Agenda

1. Identity Mgt tutorials via video conference
2. Update on the MAPS project
3. News on the “AAF”
4. Eduroam user group (Australia)
Middleware

• Connects distributed people to distributed resources

• **People** from research and higher education
  - Identity and access management
  - Collaboration management, virtual organisations

• **Resources** become one large virtual facility
  - Data sets, information repositories
  - Distributed computing resources, instruments
  - Visualisation, simulation, and other software tools
1. Identity Management Tutorials

- AARNet with support from NMI-EDIT (Internet2 and EDUCAUSE) and the APAN Middleware Working Group held three video sessions via its bridging services primer for the APAN community on identity management.

- Regular participants from Australia, New Zealand, Japan

- Tutorial 1 – Business Case for Identity Mgt
  - Mr. Michael Berman, Senior Vice President and Chief Technology Officer of the Art Center College of Design.

- Tutorial 2 – US institution Identity Mgt case studies by
  - Jon Giltner, Director of IT Architecture and Security, University of Colorado.
  - Paul Caskey, Technology Architect, The University of Texas A & M University.

- Tutorial 3 – Australian Middleware activities by
  - Viviani Paz – AusCERT/AAF
  - Neil Witheridge – MAMS/AAF

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Welcome to MAPS

MAPS (Middleware Action Plan and Strategy) is a project to develop a strategic roadmap for middleware activities that will support research and higher education in Australia. Middleware is a set of common software and services designed to connect people to a range of resources in distributed environments. These resources include major research facilities, information and communications technology infrastructure, data repositories, and other resources that support e-research, scholarly communication, and e-learning.

The MAPS project is funded by the Australian Government’s Department of Education, Science and Training (DEST). The funding has been provided through the Systemic Infrastructure Initiative (SII) as part of the Government’s Backing Australia’s Ability - Building Our Future Through Science and Innovation. MAPS is part of the Managed Environment for Research Repository Infrastructure (MERRI) programme of projects.

Middleware News

- Final Middleware roadmap now available.
- Australian Access Federation (AAF) to be implemented from 2007.

MAPS Partners

- The University of Queensland
- Macquarie University
- Monash University
- The Australian National University
- CAUDIT
- CAUL
- AARNET
2. MAPS Project

• **Aim:**
  To develop a strategic roadmap for middleware, which will support the effective targeting of resources towards a coherent, sustainable middleware infrastructure for research and education within Australia.

• **Process:**
  - Wide consultations within Australia and internationally
  - Review of Australian and international middleware activities and service models
  - Early drafts reviewed by Steering Committee
  - Draft roadmap sent to community for wider feedback, May 2007
  - Steering Committee reviewed community feedback, June 2007
2. MAPS Project – Findings so far

**Finding 1:**
Agree and adopt a data standard for identities, ratified by CAUDIT, that supports international interoperability and key use cases.
- auEduPerson Working Group established
- Canvassing Identity Providers on common attributes and schemas
- Profiling eduPerson for Australia – especially affiliation
- Identifying needs for additional attributes through use cases

**Finding 2:**
Define how institutions will need to interface with the AAF and to use this to identify gaps and barriers which institutions face in joining the AAF as identity providers.
- Identity management systems
- Business case
- Consultation, training, implementation assistance
2. MAPS Project – Findings so far

- **Finding 3:** Identify and prioritise services/resources to be integrated into the federation
  - Data sources and repositories
  - Software tools
  - Collaboration environments
  - Instruments and computing resources
  - Publisher resources

- **Finding 4:** Define how resource providers will need to interface with the AAF and use this to identify and address gaps and barriers resource managers face in joining the AAF.
  - Business case
  - Consultation, training, implementation assistance
2. MAPS Project – Findings so far

• **Finding 5:** Continue to participate on existing international federation architecture and policy groups in order to facilitate inter-federation. The AAF should seek participation with other major federations as they form.
  - IGTF
  - ECAM (EU)
  - MACE (US)
  - HEBCA and FBCA (US)

• **Finding 6:** Plan and implement a communications programme for services related to middleware and eResearch software, aimed at both research end-users and eResearch support service providers.
  - What technology environments are available?
  - What advisory, support, and deployment services are available?
2. MAPS Project – Findings so far

• **Finding 7:**
  Develop and maintain a set of reference architectures that institutions can use to deploy an eResearch technology environment to their research communities.
  - Baseline software and services to provide
  - How to interface with national services (AAF, ANDS)
  - How to interface with international services (EGEE, OGF)
  - How to determine network, storage, processing capacity required

• **Finding 8:**
  Middleware development continue to receive funding in line with the priorities set in the NCRIS Investment Plan for Platforms for Collaboration. Other funding programmes should also continue to consider experimental middleware development.
  - Integrated collaboration tool suite
  - Integration of AAF protocols into applications
  - Trial deployment of iRODs
  - Hardening and extension of data transfer services
  - Development of workflow services
  - etc
2. MAPS Project – Findings so far

- **Finding 9:**
  Make provision for a period of support, promotion, and assessment when allocating funds to activities such as extending, integrating, developing, and deploying middleware tools and services.
  - Support for output for period of time (2 years?)
  - Mini-grant programmes to promote take-up
  - Assessment to determine whether to further fund and promote it, or whether a preferred successor is now available
Actions

• Continue good work that has already started
• Build and communicate a set of reference architectures for institutions
• Publish final roadmap
• Consider whether to extend MAPS project to end of 2007 to do reference architecture work.
Welcome

The Australian Access Federation Project will develop and deploy an infrastructure to facilitate trusted electronic communications and collaboration within and between higher education and research institutions both locally and internationally as well as with other organizations, in line with the NCRIS objective of providing researchers with access to an environment necessary to support world-class research. This project builds on the existing DEST funded work in the first phase of the e-Security Framework project (based at the University of Queensland) and the MAM5 (Meta Access Management System project, based at Macquarie University).

The Australian Access Federation Project is sponsored by the Australian Government’s Department of Education, Science and Training (DEST). The funding has been provided through the Systemic Infrastructure Initiative (SII) as part of the Government’s Backing Australia’s Ability - Building Our Future Through Science and Innovation.
3. AAF - Background

- **CAUDIT PKI Pilot Project**
  - Funded by DCTIA/Grangenet
  - Investigated PKI architecture model for HE & Research
  - Deployed pilot infrastructure (CAUDIT PKI Pilot v0.1 (prototype))
  - Authentication

- **MAMS Project**
  - Funded by DEST
  - Development of a meta access management system framework
  - Authentication/Authorization
  - www.melcoe.mq.edu.au/projects/MAMS/

- **eSecurity Framework Project**
  - Development of a common trust infrastructure based on a production PKI that supports the implementation of Shibboleth across the sector.
  - PKI testbed v0.2 (in use)
  - www.esecurity.edu.au
  - wiki.esecurity.edu.au
What is the AAF? (1)
Facilitator for trusted electronic communications and collaboration within and between institutions of higher education and research in Australia and other organizations worldwide.
What is the AAF (2)

- International federation from conception
  - International CAUDIT members (Fiji, PNG, NZ)

- Wide collaboration with international institutions
  - PKI
  - Grid Computing
  - Shibboleth

- 1 Million users
  - Around 60 organisations
  - Schools and VET federation interested in peering with AAF
Trust federation

• Strong concept of trust
  – Builds on CAUDIT’s and AusCERT’s relationship with sector
  – Uses PKI to increase integrity, confidentiality and non-repudiation of information shared.
  – Uses PKI certificates to encrypt the communications between service providers and identity providers implemented using Shibboleth
What is the AAF? (4)

Trust federation

- Transparent operations framework
- Common policy framework for the sector
  - Members agree to abide by a common set of rules, policies and agreements.
  - Resource and Service providers trust the information passed to each other and manage the access rules to their resources
Trust federation

• Infrastructure
  – Enable access to online resources and services for the sector
  – Infrastructure based on two technologies:
    • Shibboleth and Public Key Infrastructure
      – Allow for strong authentication mechanisms
      – Allow for the use of digital signatures and encryption
        » email and electronic documents
      – Allow for server certificates issued through the AAF
      – Allow for federating access management among services within the institution.
What is the AAF? (6)

Trust federation

• Infrastructure
  – AusCERT Root Certificate in vendor’s Trust Lists
    • Simplify the end user experience
  • Signed server certificates issued through the AAF
    • Microsoft, Mozilla, Apple
What will AAF provide?

Federated Authentication, Authorization and Identity Management

- **Simplified access to resources**
  - eLearning, eJournals, library resources etc

- **Simplified access to infrastructure**
  - Research Instruments, modelling and visualisation tools
  - High Performance Computers
  - Compute Grids
  - Collaboration environments and workspaces for virtual teams

- **Simplified access to Data**
  - Data collections
  - Data Grids

- **Simplified exchange of information**
  - Encrypted emails
  - Digital signatures
  - Secure file transfer
  - Secure web browsing
What are the AAF benefits? (1)

For researchers, other staff members, or students at a university or research institutions

- To log in using a single account issued by their own institution
- To access a wide range of resources both internal and external to their institution
What are the AAF benefits? (2)

For Resource providers

• By agreeing to abide by the federation policies and to trust the information passed to each other
  – Concentrate in managing the resource or service and the rules for how they are accessed, rather than managing user accounts or certificates.
What are the AAF benefits? (3)

For Institutions

• Enables their research, academic, and administrative users to access a wide range of resources and to collaborate more easily with colleagues.

• AAF membership can be used as a driver for improving institutional identity management practices.

• Opportunity to use signed server certificates issued through the AAF.

• Enables the use of digital signatures and encryption on email and electronic documents.
  – AusCERT Root CA Certificate in browsers

• Enables federating access management among services within the university.
AAF Project

- Builds on previous projects
  - CAUDIT PKI, eSecurity Framework, MAMS
- Funded by
  - $4.8 M
- Lead Institution: UQ
- Partners
- http://www.aaf.edu.au
- email: aaf@aaf.edu.au
AAF Project Components

Part 1
• The development of overarching governance and policies for the whole Trust Federation
  – these are independent of delivery technologies

Part 2
• The development of specific policies, technical implementation and rollout of PKI for a Trust Federation

Part 3
• The development of specific policies, technical implementation and rollout of Shibboleth for a Trust Federation.
AAF Schedule Overview (1)

- **Phased approach**
  - To enable AAF participation at early stages of deployment

- **Governance**

- **Policies**

- **Technologies**
  - PKI
  - Shibboleth
AAF Timelines

- Phased approach to deploy the federation
  - Release 1 – Core Infrastructure
  - Release 2 – Additional Services Infrastructure

- Production early 2008!

- Join AAF PKI and Shibboleth test bed federation to be ready for AAF

- Early integration of institution’s services using the AAF PKI and Shibboleth test bed federation information and support
  - Installation and configuration guidelines for IdP and SP
  - Certificate Management Systems capability study and evaluation
  - Training and workshops
4. Eduroam user group

- **Current Status**
  - Eduroam in Australia now managed by AARNet
  - Deployment and awareness is low
  - VPN for authenticated access is still an issue
  - Little activity in eduroam-ng
  - Little/no eduroam activity b/t APAN/Europe/US via GWG, activity in separate regions on tech front

- **Plans**
  - Promote eduroam awareness and deployment
  - Create self supporting tech group
  - Inform on general wireless/wireless security issues
  - Engage on eduroam & eduroam-ng issues
4. Eduroam user group

Participation

- Australian Catholic University
- Deakin University
- Charles Darwin University
- Flinders University
- Murdoch University
- RMIT
- Swinburne University
- University of Adelaide
- University of Southern Queensland
- University of Tasmania (to be confirmed)
- FreeRADIUS Rep (to be confirmed)
- RADIATOR Rep (to be confirmed)
4. Eduroam user group

The **aims and objectives** of the group are

- Assist in providing community support
- Assist in information dissemination and best practice.
- Generate awareness and profile for the service.
- Monitor Australian policy and report.
- Track overseas eduroam development work.
4. Eduroam user group

- The **proposed deliverables** will be to:
  - Create a technical information repository via the website, wiki, mail archives,
  - bug list, and compatibility list.
  - Monitor eduroam deployment and use by collecting/reporting information on
    - authentication requests, accounts and support issues.
  - Develop the eduroam profile through marketing material including a business
    - case document, a guide for network managers, some case studies, a flyer and
    - workshops.
  - Write a technical paper on the "VPN" only issue.
  - Review and assess the current service and identify future needs and issues.
  - Review and assess the current national policy on eduroam.
  - Prepare a final report.
Eduroam user group

- Chair and co-chair elected
- Members confirmed – they will report back to local state on work of the group
- First face-to-face meeting in Adelaide – Sept 4
- Priorities, timelines, ownership of work to be agreed
- Interest in observer roles from outside of Australia will be considered at first meeting.

John Stevens (Deakin University) taking about the user group at QUESTNet (July 2007)
Summary 1

- Three IDM tutorials have been organised and run between APAN conferences. We are planning some wireless security tutorials soon.

- The MAPS project has been a good way to engage to discuss and promote middleware, to identify its benefits to R&E, to determine a strategic and operational path forward.

- AAF is logical next step from CAUDIT PKI, MAMS Shibboleth and MAPS projects (as well as many others).

- Eduroam is important but needs collective approach with sector to deploy and raise awareness/use and to resolve key issues.
Summary 2

- Key work (probably in parallel)
  - To continue to educate and inform.
  - To deliver a scalable, secure and user-friendly federation/intra-federation as full production service.
  - To deliver easy to deploy identity mgt system solution
  - To deliver applications/services/content services to demonstrate the value of making access to them easy through the AAF.
  - To keep the needs of the end user in mind and changes to the environment/network to ensure the solution meets today’s/tomorrow’s needs.
And finally....

- **Acknowledgements**
  - IdM speakers in USA/Australia, NMI-EDIT, AAF
  - Patty McMillan – MAPS
  - Viviani Paz & Rodney McDuff – AAF
  - Tanya Ballat/John Stevens – eduroam user group

- **More information...**
  - Visit new look website – www.aarnet.edu.au
  - MAPS – www.middleware.edu.au
  - AAF – www.aaf.edu.au
  - Eduroam – www.eduroam.edu.au
Thank you
Any Questions?