

# Developer Meetings

- - April 2019
    - April 12th 2019
  - March 2019
    - March 29th 2019
    - March 1st 2019
  - February 2019
    - February 22nd 2019
    - February 1st 2019
  - January 2019
    - January 25th 2019
    - January 18th 2019
  - December 2018
    - December 13rd, 2018
  - November 2018
    - Nov 29th, 2018
    - Nov 1st, 2018
  - October 2018
    - Oct 12th, 2018
    - Oct 5th, 2018
  - September 2018
    - September 28th, 2018
    - September 21st, 2018
  - August 2018
    - August 24th, 2018
    - August 17th, 2018
    - August 3, 2018
  - July 2018
    - July 27th, 2018
  - June 2018
    - June 29th, 2018
    - June 22nd, 2018
    - June 8th, 2018
  - May 2018
    - May 4th, 2018
  - April 2018
    - April 6th, 2018
  - March 2018
    - March 30th, 2018
    - March 16th, 2018
  - February 2018
    - February 23th, 2018
    - February 9th, 2018
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April 2019

April 12th 2019

- Pegasus 5.0

- Site Catalog Conversion to YAML
    - mukund is mainly done
    - pushed out his changes
    - trying to make the tests green
  - Checkpointing changes to accomodate LIGO use of vanilla universe
    - Karan and Mats will explore and see if it is possible
    - cumulative stdout/stderr
      - what about time and duration values
      - since there is no DAG Node retry and job just goes on HELD state
  - Composite Events
    - Kibana dashboard needs to be updated
    - dropping \_\_\_ in the event names
    - George wants the AMQP library updated
      - Will create a JIRA item
  - Office Hours video
    - Karan will work Jasmine to upload the video
- Papers
  - RACE Paper submitted last week
  - PEARC Paper this week
- Proposals
  - Army Research
    - enabling in-situ supports for ExaScale
    - linked with what Tu is doing
  - SCEC Proposal Submitted
    - have a good chance
  - Exascale one with Michigan
    - the call will come out soon
  - Ewa , Rafael and Deborah
    - NSF GCR Proposal
    - Modelling wild fires
    - Has PRICE school input and also Deborah Post DOC
- ESscience
  - Pegasus Tutorial Proposal
  - May 6, 2019: Tutorial Proposal Deadline
  - Also trying for the workflow comparison paper
  - Dynamo paper by George
- Pegasus connect discussion
  - tabled it for later when Mats is around
- HTCondor Week
  - Karan will be doing a Pegasus talk and Pegasus workshop
- Pegasus OLCF Poster
  - combine the panda poster
  - can also submit to ESscience
- Ryan's work
  - Loic is moving pachyderm setup to AWS
- Loic Rafael and Tu are working on a paper for Cluster
- Software X

## March 2019

### March 29th 2019

- 4.9.1 Release
  - done and working on 4.9.2
- Site Catalog Conversion to YAML
  - mukund working on it
  - i still need to look at the bamboo tests
    - bamboo failing on mount scratch thing that condor thing
    - we have to fix in pegasus also. to fail on credentials in /tmp
    - check and do condor\_config\_val on the key and check if /tmp is in there
    - mainly affects all the users that use x509
    - LIGO has also tripped over it . Both with Pegasus and without Pegasus
- Condor vanilla checkpointing
  - karan asked him about what he is trying to do
- composite events
  - check for keys with same values
  - also do we need to pad extra keys for all events?
- Extensions to Jupyter Integration
- Pegasus Connect
  - will discuss on whiteboard on April 12th

### March 1st 2019

- 4.9.1 Release
  - moving it to early next week
  - Pending Issues
    - <https://jira.isi.edu/projects/PM/versions/11891>
    - Execution environment for titan
    - service dependencies
      - PyOpen SSL
        - [Rajiv Mayani](#) please look at that and the flask dependencies
  - HPSS transfer client incorporation
    - Set the transfers to do remotely
- Office Hours
  - On Friday March 22nd on real time monitoring
- transformation catalog for 5.0
  - Mukund will work on it next
- EScience?
  - Paper
- pegasus-exitcode test
  - success message not parsed correctly
- Programmer
  - will interview the

## February 2019

### February 22nd 2019

- 4.9.1 Release
  - Pending Issues
    - <https://jira.isi.edu/projects/PM/versions/11891>
    - This raises the larger issue of how long we want to support externals packages

there are some packages we need to ship because of worker packages dependencies.

Consensus:  
We remove mysql python externals package for 4.9.1 and 5.0.0

And also remove the dependencies from our deb and RPM builds.

    - Transfers within containers
      - We are only going to transfer from within the container till people complain
      - [George Papadimitriou](#) will add to the documentation.
    - non ascii encoding in the stdout
  - Support HPSS storage
    - The tools we use are htar and hsi

<https://docs.nersc.gov/filesystems/archive/>
- Office Hours
  - George on real time monitoring.
    - Date?
- EScience?
  - Paper
  - Tutorial submission

### February 1st 2019

- 4.9.1 Release
  - ascii encoding breaks while parsing for monitoring events. monitors should have the population working and have log a warning error.
    - but we should ensure that stdout in database still gets populated
    - Karan will fix this
- New TC Format
- Shifter Support in Pegasus
  - is in 4.9 branch
- Pegasus Annual Report
  - will be working on it in coming weeks
  - will ask for input
  - next year report will be tricky . in terms of effort allocation.

## January 2019

### January 25th 2019

- 4.9.1 Release
  - ascii encoding breaks while parsing for monitoring events. monitors should have the population working and have log a warning error.
    - but we should ensure that stdout in database still gets populated

- YAML format for the TC
  - the line numbers should be mentioned in the errors
- GitHub commits don't trigger bamboo builds right now
  - move to webhooks?
  - slack token in bamboo.yml .
    - mats will look into it further
- SCEC for HPC Transfer certificate issue
  - Globus online certificates messed up hpc-transfer issue.
- Data Storage at NERSC
  - almost full
- Singularity container with the entry point.
  - docker singularity container conversion does not add the entry point.

## January 18th 2019

- 4.9.1
  - container execution
    - data transfers happen within the container
    - python3 issue
    - vague rules to discover what python to use
  - Singularity HUB URL's updated
    - Documentation and tutorials need to be updated
    - montage examples
    - python stuff: create JIRA item
  - LIGO pull requests
    - Build pull request
    - PAM module
    - subprocess package thing
    - also related to Python3 movement
- Transformation Catalog Implementation
- Astro Py
- Shifter support at NERSC
- Panda Integration
- CENON NT
  - Rusio data pull in
  - fetching data might be easier
- Journal Paper
  - need to write something about containers

## December 2018

### December 13rd, 2018

- Pegasus 4.9.1 release
  - local site catalog entry creation
    - based on the pegasus version on the submit host
  - encoding issue in the stdout.
- Pegasus 5.0 Release
  - TC yaml implementation
    - mukund will create a yaml schema compatible with the TC
  - backwards compatibly
    - case by case basis
    - definitely for
      - catalogs
      - dax
      - pegasus-transfer
- SWIP Paper
  - we are in good shape
- Titan
  - under the PBS batch gahp.
- ZTF
  - the pipeline is based on docker-compose
  - peter will visit ISI with postdoc Danny in January
- Tutorial at TACC
  - karan has updated pegasus-init to work on wrangler
  - will update the tutorial notes accordingly
- OLCF accounts
  - make sure they work
  - get karan and mats can login

## November 2018

## Nov 29th, 2018

- Ryan
  - working on comparison paper with george on workflow systems
  - mats, karan shared neon meeting notes with Ryan
- Pegasus 4.9.1 release
  - Due for december end
  - potential issue in monitord in reference to hierarchal organization of submit directories
  - pegasus-submitdir
- ADASS Paper
  - due tomorrow
  - need to add information about sample run
- SWIP paper
  - mats and karan will work on it tomorrow afternoon.
  - cull out sections
  - add information about updated monitoring in 4.9
- OLCF Kubernetes
  - Condor is installed and configured as root
  - George tried condor log directory to lustre as condor in container has to run as user not as root
  - LOG\_DIR should be /tmp
  - volumes can be attached to container to contain workflows etc
- Dynamo
  - Do dynamic scheduling
  - George thinking of using flocking
  - similar to what is done in OSG
  - non-sharedfs deployments should work

## Nov 1st, 2018

- Pegasus 4.9.0 and 4.8.5 Released
  - We released it this week.
- Pegasus Business Card
  - Advocate for job postings.
    - Postdoc options
    - Programmers
    - [pegasus.isi.edu/jobs](http://pegasus.isi.edu/jobs)
  - We should take to conferences with us
- Pegasus JAVA 8 dependence in RPM
  - there is a disconnect between RPM and common.sh
- ADASS
  - Karan working on a wpipe demo example
- New Student
  - Mukund
- Duncan started using 4.9.0 and has updated pyCBC to use singularity
  - changed our container execution model
  - all transfers done within the container now.

## October 2018

### Oct 12th, 2018

- Rescheduling meetings
  - New time is Thursdays 2PM starting from last week of October
- DAX API reporting
  - Perl DAX API - Rajiv
- Atlas visit
  - Wednesday we have Scientific Computing Seminar
    - Will involve writing a Pegasus code generator
    - Panda is second biggest after Condor on OSG
  - Thursday
    - Karan and George will be there.
    - Mats might be available remotely
- 4.9.0 Release
  - Mats preference is to skip the beta tag
  - Aim for the full release
  - Documentation freeze on Oct 26th
  - Try and do the builds over the weekend
- Duncan container usecase
  - cvmfs hosted container images
- Demo repository
  - panorama data and some runs from exogeni / nersc
  - Mats has two new elastic search VM's and are part of Elastic Search cluster
  - these vm's data is backed up also

## Oct 5th, 2018

- Rescheduling meetings
  - Either Tuesday or Thursdays
    - Karan will circulate a doodle poll

## September 2018

### September 28th, 2018

- Rescheduling meetings
  - Either Tuesday or Thursdays
    - Karan will circulate a doodle poll
- Pegasus 4.9.0 Release
  - transformation selection issue
    - karan has not been able to recreate it yet.
    - will look into it more today
  - docker singularity pulls
  - container symlink
  - deprecate api's
    - modify DAX generators to indicate version/ DAX API used.
    - will look into ways on how to do it
      - one way is workflow metadata attributes
      - second is attribute to ADAG object.
    - rajiv will check how it gets stored in the metrics server
- ADASS
  - will try and do a poster with Mike at ADASS
  - deadline is Oct 8th

### September 21st, 2018

- Rescheduling meetings
  - Either Tuesday or Thursdays
- Pegasus 4.9 release
  - integrity error reporting
    - pegasus-statistics reporting information about integrity errors
    - the unicorn dashboard for internal swip purposes
      - errors are appearing in the stream
      - more brainstorming required. the data is there
      - not clear whether to use grafana or kibana
        - does not have drill down functionality
        - mix of production and test workflows
        - create different queues in AMQP exchanges
  - container mount point support
    - karan is close to have that being implemented
  - transferring outputs to multiple location
    - lets say one for portal and the other for
    - list of output sites
    - good feature to add for 4.9.1
    - update --output-site option to pegasus-plan
  - pull docker images for singularity runs
    - we should do for 4.9.0
    - planner needs to tell pegasus-transfer an extra attribute.
      - add a type attribute
  - Papers
    - Github private papers repo
  - Deprecate stuff
    - perl api
    - old catalog formats
    - pegasus-plots
  - Hiring
    - <https://docs.google.com/document/d/183dkYBZ6Cp6aYDB5MGW8Dj1DbzR11UnLPYdW7luZIA/edit>

## August 2018

### August 24th, 2018

- Pegasus 4.8.4 Release
  - when are we releasing?
    - next week before mats go on vacation
- error tagging



- update stampede schema to add a table called tags
- will allow us to capture number of integrity errors

## August 17th, 2018

- Pegasus 4.8.4 Release
  - RPM fix ?
  - mats will manually verify
  - Karan should follow up with Stuart
- AMQP filtering
  - we are working on having filtering in built into monitor
  - nepomunk already has 33 errors identified
  - we need to db connection, pegasus-db-admin and other tools to pass properties with pegasus property prefix stripped off
- SWIP Paper
  - one reject seems to be harsh
  - we can try for HPDC also

## August 3, 2018

- Pegasus 4.8.3 Release
  - singularity fix
    - <https://pegasus.isi.edu/tutorial/isi/index.php>
  - mats talked to adam at nebraska about containers.
  - the main doc book will not be updated for 4.9
- SLURM
  - Design Safe / TACC on Wrangler headnode
  - Nextflow has integration with SLURM and everything can be installed in user space
- PMC unit tests are broken
  - lets fix the tests
- Pegasus 4.9 release
  - more real life runs
  - nepomunk against ceph-s3 from one of uchicago machines
  - we need to get stats reported for integrity errors
    - larger issue of error classification
- ADASS Tutorial
  - we got into second round
    - add on exercise to run montage in the end.
- LIGO
  - Bruce group at AEI Hannover has left LSC
- Infrastructure
  - HipChat mess
    - should we move to ISI Slack
  - Public Chat feature
    - Some clients for Hipchat
  - Get a free channel from Slack
    - for all Hipchat rooms
    - what about ISI slack??
  - Github removal of old integrations
    - moving email notifications . [Rafael Ferreira Da Silva](#) will take care of it
    - we need to explore
- MINT Meeting
  - went well overall
  - issue of scoping .

## July 2018

### July 27th, 2018

- Pegasus 4.8.3 Release
  - VM Tutorial
    - will update pegasus-init requirements to get it working
    - main tutorial chapter will be updated for 4.9
      - because then tutorial based container may not work
  - change how docker scripts set environment
  - SCEC database loading error
- Failing Tests
  - Issue in updates to the dashboard database
- Panorama Paper
  - agreed on a re-organization

## June 2018

## June 29th, 2018

- Pegasus
  - 4.8.3 needs to be released because of singularity launching options
    - will wait till tutorial is updated.
    - karan will update pegasus-init with population modeling or povray option
  - 4.9
    - pegasus-statistics updated with integrity metrics
    - how to flag job errors because of integrity
      - need to figure out logic
      - value add proposition
      - maybe we should value type in the pegasus lite
    - need to implement the integrity dial
  - Start creating default local site entries to execute without local site
- ADASS Tutorial
  - Will submit today
  - Google doc shared

## June 22nd, 2018

- Pegasus
  - SWIP paper submitted to escience
  - 4.8 montage tests failing
  - changes for integrity metrics in pegasus-transfer
  - updated monitord to parse events from various sources like pegasus lite output
  - mats pointed out to a bug in monitord
- LIGO
  - pip for python source package
    - update dependencies for latest packages , like pyopen ssl
    - install in the pip repository
  - pegasus-analyzer
  - interested in swip and containers.
- SCEC CSEP
  - will use containers
  - run on Comet
- 1000 genome workflow or use chimerica workflow
- ADASS Tutorial
  - montage ?
  - probably pycbc is also submitting a proposal

## June 8th, 2018

- Scott Replica Catalog issue
  - Replica Catalog deletes take a long time
- Bamboo
  - bamboo emails are no longer received. so we dont come to know about workflow plan failures
- SWIP
  - monitord integrity changes. population of data from ks records working now.
  - we still need to populate data from pegasus lite records and pegasus-transfer
  - pegasus-statistics need to be updated
  - 0.1% overhead on production osg gem workflow
- Pegasus deployment at ORNL
  - we should be doing it similar to hpc-pegasus
- Pegasus Office Hours
  - next one in August
  - travels in July

## May 2018

### May 4th, 2018

- Pegasus 4.8.2 Release done on May 3rd
- we should consider separate user data to a separate file on pegasus-wms
- si2 meeting updates
  - some potential new users
  - ewa slides were a good overview summary
  - integrity data schema changes.
  - monitord changes need thinking

## April 2018

## April 6th, 2018

- Pegasus 4.8.2 Release
  - PMC bugs
  - tutorial for usc hpc
  - no longer allow + or . in the names
- Pegasus Report
  - Submitted for Ewa' review
- SWIP test run
  - discovered integrity errors in the wild
  - at colorado and university of nebraska
    - we would have not caught it before
  - e-science paper

## March 2018

### March 30th, 2018

- SWIP
  - pegasus-run issue, with wf restarting from scratch
    - because dagman rescue file is not there.
    - so should we update pegasus-run to look at the dagman.out file
      - so far we think it should be kept consistent with normal dagman behavior
      - to be discussed at condor week
  - mats created a Jira item for swip related statistics
    - <https://jira.isi.edu/browse/PM-1260>
    - will involve a database schema.
  - Things remaining
    - Dials to be implemented
    - stampede changes
    - pegasus-transfer changes???
- SC Tutorial Submission ( April 16th)
  - <https://sc18.supercomputing.org/submit/tutorials-submissions/>
  - We should try and add exercises for containers
  - We will try for half day
    - 45 minute introduction
  - Feedback from Arizona Container Camp
    - There is interest.
  - coming up with an existing application that people understand or can relate to
    - montage - complex dax generator
    - rosetta
      - only works in nonsharedfs stuff
      - with
    - machine learning example?
      - with tensor flow?
      - requires container
    - NVIDIA has a lot of examples about machine learning
      - has to be multistep
      - and at least bag of tasks
    - Ashwin is doing some tensor flow stuff
      - on workflow.isi.edu
      - is working out of jupyter notebook
    - Genome sequencing workflows??
      - use Broad GATK sequencing workflow to use
      - SOYKB and IRRI use GATK
      - and are huge communities
    - <http://biocontainers.pro/docs/101/running-example/>
- Pegasus Report
  - we should be resolve Jira items as we fix them
  - will be also doing cumulative statistics
- Pegasus Office Hours
  - Jupyter Notebooks
  - will update the example to use namd example used for Oakridge
- Panorama Stuff
  - our multiplexing part in monitord done so far
    - however we are relying on amqp queues and routing keys for filtering
  - darshan data population
    - we need to invoke a script (pegasus-darshan) that will be invoked in the namd wrapper script, to pull the data from darshan logs on the file system and generate an ASCII output
  - Panorama.isi.edu VM
    - AMQP
    - Logstash
    - Kibana
    - Elastic Search
      - Make it do a backup every so often.

- Warns against doing it as a permanent datastore
    - Rajiv will verify
  - Influx
- Backups
  - CRASH PLAN backup for the /srv and /opt in the panorama VM
- LIGO Database locked issues
  - we need to look into the locking issues by tinkering with monitord flush intervals

## March 16th, 2018

- SWIP
  - Most of the SWIP stuff is done as far as planner changes and getting the workflows running
  - we are in a position to share something
  - To do
    - sharedfs
    - Dial implementation
    - Update monitoring
    - Paper submission for EScience
- Pegasus Reports
  - new applications to attribute to pegasus grants
  - all the mike wangs work will go here
  - SCEC
  - LIGO - need to ping Duncan
- Panorama/ Pegasus workflow endpoints
  - We seems to be going towards AMQP
    - How is AMQP going to be configured
    - So far we have
      - `amqp://[USERNAME:PASSWORD@]amqp.isi.edu[:port]/<exchange_name>`  
Online monitoring in kickstart
      - `amqp://[USERNAME:PASSWORD@]amqp.isi.edu[:port]/<virtualhost>/<exchange_name>`
    - Virtual Hosts
      - right now virtual host is hardcoded in monitord code. we set it to pegasus
      - global - across workflows
    - Exchanges
      - should be global across workflows
      - type direct - in panorama
      - we want them to be type -> topic instead
    - Queue
      - in panorama different queues for each workflows
    - Routing Keys
      - the routing key should be based on stampede event names
    - Events populated
      - [https://pegasus.isi.edu/documentation/stampede\\_wf\\_events.php](https://pegasus.isi.edu/documentation/stampede_wf_events.php)
      - We should add periodic events about states of workflows
      - SWIP integrity error events will be populated by clients

## February 2018

### February 23th, 2018

Eliminate support for Py2.6?

Python Dependencies

All - future

pegasus-service - [Flask](#), [SQLAlchemy](#), [Flask-SQLAlchemy](#), [Flask-Cache](#), [pam](#), [plex](#), [pyOpenSSL](#), [orderdict](#)

pegasus-monitor - [SQLAlchemy](#)

pegasus-analyzer - [SQLAlchemy](#)

pegasus-s3 - [boto](#)

pegasus-globus-\* - [globus-sdk](#)

pegasus-init - [jinja2](#)

pegasus-metadata - [argparse](#)

pegasus-em - [requests](#)

PostgreSQL - [psycopg2](#)

MySQL - [MySQL-Python](#) OR [mysqlclient](#)

**Note:** Packages in green are available from yum.

## February 9th, 2018

- SWIP
  - checksum computation will be implemented in pegasus-transfer.
    - allows us to handle the case where the input files don't have checksums in the RC
  - integrity checks are disabled now for files that dont have checksums in the RC
  - dial knob
- Tests
  - seem to be slow
  - bamboo could be moved to the new server
  - storage constraint test
- Lizard FS
  - Mats will give an update next time around
- Servers
  - Trying to do two server
  - IF we buy one server
    - Buy a storage server. That is Mats preference.
    - SoyKB workflow has
  - Compute
    - we will get a compute server first.
  - We should figure out the server and put in the request soon, and done by Feb end
- LSST
  - Tom Glanzman?
  - We will touch base on Monday with Tom and Nersc folks
- Office Hours today
  - have a presentation on containers
  - will upload on the website

## January 2018

### January 12nd, 2018

- AWS Batch
  - seems to be running in karan's account.
  - update documentation about aws batch
- Pegasus 4.8.1 Release
  - upto Mats whether we should tag or not.
- Pegasus Office Hours
  - Rafael will look up a new name
  - Container Presentation
    - Talk about containers
    - Blue Jeans
  - Advertising avenues
    - XSEDE workflows list
    - OSG List

## December 2017

### December 1st, 2017

- AWS Batch
  - Client done. still have to figure out about stdout and stderr
  - maybe we should have batch push the files and control where the jobs go in
  - also maybe each file should go to it's own stdout stderr
- Metrics for SWIP
  - Stampede
  - Metrics Server
  - Elastic Search
- Rajiv working on changing the salt configuration
- Model Integration with Wings

## November 2017

## November 10th, 2017

- Pegasus
  - AWS Batch
    - checked in stuff
    - jars checked in aws sub directory in the jars folder. pegasus-config classpath is updated accordingly
  - Bamboo builds
    - change in how users are handled
    - rajiv and mats worked on changing the salt configuration for the various machines
      - the major part changed was how the users are handled
      - the bamboo user got messed up and uid's were mismatching on the filesystem
      - main group for people unix accounts should be pegasus for everybody
      - only project users will have access to VM's for a particular project
  - Stewie Rebuild
    - move off stewie. the main OS needs to be updated
    - panorama
      - Rafael and Geroge will create a VM for panorama
        - CENTOS 7
          - mats will help George create VM
        - Ashwin consumers from Influx DB
    - mysql server
      - Pegasus metrics server
  - JSON vs YAML
    - initial impressions seem to favor yaml
      - YAML does have benefit of including comments
      - also YAML , JSON will result in additional lines
  - templates for site catalogs
  - LSST
    - mats will update documentation for pyglidein
    - to work with condor pool passwords thing
    - also will take mike site catalog to update NERSC entries
  - tests
    - rosetta and montage appear working again. not clear what triggered errors in first place
- SC Next week
  - Rafael and Karan are away
- AWS workshop for LIGO
- George Panorama work
  - Dakota ends up launching multiple Pegasus workflows based on it's gradient functions
  - using ensemble manager to do multiple runs
  - George will check in dakota test case and example
    - pick one approach and update documentation
  - SWIP Demo
    - think about merging stuff from panorama back to production branch
- work with ian foster and raj kettimutt on globus online
  - do multi site run
- Tudo
  - working on insitu
  - data spaces approach to have staging area
  - tudo wrote sample applications
  - evaluating on CORI using shared memory
  - burst buffers cannot be used
- Ashwin
  - analyzes influx db data
  - using statistical learning
  - python panda library

## November 3rd, 2017

- Pegasus 4.8.1 release
  - 3 bugs in worker package staging.
  - pegasus-transfer PYTHONHOME unset does not work
  - hierarchal workflow handling.
    - to be discussed tomorrow
- AWS Batch
  - need to check in changes.
  - need to add options for the client and do error checking.
  - still need to figure out how to integrate in pegasus

## September 2017

### September 15th, 2017

- Pegasus development
  - Dashboard

- LSST might want it running out of a directory other than \$HOME/pegasus
    - No plans to tackle it right now. requirements are vague. and catch 22 situation
  - Python problem with Pegasus install
    - DAX3 problem does not work.
    - Could not be recreated
  - PyPy account should be disabled
    - pypy has a 4.3 pegasus package
    - we should remove it
  - The jobname with dagman not allowing . is fixed
- LIGO
  - Heard from Duncan. Tried out metadata stuff
- Another person at NERSC that is interested in running Condor
- AWS Batch
  - done initial development.
  - how to retrieve logs etc.

## September 8th, 2017

- Pegasus 4.8.0 Release
  - went out this week
  - documentation
  - pyglidein
    - out of icecube
    - mats added a section in the documentation
      - pretty neat once it is setup
      - and works really well on machines with two factor
      - not tuned for MPI things.
      - on the submit machine a web based python thing.
      - pegasus resource profiles will work out of the box with pyglidein
- Releases
  - Post 4.8 Releases
    - changes in the debain build
      - source package has been renamed. mats removed the source part
      - changed the versioning of RPM and debian. The dev series will have the timestamp in it.
        - pegasus-version -f also has timestamp
    - Will create a separate YUM and DEB developer repositories
      - repositories will not be signed.
    - Mats is still playing setup
    - Worked a lot on Debian packaging.
- HipChat will be upgraded to Stride
- Mats updated JIRA today
- Sim Center Workflows
  - Using Condor IO thing
  - for 4.8.1 we should look at the remap thing
- SWIP Poster
  - the first review is really good
- Docker and Singularity
  - have stuff about engineering challenges
  - But not enough usage
  - Practical Aspect
- Von's Group SWAMP thing.
  - pegasus is part of trustworthy software thing?
- AWS Batch
  - AWS batch thing works
- Investigate how Dakota and Pegasus can work together
  1. Run Dakota as a job
  2. Run Dakota on submission machine
    - a. dakota calls a script that does a pegasus workflow
  3. Mix of 1 and 2.

## August 2017

### August 25th, 2017

- Pegasus 4.8.0 Release
  - beta3 tagged
  - monitord replay issue for rc tables against mysql server
  - Jupyter thing
    - VM updated with Jupyter
  - Docker example application
  - R builds with pegasus
    - for time being only brew builds have that disabled.
    - Condor update to the brew installation.
- Pegasus 4.9 Roadmap
  - SWIP

- lay out the changes
      - prioritize stuff for production readiness
      - the knob for integrity.
      - get into transfers.
      - signing stuff on the backburner.
    - chaos monkey tests
  - metadata things
  - aws batch support
- Pegasus Tutorial
  - George felt that Pegasus tutorial was a bit too easy.
  - it should be maybe more interactive. get the user to develop a new workflow
- Tudu will pick up Decaf work
- Dataspaces
  - do data management
- Ashwin will work on deep learning on panorama
  - use tensor flow
- Dakota
  - ini file . runs simulation and converges simulation points
  - George will be working on it
  - has a checkpointing facility

## August 18th, 2017

- mats found a new hydrology user in boulder
  - based at Boulder
  - there was a magpie presentation there.
  - mats did a hosted ce tutorial
- 4.8.0beta2 release
  - tagged and sent it out.
- monitor workflow and read permissions creation
  - should only when the database is created.
  - ~/.pegasus directory should be 755
- dashboard errors
  - rajiv should traverse the directory in the dashboard.
- LSST
  - cleanup issue
    - mats and karan agree on it, that it is bad application
    - we should reply to it.
    - the wrapper should copy the file and launch the job
- source a setup a script for jobs
  - has to be generically done
- registration jobs shell expansion
  - we should not do getEnv=True
- testing repo
  - stuart from LIGO asked for it.
- BOSCO
  - we have the examples updated
- Karan will remind Eliu about LIGO and Bluewaters
- Slick Jupyter Demos
  - Started up VM's
- Jupyter tutorial
  - should be integrated into the VM

## August 11th, 2017

- Bamboo is finally green
- we will do a Pegasus RC1. actually a beta since we still want to address some issues.
- Rajiv fixed the build with python crypto issues
  - pyopen-ssl was updated during 4.7.x series
  - we should package only things that we are not sensitive to the versions
  - so right now pyopenssl is removed from binary builds, and all associated dependencies were removed.
- New throttling things.
  - number of jobs scale with the size of the workflows.
- SCEC all hands meeting.
- Documentation
  - Took a stab at the containers.
  - Rafael has to add a separate jupyter chapter
  - Karan will update the throttling docs
- LSST
  - Mats and Karan had a call with Tom about designing a workflow for one of the production pipelines
  - Mats and Rafael had a call with the French cluster folks (Fredrique Sutter). Fredrique works for simgrid
- Paper
  - rvGAHP paper ready for submissions
- Suraj Poster
  - Mings pass really helped



# July 2017

## July 21st, 2017

- VMs are down, so tests are slow, and cannot test the new features yet
  - Mats will send an email (or call) Derek to check with the VMs issue
- Try to run the Montage container test on OSG
  - TODO: Reconfigure our poll (it is not flocked yet)
- Pegasus 4.8.0
  - Bugs on the container (transformation catalog) is fixed
  - Stage in/out nodes based on the number of computing jobs on the workflow
  - TODO: add warning for errors (size of jobs)
  - Warning for category is done
  - TODO: reference implementation of a workflow using docker (1000 Genome workflow - Rafael)
  - Jupyter: add container keyword for API

# June 2017

## June 23rd, 2017

- Pegasus 4.8.0
  - Decaf
    - local universe jobs does not honor request\_cpus , and jobs remain idle if they ask for multiple cpu's
      - karan will update pegasus to remove the request\_ parameters from the local universe jobs
  - Steven Clark
    - Pegasus build issue is related to python 3 compatibility in the DAX API
- LIGO
  - Eliu plans to run on Bluewaters
  - we should confirm that he only wants to run on bluewaters.
  - they have sucky performance of getting data to the compute nodes in bluewaters.
  - set the schedd start date
- NERSC
  - Karan will do a test setup there.
- Pegasus Builds
  - failed because of detain version upgrades to build tools
  - setup tools in python complains to pegasus 4.8.0-dev

## June 9th, 2017

- Pegasus 4.7.5
  - pegasus-rc-client bug fix is done
  - 4.7.5 and 4.8.0 together
- Pegasus 4.8 release
  - docker stuff is complete
    - docker tests added are green
  - karan will work on singularity next week.
  - LIGO reports pegasus lite jobs filling up /tmp . karan will check with LIGO on whether there is any environment set?
  - rafael will update his api to make it consistent with the container format
  - also will add a bamboo example.
- DECAF integration
  - karan has an idea about it.

## June 2nd, 2017

- Pegasus 4.7.5
  - pegasus-rc-client bug fix to be done
- Jupyter
  - rafael will be working on it during June
- For 4.8.0
  - container
    - docker works in nonsharedfs right now.
    - work on **singularity** support.
    - clustering . clustered jobs can only refer to one container
    - symlinks - for 4.8.0 they are disabled.
  - container sharedfs example
    - we have pegasus-lite with sharedfs. automatic translation of file URL's
  - transfer refiner
  - notification email updates
    - mats updated default notification scripts. will generate svg files

- at end of workflow generate notifications that have statistics
        - monitord needs to run the remaining notifications after the workflow is done.
- makeflow integration
  - limitations for pegasus generating make flow integration
    - makeflow model
      - all files have to be on the submit host
      - how do we translate auxiliary jobs to make flow description
        - tyson at arizona.
        - add new transfer jobs
        - add new credentials
        - no postscripts there
      - monitoring
        - won't work with monitoring
        - write a new monitord.
    - maybe do an opposite translation???
    - what will be useful is to integrate with using work queue with our own dagman manager.

## May 2017

### May 12th, 2017

- auto scaling of stage out and stage in jobs
  - 4.8 transfer refiner will be Cluster by default.
  - auto-computation of number of stage in, stage out and cleanup jobs
    - defaults should be computed based on number of jobs at a level.
    - use a ratio or step function .
    - come up ratio ranges for auto determination
      - 1:5 for numbers of jobs < 10K ( 20%)
      - 1:20 for number of jobs > 20k ( 5%)
    - will create a JIRA item for this
- container stuff
  - close to having one example running
  - have not figured clustering jobs out yet.
  - mats agrees with the approach now. pegasus lite invokes the docker run commands.
- integrity stuff
  - will make slides
  - be specific about we have done .
  - we give them an option of running synthetic stuff
  - For
    - also define best effort part.
      - strict, off, minimal , best effort
  - how do we handle case where SHA exists.
- WDL
  - workflow definition language
    - WDL is JSON based
    - has a template approach with variable substitution
- AWS Cleanup
  - need to delete snapshots and cleanup VM's

## March 2017

### March 17th, 2016

- monitord stdout and stderr missing
- the VARS one. just expose the variable.
- SCEC issue
  - job managers per resource
  - got fixed by one job manager per job
  - BOSCO works partly.
- containers call from yesterday
  - dsa
- metadata
  - metadata population in postscripts
  - move metadata population to the postscripts.

### March 10th, 2016

- SCEC cleanup issue

- related to Jglobus not updating and enforcing the compliance for RFC 2818 compliance
    - <https://github.com/jglobus/JGlobus/issues/159>
- LSST visit update

## March 3rd, 2016

- Pegasus 4.7.4 Release
  - sent out the release
  - we did a ligo fix yesterday to pegasus transfer
- mats osg gem
  - workflow did not finish
    - pegasus-exitcode has a shortcut for a regex
      - make it more strict. whether to trigger failure in pegasus-exitcode
      - revisit how metadata population
      - trigger failure for missing records.
- SCEC RC client issue
  - Rafael will look into it for pegasus-rc-client
- containers support
  - containers on a pause right now.
- Webinar
  - lets try and schedule one for april end
  - bluejeans will be an option
  - topic will be covered new features for 4.8.0

## February 2017

### February 24th, 2016

- Pegasus 4.7.4 Release
  - we will tag today.
  - there is a potential monitor bug that happens on sub workflow retires only in the live mode, that Karan is unable to trace
    - ds
- containers support
  - pegasus lite launches docker wrap
    - or the other way around. because worker package has to be installed in the container in some cases
      - so double install
  - Clustered jobs
    - we want at max one container to use the clustered job.
- monitor performance
  - on OSG connect there is a difference between 4.6 and 4.7 performance replay
- monitor.log has errors indicating unable to read .out .err files.
  - we think it is a race between DAGMan and the filesystem

### February 17th, 2016

- Pegasus 4.7.4 Release
  - targeted for next week.
  - LIGO ran into a prescript issue
    - pegasus lite deleted the worker package in the workflow submit directory
      - only triggered when there was a subsequent compute job.
- new transformation catalog format
  - <https://jira.isi.edu/browse/PM-1165>
- containers
  - open issue whether docker wrapper launches pegasus lite
  - or the other way around

### February 10th, 2016

- Pegasus 4.7.3 Release
  - SCEC has issue with pegasus-db-admin
    - mysqldump timesout when updating their replica catalog
  - Database TC
    - remove support for Database TC
- Stewie and fisheye upgrades
  - fisheye upgrade
    - Mats agreed to do the upgrade
  - stewie runs debian 7
    - we need to upgrade it one day or later.
    - runs GridFTP and mysql
    - RabbitMQ is running there
    - MongoDB is running there
    - Catalog dependencies on stewie

- 5K limit for a new server
- OSG All Hands Meeting
  - no tutorial looks like
  - lots of pegasus users coming there
- Containers Support
  - pegasus lite invokes the docker wrap.
  - singularity support will be required.
  - container modes
    - should we support docker definition file
      - do we build on the worker nodes?
    - pull in an existing docker image from the hub
      - on the staging site
    - whether we should unload an image or not
      - we should try and cleanup
    - credential renaming has to be worked out
  - Transformation Catalog
    - how to represent container dependency in the transformation catalog

## February 3rd, 2016

- Pegasus 4.7.3 Release
  - we tag later today or first thing monday
  - waiting for scott to reply
- Jupiter Notebook
  - in general jupyter the interactive interface closes if you close the tab
  - in our case it does not affect us, since we invoke pegasus-plan at the server end
  - Vicky has a workflow out of panorama that she has in jupyter as a set of the instructions
- Containers
  - karan did some exploration of docker containers via HTCondor
  - by default docker in the container runs as root.
    - means output files are written out as root
  - also the containers need to be shipped around.

## January 2017

### January 27th, 2016

- Pegasus 4.7.3 Release
  - 4.7.3 release.
    - condor stable release has been released.
    - we will tag next friday one way or other
    - fix monitor replay mode
    - crosscheck with rajiv on dashboard
    - centralized mysql server for master workflow dashboard
      - LIGO wants to host a mysql server for master workflow databases
      - Mats will like to see something similar
      - also look at some publish subscribe options
- Rafael give an update on the container
  - docker universe
    - htcondor support i think is mainly geared towards startds
  - preinstall software in user containers
  - another model is to let pegasus figure out data and executables
  - rafael did stuff in pegasus lite stuff
    - will have to rewrite proxy and credential environment variables
    - also how is the environment is rewritten
  - good to have a generic concept of multi-level wrappers
  - need to have a pegasus-docker-wrapper or pegasus-container-wrapper to do launch docker or singularity
    - another container technology called shifter
      - <http://www.nersc.gov/users/software/using-shifter-and-docker/using-shifter-at-nersc/>
    - OSG uses singularity because it is more friendly to launch in user space.
    - OSG is launching user jobs using singularity. the image is determined by the VO.
  - lets target pegasus lite mode first
  - little bit of data passing.
- Rafael will have a student to take forward the docker swarm stuff
  - 8 hours every week

### January 13th, 2016

- Pegasus 4.7.3 Release
  - sub workflows
  - better error message for pegasus-transfer when source files don't exist
  - pegasus-kickstart
    - improve error message
  - dashboard to better separate kickstart and pegasus lite messages

- Potential SCEC issued with RV-GAHP
- results of qualtrics user survey
- Pegasus 4.8
  - swip stuff for 4.8
  - have sent emails for their use cases

## October 2016

### October 7th, 2016

- Pegasus 4.7 Release
  - release notes and documentation is done
  - need to follow up with Action for our build VM's
  - LIGO is not going to test 4.7 release as they are in midst of a cluster upgrade.
  - Rafael will write a blogpost about R API after the 4.7 release
- Dashboard requests 4.7.1
  - rafael and rajiv will work on getting dashboard to display the database schema version and the pegasus version
  - useful, when a new version of pegasus is deployed and .
  - Unable to read the sqlite database
    - related to users permissions on the database
- from braindump in replay mode should be able to pick up relative paths.
- brew error on macos sierra
  - brew releases are built manually
  - after the release we have to update the formula to reflect latest stable version.
- ACME workflow on MIRA
  - GitHub page to be updated with list of dependent software
  - ACME team needs to help with installation of one of the software.

## September 2016

### September 16th, 2016

- Builds
  - disabling RHEL5, Debian 6, Ubuntu precise. Karan will make sure in the code it works
- Pegasus 4.7.0 Release
  - reached out to LIGO. hopefully they will start testing
  - rajiv checked in dashboard changes
  - karan to write documentation for directory layout
  - rafael will update pegasus-exitcode next week.
- Pegasus 4.8.0 release
  - one of the first things will be to update the SUBDAG keyword.
- LLNL account approved for Karan
- OLCF account waiting for notarized documents to be received
- SCEC
  - concurrency limits for transfer jobs
  - prime candidate for priority stuff that will allow good interleaving of transfer jobs with the compute jobs
  - ask Scott to see if 8.5.6 condor can be released.
- ACME workflow
  - HSI client for HPSS storage.
  - Karan will reply to Jamie.
- Bluewaters HTCondor install
  - Bluewaters renewed till 2019
- Pegasus HPCC workshop on September 30th
  - karan will be there.

### September 9th, 2016

- Builds
  - disabling RHEL5, Debian 6, Ubuntu precise
- Pegasus Development
  - 4.6.2 released . LIGO has updated it.
    - LIGO tripped over changes to planner submit directory behavior
    - held job reasons are recorded in the database
  - 4.7.0 release
    - went through pending items
    - targeting end of the month for the release
- proposal
  - data aware workflow management
  - no BPEL only a reference for it.

## September 2nd, 2016

- Pegasus Development
  - 4.6.2 released . LIGO has updated it.
    - pegasus.dir.storage.deep true throws an error right now.
  - 4.7.0 release
    - karan looked into the HELD job
    - rajiv thinks no dashboard change required.
    - pegasus-exitcode changes will be done by rafael
    - LIGO should install 4.7.0 on dev machine.
  - SCEC production run
    - Reverse GAHP OLCF
    - once tokens are reactivated , karan will check up on rhea vrgahp and get it running
  - HTCondor on bluewaters
    - Karan opened a ticket.
  - LLNL
    - security training to be done by Karan
  - panorama
    - rafael is working on panorama demo
      - two different pegasus workflows running on 2 exogeni slices
      - and data staging server in between. shadow q has to propagate transfer priorities
      - currently it is workflow level priority. will be manually assigned.
      - 1000 genome workflow -

## August 2016

### August 12th, 2016

- Pegasus Development
  - 4.6.2 release
    - release notes are checked
    - tutorial documentation will be updated to include the docker tutorial
    - pegasus service init script
      - we will not include it and enable by default in the builds
      - mats will update the item accordingly
  - 4.7.0 release
    - submit directory structure
      - we need to get the depth thing fixed . Karan need to make sure if the DAGMan knob can be set automatically.
      - we should have a way to have it set for deeper
    - documentation to be set
    - pegasus-exitcode to have wait lock thing to setup it's logs
      - one option is to log only exceptions initially.
- pegasus-keg to mimic IO pattern
  - read files over and over again.
    - this way we can increase IO without increasing file size ( that results in higher data transfer costs)
- DECAF WMS
  - [10:30 AM] Rafael Ferreira da Silva: <https://bytebucket.org/tpeterka1/decalf/wiki/public-docs/peterka-decaf-handout.pdf?token=c693fc8bb177...>
  - [10:31 AM] Rafael Ferreira da Silva: <https://cfwebprod.sandia.gov/cfdocs/CompResearch/templates/insert/project.cfm?proj=134>

### August 5th, 2016

- Pegasus development
  - waiting for LIGO to check the support for changes for OSG, where pegasuslite URLs are converted to file URL if the staging site and compute site are same
    - Karan has a call with Duncan next week planned.
  - staging sites deep directory structure
    - mats has it working for one of the workflow.
  - <https://jira.isi.edu/browse/PM-1049>
    - automatic delayed job retries
    - the real fix should be in DAGMan. Karan will follow up with Kent. Will address for 4.8
  - postscript output redirects
    - one file per job is what we had considered earlier
    - maybe we should do it per workflow log file.
- DIPA workflow development
  - good progress there.
- Titan Setup
  - we should consider setting up it the same way as bluewaters
- Next Pegasus proposal
  - next week meeting we should iterate on items.

- Samrat issue
  - get pegasus-exitcode to look for final output files
  - checked in workflows to the pegasus repository
    - bioconductor repository
    - would be good to setup PAGE cloud VM with the workflow.
- Deter Krans Mueller
  - director of supercomputing in germany
  - supermute supercomputing cluster
  - will send a student for 3 months to ISI end of the month.
- Rafael plans to practical comparison paper
  - Gui's docker stuff.
  - do a blogpost of montage with above docker stuff.

## July 2016

### July 15th, 2016

- Pegasus development
  - waiting for LIGO to check the support for changes for OSG, where pegasuslite URLs are converted to file URL if the staging site and compute site are same
  - staging sites deep directory structure
  - dashboard changes for nested submit directory structure
    - fixed the on demand loading for the dashboard.
  - identify workflows that will benefit
    - LIGO
    - Splinter
    - OSG - Kink
  - put in the test cases for testing it out.
    - use the new montage dax generator
    - pull the montage dax generator via squid cache.
- Release schedule
  - Get 4.6.2 out first.
  - 4.7 probably early august.
- ALCF Mira running.
  - cobalt workflow
  - ACME workflow compilation. Waiting on Ben for the source code.
- Panorama use case
  - SNS is not enough in terms of data sizes.
  - anirban will start working on it next week.
- R Examples
  - samrat working on a bioconductor example
    - has an example workflow
    - code should be checked into github
  - samrat is working on a more advanced workflow that will be put in the examples directory also
- Gui docker nodes work on amazon ec2
  - uses docker swarm and docker machine to do setup etc
  - workflows run in condor IO mode.
- DIPA Workflows
  - waisman folks will start working on it.
- free surfer workflow
  - mats does not think there is enough uptake.
  - suchandra is working on a second version that will add more capabilities
- seismology workflow
  - rafael will check in to the repo.

### July 8th, 2016

- Pegasus development
  - waiting for LIGO to check the support for changes for OSG, where pegasuslite URLs are converted to file URL if the staging site and compute site are same
  - pegasuslite signal handling
    - mats updated it. LIGO reported cases, where jobs got killed before the outputs were staged back . But the jobs themselves were not marked as failures.
    - duncan's third issue could also be related to the signal handler
  - modify kickstart to compute md5 checksums.
    - we could potentially get kickstart to validate md5 checksums
    - have an architectural idea about it.
      - gridftp currently does not expose checksumming
      - irods client has checksumming in built.
  - pegasus-init R example
    - R example will not run on OSG because of module load issues
    - all R examples will have a wrapper for the scripts
  - 4.6.2 after changes are verified.
- DIPA Workflow
  - with Waisman brain imaging pipeline that runs on Waisman cluster

- Rafael is working on a seismology workflow
- tophat workflow paper got accepted in a bio journal
- Pegasus Virtual Summer School
  - would be similar to the XSEDE ones
  - will be 1.5 hours long.

## July 1st, 2016

- Mats has moved bamboo to a new RHEL7 VM
  - migrated all the tests to it.
  - there were issues with CondorC tests that are resolved now. because of path issues
- pegasus-init R
  - Rafael will integrate Samrat's R example workflow
  - Samrat is also working on a bioconductor example workflow
- rajiv made minor dashboard query changes

## May 2016

### May 13th, 2016

- Pegasus development
  - kickstart wrappers
    - process explosion.
    - eventually we would want it to be in the workflow.
      - handle these wrappers as credentials in the workflow.
      - what are class of files that are always required.
    - KICKSTART\_WRAPPER in kickstart
      - was done for the PAPI stuff originally.
  - pegasus-init for OSG
    - pegasus-init
  - R examples?
    - rafael will do it in june.
  - job held scenarios
    - open with htcondor admin .. a job should never goto the held state
    - maybe pegasus should do quick retry for small workflows
      - for large workflows retries should happen at a longer delay
    - for workflows less than 100 nodes held duration should be small, and failures maybe should be triggered earlier
    - not for large workflows
  - revisit whether clustered jobs should be based on size of the cluster or the number of jobs
    - mats no longer likes the idea of having fixed number of transfers
  - deep directory structure for the workflows
    - can splinter move to using them?
      - right now they are condor io
      - on the data side it deep directory structure will only work
  - BOSCO SSH
    - Mats tried with condor 8.5.4 on comet.

### May 6th, 2016

- Pegasus development
  - moved the submit directory creation stuff to the mapper interface
    - reorganized the code for it.
  - on the execution site for nonsharedfs case we will enable for the dashboard
  - dashboard works mostly
    - only improvement is on the file browser side. will open a JIRA item for it
  - database changes
    - for 4.7 we will add extra columns to workflow state and job state tables.
  - the dashboard needs to show the better the task metadata better for 4.7
- pegasus tutorial for virtual summer school.
  - will be based on the XSEDE tutorial
  - bluewaters will setup a VM for the tutorial.
  - Scott will do an introduction and an overview.

## April 2016

### April 22nd, 2016

- Pegasus development
  - 4.6.1 released today
    - had to fix bugs for symlinking not being triggered for SCEC



- dashboard for the home page should work without trailing slash
      - all other pages should work the same way . For 4.7 we should do that
  - Pegasus R example
    - rafael will work on it
  - OSG and XSEDE site catalog examples
  - Submit Directory organization
  - Relative DAGMan paths
- HTCCondor week
  - Lauren said training week
- Bluewaters training
  - 2 day training might be too long
  - we will work on pegasus training module.

## April 15th, 2016

- Pegasus development
  - 4.6.1 release next week
    - pegasus-status change for new Condor changes
      - cartoon will be upgraded to 8.5.x
    - pegasus-analyzer
      - will report correctly submit failures
    - better errors for mismatch in cores/ppn requirements
    - Tag and build on Thursday.
    - pegasus-s3
      - batched uploads and downloads
    - output directory options fails if local scratch not specified
  - NFS reported write as successful for a transfer job.
    - wget reported data was transferred and wget succeeded good use case for checksumming of data
      - where do checksums come from
        - for data files good placeholder in the transformation catalog.
    - SCEC had similar issues where SGT's had gotten corrupted
      - that is why SCEC put a specific job in the workflow and uses ABORT DAG on feature
- Call with Kent for adding nodes to a running DAG
- group jobs with similar errors
  - might be a python library in there
- HTCCondor Week
  - proposed a hands on tutorial
- pegasus 4.7
  - ignore integrity constraints in monitor
    - only for duplicate keys

## April 1st, 2016

- Pegasus development
- Submitted tutorial for XSEDE 16
  - will include RADICAL
  - might update tutorial with BOSCO. Mats already have BOSCO to run on Comet
- Derrick Lazaro wants to build a bigger filesystem ( 400 TB )
  - will be backed up
  - has a commercial storage vendor in mind
  - has backed up capabilities in built ( block level backup)
  - let Mats know about storage needs
  - Mats estimated our storage needs to 25-50TB
- Graduate student coming to the group mid may to july. brazilian student. currently in Florida
- Ahmad group got a EPSCoR grant
- CRAFT Meeting update

## March 2016

### March 25th, 2016

- Pegasus development
  - Gideon has been working on kickstart online monitoring for panorama.
    - the lib interpose monitoring requires app code to be dynamically linked to use LD\_PRELOAD
    - now kickstart has a new mode, where monitoring thread will scan the proc filesystem for all processes in resource group.
      - this approach disables the PAPI counters as they need to be retrieved from app itself
    - also is working on aggregation logic
      - complicated accounting information
    - added another process called pegasus-monitor . so it is usually pegasus-kickstart-> pegasus-monitor -> application
    - can deploy without any external dependencies.

- 4.6.1 release
  - in april when karan comes back from PAGE meeting
- Condor bug on schedd evicting dagman jobs
  - LIGO noticed on other submit nodes
- mats worked with Derrick to make sure glideins work with BOSCO on comet
  - CyVerse Talk - Mats will do a hands on thing with them. Mats may do an existing tutorial.
  - raphael used the new slides.
- Pegasus workshop
  - erin will get back to us with other feedback.
  - make the intro slides more simpler.

## March 18th, 2016

- Pegasus development
  - deep submit directory structure working for submit directory on PM-833 branch. however need to move to relative directory paths in the .dag file , before merging back to master
  - gideon is reworking how kickstart online monitoring work
    - working on kickstart monitor that goes through the /proc/ filesystem with the assumption all apps installed via kickstart have the same process group as pegasus-kickstart
  - pegasus workshop on campus on tuesday. it is setup <https://pegasus.isi.edu/tutorial/usc/>
    - the tutorial is setup using pegasus-init
    - will ask mats to move the XSEDE tutorial to pegasus-init
- raphael working on energy paper again
- stephan paper to HPDC got accepted

## March 11th, 2016

- Pegasus development
  - R DAX API is done
    - will be proposing for CGSMD
  - Deep hierarchy structure
- LIGO meeting
  - do a local file copy against the staging site
    - having a separate staging site bogs down inter site transfers
  - metadata
    - they are interested. want monitord to transfer the stampede database to another location from the scratch submit directories
    - cannot really do it in monitord
    - can also potentially do it in pegasus-dagman
  - argument passing for sub workflows
    - will be done 4.6.1
  - jobs that work on output site directory.
  - credentials issue
  - variable substitution
    - will make use of it
  - submit directory and other directory organizations
    - are interested in using it
- 
- Rosa
  - wants to do something with pegasus
- Monitord

## March 4th, 2016

- Rosa
  - dispel4py Stream based workflow mapped to MPI, Storm
  - MPI 3 Failure Recovery from Node Failures
- Monitord
  - Triggered by Condor failures. Workflow killed, condor recovery did not spit out all event on recovery.
  - Need better way to test.
- DB Admin
  - Merge issues
  - rafael with confirm with gideon if there is an issue

- Bamboo
  - Rebooted for DROWN Attack
- R API
  - Unit tests done.
  - Packaging - Ship, host?

## February 2016

### February 19th, 2016

#### Pegasus development

- support for GO - mats is working on it
- dashboard shows multiple workflows with same uuid. fixed in monitord
- pegasus transfer was prepending path because of globus location
  - mats has changed the logic
- SCEC wanted to disable the stat of files that was happening automatically because of registration turned on.
  - we now have the property that can explicitly turn it off
- SCEC tripped over replica catalog insert performance.
  - rafael working on it. identified the bottleneck
- Catalog files in submit directories
  - will create a catalogs directory
  - what about file based replica catalogs and cache files etc? some of them can be large.
- Pegasus Blogs
  - SCEC
  - RVGahp?
- Website
  - highlight applications better.
- workq has a catalog server running
  - how do jobs report real time monitoring information back to monitor without rabbitmq
  - have a condor submit wrapper
    - will help us increase memory requirements in case of failures.
- PegasusLite to have pegasus-transfer invocations as kickstart records
  - kickstart

### February 12th, 2016

#### Pegasus development

- support for GO
  - mats found a python REST API - is decent.
  - will only work on a small subset of workflows
    - only third party transfers
    - how to handle file URL's on the submit host
    - and how do we activate the end points.
    - lifetime of credentials .
    - cannot work on non shared fs mode, as what end point to use when staging to the worker nodes.
    - maybe we should look at how condor does it.
- held jobs
  - dagman added support in 8.3 where the held job reason appears in dagman.out
  - will need schema change
  - failing workflows
  - held jobs.
  - have a held job tab.
- pegasus-submitdir archive
- PMC job statistics in pegasus-statistics
  - mats and rajiv
  -

#### Annual Report

### February 5th, 2016

#### Pegasus development

- 4.6.1 release
  - pegasus-glite-configure
  - change of how retries are done for transfer jobs, using requirements and dagnode retries
    - <https://jira.isi.edu/browse/PM-1049>
    - there are just 2 retries implemented for transfer jobs

- one more option is for pegasus-transfer to do better retries
      - and let the dagman retry set to 1.
    - use DAGMan influence to do in retry.
    - do more testing at our end.
    - lets change default retries for transfer jobs
      - and do this only for transfer cleanups in condor environments
  - LIGO runs
    - symlinking
  - R API
    - will target 4.6.1 and keep it similar to the python API
- 4.7.0 release
    - filesystem organization
  - Keck workshop on Pegasus on Feb 26th
  - Pegasus Annual Report
  - Pegasus GUI email
    - we will send user a direct link
  - Pegasus Announce SLES email
    - we have done on SLES 11 not on SLES 12

## January 2016

### January 28th, 2016

#### Pegasus development

- 4.6.0 release
  - Released this week
- Pegasus Website
  - new website there
  - karan will put in the old release notes.
  - Links for old documentation on the new website
    - <https://pegasus.isi.edu/docs/>
  - Rajiv has updated the docker tutorial
  - Tutorials will be moved to Pegasus website
  - Have a research link to point to Scitech website
- Gideon confirmed MoabGlite helper scripts work with stock condor
  - will also check in a tool to put in the scripts to the right locations.
- Pegasus Lite pulls in a worker package
  - should we download even by default from the worker package
  - warnings for worker package not being found.

### January 22nd, 2016

#### Pegasus development

- 4.6.0 release
  - open items
    - <https://jira.isi.edu/issues/?filter=10952>
  - constraints algo implemented and checked in . tests worked .
  - documentation
    - karan added chapters on metadata and variable expansion
    - gideon updated execution environments
    - updated the BOSCO section about SSH
  - pegasus-analyzer exits gracefully when nothing in the stampede database
    - check if analyzer and statistics check for the version.
  - pegasus-init
  - pegasus-db-admin
    - better error message for that case.
  - karan will update tutorial to take account of default options
  - for glite style condor arguments quoting is automatically turned off
- new website.

### January 15th, 2016

#### Pegasus development

- 4.6.0 release
  - open items
    - <https://jira.isi.edu/issues/?filter=10952>
    - Rafael almost done with Constraints cleanup algo. tests run fine on the branch
    - pegasus-bootstrap

- gideon was doing it as Jinja templates
    - will set it up a shell script. will be easier for people to update
  - documentation needs to be updated
  - map the globe
- for resource requirements add pegasus.queue keyword. update documentation to have one table. remove the documentation for priorities.
- MOAB stuff documentation. Will be considered for next major release.
- DAGMan wants to remove the functionality of running postscript in case of prescript failure
  - does not affect pegasus
- DAGMan wants to remove DAG NOOP keyword
  - was introduced for LIGO

## January 8th, 2016

### Pegasus development

- 4.6.0 release
  - open items
    - <https://jira.isi.edu/issues/?filter=10952>
- Condor DAGMan log messages contain HTCondor in 8.5 series
  - broke monitord
  - fixed both 4.5.4 and 4.6.0.
- 8.5.2 has DAGMan logging timestamp from condor job log also.
  - monitord has been updated for that.
- metrics reported were updated
- Globus strict checking mode.
  - gridftp + ssh version.
- Scott is working on getting the reverse GAHP stuff
- How to configure the batch\_gahp

## December 2015

### December 18th, 2015

#### Pegasus development

- 4.6.0 release
  - open items
    - <https://jira.isi.edu/issues/?filter=10952>
- Reverse GAHP for Oakridge Titan
  - <https://github.com/juve/rvgahp>
  - done because cannot do incoming connections on titan
  - and also they don't want to use pilot jobs, as it is not easy to yank a job from a HTCondor queue
- Harvard Pegasus installation
  - with SLURM support.. Karan will work on this.
- We should explore remote batch GAHP stuff
  - for remote batch do
    - batch gahp --rgahp-key /give/key user@host
    - look at the remote\_gahp script.
  - documentation for the batch gahp thing.

### December 11th, 2015

#### Pegasus development

- 4.6.0 release
  - open items
    - <https://jira.isi.edu/issues/?filter=10952>
  - pegasus-db-admin
  - cleanup algorithm
    - raphael will work on it.
- pegasus-s3 cert issue
  - updated boto library to account for cacert change
  - on mac, had to disable the automatic failover
- Bypass PFN's
  - replica selectors can now order replicas. Default and regex ones updated
- monitord
  - combination of missing job terminated and exception on casting job duration as int, triggered a bug that LIGO reported.
- default behavior of planner
  - pick up pegasus.properties from cwd as a replacement for conf option
  - --sites option for \* behavior , remove local from candidate sites
- pegasus-bootstrap commands
  - sets up pegasus with site catalog. and dax generators

## December 4th, 2015

### Pegasus development

- JDBCRC
  - should work for 4.5.3 . will work for the release
  - need to make the changes for 4.6.0
    - should consider batch inserts
    - rafael has implemented the batch inserts also
    - the database locked errors are fixed.
- Rafael is looking into how the timeouts are implemented in sql alchemy
- Mac OSX El Capitan Builds
  - Gideon fixed those. El Capitan does not allow root to modify files in /usr
  - Gideon changed the installer to install to /local
  - Upgrading the mac mini build host.
- LIGO proxy issue
  - change in how proxies are generated.
  - LIGO en-common proxies were not supported by J-Globus
  - Gideon has the patch for making the updated jar.
- Gideon has added instructions on building globus for El - Capitan
- Jobmanager-condor for obelix was updated to support both shared fs and non shared fs cases.
- metadata registration
  - information for output files is tracked.
- pegasus-metadata client . Rajiv.
- Cleanup algorithm - Rafael ?
- LIGO use case for fallback PFN for PegasusLite cases
  - they want to use existing input data for frame files, on different locations across sites
  - but have a single site catalog entry for the computation, as glideinwms provisions it
  - Karan and Mats are working on it
  - pegasus-transfer changes ?
    - sd
- LIGO running workflows across LIGO and OSG .
- Database locked errors for monitord.
- Call the 4.6 release as 5.0 release.
- Gideon working on MOAB Blahp support.

## October 2015

### October 23rd, 2015

#### Pegasus development

- Tutorial VM
  - rajiv will update dashboard screenshots and go through the Virtual machine based tutorial
- JDBCRC
  - should work for 4.5.3 . will work for the release
  - need to make the changes for 4.6.0
    - should consider batch inserts
    - sqlite supports unlimited connections
      - for write locks , 25 jobs running for write locks. after 25 and it ignores timeout settings.
      - 67 registration jobs.
      - raphael is implementing a back off
      - category for the registration jobs
      - eventually do the dagman category stuff
  - metadata registration
    - information for output files is tracked.
    - pegasus-metadata client
- concurrency limits
  - in partitionable slots this has an affect on performance
  - for 4.5.3 we will have a knob and set it to false by default.
- Dashboard and PAM problem.
  - mats will create JIRA item.
- salon working on data from MYRA
  - trying to find contention of data

## October 16th, 2015

#### Pegasus development

- does stime include io wait time. does not appear so. the cp of 1GB file indicates that
  - so then is there a way to capture the IO wait time
- pegasus-db-admin
  - version migration for panorama works
  - metadata schema finalized

- failing jdbc RC test
- metadata population
  - metadata population from DAX working
  - metadata attributes from transformation catalog and site catalog are now incorporated, as metadata events are generated at end of site selection
  - output file sizes will be populated for files with register flag set to true.
- pegasus dashboard
  - metadata display done other than the file information that needs to be populated
- cleanup algorithm
  - will be done before raphael leaves for vacation
- website changes
- panorama changes
  - monitor change to make sure events don't get dropped
  - online monitoring spawns a thread where there is a queue that is responsible for inserting the online monitoring events into the db
  - the thread checks the database to make sure the job instance is populated.
  - CURRENTLY, it is not done for the anomaly populations.
- SNS and Acme workflow
  - maybe we can hire a student to do it
  - maybe scalarm can be used for SNS workflows
  - Ben said there is a meeting about Pegasus on Titan.
- Mats has installed wordpress on one of the machines.

## October 9th, 2015

### Pegasus development

- pegasus-db-admin
  - db version has been moved to string. a new column was added.
- metadata population
  - files are populated if a user specifically associates metadata with a file in the DAX or if an output file is marked for registration
  - make sure that for tasks metadata attributes are inherited from the transformation catalog.
- pegasus-metadata client
  - output format ?
  - is the client for end users
  - list files for a workflow
  - list workflow metadata
- pegasus dashboard
  - workflow level
  - task level level
  - file level metadata

## October 2nd, 2015

### Pegasus development

- pegasus-db-admin
  - changes discussed last week?
  - also change to string for the database version for allowing merges with panorama
    - panorama db versions should be N.x and not whole integers
- jdbc sqlite test failures
- pegasus-transfer
  - better job with grouping for ssh transfers.
- metadata population
  - planner generates the events now for associating metadata with wf, job and files
  - use case should be for a file what workflow and job created that file.
- Pegasus workshop
  - we will be using workflow.isi.edu
  - mats has created 30 training accounts on workflow.isi.edu
  - suggestions on workflow example?
    - blender rendering example..
  - pegasus-dashboard should be installed
- Sipt portal
  - back up and running

## September 2015

### September 25th, 2015

- Pegasus development
  - pegasus-kickstart to return record on condor\_rm ( SIGINT)
  - changes to data reuse algo for Chris Edlund
    - delete jobs when inplace cleanup is used for intermediate files that are not transferred to the output site.
  - use of DAGMan NOOP keyword
    - workflow test failures

- change monitor to not complain for noop jobs.
  - comma separated directories for input dir
    - automatically delete the input directory ? we all agree not a general use case.
  - pegasus-transfer grouping should be done for all protocols?
    - problem is some renames for output files
    - avi has been running workflows on OSG with pegasus lite.
    - 2 million connections over two days on SSH server
  - pegasus-db-admin error handling.
    - if it fails with error, it should not report that database has been updated. This is a bug
    - other is what to do , when 4.5 is run against
    - downgrade option
    - warn if db-admin detects database version is higher than what it is currently running, and exit with 0 exitcode.
- Pegasus IEEE article accepted
- montage workflows
  - dax generator is not maintained
  - have it as a student project to convert the DAX generator to python API.
    - they also check an overlap check
  - montage jobs have varying memory requirements
  - we should not showcase it.
- Pegasus Workshop in October
  - fallback from USC HPCC cluster required
  - whole day will be rough.
  - Mats will not be around! Going for the duke workshop.
- panorama
  - monitoring thread segfaults
  - why was the segfault happening initially
    - happening in fork system calls
    - related to starting and stopping monitoring threads
    - and how PAPI counters were updated.

## September 18th, 2015

- Pegasus development
  - pegasus-db-admin updated
  - for spec added registration of flat lfn's when deep LFN are used
  - workflow tests now running.
- pegasus paper
  - will add info about galactic plane and gtfar
  - cloud challenges
    - talk about virtual clusters . precipe / wrangler
      - tie more closely to setup stuff and talk about chef/puppet and precise and wrangler.
    - gtfar
    - add them in acknowledgements
  - not much to add about cloud challenges other than image managements
- hubub conference
  - latech user who wants to run on bleaters
  - tom bishop
  - pegasus submit tutorial.
  - to do with steven...
- panorama
  - segfaults happening randomly
    - happen when the monitoring thread is started.
- craft
  - jarek
  - hubzero
    - chip design
    - instead of hubzero use open science framework - a non profit funded thing

## September 11th, 2015

- Pegasus development
  - worker package tests in pegasus lite
    - pegasus lite will complain if the system architecture
  - panorama tests now work
    - maybe some problems might be masked!
  - jdbcrc
    - updated jdbcrc . for mysql and postgres deletes work differently.
    - raphael will abstract it out
  - gideon changed the way the papi counters are used in kickstart
    - earlier signals were being used for threads to report counters
    - PAPI now allows to query for counter values
- Pegasus cloud article
  - ewa is doing the final edits
- HubBub presentation
- panorama
  - darek working on getting papi counters to monitor
  - changed the job metrics table in the stampede database.



## September 4th, 2015

- Pegasus development
  - worker package creation on the submit host.
    - should we include python externals directory .
    - we will put that back in. we only need boto.
    - also need to make sure it works for a RPM or deb install.
    - implement the compatibility check in PegasusLite
  - panorama tests
  - better error for input file replica selection failures
  - Scalr for openstack tests
    - action has a new openstack deployment.
    - have our two QNAPS setup on the build VM's to run workflow tests.
    - run on vmware pool.
  - SCEC shallow LFN's
    - for registration in the replica catalog.
    - put the test in 4.5 .
  - Database schema changes
    - pegasus-db-admin changes to database schema.
    - downgrades work
- The short paper
  - working on the google doc.
  - we are not actively working on ec2.
- panorama
  - adding papi counters to online monitoring.
  - pegasus-transfer explodes when signal is sent
  - online monitoring dashboard.

## August 2015

### August 28th, 2015

- pegasus 4.5.2 released
- worker package staging
  - planner will use a worker package from the submit side installation and use it.
- pegasus s3 tests
  - currently no s3 tests
- tests are running against 8.3.8
- cleanup algorithm update ( Rafael)
  - estimate that it will be done in two weeks
  - has to work for multiple sites
- cloud computing short paper
- hub bub
- panorama and dv/dt poster and presentations . in mid september
- metadata discussion
  - google doc updated
  - leaning towards monitor populating the database
  - remove the estimated size and md5 checksum

### August 21st, 2015

- pegasus 4.5.2 release
  - release notes checked in
  - db-admin changes?
    - update man pages
  - python source package
  - tests are we moving to dev branch?
  - docker problem
    - how to get around it ?
    - an issue inside docker, that is being exposed
    - we will put in a wrapper around it.
  - panorama branch is disabled
    - but tests should be fixed.
    - dark will be fixing it
    - rajiv pushed out his dashboard changes for darek. for demo at supercomputing.
- cleanup algorithm
  - Rafael will start next week
  - how will the limits be passed
- kickstart changes
- metadata schema discussion
  - next week.
  - postscript
  - dagman has plugin's

- schema
- use case
- stampede is sqlite
- pegasus-exitcode write locks.
- separate sqlite database for metadata.

## August 14th, 2015

- Pegasus 4.5.1 release
  - Release notes online <https://pegasus.isi.edu/news/4.5.1> is done
- Bamboo machine troubles
  - panorama tests hung because of bamboo
  - do experiment for the case where we do condor off and see what happens to pegasus-dagman.
- Panorama tests
  - look at build #73
- pegasus-kickstart stuff
  - for interpose stuff
  - gideon investigating how to cover all cases for threads
  - wants to make sure that descriptor table is accessed in a thread safe way. in worse case
  - also is doing thread tracking, thread counters and thread lists
- directory structure organization for submit directories.
- nonsharedfs mode problem for auxillary jobs
- sudharshan cleanup algorithm
- stefan update
  - working on user models on how to submit jobs to HPC
  - what user characteristics are of submission process
- to be able to show the IO part for SoyKB
  - metrics of success
    - makespan is reduced.
    - number of service units is reduced
- what makes an application IO intensive

## August 7th, 2015

- Pegasus 4.5.1 release
  - Release notes online <https://pegasus.isi.edu/news/4.5.1>
  - PEGASUS\_SCRATCH\_DIR is populated for all jobs in shared fs case.
- 4.6 common resource requirements
  - we are now exposing three pegasus profiles cores, nodes and ppn.
  - added logic to do specific translations for PBS and SGE
- cleanup bug fixed related to DAX transfer flag for input files
  - larger question and agreement. transfer flags for input files usually don't have any meaning.
  - transfer flag should be renamed or in the API
    - change in schema
    - at minimum we should change the DAX API's
    - transfer attribute renamed to final output?
- spaces in Pegasus URL
  - gideon feels it should be mod 20 instead
  - somewhere in documentation .
    - the planner should have more specific error message in case of spaces.
- kickstart enhancements - gideon
  - fixing edge cases in kickstart for the extended reporting
  - what can we do with the papi performance counters and see what will be used in panorama.
  - will be updated for counters.
  - gideon and darek will try and merge

## July 2015

### July 31st, 2015

- Pegasus 4.5.1 release
  - will release it next week
  - update the mapper documentation
    - have a link to the replica catalog
  - steven clarke cleanup issue
- resource requirements
  - update the resource requirements section for 4.6
- acme integration
  - rajiv will work with bibi to integrate it with the REST monitoring api
- kickstart changes to get papi counters
  - Only triggered if -Z option is passed
  - the paper on xsede mentioned about them reporting per threads
  - also we make better track of threads launched by the executable
    - some edge cases for the thread case

- double execve of process does not work currently
      - example: /usr/bin/env date
  - also record command line options for all sub process launched
    - in the proc record , the cmd tag
    - grabs only first 1K of arguments
- monitor amqp population
  - revert back to use the event name as the routing key for AMQP population.
- pegasus cleanup with peak storage requirements
- Panorama
  - Data analysis done..
  - ideas about writing a paper about workflow profiles
- Anomalies Detection
  - showing anomalies in dashboard and population in stampede schema

## July 24th, 2015

- XSEDE Tutorial
  - 2 Posters and one tutorial
  - news item online
- Pegasus Development
  - common resource requirements PM-962
    - documentation needs to be updated
    - we have cores , hostcount
    - karan should make sure cores is translated correctly to ncpus for PBS
  - Pegasus REST API for integrating with Pegasus
  - pegasus transfer
    - checkpoint files
  - LIGO developer notion of site attribute
    - maybe we should be more clearer in the documentation
  - automatically changing parameters for memory on job retries
    - check point file for the job is a partial solution
  - monitor amqp population
    - works.. we will document it on JIRA
- Panorama
  - Darek implemented sending messages in batches from kickstart to rabbitmq
  - socket based communication between kickstart and lib interpose . was done to take of the file interleaving issue.
  - tests on obelix and exogeni indicate socket writes are atomic for panorama message

## July 17th, 2015

- PMC Cpu affinity
- LIGO pegasus analyzer bug
  - has been passed to LIGO . awaiting to hear from them
- Cleanup algo
- Resource Requirements
  - common pegasus profiles
- SGE
  - change.dir should be set automatically for shared filesystem stuff
  - documented already.
- kickstart path variable to prepend.
- REST interface for monitoring for pegasus is done. Rajiv completed this week.
- extensions to the cleanup algorithm. rafael will start working .
- Pegasus 4.5.1 release
  - will be done after XSEDE.
- Pegasus XSEDE tutorial
- XSEDE Pegasus Poster
  - show a LIGO workflow for the XSEDE poster.
- Salt configuration needs to be updated
  - Student machines on salt
- panorama
  - rabbit mq installed on exogeni site.
  - darek will do message batching working.
  - gideon recommends doing it with the AMQP C API library
  - message interleaving in kickstart.
  - lot of unacknowledged messages in rabbit mq
- kickstart polling loop
- all kickstart memory values are in MB

## July 10th, 2015

- PMC jobs automatic summing of maxwalltime. Should be disabled
  - In PMC case we will do a division.
- PMC CPU affinity for jobs PM-953
  - there might be a fragmentation approach.
- Pegasus REST interface
  - short cut URL end points.

- karan will send email to Lavanya.
- running on SGE cluster using GLite interface.
- harmonized pegasus profiles
- Metadata
  - will need the file implementation .
- Dashboard Panorama stuff
  - September 16th. Time series and anomaly detection.
  - Application level anomalies
  - Infrastructure level anomalies.
  - no plans for integration in production Pegasus.
- monitor profiling of monitor population.
  - we want to see how long 1000 events take to be populated in case of LIGO .
- Panorama
  - anomaly detection
    - implemented a working prototype of threshold based anomaly detection
    - kickstart sends events to rabbit mq, then monitor populates to influx db.
    - darek tool queries influx db and takes in the metadata file generated by pegasus and determines the anomaly and sends it back to rabbit mq
    - monitor then again picks up anomaly and populates it to stampede db for dashboard to display.

## June 2015

### June 12th, 2015

- Pegasus profiles for job/resource requirements
  - postponed till next week when mats is here
  - karan to create a list of relevant profiles
- pegasus dashboard
  - locking issue?
  - can this be related to new connection stuff or the failing tab?
  - look at connection pooling .. or maybe transactions are not being closed properly?
  - also see if there is an option for dashboard to set a read only lock when opening a connection to the databases
- panorama workflow tests
  - failing.. but merge from master was done.
  - karan to investigate
- panorama workflow dashboard
  - updated the job metrics tab for doing the polling
  - for mpi jobs the job name appears as aprun, since that is the process running on rank 0
- Job Survey paper
  - Darek sent a final version
  - will be submitting next week
- Pegasus Release timeline
  - maybe we should put on our website somewhere?
- Rafael Energy paper
  - information about building energy profile.

### June 5th, 2015

- panorama usecase and metadata passing through
  - not done yet for the metadata associated with files with replica catalog
  - DONT rebase commits that have been pushed out
- job.runtime, cluster.maxruntime, maxwalltime parameters
  - how to associate profiles. have a different namespace
  - how is it expose in the DAX API
- python dependency
  - stopped support for 2.5 and 2.6
  - only affects redhat 5 systems.
  - will have to install redhat 2.6 python package on 2.5
  - setup tools for python 2.6 has to be at build time
- pegasus-dashboard updates for LIGO
- cleanup bug for intercept runs with InPlace cleanup.
- S3 storage
  - about 9TB and rising for pegasus system services backup
  - right now no backups are going to go to Glacier
  - we only keep 2 weeks of data
  - glacier is good if we want to keep 6 months of data
  - 3VM' for pegasus website , CROWD etc
  - database on stey and obelix
  - qnaps /nfs/ccg3 and /nfs/ccg4
  - Big ticket items of 9TB backup bucket in S3
  - need to keep 2 backups in S3
- HubBub talk.
  - abstract

- talk by Jack Donagata.

## May 2015

### May 29th, 2015

- Bamboo test failures
  - condor-c tests working now. changed the site catalog for those
  - rhel5 json module
  - pegasus-transfer will do a proper check and complain for missing json module
  - mats will update documentation accordingly
- Python Dependencies
  - New python dependency 2.6 from 2.4
  - newer versions of Fedora uses Python 3
  - Fedora will keep python 2.x support till 2020.
  - maybe have a dynamic bash wrapper across python code to pick the right python version
  - have a tool called pegasus-python??
- concurrency limits
  - apply to bamboo machine and our other workflow hosts.
  - throttle number of grid jobs per categories of jobs. that is what SCEC wants and cannot be done.
    - unless negotiation can be employed for grid universe jobs.
    - define own throttles in compute jobs
- pegasus-dashboard
  - LIGO has an issue with no authentication URL rendering.
- quoting for environment
  - implemented. changed both for environment and +remote\_environment
- docker universe support
  - should work out of the box with condorio
- new dagman default values
- pegasus-statistics
  - show bad put?
- LIGO OSG
- Documentation
  - 10 minutes using pegasus-docbook
  - using new pipeline it uses 3 minutes
  - the hyperlinks don't work
  - include that into pegasus website template
  - In PHP we tell Google not to index old version
- panorama

### May 8th, 2015

#### Bamboo test failures

- montage tests are failing because of the remote service being down
- documentation tilte is messed up. gideon will look at it

#### pegasus-transfer new format

- mats has come up with a new JSoN format.
- backward compatibility with the old format
- create dir and cleanup jobs will be different

#### Metatdata

- google doc shared with people
- next steps are panorama use case for calling out
- ssh cleanup . JGlobus library does not implement ftp

#### LIGO on XSEDE

- have started using PMC
- data management

#### Python builds

- always check the python version.
- if we ship our own python modules, then we may have to

#### Bamboo build machine

- build and test plan ( running concurrently )
- also we can run docker stuff
- automate the salt setup of bamboo agents
- maintain one OS. Can action give us a beefier VM?
- we have too many documentation builds running ?
- VW with bamboo agent and use docker

- workflow tests are a separate issue
  - they don't load the bamboo machine
  - that is more related to a big condor pool.
  - workflows tests will run always out of bamboo.
- mats and rajiv will work on it for the VM stuff.

#### Getting new SSL certificates

- \*.isi.edu is screwed up in firefox

#### Metrics Server fixes

- google maps update broke the web UI.
- somehow all the colors were used in the trends ?

## May 1st 2015

- Pegasus 4.5 release
  - not heard back from SCEC and LIGO
  - mats checked in the example
  - will add release slider
- Variable Expansion
  - pretty much done
    - right now we have \$()
    - we will change with \${env-variable}
    - have more helpful error message
- pegasus-kickstart
  - file does not exist. now gives a proper error
- XSEDE poster due next week
- Monitoring Service API
  - donald is almost done.
- PMC with PegasusLite
  - PMC job by default runs on the shared filesystem
  - tasks in PMC are pegasus lite tasks
  - if a task does randomio, then on shared fs might be tricky
- brazilian student contacted about pegasus application for real workflows.
- mats will be doing the transfer events for panorama next week

## April 2015

### April 24th 2015

- Pegasus 4.5 release
  - release candidate today rc2
  - updates to pending items
  - job throttling added to optimization guide.
  - release notes are online <https://pegasus.isi.edu/news/4.5.0>
  - waiting for db-admin unit tests to be checked in.
  - pegasus-cleanup checking
  - pegasus-lite-local.sh add some path before starting.
- rest monitoring API
  - we have not heard back from lavanya yet
  - PNNL acme stuff
- pegasus 4.6 release
  - common pegasus-transfer , pegasus-cleanup and pegasus-createdir
  - APP\_PATH\_PREPEND addon
  - pegasus worker package staging
    - planner calls out to common script to determine the worker package
    - if it does not exist , we build a default worker package on the fly
    - add extra logic to the untar job in the
  - pegasus-gridftp modification for ssh ftp.
  - software eggs
- panorama
- metadata for 4.6

### April 17th 2015

- Pegasus 4.5.0 Release
  - rc1 working for hub
  - LIGO trying it out.. wanted to change checkpoint files. need to hear back on the dashboard changes.
  - SCEC ? waiting to hear from Scott

- <https://jira.isi.edu/issues/?filter=10851>
- pegasus-db-admin sqlalchemy issues? for updating tables?
- pass through implemented for Glite to PBS
- verification of update to pegasus version on running workflows
  - mats thinks his testing should do the trick.
- Pegasus Dashboard for bamboo user
  - URL - <https://cartman.isi.edu:5000>
  - Authentication - Uses PAM Authentication
  - Admin Users - mayani, vahi, ryнге, juve, rafsilva, darek, deelman
- Cedars visit
  - SGE cluster
  - we have 3 potential SGI cluster users Cedars, Vision group at ISI and maybe Rutgers ( that will be replaced with SLURM)
- Lavanya REST API
  - <http://pegasus.isi.edu/wms/docs/4.6.0cvs/rest-api-monitoring.php>
- Pegasus 4.6 release
  - variable expansion thing figured out
    - argument strings in dax, profile values in the dax
    - site catalog.
    - replica catalog file based one.
    - need to now make changes in various parsers
    - predefined environment variable
  - metadata
    - LIGO Dibbs .. ability to do data reuse based on metadata attributes
    - panorama - pegasus - aspen interface
    - iplant
      - they want in the IRODs
      - S3 tags.
    - mats wants a better idea of what it looks like in the ideal world.
  - file management on scratch directory, submit directory also?
  - implementation of the REST API
  - implementation for held job tracking
  - Panorama requirements
    - influx db monitoring , into pegasus-transfer.
    - pegasus-transfer sends messages to rabbit mq about file size transferred
    - pegasus aspen interface ( modelling tool ) . apsen is a C++ library.. pegasus planner querying the aspen models for each node.
      - command line tool pegasus-aspens
      - planner needs to send application parameters, and all the metadata for the node.
      - gets back a list of attributes , memory and usage, and convert them internally into pegasus profiles
      - this can be a generator of metadata.
      - application model which is a file and a machine model
    - timeseries data . monitoring data about the dashboard, anomalies
    - there is a CEP thing that anirban is developing and will determine anomalies.
  - dv/dt requirements
    - prediction service
    - pegasus will query the prediction service

## April 10th 2015

### pegasus cleanup

- gideon removed a bunch of stuff
- will be completing the cleanup
- pegasus-plots will be deprecated in the release notes for 4.5 release and removed for 4.6

### pegasus RC1

- built now.
- should have created a 4.5 branch and then done a tag
- pegasus-halt ( is it prototype )
- pegasus-run on already running workflow
- pegasus-db-admin missing import
- mats will delete the rc1 branch

### pegasus 4.5.0 release

- karan will add options for pass through text for Glite options.

### pegasus-db-admin

- should be done soon

### HPCC tutorial

- send link to Fan fli from CHLA
- vision group at ISI . former BBN people.

### XSEDE paper

- submitted to xsedede

- for journal paper, expand to pilot workflow systems. panda, swift coasters, big job

#### REST API

- rajiv will add to the docbook
- largely agree
- uuid for the top level workflow

### April 3rd, 2015

- Pegasus 4.5 release
  - pegasus-db-admin
    - ds
  - planner will set auto update on pegasus-db-admin . and include
  - extra python modules being shipped mysql config and postgres config
    - right now on our build hosts we are building mysql and postgres.
    - RPM packaging adds dependencies automatically
    - openssl dependency
    - best option is database dependencies optional
  - targets 4.5.0 pre release candidate for thursday
  - pegasus-dashboard updates
  - pegasus-monitor failed for 4.4 runs
  - documentation
    - fix missing references
- REST API for monitoring workflows and jobs
  - work on it for next week.
- questionnaire
  - 15 responses in all.
- xsede paper
  - deadline on monday . 8 pages.
  - have number of cores
  - no reliable way for specifying cores on OSG
- web interface for influx db
- permanent influx db install

### March 2015

#### March 27th, 2014

- metrics server
  - final change pushed out by donald
- REST API
  - job monitoring API for workflow and jobs
  - will work with Rajiv
  - next week friday we will have a spec out for the API
- Pegasus 4.5 release
  - resolving pegasus-db-admin issue
  - work on the documentation
  - should reach may first deadline
  - next week we will do a pre release for SCEC.
- Job submission paper
  - for xsede some sections you will remove.
  - need some major modifications regarding introduction.
  - new deadline for xsede is april 6th.
- pegasus transfer issue in google cloud vs amazon cloud
  - gsutil causes a 1 second overhead for a zero byte file. probably an authentication protocol
  - directly with wget works faster.
  - when you downloading larger files
    - huge overhead compared to 3 times in amazon.

#### March 20th, 2015

pegasus 4.4.2 release done

- will be deployed by LIGO

tagged release for SCEC production runs .. we will do a pre-release candidate

metrics server

- follow up on histogram page?
- gideon will deploy the changes on the production machine



pegasus-db-admin

- updates
- dashboard and stampede expunge functions.
- sql alchemy init and duplicate code. will enable foreign keys.
- SQLAlchemy init interface takes a URI.

pegasus-submit-dir

- till we come up with a better name
- can archive, move and delete

pegasus-dashboard archive option

- gideon will make changes to the dashboard schema.

transfer grouping in Pegasus

- PM-829

PM-851 kickstart invoke option for auxiliary jobs

pegasus dashboard updates

- LIGO uses for apache to use uncommon for single sign on and authentication

job submission survey short paper

- march 30 deadline

Panorama Updates

- wants to have a separate panorama branch
- mpi-exec has been merged back to master.
- similar to the adamant branch
- rabbit mq
  - has a rest interface
  - so easy to post http messages to it
  - uses small amount of memory
- long term we will have pegasus-service receive the messages instead of rabbit mq.
- we are collecting data and share with other people in collaboration
  - http location on obelix ( the way we did for stampede)
- real time monitoring in kickstart
  - runtime metadata and file descriptor 3 ( did for hubzero)

User Questionnaire

- still at same place as earlier
- gideon will send out a reminder

## March 13th, 2015

- Metrics Server
  - deployed on the production server.
  - want to do anything on basis of distribution of files
  - donald will create a new histogram page ,
- Pegasus NSF Report
  - sent to Ewa
- Pegasus 4.4.2 release
  - karan will check in release notes today
- Pegasus Tutorial as part of HPC Workshop Series in April
- Gideon will be going to the summer school.
- Pegasus 4.5.0 release
  - Targeting May 1st release
  - local-scratch is picked up.
  - ensemble manager submission
    - will support both modes
    - bundle mode
    - public ensemble manager. there are security issues. user credentials.
    - the person who starts the service will setup the credentials
  - pegasus-analyzer fix for case where jobs eventually succeed after failures
  - pegasus-db-admin update
    - ds
  - transfer grouping of staging jobs
  - Pending items
    - <https://jira.isi.edu/issues/?filter=10851>
- User Questionnaire
  - 12 responses for

- a lot of people are interested in a workshop
  - better support for loops and branches
  - better provenance support .
- Workflows on Google and Amazon
  - google takes much longer to do data transfers.
  - non shared fs and shared fs
- metadata
- Panorama
  - Demo in September of Panorama functionality
  - getting data transfer metrics out of pegasus-transfer in structured way
  - what data we need to collect
  - for third party transfers we can do timings but not rates
  - darek is working on adding real time monitoring to pegasus-kickstart
  - pegasus transfer will communicate to pegasus-kickstart to report to a central server
    - can be a http server similar to metrics server
    - panorama is considering influx DB for real time monitoring.

## March 6th, 2015

- metrics server update
  - plans to deploy the changes today. fixing last issue
  - still has to make the database schema changes required for planner file counts
    - will be done next week
- planner reports file breakdowns
- pegasus 4.4.2 release
  - it has fixes LIGO is interested.
  - most probably next week.
- pegasus-db-admin
  - reorganization of the code and the schema.
- pegasus-archive /pegasus-delete
  - rafael does not have time to work on these because of proposal work
  - will move to either gideon or mats
- pegasus-dashboard updates
  - has more LIGO requests for pegasus 4.5.0 release
  - wsgi script for root mode
- LIGO visit
  - post 4.5 we will do better organization of files on the file structure
  - Pegasus poster for LIGO meeting
- ensemble manager
  - scec folks will try it
  - monitord netlogger bugfix
- pegasus-transfer enhancements for panorama
- job submission paper in github
  - pegasus and job management systems.
- online monitoring for pegasus-kickstart
  - application sends signal to pegasus-kickstart via libinterpose
- pegasus-keg extensions
  - the pegasus-mpi-keg is a separate executable
  - extensions to the io stuff
  - will incorporate in 4.5.0
- NSF report
  - still waiting to hear from mats and scott
  - karan is still updating the metrics page.

## February 2015

### Feb 20th, 2015

- metrics server update
  - donald still has to deploy the changes.
- pegasus user questionnaire
  - gideon will send new links and will update
- SCEC update
  - scott has debugged his memory
- Pegasus Report
  - soykb and other iplant workflows ... part of ECSS
  - galactic plane
  - ahmeds work
- pegasus dashboard updates
  - pegasus-dashboard is started whenever bamboo is built up
  - dashboard show all states for a job now.
- pegasus-db-admin tool
  - test cases in bamboo
  - documentation
  - migration notes
  - some python errors that need to be fixed.
- 4.5 release

- still remaining
  - held jobs tracking in monitor
- job retry set to 1 and disable retries for DAX jobs
- decrease the held period from one hour when job is removed.
- improved documentation for output mappers
- ensemble manager todo's
  - we won't have ensemble manger in multiuser mode
  - support both modes ( upload a tar file and finer grained control where he specifies the DAX files and the submit directory )
  - only the dashboard will run in multiuser mode
  - how do we start ensemble manager process
    - run as per user .
- copying of catalog files to submit directory.
- input directory copies based on recursive transfers as part of directory
  - it won't work in condorio mode because it flattens out
  - add type directory in the DAX schema.
- pegasus tutorial
- environment variable file substitution in site catalog, replica catalog and transformation catalog
- XSEDE Tutorial proposal and Posters

## January 2015

### Jan 14th, 2015

- metrics server update
  - no update from Donald still away from vacation
- Pegasus development
  - data configuration for different sites
    - working for steven
  - held jobs
  - pegasus-dashboard
    - root mode for dashboard and ensemble manager
      - gideon needs to confirm for ensemble manger
      - done for dashboard
  - pegasus-analyzer bug fix
  - pegasus-db-admin tool update
    - unit tests
    - bamboo pool will break.
  - upgrade to newer version of Pegasus
    - what happens to running workflows
  - pegasus-statistics with PMC - Mats and Rajiv
    - mats and rajiv will work on it.
  - docker based tutorial launcher
    - how to integrate in the build process
    - form
    - candidate machine
      - obelix
    - vmware colo vm
    - obelix.
- Pegasus Poster for Si2
  - will base on the previous years.
  - any particular thing we want to focus on ? or general?
- Pegasus Annual Report
  - User questionnaire - need to send out.
    - list of people to send it out to . Gideon has one.?

### Jan 7th, 2015

- metrics server update
  - no update from Donald still away from vacation
- 4.4.1
  - installed on workflow
  - OSG and XSEDE submit hosts will be upgraded in 3 weeks
  - need to follow up with LIGO
- database upgrade tool integration
  - documentation and manage left
  - import error for properties
  - python test case
- support for per site data configuration
  - mostly done/ still need to figure out worker package staging for that.
- pegasus-dashboard
  - should we show all job instances for a job.

- held jobs logged by pegasus-monitor
- user questionnaire

## December 2014

### Dec 8th, 2014

- metrics server update
  - minor bugs in the UI... still need to be fixed, especially how the session states are handled
  - things remaining to do
    - database/server side pagination
    - figure out the scroll issue for the trend charts
    - move the trends charts from the home page to under planner and download tabs
    - rename run metrics to dagman metrics, and instead of showing the most number of times a workflow was run, we want to see the top applications for which dagman workflows were run
    - for the time bar on the top, have drop down menu for years and months
    - can the maps pin show the actual number, for example in the top downloads map thing
- monitor fixes
  - for the race issue with postscript handling PM-798
    - had to change the way stdout and stderr is populated for job\_instance. It is now populated with the POST\_SCRIPT\_TERMINATED event happens
- pegasus-analyzer fixes
  - show the planner log when prescript for sub dax fails. PM-808
- we want to release 4.4.1 before the break.
  - has monitor fixes that LIGO requires
- tracking held jobs
  - decided to add a column in the jobstate table to capture why a job was held
- changes to pegasus-keg
  - to simulate reading in input and writing out of output files
  - will also simulate cputime and walltime
  - initially pegasus-keg will read in and write out the outputs and then do the sleep for the cpu time duration
  - removing the system information that it prints out
  - in the mpi version, the IO is solely done by the master.

### December 3rd, 2014

- Update from Duncan on LIGO dashboard requirements
  - run a flask module from apache
  - let apache handle authentication
  - read only dashboard view
  - have a separate flask frontend.
  - they are ok with a command line tool to remove workflow entries
  - port collisions .. so they prefer apache to do the handling.
- failed jdbrc unit test case
- glite quoting for the environment
- pegasus-dashboard delete workflows capability
- failing workflow reporting in the dashboard
- monitor to follow condor job log
- db admin tool updates

## November 2014

### November 12th, 2014

- DAGMan metrics reporting
  - working and completed for 4.5.0cvs
  - planned metrics
    - exclude the metrics that never ran.
    - have a drop down menu - planned , planned and run
- RPM/ and DEB tracking for downloads
  - mats has a script that goes through the download logs to populate the server.
  - So we are tracking those now.
- Failed data reuse regex test
  - make it a planning only test case
- hierarchal workflows options forwarding
  - have a value of null/none
  - --inherit option with a comma separated list of long opts.
- higher level DAX API for sub workflows ?
  - hack to figure out the command line arguments for the planner
- Pegasus Distribute Wrapper
  - waiting to hear further from Steven

- a /bin/bash test case
- Metrics Server Updates by Donald
  - has the geo location running
- DB Upgrade tool - Rafael ??
  - version upgrades
  - specific table version
  - <https://jira.isi.edu/browse/PM-776>

## November 5th, 2014

- DAGMan metrics reporting
  - already in recent DAGMan versions. can be enabled.
  - pegasus-run having the duplicate logic.
- Pegasus Distribute Wrapper
  - Initial implementation done and there is an example for Steven to try out
- Metrics Server Updates by Donald
- DB Upgrade tool - Rafael ??

## October 2014

### October 29th, 2014

- Upcoming Proposals
  - NEESGrid call
    - Robert Flashgun with Nirav..ASU stuff. Do some earthquake stuff
    - frank mckenna for needs type stuff
      - SCEC is part of the proposal
    - December 3rd due date
- Pegasus Development
  - monitor postsript handling
  - dynamic hierarchy stuff
  - Condor C with LIGO
  - Steven Clarke Distribute Stuff
  - pegasus-hpc-cluster ( PHC )
  - DAGMan metrics
- Kenichi Workflow
  - SNS workflow
  - Training material.
- Metrics UI updates
  - Trends over times
  - Geo overlay
- Darek from Poland - A postdoc 1206
  - panorama project
- Adaptive Workflows
  - adapting workflows... they are not converging.
  - templating workflows
  - Hopper Site Catalog
  - Sample Site Catalogs

## September 2014

### September 17th, 2014

- Checkpointing feature
  - tested and implemented into pegasus
  - communicated with LIGO and John Veitch will test it next week.
  - will be run from a binary install
  - kickstart won't enforce non zero exit code for application exit code . we will require application codes to exit with non zero status.
- Profile and Properties documentation integration
- database schema upgrade tool
  - rafael starts working on it
- support for google storage
  - hassan writes a paper for google storage
  - compare S3 with google storage
  - parallel uploads of chunks not supported with gsutils.. relies on a very specific python module
  - ~/.botoconfig
  - uses oath token for authentication
- works paper revisions due oct 1st.
- dv/dt paper has been submitted as a CS dept tech report.
- DOE Oakridge meeting

- interface with ASPEN ( analytical modeling ) - domain specific language for defining code.
- combine aspen model with machine model and come up with estimates of runtimes.
- christopher riggers from RPI models parallel storage systems.
- Explore visualization stuff for pegasus-plots and dashboard?

## August 2014

### August 25th, 2014

- Ensemble Manager - User Authentication
  - initially gideon is working on a PAM based approach
- refactored netlogger dead code
- Workflow Checkpointing support - ongoing
- Google Compute Engine
  - related to google genomics
  - put in support for GCE transfer tool to interact with Google Storage ( their S3 equivalent)
  - put in credential handling in the planner.
  - fits well with long term planning for pegasus.
- Replica Catalog Service

### August 18th, 2014

- Data Reuse Partial Mode
- Service integration
- Profiles and Properties Documentation
  - Scope Column in the properties documentation ( transformation, job and global )
  - in profiles documentation corresponding property key
- pegasus-service integration
  - need to integrate the documentation
- redhat 5 builds
  - partially... because of 2.4 installed version pegasus-s3 fail
- authentication mechanism
- pegasus-service-admin migrate option
- new tool pegasus-db-admin
- get a new 32 bit VM with cents 6.5
- also centos 7 VM
- add a setup task that cleans \$HOME/.pegasus in bamboo infrastructure.
- Docker Kernel Problem
  - if a docker build running and you stop the build, then the whole thing crashes
  - one solution is to upgrade the kernel version.
  - cartman OS can be changed or move the docker builds to a VM.

### August 11, 2014

### August 4th, 2014

- how to handle a single job wrapping around PMC
  - will add a property to turn the wrapping off.
- checkpointing for LIGO . synonym for checkpointing. user level state files.
  - create a JIRA item that explains that.
  - list the various cases that will be handled
    - a lot of times in case of eviction kill -9 is sent.
- pegasus dashboard changes
  - multi tenancy for users.

## June 2014

### June 30th, 2014

- pegasus-remove and pegasus-dagman. pegasus-dagman has a wait of 100 seconds before monitor is killed, when pegasus-remove is called.
- rafael will add a workflow test case for JDBCRC
- Still have to make a slider.
- Karan will work on XSEDE poster for Pegasus
- IPlant and metadata requirements.
- pegasus-dagman / monitor / condor-dagman
  - hierarchal
  - PMC
  - GRAM

### June 9th, 2014

- 4.4 release
  - next week

- documentation items remaining
- JDBRC test cases and handover to SCEC
- Dashboard improvements
  - dashboard improvements
- Post Release Activities
  - integrate pegasus service back into the main codebase

## May 2014

### May 12th, 2014

- PM-747
  - will be used for soykb
  - test case
- Development releases
  - 4.4
    - plan for June 20th
    - automatic data dependencies
    - wrap up existing stuff
    - documentation
    - JDBRC change
    - documentation of FAQ's
  - 4.5
    - pegasus-service
      - some form of multi tenancy
      - python dependencies especially for external stuff is tricky
      - rename of dashboard database tables
    - pegasus-dashboard enhancements
    - separate the planning job from the prescript
    - checkpointing
    - software cleanup
    - transfers with hierarchies
    - leverage condor asynch transfers in pegasus lite
    - try for before christmas
    - 5 minute youtube video
  - 4.6
    - metadata
    - dax annotation
    - enhanced notifications
      - monitord
    - PMC data locality
    - globus online support ??
      - get credentials . at least do more research.
    - skipping symbolic links

### May 5th, 2014

#### Condor week

- Lauren
  - Karan needs to provide more documentation for her
- Kent Wenger
  - dagman reporting
    - dagman metrics files is created by newer versions of DAGMan in the submit directory.
  - retry immediate parent
    - CMS has a requirement for this also. The most important thing on Kent's plate
- dynamic workflows
  - node expansion . may not be that worthwhile
- pegasus lite asynch transfers
  - using condor chirp in the pegasus lite shell script once the main computations are done. that way we can pipeline
  - does not work with partitionable slots
  - does not work with condor file io

#### Bamboo Test Cases

- Job got hung for a long time??

#### User Survey

- Developer Meeting will be moved to 1PM for

## April 2014

### April 21st, 2014

- - Pegasus Metrics
    - ewa sent out the report for metrics to Dan. we need to get her final version.
    - JIRA metrics
      - work log feature of JIRA - everybody does not find it useful.
      - all developers need to be diligent of putting tasks into JIRA
      - sub tasks in JIRA ???
      - how to track user feature requests
    - performance improvement
      - get the data structures upto speed.
      - timing the cleanup is also important and canceling it if it goes too long
  - SI2 Tasks
    - Support Data as first class objects
      - file movement open JIRA item
      - data flow dependencies
    - Support annotations for runtime and files sizes
    - software review of streamlined
      - remove pegasus-plots
      - remove libexec
      - remove unused example
      - archive sub directory
      - <https://jira.isi.edu/browse/PM-672>
    - tutorial VM's
    - refine and document metrics
      - we have the confluence page that captures
    - metadata registration in catalogs
    - triggers for enhanced notifications for long runtimes
      - we personally feel
    - pegasus service
      - have a release and multi tenancy
      - sort out all the python stuff.
      - reconsider moving pegasus-service back into pegasus git repo
    - documentation for integrating pegasus
    - enhance feature coverage and testing framework.
      - unit test coverage
    - adopt a model on how others can contribute to pegasus
      - document the process how people can contribute.
  - Customer Survey
    - identify questions to ask.

### April 14th, 2014

- JIRA Policy Document or page
- [Pegasus Metrics](#)
- Pegasus Survey
  - Develop a list of questions .
  - Forward to Duncan CBC Group
- New Default Transfer Refiner - BalancedCluster

## March 2014

### March 31st, 2014

- Gideon changed the tutorial VM.
- Put in backward support for old credential handling.
- Mats started on an outline for the optimizations chapter.
- next week's developer meeting is cancelled.
- general Pegasus dependencies
  - python > 2.4 and less 3.0
  - in general, easier to build from source rather than from source RPMs
- update Pegasus README
- change the build.xml to say default build without docs. remove the dist-nodoc target. instead we will have ant dist-release as the default target
- also we should start having documentation per minor release and not per major release as we do now.

### March 24th, 2014

- Pegasus 4.3.2 release done last week
- storage constraints paper - gideon, rafael and karan worked on it.



- karan worked on the hpc-pegasus setup.. has workflows running through PMC
- karan and mats have a XSEDE tutorial proposal that will be submitted today
- dv/dt paper rejected for HPDC. Will try for a middleware conference due mid may
- 4.4 release
  - checkpointing solution
  - leaf cleanup for hierarchal workflows
  - md5checksum option for guc transfers
    - we won't follow up on kickstart generating the checksums, but tracking checksums in replica catalog.

## March 17th, 2014

### Agenda

- XSEDE poster and tutorial proposal
  - will get it done this week. mats and karan will work on it.
- idafen will work on a workshop paper for xsede on reproducibility
  - 4 page limit
  - deadline is april 5th.
- energy simulation for SC 2014
  - measure energy when running workflows
  - try to check if energy usage changes whether data is transferred to a site, or everything is executed at one site.
- sane defaults for 4.4 for transfer jobs, pre scripts etc
  - transfer jobs
    - how many stage in jobs - 2 jobs and each job with 2 threads.
    - how many threads each transfer jobs - pegasus-transfer has a default to 2
    - pegasuslite job
      - change sls name ? property name change
      - control the number of threads
    - add a chapter called tuning workflows
      - mats will add about a section on tuning transfers.
      - setting clustering parameters.
    - changing back the default refiner to bundle???
  - cleanup job
  - change hold release time to one hour.
- new transfer refiner
  - maybe can use k means clustering ?
- leaf cleanup for hierarchal workflows
  - --cleanup leaf,inplace,none
  - tell the planner to throw a warning when
- sudharshan's paper
  - emphasize that the goal is not improving the makespan.
- 4.3.2 release
  - release notes checked in on friday
  - mats will tag after the release.
  - the service should be installed in the tutorial VM image.
- Condor Categories
  - similar to dagman categories.
  - will condor accounting groups work??

## March 10th, 2014

### Agenda

- Should we stage sub-workflow output files to parent workflow scratch? (related to leaf cleanup)
- Should we enable DAX jobs to have input and output uses, and distinguish between planner inputs and sub-workflow inputs?
- SUB DAG keyword to make pegasus generated subdag submit files match with dagman version always
  - From Kent, Wenger
    - Hey, I just wanted to touch base and find out whether you guys have made any progress towards making Pegasus-generated sub-DAG submit files match the "normal" DAGMan format.
    - (See <https://htcondor-wiki.cs.wisc.edu/index.cgi/tktview?tn=3891,4.>)
- data reuse edge case
  - have fix for it and have added unit test cases
- altassian licenses expiring?
- plan for a pegasus workshop / meeting for 2nd week of January 2015

## March 3rd, 2014

- monitor fix for LIGO
  - pegasus plan prescripts were not logged in the database.
- checkpointing files
  - karan will create a JIRA item and send it to ligo folks for comment.
- transfer fix
- held jobs ?
- separate pegasus plan planning jobs

- throttle jobs via category.
- real full ahead planning
  - plan full ahead -
  - will help in debugging workflows
- hierarchal workflows planner arguments in the prescript wrapper shell scripts.
- final cleanup job for the workflow
- fix for iplant workflows cleanup. previously generated files whose locations are determined in the replica catalog should not be cleaned up

#### Workflow reproducibility ( idafen )

- here for 3 months - march/april and may
- document the infrastructure that was used to generate the workflows
- created ontologies to describe infrastructure.
- precip API
  - expressed an interest in it .
  - he focuses not on how to deploy, but instead to describe the infrastructure
  - then do experiments that take in his description and deploy it using precept
- target two conferences
  - one systems
  - other semantic

#### Pegasus Submit Node on HPCC

- waiting on glite recommendations from condor-admin

## Feb 2014

### February 24th, 2014

#### SCEC Transfer Issues

- hpc login crashed for sceec workflows because of too many stageout jobs
- there were too many connections open at xinetd level
- also the stageout jobs were starving all the other local universe jobs in the workflows
- so the workflows were getting bunched at the stageout level
  - we solved it by moving only the transfers to the vanilla universe on shock
  - ran into credential handling backward compatibility we put in 4.4 after new credential handling.

#### Transfer Configuration for 4.4

- by default the number of threads will be 2
- we will expose a way via properties to increase the number if users want to have better bandwidth
- in case of any failures, pegasus-transfer will revert back on a single thread

### February 10th, 2014

#### Postscript handling

---

- We have implemented a solution in PM-737 to get around condor quoting rules.

- MPI code are not kickstart wrapped

- Pegasus should indicate whether a clustered job or a kickstart job.

- DAGMan exitcode

#### checkpoint jobs

- 10% of runtimes

- pegasus-transfer will have to be changed

- link is set to type checkpoint

- transaction support for checkpoint

- timeout is job runtime - process
- pegasus-kickstart timeout method
- also has dv/dt implications for monitoring.

pegasus-exitcode assumes success and checks for failure

- refactored the script for unit tests as a library
- pegasus-statistics
- pegasus-analyzer ( maybe some commonality)
- pegasus python library has to be included in worker package

pegasus-transfer

- threads are handled similar to pegasus-s3
- default threading
- 
- expose options end to end
- initial threads to irods
- what options to set

pegasus-config will now work with a source checkout

## December 2013

### December 16th, 2013

- TODO: Talk about ADAMANT design

### December 3rd, 2013

- 4.3.1 release
  - just need to send the announcement.
  - gideon has updated the build infrastructure in bamboo to build the release
  - to do
    - do a drupal snippet, to update the downloads page automatically.
      - dynamically render the page using the shared directory in drupal.
    - pegasus-analyzer will have a recurse option.
- identity management for pegasus service
  - portal use case
  - user authentications
  - website
    - put a token in a cookie.
  - draw bigger pictures on the identity stuff.
- Unicore Testing

## November 2013

### November 11th, 2013

- 4.4 Planning
  - according to proposal, we need pegasus as a service, metadata registration, enhanced notifications on long runtimes etc.
  - ligo realtime analysis?
    - scott and kent mentioned that real time analysis is a priority.
    - gstreamer interface.

- investigate streaming workflows
    - uncore testing support
- Pegasus Tutorial on (Mats VM on oregon region)
- Pegasus as a service
- Ensemble Manager
  - an ensemble has no end state currently.
  - update documentation on the website
  - gideon plans to remove the upload catalog options. instead the clients will read in the properties and automatically upload.
- NSF Cloud Proposal
  - Experiment management.... maybe does not align itself with NSF Cloud.
- Adamant Demo
  - workflows are setup and done.

## November 4th, 2013

- Tutorial format finalized for November 14th meeting. similar to software carpentry layout
- 4.4 release things
  - pegasus metadata support
    - dax schema changes
    - irods - support for metadata attributes
    - s3 objects - they can have tags associated with it.
  - transient replica catalog.
  - uncore support
  - for JIRA items move to the next one.
  - moteur support.
  - dv/dt wrapper support ( probably in a separate dv/dt branch)
- move to VMWare for hosting websites
  - pegasus.isi.edu will be as a VM in a VMWARE ESX pool.
    - initially 4 VM's for Bamboo BNT
    - retire the machine for PAGE QC
  - long term we are moving to ESX

## October 2013

### October 1st, 2013

#### Pegasus 4.3 release

- dashboard is separate
- prepare rpm for ligo
- ssh submission for 4.3
- tutorial vm almost done
  - the clock issue remains. probably an issue with how virtualbox does the time.
- need to hear back from scott
- sepiddeh working on make flow compatible code generator.

## September 2013

### September 23rd, 2013

#### Software Carpentry followup

- Create a pegasus youtube channel.
- See if that can be linked from the ISI webcast page.

#### ISI Pegasus Workshop

- Submit host setup at HPCC
- specs are similar to workflow.isi.edu
- gideon will mail to HPCC admins today about this

#### Tutorial VM

- networking issue
  - persistent rules file /etc/udev/rules/70-persistent-networking.rules
  - instead of deleting it lets just disable it in our VM's
- X with virtual box guest additions for enabling copy paste
- turn on ntp
- larger virtual disk - will increase the size to 8GB
- X should just add couple of hundred MB's

#### Pegasus Release

- JDBC RC
- Tutorial VM

- pegasus-statistics
- pick up a release date
- tentatively next friday i.e the 4th.

## September 9th, 2013

### Software Carpentry

- Karan will prepare introductory slides for Pegasus.
- Talk to John about providing a Pegasus submit node.
- Rajiv will be working on the Pegasus RNASeq VM.
- John Mehringer will go first in the second day.
- Parking is in Levy structure in southwest corner.
- Inquire about shuttle from Health Science Campus.
- Still do - RNASeq module.
- Put Information about parking and HSC Shuttle.
  - Parking Center.

### Pegasus Release

- waiting for Scott to do release testing.

### Pegasus Lite Paper

- Karan will send the camera ready version today.

### Precip

- using netlogger for logging.
- replace python logging framework
- incorporating events from the remote site
- AMQP ?
  - Getting events into a common file.
- Run montage using precip

### Condo of Condos Workshop

- Laurent and Gideon have 10 minutes each.
- Bosco new name is MyHTC.

## August 26th, 2013

### Pegasus 4.3 release

- dagman metrics not implemented yet by kent. still in design phase.
- testing stuff
  - unit tests running in bamboo.
- add missing data dependencies
  - still checks and produces errors

### Precip Logging

- getting the metrics back

### Pegasus Hold

- how to get dagman stop submitting jobs
- idle jobs need to go on hold.
- we can send sigusr1 to dagman.
- need to handle hierarchal workflows.
- JDBC RC stuff

### JDBC RC

- we will just update the existing version one.
- have a python based RC for Replica Catalog.

### Ensemble Manager Paper

- Gideon will be working on it.

### DAGMan replacement??

- Software engg stuff.

## August 19th, 2013

- Pegasus 4.3 release
  - output mapper stuff implemented.
  - pegasus-statistics changes checked in by Rajiv
  - app metrics associated with the metrics report
    - pegasus.metrics.app
    - can be used for RNASeq tracking and other applications
    - the metrics UI will be able to filter on the name.
- Globus Online Support - move to 4.4 release
  - can only do certain parts of transfers.
  - for transfers from local submit host , we need to use globus connect
    - credentials issue
    - for submit host, there needs a local endpoint.
- LIGO testing ?
  - prepare a pre release RPM for LIGO

## August 12th, 2013

- Pegasus Lite Paper
  - Wait for the Big Data and Science Workshop
- 4.3 Release
  - Output Mapper Submission
    - error if output site and a output mapper replica catalog specified
  - Globus Online Support in pegasus-transfer
    - OAuth tokens issue.. when to get the token
    - support for multi end point with different credentials
    - probably need to do a pegasus-globus-online
      - the client needs to be blocking .
  - SSH Submission
    - Will use RNASeq for that.
  - Boto downgrade worked.
    - did not build on RHEL 5
  - Test Suite
    - Suite of integration tests
      - checksum the files
- Ensemble Manager
  - Almost done with the first version
  - Will work on the Galactic Plane version
- General JUnit Tests for Pegasus
- Galactic Plane Paper

## July 2013

### July 29th, 2013

#### Software Carpentry

- Workflows Tutorial
  - 1 hours overview of HPCC if HPCC folks are interested.
  - Pegasus Tutorial ( 2 hours )
  - An info part on where to run jobs
    - OSG
    - HPCC
    - XSEDE
- Pegasus Development
  - Rajiv will complete the pegasus-statistics part
  - error messages ( give more hints on what went wrong on site selection )
- Monitoring API
  - wants a jar with a simple API to monitor workflows
  - wrap it up in a jar
  - provide interface
  - portal integration
    - rest interface for the pegasus service

### July 8th, 2013

- gideon has changes checked in dax2dot based on the closures and reductions
- karan has checked in the LCA approach. But does not scale for our performance test case.
- Also changed the way edges added for the create dir nodes. that will go in for 4.3.
- Precip Paper
  - deadline extended to the 19th of July.
- Posters to be made for XSEDE
- Sudharshan will make a poster on his cleanup work on Monday.
  - Sudharshan will be going on Monday to campus to present the poster around 1-3PM

- Will give a talk to CCG group Tuesday July 16th at 11:00AM
- Currently, sudharshan's algo takes 15 seconds on a 1000 node montage workflow.

## July 1st, 2013

- monitor bug fix checked in
- algorithm to remove extra graph dependencies
- backups
  - we need to update the pegasus machine
    - jira, svn, website ( website and svn need to move at the same time ), crowd updates
    - confluence was moved to another . also coordinate with action to do the move.
    - mats already updated crowd today
      - there is secret number of conf files... apache on top of tomcat
    - update to debian machines
      - obelix, cartman and stewie, and the ccg worker nodes.
- mats has updated the bamboo tests to use new filesystem paths
- ADAS abstract
  - for galactic plane on Amazon. if accepted due in september.
- 4.3 release
  - fix error messages. see what can be done to improve them .
  - output replica catalog
  - pegasus-transfer tests.
  - updates to cleanup algorithm based on sudharshan's work ??
  - release notes will be updated to indicate the dashboards move to pegasus-services thing.
- Precip Paper
  - mats will do the zotero work.
  - submitting to cloud com in bristol uk.
  - seppideh has some data on openstack. could not get all instances started up.
  - seppideh will release the token to gideon to do an edit pass
- Cleanup Algorithm

## June 2013

### June 24th, 2013

- Pegasus Development
  - Monitor issue <https://jira.isi.edu/browse/PM-712>
  - karan has a fix that works for him.
  - needs to test the replay mode.
- Update on SCEC visit
  - pegasus-archive tool
    - archive everything other than the stampede db and braindump file
  - scott will try to cluster rupture variations for the same rupture in one task based on runtime estimates
  - the SGT will become 16 times bigger and post processing 8 times bigger on move to 1HZ. clustering rupture variations in scec code will help in reducing the number of jobs in the DAX
  - Scott tried to generate a single DAX for the post processing workflow. Was unable to do so. Has generated two dax'es
- Galactic Plane
  - Cut out service. Slow times on retrieving the image from S3. Small bandwidth between S3 and EC2
  - Will need to have monitoring etc... Not fast enough for a webpage to be responsive.. will need some queuing up
  - Backups
    - Mats working on Kepler data.
    - mats tried backup with S3. does not like symlinks. will change the way backups are managed. the transfer times can be long.
- Update from Sudharshan
  - Good progress. showed some simulations
- Adamant Update
  - we are on hook for providing the interfaces in pegasus-transfer that will talk to the exo planner service
  - also provide shadow queue service, that gives estimates on jobs that will be in the queue.
  - supercomputing demo?
- Precip Paper
  - majeick si doing some experiments

### June 17th, 2013

- Pegasus Development
  - the dax job handling is completed.
  - update on ligo front.
  - condor priorities for local universe jobs
    - not handled right now.
    - gideon has a ticket open for them.
  - gideon observation of s3
    - scalable but not good latency or
- Pegasus Lite Paper
  - mats is almost done with the runs. to grep through the runs to get the intermediate files in and out of S3

- not done the S3 caching for rosetta as yet. still not sure. too much work for the time remaining.
- mats did do the runs with task clustering. he got better numbers and saw a difference in case of rosetta.
- interleaving of compute jobs and transfers. may help montage.. but won't help rosetta
- whether we should include the new pegasus 4.2 features.
- Cleanup Algorithm
- Glacier Backups for NFS?
  - instead of using two qnaps, just have one and use other for duplicates
  - we need a place for backups
  - currently the QNAPS are 18TB each with raid 6. Raid 10 is a better configuration on the QNAP according to the forums. This means though we will have half the space.
    - have one qnap for scratch
    - have other qnap for storage - the storage will be backed upto glacier. right now QNAP only support S3. Support for glacier is coming.
  - ewa and richard think glacier backups are a good option.
    - there might be a purge policy required on glacier.
- Precip Paper
  - change tracking on
  - use dropbox
  - broadcast when you making a new version.

## June 10th, 2013

- Pegasus Development
- change to dax handling
- fix of stdout
- regex based replica catalog.
- changes to pegasus-statistics for aggregate statistics

### Pegasus Lite Paper

- compute data between s3 and local disk.
- compute costs for the runs ?
- have data outside
- local cache for the S3 client ?? could affect the rosetta cache.
- change the rosetta workflow.
- if there are a lot of small files.
- reading parts of files.
- Ewa will send her version of the changes.

### Sudharshan Algorithm for Cleanup

- Greedy approach planned
- will try implementing a version and show the different executable workflows created

## June 3rd, 2013

### Pegasus Lite Paper

- Breakdown of the runtimes , experiments
  - In case of sharedfs, the kickstart runtimes in the breakdown file will be longer
  - for the S3 case we can calculate the S3 transfer time by calculating the difference between the cumulative runtimes
  - doing two experiments rosetta(cpu intensive) and montage( io intensive)

### Pegasus Development

- Java DAX API issues
  - might be some bugs in there.

### Precip Paper

- Ewa wants a link to pegasus website in the paper.
- have more logical thinking in the paper, like reliability and repeatability



- Sepideh adding some new figures to the paper.
- Maciek will provide an experiment use-case for the paper.

#### Stampede and Corral Annual Reports

- Karan and Mats will be working on these

#### Sudarshan's Project

- Going to look into providing a cleanup algorithm that meets a given storage constraint
- Will look at the static problem of inserting dependencies into the workflow to achieve a solution

#### PMC Paper

- on amazon
- with clustering and pmc

#### Shirts

- Should get the logo sample this week, once we approve then we can order shirts

#### dV/dT

- Rafael is working on a draft of the data collection and modeling paper
- We are planning on publishing data, will start drafting a format this week

## May 2013

### May 20th, 2013

Confluence is going slow. Mats is going to look.

Analytics are set up on Confluence now.

#### Pegasus Transfer

- Mats committed a new version that has support for 2-stage transfers

#### Pegasus S3 Client

- Gideon changed .s3cfg to .pegasus/s3cfg

#### Pegasus Lite Paper

- Mats is working on the experiments
- We have two weeks to the deadline

#### PMC Paper

- Experiments on Amazon comparing Pegasus, Pegasus w/ Clustering, PMC alone

#### Pegasus Service

- Finished setting up users and test suite
- Next is a quick-and-dirty ensemble manager implementation
- Gideon is going to commit a change to Pegasus that removes the dashboard components. They will live in the pegasus-service repository from now on.

#### Summer Student

- Need to think up a project. Needs to be research-oriented and relatively small.
- Cleanup? Precip?

#### Contacting users

- Find out if they need anything.

#### Examples

- Simple examples in Perl, Python and Java
- Gideon will add them to the examples in the pegasus Git repo

## April 2013

### April 22nd, 2013

Pegasus 4.2.1 Release

- monitor prescript handling fixed
  - pegasus-analyzer should detect prescript failures, and the prescript exitstatus should be logged in the database
  - pegasus-statistics was updated for the job instance report
- pegasus planner
  - need to confirm all checkin's are complete
- do we want to get LIGO to do a test or just release?

Pegasus statistics across workflows - Rajiv

Pegasus Lite Paper

- Mats will do the runs on Amazon
- Karan will work on paper when he comes back

pegasus-hold and pegasus-release

- any difference between doing a hold on the dagman directly or pegasus-dagman
- we need to do more investigations on monitor

BOSCO

- Mats is trying to run on HPCC
- a single job is running fine.

## April 8th, 2013

Pegasus 4.2.1 Release

- Work on it towards this week
- monitor prescript issue to fix

Pegasus 4.3

- pegasus statistics extensions
  - across root workflows
  - <https://jira.isi.edu/browse/PM-507>
  - condor temp file

Pegasus Posters

- One at XSEDE
- joint one with BOSCO team

Pegasus Lite Paper

- Submission to IEEE Big Data

New Programmer Hire

- expanded posting on confluence
- [New Programmer Hire](#)
- will send out to HPC Wire , RENC1 and USC SC Connect

## April 1st, 2013

Pegasus Lite Paper

- Waiting on Ewa
- Not much we can do about the IEEE conference. The page limit is 8 , the current size of the paper.

XSEDE Poster

- Pegasus Poster. Karan will send update
- Also a joint Pegasus BOSCO poster
- Also as part of that we will get the MPI workflows up and running through Pegasus and BOSCO

Pegasus Development

- Bypass of staging input files for Pegasus Lite Case
- Inplace cleanup bug fixes done.
- pegasus-s3
  - gideon checked in changes of copy from one file to another
  - mats adds a pegasus transfer
- workflow cleanup nodes
  - separate cleanup node in the workflow
  - for hierarchal workflows we only delete the outermost workflow
  - what happens if no output-site specified
    - the ligo case!
- backward compatibility for LIGO

- Pegasus Dashboard
  - general javascript updates
- Generic Pegasus Slides
  - 2-3 slides.

## March 2013

### March 25th, 2013

- Pegasus Lite Paper Submission
  - We will try for <https://sites.google.com/site/sweetworkshop2013/>
  - Karan will move the paper to the ACM format
- Pegasus-statistics
  - Waiting on Scott to get back with the list of metrics
  - Rajiv will be working on it
- pegasus-s3 changes
  - we want to be able to copy output files from one s3 bucket to another
  - requires changes to pegasus-transfer and pegasus-s3
- final node for cleaning up remote directories
  - also related is getting the cleanup algorithm working when we bypass first level staging.

### March 18th, 2013

- Mats has an RPM almost sorted out for LIGO that does not require us to have PYTHONPATH set. Instead the libraries go into standard locations
- Karan is testing this RPM at on spice-dev1 and has setup a page with instructions on how to submit a test workflow to VIRGO
  - <https://www.lsc-group.phys.uwm.edu/ligovirgo/cbcnote/aLIGOaVirgo/130307121559GeneralInstructions%20For%20Submitting%20Workflows%20on%20VIRGO>
- Statistics across root workflows
  - earlier gaurang had generated statistics for scec runs by hand... executiing queries on the msql command line
  - he does not have the queries documented anywhere
  - this is something we have talked about in context of 4.3 with Rajiv
  - will follow up with scott on wednesday's call
- 4.2.1 release
  - backward compatibility for LIGO . still to be done
  - probably next week after the pegasus annual report
  - RPM to handle native python installation
- Pegasus Annual Report
  - Karan will work on it this week
  - Try to follow the same template as earlier.

### March 4th, 2013

- Sent link on DAGMan metrics to [DAGMan Metrics Reporting](#) to Ewa
- Metrics for Rob Quick's workflow
- Gideon pushed out kickstart changes
- Rajiv has pushed changes to the queries for the dashboard.
- Setup meeting with Jaime and Derrick at OSG AHM to discuss
  - remote\_initialdir
  - extra attributes for glite/bosco submissions
  - mpi workflows.
- OSG Poster to be made this week. And 4.2 Release slides.

## February 2013

### February 11th, 2013

Direct submission of workflows to PBS

- Glite submission in Condor. We setup a VM that hosts a PBS scheduler and using that too test
- Karan prepared an example for 4.2 that can be used to submit directly to local PBS using the glite interfaces in Condor
  - the remote\_initialdir / +remote\_iwd does not work
    - problem for MPI codes
    - for the time being, the example prepared relies on kickstart to change the directory before launching a job
  - there is also a ssh style that allows us to use BOSCO to do remote submissions using SSH to a PBS cluster
    - that one also has the issue of remote initialdir

- jobstate.log refactoring.

- data transfer ( support for globus online)

- lightweight tracing
- task stats. net link socket pegasus-kickstart . how much memory the task used and io used.
- add task stats to kickstart
- ptrace
- trace linux equivalent is system tap
  
- dashboard improvements
- single api for clients
- last week drop down
- performance run on large workflows.

## February 4th, 2013

- CCGrid / Pegasus Lite Paper
  - Performance section
  - remove the experiments section?
  - OR
  - extra experiments section
  - have the squid proxy cache
  - find a workshop to submit the paper
- Cloud Paper
  - Ewa is working on it.
- Git HUB Migration
  - - couple of branches like monitord , pmc and dang are branches
  - - svn will be made read only .
  - - update the website with all the development information
  - - bamboo scripts
  - - documentation ( long term )
  - - nightly builds
- SSH Submission
  - - gsissh submission for blue waters
  - - ssh to blue waters is required for OTP
  - - passing of parameters to PBS
  - - SSH key
  - - ssh agent.
  - - queue keyword
  - - Batch session
  - - submit jobs to HPCC
  - - Gideon will do that.
- monitord memory explosion
  - - long term for monitord
  - - pegasus-dagman replacement
- minor release 4.2.1
  - - potential monitord bug issue
  - - long term dagman replacement
- Response time for metrics page
  - - occasionally it is slow