



RelMon Service

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Content

- Introduction to RelMon Service
- Project goals
- Future improvements

RelMon

RelMon – tool which was created for comparing DQM plots by generating RelMon reports

- It is used to present large numbers of plot comparisons
- Such comparisons are extensively used in the release and conditions validation by PdmV
- It organizes plots by physics content following the organization of the plots in DQM
- Separates the comparisons between those where the target and reference are consistent from those where they are not

RelMon service

- RelMon service is tool which was developed by another student Jonas.

More info could be found:
Jonas slides [RelMon Service](#)
RelMon [Twiki](#)

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RelMon service

New RelMon request (campaign) [New RelMon](#)

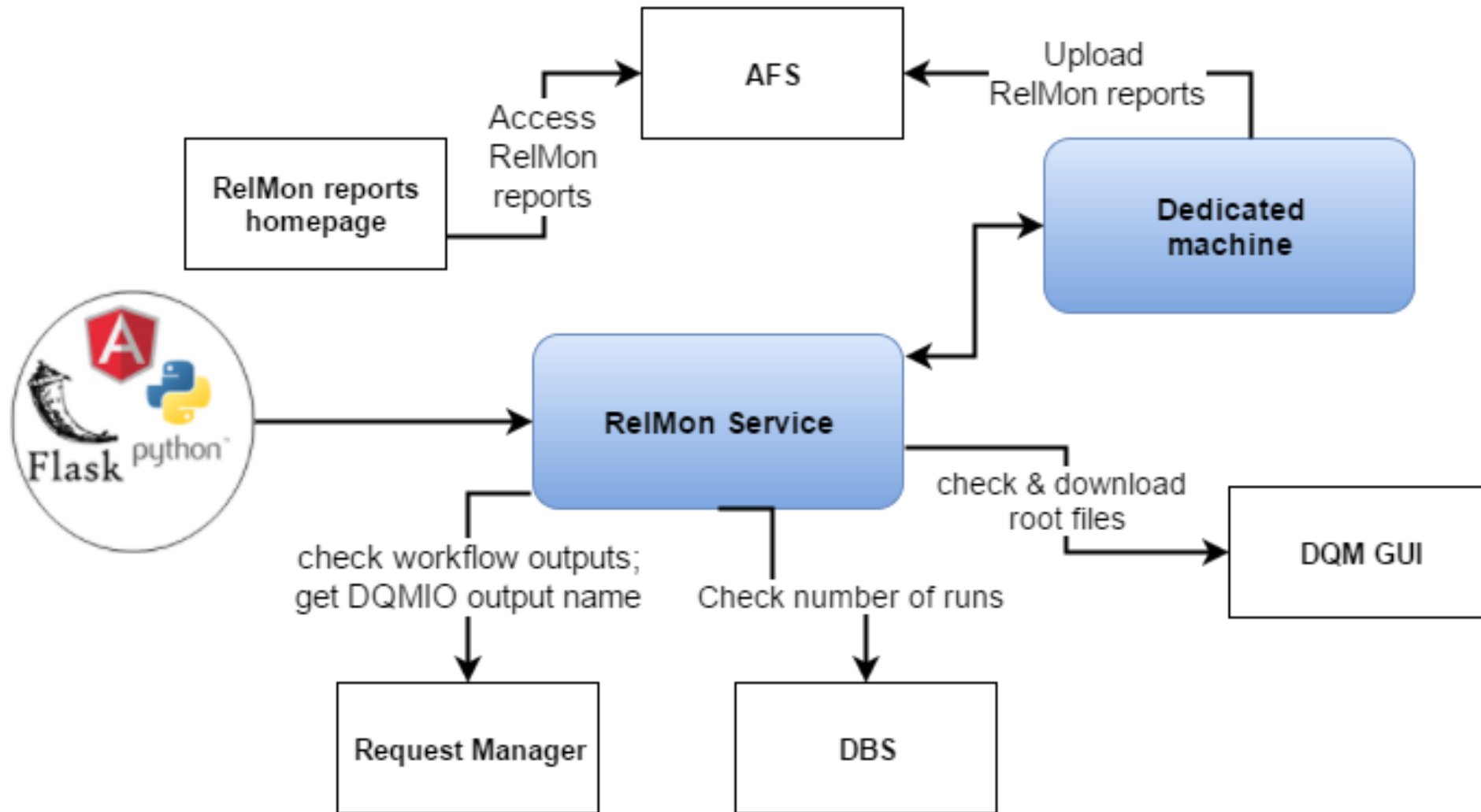
Latest requests

Campaign	Workflows
<p>Id: 1460736642</p> <p>Name: CMSSW_8_1_0_pre2 _2017_designGTVSC MSSW_8_1_0_pre1_ 2017</p> <p>Status: finished</p> <p>Threshold: 100</p> <p>Log file</p> <p>Terminate Close</p> <p>Edit</p>	<p>FullSim (total: 11, DQMIO: 0, ROOT: 0, downloaded: 11, NoDQMIO: 0, NoROOT: 0, failed_rqmgr: 0, failed: 0, failed download: 0)</p> <p>FullSim_PU (total: 6, DQMIO: 0, ROOT: 0, downloaded: 4, NoDQMIO: 0, NoROOT: 0, failed_rqmgr: 0, failed: 0, failed download: 2)</p>

Project main tasks

- Approximately automatically reports pairing
- Multithreading
- Edit functionality

Design



Workflow statuses

- Failed_rqmgr – request manager doesn't know this workflow name.
- NoROOT - according to Workload Manager the workflow is in one of the final states, but there are not enough root files available
- NoDQMIO - workflow does not produce DQMIO output
- Downloaded - root files for this workflow have been downloaded
- failed download – something went wrong during the download process

heli_RVCMSSW_8_0_1RunJetHT2015D__HBHENEFiltGTRef_ReVal_jetHT2015D_160414_142602_9506	ROOT 1/1	downloaded
prebello_RVCMSSW_8_0_0RunDoubleEGPrpt2015C__ReVal_dbEGPrpt2015C_160222_111923_1274	ROOT 6/3	downloaded versioned
mewu_RVCMSSW_8_1_0_pre2ZEE_13_PU25ns__FastSim_160408_153022_2855		NoROOT
franzoni_PR_reference_ReVal_269224_160420_002333_3446		NoDQMIO
workflow_name_which_does_not_exist		failed_rqmgr
heli_RVCMSSW_8_1_0_pre2ZMM_13_PU25ns__UPG17PU35designGT_160414_154637_2771	versioned ROOT 1/0	failed download

Version files pairing 1/3

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- 1 campaign - 6 or less categories
- Reference and target lists
- The same campaign name delete old subcategories

RelMon service

New RelMon request (campaign) [Hide](#)

[Data](#) [FullSim](#) [FastSim](#) [Generator](#) [FullSim_PU](#) [FastSim_PU](#)

FullSim reference samples

```
heli_RVCMSSW_8_1_0_pre1MinBias_13_UPG17_160316_134040_6286
heli_RVCMSSW_8_1_0_pre1QCD_Pt_600_800_13_UPG17_160316_121129_1410
heli_RVCMSSW_8_1_0_pre1TTbar_13_UPG17_160316_121106_8313
```

FullSim target samples

```
heli_RVCMSSW_8_1_0_pre2MinBias_13_UPG17designGT_160413_160427_8591
heli_RVCMSSW_8_1_0_pre2QCD_Pt_600_800_13_UPG17designGT_160413_160511_2457
heli_RVCMSSW_8_1_0_pre2TTbar_13_UPG17designGT_160413_160441_9257
```

[No HLT](#) [Only HLT](#) [Both](#)

Name:

campaigns'_name

Threshold:

100

Submit

Version files pairing 2/3

REF:

DQM_V0001_R000000001__**RelValCosmicsSPLoose_UP15**__CMSSW_8_0_3-**80X_mcRun2cosmics_startup_peak_v4_gs7120p2NewGTv3**-v1__DQMIO.root

TAR:

DQM_V0001_R000000001__**RelValCosmicsSPLoose_UP15**__CMSSW_8_0_3-**80X_mcRun2cosmics_startup_peak_v4_gs71xNewGtHcalCust**-v1__DQMIO.root

- **Red** part should be identically equal
- **Purple** part should be as familiar as possible

Implemented **Levenshtein distance** algorithm

Version files pairing 3/3

REF:

DQM_V0001_R000000001__RelValCosmicsSPLoose_UP15__CMSSW_8_0_3-80X_mcRun2cosmics_startup_peak_v4_gs7120p2NewGTV3-v1__DQMIO.root

TAR:

DQM_V0001_R000000001__RelValCosmicsSPLoose_UP15__CMSSW_8_0_3-80X_mcRun2cosmics_startup_peak_v4_gs71xNewGtHcalCust-v3__DQMIO.root

1. Check if there is equal to **red** part (The physics process name)
2. Check and take the same **green** part (the Run number)
3. Check **orange** part and take the highest version (the processing version)
4. Check and take the **highest** yellow part (the DQM GUI upload version number)

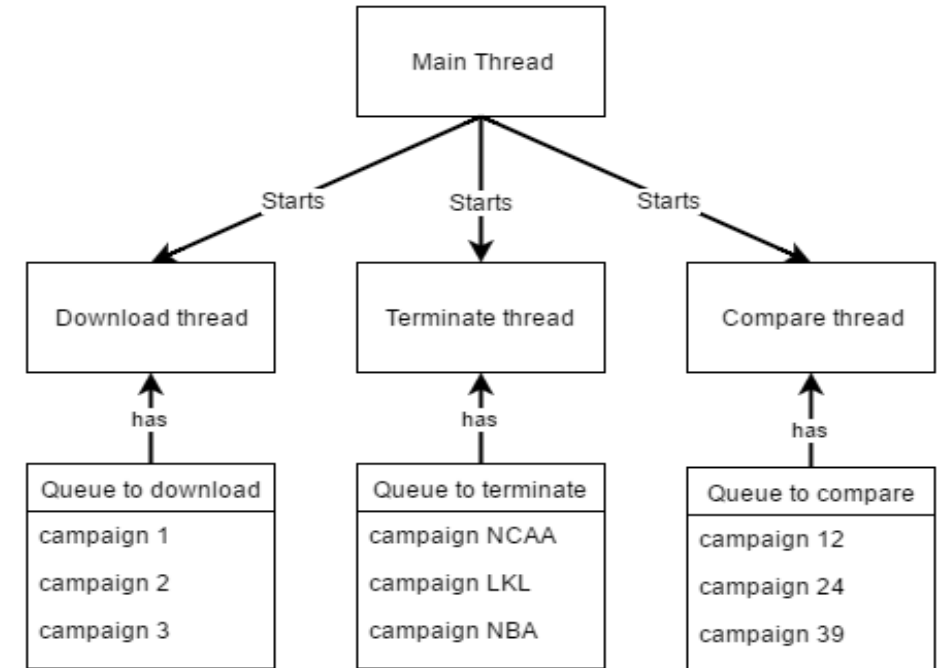
MultiThreading

Campaign – user's submitted report.

Based on **FIFO** queue method.

Advantages:

- Faster comparison
- No pressure to DQM GUI



Before:

- 0 campaign 1 threads.
- 1 campaign 4 threads
- 10 campaigns **31** threads.

Now:

- 0 campaign 4 threads.
- 1 campaign 4 threads.
- 10 campaigns **4** threads.

Edit Functionality

New RelMon request (campaign) Hide

Data FullSim FastSim Generator FullSim_PU FastSim_PU

Data reference samples

```
prebello_RVCMSSW_8_1_0_pre1RunCosmicsA__ReVal_cos2010A_160312_030927_5558
prebello_RVCMSSW_8_1_0_pre1RunJet2012D__ReVal_jet2012D_160312_030937_8401
prebello_RVCMSSW_8_1_0_pre1ZEISkim2012D__ReVal_zEI2012D_160312_030958_7630
prebello_RVCMSSW_8_1_0_pre1RunCosmics2011A__ReVal_cos2011A_160312_031018_927
prebello_RVCMSSW_8_1_0_pre1RunMinBias2012D__ReVal_mb2012D_160312_031028_4648
prebello_RVCMSSW_8_1_0_pre1RunMu2012D__ReVal_mu2012D_160312_031038_7197
```

Data target samples

```
mewu_RVCMSSW_8_1_0_pre2RunCosmicsA__ReVal_cos2010A_160407_221133_411
mewu_RVCMSSW_8_1_0_pre2RunJet2012D__ReVal_jet2012D_160407_221143_4075
mewu_RVCMSSW_8_1_0_pre2ZEISkim2012D__ReVal_zEI2012D_160407_221206_9111
mewu_RVCMSSW_8_1_0_pre2RunCosmics2011A__ReVal_cos2011A_160407_221226_9215
mewu_RVCMSSW_8_1_0_pre2RunMinBias2012D__ReVal_mb2012D_160407_221237_7212
mewu_RVCMSSW_8_1_0_pre2RunMu2012D__ReVal_mu2012D_160407_221247_5800
```

No HLT Only HLT Both

Name:

Aivaras_nice_Student

Threshold:

100

Submit

Future improvements or in other words:

TODO:

- Manual pairing set by user
- Adding dynamically categories
- Email notifications about finished or failed RelMon campaign

Thank you
for attention!

Questions? >.<