

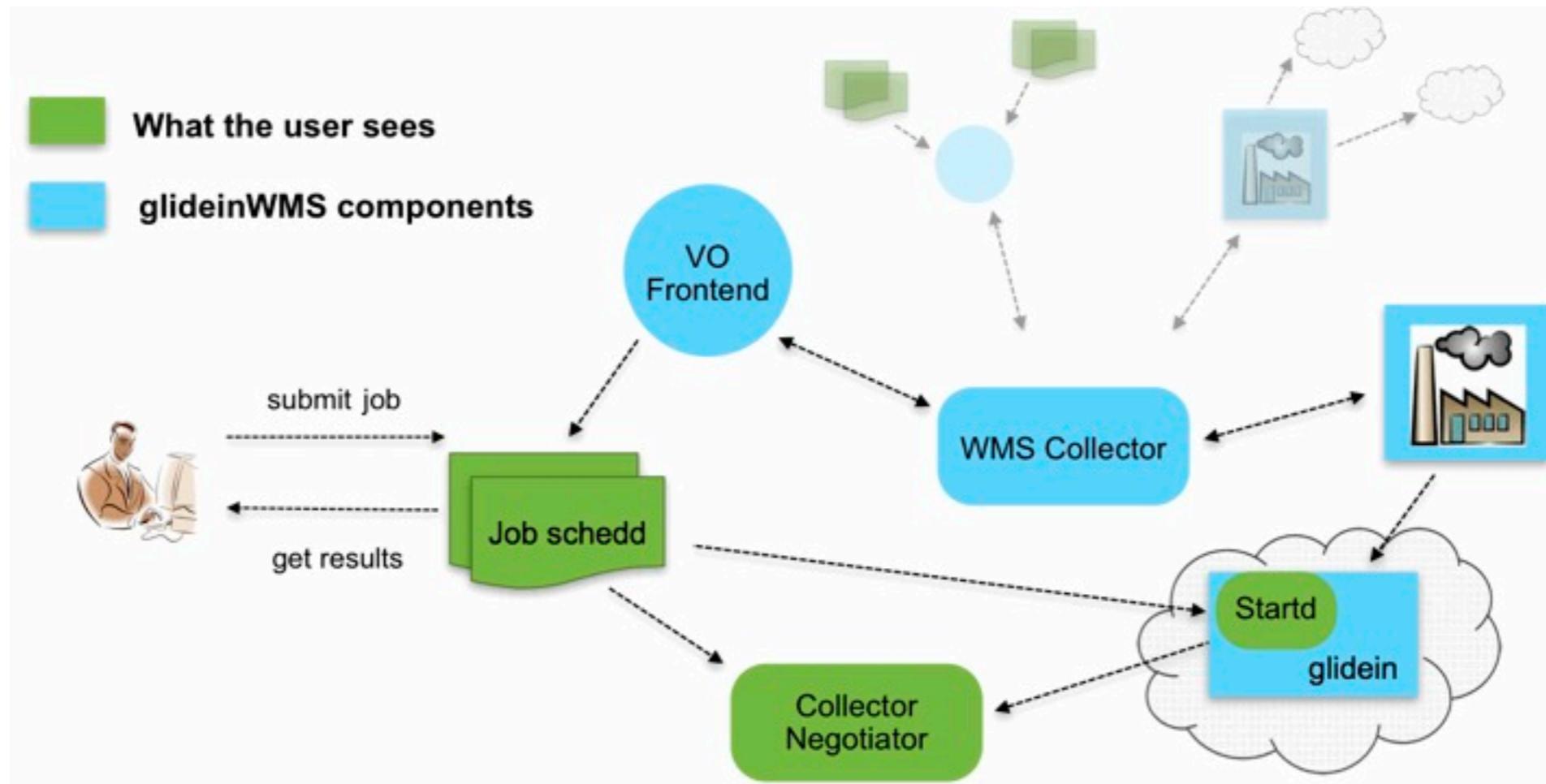
Update on CorralWMS

Nov.10, 2010

Overview

- Quick review of glideinWMS and Corral
- Integration of Corral with glideinWMS
- Current issues
- Plans going forward

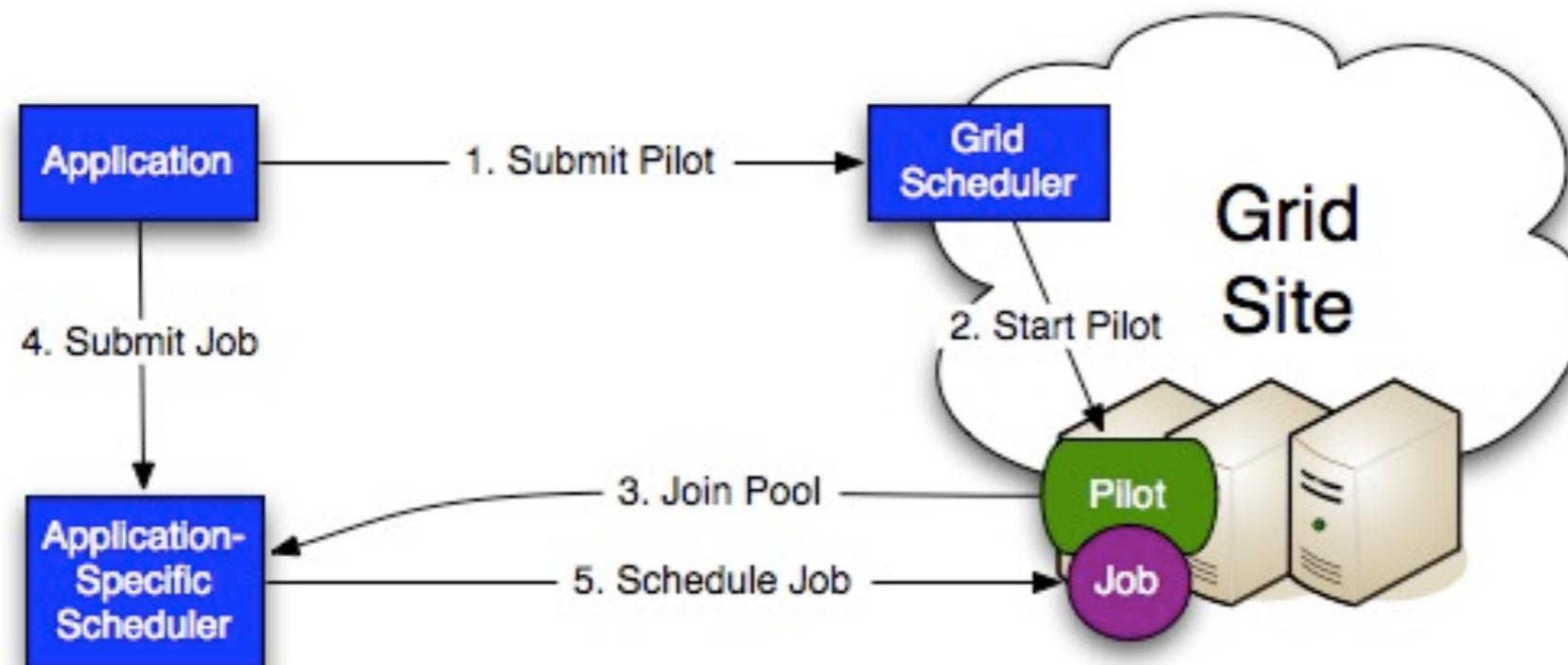
glideinWMS



- Glidein Factories know about grid sites and how to submit glideins
- VO Frontends know about job details, how many and what kind of glideins needed
- Factories and VO Frontends communicate through a common Condor WMS Collector

Corral

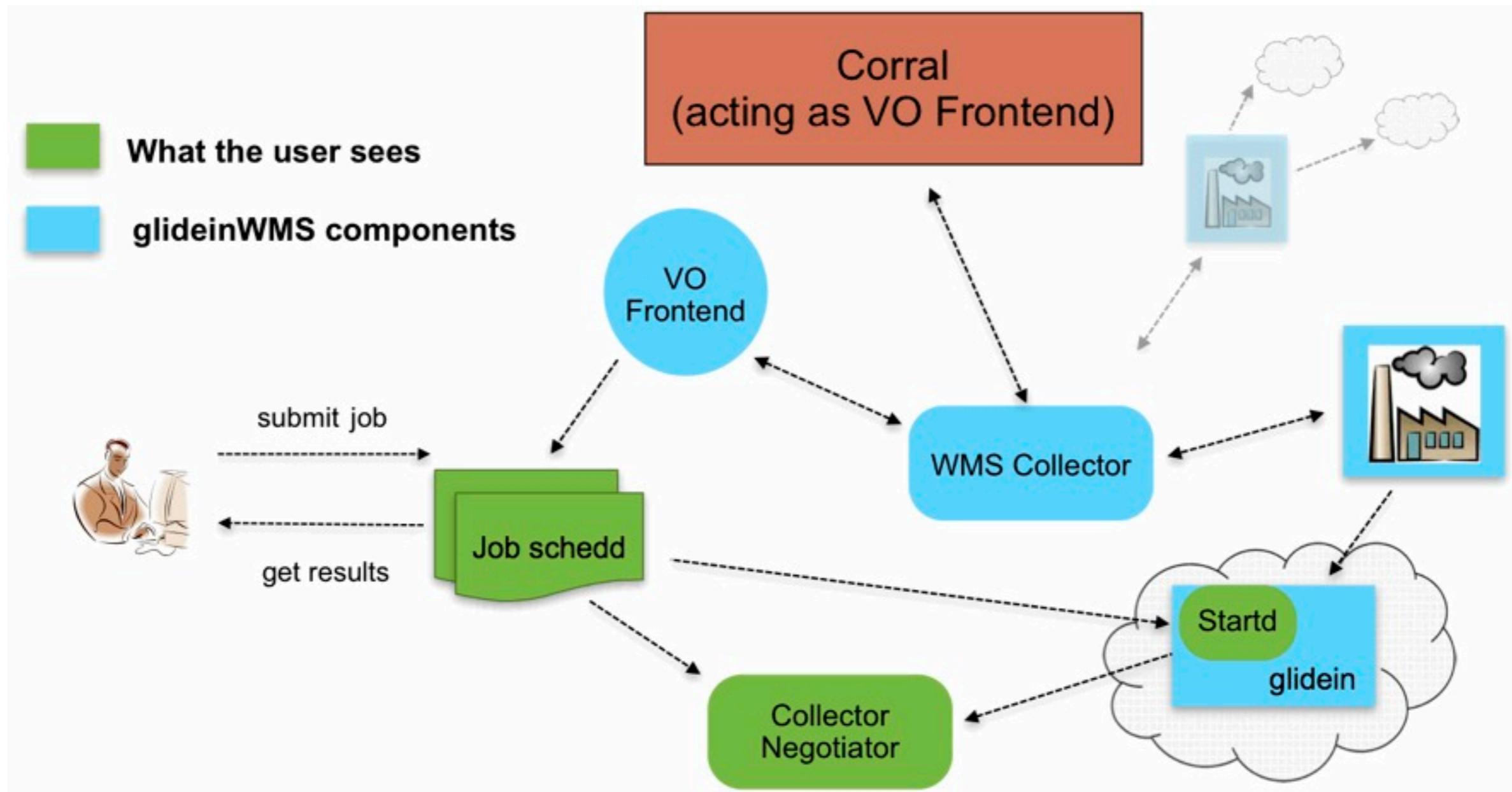
- Provision resources explicitly
- Pay to allocate resources once and reuse



Differences between Corral and glideinWMS

- Corral users pay to use resources
- Corral users provide site-specific information in their request
- Corral requests have additional requirements
 - Includes user's proxy
 - Limited number of jobs allowed in the queue at a site
- There is no one service that manages all user requests to the factory in Corral

Integrating Corral with glideinWMS



Integrating Corral with glideinWMS

- Decided to restructure glideinWMS to support multiple frontend types
 - Requires clear division and changes to the protocols between frontends and factories
- Corral is now a supported part of the glideinWMS software
 - 3 supported frontends, possibility of community contributed frontends
- New functionality for Corral included in glideinWMS
 - New features needed for Corral can be useful for glideinWMS in general
 - All features will be included with glideinWMS releases

Integrating Corral with glideinWMS

- Protocol change so a Frontend can include a chunk size in their request
- Ability to dynamically change pilot submission based on Corral request
- Factory changes to add chunk size to start N pilots for each Condor-G job
- Add additional resource specifications to a Condor_G submission
- Disable monitoring slots

Current issues

- Condor does not currently support multislots functionality
- We need to support multiple grid types because we do not understand all the requirements for submitting pilots to types other than gt2
 - Each batch system or site can interpret rsl differently as well
- Possible oversubscription
 - Asking and getting a few extra pilots OK, asking for an extra Condor_G job that starts 100 pilots will cause problems

Current issues

- Not sure how to incorporate multislot requests for users of the glideinWMS frontends
- Multislot requests break the 1:1 relationship between Condor-G jobs and pilots
- The multiple “virtual” frontends in Corral conflicts with how the factory is designed to handle frontends
 - Breaks factory monitoring, no functionality in place to clean up other files
 - New security class has to be added for each user

Goals going forward

- Retain identity of both systems to maintain backwards compatibility
- Add support for multicore pilots
- New information system integration
- Additional monitoring
- Add ability to communicate factory and pilot submission errors back to frontends

Goals going forward

- More scale testing of new functionality
- Integration of clouds
- Continue to be active in the community
 - attend conferences, grid schools, papers and posters
 - Will be supporting a SCEC run at the end of this year/beginning of next year
- Redesign the configuration of the factory to be flexible for future feature integration