

Development for a Virtual Organization Platform: GakuNin - mAP and its Case Study in a Japanese Federation.

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Development for a Virtual Organization Platform: GakuNin-mAP and its Case Study in a Japanese Federation.

We, **GakuNin** are developing GakuNin mAP (Member Attribute Provider), which provide membership information of small groups to Service Providers (SPs). Such information of groups, known as Virtual Organization (VO), enriches services on SPs, e.g. with cooperation among members .

Lack of attributes for small groups or communities in federation

- ✓ Predefined attributes are coarse-grained, e.g. eduPersonAffiliation and organizationalUnitName.
- ✓ IdP admin cannot handle all of them in ID management system.
E.g. members of a laboratory, a joint research project, ...
- It seems there should exist another entity to handle them in federation.

Types of SP Connectors

It depends on how the SP use membership information from GakuNin mAP.

1. Contract-base registration by SP operator
2. Free to join

Avoids privacy issues

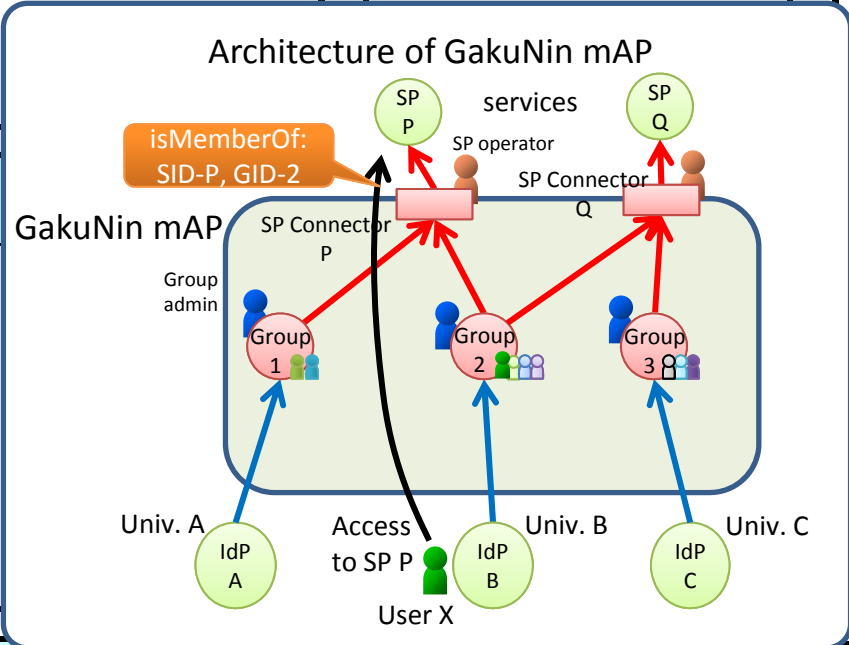
GakuNin mAP sends minimum information of groups which have connections with the SP Connector.

The connection is wholly controlled by Group admin.

How to become a group member

It depends on the type of the group.

1. Invitation by group admin
2. Registration by himself with group admin's permission
3. Registration by himself without group admin's permission



Applicable services

For example,

- E-book services
- Mailing list provider
- File sharing service

and other services with the concept of "ID group"

How to send isMemberOf attribute

- ✓ It uses SimpleAggregation feature in Shibboleth to get additional request to specified AP after authentication
- ✓ mAP actually consists of Shibboleth IdP and retrieves membership information from own MySQL database.

The flowchart shows the process: ① Authn request from IdP to SP; ② Response from SP to IdP; ③ Additional request from SP to AP; ④ Return isMemberOf attr. from AP to SP.

2-layer groups

GakuNin mAP allows limited hierarchy of groups.

- ✓ inter-university and inner-university
- ✓ Example: consortium over universities

The diagram shows a hierarchy of groups across two layers: 'inter-university layer' and 'inner-university layer'. A tree structure of red circles represents the group hierarchy, with a dashed line separating the two layers.