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GlideinWMS

Parag Mhashilkar
Stakeholders Meeting
January 07, 2016

Overview

- Updates since last stakeholder's meeting
- Upcoming releases
- Reference slides
 - GlideinWMS Architecture
 - Quick Facts
 - Releases since last stakeholders meeting

Highlights Since Last Stakeholders Meeting

- Releases: (Details in Reference Slides)
 - v3_2_11_2: September 18, 2015
 - Fixes a critical bug introduced in v3_2_11 that prevented the condor_startd from sending keep alive signal to the condor_schedd
 - v3_2_12: ~~Tentatively end of October 2015~~ **January 2016**
 - Put monitoring stats from factory completed logs into glideresource classad
 - RPM improvements
 - Improve calculation of max requested running by making it more conservative
 - Advertise curbs and limits hit by the frontend to glideresource classads
 - **Improvements to factory configuration. Makes it easier for operations to share entry information across multiple factories. External contribution - Jeff Dost**
 - **Support for GPU as a resource**
 - **Address accounting issues related to multicore glideins**
 - v3_3_rc6: January 06, 2016
 - AWS cloud related requests from HEPCloud
 - Allow updating AWS credentials in frontend without need to reconfig/restart the service
 - Improve frontend policy configuration
 - Experimental features or features that may break backward compatibility
 - Issues addressed in v3.2.12 rc4

Highlights Since Last Stakeholders Meeting

- Communication
 - New URL for project webpage: <http://glideinwms.fnal.gov>
 - Content migration over next few weeks
 - GlideinWMS project status reported monthly at the SCD project status meeting
 - Release announcements are also sent to the glideinwms-stakeholders mailing list
- Support
 - Worked with OSG in identifying scalability limitations with its VO Frontend deployment
 - Understanding use case of IceCube VO and their use of OSG and EGI resources. Directed them to OSG. IceCube will be served via the CHTC/GLOW frontend.
- Project Effort
 - Project Management: 0.15 FTE
 - Development & Support: 2.75 FTE
 - Temporary reduction in 0.5 FTE of Marco Mambelli for the month of November and December 2015
 - New contractor, Marco Mascheroni, starting January 2016 @ 0.5 FTE funded by CMS

Milestones from last time

- Factory/Frontend Configurability
 - Factory configurability scheduled for v3.2.12
 - Frontend configurability scheduled for v3.3
 - Status: Complete (Awaiting respective releases)
- “Why is my job not running”?
 - Scheduled for ~~v3.2.12~~ v3.2.13
- Aggregate Monitoring
 - No Progress.

Upcoming Releases - Production Series (v3.2.x)

- Primary Focus of Production Series:
 - High impact bug fixes and features that do not break backward compatibility
 - Monitoring enhancements
 - Support entries $O(600+)$

v3_2_13 - Tentatively end of March 2016

- Improve user friendliness: “Why my job is not running?”
- Log additional monitoring info available to the frontend in the glideresource classads
- Scale factory to $O(600+)$ entries

Upcoming Releases - Development Series (v3.3.x)

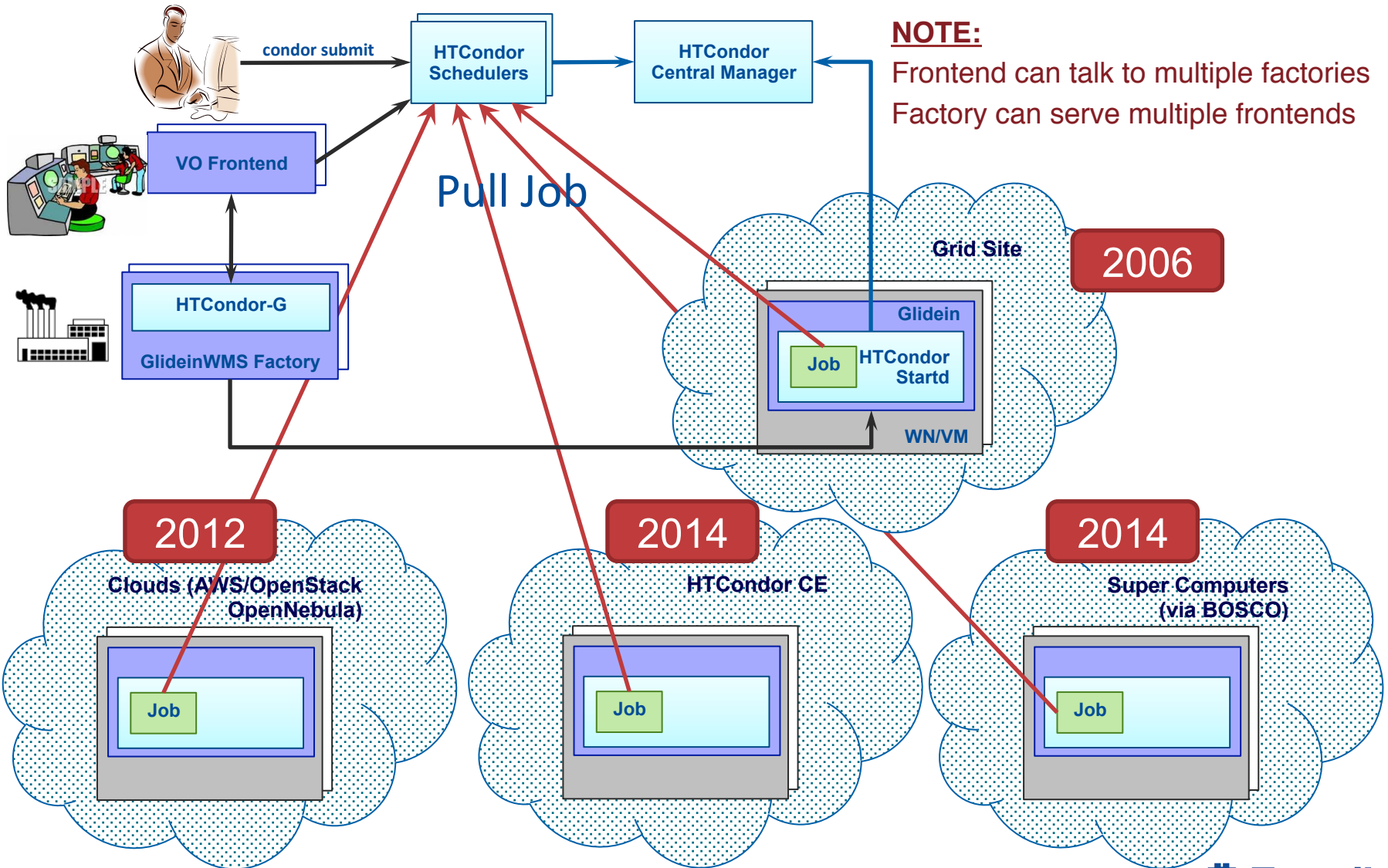
- Primary Focus of Development Series:
 - Production quality but some features maybe experimental
 - Support different EC2 features in GlideinWMS
 - Factory/Frontend Configurability
- Next Release: v3.3
 - Driven by stakeholder requests
 - Will be available in the form of release candidates until we reach critical mass

v3_3 - ~~Tentatively end of August 2015~~

- AWS spot pricing & AZ support - **COMPLETED**
- Support manageable solution for complex VO provisioning policies - **COMPLETED**
- Simplify configuration of BOSCO entries - **IN PROGRESS**
- Allow updating AWS Image settings (AMI ID) without factory/frontend reconfiguration - **COMPLETED**

Reference Slides

GlideinWMS



GlideinWMS: Quick Facts

- GlideinWMS is an open-source product (<http://tinyurl.com/glideinWMS>)
- Heavy reliance on HTCondor (UW Madison) and we work closely with them
- Effort:

Role	Resources	Effort (FTE)
Project Mgmt/Lead	Parag Mhashilkar (0.15 USCMS)	0.15
Development & Support	Parag Mhashilkar (0.75 SCD) Marco Mambelli (0.9 SCD + 0.1** OSG) Hyunwoo Kim (0.5 SCD) Marco Mascheroni (0.5 CMS - Contractor) ** Scalability improvements to OSG VO GlideinWMS infrastructure	2.75
Cloud Integration	Anthony Tiradani (0.2 USCMS)	0.2
TOTAL		2.9

Table: Current Resources & Roles

- Additional Code Contributions (Past year)
 - Jeff Dost (UCSD)
 - Brian Bockelman (OSG/UNL)
 - Mats Rynge (ISI/OSG)

Quick Facts: Releases & Support Structure

- Releases
 - Issues tracked in redmine issue tracker
 - <https://cdcvns.fnal.gov/redmine/projects/glideinwms/issues>
 - Categorized and prioritized based on impact, urgency and requester
 - Issues are now associated with respective stakeholders
 - Issues are assigned based on developer's expertise and other workload
 - Roadmap for upcoming releases available in redmine (See reference slides)
 - SCM
 - All releases are version controlled and tagged
 - <http://www.uscms.org/SoftwareComputing/Grid/WMS/glideinWMS/doc.prd/download.html>
 - Release notes & history
 - <http://www.uscms.org/SoftwareComputing/Grid/WMS/glideinWMS/doc.prd/history.html>
- Support
 - Entire development team is responsible for support

Quick Facts: Project Status & Communication Channels

- Project meeting: Mondays 3-4pm
 - Technical discussions & status updates
 - Regular stakeholder participation
 - Contact Parag Mhashilkar if you need invite for this meeting
- Quarterly Stakeholders Meeting
- Project Management
 - Project Status reported monthly at CS Project status meetings

Area of Interest	Mailing Lists
Support	glideinwms-support@fnal.gov
Stakeholders	glideinwms-stakeholders@fnal.gov
Release Announcements	glideinwms-support@fnal.gov cms-dct-wms@fnal.gov glideinwms-stakeholders@fnal.gov
Future Release plans	See next slide
Discussions	glideinwms-discuss@fnal.gov
Code commits	glideinwms-commit@fnal.gov Twitter Tag: @glideinwms

Tracking Releases in Redmine

1. Visit the redmine issues tab for GlideinWMS or the URL

Default tabs not too useful

2. Click custom query for stakeholder or version roadmap

Issues

#	Tracker	Target version	Status	Priority	Subject	Assignee	Updated	Labels
v3_2_10 7								
2409	Feature	v3_2_10	New	High	Support validation scripts to run periodically (not just at pilot start)	Marco Mambelli	05/13/2015 01:26 PM	OSG VO
6897	Bug	v3_2_10	Feedback	High	Partitionable glideins not accounted for correctly	Parag Mhashikar	05/12/2015 04:42 PM	OSG
7927	Feature	v3_2_10	New	High	Per-frontend unique idle job counts	Marco Mambelli	04/13/2015 04:16 AM	OSG
4904	Feature	v3_2_10	Assigned	Normal	Specify a default for GWMS_XSLT_PLUGIN_DIR	Marco Mambelli	04/01/2015 01:43 PM	OSG
4846	Feature	v3_2_10	Assigned	Normal	Include GWMS_XSLT_PLUGIN_DIR setting in generated {factory,frontend}_startup	Marco Mambelli	04/01/2015 01:42 PM	OSG
7807	Feature	v3_2_10	New	Normal	Support CONDORCE_COLLECTOR_HOST for OSG sites	Parag Mhashikar	04/13/2015 03:21 AM	OSG
8437	Feature	v3_2_10	New	Normal	Split entry configuration from main factory config	Parag Mhashikar	04/27/2015 12:13 PM	OSG, CMS
v3_2_x 12								
4587	Bug	v3_2_x	Assigned	Normal	OSG: Automate / fix HTCondor-CE issues	Burt Holzman	02/03/2015 02:44 PM	OSG
6732	Bug	v3_2_x	New	Normal	Glideins report 100% success rate even if startd fails to start/run a matched job.	Marco Mambelli	03/04/2015 04:47 PM	CMS, OSG
3203	Feature	v3_2_x	Assigned	Normal	OSG: condor-g-analyze	Burt Holzman	02/03/2015 02:44 PM	OSG

My custom queries

- Issues Awaiting My Feedback
- My Unassigned Issues
- Custom queries**
- CMS Tickets
- FIFE Tickets
- OSG Tickets
- One Facility Tickets
- Operations Tickets
- CMS Master Ticket
- Igor Sfiligoi's Tickets
- Issues Awaiting Developer Feedback
- Issues by Age
- John Weigand's Tickets
- List With Due Date
- My Open Issues
- Not Closed + Grouped by Assigned To
- Not Closed + Grouped by Target Version
- Open Bugs: High Priority
- Series v2.7.x
- Series v3.2.x
- Series v3.x
- Stakeholder Requests
- Tickets with no version
- Unassigned Tickets
- v3.2.10: Roadmap
- v3.2.9: Open Issues
- v3.2.9: Road Map
- v3.3: Road Map

GlideinWMS Releases - Key Features

v3_2_11_2 - September 18, 2015

- Bug Fix: Fixed authentication issue introduced in v3_2_11 where a glidein startd fails to send keep alive signals to v8.2.x schedds

v3_2_12 - January 2016

- Various curbs and limits triggered in the frontend are now logged in the glideresource classads
- Frontend is now more conservative while computing max request running
- Glideins now support advertising custom resources on the worker node This can be used to advertise resources like GPUs.
- Several improvements to rpm packaging. Useful frontend tools are now available in the user path.
- Support splitting of factory configuration into factory's deployment specific configuration and entry specific configuration.
- Unique idle jobs matched by the frontend is now available in glideresource classads
- Bug Fix: Fixed a bug where CCB_ADDRESS configuration for the glidein was not created correctly under certain conditions
- Bug Fix: create_frontend script now correctly populates images in the monitoring pages
- Bug Fix: gwms-logcat now correctly supports multiple users
- Bug Fix: Frontend now correctly deadadvertises glideresource classads on shutdown
- Bug Fix: Disable collector's use of shared port to support HTCondor 8.4
- Bug Fix: Counting correctly glidein and cores, specially for partitionable jobs
- Bug Fix: Fixed bug where DaemonShutdown was failing to consider dynamic slots

GlideinWMS Releases - Key Features

v3_3 rc6 - January 06, 2016

- Features, bug fixes addressed in v3_2_12
- Support configuration of EC2 spot prices and AZ
- Support frontend policies specified in external python file
- Support changes to VM ID and VM Type without need to reconfig/upgrade frontend service