

Accessing data from the Tier-2 dCache

You can run fireworks (cmsShow) on your laptop or desktop machine and access data directly from our Tier-2 storage element. Just put the prefix 'root://xrootd.rcac.purdue.edu/' in front of the LFN.

Example:

```
> cmsShow root://xrootd.rcac.purdue.edu//store/data/BeamCommissioning09/MinimumBias/RAW-RECO/SD_AllMinBias-Jan23Skim-v1/0014/AC5CE429-B809-DF11-85F1-0026189438A9.root
```

To copy a single file from the Tier-2 storage element to your local machine (laptop or desktop) you can use the command **xrdcp**. First you need to initialize your ROOT or CMSSW environment (run cmsenv).

Example:

```
> xrdcp root://xrootd.rcac.purdue.edu//store/group/ewk/DY/DYM20/ntuple_skim_96_2_z5w.root my.root
```

You will get a progress bar as the file downloads. You may also want to think about using the -R option, which allows you to recursively download a directory.

Please see the details at <https://twiki.opensciencegrid.org/bin/view/Tier3/XrootdClient>

If you are using ROOT, you can open files from our Tier-2 storage element just like you would any other file:

```
TFile::Open("root://xrootd.rcac.purdue.edu//store/data/BeamCommissioning09/MinimumBias/RAW-RECO/SD_AllMinBias-Jan23Skim-v1/0014/AC5CE429-B809-DF11-85F1-0026189438A9.root");
```

This returns a TFile object, and you can proceed normally.

Data access through AAA:

Check for file availability with:

```
> xrd cms-xrd-global.cern.ch existfile /store/myfile.root
```

Direct access: ROOT and CMSSW PoolSource can open a remote file directly through AAA

```
> "root://cms-xrd-global.cern.ch//store/myfile.root"
```

Make a local copy:

```
> xrdcp root://cms-xrd-global.cern.ch//store/myfile.root /localpath/myfile.root
```

For additional information see: <https://twiki.cern.ch/twiki/bin/view/CMSPublic/WorkBookXrootdService>