



**CLOUD NATIVE**  
COMPUTING FOUNDATION



Open Source Software Fuels Explosive  
Startup Growth and Goes Mainstream

# Cloud Native Computing Foundation

- Non-profit, part of the Linux Foundation
  - Founded December 2015
- Current projects:



Kubernetes



Prometheus



OpenTracing



Fluentd



Linkerd



gRPC



CoreDNS



containerd



rkt



CNI

Platinum members:



# Today the Linux Foundation is much more than Linux



## Security

We are helping global privacy and security through a program to encrypt the entire internet.



## Networking

We are creating ecosystems around networking to improve agility in the evolving software-defined datacenter.



## Cloud

We are creating a portability layer for the cloud, driving de facto standards and developing the orchestration layer for all clouds.



## Automotive

We are creating the platform for infotainment in the auto industry that can be expanded into instrument clusters and telematics systems.



## Blockchain

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



We are regularly adding projects - for the most up-to-date listing of all projects visit – <http://lfp.projects.org>

# Members: 85 and Growing

## PLATINUM MEMBERS



## SILVER MEMBERS



## GOLD MEMBERS



## ACADEMIC/NON-PROFIT



## END USER MEMBERS



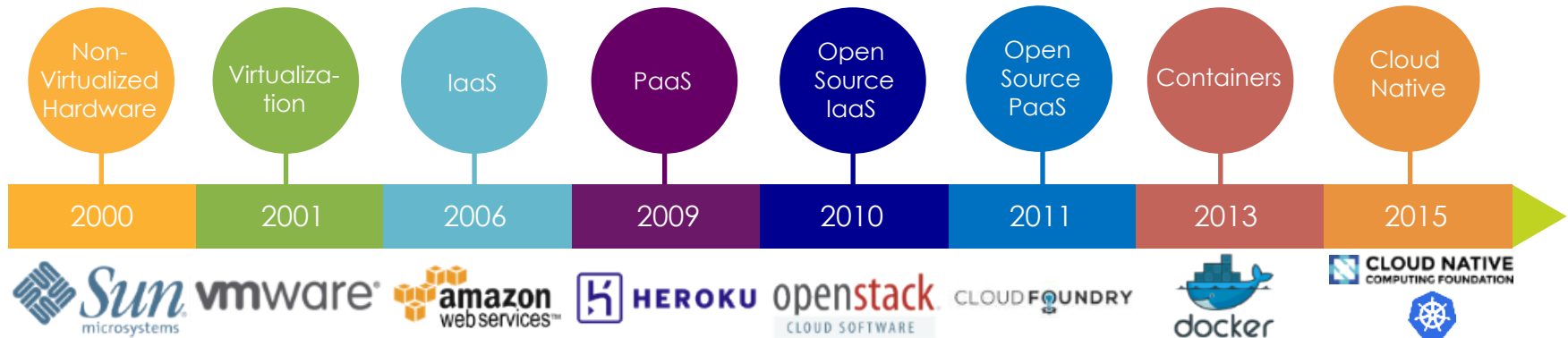
## END USER SUPPORTERS

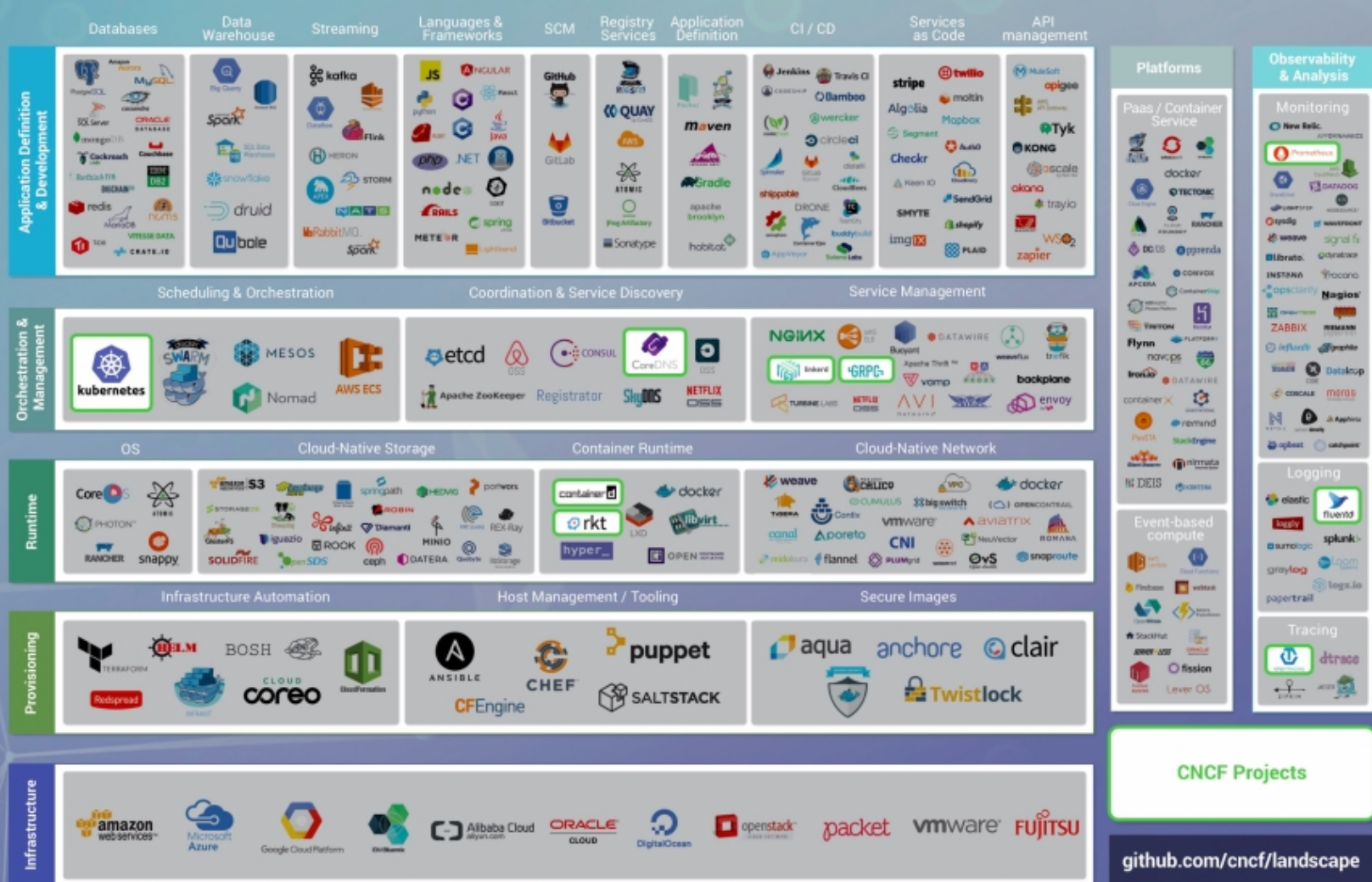


# Cloud Native: CNCF (2015)



- Cloud native computing uses an open source software stack to:
  - segment applications into *microservices*,
  - packaging each part into its own *container*
  - and dynamically *orchestrating* those containers to optimize resource utilization



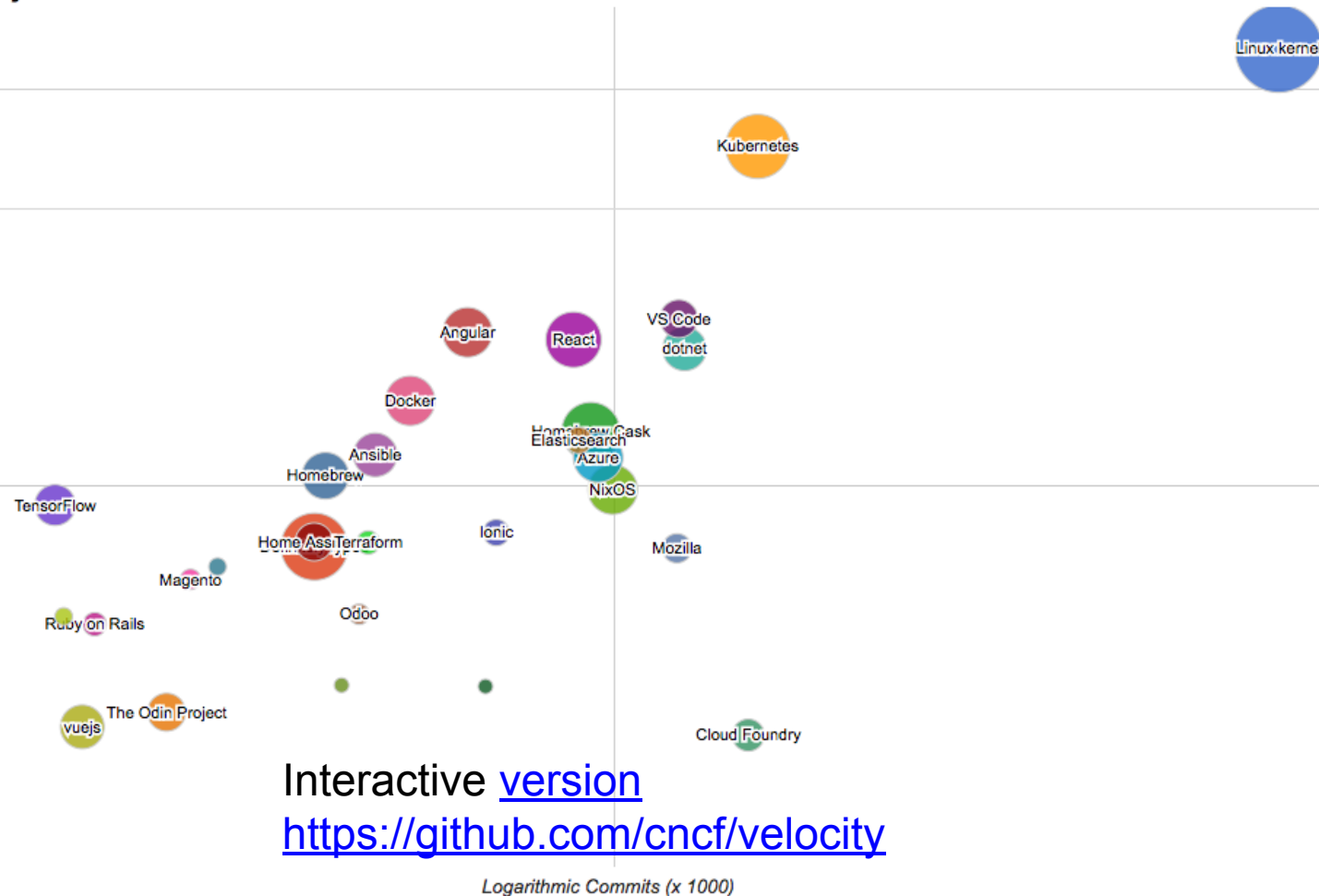


## Top 30 Projects 2016-05 - 2017-04

Logarithmic PRs + Issues

100...

10000



- Linux kernel (kernel.org) 3865 authors
- DefinitelyTyped (definitelytyped.org) 197...
- Kubernetes (kubernetes.io) 1749 authors
- Homebrew Cask (caskroom.github.io) 138...
- React (facebook.com) 13...
- Azure (azure.github.io) 1...
- Docker (mobyproject.org)...
- NixOS (nixos.org) 981 a...
- Angular (angular.io) 980...
- Homebrew (brew.sh) 888...
- Ansible (ansible.com) 85...
- dotnet (microsoft.com/ne...
- vuejs (vuejs.org) 816 aut...
- TensorFlow (tensorflow.o...
- The Odin Project (theodi...
- Home Assistant (home-a...
- VS Code (code.visualstu...
- Cloud Foundry (cloudfou...
- Mozilla (mozilla.org) 501...
- Ionic (ionicframework.co...
- Elasticsearch (elastic.co/...
- Terraform (terraform.io) 4...
- Ruby on Rails (rubyonrai...
- Magento (magento.com/v...
- Odoo (odoo.com) 403 au...
- Node.js (nodejs.org) 395...
- Prometheus (prometheu...
- Office Developer (dev.offi...
- jsDelivr (jsdelivr.com) 36...
- Chef (chef.io/chef) 364 a...

Interactive [version](https://github.com/cncf/velocity)  
<https://github.com/cncf/velocity>

# CloudNativeCon/KubeCon

- CloudNativeCon/KubeCon North America 2017
  - Austin, TX
  - December 6 - 8, 2017
  - CFP, Registration & Sponsorships now open
- CloudNativeCon/KubeCon Europe 2018
  - Copenhagen, Denmark
  - May 2 - 4, 2018
- <http://events.linuxfoundation.org/>



Please follow up with Dan Kohn

[dan@linuxfoundation.org](mailto:dan@linuxfoundation.org)

[@dankohn1](https://twitter.com/dankohn1) on Twitter

# Agenda

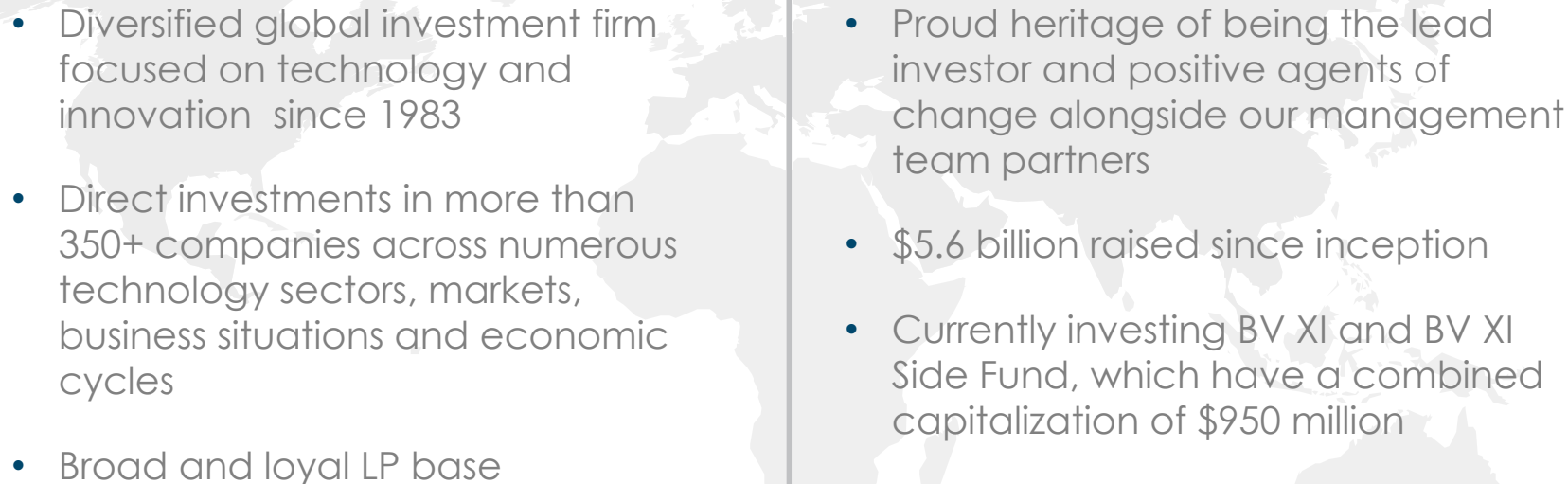
- 5:00 Welcome from CNCF
- 5:15 Introduction to our co-host Battery Ventures
- 5:15 Lightning Talk: Jim Zemlin, The Linux Foundation
- 5:25 Lightning Talk: Mark Shuttleworth, Canonical
- 5:40 Panel: Open Source Software Fuels Explosive Startup Growth and Goes Mainstream



QUIET EXPERTISE THAT SPEAKS VOLUMES.

VENTURE + GROWTH | PRIVATE EQUITY

# Introduction

- 
- Diversified global investment firm focused on technology and innovation since 1983
  - Direct investments in more than 350+ companies across numerous technology sectors, markets, business situations and economic cycles
  - Broad and loyal LP base
- Proud heritage of being the lead investor and positive agents of change alongside our management team partners
  - \$5.6 billion raised since inception
  - Currently investing BV XI and BV XI Side Fund, which have a combined capitalization of \$950 million





(i) Unless otherwise stated, information provided is as of May 2017. (ii) Past performance is no guarantee of future performance and there can be no assurance that Battery or its portfolio companies will achieve comparable results. © Copyright Battery Ventures

# Introduction and Overview



(i) Unless otherwise stated, information provided is as of May 2017. © Copyright Battery Ventures.

# Investment Strategy

	SEED	EARLY	GROWTH	BUYOUT
<b>OWNERSHIP</b>	Minority position	Minority position	Minority position	Control position
<b>TRAITS</b>	<ul style="list-style-type: none"> <li>• Concept stage or product beta</li> </ul>	<ul style="list-style-type: none"> <li>• Product launched</li> <li>• Initial user &amp; revenue traction</li> <li>• Core management team</li> </ul>	<ul style="list-style-type: none"> <li>• Proven business model</li> <li>• Revenues exceed \$5M / year</li> <li>• Strong market position</li> </ul>	<ul style="list-style-type: none"> <li>• Stable revenue streams</li> <li>• Strong market position</li> </ul>
<b>OPERATIONAL VALUE-ADD REQUIRED</b>	<ul style="list-style-type: none"> <li>• Low touch – “Go prove it”</li> <li>• Introduction to key hires</li> <li>• Introduction to advisors/ industry experts</li> <li>• Introduction to team members</li> </ul>	<ul style="list-style-type: none"> <li>• “Super star” recruiting</li> <li>• Intros to customers, other portfolio companies</li> <li>• Business strategy guidance</li> </ul>	<ul style="list-style-type: none"> <li>• Strategic sales &amp; marketing guidance</li> <li>• Acquisitions</li> <li>• Management team recruiting</li> <li>• Exit opportunities guidance (Acquisition / IPO)</li> </ul>	<ul style="list-style-type: none"> <li>• Significant operational involvement</li> <li>• Cost improvements</li> <li>• Management team recruiting</li> <li>• Acquisition engine</li> </ul>
<b>GEOGRAPHY</b>	North America & Israel	North America & Israel	North America, Israel & Europe	North America, Israel & Europe
<b>EXAMPLES</b>				

(i) Unless otherwise stated, information provided is as of May 2017. (ii) Visit <http://www.battery.com/our-companies/> for a full list of all portfolio companies in which all Battery Funds have invested. (iii) Logos on this page include some of Battery Ventures active and exited portfolio companies from active BV funds & BV side funds (VII-XI). © Copyright Battery Ventures.

# Sample of Present Enterprise IT Portfolio Companies

## COMPUTE

**NUTANIX**

**STRATO  
SCALE**

**FUNGIBLE**

## STORAGE

**COHESITY**

**Excelero**

**diablo  
technologies**

**Pd** Primary Data

**Flustifile**

**Zerto**

## NETWORKING

**FibraWeb**

**cumulus**

## SECURITY

**LIGHTCYBER**  
CLICKING THE BREACH DETECTION RAP

**RISKIQ**

**GuardiCore**  
Securing SDN

**VERA**

## BIG DATA

**collibra**

**CASK**

**SISENSE**

**influxdata**

**StreamSets**

**interana**

## MONITOR & ALERTING

**APPDYNAMICS**

**bigpanda**

**catchpoint**

**Dataloop.IO**

**OpsGenie**

## DEV TOOLS

**mx mendix**  
the app platform

**CHEF** **JFrog**

## CLIENT

**nitro**

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# The Battery Open Source Software (BOSS) Index



Open-Source Software Index  
Top 40 Projects by Category and  
Sample of Related Companies

- Released on April 7, 2017 on TechCrunch
- Analyzed thousands of open source projects and ranked the projects according to four factors, which included:
  - Public interest in the project, as measured by Google search activity;
  - User activity, gauged by mentions of the projects on the popular tech-discussion board Stack Overflow;
  - Jobs impact, measured by the number of job postings citing each open-source project listed on the job boards Indeed and Simply Hired; and
  - Impact in the open-source community, tracked by measuring a project's influence on GitHub.
- Data & Analytics and DevOps are driving open source growth in the enterprise with well known projects such as Linux, Docker and Git
- With the successful IPOs of Mulesoft and Cloudera, there will be many more to come

14 DevOps	11 IT Operations	15 Data & Analytics
 GitLab	 redhat.	 ORACLE
 GitHub	 ubuntu	 cloudera
 RisingStack	 HASHICORP	 Hortonworks
 docker	 NGINX	 elastic
 SAUCE LABS	 ANKORE	 databricks
 BrowserStack	 CHEF	 mongoDB
 Gradle	 puppet labs	 redislabs
 Google	 Sonatype	 neo4j
 CollabNet	 MIRANTIS	 confluent
 npm		 Google
 redhat.		 EDB ENTERPRISE
 cloud bees		 DATASTAX

\*Denotes a Battery portfolio company.  
For a full list of all Battery investments and exits, please visit: <https://www.battery.com/our-companies/list/>

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# JFrog swamUP 2017 – May 24-26, 2017



The graphic is split into two main sections. The left section has a dark green background with a vine and gear motif. It features a megaphone icon and text about sponsorships, agenda, and group discounts. A white box lists 12 sponsors. The right section has a blue sky background with a photo of a vineyard and a stone building. It contains the event title, location, and dates.

**Sponsorships available**  
[swampup.jfrog.com](http://swampup.jfrog.com)

**Full session agenda**

**Ask your rep about group discounts for 5 or more attendees**

**Our 2017 Sponsors**

redhat | cloudbees | CHEF | BLACKDUCK  
Microsoft | sumologic | ORACLE | circleci  
aqua | codefresh | snyk | Undo

**Contact**  
[swampup@jfrog.com](mailto:swampup@jfrog.com) for more information  
[swampup.jfrog.com](http://swampup.jfrog.com)

**WE DON'T SEE YOU ENOUGH!  
JOIN US AT**

**JFrog 2017 swamUP**  
Napa Valley, California | May 24-26, 2017

[swampup.jfrog.com](http://swampup.jfrog.com)

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# Welcome from the Linux Foundation

May 22, 2017

Jim Zemlin, Executive Director

# Much More than Linux: Large Scale Open Source Projects and Initiatives



CLOUDFOUNDRY



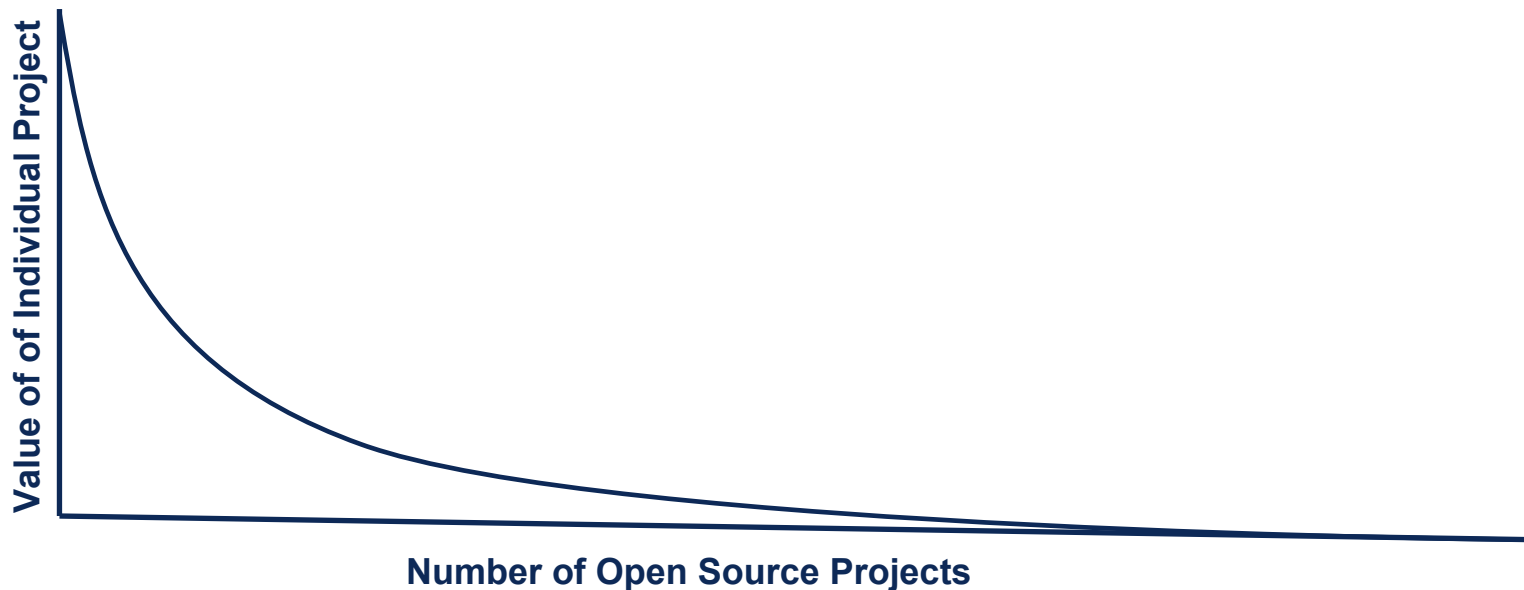
# Linux Foundation by the Numbers

- 9 code changes per hour
- \$100M in collective OSS funding
- Over 500,000 students across all our training programs
- 175 staff including Linus Torvalds (Linux, Git), Brian Behlendorf (Apache)
- 15 years of experience
- Over 500 corporate members across all our projects
- Over 150 events a year worldwide gathering 20,000 attendees from 4000 companies and 85 countries
- 184,477,418 lines of code written
- 63,500 person-years of work
- Estimated development cost: \$14,522,000,000
- *All code is freely available for anyone to use for any purpose*

# There are millions of open source projects

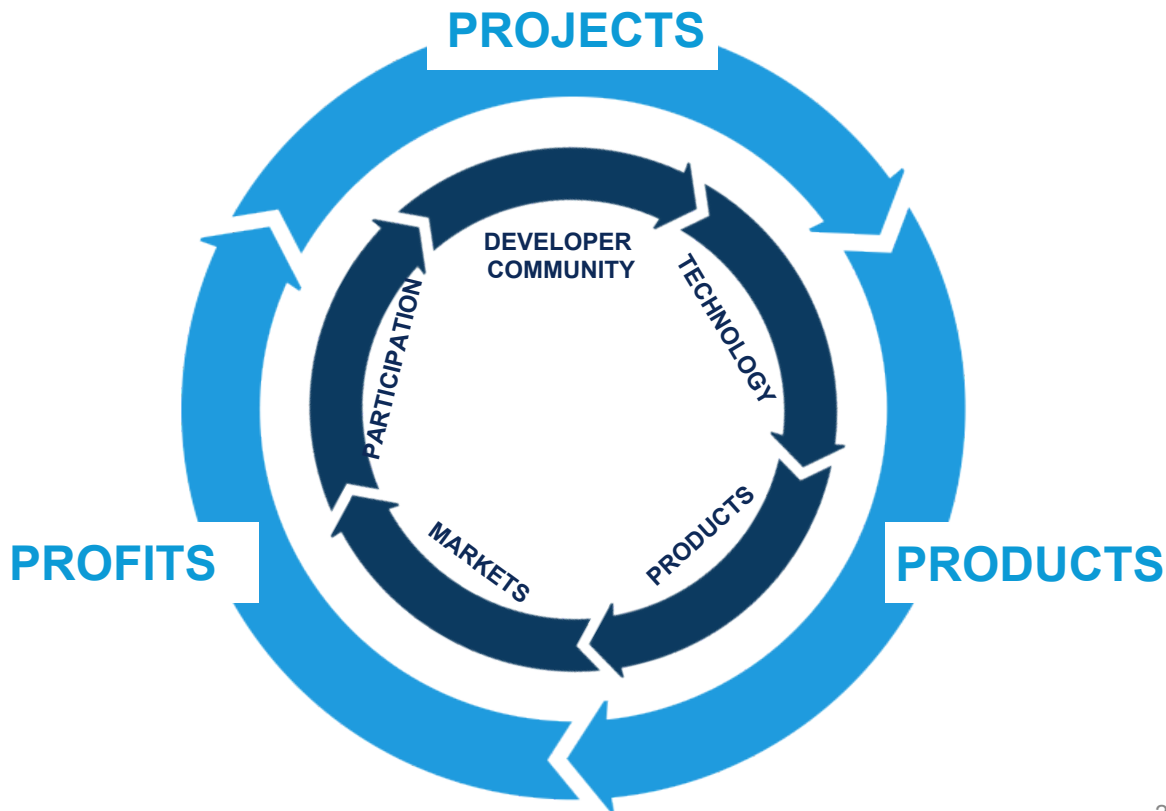
- Github hosts over 64,000,000 open source repositories  
<https://github.com/about>
- SourceForge is home to 430,000 open source projects.  
<https://sourceforge.net/about>
- Apache Software Foundation now has 175 committees managing ~300 projects and another 50+ projects in incubation  
Source: <https://projects.apache.org>
- Eclipse Foundation now has 163 projects and 120 new projects in incubation  
Source: <https://projects.eclipse.org/list-of-projects>
- OpenStack has 49 project teams working on 1,525 project repositories  
Source: <https://releases.openstack.org/teams>

# The real question is which projects matter?



# Foundations enable ecosystems by creating trust

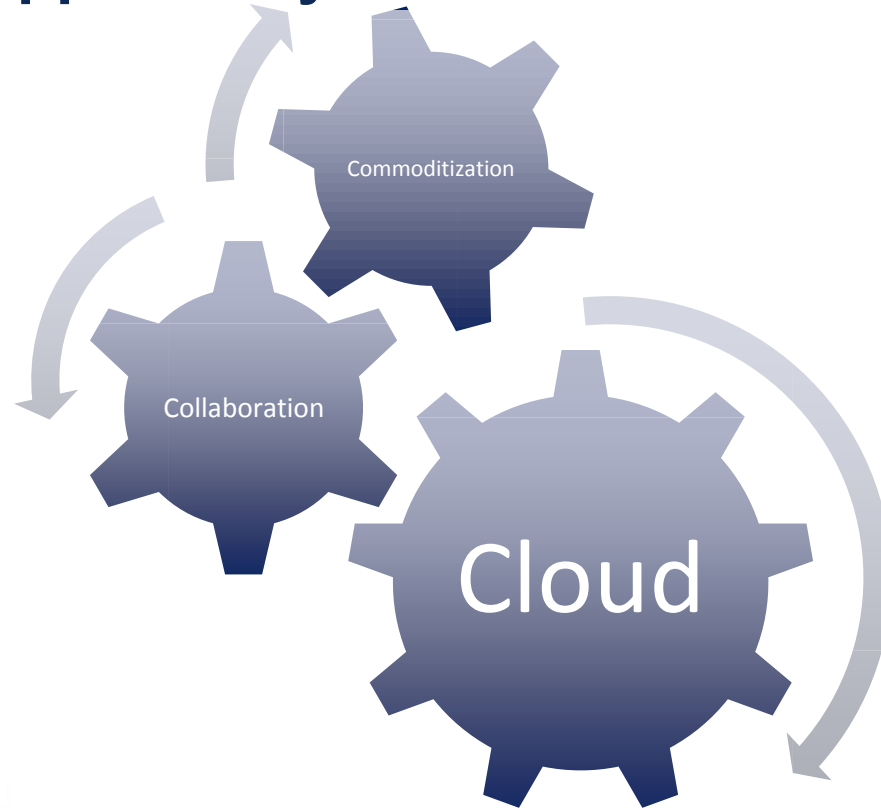
Successful Projects depend on members, developers, infrastructure to develop products that the market will adopt.



# Creating sustainable trust requires real work

Governance and Membership	<ul style="list-style-type: none"><li>• Incorporation, Tax status, Bylaws, Member Agreements, Anti-trust, etc.</li><li>• Ongoing business development and membership recruitment</li></ul>
Development Process	<ul style="list-style-type: none"><li>• Technical Decision Making</li><li>• Project Life Cycle</li><li>• Release Process</li></ul>
Infrastructure	<ul style="list-style-type: none"><li>• Custom infrastructure using open source best practices</li><li>• Security and reliability</li></ul>
Ecosystem Development	<ul style="list-style-type: none"><li>• Marketing</li><li>• Events</li><li>• Training</li><li>• Code Provenance</li></ul>
IP Management	<ul style="list-style-type: none"><li>• License compliance</li><li>• Trademark management</li><li>• Legal defense and Collaboration</li></ul>

# Why CNCF represents projects that are creating real investment opportunity



# Thank you



**CLOUD NATIVE**  
**COMPUTING FOUNDATION**



Open Source Software Fuels Explosive  
Startup Growth and Goes Mainstream

# Panel: Open Source Software Fuels Explosive Startup Growth and Goes Mainstream



**Evan Kaplan**  
InfluxData

@evankaplan



**Janet Kuo**  
Kubernetes

@janet\_kuo



**Yoav Landman**  
JFrog

@\_yoav\_



**Andy Randall**  
Tigera

@andrew\_randall



**Priyanka Sharma**  
OpenTracing

@pritianka



**Dharmesh Thakker**  
Battery Ventures  
(Moderator)

@Dthakker02