

# **VNC Access Instructions**

How to use VNC to access the CSE EDA tools

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2018: Lena Peterson, Andreas Torstensson, Erik Börjeson

Chalmers University of Technology

# 1 Introduction

Starting in the fall of 2018 we will run all electronic-design automation (EDA) tools on a separate Linux server called `heffalump.ita.chalmers.se`. The computers in the two labs, 4220 and 4225, have been replaced and now only run Windows 10. These instructions assume that you are sitting at one of the lab computers. In case you are trying to access `heffalump` from another computer, the exact steps may be a bit different.

VNC stands for virtual network computing and is a platform-independent tool for screen sharing. You will run the entire EDA tools on `heffalump`; the only thing that will happen on the PC you are sitting at in the lab is that screen output is shown there and when you use the keyboard or mouse, these interactions will be forwarded to `heffalump`.

In VNC nomenclature, the client software is run on your lab PC while the server software is run on `heffalump`. The client is allowed to control the server by transmitting keyboard and mouse input, while the server sends rectangles from its frame buffer (i.e. the graphics) back to the client.

VNC uses a special TCP port for setting up the control and for the transmission of graphics and commands. The default (which we also use) is port  $5900 + N$ , where  $N$  is a unique number assigned to each user. If you have previously taken courses using the `heffalump` server, you should already have this number and a VNC password. **If you haven't been assigned a user number and a password, you will need to contact the teacher responsible for the course.**

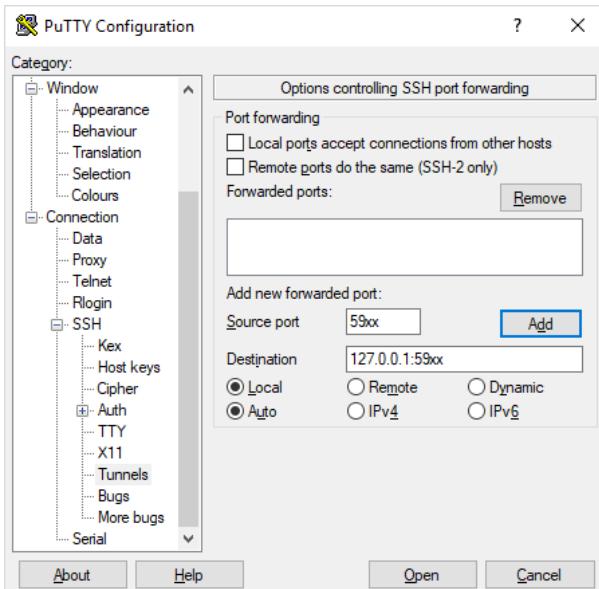
The instructions below assume that you have this information.

## 2 Connecting to the `heffalump` server

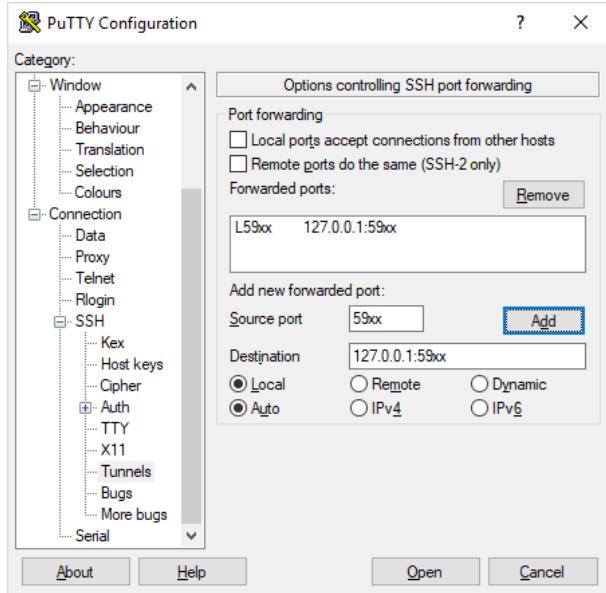
Log into the PC in the lab with your CID and usual password.

Start the PuTTY application on the PC, which will open the PuTTY configuration window.

Go to **Connection → SSH → Tunnels**, which will open the window shown below.



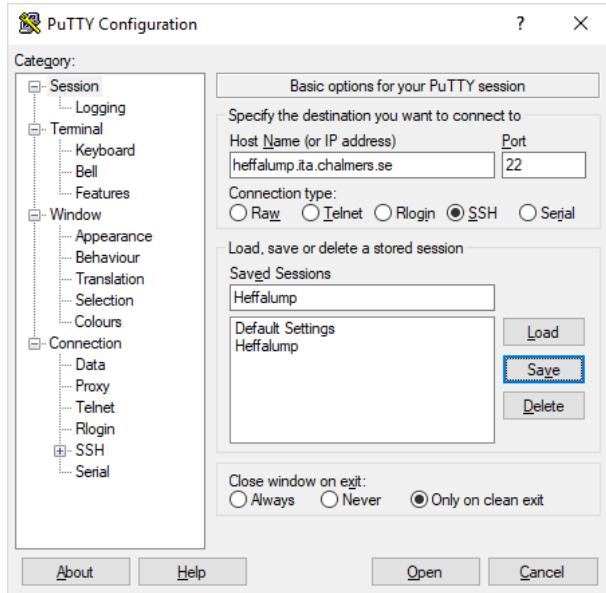
Fill in the "Source port" and "Destination" fields using your designated port (59xx in the above figure) and press **Add**. The window should now look like shown below.



Return to the "Session" category in the left window pane; it is at the top so you may have to scroll up.

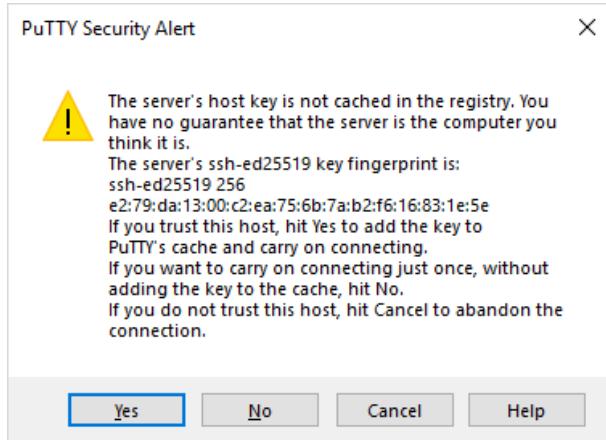
Add destination host name as shown below, give the session a name (here we called it Hef-falump) and save it by pressing the **Save** button.

Saving the session will allow you to load it again as long as you use the same computer.



Connect to the server by pressing the **Open** button.

Accept the server's host key in the pop-up window that appears by pressing the **Yes** button.



A login window from heffalump appears next.

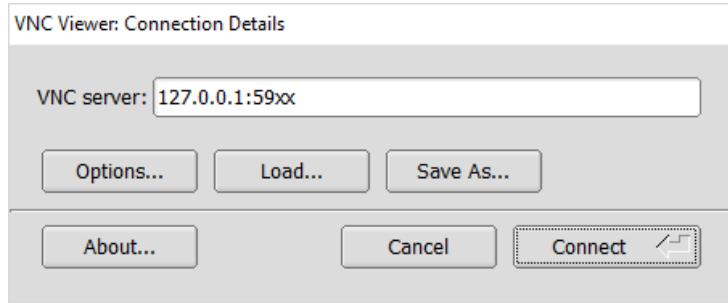
Input your CID to login, use your CID password when prompted.

Leave this window open until you are done using VNC, it maintains your connection to the server. If you accidentally close this window you will have to reopen PuTTY, load or reenter your settings and then open the connection again. Note that you do not have to worry much if this happens while you use any EDA tools, since the EDA tools will not shut down due to loss of the VNC connection.

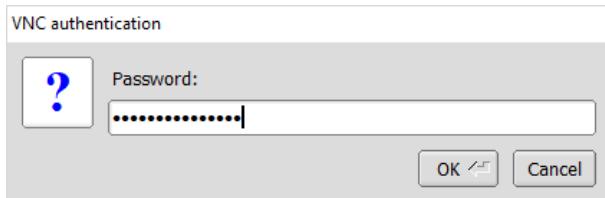


In Windows, start the "TigerVNC Viewer" application.

In "TigerVNC Viewer", input the tunnel destination from PuTTY as shown below, using your designated port, and press **Connect**.



Input your VNC password in the password prompt shown next. (This is the only place where the VNC password is used, other places use the CID password).



You should now arrive at a login screen, It should show your name as well as your CID. Use your CID password to log in.



When logged in you should now see the Linux desktop, where you can access the Terminal and other applications. If you close this window you will have to repeat the steps starting with launching the "TigerVNC Viewer" application.

The window can be resized if you want it larger or smaller. If the resolution does not automatically update when you resize the window, try opening **System → Preferences → Display** in the top bar. If the resolution is not adjusted automatically, select an appropriate value (e.g.  $1920 \times 1137$  when maximized) and click **Apply**.

A menu for the VNC client can be opened by pressing the **F8** key, where options such as full-screen mode can be selected.