



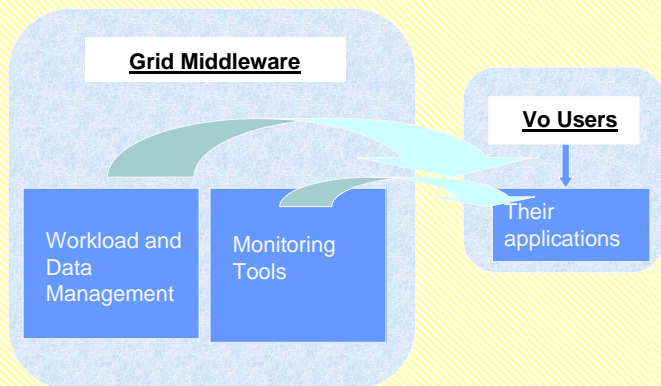
A General Information System API in LCG

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Introduction

Access to the Information System is a fundamental operation for Grid middleware and for VO applications



The problem

YESTERDAY: LDAP

- Its Protocol
- Its Schema
- Its Query Language

New Technology

TODAY: R-GMA

- Its Protocol
- Its Schema
- Its Query Language

New Technology

TOMORROW: MDS3

- Its Protocol
- Its Schema
- Its Query Language

Proposed Solution

We propose a general API able to interact with any actual and/or future protocol.

Characteristics:

1. Single interface for User Applications.
2. Defined query language and data model are included.
3. The user needs to specify the service he wants to access and the query to perform on the data using the canonical schema. The query and schema are syntactically and semantically translated internally in a transparent manner.

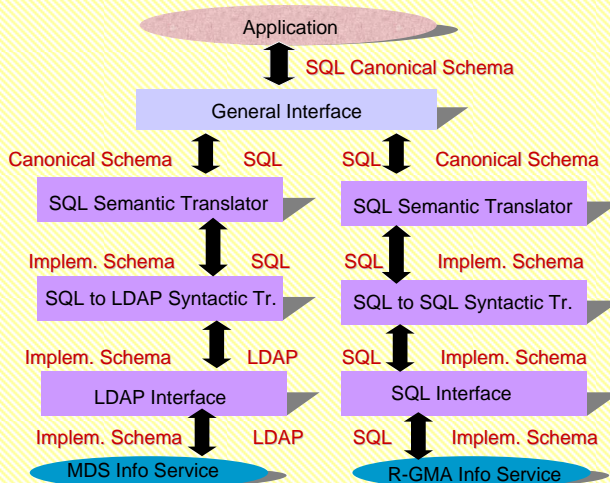


Figure 1: General schema of the high level Information System API.

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Total Sites: 7
Total CPUs: 726
Total Storage: 655
(TB)

September 10 2004





The Design

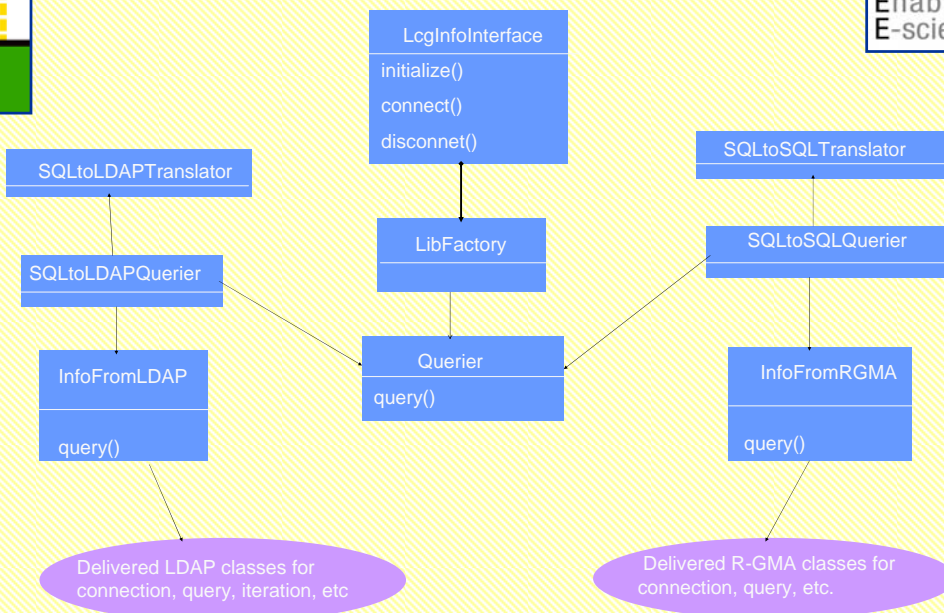


Figure 2: Relational Schema of the classes included in the package

User Requirements

- a) SQL query
- b) Configuration file which allows users to define the service to query and therefore the specific protocol to be used. The user can also define parameters specific to each protocol.

Preliminary Results

1. We have tested successfully typical WMS and Monitoring packages queries

```
SELECT Name UniqueID Status RunningJobs FROM
Glue.ComputingElement Glue.ComputingElement.State
```

```
long
Lxb0706.cern.ch:2119/jobmanager-pbs-short
0
short
lxb0706.cern.cg:2119/jobmanager-pbs-short
0
[...]
```

2. Implementation in MonALISA

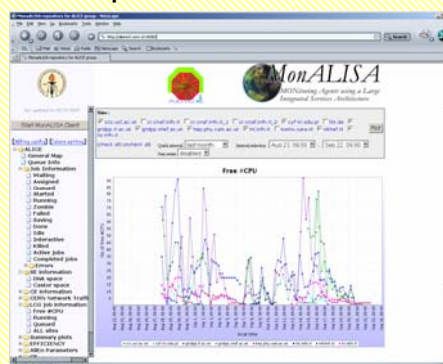


Figure 3: Interface implementation in MonALISA (ALICE)

3. Successfully implemented in some tools deployed by LCG

Lcg-infosytes: information tool for LCG



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