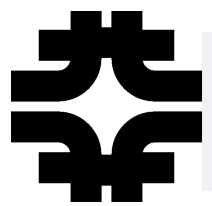


# **Glidein WMS Project Status**

**Burt Holzman**

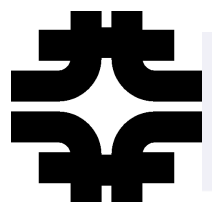
**Project Status “Virtual” Meeting**

**Feb 19, 2009**



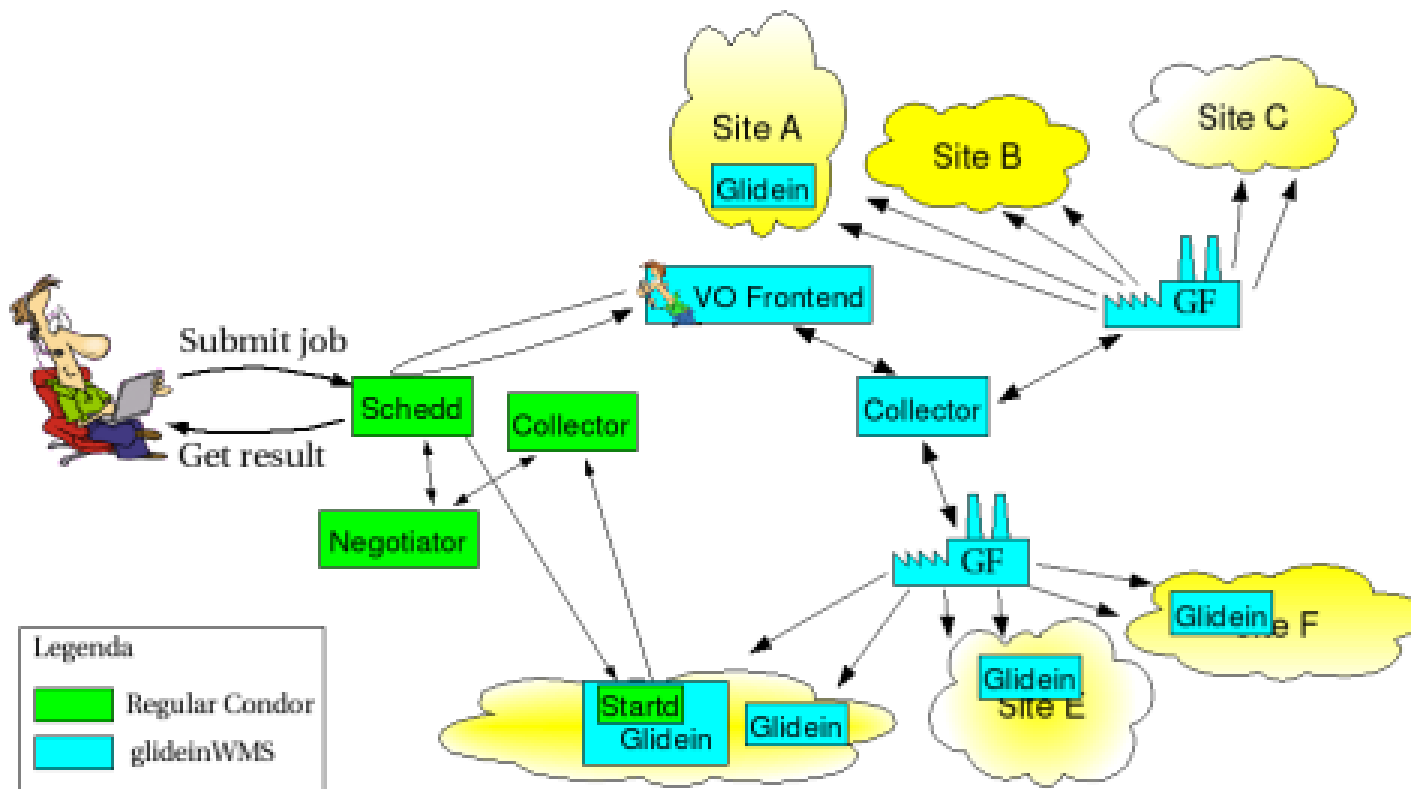
## Glidein WMS – project news

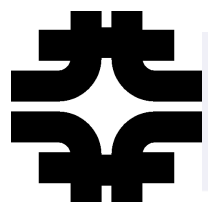
- ⇒ Dave Dykstra has joined the project as gLExec maintainer
- ⇒ CMS continues testing glideinWMS integration with analysis service (CRABserver)
- ⇒ CDF is borrowing CMS testbed resources for scale glideinWMS testing of their own
- ⇒ Will schedule 2<sup>nd</sup> quarter all-stakeholder meeting soon
- ⇒ Will schedule 3<sup>rd</sup> quarter project status meeting soon also (I've learned my lesson!)



# Glidein WMS Overview

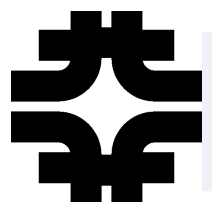
⇒ GlideinWMS: a workload management system for the grid centered around Condor's glide-in functionality





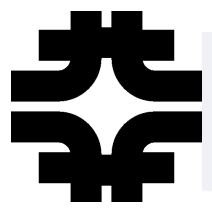
# Glidein WMS Overview (II)

- ⇒ Current release: v1.5.2 (06 Nov 2008)
- ⇒ Stakeholders: CDF, Fermigrid, MINOS, OSG, CMS
  - ⇒ Possible new stakeholder: DZero analysis (Michael Wang)
- ⇒ Current Effort (FTEs) (1<sup>st</sup> - 2<sup>nd</sup> Quarter FY09)
  - ⇒ 50% development (Sfiligoi – CMS, Mhashilkar – CD)
  - ⇒ 5% gLexec (Dykstra - CD)
  - ⇒ 5-10% project mgmt (Holzman - CMS)
- ⇒ Projected Effort (3<sup>rd</sup> - 4<sup>th</sup> Quarter FY09)
  - ⇒ 10% operational support (Sfiligoi – CMS, Mhashilkar - CD)
  - ⇒ 40% integration/hardening (Sfiligoi- CMS, Mhashilkar – CD)
  - ⇒ 5% gLexec (Dykstra - CD)
  - ⇒ 5-10% project mgmt (Holzman - CMS)



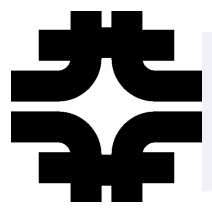
# Glidein WMS – current requirements

- ⇒ Documentation (CDF, CMS, Fermigrid)
  - ⇒ Contribute to “operations manual”
  - ⇒ Improve existing installation documentation, organization
- ⇒ glideinWMS extension: serve multiple VOs (Fermigrid, OSG)
- ⇒ Improved monitoring (OSG, CMS)
- ⇒ Scales to 10k running jobs (CDF, CMS)



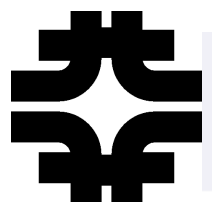
# Glidein WMS – new requirements

- ⇒ Pass multiple proxies between frontend and server (CMS)
- ⇒ gLexec subproject (OSG)



# Glidein WMS - documentation

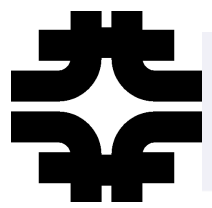
- ⇒ Effort: Mhashlikar, Tiradani
- ⇒ Review steps for operations manual
- ⇒ Improve existing documentation
  
- ⇒ Should be complete (reasonable draft) in 4-6 weeks  
(then of course iterative cycle beings with stakeholders' fresh eyes and requirements )



# Glidein WMS – multi-VO service

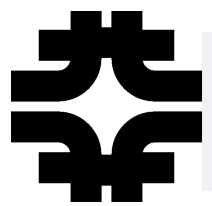
- ⇒ Effort: Sfiligoi, Mhashlikar
- ⇒ New version 2.0 cleanly separates factory and frontend duties
- ⇒ This allows a fully VO-independent glide-in factory and each VO can contribute a VO frontend
- ⇒ v2.0 is ready for release, except for monitoring (next slide)





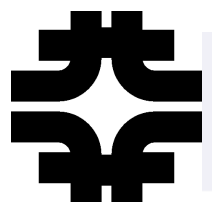
# Glidein WMS – improved monitoring

- ⇒ Effort: Sfiligoi, Mhashlikar
- ⇒ v1.x monitoring generated statically by server
  - ⇒ v1.6.3beta includes performance improvements
- ⇒ v2.x monitoring will not scale (every VO increases number monitored elements by factor of 2)
  - ⇒ Client-side monitoring in development
- ⇒ v2.0 release targeted for 6 weeks



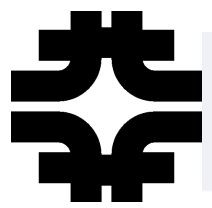
# Glidein WMS – scaling to 10k (and beyond)

- ⇒ Effort: Sfiligoi, Mhashlikar
- ⇒ Successfully tested at 11k running jobs over WAN
- ⇒ Collaboration with Condor: actively seeking new features and improvements that help scale
  - ⇒ Reduced memory footprint
  - ⇒ New security features
  - ⇒ New connection broker integrated into Condor 7.3 series (alleviates need for GCB hardware; potentially 3x increase in scale)
  - ⇒ Condor team does the coding and maintenance; we provide a testbed that reflects our “worst-case” use cases



# Glidein WMS – multiproxy passing

- ⇒ Effort: Sfiligoi, Mhashlikar
- ⇒ New requirement from CMS
- ⇒ Use case: glideinWMS operators may want to maintain a pool of pilot identities which scales as the number of glideinWMS users. Otherwise, a single pilot identity will get deprioritized at destination sites using fairshare.
- ⇒ Proof-of-principle tested; requires minor code change
- ⇒ Integrated and tested in 2 weeks



# Glidein WMS – gLExec subproject

- ⇒ Effort: Holzman, Sfiligoi, Dykstra
- ⇒ Integrating orphaned gLExec project from VO Services project; in transition
- ⇒ Essentially in maintenance mode, minimal effort
  - ⇒ Maintenance may require more effort than “minimal”; after transition, project mgmt will evaluate
- ⇒ New requirements will also drive requests for increased effort