

Installation instructions for MITSIMLab

This file describes the installation instructions for MITSIMLab. Commands that need to be typed at the console are prepended by a dollar sign (\$). For example if you need to type `cd bin`, it will be shown here as `$ cd bin`.

All files are present in the zipped file MITSIMLab. To install the entire folder you may need to be the root user.

- Go to the home directory of the user
\$ cd
- Copy the file onto the hard drive by
\$ cp <path of cdrom>/MITSIMLab.tar.gz .
For example in a Fedora system the command would be
`$ cp /media/cdrom/MITSIMLab.tar.gz .`
Note the space after `cp` and after `gz`
- Untar the file by
\$ tar zxvf MITSIMLab.tar.gz
- Change the directory to the newly created directory
\$cd MITSIMLab

You should see the following directories/files:

- 1) `bin` – which has two directories `ad` and `linux` (which contains the executables)
- 2) `GUI_libs.tar` – the archive that contains `GUI_Libs`. Installation instructions are presented below.
- 3) `pvmprofile`
- 4) `.pvm_hosts` (hidden file, to see it type `$ ls -la`)
- 5) `view` – contains an example in the `data/brunnsviken` directory with the input files to run MITSIMLab
- 6) `UserManual.pdf` – the user manual for MITSIMLab and Road Network Editor (RNE)
- 7) `MITSIMLab_OSLicense_092005.pdf` and `OtherCopyrights.pdf`

Note: The following instructions are for operation using `cshell(tcsh)`.

1. Prior requirements:

- In the initial installation of Linux install PVM, or install it using an RPM.
- MITSIMLab requires the graphics library GNOME. In the initial installation of Linux, choose GNOME among the options present for Graphics Library.

2. Preparation for installation:

- Install GUI Libraries present in the compressed tar archive `GUI_Libs.tar.gz`.
 - Unzip the archive
\$ tar zxvf GUI_Libs.tar.gz
 - Change directory to the newly created library `GUI_Libs`
\$ cd GUI_Libs
 - For this step you need to become root. Type in **su**. At the password prompt type in the root password and stay root for the next few steps
\$./Install

- Still as root edit the file /etc/ld.so.conf to add the line /usr/local/lib/ One of the ways to do this is
 - Using a text editor such as emacs
 - \$ **emacs /etc/ld.so.conf**
 - As the file opens add the line
 - /usr/local/lib**
- Closing the text editor, as root type
- At this stage you should be the user and not the root. To check this, type whoami and it should give the username (and not root)
- MITSIMLab requires *libstdc++-libc6.2-2.so.3* This can be obtained from websites such as rpmfind.net

3. At this stage you are ready to install MITSIMLab.

The XENVIRONMENT needs to be set. This can be done by editing the .cshrc file in the directory of the user and adding a line that sets the environment

\$ **emacs .cshrc**

Add the following line to the end of the file

setenv XENVIRONMENT ~/MITSIMLab/bin/ad/xmitsim.ad

4. The PVM needs to be installed for running smc. PVM facilitates communication between between the packages MITSIMLab and TMS.

- Download a version of PVM. Some versions are available at <http://netlib2.cs.utk.edu/pvm3/index.html>.
- Unzip/untar the file (Eg: tar zxvf pvm3.4.5.tgz). As root (using su and typing in the root password), type
 - \$ **up2date PVM**
 - \$ **exit**
- The pvm_hosts file needs to be edited. This can be done using a text editor such as emacs. For eg:
 - \$ **emacs .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)

5. Running PVM to be able to compile the .smc file

- Remove the existing PVM files by typing (You need to be root for this step)
 - \$ **rm -fr /tmp/pvm***
- Execute PVM by

- **\$ pvm ~/.pvm_hosts**
- Verify that host server has been added by
\$ conf
- Push PVM to the background by
\$ quit

6. 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 cshrc file. For example:

\$ emacs .cshrc

Add the line

setenv PATH "\$PATH":"\$HOME/MITSIMLab/bin/Linux"

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.