



ANNUAL REPORT 2023

# Open Mainframe Project Annual Report

[www.openmainframeproject.org](http://www.openmainframeproject.org)



# Table of Contents

3	Letter from the Executive Director	28	Creating a Thriving Multi- Generational Workforce
4	Governing Board	28	Fostering Inclusive Work Environments for the LGBTQIA+ Community
5	Technical Advisory Committee	28	Opportuniities for All
6	Marketing Committee	29	Addendum
7	Project Updates	29	I am a Mainframer Podcast
8	Active Projects	29	TFIR videos
12	Incubation Projects	30	Open Mainframe blogs
17	Working Groups		
20	Open Mainframe Summit		
20	Mentorship		
20	Ambassadors		
26	Diversity		
26	Black History Month (February)		
26	Women's History Month (March)		
27	Asian American and Pacific Islander (AAPI) Month (May)		
27	National Hispanic Heritage Month (September 15 to October 15)		
27	Making Our Strong Community Stronger		



A note about the images in this Annual Report:  
All images in this book are sourced from [Linux Foundation Flickr](#), [Unsplash](#), [Pexels](#), and [Stocksnap](#).  
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# Letter from the Executive Director

## Open Mainframe Project Community



As 2023 comes to an end, we reflect on our growth and achievements as open source continues to make a huge impact on the mainframe industry. We had more than 2,100 contributors and 95,000 commits to Open Mainframe Project hosted projects this year. Zowe continues to gain adoption with [nearly 40% of mainframe customers leveraging Zowe, according to the Arcati Mainframe Yearbook](#). Additionally,

we welcomed [Galasa](#) as a new project, which signals that there are more opportunities for open source in the mainframe ecosystem.

One question that many mainframe customers and vendors have is how our projects are valuable to their bottom line. The answer is pre-competitive, leveraged development. I see this in other horizontal and vertical markets with huge success stories.

[Automotive Grade Linux](#) formed to bring together automakers and their supply chain on a common platform. [Academy Software Foundation](#) hosts the common projects that all the major studios leverage for visual effects in the movies. The list goes on and on, and it shows that when an industry can work together to build the common pieces of their software stack that aren't differentiating, the result is higher quality, lower cost, and more secure. Look for more to come in 2024 as this theme is further explored.

I hope you enjoy this annual report, to see the continued progress the Open Mainframe Project is making to ensure a sustainable future for mainframe.



# Open Mainframe Project Governing Board:

Governing Board is charged with ensuring transparency across our community, stability across our ecosystem and financial viability for our umbrella project. They also play an incredibly important role in helping us plan for the future in a fast evolving market. It is composed of members both appointed and elected on a yearly basis per the charter.

Thank you to the Open Mainframe Project Governing Board members for their strategic guidance this year.

## GOVERNING BOARD



**Alan Clark**  
CTO Office at  
Suse LLC



**Cam Seay**  
Instructor at East  
Caroline University



**Harry Williams**  
CTO at Marist  
College



**Jeff Cherrington**  
VP, Product  
Management, Systems  
at Rocket Software, Inc.



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



**Martin Kennedy**  
Managing Director  
at Citi



**Meredith Stowell**  
VP, IBM Z Ecosystem  
at IBM Corporation



**Peter Wassel**  
Director, Product  
Management at  
Broadcom Corporation



**Phil Tully**  
LinuxOne Engineering  
Operations Director  
at Citi



**Victor Giusto**  
Sr. Director technical  
services at Automatic  
Data Processing, Inc.  
(ADP)

# Technical Advisory Council (TAC)

The Technical Advisory Council (TAC) is responsible for oversight of Open Mainframe's technical communities, including approving new project proposals, updates for project lifecycle changes, establishing community norms, workflows, or policies that are not within the scope of any single project, and resolving technical matters that affect multiple projects. Additionally, the TAC manages the Open Mainframe Project Ambassador Program and Mentorship Program.

We'd like to thank the TAC for all their guidance and support this year.

## TECHNICAL ADVISORY COUNCIL



**Andrea Orth**  
Scrum Master at State Farm Mutual Automobile Insurance Company



**Giancarlo Frix**  
Sr. Software Developer at Rocket Software



**Gregory MacKinnon**  
Distinguished Engineer at Broadcom Corporation



**Joe Bostian**  
OS and Analytics Architect at IBM Corporation



**Lauren Valenti**  
Head of Mainframe Education and Customer Engagement at Broadcom Corporation



**Mike Friesenegger**  
Solution Architect at Suse Software Solutions Germany GMBH



**Phil Tully**  
Chair, LinuxOne Engineering Operations Director at Citi



**Sean Grady**  
Sr. Software Architect at Rocket Software, Inc.



**Sudharsana Srinivasan**  
IBM Z Influencer Program Manager at International Business Machines Corporation

# Marketing Committee

The Marketing Committee seeks to create awareness of open source on the mainframe, advocate for the hosted projects and technical initiatives, and build the Open Mainframe Project brand. All corporate members are invited to participate in the various events and campaigns produced.

## MARKETING COMMITTEE



**Donna Hudi**

Chief Marketing Officer  
at Phoenix Software  
International



**Jeanne Brooks**

WW IBM Z & LinuxOne  
Community Leader at IBM  
Watson Health



**Lacey Darrow**

Senior Global Public  
Relations Manager At  
Rocket Software, Inc.



**Rick Perret**

Head of AR and Open  
Source Marketing at  
Broadcom Corporation



**Stacey Miller**

Chair, Senior Product  
Marketing Manager at  
Suse LLC

# 2023 Project Updates

Open Mainframe Project hosts critical projects that make a positive impact for the global mainframe Infrastructure. Projects are split into three levels - active, which consists of a stable community and technology adoption or usage in production environments; incubation, which allows for community exploration and launch of different ideas, codes, infrastructure; and sandbox, which is early stage projects and work that is building early consensus and scope for the work to be done.

## ACTIVE PROJECTS



## INCUBATING PROJECTS



## Sandbox Projects



# Active Projects



## Bridging the Skills Gap with the Open Mainframe Project's COBOL Programming Course

Written by **Michael Bauer**, Co-chair of the COBOL Programming Course and Software Engineering Supervisor at Broadcom; and **Sudharsana Srinivasan**, Co-Chair of COBOL Programming Course and IBM Z Technical Enablement Manager



### An Established Presence

COBOL running on mainframes continues to be responsible for the often unseen operation of the world's economy. Financial institutions, insurance companies, retailers, and government entities rely on these systems for their reliability, availability, security, scalability, and performance.



Despite its pivotal role, COBOL faces a generational skills gap as many experienced programmers retire. Recognizing this challenge, the Open Mainframe Project has launched and continues to drive forward a [COBOL Programming Course](#) with a mission to:

- Attract the next generation of learners to add COBOL to their tech toolkit
- Improve the learning experience through modern tooling
- Create an enthusiastic community of learners

The course stands out by offering practical experience to learners through hands-on labs on z/OS. By enabling developers to effectively learn COBOL, the program not only helps to ensure that mission-critical applications continue to run smoothly but also opens up career opportunities in an area where demand for skilled professionals exceeds supply.

We encourage you to try our latest course, available on [GitHub](#), and join our community of over six thousand learners on the #cobol-programming-course channel on the [Open Mainframe Project Slack!](#)



### A Year of Collaboration

In 2023, we owe most of our progress to our collaborations with our learners and other Open Mainframe projects. Community members continue to collaborate and help each other, which really makes this initiative viable. Therefore, we'd like to say THANK YOU to everyone who helped someone with COBOL this year!

We also enhanced our course by adding a new chapter on testing. This addition can be attributed to a partnership with the Open Mainframe Project's [COBOL Check project](#) in combination with the [mentorship program](#). We'd like to thank Rune Christensen of COBOL Check and our mentee Ashis Kumar Naik for his dedication in contributing this content. I'd also like to commend fellow Technical Steering Committee (TSC) members Sudharsana Srinivasan and Hartanto Ario Widjaya for their review and oversight on this initiative. You can try out this new course now by accessing our [latest release](#).

We also continue to collaborate with members of [Zowe](#) as it plays a critical role in enabling the hands-on labs in the COBOL course.

## The Path Forward

In 2024, the TSC of the COBOL Programming Course project would like to expand the course to contain more CICS content. CICS stands for Customer Information Control Systems and is a powerhouse of a transaction processing subsystem on z/OS. We are certainly seeking experts in the field to contribute to both the educational content as well as the hands-on labs.

As the [Broadcom donated z15](#) system comes online, we would like to enable our hands-on labs to be completed on this Open Mainframe Project system. Access to this system will better enable us to include hands-on labs involving CICS and continue to build and execute on a strategic roadmap that is focused on learner experience.

You can also influence our direction by opening requests in our GitHub, such as [this request](#) to add content around COBOL Communication with Java Methods. You can view our high-level roadmap [here](#). If you are able and willing to contribute to any of these initiatives, please reach out.



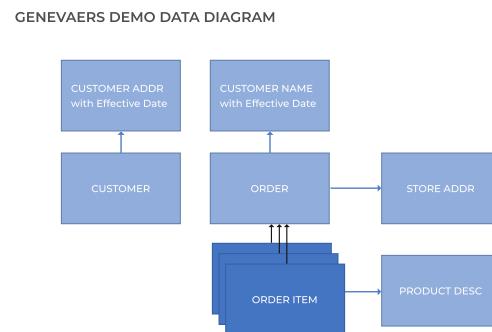
Written by  
**Andrea Orth**, Chair  
of GenevaERS

## Automation

In 2023, [GenevaERS](#) published the open source code to GitHub. New automated build processes were created for the GenevaERS mainframe batch engine and the GUI. One build process can create GenevaERS or the commercial offering called SAFR. The GUI build process has a new option to build the initial Postgres metadata repository. In addition, the GUI is no longer exclusive to Windows as support for Ubuntu Linux and Mac was added this year.

The new automation allows an organization to build the GUI and batch engine themselves.

In 2023 a new testing framework was created to automatically run test cases. A new feature was added to run the framework on USS instead of locally.



## Project maturity

The project has a proposed release roadmap for future versions of the GUI and batch engine and is exploring the features in GitHub projects to manage the work for each release.

A new committer joined the project. This is the first committer not affiliated with an organization using GenevaERS or IBM.

## Research and development

The project worked with an organization to determine if GenevaERS can be extended to read data stored in an Adabas database. A read extension was created as a proof of concept (POC) and successfully read and processed data from Adabas.

A second research effort created a java program that mirrors a GenevaERS built demo view. The java program was called during the GenevaERS batch process and successfully read data and produced output that matched the demo view.

## Documentation

Work completed on converting and ingesting existing documentation into a GitHub / Jekyll powered website.

## Development

Implemented an alternative indexing method for in-memory lookups. Alongside the original binary tree method there is now an option for using hash tables that is parameterizable. For different types of data - different data sizes, different key sizes - one method may be more efficient than another. We also added support for alphanumeric strings that are greater than 256 bytes and an alternative method for reading from DB2 using the DB2 unload utility.

The first milestone to replace the current zO/S MR91 was met with a new java MR91. The feature set in Java MR91 will expand in 2024 with the goal of completely replacing the current MR91 and merge the functionality into the GUI.

The advanced debugging capabilities available after a run of MR91 went through multiple iterations to fix defects and add more user-friendly outputs.

## Goals for 2024

- Meeting with at least 3 organizations to discuss what they look for in a solution.
- Fully support reading ADABAS. Experiments running a java program in the batch process have been on zO/S, we want to run tests on zLinux and compare the metrics to zO/S. This includes an install from an organization not currently using GenevaERS.
- Update our documentation so it accurately reflects the current state of GenevaERS.



## Mainframe Open Education Increases Awareness & Recognizes Contributors Through Credentialling

Written by **J.J. Lovett**, Member of the Mainframe Open Education Core Team and Education & Customer Engagement, Mainframe Division at Broadcom



The [Mainframe Open Education \(MOE\)](#) Core Team continues to raise awareness of the crowd source education movement in several key areas – thought leadership, social media, and recognizing community member contributions through badging and credentialling.

Core Team members have participated in working sessions and presentations across industry and community events throughout the year. Recent events include:

- SHARE New Orleans in August 2023 (Meredith Stowell, VP Ecosystem at IBM; Neal Cash, Sr Manager Vitality Program at Broadcom) – a working session on evaluating education needs.
- Open Mainframe Summit in Las Vegas, NV (Meredith Stowell, VP Ecosystem at IBM) – a presentation on the research completed by

MOE member Paul Newton (IBM) on the various roles and career paths throughout the mainframe ecosystem.

- Techstrong.tv episode of The Open Mainframe: Hosts Alan Shimel and John Mertic are joined by leaders J.J. Lovett (Broadcom), Viviane Sanches (Kyndryl), Paul Newton (IBM) and Tiiso Senosha (Open Mainframe Mentor) to provide an overview of the Mainframe Open Education advancing to a full project for Open Mainframe Project as well as the new credentialling effort.

These efforts have advanced the effort alongside new social media campaigns launched in partnership with Open Mainframe Project, as well as Core Team member's organizational social media teams – highlighting contributions by educators and vendors throughout the community. The mainframe is a tightly knit community and very well connected. Being able to share information openly through social media fits right alongside the sharing of education through open source.



Badging and credentialing are finally here alongside many other Open Mainframe Project badges via Credly. There are three levels of badges for contributions, starting with the MOE Contributor Level 1 badge. Level 1 is awarded for creating content related to Mainframe foundational concepts within the MOE Gitbook courses. This is a very exciting moment for MOE and the Core Team to be able to provide recognition to those embracing the open sharing of the community's tomes of knowledge and experience.

In 2024, MOE is anticipating in bringing new Core Team members to expand and round out the skill set the program brings to the table, another round of content contributions, research effort; content assessments, as well as more community engagement in person at events as well as online.

We want to thank current core team members for all of their support:

Lauren Valenti (Broadcom) - Project Leader

- Viviane Sanches (Kyndryl)
- Mark Baron (Kyndryl)
- Paula Ramos (Kyndryl)
- Tiiso Senosha (IBM)
- Paul Newton (IBM)
- Bob Dahlberg (Virginia Commonwealth University)
- Neal Cash (Broadcom)
- Nanxi Meng (Broadcom)
- Mark Vogler (Broadcom)
- J.J. Lovett (Broadcom)

To learn more about Mainframe Open Education, how to contribute or how to help the overall effort in many other ways, please reach out to [J.J. Lovett](#).



## Zowe's Impact in 2023: Growth, Development & Future Prospects

Written by **Jakub Balhar**, Chair of the Zowe Technical Steering Committee and Staff Software Engineer at Broadcom



In 2023, [Zowe](#) marked significant milestones in its journey as a pioneering open-source project tailored for the z/OS platform. Here's an overview of its achievements and future direction.

### Zowe by the Number



252680

Zowe CLI Downloads



645K

Zowe Explorer Downloads



7431

Zowe z/OS Downloads



720

Contributors



75

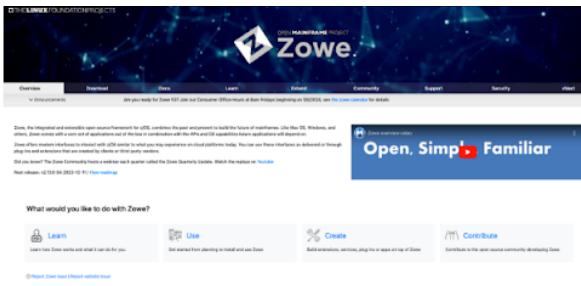
Zowe Conformant Products

## Impressive Growth Metrics

- VSCode Explorer Usage: Achieved 100,000 unique users and over 600,000 downloads.
- CLI Tool Downloads: Surpassed 250,000.
- Server Side Distribution: Nearly 7,500 downloads.
- Market Adoption: The Arcati Yearly Report, a respected source for z/OS market data, reveals that approximately 70% of z/OS users plan to adopt Zowe, with 40% already utilizing it.

## Enhancements and Learning Curve

- Installation and Configuration: While significant improvements were introduced with Version 2, the Zowe Team acknowledges the need for capabilities that would offer an experience familiar to the majority of z/OS Systems Programmers.
- Team Composition and Learning: The Team, comprising both distributed-world experts and z/OS veterans, is actively listening and adapting to community feedback.
- Documentation and Implementation: Emphasis on simplifying installation and configuration documentation has been a primary focus, consistently addressed in each roadmap planning iteration (PI).



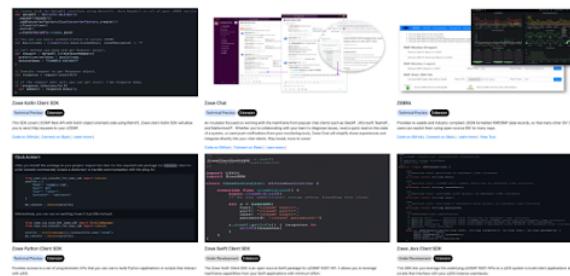
## Website Revamp and Community Engagement

- New Website Design: [zowe.org](https://zowe.org), the community-led website for the project, received a makeover for a better user experience, featuring updates on news, events, and ongoing projects. The projects include collecting Zowe Consumer feedback through the Question of the Month.
- Community Growth: Welcomed two new active squads – the zOS Squad and IntelliJ Squad, contributing significantly to key projects. The zOS Squad, responsible for ZSS and Launcher, has brought these projects into the limelight. We also invited a new Comprehensive Support Provider (Rocket) into the community of support providers.
- Involvement in z/OS focused Events: Zowe was active in presentation of sessions across the major z/OS events such as Share, OMP Summit on Open Source in Finance, GSE UK and IBM TechXChange
- Quarterly webinars: In an effort to summarize

Zowe Community activities as well as insights into new capabilities & components, the Onboarding squad with the help of the remaining squads published four quarterly webinars. There are plans for four more in the coming year.

## Looking Ahead to 2024

- Release of Zowe Version 3: This major release confirms Zowe's maturity, featuring fewer breaking changes compared to the transition to Version 2. To learn more visit [vNext](#).
- Explorer for IntelliJ: An extension for the IntelliJ Suite of IDEs, reaching Long-Term Support (LTS) status and set to become a core component of Zowe.
- Client Side SDKs Expansion: The addition of Kotlin and Java SDKs, while not yet core, significantly simplifies interactions with z/OSMF APIs. Similarly the growing maturity of the Python SDK, we hope to get it to GA state within the next year. A conformance program for SDKs is in the works to ensure consistency across languages.



## Conclusion

2023 has been a year of significant progress and learning for Zowe. With its growing adoption and continuous enhancements, Zowe is poised to play an even more pivotal role in the z/OS ecosystem in 2024 and beyond. If you are interested in more details about the future direction consult our [roadmaps](#).

## Incubation Projects:



Written by **Joe Bostian**, Ambitus lead and Senior Technical Staff Member at IBM



One of the hardest things about starting an open source project is building and maintaining a robust community. While this is less of a problem for large projects like deep learning frameworks or databases that attract corporate involvement, how does someone with a project that's smaller in scope get established?

[The Ambitus project](#) under the Open Mainframe Project is meant to be a place for people with good ideas to establish their projects in a common location rather than being scattered and lost in Github or Gitlab. These are projects that aren't large enough to be independent efforts under the Open Mainframe umbrella, so Ambitus is an incubator of sorts to help open source developers get started.

This past year, the Ambitus community spent a good deal of time creating a Python API to RACF on z/OS. They have structured their interface in such a way that it can be easily extended to other mainframe authentication backends to be vendor-neutral. There are other sub-projects available that contain useful utilities and tools for automation and simplified operation of z/OS. These include the control block explorer, and pyzkiln - a set of python code that serves as a collection of building blocks for larger efforts.

Next year we have two main objectives:

- Extend the work of our current efforts and implement some new ideas that the team has for improving the integration of z/OS with common open source automation infrastructure. This will include the zTron project, which has been dormant for the last couple of years.
- Perform our build/test on the system image(s) available from the Open Mainframe Project. This is intended to further enhance our team collaboration and serve as an example for users new to the mainframe development

environment.

We believe the Ambitus project is an important part of the mainframe open source ecosystem by helping new users to gain traction to bring their ideas to the mainframe environment.



## CBT Tape - A proven track record of contributions

Written by [\*\*Sam Golob\*\*](#), lead for CBT Tape

[The CBT Tape project](#) has a proven track record of maintaining “software tool” contributions written by systems programmers and others from all over the world. It’s the same kind of stuff, done over and over, with different materials. These tools make it much easier for programmers to work on IBM’s z/OS operating system and do their daily tasks. Our tools are used by thousands of z/OS installations around the world, and collectively, they save these installations millions of dollars, and thousands of hours of programmer staff time. All our tools are distributed for free, at our website, [www.cbttape.org](http://www.cbttape.org).

### CBT V506 Final Version - Dec - 05 - 2023

The files are all packaged into PKZIP® and are in EBCDIC, as you download from here, unstrip, [upload as Binary](#) (No EBCDIC to ASCII translation) to your mainframe to an [F101](#) data set. Sequential files are suffixed .DATA and are ready to use after being uploaded (again as Binary). File 1 through 5, and 7, are the only files always not packaged with XMIT. Files suffixed .XMI and are in XMIT format so you will need to do a TSO command RECEIVE INDATASET(?) where ?? is the file name to transform it back to usable POS or sequential file. You will need a utility to unzip (decompress) the ZIP files and I suggest either [7-Zip](#) (free), WinZip, or WinRAR.

For [latest version](#) of files that have been updated since the last tape version, please check the [Updates](#) page. It is advisable to check the [Updates](#) page BEFORE you check this page for the file number that you want, just to make sure you get the latest version of the code.

Need more help? Having Trouble? See our [download instructions](#).

File 1 on both the CBT and Overflow (COV) is a complete index and guide to what is on the tape so if you do not already have file 1 for the current version of the tape you will probably want to download it first. It is available below in several formats so you can use the one that is most convenient.

[File001\\_DIRECTORY](#) Download EBCDIC compressed ZIP format for use on MVS [src](#)

[File001\\_DIRECTORY](#) Download ASCII compressed ZIP format for use on PC [src](#)

Download [Mington Magazines in PDF format](#): zlx, cics, db2, mvs, mpp, rcf, smi [src](#)

[View File 1 here as ASCII text](#). This is uncompressed .TXT which is very large so use one of the ZIP versions if you can.[src](#)

[View TAPEMAP in ASCII](#) [src](#)

[View changes to CBT since last tape ASCII text \(excerpt from File 1\)](#) [src](#)

We have done this same thing for 48 years, and I have been in charge, myself, of our effort in doing it, for over 33 years. This year we have processed several hundred contributions, and added them to, or used them to modify, our total collection.

It is the same every year, hopefully, with different contributions and different contributors.

Additionally, we also try to fix old tools to make sure that they work on IBM’s current operating systems.

For 2024, the team is working on a side/sub project to mirror the [cbttape.org](#) files to github at [github.com/cbttape](#). Progress is being made and the hope is that in 2024 it will be completed providing our users with another avenue to access the ‘tape’.



Written by **Louisa Seers**, Chair of the Galasa Technical Steering Committee and Product Manager at IBM

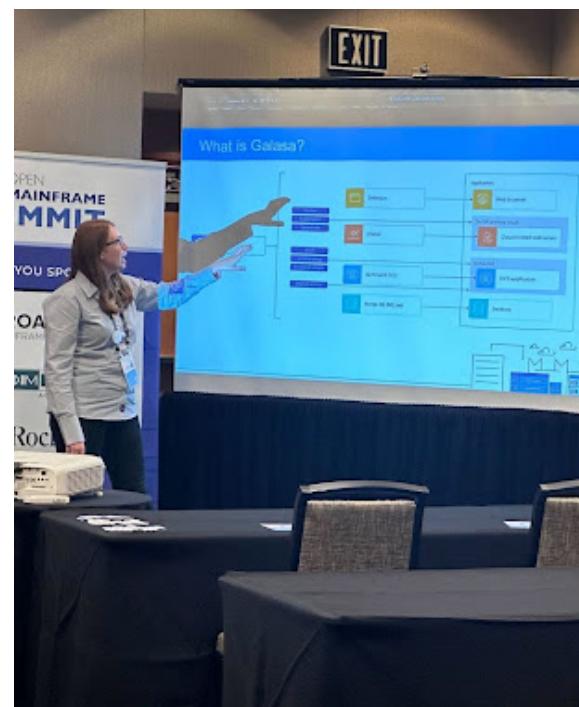


It has been a whirlwind year. I joined the [Galasa](#) team in January to look at how we can gain adoption by the [Open Mainframe Project](#) to gain better governance and, most

importantly, find the right home for Galasa. Through research and team conversations, we felt the Open Mainframe Project was the right place, as their mission is to enhance the quality, reliability and availability of Mainframe systems, and the adoption of modern development methodologies, which Galasa supports. The process to gaining adoption by the Open Mainframe Project was to gain a sponsor from the Technical Advisory Committee (TAC), and present at one of their monthly meetings to gain approval from the voting members. With IBM's Joe Bostian as our sponsor, in April, Will Yates and I presented to the committee and got an overwhelming vote of approval – we had finally made the crucial step towards adoption!

The next step was to organize the Technical Steering Committee (TSC). We had our first open meeting in June and, as we hadn't been fully announced, it took a little bit of time for us to get up and running. I was elected as Chairperson

and luckily, we have a great team – Mike Cobbett presented the technical roadmap that had been created before being adopted, and we have Michelle, Dom, Venkat, and Petr to represent other organizations interested in steering the project in the right way; it felt like we were finding our feet. Having an open source project is like starting with a blank page and thinking, how do we start to gain attention and traction so that people know we exist? How do we make it as easy as possible for people to join us?



When we announced Galasa in September ([here](#)), I was full of excitement. We gained sessions at the Open Mainframe Summit, part of the IBM TechXchange conference. I got the

opportunity to present on the Keynote and a Galasa 101 talk as part of the agenda which was my first time attending a conference to speak, so I gained a lot of new experiences in a short space of time. By September, we had gotten into the flow of running TSC meetings in public, and we created the project structure: the iteration planning (fortnightly), scrum meetings (thrice weekly), and retrospectives (every 6 weeks) – for the calendar click [here](#). For me, this felt like the opportunity to start thinking longer term, I had the opportunity to think less about how we fight the immediate fires of getting ready, and more about how we drive towards the future.

October and November seemed to pass by incredibly quickly, as we were moving the Galasa infrastructure, building more enhancements for the CLI capability, and helping publicise through videos, blogs, and conferences such as GSE UK. Watching Michelle and Jade present in person at GSE UK was phenomenal, because it felt like the open source project was gaining traction. Although they had done those presentations before, I was able to sit and watch the audience reaction, which made it even more real.



In November, we received great news - Galasa was recognized as "Most Innovative Open Source Project" in [DevOps.com's DevOps Dozen awards](#).

Building up to the year full of achievements, Will and the team have put in years of effort, architecture, development, and thought into getting Galasa into the brilliant place where the project can now live under the right governance and home with the OMP. For now, there are three things we want to accomplish: gaining new contributors; attracting and looking after users; and building a version 1. This will allow us to be more sustainable as a project and continue to help automate testing and make developing on the mainframe a better experience for those that do it every day.



## Software Discovery Tool 2023 Year in Review

Written by **Elizabeth Joseph**, Software Discovery Tool Lead and Global Head of the Open Source Program Office for IBM Z



[The Software Discovery Tool](#) provides a web interface that allows developers to search for open source software packages available for the

mainframe across various Linux distributions and several IBM z/OS related open source initiatives.

One of the biggest challenges with this project has been that as we add more Linux distributions to the tool, it became slow. In production, this meant we could only load a subset of the files that are maintained, and ultimately we needed to rewrite the back end.

In the summer of 2022, Arsh Pratap joined the project as part of the Open Mainframe Project Mentorship Program and developed a prototype of a SQL-based back end. This year we welcomed Arsh back as a mentor, and he guided our newest mentee, Prince Singh, through the process of turning that prototype into production code. By the end of August this year, the work was completed and it was put into production. The tool residing at <https://sdot.openmainframeproject.org/> is now significantly faster, and being in a relational database opens the door to endless optimizations moving forward as the tool continues to mature. Prince has written about his experience implementing the SQL back end, and with the Mentorship Program in general, here: [Empowering Open Source: My Journey with the Open Mainframe Project's Software Discovery Tool](#).

This year we also decided to tackle the User Interface (UI), and our other mentee for the summer was Aashish Khatri, whose background in UI was key to this goal. The current UI for the tool is functional, but again, as the tool grew to include more back ends, it quickly became trickier to navigate in a swift and useful manner,

especially when searching multiple sources at once. Aashish was able to bring fresh eyes to the project and spent time learning about the users and use cases to come up with proposals for a redesign of both look and feel, and how the tool actually functions and displays results.

By the end of the summer, he had a mock-up with code to go along with it proposed to the project! He also took time to share his process and rationale for various design decisions in this blog post: [My Software Discovery Tool – Frontend Mentorship](#).

The screenshot shows the homepage of the Software Discovery Tool. At the top, there's a navigation bar with links for 'about', 'blog', 'contact', and 'documentation'. Below that is a search bar with two input fields: 'Search Packages' and 'Search Exact'. The main content area has a heading 'Packages From Any Source Any Repository In One Place.' with a cartoon illustration of a person reading a large book. Below this, there's a sub-section with the text 'Discover Open Source Packages For ZArchitecture/S390x On Any Z Operating System In One Place.' and a link to 'Discover Open Source Packages'. At the bottom, there's a section for 'SUPPORTED FOR:' with icons for various operating systems and distributions.

## Onward to 2024!

In 2024, we're seeking to implement the front-end developed by Aashish and to finalize documentation changes that need to be made to support the new SQL back-end. We're also refocusing some of our efforts on z/OS-related open source, by implementing procedures for keeping the back-end sources more up to date. This will include splitting the z/OS-based sources out into categories based on where developers can find them, whether it's a tool from [CBT Tape](#) or the [z/OS Open Tools project](#), or one of the various other places we've found open source tools for z/OS. The team is thrilled by the value the tool has brought to the community as folks search across distributions for supported applications, and looking forward to expanding this even more.



Written by **K Jijo George**, Lead for Tessia and Linux Systems Engineer at IBM Germany Research & Development GmbH



It has been 3 years since [Tessia joined Open Mainframe Project in 2020](#), in the meantime the team here has gone through various overhauls with new initiatives

and collaborations going on in parallel. The Tessia user base and projects hosted on our internal instance has seen a steady growth over the previous year with new projects and users added year on year.

[Tessia](#) is an open-source project for IBM Z resource management and automated installation of Linux distributions. It is used to manage the relationships between Z datacenter resources and allocates them to specific projects and users according to a role-based schema. Using these defined resources, Tessia can then be used to easily deploy Linux distributions from a repository, such as a mounted ISO image obtained from distribution partner on any of these hardware resources using a simple command.

It uses HMC API to control LPARs, s3270 terminal for z/VM and virsh to manage KVM-based installations. A distro is installed with “automatic installation” mode, Tessia provides customizable templates to fine-tune the installation process. In addition, Tessia also supports in task automations by running Ansible playbooks on installed systems. All the jobs which are executed using tessia be it power management, installation, ansible tasks are managed using a scheduler internally to avoid any form of resource conflicts.

Tessia can be included into existing CI/CD pipelines and be integrated together as a part of a continuous release process. It enables testers and developers to effortlessly bring up their environments with various distros

and hardware configurations and try out new releases and changes over multiple setups. Overall, it improves experience with Linux on Z by automating the tedious hardware interactions and simplifying the install process, which in turn facilitates faster adoption of open source on Z platform.

Our users have been a strong driving force for us over the past year with their valuable inputs on the new features that they would like to see with tessia. While we cannot work on all those changes simultaneously, we try to align our new development activities in line with their recommendations so that we can deliver to the users what they need.

This year, we focused on developing and maintaining the existing Tessia internal service environment and worked on the new version of Tessia which uses a mesh-based architecture. Additionally, we also received multiple contributions from external contributors in the form of technical support with fixes and improvements.

The core team also achieved 3 releases focused on:

- Improved support for subiquity installer for Ubuntu
- Updated logging and check

- Increased support and changes for new distros
- Bug fixes and improvements in baselib communication
- NVMe support for LPAR

We are excited about the milestones we met this year and look forward to more technical achievements. Our roadmap includes:

- Tessia User support and management
- Continue with Agile
- Ideas with OCP and other integrations
- Development activities
  - Add new H/W Support
  - Support new distributions – changes on Ubuntu and SUSE
  - Tessia-mesh development activities



We have also been able to present our work at multiple internal events and also on [TFIR's Mainframe Matters](#), thanks to the support of Open Mainframe Project. We hope to continue

this development and growth in the year 2024. Finally, I would like to thank my whole team who have worked on various aspects to tessia over the past year, as it's the results of their hard work and dedication which I get to present on various stages.

Feel free to reach out to the team if you have any questions or would like to work with us on any new, challenging and innovative ideas.

## Working Groups

Working groups are non-code collaborations that explore a particular topic or create a cross-collaboration between projects, with a defined purpose and scope. Open Mainframe Project is currently home to the [COBOL Working Group](#), [Linux Distributions Working Group](#) and [Modernization Working Group](#). In this section, we are highlighting the Linux Distribution Working Group for all of the milestones they achieved.



### Linux Distributions Working Group 2023 Year in Review

Written by **Sarah Julia Kriesch**, Co-Chair of the Linux Distributions Working Group and Lead IT/

OT Engineer at Accenture DACH and **Elizabeth Joseph**, Co-Chair of the Linux Distributions Working Group and Global Head of the Open SOurce Program Office for IBM Z



The Open Mainframe Project [Linux Distributions Working Group](#) brings together representatives from several Linux distributions to collaborate on issues, resources, and technical planning for development on the s390x architecture. To satisfy this goal, the team collaborates via [our mailing list](#), and [monthly meetings](#) where shared issues and news are raised, discussed, and solved, as needed.

This year, we had active contributions from contributors of SUSE Linux Enterprise Server, Red Hat Enterprise Linux, Ubuntu, openSUSE, Fedora, Debian, Rocky Linux, and AlmaLinux. We expanded the group to invite others who are closed to the Linux on the mainframe community, including Berthold Gunreben from GSE Linux and z/VM Working Group, and Vignesh, who contributes to several different open source projects that have a logical home on Linux on the mainframe, and Kuriakose Jijo George from the Tessia project. With that, we have achieved the goal to also include Open Source Contributors from upstream projects (related to s390x).

AlmaLinux and Rocky Linux have joined using [openQA](#) for automated tests. AlmaLinux has added tests for Red Hat KVM for s390x into the openQA repositories, which you can read more about here: [AlmaLinux Contributes to OpenQA Project, Adds Additional Architectures Support, New Features.](#)

In October, we launched a new web forum on the [Open Mainframe Project's Discourse site specifically for Linux on s390x](#), responding to feedback from the community that participation in mailing lists was a bit difficult UI-wise for some contributors. The new forum can be found here: <https://community.openmainframeproject.org/c/linux-s390x>

We held 8 “monthly” meetings in 2023, and discussed a variety of topics, including:

- [Device interrupts for virtual card readers that were ignored by the kernel](#) (patch in the works!)
- [Expanded D language support](#)
- Possible shared customer/client implementations or requirements around DPDK to garner more resources
- .NET 7 availability being worked on by multiple distributions (started with RHEL)
- Additional support for Debian with CI/CD integration in the IBM LinuxONE Open Source Software Cloud
- Libcds/firebird: First time, that the package build for s390x is successful on openSUSE

- [Frame pointer option enabling](#) (already forwarded and approved with some changes)
- Ongoing fixes for [Redpanda](#) support
- [OpenMPI build errors](#)
- Issues with btrfs-progs which have [now been fixed upstream](#)
- Neovim LuaJIT support [not activated for s390x](#) upstream
- WebKit: [Crashes and infinite recursion in JSC::LLInt::CLoop::execute](#) on s390x
- [Zeek packaging for Fedora](#)
- openSUSE: Progress on [Enablement of python-onnx for AI on Telum processors](#)
- Increasing participation/discussion related to [dracut changes](#)
- Resource constraints with OBS during data center move, and addressing slow test environments

We have got successful knowledge sharing about Linux distributions best practices and s390x packaging topics on the mailing list, the same as in our meetings.

## Events



In order to continue raising awareness around the architecture and our platform, Sarah-Julia Kriesch and Elizabeth K. Joseph spoke at several open source software events in 2023, including:

- February 2023: FOSDEM: Upstream Collaboration and Linux Distributions Collaboration - Is that excluded? The Linux Distributions Working Group @ The Open Mainframe Project [https://archive.fosdem.org/2023/schedule/event/open\\_mainframe\\_project/](https://archive.fosdem.org/2023/schedule/event/open_mainframe_project/)
- May 2023: openSUSE Conference: The Mainframe: An alternative platform for openSUSE <https://events.opensuse.org/conferences/oSC23/program/proposals/4058>
- June 2023: Devconf.cz 2023: Linux Distributions Collaboration on the Mainframe <https://devconfcz2023.sched.com/event/IMYmY>

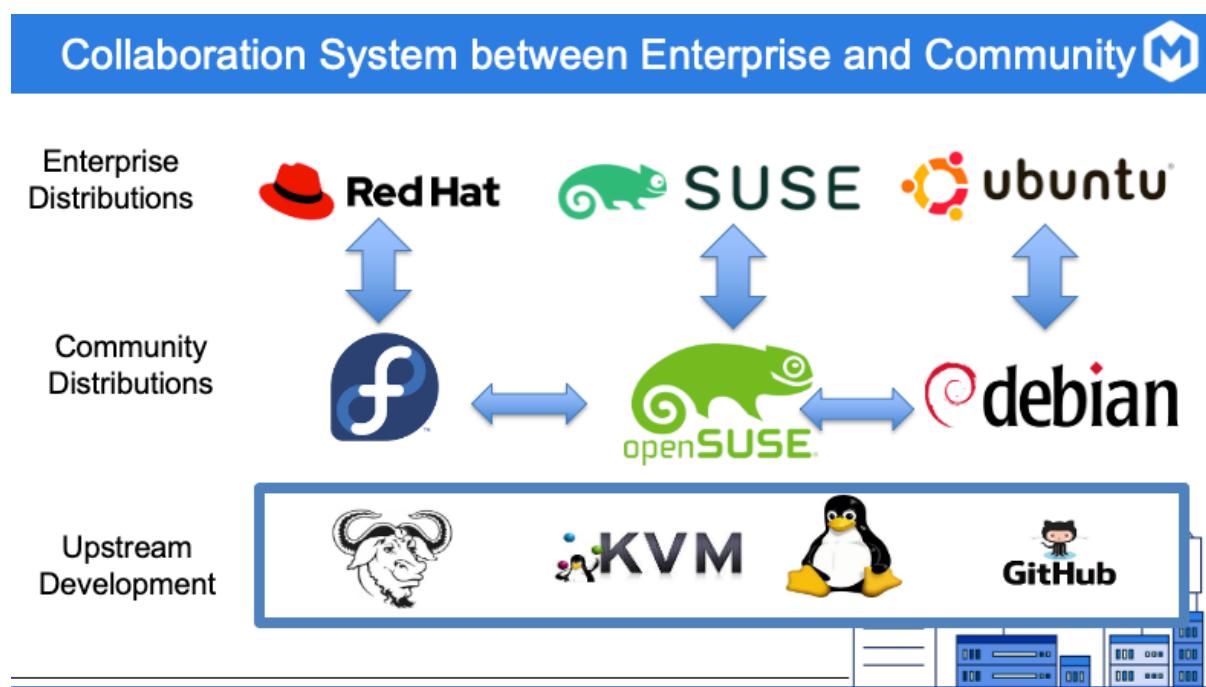
- September 2023: Open Mainframe Summit: Togetherness of Linux Distributions on the Whole Open Source Software Development Life Cycle <https://openmainframeproject.org/event/open-mainframe-summit-las-vegas/>
- October 2023: All Things Open: Linux Distribution Collaboration ...on a Mainframe! <https://2023.allthingsopen.org/sessions/linux-distribution-collaboration-on-a-mainframe/>

## Looking Ahead

In 2024, we're eager to continue the strategies we've developed for a successful group, as well as leveraging things like our new web forum to

encourage collaboration to a broader segment of our community. Initiatives like the openQA platform have caused a rise in awareness in the platform to the broader development community, a trend we're also seeking to see continued. Working Group members will also continue their efforts at general open source and Linux conferences to inspire new discussions with upstream projects and beyond. The success of the working group has also opened doors for group members looking to increase their on-company time on collaboration between the distributions, which is something we should see results of in 2024.

our wiki page for more information about how to join our mailing list and forums, and for the latest about our upcoming team meetings, and minutes and recordings from past meetings: <https://wiki.openmainframeproject.org/display/LinuxDistrosWG>.



# Open Mainframe Programs

## Mentorship

### [Open Mainframe Project's Mentorship Program](#)

is one of our oldest initiatives. Since launch in 2016, the Mentorship program has helped more than 100+ developers and students gain experience in a hands-on learning experience with Linux, open source, and mainframes.



### Summer 2023

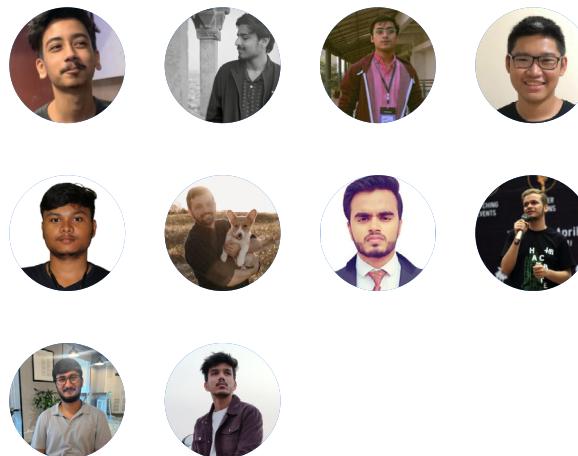
Written by [Yarille Ortiz](#), Senior Project Coordinator at the Linux Foundation



This year, we yet again set a new record of applicants for the mentorship program. In the Summer 2023 term, which began on June 1, more than 725 developers and students applied for the 8 mentorship programs. Our program's incredible mentors had the challenging task of reviewing the applications to select 11 mentees.

Mentorship this year includes Open Mainframe

projects such as Zowe, COBOL Check, Software Discovery Tool, COBOL Programming Course, App Store UI, and ADE. The mentees will complete their summer term with real-world, hands-on experience utilizing Linux, open source, and mainframes that they can carry with them into the next phase of their career path. Some even return to be mentors in our program.



### **Learn more about the mentorships and mentees in these blogs and videos:**

- [Summer mentorship program](#)
- [Priyansh Mehta](#), student and open source enthusiast
- [Aashish Khatri](#), student at Indian Institute of Information Technology Gwalior
- [James Kostrewski](#), student at Farmingale State College

- [Abdul Samad Siddiqui](#), student at Usman Institute of Technology
- [Sidharth Bhardwaj](#), student at Maharaja Surajmal Institute of Technology
- [Prince Singh](#), postgraduate student at Indian Institute of Information Technology
- [Sidharth Mohanty](#), student at Odisha University of Technology and Research
- [Ashis Kumar Naik](#), pre-final computer science student at Odisha University of Technology and Research
- [Issac To](#), student at King's College London

## Ambassadors

These ambassadors are a group of dedicated individuals who are passionate about promoting and advancing the use of mainframe technology in various industries.

The primary objective of the Ambassadors Program is to inform as many people as possible about how to join the community and advance Open Mainframe. The new ambassadors come from all corners of the world, representing various companies and organizations that use mainframe technology. They were specifically selected for their knowledge, leadership abilities and dedication to the Open Mainframe Project's mission.

The ambassadors have volunteered to speak, mentor, review materials or presentations and write blogs or contributed articles that showcase Open Mainframe as an umbrella foundation or any of the projects that fall under it.

## Meet the 2023 class of ambassadors:



**Lionel Dyck**

Lionel is a Senior Software Developer and a CBTTAPE contributor. He had been using z/OS for many years and had been involved in the open source projects since the early 80's.

Lionel is a happy family man, having been married to his lovely bride for nearly 50 years and is a proud parent of two great children who have blessed him with two wonderful grandchildren.

Although Lionel currently resides in Texas, he spent the first five decades of his life in California. Lionel's passion for z/OS and his extensive experience has driven him to develop innovative tools that simplify its use. Typically, Lionel uses ISPF and REXX to create these tools. Additionally, he has authored several dozen articles and blogs detailing the use of open source tools for the mainframe.

Lionel's passion for writing extends beyond technical writing. He has a keen eye for detail and has been known to proofread novels for both sci-fi and mystery authors.

### 3 fun facts:

- He enjoys spending time with his bride.
- He misses the old SCIDS at SHARE.
- He can't sing and doesn't drink.

As an Open Mainframe Ambassador, Lionel is eager to pursue conference speaking opportunities as well as writing/blogging opportunities to promote new technologies and products in the field.



**Domenico D'Alterio**

Domenico D'Alterio is a highly skilled IBM Principal Product Manager with extensive industry experience. He contributes to the Open Mainframe Project's Zowe and IBM Z distribution for Zowe projects, as a Zowe onboarding Squad team member, Zowe Chat Squad team member and Zowe contributor. Domenico's current responsibilities include contributing to the open source project strategy and direction as well as the market success of Zowe's IBM Z distribution.

Prior to his current position, Domenico was the Product Manager for IBM Z AIOps offerings. He was able to hone his leadership skills while working on the strategic direction of multiple offerings. Domenico has held a variety of management positions in IBM's development and Customer Support organizations as well as the position of Product Manager for Z Analytics products.

Domenico's experience and expertise makes him an excellent candidate for speaking opportunities, where he can represent the Mainframe project at conferences and press interviews. He also enjoys mentoring new members of the community, assisting them in contributing upstream and creating collateral for project overview materials. Domenico also enjoys blogging.

### 3 fun facts:

- He likes to walk over the mountains, discover new places and do hiking ... last year (May 2022) he made the Gran Tour Val Di Chiana ... 45 km of hiking in 1 day, it was exciting and challenging at the same time. In May this year, he will try the second step of the tour, same distance, different itinerary.
- He loves cooking, especially for people he loves like his daughter and girlfriend. He likes to experiment with even plates that are not Italian usual food, so he cooks some Chinese, English, Mexican and other food specialties.
- His dream is to drive a Ferrari.



### Rune Christensen

Rune Christensen, a Lead Software Engineer at Bankdata Denmark, has extensive mainframe experience dating back to 2006. As a member of Bankdata's Mainframe Developer Experience team, he is in charge of providing mainframe developers with the necessary tools, support and education. Rune is concentrating his efforts in his current position on bringing a DevOps mindset to Bankdata's mainframe development.

Aside from team projects, Rune's expertise in COBOL and SQL performance is noteworthy. He is committed to promoting shift left to developers and persuading management of its effectiveness. Rune has also been a member and administrator of the COBOL Check TSC.

Rune has also been appointed an Open Mainframe Ambassador, a position in which he hopes to make numerous contributions to the project. These include attending conferences to represent the project, mentoring new community members to contribute upstream, reviewing and contributing to project overview material, and improving project documentation by creating getting started guides and how-tos.

#### 3 fun facts:

- He has drained a sysplex for resources with a recursive SQL.
- He knows a LOT about beers that cause headaches.

- He has not owned a television for the last 15 years.



### Jakub Balhar

Jakub Balhar is an experienced technology enthusiast based in Europe. He is passionate about open source and security.

He currently devotes a lot of time to the Zowe project, where he is the API Mediation Layer squad lead and chair of the Zowe TSC.

Over the course of his career, Jakub has been involved in a variety of companies and projects within the IT industry. Notably, he has worked on Earth Observation projects with NASA and the European Space Agency. Additionally he co-authored a book on accessibility for people for Dyslexia, titled "Dyslexia and Accessibility in the Modern Era: Emerging Research and Opportunities."

#### 3 fun facts:

- He plays and organizes Larps including once organizing a week long larp on the replica of a historical ship in the mediterranean sea.
- He dances tango argentino.
- He enjoys rock climbing, but when the mood strikes, he likes to solo climb without the rope.

Jakub is dedicated to pursuing opportunities as an Open Mainframe Ambassador, including speaking engagements, press interviews, mentoring new community members and

writing about new technologies and products.



### Fernando Rijo Cedeno

Fernando Rijo Cedeno works at Broadcom, Inc. as a talented and experienced Software Engineer. He is a TSC member and mentor for the Zowe CLI Squad, as well as an ex-leader of the Zowe Explorer Squad. Fernando is a Zowe contributor who works on projects involving low level z/OS tools, middleware, web and mobile applications. He has extensive experience working with programming languages and frameworks such as REXX/OML, TS, Node.js, Flutter, Angular, Ionic, CSS/SCSS, HTML, C/C++, Python, Groovy, Java, Kotlin, and others.

#### 3 fun facts:

- He likes learning new skills.
- He loves to travel.
- He belongs to the 5am Club (Book).

Fernando is eager to pursue opportunities such as speaking engagements, mentoring, translation, blogging and collaboration with other open source communities.



### Caitlin Mooney

Caitlin Mooney is a recent Computer Science Graduate from the New Jersey Institute of Technology.

She is passionate about using technology for social good and is an enthusiastic volunteer for various causes. Her work experience includes infrastructure problem solving at UPS, STEM and Mainframe research at BCC, and business operations at Colliers International and Pullman Services. Caitlin's primary career interests lie in law and privacy and she is eager to learn more about cyber security, finance and mathematics.

#### 3 fun facts:

- She has a pet bird, named Snowball.
- She loves Star Wars and The Witcher.
- She has an obsession with the Hamilton album.

Caitlin hopes to represent the project as an Open Mainframe Ambassador by giving press interviews and attending conferences. She also looks forward to mentoring new members of the community, improving project documentation, and writing blog posts about new technologies and products. Caitlin is confident that even though she is still a novice in the field, she can provide non-technical mentorship to those who require it.



### Boris Petkov

Boris Petkov is an accomplished Engineering Manager with over three years of experience at Broadcom,

where he leads a dedicated team with the primary goal of contributing to Zowe and driving adoption.

#### 3 fun facts:

- He was born on the same date as Tupac Shakur.
- He was born on the same date as the last Tsar of Bulgaria, Simeon II.
- He graduated from high-school twice... yes, both times successfully.

Boris is committed to mentoring new community members and guiding them toward upstream contributions as Open Mainframe Ambassador. He is interested in translation opportunities in addition to his mentoring work. He is enthusiastic about teaching Zowe users in getting the most out of Zowe.



### Michael DuBois

Michael DuBois, Senior Manager for Product Management in Broadcom's Open Mainframe Technologies,

is a seasoned expert with over 35 years of experience in Mainframe application development and programmer productivity solutions. He currently leads Broadcom's Product

Management team for Open Mainframe Technologies which includes CA Brightside and Broadcom's open source activities, specifically Zowe. He is also an active member of the Zowe community as a member of the Zowe Advisory Council and the Onboarding Squad.

#### 3 fun facts:

- He is compulsively neat.
- He enjoys long road trips.
- He spent five years coaching travel softball.

As an Open Mainframe Ambassador, Micheal is dedicated to supporting the Zowe project by participating in conference speaking opportunities and assisting new community members in contributing upstream. He is also interested in reviewing and contributing to project overview materials as well as writing blogs about new technologies and products.



### Marcus Davage

Meet Marcus Davage, a BMC Software lead product developer and active supporter of IBM Z and LinuxONE.

Marcus is a true veteran and expert in the field of mainframes, with over 30 years of experience. He has worked as a programmer, systems programmer, consultant, database administrator and other roles, giving him a broad understanding of mainframe technology.

In his spare time, he volunteers as a STEM Ambassador, leading Code Clubs in Welsh speaking primary schools and introducing children to the fascinating world of technology.

Marcus is an active member of several user groups and committees, including the UK Db2 User Group and the GSE Conference Planning Committee, in addition to his advocacy work. He is an IBM Champion as well as an IBM Z and LinuxONE Influencer, and he blogs and podcasts on a regular basis to share his industry insights and knowledge.

#### 3 fun facts:

- He speaks Welsh at home.
- He once played piano for the Filipino Minister for Development.
- He is two-degrees separated from King Charles III.

Marcus is dedicated to advancing the project

and its objectives in his capacity as an Open Mainframe Ambassador. He is most interested in speaking opportunities where he can represent the project at conferences and events, as well as collateral creation where he can review and contribute to project overview material. He also enjoys blogging and writing about new technologies and products, describing them with his mainframe expertise and experience.



### Dong Ma

Introducing Dong Ma, a passionate Software Engineer at IBM and a dedicated contributor to the Open

Mainframe Feilong project. With his expertise in cloud infrastructure and OpenStack, Dong has been actively contributing to the open source community for several years.

Dong is currently employed by IBM Cloud Infrastructure Center, where he specializes in on-premises cloud deployments on the IBM Z and IBM LinuxONE platforms. He has made significant contributions to the Jenkins, OpenStackCI, and QA areas of OpenStack since the Liberty release, with a keen eye for detail and a focus on quality assurance.

Dong's enthusiasm for open source and technology has led him to speak at a number of conferences, including the OpenStack Summit, LCA2017, LinuxCon Japan, FOSSCON, and others. His extensive knowledge and experience have earned him the respect of the community.

#### 3 fun facts:

- He once took pictures with Linus Torvalds.
- He likes to collect stamps and fridge magnets.
- He is the father of two kids.

Dong is an Open Mainframe Ambassador who is dedicated to fostering community growth. He intends to represent the project at conferences, mentor new community members in contributing upstream, create and review project overview material, translate key project documents into other languages, and write blogs and articles describing new Feilong technologies and products.

Dong Ma is a dedicated and accomplished professional who personifies the open source community's spirit. His contributions to the Feilong project, as well as his passion for technology, have earned him a position of respect and admiration in the industry.

The new ambassadors join an already thriving program with thought leaders from several Open Mainframe Project member companies and other industry organizations. To see the complete list of ambassadors, please check out the [Ambassadors Page](#).



## Twice the Fun this Year at Open Mainframe Summit

Written by **Maemalynn Meanor**, Director of PR and Communications at the Linux Foundation



This year for the 4th annual [Open Mainframe Summit](#), the premier mainframe event was co-located with two industry conferences – [IBM TechXchange Conference](#)

[2023](#), hosted in Las Vegas on September 11-14; and [Open Source in Finance Forum](#), hosted in New York City on November 1.

Open Mainframe Summit aims to connect and inform all those interested in growing the use of mainframes and related technology in dynamic technical and educational sessions. It is open to students, developers, corporate leaders, users and contributors of projects from around the globe looking to learn, network and collaborate. It will feature content tracks that tackle both business and technical strategies for enterprise development and deployment. We were excited to see more than 1,000 people engage with or attend a project session to learn about the open source collaboration happening in the mainframe space.

"As mainframe technology and events evolve

and mature, it becomes a more natural evolution to align Open Mainframe Projects and activities with other industry events," said John Mertic, Director of Program Management at the Linux Foundation and Executive Director of the Open Mainframe Project. "This year, by partnering with IBM and FINOS, we are offering attendees the opportunity to enhance their experience with unique presentations and targeted conversations with industry experts."

Videos for both events are available on the [Open Mainframe Project Youtube Channel](#). Click [here](#) to view Open Mainframe Summit New York, which was co-located with [Open Source in Finance Forum](#). Slides can be viewed [here](#).

Click [here](#) to watch keynote presentations from Open Mainframe Summit - Las Vegas, which was co-located with [IBM TechXchange](#).



## Open Mainframe Project's Commitment to Diversity and Inclusion

Written by **Maemalynn Meanor**, Director of PR and Communications

Open Mainframe Project is committed to nurturing an inclusive environment for our community. This year, we've showcased the many faces and voices of the mainframe industry in blogs and podcasts in various themes and holidays including:

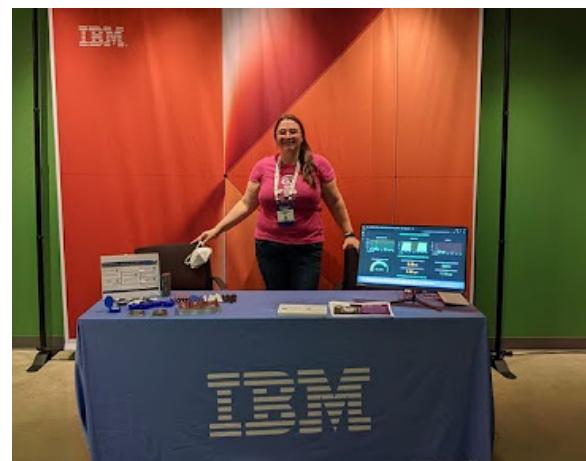
### Black History Month (February)



- **Cameron Seay**, Co-Chair of the Open Mainframe Project's COBOL Working Group, [discusses the importance of training the next generation](#)

- **Byron Smith**, Vice President of Mainframe Security at M&T Bank, [shares his journey as a millennial mainframer](#).

### International Day of Women and Girls in Science (February 11)



- **Elizabeth Joseph**, Chair of Open Mainframe Project's Software Discovery Tool and Global Head of the Open Source Program Office for IBM Z, [wrote about her journey and how the Open Mainframe Project helped her advance in her career](#) and provided insights on breaking barriers in science and tech.

### Women's History Month (March)

- **Sarah Julia Kriesch**, Co-Chair of the Linux Distributions Working Group and Lead IT/OT Engineer at Accenture DACH, [discusses her academic and professional journey in the tech industry](#) and the importance of mentorships and male advocates.

- **Sudharsana Srinivasan** [shares her journey with COBOL](#) and how she turned a missed opportunity into a passion she shares with others.



- **Stacey Miller**, Co-Chair of the Open Mainframe Project Marketing Committee and Global Product Marketing Manager at SUSE, shared how not having volleyball skills ultimately [pushed her into a career path she loved and women she really admires](#).

- The latest episode of the "[I Am a Mainframer](#)" [podcast](#) features **Megan Conklin**, the WW Director of LinuxONE and Linux on System Z Sales at IBM, who led the global team responsible for the unprecedented adoption and growth of the LinuxONE brand at IBM.

## Asian American and Pacific Islander (AAPI) Month (May)



- **Maemalynn Meanor**, Director of PR and Communications at the Linux Foundation, shared [3 ways that you or your company can honor](#) your AAPI colleagues and culture.
- **Dong Ma**, Open Mainframe Project Ambassador and Software Engineer at IBM, [shared how his academic journey and personal perseverance](#) gave him the opportunity to work at IBM and how he learned open source.
- **John Mertic**, Executive Director of Open Mainframe Project, shared his [hope for the future](#) for AAPI communities.
- On this episode of the “I Am a Mainframer” podcast, host Steven Dickens is joined by **Shuang Chen, PhD**, a seasoned entrepreneur, senior technologist, inventor, and recognized industry leader. [Shuang brings over three decades of industrial experience in technology innovation](#), software, large-scale internet systems, entrepreneurship, and business executive leadership.

## National Hispanic Heritage Month (September 15 to October 15)



- **Yarille Ortiz Kilborn**, Senior Project Coordinator at the Linux Foundation, shared how her [mother introduced her to mainframes at a young age](#) and encouraged her to find her passions in technology,
- **Fernando Rijo Cedeno**, Senior Software Engineer at Broadcom and Open Mainframe Project Ambassador and contributor to Zowe, [wrote about his journey from the Dominican Republic](#) and his commitment to continuous learning.
- **Luciano Gimeno**, LinuxONE Sales Manager of North & Latin America at IBM, was featured in this month's “I am a Mainframer” podcast. [He discussed how he embraced the continuous change in the mainframe world](#), the growth of Linux on mainframes, the challenges and joys of shifting roles, and more.



Written by **Megan Rupert**, Mainframe Software - Event Marketing at Broadcom, and Keelia Estrada Moeller, Marketing Content Specialist at Broadcom

**Making Our Strong Community Stronger (MSCS)** is a diversity, equity, inclusion, and belonging initiative dedicated to creating safe spaces and bringing awareness within the mainframe industry. Since the initiative's inception in 2020, we have covered a broad range of topics highlighting unique individuals across the mainframe ecosystem.

This year, MSCS brought focused on a few issues including creating a multi-generational workforce, fostering an inclusive workforce for the LGBTQIA+ and opening the door for career opportunities and programs encouraging diverse candidates.



## Creating a Thriving Multi-Generational Workforce

At SHARE New Orleans in August 2023, Dr. Gloria Chance, CEO and Founder of The Mousai Group, will moderate a panel discussion exploring how multigenerational mainframers are bridging the age gap within their organizations including:

- Acknowledge the age gap in the industry
- Discuss the realities of multigenerational workplaces
- Explore what it is like to be older/younger/mid-career as the demographics of your workforce shift
- Examine the challenges/opportunities that exist
- Discuss ways for all to thrive



Panelists included Len Santalucia (Vicom Infinity, A Converge Company), stephanie nwankwo (Broadcom) Earl Dixon (Broadcom), Laticia

C. (IBM), John Thompson (MCEC), Cynthia Overby, (Rocket Software), Rebecca Parchman (BMC Software) and Megan Rupert (Broadcom Mainframe Software). Watch the video [here](#).



## Fostering Inclusive Work Environments for the LGBTQIA+ Community

This webinar explored ways you can foster inclusivity by understanding the intersection of multiple marginalized groups, taking advantage of “teachable moments” and creating an environment where employees know they belong. Panelists include Debbie Schildkraut (Kestin Impact Consulting), Dan Brown (LF Energy), Michelle Hébert (Applied Systems), Larry Cook (Broadcom Mainframe Software) and moderator Jess Pettitt (Good Enough Now). Watch the video [here](#).



## Opportunities for All

A webinar that showcased the different roles in the tech industry, specifically the mainframe sector, and mentorship and hiring programs that encourage and support diverse applicants from a global scale. Panelists include Jen Corio (BMC), Earl Dixon Jr. (Broadcom Mainframe Software), Shelly Meierarend (IBM) and John Mertic (Open Mainframe Project). Watch the video [here](#) to learn more about the current mentorship and employment opportunities.

With 2024 on the horizon, MSCS is looking to expand and deepen our impact on the broader community by sharing more experiences of our employees and building more relationships. Follow our journey and become a part of it by joining our [LinkedIn group](#).

# ADDENDUM

## I am a Mainframer Podcast

### Youtube Playlist:

[https://www.youtube.com/watch?v=Qc44gfbOZ\\_4&list=PL8REpLGaY9QHNU5g4Glzdz4CA64I24FOR](https://www.youtube.com/watch?v=Qc44gfbOZ_4&list=PL8REpLGaY9QHNU5g4Glzdz4CA64I24FOR)



- I am a Mainframer: Meral Temel**

January 25, 2023

- I am a Mainframer: Benjamin Daniels**

February 27, 2023

- I am a Mainframer: Megan Conklin**

March 22, 2023



- I am a Mainframer: Salisu Ali**

April 28, 2023

- I am a Mainframer: Shuang Chen, PhD**

May 17, 2023



- I am a Mainframer: Zareen Rydhan**

June 14, 2023

- I am a Mainframer: Richard Perret**

July 20, 2023



- I am a Mainframer: Guilherme Cartier de Palma**

August 23, 2023

- I am a Mainframer: Jabrell McPherson, Sharif Ali, and Jason Lowe**

September 22, 2023

- I am a Mainframer: Luciano Gimeno**

October 11, 2023

- I am a Mainframer: Domenico D'Alterio**

November 15, 2023

- I am a Mainframer: Megan Rupert**

December 21, 2023

## TFIR videos



- Open Source Will Continue To Grow | 2023 Predictions**

Guest: John Mertic ([LinkedIn](#), [Twitter](#))

February 8, 2023

- Impact Of Cost Cutting On The Mainframe Industry**

Guest: John Mertic ([LinkedIn](#), [Twitter](#))

February 21, 2023

- GenevaERS: More Than Just A Reporting Solution**

Guest: Andrea Orth ([LinkedIn](#))

March 1, 2023

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Guest: Jakub Balhar ([LinkedIn](#))  
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Guest: Alan Clark ([LinkedIn](#))  
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- [Open Mainframe's Ambitus Project Helps With Keeping Code Base Secure](#)  
Guest: Joe Bostian ([LinkedIn](#))  
May 4, 2023
- [John Mertic's New Book Provides Blueprint For Open Source Projects](#)  
Guest: John Mertic ([LinkedIn](#))  
May 15, 2023
- [Tessia: Automate Linux Provisioning On Z Systems](#)  
Guests: Kuriakose George | Sybille Kurz ([LinkedIn](#))  
June 1, 2023
- [Open Mainframe Project Partners With IBM & FINOS For Its 4th Annual Summit](#)  
Guests: John Mertic ([LinkedIn](#))  
Elizabeth K. Joseph ([LinkedIn](#))  
June 26, 2023
- [What To Expect At The Open Mainframe Summit Hosted With IBM TechXchange Conference 2023](#)  
Guest: John Mertic ([LinkedIn](#))  
September 4, 2023

- [How Galasa Fits Into The New Mainframe Modernization Agenda | Louisa Seers](#)  
Guest: Louisa Seers ([LinkedIn](#))  
September 20, 2023

## TechStrong TV videos



- [2023 Predictions – Increased Security and Hands-on Training – The Open Mainframe EP 18](#)  
Guest(s): Alex Kim, Jakub Balhar, Sudharsana Srinivasan  
Hosts: Alan Shimel, John Mertic  
February 8, 2023
- [Can Open Source be Secure? The Open Mainframe EP 19](#)  
Guest(s): Alan Clark, Kate Stewart, Mark Ackert  
Hosts: Alan Shimel, John Mertic  
March 20, 2023
- [Fintech, Open Source & Mainframe Modernization – The Open Mainframe EP 20](#)  
Guest(s): Gabriele Columbro, Lee Santalucia, Rune Christensen, Tracy Ragan  
Hosts: Alan Shimel, John Mertic  
April 18, 2023
- [Open Source Projects – Beyond Code – The Open Mainframe Show EP 21](#)  
Hosts: Alan Shimel, John Mertic  
June 8, 2023

- [Meet Us in Las Vegas or New York for the Open Mainframe Summit – The Open Mainframe EP 22](#)

Guest(s): Donna Hudi, Elizabeth Joseph, Len Sentalucia, Rick Perret  
Hosts: Alan Shimel, John Mertic  
June 30, 2023

- [Happy 5th Anniversary, Zowe! - EP 23](#)

Guest(s): Joe Winchester, Mike Siemasz, Rose Sakach  
Hosts: Alan Shimel, John Mertic  
July 31, 2023

- [Fostering Mainframe Education Resources for the Future – The Open Mainframe EP 24](#)

Guest(s): J.J. Lovett, Paul Newton, Tiiso Senosha, Viviane Sanches  
Hosts: Alan Shimel, John Mertic  
September 7, 2023

## Open Mainframe blogs

- [Mental Wellness Month](#)  
Written by Cynthia Coupé  
January 13, 2023

- [Welcome Peter Wassel and Jeff Cherrington to the Governing Board](#)  
Written by John Mertic  
January 20, 2023

- [Zowe Wins DevOps Award For Second Year in a Row!](#)  
Written by David McNierney  
January 23, 2023

- [Black History Month Spotlight: Cameron Seay](#)  
Written by Cameron Seay  
*February 1, 2023*
- [Feilong: Updates & a new Demo](#)  
Written by Mike Friesenegger  
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- [Black History Month Spotlight: Byron Smith](#)  
Written by Open Mainframe Project  
*February 8, 2023*
- [International Day of Women and Girls in Science 2023](#)  
Written by Elizabeth Joseph  
*February 11, 2023*
- [Mainframe Open Education: Fostering the Stewardship of Education Resources](#)  
Written by Open Mainframe Project  
*February 15, 2023*
- [How Successful is Zowe?](#)  
Written by Trevor Eddolls  
*March 1, 2023*
- [Open Mainframe Project's 2022 Annual Report](#)  
Written by John Mertic  
*March 8, 2023*
- [My Journey: A Mentorship with Zero Linux Knowledge](#)  
Written by Open Mainframe Project  
*March 13, 2023*
- [A look at Zowe @ the CMG Impact Conference](#)  
Written by Domenico D'Alterio
- [March 15, 2023](#)
- [Life Comes Full Circle with COBOL](#)  
Written by Open Mainframe Project  
*March 20, 2023*
- [It Starts with Us](#)  
Written by Stacey Miller  
*March 27, 2023*
- [6 Ways to Share Zowe CLI Scripts with Friends](#)  
Written by Dan Kelosky  
*March 29, 2023*
- [A Modern Approach to Mainframe DevOps: New Zowe zDevOps Jenkins Plugin](#)  
Written by Zowe Community Members from the IBA Group  
*April 10, 2023*
- [ZEBRA – Get to know RMF using modern JSON format](#)  
Written by Alex Kim  
*May 1, 2023*
- [An introduction to MVS, IBM Mainframe and z/OS](#)  
Written by Sam Golob  
*May 3, 2023*
- [Open Mainframe Project Launches Applications for 2023 Summer Mentorships](#)  
Written by Open Mainframe Project  
*May 8, 2023*
- [3 Ways to Celebrate AAPI Heritage Month](#)  
Written by Maemalynn Meanor  
*May 10, 2023*
- [My Personal Experience with Zowe](#)  
Written by Domenico D'Alterio  
*May 15, 2023*
- [AAPI Month Spotlight: Dong Ma, Software Engineer at IBM](#)  
Written By Dong Ma  
*May 22, 2023*
- [Fostering Inclusive Work Environments for the LGBTQIA+ Community](#)  
Written By Open Mainframe Project  
*May 24, 2023*
- [Hope for the future: A view on progress for inclusion with AAPI communities](#)  
Written by John Mertic  
*May 29, 2023*
- [Open Mainframe Project Announces CBT Tape Update 505](#)  
Written by Sam Golob  
*June 5, 2023*
- [z/OS zFS ISPF Tools](#)  
Written by Lionel B. Dyck  
*June 12, 2023*
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*July 5, 2023*

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Written By Darren Surch  
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  - [Unlock your Achievement by Earning a Mainframe Open Education Digital Badge](#)  
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Written by Abdul Samad Siddiqui, a student at Usman Institute of Technology and 2023
- Open Mainframe Project Summer Mentee  
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- [Don't Miss Ibm Z 2023 Day!](#)  
Written By Open Mainframe Project  
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  - [Zowe™ Explorer Plugin For IntelliJ Idea™: Evolution And Future](#)  
Written By Maemalynn Meanor  
September 28, 2023
  - [Building Dreams in Binary: A Latino Software Engineer's Story](#)  
Written by Fernando Rijo Cedeno  
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  - [My Open Mainframe Project Mentorship Journey: COBOL Programming Course – COBOL Check Integration](#)  
Written by Ashis Kumar Naik  
October 9, 2023
  - [Zowe's 5 Year Journey from Concept to Key Modernization Enabler for Mainframe](#)  
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  - [Zowe @ HOGENT Mainframe Day 2023](#)  
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Written by Emily Nicholls  
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  - [Open Mainframe Summit New York Recap](#)  
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November 8, 2023

- [Empowering Open Source: My Journey with the Open Mainframe Project's Software Discovery Tool](#)  
Written by Prince Singh  
November 10, 2023
- [Mentorship: Zowe Security Workgroup CVE Publication Automation](#)  
Written by Sidharth Bhardwaj  
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- [Open Mainframe Project Launches Applications for 2024 Ambassadors](#)  
Written By Maemalynn Meanor  
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- [My Zowe Mentorship: Unix System Services for Zowe Client Java SDK](#)  
Written by James Kostrewski, Student at Farmingdale State College and Open Mainframe Project Summer 2023 Mentee  
November 27, 2023
- [My Software Discovery Tool – Frontend Mentorship](#)  
Written by Aashish Khatri, Indian Institute of Information Technology Gwalior and Summer 2023 Mentee  
December 4, 2023
- [Navigating the Open Mainframe Project's Zowe](#)  
Written by Maemalynn Meanor  
December 6, 2023
- [Big Changes coming with Zowe Explorer v3](#)  
Written by Billie Jean Simmons,

Squad lead for Zowe Explorer and Software developer for IBM.  
December 11, 2023

- [Embracing Open Source Excellence](#)  
By Open Mainframe Project  
December 14, 2023
- [Galasa: My First 6 Months as a TSC Chair](#)  
Written by Louisa Seers, Chair of the Galasa Technical Steering Committee and Product Manager at IBM  
December 18, 2023

## Zowe Medium Blogs

- [6 Ways to Share Zowe CLI Scripts with Friends \(and Coworkers\)](#)  
Written by Dan Kelosky  
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- [Tips and Tricks: Zowe Secure setup for Production](#)  
Written by Jakhub Balhar  
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- [A Modern Approach to Mainframe DevOps: Meet IBA's New Zowe zDevOps Jenkins Plugin](#)  
Written by the IBA Group  
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- [Using Template Processors in JC w/Zowe CLI](#)  
Written by Dan Kelosky  
March 13, 2023
- [Goodbye to babysitting your z/OS jobs with IBM Z JCL Expert Zowe CLI plugin](#)  
Written by Domenico D'Alterio  
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- [Automate and Optimize with Mainframe Infrastructure APIs](#)  
Written by Elliot Jalley  
April 11, 2023
- [Enterprise rollout of Zowe CLI](#)  
Written by Gene Johnston  
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- [Unleash the power of Zowe V2 with IBM Z trial](#)  
Written by Wen Ting Su  
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- [Zowe CLI: "Hello World" w/REXX](#)  
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- [Seeking Leaders To Help Shape the Future of the Mainframe Using Open Source](#)  
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- [Zowe CLI: Token Based Authentication with API mediation layer and baseProfiles](#)  
Written by Joe Winchester  
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- [Step-by-step guide: use an existing JCERACFKS certificate for Zowe's z/OS components](#)  
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- [Secrets for Zowe SDK](#)  
Written by Trae Yelovich  
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  - [Step-by-step guide: Use a PKCS12 \(file-based\) keystore with Zowe generated certificate](#)  
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*October 6, 2023*
  - [Improved usability of error messages in Zowe CLI](#)  
Written by Gene Johnston  
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Written by David McNierney
- Written by Jakub Balhar  
*November 7, 2023*
- [Zowe™ Is Zowe — What is an Authentic Distribution?](#)  
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*November 17, 2023*
  - [Password management for Zowe CLI profiles](#)  
Written by Joe Winchester  
*November 17, 2023*
  - [Changes coming with the API Mediation Layer V3](#)  
Written by Jakub Balhar  
*November 28, 2023*
  - [Zowe CLI: Getting started with Team Config.](#)  
Written by Dan Kelosky  
*December 11, 2023*



### About the Open Mainframe Project

The Open Mainframe Project is intended to serve as a focal point for deployment and use of Linux and Open Source in a mainframe computing environment. With a vision of Open Source on the Mainframe as the standard for enterprise class systems and applications, the project's mission is to build community and adoption of Open Source on the mainframe by eliminating barriers to Open Source adoption on the mainframe, demonstrating value of the mainframe on technical and business levels, and strengthening collaboration points and resources for the community to thrive. Learn more about the project at <https://www.openmainframeproject.org>.

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 <https://github.com/openmainframeproject>