

ECCE Simulations

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Office Hours

- We will hold weekly, alternating office hours to help with and discuss simulation needs
- Indico page to access meetings: <https://indico.bnl.gov/category/346/>
- Meetings will alternate between Monday at 8pm ET and Tuesday at 2pm ET
- Note: First two slots will be on Tuesdays! (04/13 and 04/20), first Monday slot is 04/26

Quick links

- ECCE software documentation: <https://ecce-eic.github.io/>
- Tutorials: https://ecce-eic.github.io/tutorials_landing_page.html
- Getting started: https://ecce-eic.github.io/tutorials_day1.html
- ECCE doxygen: <https://ecce-eic.github.io/doxygen/>
- ECCE repositories: <https://github.com/ECCE-EIC/>
- ECCE mattermost: <https://chat.sdcc.bnl.gov/eic/channels/fun4all-ecce>

Getting started

- We release a daily build of ECCE software, available when you source our environment
`source /cvmfs/eic.opensciencegrid.org/ecce/gcc-8.3/opt/fun4all/core/bin/ecce_setup.sh -n`
- Note: -n will clear your environment variables so declare them after setting up
- If you make local changes to the software, your system must know where to look. My setup is:

```
source /cvmfs/eic.opensciencegrid.org/ecce/gcc-8.3/opt/fun4all/core/bin/ecce_setup.sh -n
export ECCE=/sphenix/user/cdean/ECCE
export MYINSTALL=$ECCE/install
export LD_LIBRARY_PATH=$MYINSTALL/lib:$LD_LIBRARY_PATH
export ROOT_INCLUDE_PATH=$MYINSTALL/include:$ROOT_INCLUDE_PATH
source /cvmfs/eic.opensciencegrid.org/ecce/gcc-8.3/opt/fun4all/core/bin/setup_local.sh
export ROOT_INCLUDE_PATH=${ECCE}/macros/common:${ROOT_INCLUDE_PATH}
```

Building your own packages

- We compile everything in “core software” each night
- Files in “macros” are not compiled, they are run-and-go
- You must recompile and packages you change locally (see previous slide to set up environment)
- Each package needs 3 files: autogen.sh, configure.ac and Makefile.am
- You do not need to alter the first two but the final file is package specific
- To build a package:

```
mkdir build
cd build
../autogen.sh --prefix=$MYINSTALL
make
make install
```

Ways to run ECCE

- Most people will be familiar with running in a shell. We use RCF from Brookhaven for this: `ssh -Y <userName>@ssh.sdcc.bnl.gov`
 - Advantage: fast, familiar, access to condor. Disadvantage: visualization is non-trivial
- You can also use NoMachine to access RCF via NX servers (note, there is a change coming in early May here):
<https://www.sdcc.bnl.gov/resources/services/nomachine-nx>
- Lastly, we have an Ubuntu image ready to go. Just download it and virtual box. <https://github.com/ECCE-EIC/Singularity/blob/master/VirtualBox.md>
 - This is recommended for visualization of ECCE