BY-NCPHEP TIER 3: CURRENT STATUS

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Minsk, Belarus

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Milestones

2008  Site registered in GocDB as **BY-NCPHEP**
2009  Site certified by ROC Russia
2011  Site registered in CMS SiteDB as **T3_BY_NCPHEP**

Facts

Approx. cost of hardware: ~ 20,000 USD
Site set-up: 1 FTE
Site support: 0.5 FTE, 2-3 admins
Jobs: remote CMS user MC, local user ATLAS/CMS MC/analysis
Belarusian National Grid Initiative (NGI-BY)

**Member Sites**

<table>
<thead>
<tr>
<th>Short Name</th>
<th>Official Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BY-BNTU</td>
<td>Belarusian National Technical University</td>
</tr>
<tr>
<td>BY-BSU</td>
<td>Belarusian State University</td>
</tr>
<tr>
<td>BY-JIPNR-SOSNY</td>
<td>Joint Institute for Power and Nuclear Research - Sosny</td>
</tr>
<tr>
<td>BY-NCPHEP</td>
<td>National Scientific and Educational Centre of Particle and High Energy Physics of the Belarusian State University</td>
</tr>
<tr>
<td>BY-UIIP</td>
<td>United Institute of Informatics Problems</td>
</tr>
<tr>
<td>BY-UIIP-TB</td>
<td>NGI_BY testbed provided by United Institute of Informatics Problems</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site</th>
<th>Cores</th>
<th>Storage</th>
<th>Virtual organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>BY-UIIP</td>
<td>84</td>
<td>18 TB</td>
<td>belarus, ncphep, balticgrid, nabics</td>
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<tr>
<td>BY-NCPHEP</td>
<td>36</td>
<td>4 TB</td>
<td>belarus, ncphep, atlas, cms</td>
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<tr>
<td>BY-BNTU</td>
<td>56</td>
<td>1 TB</td>
<td>belarus, ncphep, balticgrid, nabics</td>
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<tr>
<td>BY-JIPNR-SOSNY</td>
<td>24</td>
<td>1 TB</td>
<td>belarus, nuclearby, cms</td>
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</tbody>
</table>
Site configuration: Hardware

- 12 hosts
- 36 cores, 2 GB RAM/core
- 4TB RAID5
- LAN: 1 Gbps
- Internet: 40 Mbps
## Site configuration: Software

<table>
<thead>
<tr>
<th></th>
<th>Scientific Linux 5.7 x86_64</th>
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<tbody>
<tr>
<td>OS</td>
<td>Scientific Linux 5.7 x86_64</td>
</tr>
<tr>
<td>Autoconfiguration</td>
<td>PXE, CFEngine 2</td>
</tr>
<tr>
<td>Shared FS</td>
<td>NFS</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Ganglia, Nagios</td>
</tr>
<tr>
<td>Middleware</td>
<td>EMI-1</td>
</tr>
</tbody>
</table>
Site services

Common
- Cream CE + Torque/Maui
- StoRM SE @ shared FS
- UI, direct job submission
- PROOF cluster
- Squid/Frontier
- CERN AFS

ATLAS
- ATLAS SW
- CVMFS
- ManageTier3SW

CMS
- CMSSW
- Vobox
- PhEDEx
Site availability

Downtime reasons:

- Power outage, especially at weekends
- NGI-BY monitoring problems
- Software upgrades
Plans

- PhEDEx
- Storage upgrade: 50TB, Lustre
- Optical fiber upgrade: 1 Gb/s hardware, 100-200Mb/s Internet
- ATLAS Tier 3 registration
- FTS channels to T1, DDM links
- Low-priority MC production