

From zero to hero using the Open Mainframe Project's tooling platform zowe.org

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Session PG



Introducing Zowe

- An extensible framework for connecting applications and tools to mainframe data and applications.
- Aims to make the mainframe an integrated and agile platform within the changing IT **ZOWE** architectural landscape.
- First open source project on z/OS. All code is licensed under the Eclipse Public License version 2.0







What's in Zowe?



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- Industry standard REST interfaces to z/OS resources that are language and platform neutral, stateless and scalable
- Foundational building blocks for system services

- Dataset APIs
 - Create, read, update, delete, and list data sets
- JES APIs
 - View the information and files of jobs, and submit and cancel job
- USS APIs
 - Create, read, update, and delete USS files
- System APIs
 - View information about PARMLIB, SYSPLEX, and USER

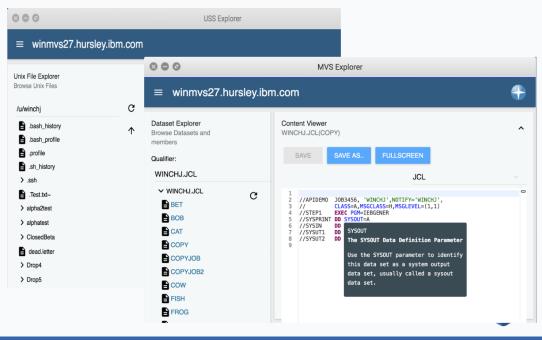




🗘 Zowe Web Desktop – An app container in a browser 🕞 🖫

- Known as **zLUX**, the Zowe Web UI is a virtual desktop system that offers a rich and open platform for a webbased mainframe user experience.
 - Mainframe Virtual Desktop
 - A web-based window manager that provides full screen interactive experience
 - Zowe Node Server
 - Runs zLUX; uses Express.js as web service framework for communication between applications and z/OS services and components, pre-reqs Node.js for z/OS
 - ZSS Server
 - Provides secured REST API services
 - Application plug-in
 - Dataservices, Configuration dataservice, URI broker, appto-app communication, Error reporting UI, Logging utility
 - Explorers
 - JES, MVS, USS explorers
 - Basic editing support for REXX and JCL

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Zowe CLI – Enables cloud-like access to mainframe CLI

- Enables app developer and DevOps engineers to interact with the mainframe easily through a CLI from any terminal on Windows, MacOS, Linux
- Easily integrates with IDEs, shell commands, bash scripts, and build tools; installs using NPM
 - Interact with mainframe files

Create, edit, download, and upload mainframe files (data sets) directly

• Submit jobs

Submit JCL from data sets or local storage, monitor status, view and download output automatically

Issue TSO and z/OS console commands

Issue TSO and console commands to the mainframe directly

Integrate z/OS actions into scripts

Build local scripts that accomplish both mainframe and local tasks

• Produce responses as JSON documents

Return data in JSON format on request for consumption in other programming languages

Build | Test | Deploy



\$ zowe zos-files create data-set-classic "..JCL" ...

\$ zowe jobs submit data-set "..JCL(copy)" ...

\$ zowe jobs view job-status-by-jobid JOB03306 ...



D Zowe API Mediation Layer – Gateway to mainframe APIs



• Enables a single point of access to mainframe APIs with high-availability, scalability, dynamic API discovery, consistent security, "one-time" sign-on experience and unified standard API documentation (OpenAPI / Swagger)

• API Catalog

UI Catalog of available APIs with their Swagger doc and service status

• API Gateway

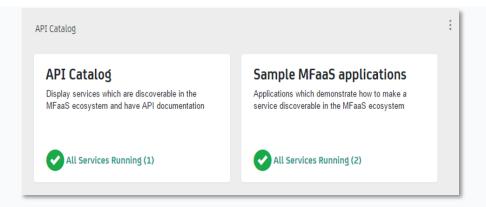
Single point of entry to an ecosystem of microservices. Hides complexity. Highly available. Based on Netflix Zuul.

• Discovery Service

Discover APIs across many applications. Repository of active services. Based on Netflix Eureka.

ESM Microservice

Authenticate and authorize API users with mainframe credentials



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Display se	rvices which are discoverable in the MFaaS ecosystem and have API documentation	
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GET	/api/v1/caapicatalog/status/updates	\sim
	getUpdatedContainersStateAsEvents	
GET	/api/v1/caapicatalog/containers	\sim
	getAllAPIContainers	
Catalog	Api Doc Controller (ApiDoc)	\sim



Zowe Demo



Getting Started with ... V ZOWE Open. Simple. Familiar.

- Project Community site
 - <u>https://zowe.org</u>
- Access to Beta Download
 - <u>https://zowe.org/download</u>
- Review Zowe squads, missions and activities
 - <u>https://zowe.org/contribute/</u>
- Code Guidelines
 - <u>https://zowe.org/code-guidelines/</u>
- Project Governance
 - <u>https://zowe.org/about-us/</u>
- GitHub
 - <u>https://github.com/zowe</u>
- Project Documentation (includes user and install guides)
 - <u>https://zowe.github.io/docs-site/</u>
- Developer Tutorials
 - <u>https://zowe.github.io/docs-site/guides/intro.html</u>
 - <u>https://developer.ibm.com/tutorials/zowe-step-by-step-tutorial/</u>



Community Slack Channels



Community Mailing Lists



Community Calendar



Community Meeting Minutes





We want your feedback!

- Please submit your feedback online at
 http://conferences.gse.org.uk/2018/feedback/PG
- Paper feedback forms are also available from the Chair person
- This session is PG





