Middleware Action Plan & Strategy Project (MAPS)

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MAPS project objective

To develop a strategic roadmap for middleware services, which will identify the services that need to be offered and describe how they ought to be offered, in order to provide ongoing, effective support for research and higher education within Australia. The roadmap should have broad consensus across the Australian research and higher education sector.
Funded by Department of Education, Science and Training (DEST)

MAPS partners:
- The University of Queensland (lead)
- Macquarie University
- The Australian National University
- Monash University
- CAUDIT (Australian University IT Directors)
- CAUL (Australian University Librarians)
- AARNet
- GrangeNet
Examples of middleware services

• Identity and access management
  – Managing federations
  – Issuing certificates
  – Managing identities within actual and virtual organisations

• Collaboration services
  – Managing access grids

• Data management and knowledge management
  – File services, e.g. with Storage Request Broker
  – Managing repositories and interoperability between repositories

• Workflow, resource provisioning and accounting
The Problem

• Need for better use of resources
  – Little coordination or interoperability around middleware services currently provided in Australia to the research community

• Need for ongoing services
  – Projects providing middleware services funded as fixed-term research projects
  – What happens to the services when the project ends?

• Need for scalability
  – Services are often a by-product, not a project’s real business
  – What happens when the scale becomes unmanageable?
Examples that illustrate the problem

• MAMS Project (Meta Access Management System)
  – At Macquarie University in Sydney; funded by DEST
  – Main aim is to integrate solutions for distributed access and identity management
  – Assists institutions in implementing Shibboleth
  – Promotes and manages “testbed federation” of identity providers and service providers
  – Funding only runs through end of 2006
  – What happens to testbed federation after 2006?
  – Who will help institutions implement Shibboleth?
Examples that illustrate the problem

- Victorian Partnership for Advanced Computing (VPAC)
  - Operates HPC facility in Melbourne
  - By-product: manages PKI certificates for users, which must be re-issued every 12 months
  - Not interoperable: CA does not interoperate with any other PKI
  - Does not scale:
    - 170 certificates issued per year
    - Could not cope with more than around 400
    - May grow to much more in next few years
    - New users will be less experienced and require more support

- Who will manage access to these resources when scale increases, and how will this be done?
Project approach and timeframe

1) Gather and analyse information (Dec 2006)
   - Needs of research communities for middleware services
   - What services are currently offered in Aus and by whom?
   - Possible models by which sustainable services could be offered
   - Views of domain experts and wider community

2) Prepare draft roadmap (Feb 2007)

3) Disseminate draft roadmap widely and incorporate feedback (Jun 2007)
National initiatives to tie in with

• NCRIS: National Collaborative Research Infrastructure Strategy
  – Coordinates resources for infrastructure to support research

• E-Research Strategic Framework
  – Will coordinate resources for providing people and services to support e-Research
Middleware Forum & CAMP

• Register at www.middleware.edu.au

• Middleware Forum, 21 Aug 2006, Macquarie University
  - Context for middleware, including relevant Government initiatives
  - Middleware activities in Australia, US, UK, European Union
  - Implementing in your institution – benefits, costs, barriers

• Middleware CAMP, 22-23 Aug 2006, Macquarie University
  - Technical focus on middleware for identity and access mgmt
  - What models are available; how to implement