



# Open Source is the Way Forward for Mainframe

*A look at the work and impact of the  
Open Mainframe Project*





# Opportunity:

Accelerate mainframe innovation  
with open and collaborative  
development

## But how?



# Antitrust Policy Notice



Linux Foundation meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of, and not participate in, any activities that are prohibited under applicable US state, federal or foreign antitrust and competition laws.

Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at [linuxfoundation.org/antitrust-policy](https://linuxfoundation.org/antitrust-policy). If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrove of the firm of Gesmer Updegrove LLP, which provides legal counsel to the Linux Foundation.

# Antitrust Policy Notice

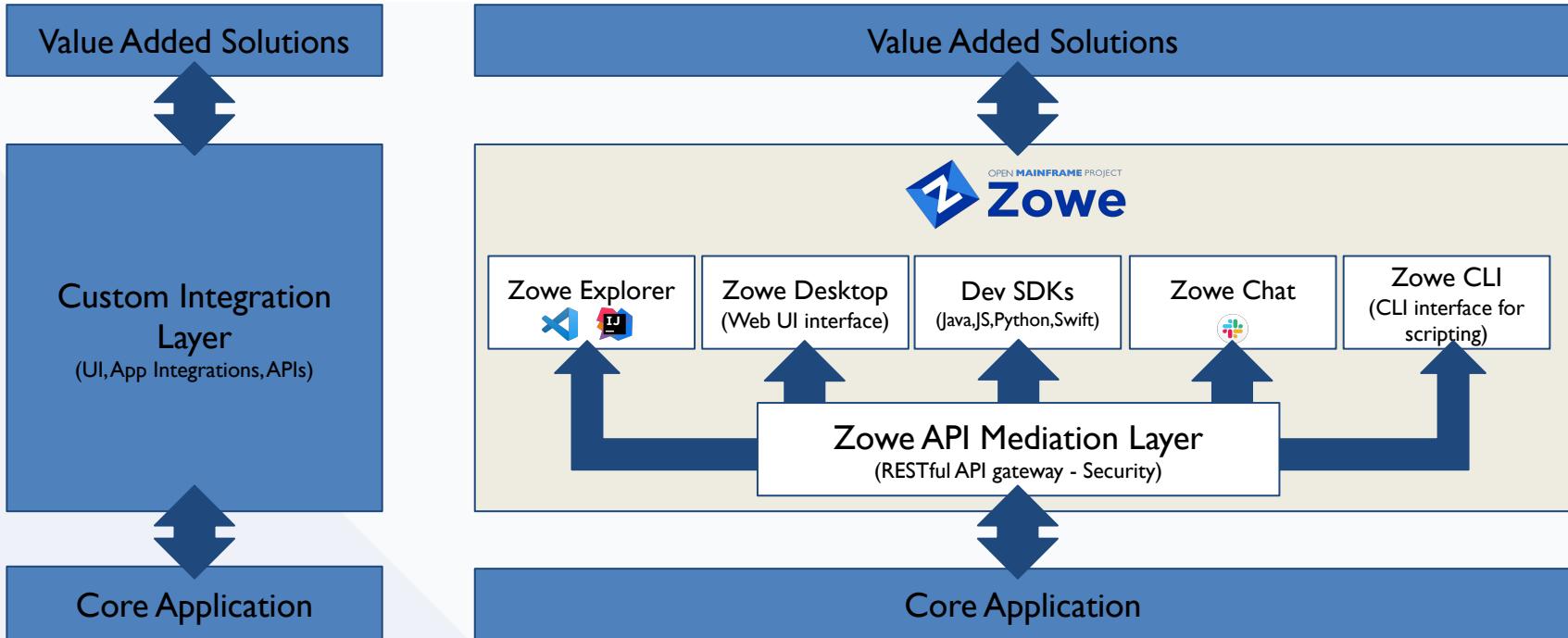


Linux Foundation meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust laws.

**Open Mainframe Project is a pre-competitive platform that enables cooperation and leveraged development.**

Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at [linuxfoundation.org/antitrust-policy](http://linuxfoundation.org/antitrust-policy). If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrove of the firm of Gesmer Updegrove LLP, which provides legal counsel to the Linux Foundation.

# Example: Leveraging Zowe Create Efficiencies



## Without Zowe

Full stack supported and developed;  
expensive R&D and hard to scale

## With Zowe

Focus on Core Application and leverage Zowe  
components to better integrate with DevOps workflows

# Cost to Create Zowe



Total Physical Source Lines of Code (SLOC)

**272,536**

Development Effort Estimate

**64.81 (777.68) Person-Years (Person-Months)**

(Basic COCOMO model, Person-Months =  $2.4 * (KSLOC^{**1.05})$ )

Schedule Estimate

**1.70 (20.46) Years (Months)**

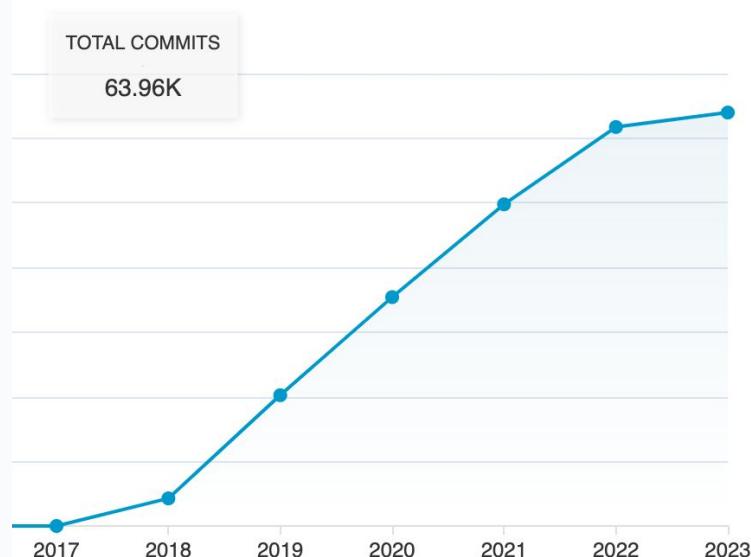
(Basic COCOMO model, Months =  $2.5 * (\text{person-months}^{**0.38})$ )

Total Estimated Cost to Develop

**\$8,754,452**

(average salary = \$56,286/year, overhead = 2.40).

generated using [David A. Wheeler's 'SLOCCount'](#)



# Frequent Contributors Get High ROI From Open Source Foundation Membership

## Return on Investment (ROI)

Those who **frequently** contribute code upstream



Those who **sometimes** contribute code upstream



Those who **rarely or never** contribute code upstream



## Member or sponsor of an open source foundation



Pie chart does not equal 100% because of rounding.

Source: "Open Source Programs in the Enterprise - 2020" Survey.

Is your company a member or sponsor of an open source foundation(s)? (e.g., Linux Foundation, Apache Foundation, Eclipse Foundation, OpenJS Foundation) If yes, how valuable is the support and return on your investment you have received from these open source foundations? Frequently contribute code upstream, n=95; Sometimes contribute code upstream, n=53; Rarely or never contribute code upstream, n=43.



© 2020 THE NEW STACK



# Value of Leveraging Development

Let's say an organization accounts for 30% of contributions (3x multiplier in value as a leading organization<sup>(1)</sup>)

This means the organization invested...

- 19.2 years of developer effort
- \$2.6M of R&D costs

and leveraged (3x multiplier<sup>(1)</sup>)...

- **175.2 years** of developer effort
- **\$23.6M** of R&D costs

## 9x R&D ROI

(1) Source:

<https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/developer-velocity-how-software-excellence-fuels-business-performance#>

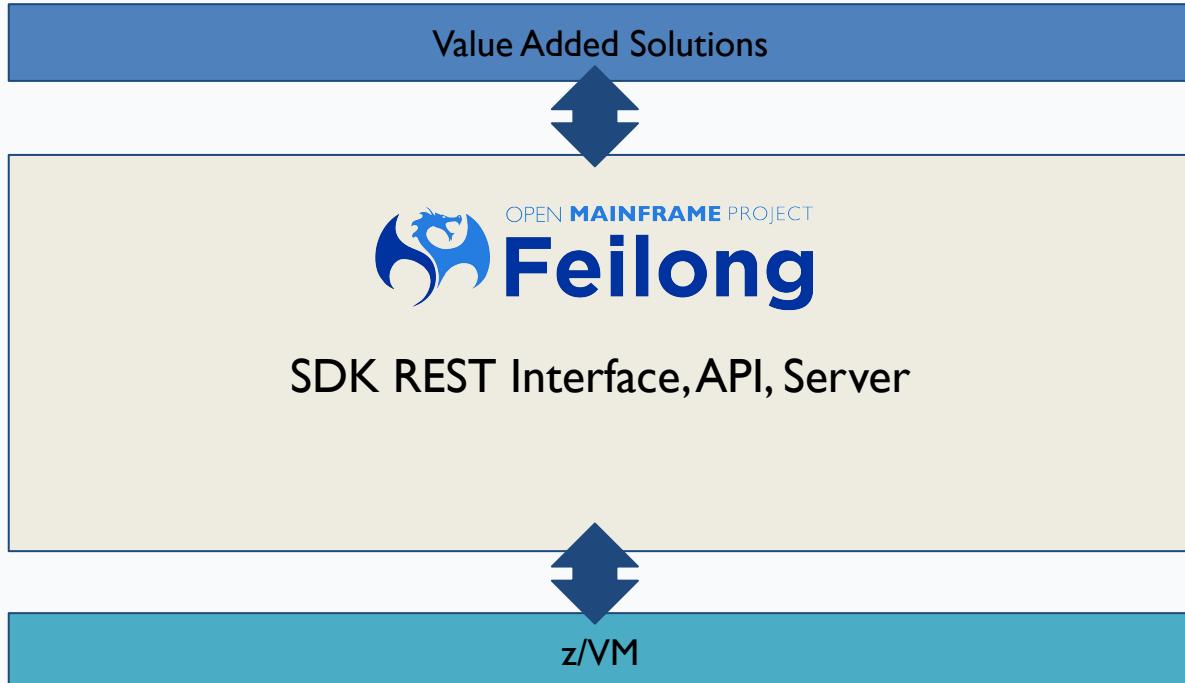


# Example: Leveraging Feilong Create Efficiencies



## Without Feilong

Full stack supported and developed;  
expensive R&D and hard to scale



## With Feilong

Vendor/Customer focus on Value Added Solutions, leverage  
Feilong development



# Cost to Create Feilong

Total Physical Source Lines of Code (SLOC)

**91,717**

Development Effort Estimate

**21.82 (261.84) Person-Years (Person-Months)**

(Basic COCOMO model, Person-Months =  $2.4 * (KSLOC^{**1.05})$ )

Schedule Estimate

**1.38 (16.59) Years (Months)**

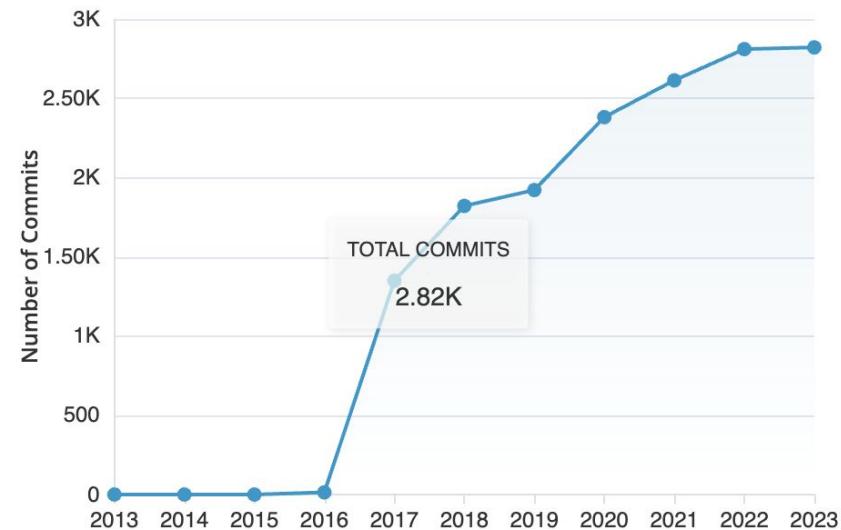
(Basic COCOMO model, Months =  $2.5 * (\text{person-months}^{**0.38})$ )

Total Estimated Cost to Develop

**\$2,947,620**

(average salary = \$56,286/year, overhead = 2.40).

generated using [David A. Wheeler's 'SLOCCount'](#)



# Frequent Contributors Get High ROI From Open Source Foundation Membership

## Return on Investment (ROI)

Those who **frequently** contribute code upstream



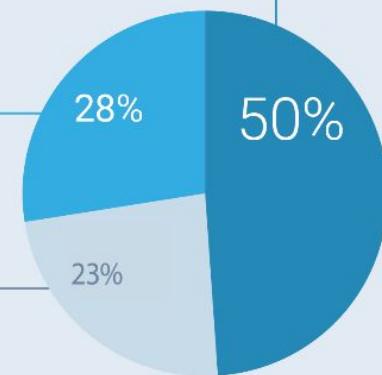
Those who **sometimes** contribute code upstream



Those who **rarely or never** contribute code upstream



## Member or sponsor of an open source foundation



Pie chart does not equal 100% because of rounding.

Source: "Open Source Programs in the Enterprise - 2020" Survey.

Is your company a member or sponsor of an open source foundation(s)? (e.g., Linux Foundation, Apache Foundation, Eclipse Foundation, OpenJS Foundation) If yes, how valuable is the support and return on your investment you have received from these open source foundations? Frequently contribute code upstream, n=95; Sometimes contribute code upstream, n=53; Rarely or never contribute code upstream, n=43.



© 2020 THE NEW STACK



# Value of Leveraging Development

Let's say an organization accounts for 30% of contributions (3x multiplier in value as a leading organization<sup>(1)</sup>)

This means the organization invested...

- 6.55 years of developer effort
- \$884,286 of R&D costs

and leveraged (3x multiplier<sup>(1)</sup>)...

- **65.46 years** of developer effort
- **\$8.8M** of R&D costs

## 7x R&D ROI

(1) Source:

<https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/developer-velocity-how-software-excellence-fuels-business-performance>

# But there are more benefits than just pure R&D



- Leadership
  - ◆ Top contributing organizations in best position to drive ecosystem direction.
  - ◆ End-users more likely to work with vendors who are primary contributors and invest in upstream projects.
- Supply chain efficiencies
  - ◆ License and security vulnerability management done in upstream project
  - ◆ Partner and developer onboarding can leverage broad community versus specific vendor resources.
- Vendor-neutral outreach and training
  - ◆ Technology enablement done at project level
  - ◆ Vendor can focus on specific value adds.

**Typical ROI 5x-40x**

dependent on membership, staff, and product investment



Challenge:

How can we grow and sustain  
open source on mainframe?

# Successful open collaboration ecosystems comes down to four core factors.

## Neutrality

No one company or organization can “take it away” from the community that forms around a project.

## IP Clarity

Removal of IP uncertainty enables anyone to get involved as a contributor or implement as a user.

## Open Governance Do-ocracy

The most successful projects that have stood the test of time have neutral, open governance models where those who do the work make the decisions in a defined governance model.

## Financial Support Ecosystem

Encouraging academic, government, and commercial engagement in leads to jobs, faster adoption, new contributions and features that address new use cases.



# Enter Open Mainframe Project

Open Mainframe Project believes...

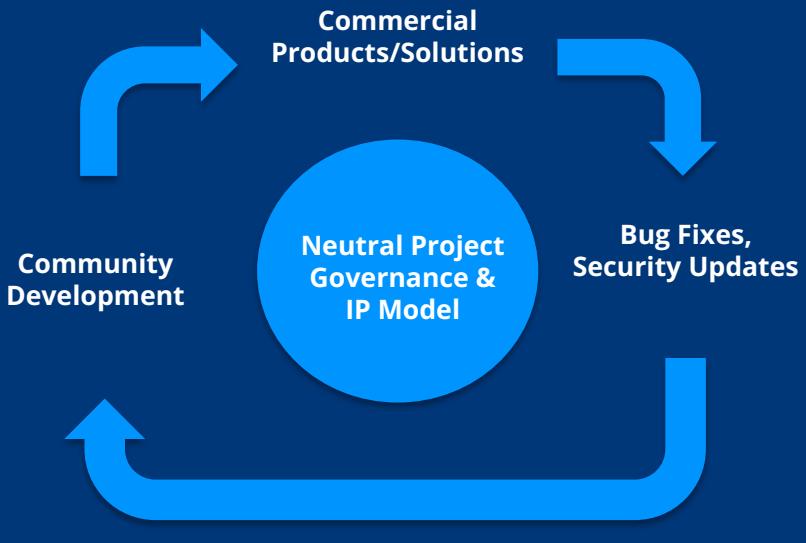
- that leading organizations leverage their **technology infrastructure as a competitive advantage**.
- that the mainframe design principles of **security, stability, scalability, and performance are important** to these leading organizations
- **having the mainframe interoperable** in a hybrid infrastructure enables leading organizations to realize its benefits.
- technical advancements that are needed by the mainframe community can be **better achieved through open source**.



# Projects support a continuous, sustainable ecosystem.

Under the LF model projects become part of a continuous, sustainable ecosystem

- Sustainable projects have a developer community
- A developer community's technology is used in commercial solutions that profit businesses
- The businesses then participate and reinvest back into the project
- The businesses then hire developers to work in the community



**Commercial dependency drives a virtuous cycle of commercial and community engagement based on accepted governance and IP models**



# OPEN MAINFRAME PROJECT

The Open Mainframe Project was founded in 2015, as a focal point for deployment and use of Linux and Open Source in a mainframe computing environment.

Open Source is the collective thread within leading organizations that look to leverage their technology infrastructure as a competitive advantage. The mainframe design principles of security, stability, scalability, and performance are important to these leading organizations, and having the mainframe interoperable in a hybrid infrastructure enables leading organizations to realize its benefits. Open Mainframe Project believes this is best achieved as a community through open source.

Open Mainframe Project hosts 17 projects and working groups and is supported by 40 organizations.

## Vision

The mainframe is an active, integrated, and essential part of modern enterprise IT, consumable by mainstream developers and users, and driven by a vibrant open source community.

## Mission

To achieve the vision of the Open Mainframe Project by...



### Setting a high bar for application development on the mainframe

through documentation, API development, and a security-first approach.



Enable the mainframe to be more consumable by developers with a transparent experience in leveraging the value propositions of the mainframe.



Showcase the mainframe of today to both the mainframe ecosystem as well as the broad enterprise IT community.



Ensure the mainframe aligns well in the changing enterprise IT landscape of cloud-native and DevOps.

# Open Mainframe Project enables this innovation

## Active Open Mainframe Projects (4)



## Incubation Open Mainframe Projects (7)



## Sandbox Open Mainframe Projects (3)



## Open Mainframe Project Working Group (3)



Learn about all Open Mainframe projects at <https://openmainframeproject.org/our-projects/>

# The LF's Support Programs help communities succeed.





The Linux Foundation's goal is to create the greatest shared technology investment in history by enabling open collaboration across companies, developers and users.

We are the nonprofit organization of choice to build ecosystems that accelerate open source technology development and commercial adoption on a global scale.



# We are behind some of the most critical projects in the world

| Vertical Industry |         |
|-------------------|--|
| Security          |          |
| AI & Data         |          |
| Cloud             |           |
| Networking        |          |
| Edge & IoT        |           |
| Web               |           |
| Visual Effects    |          |
| Sustainability    |         |
| Digital Trust     |         |
| Hardware          |         |
| Standards         |         |

# Landscape of Open Source Projects Only on Mainframe



## Open Mainframe Landscape

1.0

See the interactive landscape at [l.openmainframeproject.org](https://landscape.openmainframeproject.org/)

Greyed logos are not open source

Linux

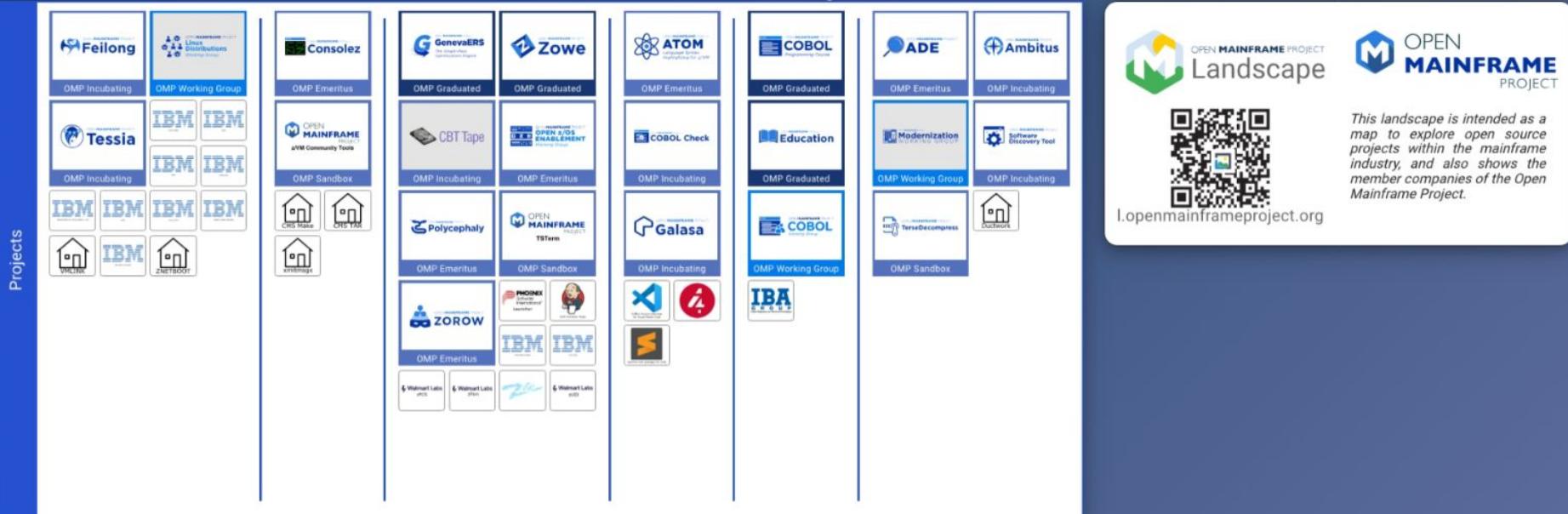
z/VM

z/OS

Development Tools

Learning and Mentoring

Other



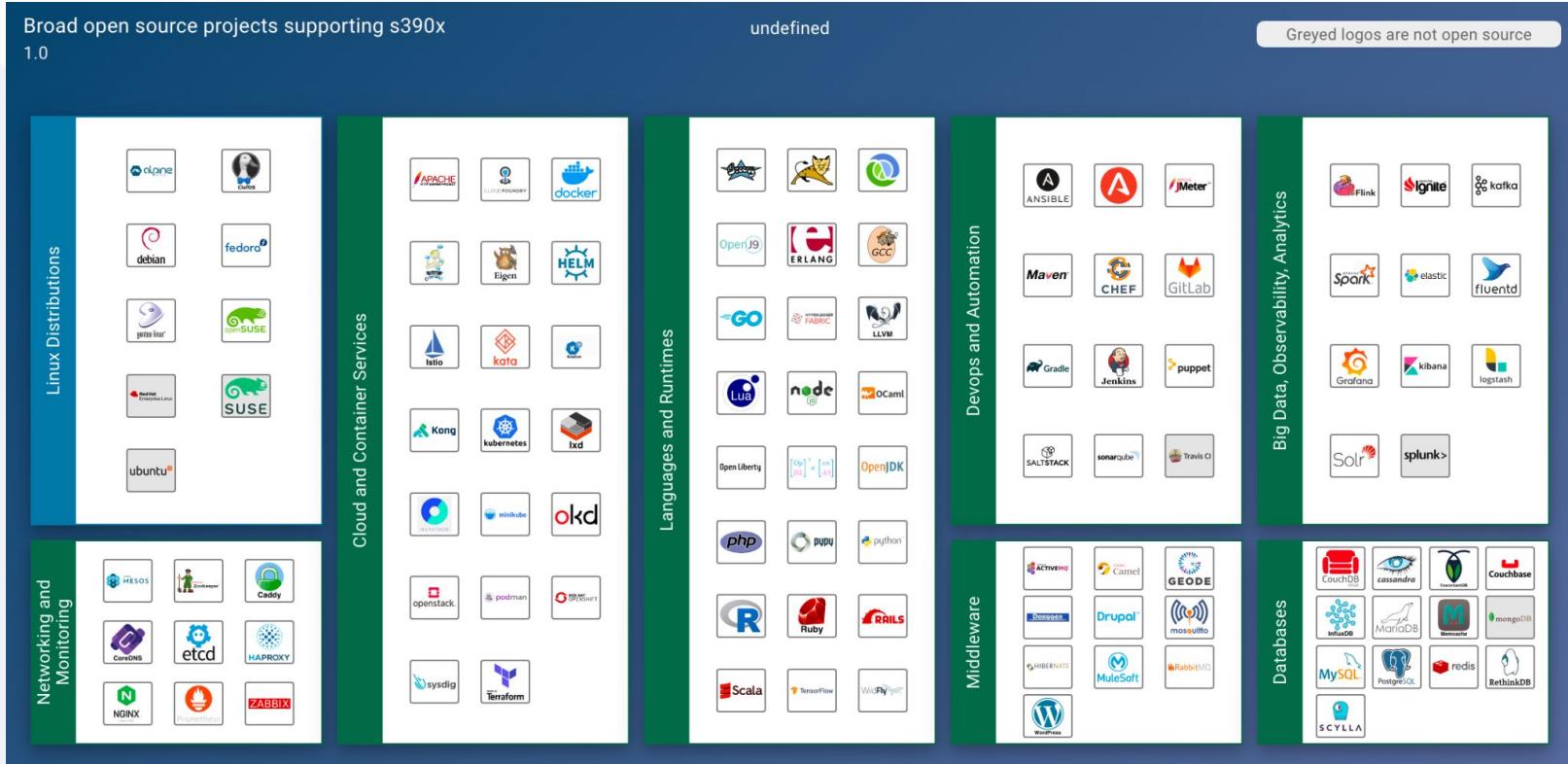
This landscape is intended as a map to explore open source projects within the mainframe industry, and also shows the member companies of the Open Mainframe Project.



[l.openmainframeproject.org](https://landscape.openmainframeproject.org/)

Source: <https://landscape.openmainframeproject.org/fullscreen>

# Broad Open Source Supported on Mainframe



Source: <https://landscape.openmainframeproject.org/fullscreen/open-source>

# Open Mainframe Project Enables Innovation



# Enabling Innovation by Connecting z/OS to Enterprise Devops



## Major Problem

Modernize integration with z/OS based applications and services  
Bridge the talent gap by enabling modern development stacks on z/OS  
Lack of cross-enterprise testing tools that properly supported z/OS.  
Open source support for z/OS was vendor-centric and development efforts disconnected.

## How We Innovated

2018 Open Mainframe Project added Zowe from contributions from Broadcom, IBM, Rocket Software  
2019 Zowe reached 1.0, launched Zowe Conformant to enable downstream ecosystem; investments in collaboration, ecosystem development, and infrastructure  
2020 Ambitus joins the Open Mainframe Project  
2022 Zowe 2.0 release  
2023 Galasa joins the Open Mainframe Project  
2024 z/OS Open Tools joins the Open Mainframe Project

## Results

60,000+ Commits, 1000+ contributors all time  
85% of mainframe customers using Zowe in or planning to use Zowe by end of 2024 ( source Arcati Mainframe Yearbook 2024 )  
50+ Zowe Conformant offerings, 3 Zowe Conformant Support Providers, 7000+ completed Zowe training offered by Interskill  
New project contributions from BMC, Phoenix Software, Vicom Infinity, and multiple customers, has grown codebases of these projects.

# Enabling Innovation by Modernizing COBOL



OPEN MAINFRAME PROJECT  
**COBOL**  
Programming Course



OPEN MAINFRAME PROJECT  
**COBOL Check**



OPEN MAINFRAME PROJECT  
**COBOL**  
Working Group

## Major Problem

COBOL talent is critical to our society, and the need has amplified in the COVID-19 pandemic.

Enabling the next generation to have COBOL skills done in isolation, causing repeated efforts and lower uptick.

COBOL lacking tools that align with modern development

## How We Innovated

Launched [COBOL Programming Course](#) as an open source project in April 2020, teaching COBOL development using VS Code and Zowe.

Created [collaboration forums](#) and ways that COBOL talent can advertise their availability

Launched [COBOL Working Group](#) to bring together leaders in thinking about the future of COBOL

[COBOL Check](#) project launched, bringing TDD practices to COBOL

## Results

“[Calling all COBOL Programmers](#)” forum has had over 1.9k individuals make themselves available since April 2020

[COBOL Programming Course GitHub repo](#) has 2.5k stars and 500+ forks, along with 22 contributors from several organizations, continuing to evolve with deeper level COBOL training content

COBOL Working Group getting broad feedback on the future direction of COBOL  
COBOL Check a step forward in modern dev practices and being integrated into VS Code and COBOL Programming Course curriculum.

# Enabling Innovation by Creating a Hub for Linux on Z and z/VM Community



## Major Problem

Users want to manage their mainframes with the same modern cloud technologies used across the enterprise.

z/VM integration with technologies such as OpenStack have long been a challenge.

Contribution base was IBM only, making it challenging to get wider adoption

z/VM lacked a sustainable hub for community tools and utilities

Linux distributions supporting s390x mainframe

## How We Innovated

2019 Open Mainframe Project added Feilong

2020 Software Discovery Tool and Tessia added as a projects

2021 z/VM Community Tools forms as a Sandbox project, Linux Distributions Working Group formed

## Results

Central repository for open source on mainframe developed, tracking across all major distributions (  
<http://sdt.openmainframeproject.org>)

Sustainable and coordinated maintainership for s390x Linux distributions, including Alma Linux, Debian, Fedora, and openSUSE amongst others.

Central hub being developed for z/VM tools and utilities for easier discoverability.

# Enabling Innovation with the Next Generation



## Major Problem

Aging tenured mainframe talent, with a growing mainframe talent gap and skills decline in next generation talent.

Needing to help connect students with opportunities in mainframe, aligning the interests in open source.

Isolated efforts in education created duplicated efforts in education.

## How We Innovated

Launched first mentorship program in 2016 with 7 mentees.

Connected within the mainframe and broad open source community to ensure mentorship work has upstream project value.

Enabled universities to also leverage the program within class work; successful with VCU and Western University (Ontario)

Mainframe Open Education project launched in 2021 to create standard hub of educational materials for mainframe.

## Results

70+ mentees completed the program, with broader classwork focus reaching 100s more.

Upstream work has included ports of Alpine Linux, contributions to HyperLedger, OpenStack, CloudFoundry, Kubernetes, and more.

Several mentees are now employed in mainframe roles with IBM, SUSE, ADP, and more.

Collaborations between Broadcom, IBM, Kyndryl, and more have built a base of common mainframe educational materials, free to use and openly licensed.

# Sustainable home for critical mainframe open source efforts.



## CBT Tape

### Major Problem

CBT Tape, a staple of mainframe programmers and operators for over 50 years, lacked a sustainable home and infrastructure to support it.

GenevaERS development was stalling internally at IBM, and needed a home to bring together more constituents and build a community around.

“Mainframe Modernization” loosely defined, causing marketing confusion.



### How We Innovated

CBT Tape and GenevaERS join the Open Mainframe Project in 2020.

Modernization WG launched in 2022

### Results

Strong contributor base to both projects.

CBT Tape gained mainframe infrastructure for development and testing, which has gained more contributors since joining.

Modernization WG defining modernization patterns for consistent, vendor-neutral education.

# Enabling Innovation for End-users



# bankdata

**TFIR**

**RUNE CHRISTENSEN**

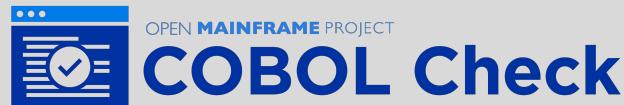
**Bankdata Relies On Open Mainframe Technologies To Serve Banks In Denmark**

## Bankdata Open Mainframe Stack

Developer Enablement



Agile / Test Driven Development



Systems Integration/Deployment



Read the Bankdata story at <https://www.openmainframeproject.org/blog/2022/12/16/open-mainframe-use-case-bankdata>



# Innovation Enablement is More than Code



# Enabling Innovation Through Diversity and Inclusion

A REAL CONVERSATION TO ACCELERATE OUR WAY FORWARD

MAKING OUR STRONG COMMUNITY, STRONGER: A COLLABORATIVE INITIATIVE

Webinar: How Personal Experiences Shape Corporate Inclusion

April 28<sup>th</sup> 2021 | 11:00 CST / 12:00 EST

Moderator: Dr. Gloria Chance  
President & CEO, The Model Group  
Peak Performer, Psychological Innovation & Creativity Expert  
Former COO

Dr. Gloria Chance  
President & CEO, The Model Group  
Peak Performer, Psychological Innovation & Creativity Expert  
Former COO

Ashley Peterson  
Product Marketing Manager, IBM Z and LinuxONE  
IBM

Jeff Henry  
VP Strategy, Product Mgmt & Design Mainframe Software Division  
Broadcom

Sharra Owens-Schwartz  
Inclusion, Diversity and Equity Senior Director  
Rocket Software

Jerry Chauyapradit  
Manager, IBM Z Interstage Networking Solutions  
IBM

A REAL CONVERSATION TO ACCELERATE OUR WAY FORWARD

MAKING OUR STRONG COMMUNITY, STRONGER: A COLLABORATIVE INITIATIVE

Webinar: Unmasking Our 'Whole Self' - Can We Create Inclusive Psychologically Safe Spaces in the Workplace?

July 28<sup>th</sup> 2021 | 9:00 PDT / 12:00 EDT

Moderator: Dr. Gloria Chance  
President & CEO, The Model Group  
Peak Performer, Psychological Innovation & Creativity Expert  
Former COO

Dr. Gloria Chance  
President & CEO, The Model Group  
Peak Performer, Psychological Innovation & Creativity Expert  
Former COO

Allyson Cook  
Program Lead, Employee Program  
Broadcom

Tina Tarquinio  
Product Management Director for Z  
IBM

Kevin Norlin  
Chief Revenue Officer  
Rocket Software

Earl Dixon Jr.  
Project Client Strategic, Vitality Inclusion Team Lead  
Broadcom

A REAL CONVERSATION TO ACCELERATE OUR WAY FORWARD

MAKING OUR STRONG COMMUNITY, STRONGER: A COLLABORATIVE INITIATIVE

From Educators to End Users: Leveraging Holistic Approaches and the Importance of Belonging Across the Tech Ecosystem

February 23<sup>rd</sup> 2022 | 9:00 PDT / 12:00 EDT

Moderator: Dr. Gloria Chance  
President & CEO, The Model Group  
Peak Performer, Psychological Innovation & Creativity Expert  
Former COO

Dr. Gloria Chance  
President & CEO, The Model Group  
Peak Performer, Psychological Innovation & Creativity Expert  
Former COO

Chinedu Ibeh  
Corporate Vice President, Enterprise Services  
New York Life

Byron Smith  
Sr. Mainframe Security Engineer, Enterprise Technology Banking Office  
M&T Bank

Gina Bullock, PhD  
Assistant Professor, North Carolina A&T State University

Nicole Ikwakor  
Specialist, Systems Engineer Infrastructure and Cloud (IAC)  
Charles Schwab

Watch the “Making our Strong Community Stronger” series on [Open Mainframe Project’s Youtube Channel](#)



[Blog](#) [DEI](#) [Diversity](#) [Diversity & Inclusion](#)

## What inclusion means to me and how to get started

Written by Maemalynn Meanor, Senior Public Relations Manager at The Linux Foundation Diversity and inclusion...

maemalynn  
April 23, 2021



[Blog](#) [DEI](#) [Diversity](#) [Diversity & Inclusion](#)

[Equity & Inclusion](#)

## My favorite Mainframe and Six Women Building It

Written by Tina Tarquinio, Making Our Strong Community Stronger Panelist and Product Management Executive for...

Open Mainframe Project  
November 12, 2021



[Blog](#) [DEI](#) [Diversity](#) [Diversity & Inclusion](#)

## Women in Technology Continue to Grow in Numbers and Contribution

Written by Sagi Amirsoleymani, Vice President, WW Cross Brand, Rocket Software Rocket Software is a...

Open Mainframe Project  
May 26, 2021

Read about diversity in mainframe on [Open Mainframe Project’s Blog](#)

# Enabling Innovation through strong security and IP policies



Good open source projects follow key best practices...

- Multiple, unaffiliated contributors
- Code review policies
- Secure and validated release process
- Security minded development

Open Mainframe Project, as well as larger Linux Foundation projects are well tested, have continuous security analysis, and operate in the best practices of open source projects.

- OpenSSF Best Practices badges
- Routine license scans, including dependency and software supply chain analysis
- Security standards and tooling from OpenSSF leveraged



openssf  
scorecard

# Enabling Innovation by Telling the “Mainframer” Story



- Monthly interview series that highlights diversity in mainframe
- Showcases why people have mainframe in their careers and their views of the technology and career field
- Read and listen at [openmainframeproject.org/podcast](http://openmainframeproject.org/podcast)



# Enabling Innovation by Providing an “Open” Mainframe

Hosted by Marist College, and through the donation of hardware by Broadcom Mainframe Software, the Open Mainframe Project has a mainframe resource available to **any** open source project looking to support Linux on s390x, z/OS, or z/VM.

Available in Summer 2024. Thanks to these vendors for donations and support.



MARIST



# Enabling Community by Creating New Ecosystems

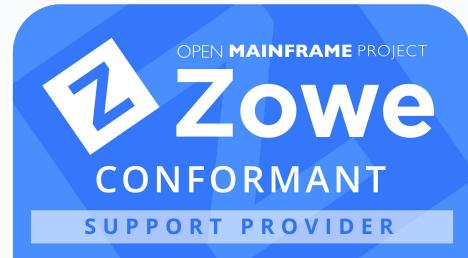


Zowe Conformance Program enables vendors to showcase their offerings based on Zowe, as well as their capabilities in supporting Zowe end-users.

Zowe Support Provider Conformance Program gives vendors the ability to showcase their Zowe support competencies.

## Benefits

- Your offering and logo listed in the [Zowe Conformant offering directory](#) or [Zowe Conformant Support Provider directory](#) and showcased in Zowe outreach materials
- Exclusive branding marks to use in your product materials
- Participation in the Zowe Advisory Council (ZAC)
- PR announcement for new organizations providing offerings
- Post a guest blog post on your offering on the Open Mainframe Project and Zowe blog



## Fees are waived for Open Mainframe Project members

More details at

<https://www.openmainframeproject.org/projects/zowe/conformance>

# Enabling Community through a Focal Event for Open Source on Mainframe



Open Mainframe Summit is the annual event that brings together the open source and mainframe ecosystems, discussing projects, trends, and executive insights.

In 2023 we aligned with Open Source in Finance Forum, hosted by FINOS, to bring this innovation to end-users, helping them leverage and engage the open innovation happening in mainframe.



**New York - October 1st**

**More at [openmainframesummit.org](https://openmainframesummit.org)**

# Getting Involved in Open Mainframe Project



# Contribute to Our Projects - anyone can!



## Contribute to an existing project:

- Submit a PR with a bugfix or new feature
- Pick existing GitHub issue as a sample project
- Integrate with a new app / contribute plugin
- Help improve project documentation
- Submit additional test cases
- Join the TSC discussion: dev mailing list, conf calls

## Get involved with the TAC or Working Group:

- DevOps / CI expertise always useful
- Interest / expertise in security especially welcome
- Join the TAC discussions: mailing list, conf calls, working groups

More information at  
[tac.openmainframeproject.org/engagement](https://tac.openmainframeproject.org/engagement)



## Getting Involved in Projects

All of the projects hosted at the Open Mainframe Project are open and transparent, and welcome participation from anyone interested in the technology areas. Each project publishes their governance processes within their project repo (typically in the README.md file or in a GOVERNANCE.md file within the primary project repo or TSC repo) on roles within the community and how decision making is made.

### TAC Meetings

Learn more about joining the public meetings of the Technical Advisory Council (TAC) on the [Meetings page](#)

### Mailing Lists and Slack channels for hosted projects

Each project hosted at the Open Mainframe Project collaborates on open channels that are welcome for anyone in the community to participate in. See the below list of channels for each project.

All Slack channels referenced below are part of the [Open Mainframe Project Slack organization](#)



Repo: <https://github.com/openmainframeproject/ade>  
Website: <http://ade.openmainframeproject.org>  
Slack: #ade  
Leads: James Caffrey



Repo: <https://github.com/openmainframeproject/cobol-programming-course>  
Website: <https://www.openmainframeproject.org/projects/cobolprogrammingcourse>  
Mailing List: <https://lists.openmainframeproject.org/g/cobol-course-discussion>  
Slack: #cobol-programming-course

# Make Sure You are Following Us on Social!



The Open Mainframe Project  
Information Technology & Services · 1,578 followers

The focal point for deployment and use of Linux and Open Source on the mainframe  
WWW.OPENMAINFRAMEPROJECT.ORG

OpenMainframeProject  
@OpenMFProject Follows you  
A @LinuxFoundation Project for Open Source on the Mainframe as the standard for enterprise class systems and applications.  
openmainframeproject.org Joined October 2015

Follow us on LinkedIn at  
<https://www.linkedin.com/company/the-open-mainframe-project>

Follow us on Twitter at  
<https://twitter.com/OpenMFProject>

And sign up for the [Open Mainframe Project newsletter](#) to keep up to date on project happenings



# Member Organizations



Zoss Team LLC



Learn more about membership at [openmainframeproject.org/join](http://openmainframeproject.org/join)



# Governing Board Representatives



Len Santalucia  
**Chair**  
CTO  
Vicom Infinity, Inc.



Alan Clark  
CTO Office  
SUSE LLC



Cam Seay  
Instructor  
East Carolina  
University



Harry Williams  
CTO  
Marist College



Martin Kennedy  
MD  
Citi



Meredith Stowell  
VP, IBM Z  
Ecosystem  
International  
Business  
Machines  
Corporation



Paul Wade  
Rocket Software,  
Inc.



Peter Wassel  
Director, Product  
Management  
Broadcom  
Corporation



Phil Tully  
LinuxONE  
Engineering  
Operations  
Director  
Citi



Victor Giusto  
Sr. Director  
Technical  
Services  
Automatic Data  
Processing, Inc.  
(ADP)

# Technical Advisory Council (TAC) Representatives



Phil Tully  
**Chair**  
LinuxONE  
Engineering  
Operations  
Director  
Citi



Andrea Orth  
Scrum Master  
State Farm  
Mutual  
Automobile  
Insurance  
Company



Giancarlo Frix  
Senior Software  
Developer  
Rocket Software



Gregory  
MacKinnon  
Distinguished  
Engineer  
Broadcom  
Corporation



Joe Bostian  
Open Source and  
Analytics Architect  
International  
Business  
Machines  
Corporation



Lauren Valenti  
Head of  
Mainframe  
Education and  
Customer  
Engagement  
Broadcom  
Corporation



Mike  
Friesenegger  
Solution Architect  
SUSE Software  
Solutions  
Germany GmbH



Sean Grady  
Senior Software  
Architect  
Rocket Software,  
Inc.  
International  
Business  
Machines  
Corporation



Sudharsana  
Srinivasan  
IBM Z Influencer  
Program Manager



# Learn More About the Open Mainframe Project



- Discover and participate in any of our 17 hosted projects and working groups at <https://openmainframeproject.org/our-projects/>
- See the breadth of open source on the mainframe at [l.openmainframeproject.org](https://l.openmainframeproject.org)
- Take part in our upcoming events and webinars at [openmainframeproject.org/events](https://openmainframeproject.org/events)
- See the latest blog posts and news at [openmainframeproject.org/news](https://openmainframeproject.org/news)



# Why Become a Member?

Becoming an Open Mainframe Project member means your organization is...



- a leader in the open source on mainframe community
- wants to drive the technical vision of open source on mainframe
- a thought leader or aims to be a thought leader in open source on mainframe
- bringing solutions to market based on projects hosted at the Open Mainframe Project, and wanting to show your stewardship towards those communities

# Leverage Our Industry Presence to Advance Your Thought Leadership.

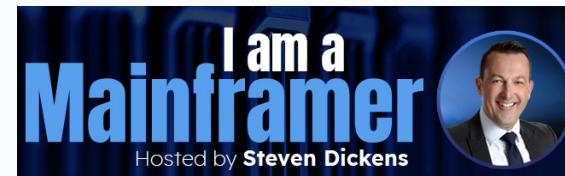
Through our large audience, extensive media outreach, and with key partnership with publications such as [Linux.com](#), [TFiR](#), [TechChannel](#), and [MediaOps](#), you will be positioned to be a thought leader in open source. Specific benefits include...

- Announcement of your membership via press release and social.
- Your company logo on both the [Open Mainframe Project website](#) and [Linux Foundation website](#).
- Guest blog post(s) on the [Open Mainframe Project blog](#) on a thought-leadership topics of our choice.
- Provide a guest for the "[I Am A Mainframer](#)" podcast, hosted by Steven Dickens and Open Mainframe Project
- Post one technical article about an open source project you care about to [Linux.com](#), which has over 1 million unique visitors per month.
- Support of your announcements with social outreach and quotes from Linux Foundation and/or Open Mainframe Project leadership as appropriate.
- Access to opportunities for contributed articles, videos, podcasts, and events



## TechChannel

## TFiR



9000+  
followers



4500+  
followers



1400+ global  
media articles  
in 2023



# Additional Event Participation Opportunities

- One invite to our member-exclusive [Linux Foundation Member Summit](#), which fosters collaboration, innovation, and partnerships among the leading projects and organizations working to drive digital transformation with open source technologies.
- Employees at your organization receive a 20% registration discount to eligible [Linux Foundation events](#), such as our Open Source Summit events in North America, Europe, and Japan.
  - Open Mainframe Project hosts mini-events for members and the community at these events.
- A 5% Discount on [Linux Foundation Event Sponsorship](#), including [Open Mainframe Summit](#) (7% discount on multi-event Sponsorships). Sponsorships offer a valuable way to reach the community of Open Source Developers, Engineers, C-level Executives, and more.



THE LINUX FOUNDATION





# Join the Zowe Conformance Program

Zowe Conformance Program enables vendors to showcase their offerings based on Zowe, as well as their capabilities in supporting Zowe end-users.

Zowe Support Provider Conformance Program gives vendors the ability to showcase their Zowe support competencies.

## Benefits

- Your offering and logo listed in the [Zowe Conformant offering directory](#) or [Zowe Conformant Support Provider directory](#) and showcased in Zowe outreach materials
- Exclusive branding marks to use in your product materials
- Participation in the Zowe Advisory Council (ZAC)
- PR announcement for new organizations providing offerings
- Post a guest blog post on your offering on the Open Mainframe Project and Zowe blog



## Fees are waived for Open Mainframe Project members

More details at <https://www.openmainframeproject.org/projects/zowe/conformance>

# Showcase Your Career Opportunities in Mainframe



- Showcase of Open Mainframe Project members who are hiring for mainframe positions
- Not a job board - links to each member's job listings

Careers in Mainframe

Are you looking to see where mainframe and open source skills can take you? Check out the many open opportunities from Open Mainframe Project members below for the next step in your career.

|   |   |   |   |
|---|---|---|---|
| <br>A more human resource.<br><a href="#">LEARN MORE</a> | <br><a href="#">LEARN MORE</a> | <br><a href="#">LEARN MORE</a> | <br><a href="#">LEARN MORE</a> |
| <br><a href="#">LEARN MORE</a>                           | <br><a href="#">LEARN MORE</a> | <br><a href="#">LEARN MORE</a> | <br><a href="#">LEARN MORE</a> |

<https://www.openmainframeproject.org/resources/careers>



# Host a Mentorship

Open Mainframe Project funds mentorships for students to bring new talent into mainframe through contributions to open source. These mentees have made huge impacts on hosted projects such as Zowe, Feilong, COBOL Programming Course, and more, as well as broad open source projects such as Alpine Linux, CloudFoundry, Kubernetes, and more.

Members can provide a mentorship and be a mentor, which is funded by the Open Mainframe Project. This provides a unique opportunity to find new talent.

Contact [mentorship@openmainframeproject.org](mailto:mentorship@openmainframeproject.org) if you are interested.



LFX is a toolkit built to add value to every aspect of open source development. LFX directly supports projects and empowers open source developers to write better, more secure code and grow sustainable ecosystems.



#### LFX Insights

You can't improve what you don't measure



#### LFX Security

Open source security is a shared responsibility



#### LFX Individual Dashboard

Measure your impact across the entire open source ecosystem



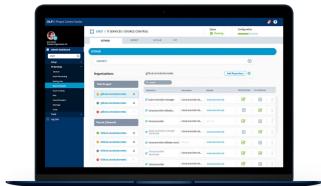
#### LFX Mentorship

Train future open source leaders



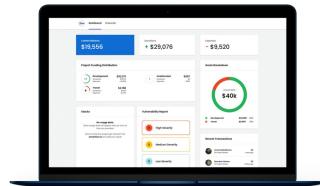
#### LFX EasyCLA

Don't let contribution policy disrupt development velocity



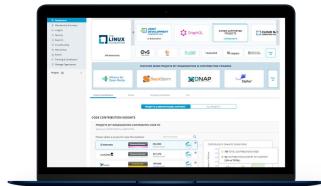
#### LFX Crowdfunding

Support the projects you depend on



#### LFX Organization Dashboard

The limited access beta will be launching mid 2021 for LFX Organization Dashboard.



#### LFX Project Control Center

The limited access beta will be launching mid 2021 for LFX Project Control Center.

### Additional tools include...

- LFX Member Enrollment
- LFX Landscape
- LFX Community Events
- LFX Training Portal

Learn more at [lfx.dev](https://lfx.dev)

# Maximize Your Open Source Investment with Training



THE  
**LINUX**  
FOUNDATION

Training &  
Certification

The Linux Foundation offers training and certification direct from the source, those contributing to the world's most important open source projects.

**As an Open Mainframe Project Silver or Platinum member, you are entitled to 10 vouchers for 100% any...**

- **LF eLearning Class**
- **Certification Exam**
- **eLearning+Certification Exam “Bundle.”**

The value is \$299+ per course.

# Improve Your Open Source Compliance and Practices



As a Linux Foundation member, your in-house counsel has access to the leading vendor-neutral resources in open source compliance, best practices, and training, along with peer collaboration. Specific benefits include...

- Your legal counsel's ability to participate in bi-monthly legal calls.
- One invite for your in-house counsel to [LF Legal Summit](#), which helps connect your counsel to their peers at other member companies and advance your organization's open source licensing, litigation, compliance, and best practices.
- Access to a complimentary membership to the [TODO Group](#), which is a forum for discussing best practices and approaches for establishing and managing open source program offices in organizations.
- Support from the vast expertise in the Linux Foundation in engaging with open source, and even starting your own open source project(s).

THE LINUX FOUNDATION

## Welcome to The Linux Foundation!

The Linux Foundation works with companies and communities to support the development of critical, sustainable open source projects. Companies and organizations join the LF in order to enable better collaboration among businesses and technical leaders in the open source community.

The LF also serves a key role as a neutral, collaborative forum for in-house counsel to come together and discuss legal matters relating to their development and use of open source. This welcome packet is intended to introduce your legal teams to some of the LF groups and resources that are available to them.

### LF Member Counsel

The Linux Foundation hosts recurring events for the in-house legal teams from LF members, including:

- bimonthly [member counsel calls](#), where the LF legal team discusses current topics facing our members and projects in their interactions with open source projects and communities;
- our annual [Legal Summit](#), where our members' legal teams gather for deep dives, presentations and workshops, and honest and frank debates on critical open source legal matters.

One point of clarification is that these events are for lawyers. It is acceptable to include someone else from your organization, but you must have a lawyer present as it will make other lawyers uncomfortable to participate with unrepresented individuals from other companies.

LF Member Counsel events are open to all of our members' legal teams, and are coordinated via mailing list. Please contact us at [legal@linuxfoundation.org](mailto:legal@linuxfoundation.org) to be added to the list.

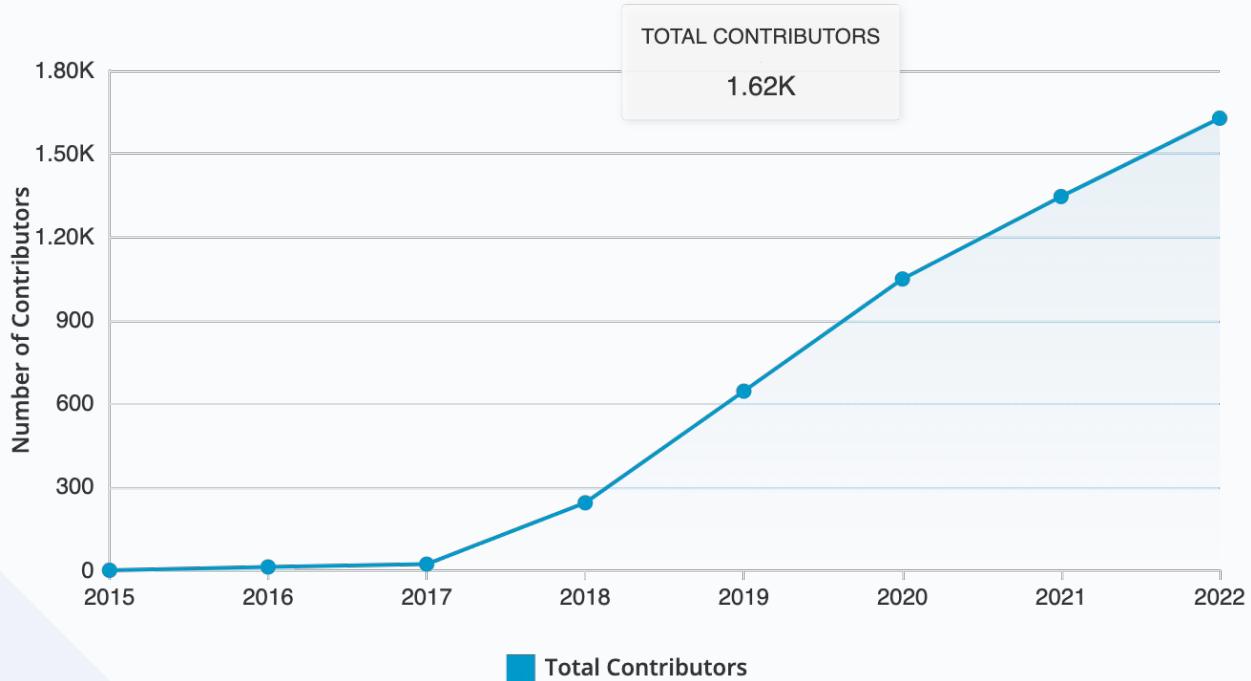
### Projects: Compliance, Licensing and Best Practices

|                                  |  |
|----------------------------------|--|
| ACT                              | <a href="https://automatecompliance.org/">https://automatecompliance.org/</a><br>Automating Compliance Tooling) seeks to improve software tooling for detecting and complying with open source licenses. Its goal is to improve the efficiency of open source compliance tools to enable compliance workflows that can be optimized for each company's unique build and release process.                             |
| OPENCHAIN                        | <a href="https://www.openchainproject.org/">https://www.openchainproject.org/</a><br>OpenChain defines the key requirements for an organization's open source compliance program. It establishes a conformance program where companies can self-certify to these requirements, with the goal of improving transparency and communication of compliance information across supply chains.                             |
| SPDX                             | <a href="https://spdx.dev/">https://spdx.dev/</a><br>SPDX (Software Package Data Exchange) is a specification for communicating Software Package Data in a standardized, human- and machine-readable format. It enables better communication of information, including license and copyright details, between organizations and interoperability between compliance tools.   |
| TODO                             | <a href="https://todogroup.org/">https://todogroup.org/</a><br>The TODO Group (Talk, Openly, Develop, Openly) is a forum where participants discuss best practices and approaches for open source strategy in their businesses. Participants include members of open source program offices and related teams, collaboratively addressing various strategic considerations interacting with open source communities. |
| COMMUNITY DATA LICENSE AGREEMENT | <a href="https://cdla.io/">https://cdla.io/</a><br>CDLA (Community Data License Agreement) is a pair of licenses that were jointly drafted by members of the LF Member Counsel Community. They define reusable license terms intended to better address unique issues that arise in open data collaboration.   |

# But Most Importantly, You Support Innovation



Our collaborative projects and working groups are successful because of the investment of members funding these initiatives.



Data through 12/31/2022. Source:

[https://insights-v2.lfx.linuxfoundation.org/open-mainframe-project/trends?selectedDateFilterType=CUSTOMDATES&startDate=Thu%20Jan%2001%202015%2000:00:00%20GMT-0500%20\(Eastern%20Standard%20Time\)&endDate=Sat%20Dec%2031%202022%2023:59:59%20GMT-0500%20\(Eastern%20Standard%20Time\)](https://insights-v2.lfx.linuxfoundation.org/open-mainframe-project/trends?selectedDateFilterType=CUSTOMDATES&startDate=Thu%20Jan%2001%202015%2000:00:00%20GMT-0500%20(Eastern%20Standard%20Time)&endDate=Sat%20Dec%2031%202022%2023:59:59%20GMT-0500%20(Eastern%20Standard%20Time))

# Drive the Direction of the Foundation Through Platinum Membership



Platinum members are the key stewards of the Open Mainframe Project, and as such hold key leadership positions in the various governance structures. Their investment is key to the sustainability of open source in mainframe.

Specific Benefits include:

- Voting seat on the Governing Board, TAC, and Marketing Committee, enabling the member to direct the strategic direction, budget, and priorities of the Open Mainframe Project.
- Host an Open Mainframe Project webinar and have a guest on the “I Am A Mainframer” podcast annually, if desired.
- Regular meetings to brief on project activities, and an annual membership check-in to review engagement opportunities and provide feedback to project leadership.
- First opportunity to participate and drive event and outreach opportunities, and the project will ensure partnership with Platinum Members in relevant events.
- Open Mainframe Project leadership will support Platinum Member events, internal open source program efforts, and be available for customer and prospect engagement.
- Additional training benefits through [LF Training](#).



# Corporate, Academic, Associate Membership Levels



| Level                | Annual Fee<br>Includes LF Silver Membership   | Board<br>Seat | TAC<br>Seat   | Marketing<br>Committee | Notes                                 |
|----------------------|---|---------------|---------------|------------------------|---------------------------------------|
| Platinum             | \$120,000   | Yes           | Voting        | Yes                    | Initial 2-year participant commitment |
| Platinum<br>End-User | \$30,000  | Yes           | Voting        | Yes                    | Initial 2-year participant commitment |
| Silver               | 5,000 employees or more = \$50,000<br>2,000 < 5,000 employees = \$35,000<br>1,000 < 2,000 employees = \$30,000<br>500 < 1000 employees = \$25,000<br>100 < 500 employees = \$15,000<br>< 100 employees = \$10,000 | 1 per 10      | Non<br>Voting | Yes                    |                                       |
| Academic             | Free  | 1 per 10      | Non<br>Voting | Yes                    | Restricted to academic institutions   |
| Associate            | Free  | No            | Non<br>Voting | Yes                    | Non-profits, open source projects     |

To join Open Mainframe Project, go to <https://www.openmainframeproject.org/about/join> or email at [membership@openmainframeproject.com](mailto:membership@openmainframeproject.com)

Listed fees include Linux Foundation Silver membership. If you are already a Linux Foundation Member, reduced pricing is available.



# Thank You!

