

## MPI within EGI

Alvaro Simon, Zdeněk Šustr



- Active between **10 November 2011** and **27 July 2012**
- 28 members/collaborators, 10 institutes
- Objectives:
  - Demonstrate that MPI can work successfully in EGI
  - Set up a VO with sites committed to supporting MPI jobs
  - Improve communication between users and MPI support
- Building on the notion that the essential functionality is already there and the negative real-world experience is caused largely by misconfiguration on actual sites.

Six areas of concern were identified and addressed:

- MPI-Kickstart VO
  - A survey was carried out, and sites were invited to join
  - Brought together interested site admins and MPI experts
  - Fresh resources configured under the supervision of the VT
  - Has not caught on among “wider public” – future open
    - ... but served as expected during the life time of the VT
- MPI Documentation
  - Applicable documents identified and referenced from a common entry point
  - Documentation proofing on MPI-Kickstart VO resources
  - Both site admin and user documentation tried and tested
  - Maintenance taken over by SA3.2

- SAM (Nagios) probes
  - New GOCDB service type to advertise MPI capability
  - A set of new probes specified
    - Sanity check
    - Simple job
    - Complex job
  - Implemented in Summer 2012
    - Deployed in a testing setup, getting ready for production
- Information system
  - A sweep of all sites, checking their advertised MPI capabilities
  - Over 200 erroneous records were identified
    - Published information mismatch, incorrect or default values
  - Identities handed over to SA1 Operations for resolution

- Accounting system
  - Facing limited MPI accounting capability in APEL
  - Input specification for accounting data collection plugins
    - Communicated to technology provider (EMI)
  - Implementation expected with EMI-3 (UMD 3)
- Batch system integration
  - Tracking reported issues
  - Nominal support in all batch systems deployed across EGI
    - Issues identified in MAUI and Torque
  - Fixes made available with EMI-2 (UMD 2)

- MPI Documentation

- [https://wiki.egi.eu/wiki/MPI\\_User\\_Guide](https://wiki.egi.eu/wiki/MPI_User_Guide)
- <https://wiki.egi.eu/wiki/MAN03>

- VT Final Report

- <https://documents.egi.eu/public/ShowDocument?docid=1260>

- MPI-Kickstart VO

- <https://www.metacentrum.cz/en/VO/MPI>

- Demonstration

- EGI TF, **Wednesday** 19 September 2012, **Demo booth 3**