

# **Geant4 Installation (Hand-on Session)**

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# Geant 4 Installation

- 1) Check that you meet all the requirements**
- 2) Download Geant4 source code**
- 3) Configure the build using CMake**
- 4) Make & install**
- 5) Configure your environment to use Geant4**

# Supported platforms & requirements

- Operating system
  - “recent” Linux (e.g. CentOS 7), best support
  - macOS 10.10+
  - Windows 7+ (limited support, not recommended)
- Compilers
  - C++11 compliance
  - such as GCC 4.8.5+, clang 3.6+, Visual C++ 14.0 (2015)
- CMake (configuration generation tool) 3.3+
- System libraries (as development packages):
  - expat, xerces-c

# CMake installation

- Linux: it is recommended to use the CMake provided by the package management system of your distribution. If version 3.3+ is not available:
  1. download the latest version (<http://www.cmake.org/>)
  2. unzip the tar-ball
  3. ./bootstrap, make, make install
- macOS: install it using the Darwin64 dmg installerpackage

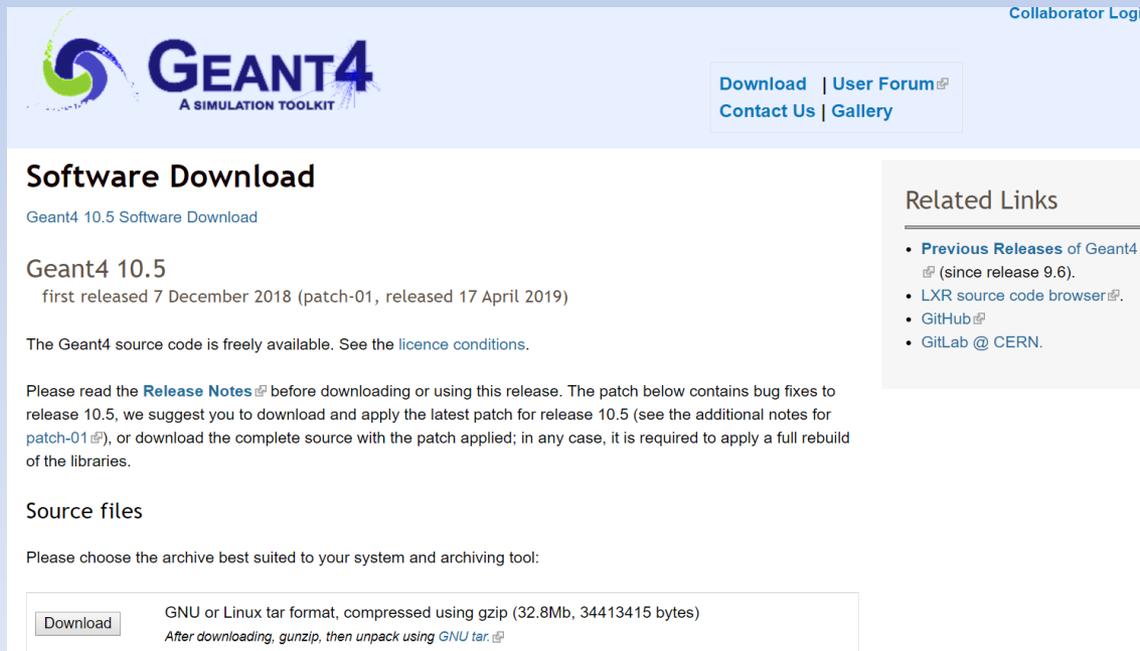
# Optional libraries

- X11 for simple graphical user interface and ray-tracing
- OpenGL for visualization
- Qt4 or Qt5 for graphical user interface
- ROOT for data analysis (even inside Geant4)
- Less frequently used libraries/tools:  
Motif, OpenInventor, DAWN, RayTracer X11, HepRApp, WIRED JAS Plug-in, AIDA, VRML browser, (external) CLHEP, Wt...

# Download Geant4

- Go to the Geant4 webpage:

<https://geant4.web.cern.ch/support/download>



The screenshot shows the Geant4 website's 'Software Download' page. At the top left is the Geant4 logo, a stylized 'G' with a blue and green swirl, and the text 'GEANT4 A SIMULATION TOOLKIT'. To the right of the logo is a navigation menu with links for 'Download', 'User Forum', 'Contact Us', and 'Gallery'. In the top right corner, there is a 'Collaborator Logi' link. The main content area is titled 'Software Download' and includes a sub-heading 'Geant4 10.5 Software Download'. Below this, the version 'Geant4 10.5' is listed, along with its release date: 'first released 7 December 2018 (patch-01, released 17 April 2019)'. A note states that the source code is freely available and provides a link to the license conditions. A paragraph of text explains that the release includes bug fixes and suggests downloading the latest patch or the complete source with the patch applied, followed by a full rebuild of the libraries. A 'Source files' section follows, with a note to choose the archive format best suited to the system. At the bottom, there is a 'Download' button and a description of the archive: 'GNU or Linux tar format, compressed using gzip (32.8Mb, 34413415 bytes)', with a note to use 'gunzip' and 'GNU tar' for unpacking.

Collaborator Logi

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## Software Download

Geant4 10.5 Software Download

### Geant4 10.5

first released 7 December 2018 (patch-01, released 17 April 2019)

The Geant4 source code is freely available. See the [licence conditions](#).

Please read the [Release Notes](#) before downloading or using this release. The patch below contains bug fixes to release 10.5, we suggest you to download and apply the latest patch for release 10.5 (see the additional notes for [patch-01](#)), or download the complete source with the patch applied; in any case, it is required to apply a full rebuild of the libraries.

### Source files

Please choose the archive best suited to your system and archiving tool:

[Download](#) GNU or Linux tar format, compressed using gzip (32.8Mb, 34413415 bytes)  
After downloading, [gunzip](#), then [unpack using GNU tar](#).

### Related Links

- [Previous Releases](#) of Geant4 (since release 9.6).
- [LXR source code browser](#).
- [GitHub](#)
- [GitLab @ CERN](#).

# Geant4 Virtual Machine

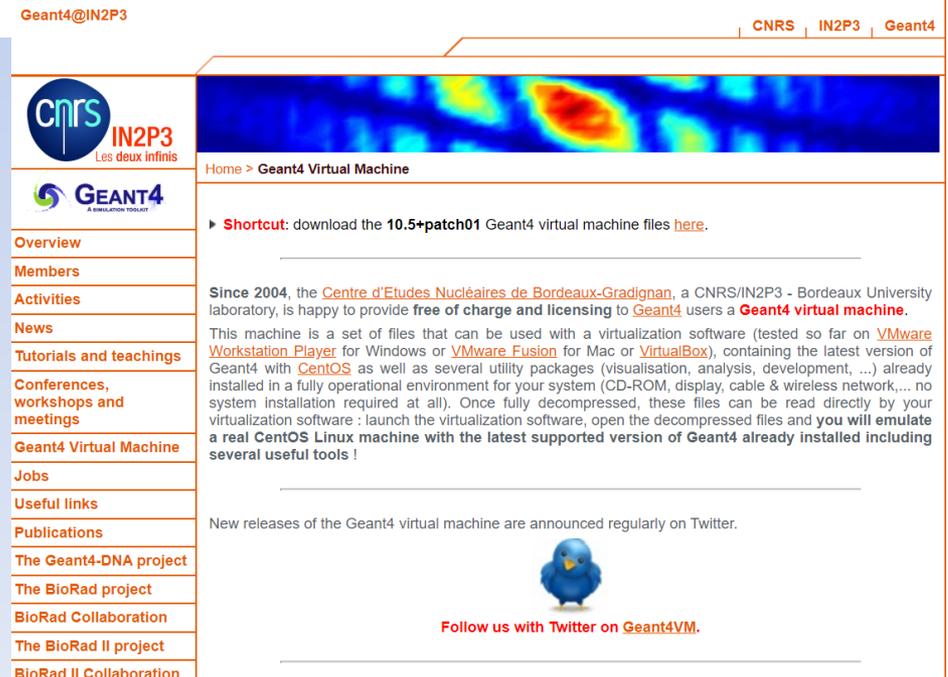
**Korean Site –temporarily. <http://141.223.47.53:8008/g4tutkor/lub1804g4.ova>**

## 설치

1. [VirtualBox](#) 설치는 각자 알아서
2. [Guest OS Image for G4Tutorial Korea](#) 다운로드 약 7 GB
  - 압축을 풀면 약 15 GB, 따라서 사용자의 컴퓨터에 최소 30 GB 빈 공간이 있어야 함.
3. [Importing 안내 동영상](#)
  - VirtualBox 열고, 파일 찾아서 Import, 이때 자신의 컴퓨터 사양에 맞게 Guest OS의 메모리나 CPU 개수를 잘 할당해 줘야 함

Other Down load site  
Information

<http://geant4.in2p3.fr/spip.php?rubrique8&lang=en>



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 **IN2P3**  
Les deux infinis

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A SIMULATION TOOLKIT

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▶ **Shortcut:** download the **10.5+patch01** Geant4 virtual machine files [here](#).

Since 2004, the [Centre d'Etudes Nucléaires de Bordeaux-Gradignan](#), a CNRS/IN2P3 - Bordeaux University laboratory, is happy to provide **free of charge and licensing** to [Geant4](#) users a **Geant4 virtual machine**.

This machine is a set of files that can be used with a virtualization software (tested so far on [VMware Workstation Player](#) for Windows or [VMware Fusion](#) for Mac or [VirtualBox](#)), containing the latest version of Geant4 with [CentOS](#) as well as several utility packages (visualisation, analysis, development, ...) already installed in a fully operational environment for your system (CD-ROM, display, cable & wireless network,... no system installation required at all). Once fully decompressed, these files can be read directly by your virtualization software : launch the virtualization software, open the decompressed files and **you will emulate a real CentOS Linux machine with the latest supported version of Geant4 already installed including several useful tools !**

New releases of the Geant4 virtual machine are announced regularly on Twitter.

  
Follow us with Twitter on [Geant4VM](#).