



Enabling Grids for  
E-science in Europe

[www.eu-egee.org](http://www.eu-egee.org)

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# Network Requirements

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# Introduction

- Network resources are equally as important in the EGEE large-scale Grid
- They are the means to connect the providers of computing storage, instrumentation and application resources with user VOs
- Modelling, provisioning, operating and monitoring of network services
  - Service definition
  - Service implementation
  - Service operation and monitoring

# Network services

- Connectivity
- Guaranteed bandwidth
- Reservation of resources
- QoS
- Authorization-accounting
- Discovery
- Scheduling
- L2 VPN connectivity
- Security, encryption
- Cost of transfer

# Requirements

- **Application requirements**
  - What network requirements do EGEE applications impose?
  - At which time frames?
- **Operational requirements**
  - Which operational requirements does EGEE impose on campus/last mile NOCs, NREN NOCs, GEANT?
  - At which time frames?
- **Middleware requirements**
  - What input is required from the Grid middleware to the network services provisioning brokers?
  - What input is required from the network services provisioning brokers towards the Grid middleware (monitoring, discovery of network connectivity and available services)?
- **Access of EGEE sites to NRENs and the GEANT backbone**

# Documents and deadlines

- Network Resource Provision- Requirements And Use Cases
  - <https://edms.cern.ch/document/476742>
- Application requirements from NA4 and SA1 – M5
- Operations requirements – M5
- Bandwidth allocation and reservation
  - Requirements and use cases analysis – M6
- Network Performance Monitoring
  - Requirements and use cases for end users – M4
  - Requirements and use cases for operations – M4
  - Requirements and use cases for middleware – M6