ISE Tool Flow How To

Install ISE 14.7

1) OS Required/suggested: Ubuntu 14.04 LTS. Xilinx now supports Ubuntu 14.04 LTS.
2) Click/double click on the “Xilinx_ISE_DS_Lin_14.7_1015_1.tar” file in the Ubuntu Nautilius document navigator and choose a folder to extract the files to. I use “home/Installs” in this document. If you use something different then remember to replace “Installs” with your directory name.
3) Ubuntu 14.04. Open a terminal < ctrl + alt + T>. Change directory to the following folder: “*cd Installs/Xilinx_ISE_DS_Lin_14.7_1015_*1”
4) Terminal: Type “sudo ./xsetup” and press enter. This application needs to be installed with root privileges otherwise the installation will not install properly. You will be prompted for the sudo password. Enter this and press enter.
5) The ISE 14.7 Installer GUI will pop up. Click “Next” to commence with the installation process.
6) Read the Accept License Agreements (1 of 2) page and when happy tick “I accept...” and “I also accept…” for both tick boxes. Then click “Next”.
7) Read the Accept License Agreements (2 of 2) page and when happy tick “I accept...” for the tick box. Then click “Next”.
8) Select the “ISE Design Suite System Edition” radio button and select “Next”.
9) You will then be required to select which tools you want to install with the ISE Design Suite Edition. I selected “Install Cable Drivers”. The rest of the boxes were ticked, so I have decided to install the complete set of tools available. Press “Next”.

10) Select where you want to install the Vivado tool set. I am using the default “opt/Xilinx” folder. I have also ticked the “Import tool preferences from previous version” buttons. This is not necessary though. Press “Next”.
11) A window with the “Installation Summary” will be displayed showing what tools will be installed and where they will be stored on your drive. If you are happy press “Install”, otherwise press “Back” and edit your previous settings.
12) Wait until the Xilinx Software Install window states that the “Install Completed” and select “Finish”.
13) 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> Xilinx -R*”
14) Terminal: Navigate to the “home” folder and remember to change user and group to your username with the following command: “*sudo chown <username>:<username> .Xilinx -R*”. NB: This step may not be necessary, but it will not cause an issue if you execute anyway.
15) It will be a good idea to create an ISE 14.7 startup script file on your Desktop with the following lines:
    1. #!/bin/bash
    2. ./opt/Xilinx/14.7/ISE_DS/settings64.sh
    3. ise

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

16) Run the script and the ISE IDE will launch. You can now select the required Xilinx ISE project file (*.xise) and continue.
17) It is now time to install the license for ISE. Create a “Xilinx” folder in your home directory using the nautilius documentation navigator: “home/<user name>/Xilinx” and copy the ISE license file provided by your administrator to this location.
18) Load the license using the Xilinx License Configuration Manager”. Click on “Help” -> “Manage License…”. Click “Load License”.

Navigate to the license file (*.lic) in the “home/<user name>/Xilinx” folder. Press “Open” and when the license installation was successful then press “OK”.

19) To confirm that the license file was successful, click on “Refresh” and make sure a list of Tools/IP is read back and that the license is still valid. Once this is done then close the “Xilinx License Configuration Manager” by clicking “Close”.

20) To install the USB driver please open up a terminal <ctrl+alt+T> and follow the instructions below:

Installing Cable Drivers

- install the prerequisite

install

```
On 32-bit
sudo apt-get install gitk git-gui libusb-dev build-essential libc6-dev fxload
On 64-bit
sudo apt-get install gitk git-gui libusb-dev build-essential libc6-dev-i386 fxload
```

- Download the driver source and install

download and install

```
cd /opt/Xilinx
sudo git clone git://git.zerfleddert.de/usb-driver

cd usb-driver/
On 32-bit
sudo make
On 64-bit
sudo make lib32
```

Setup up the driver

setup up

```
$ ./setup_pcusb /opt/Xilinx/13.2/ISE_DS/ISE/
Looking for USB cable files: /opt/Xilinx/14.2/ISE_DS/ISE/bin/lin
Copying firmware to /usr/share:
`/opt/Xilinx/14.2/ISE_DS/ISE/bin/lin/xusbdfwu.hex' -> `/usr/share/xusbdfwu.hex'
`/opt/Xilinx/14.2/ISE_DS/ISE/bin/lin/xusb_emb.hex' -> `/usr/share/xusb_emb.hex'
`/opt/Xilinx/14.2/ISE_DS/ISE/bin/lin/xusb_xlp.hex' -> `/usr/share/xusb_xlp.hex'
`/opt/Xilinx/14.2/ISE_DS/ISE/bin/lin/xusb_xp2.hex' -> `/usr/share/xusb_xp2.hex'
`/opt/Xilinx/14.2/ISE_DS/ISE/bin/lin/xusb_xpr.hex' -> `/usr/share/xusb_xpr.hex'
`/opt/Xilinx/14.2/ISE_DS/ISE/bin/lin/xusb_xse.hex' -> `/usr/share/xusb_xse.hex'
`/opt/Xilinx/14.2/ISE_DS/ISE/bin/lin/xusb_xup.hex' -> `/usr/share/xusb_xup.hex'
Installing udev rules:
done
```

21) It may be a good idea to power your PC/lap top down and then up again as the USB drivers may not take affect until this happens. In my case, I plugged a stick drive into the USB and then ejected that and connected the Xilinx Platform Cable USB module. Once this was done then the status LED illuminated and I was able to configure the FPGA via JTAG.