



# The Mainframe An alternative Platform for openSUSE

*Sarah Julia Kriesch*

*[sarah.kriesch@opensuse.org](mailto:sarah.kriesch@opensuse.org)*

# Agenda

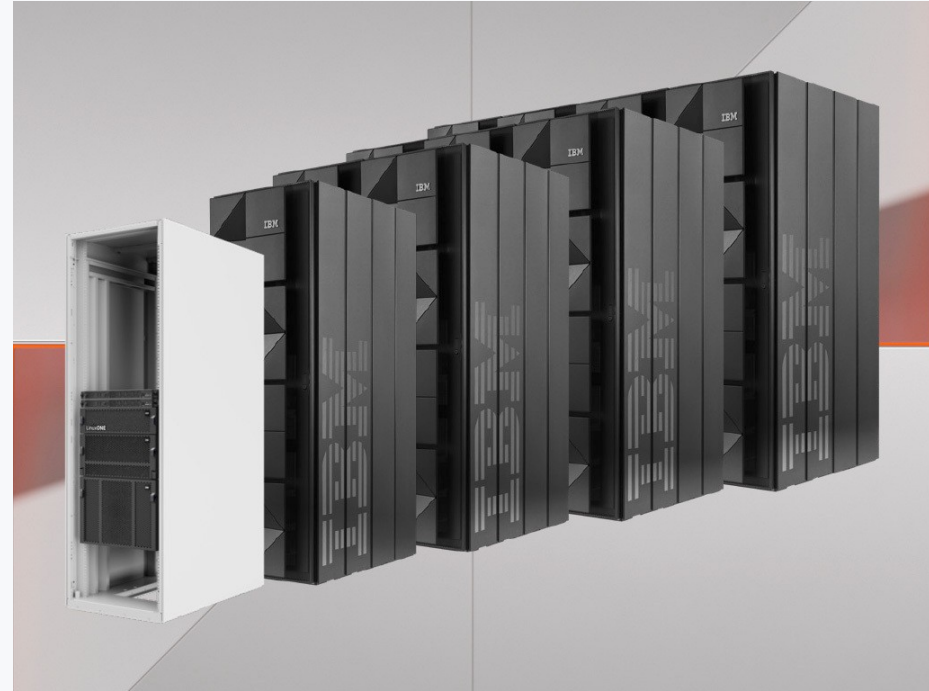


- The Mainframe
- s390x as an additional architecture in OBS
- The Open Mainframe Project
- LinuxONE (OSS) Community Cloud
- The Linux Distributions Working Group
- Our Goals for all Linux Distributions and “Upstream Projects”
- How to receive support in development /architecture specific stuff



## The Mainframe

- “Large” high-performance computer systems (well known)
- Now also available in a smaller version
  - Presentation “The new mainframe for Edge Computing and Industry 4.0”
- Big Endian Systems
- Architecture s390x
- Used for mission-critical data
- Thousands of VMs can run on such a system





# The architecture s390x in OBS



- s390x available as zSystems in OBS:
  - <https://build.opensuse.org/project/show/openSUSE:Factory:zSystems>
- Adding to your own project:
  - Repositories → Add from a Distribution → openSUSE Factory zSystems

openSUSE distributions

<input checked="" type="checkbox"/> openSUSE Tumbleweed	15.4 Variants  :	15.3 Variants  :	<input type="checkbox"/> openSUSE Backports for SLE 15 SP2
<input type="checkbox"/> openSUSE Backports for SLE 15 SP1	<input type="checkbox"/> openSUSE Backports for SLE 15 SP4	<input type="checkbox"/> openSUSE Backports for SLE 15 SP3	<input type="checkbox"/> openSUSE Backports for SLE 12 SP3
<input type="checkbox"/> openSUSE Backports for SLE 12 SP2	<input type="checkbox"/> openSUSE Leap 15.4	<input type="checkbox"/> openSUSE Leap 15.3	<input checked="" type="checkbox"/> openSUSE Factory zSystems
<input type="checkbox"/> openSUSE Factory RISCv	<input type="checkbox"/> openSUSE Backports for SLE 12 SP5	<input type="checkbox"/> openSUSE Backports for SLE 12 SP4	<input type="checkbox"/> openSUSE Leap 15.5
	<input type="checkbox"/> openSUSE Backports for SLE 12 SP1	<input type="checkbox"/> openSUSE Backports for SLE 12 SP0	
	<input checked="" type="checkbox"/> openSUSE Factory PowerPC	<input checked="" type="checkbox"/> openSUSE Factory ARM	

- Wiki: <https://en.opensuse.org/ZSystems>

# The Open Mainframe Project



- Founded 2015
- Focal point for deployment and usage of Linux and Open Source in a mainframe computing environment
- Project under the Linux Foundation





- LinuxONE Community Cloud providing VMs for 120 days for Developers, Students, Professors:

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

Hint: Account will be removed afterwards and recreation possible

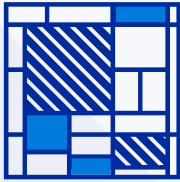
- LinuxONE OSS Community Cloud available for OSS Projects with Long-Term VM access
- openSUSE zSystems has got 7 VMs for development and hackathons
- Requirement: Any open source project as a reference
- Choices between Ubuntu, RHEL and SLES (upgrade to openSUSE possible!)
  - <https://www.ibm.com/community/z/open-source/virtual-machines-request/>



OPEN **MAINFRAME** PROJECT

**COBOL**

*Working Group*



OPEN **MAINFRAME** PROJECT

**Modernization**

WORKING GROUP



OPEN **MAINFRAME** PROJECT

**Linux  
Distributions**

*Working Group*



**Rocky Linux**<sup>™</sup>



**ubuntu**<sup>®</sup>



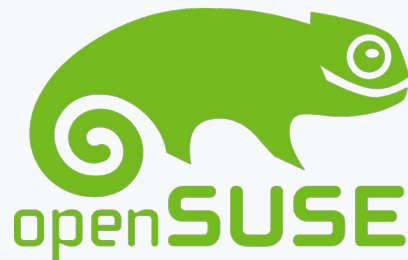
**debian**



**AlmaLinux**



**Red Hat**







- Founders/ (Co-)Chairs:
  - Sarah Julia Kriesch (openSUSE, Accenture)
  - Elizabeth K. Joseph (Ubuntu, IBM)
- One Representative for every Linux distribution (required for input)
- Upstream Developers welcome during our meetings :)
- Sponsor: SUSE



- 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

<https://wiki.openmainframeproject.org/display/LinuxDistrosWG/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
- Monthly meetings (come together) with review



Are there any problems during your development process for s390x?



- Biweekly meetings of our openSUSE zSystems Team (after-work in Europe)
  - Knowledge sharing and s390x/openSUSE specific stuff
  - News from IBM side and by the Linux Distributions Working Group
  - Organization of a yearly SUSE/openSUSE zSystems Team BBQ Event
- Training material:  
[https://en.opensuse.org/ZSystems#Introduction\\_to\\_the\\_Z\\_Architecture\\_edit](https://en.opensuse.org/ZSystems#Introduction_to_the_Z_Architecture_edit)
- Our own mailing list for questions (also some IBMers are subscribed):
  - <https://lists.opensuse.org/archives/list/zsystems@lists.opensuse.org/>
- Bug reports for s390x (AdaLovelace on CC) → can be forwarded to IBM  
Hint: Don't add sarah.kriesch@ibm.com!



- Fast support via the mailing list of the Linux Distributions Working Group
- Other Linux Distributions can reproduce build issues
- IBM Distinguished Engineer is responding on development problems
- Solid solutions available (for upstream) within hours or some days
- Mailing List:  
<https://lists.openmainframeproject.org/g/wg-linux-distros>



# Questions?

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