

Setup to run Athena

- Login, creating necessary directories
- setting up CMT
- check-out a CMT package
- check-out RecExTB
- Compile the RecExTB package

LAr Software Tutorial
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Slide 1

Some directories ...

- To run the hands-on part of the tutorial you need ~100MByte disk space. (fine in your home dir)
- Log into e.g. fate-2 (using your account).
- create your working directory, e.g.
mkdir Athena/
cd Athena/
- Create cmtdir and copy basic requirements file locally
mkdir cmthome
cd cmthome
cp ~seuster/Tutorial/requirements .
- Look at the requirements file with your preferred editor (e.g. emacs)
emacs requirements

The CMT requirements file

The lines you might want to edit:

```
# Set the site where you are working. For CERN set:
set CMTSITE STANDALONE
# Set the base location of all release for your site:
macro ATLAS_DIST_AREA "/hepuser/atlas/atlas-kit/9.0.0/dist"

# Set release number
macro ATLAS_RELEASE "9.0.0"

apply_tag opt

macro devarea "${HOME}/Athena"

macro home_dir "${HOME}"
path_remove CMTPATH "${home_dir}"
path_prepend CMTPATH "$(devarea)"
```

Release number. Change this line to use another release (or nightly).

use optimized build

Work Area. Edit this line if you work in another directory!

Source Setup Scripts

.sh or .csh depending on the flavor
of your shell

- In your cmt dir

```
source /hepuser/atlas/atlas-kit/9.0.0/setup.[c]sh (@ UVic)  
cmt config
```

- Need to be done only once

```
source setup.[c]sh
```

- You need to source this script every time you open a new window!


- Now all environment variables should be set

Check-out CMT packages

- Checking out means retrieving a package from the cvs repository.
- For our exercises, we need CaloTBRec-00-00-14

Go to you work area (cd ~/Athena/)

```
cmt co -r CaloTBRec-00-00-14 Calorimeter/CaloTestBeam/CaloTBRec
```



cvs tag

cvs path of the package

But first, set up cvs access via ssh ...

Getting a Run Time Environment (1)

- Recommended method: Use RecExTB package even if you do run another jobOption file.
 - Code-less package, contains only jobOptions.
- Check out RecExTB
 - Go to you work area (cd ~/Athena/)
 - cmt co -r RecExTB-00-00-52
 - Reconstruction/RecExample/RecExTB
- Change into the cmt directory of RecExTB
 - cd Reconstruction/RecExample/RecExTB/RecExTB-00-00-52/cmt
- Look at the cmt requirements file of RecExTB
 - emacs requirements

requirement file of the RecExTB package. (some lines)

```
branches run
use AtlasPolicy      AtlasPolicy-*
use AthenaCommon    AthenaCommon-* Control
use TestPolicy      TestPolicy-*
#for root tuple
use RootHistCnv     v*
use AtlasROOT      AtlasROOT-* External
use RDBAccessSvc   RDBAccessSvc-* Database/AthenaPOOL
#-----
#for LAr
#-----
use ByteStreamCnvSvc ByteStreamCnvSvc-* Event
use TBCnv          TBCnv-* TestBeam
use LArCondCnv     LArCondCnv-00-* LArCalorimeter/LArCnv
#for rebuilding
use LArROD         LArROD-* LArCalorimeter
# -----
# Tags needed for 8.7.x
# -----
use InDetCabling InDetCabling-* InnerDetector/InDetDetDescr
use CaloTBRec CaloTBRec-* Calorimeter/CaloTestBeam
use TileTBRec TileTBRec-* TileCalorimeter
use TileRecUtils TileRecUtils-* TileCalorimeter
use TileConditions TileConditions-* TileCalorimeter
use InDetTBRecExample InDetTBRecExample-* InnerDetector/InDetExample
use TrkKalmanFitter TrkKalmanFitter-* Tracking/TrkFitter

# This dependency has to come last because of a bug in CMT v14
use AthenaRunTime AthenaRunTime-* Control
```

All packages listed here are compiled together with RecExTB by the command **cmt broadcast gmake**

Getting a run-time environment (2)

- Build the RecExTB package

```
cd Reconstruction/RecExample/RecExTB/RecExTB-00-00-52/cmt  
(if you are not already there)
```

- always build from cmt directory

```
source setup.[c]sh
```

- Source this file the first time or whenever you change the requirement file, or check out new packages. It sets up environment variables.

```
cmt broadcast gmake
```

- Recompiles current package plus all packages it depends on.
- In case of RecExTB: Also sets up a runtime environment

- Run a script to copy/link necessary files into you run directory

```
cd ../run
```

```
source ../share/RecExTB_links.sh
```

On the next login you need only:

```
source setup.[c]sh
```

in RecExTB/cmt in all windows where you want to run Athena

after `source /hepuser/atlas/atlas-kit/9.0.0/setup.sh`

```
source ~/cmthome/setup.sh
```


Now we have a run-time environment

- After the steps of the last slide you should have 'athena' as alias of an executable. You can try by typing

athena

You should get a few lines help text

what to change for 9.0.X

- simply replace 9.0.0 with the version you want to run
- you might want to check out more recent versions of the packages