# EESSI + HPC.NRW collaboration Kickstart meeting

Tue Jan 5th 2021 - 13:00-14:30 CET

# Agenda

1. Quick introduction of participants [ALL]

2. Very short intro for HPC.NRW competence network [Robert]

3. Goals with respect to harmonized software environment in HPC.NRW [Robert]

4. Current areas of activity and possible contribution areas in EESSI [Kenneth]

5. Discussion of what HPC.NRW could do [ALL]

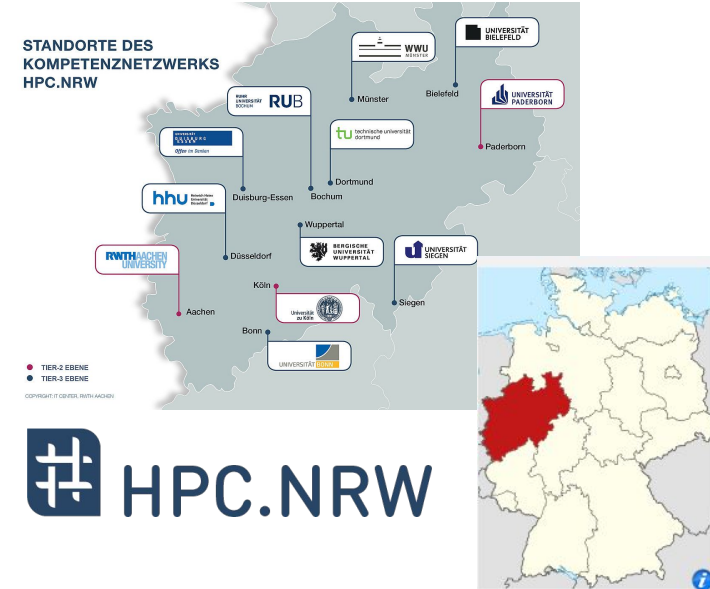6. Next steps

# Quick introduction of participants

Please introduce yourself (in 1 min or less!)

- ○ Where do you work

- ○ Experience in HPC context

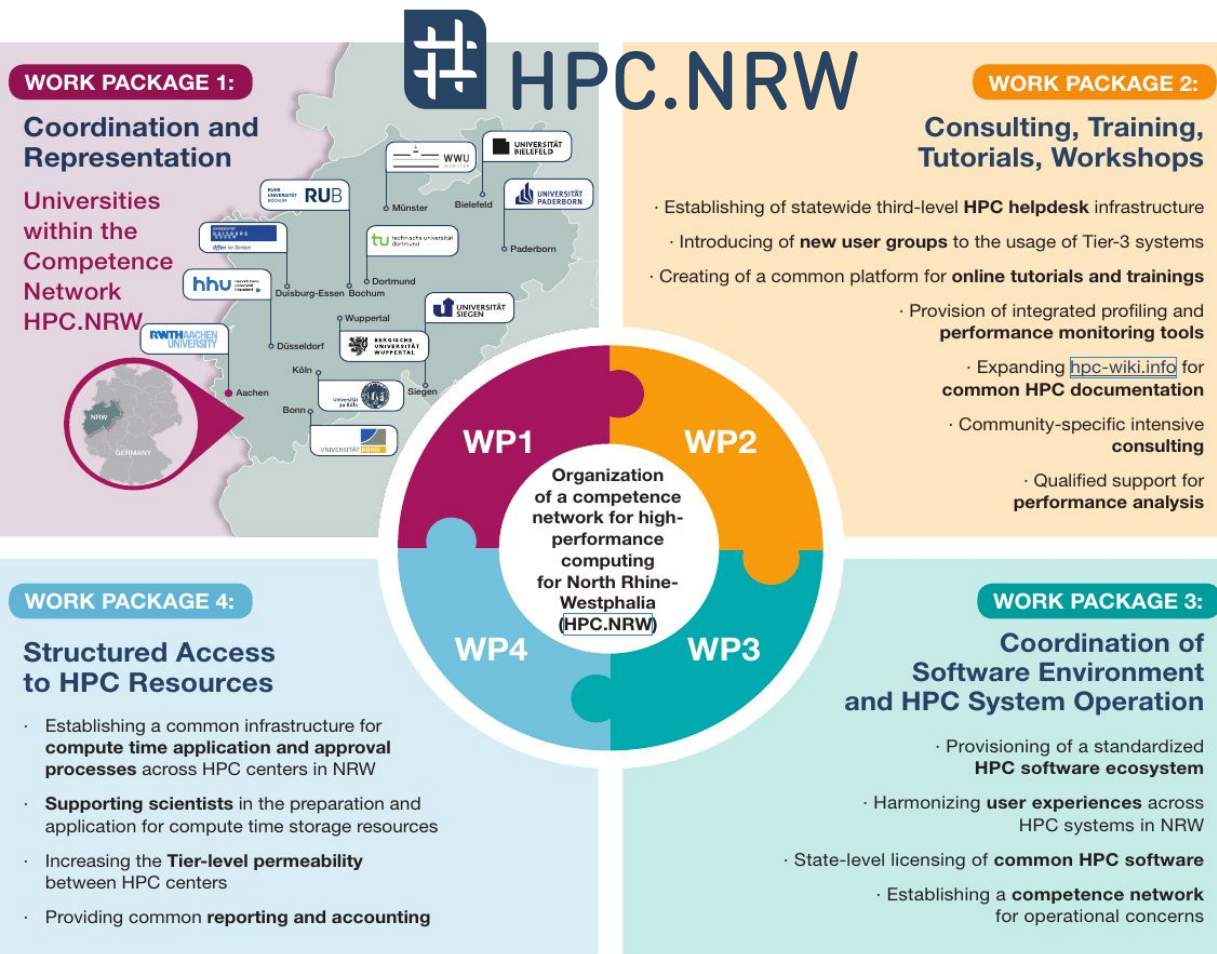- ○ Primary interests in context of EESSI project

# HPC.NRW competence network



- Competence network of all universities with data centers in

  North-Rhine-Westphalia (NRW)

  - 12 universities

- Established mid 2019

- First funding phase till end of 2022

- Main goals:

  - Support for transitions between HPC-tiers

  - Competent HPC-Support for all researchers in NRW

  - Efficient planning, setup and use of HPC resources

- Funding for personnel (18 FTE) and for state-level software licensing, ...

[Robert]

# HPC.NRW competence network



**WP3:** Coordination of Software Environment and HPC System Operation:

- Provisioning of a standardized HPC software ecosystem
- Harmonizing user experiences across HPC systems in NRW
- .....

[Robert]

# HPC.NRW competence network

**WP3:** Coordination of Software Environment and HPC System Operation:

**Efforts so far for a standardized HPC software ecosystem:**

- Investigation and analysis of available software and software usage in NRW

- Internal Easybuild Workshop and Best-Practice guides

- Concept for an "HPC.NRW-module-tree"

    - In addition to the existing module-trees, deployment with Easybuild

    - → instead of setting up a similar initiative

**We think we can contribute to EESSI because:**

- we have developers and system administrators in the project (6 FTE for WP3)

- we have sites that have experience with/use Easybuild and/or CVMFS

- we have many different clusters (for testing purposes)

[Robert]

# Current areas of activity and possible contributions to EESSI



- Fixing problems encountered with iterative revisions of pilot repository, see project for 2020.12 revision (https://github.com/orgs/EESSI/projects/3)

- Improvements & bug fixes to EasyBuild (RPATH issues, building in Prefix env)

- Automation: Ansible, scripts

- Continuous Integration (GitHub Actions)

- Testing for (compat &) software layer with ReFrame

- Exploring other platforms (macOS, POWER)

# Discussion of what HPC.NRW could do

- Automation
  - Continue Terje's work with Terraform to leverage cloud resources
  - Work towards goal of adding software to repo via pull requests

- Testing & CI
  - Verify aspects of compat & software layer in GitHub Actions workflow
  - Software application testing with ReFrame (MPI, GROMACS, OpenFOAM, TensorFlow)

- Documentation
  - Native CernVM-FS access (next to via Singularity)
  - Running MPI jobs (+ using CernVM-FS alien cache?)
  - Build nodes (https://github.com/EESSI/docs/issues/50)
  - ...

# Next steps

- Getting organised
  - Create issues + project (Kanban) board
  - Make sure active contributors are using EESSI Slack (easy communication)
  - Weekly (short) meetings to discuss current/next tasks & progress?
    - Fixed day/time?
    - Maybe only by small focused working groups?

- Prioritize & assign tasks
  - Which tasks should be tackled first?
  - Which aspects does HPC.NRW want to focus on?
  - Who does what?