

Environment setting in KEKCC

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The new KEKCC is Red Hat Enterprise Linux release 9.3 (Plow). The default compiler is gcc 11.4.1.

module

The same gcc 8.3.0 as the old system can be used with module, but is basically unnecessary.

```
$ module av
```

```
----- /opt/Modules/modulefiles -----  
gcc/850  gcc/1230  intel/2024  nvhpc/24.1
```

/sw/packages

You can use the software installed in /sw/packages. Everything is installed with the default compiler.

package
/sw/packages/root/5.34.38
/sw/packages/root/6.32.04
/sw/packages/geant4/9.6.4
...
/sw/packages/geant4/11.2.2

The ROOT on the group directory is no longer used.

unpacker

The unpacker is placed in the group directory, /group/had/sks/software/unpacker/e70 This is updated constantly.

See below for local installation.

```
$ git clone ssh://sks@www-online.kek.jp:8022/~/public_html/git/unpacker.git
$ cd unpacker/src
$ cp Makefile.org Makefile
$ make
```

Check if the `unpacker-config` command is available.

```
$ unpacker-config --version
2024-07-03
```

Environment variables

The following is an example of environment setting in `.bashrc`.

```
. /sw/packages/root/6.32.04/bin/thisroot.sh
. /sw/packages/geant4/11.2.2/bin/geant4.sh
. /sw/packages/geant4/11.2.2/share/Geant4/geant4make/geant4make.sh
conda activate myenv
export G4WORKDIR=$HOME/work/geant4 # set as you like
export PATH=/group/had/sks/software/unpacker/e70/bin:$PATH
export PATH=$G4WORKDIR/bin/Linux-g++:$PATH
```

Anaconda setting

To use Python, it is recommended to build the Anaconda local environment once using the `conda` command as follows. Note that it is recommended to use `conda install` instead

of `pip install` in the anaconda environment. Newer versions of python, such as 3.12, are available, but to run PyROOT under `/sw/package`, the python version must be default, 3.9.

```
$ conda create -n myenv python=3.9 # myenv is an example name
$ conda activate myenv
$ conda install numpy psutil pyyaml rich # and other modules you like
```

Add the following line in `.bashrc` to activate your environment.

```
conda activate myenv
```

If the prompt header of conda is annoying, add the following line in `.condarc`.

```
change_ps1: False
```

K1.8 analyzer

Install the K1.8 analyzer as follows.

```
$ git clone \
ssh://sks@www-online.kek.jp:8022/~public_html/git/k18-analyzer.git
$ cd k18-analyzer
$ git checkout e70 # choose branch as you like
$ cp Makefile.org Makefile
$ make
```

See README for more information on how to use the analyzer.