PoD

PROOF on Demand

Anar Manafov, GSI Darmstadt,

CHEP 2009

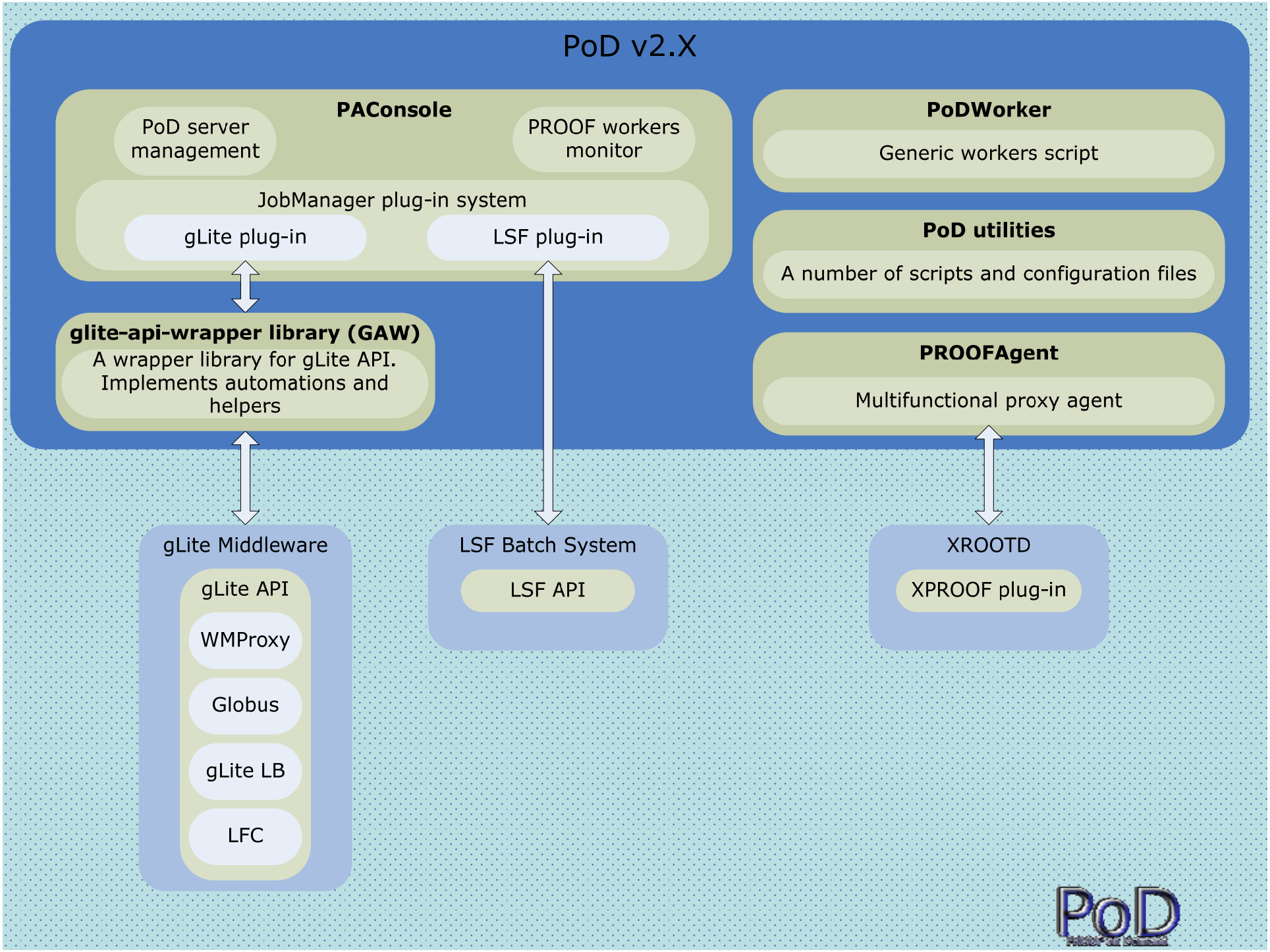
v. 0.16

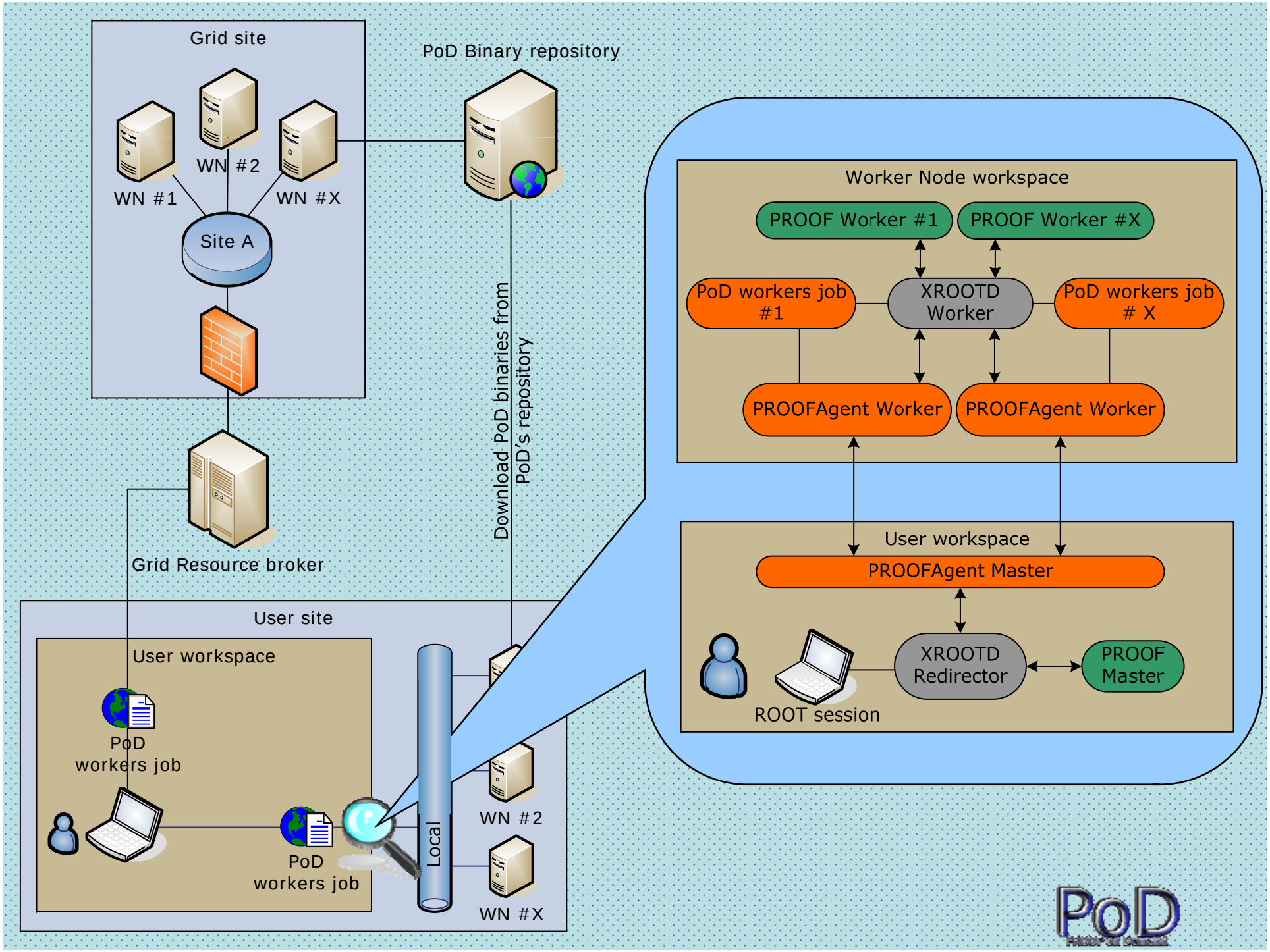
Motivation

Design a toolset to setup a PROOF cluster on-the-fly.

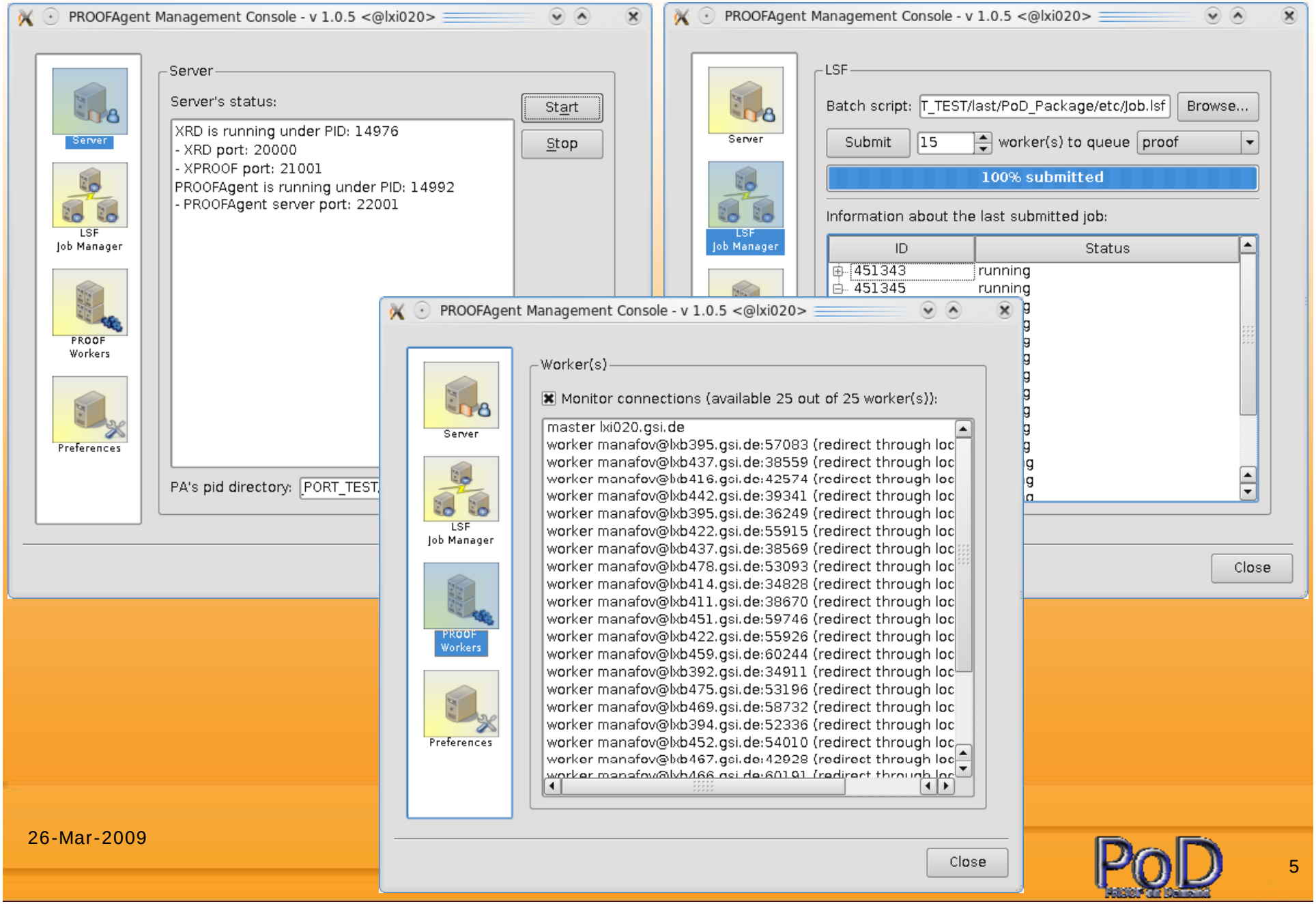
The main goal is to make it transparent, also simple in use and extensible.

Use and combine Grid/Batch resources.

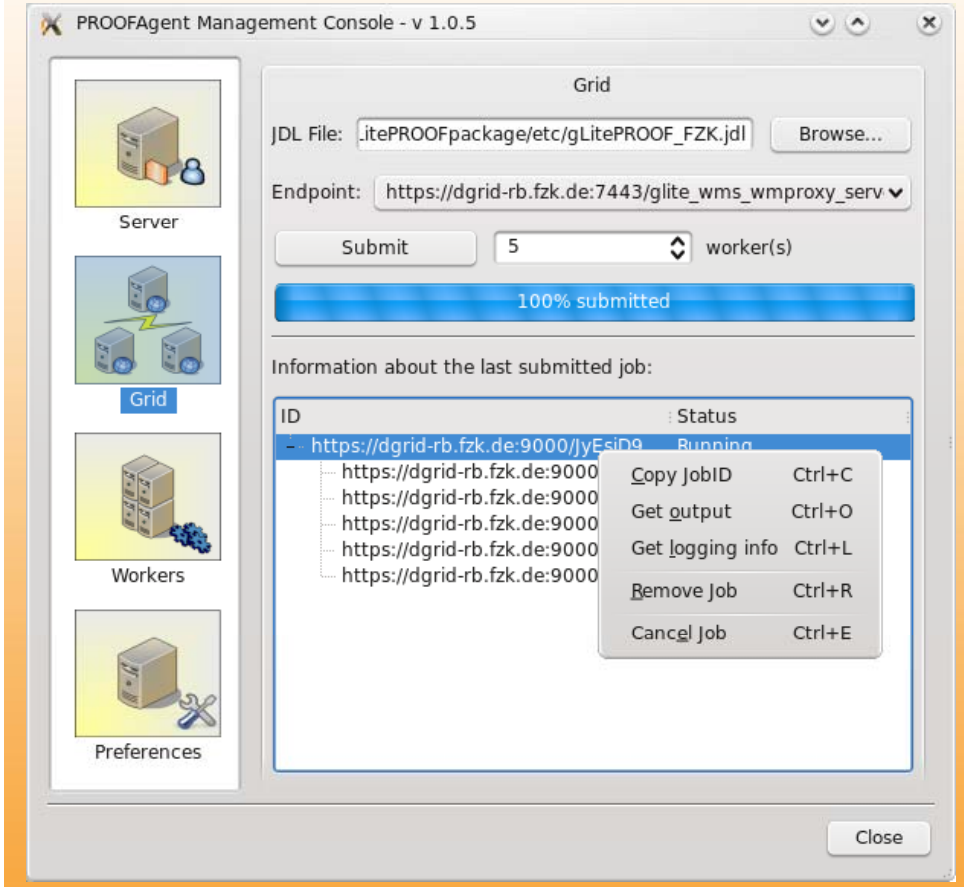

PoD v2.X
PAConsole
PoD server management
PROOF workers monitor
JobManager plug-in system
gLite plug-in
LSF plug-in
glite-api-wrapper library (GAW)
A wrapper library for gLite API. Implements automations and helpers
PoDWorker
Generic workers script
PoD utilities
A number of scripts and configuration files
PROOFAgent
Multifunctional proxy agent
gLite Middleware
gLite API
WMProxy
Globus
gLite LB
LFC
LSF Batch System
LSF API
XROOTD
XPROOF plug-in
PoD

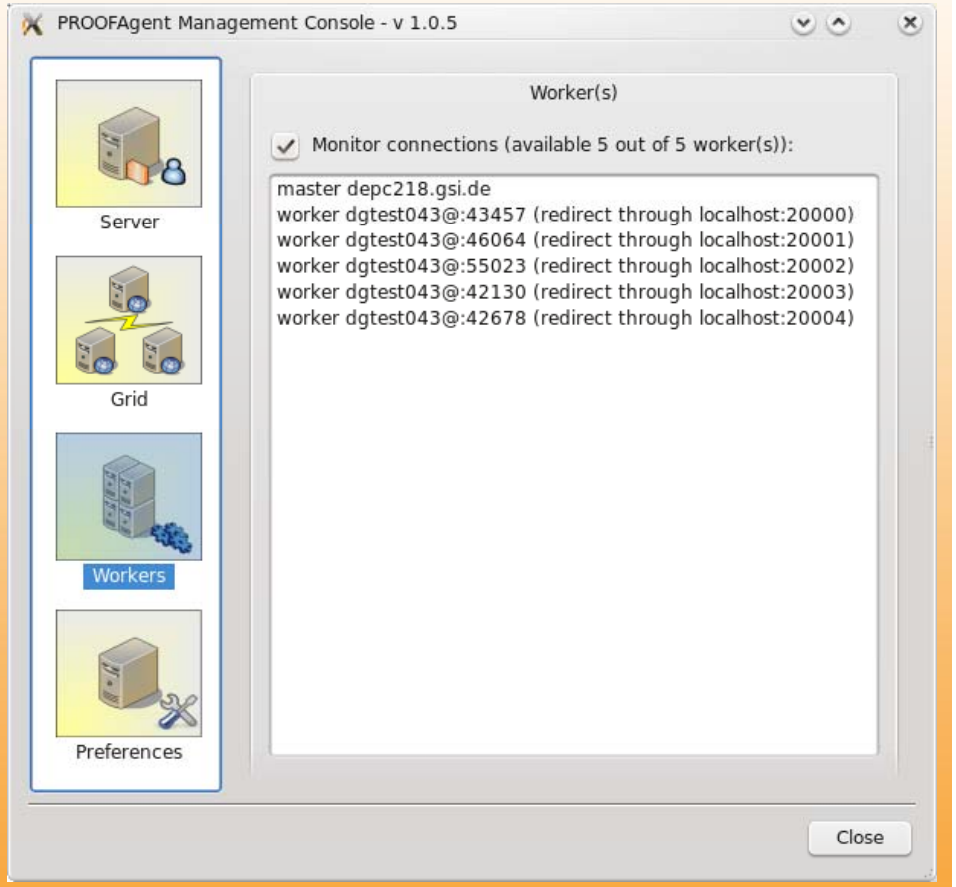

Grid site
PoD Binary repository
WN #1
WN #2
WN #X
Site A
Download PoD binaries from PoD's repository
Grid Resource broker
User site
User workspace
PoD workers job
PoD workers job
Local
WN #2
WN #X
Worker Node workspace
PROOF Worker #1
PROOF Worker #X
PoD workers job #1
XROOTD Worker
PoD workers job # X
PROOFAgent Worker
PROOFAgent Worker
User workspace
PROOFAgent Master
XROOTD Redirector
PROOF Master
ROOT session
PoD

PAConsole - a GUI of PoD



PAConsole - a GUI of PoD





TODO

New stable release with LSF (ALICE, GSI)

Implement plug-ins for

- SGE, Condor, PBS, Globus...

Support Mac OS X UI and WNs

- implement PAConsole natively using Cocoa framework and Objective-C,
- port PROOFAgent to Mac OS X,
- advertise workers via Bonjour.

Extend PAConsole functionality

Use PROOFAgent proxying dynamically

Extend code coverage

Software development

Agile methods are used

- continues integration (automated builds on SLC3, SL4, and F9, nightly builds),
- unit tests,
- projects metrics,
- task tickets and sprints...

Current build systems

- GNU Autotools,
- CMake.

Documentation systems

- DocBook (user manual and misc docs),
- Doxygen (source code documentation).

Continues integration

- Buildbot (automated distributed builds).

Summary

Easy in use

- user's manual (http://www-linux.gsi.de/~manafov/D-Grid/docz/),
- one-click-installation,
- user friendly GUI – easy to configure and use,
- works out of the box,
- dynamic ports on UIs and WNs,
- supports reconnections,
- supports different resources (with help of plug-in system).

Transparent

Resource sharing and monitoring for free

PoD: a PROOF cluster on-the-fly

Documentation/Download:
https://subversion.gsi.de/trac/dgrid

GEFÖRDERT VOM
Bundesministerium für Bildung und Forschung