

JOB SUBMISSION FRAMEWORKS: ATLAS

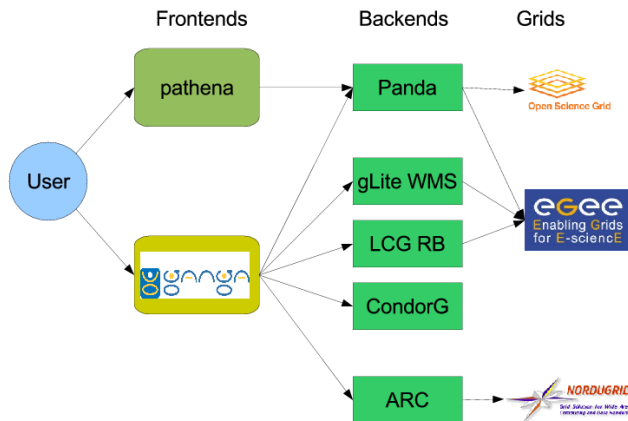
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DISTRIBUTED ANALYSIS - CURRENT SITUATION



Data is centrally being distributed by DQ2 - Jobs go to data

FRONT-END: PANDA CLIENTS

Command line tools for submission to Panda (pilot system):

- pathena: Athena jobs
- prun: ROOT/general jobs
- psequencer: Analysis chain
- pbook: Bookkeeping

Web based monitoring:

Panda jobs for user Johannes Elmsheuser - Mozilla Firefox

Date: Bearbeitet Ansicht Chronik Lesezeichen Extras Hilfe

http://panda.mn.ch:2580/server/pandamon/query?job=6&jobsetID=984828&user=johannes%20Elmsheuser

Panda jobs for user johannes...

Showing 1 jobsets modified from 2010-09-04 20:42 to 2010-09-04 15:55

Job Sets:

User:jobID	Created	Latest	Jobs	Pre-run	Running	Holding	Finished	Failed	Cancelled	buildjob	Site
johannes Elmsheuser: 984828	2010-09-04 14:32	2010-09-04 14:32	2					1	1	1108424750	ANALV_ARC
In: data10_7TeV.00155118.physics_MuonBeam.merge.AOD.r1289_p161_rdi43338_00 Out: user.elmsheuser.20100904163212.473.ANALV_ARC											

Showing 2 jobs modified from 2010-09-04 20:42 to 2010-09-04 15:55

Jobs:

PandaID, Owner, Working group	Job	Status	Created	Time to start	Duration	Ended/Modified	Cloud/Site	Type	Priority
1108424750 johannes Elmsheuser	jobsetID=984828 out Athena-05-05-11 Error details: trans: Athena crash - consult log file	Failed	2010-09-04 14:32	0:05:36	0:05:00	09-04 20:42	ICU/ANALV_ARC	analysis-run	952
1108424750 johannes Elmsheuser	In: data10_7TeV.00155118.physics_MuonBeam.merge.AOD.r1289_p161_rdi43338_00 jobsetID=984828 buildjob=00-00-02	Finished	2010-09-04 14:32	1:19:35	0:04:00	09-04 15:55	ICU/ANALV_ARC	analysis-build	2000
InBDS: user.elmsheuser.20100904163212.473.ANALV_ARC.00									

Run jobs in this job set: 1108424750

Job 1108424750 details

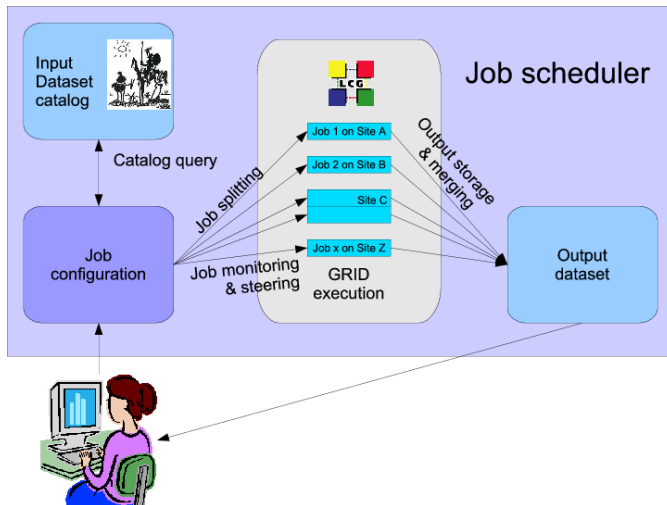
5 files for job 1108424750:

Filename	Type	Status	Dataset
AOD.143338_001003.root.1	input	ready	data10_7TeV.00155118.physics_MuonBeam.merge.AOD.r1289_p161_rdi43338_00
quid=ad3480E-4967-CF11-B083-0021E2226A0	input	ready	660.00001.AtlasIdealCERNRelease.v110801
SRRelease.11.8.1.17.ar	input	ready	user.elmsheuser.20100904163212.473.ANALV_ARC.00
quid=b17f6ef-a06e-4a20-b0b1-cf0d4a4234d	input	ready	user.elmsheuser.20100904163212.473.ANALV_ARC.00
user.elmsheuser.20100904163212.473.ANALV_ARC-1108424750.log.gz	log	failed	user.elmsheuser.20100904163212.473.ANALV_ARC (destination block: _sub020811773)
quid=f3c285f-3105-42b4-8d8a-c81ac12b0681	log	failed	user.elmsheuser.20100904163212.473.ANALV_ARC (destination block: _sub020811773)
Space token AD3F-T1_SCRATCHDISK	output	failed	user.elmsheuser.20100904163212.473.ANALV_ARC (destination block: _sub060811773)
user.elmsheuser.20100904163212.473.ANALV_ARC.D3FD_00002.com (on quid)	output	failed	user.elmsheuser.20100904163212.473.ANALV_ARC (destination block: _sub060811773)
Space token NG0F-T1_SCRATCHDISK	output	failed	user.elmsheuser.20100904163212.473.ANALV_ARC (destination block: _sub060811773)

Find and view log files

DISTRIBUTED ANALYSIS

Job scheduler/manager: GANGA



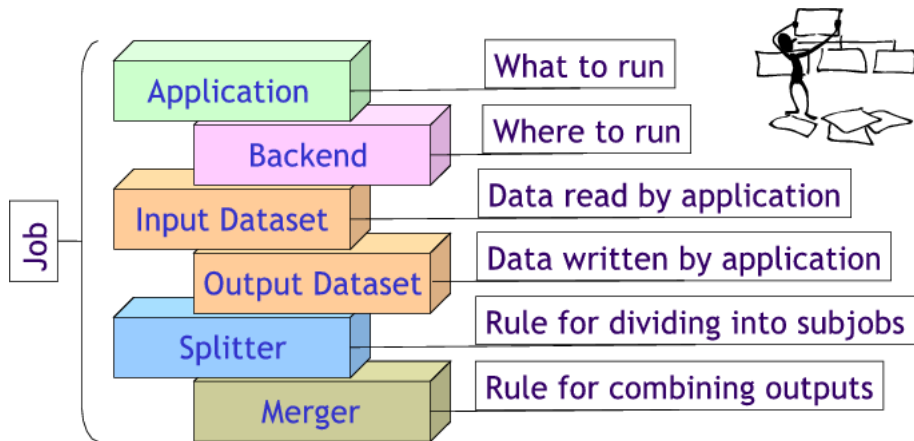
FRONT-END CLIENT: GANGA



- A **user-friendly** job definition and management tool.
- Allows simple switching between testing on a **local batch system** and large-scale data processing on distributed resources (**Grid**)
- Developed in the context of **ATLAS** and **LHCb** :
 - For **ATLAS**, have built-in support for applications based on **Athena** framework, for Production System **JobTransforms**, and for **DQ2** data-management system
- **Component** architecture readily allows extension
- Python framework
- GPL License (also commercial usage) and D-Grid participation

GANGA JOB ABSTRACTION

- GANGA simplifies running of ATLAS (and LHCb) applications on a variety of Grid and non-Grid back-ends



JOB DEFINITION USING ATLAS SOFTWARE

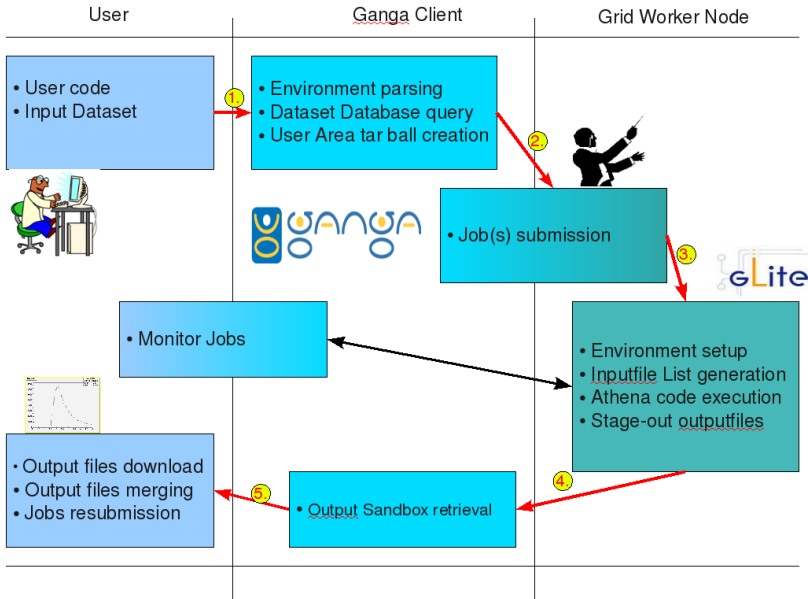
GANGA offers three ways of user interaction:

- Shell command line
- Interactive IPython shell
- Graphical User Interface

Job definition at command line for GRID submission:

```
ganga athena
--inDS fdr08_run2.0052283.physics_Muon.merge.A0D.o3_f8_m10
--outputdata AnalysisSkeleton.aan.root
--split 3
--lcg --cloud DE
AnalysisSkeleton_topOptions.py
```

JOB WORK-FLOW: ATHENA ON LCG BACK-END



CURRENT USER PROBLEMS AND SUPPORT

Frequently asked questions or problems:

- There is a problem with special user code configuration
- The job had problems with accessing the input data file (copy-to-scratch, dcap/rfio/xrootd or FileStager)



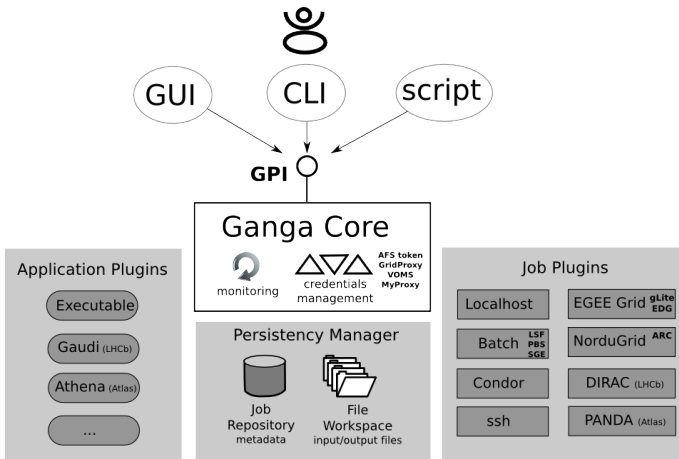
Support:

- Started ATLAS wide user support mailing list for DA
- Shifters in EU and US time zone
- Hoping for user2user support
- Has developed to one of the busiest mailing lists in ATLAS

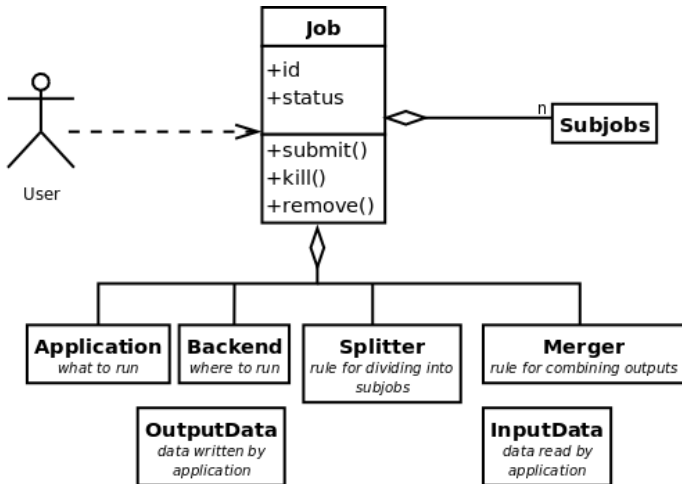


BACKUP

GANGA ARCHITECTURE



GANGA JOB COMPONENTS



GANGA OBJECTS

