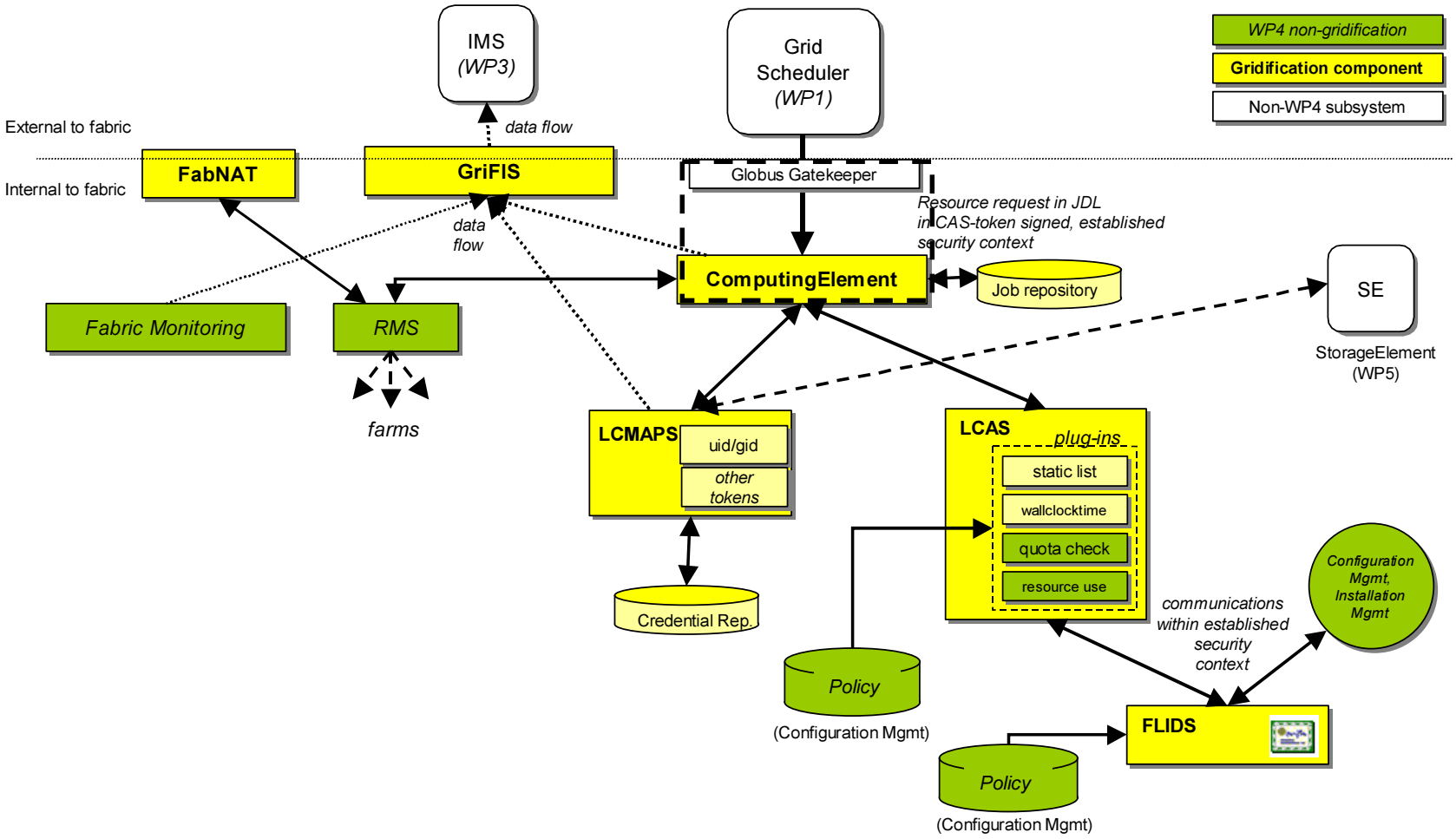
Gridification progress report

For gridification: Martijn Steenbakkers

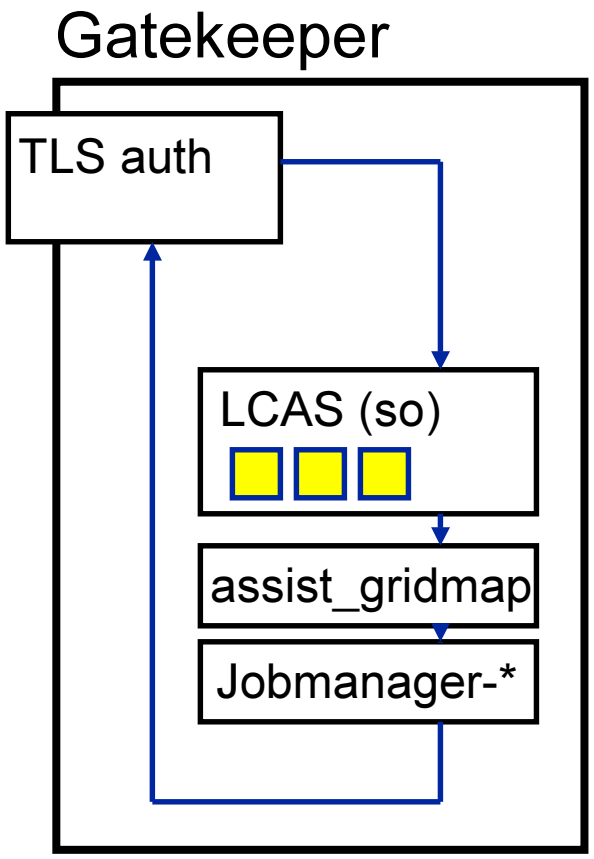
hep-proj-grid-fabric-gridify@cern.ch

Gridification Architecture

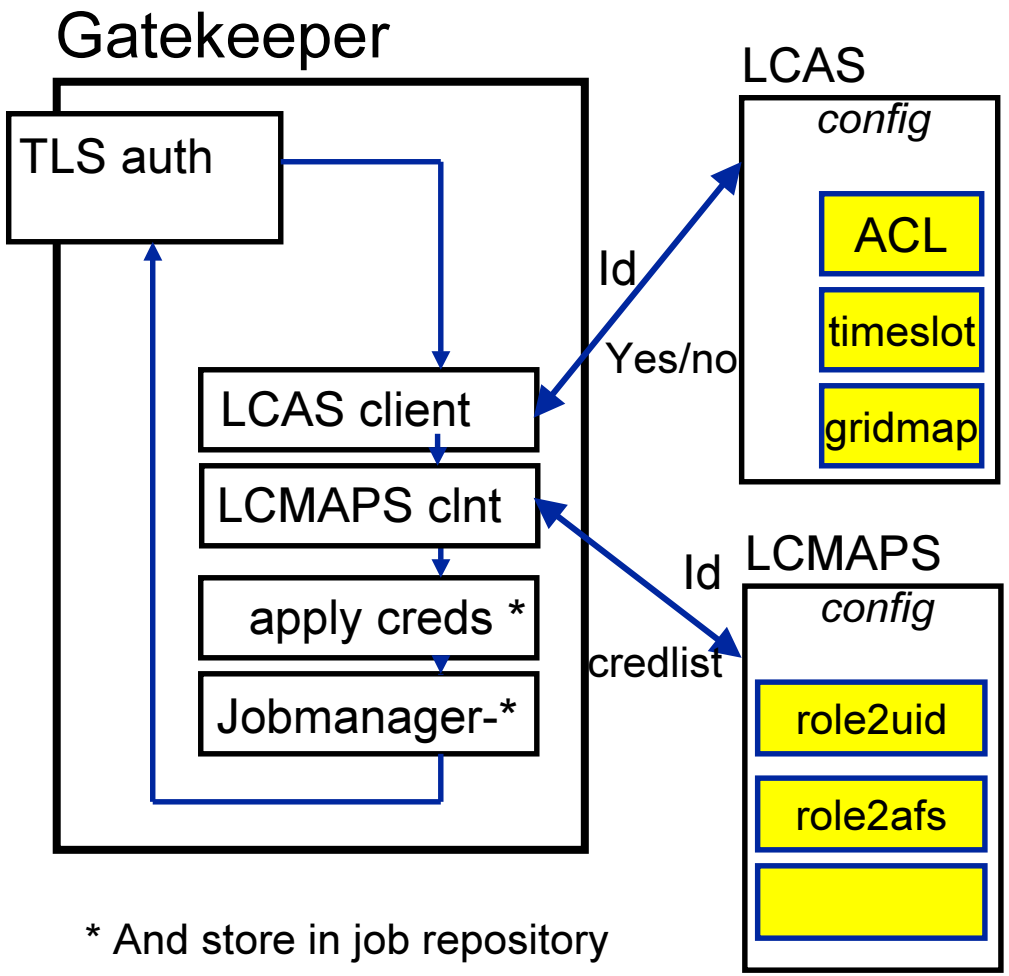


Authentication control flow EDG gatekeeper

NOW (EDG1.2), EDG1.3



EDG1.4, EDG2.x



* And store in job repository

LCAS 1.0 (EDG release 1.2)

- First prototype: shared object (`lcas.mod`)
  - Dynamic library calls from `edg-gatekeeper`
  - 3 static authorization modules:
    - Allowed users (`grid-mapfile` or `allowed_users.db`)
    - Banned users (`ban_users.db`)
    - Available timeslots (`timeslots.db`)
  - No plug-ins supported yet
  - LCFG object `obj-lcas` installs authorization databases
  - Documentation: http://www.dutchgrid.nl/DataGrid/wp4/lcas/

edg-gatekeeper 2.0

- Linked dynamically instead of statically
- Deployment testbed: occasional crashes (hard to reproduce)
  - Bugzilla bugs: 431, 471
- Memory corruption and memory leaks in Globus code (found a.o. with insure++)
- New patch available: 2.0.3-21d
- ATF discussion last week: Rewrite gatekeeper ?

LCAS 1.1 (EDG release 1.3)

- Shared object with the 3 authorization modules
- Plug-in framework added (based on dynamic library calls)
  - List of plug-ins to be loaded in `lcas.db`
  - Example plug-in: `lcas_plugin_example.c`
  - Plug-in has to provide the following interfaces:
    - `int plugin_initialize(int argc, char ** argv)`
    - `int plugin_confirm_authorization(`
      `lcas_request_t request,`
      `lcas_cred_id_t user_cred)`
    - `int plugin_terminate()`
- Documentation soon available
- Please develop plug-ins (ACL, accounting, quota checks)

Future

- LCMAPS local credentials
  - Library implementation of credential generation plug-in framework
  - Replace gridmap(dir), but keep functionality
  - Logical place to add role support
  - EDG release 1.4 (?)
  - AFS/Kerberos support: EDG release 2.x
- LCAS 2.0:
  - first prototype AAA server with simple policy language
  - EDG release 2.0 (?)
- Additional modifications to gatekeeper required
  - error&status handling: Getting a useful message to the user
- Other components (job repository, FLIDS, FABNAT) > EDG 2.x