



SWCON201
Opensource & Software
Development Methods and Tools

Introduction to Opensource and Linux

Department of
Software Convergence



Contents

- Agenda
- Class
- Summary
- Reference
- Homework

Agenda

- Course Overall
- Opensource
- Linux

Goal

- Understanding of:
 - ❖ Opensource
 - ❖ Latest Software Development Process, Philosophy and Tools
 - ❖ Opensources in Software Development Process and Tools
- Experience of Linux as your:
 - ❖ Main Computer (instead of Windows or MacOS)
 - ❖ Main Programming Environments
 - ❖ Main Data Analytics Environments
 - ❖ Main Gaming Platform
 - ❖ Main Hobby Environments
 - ❖ and etc.,

Topics

- Intro to Opensource and Linux
- Problem Definition
- Selecting Right Language
- Selecting Right OS
- Design (& Development) Process
- Design by Figures
- Programmers in Korea
- Software Maintenance
- Test and Enhancement
- Design Pattern
- Online Co-work and Education
- Open Source License
- Project Management

Linux {Experience} Project

- Linux installation over your preferred environments
- Decide your own use-case
- Software Installation, Experience and Report
 - ▣ Install your preferred software based on your proposed use-case, and experience it
 - One software per week
 - Make a report
 - One report per software
 - More than two pages per software
 - Submit reports at Week.13

Definition of Opensource Software

● From Wikipedia

오픈 소스 소프트웨어

文 A 57개 언어 ▾

문서 토론

읽기 편집 역사 보기

위키백과, 우리 모두의 백과사전.

오픈 소스 소프트웨어(Open source software; OSS, 문화어: 공개원천소프트웨어)는 소스 코드를 공개해 누구나 특별한 제한 없이 그 코드를 보고 사용할 수 있는 **오픈 소스 라이선스**를 만족하는 **소프트웨어**를 말한다. 통상 간략하게 **오픈 소스**라고 말하기도 하며 대한민국의 공공기관에서는 **공개 소프트웨어**라는 표현을 사용한다.^{[1][2]} (단, 저작권위원회에서는 오픈소스SW를 사용한다.^[3])

오픈 소스 모델이나 다양한 독립 정보원의 협동 개발은 한 기업이 개발하거나 유지할 수 있는 것보다 훨씬 더 다양한 디자인 관점의 범위를 만든다. 2008년, Standish Group에 의한 리포트에 따르면 오픈 소스 소프트웨어 모델의 채택은 소비자에게 연간 600억 달러의 절약을 가능하게 한다고 한다.

통상 오픈 소스 소프트웨어는 **자유 소프트웨어**와 비슷하지만, 자유 소프트웨어는 자유 소프트웨어 재단과 GNU 프로젝트와 관련된 소프트웨어에서 자유를 중시하는 의미에서 사용하고 오픈 소스 소프트웨어는 소스의 형태 자체를 중시하는 말이다.^[4]

Open Source Initiative(OSI)-opensource.org^[5]는 공개 소스 정의(OSD)의 관리 및 촉진을 담당하는 비영리 조합이다. OSI가 인증하는 공개 소스 소프트웨어(OSS) 인증 마크를 통해 소프트웨어가 실제로 공개 소스라는 것을 증명하고, 공개 소스의 복제도 가능하다. 소프트웨어의 소스 코드를 자유롭게 읽고, 재배포 및 개조를 가능하게 함으로써 소프트웨어가 향상되고, 한 사람이 느린 속도로 소프트웨어를 개발하는 것보다 여러 사람들이 고치고 쓰고 버그를 개선하는 것이 보다 빠를 수 있다는 공개 소스의 기본 이념을 구현하는 단체이다.



Definition of Opensource Software

- From WiKipedia

Open-source software

From Wikipedia, the free encyclopedia

Open-source software shares similarities with [free software](#) and is part of the broader term [free and open-source software](#).

For other uses, see [OSS](#).

For broader coverage of this topic, see [Open-source-software movement](#).

Open-source software (OSS) is computer software that is released under a [license](#) in which the [copyright](#) holder grants users the rights to use, study, change, and [distribute the software](#) and its [source code](#) to anyone and for any purpose.^{[1][2]} Open-source software may be developed in a [collaborative public manner](#). Open-source software is a prominent example of [open collaboration](#), meaning any capable user is able to [participate online](#) in development, making the number of possible contributors indefinite. The ability to examine the code facilitates public trust in the software.^[3]

[Open-source software development](#) can bring in diverse perspectives beyond those of a single company. A 2008 report by the Standish Group stated that adoption of open-source software models has resulted in savings of about \$60 billion per year for consumers.^{[4][5]}

Open source code can be used for [studying](#) and allows capable end users to adapt software to their personal needs in a similar way [user scripts](#) and custom [style sheets](#) allow for web sites, and eventually publish the modification as a [fork](#) for users with similar preferences, and directly submit possible improvements as [pull requests](#).

Definition of Free Software

- From WiKipedia

자유 소프트웨어

문서 토론

위키백과, 우리 모두의 백과사전.

자유 소프트웨어(영어: free software)는 복사와 사용, 연구, 수정, 배포 등의 제한이 없는 **소프트웨어** 혹은 그 통칭이다. 소프트웨어의 수정 및 수정본의 재배포는 인간이 해독 가능한 프로그램의 **소스 코드**가 있어야만 가능하며, 소스 코드는 **GPL** 등의 라이선스를 통하여거나, 혹은 극히 드물게 **퍼블릭 도메인**으로 공개되기도 한다. **자유 소프트웨어 운동**은 초창기의 컴퓨터 사용자들이 이러한 자유를 누릴 수 있도록 하기 위해서 **1983년**에 시작되었다.^[1]

1990년대 후반에는 자유 소프트웨어 대신 **오픈 소스 소프트웨어**라는 용어가 많이 쓰이기 시작했다. 하지만 자유 소프트웨어 재단은 자유로운 사용을 강조하는 대신 기술적인 면에 치우친 용어라는 점에서 "오픈 소스 소프트웨어"라는 용어 대신 "자유 소프트웨어"라는 용어를 사용할 것을 권장한다.^[2] 이와 반대되는 개념으로 **독점 소프트웨어** 혹은 **비자유 소프트웨어** 등의 용어도 있다.

자유 소프트웨어는 완전히 무료로 또는 최소한의 금액만을 받고 자유롭게 배포되어야 하며 자유 소프트웨어를 통한 비즈니스 모델들은 대개 고객 지원이나 커스터마이징 등을 통한 것들이다. 반면 독점 소프트웨어를 이용한 비즈니스 모델들은 사용자가 합법적으로 소프트웨어를 이용하기 위한 허가를 위해서 반드시 일정 비용을 지불해야 하기 때문에, 자유 소프트웨어와는 맞지 않는다.

Definition of Free Software

● From WiKipedia

Free software

From Wikipedia, the free encyclopedia

For other uses, see [Free software \(disambiguation\)](#).

Not to be confused with [Freeware](#).

For broader coverage of this topic, see [Free software movement](#).

Free software or **libre software**,^{[1][2]} infrequently known as **freedom-respecting software**, is computer software distributed under terms that allow users to run the software for any purpose as well as to study, change, and distribute it and any adapted versions.^{[3][4][5][6]} Free software is a matter of **liberty**, not price; all users are legally free to do what they want with their copies of a free software (including profiting from them) regardless of how much is paid to obtain the program.^{[7][2]} Computer programs are deemed "free" if they give end-users (not just the developer) ultimate control over the software and, subsequently, over their devices.^{[5][8]}

The right to study and modify a computer program entails that **source code**—the preferred format for making changes—be made available to users of that program. While this is often called "access to source code" or "public availability", the **Free Software Foundation** (FSF) recommends against thinking in those terms,^[9] because it might give the impression that users have an obligation (as opposed to a right) to give non-users a copy of the program.

Although the term "free software" had already been used loosely in the past and other permissive software like the **Berkeley Software Distribution** released in 1978 existed,^[10] Richard Stallman is credited with tying it to the sense under discussion and starting the **free software movement** in 1983, when he launched the **GNU Project**: a collaborative effort to create a freedom-respecting **operating system**, and to revive the spirit of cooperation once prevalent among **hackers** during the early days of computing.^{[11][12]}

Free Software Foundation



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The Free Software Foundation (FSF) is a nonprofit with a worldwide mission to promote computer user freedom.

FEATURED



The future of sharing is up to you! Join the FSF by Dec 31 to defend your freedom to share

JOIN FSF NOW

Help us defend the freedom to share: Become a member before Dec. 31

Free software means that the users have the freedom to **run, edit, contribute to, and share** the software. Thus, free software is a matter of liberty, not price. We have been defending the rights of all software users for the past 35 years. Help sustain us for many more: [become an associate member today](#).

Subscribe to our monthly newsletter, the [Free Software Supporter](#):

Email address

Sign up

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FEATURED



LibrePlanet 2023 will be held March 18-19, CFS extended to November 23

BLOG | NEWS | EVENTS

FSF Giving Guide: Put freedom first in your giving this year

The 2022 Giving Guide (v13) is here!

Aidez-nous à défendre la liberté de partager: adhérez avant le 31 décembre

Free Software Directory meeting on IRC: Friday, November 18, starting at 12:00 EST (17:00 UTC)

Join the FSF and friends on Friday, November 18, from 12:00 to 15:00 EST (17:00 to 20:00 UTC) to help improve the Free Software Directory.

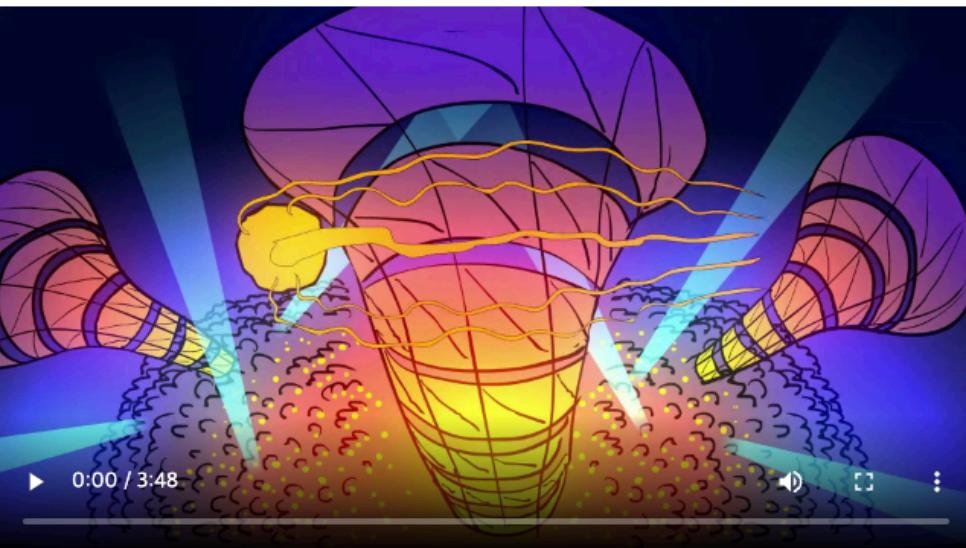
Free Software Foundation

- The Free Software Foundation (FSF) is a non-profit organization founded by Richard Stallman on October 4, 1985, to support the free software movement, with the organization's preference for software being distributed under **copyleft** ("share alike") terms, such as with its own **GNU General Public License**.
- From its founding until the mid-1990s, FSF's funds were mostly used to employ software developers to write free software for the **GNU Project**. Since the mid-1990s, the FSF's employees and volunteers have mostly worked on legal and structural issues for the free software movement and the free software community.
- Consistent with its goals, the FSF aims to use only free software on its own computers.

GNU Operating System

 **GNU** Operating System
Supported by the [Free Software Foundation](#)

ABOUT GNU PHILOSOPHY LICENSES EDUCATION SOFTWARE DISTROS DOCS MALWARE HELP GNU AUDIO & VIDEO >



0:00 / 3:48

[Escape to Freedom: A video from the FSF](#)

What is GNU?

GNU is an operating system that is [free software](#)—that is, it respects users' freedom. The GNU operating system consists of GNU packages (programs specifically released by the GNU Project) as well as free software released by third parties. The development of GNU made it possible to use a computer without software that would trample your freedom.

We recommend [installable versions of GNU](#) (more precisely, GNU/Linux distributions) which are entirely free software. [More about GNU below.](#)

As we enjoy great advantages from the inventions of others, we should be glad of an opportunity to serve others by any invention of ours, and this we should do freely and generously.
—Benjamin Franklin

The GNU Project strongly urges the community to communicate in ways that are friendly, welcoming and kind. See the [GNU Kind Communications Guidelines](#).

GNU and FSF move official IRC channels to Libera.Chat network. Read the full [announcement](#) and the follow-up [update](#).

[Planet GNU](#) 

[GNU lightning 2.2.0 release](#): GNU lightning 2.2.0 released! GNU lightning is a library to aid in making portable programs that compile assembly code at run time. Development:

GNU OS? (Wikipedia)

GNU(GNU¹/gnu: /, 그누)^{[1][2]}는 운영 체제의 하나이자^{[3][4][5]} 컴퓨터 소프트웨어의 모음집이다. GNU는 온전히 자유 소프트웨어로 이루어져 있으며,^{[6][7][8]} 그 중 대부분이 GNU 프로젝트의 GPL로 라이선스된다.

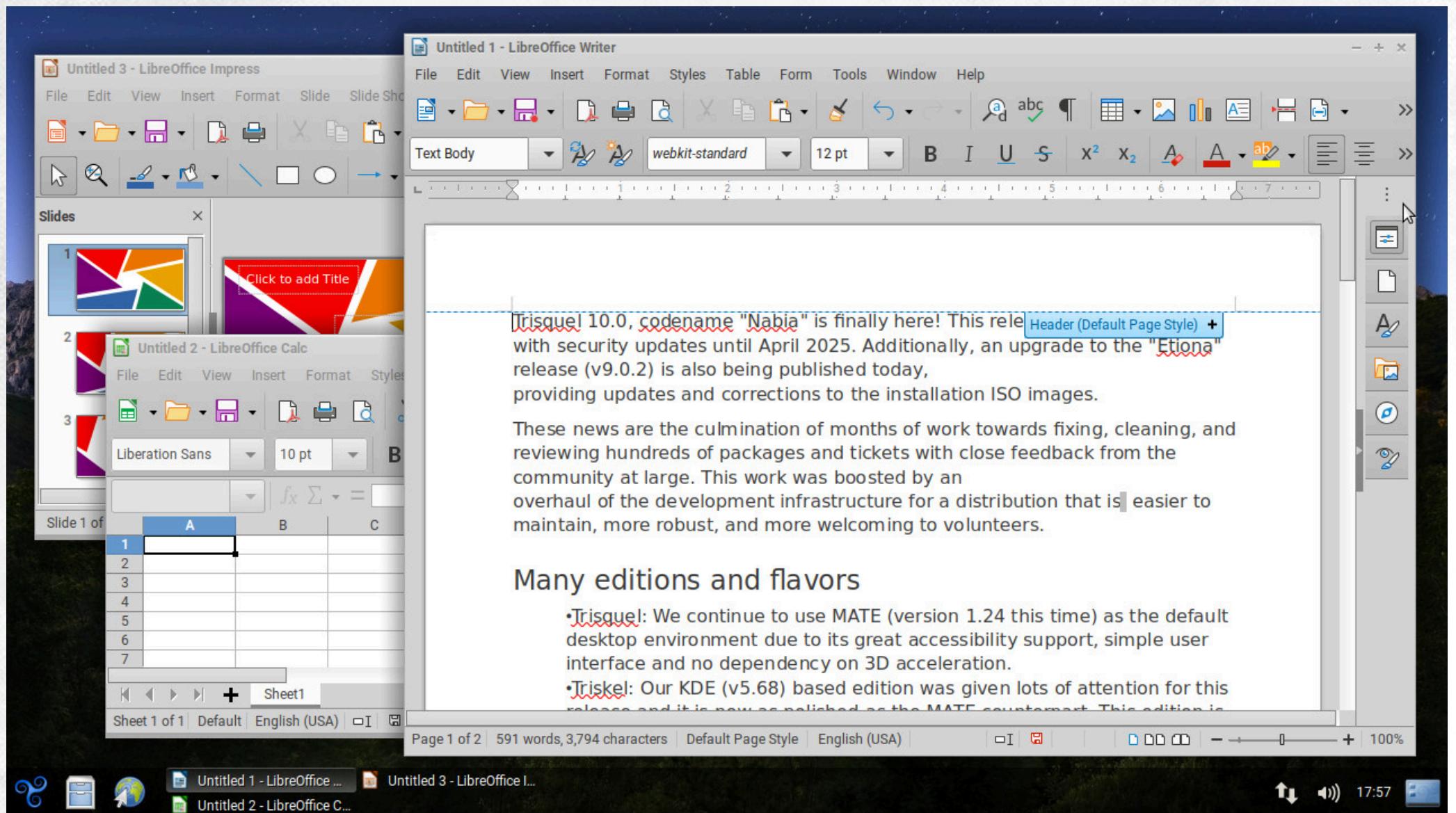
GNU는 "GNU's Not Unix!"(GNU는 유닉스가 아니다!)의 재귀 약자이며,^{[6][9]} 이렇게 선정된 이유는 GNU의 디자인이 유닉스 계열이지만 자유 소프트웨어인 점과 유닉스 코드를 포함하지 않는다는 점에서 차별을 두려는 것이다.^{[6][10][11]} GNU 프로젝트에는 운영 체제 커널인 GNU HURD가 들어있는데, 원래 자유 소프트웨어 재단(FSF)에서 거기에 중점을 두고 있었다.^{[6][12][13][14]} 그러나 허드(Hurd) 커널이 아직 산업용으로 사용 가능한 상태가 아니라서^[15], 그 대신 GNU가 아닌 커널(리눅스가 가장 많이 사용된다)을 GNU 소프트웨어와 함께 사용할 수 있다. 현재 GNU와 LINUX를 결합하여 너무나 많이 사용되므로, 이 조합을 짧게 'LINUX'라고 말하는 경우가 많으며, GNU/LINUX라고 부르는 경우는 많지 않다.^{[16][17]} 삽화에 나와있는 GNU는 생물의 종 이름이다.

프로젝트의 창립자 리처드 스톤먼은 GNU를 "사회에 대한 기술적 수단"으로 보았다.^[18] 이와 관련해 Lawrence Lessig는 스톤먼의 책 『자유 소프트웨어, 자유 사회』 제2판에서 스톤먼은 소프트웨어의 사회적 관념과 어떻게 자유 소프트웨어가 공동체와 사회 정의를 조성할 수 있는지에 대해 썼다고 언급하였다.^[19]

GNU OS? (Wikipedia)

GNU ([/gnu:/](#) / (🔊 [listen](#)))^{[3][4]} is an extensive collection of [free software](#) (383 packages as of January 2022^[5]), which can be used as an operating system or can be used in parts with other operating systems.^{[6][7][8]} The use of the completed GNU tools led to the family of operating systems popularly known as [Linux](#).^[9] Most of GNU is licensed under the [GNU Project's](#) own General Public License ([GPL](#)).
GNU is also the project within which the free software concept originated. [Richard Stallman](#), the founder of the project, views GNU as a "technical means to a social end".^[10] Relatedly, [Lawrence Lessig](#) states in his introduction to the second edition of Stallman's book *Free Software, Free Society* that in it Stallman has written about "the social aspects of software and how Free Software can create community and social justice".^[11]

GNU OS screen shots



What is Free Software? (From GNU)

What is Free Software?

Free software means the users have the freedom to run, copy, distribute, study, change and improve the software.

Free software is a matter of liberty, not price. To understand the concept, you should think of “free” as in “free speech”, not as in “free beer”.

More precisely, free software means users of a program have the [four essential freedoms](#):

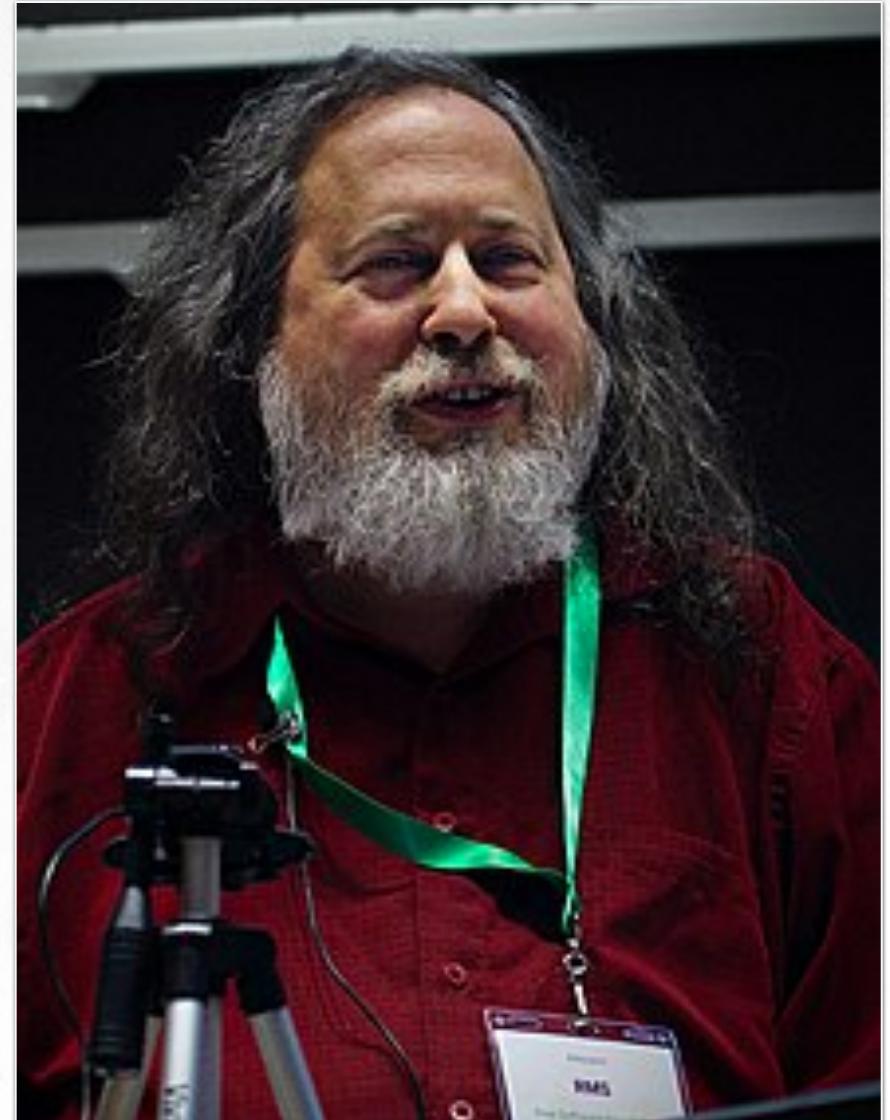
- The freedom to run the program as you wish, for any purpose (freedom 0).
- The freedom to study how the program works, and change it so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help others (freedom 2).
- The freedom to distribute copies of your modified versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.

Developments in technology and network use have made these freedoms [even more important now](#) than they were in 1983.

Nowadays the free software movement goes far beyond developing the GNU system. See [the Free Software Foundation's web site](#) for more about what we do, and a list of [ways you can help](#).

Richard Stallman

- Born :
 - ▣ March 16, 1953
 - ▣ New York, US
- Education :
 - ▣ Harvard University
 - ▣ MIT
- Occupation : Activist & Programmer
- Known for :
 - ▣ Free software movement
 - ▣ GNU
 - ▣ GNU Emacs
 - ▣ **GNU Compiler Collection**
 - ▣ GNU General Public License
 - ▣ copyleft
 - ▣ Free Software Foundation



Richard Stallman's Personal Site

I continue to be the Chief GNUisance of the GNU Project.
This is my long-term commitment and I plan to continue.

[Support me against a campaign of hatred](#)

[Political Articles](#) | [Political Notes](#) | [Talks](#) | [Airlines](#) | [Anti-Glossary](#) | [Archive](#) | [Ban face recognition](#) | [Books](#) | [Comics](#) | [Empire of the Megacorporations](#) | [Fiction](#) | [Glossary](#) | [GPG Key](#) | [Humor](#) | [Humorous Bio](#) | [Links](#) | [Media/Press/Bio](#) | [Non-Political Articles](#) | [The Four Factors of the Apocalypse](#) | [There Ought to Be a Law](#) | [Travel Experiences](#) | [Travel Photos](#) | [RMS personal FAQ](#) | [Sayings](#) | [Scientific Links](#) | [Stallman on Love](#) | [Thanks](#) |

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[RSS site feed](#) for the most recent political notes and new material.

This is the personal web site of Richard Stallman.

The views expressed here are my personal views, not those of the [Free Software Foundation](#) or the [GNU Project](#).
For the sake of separation, this site has always been hosted elsewhere and managed separately.

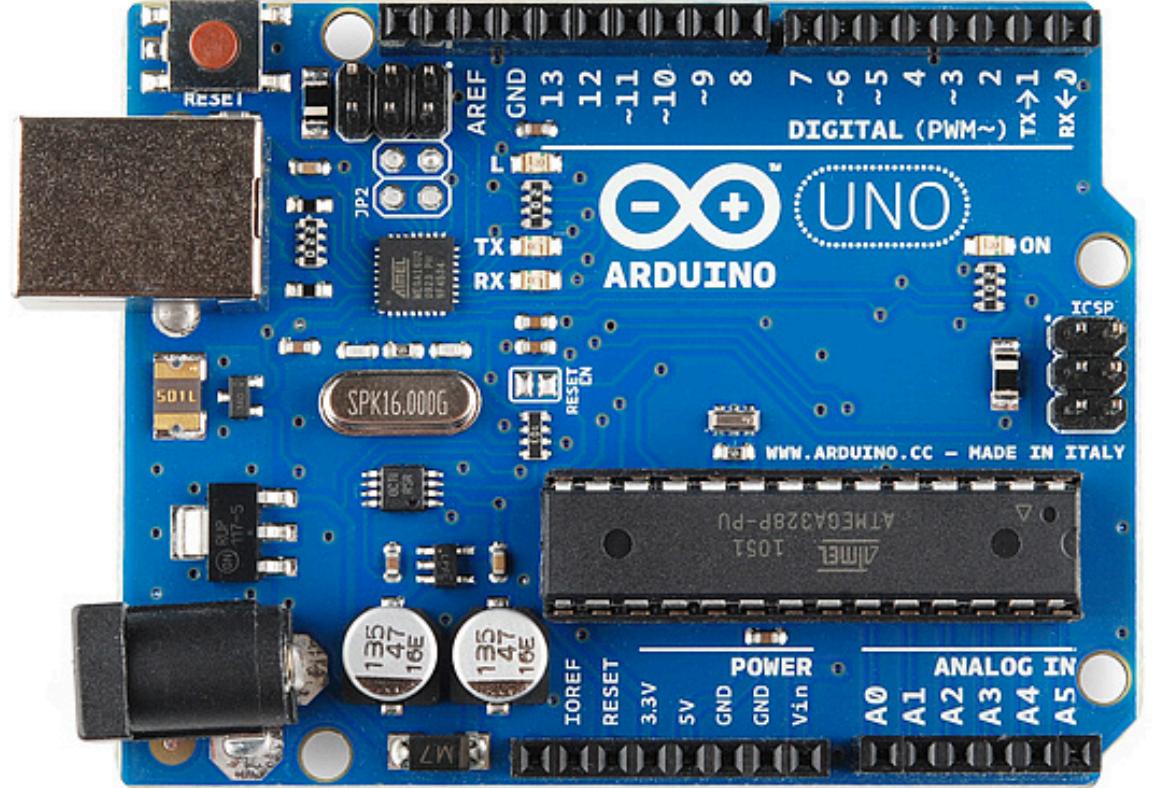
If you want to send me GPG-encrypted mail, do not trust key servers! Some of them have phony keys under my name and email address, made by someone else as a trick. See [gpg.html](#) for my real key.

Opensource software

- Too many
- Most famous? LINUX!

Opensource hardware : Arduino

- Arduino hardware products are licensed under a CC BY-SA license, while software is licensed under the GNU Lesser General Public License (LGPL) or the GNU General Public License (GPL), permitting the manufacture of Arduino boards and software distribution by anyone.



Opensource processor?

Strange?

By 바이라인네트워크

[인사이드 반도체]인텔이 주목한 RISC-V, Arm 대안 될까 - Byline ...

인텔이 최근 Arm 아키텍처의 대안으로 RISC-V 생태계 조성에 나선다고 밝혔습니다. 여기에 10억달러(약 1조4000억원) 가량을 투자하기로 했고요. 1조원이면 적잖은 금액...



2주 전

By 지디넷코리아

오픈소스 RISC-V, ARM 대안될까

RISC-V는 비영리 단체인 'RISC-V 인터내셔널'이 관리하는 오픈소스 명령어 세트다. 이를 이용해 시스템 반도체나 프로세서 등 어떤 제품이든 자유롭게 개발할 수 있고 최종...



2주 전

By 조선비즈

ARM-퀄컴 소송전 삼성전자에 '불똥'… ARM 설계 모바일 칩에 못 쓸 수도 - 조선비즈

ARM의 설계 독점 우려로 애플과 인텔은 ARM 설계가 아닌 오픈소스 기반의 RISC-V(리스크 파이브)로 설계를 옮기려고 한다. 삼성전자 역시 이런 대비가 필요하다는 지적...



4일 전

By HPCwire

RISC-V Is Far from Being an Alternative to x86 and Arm in HPC

RISC-V is designed as a modular instruction set with a very small base of less than 50 instructions. Custom cores that can be tacked on to the base ISA like...



15시간 전

Opensource processor : RISC-V

Social media icons: Twitter, LinkedIn, YouTube, RSS, GitHub, Email.

Language: Languages ▾ Tech Meetings Community Meetings Working Groups Portal Join

RISC-V logo

About RISC-V ▾ Membership ▾ RISC-V Exchange Technical ▾ News & Events ▾ Community ▾ Search icon

RISC-V Global Summit



RISC V Summit North America 2022 Launch

RISC-V SUMMIT

December 13-14, 2022

San Jose, CA

#RISCVSummit #RISCVEverywhere

CLICK HERE FOR INFO ON THE RISC-V SUMMIT

Propose your talk for the RISC-V Global Summit today! Our Call for Presentations is open and we'll be fully in person for this year's RISC-V Global Summit North America in San Jose this December. Tell us all about what you can share with the global RISC-V community here.

About RISC-V

Read Specs

Join Now

RISC-V: The Open era of computing



RISC-V: The Open Era of Computing

RISC-V

RISC-V: The Open Era of Computing

Calista Redmond

CEO, RISC-V International

0:01 / 17:58

Opensource processor : RISC-V

RISC-V is an open standard Instruction Set Architecture (ISA) enabling a new era of processor innovation through open collaboration

RISC-V enables the community to share technical investment, contribute to the strategic future, create more rapidly, enjoy unprecedented design freedom, and substantially reduce the cost of innovation

Opensource processor : RISC-V & Linux

The screenshot shows the Canonical Ubuntu website. At the top, there's a navigation bar with links for 'Enterprise', 'Developer', 'Community', 'Download', 'Search', and 'Sign in'. Below the navigation bar, there are tabs for 'Downloads' (selected), 'Desktop', 'Server', 'IoT', and 'Cloud'. The main content area features a large image of a computer monitor displaying a terminal window with the text 'Hello, RISC-V!'. Below the image, the text reads 'Download Ubuntu for RISC-V Platforms' and 'Ubuntu — now available for multiple RISC-V platforms'. There's also a section about enabling support for SiFive Unmatched, StarFive VisionFive, Allwinner Nezha, and Sipeed LicheeRV. A 'Get in touch' button is located at the bottom left.

Download Ubuntu for RISC-V Platforms

Ubuntu — now available for multiple RISC-V platforms

Run Ubuntu with your favourite RISC-V boards. Ubuntu recently enabled SiFive Unmatched, StarFive VisionFive, Allwinner Nezha, and Sipeed LicheeRV in 22.10. Download the images for those boards below.

Pick the OS image to match your hardware, flash it onto SD/microSD card, load it onto your board and away you go.

Get in touch

The slide has a dark blue background with diagonal light blue stripes. At the top, the RISC-V Summit logo is displayed. The main title 'Linux on RISC-V' is in large white serif font. Below it, 'Fedora and Firmware Status Update' is in a smaller white sans-serif font. The speaker's information is listed in yellow text: 'Wei Fu <wefu@redhat.com>', 'Senior Software Engineer', 'Red Hat Software (Beijing) Co.,Ltd.', and '@tekkamanninja'. At the bottom, the hashtag '#RISCVSUMMIT' and the URL 'tmt.knect365.com/risc-v-summit/' are shown.

Opensource datacenter : OCP

- Open Compute Project (initiated by Facebook)

The screenshot shows the homepage of the Open Compute Project website. At the top right, there is a search bar with a magnifying glass icon, followed by 'Contact' and 'Career Center' buttons. Below the header, the 'OPEN Compute Project ®' logo is displayed, featuring a circular graphic of green dots. A navigation menu includes 'About', 'Marketplace', 'Solution Providers', 'Contributions', 'Projects', 'Events', 'Membership', and 'Blog'. The main content area features a large image of a server rack in a data center. Overlaid on the image is a dark grey arrow pointing upwards and to the left, containing white text. To the right of the arrow is a circular graphic of white arrows forming a spiral pattern, with the word 'YEARS' in the center.

Open Possibilities.

The Open Compute Project Foundation (OCP) was initiated in 2011 with a mission to apply the benefits of open source and open collaboration to hardware and rapidly increase the pace of innovation in, near and around the data center. Now celebrating our 10th anniversary, just wait till you see what we have planned for the next ten years!

Opensource datacenter : OCP projects



Security



Server



Storage

Sub-Projects:

High Performance Computing - Incubation
Mezz (NIC)
Open Accelerator Infrastructure
Open Domain-Specific Architecture
Composable Memory System



Networking

Sub-Projects:

ONIE
SAI
SONiC
Enterprise Connectivity Solutions (ECS) -
Incubation
Open Network Linux (ONL)
Interconnects



Open System Firmware



Rack & Power

Opensource datacenter : OCP projects



Cooling Environments

Sub-Projects:

- Immersion
- Cold Plate
- Door Heat Exchanger
- Advanced Cooling Facilities
- Heat Reuse



Data Center Facility

Sub-Projects:

- Modular Data Center
- OCP Ready™ Facility Recognition Program
- Operation Technology Security
- DCF Sustainability



Hardware Management

Sub-Projects:

- Hardware Management Module
- Hardware Fault Management - Incubation
- OpenRMC-DM



Sustainability



Telco

Sub-Projects:

- Edge



Time Appliances Project (TAP)

Opensource datacenter : OCP projects



OCP Strategic Initiatives

Sub-Projects:

Test and Validation Enablement Initiative



Future Technologies Initiative

Sub-Projects:

- AI HW SW CoDesign Workstream
- Cloud Service Model Workstream
- Computational Storage



Regional Project Community - Europe



Regional Project Community - Japan

Regional Community

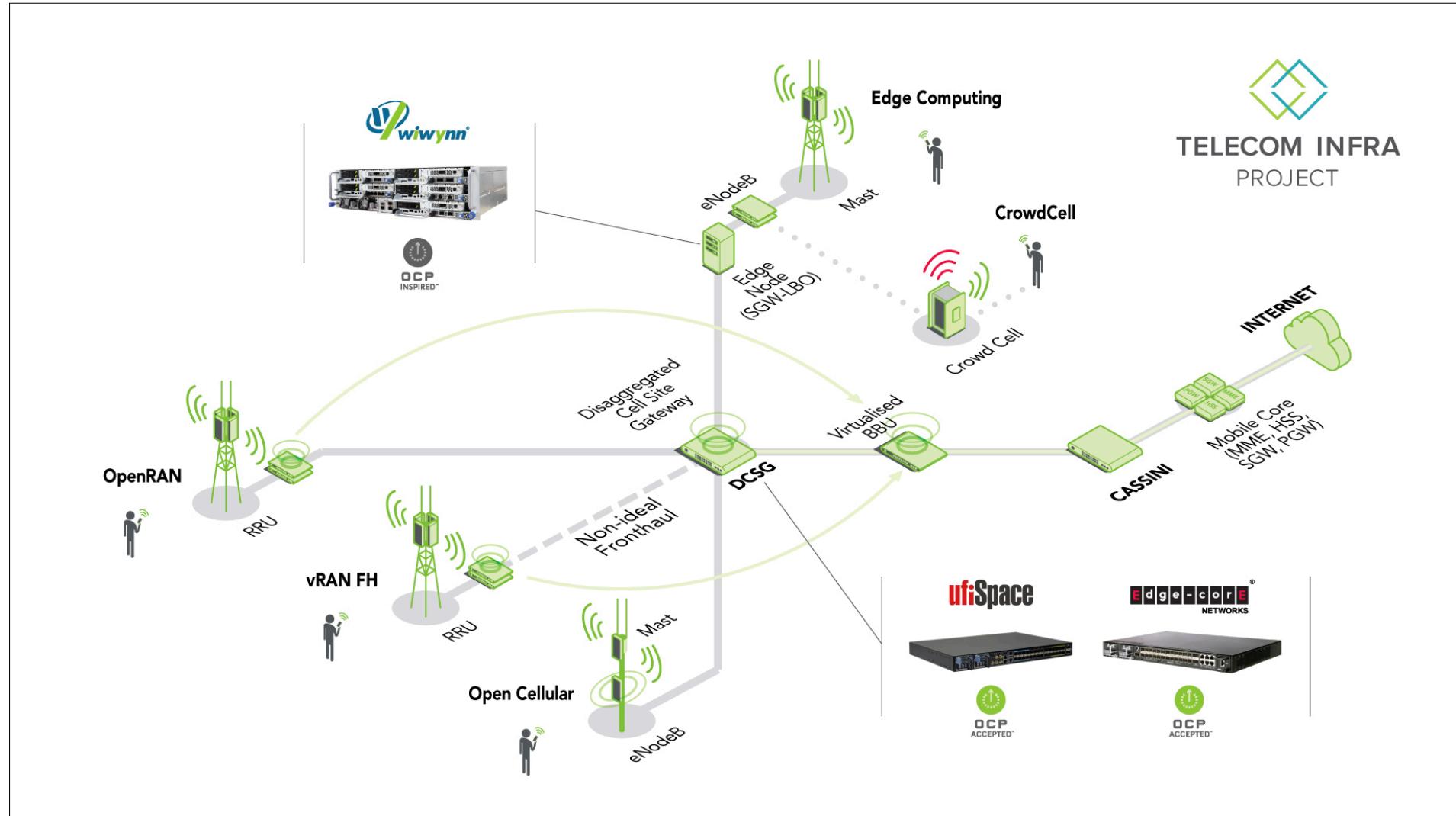


Regional Project Community - Korea



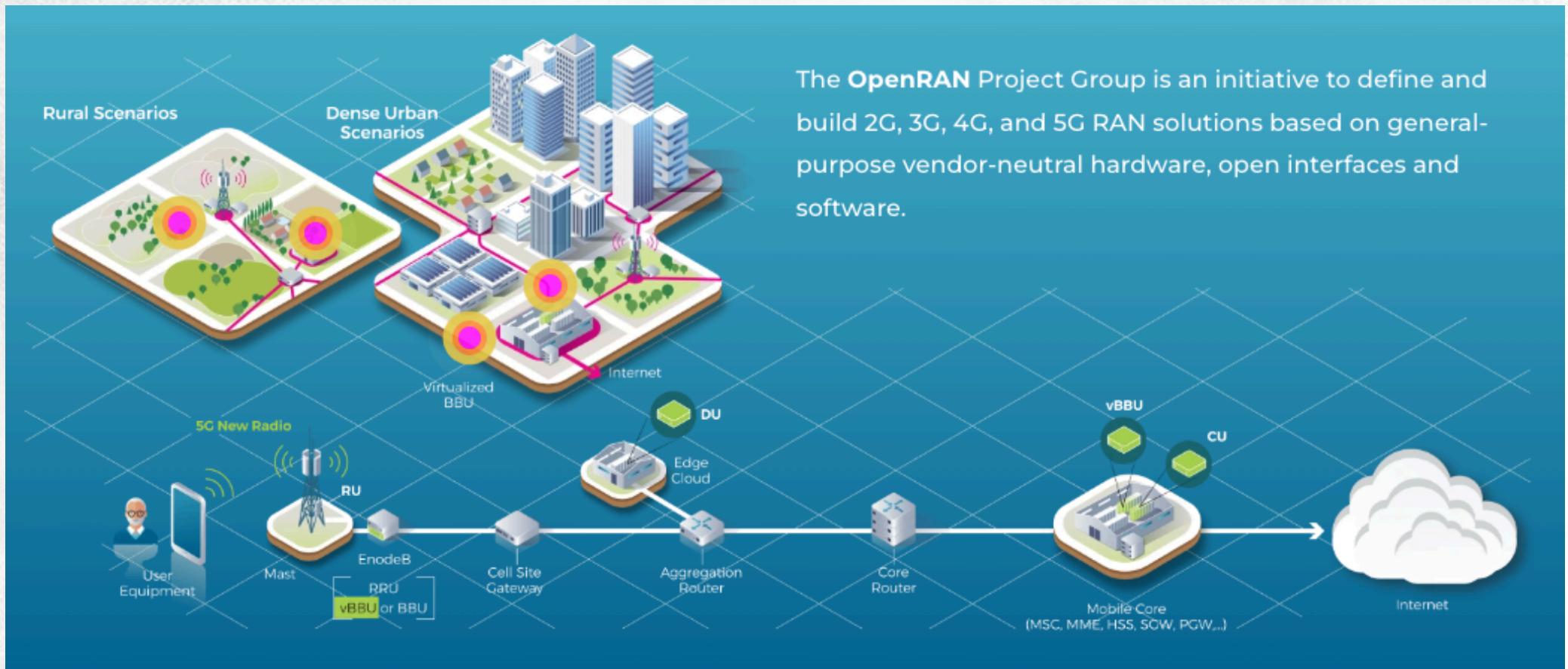
Regional Project Community - Taiwan

Opensource 5G network : OCP TIP



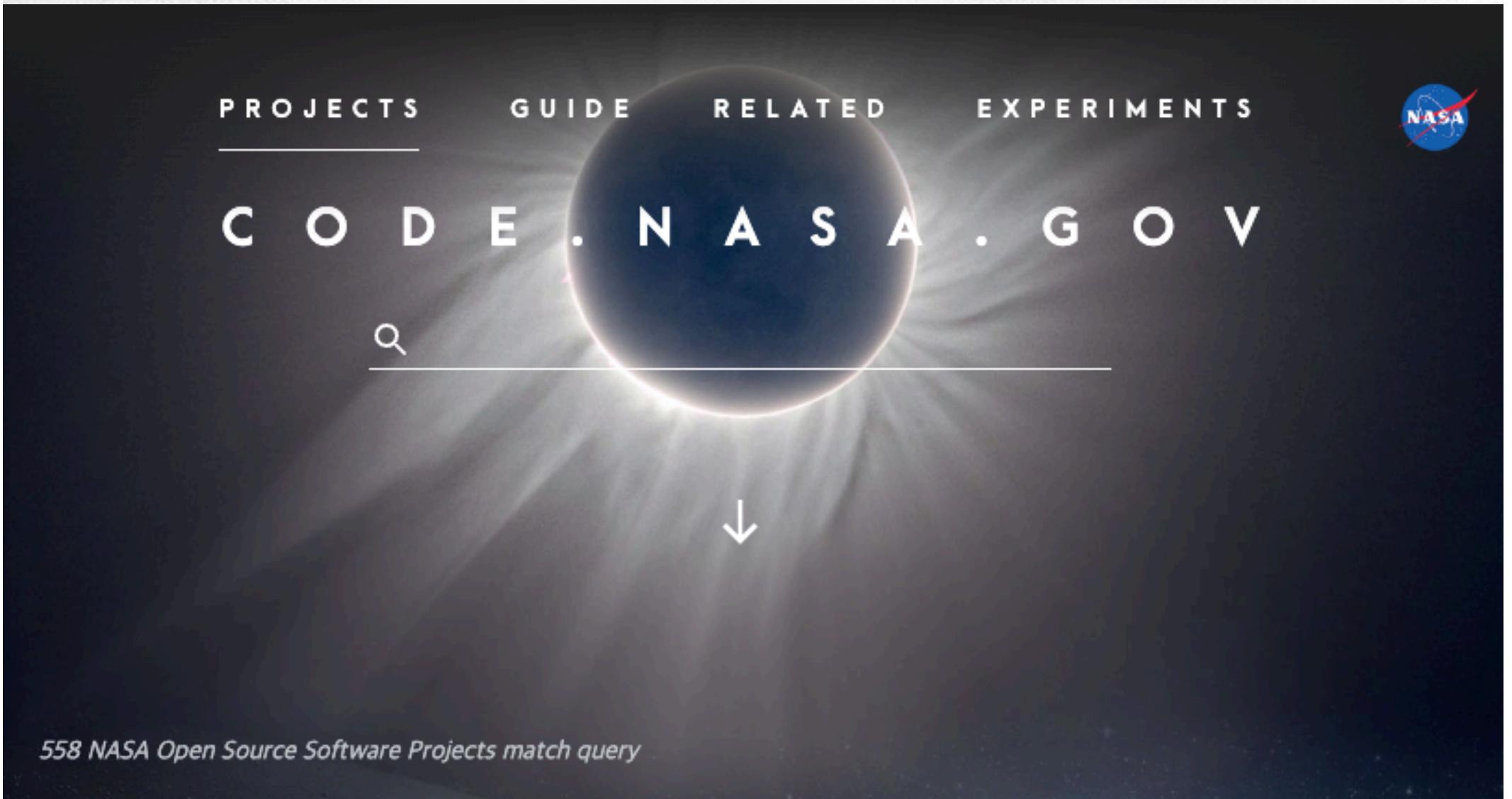
Opensource 5G network : OCP TIP

- OpenRAN Project Group under OCP TIP

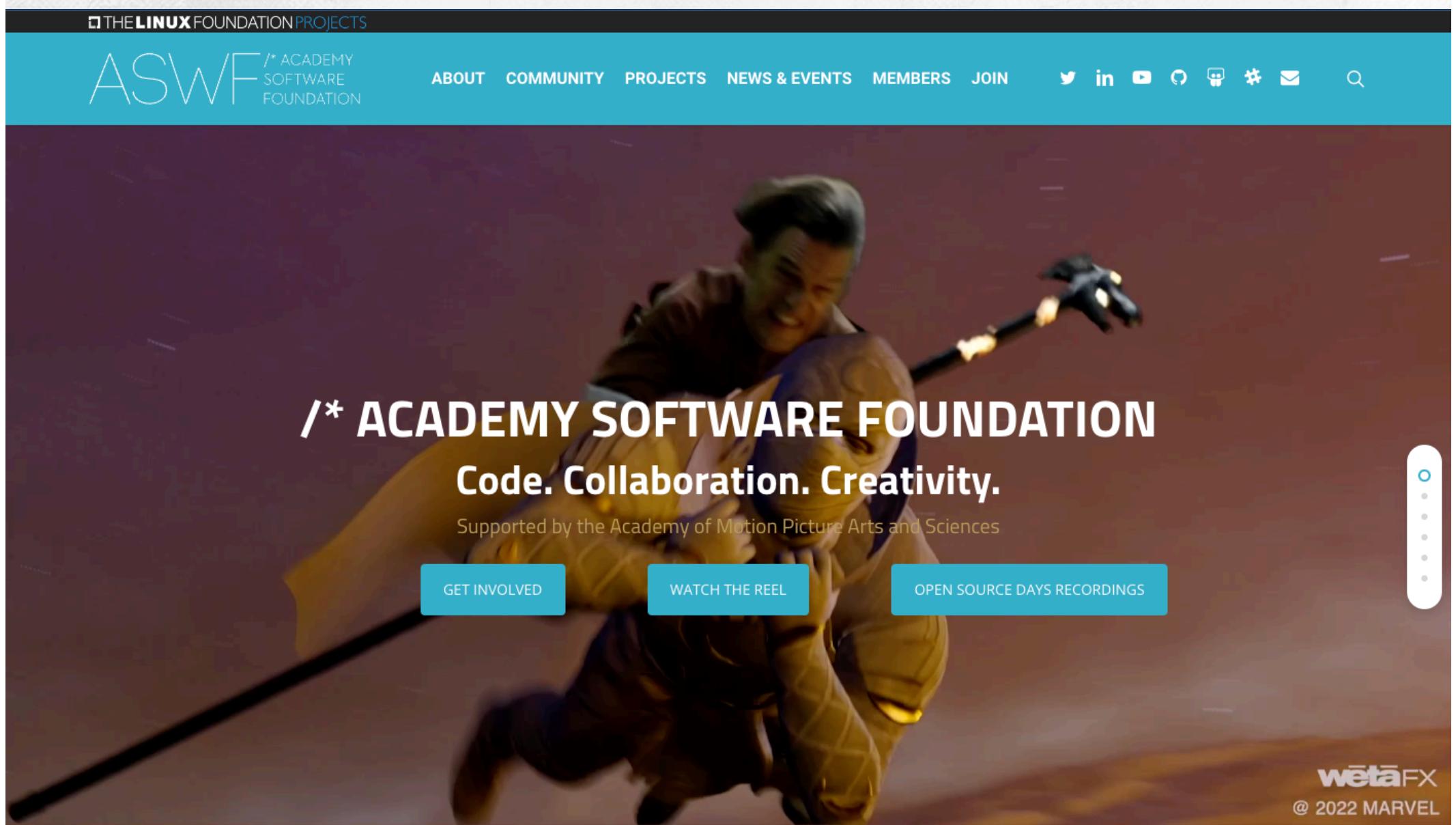


Opensource NASA

- Catalog of Open Source NASA code that has received SRA approval



Opensource Hollywood



THE LINUX FOUNDATION PROJECTS

ASWF /* ACADEMY SOFTWARE FOUNDATION

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/* ACADEMY SOFTWARE FOUNDATION

Code. Collaboration. Creativity.

Supported by the Academy of Motion Picture Arts and Sciences

GET INVOLVED WATCH THE REEL OPEN SOURCE DAYS RECORDINGS

wetaFX
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/* ACADEMY SOFTWARE FOUNDATION DPEL MATERIALX OpenColorIO OpenCue OpenEXR OpenFX open shading language OpenTimelineIO OpenVDB rawtoaces rez

Opensource Hollywood

THE LINUX FOUNDATION PROJECTS



ABOUT COMMUNITY PROJECTS NEWS & EVENTS MEMBERS JOIN

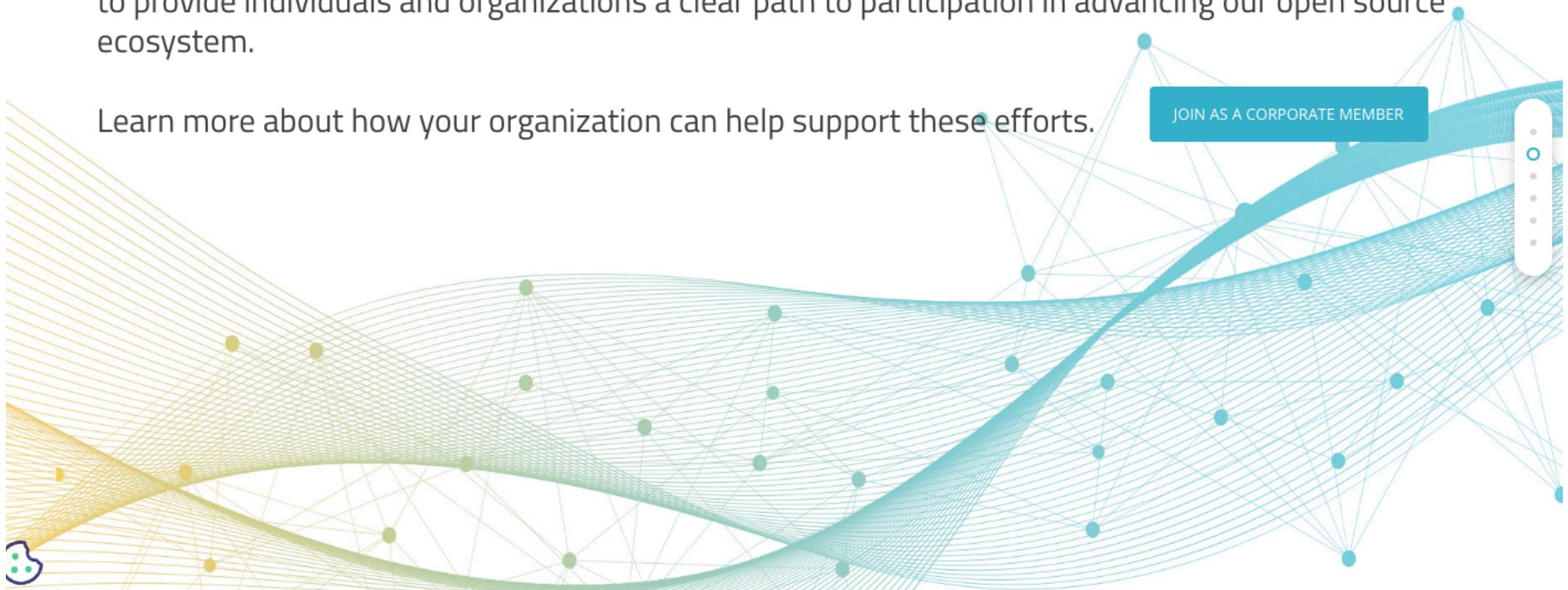


/* OUR MISSION

The mission of the Academy Software Foundation (ASWF) is to increase the quality and quantity of contributions to the content creation industry's open source software base; to provide a neutral forum to coordinate cross-project efforts; to provide a common build and test infrastructure; and to provide individuals and organizations a clear path to participation in advancing our open source ecosystem.

Learn more about how your organization can help support these efforts.

[JOIN AS A CORPORATE MEMBER](#)



Opensource ENERGY

THE LINUX FOUNDATION PROJECTS



ABOUT ▾ PROJECTS ▾ TRAINING & CERTIFICATION RESEARCH ▾ MEDIA ▾

JOIN



LF Energy is an open source foundation focused on creating a technology ecosystem to support rapid decarbonization that benefits the environment, enables economic prosperity, and leads to social well-being for future generations. LF Energy provides a neutral, collaborative community to build the shared digital investments that will transform the world's relationship to energy.

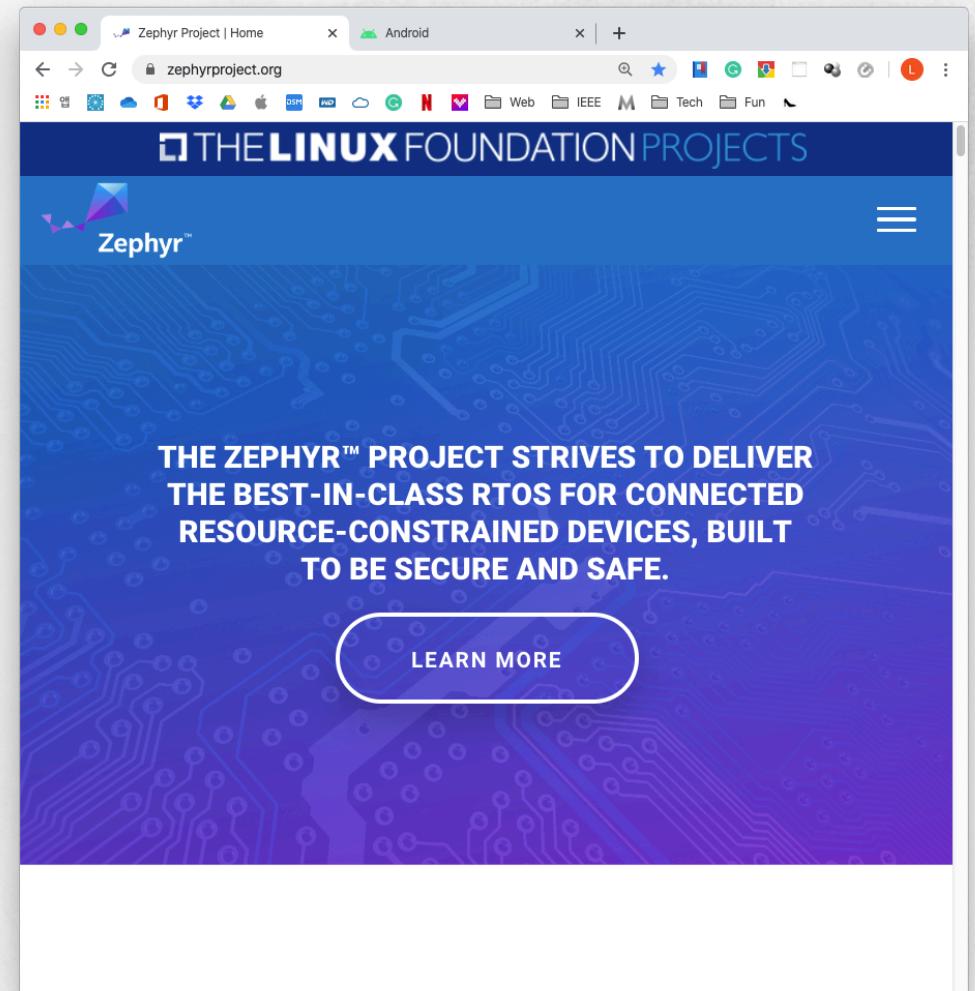
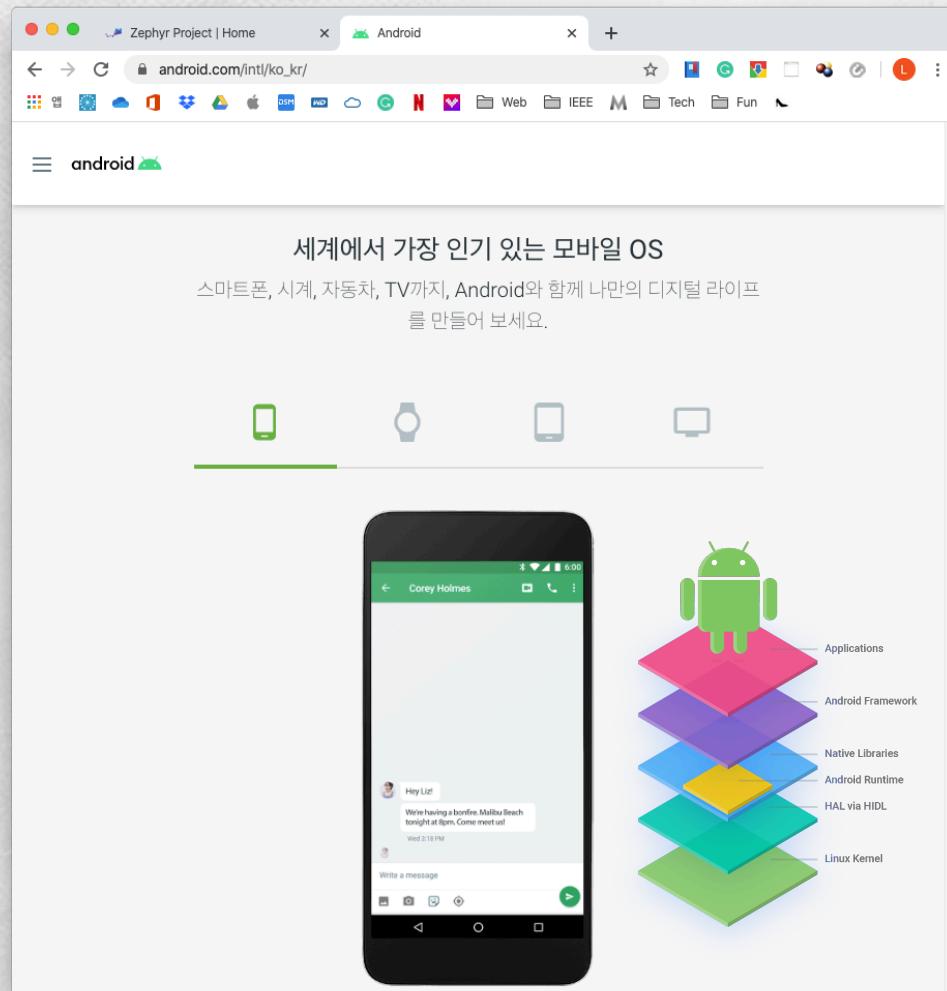
Linux Foundation Energy is a vendor-neutral, non-profit organization that brings together energy producers, utilities, end users, academia, government and the technology industry to collaboratively develop technology solutions – including software solutions, standards, and specifications – for the energy sector to speed decarbonization and the energy transition generally.

The digitalization of power systems enables the abstraction of the world's largest machine into composable software defined infrastructure. Digitalization also means that operators can "network electrons" by orchestrating the metadata about an electron in ways never before possible. Digitalization facilitates a radically energy-efficient future. When every electron counts, renewable and distributed energy provides humanity with the tools to address climate change by decarbonizing the grid, powering the transition to e-mobility, and supporting the urbanization of world populations.

LF Energy builds communities to develop open technologies, frameworks, reference architectures, and research to alleviate pain points and identify the most urgent priorities to digitally transform the energy sector. This includes cybersecurity, interoperability, control, automation, virtualization, flexibility, and digital orchestration for balancing of supply and demand, which cannot be solved by legacy, proprietary solutions.

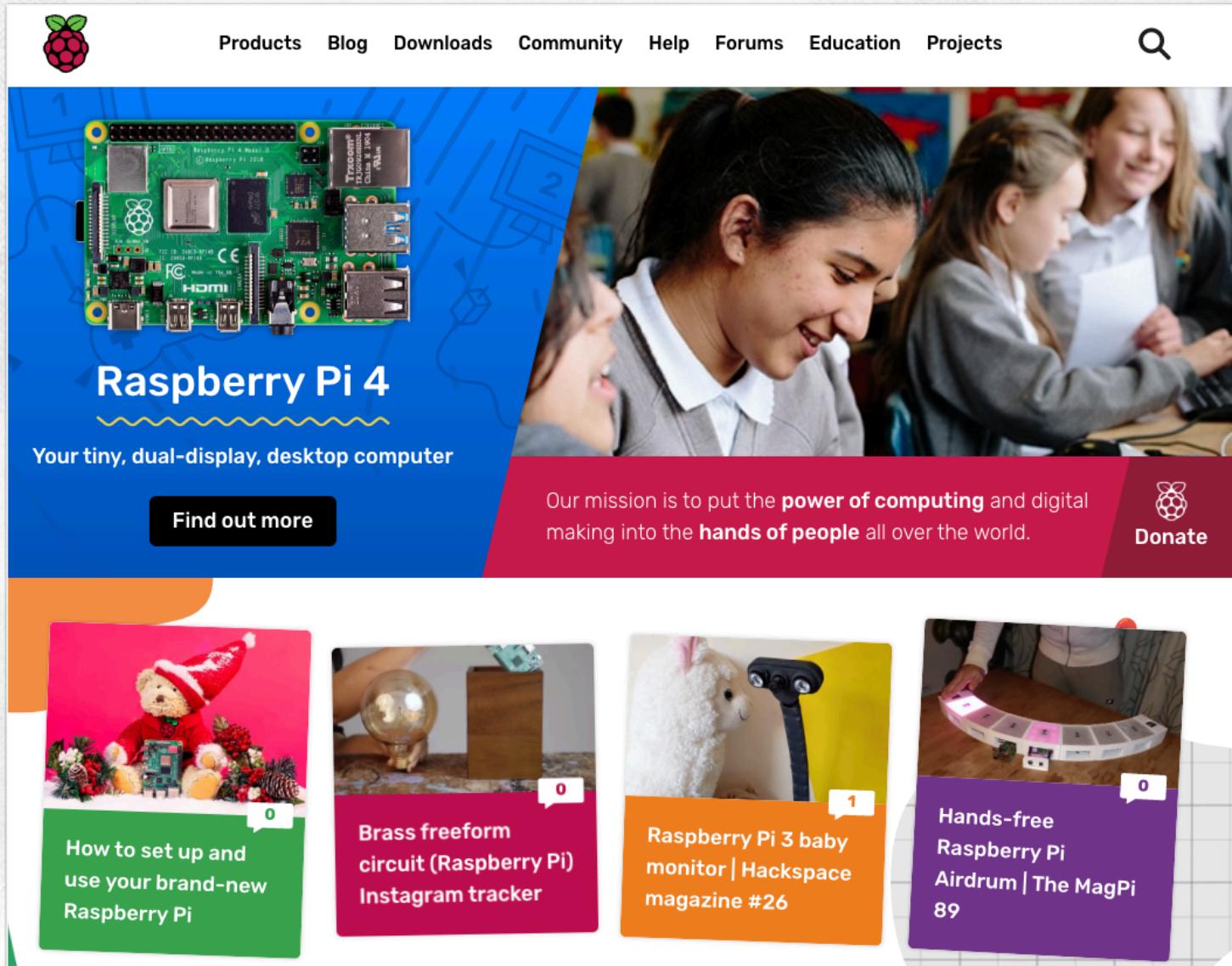
Why Linux?

Linux Dominates Smartphones and IoT



Why Linux?

● Linux Dominates Physical Computing



Why Linux?

● Linux Dominates Physical Computing

Coral

[Products](#) [Industries](#) [Examples](#) [Docs & Tools](#) [About](#)

Products

Helping you bring local AI to applications from prototype to production



The Coral website page displays a variety of hardware components designed for local AI computing. It includes a Dev Board with a central processor and a cooling fan, several M.2 and Mini PCIe modules for different form factors, a USB Accelerator for portability, and a Dev Board encased in a protective aluminum heatsink. The page also features a prominent red 'Products' menu bar at the top.

Why Linux?

● Single OS for Super Computers

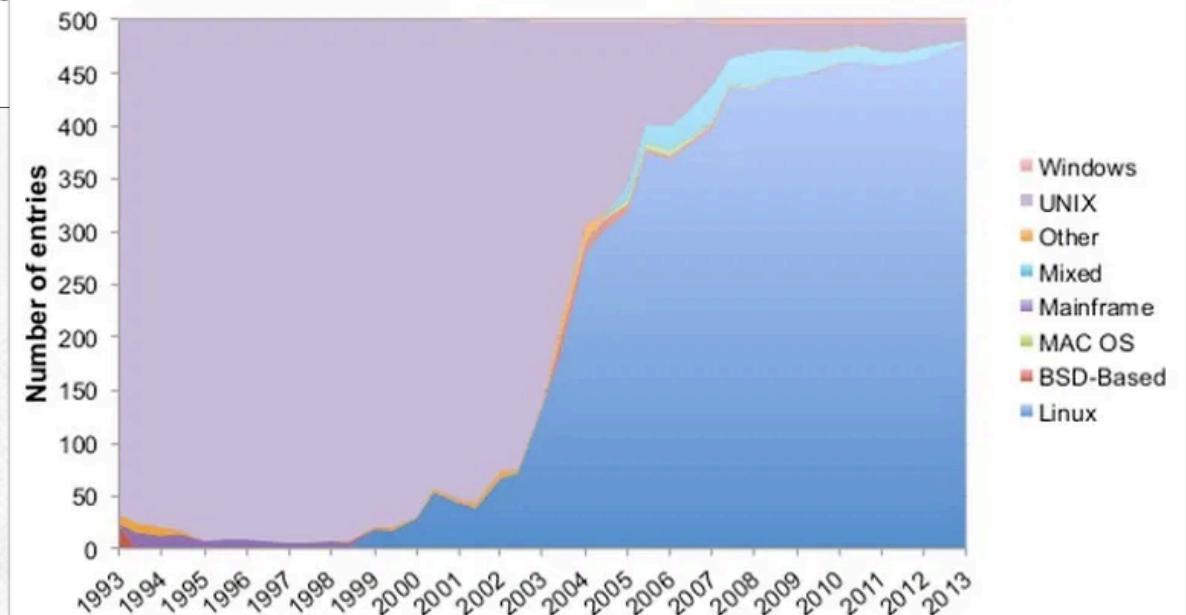
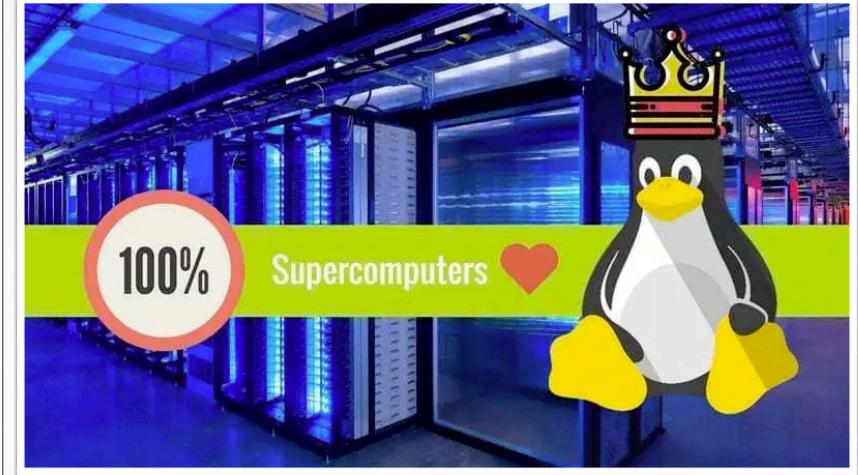
Linux Runs on All of the Top 500 Supercomputers, Again!

Last updated December 11, 2019 By [Abhishek Prakash](#) — [16 Comments](#)

Linux might be struggling for a decent desktop market share but it is definitely ruling the world of supercomputers. Linux is the supercomputer operating system by choice.

As per the [latest report from Top 500](#), Linux now runs on all of the fastest 500 supercomputers in the world. The previous number was 498 as remaining two supercomputers ran Unix.

[Top500](#) is an independent project that was launched in 1993 to benchmark supercomputers. It publishes the details about the top 500 fastest supercomputers known to them, twice a year. You can go the website and [filter out the list](#) based on various criteria such as country, OS type, vendors etc.



Why Linux?

● Linux over Windows Desktop

EDITION: AS ▾

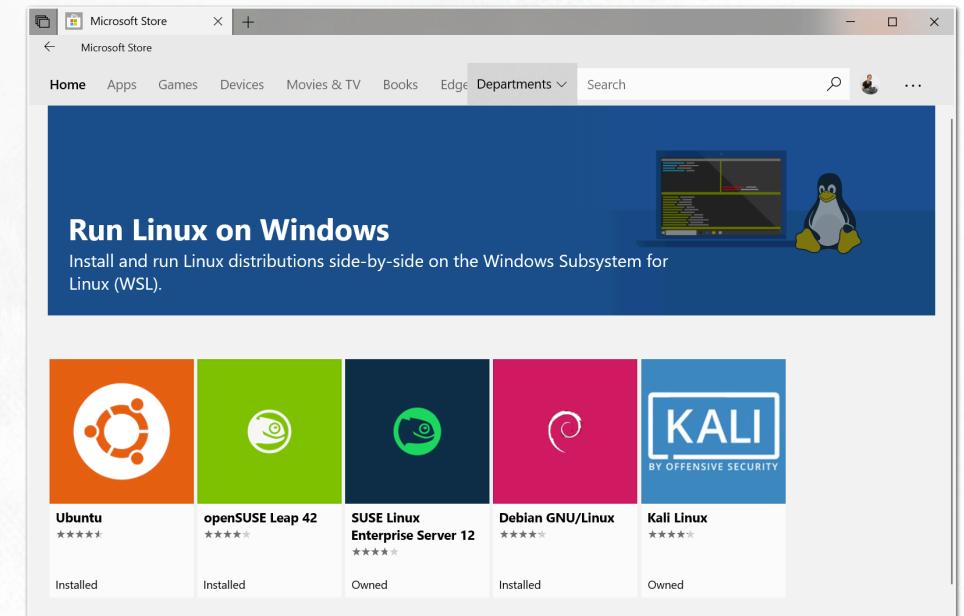
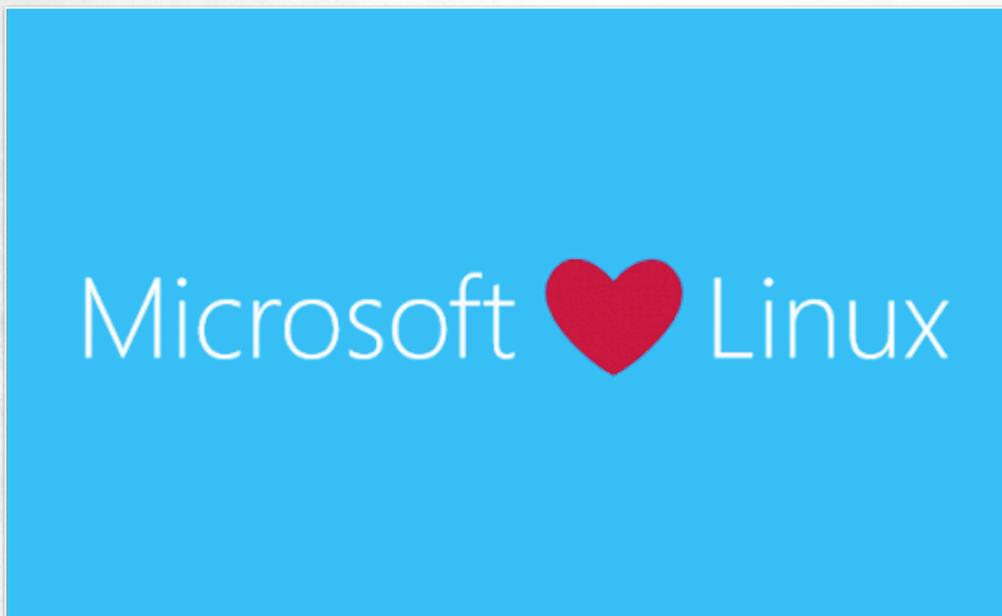
ZDNet

By Steven J. Vaughan-Nichols for Linux and Open Source | December 6, 2019 -- 19:43 GMT (03:43 GMT+08:00) | Topic: Enterprise Software

MUST READ: [How the Canonical team is making Ubuntu better for Windows](#)

Canonical makes Ubuntu for Windows SubSystem for Linux a priority

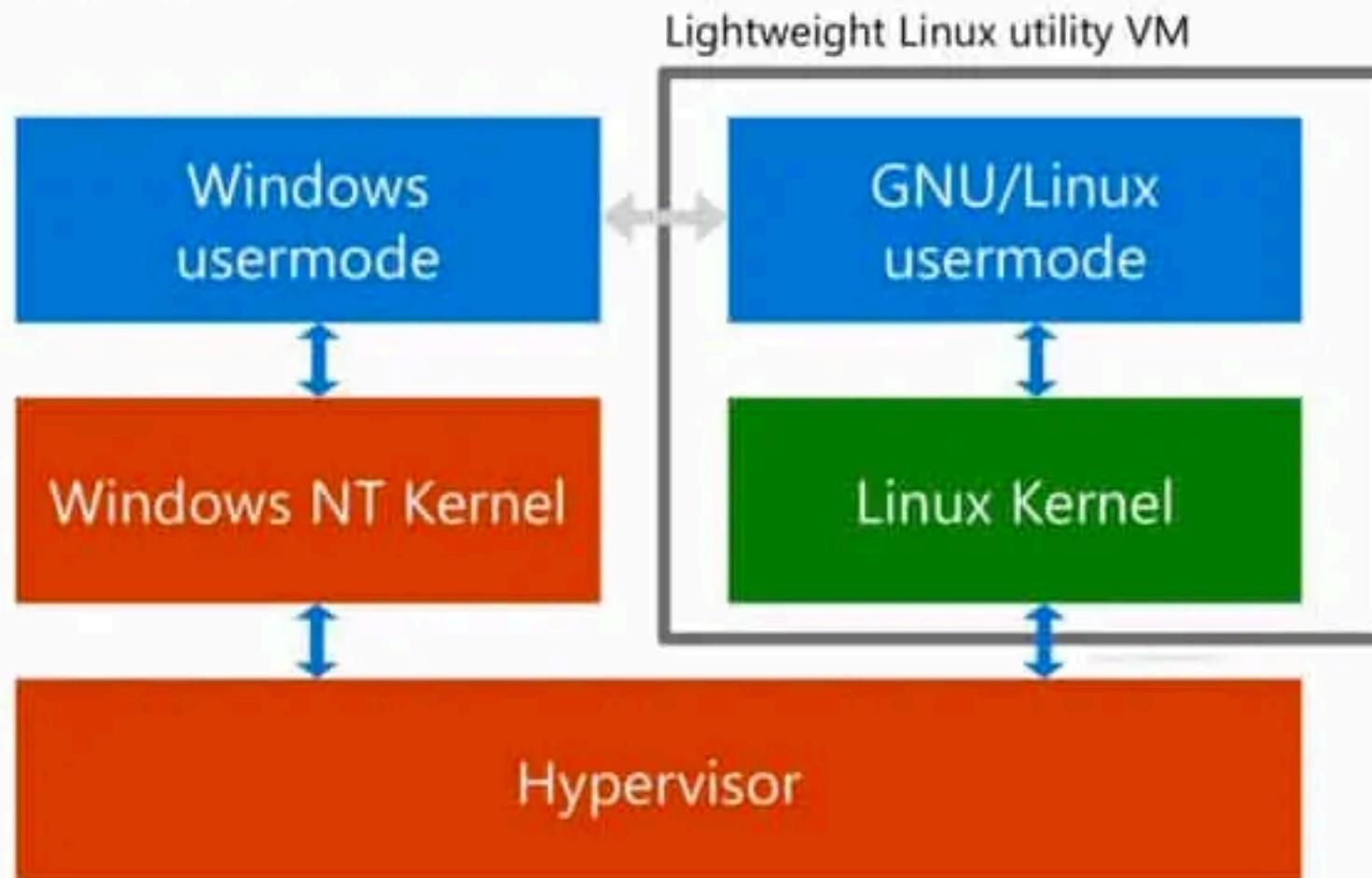
Canonical is putting more resources into the Linux desktop and that includes making Ubuntu better on the Windows desktop.



Why Linux?

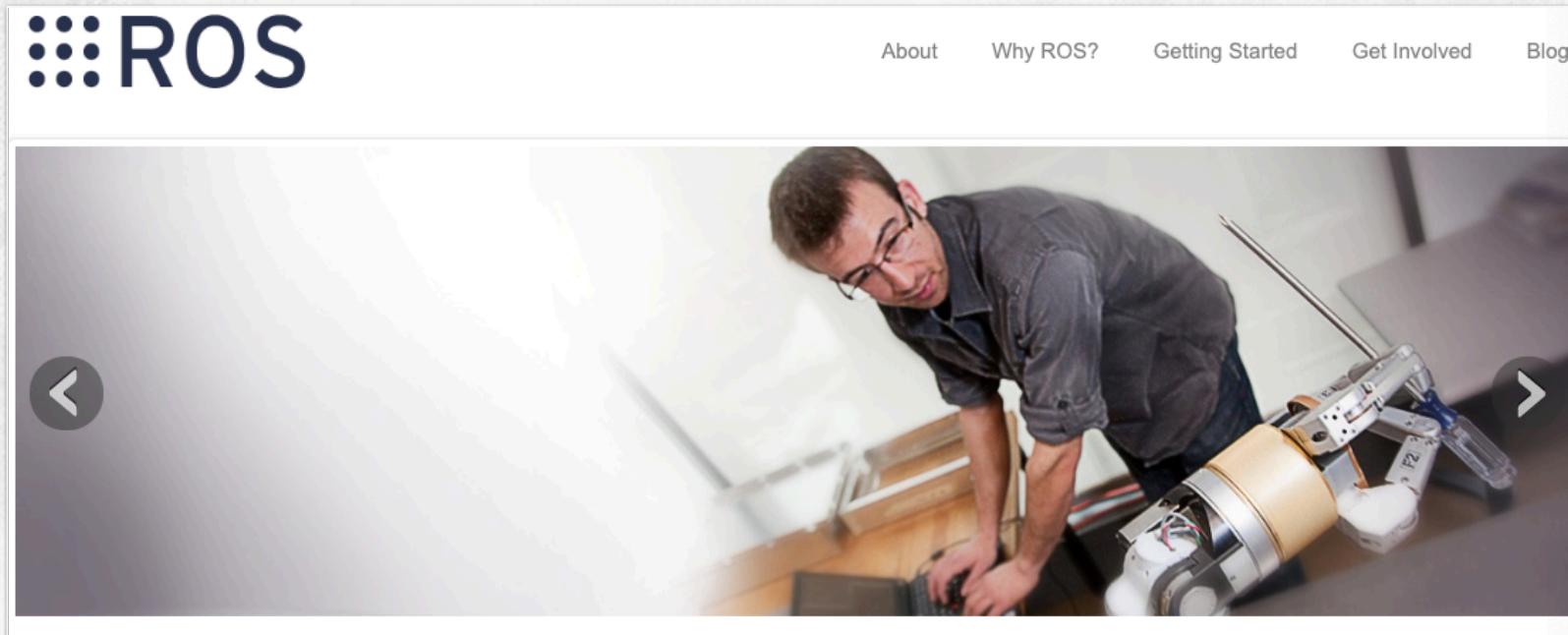
- Linux over Windows Desktop

WSL 2 architecture overview



Why Linux?

● Linux over Robot



The screenshot shows the official ROS website. At the top, there's a navigation bar with links for "About", "Why ROS?", "Getting Started", "Get Involved", and "Blog". Below the navigation is a large banner featuring a man wearing glasses and a dark shirt, working on a complex robotic arm. To the left of the banner is a left arrow icon, and to the right is a right arrow icon. Below the banner is a horizontal row of five small circular dots, likely indicating a scrollable section. The main content area is divided into three columns. The first column contains an illustration of two cartoonish characters, one green and one blue, standing next to a yellow circle with the text "ROS". Below this is a text block: "ROS Melodic Morenia" followed by a detailed description: "Melodic Morenia is the 12th official ROS release. It is supported on Ubuntu 18.04 LTS (Bionic Beaver) and 19.10 (Eoan Ermine). It is also supported on Debian Stretch and Artful. Get Melodic Morenia now!". A blue "Download" button is at the bottom of this section. The second column contains an illustration of a red robot-like character with the text "ROS Kinetic Kame" above it, followed by a description: "Kinetic Kame is the 10th official ROS release. It is supported on Ubuntu 16.04 LTS (Xenial Xerus) and 18.04 LTS (Bionic Beaver). It is also supported on Ubuntu 14.04 LTS (Trusty Tahr) and 16.10 (Yakkety Yak). Get Kinetic Kame now!". A blue "Download" button is at the bottom of this section. The third column on the right lists several resources with icons: "Wiki" (document icon), "Find tutorials and learn more"; "ROS Answers" (chat icon), "Ask questions. Get answers"; "Blog" (RSS icon), "Get the latest news"; and "Forums" (envelope icon), "Hear the latest discussions".

ROS Melodic Morenia
Melodic Morenia is the 12th official ROS release. It is supported on Ubuntu 18.04 LTS (Bionic Beaver) and 19.10 (Eoan Ermine). It is also supported on Debian Stretch and Artful. Get Melodic Morenia now!

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Wiki
Find tutorials and learn more

ROS Answers
Ask questions. Get answers

Blog
Get the latest news

Forums
Hear the latest discussions

Why Linux?

● Linux over Automotive Grade Vehicle

The screenshot shows the homepage of the Automotive Grade Linux website. At the top, there's a navigation bar with links for About, Community, Software, Resources, Newsroom, Events, and Contact Us. Social media icons for Twitter, Facebook, and LinkedIn are also present. The main content area features two large cards: one for CES 2020 and one for Volkswagen joining AGL. Below these cards, there's a section titled "What is Automotive Grade Linux?" with a detailed description of the project.

THE LINUX FOUNDATION PROJECTS

AUTOMOTIVE GRADE LINUX

About Community Software Resources Newsroom Events Contact Us

CES 2020

Learn more about the 18+ member demos in the AGL booth, RSVP for our Evening Reception, or schedule time to learn more about AGL!

LEARN MORE

Volkswagen joins Automotive Grade Linux

Learn More

CFP OPEN: AGL All Member Meeting, Hawaii | March 18-19, 2020 **READ MORE**

What is Automotive Grade Linux?

Automotive Grade Linux is a collaborative open source project that is bringing together automakers, suppliers and technology companies to accelerate the development and adoption of a fully open software stack for the connected car. With Linux at its core, AGL is developing an open platform from the ground up that can serve as the de facto industry standard to enable rapid development of new features and technologies.

Why Linux?

● Linux over Classic Game Platform



The screenshot shows the official RetroPie website at <https://retropie.org.uk>. The header features a logo with a red joystick and the word "RETROPIE" in yellow. Below the logo is a navigation bar with links: HOME, NEWS, DOWNLOAD, FORUM, DOCS, ABOUT, and DONATE. A search bar is on the right. The main content area has a dark background. On the left, there's a "Welcome" section with text about what RetroPie is and how to get started. On the right, there's a large image of a video game scene featuring a blue character with green hair holding an umbrella, walking through a brown landscape. Below the image is the "AMIGA" logo. At the bottom, a note states: "Please note: No copyrighted games are included with RetroPie".

Welcome

Welcome to RetroPie. RetroPie allows you to turn your Raspberry Pi, ODroid C1/C2, or PC into a retro-gaming machine. It builds upon Raspbian, EmulationStation, RetroArch and many other projects to enable you to play your favourite Arcade, home-console, and classic PC games with the minimum set-up. For power users it also provides a large variety of configuration tools to customise the system as you want.

RetroPie sits on top of a full OS, you can install it on an existing Raspbian, or start with the RetroPie image and add additional software later. It's up to you.

While the RetroPie Project originated at petRockBlock.com this is now the home of RetroPie.

[Get RetroPie](#)

Please note: No copyrighted games are included with RetroPie

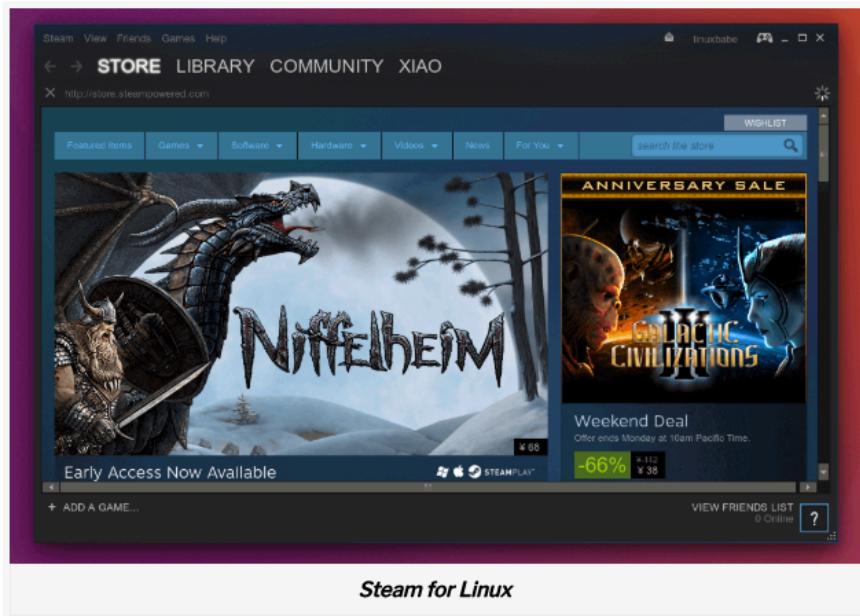
Why Linux?

● Linux over Online Game Platform

8. Steam

Steam is not open-source but it is regarded as the [ultimate online gaming platform](#), is an online community where you can easily search, install, and manage game collections for different OS platforms.

SteamOS + Linux on Steam is the best thing that has happened to gamers in the Linux community.



<https://www.fossmint.com/best-open-source-linux-software-in-2018/>

The SteamOS landing page. At the top, there's a navigation bar with 'Install Steam', 'login', and 'language' options. The main headline is 'SteamOS is here' with a large Steam logo. Below the headline, a message says: 'We've been hard at work to deliver on our promise of a new kind of living room entertainment environment - one that is accessible, powerful and open.' Another message below it says: 'In making SteamOS available to you, we're excited to take the next major step towards that goal. But before you dive in, please take a few minutes to understand what SteamOS is and what it is not.' Two call-to-action boxes are present: 'Build your own Steam Machine' (with a 'DIY Steam Machine' link) and 'Build and sell Steam Machines' (with an 'OEM/Partner Page' link). The URL 'https://store.steampowered.com/steamos/' is shown at the bottom.

Introduction

Proton is a tool for use with the Steam client which allows games which are exclusive to Windows to run on the Linux operating system. It uses Wine to facilitate this.

Most users will prefer to use Proton provided by the Steam client itself. The source code is provided to enable advanced users the ability to alter Proton. For example, some users may wish to use a different version of Wine with a particular title.

Getting Started with Proton from Steam Play

- As the new Steam Play is still in Beta, it is recommended that you opt into the [Steam Client Beta](#) for the latest features and fixes.
- Proton requires graphics drivers that are more recent than what is typically packaged in most distributions; please read the [list of requirements and quickstart for Ubuntu 18.04 users](#)
- Install and play games! Please refer to [this post](#) for more information.
- Visit the [changelog](#) for information about recent updates.

<https://github.com/ValveSoftware/Proton>

Why Linux?

● Linux over Data Science



Building Sustainable Ecosystems for Cloud Native Software

The Cloud Native Computing Foundation (CNCF) hosts critical components of the global technology infrastructure. CNCF brings together the world's top developers, end users, and vendors and runs the largest open source developer conferences. CNCF is part of the nonprofit Linux Foundation.

CLOUD NATIVE COMPUTING FOUNDATION HOSTED PROJECTS

 kubernetes Orchestration	 Prometheus Monitoring	 opentracing Tracing API	 fluentd Logging	 gRPC Remote Procedure	 containerd Container Runtime
 rkt Container Runtime	 CNI Networking API	 envoy Service Mesh	 jaeger Distributed Tracing	 batteru Security	 TUF Update Framework
 vitess Storage	 linkerd Service Mesh	 CoreDNS Service Discovery	 rook Storage		



NEWS & BLOG POSTS

December 19, 2019 LF AI Foundation Announces Graduation of Angel Project	December 17, 2019 LF AI Foundation Welcomes ZILLIZ as Premier Member
December 5, 2019 Thank you! LF AI Day Shanghai Summary	November 27, 2019 LF AI Receives Best Contribution Award from Chinese Association for Artificial Intelligence (CAAI)

PROJECTS

The LF AI Foundation supports open source projects within the artificial intelligence, machine learning, and deep learning space. You can think of us as a greenhouse growing and sustaining open source AI, ML, and DL projects from seed to fruition. The LF AI Foundation provides the support to projects for open development to occur among a diverse and thriving community, in addition to a number of enabling services that include membership and funding management, ecosystem development, legal support, PR/marketing/communication, events support, and compliance scans.

Linus Torvalds (father of Linux)



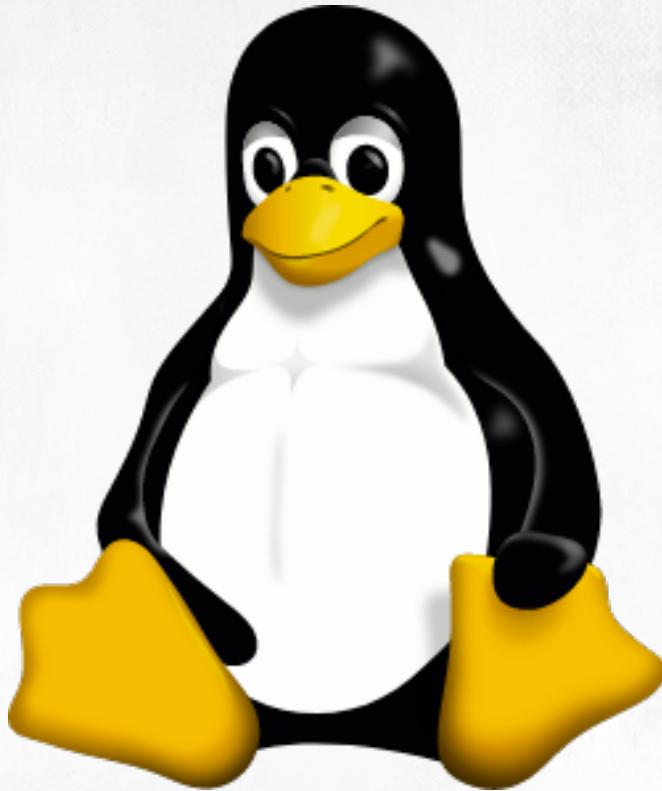
Linus Torvalds (father of Linux)



"Hello everybody out there... I'm doing a (free) operating system (just a hobby, won't be anything big and professional like gnu)...it probably will never support anything other than AT-hard disks, as that's all I have..."

August 1991

Tux (mascot of Linux)



리눅스 커널의 마스코트인 Tux(텍스)는 래리 유웡이 1996년에 창조한 마스코트이다. 왜 하필 펭귄이냐 하면 별다른 이유는 없고, 그저 개발자인 리눅스 토르발스가 펭귄을 좋아해서라고 한다. 때는 93년 경, 토르발스가 오스트레일리아 태즈메이니아를 여행하던 때의 일이다. 토발즈는 유닉스 모임에서 리눅스에 대해 말하려 가던 중에 엄청나게 작은 쇠푸른펭귄한테 물리게 된다. 그 일로 인해 토르발스가 펭귄을 좋아하게 되고 리눅스의 로고로 떠올리게 되었다고 한다.

Linux Foundation

- Since 2000, the Linux Foundation (LF) is dedicated to building sustainable ecosystems around open source projects to accelerate technology development and commercial adoption.
- The largest open source non-profit organization, it works to promote, protect, and advance Linux and collaborative development and support the "greatest shared technology resources in history."

The screenshot shows the homepage of The Linux Foundation. In the top left corner, there is a logo for 'THE LINUX FOUNDATION' with a stylized blue 'L' icon. The top navigation bar includes links for 'Projects', 'Membership', 'Events', 'Training', 'Resources', and 'About'. To the right of the navigation, there are social media icons for Twitter, Facebook, LinkedIn, YouTube, and Google+. The main banner features a dark background with a network of glowing blue lines and yellow dots, symbolizing connectivity. The text 'The Linux Foundation is Creating the Largest Shared Technology Investment in History' is displayed prominently. Below this, a blue button says 'LEARN MORE ABOUT OUR PROJECTS'. On the right side of the banner, there is another text block: 'Our members are developing billion-dollar markets and ensuring society continues to run on open source'. At the bottom of the page, a blue footer bar contains the text 'Open Source Guides for the Enterprise – Learn about best practices for running an open source program office or starting an open source project within your organization.'

Actively manage your open source project health with LFX Insights. [Learn how.](#)

ENGLISH

Sign In



JOIN

Decentralized innovation. Built on trust.

The Linux Foundation provides a neutral, trusted hub for developers and organizations to code, manage, and scale open technology projects and ecosystems.

[LEARN MORE](#)



850
open source
projects >

2M+
developers
trained >

777K
developers
contributing code >

51M
lines of code
added weekly >

17K
contributing
organizations >

70+
upcoming
events >

Linux Foundation

Explore our projects.

Open Software

Open Hardware

Open Standards

Open Data

The Linux Foundation provides a neutral, trusted home for developers to collaborate on open software projects. [See all open software projects.](#)



[SEE ALL PROJECTS](#)

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Open Hardware

Open Standards

Open Data

The Linux Foundation provides a neutral, trusted home for developers to collaborate on open hardware projects. [See all open hardware projects.](#)



SEE ALL PROJECTS

Linux Foundation

Explore our projects.

Open Software

Open Hardware

Open Standards

Open Data

The Linux Foundation provides a neutral, trusted home for developers to collaborate on open standard projects. [See all open standard projects.](#)



SEE ALL PROJECTS

Linux Foundation

Explore our projects.

Open Software

Open Hardware

Open Standards

Open Data

The Linux Foundation provides a neutral, trusted home for developers to collaborate on open data projects. [See all open data projects.](#)



[SEE ALL PROJECTS](#)

Linux Foundation Projects (VISIT!!)

Find a project to contribute to:

FILTER PROJECT BY ▾

✓ Show All

AI, ML, Data and Analytics

Blockchain

Cloud

Containers

CI/CD and Site Reliability

Cross-technology

DevOps

IoT and Embedded

Linux Kernel

Networking and Edge

Open Hardware

Open Source and Compliance Best Practices

Privacy and Security

Quantum Computing

Safety-Critical Systems

Storage

System Administration

System Engineering

Visual Effects

Web and Application Development

All | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W

3MF Consortium

AAA

Academy Software
Foundation (ASWF)

Accord Project

Active & Available
Inventory (AAI)

Acumos

Adlik

Adversarial
Robustness Toolb

AI Explainability 360

AI Fairness 360

Airship Installer

Ajv

Alliance for Open
Media (AOM)

Ambitus

AMP

Amundsen

Angel

Anomaly Detection
Engine for Linux Logs
(ADE)

Antrea

Anuket

Appium

Application Runtime
PMC

Application Runtime
PNC

Argo

Aries

Artifact Hub

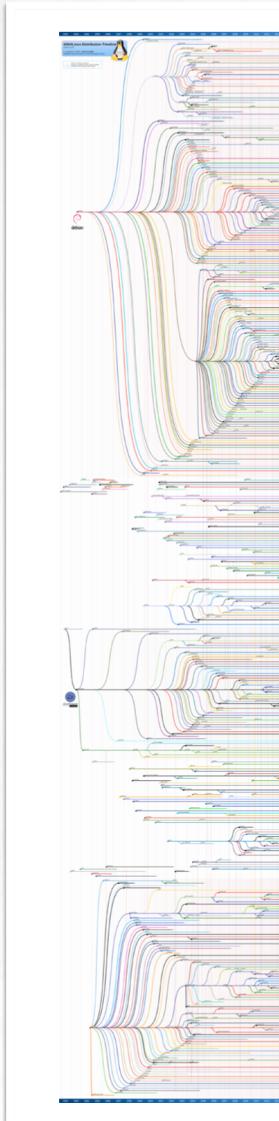
AsyncAPI



Linux Distros

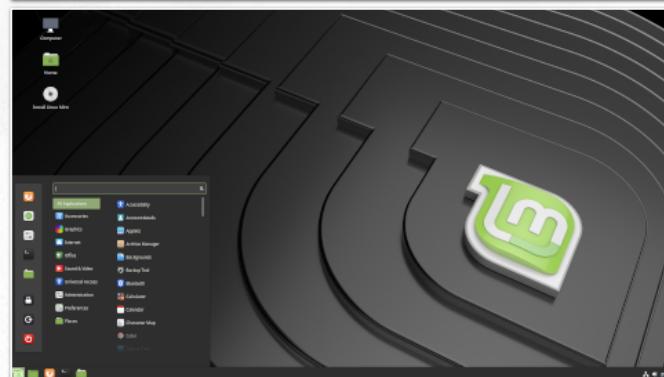
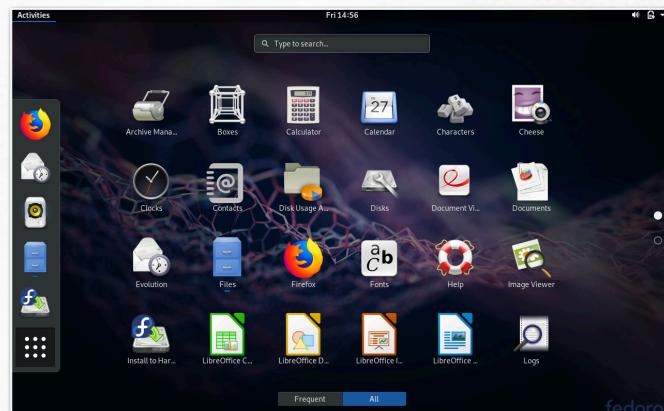
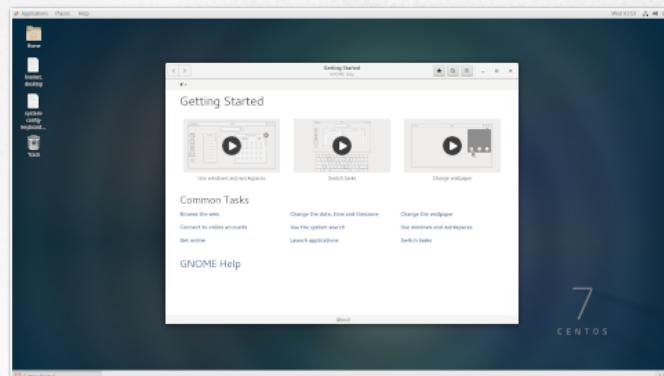
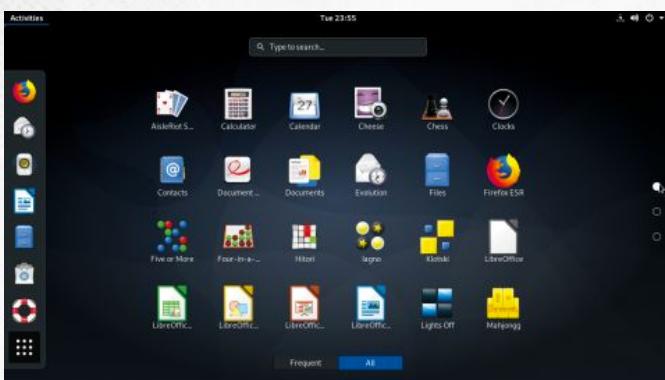


<https://www.techolac.com/linux/best-linux-distros-2019-linux-distros-introduction/>



480
Distros

Linux Desktop



Ubuntu Linux for Server, Cloud & IoT

The screenshot shows the Canonical Ubuntu Downloads page. The top navigation bar includes links for Enterprise, Developer, Community, Download, Products, and Login. Below the navigation is a search bar. The main content area features five sections: Ubuntu Desktop, Ubuntu Server, Ubuntu Cloud, Ubuntu flavours, and Ubuntu for IoT.

Ubuntu downloads

Ubuntu Desktop ›
Download Ubuntu desktop and replace your current operating system whether it's Windows or Mac OS, or, run Ubuntu alongside it.
Do you want to upgrade? [Follow our simple guide](#)

Ubuntu Server ›
Whether you want to configure a simple file server or build a fifty thousand-node cloud, you can rely on Ubuntu Server and its five years of guaranteed free upgrades.

Ubuntu Cloud ›
Ubuntu is the reference OS for OpenStack. Try Canonical's OpenStack on a single machine or start building a production cloud on a cluster — just add servers.

Ubuntu flavours ›
Ubuntu flavours offer a unique way to experience Ubuntu with different choices of default applications and settings, backed by the full Ubuntu archive for packages and updates.

Ubuntu for IoT ›
Are you a developer who wants to try snappy Ubuntu Core? The new, transactionally updated Ubuntu for clouds and devices.

Ubuntu for Lightweight Environments

Ubuntu flavours

Ubuntu flavours offer a unique way to experience Ubuntu, each with their own choice of default applications and settings. Ubuntu flavours are backed by the full Ubuntu archive for packages and updates.



Kubuntu

Kubuntu offers the KDE Plasma Workspace experience, a good-looking system for home and office use.



Lubuntu

Lubuntu is a light, fast, and modern Ubuntu flavor using LXQt as its default desktop environment. Lubuntu used to use LXDE as its default desktop environment.



Ubuntu Budgie

Ubuntu Budgie provides the Budgie desktop environment which focuses on simplicity and elegance. It provides a traditional desktop metaphor based interface utilising a customisable panel based menu driven system.



Ubuntu Kylin

The Ubuntu Kylin project is tuned to the needs of Chinese users, providing a thoughtful and elegant Chinese experience out-of-the-box.



Ubuntu MATE

Ubuntu MATE expresses the simplicity of a classic desktop environment. Ubuntu MATE is the continuation of the GNOME 2 desktop which was Ubuntu's default desktop until October 2010.



Ubuntu Studio

Ubuntu Studio is a multimedia content creation flavor of Ubuntu, aimed at the audio, video and graphic enthusiast or professional.



Xubuntu

Xubuntu is an elegant and easy to use operating system. Xubuntu comes with Xfce, which is a stable, light and configurable desktop environment.

Intel's Clear Linux Project

The screenshot shows the homepage of the Clear Linux Project website. At the top, there is a navigation bar with the Clear Linux Project logo, a search icon, and links for About, Developer, and Software. Below the navigation bar, there are tabs for THE PROJECT, BLOGS & NEWS, EVENTS, and TERMS & POLICIES. The main content area features a large teal background with the text "Clear Linux* Project" and a description of the project's mission: "The Clear Linux Project creates an operating system and software stacks that offers highly optimized performance, security, versatility, and manageability." A "DOWNLOAD CLEAR LINUX OS" button is located on the left side of this section. To the right, there is a stylized 3D geometric logo composed of blue and yellow facets. Below this, four circular icons represent key features: PERFORMANCE (blue), SECURE (green), CUSTOMIZABLE & MANAGEABLE (light blue), and AUTOMATED DEVELOPMENT MODEL (yellow). Each feature is accompanied by a detailed description.

THE PROJECT

BLOGS & NEWS

EVENTS

TERMS & POLICIES

Clear Linux* Project

The Clear Linux Project creates an operating system and software stacks that offers highly optimized performance, security, versatility, and manageability.

DOWNLOAD CLEAR LINUX OS

PERFORMANCE

Clear Linux OS is highly tuned for Intel platforms
Clear Linux OS optimizes across the whole stack: the platform, kernel, math libraries, middleware layers, frameworks, and runtime.

SECURE

Security enabled from the Cloud to the Edge, to the End Device
Clear Linux OS has an automated tool that is constantly scanning for CVEs, which are patched accordingly.

CUSTOMIZABLE & MANAGEABLE

Clear Linux OS employs the stateless concept
This strict separation between User and System files allows for easier manageability and simplifying customization.

AUTOMATED DEVELOPMENT MODEL

Clear Linux OS is built for efficiency
More than 90% of our components packaged by a tool ensuring consistency and scalability to more than 4000 components throughout the distribution.

Intel's Clear Linux Project

Intel Optimizations

The Clear Linux team uses multiple methods to optimize for performance on Intel products:
kernel configurations, compiler flags and automatic use of optimized binaries and libraries.

Optimizes **compiler flags**
Compiles twice to ship
multiple libraries

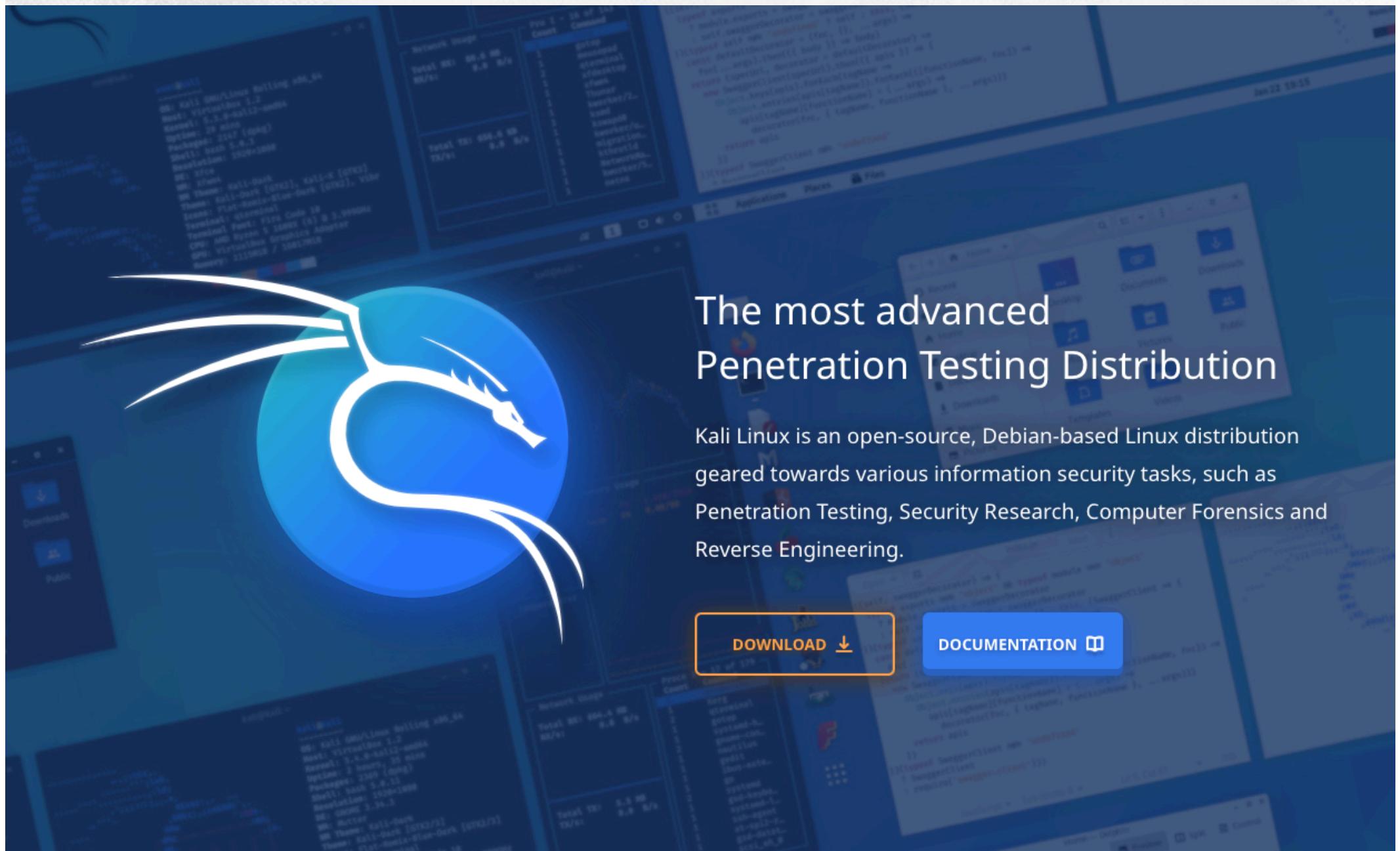


On Intel's CPUs with AVX512 instructions, the AVX512 optimized library is auto-selected at application startup.

Linux for Hackers



Linux for Hackers



The most advanced Penetration Testing Distribution

Kali Linux is an open-source, Debian-based Linux distribution geared towards various information security tasks, such as Penetration Testing, Security Research, Computer Forensics and Reverse Engineering.

[DOWNLOAD ↓](#)

[DOCUMENTATION ↗](#)

Linux for Hackers

All the tools you need

The Kali Linux penetration testing platform contains a vast array of tools and utilities. From information gathering to final reporting, Kali Linux enables security and IT professionals to assess the security of their systems.

[Find out all about Kali's Tools >](#)



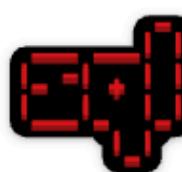
Metasploit Framework



Nmap



Responder



sqlmap



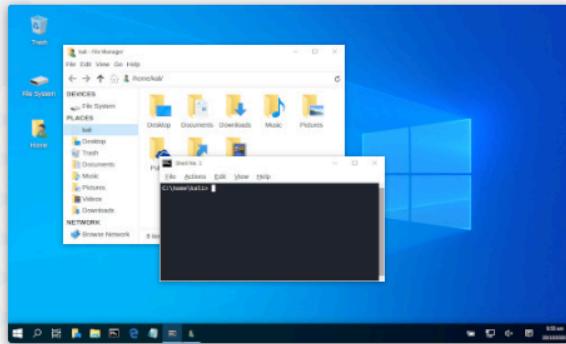
Wireshark



CrackMapExec

Linux for Hackers

Kali Everywhere



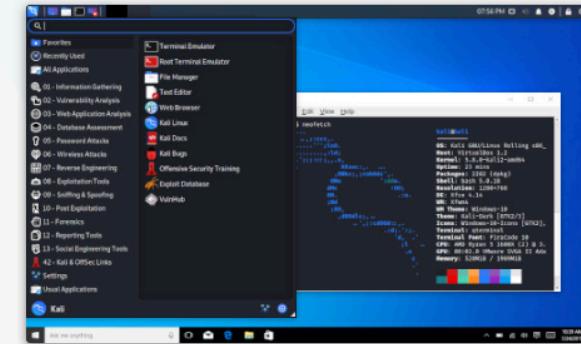
Undercover Mode

Using Kali in an environment where you don't want to draw attention to yourself? [Kali Undercover](#) is the perfect way to not stand out in a crowd.



Kali NetHunter

A mobile penetration testing platform for Android devices, based on Kali Linux. [Kali NetHunter](#) is made up of an App, App Store, Kali Container and KeX



Win-KeX

Win-KeX provides a full Kali Desktop Experience for Windows WSL. Applications started via Kali's panel will share the desktop with Microsoft Windows applications.

Linux for Hackers

Kali Everywhere



ARM

Cheap & low powered devices, which make for great leave behind devices. Modern ARM based laptops provide high speed with long battery life as an assessment platform.



Bare Metal

Single or multiple boot Kali, giving you complete control over the hardware access (perfect for in-built WiFi and GPU), enabling the best performance.



Cloud

Hosting providers which have Kali Linux pre-installed, ready to go, without worrying about looking after the infrastructure.



Containers

Using Docker or LXD, allows for extremely quick and easy access to all of Kali's tools, without the overhead of a isolated virtual machine.



Mobile

A mobile penetration testing platform for Android devices, based on Kali Linux. Kali NetHunter consists of an NetHunter App, App Store, Kali Container, and KeX.



USB

Kali in your pocket, ready to go with Live Boot. Your Kali, always with you, without altering the host OS, plus allows you to benefit from hardware access.



Virtual Machines

VMware & VirtualBox pre-built images ready to go. Allowing for a Kali install as bare as possible, with additional features such as snapshots, without altering the host OS. And we have vagrant images too.



WSL

WSL is included out of the box with modern Windows. You can then start to use Kali (and Win-Kex) without any installing any extra software.

Still, why Linux?

Linux for Your Career Path

- Server Programming for
 - ▣ Cloud/Container Computing,
 - ▣ Big Data Processing, IoT Data Analytics, Machine Learning,
 - ▣ MMO/MMORPG Game Engine, Multiplayer Game Server,

- Your career enhancement with
 - ▣ Public cloud computing : Amazon, Google, Microsoft,
 - ▣ Private cloud computing : OpenStack, Docker/Kubernetes,
 - ▣ Course : Datacenter Programming, MIZARO Programming,
 - ▣ New Language for Servers : Go from Google,
 - ▣ Development Method : Agile, DevOps, Microservice, Serverless,
 - ▣ New Wave : Edge Computing, Fog Computing,

Still, why Linux again?

Cost & National Security

The Microsoft Store interface is shown with two product cards. The top card is for Windows 10 Pro, featuring a woman looking out of a window at a city skyline. The price is ₩324,600 and there's a 'Cart에 추가' (Add to Cart) button. The bottom card is for Windows 10 Home, featuring a woman looking out of a window at a city skyline. The price is ₩208,000 and there's a 'Cart에 추가' (Add to Cart) button.

MS Windows
+ MS Office
= ??

The Microsoft Store interface shows the Office 365 product page. It features a large 'Office 365 구입' (Buy Office 365) button. Below it, there's a section titled 'Office 365로 Office 활용 극대화하기' (Maximize Office usage with Office 365).

가정용	비즈니스용		
최적가	최고 인기		
Office 살펴보기	Office 365 Home	Office 365 Personal	Office Home & Student 2019
Office Home & Business 2019를 찾고 계시나요?	₩119,000 /년	₩89,000 /년	₩179,000
학생 및 강사용 Office			
Mac용 Office	지금 구입	지금 구입	지금 구입
가정용 Office 365란?			
Office 365를 이미 가지고			

Still, why Linux again?

Cost & National Security

The image displays two screenshots of IT news websites. The top screenshot is from 'Da Digital Daily' (Digital Daily), featuring a blue header with the logo 'Da 디지털데일리' and the tagline 'IT언론의 새로운 대안'. Below the header is a navigation bar with categories like '최신기사', 'IT정책', '통신/방송', etc. A main headline reads '당신의 초능력' (Your Superpower). The bottom screenshot is from 'ZDNet Korea', with a red header featuring the logo 'ZDNet Korea' and the text 'EDITION: KOREA'. It also has a navigation bar with various links. Both sites show a dark banner with the text 'IBM Cloud Paks' and '필드에서 바로 적용 가능한 애플리케이션 현대화 방법론'.

Da Digital Daily

IT언론의 새로운 대안
Da 디지털데일리

당신의 초능력

최신기사 IT정책 통신/방송 e비즈/솔루션 보안 금융IT 콘텐츠 기업문화 산업 국제 피플 칼럼 S리포트

실시간속보 ▶ "IT직원, 협업부서 전진배치"…KB국민은행, 2020년 조직개편 단행

HOME > 뉴스

“윈도 종속 벗어나자”… 개방형OS ‘구름 플랫폼’

2019.12.06 10:04:54 / 이종현 bell@ddaily.co.kr

관련기사

- 한컴, '구름 플랫폼' 생태계 활성화 위한 협의체 발족
- 한글과컴퓨터, 구름OS 생태계 확대

◆ 2019년 IT 산업별 결산
◆ 2019년 혁신제품 선정

당신의 초능력

Da 기획/특집/시리즈 더보기 >

ZDNet Korea

EDITION: KOREA

뉴스 이슈진단+ 지역문화산업 4차산업혁명 블록체인 컨퍼런스 칼럼 · 연재 포토 · 영상 뉴스레터 로그인

IBM Cloud Paks
필드에서 바로 적용 가능한 애플리케이션 현대화 방법론 더 알아보기

공공 PC시장 열렸다...하모니카·구름OS·티맥스 각축

[이슈진단+] 정부 '개방형OS' 민간 호응도 (상)

임민철 기자 | 입력: 2019/07/24 15:03 -- 수정: 2019/07/25 11:04 | 컴퓨팅

intel 진정한 기업용 SSD Intel® Enterprise SSD

Still, why Linux again?

Cost & National Security

ZDNet Korea news print

中, 자체 PC 운영체제 공개 테스트 시작
'유OS' 기능·디자인 공개…연합기업도 출범

유효정 중국 전문기자 | 입력: | 홍&모바일

여러 중국 기업이 연합해 만드는 자체 PC 운영체제(OS) '유OS(UOS, unity operating system)' 정식 공개 테스트에 돌입했다. 데스크톱PC와 서버에 적용 가능한 이 OS를 위한 '연합' 기업도 출범했다.

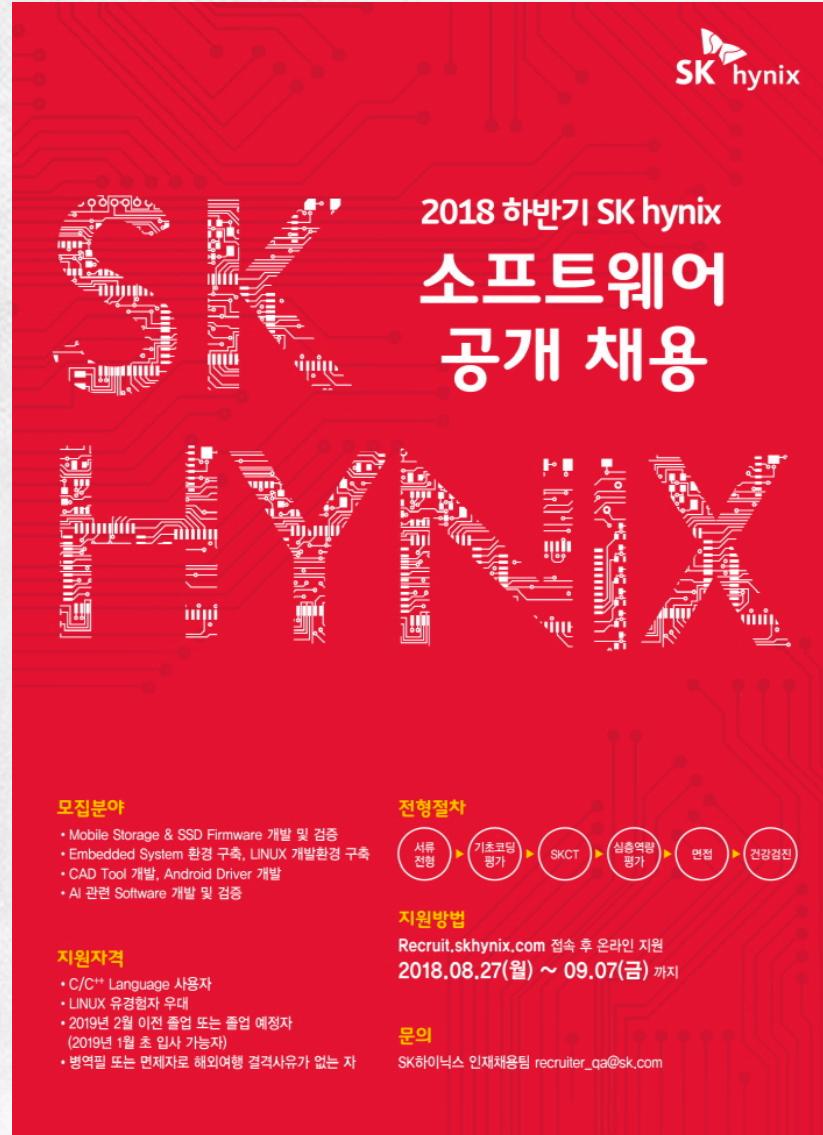
IT즈자 등 중국 언론에 따르면 UOS 공식 홈페이지를 통해 UOS의 기능과 디자인이 공개된 동시에 개발과 서비스를 추진할 연합 회사 '유니온테크(UNIONTECH)'도 베일을 벗었다.

UOS는 중국전자그룹(CEC), ZTE, 디핀(Deepin), 아처마인드(ARCHERMIND) 등 기업이 공동으로 만든 자체 OS다. 지난 5월 연합팀을 결성한 이후 지난 13일 정식으로 개방, OS 대외 테스트에 돌입했다.

UOS를 맡을 연합 회사 유니온테크도 출범했다. 중국 여러 기업 및 기관 등에서 OS 개발을 진행해 온 전문가를 추려 공동으로 꾸린 회사다. 이 회사는 OS 등 기초 소프트웨어 연구 개발과 서비스 컨트롤타워 역할을 하게 된다. 본사는 베이징에 있지만 상하이, 광저우, 우한, 난징, 시안, 청두 등에 자회사를 세워 전국적인 개발이 이뤄진다.



Still, why Linux again? Only, C++ & Linux



The banner features a red background with a circuit board pattern. The SK hynix logo is prominently displayed in the top right corner. The main text reads "2018 하반기 SK hynix 소프트웨어 공개 채용". Below this, the SK hynix logo is formed by a series of interconnected circuit boards. The bottom section contains recruitment details in Korean.

모집분야

- Mobile Storage & SSD Firmware 개발 및 검증
- Embedded System 환경 구축, LINUX 개발환경 구축
- CAD Tool 개발, Android Driver 개발
- AI 관련 Software 개발 및 검증

지원자격

- C/C++ Language 사용자
- LINUX 유경험자 우대
- 2019년 2월 이전 졸업 또는 졸업 예정자
(2019년 1월 초 입사 가능자)
- 병역필 또는 면제자로 해외여행 결격사유가 없는 자

전형절차

- 서류 전형
- 기초코딩 경기
- SKCT
- 심층면접 경기
- 면접
- 면감검진

지원방법

Recruit.skhynix.com 접속 후 온라인 지원
2018.08.27(월) ~ 09.07(금) 까지

문의

SK하이닉스 인재채용팀 recruiter_qa@sk.com

모집분야

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- 병역필 또는 면제자로 해외여행 결격사유가 없는 자

Still, why Linux again?

Latest Trends

Member-only story

Switzerland Goes Open Source

Tom Smykowski · Follow
2 min read · Jul 21, 2024

87 2

Photo by Louis / Pexels

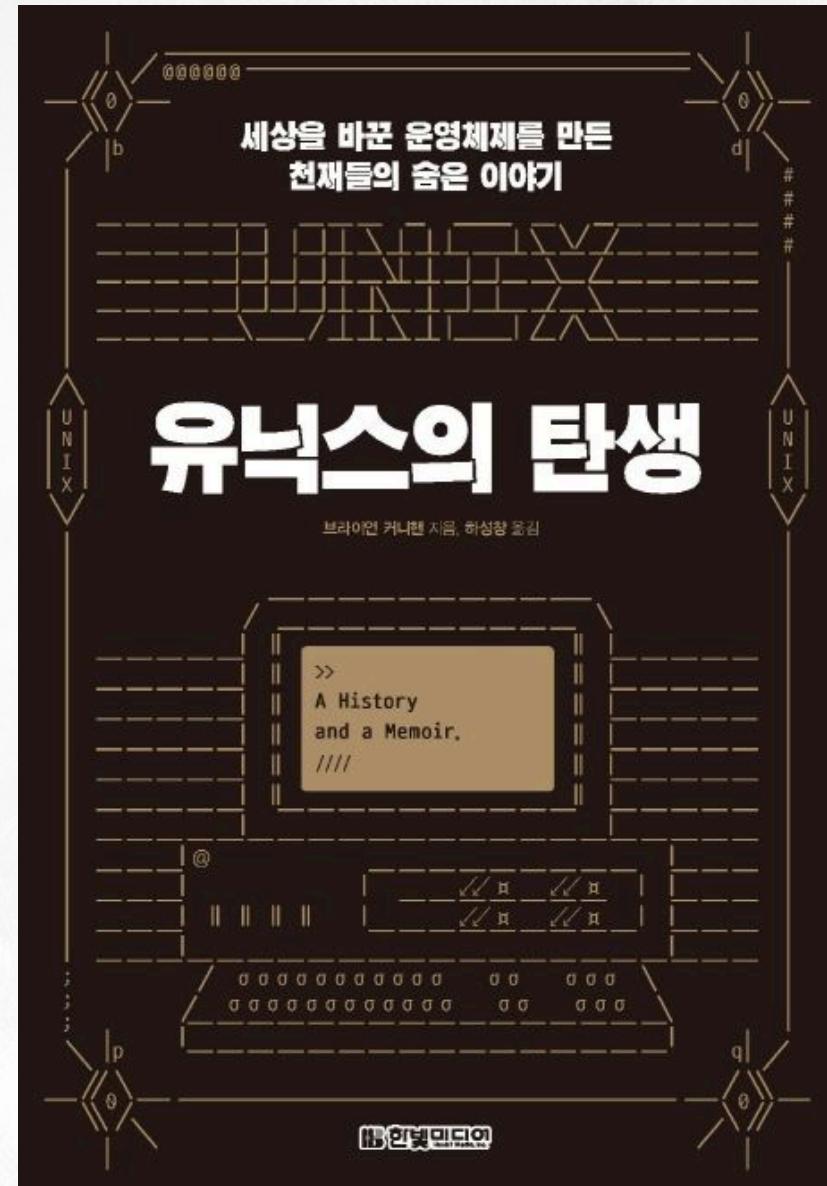
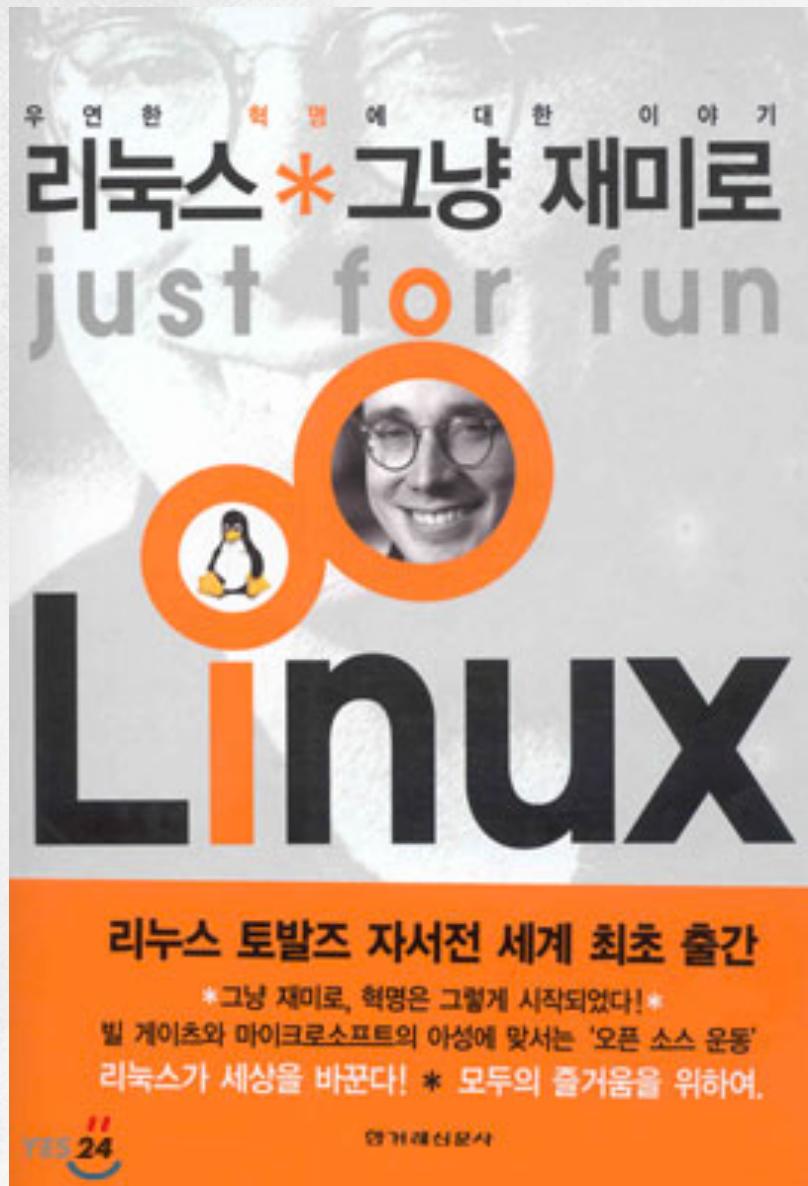
The capitol of delicious cheese and chocolate decided to open source public services code, data and APIs

Seven years ago Bulgaria decided to open source public service source [codes](#). This year another European country follows the [suit](#).

Summary

- Opensource is philosophy and culture
 - ▣ Opensource initiative
 - ▣ Free Software Foundation
 - ▣ Richard Stallman
- Opensource is not limited to software
 - ▣ Opensource single board computer
 - ▣ Opensource processor
 - ▣ Opensource datacenter (computer, storage, rack, etc)
 - ▣ Opensource 5G network
 - ▣ Opensource NASA
 - ▣ Opensource Hollywood
- Linux

Reference



Finally, Linux as Main Machine

- The Most Important Term-Project in this Course
- The time is NOW

Google linux as main pc

전체 이미지 동영상 뉴스 쇼핑 더보기 설정 도구

검색결과 약 365,000,000개 (0.37초)

[Top 10 Uses for Linux \(Even If Your Main PC Runs Windows\)](#)
<https://lifehacker.com/top-10-uses-for-linux-even-if-...> 이 페이지 번역하기

2014. 2. 1. - install a lightweight Linux distribution on it (like Lubuntu or, if you're a bit more savvy, Archbang) and it'll feel like a new machine again. It may not be able to do everything your powerful Windows machine can do, but it's better than having a non-functional computer, and works perfectly for basic tasks.

관련 질문

What is difference Linux and Windows?

What is the best Linux operating system?

Can you run PC games on Linux?

What is Linux operating system used for?

사용자 의견

Real Machine

- Option 1: Intel CPU based Desktop and Notebook
- Option 2: Intel CPU based Mini PC (Ex: NUC)
- Option 3: Embedded Boards
 - RaspberryPi: ARM Processor
 - Snapdragon Board: Qualcomm Processor

Featured boards



Ubuntu Core 18 allows you to install apps on your board in just a few clicks for Raspberry Pi 2 or 3.

[Install Ubuntu Core 18](#)

Ubuntu Core 18 helps you harness the power of boards tailored for the IoT ecosystem, like the Dragonboard 410c.

[Install Ubuntu Core 18](#)

Ubuntu Desktop and Ubuntu Core 18 can be easily installed on other architectures like Intel® 64 bits.

[Install Ubuntu Core 18](#)

Virtual Machine (Opensource)

- Safe and Easy
- Example: VirtualBox
- Open Source
- GPLv2 License

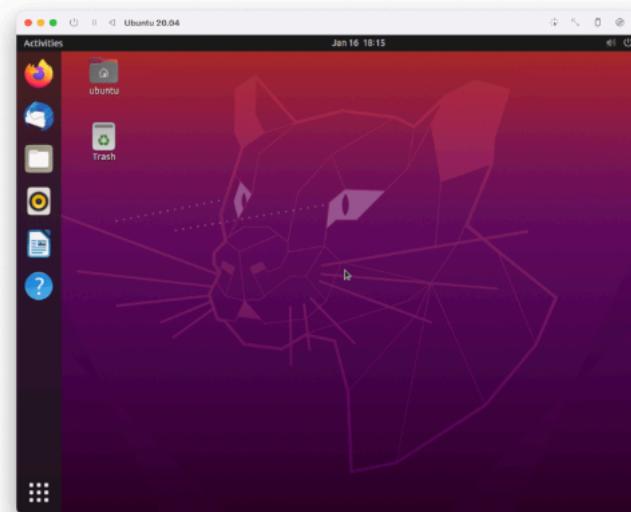
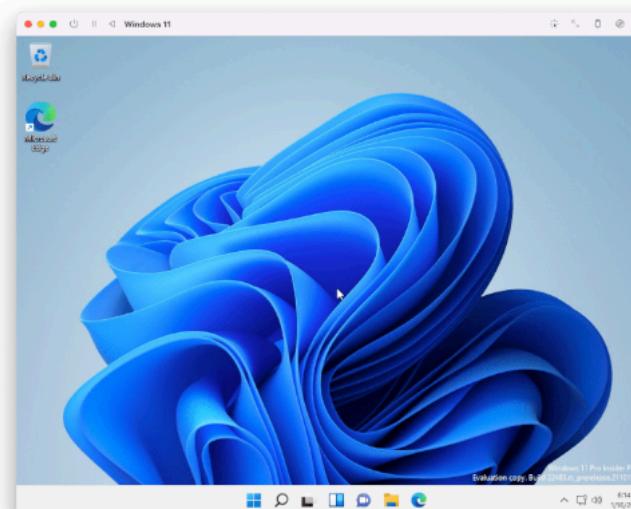


The screenshot shows the official website for Oracle's VirtualBox. At the top, there's a navigation bar with links for "About", "Screenshots", "Downloads", "Documentation", "End-user docs", "Technical docs", "Contribute", and "Community". Below the navigation is a large "VirtualBox" logo. The main content area features a "Welcome to VirtualBox.org!" message. It describes VirtualBox as a powerful virtualization product for enterprise and home use, available under the GPL version 2. It mentions supported guest operating systems like Windows, Linux, Macintosh, and Solaris. A "News Flash" sidebar highlights recent releases: "VirtualBox 6.0 released!", "VirtualBox 5.2.22 released!", and "VirtualBox 5.2 released!". A large green button at the bottom encourages users to "Download VirtualBox 6.0". The footer includes links to "Hot picks", "Oracle Tech Network", "Hyperbox", "phpVirtualBox", and "ORACLE".

UTM for M1/M2 Silicon (Opensource)

Windows. Linux. Meet **Apple Silicon.**

UTM employs Apple's Hypervisor virtualization framework to run ARM64 operating systems on Apple Silicon at near native speeds. On Intel Macs, x86/x64 operating system can be virtualized. In addition, lower performance emulation is available to run x86/x64 on Apple Silicon as well as ARM64 on Intel. For developers and enthusiasts, there are dozens of other emulated processors as well including: ARM32, MIPS, PPC, and RISC-V. Your Mac can now truly run anything.



VMWare Workstation Player (Commercial)

- Free Version with Limited Features
- Supports MS Windows and Linux

The screenshot shows the VMware website's product page for Workstation Player. At the top, there's a navigation bar with links for VMware Cloud, 제품 (Products), 솔루션 (Solutions), 지원 (Support), 전문 서비스 (Professional Services), 다운로드 (Downloads), 파트너 (Partners), and 회사 (Company). The main heading is "Workstation Player". Below it, there are sections for "개요" (Overview), "특징" (Features), "사용 사례" (Use Cases), "기술 규격" (Technical Specs), "비교" (Comparison), "FAQ", "참고 자료" (References), and "운영 체제 선택" (Operating System Selection). A prominent blue button on the right says "지금 다운로드" (Download Now). Two call-to-action boxes are at the bottom: a dark blue box on the left for "지금 바로 Workstation Player 구매" (Buy Workstation Player now) and a green box on the right for "독점 교육 할인" (Exclusive educational discount).

Homework

- Installation:
 - Real-machine: PC, Raspberry Pi, etc.
 - Virtual-machine: Virtual Box, Parallels, VM Ware
- Scope:
 - Week.1: Linux Installation
 - Week.2~11: 1 new program per week
 - Week.12: Report on experience about Linux life
- Submission:
 - More than 2 page report on each week
 - **Final report submission within Week.13**



Thank you