

Build lcls2 at NERSC

Prescriptions from Chris with my comments.

Login

```
ssh -Y <username>@cori.nersc.gov
```

```
ssh -Y cori05 # other nodes may have different versions of compilers...
```

Cloning lcls2 repository

[Version control with git](#) -describes git initialization.

The final command should be

```
git clone git@github.com:slac-lcls/lcls2.git
```

Create and activate conda environment

```
module load python
```

See available conda environments and create one:

```
conda env list
conda env create --name <ps-0.1.1-...-environment-name> -f env_create.yaml
source activate <ps-0.1.1-...-environment-name>
```

where the file `env_create.yaml` contains the list of require packages.

Originally it is located in https://github.com/slac-lcls/reلمانage/blob/master/env_create.yaml or `env_create_py2.yaml` for python2.

Our version of `env_create.yaml` has slightly modified content of the file `env_create_py2.yaml`

```
channels:
  - defaults
  - conda-forge
dependencies:
  - python=3.6
  - cmake
  - h5py
  - ipython
  - numpy
  - cython
  - matplotlib
  - mongoddb
  - pymongo
  - mpi4py
  - nose
  - pyzmq
  - versioneer
  - requests
```

Build

```
cd lcls2
```

```
export CRAYPE_LINK_TYPE=dynamic
export INSTDIR=`pwd`/install
```

For python2.7

```
./build_python2_psana.sh
export PYTHONPATH=$INSTDIR/lib/python2.7/site-packages
```

For python3.6

```
./build_python3_light.sh  
export PYTHONPATH=$INSTDIR/lib/python3.6/site-packages
```

Useful conda commands

- `conda list`
- `conda env list`
- `conda env remove --name <ps-0.1.1-...-environment-name>`

Run apps etc

```
python psana/psana/pscalib/calib/MDBWebUtils.py 7  
ipython  
> import psana
```

References

- [Version control with git](#)
- https://github.com/slac-lcls/relmanage/blob/master/env_create.yaml
- <https://github.com/slac-lcls/lcls2>