Simulation of HLT: Instructions

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Dedication

For Btag POG and TSG

Abstract

This document is a simple instruction about HLT simulation in MC

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> ***Note***
>
> That's only EXAMPLE. Please, don't consider it seriously!

1 Instruction

1.1 You can do

a few steps to simulate HLT in MC

```
# 1) Prepare environment:

  cmsrel CMSSW_5_3_3
  cd CMSSW_5_3_3/src
  cmsenv
  cvs co HLTriggerOffline/Btag

  scramv1 b -j4

  cvs co HLTriggerOffline/Common
  checkdeps -a
  scram b -j4
  hash -r

  cvs co HLTrigger/Configuration
  checkdeps -a
  scram b -j4
  hash -r

  cp HLTriggerOffline/Btag/doc/HLTValidation_cff.py HLTriggerOffline/Common/python/
  cp HLTriggerOffline/Btag/doc/hltHarvesting_cfg.py HLTriggerOffline/Common/test
  cp HLTriggerOffline/Btag/doc/HLTValidationHarvest_cff.py HLTriggerOffline/Common/python/

  scram b -j4

  cd HLTriggerOffline/Btag/test

  # 2)  Simulating our HLTigger.  Here there are examples: user-defined trigger 2.1) and default 2.2)

  # 2.1)

  hltGetConfiguration /users/rwalsh/dev/CMSSW_4_2_0/GRun_V139/V12  --cff --offline --mc --unprescale --process RECO > HLT_my_cff.py
  cp  HLT_my_cff.py ../../../HLTrigger/Configuration/python
  cd ../../../; scram b -j4 ; cd -
  # 2.1.2)
  ./getHlt.sh # modify, first, master table reference

  # 2.1.3)
  cmsDriver.py TTbar_8TeV_cfi.py -s GEN,SIM,DIGI,L1,DIGI2RAW,HLT:my_cff  -n 5 --eventcontent FEVTDEBUGHLT --conditions auto:startup  --mc --fileout output.root --no_exec --python_filename hlt_my.py  --datamix NODATAMIXER
```

```
40
41  # 2.2)
42  cmsDriver.py TTbar_8TeV_cfi.py -s GEN,SIM,DIGI,L1,DIGI2RAW,HLT:7E33v4 -n 5 --eventcontent FEVTDEBUGHLT --conditions auto:startup_7E33v4 --mc --fileout output.root --no_exec --python_filename hlt_7e33v4.py  --datamix NODATAMIXER
43
44  # 3) Produce plots:
45
46  # 3.1)
47  nano -w ../Comon/test/hltHarvesting_cfg.py # put output.root  file here
48
49  # 3.2)
50  cmsRun ../../Common/test/hltHarvesting_cfg.py
```

That's it.