



IceCube Grid Computing Status

Outline

1. Resources available
Computing Elements, Storage Elements
2. Administration / Installation
3. Software Installation
4. Grid Usage – MC Production

Resources available - Computing Elements

```
[dpieloth@abelard scripts]$ glite-wms-job-list-match -a software.jdl | grep de:  
Connecting to the service https://grid-wms10.desy.de:7443/glite_wms_wmproxy_server  
- grid-ce.physik.rwth-aachen.de:2119/jobmanager-pbs-extralong  
- grid-ce2.physik.rwth-aachen.de:8443/cream-pbs-extralong  
- lcg-ce0.ifh.de:2119/jobmanager-lcgpbs-icecube  
- maigrd-ce1.physik.uni-mainz.de:8443/cream-pbs-icecube  
- maigrd-ce2.physik.uni-mainz.de:8443/cream-pbs-icecube  
- udo-ce01.grid.tu-dortmund.de:8443/cream-pbs-dgiexp  
- udo-ce01.grid.tu-dortmund.de:8443/cream-pbs-dgipar  
- udo-ce01.grid.tu-dortmund.de:8443/cream-pbs-dgiseq  
- lcg-cream.ifh.de:8443/cream-pbs-icecube  
- grid-ce5.desy.de:2119/jobmanager-lcgpbs-desy  
- grid-cr4.desy.de:8443/cream-pbs-desy  
- grid-ce5.physik.uni-wuppertal.de:2119/jobmanager-lcgpbs-dg_long  
- grid-ce5.physik.uni-wuppertal.de:2119/jobmanager-lcgpbs-dg_med  
- grid-ce5.physik.uni-wuppertal.de:2119/jobmanager-lcgpbs-dg_short  
- grid-ce.physik.rwth-aachen.de:2119/jobmanager-pbs-icecube  
- grid-ce2.physik.rwth-aachen.de:8443/cream-pbs-icecube  
- udo-ce03.grid.tu-dortmund.de:8443/cream-pbs-icecube  
[dpieloth@abelard scripts]$ □
```

IceCube VO CE Support at sites in
Aachen, Dortmund, Hamburg, Mainz, Wuppertal, Zeuthen

Resources available - Computing Elements

```

[dpielo@astralabius ~]$ lcg-infosites --vo icecube ce | grep de:
4116      47      218      209      9      grid-ce5.desy.de:2119/jobmanager-lcgpbs-desy
2024      9      799      248      551    grid-ce2.physik.rwth-aachen.de:8443/cream-pbs-icecube
2024      9      799      248      551    grid-ce.physik.rwth-aachen.de:2119/jobmanager-pbs-icecube
132       6      2        0        2      udo-ce01.grid.tu-dortmund.de:8443/cream-pbs-dgipar
132       6      0        0        0      udo-ce01.grid.tu-dortmund.de:8443/cream-pbs-dgiexp
132       6      42       42       0      udo-ce01.grid.tu-dortmund.de:8443/cream-pbs-dgiseq
4116      0      219      192      27     grid-cr4.desy.de:8443/cream-pbs-desy
784       0      2        2        0      lcg-cream.ifh.de:8443/cream-pbs-icecube
784       0      2        2        0      lcg-ce0.ifh.de:2119/jobmanager-lcgpbs-icecube
448       438    10       10       0      maigrid-ce1.physik.uni-mainz.de:8443/cream-pbs-icecube
440       439    0        0        0      maigrid-ce2.physik.uni-mainz.de:8443/cream-pbs-icecube
1840      0      2354     472      1882   udo-ce03.grid.tu-dortmund.de:8443/cream-pbs-icecube
1026      9      124      85       39     grid-ce5.physik.uni-wuppertal.de:2119/jobmanager-lcgpbs-dg_med
1026      9      2238     868      1370   grid-ce5.physik.uni-wuppertal.de:2119/jobmanager-lcgpbs-dg_long
1026      9      2        1        1      grid-ce5.physik.uni-wuppertal.de:2119/jobmanager-lcgpbs-dg_short
[dpielo@astralabius ~]$ █
  
```

all in all ~ 10800 cores
 sharing this with other VOs (atlas, cms, lhcb, magic, etc.)

Resources available - Storage Elements

```
[dpieloth@astralabius ~]$ lcg-infosites --vo icecube se
Avail Space(Kb) Used Space(Kb) Type SEs
-----
5383217218 n.a n.a dcache-se-desy.desy.de
876079677440 1350055690240 n.a srm.unl.edu
876079677440 1350055690240 n.a red-srm1.unl.edu
876079677440 1350055690240 n.a dcache07.unl.edu
154300579840 1031658995712 n.a bsrml.t2.ucsd.edu
14539820042 310029384 n.a grid-srm.physik.rwth-aachen.de
74745244976 63437123704 n.a ff-se.unl.edu
28923130568 9876869432 n.a globe-door.ifh.de
12069316 15087425083 n.a fndcal.fnal.gov
12888888 9093993671 n.a fndcal.fnal.gov
945209 5661365190 n.a fndcal.fnal.gov
945209 5661365190 n.a fndcal.fnal.gov
14024789 20747780010 n.a fndcal.fnal.gov
12769214 15086725185 n.a fndcal.fnal.gov
2831155200 n.a n.a fndcal.fnal.gov
2894195732 5599269867 n.a fndcal.fnal.gov
2894195732 5599269867 n.a fndcal.fnal.gov
13554488 9093328071 n.a fndcal.fnal.gov
1774156885 12381619114 n.a fndcal.fnal.gov
6251954542 12732513937 n.a fndcal.fnal.gov
18998440063 100927500729 n.a osg-se.sprace.org.br
[dpieloth@astralabius ~]$ █
```

IceCube VO SE Support at sites in
Aachen, Hamburg, Wuppertal, Zeuthen (sharing this with other VOs..)

Administration

IceCube VO administration at DESY HH (EGI now)

User-View

Becoming IceCube VO member

Member renewal, retirement

Admin-View

Configurations, Installing VOs on glite

no problems so far..

Software Installation

Photonics only (no additional software needed)
(Photonics, Photorec)

Mirroring /downloads of x2100:
(Simulation software, etc.)

~ 250 GB Space needed within software directory

IceCube grid MC Production full integrated into simulation chain
through IceProd's glite plugin

Grid Usage – MC Production

CPU Time used

(IC40, IC59, mainly corsika)

i3exec runtime 8574d 6h 42m 5s (dataset 5905 so far..)

CEs/SEs are used not really grid like..

(CEs are used in local cluster manner..)

With iceprod 1.3.2, CEs are IC79 MC Production ready

(gridftp Zeuthen <-> German Sites to be evaluated..)

Summary

IceCube VO grid resources are used so far for IC40, IC59 Production
(still limits.. UHE)

With iceprod 1.3.2, CEs are IC79 MC Production ready

gridftp Zeuthen <-> German Sites copy load to be evaluated..

More need for “grid like” usage of resources..

THANKS!