



# Belgian e-Infrastructures

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# Available Belgian e-Infrastructures

- Belgian Research Network – BELNET
- Computing grid – BEgrid
- At the Flemish level (VSC):
  - Planning a supercomputer
  - HPC inter-university infrastructure in preparation
  - Participation in BEgrid
- At the Walloon level (CÉCI):
  - HPC inter-university infrastructure in preparation



# BELNET

At the national level:

high-bandwidth internet connection and services to Belgian universities, colleges, schools, research centers, and government departments

At the international level:

- providing high-bandwidth connections in the research world:
  - Connected to GÉANT
  - Optical fibres to main European cable crossroads
- providing connection to the commercial Internet



# BELNET services Standard Package (1)

- IP addresses (IPv4 and IPv6)
- DNS services
- Clock synchronisation
- Software archive
- Bandwidth statistics



# BELNET services Standard Package (2)

- BELNET CERT: computer and network security.
- 24/7 Helpdesk: problem solving, around the clock.
- Support and advice: Customer Relations Team as your central point of contact.
- Participation in workshops organised by BELNET



# BELNET extended services

- Interconnectivity service
- Backup connectivity
- IPv6 connectivity
- Multicast
- Domain Name Registration
- Instant Messaging: efficient communication in real time.



# BELNET extended services (2)

- Digital Certificates Service
- Vulnerability Scanner
- Videoconferencing
- eduroam: secure wireless internet.
- E-collaboration Platform
- BEgrid



# BELNET services cost

Not all is for free

- Connection cost depending on organisation and bandwidth
- Line from institution to nearest pop
- Standard services included in connection
- Extra services at cost



## BELNET Services conclusion

- Stable basic service
- More and more additional services

means

the network infrastructure is a well-known,  
reliable e-infrastructure

Moreover: Belgian cultural organisations often  
can make use of BELNET services



# Computing services

More computing power for faster and better research

- BEgrid
- VSC
- CÉCI



# BEgrid

Computing/data grid for research in Belgium

Collection of computers/ storage connected together and managed by a special software

- sharing of resources

- lending resources from elsewhere at times you do not have enough

- making use of special resources

(compare to interlibrary lending, lending between museums)

- sharing of data



## BEgrid (2)

### Resource providers

- Universities
- Research organisations

### Who can use it

- members of participating institutions
- Extended most of the time to others



# BEgrid(3)

## Services

- courses
  - basic use
  - particular use
- help for a first use
- help with a feasibility study



# BEgrid (4)

## Cost

- Still for free, will probably change in the future

## Use for Cultural Heritage organisations

- open to test
- Production use to be discussed



# Vlaams Supercomputer Centre

Infrastructure being built up

- Supercomputer – estimated end 2011
- Inter-university connected HPC systems (under construction)

Access controlled by a “credit” mechanism

Use for Cultural Heritage organisations to be handled case by case



# Consortium des Équipements de Calcul Intensif

Inter-university connected clusters  
project



# Cloud computing

No cloud computing for research available  
BELNET is studying the possibility to offer  
cloud computing services

Contact BELNET if interested



# Data Infrastructure (1)

Needs are high:

amount of data is growing

- long term preservation
- backup
- secured (open) access
- curation



# Data Infrastructures

## ... And more

- Standards and metadata
- Automatic extraction of knowledge
- Protocols for interoperability
- Empowered search engines for complex data
- Advanced repositories architectures
- Rights management
- Use and re-use of content
- Advanced services for collections management
- Multilingualism
- Linked data and persistent identifiers



# Data Infrastructures availability

NONE

but

Digital Cultural Heritage organisations have a  
Data Infrastructure

requirements for more and better and associated services  
are known

BELNET is looking if its customers are interested  
in storage and Data Infrastructure services.



Thank you for your attention