



Installation Accounting Status

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*WLCG Management Board,
CERN 28 October 2008*

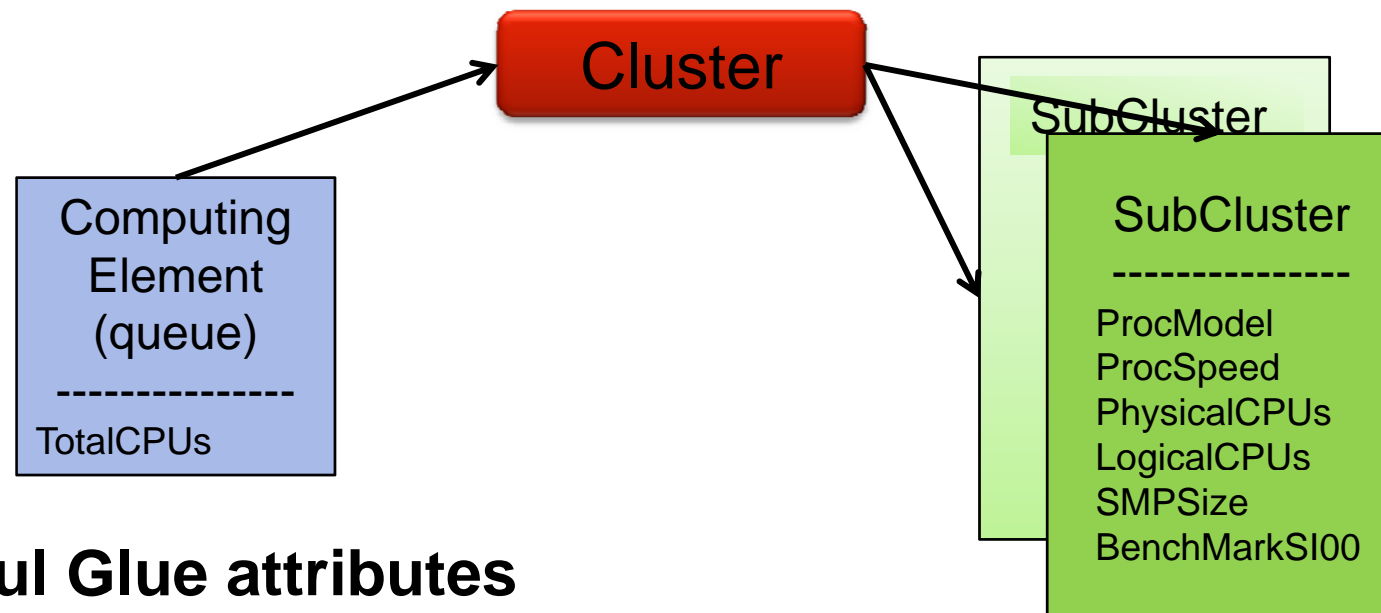
Computing Capacity

■ Initial assumptions:

- The source to calculate provided computing capacity at sites should be the information system.
- The computed capacity should be compared against the declared pledges. Therefore, it should be expressed in KiloSpecInto2000.
- The publishing vector should be the APEL portal: cesga



Computing Capacity



■ Useful Glue attributes

- TotalCPUs = *Total number of assigned Job Slots in the queue*
- PhysicalCPUs = *Total number of real CPUs/physical chips in the subcluster*
- LogicalCPUs = *Total number of core/hyperthreaded CPUs in the subcluster*



$Installed\ Capacity = BenchMarkSI00 * PhysicalCPUs$

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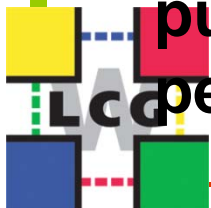
Computing Capacity Issues

- **Published numbers mostly filled by hand by site admins**
 - Better information providers and validation tools can cure the situation
- **SubClusters not homogeneous**
 - Published average should be OK
- **Fairshare not published**
 - Is it OK to publish the total ?
- **Normalized values**
 - If CPU speed is scaled up to some value then also SubCluster's Physical and Logical CPU count must be scaled so that the total power is reflected.
- **Benchmark=KSI00 most problematic to check**
 - Retired as of February 2007
 - Most sites refer to spec.org
 - SPEC.ORG reports CPU power per chip and not per core



Computing Capacity: some results

- **124 WLCG T2 Sites**
 - 13 WLCG T2 Sites not yet in GOCDB
 - 21 WLCG T2 Sites not answering
 - 103 WLCG T2 Sites OK
- **78 WLCG T2 Sites running PBS (and its flavors) - others mostly running condor (sge and Isf)**
- **27 WLCG T2 PBS Sites do not publish Physical CPUs**
- **“pbsnodes -a” and “qmgr -c print server/queue <queue>” used as validation through globus-job-run on the CE**
- **Processor Model/Speed compared with what published by SPEC.ORG to find out correct KSI00 per CPU**



Computing Capacity: some results

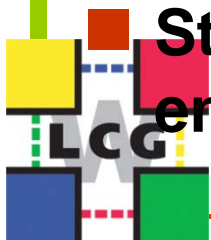
■ Canada-West Federation

- Pledges 2008 = 300KSI00
- Computed Installed capacity= $90 \times 1.5(135) + 64 \times 2.7(172.8) + 420 \times 1.5(630) = 937.8\text{KSI00}$
- **ALBERTA-LCG2**
 - ALBERTA-LCG2 'torque' 1
lcgce01.cpp.ualberta.ca{lcgce01.cpp.ualberta.ca:2119/jobmanager-lcgpbs-atlas{TotalCPUs=115}} 1
lcgce01.cpp.ualberta.ca{ClusterID=lcgce01.cpp.ualberta.ca,ProcModel=Opteron,ProcSpeed=1800,PhysicalCPUs=0,LogicalCPUs=0,SMPSize=2,BenchMarkSI00=1500}
- **SFU-LCG2**
 - SFU-LCG2 'torque' 1 snowpatch-hep.westgrid.ca{snowpatch-hep.westgrid.ca:2119/jobmanager-lcgpbs-atlas{TotalCPUs=256}} 1 snowpatch-hep.westgrid.ca{ClusterID=snowpatch-hep.westgrid.ca,ProcModel=Intel(R) Xeon(R) CPU X5355 2.66GHz,ProcSpeed=2660,PhysicalCPUs=64,LogicalCPUs=1,SMPSize=2,BenchMarkSI00=381}
- **VICTORIA-LCG2**
 - VICTORIA-LCG2 'torque' 1 lcg-ce.rcf.uvic.ca{lcg-ce.rcf.uvic.ca:2119/jobmanager-lcgpbs-general{TotalCPUs=432}} 1 lcg-ce.rcf.uvic.ca{ClusterID=lcg-ce.rcf.uvic.ca,ProcModel=Intel(R) Xeon(TM) CPU 3.20GHz,ProcSpeed=3202,PhysicalCPUs=2,LogicalCPUs=2,SMPSize=2,BenchMarkSI00=976}



Storage Capacity: status update

- **They provide needed info with no sysadmin intervention.**
- **CASTOR information providers deployed at RAL**
 - They pass the validation procedure – minor changes needed
 - Precise schedule needed
- **DPM information providers deployed at a few sites (UK and France)**
 - In certification as a patch release for DPM 1.6.11
- **dCache information providers available with dCache 1.9.2**
 - Some implementation problems. Phone conf scheduled for Thursday, 30 October 2008. OSG invited as well.
- **StoRM information providers will be available at the end of November 2008**



Thank You



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