OSG as XD Service Provider

Report to OSG Council

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Highlights

1. OSG continues to provide HTC compute resources to XD users since April 1,2012

   a. System is stable and has >99.9% availability
   b. System is also used for non-XD users; we are currently upgrading the hardware to accommodate increased total usage which has occasionally peaked at 15K simultaneous jobs (cores)

2. Updated strategy for PI allocations "exhaust"

   a. XRACs are for "n" service units (SU), for one year. This model works fine for HPC systems, but is too rigid for a HTC system. OSG prefers that the user should be able to keep running as long as there are available opportunistic cycles.
   b. We have modified the handling of XD allocations on OSG
      i. While a PI still has SUs left, jobs are automatically placed in a high priority group
      ii. After the PI has exhausted their SUs, jobs are placed in a low priority group where they continue to access available opportunistic cycles "behind" other OSG and XD high priority users (note that we do not disable the project here, as is the default in XSEDE)
      iii. When the allocation runs over its end-date, we terminate the allocation's access to OSG

3. We are improving the ability of sites to see which projects are active at their facility (see Field-of-Science accounting report)

4. The usage is growing in terms of: 1) allocations via XRAC; 2) wall time; and 3) number of active users

2013 OSG XRAC Allocations

Last_name	First_name	Organization	Charge_number	FOS	Start	Allocation
Chong	Lillian	University of Pittsburgh	TG-MCB100109	Molecular Biosciences	01/01/13	500,000
Krieger	Donald	University of Pittsburgh	TG-IBN130001	Integrative Biology and Neuroscience	01/01/13	3,476,000
Anderson	Phillip	University of Texas at Dallas	TG-ATM130015	Atmospheric Sciences	04/01/13	200,000
Gull	Emanuel	University of Michigan	TG-DMR130036	Materials Research	04/01/13	1,000,000
Nath	Pran	Northeastern University	TG-PHY110015	Physics	04/01/13	1,000,000
Hagan	Michael	Brandeis University	TG-MCB090163	Molecular Biosciences	07/20/13	26,000
Hagan	Michael	Brandeis University	TG-MCB090163	Molecular Biosciences	10/01/13	154,000
Moix	Jeremy	Massachusetts Institute of Technology	TG-CHE130103	Chemistry	10/01/13	100,000
Shafi	Qaisar	University of Delaware	TG-PHY120014	Physics	10/01/13	1,010,000
Wang	Shaowen	University of Illinois at Urbana-Champaign	TG-SES090019	Social and Economic Science	10/01/13	825,000
					TOTAL	8,291,000

In total there are ~110 XSEDE allocation on OSG; above plus startup, training, and staff accounts

2013 OSG-XD Usage Summary

Walltime by Month
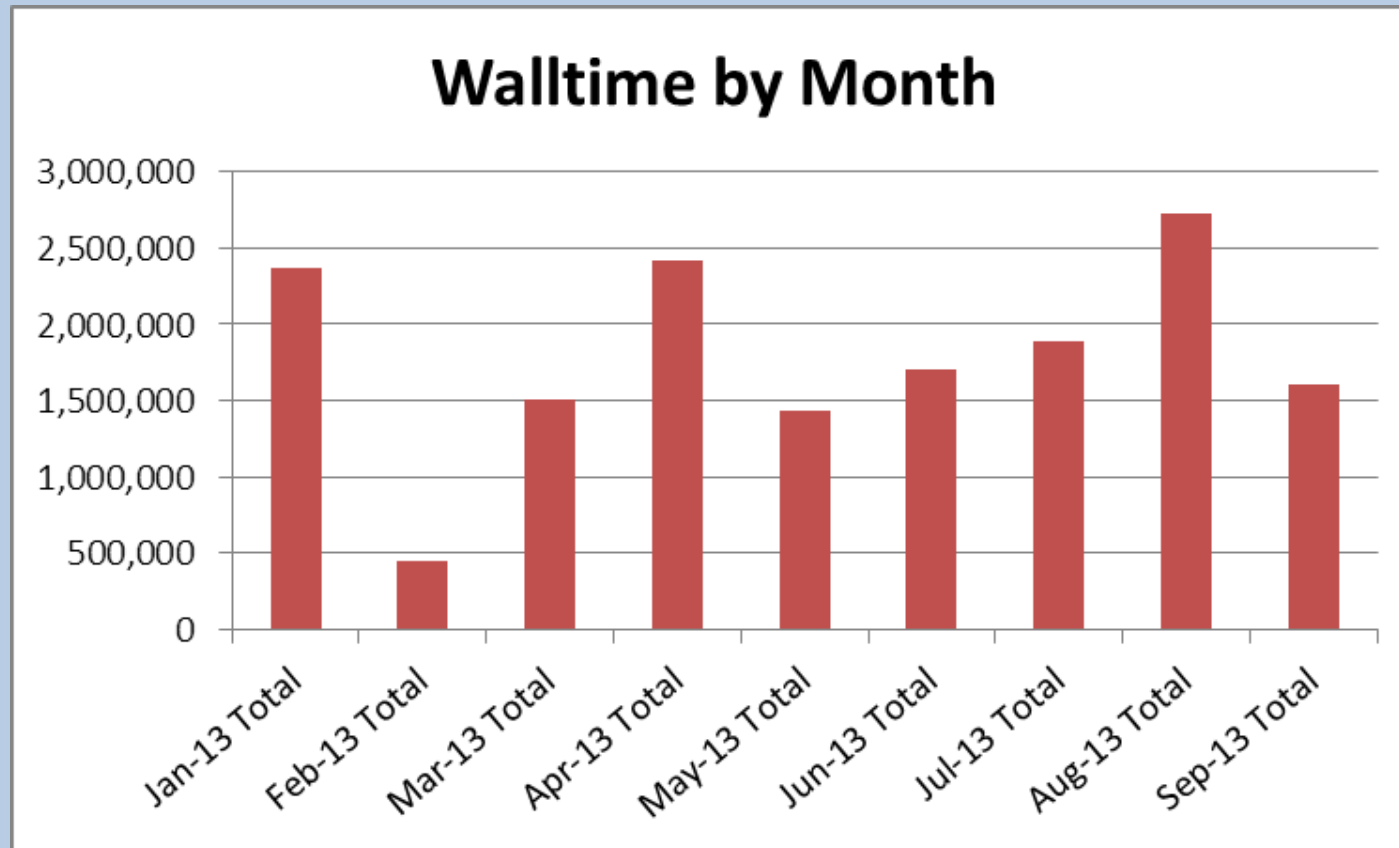
Total Usage in first 9 months is 16.1M hours

Biggest Users

- Don Krieger; U-Pitt; Brain Concussion Research = 14M hours
- Pran Nath; Northeastern U; LHC Theory = 1M hours

2013 Distribution of OSG-XD Usage by PI

Allocation-ID	Walltime
TG-IBN130001	14,092,136.9
TG-PHY110015	1,004,429.4
TG-TRA100004	444,374.6
TG-DMR130036	183,874.0
TG-ATM130015	77,168.6
TG-DMS120024	68,907.8
TG-DMR120085	60,624.7
TG-PHY120014	60,332.7
TG-ATM130009	51,221.6
TG-CHE130091	30,951.2
TG-IRI130016	17,338.2
TG-OCE130029	9,257.3
TG-MCB090163	6,883.3
TG-MCB090174	1,223.6
TG-MCB100109	989.5
TG-MCB130072	15.6
TG-STA120004	14.9
TG-CCR120041	11.7
TG-STA110014S	5.1
TG-ASC130043	0.4
TG-BCS110002	0.3

21 active users with a broad spectrum of usage patterns

2013 OSG-XD Active PIs per month

Active Users by Month