



OGSA-DAI

Support, Evaluation and Application

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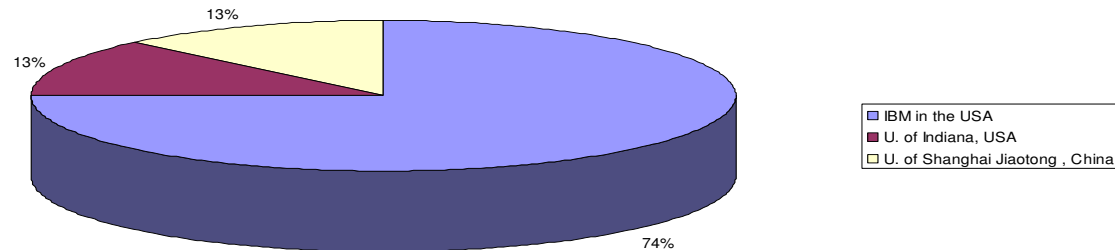
CCLRC e-Science AHM

28-29 Oct. 2003

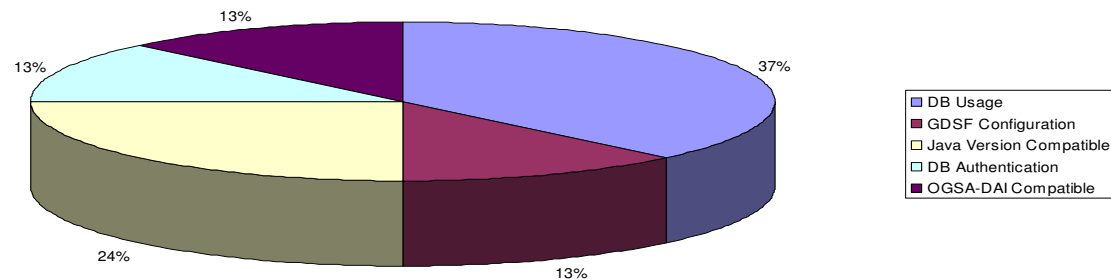
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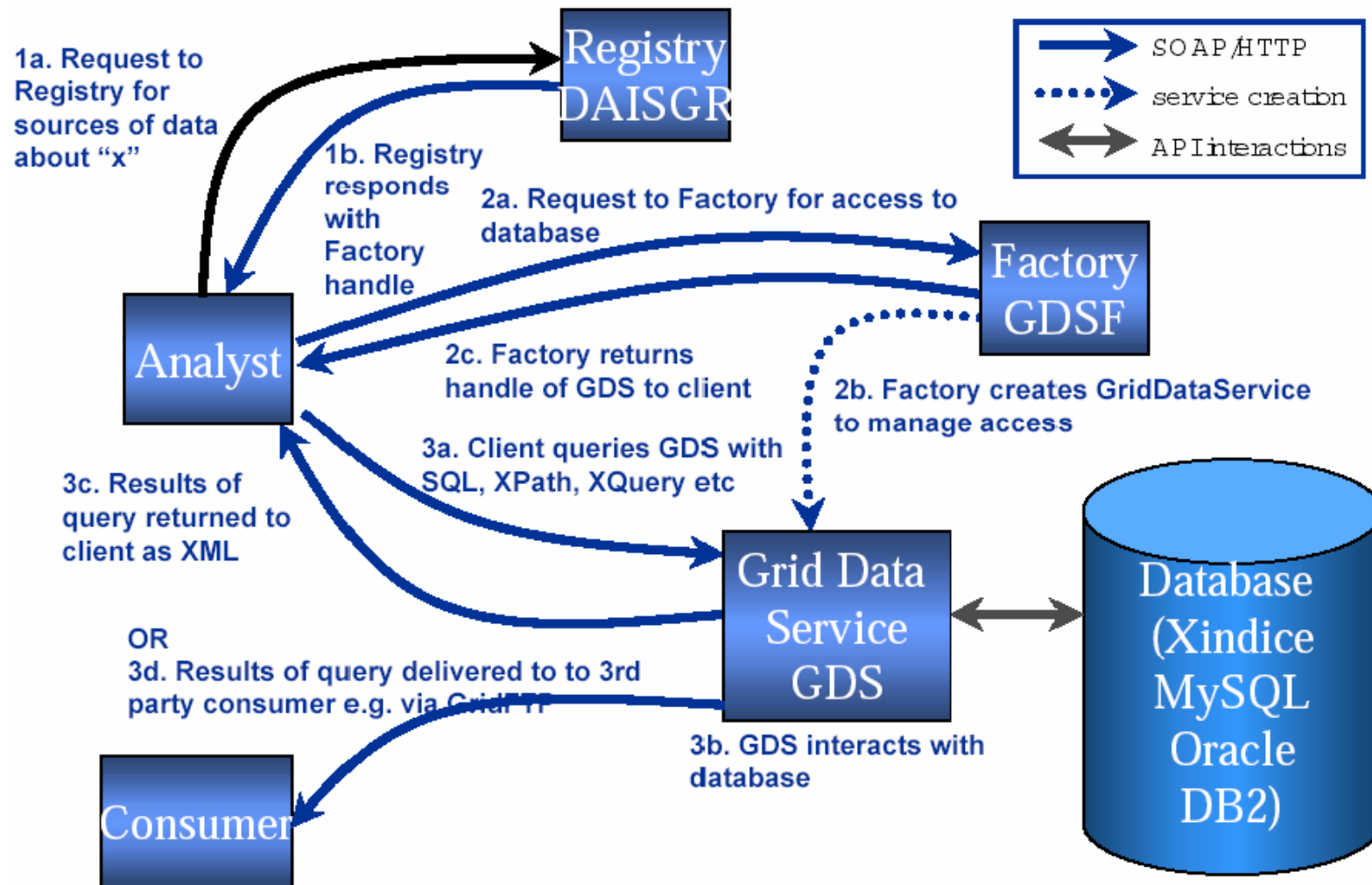
- Time: From 10/06/2003 to 04/07/2003
- Software Based: GT3 Alpha3 and Beta, OGSA-DAI v2 and v2.5
- Where the Query Submissions Come From:



- Queries Covered



- **What is OGSA-DAI**
 - OGSA Data Access and Integration
 - Within the OGSA Framework
 - GT3 Base Service
- **Three Key New Services:**
 - GridDataService
 - GridDataServiceFactory
 - DAIServiceGroupRegistry
- **Databases Supported:**
 - Xindice, MySql, Oracle and DB2
- **Languages Supported:**
 - SQL92, Xpath, Xupdate



OGSA-DAI (v 3.0.2) Performance Test Suite**•Setup1**

Each OGSA-DAI test client executes the following steps:

Step1: Calls DAIServiceGroupRegistry to find GridDataServiceFactory

Step2: Calls GridDataServiceFactory to create instance of GridDataService

Step3: Calls instance of GridDataService to search Xindice DB. A 2KB size XML data will be got.

Step4: Calls instance of GridDataService to destroy itself.

With and without authentication via GSI message level security

OGSA-DAI service hardware: one Intel Pentium III 450MHz processor, 384MB RAM ----- esc4.dl.ac.uk

OGSA-DAI test client hardware: one Intel Pentium III 450MHz processor, 384MB RAM ----- esc5.dl.ac.uk

OGSA-DAI (v 3.0.2) Performance Test Suite (cont.)

•Setup2

Same with Setup1, but Step2 consists of 200 cycles, each of them calling GridDataServiceFactory to create new instance of GridDataService

•Setup3

Same with Setup1, but Step3 consists of 200 cycles, each of them searching Xindice DB to get a 2KB size XML data

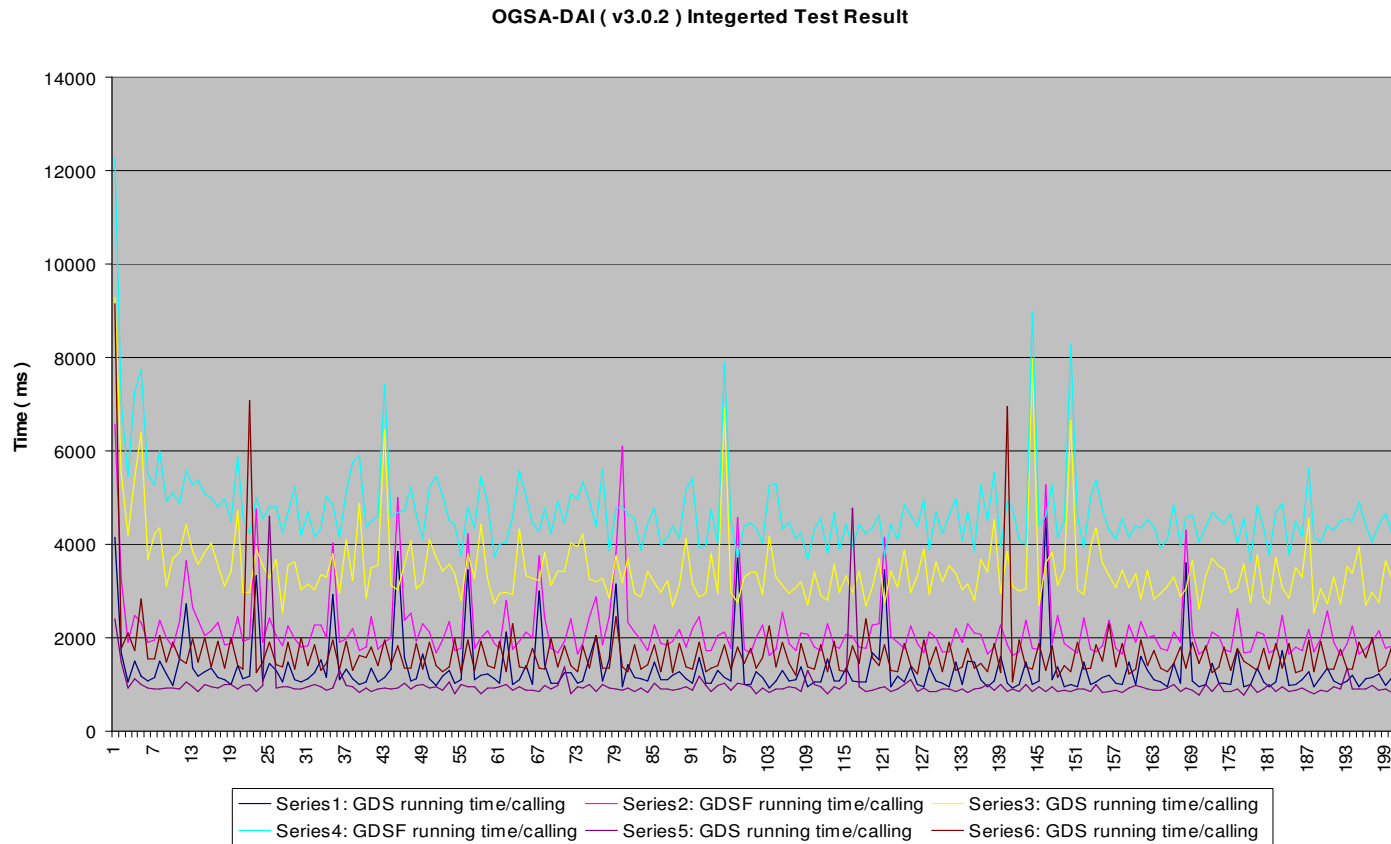
•Setup4

200 clients talking to OGSA-DAI service were run serially on one node.

General Results of the Performance Test

Setup	Authentication	Service Container	Average Running Time	Average CPU u+s usage
1	No	Tomcat 4.1.24	25302 ms/service	99.9%
1	Yes	Tomcat 4.1.24	33362 ms/service	99.9%
2	No	Tomcat 4.1.24	1322 ms/service	99.9%
2	Yes	Tomcat 4.1.24	3487 ms/service	99.9%
3	No	Tomcat 4.1.24	973 ms/service	99.9%
3	Yes	Tomcat 4.1.24	1671 ms/service	99.9%

Test Results of the Client



Test results of Setup1 to Setup3

Test Results of the Client (cont.)

Series1: one GDSF creates one instances of GDS. 200 cycles of calling GDSF, without security

Series2: same with Series1, but refer to GDSF

Series3: same with Series1, but with security

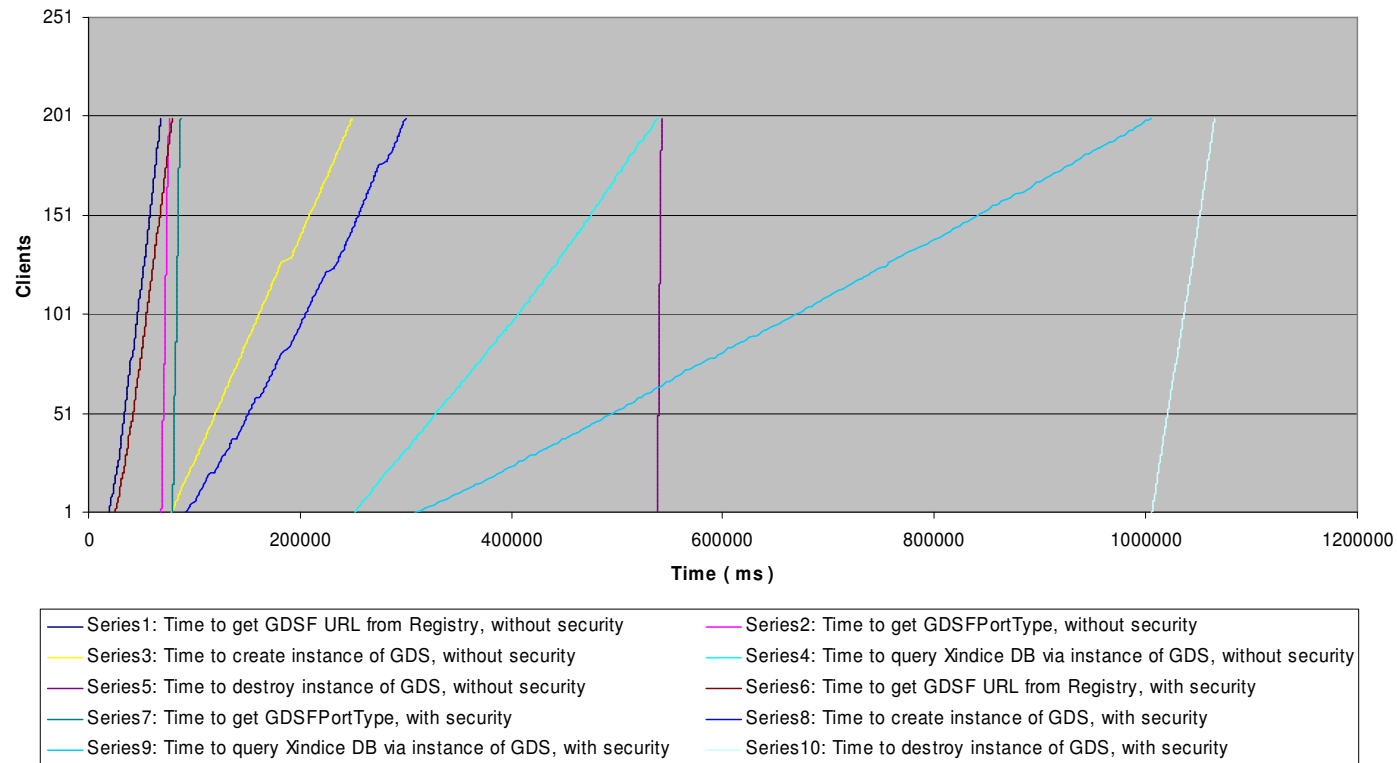
Series4: same with Series2, but with security

Series5: one GDSF creates one instance of GDS. 200 cycles of same instance of GDS, without security

Series6: same with Series5, but with security

Test Results of the Client (cont.)

OGSA-DAI (v3.0.2) Integrated Test Result

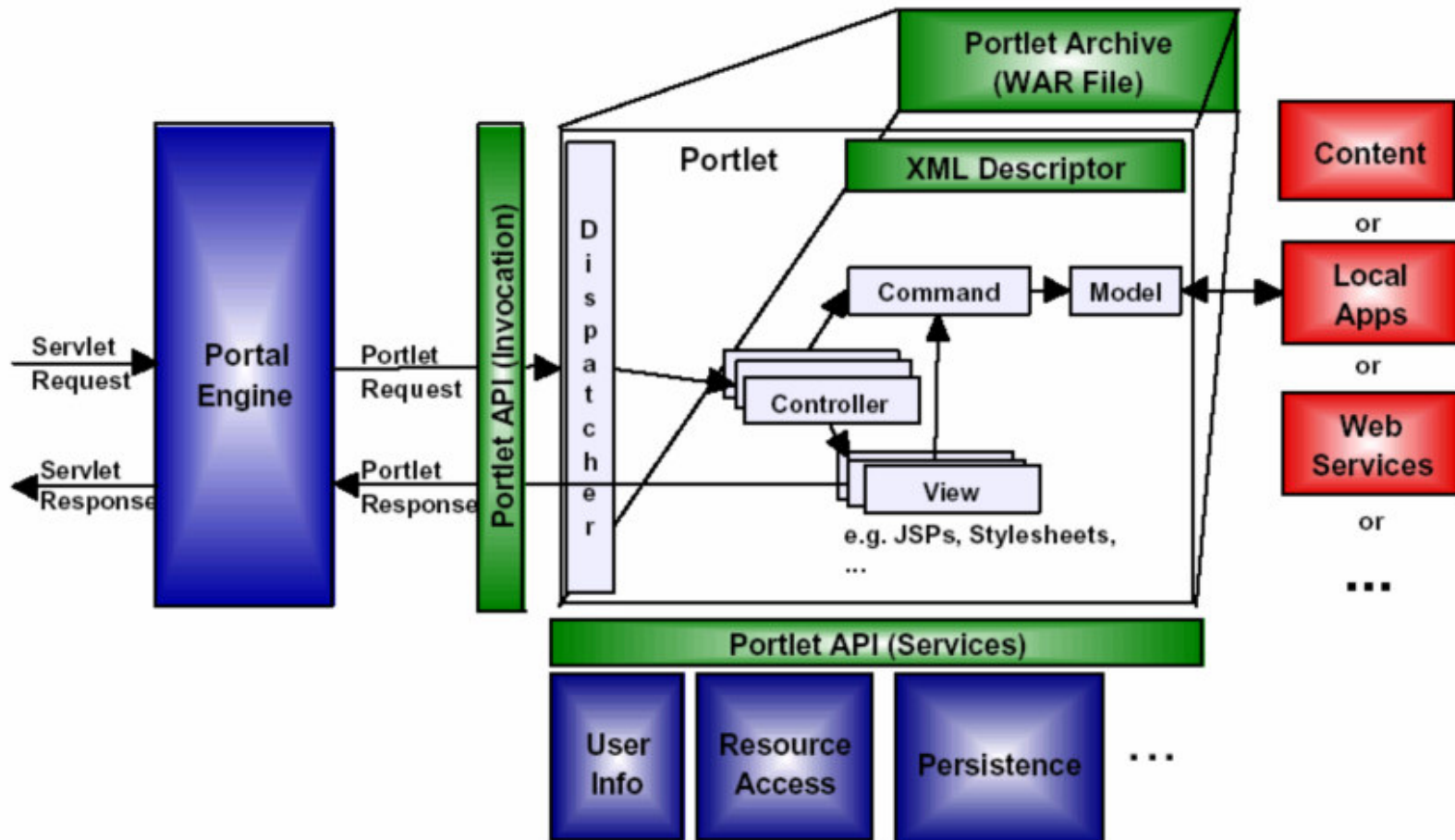


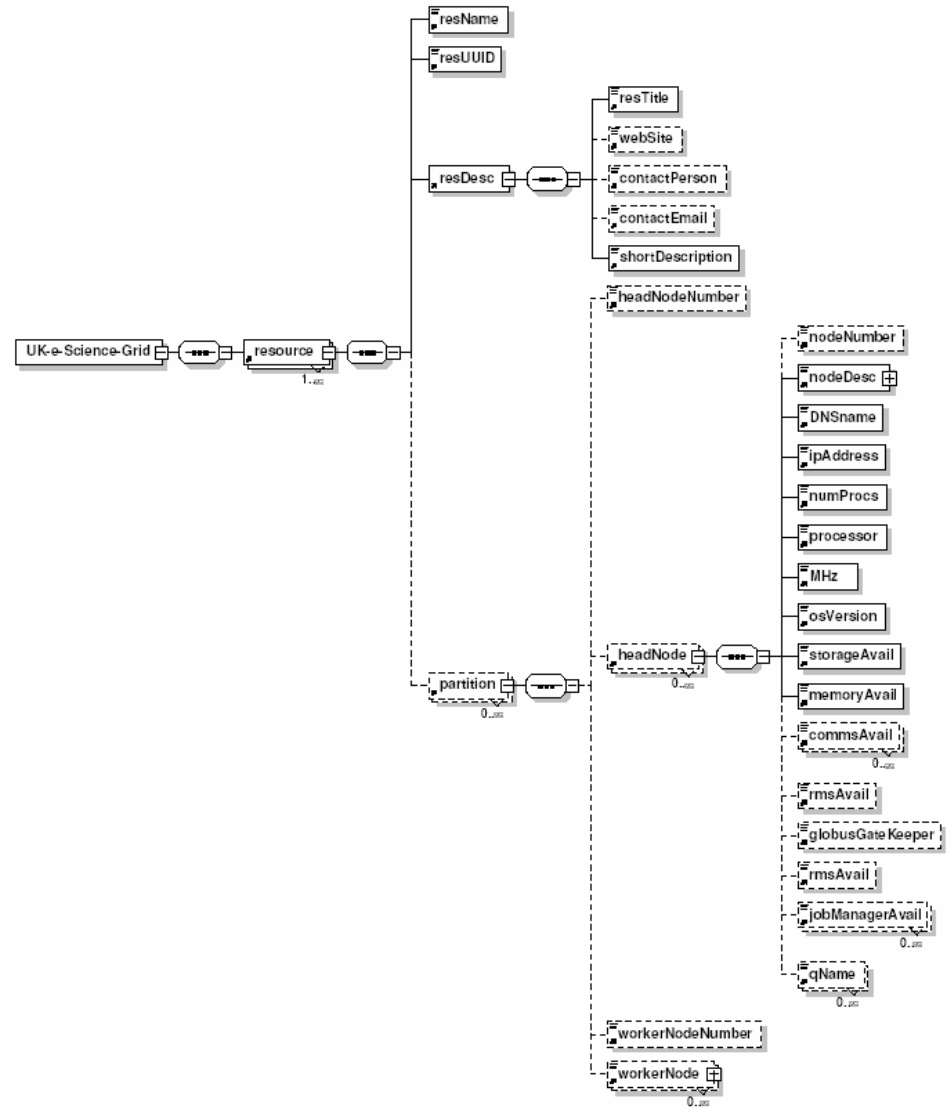
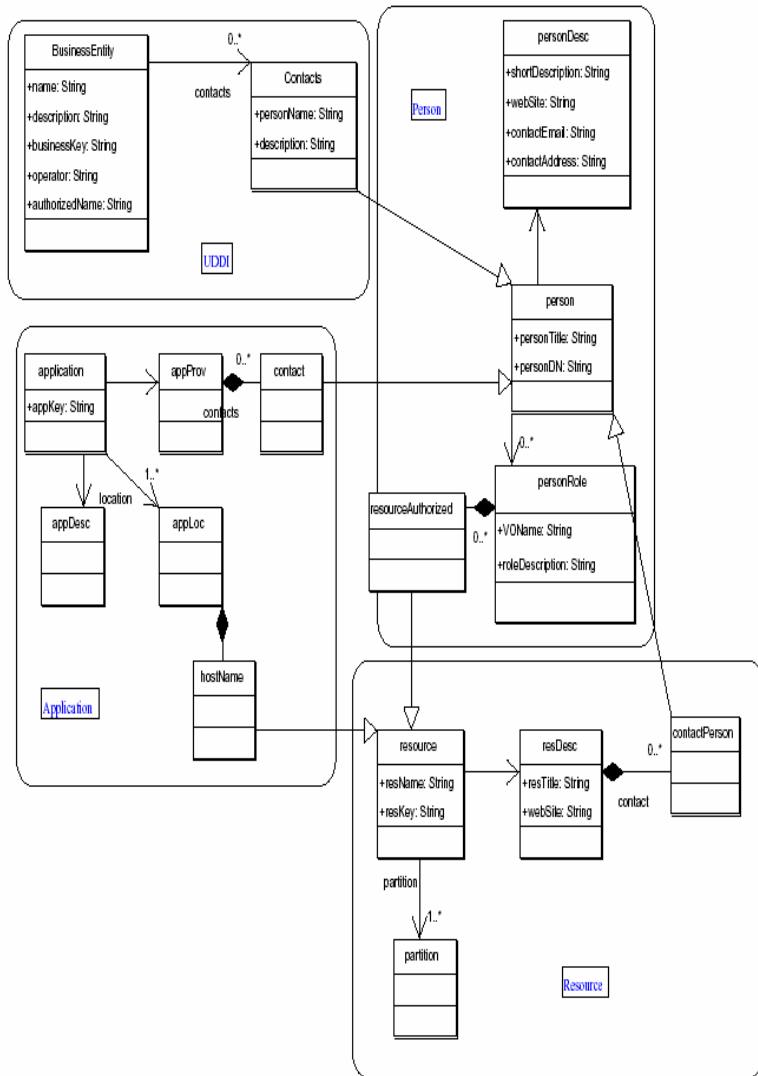
Test results of Setup4

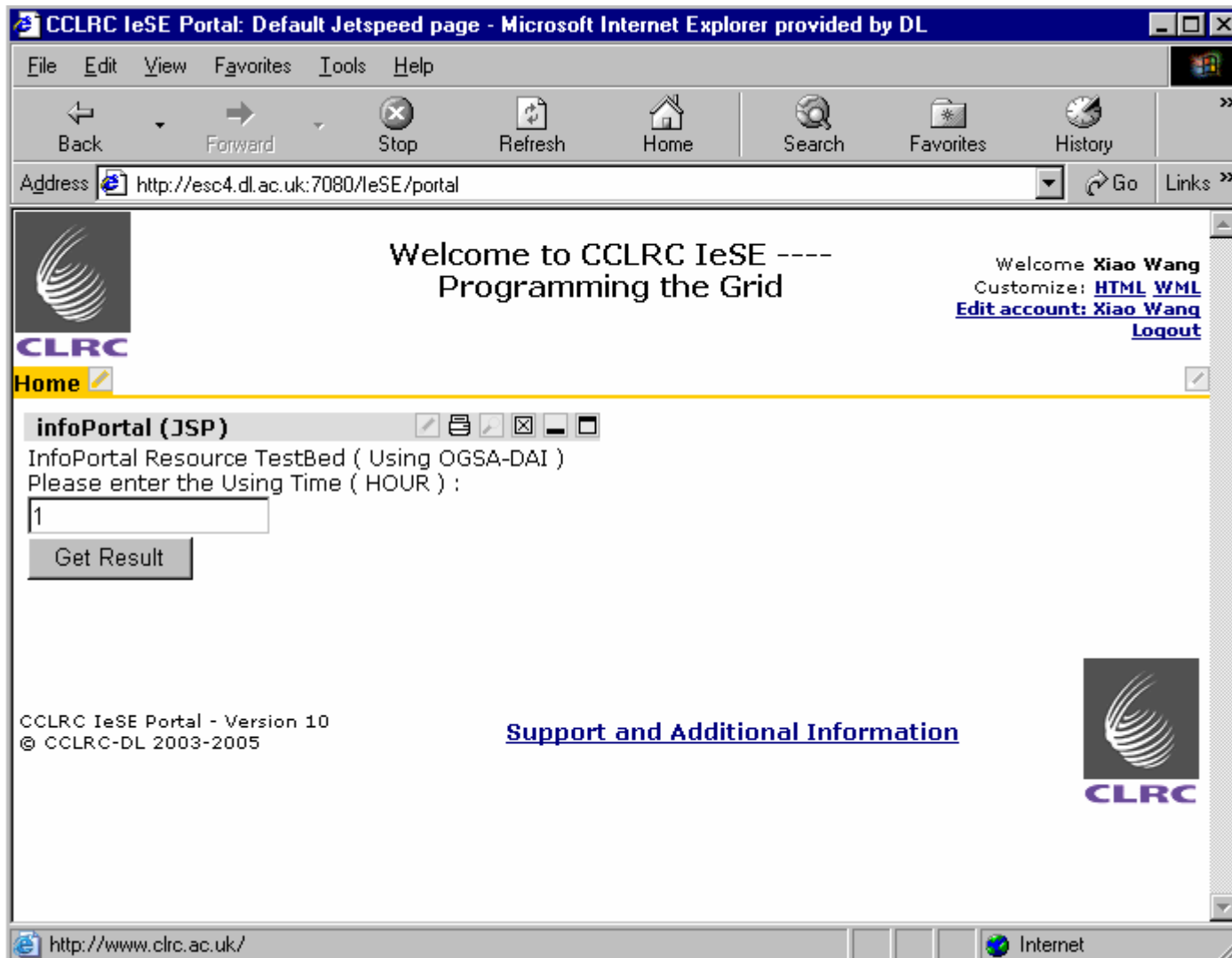
JetSpeed

- Portal Framework
- Portlets Abstraction
- Java Based
- Open Source (Apache)
- Built Upon the Servlet API, Turbine, Torque and Velocity

Portal Architecture








CCLRC IeSE Portal: Default Jetspeed page - Microsoft Internet Explorer provided by DL

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History

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Home

infoPortal (JSP)
InfoPortal Resource TestBed (Using OGSA-DAI)
Please enter the Using Time (HOUR) :

CCLRC IeSE Portal - Version 10
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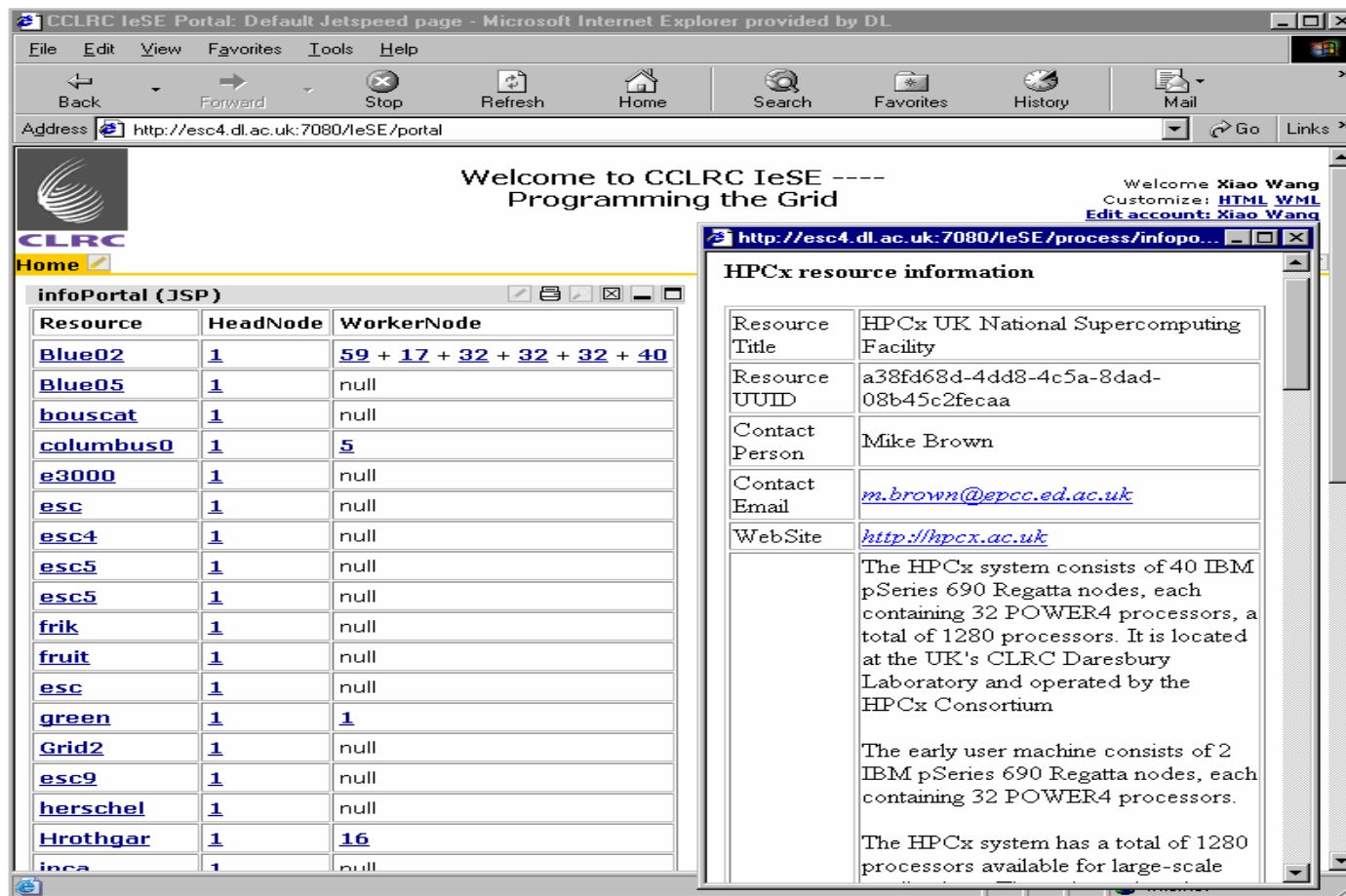
[Support and Additional Information](#)



<http://www.clrc.ac.uk/> Internet

Xiao Dong Wang

CCLRC e-Science Centre



Address: <http://esc4.dl.ac.uk:7080/IeSE/portal>

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infoPortal (JSP)

Resource	HeadNode	WorkerNode
Blue02	1	59 + 17 + 32 + 32 + 32 + 40
Blue05	1	null
bouscat	1	null
columbus0	1	5
e3000	1	null
esc	1	null
esc4	1	null
esc5	1	null
esc5	1	null
frik	1	null
fruit	1	null
esc	1	null
green	1	1
Grid2	1	null
esc9	1	null
herschel	1	null
Hrothgar	1	16
inca	1	null

HPCx resource information

Resource Title	HPCx UK National Supercomputing Facility
Resource UUID	a38fd68d-4dd8-4c5a-8dad-08b45c2fecaa
Contact Person	Mike Brown
Contact Email	m.brown@epcc.ed.ac.uk
WebSite	http://hpcx.ac.uk

The HPCx system consists of 40 IBM pSeries 690 Regatta nodes, each containing 32 POWER4 processors, a total of 1280 processors. It is located at the UK's CLRC Daresbury Laboratory and operated by the HPCx Consortium

The early user machine consists of 2 IBM pSeries 690 Regatta nodes, each containing 32 POWER4 processors.

The HPCx system has a total of 1280 processors available for large-scale