

## OSG WLCG US Tier-2 Accounting Reports



OSG now locally publishes the information being sent to the WLCG accounting system and compares the results to the WLCG published reports. Our goal is to account for all LHC usage on Tier-2 sites, whether the jobs are submitted through grid interfaces or locally directly to the local batch system. This is not yet complete. We are looking for feedback to see if this report is useful and other information that you would like to see. Below is a summary of the available data; a more thorough ongoing analysis is currently available at [http://t2.unl.edu/gratia/wlcg\\_reporting](http://t2.unl.edu/gratia/wlcg_reporting). For each US ATLAS Tier-2 federation (consisting of multiple sites on the OSG) and each US CMS Tier-2 site, we show the following information:

- 2008 KSI2K Pledge: The size of the resource, as measured in KSI2K.
- Month's Goal of KSI2K-hours: The number of hours in the month times the pledged size of the resource times 60% (the efficiency factor as defined by the WLCG MOU).
- KSI2K-hours for the VO that owns the Tier-2: KSI2K hours are CPU-hours multiplied by the average KSI2K rating of the resource as published by the site. These normalization factors are not completely fixed. They are under active discussion in the WLCG as well as OSG, as the profile of ratings for an LHC application does not necessarily match the profile as published by the standards organizations.
- KSI2K-hours for both ATLAS and CMS (and LHCb and Alice but there are only a few LHCb jobs been run on OSG and no Alice jobs).
- Percentage of the WLCG KSI2K-hours used in the month compared to the goal - that is available given the pledged amount. Percentage is based on the entire month's usage potential given the usability of the pledged size.
- The total number of KSI2K-hours accounted to the site.
- Percentage of the site's total time delivered to non-WLCG VOs on the OSG. This shows the availability of usable resources on OSG at the site unused by the owning VO. There is no indication that we are yet saturating the resources.

The following issues are actively being worked:

- Accurate normalization factors, for example details of reporting of the different CPU types in the US ATLAS MidWest Tier-2.
- The efficiency (CPU-Hours/Wall-Hours) of the applications as measured by the accounting system. In particular, we are looking into the efficiency at the UCSD US CMS Tier-2 which is significantly lower than at other sites.
- Problems in specific reporting probes. There is a probe for each individual batch system that is deployed. In particular the probe for the PBS batch system currently has problems reporting CPU (rather than Wall) Time. This is fixed in the OSG 1.0 deployment which will be released early next week.

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- The change in Cluster/Site name of the US CMS Purdue Tier-2 – Purdue-Steele - remains a current issue. It has required changes in the OSG to WLCG transfer and WLCG reporting system involving several groups. These issues have been resolved and the process to be followed when a site changes its name have been more clearly understood. Since this cluster is part of “Big Ten’s largest campus supercomputer in just <http://www.purdue.edu/UNS/x/2008a/080505McCartneyBuild.html> we have not wanted to dictate the site name.

### US ATLAS T2 Federations

WLCG Accounting Name	2008 KSI2K Pledge	Percent of WLCG goal achieved	Month goal of Normalized CPU hours	Normalized CPU Hours for ATLAS VO	Normalized CPU Hours for all WLCG VOs	Normalized CPU Hours for all VOs on OSG	% of site's time given to non-WLCG VOs
US-AGLT2	965	101%	430,776	436,225	436,225	437,071	0%
US-MWT2	1,112	189%	496,396	940,011	940,011	1,009,571	6%
US-NET2	665	94%	296,856	279,571	279,571	279,605	0%
US-WT2	820	117%	366,048	431,536	431,536	431,536	0%
US-SWT2	1,386	84%	618,710	524,157	524,157	524,331	0%

### CMS T2 Sites

WLCG Accounting Name	2008 KSI2K Pledge	Percent of WLCG goal achieved	Month goal of Normalized CPU hours	Normalized CPU Hours for CMS VO	Normalized CPU Hours for all WLCG VOs	Normalized CPU Hours for all VOs on OSG	% of site's time given to non-WLCG VOs
T2_US_UCSD	1,000	33%	446,400	147,940	147,947	241,707	38%
T2_US_Purdue	1,000	79%	446,400	354,934	354,934	444,819	20%
T2_US_Wisconsin	1,000	123%	446,400	549,209	549,209	549,213	0%
T2_US_Florida	1,000	67%	446,400	301,790	301,809	966,358	68%
T2_US_MIT	1,000	46%	446,400	205,576	205,576	481,063	57%
T2_US_Caltech	1,000	137%	446,400	612,637	612,637	623,751	1%
T2_US_Nebraska	1,000	49%	446,400	222,690	222,692	358,828	37%