

Table of Contents

Strategy And Plans For Interoperability With Other Grid Infrastructures.....	1
1. Overview.....	1
2. Requirement.....	1
3. Analysis.....	1
4. Development.....	1
5. Support.....	1
6. Standards.....	2
Bibliography.....	2

Strategy And Plans For Interoperability With Other Grid Infrastructures

1. Overview

This document outlines the strategy and plans for Interoperability between EGEE and other Grid infrastructures. It includes the identification of applicable standards and areas where standardization efforts are still required. It also gives an analysis as to what extent the gLite distribution adheres to these standards. This work builds upon previous experiences most notably the interoperations activity with OSG [\(1\)](#) and the interoperations activity with ARC [\(2\)](#). This experience has been used to create the Interoperations Cookbook [\(3\)](#) which describes what is required to achieve interoperation between infrastructures. The strategy follows a simple five point plan, each point is described in more details below.

1. Identify requirement
2. Analysis of the problem
3. Develop solutions
4. Operational Support
5. Standards

2. Requirement

Experience has shown that an interoperations activity cannot successfully get underway without first identifying the infrastructures which need to interoperate and the user community for which this is required. Therefore the first step is for EGEE to actively engaging with its user community to help identify with which infrastructure interoperation is required. The demand from the user community is a key factor in driving the activity. If a VO has resources provided by an infrastructure project other than EGEE and requires that EGEE interoperates with that infrastructure, this requirement should be brought to the TMB for discussion and the task will be prioritized.

3. Analysis

The second step is to understand the similarities and differences between the infrastructures. This can be achieved by investigating the main functions provided by the infrastructures and producing an *interoperability matrix*. The typically areas covered include security, information systems, job management and data management. Once the scale of the problem is understood a decision can be made on the most pragmatic way to achieve interoperability. The most common techniques to use are described in the Interoperations Cookbook [\(3\)](#). This task will be carried in collaboration between technical representatives of EGEE, the VO and the other infrastructure. The final plan should be brought back to the TMB for discussion and the various tasks required to be carried out by EGEE members will be prioritized.

4. Development

Components need to be developed which implement the proposed solutions which were identified in the analysis phase. The development work should be carried out by the relevant developers to minimize the overhead of a new developer requiring to understand a component in order to make a small change.

5. Support

Once the components have been developed, the information required to provide a production quality service needs to be disseminated to the operations teams. Ongoing support needs to be given and the situation needs

to be continuously monitored to ensure that interoperability is maintained.

6. Standards

The long term goal is to achieve interoperability via the use of standards

EGEE is actively involved in a number of standardization efforts. The interoperability activity is particularly focused on identifying areas for standardization and following up on standardization efforts. The list of standards that are considered to be important for interoperability and their current status can be found on the Standards Status (4)Page. This is a continuation of the EGEE II EGEE Standards Survey (5) and provides the current status of the relevant standards that were identified in the report. The KnowARC project has produced a similar report (6).

Bibliography

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