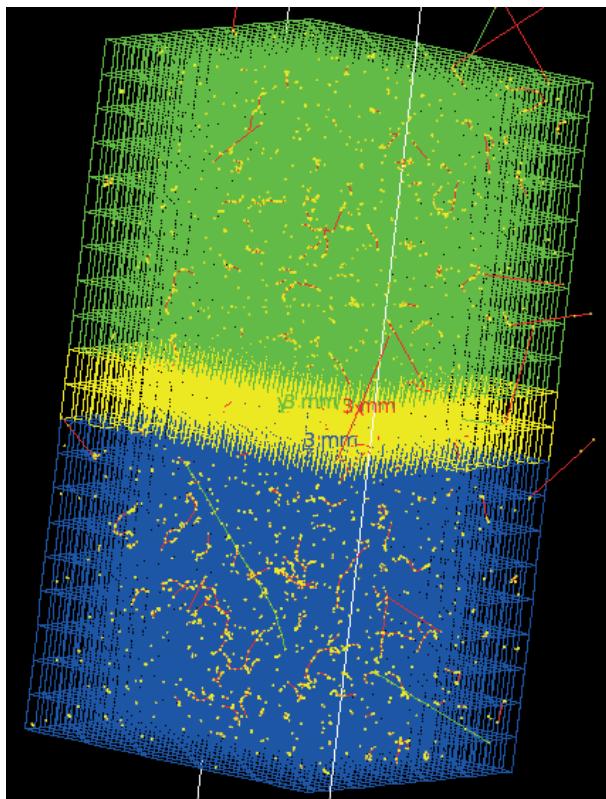


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DosiVox



Installation
guide

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1 Introduction

The *DosiVox* (Martin et al., 2015a,b) software runs under *Linux*. It was developed and tested with *Scientific Linux 6.4 (Red HatTM)*, running on the Geant4 (Agostinelli et al., 2003; Allison et al., 2006) Virtual Machine (freely available at: <http://geant4.in2p3.fr/spip.php?rubrique8>) developped at the Centre d'Etudes Nucléaires de Bordeaux-Gradignan, France (Int. J. Model. Simul. Sci. Comput. 1 (2010) 157–178, <http://www.worldscientific.com/doi/abs/10.1142/S1793962310000122>). For further references please see the manual of *DosiVox*.

This virtual machine itself contains the *Geant4* libraries, which are necessary for compiling the source code, if non-compiled or modified *DosiVox* codes are used.

First: Load the virtual machine and unzip it in a folder.

2 Installing the Virtual Machine

The provided instructions are given for a PC with the following setup:

- Windows 7, 64 bit
- Memory: min. 4 GB

2.1 Installing the virtual machine with VMwareTM:

DosiVox was tested with *VMware Player 6TM* (free for PC) and *VMware Fusion 6TM* (available for purchase for Mac). After installing and running the player you will get the window shown in Fig. 1.

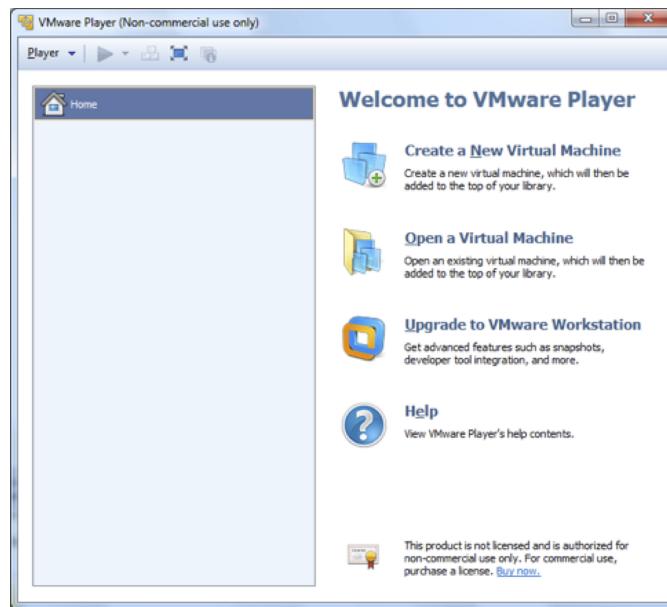


Figure 1: *VMware PlayerTM* installation window 1

- *Open a Virtual Machine* → [browse and select the file s16_x64.vmdk] (Fig. 2).
- *Play the virtual machine.*

Parameters of this machine can be modified by using the *Edit virtual machine settings* button (Fig. 2). See Figure 3 for a screenshot. For further information the user is invited to read the README file on the : <http://geant4.in2p3.fr/spip.php?rubrique8> page.

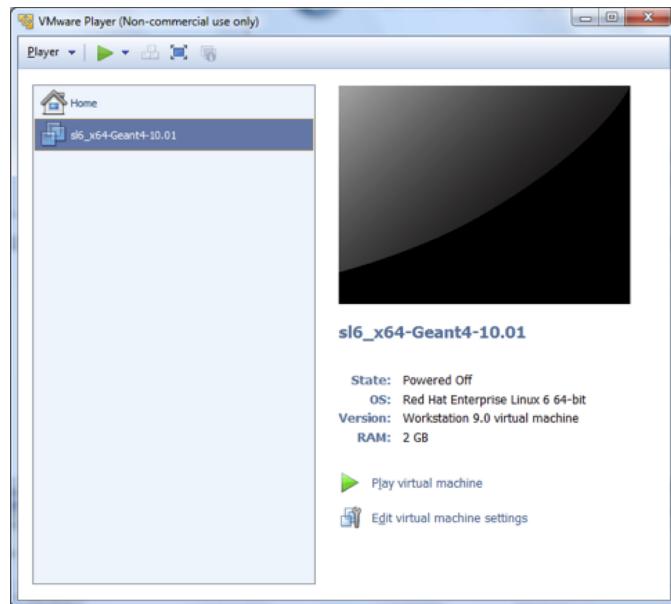


Figure 2: *VMware PlayerTM* installation window 2

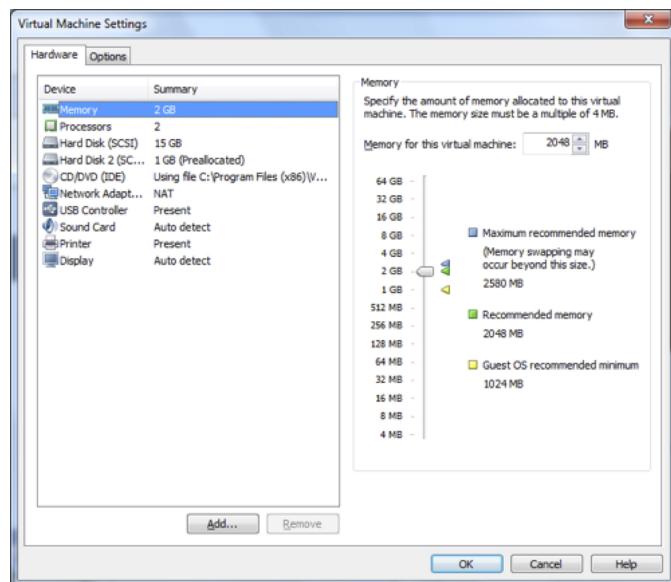


Figure 3: *VMware PlayerTM* virtual machine settings

3 Install DosiVox in the virtual machine

Open your virtual machine will result in the window shown in Fig. 4.

Note: At the first virtual machine start, VMware Player displays a message asking whether you have moved or copied the virtual machine. You have to answer "I copied it".

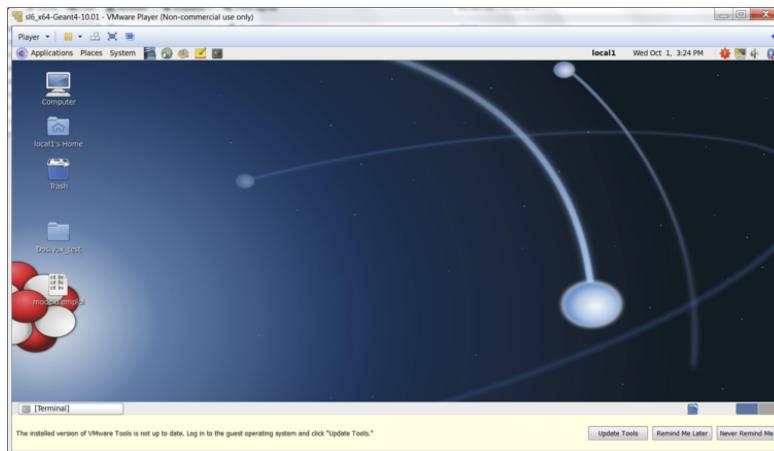


Figure 4: Desktop of the virtual machine

From *MS WindowsTM*:

- Copy the file *DosiVox.zip* and go back to Scientific Linux
- Paste the file in the folder *local1*'s home
- Right-click  to unzip the folder
- The folder *DosiVox_test* contains three sub-folders: *build*, *data*, *results*
- In order to run a simulation, you need to open a terminal by clicking on the terminal icon  or by right-clicking  on a folder or on the desktop and select *Open in Terminal*.
- In the terminal, go to the *DosiVox* folder using the following command: `cd DosiVox` (In case *DosiVox* was placed in another folder, make sure to set up the correct path.)
- Run *DosiVox* with the command: `build/DosiVox`
- To start the simulation the software asks for the name of the pilot file (PTF, cf. *DosiVox manual*) (type any key and press the enter key  to get a list of available PTF files.)

For further information please see the *DosiVox* manual.

4 Information about the folders

- The `build` folder contains the compiled C++ code of *DosiVox* and the associated files
- The `src` and `include` folders contain the C++ code (.cc and .hh files); you can have a look by opening them with, e.g. `emacs` or `gedit`
- The `data` folder contains the `spectra` folder where all the spectra used for simulations are stored. All these files are TXT files and therefore can be easily modified. For instance, the file `UserDef` allows the user to simulate any particle, including ones other than those emitted by the ^{40}K and U- and Th-series. The `data` folder must also contain the Pilot Text Files (PTF) used by *Geant4* to run the simulations (cf. *DosiVox* manual for further information on the PTFs).
- The `results` folder contains the results of the simulation (cf. *DosiVox* manual for further information).

Nota bene: The virtual machine works as an independent computer on the user PC or Mac. All the data in the virtual machine are not automatically saved in the regular computer, for example in the case of the deleting of the virtual machine. To access and save virtual machine data outside of the virtual machine (simulation results for example), use a shared folder between the regular computer and the virtual machine, or copy the data files in the virtual machine and paste them on the regular computer.

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