



Open Science Grid

# OSG-XD Usage Update

OSG Council Meeting

July 15, 2014

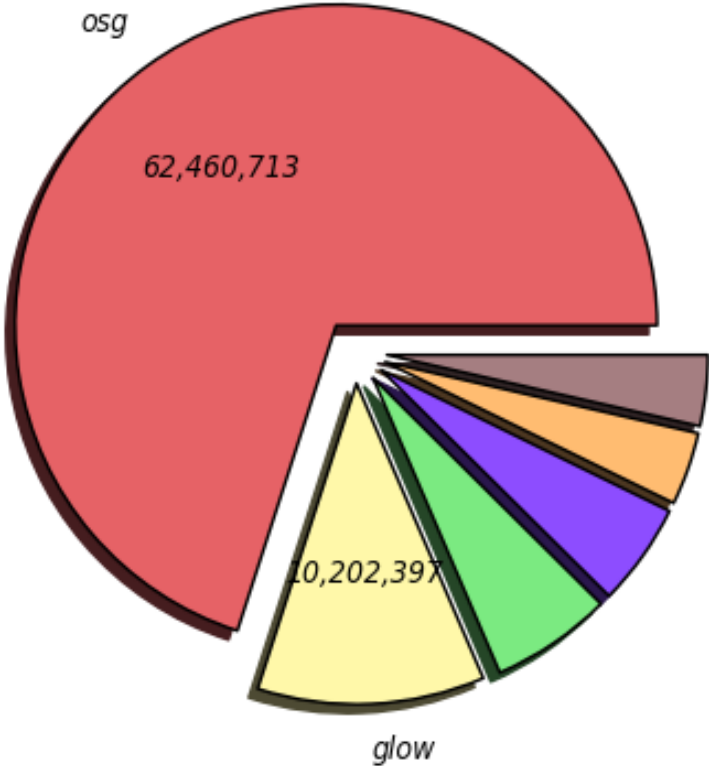
*Mats Rynge*

*(presented by Chander Sehgal)*



# Opportunistic VOs 7/1/13-6/30/14

Wall Hours by VO (Sum: 89,199,263 Hours)  
52 Weeks from Week 26 of 2013 to Week 26 of 2014



osg (62,460,713)  
sbgrid (3,182,049)

glow (10,202,397)

engage (5,440,943)

gluex (4,630,709)

hcc (3,282,452)



# OSG VO Scope & Usage

The OSG VO does not own any computing resources and only exists to harvest unused cycles at OSG sites (Opportunistic cycles) and make them available to researchers who are not already affiliated with an OSG VO.

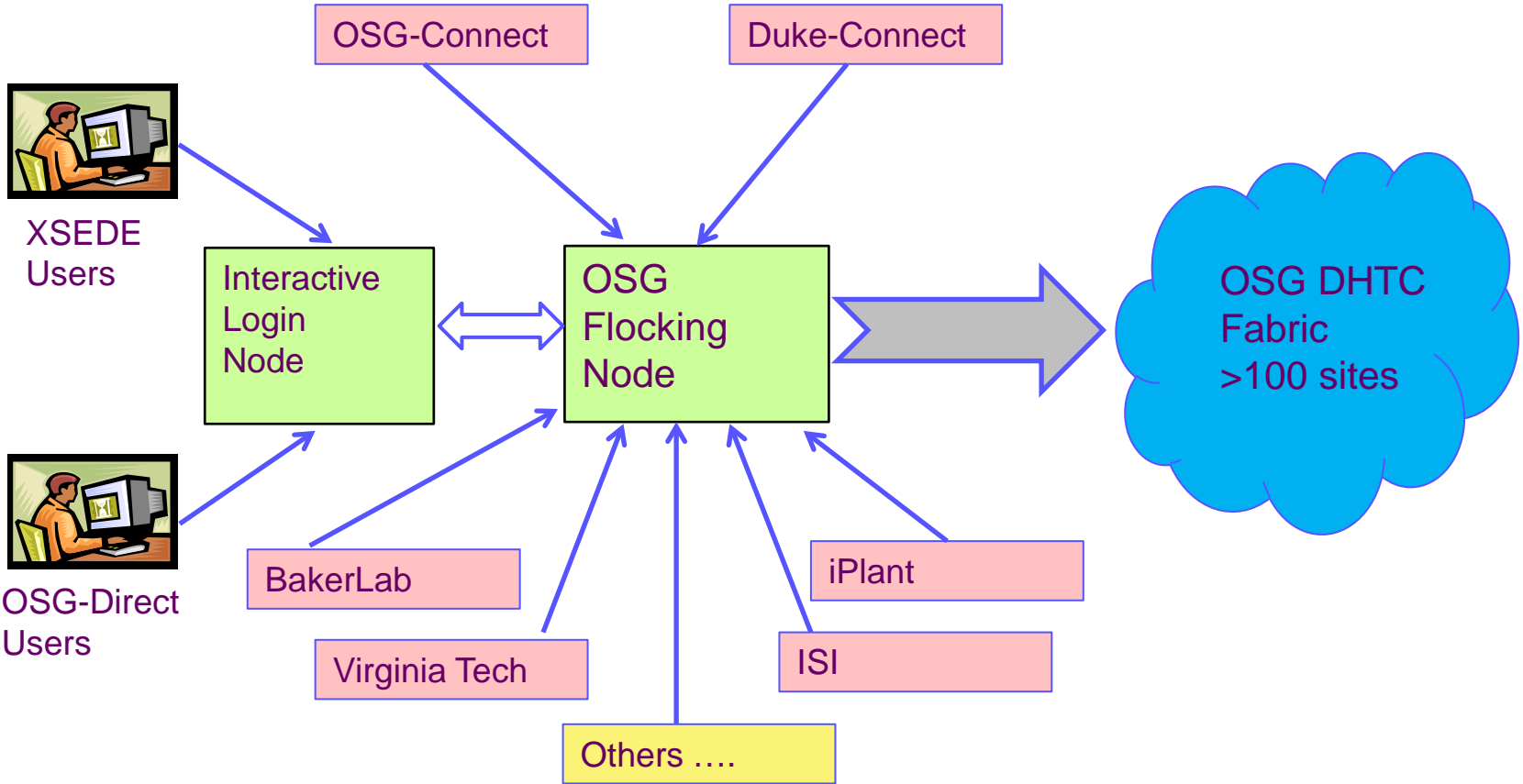
For the 12 months ending 30-Jun-2014, the OSG VO harvested 64.7M hours (from sites by using gWMS) and delivered them to various submit hosts to enable the computing of researchers

<b>Submit Host</b>	<b>Wall Hours</b>
OSG-XD (XSEDE and OSG Direct)**	57,319,443
OSG-CONNECT **	5,265,402
BakerLab	1,399,444
ISI	43,559
LSU	63

\*\* Core OSG Services



# Easier “On-Ramp” to the OSG DHTC Fabric



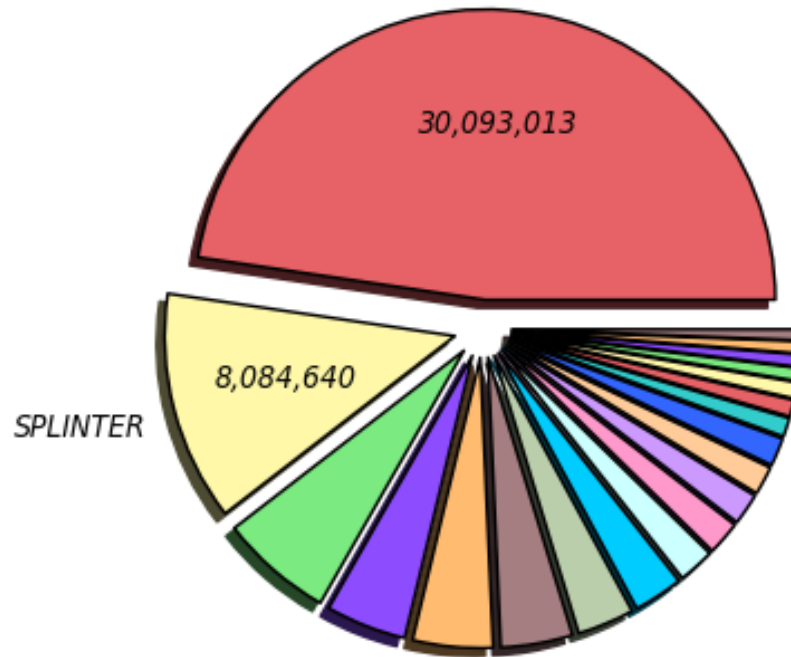
All access operates under the OSG VO using glideinWMS



# OSG VO Wall Hours 7/1/13-6/30/14

Wall Hours by VO (Sum: 63,137,588 Hours)

365 Days from Week 26 of 2013 to Week 26 of 2014  
TG-IBN130001



- TG-IBN130001 (30,093,013)
- SNOWMASS (2,812,541)
- UMICH (1,280,064)
- DETECTORDESIGN (989,043)
- CONNECTTRAIN (449,752)
- SPLINTER (8,084,640)
- Other (2,525,408)
- UPRRP-MR (1,192,943)
- DUKE (425,961)
- DUKE-QGP (3,972,774)
- RIT (2,004,090)
- PHENO (1,108,623)
- TG-PHY120014 (584,567)
- TG-TRA100004 (417,351)
- DUKE-4FERMION (2,836,943)
- ECFA (1,744,646)
- TG-DMR130036 (1,002,362)
- EIC (564,486)
- KNOWLEDGESYS (383,182)



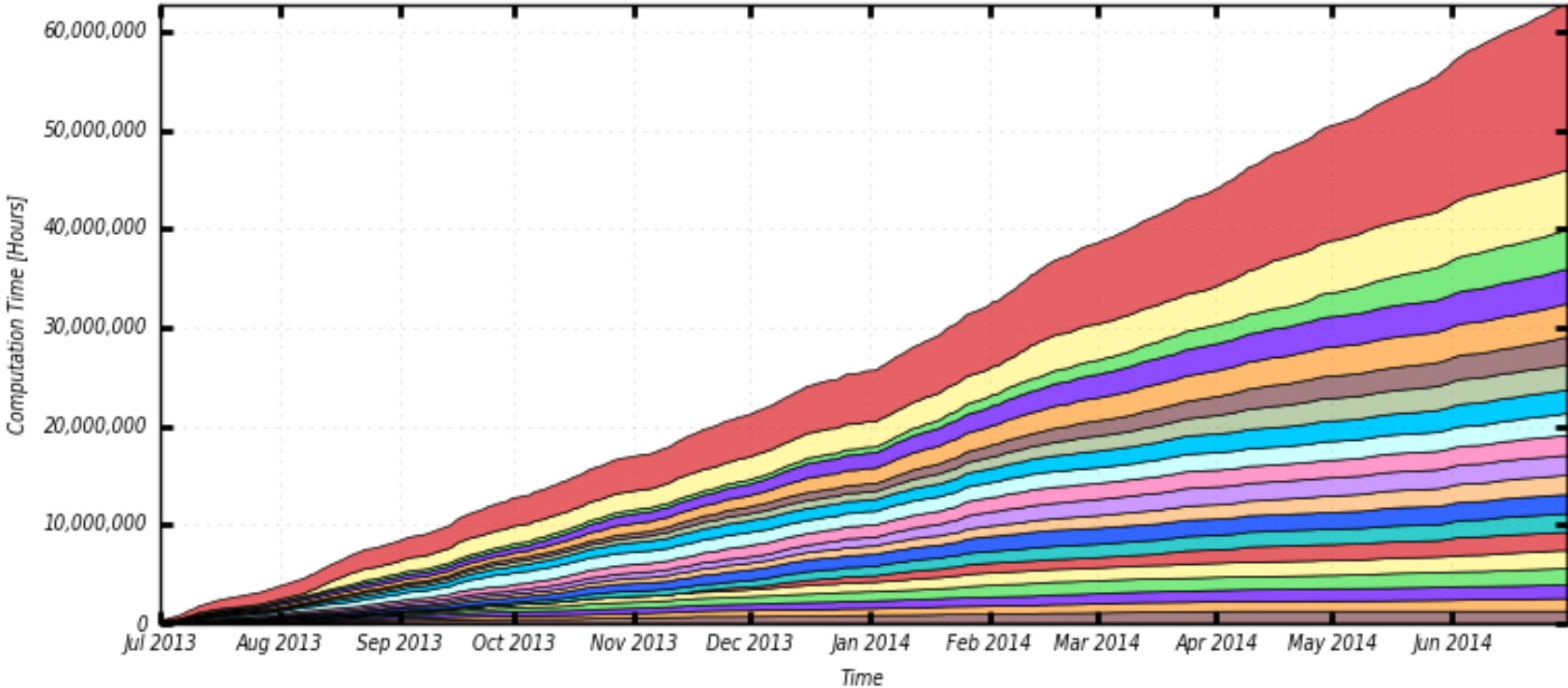
~50% of OSG VO usage comes from XD projects.

But if you exclude TG-IBN130001, only 4.2% is XD projects.



# Resource Contributions

### Cumulative Hours Spent on Jobs By Facility 365 Days from Week 26 of 2013 to Week 26 of 2014



- Other (16,848,793)
- USCMS-FNAL-WC1-CE3 (6,060,262)
- Tusker-CE1 (3,978,829)
- UCSDT2-D (3,515,052)
- UCSDT2-C (3,369,232)
- FNAL\_GPGRID OPP\_3 (2,776,246)
- FNAL\_GPGRID\_3 (2,555,274)
- GridUNESP\_CENTRAL (2,394,620)
- GLOW-OSG (2,218,956)
- MWT2\_CE\_UIUC (2,039,091)
- Sandhills (2,012,080)
- NWICG\_NDCMS (1,947,404)
- MWT2\_CE\_UC (1,942,588)
- red-gateway2 (1,866,782)
- Crane-CE1 (1,853,092)
- red-gateway1 (1,827,195)
- MWT2\_CE\_IU (1,639,282)
- UCD (1,396,954)
- UConn-OSG\_CE (1,279,551)
- Purdue-RCAC (1,223,717)

Total: 62,745,012 Hours, Average Rate: 1.99 Hours/s



# XD Research Allocations

7/1/13-6/30/14

Project Name	PI	Institution	Field of Science	Wall Hours	Allocation	Used
TG-IBN130001	Donald Krieger	University of Pittsburgh	Biological Sciences	30,093,013	3,750,000	802%
TG-DMR130036	Emanuel Gull	University of Michigan	Materials Research	1,002,361	1,000,000	100%
TG-PHY120014	Qaisar Shafi	University of Delaware	Physics	584,567	1,200,000	49%
TG-MCB100109	Lillian Chong	University of Pittsburgh	Molecular Biosciences	264,362	500,000	53%
TG-CHE130103	Jeremy Moix	Massachusetts Institute of Technology	Chemistry	61,405	100,000	61%
TG-MCB090163	Michael Hagan	Brandeis University	Molecular Biosciences	56,314	154,000	37%
TG-ATM130015	Phillip Anderson	University of Texas at Dallas	Atmospheric Sciences	3,379	200,000	2%
TG-PHY110015	Pran Nath	Northeastern University	Physics	37	1,000,000	0%
<b>Total</b>				<b>32,065,437</b>	<b>7,904,000</b>	

>>Note: TG-DMR130036 just got another allocation for 2M hours starting July 1st.



# XD Startup and Campus Champion Allocations 7/1/13-6/30/14

Project Name	PI	Institution	Field of Science	Wall Hours	Allocation	Used
TG-TRA100004	Andrew Ruether	Swarthmore College	Other	417,351	200,000	209%
TG-CHE130091	Paul Siders	University of Minnesota; Duluth	Chemistry	134,193	100,000	134%
TG-IRI130016	Joseph Cohen	University of Massachusetts; Boston	Information; Robotics; and Intelligent Systems	80,940	200,000	40%
TG-OCE130029	Yvonne Chan	University of Hawaii; Manoa	Ocean Sciences	34,547	33,120	104%
TG-TRA120014	Pol Llovet	Montana State University	Cross-Disciplinary Activities	19,479	200,000	10%
TG-IBN130008	Jorden Schossau	Michigan State University	Biological Sciences	16,857	200,000	8%
TG-DEB140008	Robert Toonen	University of Hawaii; Manoa	Environmental Biology	4,106	31,000	13%
TG-MCB120070	Joseph Hargitai	Albert Einstein College of Medicine	Molecular Biosciences	378	100,000	0%
TG-TRA120041	Hanning Chen	George Washington University	Computer and Information Science and Engineering	231	200,000	0%
TG-MCB140160	David Rhee	Albert Einstein College of Medicine	Molecular Biosciences	15	200,000	0%
TG-MCB130072	Robert Quick	Indiana University	Molecular Biosciences	11	200,000	0%
TG-CCR120041	Luca Clementi	San Diego Supercomputer Center	Computer and Computation Research	6	50,000	0%
TG-CDA100013	Mark Reed	University of North Carolina; Chapel Hill	Mathematical and Physical Sciences	6	100,000	0%
TG-CCR130001	Ruth Marinshaw	Stanford University	Other	2	50,000	0%
<b>Total</b>				<b>708,121</b>	<b>1,864,120</b>	

Startup Allocation  
Campus  
Champions

# OSG-Direct Projects

7/1/13-6/30/14

Project Name	PI	Institution	Field of Science	Wall Hours
SPLINTER	Robert Quick	Indiana University	Medicine	8,084,640
Duke-QGP	Steffen A. Bass	Duke University	Nuclear Physics	3,972,774
Snowmass	Meenakshi Narain	Brown University	High Energy Physics	2,812,541
RIT	P. Stanislaw Radziszowski	Rochester Institute of Technology	Computer Science	1,999,031
ECFA	Meenakshi Narain	Brown University	High Energy Physics	1,744,646
UMich	Paul Wolberg	University of Michigan	Microbiology	1,280,064
UPRRP-MR	Steven Massey	Universidad de Puerto Rico	Bioinformatics	1,192,943
Pheno	Stefan Hoeche	SLAC	High Energy Physics	1,108,623
DetectorDesign	John Strologas	University of New Mexico	Medical Imaging	989,043
IU-GALAXY	Robert Quick	Indiana University	Bioinformatics	665,197
EIC	Tobias Toll	Brookhaven National Laboratory	Accelerator Physics	564,486
HL-LHC-TP	Meenakshi Narain	Brown University	High Energy Physics	90,870
DeerDisease	Lene Jung Kjaer	Southern Illinois University	Biological Sciences	63,759
OSG-Staff	Chander Sehgal	Fermilab	Computer Science	40,514
SoyKB	Dong Xu	University of Missouri	Plant Biology	24,323
PO-LBNE	Maxim Potekhin	Brookhaven National Laboratory	Physics - Neutrino	18,334
BNLPET	Martin Purschke	Brookhaven National Laboratory	Medical Imaging	1,289
SNOplus	Joshua R Klein	University of Pennsylvania	Physics - Neutrino	489
<b>Total</b>				<b>24,653,567</b>



# Tracking Allocations

- Problem: How do we, ahead of time, know that an allocation is about to expire and encourage the user to submit a research allocation request?
- Research allocations can only be submitted 4 times a year, and takes time to peer review and get set up.
- We have started to track active allocations on a monthly basis. Information is gathered from Gratia, XSEDE allocation database, and the OSG-XD submit host. This is a fairly manual task, but allows us to evaluate expiration dates and usage.