OSG User Support & Campus Grids

Mats Rynge
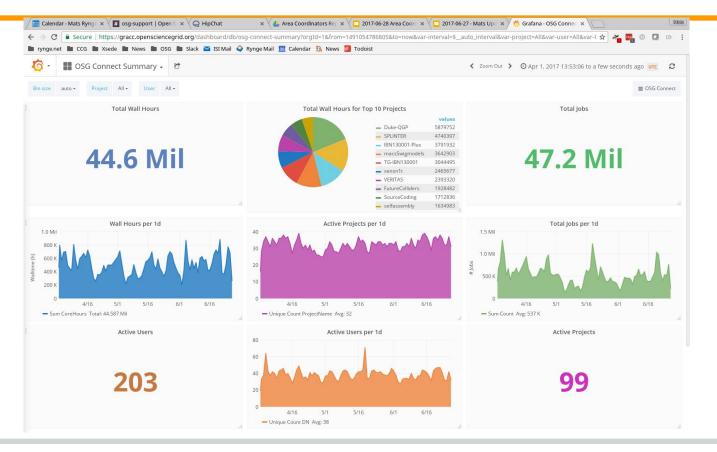
OSG Area Coordinator's Meeting, **June 28, 2017**

Open Science Grid

Outline

- Review of OSG Connect user support

  - A steady number of active users and active projects

  - Report on helpdesk tickets

  - Improving the new user on-boarding process

- Singularity support and documentation

- Condor_annex

- SPT - user engagement and jupyter notebook

- Xenon1t - new sites in Europe / frontend changes

- Upcoming workshops with user support and campus integration

Usage statistics during Apr-Jun 17

Usage statistics during Apr-Jun 17

OSG Connect
Active Users = 95, Active Projects = 50, WallHours = 19.1 M, Jobs = 16 M

OSG Direct (XD + direct)
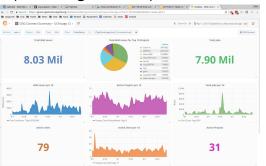Active Users = 21, Active Projects = 14, WallHours = 12.9 M, Jobs = 21.5 M

(UChicago, Duke) CI Connect
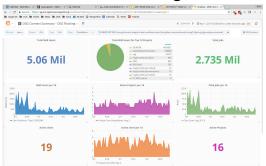Active Users = 79, Active Projects = 31, WallHours = 8 M, Jobs = 7.9 M

OSG Flocking
Active Users = 19, Active Projects = 16, WallHours = 5 M, Jobs = 2.7 M

OSG Connect

(UChicago, Duke) CI Connect
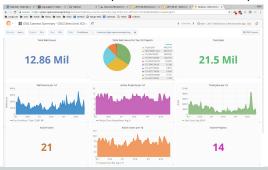
OSG Flocking

OSG Direct (OSG XD + direct)

Helpdesk tickets resolved during Jan-Mar 17

Resolved = 308
Created = 322
About 20 tickets resolved per week
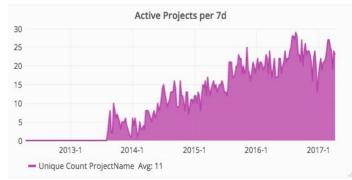
Average First Response Time = 3 hours
Average Resolution Time = 19.5 hours
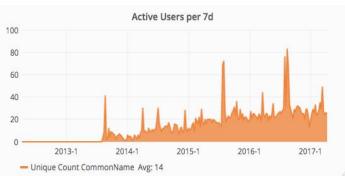
Positive response from the users

Resolved tickets split by priority

Priority		Count
Urgent		138
Low		106
High		61
Medium		3

Please tell us what you think of your support experience.

80% Positive	20% Neutral	0% Negative	15 Answered	44 Unanswered

Above expectations — 12

Met expectations — 3

Below expectations

Strengthening New User On-boarding

Active Projects per 7d
— Unique Count ProjectName Avg: 11

Active Users per 7d
— Unique Count CommonName Avg: 14

A steady increase in the number of active projects and active users.

- Challenge: Many new OSG Connect accounts are not being used. New users might have difficulty getting started on OSG? HTCondor? X?
- Solution: Followup tickets. When an account is created, we also create a ticket which will "wake up" at a later date. We will then check back with the user.
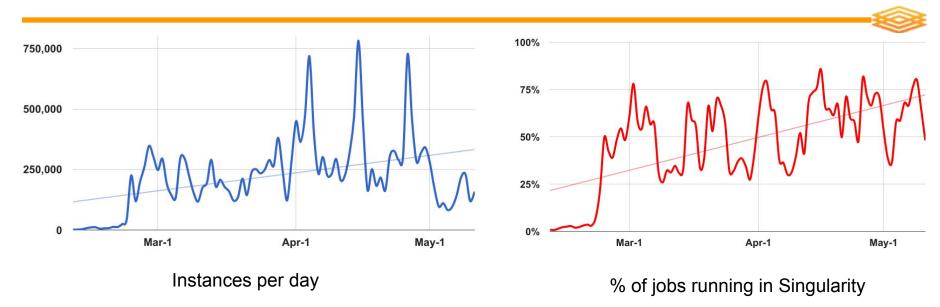
Strengthening New User On-boarding (Emelie, Bala)

We are in the process of strengthening and expanding our new user on-boarding

procedures using ACI-REF & others as guides

- Document: **Facilitation in the OSG Context**

- Defines a 4-step process for orienting new OSG Connect users.

  - Includes 2 consultation sessions with OSG User Support staff, one following the initial account setup, and the other scheduled for one month later.
  - Detailed user profiles and interaction records will be created and maintained.

Singularity

Instances per day

% of jobs running in Singularity

Helpdesk article: https://support.opensciencegrid.org/support/solutions/articles/12000024676-singularity-containers

Derek's Blog: https://djw8605.github.io/2017/01/12/singularity-on-the-osg/

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GPU images

- A current challenge is how to deal with GPU drivers in Singularity

- GPU drivers have to match on the host and in the container

- Some development upstream, but it will take time

- Working on a temporary solution - binding the driver lib directory from the host inside the container

condor_annex Tutorial (Mats, Lincoln, Marty, Tom M)

- Remaining issues for production
  - Difficult to set up AWS account (remember that we want users to come in via their own accounts / credit cards)
  - AWS account setup has multiple "wait until this is activated" steps - prevents end-to-end setups during workshops
  - Have to share pool password

- Will use new condor_annex from HTCondor 8.7.2 - looks better, but some of the difficulties with getting accounts set up in time remains.
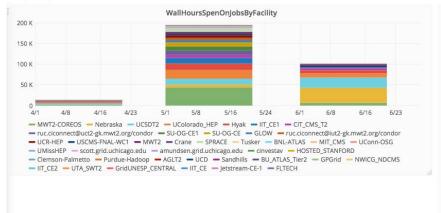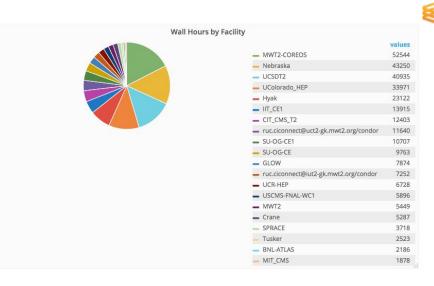
SPT (Benedikt, Judith)

- Automatic processing jobs are now running
- **Setup Jupyterhub instances on both SPT login nodes, Globus Auth provided by OSG Connect accounts**
- Created large memory slots just for SPT on login nodes
- Ingesting more data from pole: 5ish TB right now
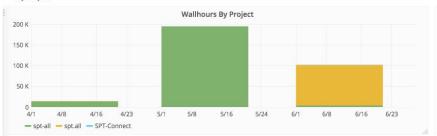- Improving backup automation - Working with NERSC and SPT folks

SPT Usage

By Facility

WallHoursSpenOnJobsByFacility

Legend: MWT2-COREOS, Nebraska, UCSDT2, UColorado_HEP, Hyak, IIT_CE1, CIT_CMS_T2, ruc.ciconnect@uct2-gk.mwt2.org/condor, SU-OG-CE1, SU-OG-CE, GLOW, ruc.ciconnect@iut2-gk.mwt2.org/condor, UCR-HEP, USCMS-FNAL-WC1, MWT2, Crane, SPRACE, Tusker, BNL-ATLAS, MIT_CMS, UConn-OSG, UMissHEP, scott.grid.uchicago.edu, amundsen.grid.uchicago.edu, cinvestav, HOSTED_STANFORD, Clemson-Palmetto, Purdue-Hadoop, AGLT2, UCD, Sandhills, BU_ATLAS_Tier2, GPGrid, NWICG_NDCMS, IIT_CE2, UTA_SWT2, GridUNESP_CENTRAL, IIT_CE, Jetstream-CE-1, FLTECH

Wall Hours by Facility

	values
MWT2-COREOS	52544
Nebraska	43250
UCSDT2	40935
UColorado_HEP	33971
Hyak	23122
IIT_CE1	13915
CIT_CMS_T2	12403
ruc.ciconnect@uct2-gk.mwt2.org/condor	11640
SU-OG-CE1	10707
SU-OG-CE	9763
GLOW	7874
ruc.ciconnect@iut2-gk.mwt2.org/condor	7252
UCR-HEP	6728
USCMS-FNAL-WC1	5896
MWT2	5449
Crane	5287
SPRACE	3718
Tusker	2523
BNL-ATLAS	2186
MIT_CMS	1878

By Project

Wallhours By Project

Legend: spt-all, spt.all, SPT-Connect

WallHours by Project

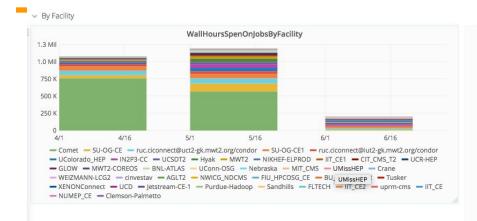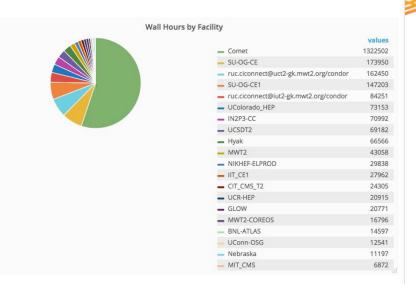|	values
spt-all	212306
spt.all	98005
SPT-Connect	699

Xenon1T (Benedikt, Suchandra, Judith, Mats)

- Moved US-based raw data storage used for OSG processing from Stash to dCache-based storage
- Added submission using the OSG infrastructure to EGI sites where Xenon1T has an allocation
  - Added NIKHEF, CCIN2P3, Weizmann Institute of Science, and INFN-CNAF so far
  - Added new Xenon1T group to OSG glidewms frontend to use the Xenon VO to submit jobs rather than OSG VO
  - Transparent to users
  - NIKHEF largest EGI contributor to Xenon1T computing
  - Processing framework gets data depending on location, i.e. jobs on EGI get data from EGI sites, jobs on OSG get data from UChicago storage

Xenon1T Usage

Upcoming Workshops with OSG User Support and Campus Integration

- PEARC17, New Orleans, July 9-13, 2017
  - http://www.pearc.org/call-for-participation
- RMACC, Boulder, August 15-17
  - https://www.rc.colorado.edu/news/rmacccallforparticipation
- Workshop on High Throughput Computing in Bioinformatics and Biomedicine using Open Science Grid, in conjunction with IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2017)
  - http://sbbi-panda.unl.edu/bibm2017/