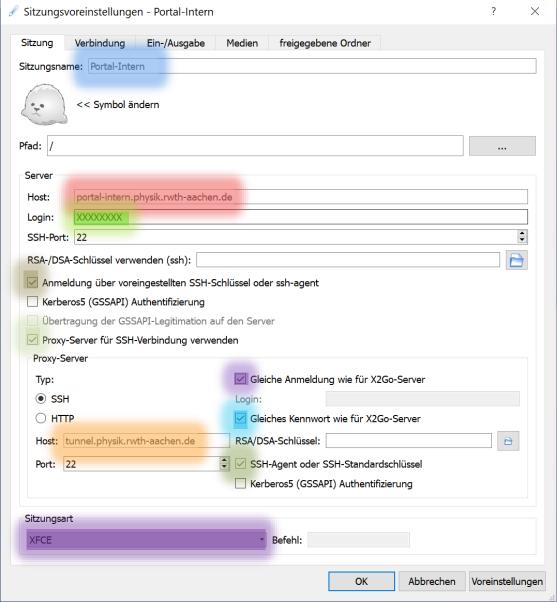
How to Use Geant4 in the CIP Pool (and remotely)

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Remote Access Using X2Go

- Session name: arbitrary
- Host: portalintern.physik.rwth-aachen.de
- Login: username
- Try auto login (via SSH Agent or default SSH key)
- Use Proxy server for SSH connection
- Same login as on X2Go Server
- Same password as on X2Go Server
- Host (Proxy server): tunnel.physik.rwth-aachen.de
- SSH Agent or default SSH key
- Session type: XFCE, KDE



Using Geant4 in the CIP Pool

- Log in using your account
- Download geant4.10.6.p02.sh from Moodle
- Source the setup files in a bash-like shell source geant 4.10.6.p02.sh

 Hint: echo \$SHELL tells you the shell you are using

Remark 1:

- When sourcing the above file you automatically set your environmental variables so that you use can use Geant4. This includes:
 - setting the location of Geant4 and of its libraries and physics data,
 - preparing the environment for compiling Geant4 program code,
 - · choosing a newer compiler,
 - adding newer versions of libraries to your library path.

Remark 2:

 Every time you open a new console/terminal you will need to source your environmental variable.

Remark 3:

- To avoid sourcing the setup file, one can make use of ".bashrc" file and source the file automatically when a new shell is started
- WARNING: This may have side effects! Especially other programs depending on older libraries may not work anymore!

Testing Your Setup

- Download Geant4 example B4.tar.gz from Moodle.
- Extract it: tar xzvf B4.tar.gz
- Compile example B4a (simulation of a calorimeter):
 - cd B4/B4a
 - cmake .
 - make
- The executable will be stored in . (current directory)
- Start the program:
 - ./exampleB4a
- Shoot 100 particles (in this case e-) on the calorimeter. Enter "/run/beamOn 100" in the session field.
- What do you see?
- **Remark:** The program reads its configuration file (*.mac) from the current directory. If you execute the program in its own directory you have to copy the configuration files first.