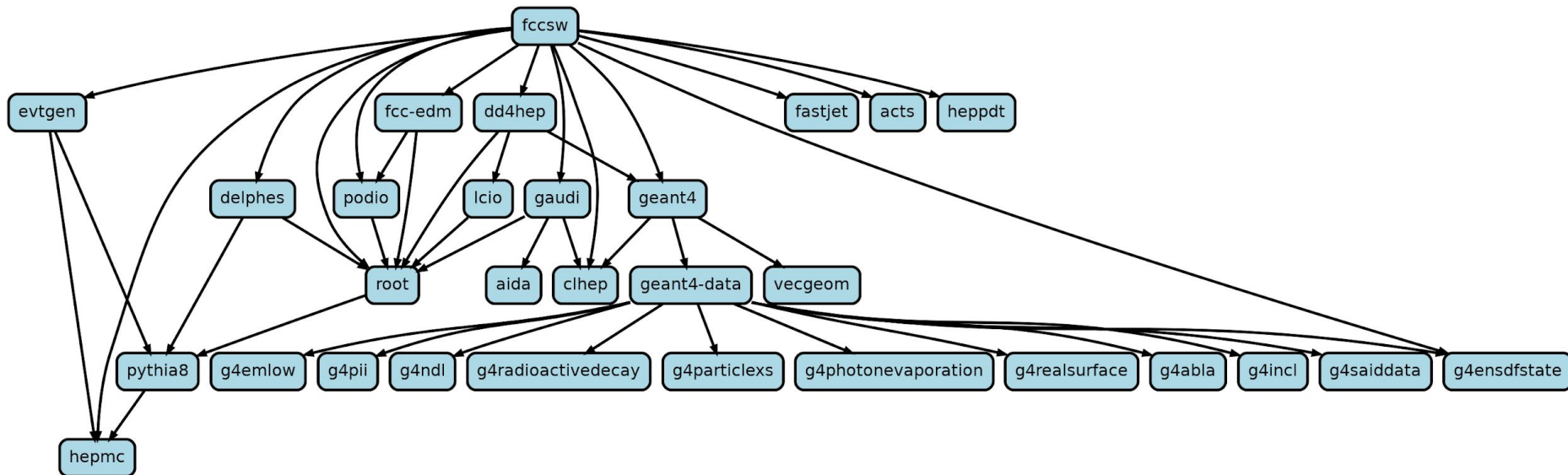


Migration of FCCSW to EDM4HEP

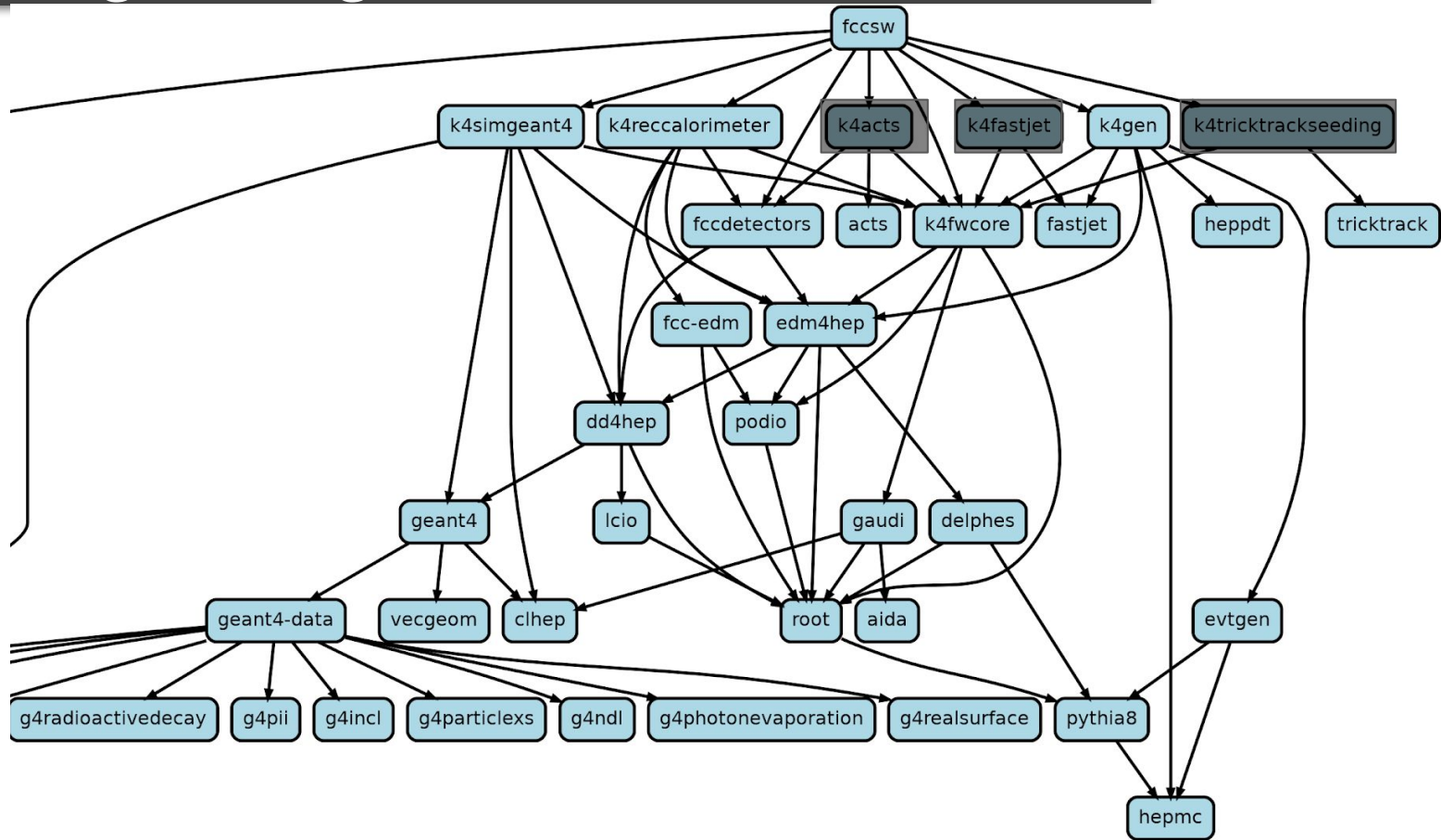
FCC Software Meeting - 2020/11/27

Valentin Volkl (CERN), Key4hep Software Group

Package reorganization - FCCSW old

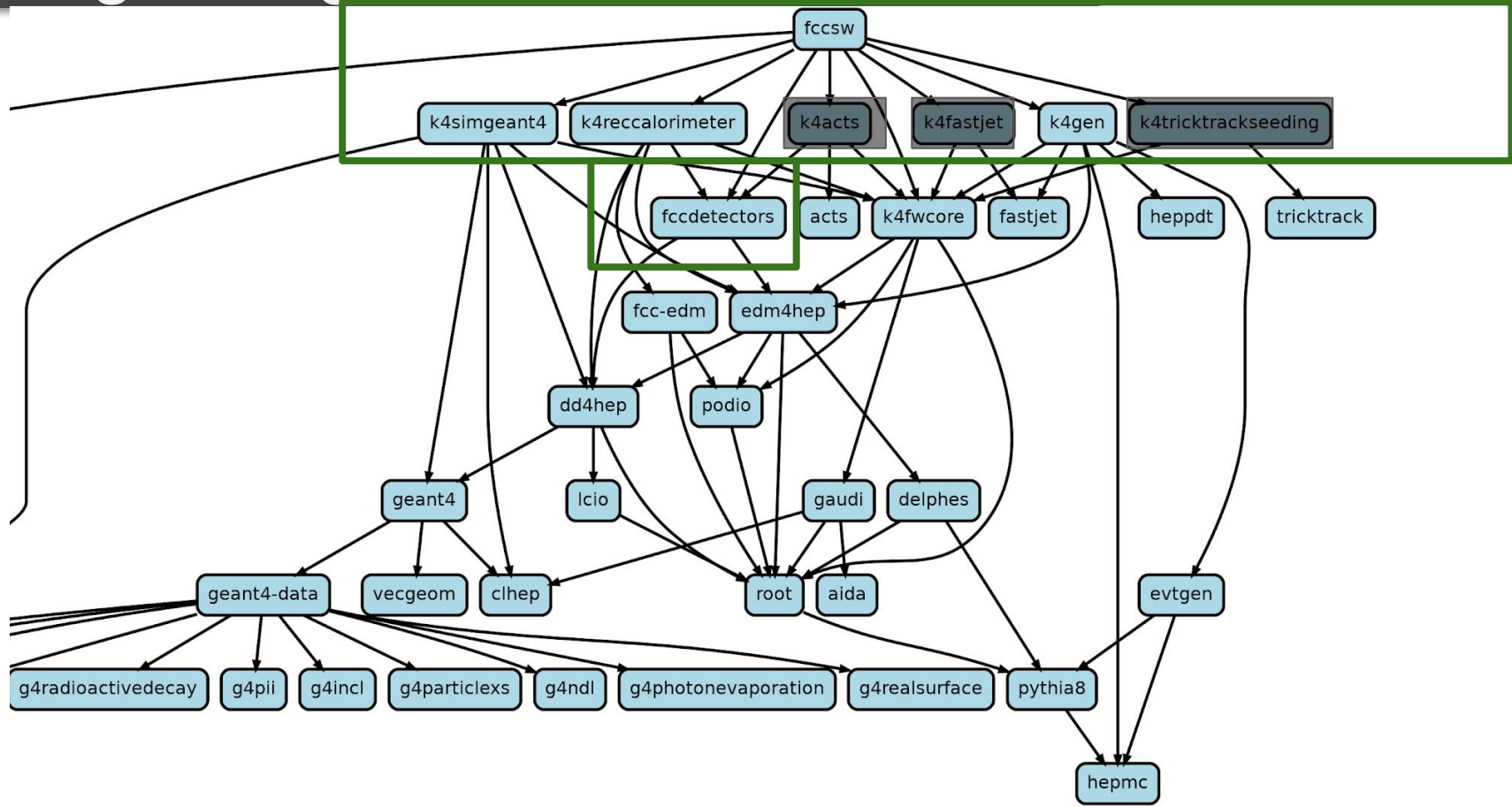


Package reorganization - FCCSW new



Package reorganization - FCCSW new

FCCSW NEW



Spack for Key4HEP



- Installation of the full software in 6 commands:

```
git clone https://github.com/spack/spack.git
source spack/share/spack/setup-env.sh
```

```
git clone https://github.com/key4hep/key4hep-spack.git
spack repo add key4hep4-spack
```

```
cp key4hep-spack/config/packages.yaml spack/etc/spack
```

1. Setup upstream spack. The “installation” is just a git clone. Very limited dependencies (python, git, curl)



- Installation of the full software in 6 commands:

```
git clone https://github.com/spack/spack.git
source spack/share/spack/setup-env.sh
```

```
git clone https://github.com/key4hep/key4hep-spack.git
spack repo add key4hep4-spack
```

```
cp key4hep-spack/config/packages.yaml spack/etc/spack
```

2. Setup key4hep package recipes. Currently 44 packages - with standard build system fairly quick to create and maintain new ones.



- Installation of the full software in 6 commands:

```
git clone https://github.com/spack/spack.git
source spack/share/spack/setup-env.sh
```

```
git clone https://github.com/key4hep/key4hep-spack.git
spack repo add key4hep4-spack
```

```
cp key4hep-spack/config/packages.yaml spack/etc/spack
```

3. Set some preferred package configuration options (build type etc.), and give hints to the concretizer to avoid errors.



- Installation of the full software in 6 commands:

```
git clone https://github.com/key4hep/key4hep-spack.git
spack repo add key4hep4-spack

cp key4hep-spack/config/packages.yaml spack/etc/spack

# install the meta-package for the key4hep-stack
spack install key4hep-stack
```

4. Use a bundle package to install all packages needed. Environments can be used for installations with different build types or other specialisations.



- Nightly and release builds on CVMFS:

```
source /cvmfs/sw.hsf.org/key4hep/setup.sh
```

```
source /cvmfs/sw-nightlies.hsf.org/key4hep/setup.sh
```

Not yet using a filesystem view, instead setting PATH/LD_LIBRARY_PATH/... for each package.

Printout shows you exact version of installation - use that for productions.

Spack: use for developers



Use in developing software is pushing spack's intended purpose, but possible. Options:

- Spack can build from branches.
- Build can be done “as usual” after
 - `spack load`
 - `spack build-env`
- `spack dev-build` compiles local code according to the spack recipe
- `spack develop` allows dev-builds of several packages