

How DPD job submission is done and the issues involved

Rob Henderson - Lancaster University

The broad outline of the current procedure

1)The list of current requests is scanned to determine what type of request they are complete or often need the datasets placing into the request by the submitter, sometimes the tags are not known, or new tags need to be created by the submitter and then according to the following types

- single stage (largely MC type production)
- Multiple stage (data production), can be 2 or 4 stage.
- A correction to or additional datasets added to the task.
- A request for action on tasks already in prodsys.

A relevant list is recorded of a single category and the each request of a given type is processed Through the tool by typing in the task id then

1)Data is taken directly from the savannah request web page via php read.

2)The web page strings are searched for the required information. These include tag, author, and datasets but they can be declared in multiple places. Mistakes can be made in these definitions by the submitter or they may not know the information and it needs to be added. Currently three different sources of dataset are allowed embedded in comments, afs files, attached files. Often they are multiply defined and this has to automatically allowed for sono duplication occurs.

How it is done by stage: 1 (preparation)

New And Unassigned Items

(-) **ATLAS validation** (1 item)

Valid tasks 1250981-1251018 are failing with "TrigL2MuonSA::MuFastSteering is unknown" error (bug #101450, None)

(-) **ATLAS DPD Production** (3 items)

MC12 : D3PD production NTUP_TAU p1344 (task #42173, None)

NTUP JETMET p1344 for r4294 (task #42172, None)

1172237: corrupted merge file (data) ; remake input files from 1161669? (task #42090, None)

New And Assigned Items

(-) **Atlas Distributed Computing Operation Support** (4 items)

GP_Muon tasks are failing with severe configuration problem (sr #137592, None)

Incoming requests inspected for type mistakes and extra needed input.

ATLAS DPD Production - Tasks: task #42173, MC12: D3PD production NTUP_TAU...

task #42173: MC12: D3PD production NTUP_TAU p1344

Submitted by: Bertrand Breiler
 Submitted on: 2013-05-13 16:50

Should Start On: 13 May 2013

Should be Finished on: 13 May 2013

Category: Higgs

Status: None

Assigned to: None

Discussion Lock: Unlocked

Title: p1344

Destination sites: NDGF-T1

Summary: MC12: D3PD production NTUP_TAU p1344

Discussion

2013-05-13 16:50, original submission:

Dear Production team,

Could you please launch the D3PD production p1344 NTUP_TAU on the following samples:

ats/0em.onuser/breiler/public/D3PD_p1344_NTUP_TAU_8.txt

The destination site are :NDGF-T1_PHYS-HIGGS,AGL72_PHYS-HIGGS

Thank you very much,

Best regards,

Bertrand

These two are complete single stage and suitable to launch together

How it is done by stage: 2 (configure script)

an ATLAS Group Production Tool

Group Production Tickets

PROCESS INDIVIDUAL TICKETS

TICKET NUMBER

42173

combine inputs: yes no

original only: yes no exclude original exclude below comment exclude outside range Start:

accumulate mode: on off

datamerging mode: on off pTAG newTag newFormat

ram: 2000 ram1 2000 ram2

reprocessing: search format

Create Script

Reset

EDIT SCRIPT

Edit Script

EDIT ACCUMULATED SCRIPT

Edit Accumulated Script

LAUNCH SCRIPT

Launch Script

The ticket number is inserted and when create script is selected these data are automatically inserted into the appropriate template scrip determind by the project and group parameters. The accumulate mode is selected to submit the two tickets together. Ram size is given for the tasks. Create script creates a temporary instance of the script.

How it is done by stage: 3 (make script)

an ATLAS Group Production Tool



Group Production Tickets

PROCESS INDIVIDUAL TICKETS

TICKET NUMBER

42173

combine inputs: yes no

original only: yes no exclude original exclude below comment

accumulate mode: on off

datamerging mode: on off pTAG new

ram: 2000 ram1 2000 ram

reprocessing: search format

Create Script

Reset

EDIT SCRIPT

Edit Script

EDIT ACCUMULATED SCRIPT

Edit Accumulated Script

LAUNCH SCRIPT

Launch Script

The individual current script or the final accumulated script can be inspected and edited in a text area box if necessary (unusual) and then launched

```
ds:mc12_8TeV.147027.AlpGenPythia_Auto_P2011C_WenuNp2.merge.AOD.e1879_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147028.AlpGenPythia_Auto_P2011C_WenuNp3.merge.AOD.e1879_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147029.AlpGenPythia_Auto_P2011C_WenuNp4.merge.AOD.e1879_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147030.AlpGenPythia_Auto_P2011C_WenuNpSim1.merge.AOD.e1879_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147033.AlpGenPythia_Auto_P2011C_WmunuNp0.merge.AOD.e1880_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147034.AlpGenPythia_Auto_P2011C_WmunuNp1.merge.AOD.e1880_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147035.AlpGenPythia_Auto_P2011C_WmunuNp2.merge.AOD.e1880_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147036.AlpGenPythia_Auto_P2011C_WmunuNp3.merge.AOD.e1880_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147037.AlpGenPythia_Auto_P2011C_WmunuNp4.merge.AOD.e1880_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147038.AlpGenPythia_Auto_P2011C_WmunuNp5.merge.AOD.e1880_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147041.AlpGenPythia_Auto_P2011C_WtaunuNp1.merge.AOD.e1881_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147042.AlpGenPythia_Auto_P2011C_WtaunuNp2.merge.AOD.e1881_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147043.AlpGenPythia_Auto_P2011C_WtaunuNp3.merge.AOD.e1881_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147044.AlpGenPythia_Auto_P2011C_WtaunuNp4.merge.AOD.e1881_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147045.AlpGenPythia_Auto_P2011C_WtaunuNp5.merge.AOD.e1881_s1581_s1586_r3658_r3549
ds:mc12_8TeV.147046.AlpGenPythia_Auto_P2011C_WtaunuNpSim1.merge.AOD.e1881_s1581_s1586_r3658_r3549
comment:group production JET/MET
group:GR_JETMET
owner:toshi@cern.ch
tag:p1344
priority:800
events_per_job:10000
num_events:all
ram:2000
total_num_genev:-1
project:mc12_8TeV
project_mode:spacetoken=ATLASDATADISK;destination=MPPMU_PERF-JETS
formats:NTUP_JETMET
ds:mc12_8TeV.147806.PowhegPythia8_AU2CT10_Zee.merge.AOD.e1169_d771_r4294_r3549
ds:mc12_8TeV.147807.PowhegPythia8_AU2CT10_Zmumu.merge.AOD.e1169_d771_r4294_r3549
ds:mc12_8TeV.147910.Pythia8_AU2CT10_jetjet_J20W.merge.AOD.e1126_d771_r4294_r3549
ds:mc12_8TeV.147911.Pythia8_AU2CT10_jetjet_J21W.merge.AOD.e1126_d771_r4294_r3549
ds:mc12_8TeV.147912.Pythia8_AU2CT10_jetjet_J22W.merge.AOD.e1126_d771_r4294_r3549
ds:mc12_8TeV.147913.Pythia8_AU2CT10_jetjet_J23W.merge.AOD.e1126_d771_r4294_r3549
ds:mc12_8TeV.147914.Pythia8_AU2CT10_jetjet_J24W.merge.AOD.e1126_d771_r4294_r3549
ds:mc12_8TeV.147915.Pythia8_AU2CT10_jetjet_J25W.merge.AOD.e1126_d771_r4294_r3549
ds:mc12_8TeV.147916.Pythia8_AU2CT10_jetjet_J26W.merge.AOD.e1126_d771_r4294_r3549
ds:mc12_8TeV.147917.Pythia8_AU2CT10_jetjet_J27W.merge.AOD.e1126_d771_r4294_r3549
```

COMMIT EDITS



an ATLAS Group Production Tool

Group Production Tickets

How it is done by stage: 4 (launch)

The launch button is clicked and the temporary list file is automatically copied to a uniquely identifiable name in a web served directory. The id number is automatically calculated from the presence of other files names but can be overridden.

PROCESS INDIVIDUAL TICKETS

TICKET NUMBER
42173

combine inputs: yes no

original only: yes no exclude original exclude below comment exclude outside range Start: End:

accumulate mode: on off

datamerging mode: on off

ram:

reprocessing:

Create Script

Reset

EDIT SCRIPT
Edit Script

EDIT ACCUMULATED SCRIPT
Edit Accumulated Script

LAUNCH SCRIPT
Launch Script

mc12_8TeV.000613.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000614.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000615.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000616.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000617.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000617.group_MERGE_list.recon.LIST.p1344_uncomm

mc12_8TeV.000618.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000622.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000624.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000625.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000626.group_MERGE_list.recon.LIST.p1344

mc12_8TeV.000628.group_MERGE_list.recon.LIST.p1344

UNIQUE IDENTIFIER
000629

Task

Project : mc12_8TeV

Output Task Name : mc12_8TeV.000629.group_MERGE_list.merge.p1344_p1344

Output Formats : NTUP_EGAMMA,NTUP_I

First File Number in Input Dataset : 1

Total Input Files : 1

Transformation : Reco_trf.py

Transformation Version : 17.2.7.5.3

Transformation cache : AtlasPhysic

--athenaopts : NONE

--extraignorefilter : NONE

--ignoreerrors : none

--omitvalidation : NONE

DBRelease : latest

Setup : NONE

autoConfiguration : everything

beamType : none

conditionsTag : NONE

extraParameter : NONE

geometryVersion : NONE

postExec : NONE

postInclude : NONE

preExec : from BTagging.BTaggingFlags import BTaggingFlags;BTaggingFlags.CalibrationTag="BTagCalibALL-07-02"

preInclude : NONE

tmpAOD : 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 : default

Comment (Physics Long) : group_MERGE_list

Requested by : r.henderson@lancaster.ac.uk

For physics group : bphysics

Provenance: ATLAS, Group or Extended

AP GP XP

The panda launch screen is then automatically appears for the correct file and the launch is completed.



How it is done by stage: 5 (recording /informing)

The last tag is then automatically incorporated in a button that will return from panda the task number of the latest task with that tag. This information is added to the ticket by hand and the ticket closed. The whole transaction is recorded in paper format so that when problems occur later the list file and ticket can be relocated. The information here is ticket tag, list file id, task number. It was intended to insert this information directly into mysql.

42020	P1096	P1222	501	500	1250625/6
41798	P1052		526		1250982
42052	P1035				
-42040	P1528		598		1250975
42058	P1528				
42025	P1344	P1345	627	598	1250976
38876	P1344		628		1251071
58042	P1802	P1298	501	501	1251072/3
42076	P1828		599		1251178
42083	P1082				
42084	P1400		600		1251197
42085	P1328				
42082	P1328				
42081	P1328				
42086	P1497				
42087	P1935		500		1251436
42095	P1328				
42156	P1400				
42158	P1328				
42159	P1328				
42161	P1344		500		1252799
42162	P1364				
42163	P1486				
42165	P1035				
42168	P1344				
42173	P1344		625		1253383
42172	P1344				

task #42172: NTUP_JETMET p1344 for r4294

Submitted by: Toshi Sumida <toshi>
Submitted on: 2013-09-13 16:38

FIND TASK NUMBER

Find Launched Task For Tag p1344

FIND TASK ACTIVE JOB NUMBERS

Find jobid TASKID DELIMITER

Should be Finished

Priority:

Privacy:

Open/Closed:

Cache: *

Output types: *

Number of events

Number of other c

use this productio

Post a Comment

Add a New Comment (Rich Markup):

Toshi submitted 1253383
Rob

More complex cases : 5 (editing the tickets)

Group Production Tickets

PROCESS INDIVIDUAL TICKETS

TICKET NUMBER

42173

combine inputs: yes no

original only: yes no exclude original

accumulate mode: on off

datamerging mode: on off pTAG newTag newFormat

ram: 2000 ram1 2000 ram2

reprocessing: search format

Create Script

Reset

EDIT SCRIPT

Edit Script

EDIT ACCUMULATED SCRIPT

Edit Accumulated Script

LAUNCH SCRIPT

Launch Script

The various other buttons and boxes allow editing correction additions to the original ticket and control of how it is interpreted.

>This controls whether multiple sources of datasets are combined

>The ticket is divided into comment blocks this controls which parts of the ticket are enacted.

>This controls if the ticket are submitted singly or accumulated together

>This control enables two stage data and merging list files automatically to be generated together

>This allows the template RAM parameter to be overridden.

>This allows the input format to be changed so that the events per job parameter which is automatically calculated for each dataset can be overridden in four stage production.

Two stage data + merging : 6

PROCESS INDIVIDUAL TICKETS

TICKET NUMBER
42172

combine inputs: yes no

original only: yes no exclude original exclude below comment exclude outside range Start: End:

accumulate mode: on off

datamerging mode: on off pTAG newTag newFormat

ram: 2000 ram1 2000 ram2

reprocessing: search format

Create Script

Edit Script
Edit Script

Edit Accumulated Script
Edit Accumulated Script

Launch Script
Launch Script

Edit Second Script
Edit Second Script

Edit Accumulated Second Script
Edit Accumulated Second Script

Launch Second Script
Launch Second Script

FIND TASK NUMBER
Find Launched Task For Tag p1344

FIND TASK ACTIVE JOB NUMBERS
Find jobid TAGID DELIMITER

COMMENT DDM ERROR FROM LIST FILE

- When the data+merging mode is chosen the script and merging script are created at the same time and launched as scripts one and two with the small control on the second script as the first. The accumulate mode also works in this data merging mode mode.
- The original tag is taken from the ticket but this field here is used to define the merging tag.

Four stage stage data + merging : 7 (AOD-DAOD-NTUP-NTUP MERGING)

PROCESS INDIVIDUAL TICKETS

TICKET NUMBER
42172

combine inputs: yes no

original only: yes no exclude original exclude below comment exclude outside range Start: End:

accumulate mode: on off

datamerging mode: on off pTAG newTag newFormat

ram: 2000 ram1 2000 ram2

reprocessing: search format:

Create Script

Edit Script
Edit Script

Edit Accumulated Script
Edit Accumulated Script

Launch Script
Launch Script

Edit Second Script
Edit Second Script

Edit Accumulated Second Script
Edit Accumulated Second Script

Launch Second Script
Launch Second Script

Find Task Number
Find Launched Task For Tag p1344

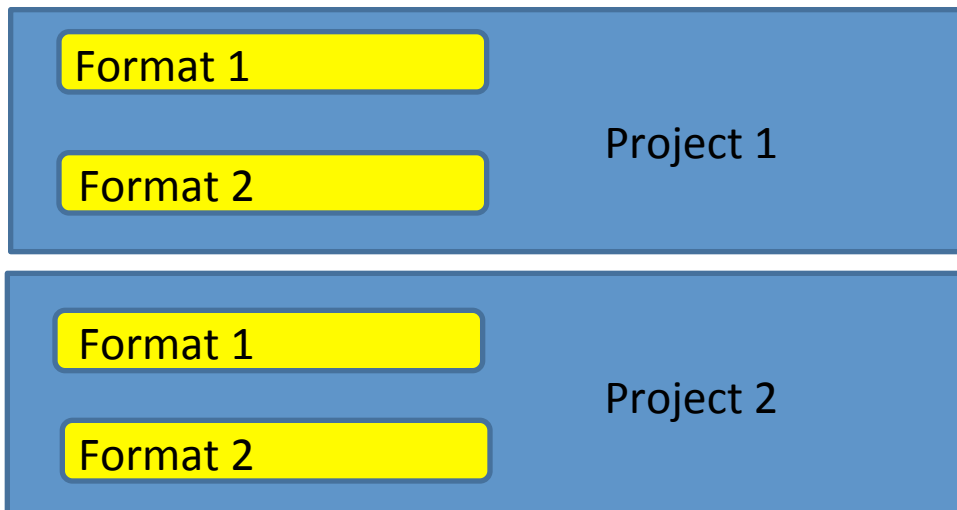
Find Task Active Job Numbers
Find jobid TASKID DELIMITER

COMMENT DDM ERROR FROM LIST FILE

This can be achieved from the original ticket from the AOD files
Firstly the two stage list files are launched (AOD-DAOD-merged)
Then these boxes are used to define the intermediate format
and new tag and new merging tag.
(DAOD->NTUP->NTUP merged)

Handling multiple formats and projects and events per job

For each of these cases currently these different requests require the list files to be produced in turn with each separately processed and presented as separate sequential files. The current launcher does this automatically processing each of these type in order automatically. Of course the prosys system could be changed such that these things can be define for each dataset separately rather than them having to be in blocks as at present.



The events per job parameter

Very important and difficult point

PROCESS INDIVIDUAL TICKETS
TICKET NUMBER
42172

combine inputs: yes no
original only: yes no exclude original exclude below comment exclude outside range Start: End:
accumulate mode: on off
datamerging mode: on off pTAG newTag newFormat
ram: 2000 ram1 2000 ram2
reprocessing: search format

Create Script

Edit Script

Edit Accumulated Script

Launch Script

Edit Second Script

Edit Accumulated Second Script

Launch Second Script

Find Task Number
Find Launched Task For Tag p1344

Find Task Active Job Numbers
Find jobid TASKID DELIMITER

COMMENT DDM ERROR FROM LIST FILE

The events per job used to be taken from the template file but after 2012 reprocessing is could either have been 1000 or 10000 and it was necessary to implement a table that enabled this to be determined per dataset requested. Two separate list files have then to be created and later merged for each case. This field allowed the format in the original ticket to be overriden in cases for multi stage production. THIS IN ITSELF WAS NOT DIFFICULT FOR ME TO IMPLEMENT VIA A SIMPLE KEYED ARRAY BUT HOW DO YOU PROPOSE TO ALLOW THE FACILITY TO ALLOW FOR THIS TYPE OF EXTRACPROCESSING OF THE TICKET WITHIN A GENERALISED FRAMEWORK?WITHOUT THIS FACILITY THE WORK LOAD WOULD HAVE BEEN ENORMOUSLY INCREASED AND MISTAKES INEVITABLY MADE.

General facilities (DDM error processing)

Very important point and maybe difficult

FROM: atlaswing@mail.cern.ch [mailto:atlaswing@mail.cern.ch] (mailto:atlaswing@mail.cern.ch) Sent: Monday, May 13, 2013 19:58:41 +0200
Date: Mon, 13 May 2013 19:58:41 +0200
From: Atlas Ddm <atlswing@mail.cern.ch>
To: r.henderson@lancaster.ac.uk
Cc: atlas.prodsys@cern.ch
Subject: Bulk submission error

This message was generated automatically. Pls do not reply
Can not process t1d=1252653 mc12_8TeV.000500.group_MERGE_list.recon.LIST.p1400 because of following errors
input=mc12_8TeV.129877.PowhegPythia8_AU2CT10_WZ_wm11Z11_m115p0d0_m1130gev.merge.AOD.e1524_s1499_s1504_r3658_r3549 InStat
no more inputs available, avail=11 used=11
input=mc12_8TeV.129878.PowhegPythia8_AU2CT10_WZ_wm11Z13_m115p0d0_m1130gev.merge.AOD.e1524_s1499_s1504_r3658_r3549 InStat
no more inputs available, avail=11 used=11
input=mc12_8TeV.129879.PowhegPythia8_AU2CT10_WZ_wm11Z15_m115p0d0_m1130gev.merge.AOD.e1524_s1499_s1504_r3658_r3549 InStat
no more inputs available, avail=11 used=11
input=mc12_8TeV.129880.PowhegPythia8_AU2CT10_WZ_wm11Z11_m115p0d0_m1130gev.merge.AOD.e1524_s1499_s1504_r3658_r3549 InStat
no more inputs available, avail=11 used=11
input=mc12_8TeV.129881.PowhegPythia8_AU2CT10_WZ_wm11Z13_m115p0d0_m1130gev.merge.AOD.e1524_s1499_s1504_r3658_r3549 InStat
no more inputs available, avail=11 used=11
input=mc12_8TeV.129882.PowhegPythia8_AU2CT10_WZ_wm11Z15_m115p0d0_m1130gev.merge.AOD.e1524_s1499_s1504_r3658_r3549 InStat
no more inputs available, avail=11 used=11
input=mc12_8TeV.129883.PowhegPythia8_AU2CT10_WZ_wm11Z11_m115p0d0_m1130gev.merge.AOD.e1524_s1499_s1504_r3658_r3549 InStat
no more inputs available, avail=11 used=11
input=mc12_8TeV.129884.PowhegPythia8_AU2CT10_WZ_wm11Z13_m115p0d0_m1130gev.merge.AOD.e1524_s1499_s1504_r3658_r3549 InStat
no more inputs available, avail=11 used=11
input=mc12_8TeV.129885.PowhegPythia8_AU2CT10_WZ_wm11Z15_m115p0d0_m1130gev.merge.AOD.e1524_s1499_s1504_r3658_r3549 InStat
no more inputs available, avail=11 used=11

DDM BULK ERROR messages tell the submitted that certain list files will not run either because all the processing possible has already been done or the datasets does not exist or have any data in. Sometimes the request is for many hundreds of datasets and the error messages is for a large random sample (again hundreds) to sort this by hand can take many hours and is very prone to error. This facility allows the error message to be copied and pasted verbatim into the text area box and it will that automatically comment out all those with error messages and replace the list file leaving an uncommented copy behind in case needed. I also does a comparison to ensure no mistake has been made. VITAL FACILITY!!!!

Useful prodsys/panda extensions

OWNER:

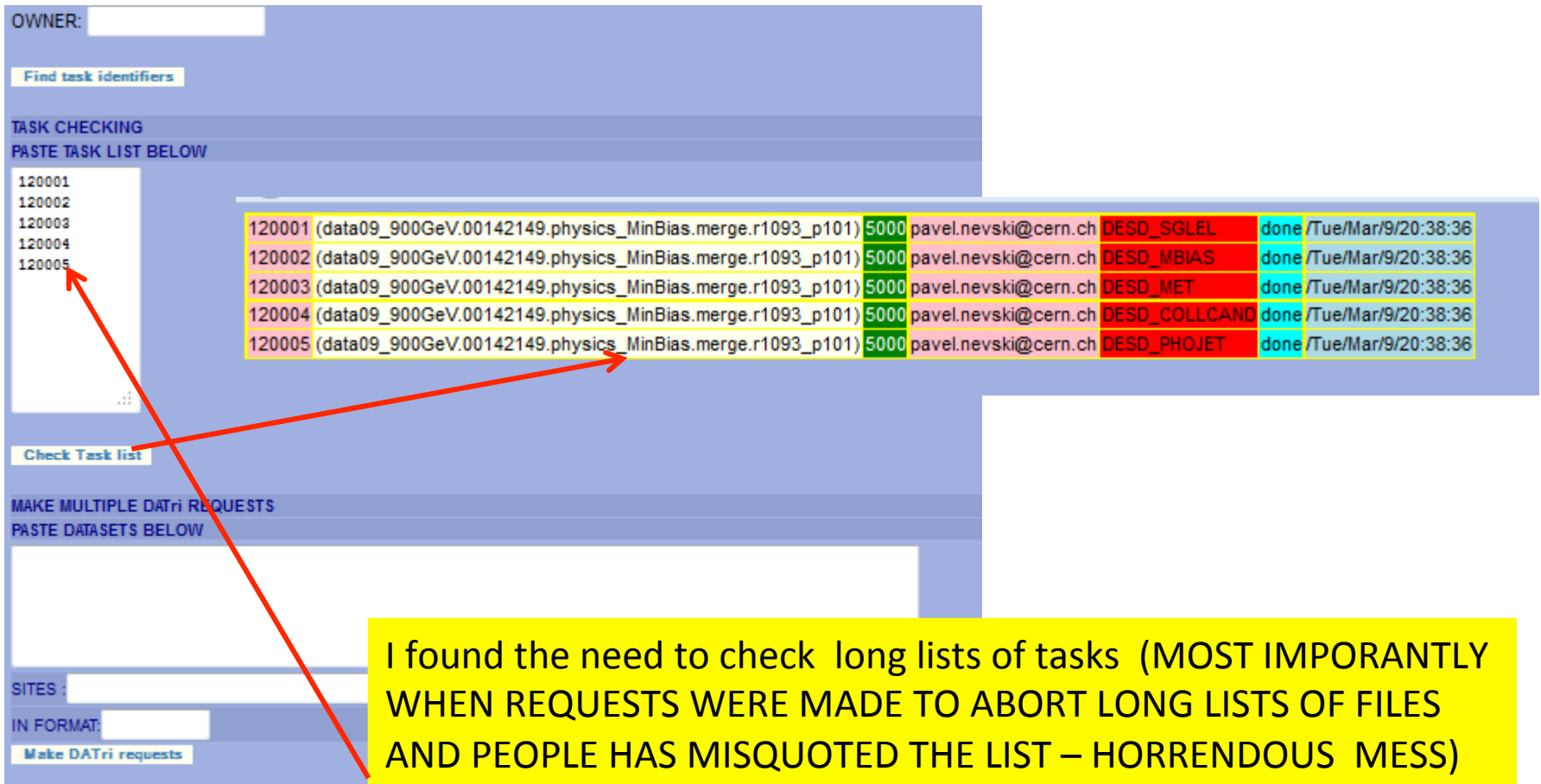
TASK CHECKING
PASTE TASK LIST BELOW

120001	(data09_900GeV.00142149.physics_MinBias.merge.r1093_p101)	5000	pavel.nevski@cern.ch	DESD_SGLEL	done	/Tue/Mar/9/20:38:36
120002	(data09_900GeV.00142149.physics_MinBias.merge.r1093_p101)	5000	pavel.nevski@cern.ch	DESD_MBIAS	done	/Tue/Mar/9/20:38:36
120003	(data09_900GeV.00142149.physics_MinBias.merge.r1093_p101)	5000	pavel.nevski@cern.ch	DESD_MET	done	/Tue/Mar/9/20:38:36
120004	(data09_900GeV.00142149.physics_MinBias.merge.r1093_p101)	5000	pavel.nevski@cern.ch	DESD_COLLICAND	done	/Tue/Mar/9/20:38:36
120005	(data09_900GeV.00142149.physics_MinBias.merge.r1093_p101)	5000	pavel.nevski@cern.ch	DESD_PHOJET	done	/Tue/Mar/9/20:38:36

MAKE MULTIPLE DATRI REQUESTS
PASTE DATASETS BELOW

SITES :

IN FORMAT:



I found the need to check long lists of tasks (MOST IMPORTANTLY WHEN REQUESTS WERE MADE TO ABORT LONG LISTS OF FILES AND PEOPLE HAS MISQUOTED THE LIST – HORRENDOUS MESS) This means that prodsys/panada must have the ability to display selectable fields for a list of taskids, preferably in any format and delimiters. Checking such list is important in many applications.

Useful prodsys/panda extensions II

EDIT ACCUMULATED SECOND SCRIPT
Edit Accumulated Second Script

LAUNCH SECOND SCRIPT
Launch Second Script

FIND TASK NUMBER
Find Launched Task For Tag p1344

FIND TASK ACTIVE JOB NUMBER
Find Jobid TASKID COLLIMITOR

COMMENT DDM ERROR FROM LIST FILE
PASTE DDM ERROR MESSAGE BELOW

Comment errors

FIND TASK ID FROM DATA SET NAME
PASTE DATA SET'S BELOW

TAG: OWNER:

Find task identifiers

TASK CHECKING
PASTE TASK LIST BELOW

Check Task list

123456
123457
123458

Finding a list of task numbers from input dataset names, tag and owner. This is necessary when you want to abort a list of tasks and this is the information you start with. I have been asked to delete data tasks where there are also merging tasks and these also need deleting.

Useful prodsys/panda extensions Iii

EDIT ACCUMULATED SECOND SCRIPT
Edit Accumulated Second Script

LAUNCH SECOND SCRIPT
Launch Second Script

FIND TASK NUMBER
Find Launched Task For Tag p1344

FIND TASK ACTIVE JOB NUMBER S
Find JobID TASKID COLMTR

COMMENT DOWN ERROR FROM LIST FILE
PASTE DDM ERROR MESSAGE BELOW

Comment errors

FIND TASK ID FROM DATA SET NAME
PASTE DATA SETS BELOW

TAG:

OWNER:

Find task Identifiers

TASK CHECKING
PASTE TASK LIST BELOW

Check Task list

This allows the finding of all the active jobs for killing in a list of Tasks for finishing

Useful prodsys/panda extensions IV

MAKE MULTIPLE DATri REQUESTS
PASTE DATASETS BELOW

SITES :

IN FORMAT: OUT FORMAT: TAG:

This allows for multiple datri requests to be made for lists of files . For more than a few files the manual system very laborious.