Open Source is essential to technology innovation

Jim Zemlin, Executive Director, Linux Foundation
Open source is one of the most successful enablers of global innovation in history
Open means open:

- **Open source can originate anywhere**
  - In dorm room in Finland: Linux
  - In a University in the US: Apache
  - In the world’s largest telco in China: ONAP (Open-O)

- **Open source is distributed everywhere**
  - The global internet makes distribution instant and global

- **Anyone can participate**
  - All these projects were quickly picked up and collaborated on all over the world

- **Everyone benefits**
  - Billions of users, companies, and countries benefit from this code under and open source license
This is a global movement that works.
Meet a few of the people who have been there from the most early days this week:

Linus Torvalds
Creator of Linux and Git, and 17th of Time Magazine’s 100 Most Important People of the Century.

Brian Behlendorf
Primary developer of the Apache Web server and creator of Apache Software Foundation, MIT Technology Review top 100 innovators in the world under the age of 35, former CTO of the World Economic Forum, entrepreneur and tech investor.

Dan Kohn
Conducted the first secure commercial transaction on the web in 1994. Former investor, and entrepreneur is now the Executive Director of the Cloud Native Computing Foundation.
Linux has grown into the most important software platform in the world.

- 100% Supercomputer Market
- 82% Smartphone Market Share
- 68% Enterprise Server Market
- 90% Mainframe Customers
- 90% Public Cloud Workload
- 62% Embedded Systems Market
- #1 Internet Client

Linux eventually dominates every market it enters.
More than Linux: Cloud Native Computing Foundation

• Nonprofit, part of the Linux Foundation; founded Dec 2015

Graduated

- Kubernetes: Orchestration
- Prometheus: Monitoring
- Envoy: Service Proxy
- OpenTracing: Distributed Tracing API
- gRPC: Remote Procedure Call
- rkt (RKT): Container Runtime
- CNI (Container Networking Interface): Networking API
- Jaeger: Distributed Tracing
- Nats: Messaging
- Linkerd: Service Mesh
- Helm: Package Management
- Rook: Storage
- Harbor: Registry
- EtcD: Key/Value Store
- Cri-O: Container Runtime
- Kubernetes: Container Runtime
- Open Policy Agent: Policy
- Cilium: Container Runtime
- Fluentd: Logging
- CoreDNS: Service Discovery
- Fluentd: Container Runtime

Incubating

- Open Policy Agent: Policy
- Open Policy Agent: Key/Value Store
- VMware: Storage
- Amazon Web Services (AWS): Storage
- Google Cloud: Storage
- IBM Cloud: Storage
- Alibaba Cloud: Storage
- JD.com: Storage
- Intel: Storage
- Microsoft Azure: Storage
- Oracle: Storage
- Pivotal: Storage
- Red Hat: Storage
- SAP: Storage
- Samsung: Storage

• Platinum members:
China is the #2 Contributor to Kubernetes*

* As well as many other CNCF projects, including 3 that started in China
Chinese Engagement with CNCF

› Over 10% of CNCF members are from China, including 16% of platinum members and 35% of gold members
› 26% of Certified Kubernetes vendors
› 19% of Kubernetes Certified Service Providers
› 32% of Kubernetes Training Partners
Chinese Membership

November 2015

1 Platinum

[Images of Huawei, Alibaba Cloud, HUAWEI, JD.COM]

June 2019

3 Platinum

6 Gold

37 Silver and Other

[Images of various Chinese companies]
New CNCF Gold Member
Today open source generally comprises 80-90% of a modern system’s total codebase

- Use Open Source Libraries to Solve Problems
  - Open Source Code (~70%)

- Write Custom Code
  - Custom Code (~10%)

- Choose a Framework
  - Open Source Code (~20%)
Today the Linux Foundation is much more than Linux...

Security
- We securing the internet as home to world's largest certificate authority securing 100M web sites.

Networking
- We are home to 9 of the top 10 open source networking projects in the world backed by the majority of global network providers.

Cloud
- We are creating a portability layer for the cloud, driving standards and developing reference tools for cloud native development.

Automotive
- Our Automotive Grade Linux platform is backed by 12 automakers and is either in or slated for production in millions of vehicles worldwide.

Blockchain
- We are creating a permanent, secure distributed ledger that makes it easier to create cost-efficient, decentralized business networks.

Edge/Embedded
- We are creating projects used in building the majority of embedded Linux distributions and rationalizing edge computing.

Web
- We are providing the application development framework for next generation web, mobile, serverless, and IoT applications.
The Linux Foundation is a critical part of the tech ecosystem

1320+ Members From 41 Countries

100% of Fortune 100 Tech & Telecom

30,000+ Developers Contributing Code

150+ Open Source Projects

$15.7B Shared Value

A new member joins the Linux Foundation every day
Open Source Ecosystems Create Sustainable Value

Successful projects depend on members, developers, standards and infrastructure to develop products that the market will adopt.
Open source is not a zero sum game:
You can help yourself while helping others at the same time.
WeBank becomes Linux Foundation Gold Member

FATE project

June 25, 2019

- Federated AI Technology Enabler
- An Industrial Grade Federated Learning Framework designed to support federated learning architectures and secure computation of ANY machine learning algorithms.

“As a system for Data Cooperation and Privacy-preserving, open source would be the best and even only option for solving the multi-party trust problem which will promote cooperation greatly,” said Prof. Qiang Yang, Chief Artificial Intelligence Officer of WeBank, Chair Professor of HKUST.

- *FATE is an open, equal, and inclusive federation learning corporative community.*
- Welcome to join us @ [https://github.com/WeBankFinTech/FATE](https://github.com/WeBankFinTech/FATE)
Learning portal for Linux Foundation Open Source Software University is Online Now!
You can schedule your CKA Exam in major cities in China Now!
KubeCon + CloudNativeCon

› North America 2019
  › **San Diego**: November 18-21, 2019
  › **Sponsorships & CFP** open

› Europe 2020
  › Amsterdam: March 30-April 2, 2020
Thank you