

-- KenjiHamano - 2015-03-30

## Container usgae

```
setupATLAS -c centos7
setupATLAS -c slc6
```

## Doxygen

```
$ asetup Athena, master, latest
$ cmake ../athena/Projects/WorkDir/
$ make doc
```

This will create a "docs/html" subdirectory in the build directory.

This use

athena/Projects/WorkDir/Doxyfile.in

to create a Doxygen file. You may need to add this line to the Doxyfile.in

USE\_MATHJAX = TRUE

## mc16 campaigns

Can be determined from run numbers

```
// Extract campaign automatically from Run Number
std::string mcCampaignMD = "";

uint32_t runNum = eventInfo->runNumber();

switch(runNum)
{
  case 284500 :
    mcCampaignMD="mc16a";
    break;
  case 300000 :
    mcCampaignMD="mc16d";
    break;
  case 310000 :
    mcCampaignMD="mc16e";
    break;
  default :
    ANA_MSG_ERROR( "Could not determine mc campaign from run number! Impossible to autoconfigure" );
    return StatusCode::FAILURE;
    break;
}
ANA_MSG_INFO( "Determined MC campaign to be " <<mcCampaignMD);
```

## ATLAS Induction Day + Software Tutorial

- 22-26 Jan 2018 [↗](#)
- 9-13 April 2018 [↗](#)
- 2-7 Jun 2019 [↗](#)
- 21-25 Oct 2019 [↗](#)
- 20-24 Jan 2020 [↗](#)
- 10-17 Jul 2020 [↗](#)
- 6-13 Nov 2020 [↗](#)
- 19-26 Feb 2021 [↗](#)

## US-ATLAS Computing Bootcamp

- [24-28 Aug 2020](#)

## Software Carpentry at CERN

- [27-29 Nov 2019](#)

## common CP Algorithm

- [AMG meeting on 21 Oct 2020](#)

## Configuration

- [AMG meeting on 9 Dec 2020](#) [CP Algorithm](#) [Block](#) [Configuration](#) (Jon Burr)
- [AMG meeting on 9 Dec 2020](#) [Configuration Ideas](#) (Nils Krumnack)

## Analysis Frameworks

- [AMG meeting on 22 April 2020](#) [Analysis Framework Fest \(Part 1\)](#): xAODAnaHelpers, PxAOD, AnalysisTop, SUSYTools, CxAOD, XAMPP framework, CAF, HGam, xTauFW
- [AMG meeting on 29 April 2020](#) [Analysis Framework Fest \(Part 2\)](#): FactoryTools, DVAnalysisBase, CalRatio, BLS group (Specialized for LLP, low pt objects, etc.)

## Plan for Run3

- [ATLAS weekly on 7 April 2020](#) [AMG Status & Plans](#) (Alison Lister, Lukas Heinrich)
- [Physics Coordination Meeting on 8 Jun 2020](#) [Towards the Run 3 analysis model](#) (Alison Lister, Lukas Heinrich)
- [ATLAS weekly on 01 Dec 2020](#) [Rel 22 Analysis Software](#) (Alison Lister, Lukas Heinrich)

## ATLAS Software Development Tutorial

- [23-17 Sep 2019](#)
- [Development Tutorial Twiki](#)

## Trigger Software Dvelopment

- [Trigger Developers Guide](#)
- [Trigger Workshop on 13 Nov 2020](#) [Trigger Analysis Tools](#) (Jon Burr)

## Accessing HITS files

- [Examples for running on HITS files](#)

## Twiki & Documents

- [AnalysisBase](#)
- [Analysis Tools](#) [AnaAlgorithm](#) and [EventLoop](#)
- [Sample Handler](#)

- Athena Framework
- xAODAnaHelpers [↗](#)
- Software Quality
  
- ATLAS C++ coding guidelines, [↗](#)
- ATLAS Coding guidelines [↗](#).
- ATLAS Coding guidelines in twiki format
- Source code for coding guidelines [↗](#)
  
- C++ best practices 2019 [↗](#)
- C++ best practices 2015 [↗](#)
- Athena Performance issues and solutions [↗](#)

## ATLAS Software Quality

- Tests to run for Tier0 requests Q tests
- Valgrind
- gdb in Athena [↗](#)
- Callgrind/Valkyrie
- Vtune
- Hephaestus
- ATLAS Performance Monitoring system
- SPOT monitoring page [↗](#)

## Examples

- StandaloneAnalysisAlgorithms [↗](#)
- StandaloneAnalysisAlgorithms/xAODWriterAlg.h [↗](#)
- StandaloneAnalysisAlgorithms/xAODWriterAlg.cxx [↗](#)
- StandaloneAnalysisAlgorithms/steering macros [↗](#)

## Event Display

- Event Displays
- ATLAS weekly on 4 Feb 2020 [↗](#) Status of ATLAS Event Displays and Plans

## Grid Certificate related

- voms admin for atlas [↗](#)
- ami (ATLAS Metadata Interface) [↗](#)

## ATLAS related

```
$ setupATLAS
$ diagnostics
$ gridCert
$ localSetupGcc &lt;value&gt;
```

```
$ lsetup "gcc &lt;value&gt;" for example $ lsetup "gcc gcc462_x86_64_slc6"
```

To get available value, do

```
$ lsetup gcc --help
```

```
$ lsetup "root 5.34.25-x86_64-slc6-gcc48-opt"  
$ lsetup "root 6.08.06-x86_64-slc6-gcc49-opt"  
$ lsetup "root 6.14.04-x86_64-slc6-gcc62-opt"  
$ lsetup "root 6.20.02-x86_64-centos7-gcc8-opt"
```

To get available root and gcc versions

```
$ showVersions root  
$ showVersions gcc
```

To see current versions

```
$ root --version  
$ gcc --version
```

### Set up root with LCG views

This is better for complete self-contained env is setup.  
SL6 machine:

```
$ lsetup "views LCG_94 x86_64-slc6-gcc62-opt"
```

Centos7 with python2

```
lsetup views LCG_98a x86_64-centos7-gcc8-opt
```

Centos7 with python3

```
lsetup views LCG_98python3_ATLAS_2 x86_64-centos7-gcc8-opt
```

## Athena related

Merge output of grid jobs

```
$ Merge_tf.py
```

This will give you correct metadata.

Check the contents of AOD

```
$ checkxAOD.py xAOD.pool.root  
$ checkMetaSG.py
```

Pick up events in a eventlist.txt from a AOD and put them into a new AOD.

```
$ acmd.py filter-files -s eventlist.txt inutAODFile -o outputAODFile
```

```
$ chainDump.py --rootFile=HIST_HLTMON_bla_bla.root > log.txt 2>&1
```

## Interactive access to xAOD

```
root [0] .x $ROOTCOREDIR/scripts/load_packages.C  
root [1] f = TFile::Open(...);  
root [2] t = xAOD::MakeTransientTree( f );  
root [3] t->Draw( "Electrons.pt() - Electrons.trackParticle().pt()" );
```

- xAOD tutorial
-

This topic: Main > KHAtlasSoft

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