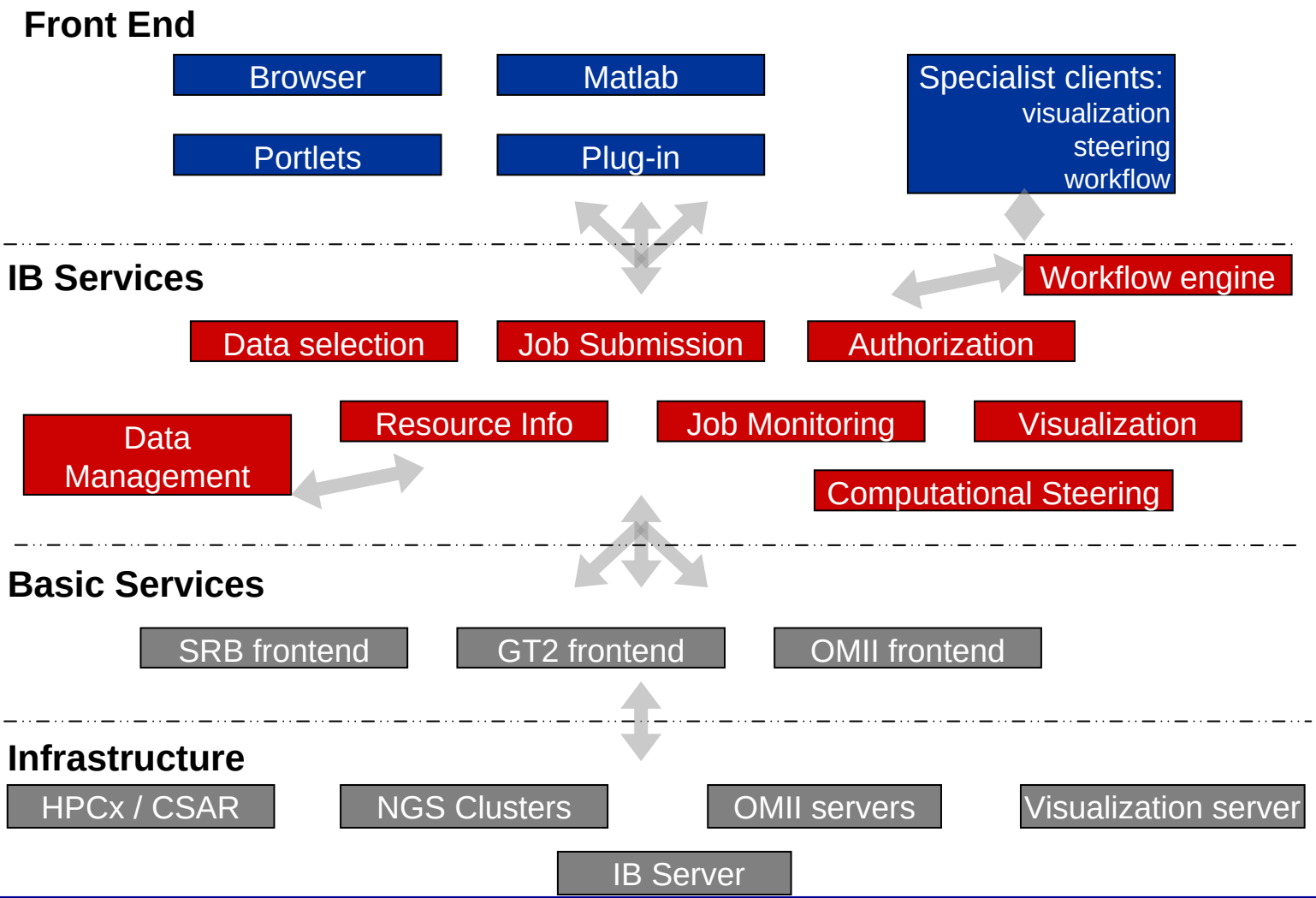

# Technology Update

Damian Mac Randal

CCLRC

# IB Architecture



# Current status

- Development process
  - independent “technology” development (adopt/adapt/develop), followed by integration into IB environment
  - six month cycle:
    demos – shown at All-Hands (and here)
    prototype(s) – prototype 1 available
- Progress reports on:
  - visualization,
  - job management,
  - data management,
  - workflow
  - steering
  - …
- Planned development
  - next prototype – end of the year
  - longer term – additional functionality

# IB “Components”

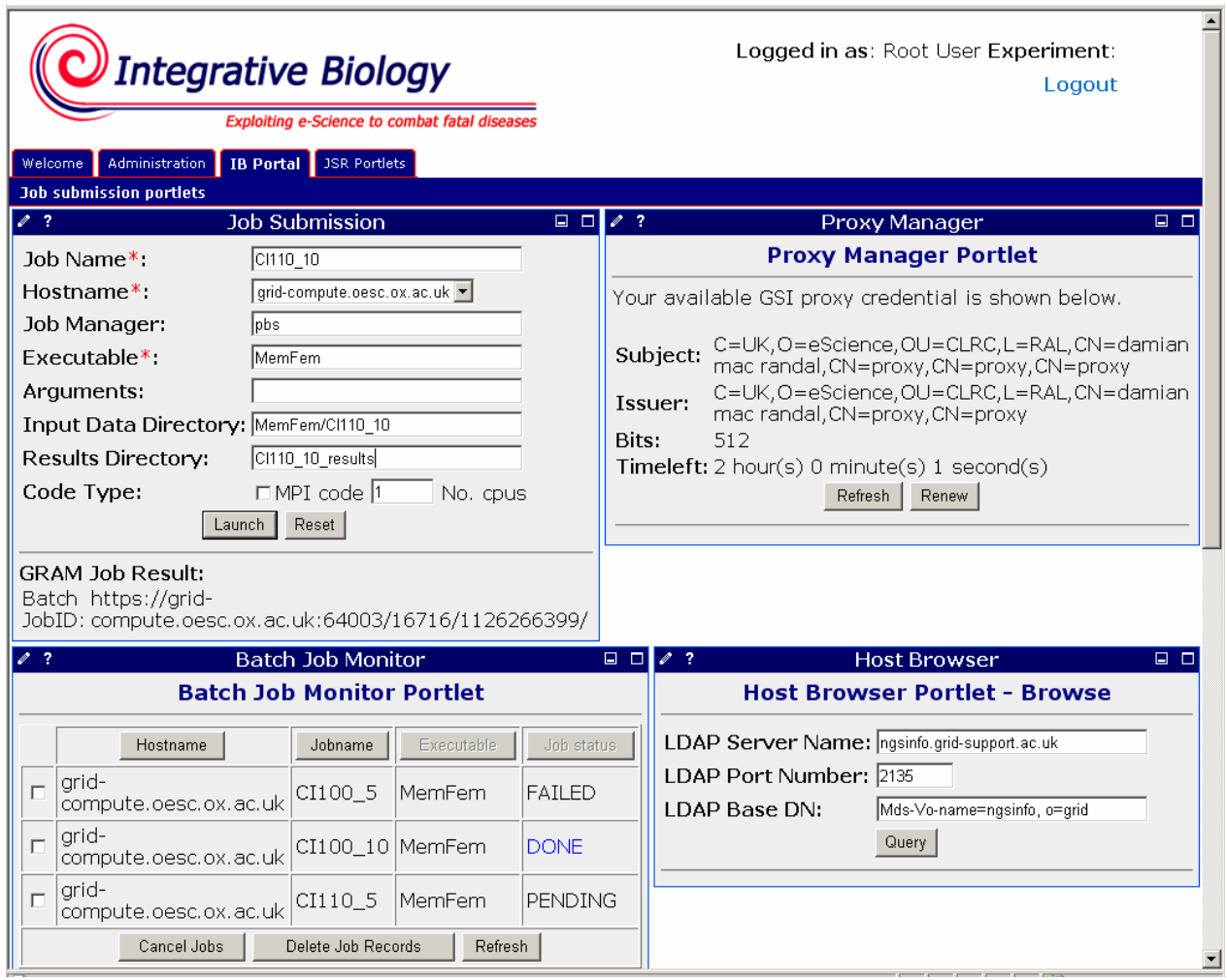
- Visualization / Interactive Services
  - workshop/demo at 1115, presentation at 1430
- Job management
  - in portal report
- Data Management
  - in portal report, and data/metadata presentation/demo at 1330
- Workflow (myIB project)
  - presentation at 1030, workshop/demo 1130
- Steering
  - presentation at 1500
- User interface/Environment (IB-VRE project)
  - in portal report, and IB-VRE presentation at 1015
- Code development
  - presentation at 1045

- Infrastructure (ESLEA project)
  - presentation at 1430

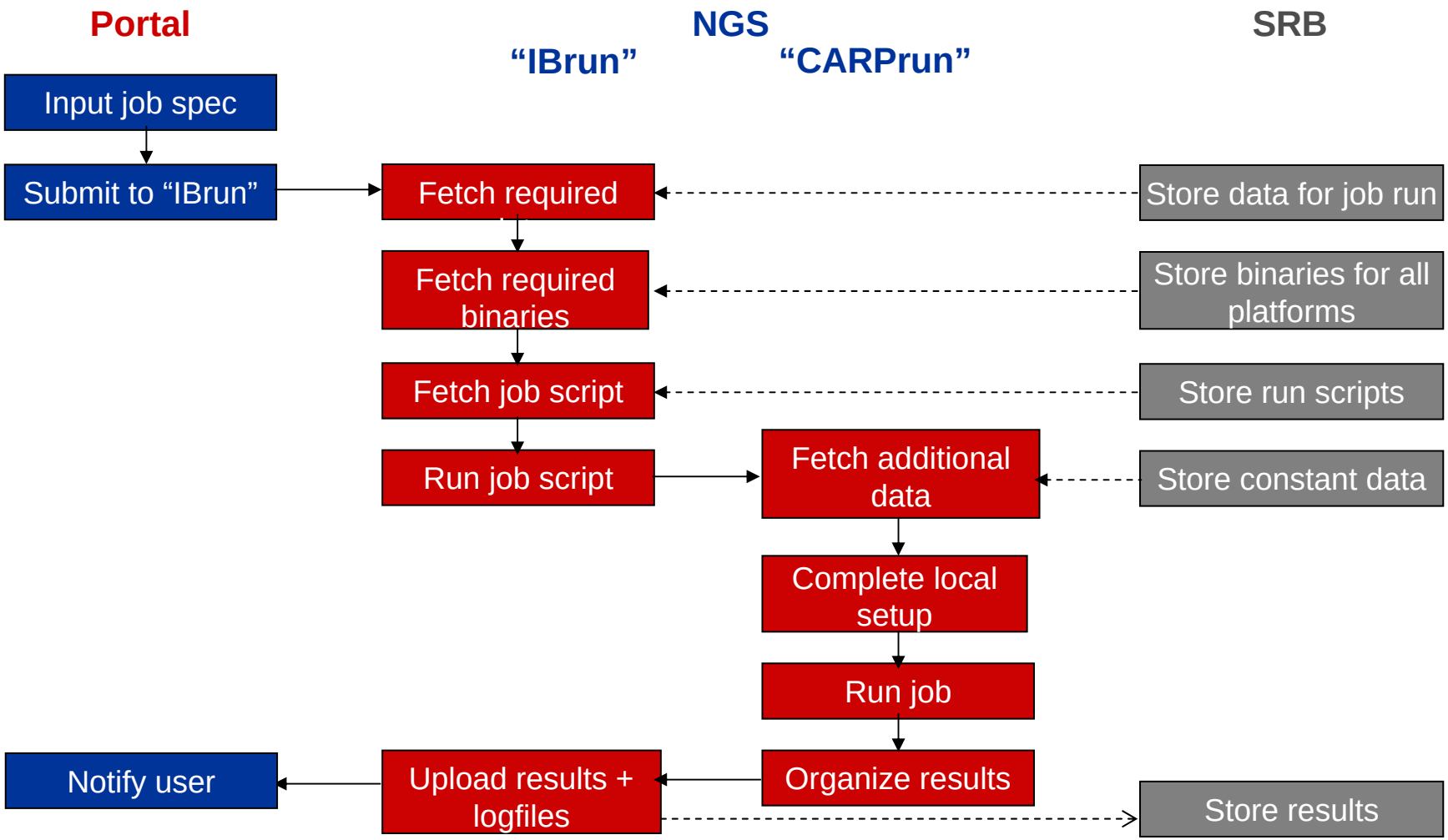
# Prototype 1

- Portal
  - job submission and monitoring – to any NGS cluster
  - “virtual filestore” held in SRB (on NGS)
  - MyProxy – GSI security required for NGS & SRB
- Enhanced visualization tools
  - based on Meshalyzer, with additional services
  - interface to SRB
- Data management
  - standard SRB interfaces
- Usable for straightforward scientific investigations
  - with a bit of setup support

# Portal


Integrative Biology
Exploiting e-Science to combat fatal diseases
Logged in as: Root User Experiment:
Logout
Welcome
Administration
IB Portal
JSR Portlets
Job submission portlets
Job Submission
Job Name*: CI110_10
Hostname*: grid-compute.oesc.ox.ac.uk
Job Manager: pbs
Executable*: MemFem
Arguments:
Input Data Directory: MemFem/CI110_10
Results Directory: CI110_10_results
Code Type: MPI code 1 No. cpus
Launch
Reset
GRAM Job Result:
Batch JobID: https://grid-compute.oesc.ox.ac.uk:64003/16716/1126266399/
Proxy Manager
Proxy Manager Portlet
Your available GSI proxy credential is shown below.
Subject: C=UK,O=eScience,OU=CLRC,L=RAL,CN=damian mac randal,CN=proxy,CN=proxy,CN=proxy
Issuer: C=UK,O=eScience,OU=CLRC,L=RAL,CN=damian mac randal,CN=proxy,CN=proxy
Bits: 512
Timeleft: 2 hour(s) 0 minute(s) 1 second(s)
Refresh
Renew
Batch Job Monitor
Batch Job Monitor Portlet
Hostname
Jobname
Executable
Job status
grid-compute.oesc.ox.ac.uk CI100_5 MemFem FAILED
grid-compute.oesc.ox.ac.uk CI100_10 MemFem DONE
grid-compute.oesc.ox.ac.uk CI110_5 MemFem PENDING
Cancel Jobs
Delete Job Records
Refresh
Host Browser
Host Browser Portlet - Browse
LDAP Server Name: ngsinfo.grid-support.ac.uk
LDAP Port Number: 2135
LDAP Base DN: Mds-Vo-name=ngsinfo, o=grid
Query

# Job submission process



# Prototype 2

- End of the year

- Enhanced portal, with additional services (VRE?)
- Job submission to NGS/HPCx/CSAR, with host status info
- Data management scheme
- Capture of basic metadata/provenance, metadata editor
- Portal access to visualization, integration with SRB
- ReG steering client integrated with IB job submission
- Multi-job steering(?)
- Basic workflow capability

- Code management infrastructure for project development

# Longer term

- Wider range of accessible hosts, more dynamic host information
- Extensive metadata/provenance, semi-automated collection
- Seamless virtual datastore
- Integrated visualization, extended capabilities
- Integrated workflow support
- Integrated steering of running jobs and workflows
- Experiment management mechanisms
- …

- Enhanced portal, additional VRE services
- Data/code repositories
- HPN
- …

# Objectives for today

- Input needed on:
  - what facilities are needed,
  - how they should be accessed, usability
  - priorities,
  - etc.

- So, please:
  - provide immediate feedback at presentations/demos today
  - input to open discussion session at 1515
  - use prototypes and comment on strengths/weaknesses, as well as bugs
  - ask for facilities that would simplify or amplify your work now
  - think about how you could use the new features provided in the prototypes

- Thank you