



WLCG Resources Reporting

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WLCG Resource Reporting

- Not the same as grid or cloud accounting!
 - But they both have a role to play
- WLCG is supported by MoUs
 - MoUs represent a commitment to support WLCG
- Pledges are a renewal of that commitment
 - And the level of that commitment
- Ensure sufficient resources are in place
 - Report on how those resources were used
- Cloud usage must therefore also be reported
 - Can not be considered production otherwise

WLCG Resource Reporting Task Force

- Mission
 - Ensure cloud resource can be reported
 - And hence be counted towards pledges
- Objectives
 - Gap analysis of current situation
 - Define a plan with a list of actions
 - Follow up on the action list
- Outputs
 - Analysis and proposal document
 - <https://twiki.cern.ch/twiki/pub/ITSDC/WLCGResourceReporting/WLCGResourceReporting-v1.docx>
 - Twiki page 😊
 - <https://twiki.cern.ch/twiki/bin/view/ITSDC/WLCGResourceReporting>
 - Action List
 - Follow-up

Proposal

- Build upon the existing APEL cloud accounting work
 - Publisher extracts the required information from the cloud resource
 - Sends the result to the accounting database
 - Includes a HEP-SPEC-06 normalization factor
 - Should be registered as eu.egi.cloud.accounting in the GOCDB
 - Automated monitoring verifies that records are being published
- EGI Accounting Portal provides an aggregated summary
 - Should be cross-checked with information from the VO
- OSG resources can send accounting summaries from Gratia
 - Similar to how this is done for Grid resources
- So far NorduGrid resources are publishing directly using SSM
- Extend REBUS to include cloud accounting values

Action List

- Analysis and proposal document ✓
 - Publishers available [1] ✓
 - OpenStack ✓
 - OpenNebula ✓
 - Normalization method ✓
 - Example provided [1] ✓
 - WLCG view in the EGI Accounting Portal [1] ✓
 - Extend REBUS to incorporate information from the portal ✗
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- [1] <https://twiki.cern.ch/twiki/bin/view/ITSDC/WLCGResourceReporting>
 - [2] http://accounting.egi.eu/cloud_tier2.php

EGI Accounting Portal –Tier 1

EGI ACCOUNTING PORTAL



GLOBAL View

VO MANAGER View

VO MEMBER View

SITE ADMIN View

USER View

REPORTS

METRICS PORTAL

LINKS

Hierarchical Tree

- Tier1
- Tier2
- Countries
- EMI3
- EGI
- OSG
- UNREGISTERED
- VO_Discipline
- VO_Metrics
- CUSTOM_view
- Cloud
- Cloud Tier1
- Cloud Tier2



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Cloud View --> TIER1 Production

Data to graph:	Sum CPU time	Sum CPU time
Period:	Start year: 2014	Start month: 12
	End year: 2015	End month: 11
Groupings:	Show data for: SITE	as a function of: DATE

Refresh

TIER1 Sum CPU time (seconds) by SITE and DATE.
VOs. December 2014 - November 2015.

The following table shows the distribution of Sum CPU time (seconds) grouped by SITE and DATE.

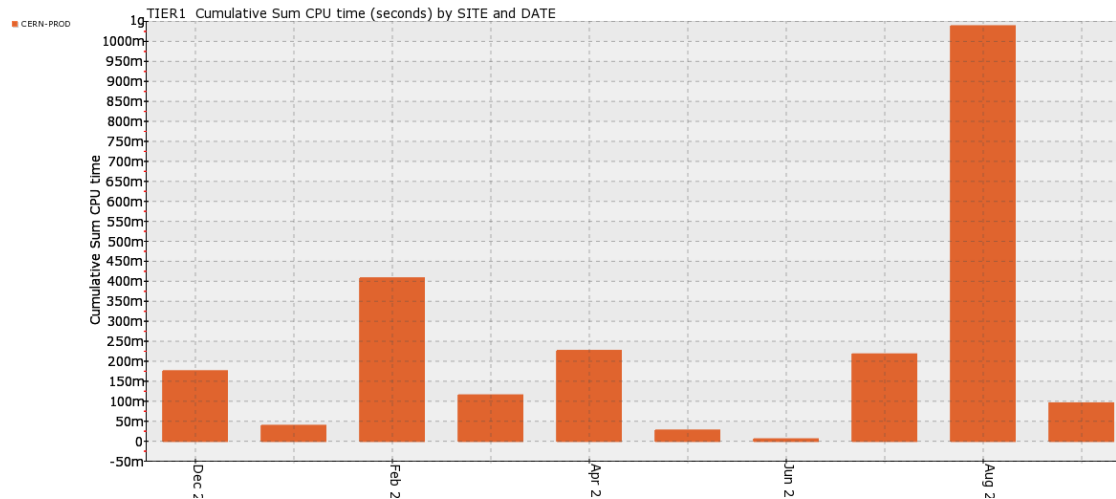
Sum CPU time (seconds) by SITE and DATE												
SITE	Dec 2014	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2015	Sep 2015	Total	%
CERN-PROD	176,475,133	39,876,391	408,813,007	116,044,810	227,303,748	28,114,096	6,124,059	218,532,044	1,039,372,160	96,054,801	2,356,710,849	100.00%
Total	176,475,133	39,876,391	408,813,007	116,044,810	227,303,748	28,114,096	6,124,059	218,532,044	1,039,372,160	96,054,801	2,356,710,849	
Percentage	7.49%	1.69%	17.35%	4.92%	9.64%	1.19%	0.26%	9.27%	44.10%	4.08%		

[Click here for XML encoded data](#)

Chart showing the Cumulative Sum CPU time (seconds) grouped by SITE and DATE.

Developed by CESGA EGI View: / sumcpu / 2014-12-2015-11 / SITE-DATE /

2015-11-03 09:06



EGI Accounting Portal – Tier 2

EGI ACCOUNTING PORTAL



GLOBAL View

VO MANAGER View

VO MEMBER View

SITE ADMIN View

USER View

REPORTS

METRICS PORTAL

LINKS

Hierarchical Tree

- Tier1
- Tier2
- Countries
- EMI3
- EGI
- OSG
- UNREGISTERED
- VO_Discipline
- VO_Metrics
- CUSTOM_view
- Cloud
- Cloud Tier1
- Cloud Tier2



Developed by CESGA

Cloud View --> Production

Data to graph:	Sum CPU time			
Period:	Start year: 2014	Start month: 12	End year: 2015	End month: 11
Groupings:	Show data for: SITE	as a function of: DATE		

Refresh

TIER2 Sum CPU time (seconds) by SITE and DATE.
VOS. December 2014 - November 2015.

The following table shows the distribution of Sum CPU time (seconds) grouped by SITE and DATE.

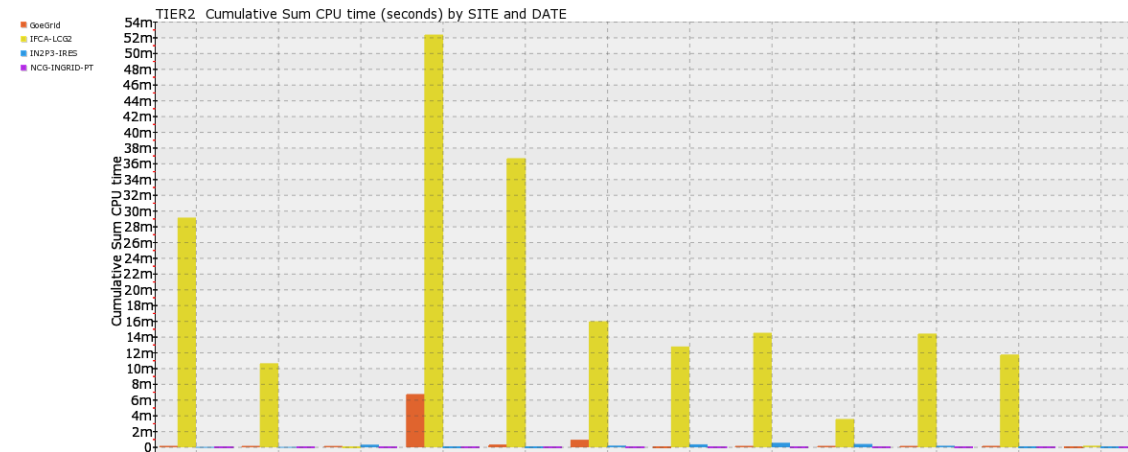
SITE	Sum CPU time (seconds) by SITE and DATE												Total	%
	Dec 2014	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015		
GoeGrid	129,541	126,332	116,318	6,711,062	305,999	907,865	53,063	129,501	128,671	124,511	133,137	8,300	8,874,300	4.19%
IFCA-LCG2	29,108,949	10,617,820	10,882	52,349,730	36,654,708	15,955,025	12,746,574	14,489,129	3,545,697	14,385,512	11,732,372	156,734	201,753,122	94.94%
IN2P3-IRES	0	0	282,457	4,452	6,196	162,153	320,269	524,790	365,912	142,519	18,626	348	1,827,922	0.86%
NCG-INGRID-PT	3,843	5,252	3,426	4,288	3,329	2,979	3,029	9,037	4,198	4,074	4,535	185	48,175	0.02%
Total	29,242,333	10,749,404	413,063	59,069,532	36,970,232	17,028,022	13,122,935	15,152,457	4,044,468	14,656,616	11,888,670	165,567	212,503,519	
Percentage	13.76%	5.06%	0.19%	27.80%	17.40%	8.01%	6.18%	7.13%	1.90%	6.90%	5.59%	0.08%		

[Click here for XML, encoded data](#)

Chart showing the Cumulative Sum CPU time (seconds) grouped by SITE and DATE.

Developed by CESGA EGI View: / sumcpu / 2014-12-2015-11 / SITE-DATE /

2015-11-03 09:06



Future Work

- Identify sites wishing to integrate their private cloud
 - And use it offset against their pledge resources
- Extend REBUS reports to include accounting information
 - From their private cloud
- Recommend that the task force terminates
 - Integrating sites and validation is an operational activity
- Consumer-side accounting
 - See next talk!

Summary

- Analysis and proposal documented
- Building upon the existing APEL work
 - Publishers for OpenStack are available
 - New WLCG view in EGI Accounting Portal
- Some WLCG sites already publishing
- Identify sites wishing to integrate their private cloud
 - Work with them to update their reports
 - And verify the accuracy of the values produced
- Recommend that the task force terminates
 - And moves to a more operational footing



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