Status of the Bonn Grid Cluster

Martin Killenberg
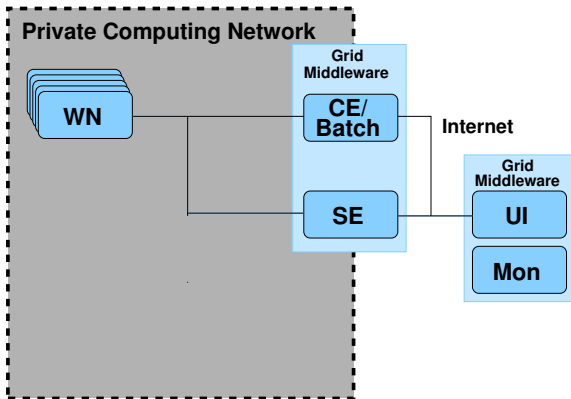
Klaus Desch, Simon K. Nderitu, Peter Wienemann, Robert Zimmermann

universität**bonn**

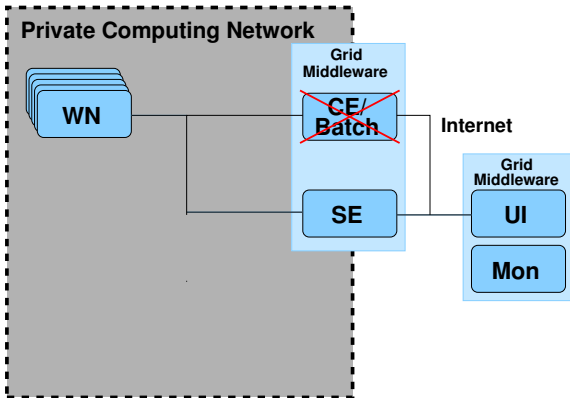EUDET Annual Meeting
Amsterdam, 6. Oct. 2008
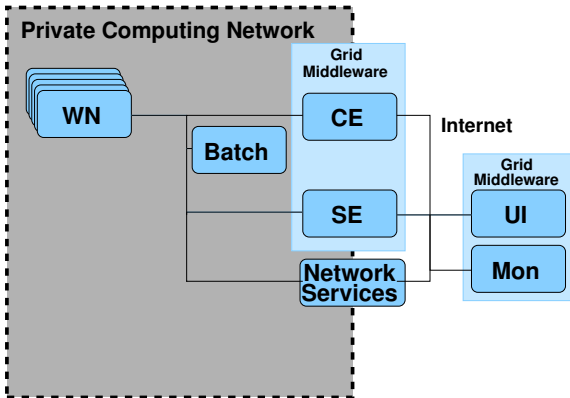
Setup in Bonn

- WNs in private GBit Network
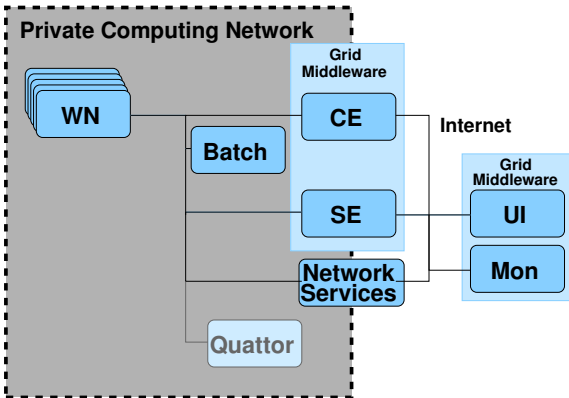
Setup in Bonn

- WNs in private GBit Network
  - Setup did not work for CE + batch on one machine
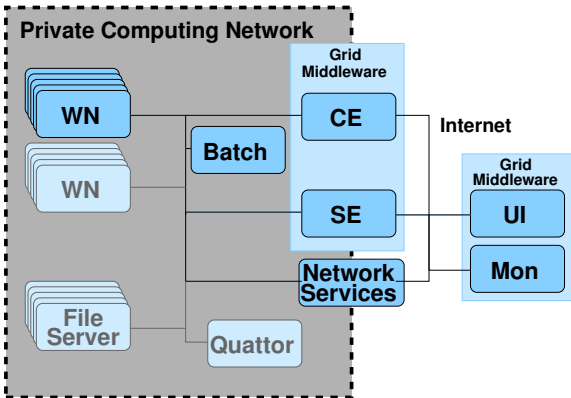
Setup in Bonn

- WNs in private GBit Network
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  - Separate batch computer
  - Network service machine

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Setup in Bonn

- WNs in private GBit Network
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  - Separate batch computer
  - Network service machine
- Quattor for cluster management
- Extend disk space and number of WNs

Existing Grid Resources

Hardware

- 10 Rack-Mounted Computers
  (CE + Batch + 8 WNs)
  - 2 dual-core, 2GB RAM/core,
    Gb/s ethernet, service processor
  - funded by EU
- 1 File Server (SE)
  - ∼3TB as HW RAID 5,
    Gb/s ethernet
  - paid from institute funds
- 3 std. Desktop Computers
  - UI
  - Network Services
  - Monitor Box

Software

Operating System	SL 4.5, 32 bit
Middleware	gLite 3.1
Batch System	Torque/ Maui
Storage Element	dCache

Plans

Software

- Install experiment specific software
  (How to install ILCSoft on the Grid?)
- Middleware is currently installed *semi-manually* (bash scripts)
- ⇒ Improve cluster management by using **Quattor**
- Set up a site monitoring using **NAGIOS** and **GANGLIA** monitoring tools

Additional Hardware

- Ordering process has started for
  - 496 CPU Cores
  - 72 TB Disc Space
- Installed still in 2008
- Will be available for ILC on best effort (to be shared with ATLAS)

New Server Room

- 200 kW cooling power (redundant)
- 10 19"-48U racks currently available for particle physics (more if needed)
- GB-Ethernet to Internet (DFN/XWin)

Hardware has moved, which caused some delays

- Completion of server room was late
- Reconfiguring due to new IP addresses and network infrastructure

Status: Cluster is online!

GStat: UNI-BONN 09:05:33 10/04/08 GMT - @wgoc01

UNI-BONN Status: OK	GOC graphs

GOCDB Configuration information:
status: Uncertified, type: Production
giis url: ldap://grid-ce.physik.uni-bonn.de:2170/Mds-Vo-name=UNI-BONN,o=grid

To test site GIIS:: ldapsearch -x -H ldap://grid-ce.physik.uni-bonn.de:2170 -b Mds-Vo-name=UNI-BONN,o=grid

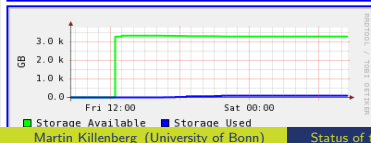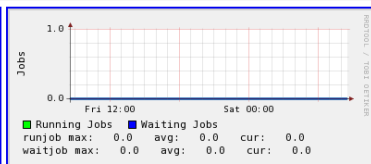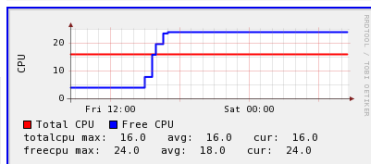| GIIS Sanity Check: ok	alert history ?

Passed

To test site GIIS:: ldapsearch -x -H ldap://grid-ce.physik.uni-bonn.de:2170 -b Mds-Vo-name=UNI-BONN,o=grid

Service Check: ok	alert history ?

Hostname	Monitored	Downtime	GOCDB NodeTypes	BDII ServiceTypes	Missing Services	History
grid-ce	Y	N	APEL,CE,Site-BDII	bdii_site,CE	none missing	alert_history
grid-se	Y	N	SE,SRM	SRM,SRM,SE	none missing	alert_history

CPU

Total CPU Free CPU
totalcpu max: 16.0   avg: 16.0   cur: 16.0
freecpu max: 24.0   avg: 18.0   cur: 24.0

Jobs

Running Jobs Waiting Jobs
runjob max: 0.0   avg: 0.0   cur: 0.0
waitjob max: 0.0   avg: 0.0   cur: 0.0

GB

Storage Available Storage Used

Summary and Outlook

Status

- CE and SE are online
- Site is registered
- Site-BDII and MonBox are running
  http://grid-se.physik.uni-bonn.de:2288/
  http://goc.grid.sinica.edu.tw/gstat/UNI-BONN/
- Site tests are currently being performed

Next Steps

- Get certified as soon as possible
- Install experiment specific software

- Improve cluster management (Quattor)
- Install file server and additional WNs