SWITCH

The Swiss Education & Research Network

AAI Monitoring: Pilot Project Description

1   Introduction

In 2001, SWITCH started a project for implementing an authentication and authorization infrastructure (AAI) based on Shibboleth. Today, many Swiss universities have implemented SWITCHaai, as it is called.

SWITCH believes that optional accounting services are important in a shared and distributed environment in order to understand how resources are used and to be able to split costs of shared resources among their users. End of 2005, the AAA pilot study [AAA-Study] recommended starting pilot projects in the following areas:
- e-learning usage statistics
- e-journal usage statistics
- Accounting for SWITCH e-conferencing
- SWITCHaai monitoring and usage statistics

This document outlines the pilot project „SWITCHaai monitoring". The goal of the pilot project is to establish a monitoring system for AAI which allows to have basic usage statistics and to sustain a high service quality. SWITCH is now looking for members of home organizations and resource owners who are interested to contribute to this project. Please subscribe to the aai-tf-monitoring mailing list or contact SWITCH if you would like to participate: Patrik Schnellmann, schnellmann@switch.ch, 044 268 1559.

2   Functional requirements

Users of the SWITCHaai monitoring system will be resource owners as well as employees of home organizations and SWITCH responsible for the operation of the SWITCHaai service.

The SWITCHaai monitoring application has to produce the following reports:

For home organizations
- Authentications per day, daily distribution
- Authorizations per resource, user group, user and time-frame
- Non-authorizations per resource and time-frame; reason for non-authorization (technical problem, missing attributes, wrong attribute values, etc.)

For resource owners
- Authorizations per home organization, user group, user and time-frame
- Non-authorizations per home organization and time-frame; reason for non-authorization (technical problem, missing attributes, wrong attribute values, etc.)

For SWITCH
- Authorization per home organization, resource and time-frame
- Non-authorizations per home organization, resource and time-frame; reason for non-authorization (technical problem, missing attributes, wrong attribute values, etc.)

The required data will be gathered from the log files of shibboleth and the web servers at home organizations and resources. Data of common interest will be transferred to the central monitoring application operated by SWITCH. The data is transferred and analyzed once a day (no real-time monitoring).

In addition to the end user functionality, the central application has to provide administrative functions, like

- management of users and access rights (AAI-based)
- data aggregation and deletion

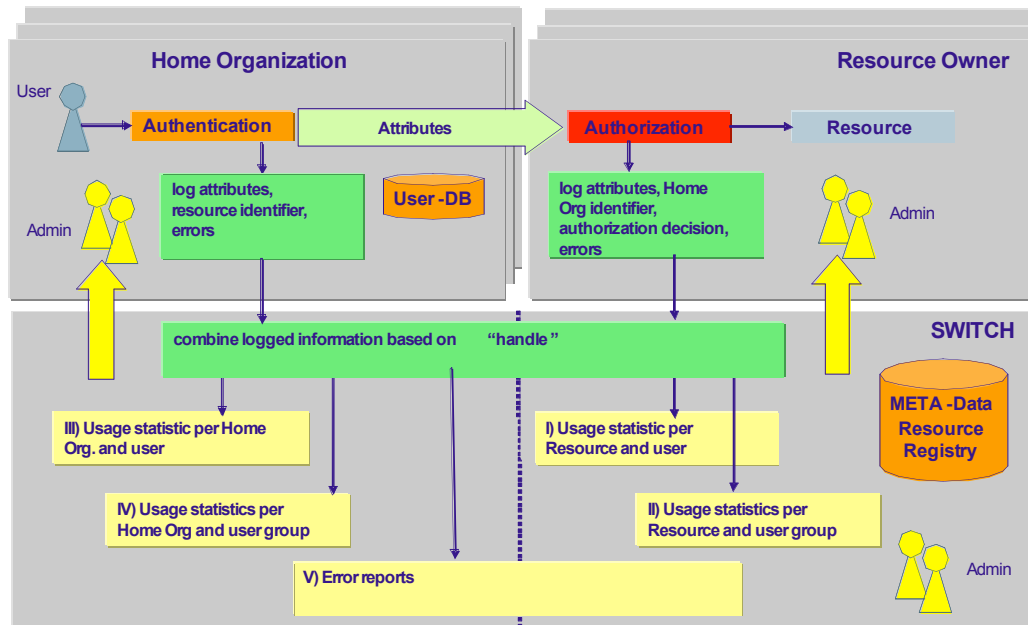and a legal framework to handle data protection issues.

Figure 1: Proposed system architecture

3 Project plan, results and milestones

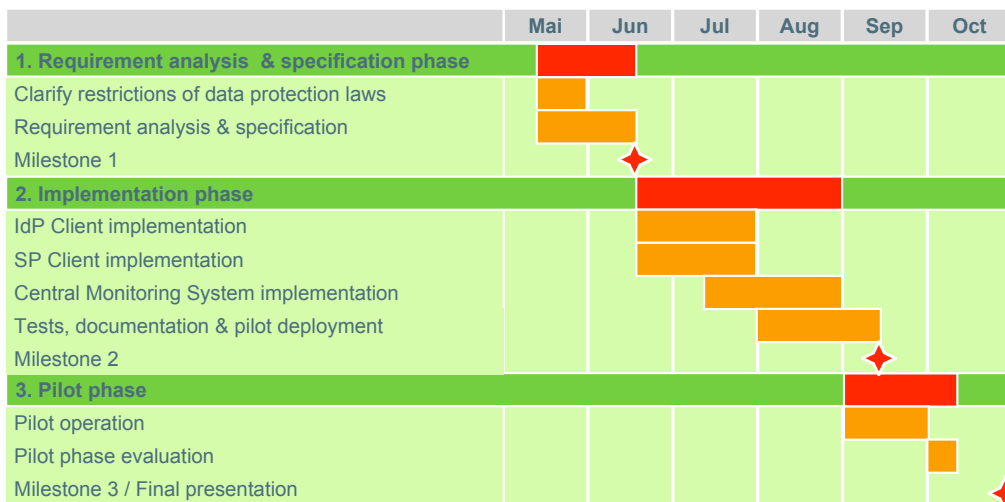The following figure gives an overview of the planned project steps, the expected results and the milestones:

	Mai	Jun	Jul	Aug	Sep	Oct
1. Requirement analysis & specification phase						
Clarify restrictions of data protection laws						
Requirement analysis & specification						
Milestone 1						
2. Implementation phase						
IdP Client implementation						
SP Client implementation						
Central Monitoring System implementation						
Tests, documentation & pilot deployment						
Milestone 2						
3. Pilot phase						
Pilot operation						
Pilot phase evaluation						
Milestone 3 / Final presentation						

Figure 2: Project plan

4 References

[AAA-Study]   Accounting for the Authentication and Authorization Infrastructure (AAI) - Pilot Study, 05.01.2006, SWITCH
http://www.switch.ch/aai/docs/AAI_Accounting_Pilot_Study.pdf