



ALICE



Interaction with OSG & WLCG

ALICE-USA Resource Review

Apr 7-8 2014

- ALICE annual computing requirements
 - from ALICE Offline group
 - # events, event size, real/MC processing times & samples, data duplication ...

- Requirements vetted by WLCG
 - Final requirements in WLCG DB
 - 6 months before they take effect

- ALICE-USA Obligations:

- Fraction of total requirements defined by proportion of ALICE-USA/ALICE

Year	FY12	FY13
ALICE Requirements		
CPU (kHEPSPEC06)	336	290
Disk (PB)	22.0	30.3
ALICE-USA Participation		
ALICE Total Ph.D. (Total-CERN)	538	528
ALICE-USA Ph.D.	40	43
ALICE-USA/ALICE (%)	7.4	8.1
ALICE-USA Contributions		
CPU (kHEPSPEC06)	24.9	23.2
Disk (PB)	1.65	2.4

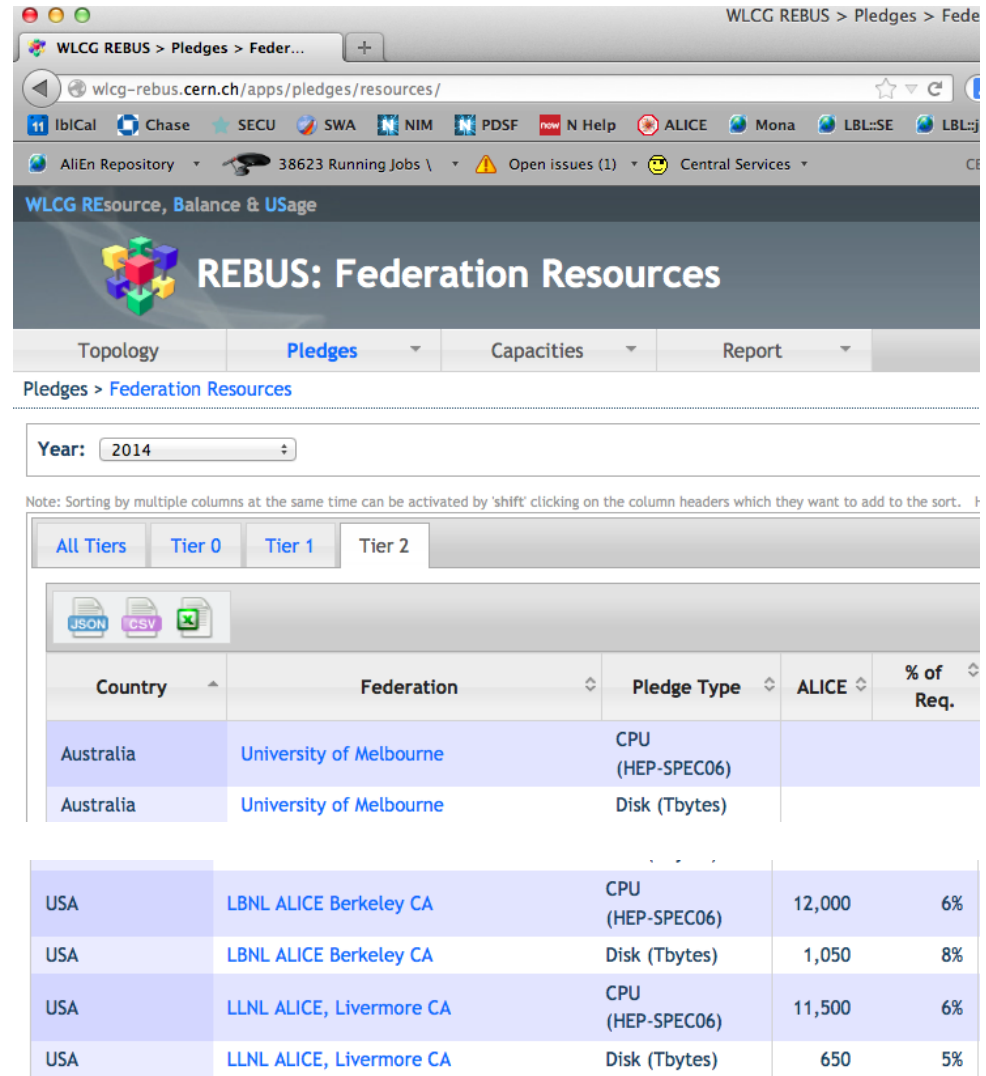
Table 1: Computing requirements from ALICE and planned ALICE-USA contribution.

- RRB Year April – March
- Bi-annual meetings of RRB:
 - April:
 - Review of RRB year just concluded
 - Present vetted experiment requirements for next RRB year
 - October
 - Adjust and finalize experiment requirements for next RRB year
 - Review pledges relative to requirements
- Site pledges
 - Due October for resources to be deployed by upcoming April
 - Placed into RRB database by site representative
 - After deadline, database becomes read only

- **Web Interface**
 - Record of all pledges
 - Can edit during pledge period

- **Signed MoU prerequisite**

- **CPU Pledges**
 - Target for monthly reports



The screenshot shows the 'REBUS: Federation Resources' web interface. The browser address bar is 'wlcg-rebus.cern.ch/apps/pledges/resources/'. The page title is 'WLCG REsource, Balance & USage'. The main heading is 'REBUS: Federation Resources'. Below the heading are tabs for 'Topology', 'Pledges', 'Capacities', and 'Report'. The 'Pledges' tab is selected. The page shows a 'Year: 2014' dropdown menu. A note states: 'Note: Sorting by multiple columns at the same time can be activated by 'shift' clicking on the column headers which they want to add to the sort.' Below the note are tabs for 'All Tiers', 'Tier 0', 'Tier 1', and 'Tier 2'. There are icons for 'JSON', 'CSV', and 'Excel' exports. The main table has columns: 'Country', 'Federation', 'Pledge Type', 'ALICE', and '% of Req.'. The table shows pledges from Australia and the USA.

Country	Federation	Pledge Type	ALICE	% of Req.
Australia	University of Melbourne	CPU (HEP-SPEC06)		
Australia	University of Melbourne	Disk (Tbytes)		
USA	LBNL ALICE Berkeley CA	CPU (HEP-SPEC06)	12,000	6%
USA	LBNL ALICE Berkeley CA	Disk (Tbytes)	1,050	8%
USA	LLNL ALICE, Livermore CA	CPU (HEP-SPEC06)	11,500	6%
USA	LLNL ALICE, Livermore CA	Disk (Tbytes)	650	5%

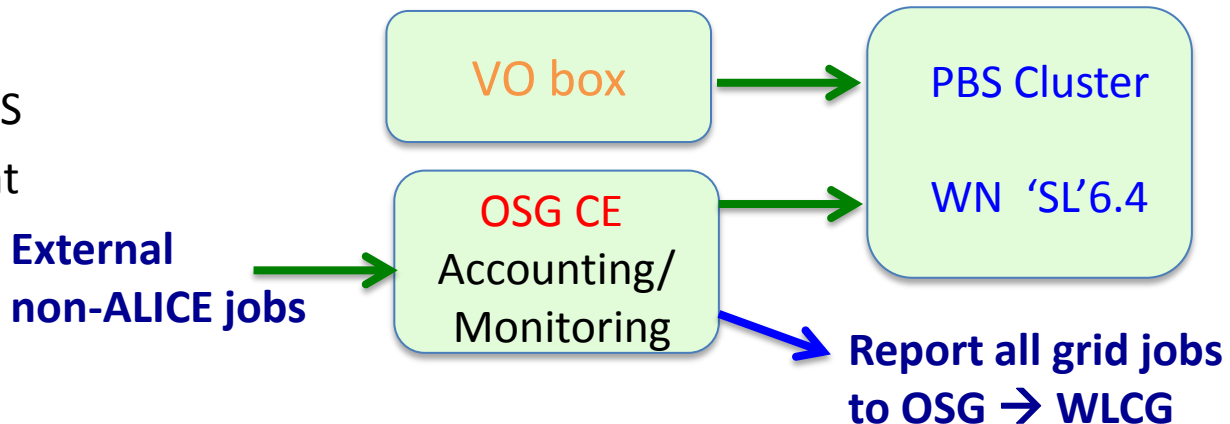


Site Configurations



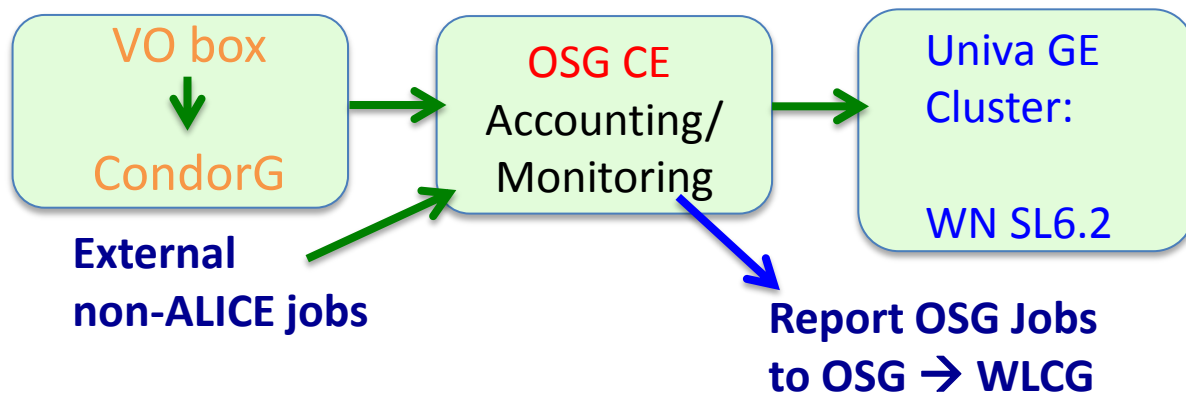
LLNL/LC

- Vobox Submits to PBS
- OSG-CE: independent external interface
- OSG Accounting



LBNL/NERSC/PDSF

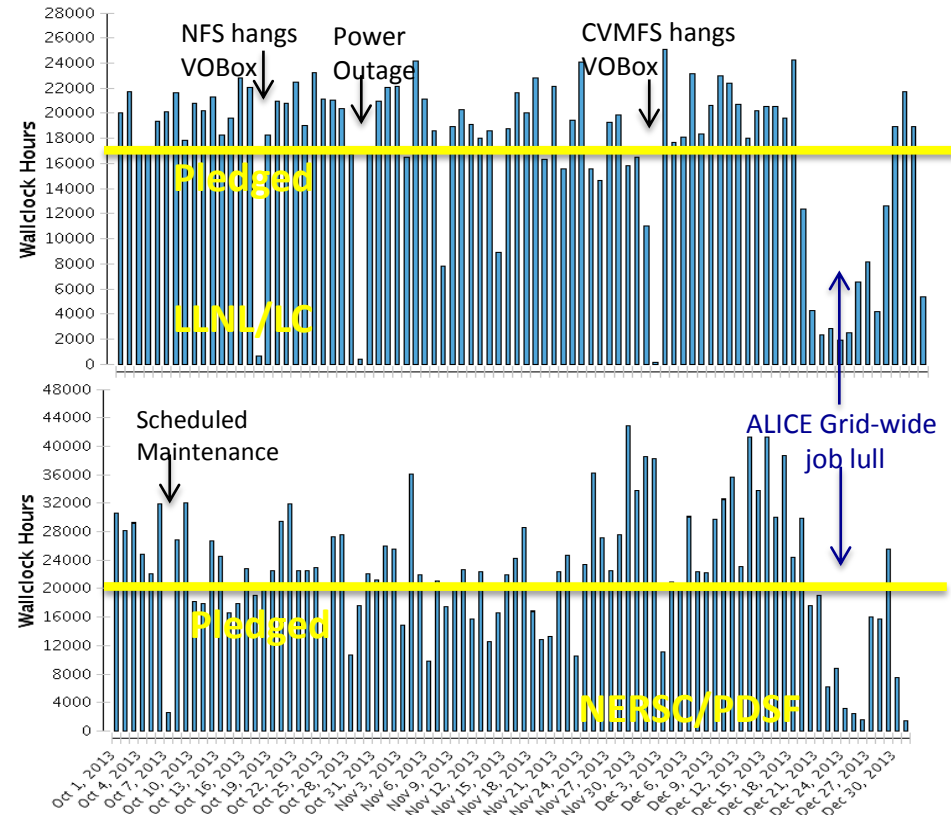
- Submits to CondorG service on VO box
- CondorG submits to OSG-CE at PDSF
- OSG Accounting



- ALICE-USA project leverages OSG capabilities

- OSG Registration Authority
 - ALICE-USA user certificates
 - PDSF & LLNL machine certificates
- Resource reports sent to WLCG
 - ~~Availability and Reliability~~
 - ~~Critical services scans~~
 - Accounting Reports
 - Gratia site service
 - OSG central repository → WLCG

OSG Reports



Q1FY14 Report to DOE Oct 1 – Dec 31, 2013

➤ Funding agency monitors that we are not oversized for our mission



ALICE

OSG Monitoring Services

<http://myosg.grid.iu.edu/>



MyOSG One-Stop location for various OSG information

Sample Pages

Resource Group Summary



RSV Status History



Current RSV Status



BDII Information Browser



Status Map



Gratia Accounting



GIP Validation Results



Availability History



VO Activation Status



VOMS Status



Resource Service Counts



Operations Status



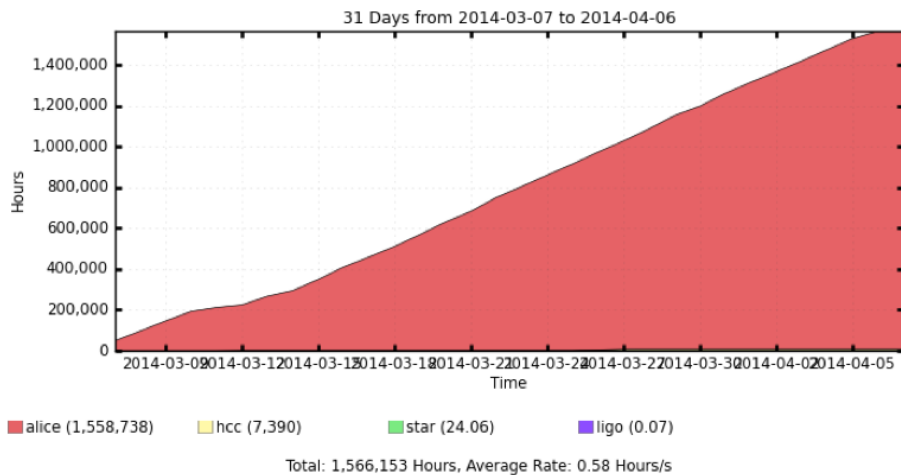


Gratia Accounting Portal



Gratia Accounting Cumulative Wall Hours (by VO)

Show Resources that are used to generate this graph



Update Page

INFORMATION TO DI

Gratia Accounting

Show Accounting Data for:

Cumulative Wall Hours (by

Start Date:

30 Days Ago

End Date:

Now

OAM of the specified date will & end time of the graph.

This page uses GratiaWeb ser (<http://gratiaweb.grid.iu.edu>) You can also use [Gratia Re](#) Fermilab for more detailed gra

RESOURCE GROUPS

- All Resource Groups
- Resource Groups in Facility
- Resource Groups in Sites
- Livermore Computing
- NERSC

Resource Group	NF HS06	VO	Jobs	CPU (hours)	Wall (hours)	Normalized CPU (hours)	Normalized Wall (hours)	Earliest Date	Latest Date	Measurement Date	EGI Accounting Name	Resources / Gratia Sites
LC-glcc	15.68	alice	46449	426358	597324	6685294	9366038	2014-03-01	2014-03-31	2014-04-05 10:17:21	US-LLNL-ALICE	"LC-glcc"
NERSC-PDSF	16.614	alice	193786	633231	918381	10520512	15257985	2014-03-01	2014-03-31	2014-04-05 10:17:21	US-LBNL-ALICE	"NERSC-PDSF"

<http://gr13x6.fnal.gov:8319/gratia-apel/>



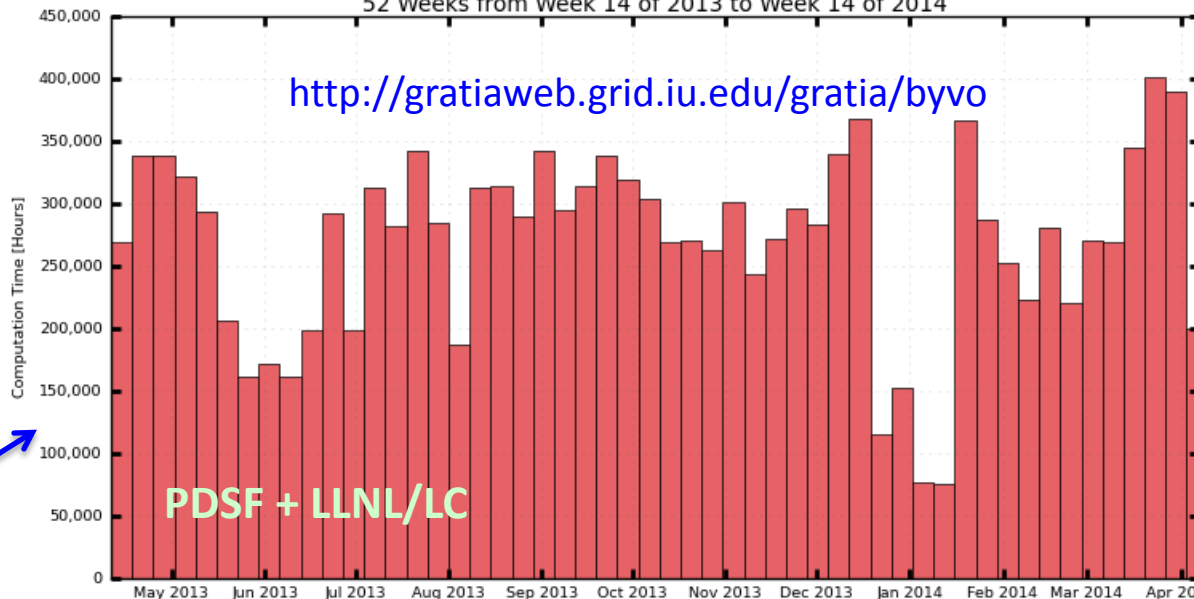
ALICE Sites http://gratiaweb.grid.iu.edu/gratia/wlcg_reporting#gip

WLCG Accounting Name	Installed Capacity Pledge	Installed Capacity Reported	Month goal of Norm CPU hours	Norm CPU hours for all WLCG	Percent of WLCG goal achieved	Norm Wall hours for ALICE	Norm Wall hours for all WLCG	Norm Wall for all VOs	Percent of site's time delivered to non-WLCG VOs
US-LBNL-ALICE	12,000	0	5,981,760	10,520,512	175	15,257,985	15,257,985	15,259,267	0
US-LLNL-ALICE	11,500	0	5,732,520	6,685,294	116	9,366,038	9,366,038	9,366,037	0

1 month

Hours Spent on Jobs By VO

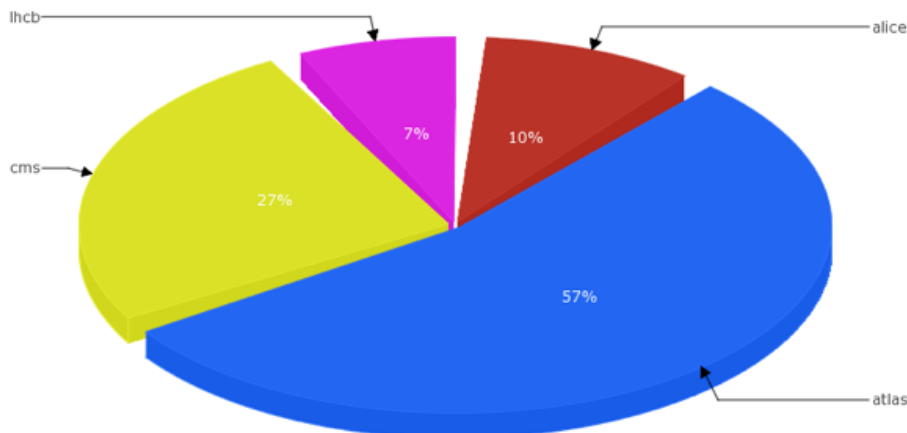
52 Weeks from Week 14 of 2013 to Week 14 of 2014



1 year
33k wall/day
18k jobs/day

- T2 Reports by country
 - Shown: normalized CPU in kSi2k
- VO Report
 - ALICE @ 10% of WLCG

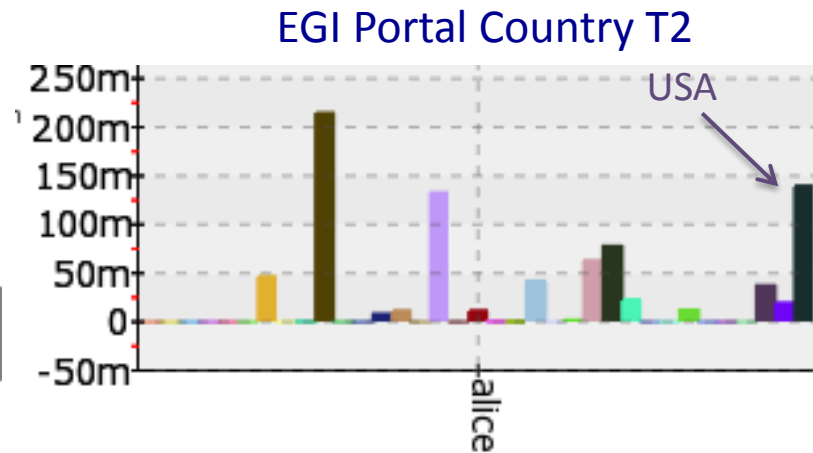
COUNTRY_T2	alice
Australia	0
Austria	0
Belgium	0
Brazil	0
Canada	0
China	0
Czech Republic	12,543,217
Estonia	0
Finland	7
France	55,513,407
Germany	0
Greece	0
Hungary	1,976,327
India	4,095,311
Israel	0
Italy	33,470,588
Japan	0
Latin America	4,069,696
Norway	140
Pakistan	49,096
Poland	9,927,253
Portugal	0
Republic of Korea	487,281
Romania	15,968,166
Russian Federation	21,938,582
Slovak Republic	6,663,927
Slovenia	0
Spain	0
Sweden	2,864,879
Switzerland	0
Taipei	0
Thailand	473,500
Turkey	0
UK	9,938,132
Ukraine	9,168,330
USA	35,675,499
Total	224,823,338



- CPU Utilization eff: CPU/wall
 - LLNL/LC & NERSC/PDSF ~ 65-70% efficiency
 - 70% Allowed by WLCG Accounting for T2



Efficiency factor for Tier-2 sites - utilisation 70% of pledge as specified in TDR



- Utilization relative to pledges
 - LLNL/LC
 - Pledge : 11,500 HS x 24 x 300 x 0.7 (allowed eff.) = 58.0 MHS-hrs
 - Delivered: 51.6 MHS-hrs → **89%**
 - NERSC/PDSF
 - Pledge: 12,900 HS x 24 x 300 x 0.7 = 65.0 MHS-hrs
 - Delivered: = 79.9 MHS-hrs → **123%**
 - Combined
 - Pledge = 123.0 MHS-hrs , Delivered = 131.5 MHS-hrs → **107%**

- RSV Monitors OSG CE for a handful of critical metrics

RSV Status History Between Mar 7, 2014 and Apr 6, 2014



Update Page

INFORMATION TO DIS

RSV Status History

Start Date: 30 Days Ago

End Date: Now

OAM of the specified date will be & end time of the graph.

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WLCG Monthly Report on Availability & Reliability

Federation	Site	Phy-CPU	Log-CPU	HS06	Availability	Reliability	Unknown	Dec 2013	Jan 2014	Feb 2014
US-LBNL-ALICE										
	NERSC-PDSF	N/A	N/A	12900	98 %	98 %	0 %	100 %	97 %	96 %
US-LLNL-ALICE										
	LC-glcc	N/A	N/A	13500	100 %	100 %	0 %	100 %	100 %	100 %

- Future in 2 Steps (ORNL likely only 2nd step):
1. Direct tests from CERN "SAM"
 2. Data taken from ALICE Monitoring - MonaLisa

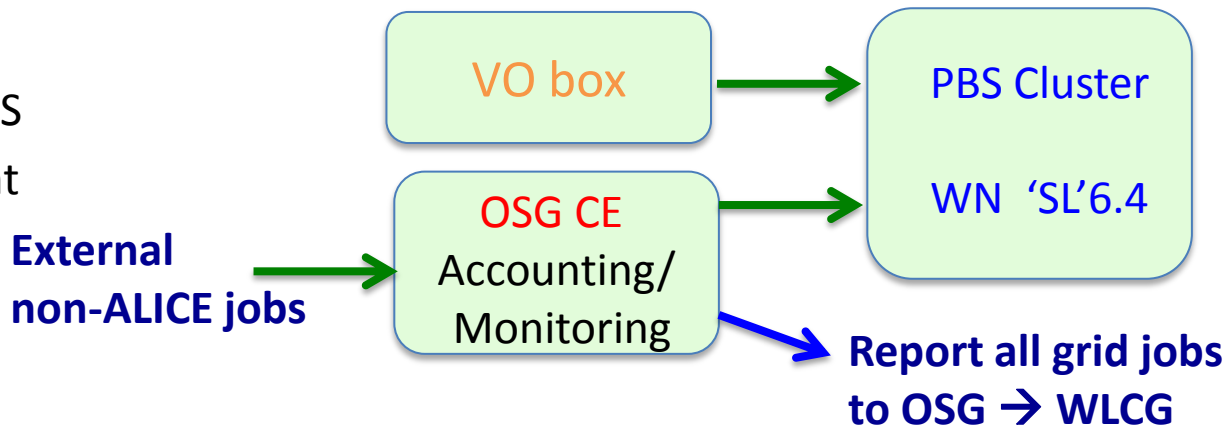


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