Perun

User and Resource Management System for Virtual Organizations/Research Communities

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Motivation

- Missing IdM and access management
- User registration is needed
    - Users already have some digital identity

- Delegation of the rights to manage entities
- Configuration of the access rights
- Attribute authority for SAML based services

Perun manages

- Virtual organizations
- Users
- Groups
- Resources
- Services
- Application forms
- Attributes

VO and Group Management

- Built-in support for virtual organizations
  - Configurable application form
  - Delegation of rights to the end users
  - Access management for resources
- Group management
  - Configurable application form
  - Group manager role
  - Automatic synchronization with external systems
  - Support for VOOT protocol (server/client) will be deployed in a few weeks

User Management

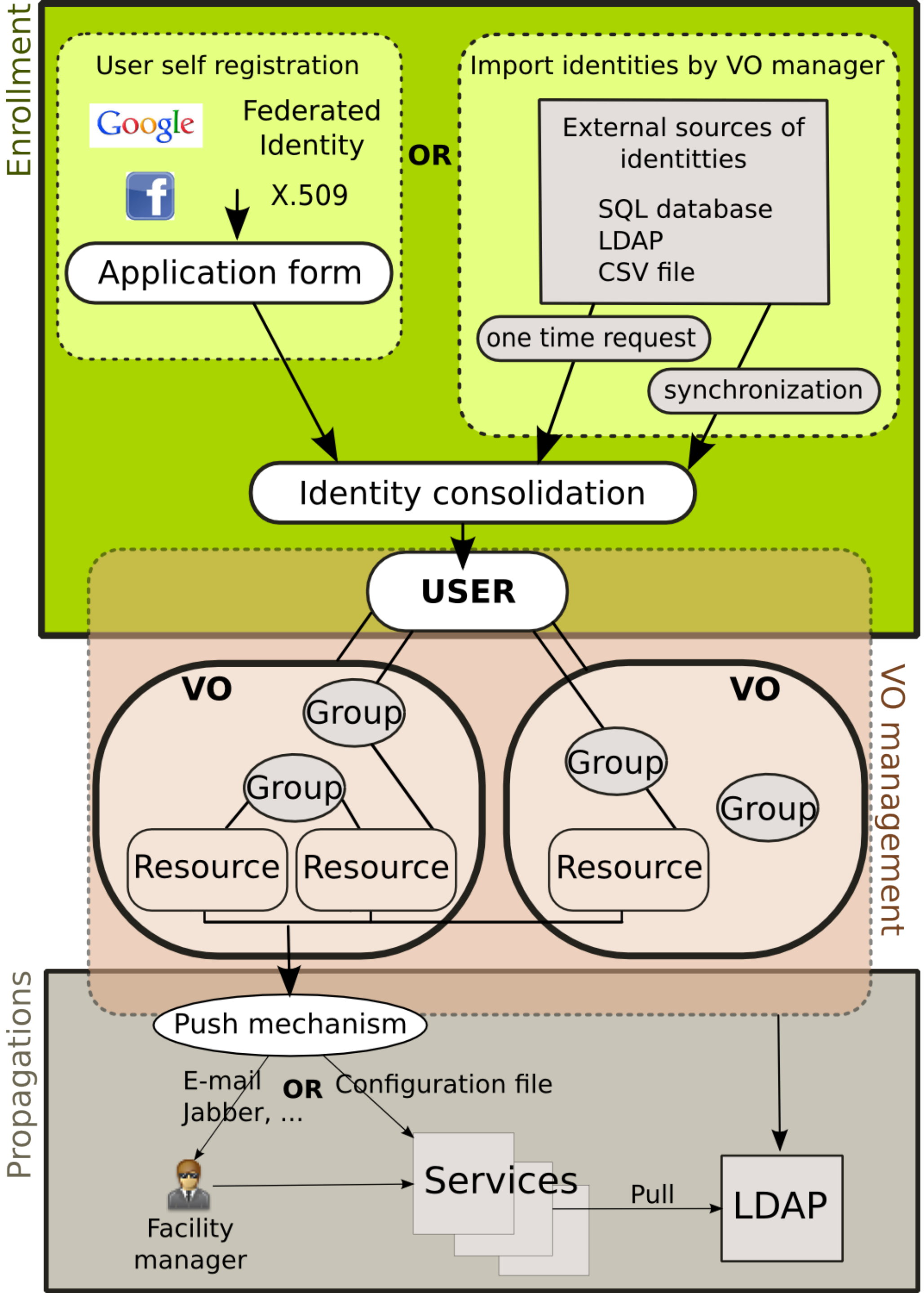
- User can have several external identities
  - Federated identities, X.509 certificates, social identities, SSH keys, Kerberos principals, …
  - Identity consolidation
  - Perun doesn’t store user’s password, private keys, ...
- Users' enrollments
  - Each VO can define its own application form with various requirements on the applicant
  - Pre-filled information from external authN system
- Service users

Access Management

- Resources are assigned to the VOs
  - Resource tagging
- Configuration of services
  - E.g. unix accounts, access to NFS storage systems, radius ACLs, mailing lists, ACLs for web applications
  - Service packages
- Push mechanism
  - omit online queries
  - pushing only on change
- Alternatively publish data through the LDAP

Attribute Authority

- Attribute Authority is another resource from Perun’s point of view
  - Perun fills the LDAP
  - AA per VO
- Deployed at CESNET - DocuWiki
  - Authorization based on the group membership


Enrollment
User self registration
Google
Federated Identity
X.509
Application form
OR
Import identities by VO manager
External sources of identitties
SQL database
LDAP
CSV file
one time request
synchronization
Identity consolidation
USER
VO
Group
Group
Resource
Resource
VO
Group
Group
Resource
VO management
Propagations
Push mechanism
E-mail
Jabber, ...
OR
Configuration file
Facility manager
Services
Pull
LDAP

Attributes Management

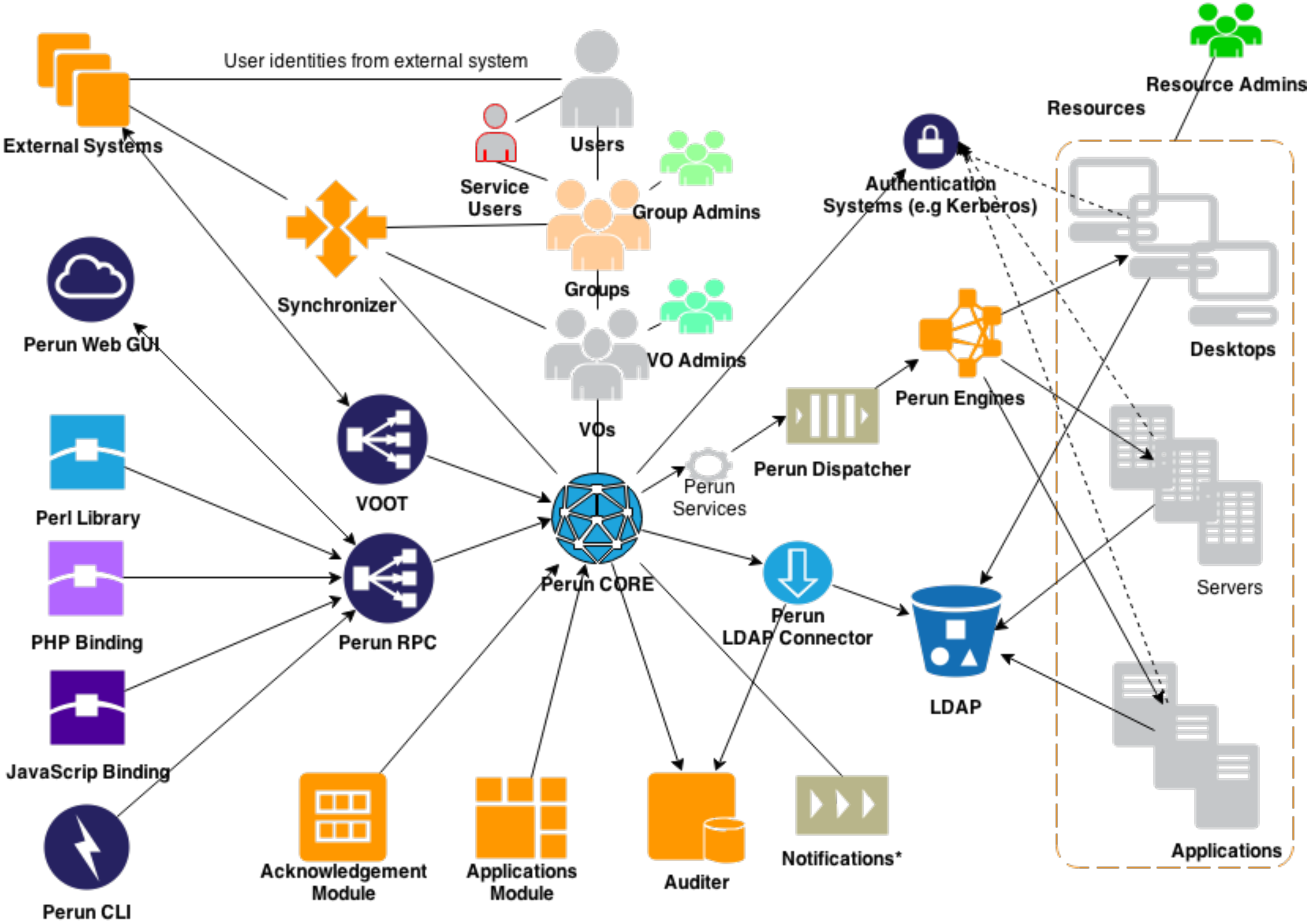
- Every entity and also relationship can have assigned attributes
- Different value types: string, number, list, array
- Access rights on attribute values
- Attribute modules
  - check proper value of the attribute
  - fill default values
  - check value of dependant attributes

Statistics

- In production since autumn 2012 (CESNET)
- >2900 users, ~1800 machines, 96 VOs
- Other deployments as virtual appliance

  GARR - CloudIdP + Perun test

  sagrid - pilot installation in NGI management
- Cooperation with HEXAA project



* Not yet deployed in production

Thank you for your attention

http://perun.cesnet.cz
http://github.com/CESNET/perun

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