

Matlab Tool Flow How To

Install R2012b

- 1) OS Required/suggested: Ubuntu 14.04 LTS.
- 2) Ubuntu 14.04. Using Nautilus, click on R2012b_UNIX.iso and extract to "Installs/Matlab2012b".
- 3) Ubuntu 14.04. Open a terminal < ctrl + alt + T>. You will need to install the JRE (Java Runtime Environment) if you don't have it. Type *"sudo apt-get install openjdk-7-jre"* at the prompt and press enter.
- 4) Terminal: You will now need to backup file "libstdc++.so.6" and link to file "libstdc++.so.6.0.13". Type in *"cd ~/Installs/Matlab2012b/bin/glnxa64"* and press enter.
- 5) Terminal: Type *"sudo mv libstdc++.so.6 libstdc++.so.6_bu"* and enter. The file should now be backed up.
- 6) Terminal: Type *"sudo ln -s libstdc++.so.6.0.13 libstdc++.so.6"* and press enter. The file should now be linked.
- 7) Terminal: set the matlab environment variable to call java 7. Type *"export MATLAB_JAVA="/usr/lib/jvm/java-7-openjdk-amd64/jre"* and press enter. Type *"echo \$MATLAB_JAVA"* to make sure the new path is set.
- 8) Terminal: Make sure the java is executable. Type *"cd ~/Installs/Matlab2012b"* and press enter. Type *"chmod +x sys/java/jre/glnxa64/jre/bin/java"* and press enter.
- 9) Terminal: You will now need to invoke the installer. Type *"sudo ./install -javadoc /usr/lib/jvm/java-7-openjdk-amd64/jre"* at the prompt and press enter.
- 10) The MathWorks Installer GUI should pop up. Select "Install without using the Internet" and select "Next".
- 11) You will be requested to sign the "License Agreement" page. Click "Yes" and then click "Next".

- 12) You will be requested to fill in the file installation key for your license. Wesley New (SKA-SA Matlab Administrator) should of provided a license and file installation key. If not, make sure you get one from him. Type in the file installation key and press "Next". I choose to install my license file under "~/Matlab".
- 13) You will then be requested for the "Installation Type". Click on the "Typical" radio button and press "Next".
- 14) You will then need to specify the installation folder. I choose "/opt/Matlab/R2012b". Press "Next". If the folder does not exist then click "Yes" to create it.
- 15) You will then be required to confirm your installation settings. If happy then press "Install" else press "Back" and then return to this step when happy.
- 16) You will be informed that your installation may require additional configuration skips. This can be ignored. Click "Next".
- 17) You will be informed that the installation is complete. Make sure Activate Matlab is ticked and click "Next".
- 18) It is now time to Activate MathWorks Software. A "MathWorks Software Activation" window will pop up. Click on the "Activate manually without the internet" and press "Next".
- 19) Click on the "Enter the full path to your license file, including the file name:" and browse to the license file (*.lic) and click "Select". Then press "Next". If all goes well then you will receive a message that says "Activation is complete.". Click "Finish".
- 20) Open another terminal and navigate to the "opt" folder and remember to change user and group to your username with the following command: `sudo chown <username>:<username> Matlab -R`
- 21) Terminal: Navigate to the "home" folder and remember to change user and group to your username with the following command: `sudo chown <username>:<username> .matlab -R`
- 22) It will be a good idea to create an Matlab R2012b startup script file on your Desktop with the following lines:

1. `#!/bin/bash`
2. `cd /opt/Matlab/R2012b/bin/`
3. `./matlab`

NB: Make sure the file is executable and that the nautilus documentation navigator is set to run the script.

23) Run the script and the Matlab IDE will launch. You can now select the required Matlab m files (*.m) and continue.

24) In order to run Matlab with the Casper tools please look at the CASPER wiki page:

https://casper.berkeley.edu/wiki/MSSGE_Setup_with_Xilinx_14.x_and_Matlab_2012b

Install R2015b

- 1) OS Required/suggested: Ubuntu 14.04 LTS.
- 2) Ubuntu 14.04. Using Nautilus, click on "R2015b_glnxa64.iso" and extract to "Installs/Matlab2015b".
- 3) If steps 4) - 10) have been implemented previously then just open a terminal <ctrl + alt + T> and type "`cd ~/Installs/Matlab2015`" and enter. Then type "`sudo ./install`" and enter. Go to step 11). If steps 4)-10) have not been implemented then I suggest you try to execute this step first and if errors proceed with step 4)-10).
- 4) Ubuntu 14.04. Open a terminal < ctrl + alt + T>. You will need to install the JRE (Java Runtime Environment) if you don't have it. Type "`sudo apt-get install openjdk-7-jre`" at the prompt and press enter.
- 5) Terminal: You will now need to backup file "libstdc++.so.6" and link to file "libstdc++.so.6.0.17". Type in "`cd ~/Installs/Matlab2015b/bin/glnxa64`" and press enter.
- 6) Terminal: Type "`sudo mv libstdc++.so.6 libstdc++.so.6_bu`" and enter. The file should now be backed up.
- 7) Terminal: Type "`sudo ln -s libstdc++.so.6.0.17 libstdc++.so.6`" and press enter. The file should now be linked.

- 8) Terminal: set the matlab environment variable to call java 7. Type `export MATLAB_JAVA=/usr/lib/jvm/java-7-openjdk-amd64/jre` and press enter. Type `echo $MATLAB_JAVA` to make sure the new path is set.
- 9) Terminal: Make sure the java is executable. Type `cd ~/Installs/Matlab2015b` and press enter. Type `chmod +x sys/java/jre/glnxa64/jre/bin/java` and press enter.
- 10) Terminal: You will now need to invoke the installer. Type `sudo ./install -javadoc /usr/lib/jvm/java-7-openjdk-amd64/jre` at the prompt and press enter.
- 11) The MathWorks Installer GUI should pop up. Select "Use a File Installation Key" and select "Next".
- 12) You will be requested to sign the "License Agreement" page. Click "Yes" and then click "Next".
- 13) You will be requested to fill in the file installation key for your license. Wesley New (SKA-SA Matlab Administrator) should of provided a license and file installation key. If not, make sure you get one from him. Type in the file installation key and press "Next". I choose to install my license file under "`~/Matlab`".
- 14) You will then need to specify the installation folder. I choose "`/opt/Matlab/R2015b`". Press "Select" and then "Next".
- 15) You will then see a "Product Selection" window. Make sure that all products are ticked and select "Next".
- 16) You must then decide where you want the symbolic links to your Matlab scripts to be stored. I chose the default location "`/usr/local/bin`".
- 17) You will then be required to confirm your installation settings. If happy then press "Install" else press "Back" and then return to this step when happy.
- 18) You will be informed that your installation may require additional configuration skips. This can be ignored. Click "Next".
- 19) You will be informed that the installation is complete. Make sure Activate Matlab is ticked and click "Next".

- 20) It is now time to Activate MathWorks Software. A “MathWorks Software Activation” window will pop up. Click on the “Activate manually without the internet” and press “Next”.
- 21) Click on the “Enter the full path to your license file, including the file name:” and browse to the license file (*.lic) and click “Select”. Then press “Next”. If all goes well then you will receive a message that says “Activation is complete.”. Click “Finish”.
- 22) Open another terminal and navigate to the “opt” folder and remember to change user and group to your username with the following command: “*sudo chown <username>:<username> Matlab -R*”
- 23) Terminal: Navigate to the “home” folder and remember to change user and group to your username with the following command: “*sudo chown <username>:<username> .matlab -R*”
- 24) It will be a good idea to create an Matlab R2015b startup script file on your Desktop with the following lines:
 1. `#!/bin/bash`
 2. `cd /opt/Matlab/R2015b/bin/`
 3. `./matlab`

NB: Make sure the file is executable and that the nautilus documentation navigator is set to run the script.

- 25) Run the script and the Matlab IDE will launch. You can now select the required Matlab m files (*.m) and continue.
- 26) In order to run Matlab with the Casper tools please look at the CASPER wiki page:
https://casper.berkeley.edu/wiki/MSSGE_Setup_with_Xilinx_14.x_and_Matlab_2012b. NB: This may need to be updated when using R2015b (TBD).

Install R2016b

- 1) OS Required/suggested: Ubuntu 14.04 LTS.

- 2) Ubuntu 14.04. Using Nautilus, click on "R2016b_glnxa64_dvd1.iso" and extract to "Installs/Matlab2016b".
- 3) Ubuntu 14.04. Open a terminal < ctrl + alt + T > and type "cd ~/Installs" and then type "chmod +w Matlab2016b/ -R". This will give all the files in the Matlab2016b folder write access.
- 4) Ubuntu 14.04. Using Nautilus, click on "R2016b_glnxa64_dvd2.iso" and extract to "Installs/Matlab2016b".
- 5) Open a terminal <ctrl + alt + T> and type "cd ~/Installs/Matlab2016b/", then "*sudo ./install*" and enter.
- 6) The MathWorks Installer GUI should pop up. Select "Use a File Installation Key" and select "Next".
- 7) You will be requested to sign the "License Agreement" page. Click "Yes" and then click "Next".
- 8) You will be requested to fill in the file installation key for your license. Wesley New (SKA-SA Matlab Administrator) should of provided a license and file installation key. If not, make sure you get one from him. Type in the file installation key and press "Next". I choose to install my license file under "~/Matlab".
- 9) You will then need to specify the installation folder. I choose "/opt/Matlab/R2016b". Press "Select" and then "Next".
- 10) You will then see a "Product Selection" window. Make sure that all products are ticked and select "Next".
- 11) You must then decide where you want the symbolic links to your Matlab scripts to be stored. I chose the default location "/usr/local/bin".
- 12) You will then be required to confirm your installation settings. If happy then press "Install" else press "Back" and then return to this step when happy.
- 13) You will be informed that your installation may require additional configuration skips. This can be ignored. Click "Next".
- 14) You will be informed that the installation is complete. Make sure Activate Matlab is ticked and click "Next".

- 15) It is now time to Activate MathWorks Software. A “MathWorks Software Activation” window will pop up. Click on the “Activate manually without the internet” and press “Next”.
- 16) Click on the “Enter the full path to your license file, including the file name:” and browse to the license file (*.lic) and click “Select”. Then press “Next”. If all goes well then you will receive a message that says “Activation is complete.”. Click “Finish”.
- 17) Open another terminal and navigate to the “opt” folder and remember to change user and group to your username with the following command: “*sudo chown <username>:<username> Matlab -R*”
- 18) Terminal: Navigate to the “home” folder and remember to change user and group to your username with the following command: “*sudo chown <username>:<username> .matlab -R*”
- 19) It will be a good idea to create an Matlab R2016b startup script file on your Desktop with the following lines:
 1. `#!/bin/bash`
 2. `cd /opt/Matlab/R2016b/bin/`
 3. `./matlab`

NB: Make sure the file is executable and that the nautilus documentation navigator is set to run the script.

- 20) Run the script and the Matlab IDE will launch. You can now select the required Matlab m files (*.m) and continue.
- 21) In order to run Matlab with the Casper tools please look at the CASPER wiki page:
https://casper.berkeley.edu/wiki/MSSGE_Setup_with_Xilinx_14.x_and_Matlab_2012b. NB: This may need to be updated when using R2016b (TBD).