

Installation instructions for MITSIMLab (in Ubuntu 8.10)

Installation instructions for MITSIMLab under a fresh Ubuntu 8.10 distribution. Commands that need to be typed at the console are prepended by a dollar sign (\$).

Part 1 – Preparation of Ubuntu

1) Prior requirements:

MITSIMLab requires the graphics library GNOME. In the initial installation of Linux, choose GNOME among the options present for Graphics Library

In the initial installation of Linux install PVM, or install it using an RPM.

2) This installation guide is valid for gcc version 4.3. If you have a newer version, some errors may occur. To check your gcc version type:

```
$ gcc --version
```

3) Installation of g++, autoconf, automake and make packages:

```
$ sudo apt-get install g++ autoconf automake make
```

4) Installation of the graphical package openmotiff:

```
$ sudo apt-get install libmotif3 libmotif-dev
```

5) Installation of the libxt-dev package:

```
$ sudo apt-get install libxt-dev
```

6) Install x11proto-print-dev

```
$ sudo apt-get install x11proto-print-dev
```

7) Install libxpm-dev:

```
$ sudo apt-get install libxpm-dev
```

8) Install libXext-dev

```
$ sudo apt-get install libXext-dev
```

9) Install Patch

```
$ sudo apt-get install patch
```

10) Install xmkmf

```
$ sudo apt-get install xmkmf
```

11) Install libxmu-dev

```
$ sudo apt-get install libxmu-dev
```

12) Download the package libstdc++2.10-glibc2.2_2.95.4-24_i386.deb from:

<http://packages.ubuntu.com/dapper/i386/libstdc++2.10-glibc2.2/download>

Install package by double clicking it

Part 2 –MITSIMLab installation

1) Download the file MITSIMLab.tar.gz from <http://web.mit.edu/its/mitsimlab.html> to */home/"username"/*

2) Untar the downloaded file MITSIMLab.tar.gz and go to the new created folder MITSIMLab

```
$ tar zxvf MITSIMLab.tar.gz  
$ cd MITSIMLab/
```

You should see the following directories/files:

- /bin – which has two directories /ad and /linux (which contains the executables)
- GUI_libs.tar – the archive that contains the installation files
- pvmprofile
- .pvm_hosts (hidden file, to see it type \$ ls -la)
- /view – contains an example for application of MITSIMLab in /data/brunnsviken
- UserManual.pdf – the user manual for MITSIMLab and Road Network Editor (RNE)
- MITSIMLab_OSLicense_092005.pdf and OtherCopyrights.pdf

3) Untar the GUI_Libs.tar.gz and go to the new created folder GUI_Libs

```
$ tar zxvf GUI_Libs.tar.gz
$ cd GUI_Libs
```

- 4) For this step you need to run the installation script a root by typing “sudo” before the command. At the password prompt type in the root password when asked.

```
$ sudo -s
$ sudo -s ./Install
```

Part 3 – Configuring the system for MITSIMLab

- 1) Edit the file /etc/ld.so.conf

```
$ sudo gedit /etc/ld.so.conf
```

Add the line
/usr/local/lib
at the end of the file and exit the text editor.
Type:

```
$ ldconfig
```

And exit the user root:

```
$ exit
```

- 2) Set the XENVIRONMENT
This can be done by editing the .bashrc file in the directory of the user (**/home/username/**)

```
$ gedit .bashrc
```

Add the line that sets the environment
export XENVIRONMENT=~/MITSIMLab/bin/ad/xmitsim.ad
at the end of the file and exit the text editor.

Type to load the saved file:

```
$ source .bashrc
```

- 3) PVM facilitates communication between the packages MITSIMLab and TMS. After installing pvm, the pvm_hosts file in the /MITSIMLab directory needs to be edited. This can be done using a text editor:

```
$ gedit .pvm_hosts
```

The file will look something like:

```
# Configuration file used for starting PVM for SIMLAB programs  
localhost.localdomain ep=$SIMLAB_Linux wd=$SIMLAB_DAT
```

You need to add a line which says:

```
<computer name> ep=$SIMLAB_Linux wd=$SIMLAB_DAT  
(where computer name is for eg: bass.mit.edu)
```

- 4) Before running MITSIMLab you need to set the path to the directory in which the executables are present. This can be done by appending an appropriate command that directs the path to the location of the MITSIMLab executables present in /bin/Linux in the bashrc file. For example:

```
$ gedit .bashrc
```

Add the line

```
export PATH=$PATH:~/MITSIMLab/bin/Linux
```

Congratulations!! You are now ready to run MITSIMLab! Instructions on how to run the program and the needed input files can be found in the user manual.

Note: Do not forget to always check the defined paths of each input file of MITSIMLab. For the bruinsviken example in the installation package, the *master.mitsim* file should be configured as:

```
[Default Parameter Directory]    = "~/MITSIMLab/view/data/Common"  
[Input Directory]               = "~/MITSIMLab/view/data/brunnsviken"  
[Output Directory]              = "~/MITSIMLab/view/data/brunnsviken/Output"  
[Working Directory]             = "~/MITSIMLab/view/data/brunnsviken/Output"
```