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## Unlocking New Doors

How the Open Mainframe Project is helping IBM Z expand outside of its traditional domain.



By Holly Eamon

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Three years after its launch, the Open Mainframe Project has achieved success by:

- Helping increase collaboration throughout the mainframe community
- Proving the platform's significance
- Attracting future mainframers to IBM Z

The most notable announcement made by the [Open Mainframe Project](https://www.openmainframeproject.org/) (<https://www.openmainframeproject.org/>) so far at [SHARE](https://www.share.org/) (<https://www.share.org/>) in August 2018: Zowe, the first open-source project based on [z/OS](https://www.ibm.com/it-infrastructure/z/zos) (<https://www.ibm.com/it-infrastructure/z/zos>). The software framework provides a way to securely manage, control, script and develop on the mainframe like any other cloud platform.

“It’s a milestone,” says John Mertic, director of program management for [The Linux Foundation](https://www.linuxfoundation.org/) (<https://www.linuxfoundation.org/>) and director for the Open Mainframe Project. “Anyone from the community can

use it and provide feedback. This is good for the IBM Z platform. It's not one company's project and that's one of the things we want to make loud and clear. We want everyone to take part and have a seat at the table and an opportunity to engage. This is big for this community and it's a concept new to some of them, but it's one that I see them embracing."

Hosted by The Linux Foundation, the Open Mainframe Project's initial focus areas were around Linux on Z, but its members were always looking at the opportunity to grow to support the entire IBM Z ecosystem and its ambitions around open source. "[Zowe \(https://www.zowe.org/\)](https://www.zowe.org/) was our first opportunity for this," he says.

## Sustainable Support

"Open source has existed since the late '90s. There's been a thrust in the movement behind opening the code that you're wanting and using, but it has always been in the DNA of Z; the mainframe community was doing open source before open source was really a name," Mertic explains.

The SHARE conference, for example, which started in 1955, was a place for mainframe programmers to come together to share source code with the idea of working together to improve everyone's source code

"What we've seen as the trend that happens, which parallels the trend of open source in general, is that it starts in a very corporate manner with different pockets of innovation, but there's never really a very unifying force or home or just center of gravity where everything for open source for a particular technology area has existed," Mertic says. "We're looking ahead and asking what the mainframe will be in 50 years and how we can ensure it's still here with vibrancy and a community still around it."

Whether the general population realizes it, the mainframe is a crucial component of how our society functions, from issuing paychecks to purchasing anything from a coffee to a plane ticket. The platform's sustainability is critical to more than just the success of the technology industry, and open source is the way to continue its legacy of innovation.

Mertic illustrates the importance of open source with a car analogy: Imagine buying a car with the hood bolted shut and the only key to open it is owned by the auto dealer. That's how a lot of proprietary technology works, but with all of the technical platforms and tools being used, technologists are the reason they proliferate and continue on—and they need a way to collaborate. It's important for them to not only have access but also the ability to inspect the technology, provide feedback and showcase other ways for it to be used.

"Open Mainframe Project members are passionate about this technology and they care about the next generation of it, and what better way to help make that a reality than to put them at the front and center instead of being off at some distant corporation?" he asks.

## Fueling Future Drivers

The Open Mainframe Project is invested in another generation as well: future mainframers. Its internship and academic programs have included well over 100 different students during the last couple of years. This past summer, a class of 11 interns was involved with work around Cloud Foundry and other open-source projects.

"It's common knowledge in this industry that we have a generational gap, and the technology itself often doesn't come with the greatest appeal or perception," Mertic says. "We continue to spend a lot of our focus on just driving that next generation of interest and making sure these programs touch all areas within the mainframe world so that organizations benefit from more talent."

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The internship program is designed for self-driven high performers, attracting students from across the globe, including North America, Europe and Asia. “We’re not just trying to drive warm bodies; we’re driving real talent with students who have a high aptitude to make a long-term difference in this industry,” he adds.

Interns typically work remotely with a mentor on anything from helping showcase how open-source tools work on the platform to supporting existing open-source projects. Tuan Hoang, one of the program’s initial interns in 2016, did the porting work on Alpine Linux—a security-oriented, lightweight Linux distribution. Though he didn’t finish the work during his internship, he continued to stick with the project, even after becoming a graduate student at Marist College.

Kevin Lee, a 2017 graduate student intern from the University of Illinois, focused on Hyperledger and blockchain on the mainframe, building an application for managing patient healthcare records.

“These are great examples of high-performing students coming into mainframe and becoming very impactful,” Mertic says. “We try to focus on those who may not have come across mainframe but are seeing open source as a key part of what they want to do, and we’re helping connect it to a great career path for them.”

The 2019 internship program is currently accepting applications. If you or someone you know is interested in learning more about IBM Z, [visit their site \(https://www.openmainframeproject.org/projects/mentorship-program\)](https://www.openmainframeproject.org/projects/mentorship-program).

## Creating Connections

Alpine Linux is another success story of the Supported Projects Program, which helps connect any open-source project with mainframe talent that can help answer questions as project owners begin to get the S390X architecture plugged into their infrastructures. This, in turn, helps promote them within the mainframe ecosystem. As Hoang continued his port work, he saw that the code needed a sustainable home to ensure Alpine Linux could continue to do S390X builds, so it became one of the supported projects.

“What’s interesting is that your average open-source project has no qualms about supporting mainframe. Their challenge is they don’t usually have the right hardware or personnel,” Mertic says.

The program first helps projects by providing hardware for testing and building. Through that process, they usually run into a number of technical issues, which is where community members step in to provide advice or direction, or even become a contributor to the project. The third step is letting the world know that this is now a technology that runs on mainframe through channels that include blogs, social media and events.

PostgreSQL is another project that’s a part of this program. “Lots of people don’t even realize that other people are using PostgreSQL on mainframe in production,” Mertic says. “Once you start to bring up these use cases, it helps break down the barriers for the next person who may want to adopt it. With any technology, enterprises are not always eager to be the first one to do something; they want to see somebody who has already paved that path a little bit.”

## Powered by Community

As the Open Mainframe Project continues its focus on open source, Mertic feels the support of the IBM Z community. “Reactions have ranged from excitement and ‘it’s about time’ to mind-blown. We have a lot of hard work in front of us, but the members and contributors are very eagerly interested in moving forward.”

He also senses excitement from those outside the community. People are excited that open source is permutating an area of technology that many thought it never would. “The open-source world is really interested in seeing what will come from here. There is a lot of genuine excitement and genuine questions. We recognize the work ahead, but we have a great community behind it.”

#### About the author

Holly Eamon is an editor and writer based in Minneapolis, MN

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