BeSTGRID planning began over 3 years ago

Broadband enabled Science and Technology GRID

$2.5million: Sep 2006 – March 2008

www.bestgrid.org
BeSTGRID will enhance e-Research capability in New Zealand by providing the skill base to help the various research disciplines engage with new eResearch services. BeSTGRID will also kick start centralised infrastructure with some capital investment at key institutions.

Demonstrate – lead by example – get “early runs on the board”
- Application focused
- Don’t over-engineer the IT

Avoid the “not invented here” syndrome through routine collaboration and consultation with partners:
- GRID Technology aligned with APAC Grid
- VPAC: Victorian Partnership for Advanced Computing
- Further technology sharing links with PRAGMA, James Cook University, Oxford and UC San Diego, Caltech

Three themes
Data GRID, Computation GRID, Collaboration GRID
BeSTGRID Scope

Federated Collaboration: Disciplines run their own research activity on top of the core infrastructure (incl sensors, visualisation, web services, portals)

Middleware ‘glue’ GRIDS: Collaboration GRID, Data GRID, Computation GRID

Advice & Support: Centre(s) provide core research infrastructure (communication, storage, computation)

Collaboration GRID

- Advanced Video Conferencing
- Access GRID
- EVO (Enabling Virtual Organisations)
- VRE (Virtual Research Environment) - SAKAI

“Low-hanging fruit”
Computation and Data GRID

Bringing site specific HPC Resources to NZ Researchers

BeSTGRID Goal: to streamline access

Connect the resources and transparently present them to the community

To match users and their jobs to the best computational resources for their needs

“Not-so-low-hanging fruit”

Strategic alignment with APAC GRID

APAC Grid – Australian Partnership for Advanced Computing GRID

• BeSTGRID will aim to align technically with APAC GRID (Identity and Access Management, Grid Operations Centre)

• Will facilitate interoperability and possible partnership in future
Federated Identity and Access

- **Australian Access Federation** (related to MAMS)
- **Shibboleth** and **OpenIDP**
  incorporating MediaWiki, Sakai, GridSphere
- **APAC Certificate Authority**

NZ Bio Portal

Implementing **exemplar** localised **research portal**
University of Auckland

Future

**BeSTGRID** is a Pilot, completing in March 2008

Ongoing, our aims are:

- **Knowledge** - Transferring to other NZ Universities, CRIs, Industry
- **Strategies** - Beginnings of a National GRID framework
- **Partnerships**
  - With APAC
  - with PRAGMA and EGEE
  - Establish industrial links
    - NZSC (cluster)
    - Bio industries (Biomatters, Cartesian GRIDspeed etc)
Kiwi Advanced Research and Education Network
Went live Dec 2006
10Gb/s NZ Backbone (“Squished” Ring)
NZ$40million, Government Funding
NZ$5million Capability Build Programme
Linking all 8 New Zealand Universities and all 9
Crown Research Institutes, and National Library
Additionally: ~622Mb/s link to US (and onto Europe)
~133Mb/s link to Australia

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www.karen.net.nz
KAREN and e-Research Capability

• Advanced Network Capability Building Advisory Panel advises REANNZ on capability issues
• Capability Build Fund will allocate NZ$5M over 2006-2009 to travel, events and projects
• Advanced Network Capability Building Roadmap 2007-2009

The KAREN Roadmap

• A national framework for activities needed to foster KAREN uptake and develop NZ eResearch
• Can be adapted by individual organisations for local strategies
• A ‘conversation starter’ for policy and funding agencies

Due for release July 2007: a ‘living document’
Roadmap Overview

Sector

Workforce
Professional development
Postgraduate support
Awards & recognition

Growing advanced network membership
Governance and support structures

Exemplar projects

Technology
Middleware
Real-time collaboration
Data storage and management
Data collection and analysis

eResearch awareness
Funding sources & criteria
Policy agendas

e-Research

Tools and applications
Collaborative projects & professional development

Middleware
Partnerships & federations

Advanced networks
Peering agreements