

IBM TechXchange 2025 conference

Open Mainframe Project: How to Contribute to Linux on the Mainframe

Sarah-Julia Kriesch, Kyndryl
Elizabeth K. Joseph, IBM

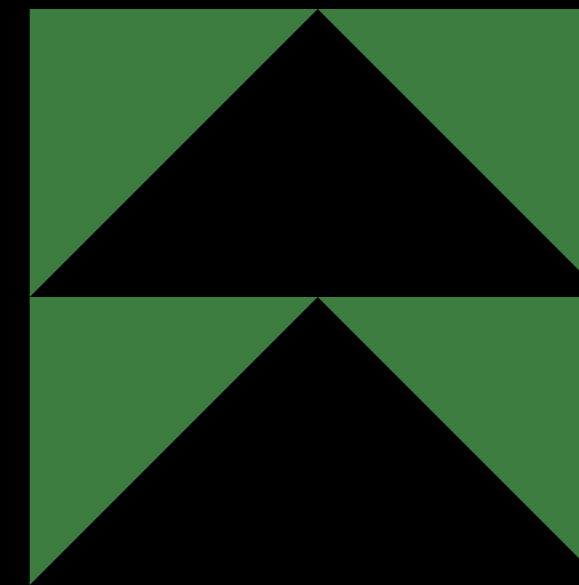
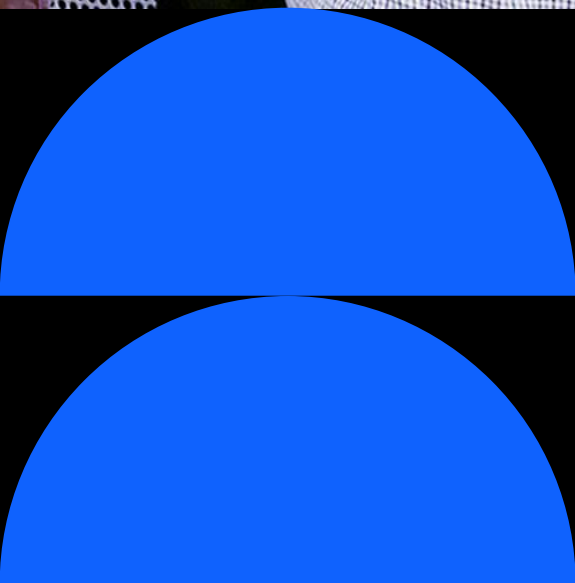
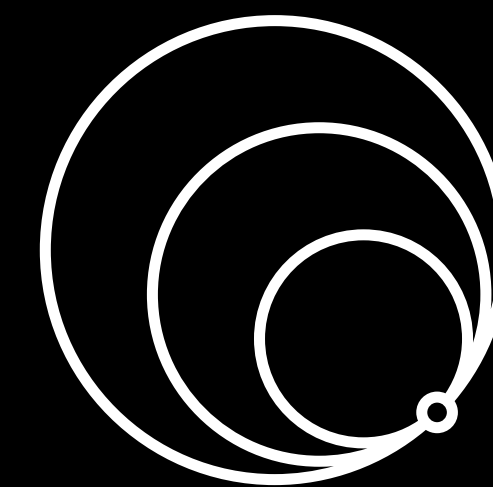
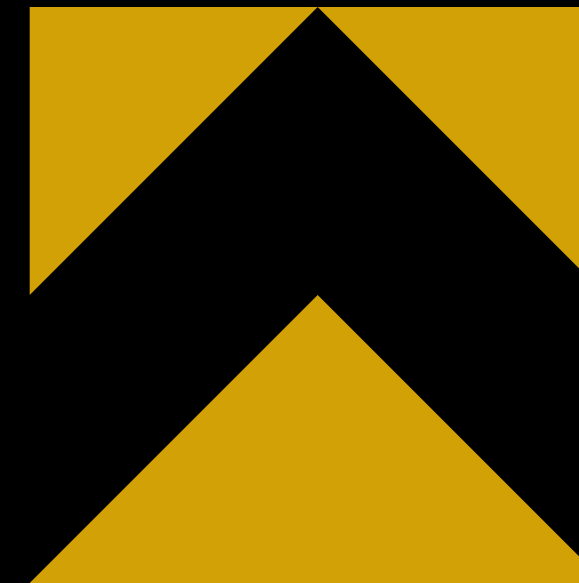
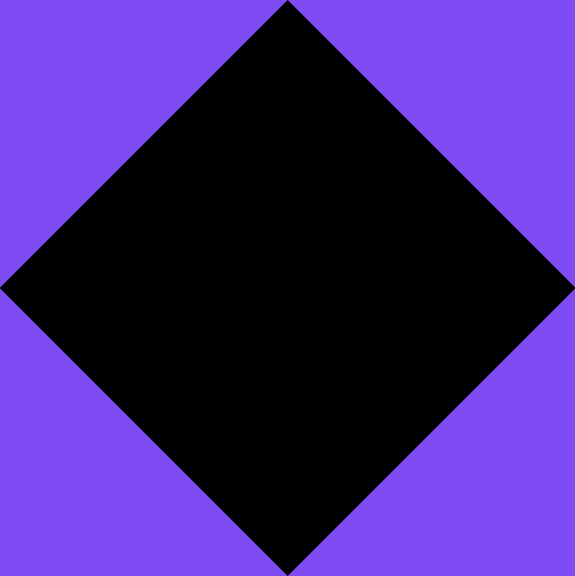
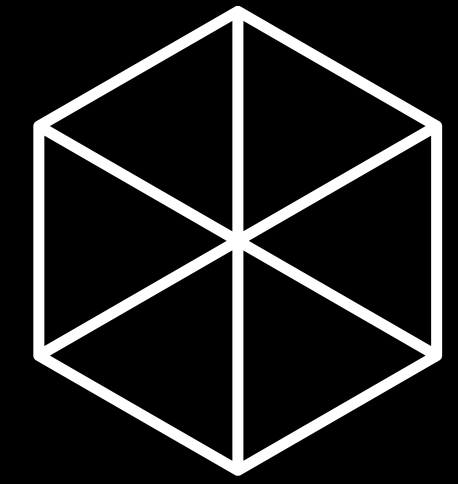
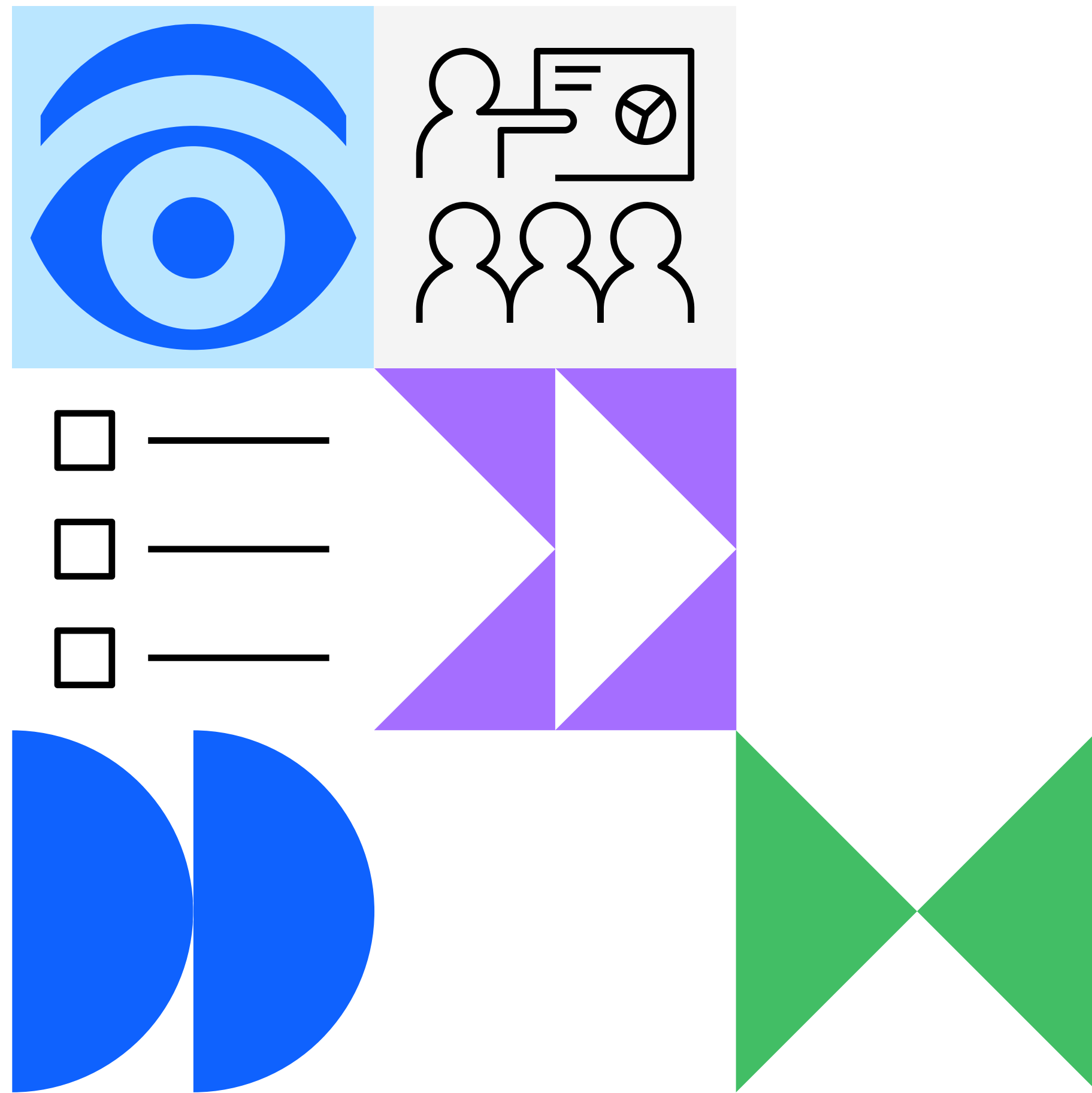


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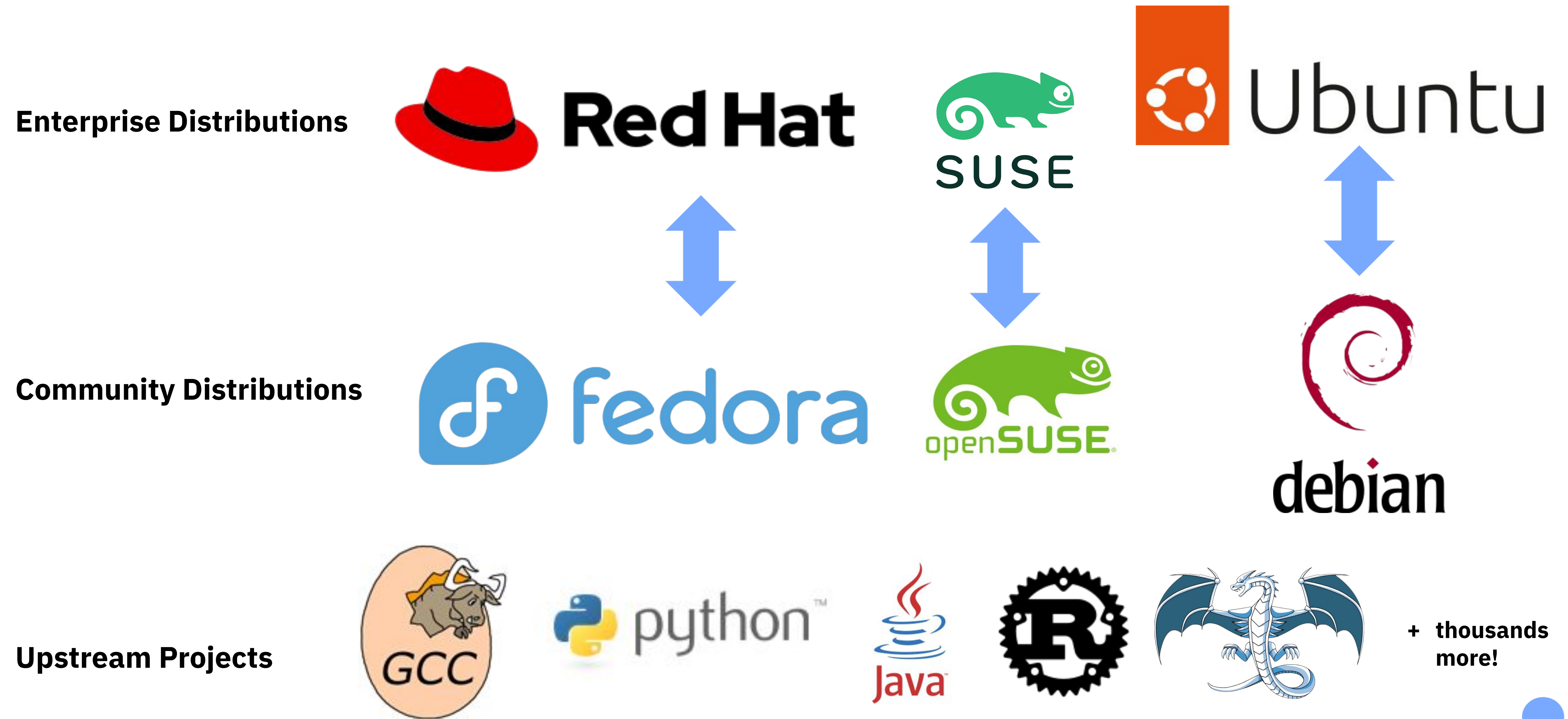
Sarah Julia Kriesch

- Senior Lead, Mainframe Architect & Open Source Evangelist @ Kyndryl
- Open Source Contributor for zLinux (Maintenance of openSUSE zSystems)
- (Co-)Chair of the Linux Distributions Working Group
- Conference Speaker
- Mainframe Architect for Hybrid Cloud
- Educator for zLinux & Kubernetes
- Mentor for Junior Architects

Elizabeth K. Joseph

- Global Head, Open Source Program Office for IBM Z & LinuxONE at IBM
- Open Source contributor to Ubuntu, Debian, OpenStack, and more
- (Co-)Chair of the Linux Distributions Working Group
- Conference speaker (hello!)
- Linux SRE by training
- Mentor and Ambassador for the Open Mainframe Project

What is a “distribution” of Linux?



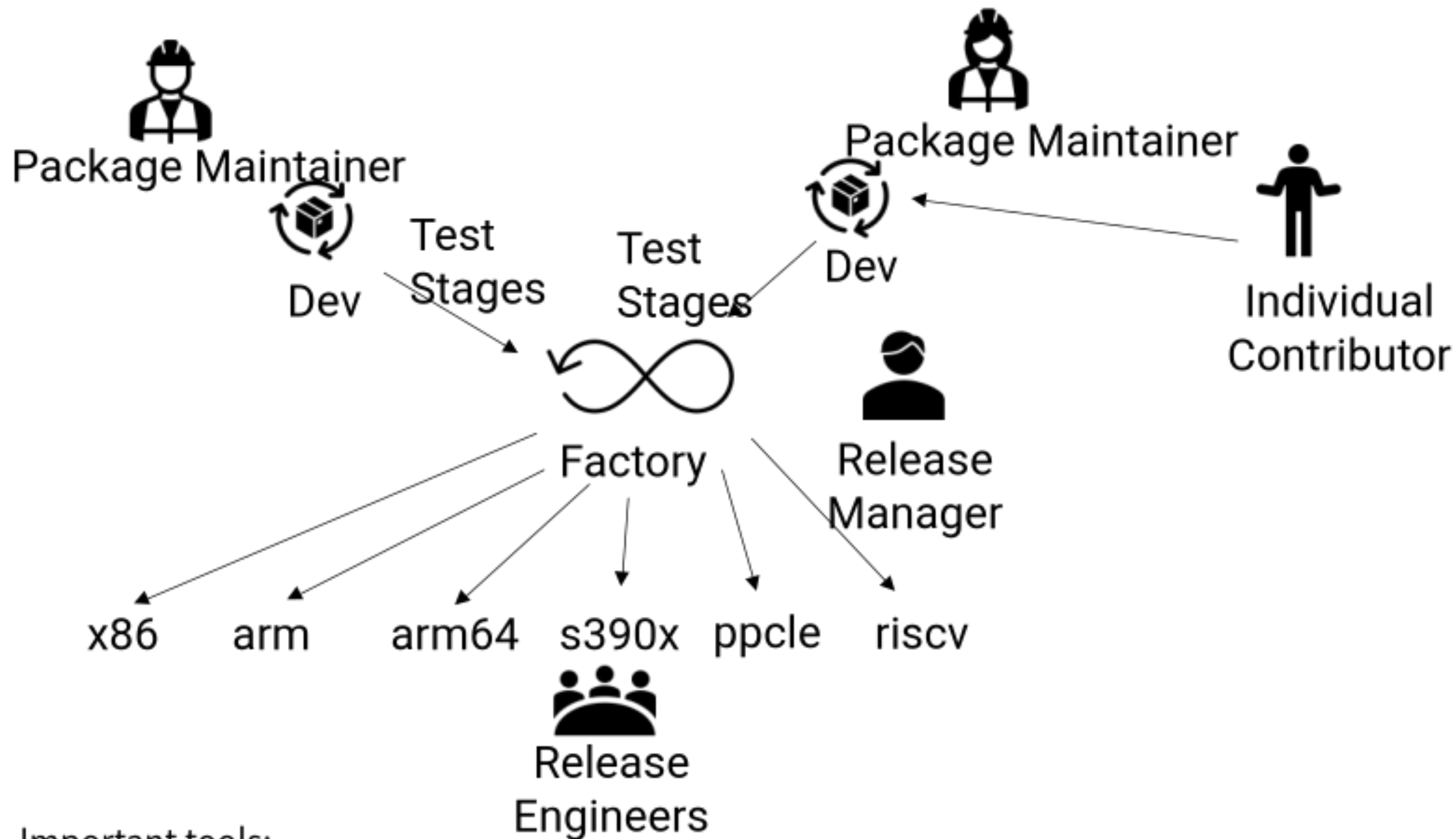
Roles in Linux Distributions

- Board/Council – Conflict Management & Decision Making
- Translators & Documentation
- QA Engineers – Testing, Bugreport creation & automated Tests
- System Administration
- Advocates/Ambassadors (Conferences & Expos)

Roles in Linux Distributions (cont.)

- Release Engineering/Technical (Steering) Committee – technical decisions and announcements
- Release Manager (additional Program Manager tasks)
- Package Maintainer- Updates from Upstream (Integration into Linux distributions)
- Upstream Developers (Cross Community Member opportunity)

Structure at openSUSE

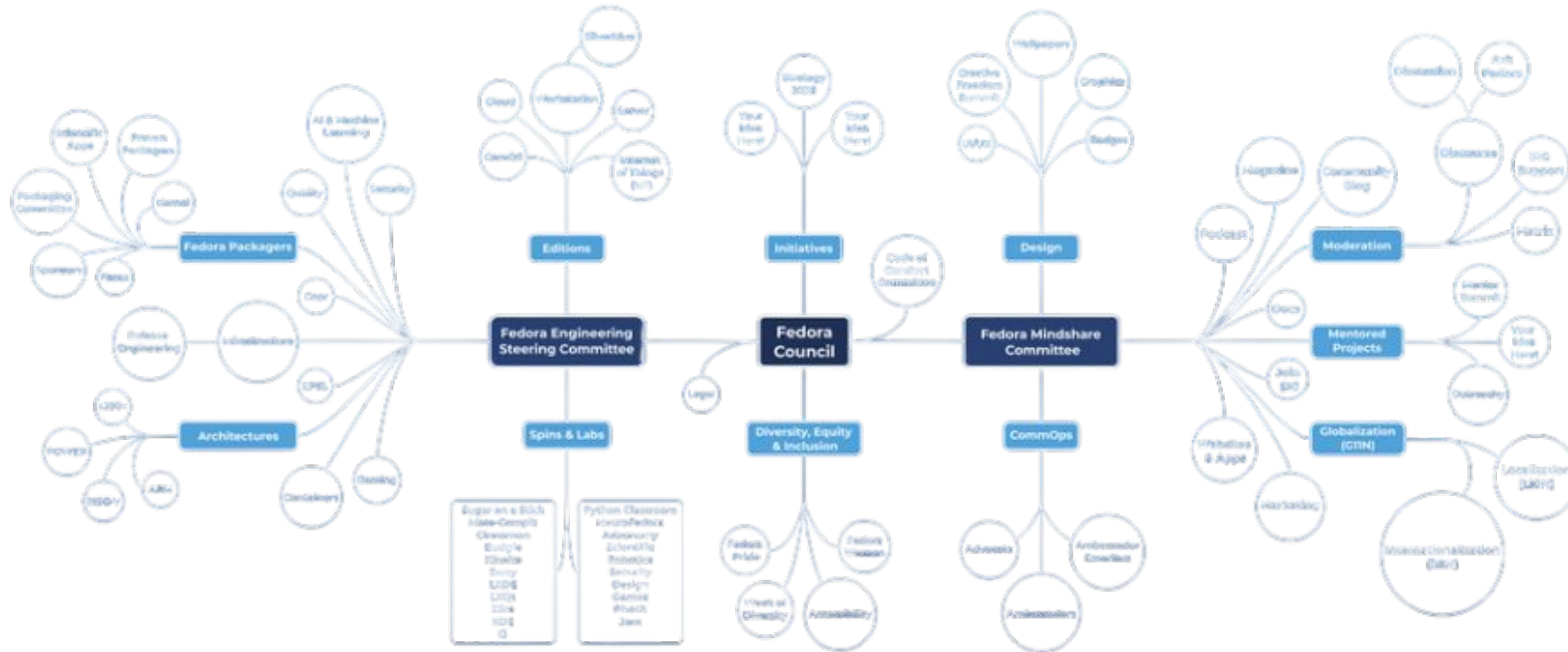


Important tools:

Bugzilla: <https://bugzilla.opensuse.org>

Mailinglist: zsystems@lists.opensuse.org

Structure at Fedora

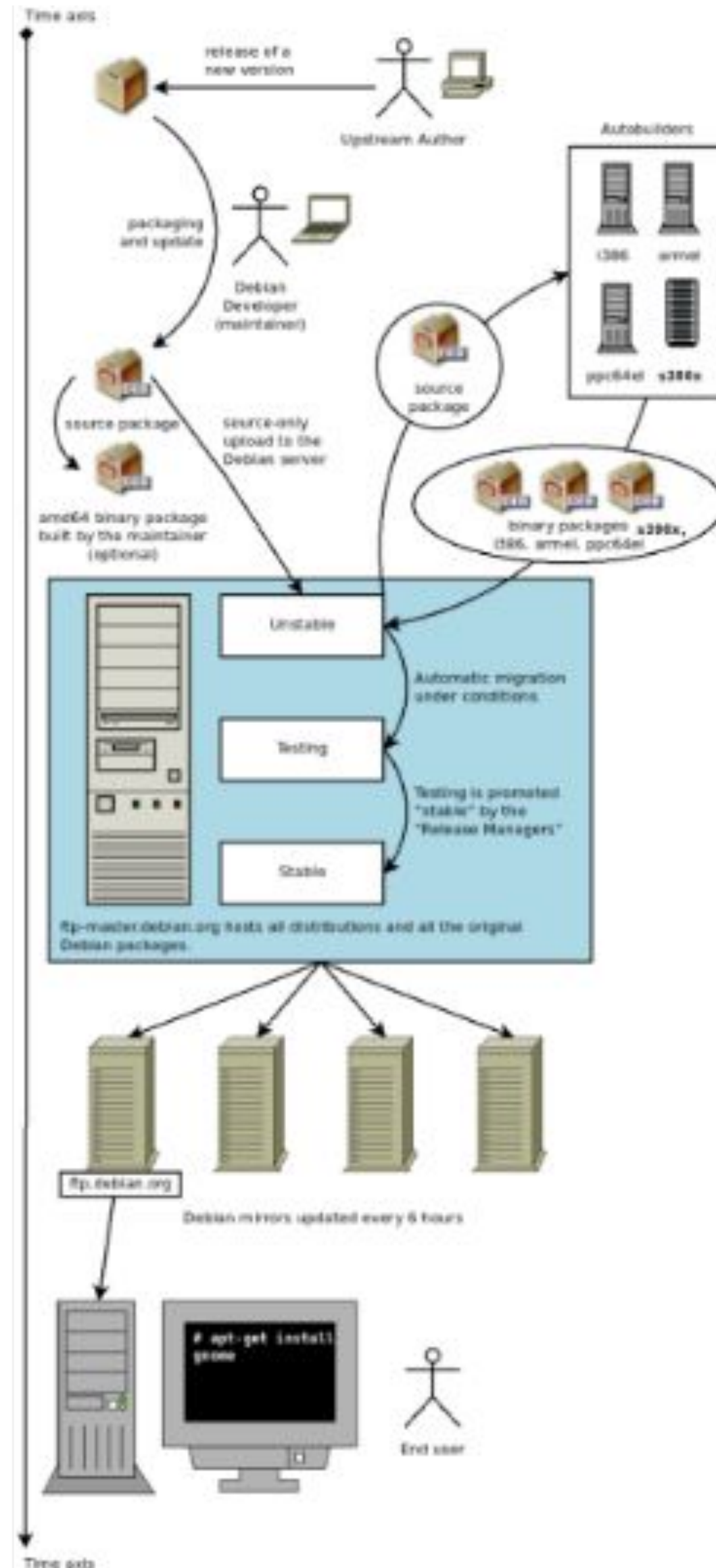


Important tools:

Bugzilla(**ZedoraTracker**): <https://bugzilla.redhat.com>

Mailinglist: s390x@lists.fedoraproject.org

Structure at Debian



Roles:

- Debian Contributor (Documentation)
- Debian Maintainer (Package Maintenance)
- Debian Developer (Full Project access)

Important tools:

Bugtracking: <https://bugs.debian.org>

Mailinglist: <https://lists.debian.org/debian-s390/>

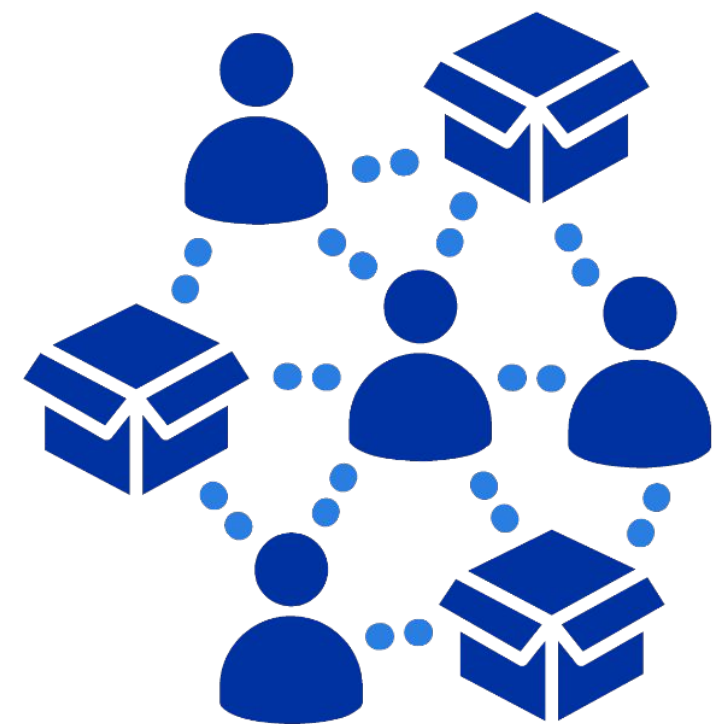
Source: <https://debian-handbook.info/browse/da-DK/stable/sect.release-lifecycle.html>

Goals of the Linux Distributions Working Group

- Create a place to collaborate across Linux Distributions via an OMP mailing list, wiki, and chat.
- Provide a space for distributions to request for help on their port.
- Ensure any and all infrastructure required is available for supporting the ports.
- Better support from IBM to fix s390x specific bugs

More at our team wiki:

<https://lf-openmainframeproject.atlassian.net/wiki/spaces/LinuxDistrosWG/overview>



OPEN **MAINFRAME** PROJECT
Linux
Distributions
Working Group



Collaboration via the Linux Distributions Working Group



Our collaborative process

- Problem discussions on our mailing list
- Reproducing issues (sometimes)
- Open discussions on the mailing list
- Forwarding issues/ideas of improvement for IBM
- Collaborative (small) projects
- Monthly meetings (come together) with review



Developer Resources for Linux on s390x

<https://openmainframeproject.org/news/developer-resources-for-linux-on-s390x/>



- IBM LinuxONE Community Cloud & Open Source Software Cloud
- Oregon State University Open Source Lab IBM Z Continuous Integration with Jenkins
- CircleCI self-hosted runner
- openSUSE Build Service
- Launchpad Personal Package Archives
- GitLab self-hosted Runner
- GitHub Actions self-hosted runner
- GitHub Actions hosted runner

IBM LinuxONE Open Source Software Cloud

- Free systems based on **IBM z15 / LinuxONE III** with long-term access!
- **Requirement:** Any open source project as a reference, and intent to work on porting for s390x
- Choices between RHEL, SLES and Ubuntu:
<https://www.ibm.com/community/z/open-source/virtual-machines-request/>



Also available: IBM LinuxONE Community Cloud providing VMs for short-term access for Developers, Students, Professors:

<https://developer.ibm.com/articles/get-started-with-ibm-linuxone/>



Hosted Github Actions CI Integration for Linux Applications

1. Submit an on-boarding issue on GitHub
2. Sign up for an IBMid
3. Add the GitHub Marketplace app to your project
4. Write & run tests!



Gitlab CI Integration for Linux (and z/OS!)

Supported architectures

GitLab Runner is available for the following architectures:

- x86
- AMD64
- ARM64
- ARM
- s390x
- ppc64le
- riscv64

Fun fact: It's also now available for IBM z/OS!

<https://docs.gitlab.com/runner/install/z-os/>

But why?

“I contribute to drive industry-wide impact — leading by example, and setting standards rather than wait for others to write it.

Shared practices & tooling (between mainframe/distributed/cloud) brings cohesion, drastically reduces toil, and accelerates any roadmap. Startups are building for "scale up" first; Z is the best scale-up platform there is. That software needs to work on Z.

In the "zopen community", I've helped deliver security through automated, proactive CVE handling.

It's tough, often thankless work, but strong stewards and contributors advance Z.

I urge mainframe vendors and customers to invest in individual contributors for unmatched ROI.”

- Vignesh, open source contributor and IBM Champion for 2025



Summary

- Everybody can contribute to Linux on Z
- IBM is not the Owner of Linux on Z
- Contributions to **Upstream** and to **Community Distributions** are welcome!
- Tests can be integrated as **s390x emulations** to GitHub Actions & Gitlab CI
- Upstream **support** or for Linux distributions via **Linux Distributions**

Working Group @ The Open Mainframe Project



Questions & Answers

Experience more here @IBM TechXchange

IBM Z
content



Join our Mainframe Roadmap kickoff :

#3358 THE Mainframe roadmap: the future with Agentic AI and Beyond , Tuesday 10:30am, Stage 07, 111, Sandbox, OCCC

JOIN us for a live IBM z17 unboxing in our sandbox Tuesday @12pm #4393

Experience our Sandbox

- Unboxed IBM z17
- Plexiglass mainframe
- Telum II LEGO
- Experts and designers
- Code in action
- AI Arcade



Hear from other clients

Banco do Brasil
Banco de Credito del Peru
Bank of Montreal
Banrisul
Charles Schwab
CIBC
Credit Agricole
DTCC
Ensono
Fidelity
Hogent University
HUK-Coburg
ICE
JN Data
Kyndryl

Lowes
Navy Federal Credit
NTT Data
Mastercard
Morgan Stanley
M&T Bank
MUFG Bank
Nationwide
Nordea
Northern Illinois University
Optum
Queens University
Sicoob
Trygg-Hansa
UBS
USAA

Earn a Lego mini model kit of IBM z17 or LinuxONE 5

Criteria for clients to earn a Lego kit:

- 1. Enroll and attend two (2) of the following technology breakout sessions:

Tuesday, October 7	Wednesday, October 8	Thursday, October 9
THE Mainframe roadmap: the future with AI, assistants, agents, quantum-security and beyond [3358] – 10:30 AM	Cybersecurity Trends in 2026 and Beyond: Navigating the Evolving Threat Landscape [3342] – 10:30 AM	Panel: Mainframe Milestones: From the first spark to celebrating the future! [3337] – 9:30 AM
AI at speed and scale: New use cases with IBM z17 [3354] – 2:00 PM	Managing Infrastructure as a code with IBM Terraform for Z and LinuxONE [3510] – 3:30 PM	
New Agentic AI for IBM Z: Strategy and Key Announcements [4392] – 3:30 PM		

- 1. Enroll and attend any IBM Z or LinuxONE lab
- 1. Meet with an expert **and** experience a demo in the IBM Z and LinuxONE sandbox



