1000 things you always want to know about SSO but you never dare to ask

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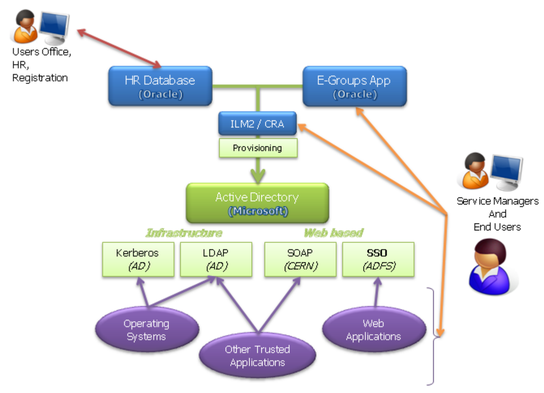
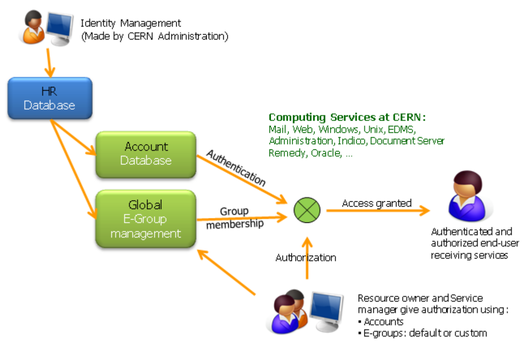
CERN Authentication

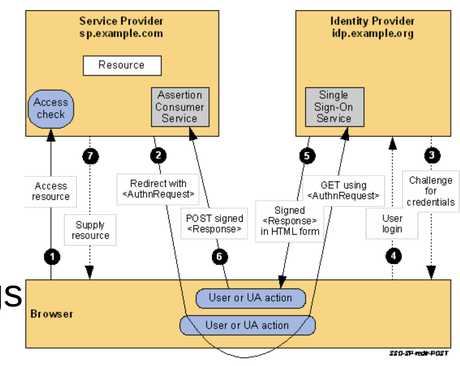
- Enhanced SSO solution for CERN Web Applications
- Authentication methods
  - Standard
    - Forms
    - Kerberos or Windows
    - Certificates
  - Two Factor (strong auth)
    - Smartcard
    - Yubikey
    - SMS One Time Password
    - Google Authenticator
- Federation
- Public Services
  - Google
  - Facebook
  - Live
  - Yahoo
  - Orange

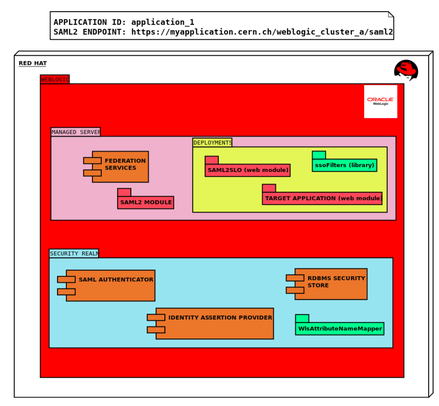


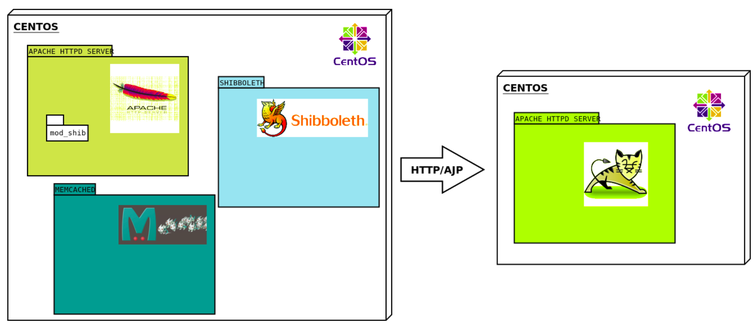


SAML2

- **S**ecurity **A**ssertion **M**arkup **L**anguage
- **OASIS**
  - **O**rganization for the **A**dvancement of **S**tructured **I**nformation **S**tandards
- **CERN SAML2 SSO**
  - Web Browser SSO Profile
    - SP-Initiated SSO: Redirect/POST Bindings
  - Oracle WebLogic applications
    - SAML2 module
  - Other
    - Shibboleth

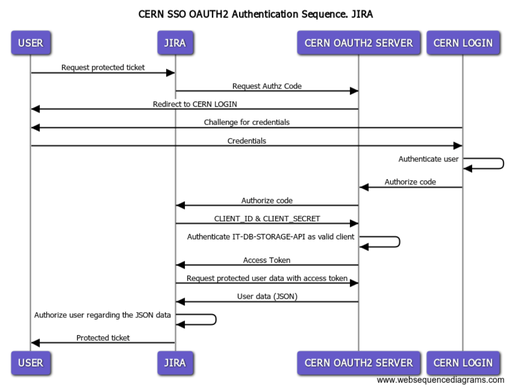


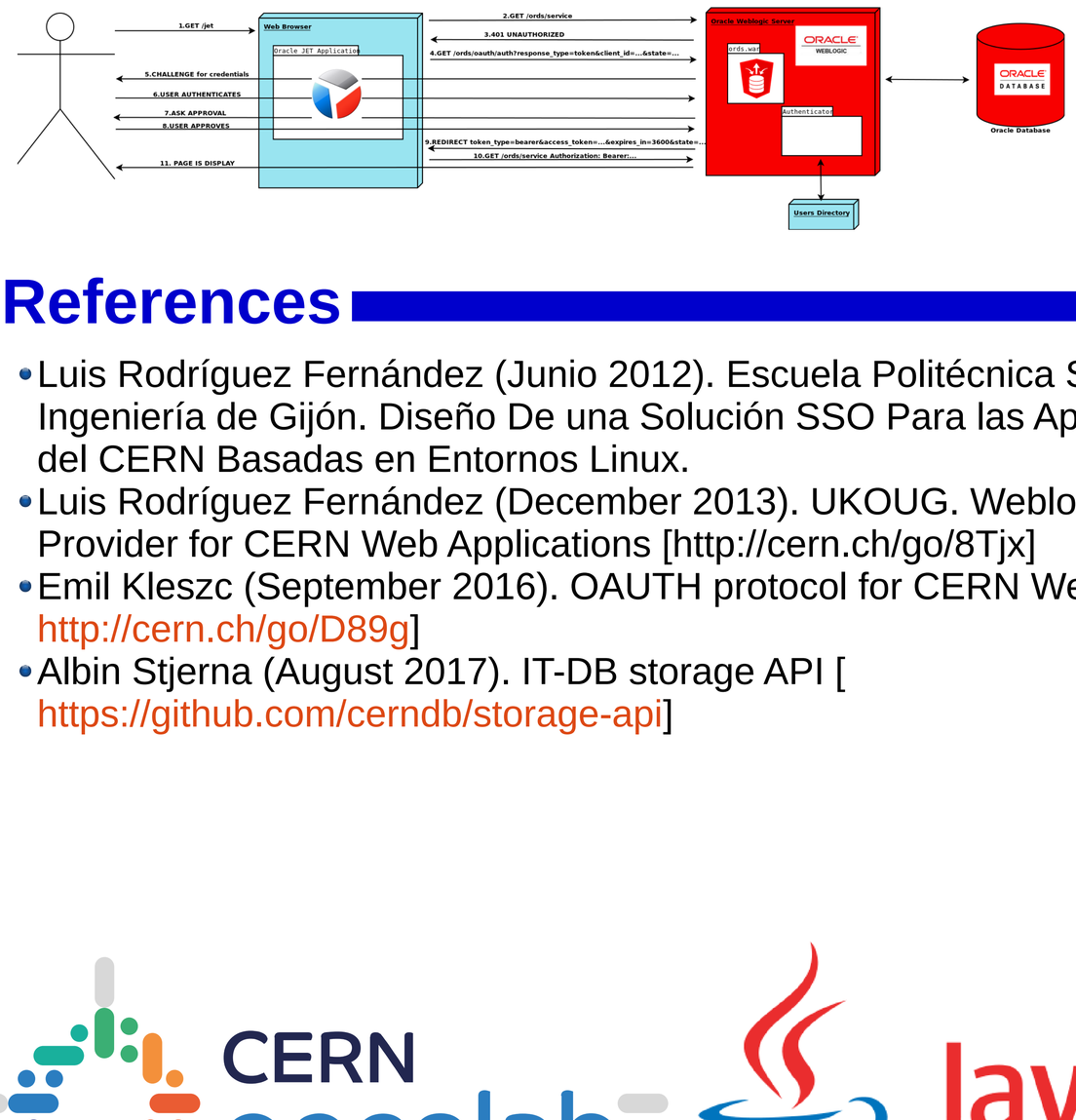




OAUTH2

- Started by Blaine Cook: Twitter OpenID implementation
- Standard developed within the IETF (rfc6749)
  - **I**nternet **E**ngineering **T**ask **F**orce
- No “out-of-the-shelve” solutions
- **CERN OAUTH2 Authorization Service**
  - Client Credentials Grant
    - “Machine-to-Machine” authentication (e.g. java)
    - Resource Owner & Authorization Server
  - **ORDS (O**racle **R**est **D**ata **S**ervices)
    - Different grants supported
    - Suitable for user-agent-based clients (e.g. javascript)





Challenges

- Applications integration
  - Ad hoc auth/authz solutions
  - Legacy
  - Commercial solutions

- Heterogeneous developer community
  - Web
  - Desktop
  - Controls
  - Sysadmins

- Different platforms
  - Virtual machines (openstack)
  - Containers (magnum, openshift)

- One solution does not fit all scenarios
  - /web/ui → SAML2
  - /api → OAUTH2

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