

# EXPERT ROOT - Expert\_Root - # 69

## The Framework

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A simulation, reconstruction and analysis framework that is based on the ROOT and the FairRoot systems. The user can create simulated data and/or perform analysis with the same framework. Geant3 and Geant4 transport engines are supported, however the user code that creates simulated data do not depend on a particular monte

carlo engine.

The full documentation is available here: <http://ex.jinr.ru/>

Repository viewer: <https://github.com/FairRootGroup/ex/>

## License

ExpertRoot is distributed under the terms of the GNU Lesser General Public Licence version 3 (LGPL) version 3.

## About experiment

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[H. Geissel et al.](#)  
[EXPERT \(EXOTIC PARTICLE EMISSION AND RADIOACTIVITY BY TRACKING\) STUDIES AT THE SUPER-FRS SPECTROMETER](#)  
[in VIth International Symposium on Exotic Nuclei \(EXON-2014\), Kaliningrad, Russia, 8 - 13 Sept. 2014, pp.579-596. World Scientific, Singapore, 2015.](#)

## Installation Guide

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### 1. FairSoft Installation

```
mkdir -p fair_install
cd fair_install
git clone https://github.com/FairRootGroup/FairSoft.git
cd FairSoft
git checkout BRANCH_NAME
./configure.sh
# 1) gcc (on Linux) 5) Clang (on OSX)
# 2) No Debug Info
# 3) Yes (ROOT6)
# 4) Yes (Install engines)
# 5) Internet (install O4 files from internet)
# 6) No (without python)
# path: fair_install/FairSoftInst
```

BRANCH\_NAME=may16p1

In case of any missing software check the `~/fair_install/FairSoft/DEPENDENCIES` file and follow instructions there.

### 2. FairRoot Installation

```
# Set the shell variable SIMPATH to the installation directory
export SIMPATH=~/fair_install/FairSoftInst
cd fair_install
git clone https://github.com/FairRootGroup/FairRoot.git
cd FairRoot
git checkout BRANCH_NAME
mkdir build
cd build
cmake -DCMAKE_INSTALL_PREFIX=~/fair_install/FairRootInstf..
make
make install
```

### 3. ExpertRoot Installation

```
# Set the shell variable FAIRROOTPATH to the FairRoot installation directory
export FAIRROOTPATH=~/.fair_install/FairRootInst

mkdir ~expertroot
cd ~expertroot
git clone https://github.com/ExpertRoot/ExpertRoot
git checkout BRANCH_NAME
mkdir build
cd build
cmake -DUSE_DIFFERENT_COMPILER=TRUE
make
```

BRANCH\_NAME=vv-0.3

### 4. ExpertRoot Initialize:

```
~/expertroot/build/config.sh
```

## User Guide

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### Updating

```
cd ~expertroot
git pull
cd ~expertroot/build
make
```