

Starting an Open Source Program in your Company

Chris Aniszczyk (@cra)

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 THE **LINUX** FOUNDATION

Hi, I'm Chris Aniszczyk (@cra)

- › CTO/COO, Cloud Native Computing Foundation (CNCF)
- › Executive Director, Open Container Initiative (OCI)
- › VP, Developer Relations, Linux Foundation (LF)

- › *In a previous life...*
 - › *Director of Open Source (@Twitter) / Sr. Eng Manager*
 - › *Co-Founder of the TODO Group*
 - › *Co-Founder of EclipseSource (via Code9)*
 - › *Open Source Committer (Gentoo, Fedora, etc)*
 - › *Principal Software Engineer, Red Hat*
 - › *Senior Software Engineer, IBM*



MESOS



eclipse

Agenda

- › Industry Trends Around Open Source
- › Rise of Open Source Programs
- › What is the TODO Group?
- › Starting an Open Source Program
- › Q&A



Chris Aniszczyk 

Travis County, United States

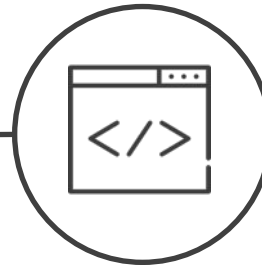


Trend: We all see FOSS Development is Accelerating

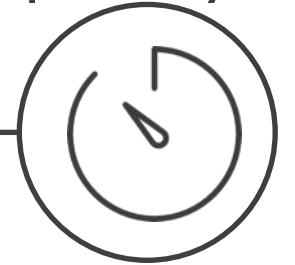
23M+
Open Source
Developers



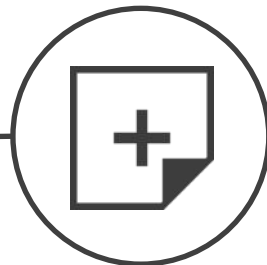
41B+
Lines of Code



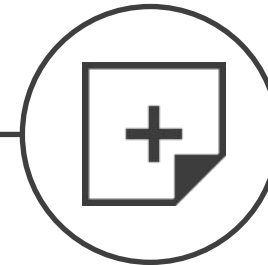
10,000+
New Versions
per Day



64M+
Repositories on
GitHub

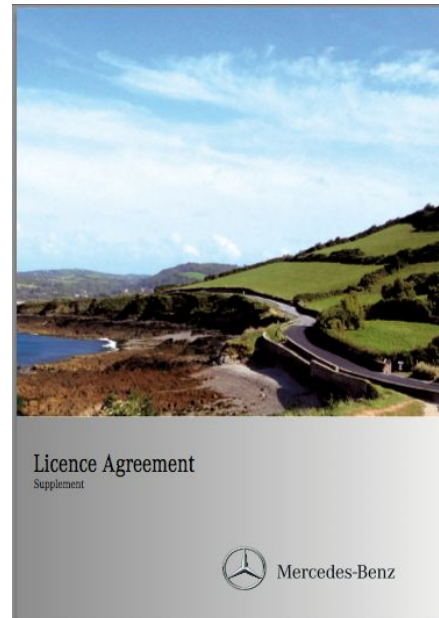


1,100
New Projects a Day



Trend: Open Source is Eating the World

- “78% of companies are using open source... 63% are participating...”
 (<https://www.blackducksoftware.com/future-of-open-source>)



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Big5rights	18
Birgmeier License	18
Boost Software License	19
Bozney Castle License	19
BSD License	20
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BSD 3-clause	32
BSD 4-clause (Original)	55
BSD 4-clause	62
BSD TCPDUMP License	76
BSD Variants	81
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Original BSD License	249
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PacketVideo License	253
Pixman License	259
ppp-further Licenses	260



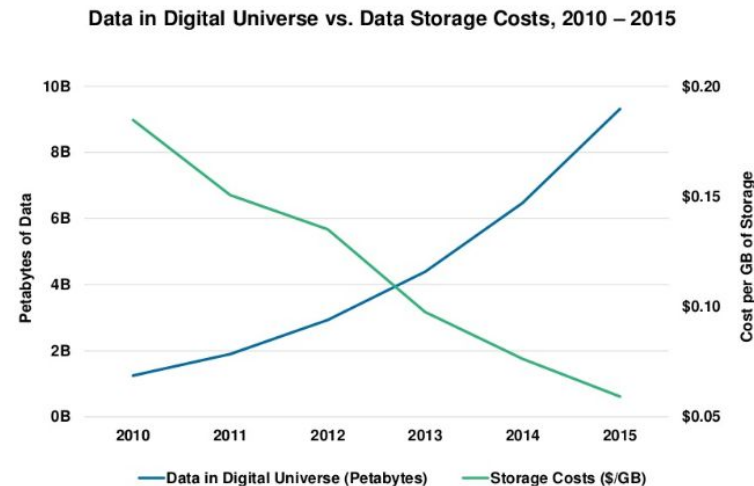
iOS: General->About->Legal->Legal Notices

http://www4.mercedes-benz.com/manual-cars/ba/foss/content/en/assets/FOSS_licences.pdf

<https://www.tesla.com/blog/all-our-patent-are-belong-you>

Trend: Data Growth is Accelerating

- More services/things are being connected to the internet and generating data that will help companies optimize their business:
<http://www.kpcb.com/internet-trends>
- Cost to store data is getting much cheaper (also for fun follow [@InternetOfShit](#))



Internet of Shit
@internetofshit

HOW HARD IS IT TO MAKE A COOKIE, LORD
theverge.com/circuitbreaker ...

CHIP
Smart Cookie Oven
POWERED BY SIDECHEF

RETWEETS 544 LIKES 773

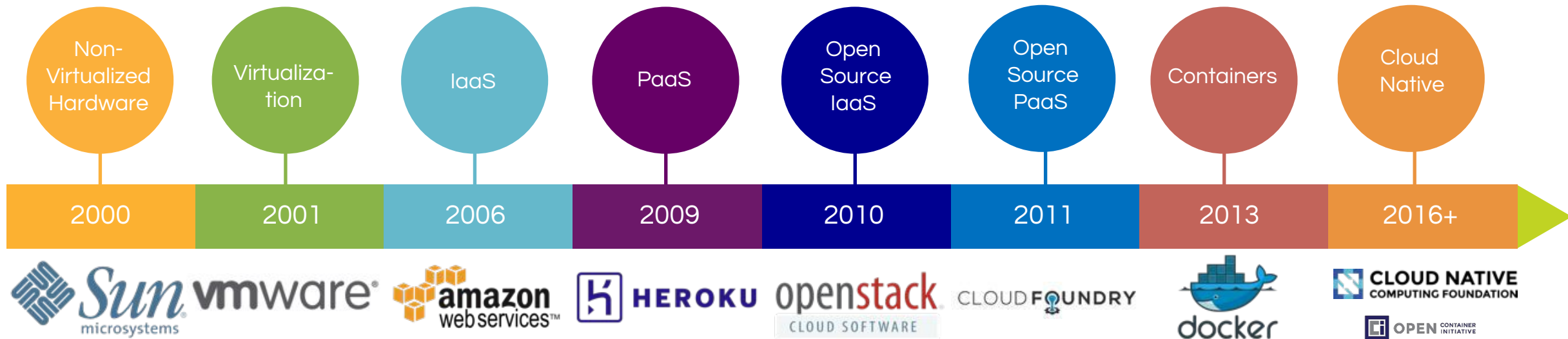
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Trend: Web Scale Companies Open Up and Share

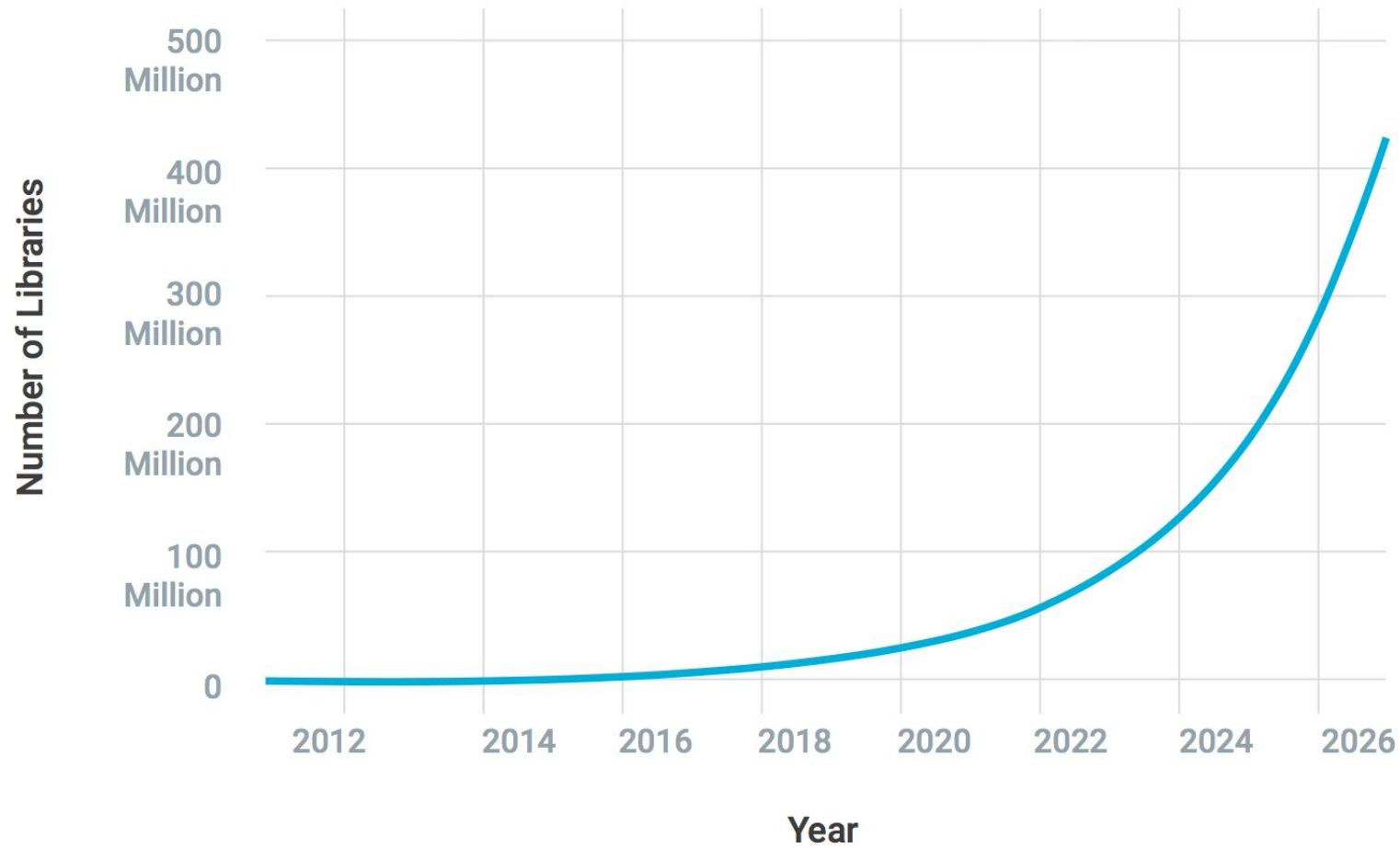
- › Software is a means to an end for internet/web scale companies
 - › Google, Facebook, Netflix, Twitter, LinkedIn, etc...
- › Google: [Kubernetes](#), [Tensorflow](#)
- › Facebook: [OpenCompute](#), HHVM, [OpenCellular](#)
- › Twitter: [Mesos](#)/Aurora/Parquet/[Heron](#)
- › LinkedIn: [Kafka](#)
- › Netflix: NetflixOSS: <https://netflix.github.io/>

Trend: Closed to Open Ecosystems

- › Over time, infrastructure has moved from single-vendor closed ecosystems to multiple cross-vendor open ecosystems
- › Infrastructure is one example, happening in other areas too!



Trend: Open Source Isn't Slowing Down Any Time Soon!



[:] SourceClear

Rise of Open Source Programs

Trend: Web Scale Companies + Open Source Programs

The internet scale companies pioneered the creation of open source programs:

- › Google: <https://developers.google.com/open-source/>
 - › *“...tasked with maintaining a healthy relationship with the open source software development community”*
- › Facebook: <https://code.facebook.com/opensource>
 - › “...we’re keen users and publishers of open software. We’ll keep you up-to-date with our new projects..”
- › Twitter: <http://todogroup.org/blog/why-we-run-an-open-source-program-twitter/>
- › Netflix: <https://netflix.github.io>

Trend: Traditional Companies + Open Source Programs

Traditional companies have begun creating open source programs too!

› Autodesk

› <https://github.com/todogroup/guides/blob/master/casestudies/autodesk.md>

› Comcast

› <https://github.com/todogroup/guides/blob/master/casestudies/comcast.md>

› Intel: <https://01.org> (*“...international team dedicated to working within open communities.”*)

› Salesforce

› <https://github.com/todogroup/guides/blob/master/casestudies/salesforce.md>

› Samsung: <http://commit101.org>

› *“The Open Source Group was formed in 2013 to do the following: Help guide the company in effective consumption, collaboration, and development of open source software. Provide advocacy on behalf of Samsung in external open source communities....”*

Trend: Startups* + Open Source Programs

Forward looking startups also created open source programs in their earlier days

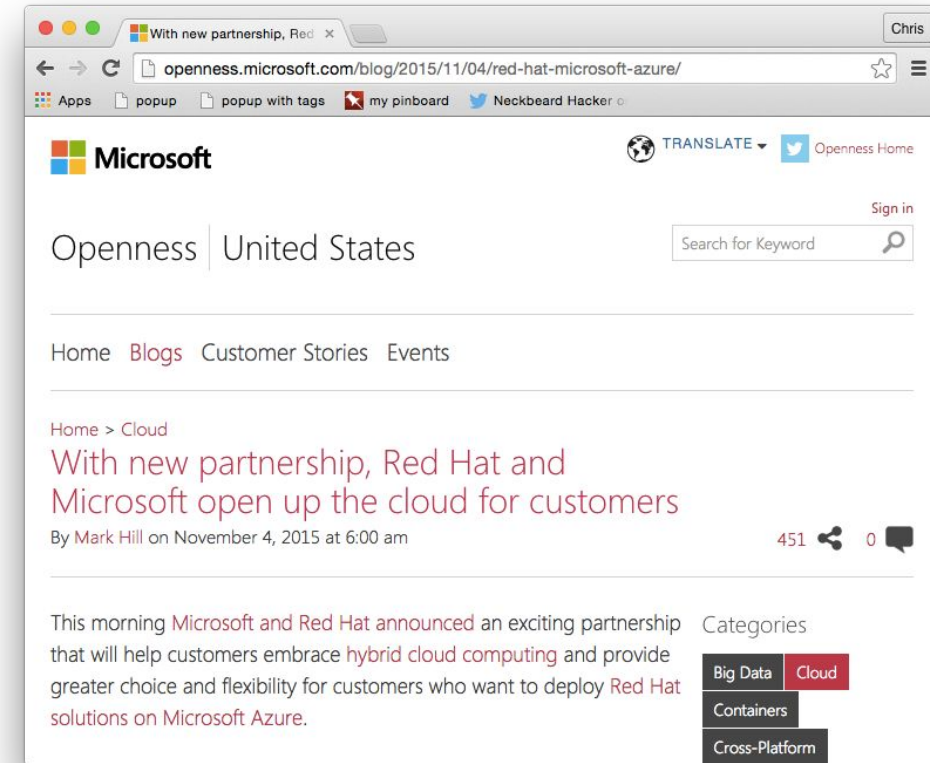
- › Box: <http://opensource.box.com>
 - › <http://todogroup.org/blog/creating-an-open-source-office-box/>
 - › “we give back to the open source community whenever possible, by contributing code to outside projects and sharing projects that we've developed internally”
- › Dropbox: <https://opensource.dropbox.com>
 - › “Dropbox loves open source! We participate in the open source community by using open source software internally and open sourcing our own projects”
- › Uber: <https://uber.github.io>
 - › “Uber loves open source and contributing to the open source community”
- › GitHub: <http://todogroup.org/blog/why-we-run-an-open-source-program-github>

Trend: Open Source Program... even Microsoft!

<https://microsoft.com/opensource>

- ▶ *“Microsoft’s commitment to openness and collaboration is ingrained... These collaborations have enabled new scenarios for customers and partners to take open source software and integrate it with a Microsoft platform.”*
- ▶ <http://todogroup.org/blog/why-we-run-an-open-source-program-microsoft>

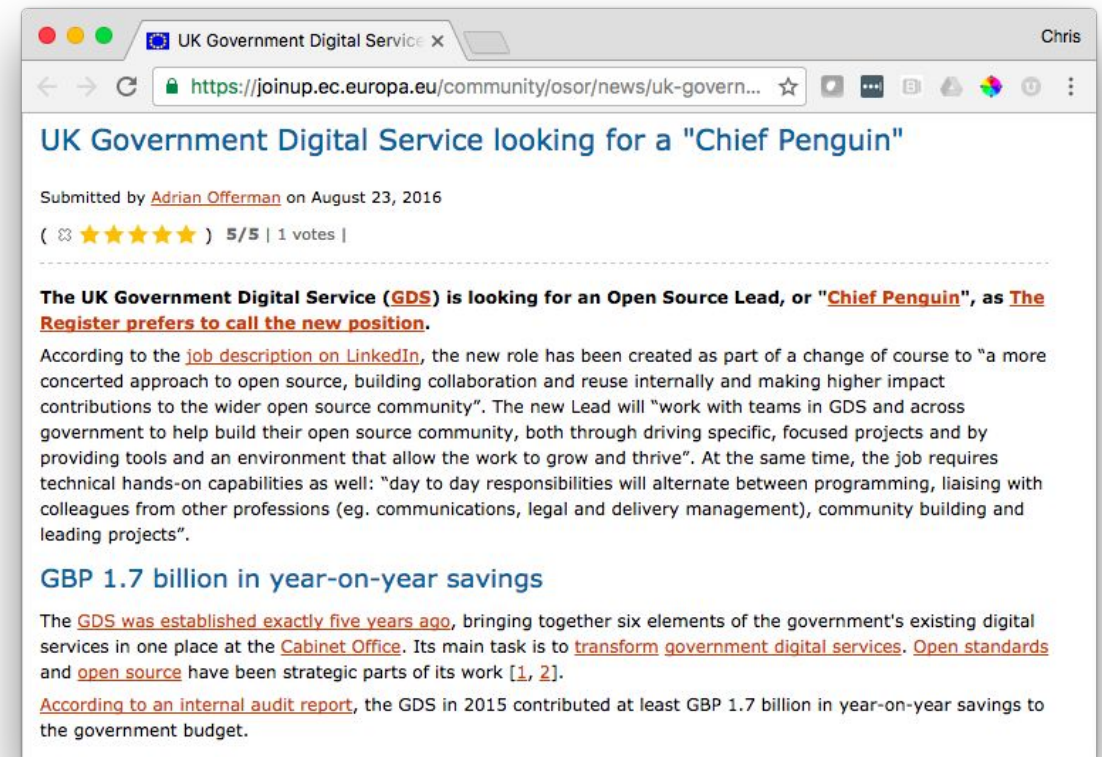
Hell they even bought GitHub!



Trend: Open Source Programs... even Governments!?

<https://gds.blog.gov.uk/about>

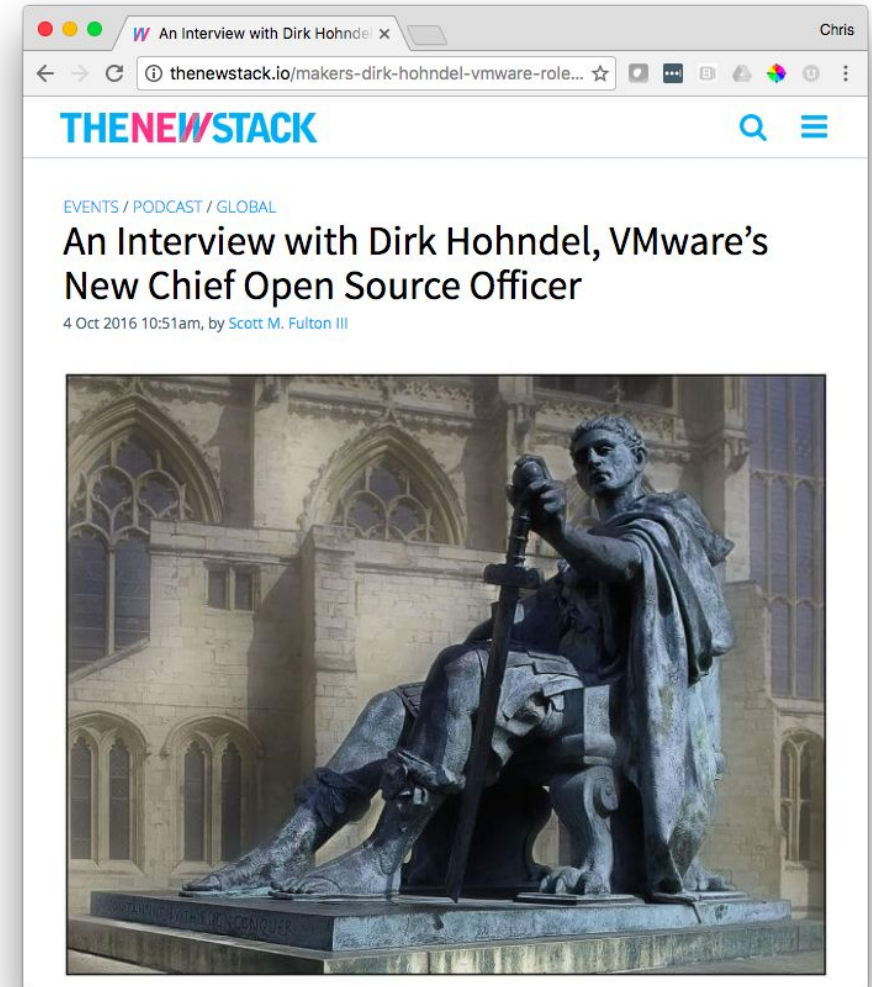
- ▶ *“We now want to build on that work with a more concerted approach to open source (and “inner source”), building collaboration and reuse internally and making higher impact contributions to the wider open source community.”*
- ▶ http://www.theregister.co.uk/2016/07/20/gds_recruiting_op_en_source_chief/
- ▶ <https://www.linkedin.com/jobs/view/169669924>



Trend: Chief “Open Source” Officer

Companies are hiring executive open source leads...

- ▶ *“As VMware broadens its ecosystem from traditional engagements in the data center space to areas such as software-defined networking and Cloud Native and mobile app technologies, we have been releasing more and more of our new offerings as open source software,” said Ray O’Farrell, executive vice president and Chief Technology Officer, VMware. “Dirk brings a new level of leadership, best practices and creativity to help us drive these open source contributions and projects.”*
- ▶ <http://thenewstack.io/makers-dirk-hohndel-vmware-role-open-source-commercial-software/>



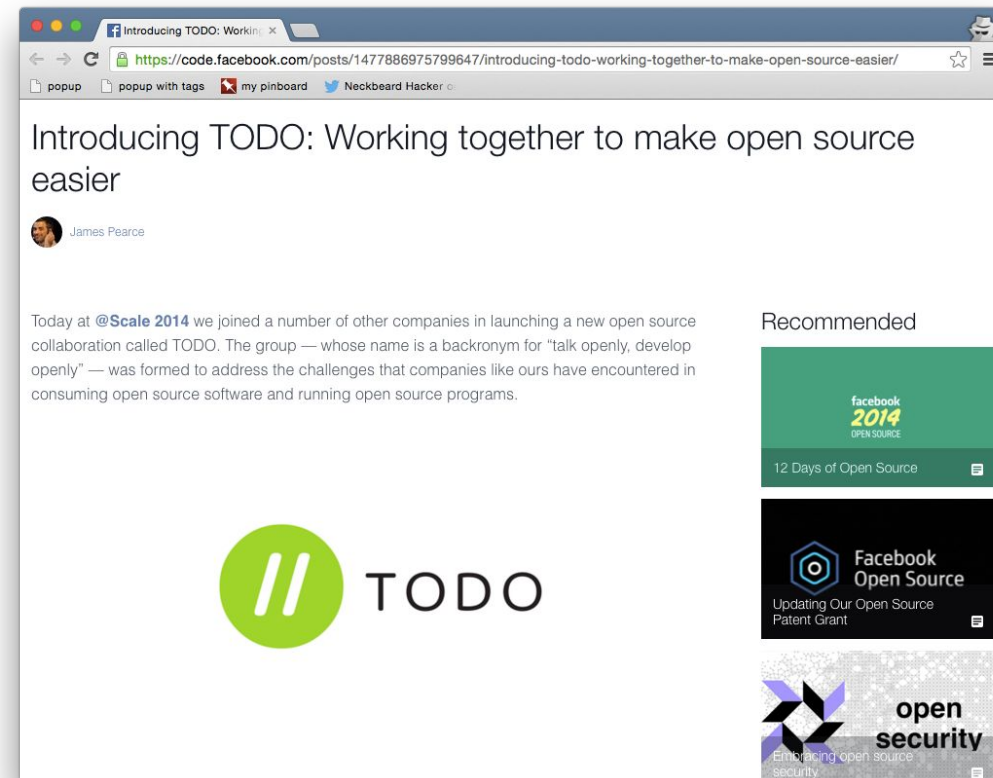
TODO Group



 THE **LINUX** FOUNDATION

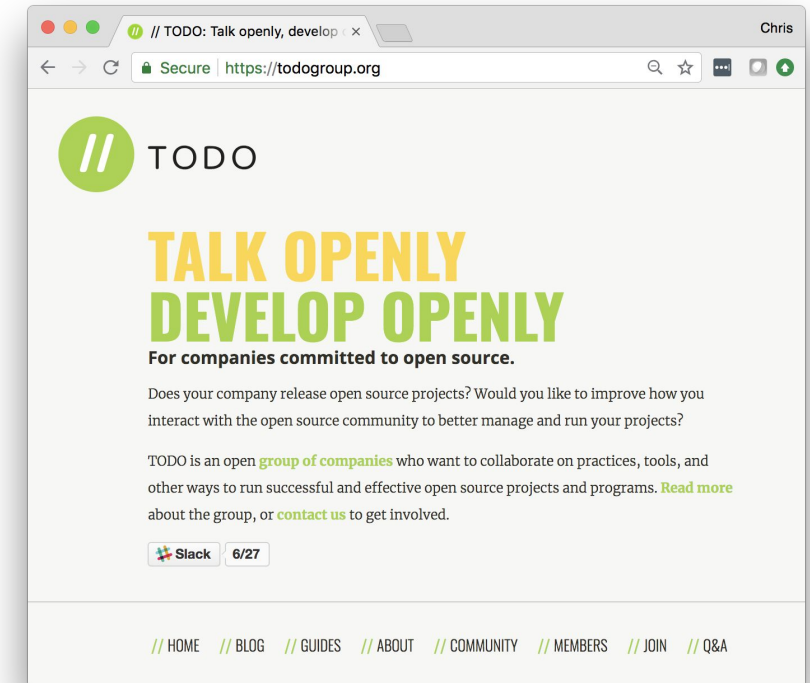
Origins of the TODO Group: todogroup.org

- ▶ Many of us who ran open source program offices shared a private mailing list to commiserate...
- ▶ It was an avenue to discuss issues in private and even find ways to collaborate on open source projects...
- ▶ Focused on Silicon Valley companies initially
- ▶ In 2014 we had an idea of scaling and opening up the the community more...
- ▶ Announced the TODO Group @Scale 2014 conference!
- ▶ **Moved to the Linux Foundation in 2016!**



What is the TODO Group?

- ▶ TODO Group is a group of companies who want to
 - collaborate on best practices on running open source programs
 - share open source policies and training material
 - codify quality criteria for well-run open source projects
 - build and share tools to maintain those quality standards
- As we scaled our open source programs, we realized we all built similar tools for the purposes of corporate scale open source...
- What is corporate scale open source?



FYI: Corporate Scale Open Source

- Corporate participants in open source have a number of unique concerns ranging from:
 - scale (i.e., Google and Microsoft have thousands of open source projects)
 - insights
 - cultural
 - legal / governance
- Companies doing open source generally want to be good community citizens, to be open and inclusive. They also need to run a business and be aware of responsibilities to their employees, shareholders and the broader community.

TODO Group + GitHub

- GitHub has won as the default host for open source projects but wasn't designed for corporate large scale open source so there are considerable feature gaps... the TODO Group is helping identify and fill those gaps (i.e., multiple org management, CLAs, community metrics)
- We also work with GitHub as a “product council” to help improve their platform that we continued to depend on (e.g., improved [org management](#) and required commit status features)
- See <https://github.com/todogroup/gh-issues>

TODO Group Members (40+ organizations)

Andrew Spyker (Netflix)

Christine Abernathy (Facebook)

Chris Aniszczyk (LF)

Gil Yehuda (Oath)

Guy Martin (Autodesk)

Ian Varley (Salesforce)

Ibrahim Haddad (Samsung)

Jeff McAffer (Microsoft)

Jeff Osier-Mixon (Intel)

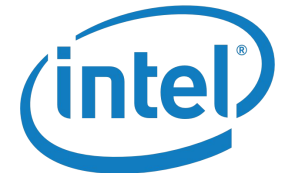
Joe Beda (Heptio)

Nithya Ruff (Comcast)

Sarah Novotny (Google)

Stormy Peters (Red Hat)

Will Norris (Google)



Starting an Open Source Program

What is an Open Source Program/Office?

- By creating an open source program office, businesses can enable, streamline and organize the use of open source in ways that tie it directly to a company's long-term business plans. **An open source program is designed to be the center of the universe for a company's open source operations and structure, helping to bring all the needed components together.**
- **See**
 - <https://github.com/todogroup/guides/blob/master/creating-an-open-source-program.md>

Open Source Program Responsibilities

The responsibilities of a program office are varied. These include:

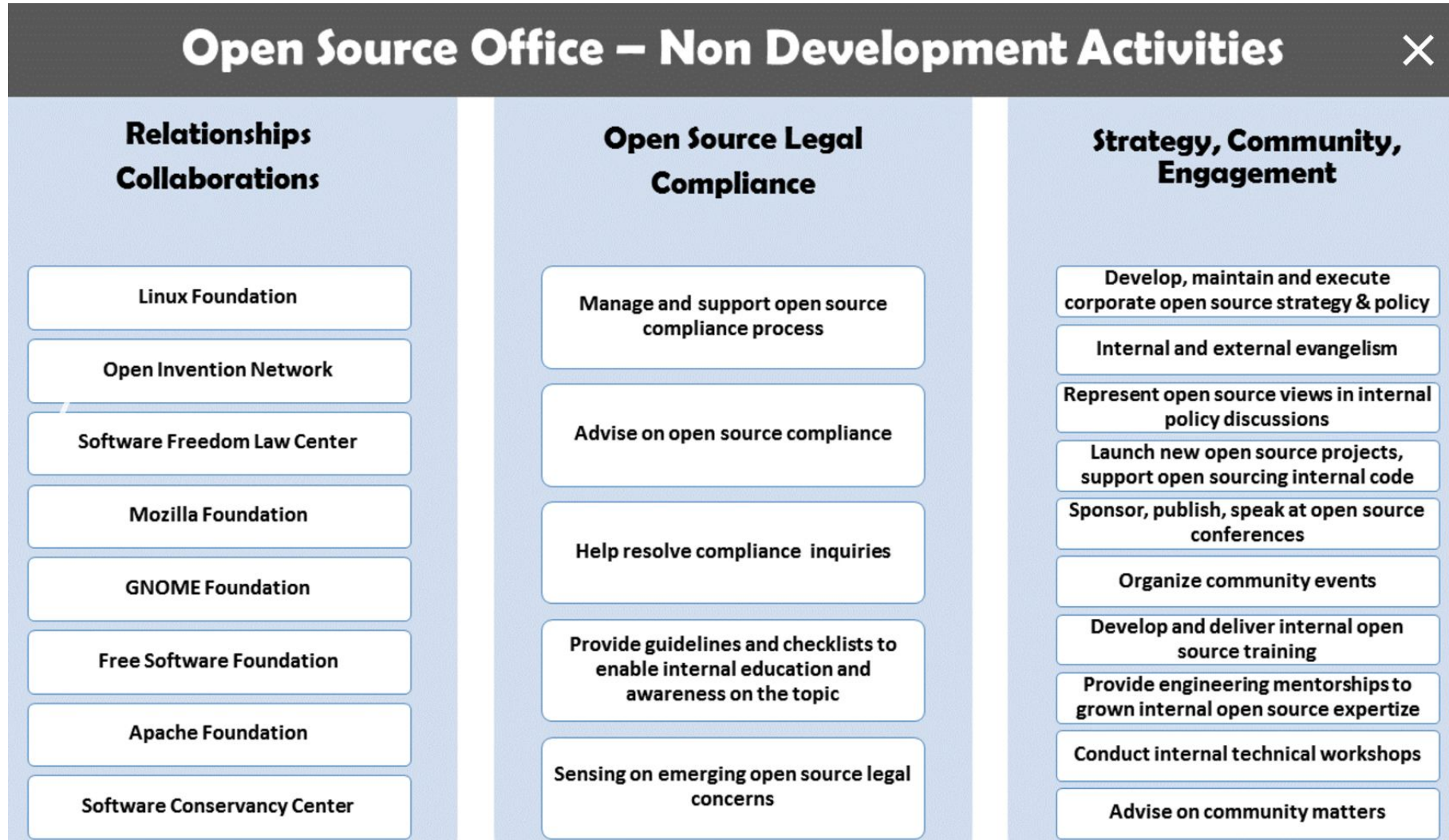
- Clearly communicating the open source strategy within and outside the company
- Owning and overseeing the execution of the strategy
- Facilitating the effective use of open source in commercial products and services
- Ensuring high-quality and frequent releases of code to open source communities
- Engaging with developer communities and seeing that the company contributes back to other projects effectively
- Fostering an open source culture within an organization
- Maintaining open source license compliance reviews and oversight

For every company, the role of the open source program office will likely be custom-configured based on its business, products, and goals. There is no broad template for building an open source program that applies across all industries — or even across all companies in a single industry. That can make its creation a challenge, but you can learn lessons from other companies and bring them together to fit your needs.

Open Source Program Structures

- An open source program structure depends on your company's primary business and your open source strategy, they can be located in the office of the CTO or other locations.
 - **Legal:** For companies that have large intellectual property portfolios, that could mean the open source program office might be a perfect fit in the legal office, where developers can work closely with the legal team on issues that arise. That might be a good fit for a hardware company because it's always concerned about potentially running into IP-related legal issues.
 - **Engineering:** Other companies are more engineering-driven, so they choose to maintain their open source program offices within their engineering departments. That allows them to focus their efforts directly on making their developers more effective and productive in their work.
 - **Developer Relations/Marketing:** In other cases, some open source offices are located inside the marketing wing of organizations because they use open source to funnel leads aimed at selling the products they build using open source.

Open Source Program Activities



Creating an Open Source Program: #1 Find a Leader

- Regardless of how your planning starts, it's important to find the right leader to help develop and then run the fledgling program office inside a company. The top candidate will have a detailed understanding about how open source works, along with some technical chops from working as a developer, contributor, or committer on existing open source projects. They should have a broad understanding of your company's business along with the business acumen and management skills to help inform strategy and plan across business units.
- In the spirit of open source collaboration, a plethora of online resources exists to help find the best candidates including [detailed sample job description postings](#) for [open source program managers](#) and other leaders from a variety of companies that established such roles, including Capital One, Box, VMware, Microsoft, and more.
- See <https://github.com/todogroup/job-descriptions>

Creating an Open Source Program: #2 Define Operations

- The budget, staffing, and technology tools and systems needed by a new program office are also key issues to resolve in establishing its operations. Some companies begin with a part-time manager, but learn they will only get so far with that approach. **Making the position someone's full-time job is a solid step to get the program off the ground, along with a small support staff to keep it nimble.**
- An example of a well-defined open source program office is one that drives needed policy, processes and tools, while also operating with a mantra of eliminating friction where it is found, using tools to automate what can be streamlined, and delegating tasks which need to be accomplished.
- A program office must offer structured policies and processes but also remain flexible. When open source users and contributors need help, the office operates more like a consultancy, providing guidance while still allowing employees to make individual or group business decisions relating to their work. **Ultimately, the goal is to establish the right balance of duties and responsibilities to meet the needs of your company and its open source users.**

Creating an Open Source Program: #3 Seek Buy-in

- Establishing an open source program office isn't something that should be done in a vacuum. Because it will have a central role in your business, creating it successfully will require open and honest input and feedback from all involved parties inside enterprises. Making sure that everyone from the executives to the developers have a say in its creation will help give the effort broad-based support.

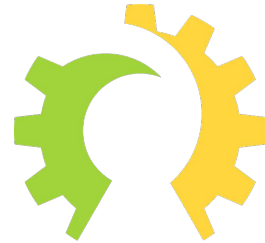
Creating an Open Source Program: #4 Setting Policies

- With many of the other important components now planned or assembled for your company's open source program office, from its creation to its structure to personnel, the next step is to develop well-defined policies and processes which will enable consistent implementation of your company's open source strategy. Crucially, they should require minimal overhead. Microsoft looks at its open source program office policies and processes with the goal of making them as unobtrusive as possible for developers and other team members.

Creating an Open Source Program: #4 Setting Policies

- For open source program policy examples:
<https://github.com/todogroup/policies> and
<https://opensource.google.com/docs/>
 - How your company accepts external contributions to their open source projects
 - How to prepare for open source releases
 - How approvals are received
 - How developers can use open source code they find on GitHub and other code repositories
 - Procedures and rules explaining how open source code can be brought into your company
 - How the incoming code is catalogued so others know it is being used
 - How a company can grow a community of like-minded external developers around it to keep it thriving
 - Rules that help determine when code should be released as open source or kept as intellectual property

Creating an Open Source Program: #5 Develop Tooling*



REPO LINTER

<https://github.com/todogroup/repolinter>



mention-bot commented 2 minutes ago

By analyzing the blame information on this pull request, we identified @vjeux to be a potential reviewer.

<https://github.com/facebook/mention-bot>

<http://ghtorrent.org>

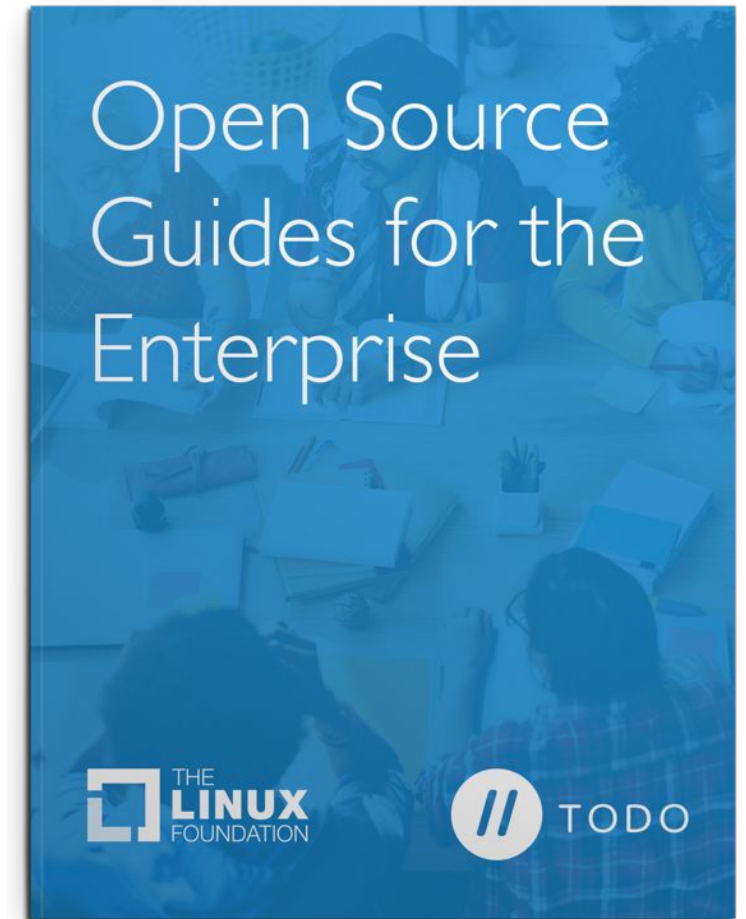
GitHub Name	Manage
azure-members	Manage Team
azure-repo-approvers	Manage Team
azureopensource-portal-write	Manage Team

<https://github.com/Azure/azure-oss-portal>

<https://github.com/Netflix/osstracker>

Learn from Others: TODO Open Source Guides

- › Developed in collaboration with TODO Group
- › Leverage best practices to run or start an open source project within your organization
- › Topics include:
 - › Creating an Open Source Program
 - Tools for Managing Open Source Programs
 - › Measuring Your Open Source Program's Success



English: <https://linuxfoundation.org/resources/open-source-guides>

Chinese: <https://linuxfoundation.cn/resources/open-source-guides>

Conclusion and Q&A

Summary and Final Thoughts...

- › Open source will continue to eat new industries (i.e., world)
 - › You will see more open source foundations around industries/problem areas: OpenAI, OpenCelluar
- › Every company will become a software company, *so learn lessons from others!*
 - › They will also act more like internet-scale companies like Google, Facebook, Netflix
 - › They will establish open source programs and hire open source leads
- › **Contribution brings influence and is the currency in open source... contribute or lose relevance!** <https://todogroup.org/join/>
- › **Read:** <https://github.com/todogroup/guides>

Thank you!

<https://twitter.com/cra>

<https://aniszczyk.org>

cra@linuxfoundation.org



Chris Aniszczyk 

Travis County, United States



Scan the QR code to add me on WeChat

 THE **LINUX** FOUNDATION

The Linux Foundation

I Letterman Drive

Building D, Suite D4700

San Francisco CA 94129

Phone/Fax: +1 415 7239709

www.linuxfoundation.org



General Inquiries

info@linuxfoundation.org

Membership

membership@linuxfoundation.org

Corporate Training

training@linuxfoundation.org

Event Sponsorship

sponsorships@linuxfoundation.org