

A portal for an easy access to the IGI grid infrastructure

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FEATURES

- Federate identity system for user authentication
- Interaction with ON-line CA to transparently request X.509 certificates on behalf of the user
- Personal certificates upload for users who already have one
- Possibility to select a VO membership or request new VO membership on behalf of user
 - Implementation of workflow submission

GOALS

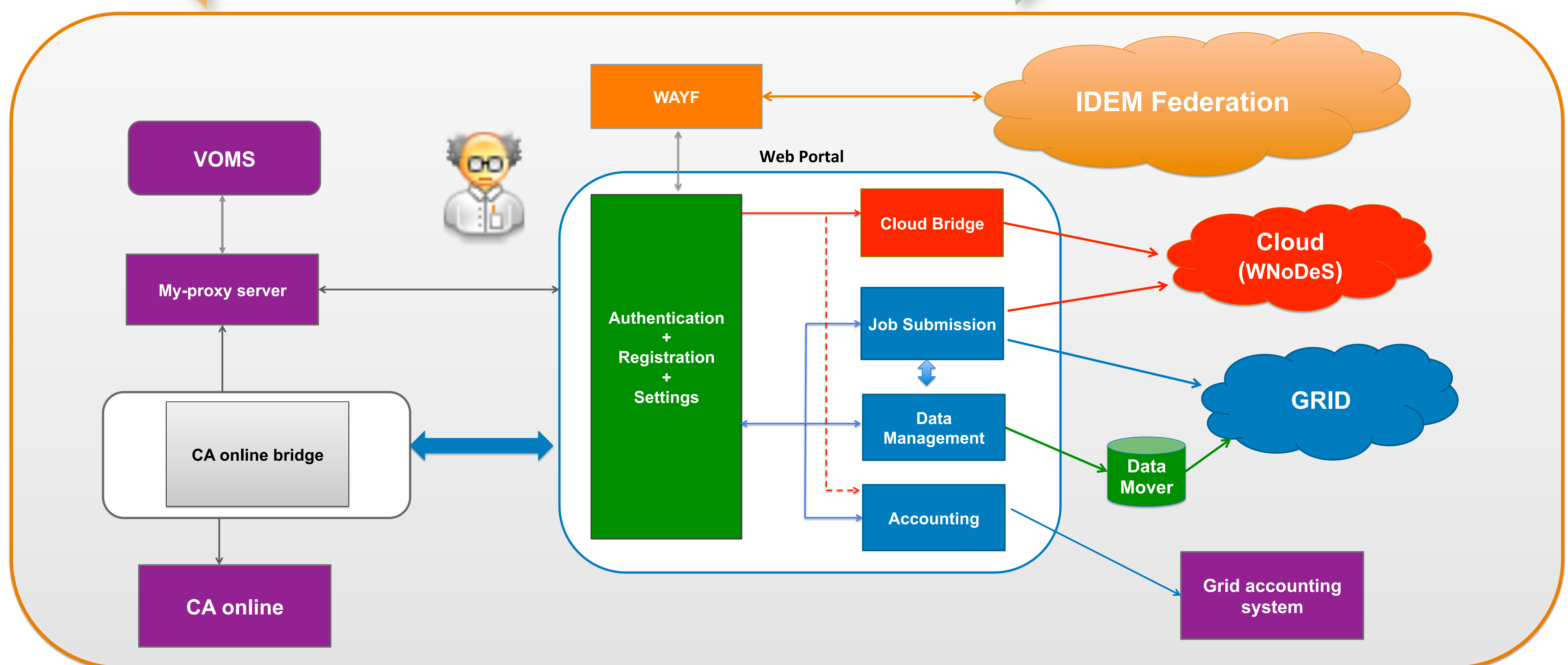
- Grid job submission via web.
 - Provisioning of a Cloud environment via web.
- Making easier the request and management of X.509 certificates and the request for a VO membership.
 - Minimizing the job failure rate

IMPLEMENTATIONS

- Web portal based on Liferay framework
- Services implemented by portlets (JSR 168 – 286)
- Secure communications with external services using shibboleth and encrypted protocols

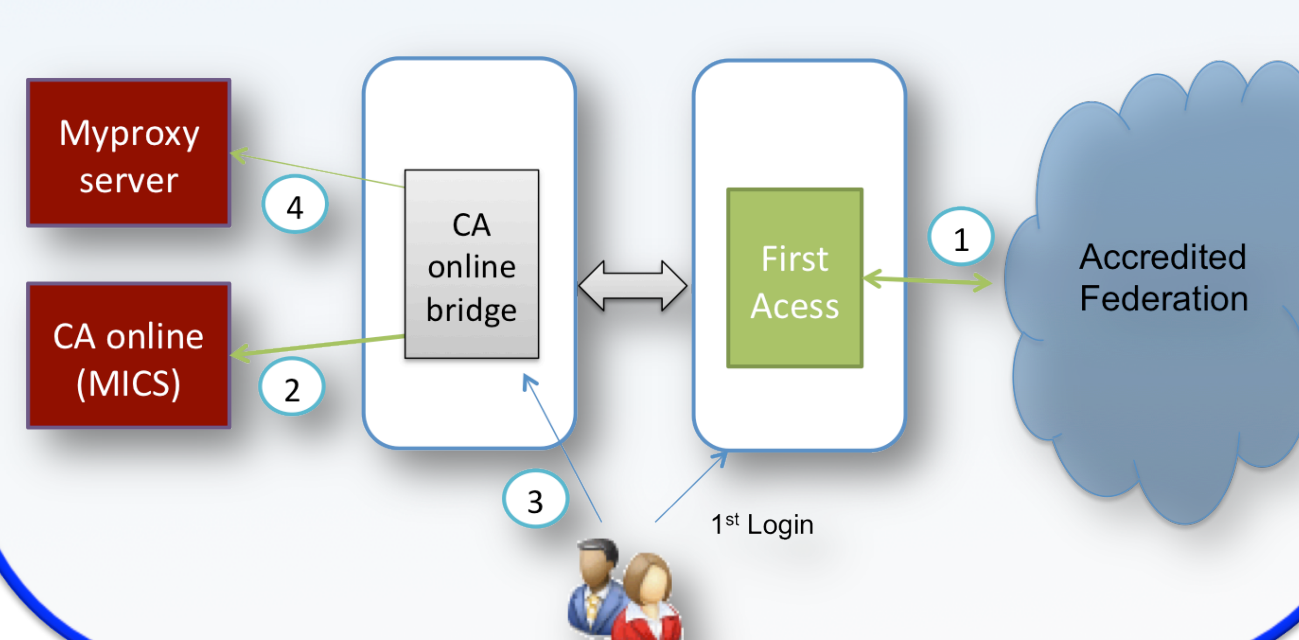
USE CASES

- INFN Theophys community is testing the portal using MPI jobs
- Bioinformatics Communities of University of Bologna are testing Parametric jobs and Workflows using applications as Blast and BWR for Protein Annotation and Genome Sequencing.



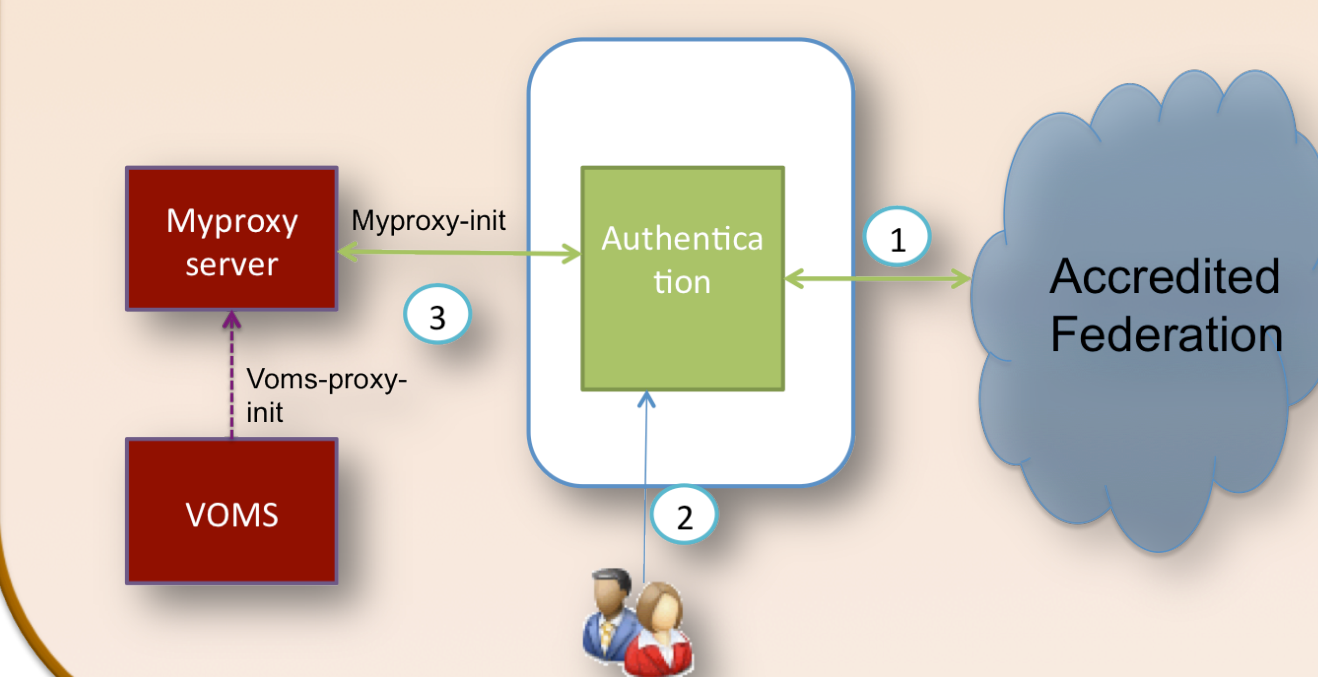
CA-ONLINE

- The portal sends, under the user approval, user's attribute retrieved from IDP to CA bridge
- CA bridge module requests to a CA-online a certificate on behalf of the user
- The user digits a passphrase for private key encryption
- The certificate is used to store a long-term proxy on a my-proxy server (the private key encrypted and the passphrase will not be saved)



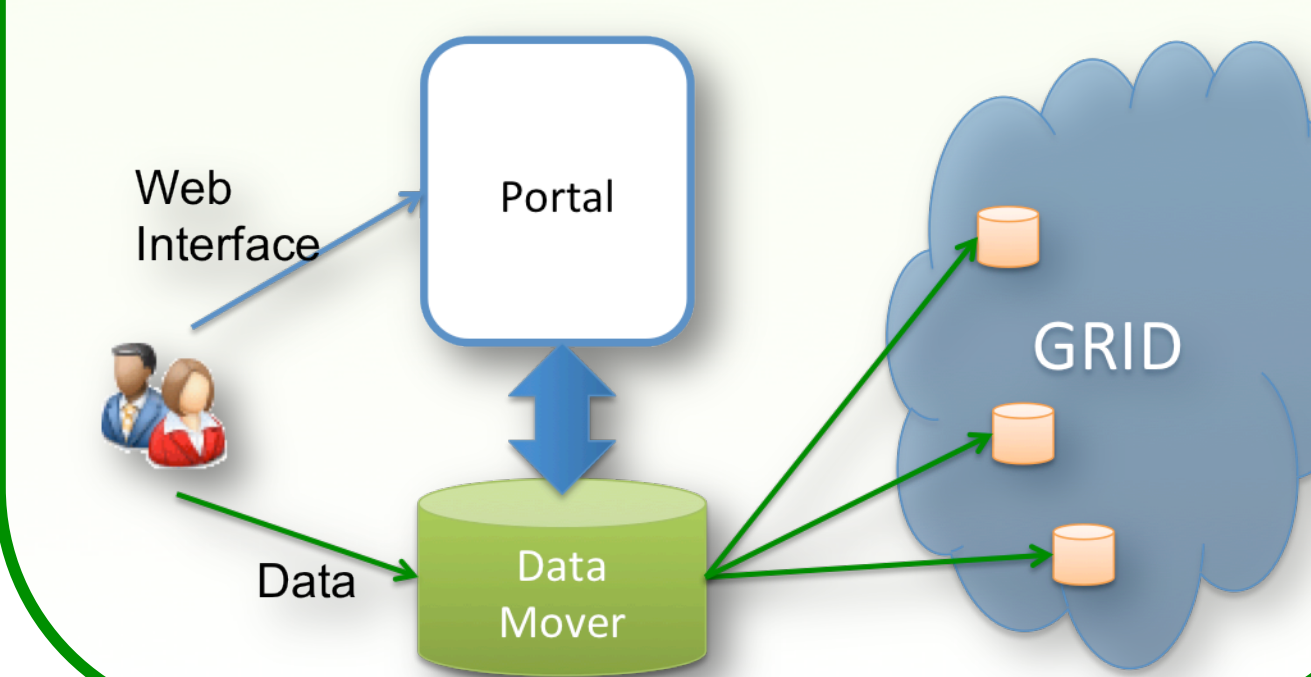
AUTHENTICATION

- The portal redirects user to the his IDP login page. Once the proper IDP has authenticated the user, he will be automatically logged into the portal
- The portal will ask him the passphrase in order to retrieve the proxy from myproxy server.
- At the same time contact the VOMS server in order to sign the proxy with VO extension.



DATA MANAGEMENT

- To avoid that the portal could be a bottleneck for data transfer, the data are moved outside the portal using an apposite service: the Data Mover
- A user can upload local or remote files using several connection protocols: https (any browser), sftp, torrent ...
- User can move files on grid using drag&drop interface and will be notified via mail/rss when the transfer will be finished



TESTING → PRODUCTION

- We are testing the portal with several user communities belonging to IDEM Federation. In the near future new communities will be added for new tests.
- After this test phase the portal will be passed in production mode.
- At the moment the features already integrated are: Federate Identity authentication, Workflow and Job submission uploading personal certificate, Data Management
- In parallel during the year the developing process carries on for additional futures integration: CA online, improved Data Management and Cloud Bridge

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