# Building XRootD with cmake and installing the source project

## System info:

* Developer tools:

Version: 11.4.1 (11E503a)  
 Location: /Applications/Xcode.app  
 Applications:  
 Xcode: 11.4.1 (16137)  
 Instruments: 11.4.1 (64535.74)

* Hardware overview

Model Name: MacBook Pro  
 Model Identifier: MacBookPro16,1  
 Processor Name: 8-Core Intel Core i9  
 Processor Speed: 2,4 GHz  
 Number of Processors: 1  
 Total Number of Cores: 8  
 L2 Cache (per Core): 256 KB  
 L3 Cache: 16 MB  
 Hyper-Threading Technology: Enabled  
 Memory: 32 GB  
 Boot ROM Version: 1037.80.53.0.0 (iBridge: 17.16.13050.0.0,0)  
 Serial Number (system): -  
 Hardware UUID: -  
 Activation Lock Status: Enabled

* Software

System Version: macOS 10.15.3 (19D76)  
 Kernel Version: Darwin 19.3.0  
 Boot Volume: Macintosh HD  
 Boot Mode: Normal  
 Computer Name: Robert's MacBook Pro  
 Username: Robert Poenaru (basavyr)  
 Secure Virtual Memory: Enabled  
 System Integrity Protection: Enabled  
 Time since boot: 4 days 1:12

## Building the project

1. build with cmake, according to [this script](https://github.com/xrootd/xrootd/blob/b04fa906e5c1dd0278881c985b283330cc572a93/.gitlab-ci.yml#L265). (gitlab nightly build).
   1. use appropriate paths for ZLIB, OPENSSL (the include dir, the crypto library and the ssl library)
   2. build without VOM modules for macOS (use command: -DVOMSXRD\_SUBMODULE=OFF)

### Missing XrdVersion header in XrdSysPlugin.cc+XrdSysPlugin.hh

In case of building errors with regards to missing the version info header:

/Users/basavyr/Library/Mobile Documents/com~apple~CloudDocs/Work/Pipeline/DFCTI/CERN\_project/0xrootd\_project/xrootd/src/XrdSys/XrdSysPlugin.cc:91:42: error:  
 member access into incomplete type 'XrdVersionInfo'  
 myInfo->vStr, urInfo.vStr, mmv, majv, minv);  
 ^  
/Users/basavyr/Library/Mobile Documents/com~apple~CloudDocs/Work/Pipeline/DFCTI/CERN\_project/0xrootd\_project/xrootd/src/./XrdSys/XrdSysPlugin.hh:35:8: note:  
 forward declaration of 'XrdVersionInfo'  
struct XrdVersionInfo;

The header file should be created by the genversion.sh script at compile time. If that isn’t the case, then just run the script from the command line separately:

cd xrootd/  
./genversion.sh

See the header file [here](/build/src/XrdVersion.hh)

## Installing the source files

Once the building process with cmake completely finished, use make install for the installation process.

1. Installing the Xrd client sources:

cd src/XrdCl/  
 make -j4  
 make install

1. Installing the entire project, including **python bindings**.  
   From the build directory, just:

ls -a  
make install -jNCORES