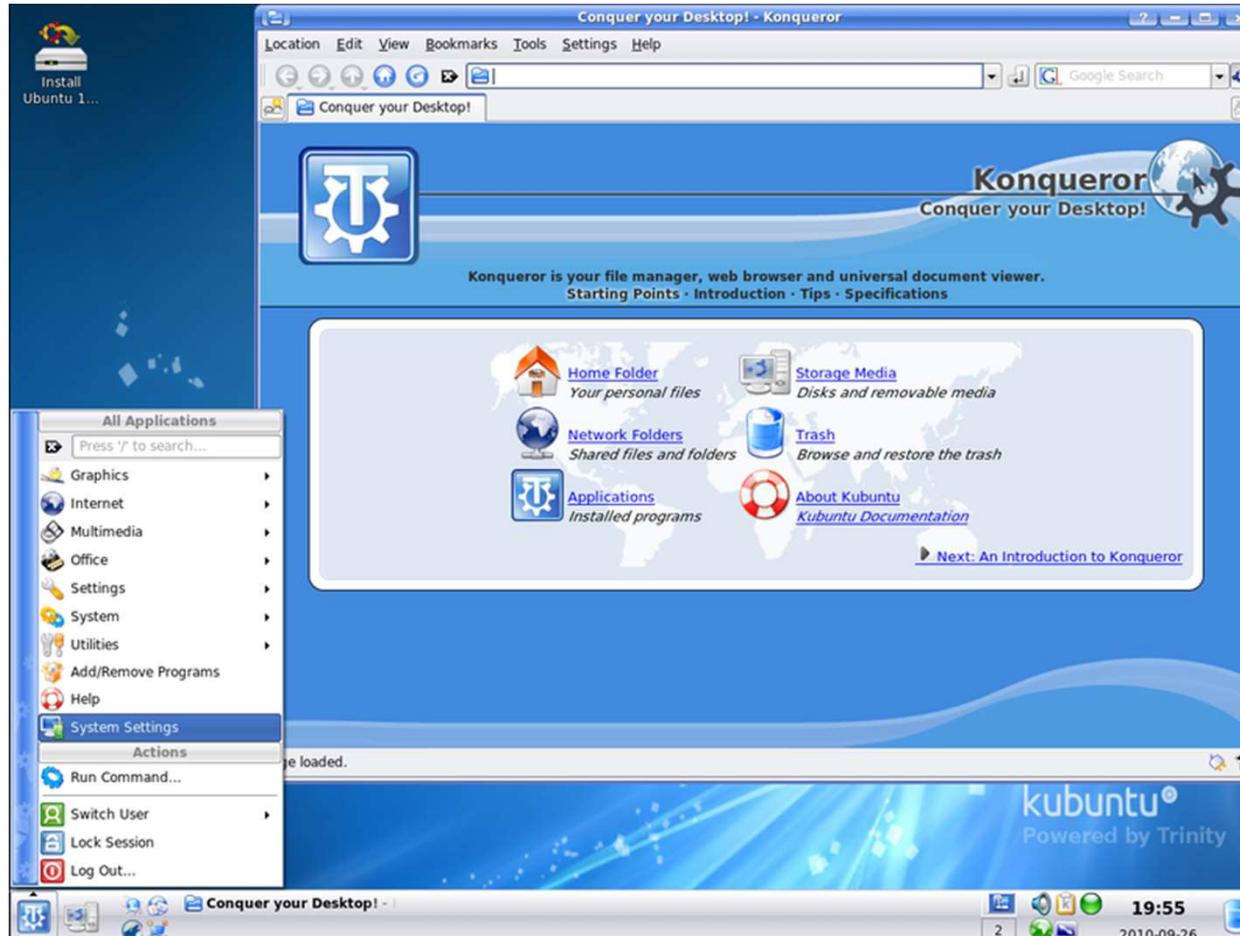
-MATE (GNOME 2)



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Linux Graphical Desktop Environments

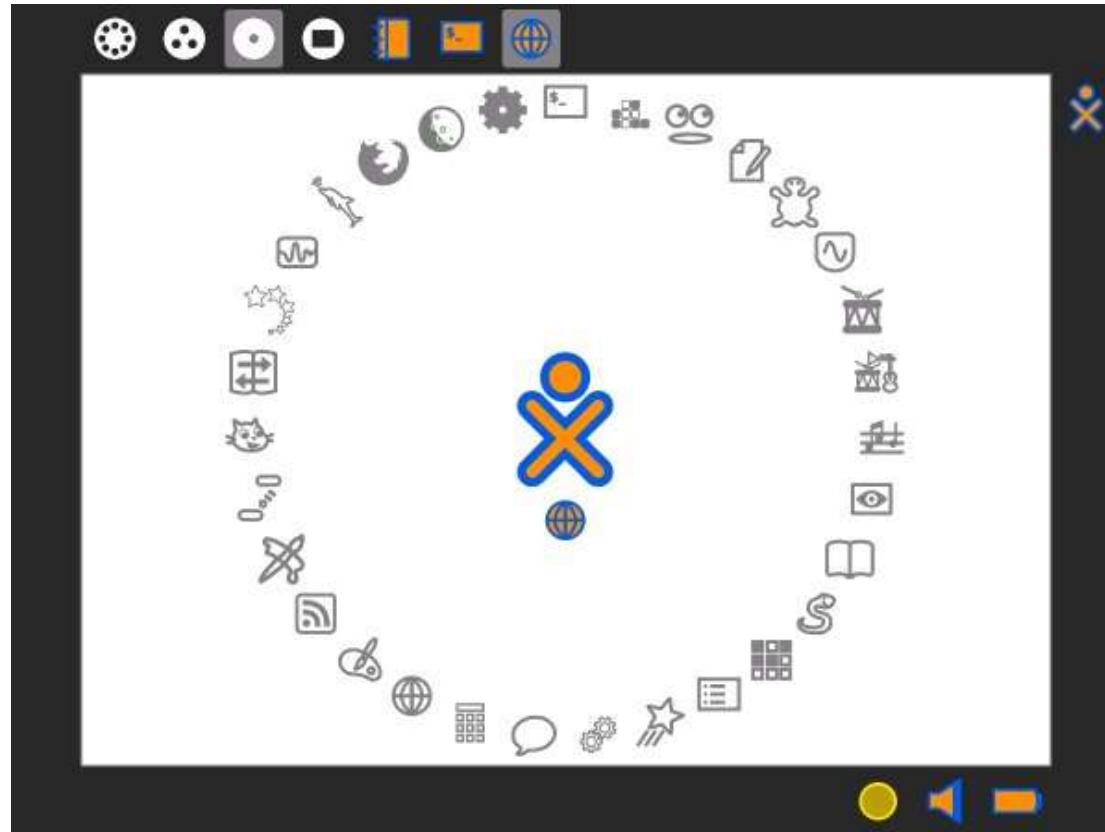
-Trinity (KDE 3)



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Linux Graphical Desktop Environments

-Sugar



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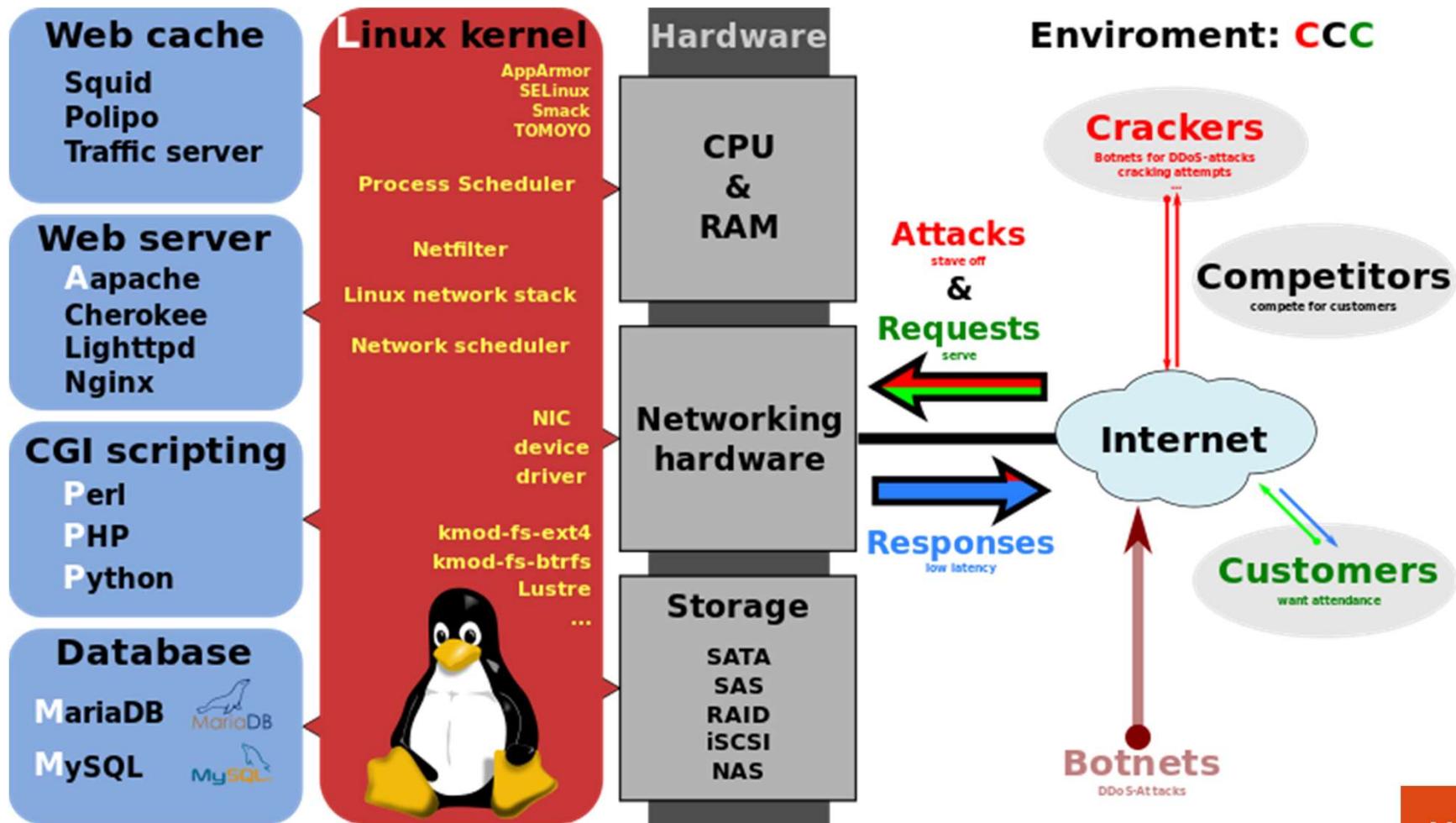
Linux Graphical Desktop Environments

-Pantheon



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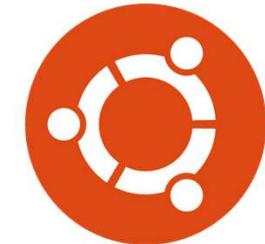
Linux Server Environment - LAMP



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What is Ubuntu ?

- Ubuntu, pronounced oo'boontoō, is actually three different things:
 - A philosophy
 - A worldwide collaborative software project, and
 - A computer operating system



ubuntu

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Ubuntu Philosophy

- Is a traditional African concept originating from the *Julu* languages of southern Africa.
- Roughly translates to *humanity to others*.

Ubuntu is an ancient African word meaning 'humanity to others'. It also means 'I am what I am because of who we all are'.

Proprietary Software vs Free / Libre Open-Source Software

- Examples of proprietary operating systems include Microsoft Windows and Mac OS X.
- Ubuntu, on the other hand, is **NOT** proprietary software because it is actively maintained by the *FLOSS* community.
 - ***FREE*** to use
 - ***FREE*** to share, and
 - ***FREE*** to develop

Ubuntu...

- Is a Debian-based Linux operating system.
- Has *gnome* as its default desktop environment
- Is based on free software.
- Development is led by Canonical Ltd.
- UTF-8 is a default character encoding.
- First release was on October 2004.
- Releases every six month.
- Every fourth release is a so-called LTS(Long Term Support).

Ubuntu... (Cont.)

- Each Ubuntu release has a version number that consists of the year and month number of the release.
 - i.e. 22.04, 22.10
- Each release has an alliterative code name using an adjective and an animal.
- Code names are in consecutive alphabetic order.
 - i.e. Ubuntu 23.10 (Mantic Minotaur)

Ubuntu... (Cont.)

Currently supported releases				
Version ↗	Code name ↗	Release date ↗	General support until ↗	Security support (ESM) until ↗
14.04 LTS	Trusty Tahr	2014-04-17 ^[96]	2019-04-25 ^[96]	2024-04
16.04 LTS	Xenial Xerus ^[97]	2016-04-21 ^[98]	2021-04-30 ^[99]	2026-04
18.04 LTS	Bionic Beaver	2018-04-26 ^[100]	2023-05-31 ^[101]	2028-04
20.04 LTS	Focal Fossa	2020-04-23 ^[102]	2025-05-29 ^[103]	2030-04
22.04 LTS	Jammy Jellyfish ^[104]	2022-04-21 ^[105]	2027-06-01	2032-04
23.04	Lunar Lobster	2023-04-20	2024-01-25	unavailable
23.10	Mantic Minotaur	2023-10-12	2024-07-11	unavailable
24.04 LTS	Noble Numbat	2024-04-25 ^[106]	2029-05-31	2034-04-25
Legend: Old version Older version, still maintained Latest version Future release				

Official Documentation

The screenshot shows a web browser displaying the official Ubuntu documentation at help.ubuntu.com. The page has a red header bar with the text "ubuntu documentation". The main content area features a table showing documentation availability for different Ubuntu releases. Below the table, a section titled "Notes" contains a bulleted list of important information. A sidebar on the left lists "Cloud Tools" such as MAAS, Juju, and Cloud-init. The bottom right corner of the page features a large red "ubuntu" logo.

Ubuntu Documentation

Community Help Wiki Contribute

ubuntu documentation

Search

Official Ubuntu Documentation

Documentation developed and maintained by the Ubuntu Documentation Project.

Release	Desktop	Server	Installation Guide
Ubuntu 21.04 (Hirsute Hippo)	HTML	<i>unpublished</i>	<i>unpublished</i>
Ubuntu 20.04 LTS (Focal Fossa)	HTML	HTML and PDF	per architecture
Ubuntu 18.04 LTS (Bionic Beaver)	HTML	HTML and PDF	per architecture

Notes:

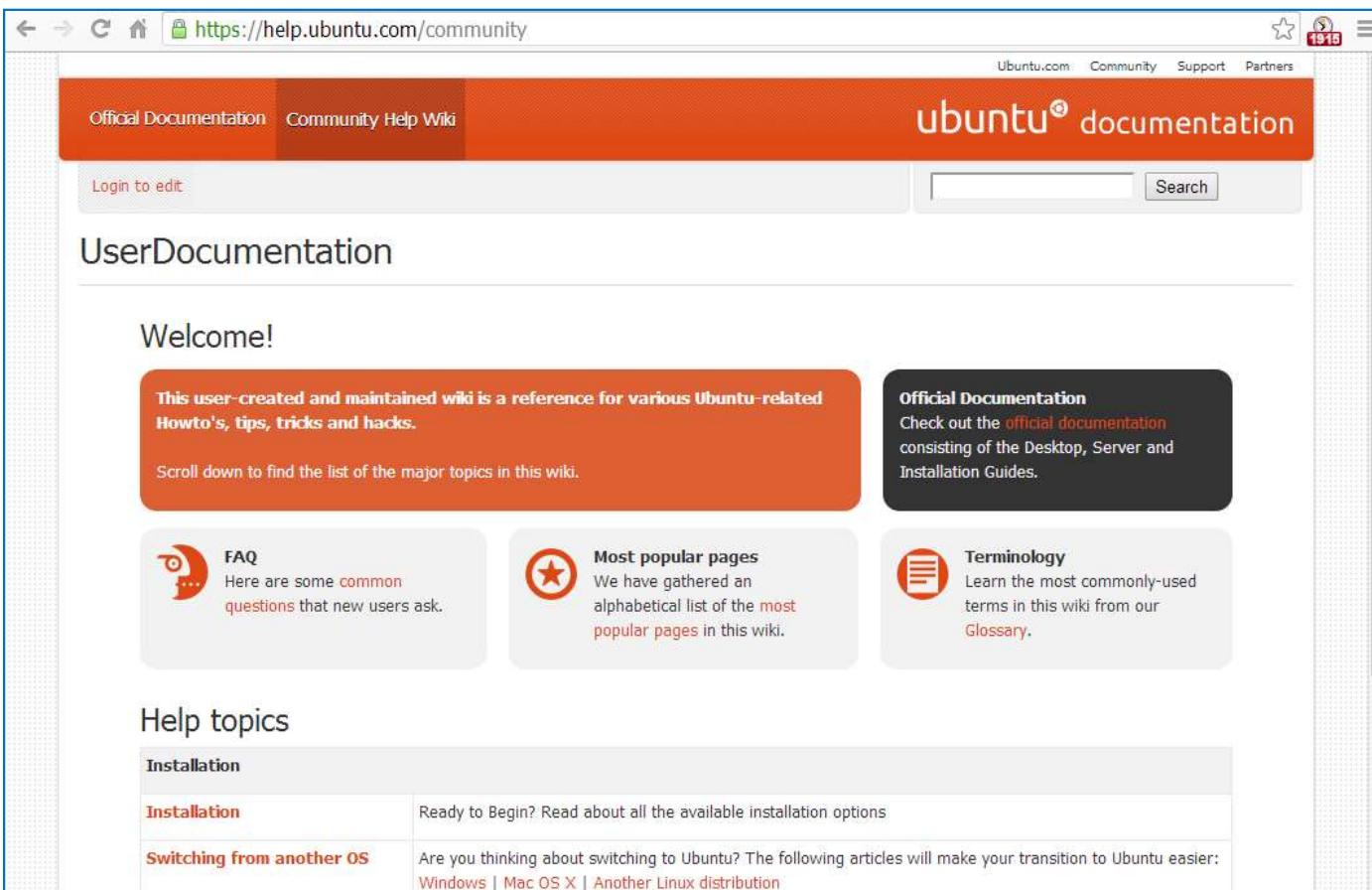
- As of the Ubuntu LTS release in 2020, the server documentation has moved to [a different site](#), and will automatically update when changes are made to the [discourse source code pages](#).
- The Desktop links above are available in many different languages. They will be displayed in the preferred language specified by your browser. If the preferred language is not available they will be displayed in English. The Serverguide and the Installation Guide are available solely in English.
- Unsupported releases are not shown here. See [instructions for upgrading to a supported version](#).
- The Server Guide and the Installation Guide are published only for Long Term Support (LTS) releases.
- Useful information: [LTS details](#) and [release & end-of-life dates](#) (for all versions).

Cloud Tools

- [MAAS](#)
- [Juju](#)
- [Cloud-init](#)

ubuntu

Community Documentation



The screenshot shows the Ubuntu Community Documentation website at <https://help.ubuntu.com/community>. The page features a red header bar with the text "ubuntu® documentation". Below the header, there are navigation links for "Official Documentation" and "Community Help Wiki". A search bar is located in the top right corner. The main content area is titled "UserDocumentation" and includes a "Welcome!" message. It also contains several informational boxes: one about a user-created wiki for Ubuntu-related how-to's, tips, and hacks; another about official documentation; and three boxes for "FAQ", "Most popular pages", and "Terminology". A "Help topics" section provides links to "Installation" and "Switching from another OS".

This user-created and maintained wiki is a reference for various Ubuntu-related Howto's, tips, tricks and hacks.

Scroll down to find the list of the major topics in this wiki.

Official Documentation
Check out the [official documentation](#) consisting of the Desktop, Server and Installation Guides.

FAQ
Here are some [common questions](#) that new users ask.

Most popular pages
We have gathered an alphabetical list of the [most popular pages](#) in this wiki.

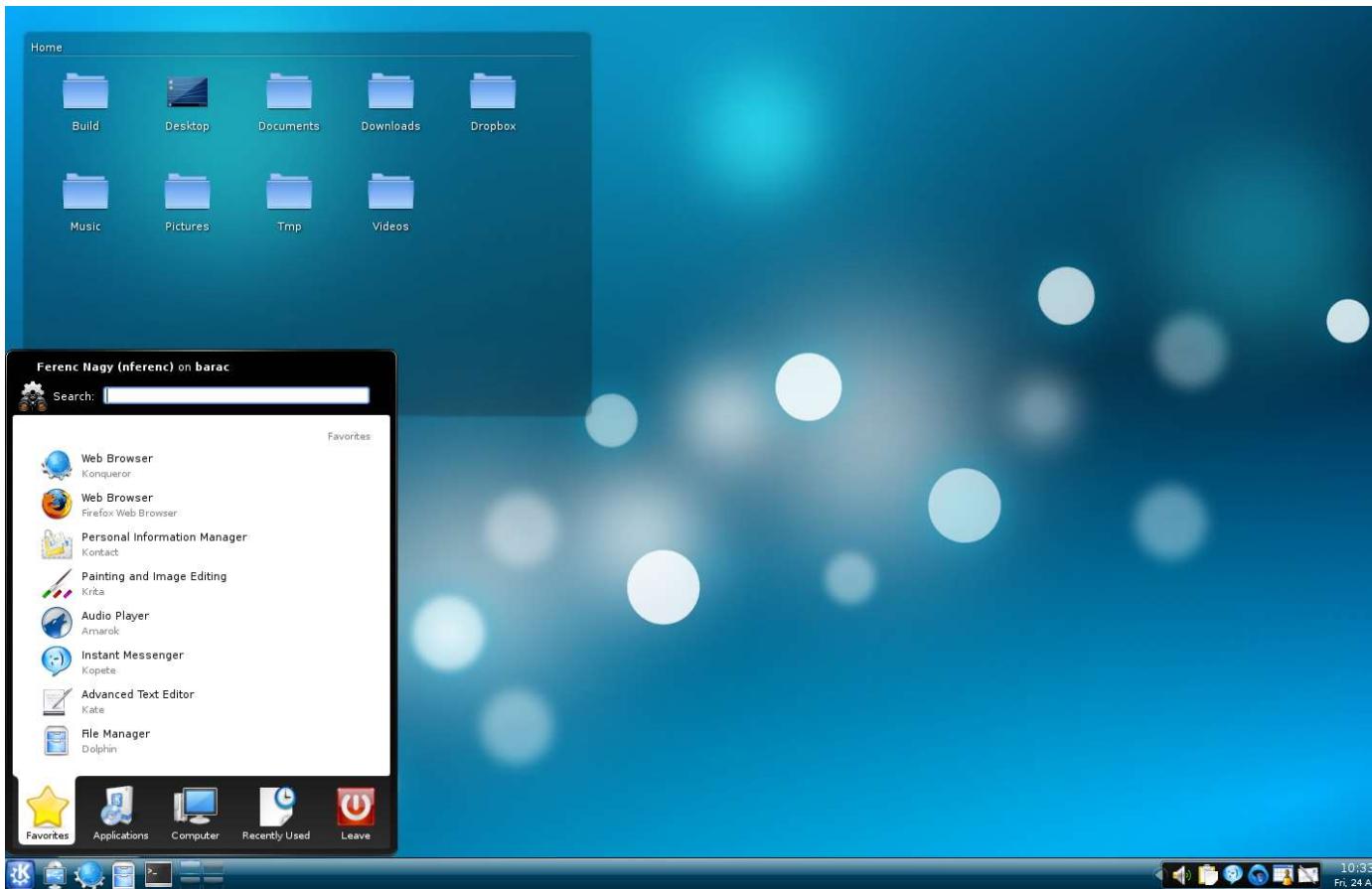
Terminology
Learn the most commonly-used terms in this wiki from our [Glossary](#).

Help topics

Installation	
Installation	Ready to Begin? Read about all the available installation options
Switching from another OS	Are you thinking about switching to Ubuntu? The following articles will make your transition to Ubuntu easier: Windows Mac OS X Another Linux distribution

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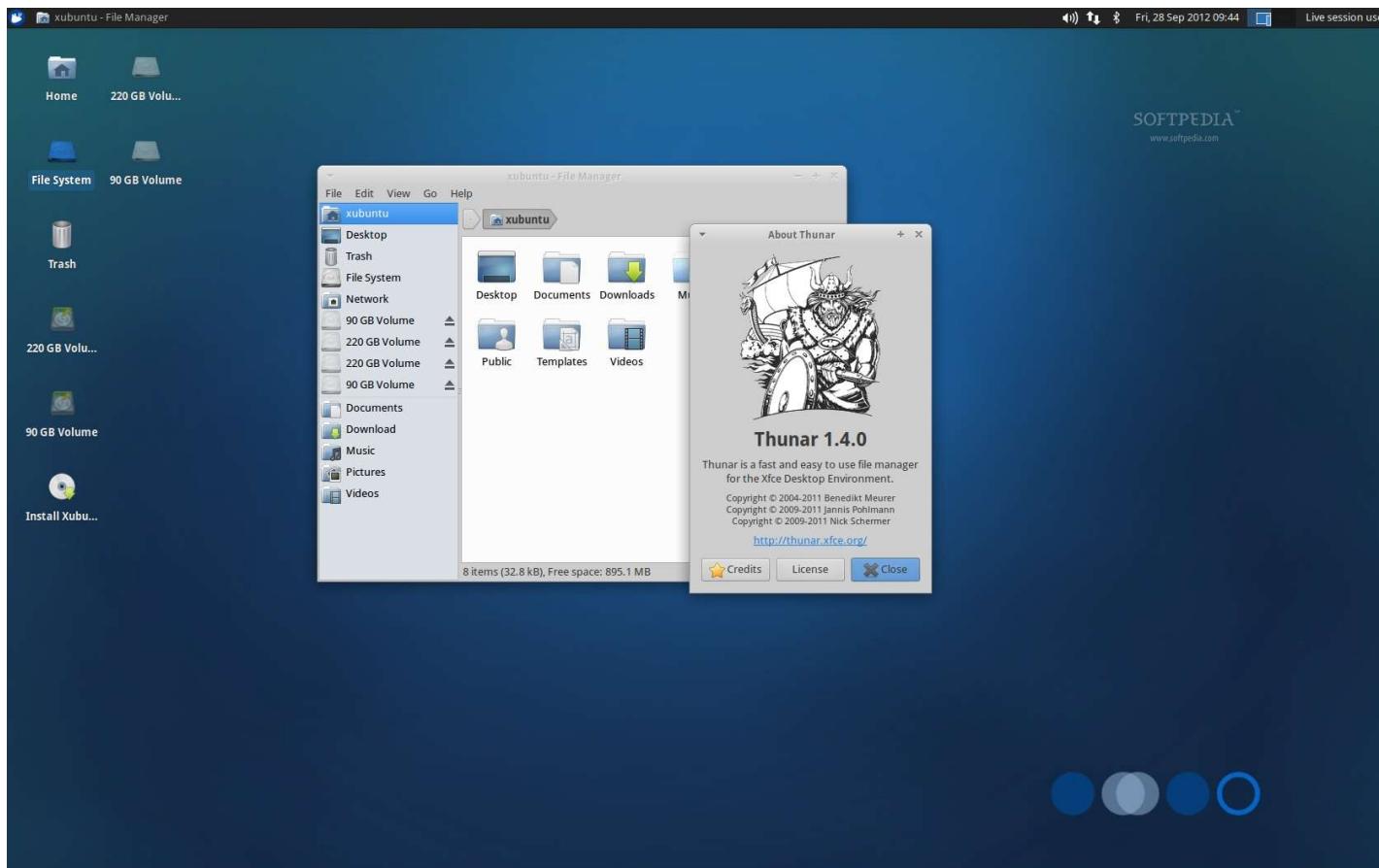
Ubuntu Brothers - Kubuntu



Downloads from : <http://www.kubuntu.org/getkubuntu>

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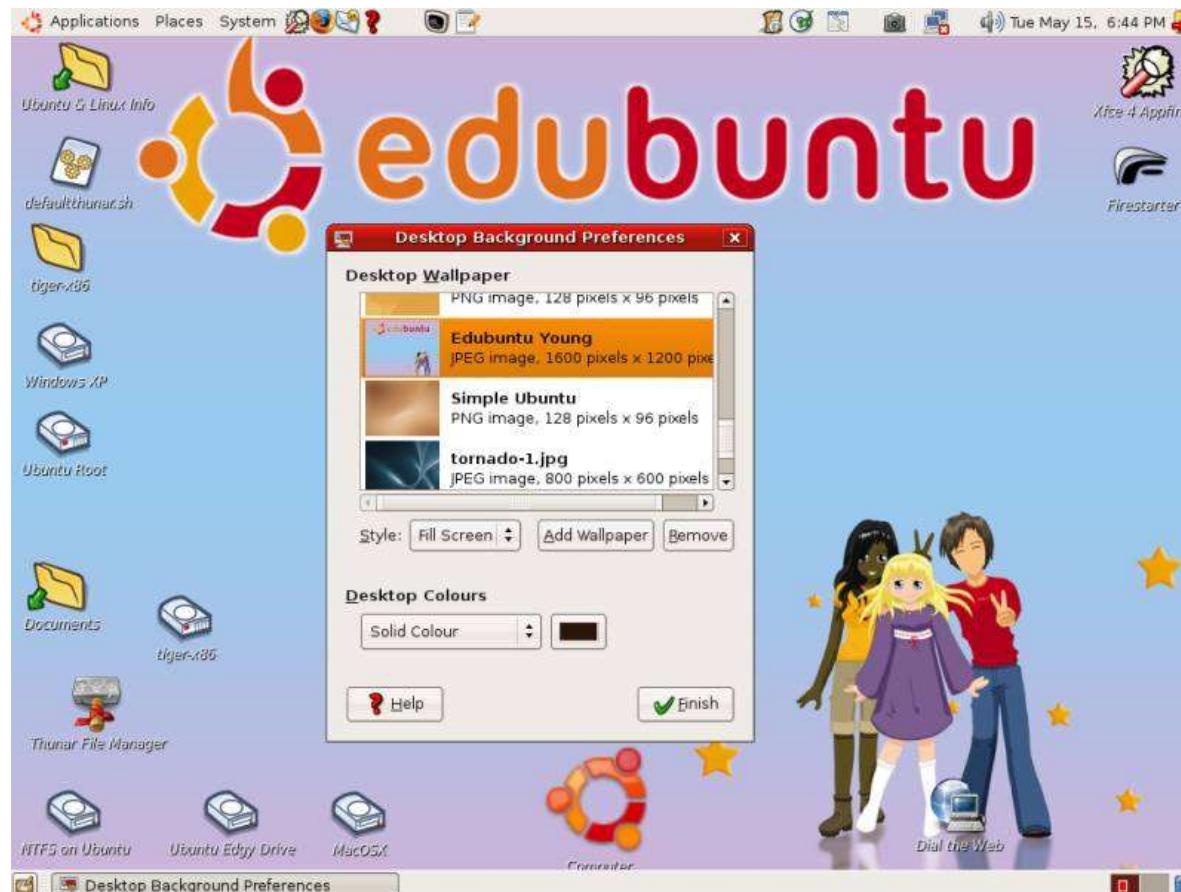
Ubuntu Brothers - Xubuntu



Downloads from : <http://xubuntu.org/getxubuntu/>

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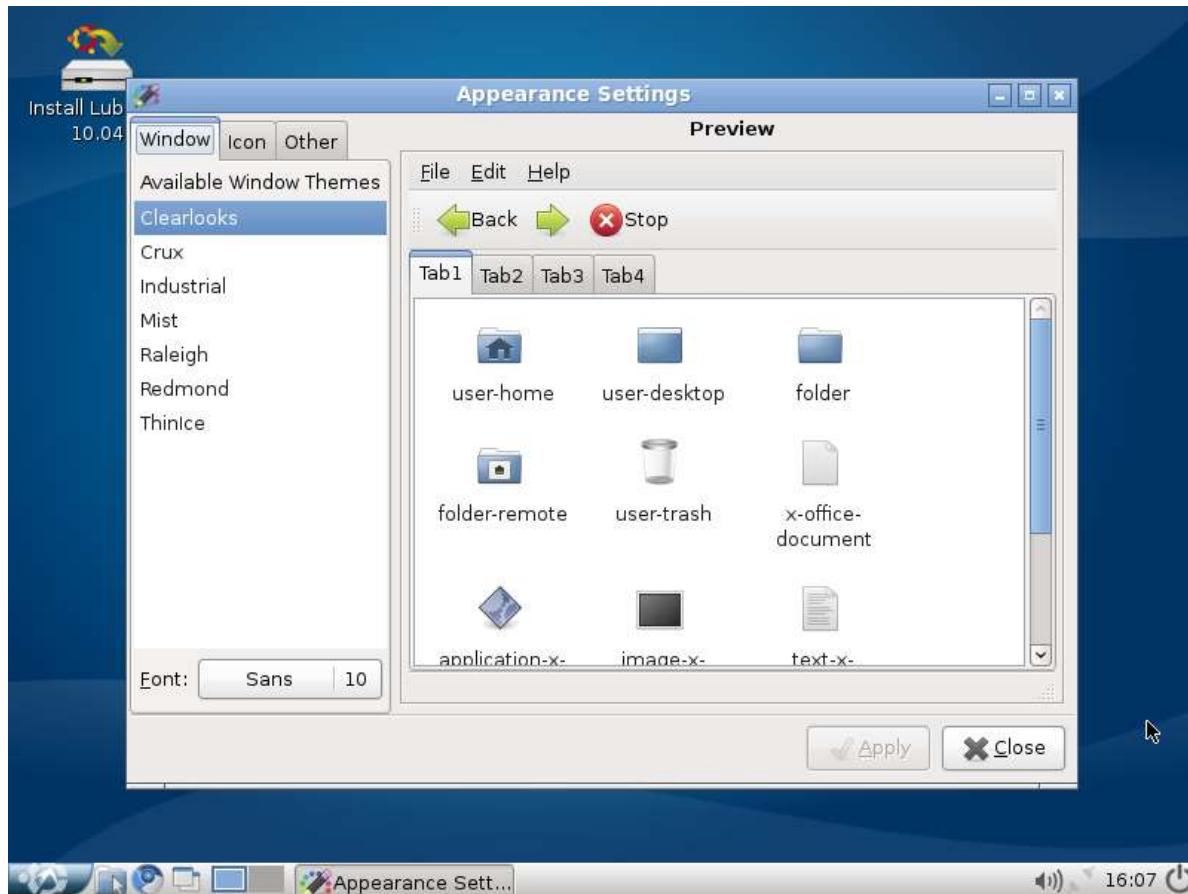
Ubuntu Brothers – Edubuntu



Downloads from : <http://www.edubuntu.org/download>

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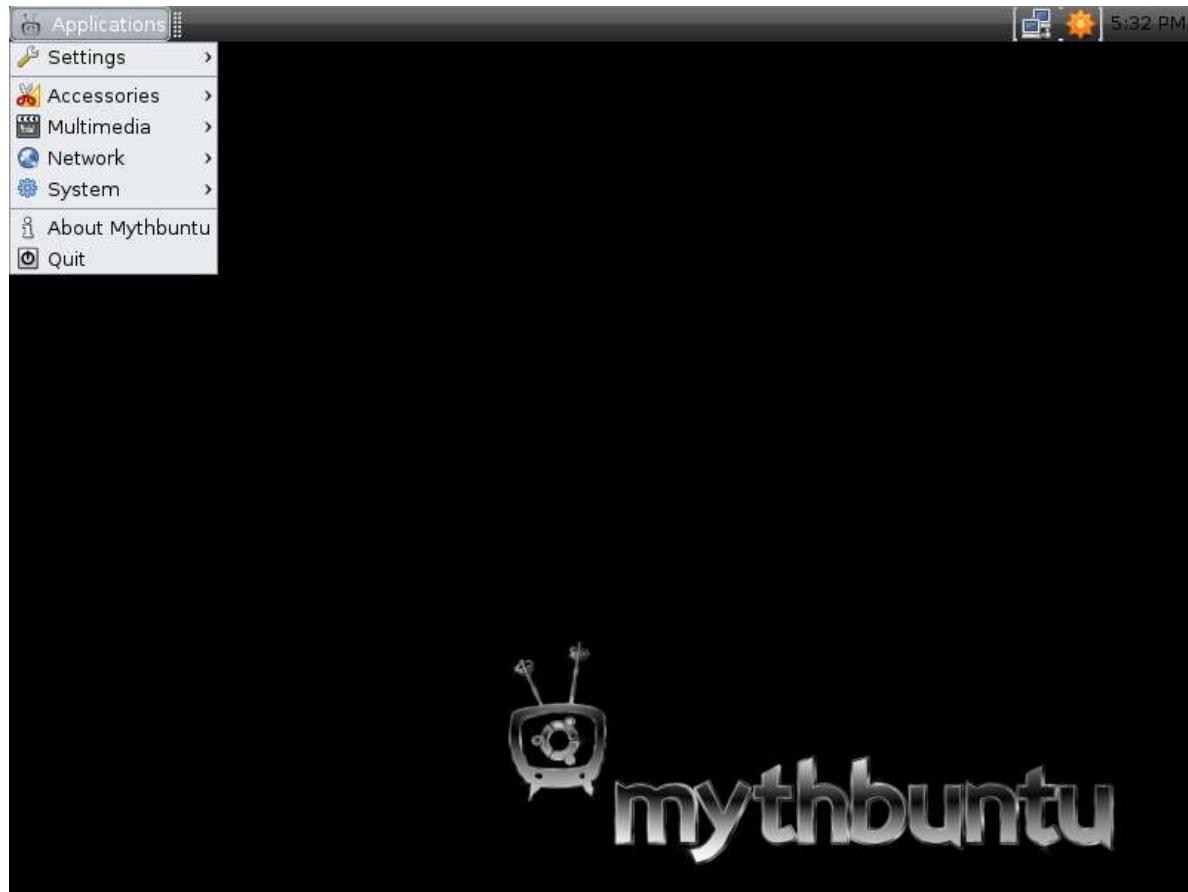
Ubuntu Brothers – Lubuntu



Downloads from : <https://help.ubuntu.com/community/Lubuntu/GetLubuntu>

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Ubuntu Brothers – Mythbuntu



Downloads from : <http://www.mythbuntu.org/downloads>

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Ubuntu Brothers – UbuntuStudio



Downloads from : <https://ubuntustudio.org/download/>

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Ubuntu Brothers - Mint



Downloads from : <https://www.linuxmint.com/download.php>

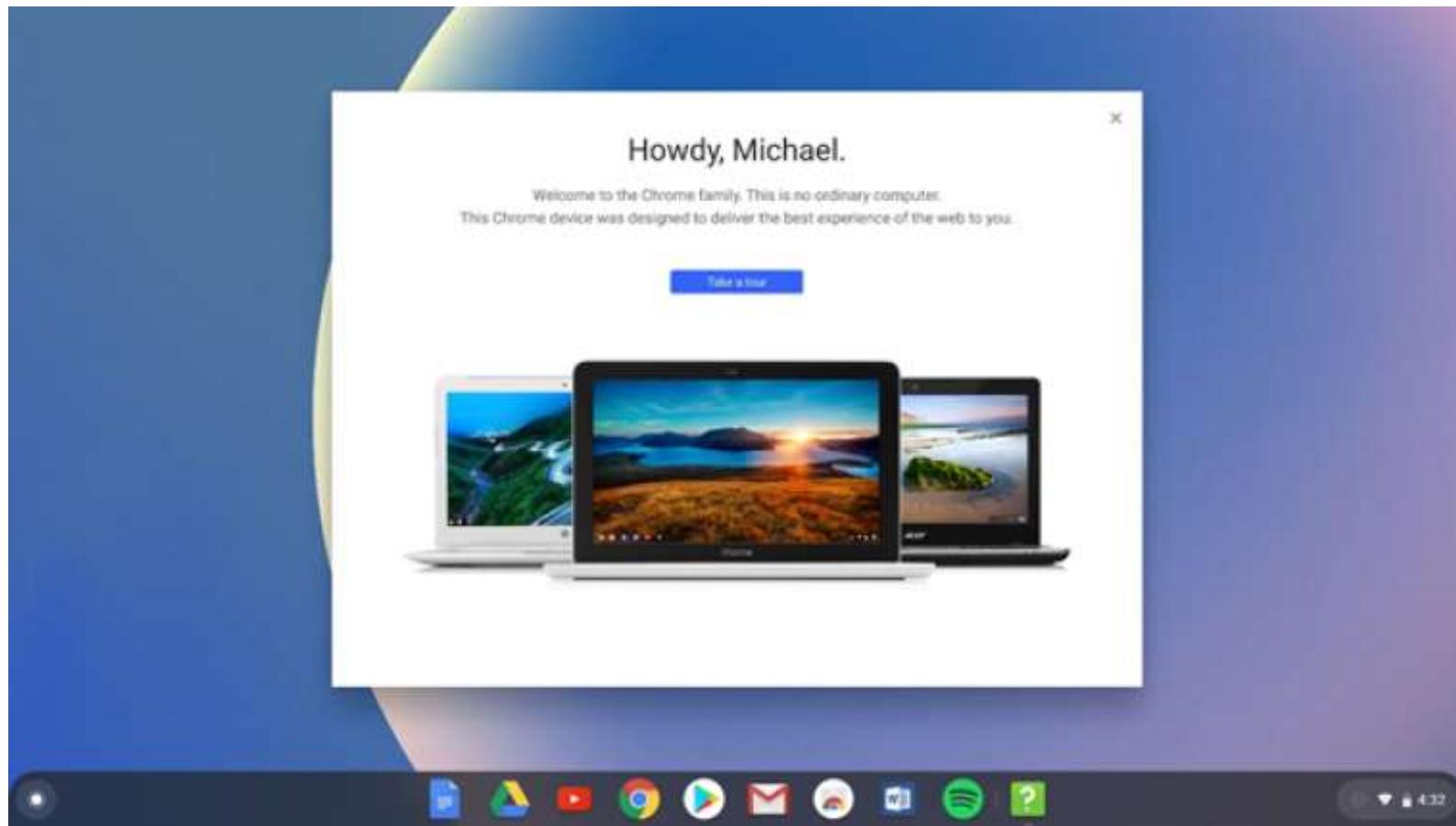
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Ubuntu Brothers – Ubuntu Touch



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The others – Google Chrome OS



<https://www.chromium.org/chromium-os>

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The others – Steam OS



<http://store.steampowered.com/steamos/?l=english>

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The others

ubuntu® releases

These releases of Ubuntu are available

Standard support	Interim Releases	Extended Security Maintenance (ESM)
LTS Releases		
Ubuntu 22.04.3 LTS (Jammy Jellyfish) ›	Ubuntu 23.10 (Mantic Minotaur) ›	Ubuntu 18.04.6 LTS (Bionic Beaver) ›
Ubuntu 20.04.6 LTS (Focal Fossa) ›	Ubuntu 23.04 (Lunar Lobster) ›	Ubuntu 16.04.7 LTS (Xenial Xerus) ›
		Ubuntu 14.04.6 LTS (Trusty Tahr) ›

There are 2 types of Ubuntu releases: Interim and LTS. Each Ubuntu LTS is maintained for 10 years total: 5 years of standard support + 5 years of ESM. Interim releases are maintained for 9 months.

For the Ubuntu release cycle please see: [The Ubuntu lifecycle and release cadence](#).

We are happy to provide hosting for the following projects via the [cdimage server](#). While they are not commercially supported by Canonical, they receive full support from their communities.

[Kubuntu](#) · [Lubuntu](#) · [Mythbuntu](#) · [Ubuntu Budgie](#) · [Ubuntu GNOME](#) · [UbuntuKylin](#) · [Ubuntu MATE](#) · [UbuntuStudio](#) · [Xubuntu](#) · [UbuntuCinnamon](#) · [Ubuntu Unity](#) ·

<http://releases.ubuntu.com/>



Linux 사용 설명서 : man

- Linux documentation pages, or man pages, contain documentation of Linux commands.
- The **man** page briefly introduces the purpose, syntax, and options related to a specific command.
- Linux 구문
\$ **man <CommandName>**

```
MAN(1)                               Manual pager utils                               MAN(1)

NAME
       man - an interface to the on-line reference manuals

SYNOPSIS
       man [-C file] [-d] [-D] [--warnings[=warnings]] [-R encoding] [-L locale] [-m
       system[,...]] [-M path] [-S list] [-e extension] [-i|-I] [--regex|--wildcard]
       [--names-only] [-a] [-u] [--no-subpages] [-P pager] [-r prompt] [-7] [-E encod-
       ing] [--no-hyphenation] [--no-justification] [-p string] [-t] [-T[device]]
       [-H[browser]] [-X[dpi]] [-Z] [[section] page ...] ...
       man -k [apropos options] regexp ...
       man -K [-w|-W] [-S list] [-i|-I] [--regex] [section] term ...
       man -f [whatis options] page ...
       man -l [-C file] [-d] [-D] [--warnings[=warnings]] [-R encoding] [-L locale]
       [-P pager] [-r prompt] [-7] [-E encoding] [-p string] [-t] [-T[device]]
       [-H[browser]] [-X[dpi]] [-Z] file ...
       man -w|-W [-C file] [-d] [-D] page ...
       man -c [-C file] [-d] [-D] page ...
       man [-?V]

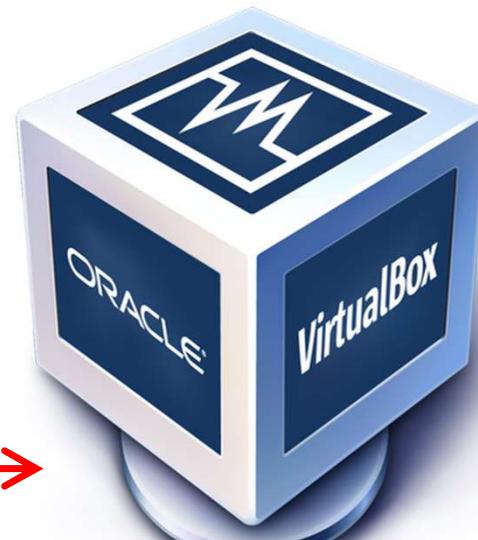
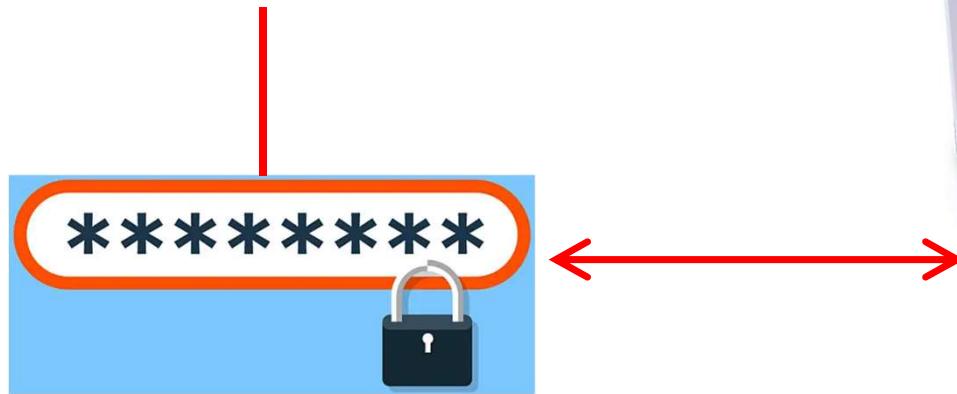
DESCRIPTION
       man is the system's manual pager.  Each page argument given to man is normally
       the name of a program, utility or function.  The manual page associated with
       each of these arguments is then found and displayed. A section, if provided,
       will direct man to look only in that section of the manual.  The default action
       is to search in all of the available sections following a pre-defined order ("1
       n 1 8 3 0 2 5 4 9 6 7" by default, unless overridden by the SECTION directive
       in /etc/man_db.conf), and to show only the first page found, even if page
       exists in several sections.

       The table below shows the section numbers of the manual followed by the types
       of pages they contain.

1 Executable programs or shell commands
Manual page man(1) line 1 (press h for help or q to quit)
```

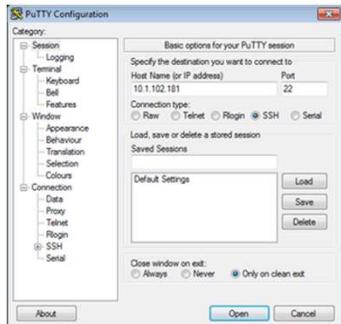


Lab Environment



ubuntu®

Or



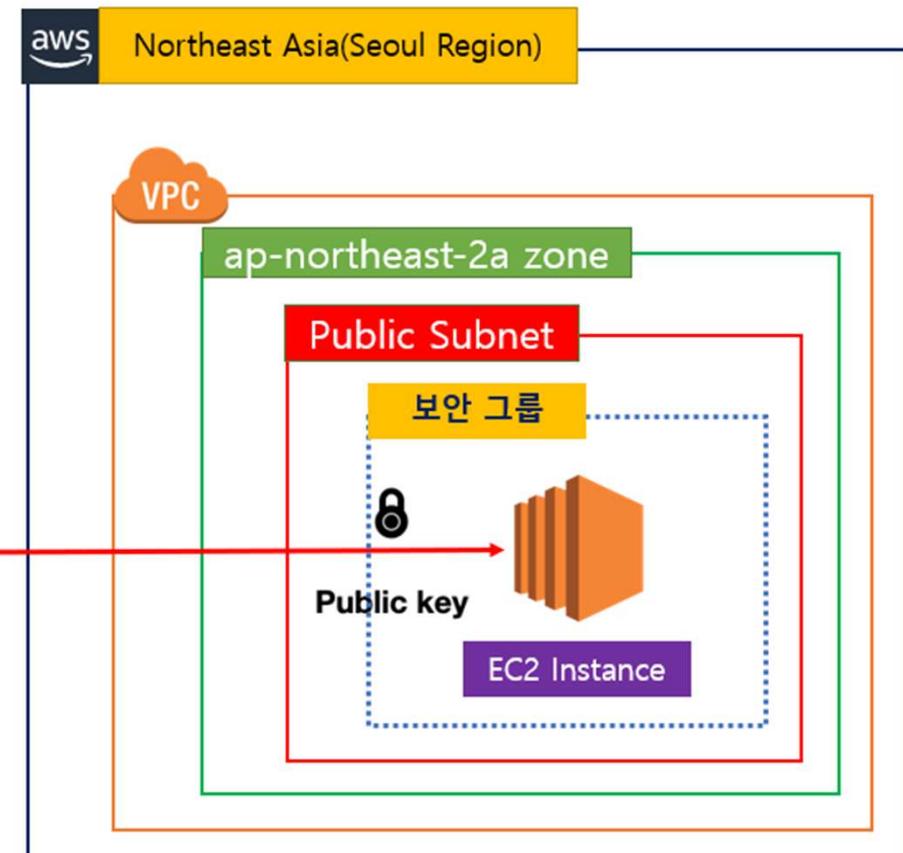
Private key



클라이언트



ssh



Resources

- <https://www.linux.com>
- <https://www.linuxfoundation.org/>
- <https://help.ubuntu.com>
- <https://ubuntuforums.org>
- <https://askubuntu.com>
- <https://www.ubuntu-manual.org>