

WP4: Monitoring and Usability

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BigPanDA Workshop @ ANL, 2014-03-06

- Documentation, Jira, SVN and Git updates, logo
- BigPanDA monitoring package, requirements
- Monitoring deployment model, instances, APIs
- SW installation
- Progress on the production instance



Documentation

- BigPanDA monitoring
 - ✓ **BigPanDAmonitoring**
 - ✓ **BigPandaHTCondorAPI**
 - ✓ **BigPanDAmonitoringEnvProd**
 - ✓ **BigPanDAmonitoringDevelopers**
- BigPanDA instance installation
 - ✓ **BigPanDAinstanceInstallation**
- Issue tracking: Jira
 - ✓ **<https://its.cern.ch/jira/browse/BIGPANDA>**
 - ✓ **<https://its.cern.ch/jira/browse/ATLASPANDA>**
- Code versioning
 - ✓ SVN: updated structure of pilot and bigpandamon repositories
 - ✓ Git: brand new project on GitHub
 - <https://github.com/PanDAWMS>**

New PanDA logo



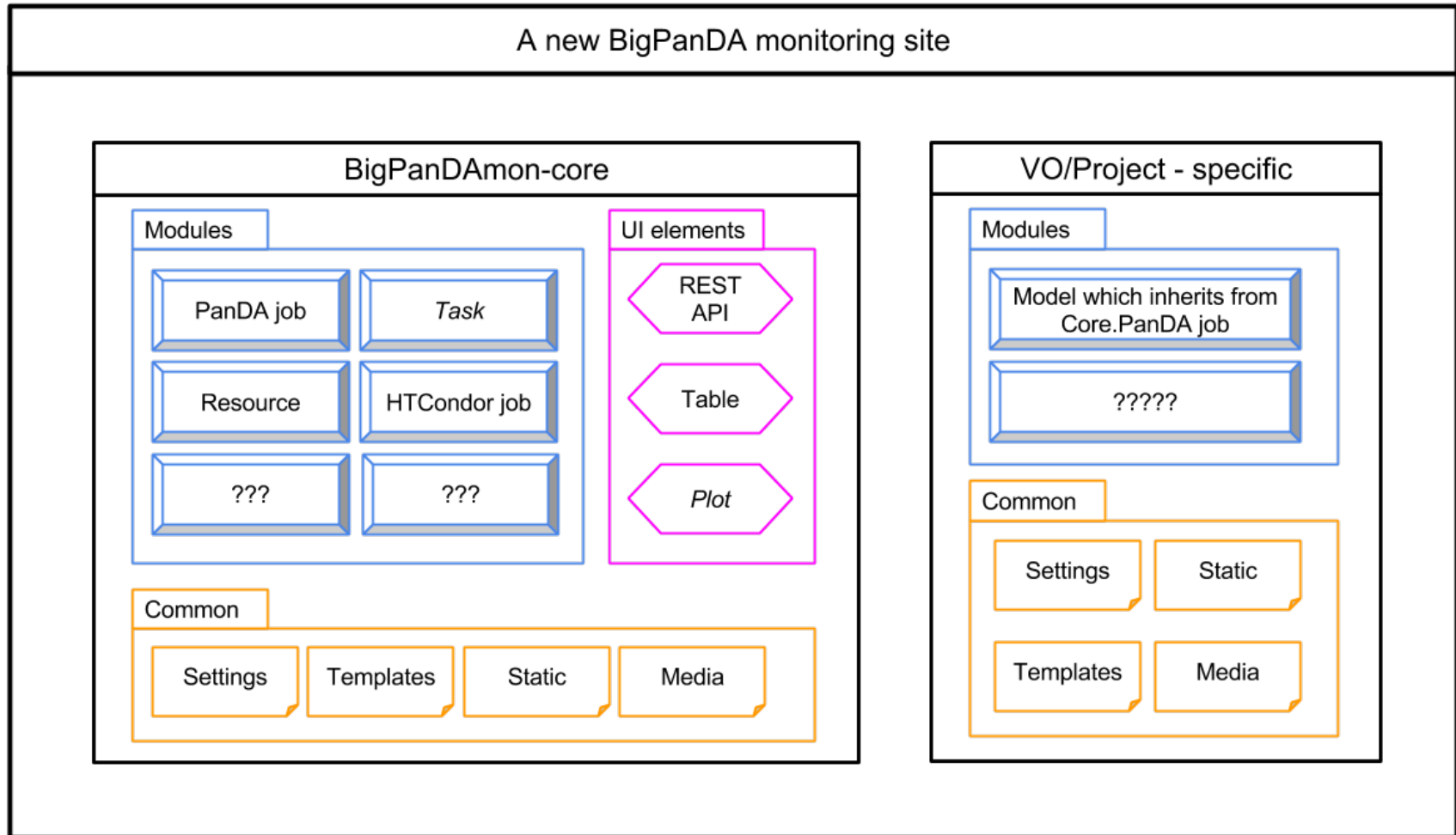
Thanks to Lisa Selwitz

BigPanDA monitoring package

- Modular, easy to bring up a new project/VO
- Clear separation between data access and visualization
- Runs on top of Oracle or MySQL DB backends
- Comes with documentation for developers
 - Describes configuration and modules
- Deployed with RPMs
- Recently refactored to ensure modularity and multi-developer collaboration

<http://pandawms.org/bigpandamon/>

BigPanDAmon modules structure



https://twiki.cern.ch/twiki/bin/view/PanDA/BigPanDAmonitoringDevelopers#Modules_structure

Emerging BigPanDAmon family

➤ ATLAS

- ✓ PanDA job monitoring (Jarka)
- ✓ ProdSys2 UI (Misha, Dmitry, Stavro)
- ✓ Intelligent networking UI (Artem)

➤ Other projects/VOs

- ✓ Large Synoptic Survey Telescope monitoring
- ✓ HTCondor monitoring
 - testbed: <http://pandawms.org/htcondortest/htcondorjobs/#>
 - ✓ Friendly collaboration with Todd Tannenbaum of the HTCondor team
 - ✓ Fruitful collaboration with Peter Love: leverage mature backend proven in apfmon, use BigPanDAmon visualization

RPMs

- PanDA ecosystem grows, need to standardize deployment process for the components of a PanDA instances
 - ➔ Refrain from “svn up” updates, provide RPMs
 - ✓ PanDA server
 - ✓ BigPanDAmon family
- Using python distutils
 - Currently manual build, distribution via CERN AFS
 - In progress: adopting build system of Dashboard/COSMIC using Koji at CERN
 - Automatic tagging, pylint & jslint code check
 - RPM repository to be available

OASIS

- OASIS: cvmfs for OSG
 - SW distribution to grid WNs

- LSST OASIS
 - ✓ OASIS account available
 - ✓ Test to cache a dummy file was successful
 - ✓ Ready to test real SW installation as provided by LSST experts and deployment/access on WNs

BigPanDA instance update

- PanDA server: panda-server-mysql-0.0.1
- BigPanDA monitoring: bigpandamon-core-0.0.2, -atlas-0.0.2, -lsst-0.0.1
- APF2 instance with standalone proxymanager installed
 - ✓ Pilot wrappers submitted with **users' proxy**
 - Proxy delegation via myproxy server
- Successfully submitting LSST jobs to BNL opportunistic resources
 - ✓ Submission of a LSST pipeline stream from the pipeline admin interface
 - ✓ Pipeline communicates with BigPanDA-Pipeline IF
 - ✓ Job is inserted into the BigPanDA DB
 - ✓ Pilot runs on a WN, picks up job from PanDA, and executes the payload
 - TODO: adapt pilot to enable input-/output-less jobs
 - ✓ Payload communicates with a web service to talk to pipeline

Thank you for your attention!



BigPanDA Monitoring and Usability
J. Schovancová and T. Wenaus
BigPanDA workshop, 06 March 2014

Backup slides

Mockup of the User activity page

Mockup of BigPanDA monitoring

PanDA ▾

Help ▾

List of jobs

List of jobs

Owner	PanDA ID	Status	Created	Modified	Start	End	Site	Prio
Jaroslava Schovancova /lsst	1999	holding	Feb 20, 23:04	Feb 20, 23:16	Feb 20, 23:05	Feb 20, 23:16	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1998	holding	Feb 20, 22:02	Feb 20, 22:13	Feb 20, 22:02	Feb 20, 22:13	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1997	holding	Feb 20, 21:48	Feb 20, 22:01	Feb 20, 21:49	Feb 20, 22:01	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1996	holding	Feb 20, 21:23	Feb 20, 21:37	Feb 20, 21:26	Feb 20, 21:37	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1995	holding	Feb 20, 21:18	Feb 20, 21:29	Feb 20, 21:18	Feb 20, 21:29	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1994	holding	Feb 20, 21:14	Feb 20, 21:26	Feb 20, 21:14	Feb 20, 21:26	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1993	holding	Feb 20, 21:04	Feb 20, 21:15	Feb 20, 21:04	Feb 20, 21:15	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1992	holding	Feb 20, 21:00	Feb 20, 21:13	Feb 20, 21:02	Feb 20, 21:13	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1991	holding	Feb 20, 18:44	Feb 20, 18:56	Feb 20, 18:44	Feb 20, 18:56	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1990	holding	Feb 20, 18:33	Feb 20, 18:44	Feb 20, 18:33	Feb 20, 18:44	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1989	holding	Feb 20, 18:29	Feb 20, 18:43	Feb 20, 18:32	Feb 20, 18:43	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1988	holding	Feb 20, 18:24	Feb 20, 18:36	Feb 20, 18:25	Feb 20, 18:36	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1987	holding	Feb 20, 18:21	Feb 20, 18:32	Feb 20, 00:00	Feb 20, 18:32	ANALY_BNL-LSST	2000
Jaroslava Schovancova /lsst	1986	holding	Feb 20, 18:17	Feb 20, 18:29		Feb 20, 18:29	ANALY_BNL-LSST	2000

<http://atlas.pandawms.org/job/list/>

Mockup of the job details page

Mockup of BigPanDA monitoring PanDA Help

Job details PanDA ID 1999 [List of jobs Job 1999](#)

Owner/VO	PanDA ID	Status	Created	Modified	Start	End	Site	Prio
Jaroslava Schovancova /lsst	1999	holding	Feb 20, 23:04	Feb 20, 23:16	Feb 20, 23:05	Feb 20, 23:16	ANALY_BNL-LSST	2000

Time in UTC.

Transformation	http://pandawms.org/pandawms-jobcache/lsst-trf.sh
Trans exit code	0
Creation host	ec2-107-20-186-95.compute-1.amazonaws.com
Modification host	slot1_4@acas1304.usatlas.bnl.gov
Pilot ID	http://pilots1.pandawms.org:25880/2014-02-20/ANALY_BNL-LSST-gridgk01/13874.1.out gridgk01.racf.bnl.gov#5645482.0#1392937505 Condor PR SULU 58g
Batch ID	gridgk01.racf.bnl.gov#5645482.0#1392937505
Scheduler ID	BNL-bigpanda-jschovan
Pilot error message	lsm-put failed (202): [202] File srm://dcsrm.usatlas.bnl.gov:8443/srm/managerv2?SFN=/rucio/NULL/0a/d2/2a943d68-cb15-4fba-ab6c-537138adfdaf.job.log.tgz does not belong to storage element (/pnfs/usatlas.bnl.gov/)! Log put error: lsm-put failed (202):

<http://atlas.pandawms.org/job/1999/>