glideinWMS in OSG

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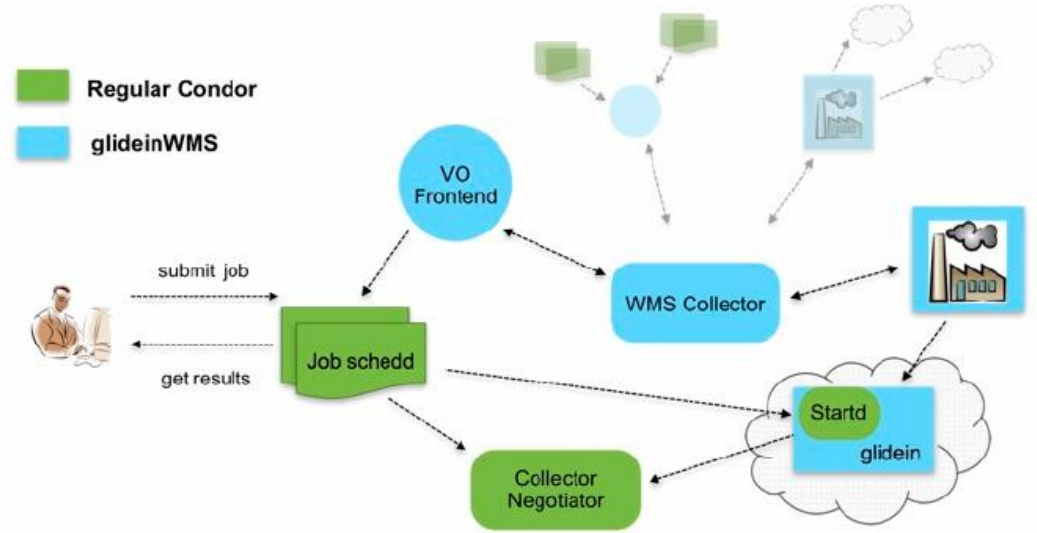
glideinWMS Architecture Overview

- Pilot based WMS based on Condor with a thin layer of scripts on top of Condor
- Components
  - WMS Collector
  - Glideinfactory
  - User Pool Collector
  - User Scheduler
  - VO Frontend
- Factory knows about the sites and how to submit glideins to the sites
- VO frontend knows about the user job details
- WMS Collector acts as a dashboard for Factory - VO Frontend communication.



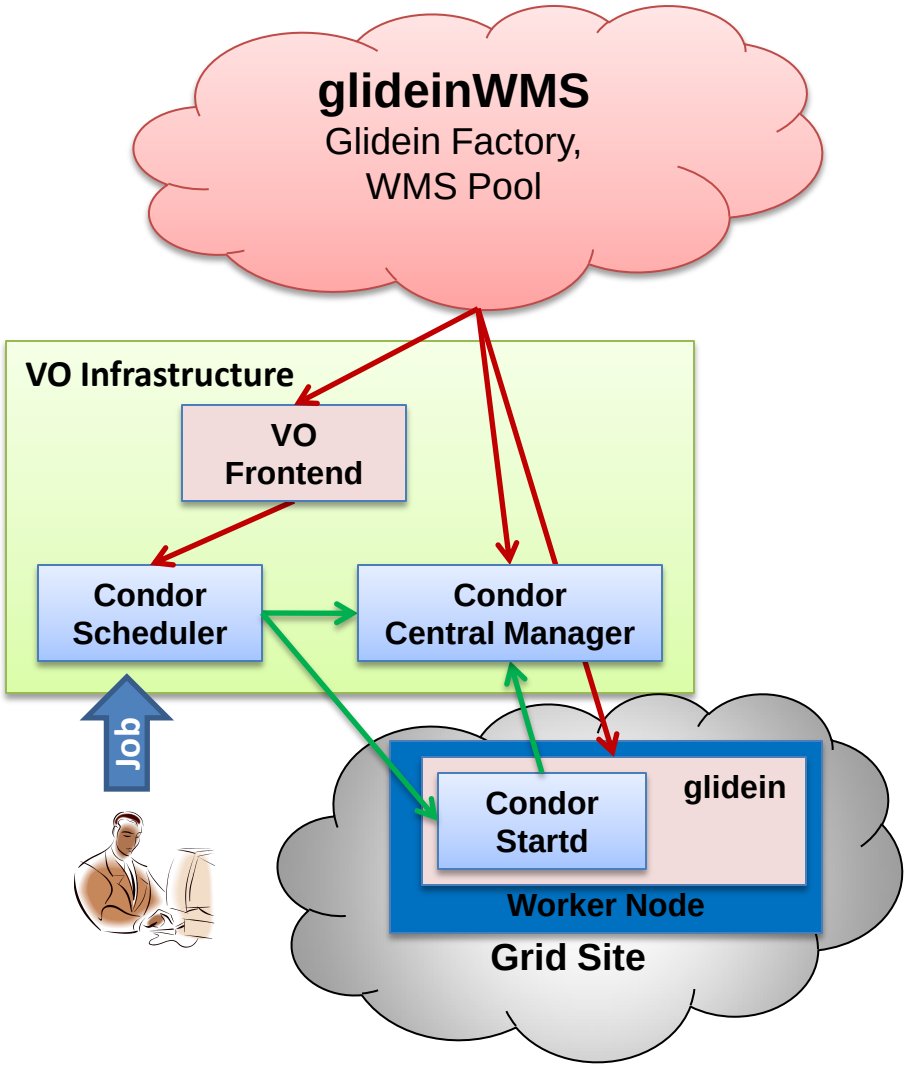
glideinWMS: User's Perspective

From the user's point of view –

- glideinWMS is just a distributed Condor system
- shields the user from interfacing directly with the grid
- users with existing Condor-ready jobs can submit them to the Grid with minimal changes.
- the pilot can validate the node before running a user job; reducing the failure rate of user jobs.
- provides pseudo-interactive monitoring
- glideinWMS can prioritize jobs from different users.

VO Infrastructure to use OSG glidein Factory Service

- End user point of view:
  - glideinWMS is just a distributed Condor system
- Setup the condor user pool
- OSG glidein Factory Service
  - Operated at UCSD
  - Express your requirements and give required details to the factory operator.
- Setup the VO frontend
  - Talks to the user pool
  - Talks to the glideinWMS pool
  - Requires installation of Web Server
- Root privileges required to install Web Server and user schedd.



Running jobs through glideinWMS on your site

- Pilot
  - Enter grid sites like any other grid jobs
  - Use service credential to authenticate with sites
  - Starts condor_startd configured to talk to the User Pool collector
  - After the allocated time is over, glidein shuts down, freeing up the worker node slot
- User job
  - Runs on the condor_startd started by the glidein
  - Can run under the user's identity rather than pilot's identity if glexec is installed on the worker nodes. This is useful for accounting purposes.

Acknowledgments

- glideinWMS infrastructure is developed in Fermilab in collaboration with the Condor team from Wisconsin and High Energy Physics experiments.
- Currently used in production by CMS, CDF and DZero,MINOS, ICECube with several other VOS evaluating it for their use case.

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- The Open Science Grid (OSG)

For More Information

- Current Stable Release: v2.4
- Support Mailing list: glideinwms-support@fnal.gov
- http://www.uscms.org/SoftwareComputing/Grid/WMS/glideinWMS/
- https://twiki.grid.iu.edu/bin/view/Documentation/JobSubmissionComparison