

**JISC**  
A Universal e-infrastructure for Europe

Joint Information Systems Committee | Supporting education and research

**JISC** Content

- Update on e-infrastructure
- Joining up across research

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E-infrastructure includes:

- Networks (internet, light paths.....)
- Computers (workstations, servers, HPC.....)
- Access controls (security, AAA.....)
- Middleware (metadata.....)
- Finding tools (portals, search engines.....)
- Digital libraries (bibliographic, text, images, sound.....)
- Research data (national and scientific databases, individual data.....)

But little of this is universally available

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**JISC** Network history – log scale

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**JISC** What is GÉANT2?

**A European R&E Networking Model:**

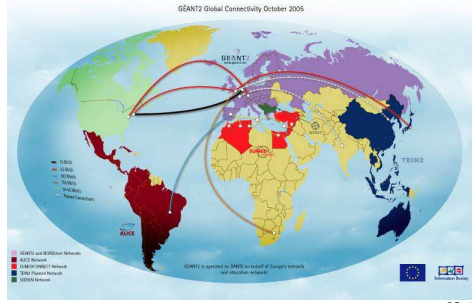
- 7th generation of pan-European research network infrastructure – continuation of a success story
- Project partners include 30 of Europe's national research and education networks (NRENS), DANTE and TERENA
- Will connect 34 European countries and serve over 3500 research and education establishments across Europe
- Over 30 million users
- Provides international connectivity to other world regions
- Funded jointly by NRENS and European Commission
- Project timescale September 2004 - August 2008

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**JISC** GÉANT2 Topology

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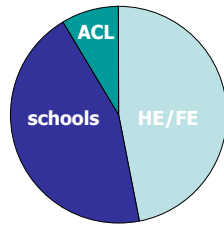


GEANT2 Objectives

- Provide a gigabit-speeds infrastructure to support European research and education
- Deploy the first international **hybrid** network: routed IP traffic combined with switched point-to-point circuits
- Implement end-to-end QoS provision
- Provide a research infrastructure for network technology developments
- Develop a wider range of network services
  - Performance monitoring
  - Security
  - Bandwidth on demand
  - Testbed facility
  - Mobility and roaming

The JANET community

- JANET available to 18M+ users in education
  - primary and secondary schools
  - higher and further education
  - lifelong learning programmes



High Performance Computing

European HPC Service

Partners: FI, F, D, IT, NL, ES, UK

Aim: Petascale performance during FP7

Usage: All of Europe subject to EU funding

Earth System Modelling

Successor to DEISA

Provision: Additional system every 2 years

Scientific case: Workshop 11/05 and 02/06

Authentication/Authorisation

- For education and research (AA not AAA)
- Different drivers (research, admin, libraries, publishers....)
- Technical interoperability (TERENA)
- Peering – no policy yet but aim for a federation of federations
- Outputs of Cotswold meeting
  - Cookbook
  - policy and outreach

Joining Up

Grid community an exemplar of what can be achieved

Other communities	
Joining up	Not Yet
<ul style="list-style-type: none"> <li>■ Libraries</li> <li>■ Teaching</li> </ul>	<ul style="list-style-type: none"> <li>■ Admin</li> </ul>

JISC's Activities

