

Joining eduroam

Wireless Roaming for Education
and Research



Joining eduroam

- What is eduroam?
- What does this mean?
- How do I get information on the service?
- What do I need to join?
- Security on eduroam.
- Global Working Group.



What is eduroam?

eduroam allows roving researchers to log-in, with their usual “user name/password”, to wireless networks at participating campuses around Australia and the world and transparently get access to resources at their home institution.



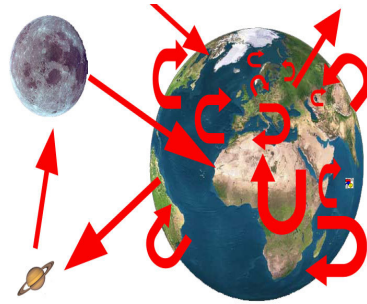
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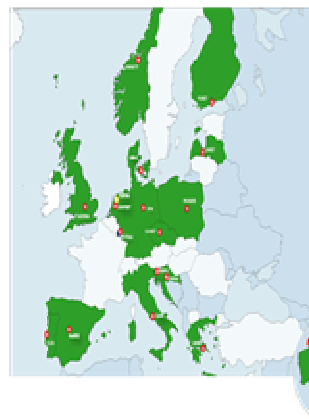
What does that mean?

- Mobility
 - The ability to access your resources at other institutions.
 - Global roaming.
 - Freedom



What does that mean?

- Productivity
 - No down time in cross institutional meetings or research groups.
 - No waiting for temporary accounts



What does that mean?

- Security
 - No reduced security for roaming uses or institutions.
 - Secure access for all meetings, conferences and guests



What does that mean?

- Part of a signal sign on solution.
 - Same username and password when traveling.
 - Reduced helpdesk costs.

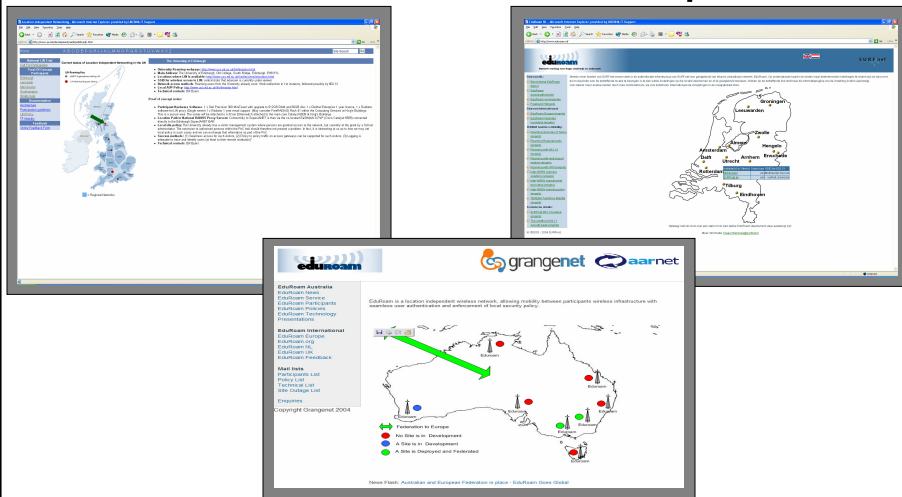


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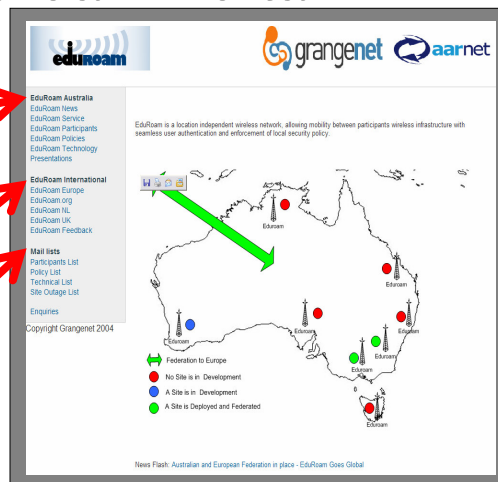
International eduroam portals



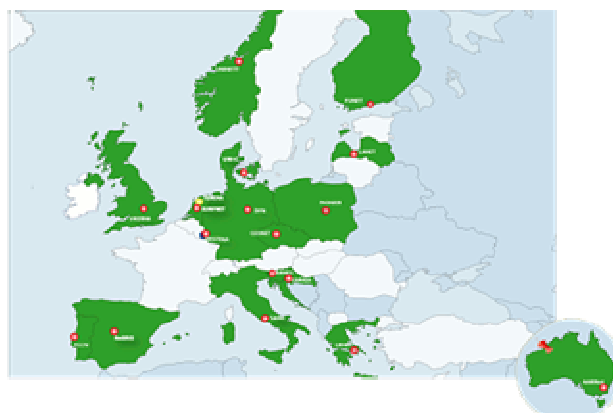
Local eduroam Portal

Elements of a portal

- Local information
 - Services
 - Participants
 - Policies
 - Technology
- International links
 - Information for roaming
- Mail lists
 - How to contact Groups



community



- more than 350 connected sites.



The AU community?

CONNECTED OR COMMITTED TO

Bureau of Meteorology	Melbourne
CSIRO	Perth
CQU	Queensland
JCU	Queensland
Deakin	Melbourne
GrangeNet/APL	Canberra
RMIT	Melbourne
Swinburne	Melbourne
MAMS Project	Sydney

Many others have expressed interest in participating.



Camp Delegates declare YES! to Interest in eduroam trials at The Australian Middleware Camp 2004.



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What do I need to join

- A wireless network
- A radius server
- A hook to your IMS system



Team Requirements

What people are required for eduroam

- The wireless people
 - Basic wireless administration skills.
 - The directory people
 - Average Radius administrative skills.
 - The security people.
 - Average firewall/ACL skills
 - The desktop support.
 - Basic to Average skills
-
- Its not about the technology that's easy.



Team Requirements

What the people require from eduroam

– Trust.

- Policy.
 - Reactive, collaborative, community.
 - Policy.
-
- Its all about the People.



Local Wireless Implementation

802.1x Tools

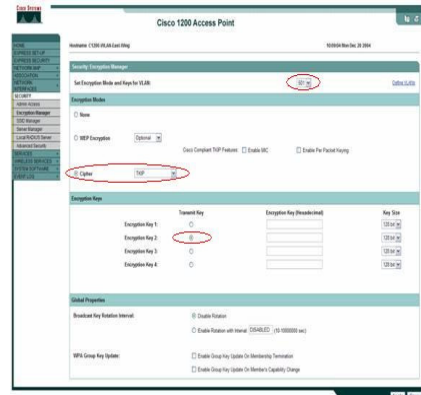
- [SecureW2](#) Alfa & Ariss
SecureW2 for Windows platforms is the cost effective and most robust client solution for deploying 802.1X networks. The SecureW2 Client enables EAP-TTLS using the standard Microsoft IEEE 802.1X Client currently available for Windows 2000, Windows XP and Pocket PC 2003.
- Now open source



Local Wireless Implementation

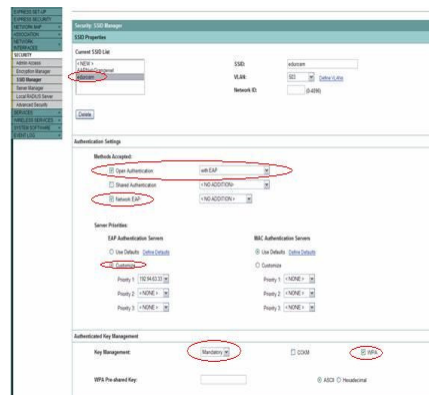
Cisco 1200 Series Access Point setup for eduroam

- Under Security, Encryption Manager.
- Select VLAN in drop down box under Set Encryption Mode and Key for VLAN.
- Select Cipher in Encryption Modes.
- Select TKIP in Cipher drop down box.
- Clear Encryption keys.
- Select Encryption key 2.



Local Wireless Implementation

- Under Security, SSID Manager.
- Select eduroam SSID.
- Under Authentication Settings, Methods Accepted.
- Select open Authentication with EAP in the drop box.
- Select Network EAP.
- Under Authentication Settings, Server Properties.
- Select Customize.
- Under Priority 1 select your RADIUS servers address.



Radius Implementation

- Create a local radius server.
- Connect local radius to IMS system
- Federate to National server.
- Connect radius services to AP's.
- Create test accounts.
- Deploy to Laptops and PDA's
- **Radius Tools**
 - [Free RADIUS](#) - A most excellent free radius server



Radius Implementation

- config for end user to connect to national server
- realm DEFAULT {
 - type = radius
 - authhost = 203.22.212.134:1812
 - accthost = 203.22.212.134:1813
 - secret = XXXXXXXXXXXXX
 - nostrip
- }
- client 203.22.212.134 {
 - shortname = national-au-eduroam1
 - secret = XXXXXXXXXXXXX
- }



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Security

- **Web redirect**
 - Not Secure / Not Scalable
- **VPN walled garden**
 - Secure / Not Scalable
- **802.1x**
 - Secure if Deployed Correctly / Scalable
- **Future Security Deployments**
 - 802.11i



Security

- **Minimum Service levels.**

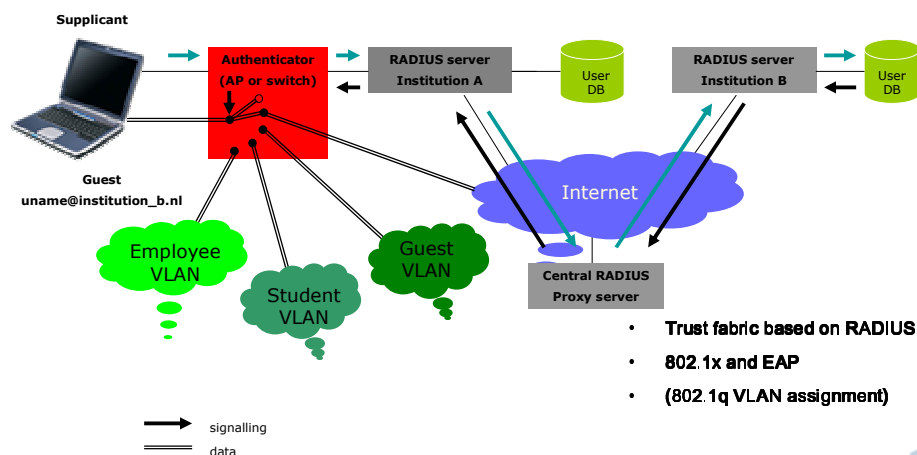
- eduroam SSID broadcasted.
 - (if technically possible on AP).
- 802.1x WPA TKIP EAP-TTLS
- http, https, ssh & VPN pass though permitted.
- Radius Server.
- eduroam portal at site.

Security is locally enforced.

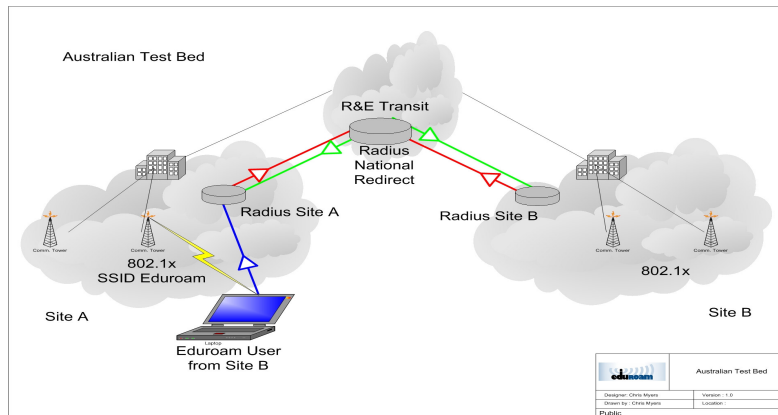
So you are in control of your environment.



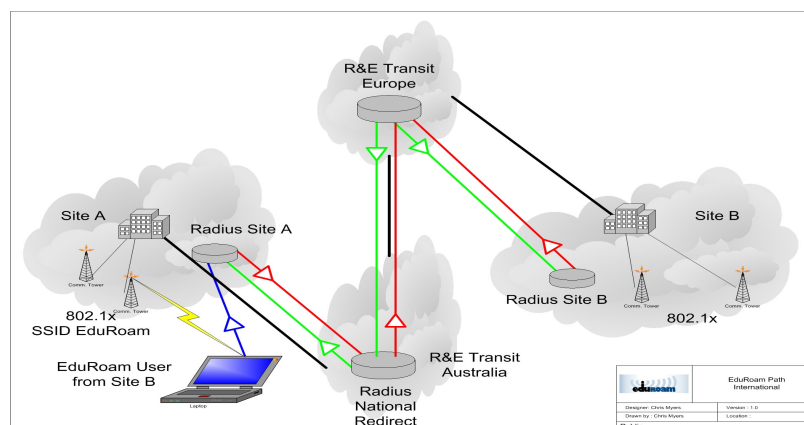
eduroam 802.1x implementation



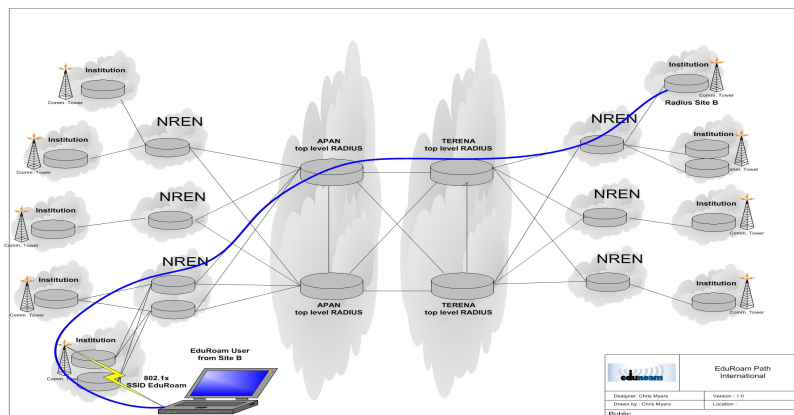
Radius Implementation



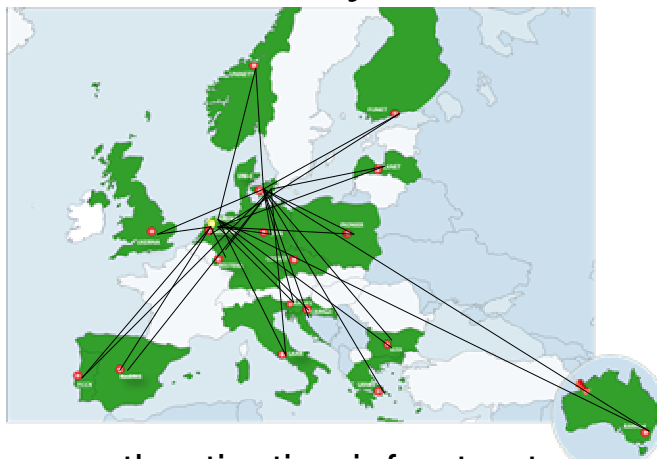
Radius Implementation



Radius Implementation



Security is



- a secure authentication infrastructure



Security

eduroam will be Policy Driven.

James Sankar from AARNet will be driving this Policy area.



Why Policy?

- Foster & Protect Trust
- Ensure minimum standards
- Provide a scalable/manageable solution to deal with abuse, hacking, vulnerability scenarios
- Provide adequate support
- Adhere to higher layer policy frameworks



Why Policy?

- Eduroam works
- More participants are joining up
- Others are waiting for a policy framework covering
 - My obligations as a home site
 - My obligations as a visited site
 - My obligations as an eduroam end user



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Global Working Group

A Global Working Group has been setup.

There is an open email list to share

The first meeting was at EuroCAMP 2005

The second meeting was held after the I2 members meeting.

We have a conference call every 2 weeks .



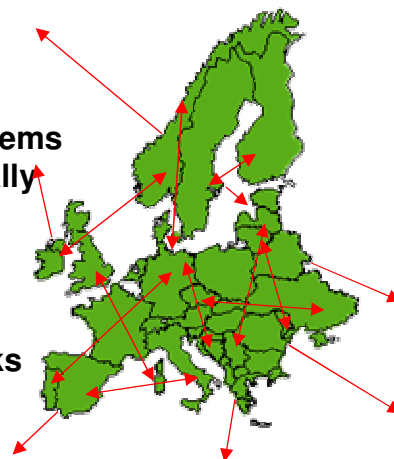
Global Working Group

What are we doing

Working on standards and systems for safe roaming internationally

eduroam NG (next generation)

Peering policies and frameworks



eduroam Links

Eduroam AU Site

<http://www.eduroam.edu.au>

Eduroam Global Working Group

<http://www.eduroam.edu.au/gwg-eduroamu>

Email Enquiries

enquiries@eduroam.edu.au



What's next

ITS UP TO YOU.

PLEASE JOIN



Joining eduroam

Thankyou

Please Join the eduroam

<http://www.eduroam.edu.au>

Acknowledgments

Surfnet, TF Mobility TERENA, UNI-C & AARNet

