

# OSG Production Support

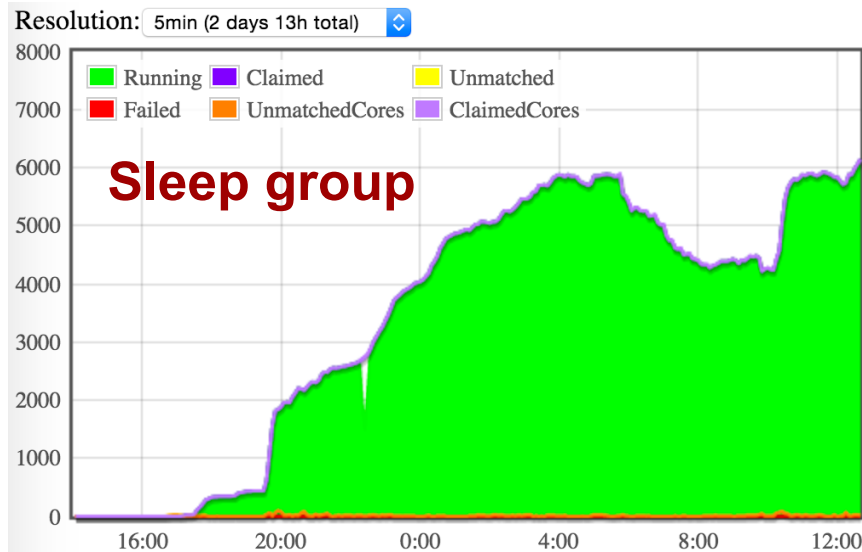
Bo Jayatilaka  
*Fermilab*

OSG Area Coordinators Call  
September 15, 2015

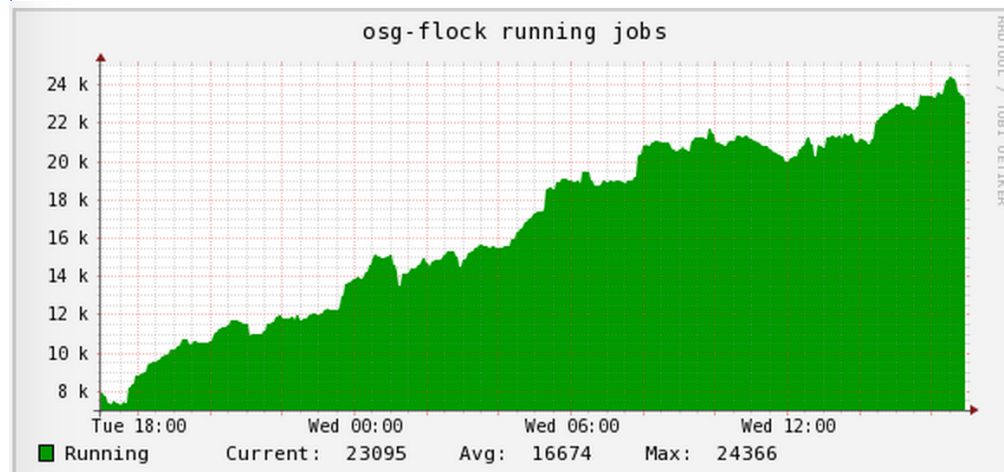


# Goal: opportunistic resources

- *Demonstrate 50k running jobs on OSG VO pool [Nov 2015]*
  - Planning to accomplish this via sleeper pools
  - Currently working on setup of one (UNL) others ready
- Begun setup this week
  - UCSD and Wisconsin pools being used as of this morning
  - Working on debugging problems with UNL pool



## OSG VO Flock

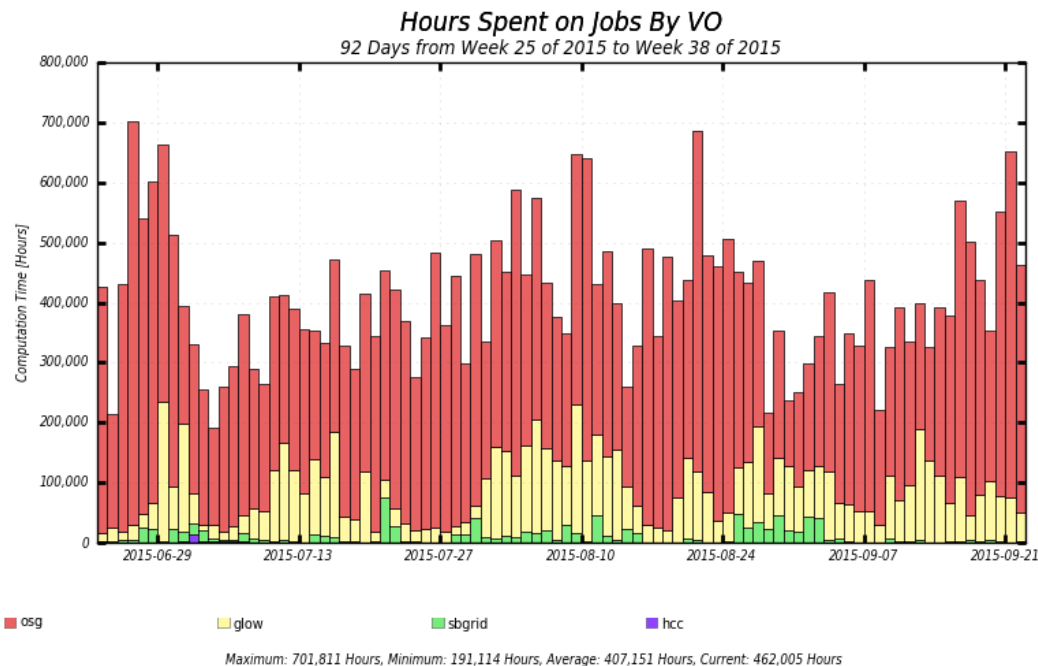
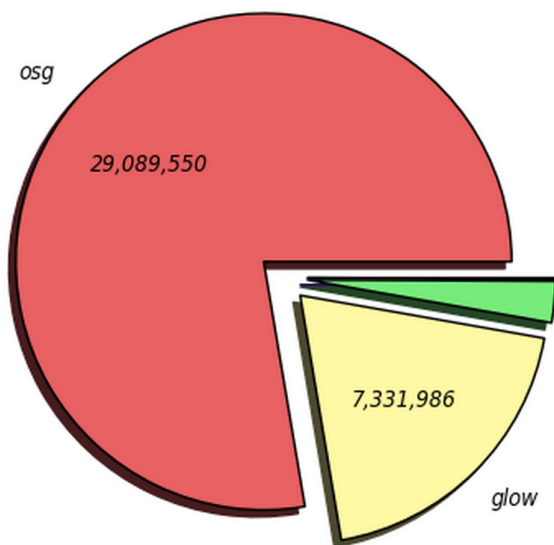




# Goal: opportunistic resources

- Is the OSG opportunistic pool demand-limited?
  - Not in the past ~3 months
- *Deliver at least 150M opportunistic hours in 12 months [Jun 2016]*
  - 37M hours in past 3 months for osg+glow+hcc+sbgrid
  - Another ~10M hours for mu2e

Wall Hours by VO (Sum: 37,457,946 Hours)  
14 Weeks from Week 25 of 2015 to Week 38 of 2015





# Goal: Intensity frontier

---

- *Deliver at least 10M opportunistic compute hours to mu2e [Sep 2015]*
  - **16.4M** opportunistic hours between 4/1 and 8/31 to mu2e
  - Averaging **850K hours/week** since May
- *Enable access of IF experiment data via Stashcache [Sep 2015]*
  - Intend to test NOvA flux file access via Stashcache in the coming weeks
- *Expand use of the OSG by the NOvA experiment to opportunistic sites [Nov 2015]*
  - Only minimal use of opportunistic resources by NOvA so far
  - Meeting with new production coordinator to discuss how we can help enable their use before next campaign (end of 2015)
- *Engage other IF experiments including those outside of FNAL to use the OSG infrastructure and tools [Mar 2016]*
  - In progress



# Goal: LIGO

- 
- *Establishment of submission infrastructure for LIGO at UCSD operated by OSG [Jul 2015]*
  - *Establish the Georgia Tech PACE cluster as an OSG site to accept LIGO jobs submitted by [above] infrastructure [July 2015]*
    - These are complete for pilots and very simple payloads
    - LIGO analysis jobs not yet running (CVMFS-related and other issues being worked out)
  - *Expand LIGO access to resources on HPC sites as well as opportunistic OSG sites [Jan 2016]*
  - LIGO observing run began on 9/18



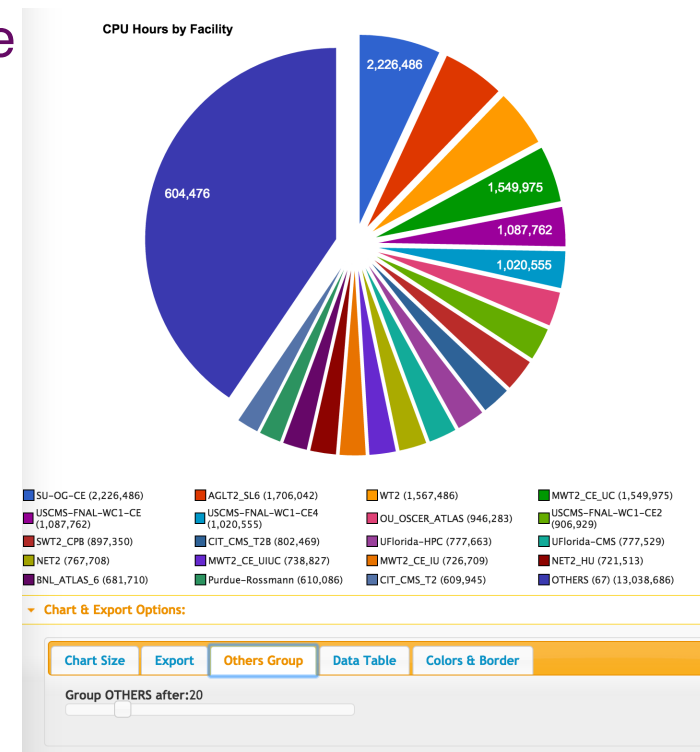
# Goals: Cosmic and HPC

---

- *At-scale testing of opportunistic OSG resources for DES* [Sep 2015]
  - Not happened mainly because of DES memory requirements
  - Investigating multicore and UCSD bigmem queue for this now
- *Enable LSST computing on OSG* [Jan 2016]
- *Enable access to HPC resources via OSG-HPC-CE* [Dec 2015]
  - UCSD OSG staff and SDSC staff working out technical details to implement this on SDSC Comet
  - Two modes of operation envisioned: CE for allocation-based as well as true opportunistic “backfill”



- *Update, streamline, and improve Gratiaweb interface and output, including proper accounting of opportunistic resources and advanced graphing tools [Mar 2016]*
  - Implementing Google Charts-based plots for Gratiaweb
  - Treemaps plot showing efficiency now widely used
  - Prototypes of other types of plots available





# Site integration status

From software team's site issues/support page

Site	Status	Main Contact	Ticket(s)	Last Updated
FIU	We got their CE in front of the NAT accepting and running remote jobs. Mengxing will be submitting a GOC ticket to start accepting test pilots.	Mengxing Cheng	N/A	9/21/15
Georgia Tech	After some troubleshooting with Patty and Dave Dykstra last week, we got CVMFS on the worker nodes working again, which let their users run simple jobs again.	Patty Carey Mehmet Belgin Peter Couvares	<a href="#">GOC</a>	9/21/15
Clemson	Gratia/RSV graphs were having issues but after a reinstall of RSV, it looks like we may be all good here	Xizhou Feng Randy Martin	<a href="#">GOC</a>	9/21/15
Michigan	Having issues with condor_ce_run from a remote host, waiting on response from admin	Bob Ball	<a href="#">GOC</a>	9/21/15
MWT2	Jobs from Fermi are missing the OSG_* env variables	David Lesny	<a href="#">GOC</a>	9/21/15
Texas A&M	SAM tests idling, BrianB suggested setting up a SYSTEM_PERIODIC_REMOVE as a workaround	Katrina Colletti	<a href="#">GOC</a>	9/21/15
Harvard	Having issues installing osg-release, waiting for him to return from leave	Daniel Caunt	<a href="#">GOC</a>	9/22/15

## New site/CE

- NOvA-only sites: SMU new CE running, JINR in progress
- Initial contact: Hawaii, MIT, Wichita State, Wyoming

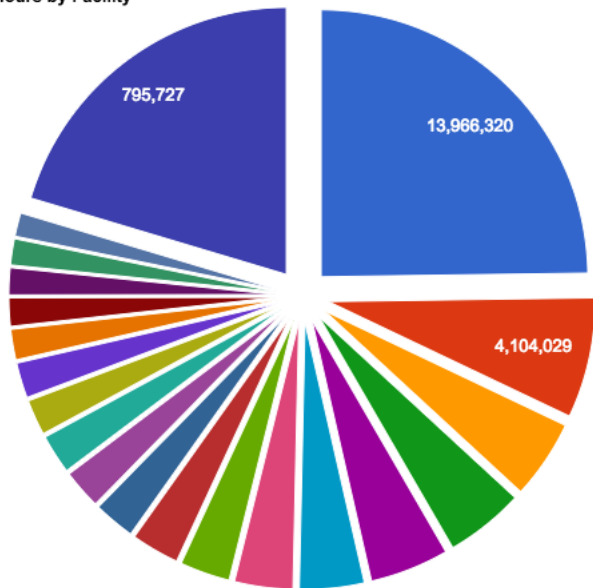




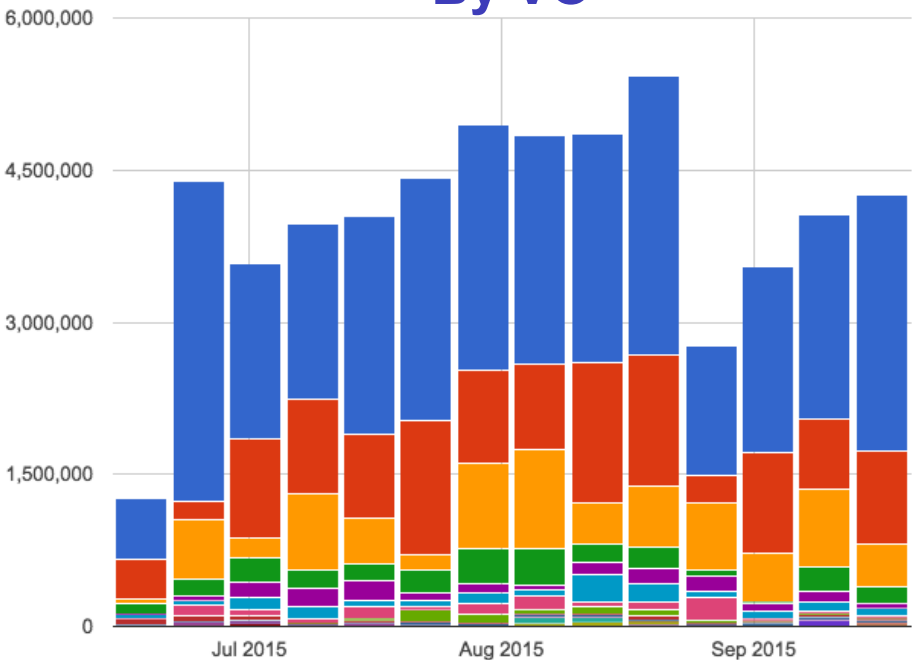
# Opportunistic usage

## By Site

Wall Hours by Facility



## By VO



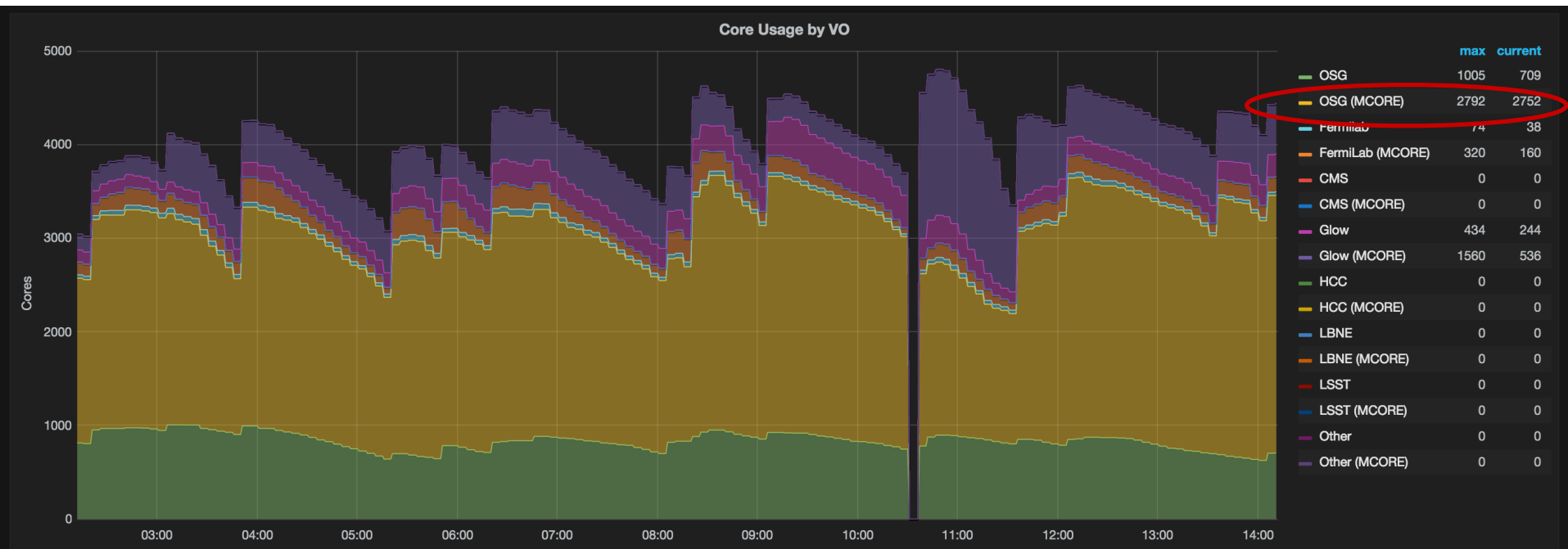
SU-OG-CE (13,966,320)	CIT_CMS_T2B (4,104,029)	USCDS2-D (2,700,238)	Tusker-CE1 (2,700,008)	osg (29,089,551)	mu2e (11,957,917)	glow (7,331,987)	dune (2,631,064)
Purdue-Hadoop-CE (2,697,221)	USCDS2-B (2,209,569)	CIT_CMS_T2 (1,992,934)	red-gateway1 (1,710,753)	cdf (1,470,587)	cms (1,338,651)	sbgrid (1,005,331)	ilc (437,594)
MIT_CMS (1,643,520)	FNAL_GPGRID_3 (1,420,581)	USCMS-FNAL-WC1-CE3 (1,345,889)	UConn-OSG_CE (1,345,059)	nova (314,630)	des (210,963)	atlas (134,003)	alice (117,503)
red-gateway2 (1,213,225)	FNAL_GPGRID_OPP_3 (1,205,729)	BNL_ATLAS_2 (1,039,868)	FNAL_GPGRID_QUOTA_3 (964,858)	UCSD (109,730)	seaqwest (60,502)	nees (36,082)	hcc (29,302)
SMU_HPC (921,477)	FNAL_GPGRID_2 (892,891)	UFlorida-CMS (803,393)	OTHERS (48) (11,488,976)	OSG-Connect (17,487)	fermilab (15,815)	numix (10,569)	OTHERS (25) (47,285)

- Past 3 months. All VOs
- **52M** hours (subtract DUNE and CDF from plots)



# Multicore

- Understanding what multicore resources are available on the OSG
- Currently OSG VO does this via a separate group
  - Running at Nebraska and Hyak
- Expanding onto other sites (e.g. ATLAS/CMS T2 sites)
- Starting with MWT2 this week



# Other ongoing/areas of concern

---

- Accounting accuracies involving [login01.osgconnect.net](http://login01.osgconnect.net)
  - Actual sites running CPU not getting credit in record
- Support-related issues for Bestman?
  - PNNL ticket <https://ticket.grid.iu.edu/25276>
- Areas of concern
  - Cosmic (DES) not showing progress
  - LIGO effort behind schedule but making progress
  - Site integration process continues to be slow