Web Services DRMAA

Steven Newhouse & Nathalie Furmento
London e-Science Centre
Imperial College, London UK
http://www.lesc.ic.ac.uk

Background

- UK Regional e-Science Centre
- Sun ‘Centre of Excellence’ in e-Science
- Concentrating on Grid Middleware:
  - Portal Infrastructure
  - Maximising Resource Utilisation
  - Policy for resource sharing
  - Construction of Imperial College Grid
- Development of higher-level scheduling & optimisation of resource utilisation
DRMAA-WS

- Build on proposed interface and developments
- Use XML & SOAP encoded request & response
- Standardise low-level remote access to DRM
- Evolve to provide GRAM / RSL type mappings
  - Job definition ML
  - Resource ML
  - Policy ML
  - Direct OGSA service?

Motivation
Layered Architecture

<table>
<thead>
<tr>
<th>GRAM 2.0 + RSL (SOAP &amp; XML?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g. XSLT transformation</td>
</tr>
<tr>
<td>(current mechanism:</td>
</tr>
<tr>
<td>globus-script-pbs-submit)</td>
</tr>
</tbody>
</table>

Other infrastructures

GRAM 2.0: + RSL

Adv Res API

Native DRM

What next…

- Very initial draft specification available
  - http://www.doc.ic.ac.uk/~nfur/drmaa/
- Implementation of interface within WS context:
  - Build basic WS interface with dummy DRM
  - Integrate with DRMAA as / when implemented
  - Link to higher-level schedulers
- Welcome comments, discussion & suggestions
  - s.newhouse@doc.ic.ac.uk
  - n.furmento@doc.ic.ac.uk