



Service Management

Jan Zvěřina

Outline



- What is it all about?
- Attributes
- Facility
- Resource
- Groups and VOs
- Owner, Perun service and Destination
- Gen/send/slave scripts vs LDAP connector
- Examples



What is it all about?

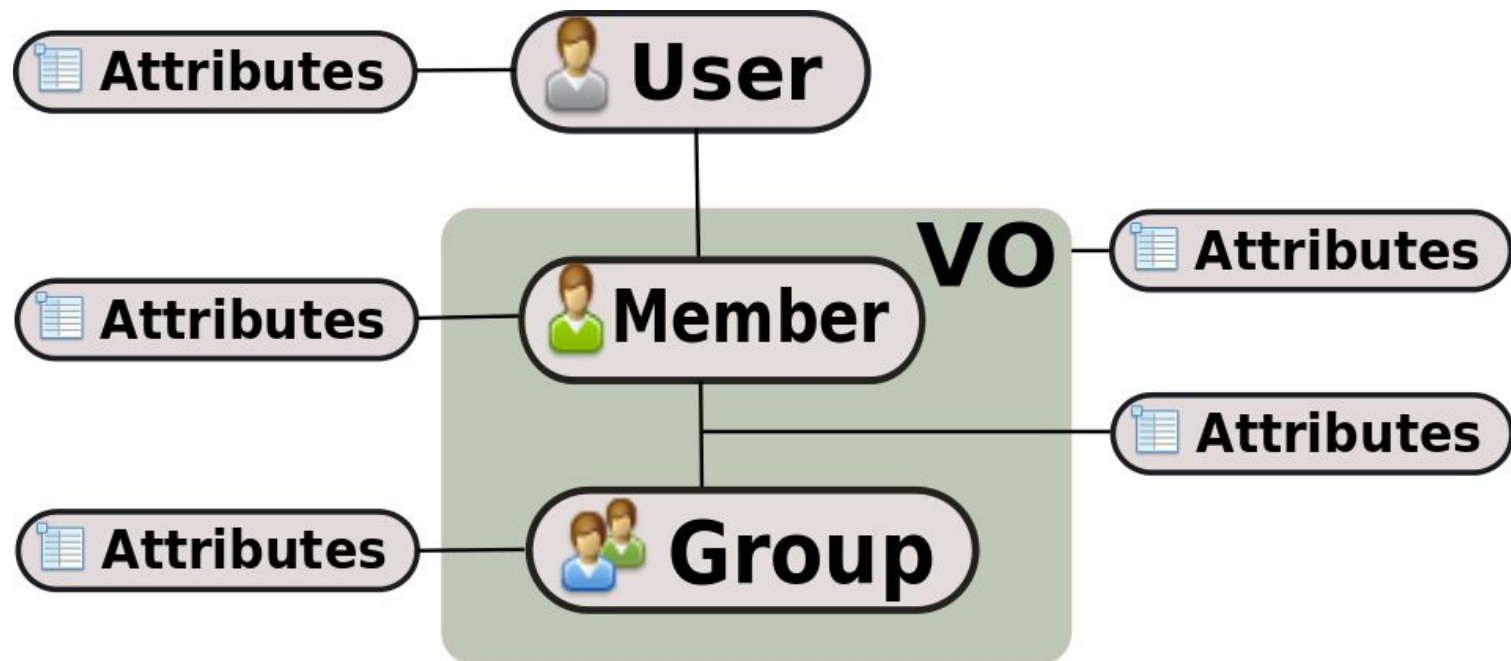
- How to transfer authorization data from Perun to the service?
- We need to know
 - What the service requires
 - How to technically transfer data to the service

Attributes

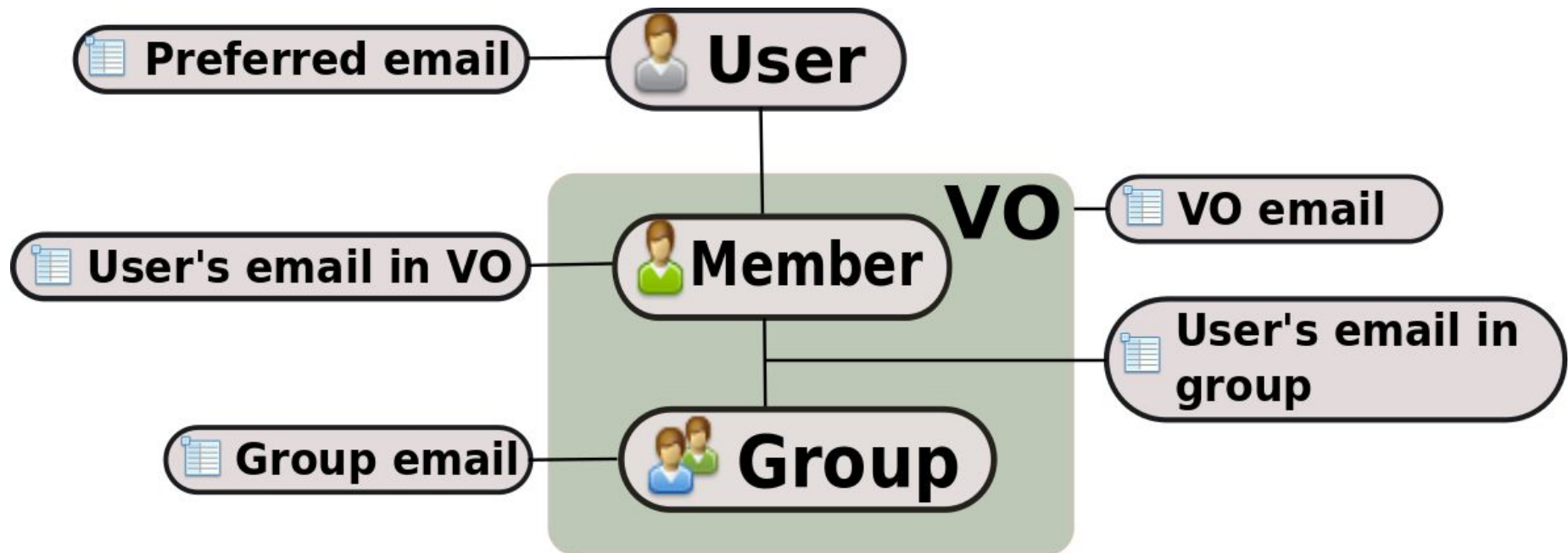


- Informations attached to the entities and relations among entities
- Various formats (String, Integer, List, Map, Boolean)
- Attribute modules
 - Syntax checks
 - Auto-fill
 - Dependency checking
- All data in Perun can be obtained via Attributes

Attributes



Attributes



Facility



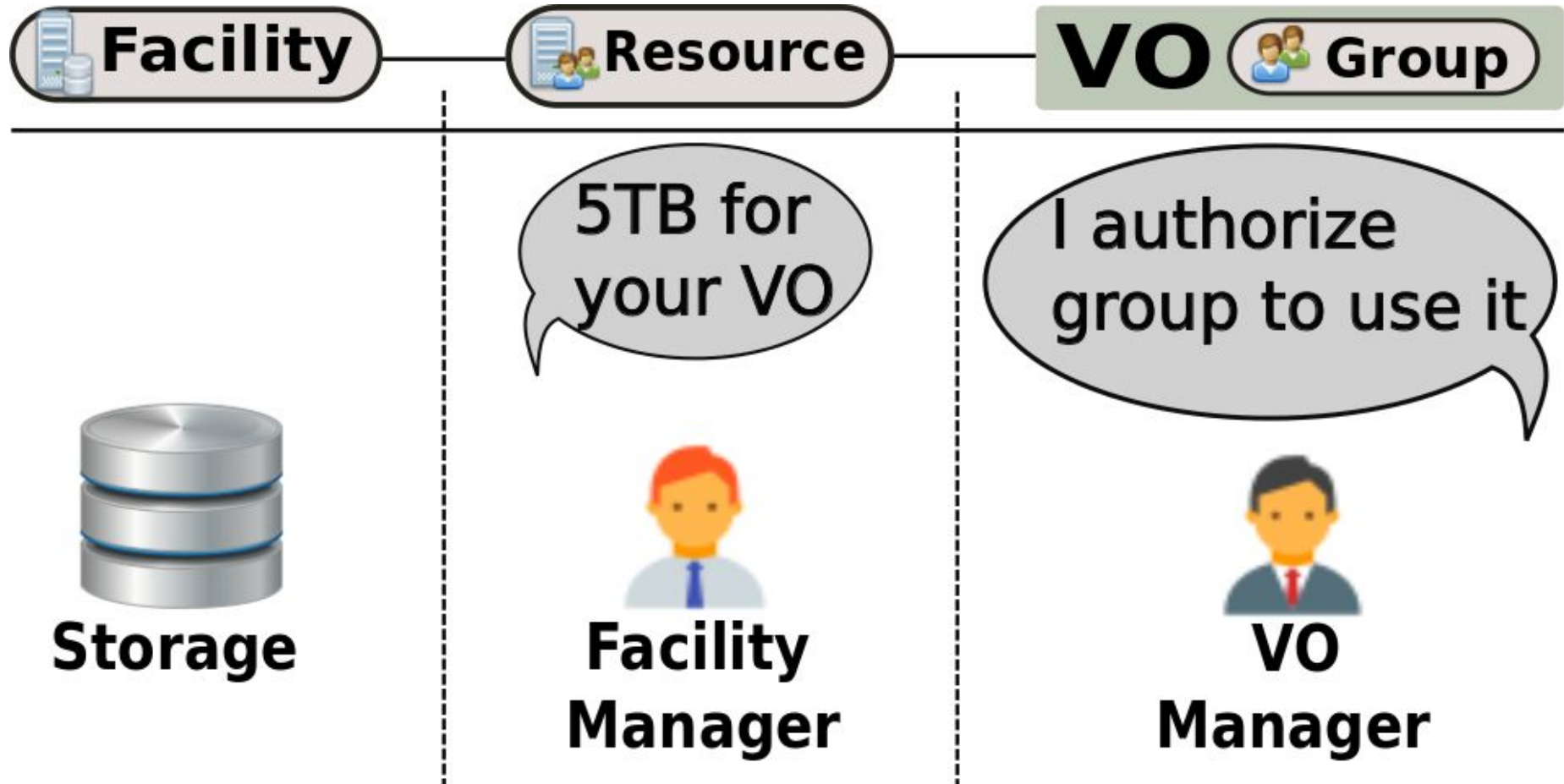
- Real world entity managed by Perun
 - Physical or virtual (cluster vs mailing list)
- Has a set of specific attributes
- Can provide Resources to VOs
- Managed by Facility Manager

Resource

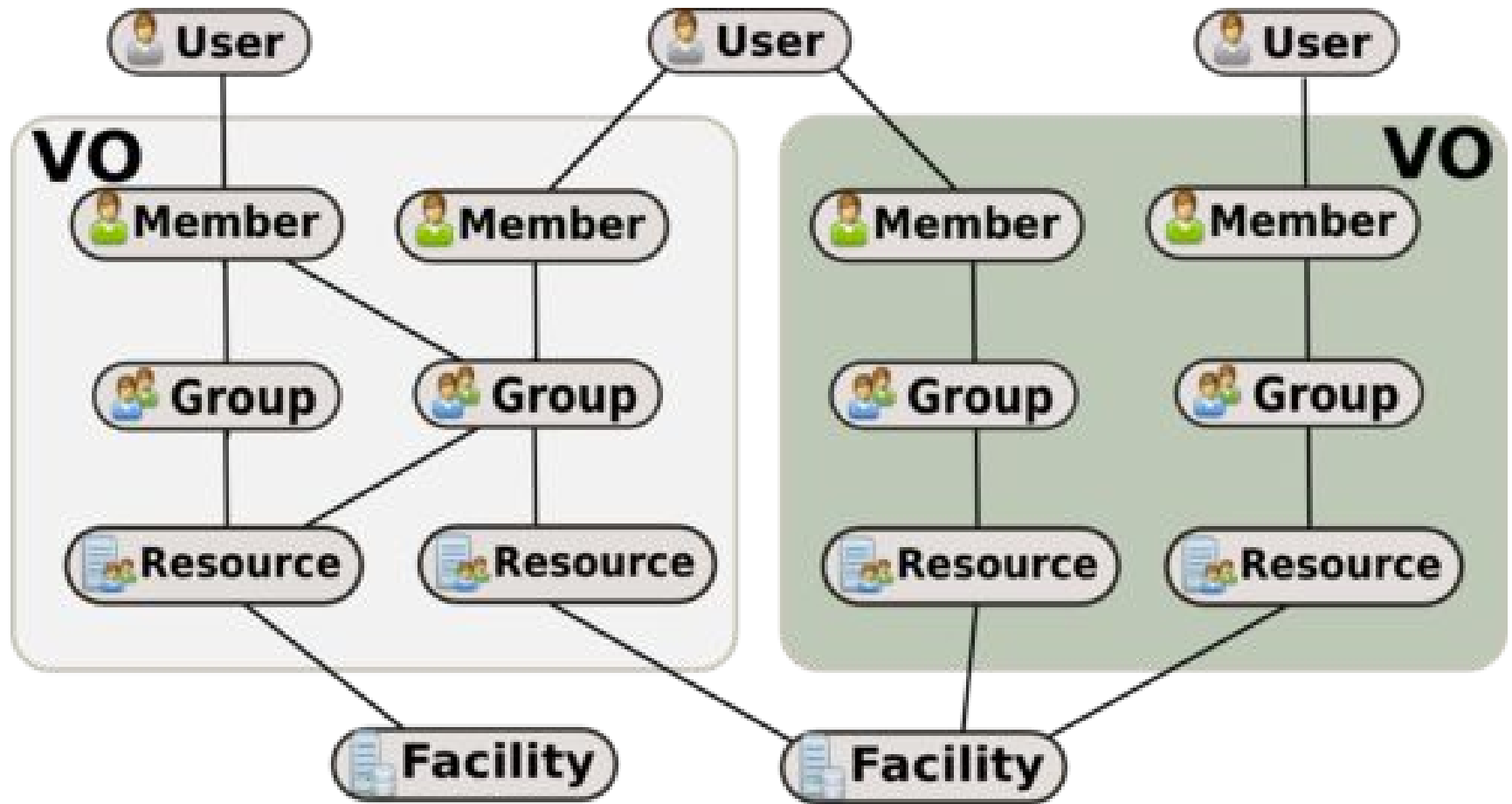


- Access to specified part of Facility for VO
- Resources are VO specific
- May restrict usage conditions (e.g.: disk quotas)
- Groups are assigned to Resources

Facility and Resource



Relationship



Responsibilities



- Facility Manager
 - Creates and manages Facilities
 - Creates Resources
 - Assigns them to VOs
 - Prepare services
- VO Manager
 - Chooses and assigns Groups of Members on provided Resources
 - Manages selected Resources Attributes

Owner



- Owner is an administrative contact for Facility
- Contact to
 - Person (not need to exists in Perun)
 - Organization
 - Other
- Description or name with contact information (email, telephone number etc.)

Perun service



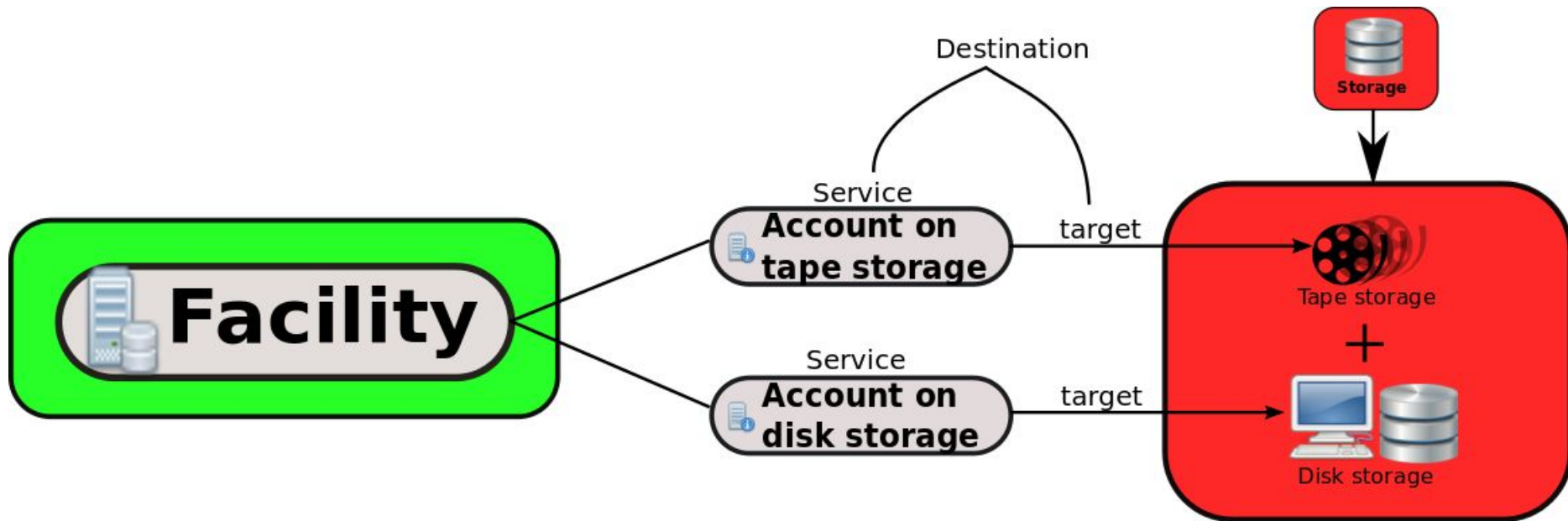
- Describes what is needed by the service of Facility for the authorization
- Script obtaining data about Perun entities assigned to the Resource
 - Transfer data for authorization decision support
- Example
 - Create an unix account on data storage

Destination



- Technically describes how to transfer authorization data to the service provided by Facility
- Describe configuration of data transfer
- Assigned to the Facility
- It is a pair
 - Perun Service
 - Definition of a target propagation

Perun to real world mapping

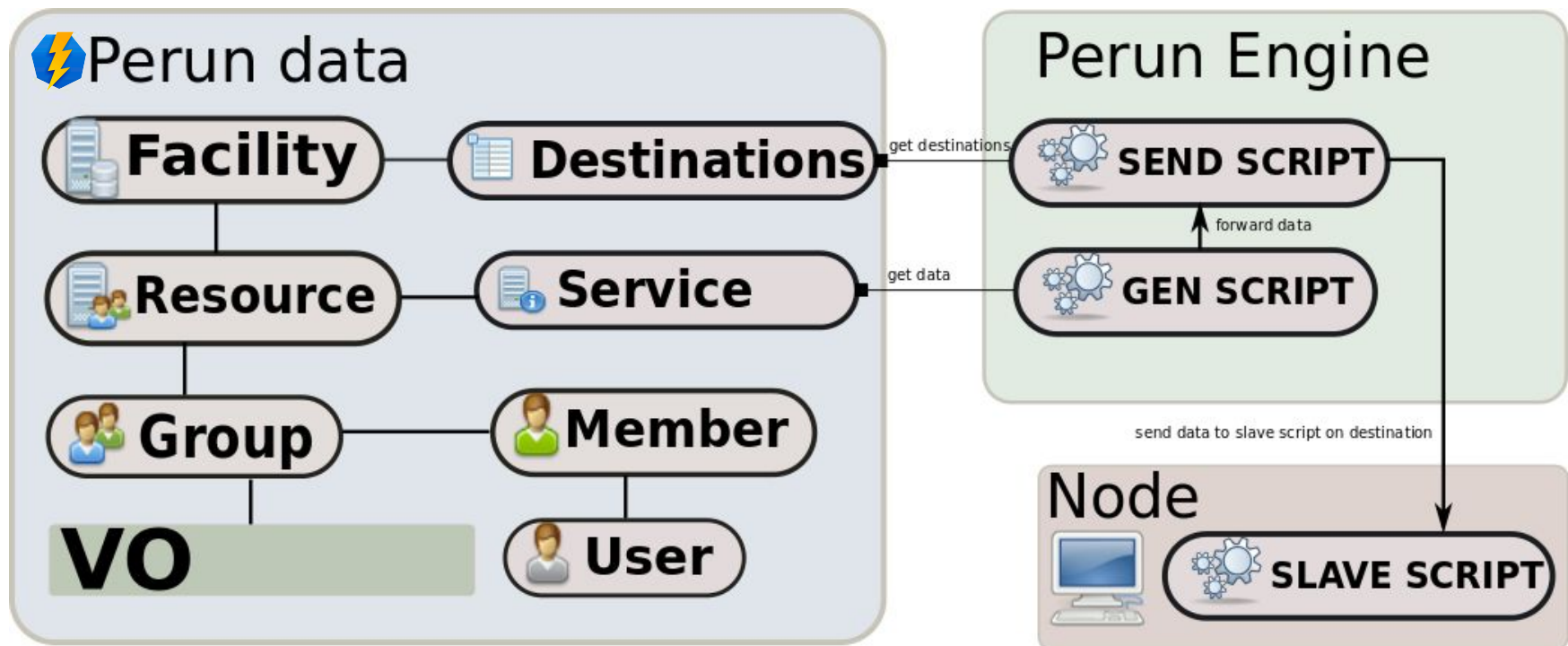


Gen/send/slave scripts



- Most frequent propagation process
- There are 3 types of scripts
 - **GENERATE**: Generates authorization data (about Users, Groups etc.)
 - **SEND**: Sends already generated data to destinations
 - **SLAVE (optional)**: Sits on destination, receives data from send script and process them (create accounts, restart service etc.)
- It is not in a real time

Gen/send/slave process



Example 1 - Cluster management



- Facility = whole cluster (homogenous)
- Resources (2 per VO)
 - 1 for users (unix account)
 - 1 for admins (root access)
- Destinations = all nodes of cluster
- Facility Manager sets default options and limitations
- Preferred options defined by Users itself
 - Using gen/send/slave mechanism

Example 1 - Cluster management



users

admins

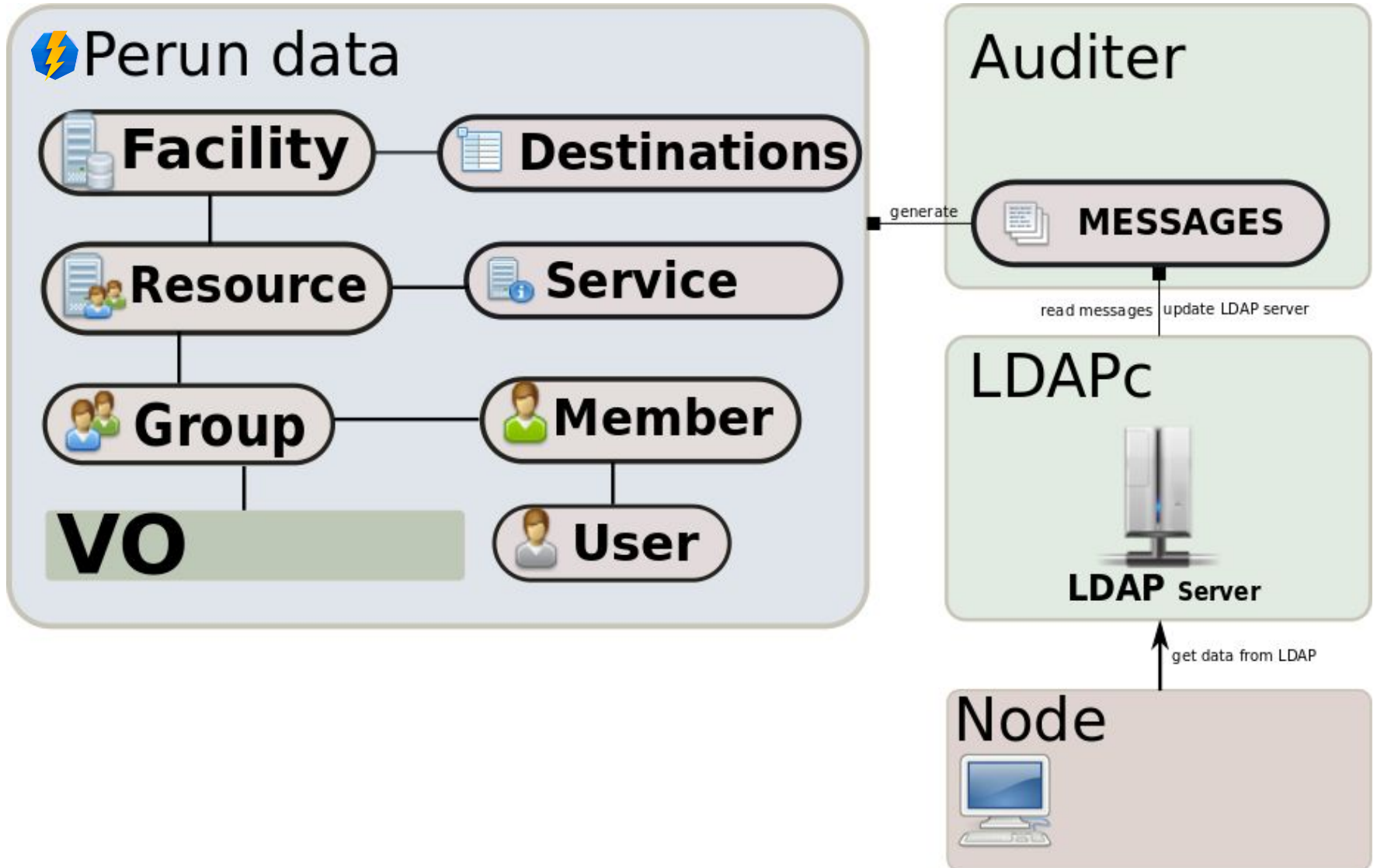


Perun LDAPc



- Another interface to obtain data from Perun
 - changes are processed in real time
- Services get rights to read specific information from the Perun LDAP
- Real time access to data in LDAP

Perun LDAP

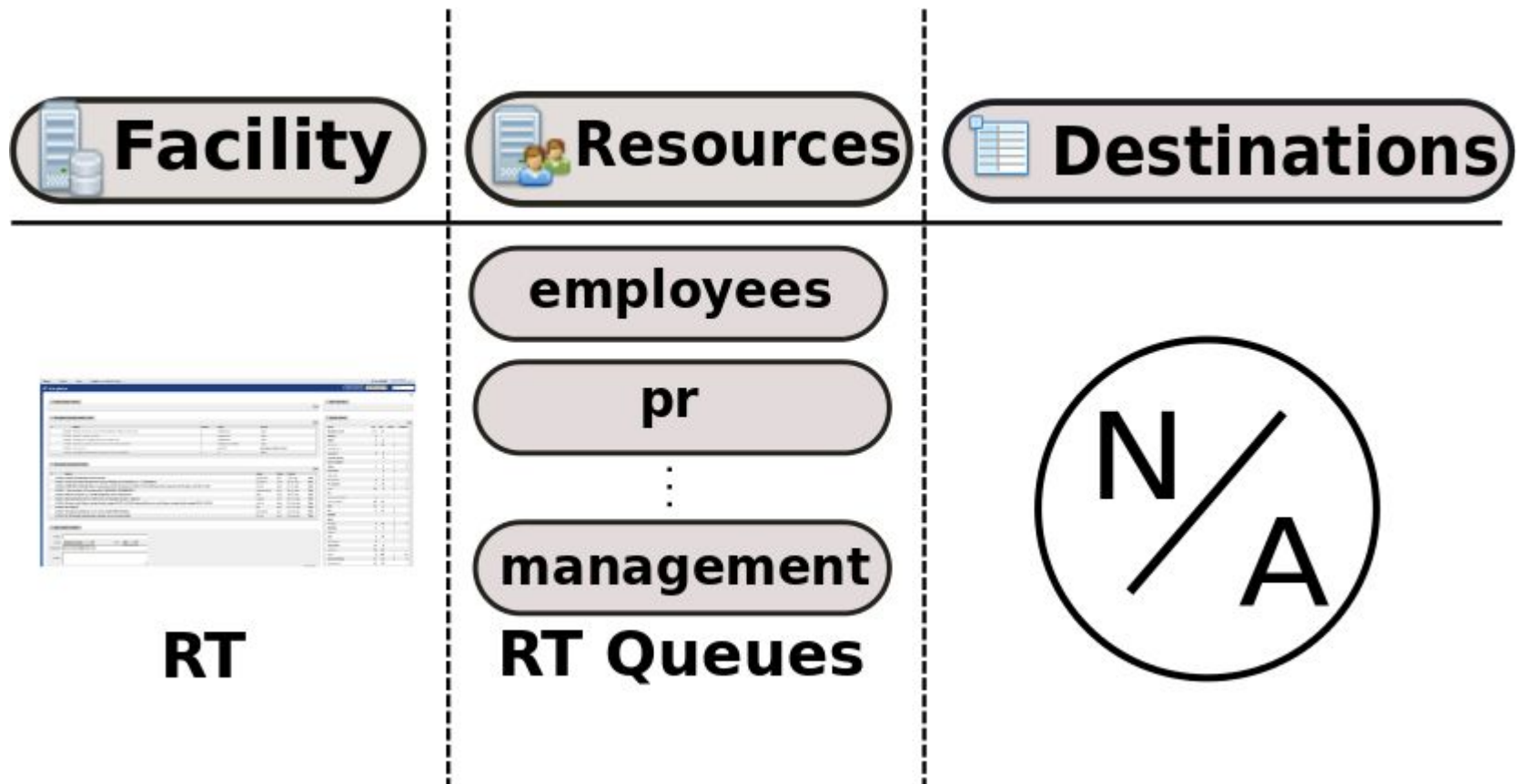


Example 2 - RT management



- RT - Request Tracker (issue tracking system)
- Facility = RT
- Resources = Queues
- Facility Manager provides queues to chosen VO
- VO Manager can assign Groups only to provided queues
- Members of assigned Groups are strictly synchronized with RT system
 - Using Perun LDAPc mechanism

Example 2 - RT management



Example 3 - SSH-keys distribution



- Practical demonstration
- Propagation of ssh keys to Facility
- Represents access to unix account via ssh key

- Required steps:
 - Creation of Facility and Resource
 - Setting of Perun Service and Destination
 - Assigning of Resource to VO and Group
 - Setting of target