



# The EDG Testbed Deployment Details



The European DataGrid Project Team (UFFICIALI)

<http://www.eu-datagrid.org>

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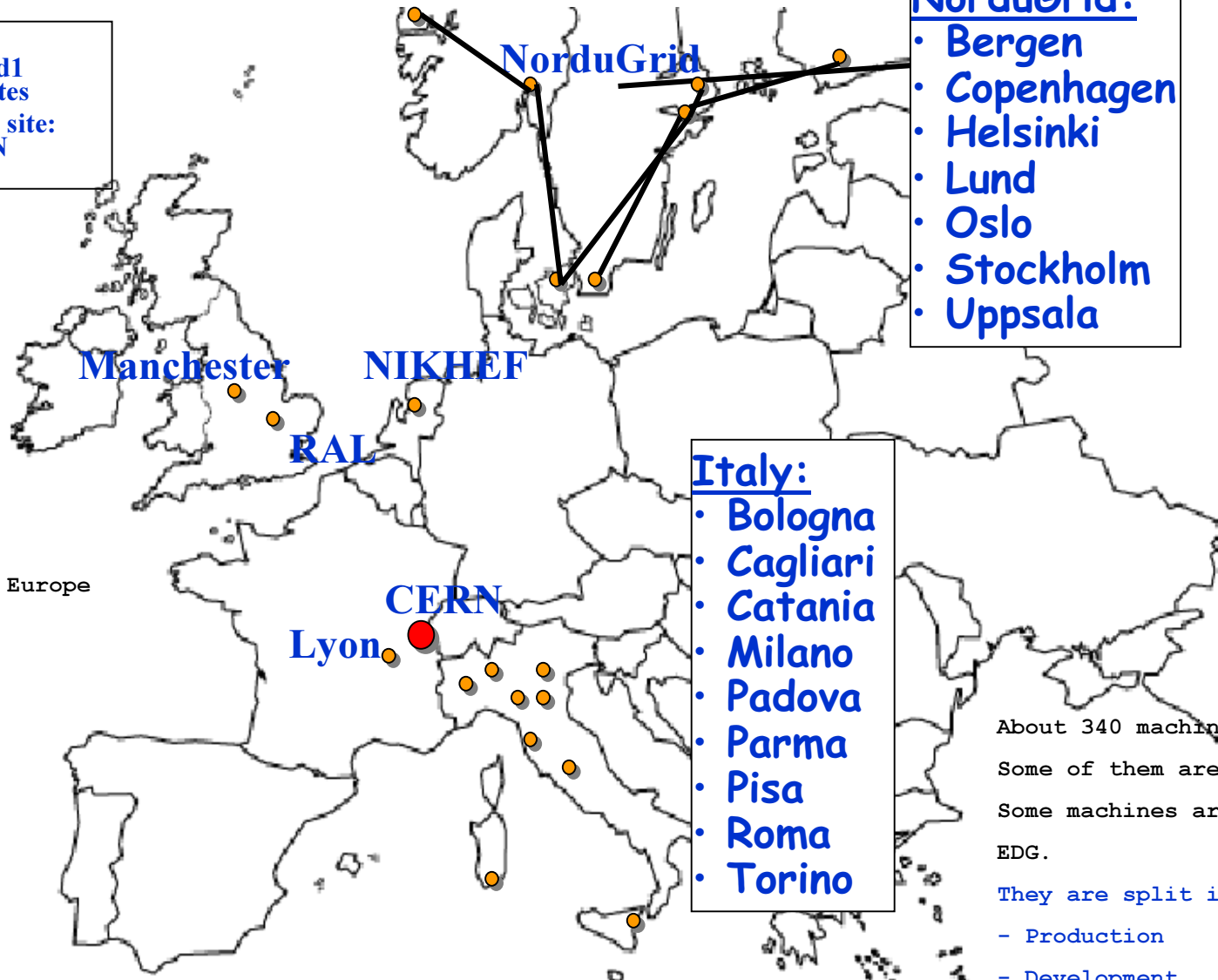
# Contents

- ◆ Current EDG Testbed
- ◆ EDG Logical Machine Type
- ◆ Hardware Components of an EDG Testbed



# Current EDG Testbed

- Testbed1 EDG sites
- Reference site: CERN



- NorduGrid:
- Bergen
  - Copenhagen
  - Helsinki
  - Lund
  - Oslo
  - Stockholm
  - Uppsala

NorduGrid is as a Grid infrastructure in the Nordic countries

- Italy:
- Bologna
  - Cagliari
  - Catania
  - Milano
  - Padova
  - Parma
  - Pisa
  - Roma
  - Torino

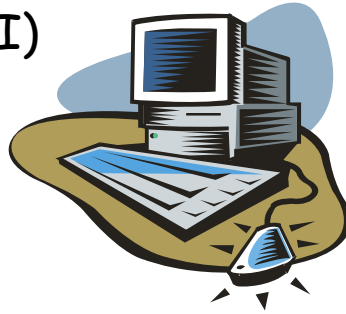
About 340 machines are available. Some of them are dual processor. Some machines are only used for EDG.

- They are split into:
- Production
  - Development

21 sites  
8 sites are in Europe

# EDG Logical Machine Types

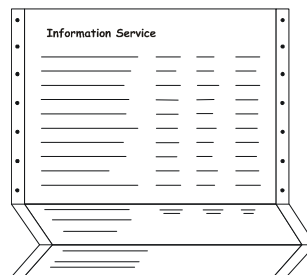
## 1. User Interface (UI)



## 2. Resource Broker (RB)

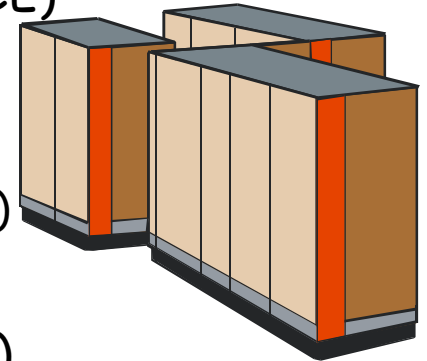


## 3. Information Service (IS)

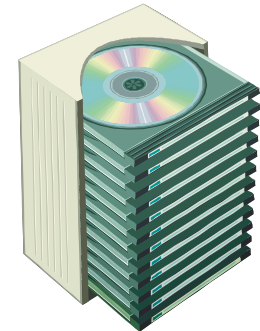


## 4. Computing Element (CE)

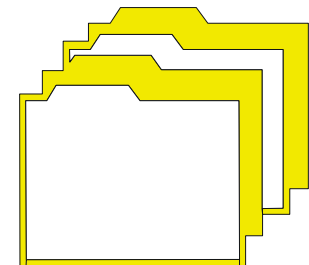
- Gatekeeper (Front-end Node)
- Worker Nodes (WN)



## 5. Storage Element (SE)

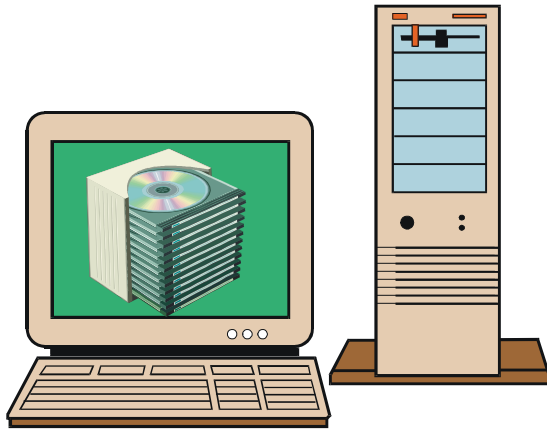


## 6. Replica Catalog (RC)

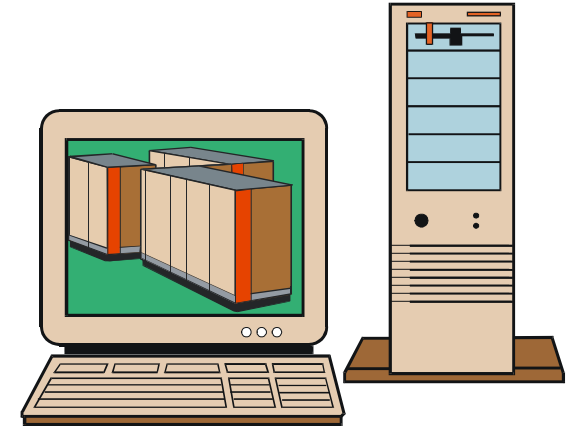




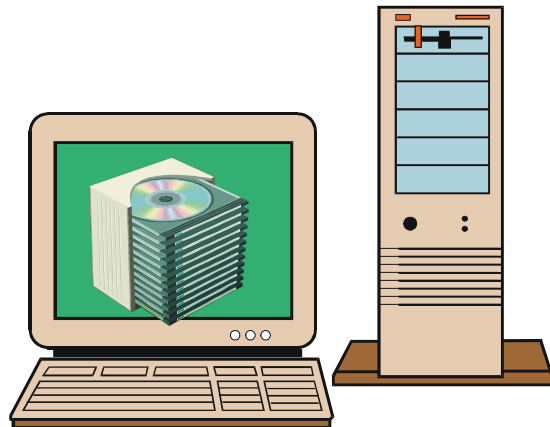
# A simple Testbed Site Configuration



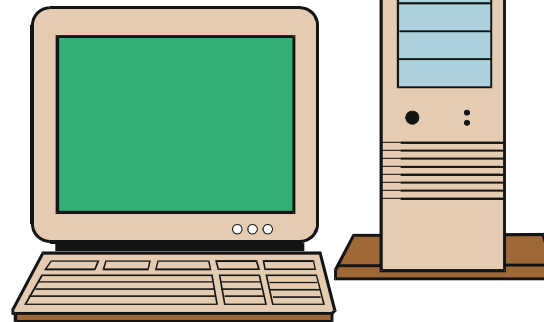
Storage Element 1



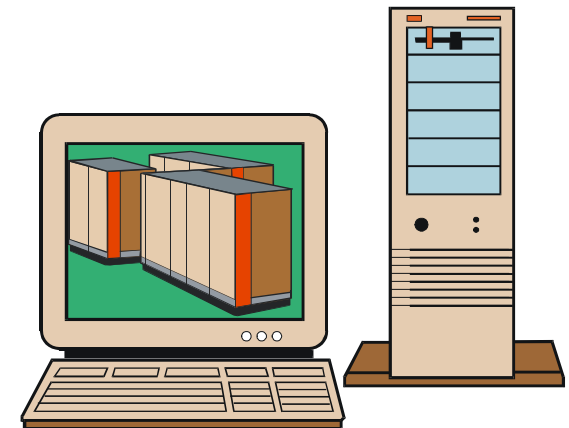
Computing Element 1



Storage Element 2



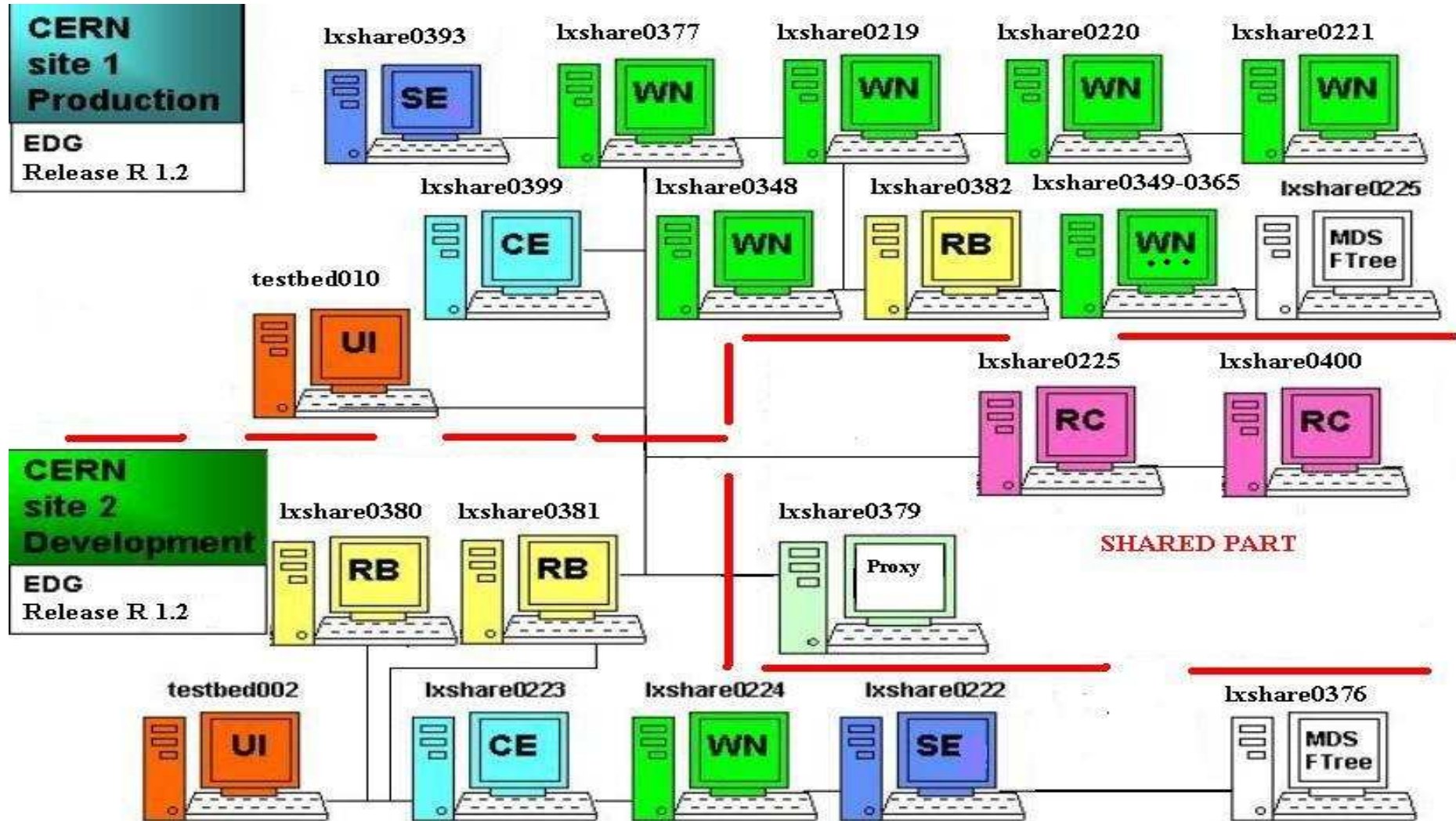
User Interface  
Resource Broker  
Replica Catalog  
Information Service



Computing Element 2



# Example CERN Testbed Structure





# Services per Machine Type

| Deamon                | UI | IS | CE<br>(frontend) | WN | SE | RC | RB |
|-----------------------|----|----|------------------|----|----|----|----|
| Globus Gatekeeper     | -  | -  | ✓                | -  | -  | -  | -  |
| Replica Catalog       | -  | -  | -                | -  | -  | ✓  | -  |
| GSI-enabled FTPd      | -  | -  | ✓                | -  | ✓  | -  | ✓  |
| Globus MDS            | -  | ✓  | ✓                | -  | ✓  | -  | -  |
| Info-MDS              | -  | ✓  | ✓                | -  | ✓  | -  | -  |
| Resource Broker       | -  | -  | -                | -  | -  | -  | ✓  |
| Job Submission        | -  | -  | -                | -  | -  | -  | ✓  |
| Information Index     | -  | -  | -                | -  | -  | -  | ✓  |
| Logging & Bookkeeping | -  | -  | -                | -  | -  | -  | ✓  |
| Local Logger          | -  | -  | ✓                | -  | ✓  | -  | ✓  |
| CRL Update            | -  | -  | ✓                | -  | ✓  | -  | ✓  |
| Grid mapfile Update   | -  | -  | ✓                | -  | ✓  | -  | ✓  |
| RFIO                  | -  | -  | -                | -  | ✓  | -  | -  |
| GDMP                  | -  | -  | -                | -  | ✓  | -  | -  |



# Example IS Content

Site: NIKHEF

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## CE [tbn09.nikhef.nl:2119/jobmanager-pbs-qlong](#):

- PBS queue "qlong" with 96 hours time limit
- Software installed: ATLAS-3.2.1 ALICE-3.07.01 LHCb-1.1.1 IDL-5.4 NIKHEF DOMCC-0.1-4
- There are 0 jobs running and 0 waiting, with 24 CPUs free

Close SE [tbn03.nikhef.nl](#) with mount point /flatfiles

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## CE [tbn09.nikhef.nl:2119/jobmanager-pbs-qshort](#):

- PBS queue "qshort" with 240 minutes time limit
- Software installed: ATLAS-3.2.1 ALICE-3.07.01 LHCb-1.1.1 IDL-5.4 NIKHEF DOMCC-0.1-4
- There are 0 jobs running and 0 waiting, with 24 CPUs free

Close SE [tbn03.nikhef.nl](#) with mount point /flatfiles

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## SE [tbn03.nikhef.nl](#) close to 2 CEs:

- [tbn09.nikhef.nl:2119/jobmanager-pbs-qshort](#)
- [tbn09.nikhef.nl:2119/jobmanager-pbs-qlong](#)
- VOs supported: alice, atlas, lhcb, biomedical, earthob, iteam (wpsix)
- gridftp on port 2811
- rfio on port 3147
- file
- 29216 Mb of free space





# Outlook

- ◆ EDG Testbed 1.x contains basic services



# Further Information

- ◆ EDG Testbed homepage:

<http://marianne.in2p3.fr>