Prerequisites for the GPU and Geant4 courses

A minimal knowledge of the C and C++ programming language and of the Linux operating system is useful for a more efficient work.
Participants must have their own laptop, equipped for supporting ssh connections to a Linux machine with graphical windows. Wi-Fi connection will be available for the participants.

As regarding the GPU course two are the possible options that the student can choose:

1. If the student would like to work on your own pc: a laptop with Linux or Mac OS X, NVIDIA or AMD as graphic board of at least 2008 and with the updated drivers.
2. as an alternative: a laptop with ssh .

Each student can also choose between two methods for using the Geant4 toolkit. 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. Additional graphical libraries (Qt and Xm) have been also installed in order to facilitate the practical session of the course. You can download a compressed version of the VM (vm_catania2015.zip) going to the following url :

http://www.lns.infn.it/link/VirtualMachineGeant4.10.p02.tar.gz

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, only for Windows and Linux OS, is available at:

https://my.vmware.com/web/vmware/free#desktop_end_user_computing/vmware_player/7_0

For Mac OS X, a trial (free for 30 days) version of VMware Fusion is available at the following link:

https://my.vmware.com/web/vmware/info/slug/desktop_end_user_computing/vmware_fusion/8_0

Once you download that, you can uncompress VirtualMachineGeant4.10.p02.tar.gz
with the following software:
•WinZip: a trial Version is available here at
http://www.winzip.com/win/it/index.html
(Only for Windows Operating system)
•7-Zip Open source software:
The command line for to extract VirtualMachineGeant4.10.p02.tar.gz by terminal Linux is:

 tar –zxvf VirtualMachineGeant4.10.p02.tar.gz

Once you have downloaded the VM, you can open that and login as:
Username:
user

Password:
user

For the practical session of the Geant4 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.Alternative

For Linux OS : No additional software has to be installed. To connect to the machine, just open a shell and digit: ssh –X userX@172.16.13.213
from user1 to user10
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 has 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.