



The Swiss Education & Research Network

AAI – Authentication and Authorization Infrastructure

Exhibit 1 Glossary

Document management

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<i>AAI</i>	means Authentication and Authorization Infrastructure
<i>AAI Participant</i>	Home Organization, Resource Owner or Service Provider
<i>AAI Services</i>	means (i) the development and operation of the central AAI system, including the operation of the WAYF server and the coordination of the federation members' WAYF servers; (ii) the operation of a competence center (test lab, training, consulting); (iii) the development of generic add-ons to Shibboleth; (iv) the development and implementation of AAI tools; and (v) strategy and marketing, all as further set forth in Exhibit 2
<i>AAI Service Provider</i>	Organization providing central AAI services to Resource Owners and Home Organizations
<i>Additional AAI Services</i>	means (i) integration services, comprising the integration of Resources of the Home Organizations; (ii) AAI jump start services, i.e. temporary support for a limited number of Resources and End Users and support for Home Organizations joining the Federation; (iii) outsourcing services, i.e. the permanent outsourcing of certain functions and Services from the Home Organization to SWITCH; and (iv) Virtual Home Organization services, i.e. operation of a Virtual Home Organization for End Users without "formal" relation to a Home Organization, all as further set forth on SWITCH's AAI Website
<i>Advisory Committee</i>	The Advisory Committee, representing the Federation members and SWITCH, acts in a purely advisory capacity as regards the management of inter-institutional AAI projects and the long-term AAI strategy.
<i>Affiliate</i>	means, as to a person or entity, another person or entity which exercises Control over such person or entity, or is under Control by it, or is under common Control by the same person or entity
<i>Attributes</i>	End User data needed for access control decisions
<i>Authentication</i>	Process of proving the identity of a previously registered End User
<i>Authorization</i>	Process of granting or denying access rights for a resource to an authenticated End User
<i>Control</i>	shall be deemed to exist if a person or entity (either alone or with its Affiliates) owns more than half of the voting rights and equity capital of another entity or is otherwise able to exert a controlling influence over another entity
<i>Dependencies</i>	means the technical pre-requisites which the systems of the AAI Members should meet

<i>End User</i>	means a registered member of a Home Organization or a Virtual Home Organization
<i>Federation</i>	means a group of organizations which cooperate in the area of inter-organizational authentication and authorization and, for this purpose, operate a common infrastructure, it being understood that the term "Federation" whether used alone or in conjunction with other words shall be descriptive only and shall not indicate any association, joint venture, partnership or other legal structure of the members thereof
<i>Federation Member</i>	means the contracting party with SWITCH who abides the policy
<i>Force Majeure</i>	means, in relation to either Party, any event beyond its reasonable control including any strike, act of God, natural disaster, fire, war, riot or national turmoil
<i>Home Organization</i>	means participating institutions such as universities or hospitals which register End Users, it being understood that the Federation members may have several Home Organizations
<i>Meta-data</i>	Technical and administrative data about Home Organizations and Resources
<i>Operations Committee</i>	The Operations Committee, representing the Federation members and SWITCH, acts in a purely advisory capacity as regards short-term decisions and operational or technical issues.
<i>Registration</i>	Process of becoming an official member of a user community. During the registration, a person has to prove his/her identity
<i>Related Service</i>	means additional service which does not have a compulsory link to AAI Services
<i>Resource Owner</i>	means the entity owning a resource and offering resource access to End Users
<i>Resources</i>	means material to which access is granted, e.g. applications, websites, databases, systems, etc.
<i>SWITCH IP</i>	means the AAI concept, the know-how, the documents, the tools and the software employed, delivered or developed by SWITCH as part of the Service delivery
<i>SUK</i>	Schweizerische Universitätskonferenz
<i>Virtual Home Organization</i>	means a user directory that allows Resource Owners to register End Users that are not otherwise registered with a Home Organization, allowing these End Users to access certain Resources
<i>WAYF-Server</i>	"Where-Are-You-From"-server, means a register of meta-data describing the AAI Federation's authentication services used by Resources



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AAI – Authentication and Authorization Infrastructure

Exhibit 2 AAI Services (Base Package) and Dependencies

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1. Service Description AAI Base Package

The AAI Base Package covers central services necessary for running an AAI and is available to Home Organizations as well as all Resource Owners belonging to a Home Organization. It comprises the following tasks:

1. Center of Competence

SWITCH operates a test infrastructure to check new components and build up know-how it can share with other organizations as well as to provide a test Home Organization, Resource and WAYF-server which organizations can use as a counterpart for testing their own installations.

SWITCH organizes information events, creates deployment guides and generally furthers the know-how transfer among the AAI Members.

SWITCH coordinates both the Advisory and the Operations Committee.

Moreover, SWITCH establishes regular contacts with the developers of Shibboleth in order to coordinate AAI issues and to introduce AAI-specific requirements.

2. WAYF-Server

SWITCH operates the central WAYF-server, a register of meta-data describing the AAI Federation's authentication services used by Resources. In addition, SWITCH is responsible for the coordination of all the WAYF-servers in the Federation operated by individual organizations.

3. AAI Tools

SWITCH develops and implements special AAI tools that facilitate the integration of resources such as AAI Proxy or AAI Portal, or enable an efficient operation of the AAI components such as a resource registry.

4. Strategy and Marketing

SWITCH is responsible for the strategic, well-coordinated further development of the AAI as well as adequate AAI marketing initiatives, both nationally and internationally, in order to ensure that the AAI Members' changing requirements are met as much as possible, and that both existing and prospective AAI Members learn about the possibilities and advantages of the AAI.

Special services for individual organizations have to be ordered separately.

2. Obligations and Dependencies of Federation Members

The following requirements must be met by the Federation Members for the proper functioning of the Services:

1. Home Organizations will install and operate the AAI elements and integrate them with their authentication systems and user directory.
2. Resource Owners will install and operate the AAI elements and integrate them with their resources.
3. Home Organizations collect a specified minimum set of attributes at the registration of end users (see "Authorization Attribute Specification", version 1.1 of January 15, 2004).
4. Home Organizations and Resource Owners will install and update new AAI software releases according to the agreed schedule maintained by the Operations Committee.

5. SWITCH provides a software repository covering all AAI components that are available for Federation Members.
6. Home Organizations inform SWITCH about any changes of their meta-data stored in SWITCH's WAYF-server in due time.
7. Home Organizations indicate technical and administrative contact information to SWITCH.
8. Resource Owners indicate technical and administrative contact information to SWITCH.
9. SWITCH takes the necessary steps to ensure seamless operation of the services under its control, monitors service availability and operates a helpdesk for Federation Members to report operational problems. Outages due to planned maintenance operations will be announced in advance and should be restricted to maintenance windows previously agreed by the Operations Committee.
10. SWITCH informs AAI Participants of bug fixes, security updates and upgrades of AAI components and coordinates efforts to keep the AAI operational and secure.
11. Federation Members use server certificates provided by an accredited CA for all their AAI elements.



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Exhibit 3 AAI Policy

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1. Introduction

Establishing an AAI to ease interactions between End Users and Resources across organizations not only requires a legal framework which allows participants to exchange information, but also the mutual trust of organizations.

The AAI bases on legal regulations already in force¹ and participants in the AAI can only act within these boundaries. The standing orders of the SUK of February 22, 2001 ease additional cooperation. However, it is also necessary that AAI Service Provider, Home Organizations and Resource Owners agree to a common set of guidelines – the AAI Policy – which describes the rules of good conduct.

The policy is an integral part of the AAI Service Agreement between SWITCH and the signing Organization and rules the relationship between the AAI Participants.

2. The SWITCHhai Federation

2.1 Definition

The SWITCHhai Federation is a group of organizations which cooperate in the area of inter-organizational authentication and authorization and, for this purpose, operate a common infrastructure.

2.2 Participants

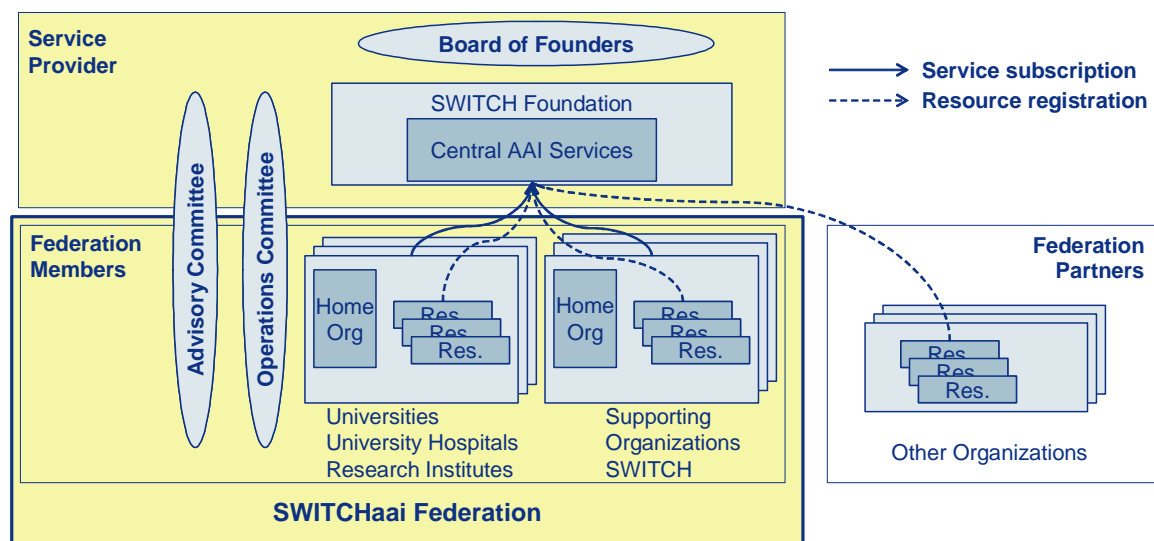


Figure 1: The SWITCHhai Federation and related organizations

¹ - Federal and the different cantonal data protection laws

- Bundesgesetz über die Förderung der Universitäten und über die Zusammenarbeit im Hochschulbereich vom 8. Oktober 1999 (UFG)
- Verordnung zum Universitätsförderungsgesetz vom 13. März 2000 (UFV)
- Interkantonales Konkordat über die universitäre Koordination vom 9. Dezember 1999
- Vereinbarung zwischen dem Bund und den Universitätskantonen über die Zusammenarbeit im universitären Hochschulbereich vom 14. Dezember 2000
- Cantonal university laws comprising the legal basis for the handling of personal data
- Cantonal acts of public responsibility governing the abuse of the AAI

2.2.1 Federation Members

All entities and organizations meeting the *Membership Requirements* as posted on the dedicated SWITCH AAI website and amended from time to time, may become Federation Members. Any revision of these *Membership Requirements* will become effective and will be deemed accepted 30 days from posting on the SWITCH AAI website. Then current Federation Members will receive an electronic message indicating such revision. Members can have different roles: they can act as representatives of user communities (Home Organizations), offer a variety of resources to the Federation (Resource Owners) and operate AAI components.

2.2.2 Service Provider SWITCH

SWITCH provides the Services according to Exhibit 2.

2.2.3 Advisory Committee

The Advisory Committee, representing the Federation members and SWITCH, acts in a purely advisory capacity as regards the management of inter-institutional AAI projects and the long-term AAI strategy.

2.2.4 Operations Committee

The Operations Committee, representing the Federation members and SWITCH, acts in a purely advisory capacity as regards short-term decisions and operational or technical issues.

2.2.5 Federation Partners

Federation Partners are organizations that offer AAI-enabled Resources to Federation members. They are allowed to integrate their Resources within the AAI and to use a minimal set of central AAI services necessary for a smooth operation of the AAI.

Federation Partners cannot act as a Home Organization, i.e. they do not represent user communities.

Service subscriptions of Federation Partners are subject to separate agreements with SWITCH.

3. Policy

3.1 Advisory Committee

3.1.1 SWITCH decides on the membership composition of the Advisory Committee. Ideally, the Committee is composed as follows:

- (a) one representative of the universities
- (b) one representative of the universities of applied sciences
- (c) one representative of SWITCH
- (d) one representative of CRUS
- (e) one to three representatives of important Resource Owners (e.g. Library Consortium, SVC)
- (f) one representative of the provider of subsidies
- (g) one jurist familiar with AAI-related legal issues

3.1.2 The Advisory Committee acts in a purely advisory capacity as regards the management of inter-institutional AAI projects and the long-term AAI strategy including but not limited to the following issues:

- (a) initiation and controlling of inter-institutional AAI projects;
- (b) financing of AAI projects and operations;
- (c) Federation strategy (membership, relation to other federations, etc.);
- (d) AAI strategy (architecture, functionality);
- (e) policies and business rules;
- (f) accreditation of CAs (Certificate Authorities);
- (g) risk assessments and service continuity management; and
- (h) further development of SWITCH's AAI Services.

3.1.3 SWITCH is responsible for the preparation of meetings and for all administrative concerns.

3.2 Operations Committee

3.2.1 SWITCH decides on the membership composition of the Operations Committee. Ideally, the Committee is composed as follows:

- (a) one representative per Federation Member
- (b) if needed, experts with specific skills

3.2.2 The Operations Committee acts in a purely advisory capacity as regards short-term decisions and operational or technical issues including but not limited to:

- (a) best practices on AAI-related technical, operational and security issues;
- (b) attribute specification, common entitlements; and
- (c) release planning.

3.3 Home Organizations

3.3.1 Home Organizations have the obligation to disclose their registration and authentication process on request of an AAI Participant.

3.3.2 Home Organizations operate a help desk for their End Users which attends to AAI-related issues.

3.3.3 Home Organizations keep their Attribute Release Policy up to date for all Resources that the Home Organizations' user communities are entitled to access.

3.3.4 Home Organizations will use for all their AAI elements server certificates provided by an accredited CA.

3.3.5 Home Organizations keep authentication information according to the legal provisions for at least 6 months at the moment.

3.4 Resource Owners

3.4.1 Resource Owners indicate which attributes they need for authorization; these indications are entered into the Resource Registry.

3.4.2 Resource Owners ensure that the meta-data they use is always up to date by using the automatic updating service provided by Shibboleth.

3.4.3 Resource Owners keep login information and log files according to the legal provisions for at least 6 months at the moment.

3.4.4 Resource Owners will use for all their AAI elements server certificates provided by an accredited CA.

3.4.5 In case of End User abuse, the abused party gets hold of the abuser. Resource Owners provide log information to the Home Organization on request.



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Exhibit 4 Software Licenses

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Document management

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