Cadence and Synopsys Setup Guide

I. Introduction

We will use Cadence and Synopsys design suits in this class for the homework, labs and project. This guide will walk you through the whole necessary setup process to get you to the software. Before setting up your computer, please make sure you already have a seasnet account. More details about seasnet account can be found in the following link:

https://www.seasnet.ucla.edu/seasnet-accounts/

II. Getting access to EEAPPS

Both Cadence and Synopsys are available on eeapps server. As you are enrolled into this course, your seasnet account is automatically activated on the EEAPPS server. Yet it can be only accessed through a computer on UCLA network. On UCLA network means either you are wire-connected to the UCLA network or you are connected to UCLA via VPN.

1. Connect to UCLA VPN

If you are using a computer in seaslab, you may skip this step and jump to the step 3, connect to the EEAPPs. If you decide to use the VPN, be aware that eeapps can not be accessed through L2TP VPN, and this is why using the windows built-in client is not recommended. If you are on a Windows VPN please the cisco client.

- a. Connect to UCLA VPN with windows built-in client (Not Recommended). https://help.bol.ucla.edu/kb_view.do?sysparm_article=kb0010938
- b. Connect to UCLA VPN with MacOS built-in client (Recommended). <u>https://help.bol.ucla.edu/kb_view.do?sysparm_article=kb0010927</u>
- c. Connect to UCLA VPN with Cisco AnyConnect (Recommended). MacOS: <u>https://help.bol.ucla.edu/kb_view.do?sysparm_article=kb0010924</u> Windows: <u>https://help.bol.ucla.edu/kb_view.do?sysparm_article=kb0010923</u>
- d. In case you want to do your work on Chrome OS or iPadOS. https://www.it.ucla.edu/bol/services/virtual-private-network-vpn-clients

2. Connect to the Remote Desktop

If you insist working through a L2TP VPN, you can connect to a remote desktop server, and connect to eeapps from the remote desktop. If you encounter issue such as remote desktop doesn't show up in the feed, just delete and add the feed again.

https://www.seasnet.ucla.edu/setting-up-remoteapps-and-remote-desktop/

3. Connect to the EEAPPs

- a. On Windows or Remote Desktop (Using Xming and Putty). <u>https://www.seasnet.ucla.edu/accessing-eeapps/</u>
- b. On Windows or Remote Desktop (Using MobaXterm) https://www.seasnet.ucla.edu/mobaxterm/
- c. On Unix Host <u>https://www.seasnet.ucla.edu/access-eeapps-unix/</u>
- d. More info about EEAPPs can be found in the following link <u>https://www.seasnet.ucla.edu/eeapps/</u>

III. Setup the Environment and CAD software

Now we will in the EEAPPS, and we will use some commend lines before we start the software. The dollar sign at the beginning of the line indicates this line is a commend.

1. Create a EE216 workspace

- a. Create a directory under your home directory
 - \$ cd ~

\$ mkdir ee216a

#ee216a is an arbitrary name for the demo purpose. It can be any name you choose but we will stick with it in this guide to make this demo easier.

b. Copy the setup file to your working space \$cp /w/class.1/ee/ee216a/ee216ata/fall19/tool-setup ~/ee216a
We tested this tool-setup script before the class, but we may update it during the class. You will be
informed if there is an update to this file. If so, just run this commend again to copy the updated too-setup
to your working directory

You only need to create this working space once during the whole class. It will stay there forever, and you want to keep your working space neat and organized. Be careful with your commend, you don't want to accidently overwrite or delete the work you have been working all quarter.

2. Run the setup script

\$ cd ~/ee216a
\$ csh
\$ source tool-setup
You will need to run these commend every time you log into the server.
Now you are good to go.

IV. Run the CAD software

- 1. Synopsys (Commend Line) \$ dc_shell-t &
- 2. Synopsys (GUI) \$ dc_shell-t -gui &
- 3. Cadence (GUI) \$ virtuoso &
- 4. ModelSim (GUI) \$ vsim &