

Application for a VCS Mandate

”Evaluation of an Authentication and Authorisation Infrastructure”

Alexander Gall, Christoph Graf and Thomas Lenggenhager
SWITCH, Limmatquai 138, 8001 Zürich

November 29, 1999

Abstract

Well co-ordinated access control is a crucial issue for the VCS project, requiring an Authentication/Authorisation Infrastructure (AAI). SWITCH proposes a one-year mandate to study and design an AAI that suits the needs of the VCS as well as further projects within universities and for collaborations with foreign institutions. The activities within the scope of this mandate will be funded by SWITCH. An AAI deployment will be proposed in follow-up mandates jointly with the universities.

1 Introduction

In the future, the VCS enables a large number of people to access a wide range of services provided by the universities over the SWITCH backbone/Internet. In any such environment, the question naturally arises how to grant access to these individuals and how to protect the services from abuse. In general, this involves a two-step process

1. Authentication: Verification of the identity of the user by examination of the credentials offered (e.g. based on a combination of username and password or on a pair of private and public keys)
2. Authorisation: Verification if the authenticated user is allowed to use a particular service

Implementation of this scheme requires setting up an AAI. Here, we may roughly distinguish organisational from technical aspects. The former includes issues like policies, guidelines and integration into the administrative process of a university in general and will be considered in co-operation with the universities. The latter comprises the hardware and software needed to operate an AAI as well as the integration of new and existing applications.

It is important to note that this issue is, of course, also relevant outside the scope of the VCS project. This means that services within VCS must be considered to be equivalent to other services requiring the same kind of

infrastructure. Furthermore, interoperability with similar systems in other countries is highly desirable. Therefore, the system design and deployment of an AAI should be considered in a broader context.

SWITCH is the place of choice for a project co-ordinating activities in this field, based on the well established relationship with the computing services of all universities. At the recent November meeting, SWITCH got the support of GSI-CICUS (Groupe des Services Informatiques de la Commission pour l'Informatique de la Conference Universitaire Suisse) to take the lead in the project aiming at establishing an AAI for the Swiss universities.

2 Goal of the Mandate

The goal of the mandate is to propose an AAI that fulfills the following requirements

- Covers the need of the VCS
- Useful also outside the VCS project (internally in a university or for bilateral projects)
- Interoperability with similar systems in Europe and world-wide

SWITCH plans to launch the tasks listed below in order to meet these goals

- Study on user requirements within VCS and the universities
- Overview of existing solutions and products useful as building blocks for an AAI
- Overview on international activities in the field of AAI
- Analysis of the results and system design of an AAI

3 Timeline

The evaluation and system design is scheduled to take roughly one year. For SWITCH, the AAI topic is so important that we will undertake first steps already in early 2000. The intention is to apply for subsequent mandates for the implementation phase, which will be performed in collaboration with the Universities.

4 Funding

Activities within the scope of this mandate are entirely funded by SWITCH. It is expected that follow-up mandates for the deployment phase of an AAI will include applications for funding on behalf of the universities participating at that stage.