

The Execution Environment Service

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Introduction

- Nikhef

- Grid computing

Security middleware in the gLite stack

- Site Access Control suite

The Execution Environment Service

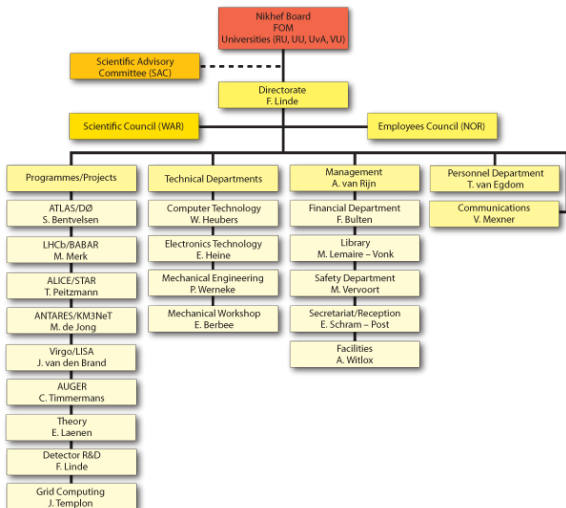
- Functional requirements

- Technical requirements

- Proposed design of the EES

- API design

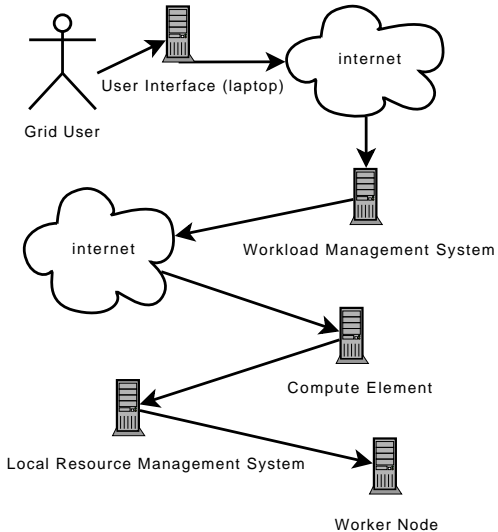
- Future development

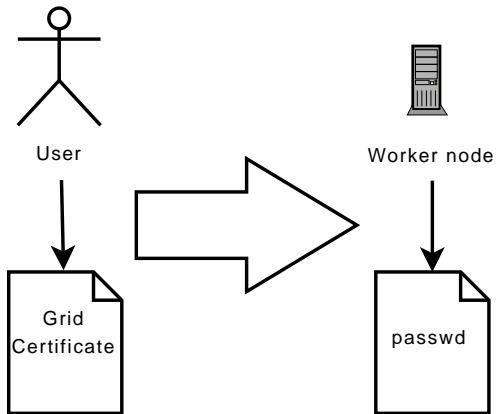


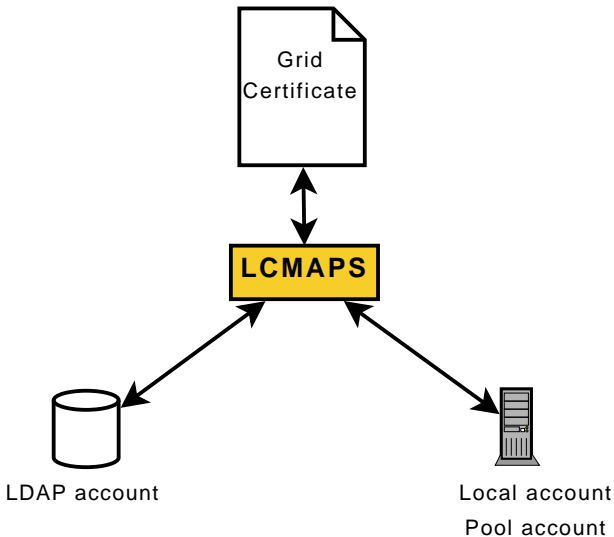
CERN on Grid computing:

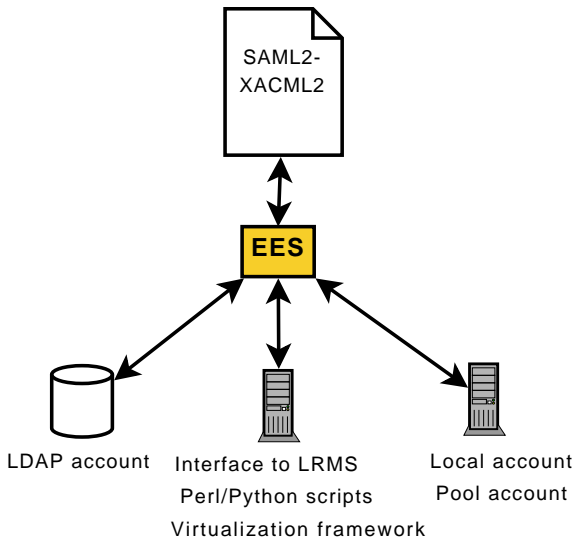
"A service for sharing computer power and data storage capacity over the Internet"

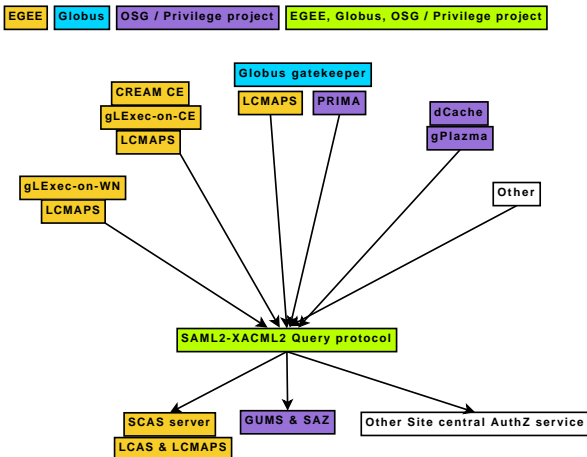


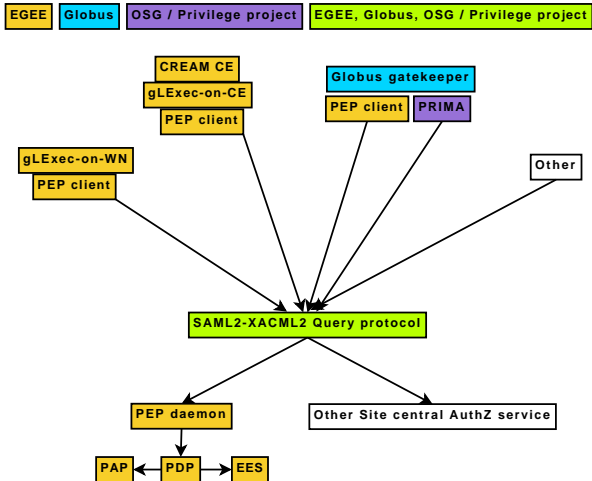








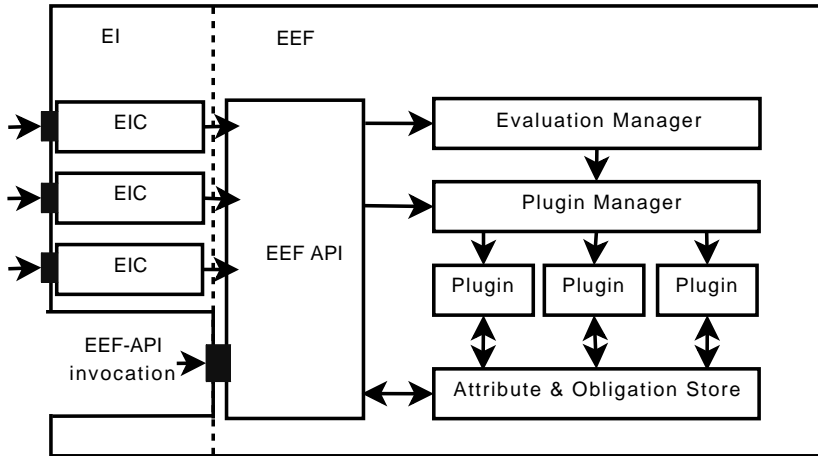


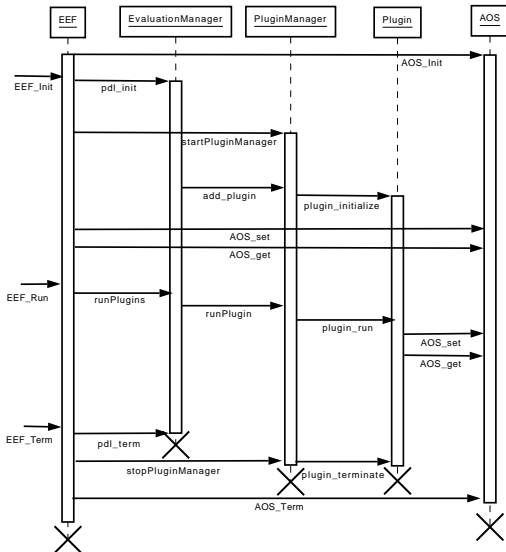


- Have the ability to work with SAML2-XACML2 concepts
- Provide a data store for generic and specialized data types
- Be easily adaptable to new use cases
- Facilitate access from several external interfaces

- Be largely backward-compatible with existing deployment schemes
- Perform efficiently
- Be thread-safe
- Be portable to many different platforms
- Be able to interact with the OS on a low level
- Provide a flexible plug-in API

EES





- EEF_Init()
- EEF_Run()
- EEF_Term()

- `plugin_initialize()`
- `plugin_run()`
- `plugin_terminate()`

- `setAttribute(label, value)`
- `getAttribute(label)`
- `setObligation(label, value)`
- `getObligation(label)`
- `destroyObligation(label)`

- getNode(label)
- addChild(label, child node)
- getChild(label)
- getParent(label)
- getValueByNode(node)

- Expose the EEF as a service
- Multi-threading support
- Plug-ins to support new use cases
- SAML2-XACML2 parsing
- Patch existing plug-ins

- X.509 certificate
- VOMS AC
- XACML request
- SAML statements

- Unix local account
- Unix pool account
- POSIX enforcement
- LDAP enforcement

- Interact with Local Resource Management System
- Enforce reconfiguration of a batch queue scheduler like Maui
- Interface with virtualization frameworks like OCCI or OpenNebula
- Execute arbitrary scripts local to the site for management purposes

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