Providing Value to Campuses
Part I: OSG Campus Services

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The Big Picture

We help campuses share
compute and storage capacity with researchers
to reduce barriers to discovery for all of Open Science

OSG Campus Services focuses on campus collaborations:
small to large, PUI to R1, CC*, MSIs, etc.

Overview

Part I (Tim C.): Brief overview of OSG Campus Services

For more details:

- Tomorrow: HTC 24 Wednesday CC* Track (open to all!)
- My talk at HTC 23 (*)

Part II (Todd T.): The HTCondor-CE Dashboard

A new tool for providers of computing capacity

* https://agenda.hep.wisc.edu/event/2014/contributions/28493/

OSG Campus Services

If Your Campus Is Just Getting Started

We offer guidance on contributing capacity to a larger CI ecosystem (e.g., OSPool, OSDF)

- For proposals — *e.g., CC*: 15 Oct 2024!* — we can:
  - Prepare you to describe how you will share capacity (e.g., for NSF CC* … but why not MRI or others?)
  - Provide letters of collaboration
- For new or expanded cluster planning (incl. CC* Strategy awards), we can:
  - Discuss detailed benefits, requirements, and responsibilities for sharing
  - Offer suggestions on hardware and software configurations

If Your Campus is Ready to Contribute

- Can meet to discuss goals and plan the integration project
- Work together to carry out the integration plan
  - Aim to minimize campus effort to get up and running
  - Offer to host and operate services on your behalf (e.g., CE, Origin)
- We provide detailed technical documentation (osg-htc.org/docs)
  - Reviewed and updated periodically, plus ad hoc as needed
- Support you throughout process
  - Contact us at any time: support@osg-htc.org
  - You always have the OSG Campus Coordinator (me!) to turn to

If Your Campus Is Contributing

- **Monitoring:** We proactively watch for issues and contact you as needed
- **Accounting:** Show you what you're contributing and who that helps ***(Pt 2!)***
- **Communication:** Individual check-ins, Campus Meet-Ups, HTC 24!
- **Ongoing support:** Respond to questions, concerns, requests; provide software/service updates; improve documentation

If Your Researchers Can Use HTC

The OSG Research Facilitation team:

- Provides access to researchers and research groups
  TODAY! — no need to be contributing capacity
- Offers training and support to researchers and staff
  (in-person, Zoom, Office Hours, email, documentation, …)
- Supports courses and workshops
- Helps campus research computing staff to help their own researchers
- Engages with national CI community to improve research computing for all

How Could We Improve?

Ways to reach me/us:

- Here at HTC 24 — breaks, Wednesday CC* Track (open to all!)
- Email: Tim Cartwright <cat@cs.wisc.edu>
- OSG Campus Meet-Ups: https://osg-htc.org/campus/support.html
- General support: <support@osg-htc.org>

Campus Examples

University of Montana

How it started:

- CC* Compute award 2019, integrated Sep 2023
- Campus staff learned about HTC and how we help researchers at scale
- Showed them one way to see who was benefitting from their contributions

How it's going:

- Held local event on research computing for their HPC system – ***but HTC too***
- Asked if we could offer training, Rachel did a 1-hour session in person
- ~50 attendees, maybe 1–2 new OSPool accounts since (so far)

Great Plains Network

GPN Augmented Regional Gateway to OSG (GP-ARGO) – 2020 CC* Compute

- Regional computing system: 18 nodes @ 15 institutions, all contributing to OSPool
- Influenced NSF OAC and the development of CC* Regional Computing area
- Led to some member campuses sharing other, non-CC* capacity

March 2024 PR: "GP-ENGINE [follow-on project] and the [GPN] contribute computing power to the [NSF]'s National Radio Astronomy Observatory (NRAO)"

> "Where does GPN fit in? … 'the data was divided into pieces and distributed to smaller banks of computers with GPUs…' In the GPN, these are servers on the campuses of University of Missouri, University of Nebraska, and Kansas State University"

https://www.greatplains.net/gp-engine-and-the-great-plains-network-gpn-contribute-computing-power-to-the-u-s-national-science-foundations-national-radio-astronomy-observatory-nrao/

Michigan State University

It's not all sunshine and bunnies… ☁️ ⛅ ☁️

- CC* Compute award began Jul 2022, integrated Dec 2023
  - During integration, campus found bug in SDN that blocked outbound networking
  - Installed additional network routes to restore outbound access; may help local usage
- In Jan 2024, PATh staff noticed poor utilization of contributed capacity
  - Singularity detection failing => Payloads needing it not matched => Fewer payloads
  - Both sides worked through issues until Singularity was available to OSPool jobs
  - Before: 6 projects running **~60 jobs/day** — After: 9 projects running **~170 jobs/day**
- Once utilization improved, campus staff scaled up contributions 🌞 🌼🐇 🌼🐇

Summary: Why Contribute Capacity?

- Join a national-scale CI ecosystem and contribute to great research (e.g., NRAO, EHT, LIGO/IGWN, IceCube, LHC, Monday talks, more…)
- Learn about HTC, to advise your researchers on getting access & using
- Connect with national community, share ideas to hone local systems
- Maximize usage of purchased capacity
- Fulfill a promise made in a grant proposal (e.g., CC*)

Next: Part II with Todd Tannenbaum

(and a question or two during transition)

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