



# Software Activities

Brian Lin  
OSG Software Area Coordinator  
Center for High Throughput Computing  
University of Wisconsin-Madison



# HTCondor-CE

- HTCondor-CE 4.0.1 was released in the OSG yesterday!
  - SciTokens support
  - Major configuration reorganization
  - New upstream documentation: <http://htcondor-ce.org>
- European HTCondor had most of a day dedicated to HTCondor-CE
- Upcoming work
  - Iterating upon SciTokens support with ATLAS and CMS pilot developers
  - Improving EGI accounting and information service support
  - Documenting HTCondor-CE for grid operators (troubleshooting, information services, Hosted CE)
  - Deduplicate OSG and upstream documentation



# Hosted CEs

- Hosted CE operations was streamlined in preparation for the CC\* meeting:
  - BOSCO, HTCondor, and tooling were updated to remove the need for operators to manually configure the site's SSH endpoint
  - Additional packaging improvements were made to reduce manual installation steps
  - Version control infrastructure was deployed to store Hosted CE configuration
- Upcoming work
  - Assist Operations with transitioning existing CEs to version control
  - Automate CE configuration updates from version control
  - Containerization (more later)
  - Automate Topology registration and factory configuration



# BLAHP

- BLAHP: important software behind Hosted CE and non-HTCondor batch system support
- Two different versions (OSG, HTCondor) of the BLAHP exist as three different “packages”
  - Unifying the two versions has been an on/off project for years
  - BOSCO: Done!
  - OSG: Packaged, investigating issues, November ETA
  - HTCondor: Next “development” release, December ETA
- The maintainer of the third version of the BLAHP, the original source from INFN, is open to a “grand unification” with the impending CREAM CE retirement



# HTCondor + GlideinWMS

- OSG 3.4 is still back-versioned on an “unsupported” version of HTCondor (8.6.x)
- Builds of the new stable series are ready in OSG 3.4 (including OSG configuration to ease 8.6 → 8.8 updates) and OSG 3.5 (including improved default security settings)
- Our currently released version of GlideinWMS requires 8.6.x
  - New version is available upstream and currently undergoing testing
  - Operations’ ITB factory has improved the speed and confidence of our GlideinWMS testing
- October ETA



# XRootD

- Recently, just minor feature releases.
- Overhauled packaging to ease installation and standardize OSG configuration (e.g. HTTP/S enabled by default)
- Upcoming work
  - XCache SciTokens integration
  - Move XCache container documentation to the official site admin documentation
  - Next major version ETA 2020 Q1



# Containers

- Stable container images for Frontier Squid, ATLAS XCache, CMS XCache, and StashCache are now being announced in our releases
- Upcoming work
  - Host a Madison/Chicago container hackathon this quarter
  - Install a Kubernetes cluster using Cancer Computer donated hardware
  - Distribute an OSG Hosted CE container
  - Polish the OSG worker node pilot container used by Syracuse



# Extra Slides





# Miscellaneous Upcoming Work

- Enterprise Linux 8
  - Requires a tricky build infrastructure update
  - Rebuilding/repackaging and testing work ~1 month
- Accounting
  - Develop method to account usage of OSG worker node pilot containers
  - Consolidate pilot accounting probes: instead of a probe per type of batch system, aim for a single HTCondor-CE probe to rule them all



# Topology

- Short-term student work resulted in a fair amount of data cleanup
- Upcoming work
  - Review remaining student work
  - COManage investigations:
    - User management for Hosted Submit
    - Topology registration replacement?
  - Overhaul project organization to better support multiple VOs
  - Store VO authentication data in Topology and serve it via HTTP for our EGI friends