

Introduction

Materials for Discussion

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Introduction

- Group production on the production system has been running as one of major production activities, to quickly/efficiently deliver the derived datasets (DAODs and NTUPs) to groups.
 - Most of physics and combined performance groups, data preparation, detectors and trigger community joined.
- Below are some points on the present situation of the group production, to discuss improvements.

Group Production Status (1/4)

- Tasks are defined for each group independently.
 - Task definition depends on groups, especially in terms of tag definition (special setup in pre/postExec etc), diskcount (for merging factor) and destinations.
- Large overlap in input datasets
 - One input dataset is used by multiple tasks.
 - At the same/similar timing, associated to Tier0 bulk reconstruction and ATLAS reprocessing.
- Production caches (including Analysis caches)
 - Depending on groups
 - AtlasProduction, TopPhys, JetMetAnalysis, BTagging and HiggsAnalysis

Group Production Status (2/4)

Group	Input type	Output type	Cache
egamma	AOD/DESD	NTUP	AtlasProduction
JetMET	AOD/DESD	NTUP	JetMetAnalysis
MCP	AOD/DESD	NTUP	AtlasProduction
Flavor-tagging	AOD/DESD	NTUP	BTagging
SM WZ	AOD	NTUP	AtlasProduction
SM direct photon	AOD	NTUP	HiggsAnalysis
SUSY	AOD	DAOD/NTUP	TopPhys
TOP	AOD	DAOD/NTUP	TopPhys
Higgs	AOD	DAOD/NTUP	HiggsAnalysis
B Phys	AOD	DAOD	AtlasProduction
Exotics	NA	NA	NA

Exotics WG uses NTUP from SM WZ, SM direct photon and JetMET, Top and SUSY.

Detectors (TRT, SCT, LAr), Data Preparation and Trigger (L1Calo, TrigMu) are not included in the list.

Group Production Status (3/4)

- Replication of datasets
 - Automatic by DaTRI to destinations (group space) defined in task definition.
- Group space
 - Mostly at Tier2s
 - Accommodate group production datasets, central MC datasets and others (non-central datasets).
 - Cleaning is non-trivial
 - Space manager(s) : for some groups, there are many managers and don't know who is in charge of the maintenance.
 - Creating a list of datasets from central and non-central productions (per group space/sites)
 - For centrally produced datasets, deletion can be arranged from the production system (under discussion now).

Group Production Status (4/4)

http://bourricot.cern.ch/dq2/accounting/group_reports2/

Group	Used [TB]	Booked [TB]
PERF-EGAMMA	137.12	285.9
PERF-FLAVTAG	102.05	126.46
PERF-JETS	210.36	406.85
PERF-MUONS	179.44	296.89
PHYS-BEAUTY	62.9	219.91
PHYS-EXOTICS	39.01	203.43
PHYS-HIGGS	75.72	219.93
PHYS-SM	413.83	588.28
PHYS-SUSY	280.58	351.87
PHYS-TOP	444.86	692.75
TRIG-DAQ	108.19	197.93

Need cleaning for the coming data

Motivations to Enforce the Coordination

- Feedbacks received
 - From Data Preparation
 - Reduction of CPU consumption against ATLAS reprocessing and MC production is necessary.
 - From Physics Coordination (triggered by Exotics WG recently)
 - <https://indico.cern.ch/getFile.py/access?contribId=2&resId=1&materialId=slides&confId=131198>
 - Groups are sharing datasets.
 - Requesting for coordination in terms of software, production request and group space
 - Discussion between Beate/Jamie (DP), Karsten/Amir (PAT) and me.
 - From groups
 - Especially for cleaning of group space
 - Cleaning is becoming urgent for 2011 data taking
- Those motivate us to centralize the activities

Proposals and Discussions

- Software
 - Include a PAT expert (for DPD-related packages) and a reconstruction expert (for AODFix etc) in the coordination.
 - With help by PAT, have a AnalysisCache as common cache for the group production
 - Efforts already started for the coordination of D3PDMaker packages (by Attila from PAT).
 - A support for PATJobTransforms is crucial. Expected from PAT(?).
 - More details from Karsten in the next talk

Proposals and Discussions

- Task
 - Using the common cache and common input dataset, define a task for multiple groups as much as possible,
 - e.g. AOD→NTUPs for SM WZ, SM direct photon, egamma, SUSY in one task.
 - Ask groups to move a simple Reco_trf.py configuration.
 - Reco_trf.py inputAODFile=ADO.pool.root
outputNTUP_XXX=NTUP.root autoconfiguration=everything.
 - Need mapping between gr_XXX, output types and destinations. Started discussion with Mikhail and Alexei.
 - Task submission with a “train” type for multiple groups.
 - Tag pXXX evolves as Tier0 f-tag, depending on pcache update, new groups joined etc.
 - This doesn't exclude the usage of another AnalysisCache and production for a single group.

Proposals and Discussions

- Group space
 - A proposal to move using a global quota on Tier1s (not now though).
 - Survey over groups was recently done.
 - More details from Ueda.
 - Until then, we need to live with the present scheme (group space at Tier2s)
 - Cleaning is becoming urgent
 - Central cleaning via the production system and DDM is necessary soon, by setting tasks to obsolete.
 - To be arranged with Cedric, Ueda, Stephane, Borut and Alexei.
 - Regular cleaning of centrally produced datasets is necessary.
 - For non-centrally produced datasets, we need efforts by space manager(s) for each group who can maintain the space and need help from DDM in terms of tools and actions.

Proposals and Discussions

- More supports from experts and ADCoS
 - A strong support for PATJobTransforms is crucial, when a new group joins the group production (or a group starts something new). Has been asked but not yet available.
 - In the operation, we would like to ask ADCoS to find any problems more quickly (and fill tickets). Recently, a workload for the production contact persons to do this is increasing.
 - Together with the above, more supports by experts on issues filled in the tracker are necessary (GDPs are mainly the initial window and can pass to experts).
 - Recent issue for Higgs WG (Andrea Di Simone)
 - Tag definition : <https://savannah.cern.ch/bugs/?79934>
 - trf parameter check in an analysis cache : fixed by Rod.