Prerequisites for the Geant4 and ROOT courses

A minimal knowledge of the C++ programming language and of the Linux operating system is useful for a more efficient work.
Participants must have their own laptop, e quipped for supporting ssh connections to a Linux machine with graphical windows. Wi-Fi connection will be available for the participants.
Each student can choose between two methods for using the Geant4 toolkit and Root analysis tool. We suggest to try to use the first one and, in case of problem, switch on the second one:

1.Recommended:

Work with a pre-configured Virtual Machine(VM), developed with the VMware tool. In this VM a Linux operating system has been already pre-installed with an installation of the Geant4 toolkit and ROOT analysis tool. Additional graphical libraries (Qt and Xm) have been also installed in order to facilitate the practic al session of the course. You can download a compressed version of the VM (vm_alghero2014.zip) going to a url which will be provided during the first lesson.
To run the Virtual Machine, it is necessary to install VMware Player that is the easiest way to run multiple operating systems at the same time on your PC (it is suggested to download and install it before the first lesson).
VMware Player program installer is available at:

https://my.vmware.com/web/vmware/free#desktop_end_user_computing/vmware_player/6_0

You can choose the version compatible with your operating systems.

You can download the virtual machine directly :

http://geant4.lngs.infn.it/virtual_machine_alghero2014/Alghero_2014.zip

Once you download that, you can uncompress Alghero_2014.zip with the following software:
•WinZip: a trial Version is available here at
http://www.winzip.com/win/it/index.htm
(Only for Windows Operating system)
•7-Zip Open source software:
-It is possible to download it at http://www.7-zip.org/download.html for both the Linux operating system that Windows.
or
It is possible to install it directly via "Add/remove software" in your Linux packages administration. The command line for to extract vm_alghero2014.zip by terminal

Linux is: *unzip Alghero_2014.zip*
Once you have downloaded the VM, you can open that and login as:
Username:
user

Password:
user

For the practical session of the Geant4 and Root course we suggest to work with the pre-configured "user", avoiding to use "root".In case, for future modification of the VM, you may need to login as "root" user, you can use the following password: scilinux6.

2.A*lternative*:

For Linux OS : No additional software has to be installed. To connect to the machine, just open a shell and digit:

ssh –X userX@192.168.1.6
from user 1 to user10

ssh -X userX@192.168.1.5
from user11 to user20

ssh -X userX@192.168.1.7
from user 21 to user30

and enter the password: userX

For Windows OS : work with SSH Secure Shell(or putty) and Xming-mesa (both freeware), to connect remotely to computers where the Geant4 toolkit and the Root analysis tool have already been installed.

Xming-mesa program installer is available at:
http://geant4.lngs.infn.it/corso_infn/Xming-mesa.exe

Additional fonts (necessary only if you want to use emacs as text editor) can be downloaded from here:
http://geant4.lngs.infn.it/corso_infn/Xming-fonts-7-5-0-8-setup.exe
(documentation is at:http://www.straightrunning.com/XmingNotes/).

SSH Secure Shell program is available at:
http://www2.ohlone.edu/downloads/SSHSecureShellClient-3.2.9.exe

Xming server must be launched before starting the SSH connection.

To configure the SSH connection with graphics windows, just open menu *Edit->Settings->Tunneling SSH Secure Client*, select *"Tunnel X11 connections"* option and click OK.

Moreover, we invite participants who are interested on working with the toolkit Geant4 to directly install the toolkit on their own operative system (Linux or Mac). We will give you all the necessary support to fix eventual installation problems.