DEFT GROUP PRODUCTION INTERFACE

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THE GROUP PRODUCTION TASK REQUEST INTERFACE

- As it stands:
  - Something of an ad-hoc system deriving from an accumulation of needs and quick solutions.
    - Very familiar to us all.
    - Could continue to serve, with manpower implications.
- What we desire:
  - Intuitive, reliable, clean, fast and self-explanatory interface.
  - Pre-filling as much of the form as intelligently as possible.
  - Privilege separation, and a production manager approval interface.

SUBMISSION FORMAT

```
#--- Top
comment:group production Top
group:GR_TOP
owner:minoru.hirose@cern.ch
tag:p937
priority:750
events_per_job:1000
num_events:all
ram:3500
total_num_genev:-1
project:data11_7TeV
project_mode:spacetoken=ATLASDATADISK;reprocessing=yes;lumiblock=yes;diskcount=3500;destination=UKI-LT2-QMUL_PHYS-
TOP,NET2_PHYS-TOP
formats:NTUP_TOP
ds:group.perf-tau.periodM.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodF.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodE.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodJ.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodH.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodI.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodL.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodB.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodG.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodD.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
ds:group.perf-tau.periodK.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
```

Select Parameters For Task Request

- *Task and Output Datasets Names will be formed from input dataset name and transformation*
- *request can be rejected by Production Manager*
- *request priority can be changed by Production Manager*
- *to submit request valid userid must be provided*
- *Userid : please proceed to the registration form to get one*
- *all requests are processed daily*
- *as always caveat emptor*

Comments

Dataset	**Project :**	default
Task Input Parameters	**Dataset**	http://nozturk.web.cern.ch/nozturk/DPDProduction/validationSamples/NTUPI
Task Execution Parameters	**Transformation Type :**	defaut
	Transformation Version :	17.2.8.10
	Configuration tag	p1575
Task Control Parameters	**userid**	nurcano

Continue

Check TASK PARAMETERS and submit your request

Task

Project :	**data12_8TeV**
Output Task Name :	**data12_8TeV.000700.group_MERGE_list.merge.p1575_p1575**
Output Formats	NTUP_EGAMMA.NTUP_TAU
First File Number in Input Dataset	1
Total Input Files	1
Transformation :	**Reco_trf.py**
Transformation Version :	**17.2.7.5.20**
Transformation cache	AtlasPhysic
--athenaopts :	**NONE**
--extraignorefilter :	**NONE**
--ignoreerrors :	**none**
--omitvalidation :	**NONE**
DBRelease :	**latest**
asetup :	**NONE**
autoConfiguration :	**everything**
beamType :	**none**
conditionsTag :	**NONE**
extraParameter :	**NONE**
geometryVersion :	**NONE**
postExec :	**ServiceMgr.COMMON_D3PDSvc.AutoFlush=200;from IOVDbSvc.CondDB import conddb;conddb.blockFolder("/LAR/TimeCorrectionOfl/NonRunCon");conddb.addFolder("LAR_OFL","/LAR/TimeCorrectionOfl/NonRunConLARTimeCorrectionOflNonRun00",forceData=True,force=True);conddb.blockFolder("/LAR/TimeCorrectionOfl/RunCon");conddb.addFolder("LAR_OFL","/LAR/TimeCorrectionOfl/RunConLARTimeCorre00",forceData=True,force=True)**
postInclude :	**NONE**
preExec :	**from BTagging.BTaggingFlags import BTaggingFlags;BTaggingFlags.CalibrationTag="BTagCalibALL-07-05";from RecExConfig.RecAlgsFlags import recAlgs;recAlgs.doMissingET.set_Value_and_Lock(False)**
preInclude :	**NONE**
tmpAOD :	**NONE**
tmpESD :	**NONE**
topOptions :	**NONE**
triggerConfig :	**NONE**
CPU per Event :	**10**
Memory Usage :	**3500**
SW Release :	**17.2.7**
Total Number Generated Events	1
Total Number Of Output Events	1
Number Of Events for Output File	1
Task Priority	750
Project Operation Mode	geometry=ATLAS-CSC-02-00-00; DBRelease=5.1.1
Comment (Physics Long)	group_MERGE_list

OTHER BITS OF BLACK MAGIC

- ☐ Submit a request to Savannah
  - ☐ Which gets scraped by a script and processed
  - ☐ Or the production managers hand-assemble a text file
  - ☐ Which gets parsed and submitted
  - ☐ And the web interface gets in there somewhere...

NOT OPTIMAL

UNDERLYING TECHNOLOGY

- Django gives us a lot of the desired items for free
  - Interaction with the DB is assumed.
  - Interface elements are pre-coded and maintained by pros.
  - Storing and changing element defaults per user is a common implementation.
  - Users and groups are intrinsic to the model, as well as authentication.
  - Models for everything! Users, groups, datasets, projects, storage elements, sites, etc. All automatically indexed against each other.

ITEMS TO COMPLETE

- [x] Django learning curve 90%
- [x] Admin interface 95%
- [x] Initial code and design of task creation and management 90%
- [ ] Deployment on test server 40%
- [ ] Creation of user pages (templates) for group task request 10%
- [ ] Creation of production manager approval page
- [ ] ProdSys1 exporter (the aforementioned text file)

Signed in as:

John Doe (ATLAS)

Roles: Top WG

Certificate:
/DC=com/DC=DigiCert-Grid/O=Open Science Grid/OU=People/CN=John Doe 112358

Project	Transformation Type	Transformation Version	Config Tag	
data12_8TeV	makeDPD	17.2.8.10	p1575	Submit

Input Datasets (with SQL wildcards)

group.perf-tau.period%.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0

Datasets Implied:

group.perf-tau.periodM.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodF.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodE.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodJ.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodH.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodI.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodL.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodB.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodG.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodD.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodK.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0

▶ Detailed Parameters

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group.perf-tau.periodE.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodJ.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodH.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodI.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodL.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodB.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodG.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodD.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0
group.perf-tau.periodK.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0

▼ Detailed Parameters

Athena Options: None	asetup: None	Geometry Version: None
Ignore Extra Filters: None	Autoconfiguration: Everything	Pre-execution Options: from BTagging.BTa
Ignore Errors: None	Beam Type: None	Pre-Inclusion Options: None
Omit Validation: None	Conditions Tag: None	Post-Execution Options: None
DB Release: Latest	Extra Parameters: None	Post-Inclusion Options: None

SAMPLE PRODUCTION MANAGER INTERFACE

Run Status	Approved	Task	Group	Project	Type	Input Dataset	Owner	Notes
	☑	1000100	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK.001	mellado	
	☑	1000101	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK.002	mellado	
	☑	1000102	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.003	mellado	
	☑	1000103	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.004	mellado	
	☑	1000104	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.005	mellado	
	☑	1000105	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.006	mellado	
	☑	1000106	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.007	mellado	
	☑	1000107	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.008	mellado	
	☑	1000108	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.009	mellado	
	☑	1000109	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.010	mellado	
	☑	1000110	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.011	mellado	
	☑	1000111	Higgs WG	data12_8TeV	makeDPD	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.012	mellado	
	☐	1000112	Top WG	data12_8TeV	Reconstruction	group.perf-tau.periodA.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0	dbenjamin	
	☐	1000113	Top WG	data12_8TeV	Reconstruction	group.perf-tau.periodB.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0	dbenjamin	
	☐	1000114	Top WG	data12_8TeV	Reconstruction	group.perf-tau.periodC.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0	dbenjamin	
	☐	1000115	Top WG	data12_8TeV	Reconstruction	group.perf-tau.periodD.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0	dbenjamin	
	☐	1000116	Top WG	data12_8TeV	Reconstruction	group.perf-tau.periodE.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0	dbenjamin	
	☐	1000117	Top WG	data12_8TeV	Reconstruction	group.perf-tau.periodF.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0	dbenjamin	
	☐	1000118	Top WG	data12_8TeV	Reconstruction	group.perf-tau.periodG.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0	dbenjamin	
	☐	1000119	Top WG	data12_8TeV	Reconstruction	group.perf-tau.periodH.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0	dbenjamin	
	☐	1000120	Top WG	data12_8TeV	Reconstruction	group.perf-tau.periodI.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0	dbenjamin	
	☑	1000121	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK.001	yaquan	
	☑	1000122	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK.002	yaquan	
	☑	1000123	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.003	yaquan	
	☑	1000124	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.004	yaquan	
	☑	1000125	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.005	yaquan	
	☑	1000126	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.006	yaquan	
	☑	1000127	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.007	yaquan	
	☑	1000128	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.008	yaquan	
	☑	1000129	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.009	yaquan	
	☑	1000130	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.010	yaquan	
	☑	1000131	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.011	yaquan	
	☑	1000132	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK0.012	yaquan	
	☑	1000133	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK.001	yaquan	
	☑	1000134	Higgs WG	data12_8TeV	RecoAll	mc12_14TeV.184002.ParticleGenerator_mu_Pt1to1000_Eta30_FTK.002	yaquan	

IMPLEMENTATION

```
class Task(models.Model):
    task_id     = models.DecimalField(decimal_places=0, max_digits=12, db_column='TASK_ID', primary_key=True)
    task_meta = models.OneToOneField('MetaTask') # See the MetaTask class. OneToOneField indicates table inheritance. https://docs.djangoproject.com/en/dev/ref/models/fields/#field-types
    task_comment = models.CharField(max_length=128, db_column='TASK_COMMENT', blank=True)
    task_dataset = models.ForeignKey('Dataset') #:group.perf-tau.periodM.DESD_ZMUMU.pro09.embedding-02-39.Ztautaull_isol_mfsim_rereco_p851_EXT0 #Changed from ds
    task_destination = models.ForeignKey('StorageElement') #UKI-LT2-QMUL_PHYS-TOP,NET2_PHYS-TOP
    task_diskcount = models.PositiveSmallIntegerField(db_column='TASK_DISKCOUNT')
    task_events_per_job = models.PositiveIntegerField(db_column='TASK_EVENTS_PER_JOB') # :1000
    task_formats = models.CharField(max_length=80, default=ALLOWED_FORMATS[0], db_column='TASK_FORMATS') #:NTUP_TOP (Ripe for another table instead of a definition)
    task_group = models.ForeignKey('DeftGroup')
    task_lumiblock = models.BooleanField(db_column='TASK_LUMIBLOCK')#; yes
    task_num_events = models.PositiveSmallIntegerField(db_column='TASK_NUM_EVENTS') #:all
    task_owner = models.ForeignKey('DeftUser') #:minoru.hirose@cern.ch
    task_param = models.CharField(max_length=4000,db_column='TASK_PARAM', blank=True)
    task_priority = models.PositiveSmallIntegerField(db_column='TASK_PRIORITY') #:750
    task_project = models.ForeignKey('Project') #:data11_7TeV
    task_project_mode = models.CharField(max_length=300, db_column='TASK_PROJECT_MODE')# :spacetoken=ATLASDATADISK;
    task_ram = models.PositiveSmallIntegerField(db_column='TASK_RAM') #:3500
    task_reprocessing = models.BooleanField(db_column='TASK_REPROCESSING')#; yes
    task_state = models.CharField(max_length=16,  db_column='TASK_STATE')
    task_tag = models.CharField(max_length=20,  db_column='TASK_TAG', blank=True)# :p937
    task_total_num_genev = models.IntegerField(db_column='TASK_TOTAL_GENEVENTS')# :-1
    task_transpath = models.CharField(max_length=128, db_column='TASK_TRANSPATH', blank=True)
    task_vo    = models.CharField(max_length=16,  db_column='TASK_VO', blank=True)

class Project(models.Model):
    proj_id = models.DecimalField(decimal_places=0, max_digits=12, db_column='PROJ_ID', primary_key=True)
    proj_name = models.CharField(max_length=128, db_column='PROJ_NAME')
    proj_vo = models.ForeignKey('VO')
    proj_tags = models.CharField(max_length=20,  db_column='PROJ_TAG', blank=True)
    proj_description = models.CharField(max_length=200, blank=True, db_column='PROJ_DESCRIPTION')
```

```
CREATE TABLE "DEFT_TASK" (
    "TASK_ID" decimal NOT NULL PRIMARY KEY,
    "task_meta_id" decimal NOT NULL UNIQUE REFERENCES "DEFT_META" ("META_ID"),
    "TASK_COMMENT" varchar(128) NOT NULL,
    "task_dataset_id" decimal NOT NULL,
    "task_destination_id" decimal NOT NULL,
    "TASK_DISKCOUNT" smallint unsigned NOT NULL,
    "TASK_EVENTS_PER_JOB" integer unsigned NOT NULL,
    "TASK_FORMATS" varchar(80) NOT NULL,
    "task_group_id" decimal NOT NULL,
    "TASK_LUMIBLOCK" bool NOT NULL,
    "TASK_NUM_EVENTS" smallint unsigned NOT NULL,
    "task_owner_id" decimal NOT NULL,
    "TASK_PARAM" varchar(4000) NOT NULL,
    "TASK_PRIORITY" smallint unsigned NOT NULL,
    "task_project_id" decimal NOT NULL,
    "TASK_PROJECT_MODE" varchar(300) NOT NULL,
    "TASK_RAM" smallint unsigned NOT NULL,
    "TASK_REPROCESSING" bool NOT NULL,
    "TASK_STATE" varchar(16) NOT NULL,
    "TASK_TAG" varchar(20) NOT NULL,
    "TASK_TOTAL_GENEVENTS" integer NOT NULL,
    "TASK_TRANSPATH" varchar(128) NOT NULL,
    "TASK_VO" varchar(16) NOT NULL,
    "slug" varchar(50) NOT NULL UNIQUE);

CREATE TABLE "DEFT_PROJECT" (
    "PROJ_ID" decimal NOT NULL PRIMARY KEY,
    "PROJ_NAME" varchar(128) NOT NULL,
    "proj_vo_id" decimal NOT NULL,
    "PROJ_TAG" varchar(20) NOT NULL,
    "PROJ_DESCRIPTION" varchar(200) NOT NULL,
    "PROJ_CONTACTEMAIL" varchar(274) NOT NULL,
    "slug" varchar(50) NOT NULL UNIQUE);

CREATE INDEX "DEFT_TASK_f54ce2f7" ON "DEFT_TASK" ("task_dataset_id");
CREATE INDEX "DEFT_TASK_0930ded8" ON "DEFT_TASK" ("task_destination_id");
CREATE INDEX "DEFT_TASK_841042a0" ON "DEFT_TASK" ("task_group_id");
CREATE INDEX "DEFT_TASK_3b61c88f" ON "DEFT_TASK" ("task_owner_id");
CREATE INDEX "DEFT_TASK_49e291f4" ON "DEFT_TASK" ("task_project_id");
CREATE INDEX "DEFT_PROJECT_45e0b1e1" ON "DEFT_PROJECT" ("proj_vo_id");
```

BRIEF DEMO