# Proxy Token Translation Service - internals

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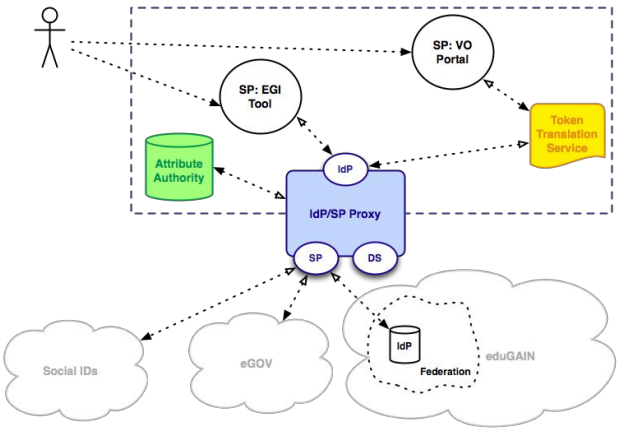
*EGI Community Forum, Bari*

12 November 2015




Focus on interaction
**VO-portal** $\leftrightarrow$ **Master-portal**
(TTS)

- Our token: short-lived RFC3820 (VOMS) proxy certificate
- Translation from SAML identity to proxy certificate
- Access to TTS must be restricted to certain services:
  - → *delegation scenario*: use OpenID Connect
    - TTS acts as OIDC *server* (Authorization Server and protected Resource)
    - VO Portal acts as OIDC *client*
    - Use OIDC access token to obtain proxy certificate

- Also need End-Entity Certificate (EEC)
- Cache EEC in MyProxy credential store behind TTS
- CILogon portal-delegation scenario (`http://goo.gl/VnMKXS`)
  - Uses OpenID Connect for MyProxy protocol
  - OIDC *server* in front of a MyProxy Online CA
  - TTS acts as OIDC *client*
  - Uses OIDC access token to obtain End-Entity Certificate

→ Use protocol and OpenID Connect server twice!

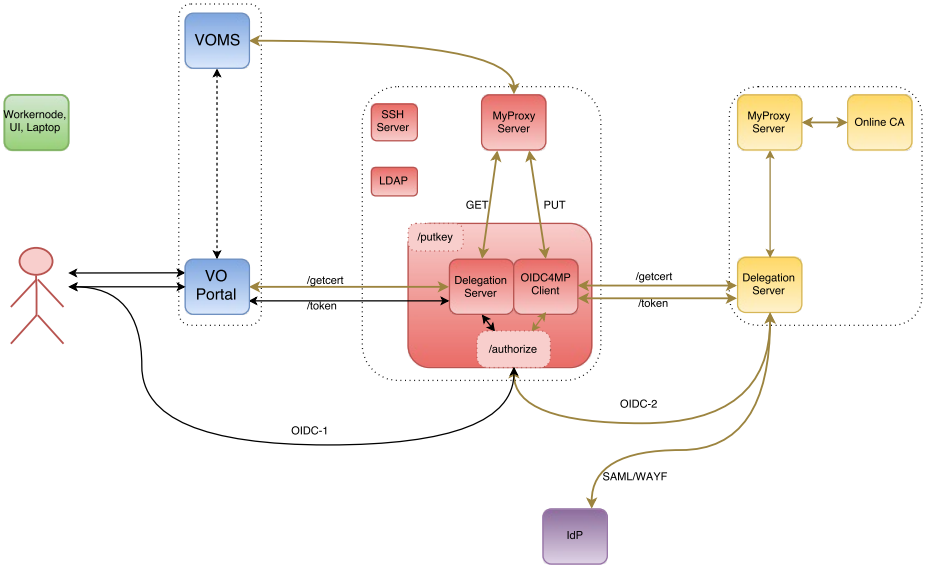
**End Entity Certificate**:

- produced using MyProxy online CA
- OIDC4MP DS is OIDC server
- TTS/Master Portal is OIDC client
- EEC cached in MyProxy credential store

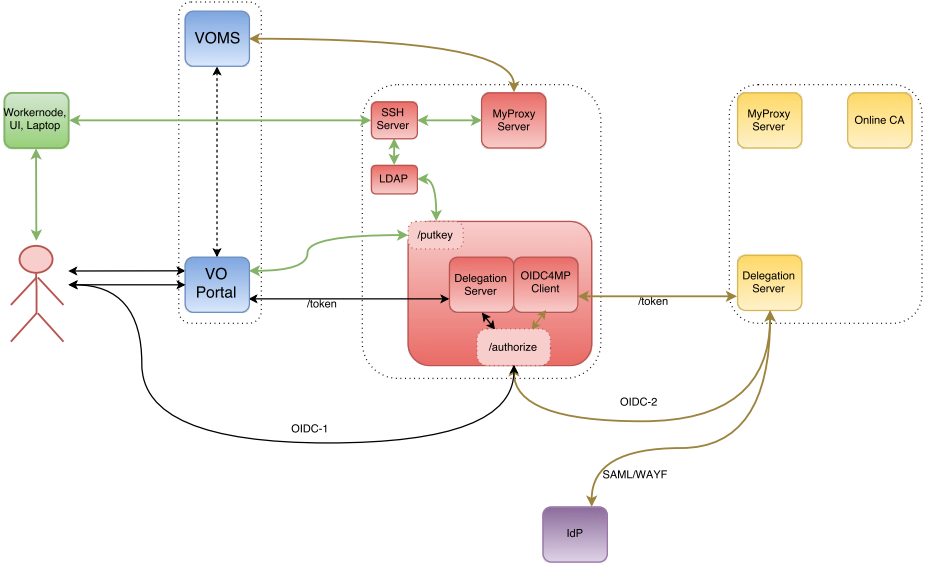
**Proxy Certificate (our token)**:

- produced using EEC in MyProxy credential store
- TTS/Master Portal is OIDC server
- VO Portal is OIDC client
- proxy is retrieved and used by VO portal

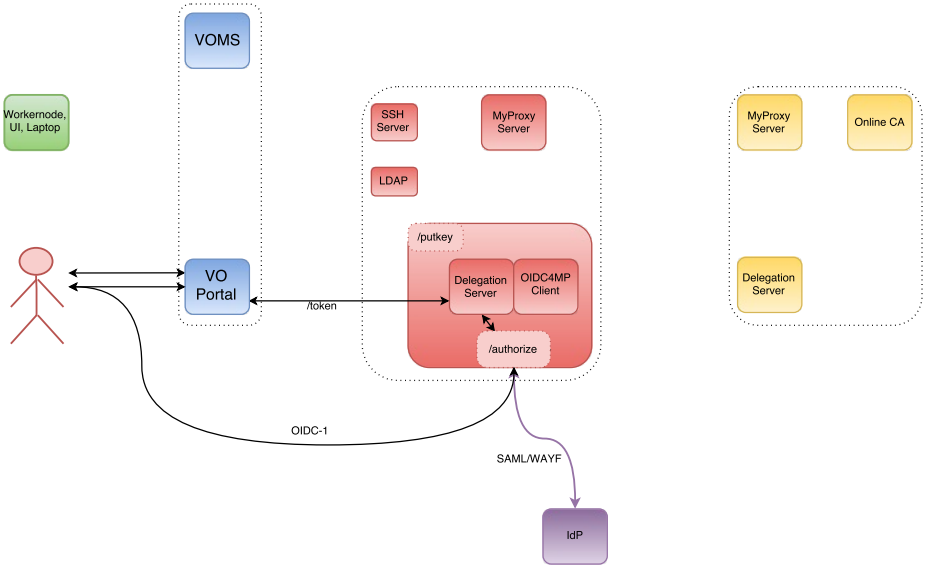
# TTS Overview: getting a certificate



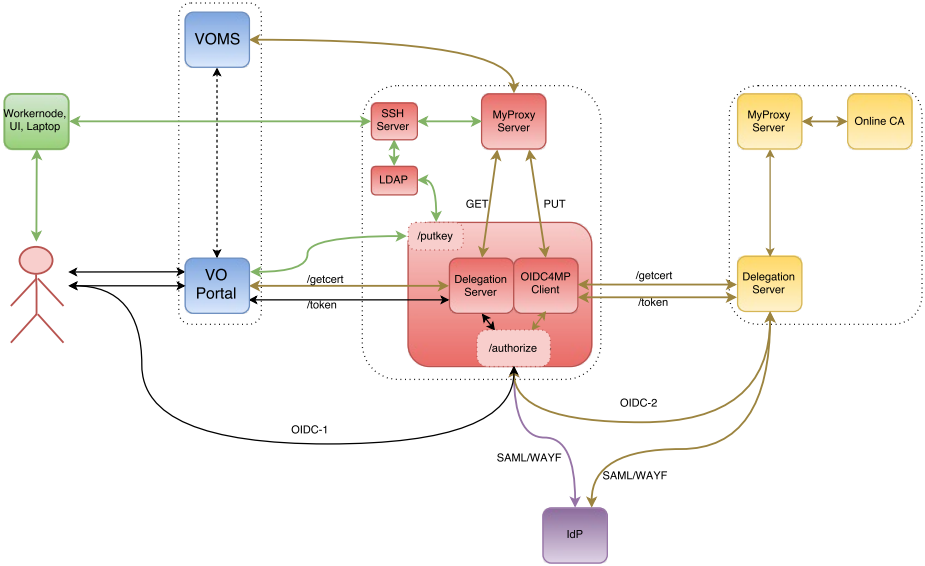
# TTS Overview: cmdline via ssh backdoor



# TTS Overview: using OIDC only



# TTS Overview: complete picture



- OpenID Connect server:
  - Reuse OIDC4MP server for pure OpenID Connect
  - SAML-to-OIDC token translation service (not difficult in itself)
  - Broader use for Master Portal
- SSH backdoor for commandline access:
  - VO portal: SSH pubkey upload (similar to GitHub, CERN)
  - Master Portal (TTS): store in LDAP
  - cron-job: `authorized_keys` with fixed command (`myproxy-logon` wrapper)
  - user obtains proxy using SSH-Agent

  → No need for ECP, Moonshot, custom passwords etc.

- Smooth transition from PUSP:
  - MyProxy CA not much different from MyProxy credential store
  - Can use robot cert+key instead of CA cert+key
  - Few simple changes in config of MyProxy CA

  → produce PUSP instead of EEC
- Based on well-maintained and proven software:
  - Production software, widely used in US
  - Actively developed
  - Maintainers are part of AARC
  - Easy to replace components (modular setup)

Implementation Master Portal:

- minor adaptations to profile (already agreed upon): `/getproxy` endpoint
- extra OIDC server servlet inside Master portal
  - `/getproxy` endpoint
  - behind `/authorize` endpoint
- `/authorize` endpoint
  - first server servlet then client servlet
  - flow for pure OIDC, probably using different scope
- implement SSH key upload: `/putkey` endpoint?

Work in progress but looking good!

Based on AARC-SA1 pre-pilot work

Combining existing blocks, minimal glue

Many thanks to Tamas Balogh (doing a lot of the hard work)

- Our setup: `https://wiki.nikhef.nl/grid/CILogon_Pre-Pilot_Work`
- OpenID Connect for MyProxy: `http://goo.gl/VnMKXS`
- CILogon docs: `http://www.cilogon.org/portal-delegation`
- MyProxy: `http://grid.ncsa.illinois.edu/myproxy/`
  - OA4MP: `http://grid.ncsa.illinois.edu/myproxy/oauth/`
  - protocol: `http://grid.ncsa.illinois.edu/myproxy/protocol/`
- VOMS: e.g. `http://italiangrid.github.io/voms/`
- ssh `authorized_keys`: `man sshd`