GEN BUS 760: Virtual Machine Setup — *Fall 2021*

Make sure you are signed in with your @wisc.edu ID for Google Drive to download from the links below. For each of the links, click on "Download" in the top right of the window that opens.

1. Download and Install VirtualBox 6.1.26

- [Windows](#)

- [OS X](#)

- [Ubuntu 19.10+](#)

2. Download and Install [Virtualbox 6.1.26 Extensions](#)

2. [Download the VM](#) (5.81 GB)

3. Import the VM

    i.   Start VirtualBox. Go to File -> Import Appliance

    ii.   Ensure that *Source* is *Local File System*, and select the .ova file you downloaded as the *File*.

    iii.   Click on *Continue,* then click on *Import*.

4. Configure the VM

You can configure the amount of RAM, video memory, and CPUs your VM uses based on how it seems to be performing as you work on it. You can change these at any time (though changes can be made only while the VM is in a shut-down state).

    i.   Select the VM in the left pane of VirtualBox, right-click on it and click on *Settings.*

    ii.   *System->Motherboard*: Adjust the RAM you would like the VM to use (I give it half of my laptop's 16GB RAM, but more/less is fine too).

    iii.   *System->Processor:* Adjust the number of CPUs you would like the VM to use (I give it half of my laptop's 4 cores, but more/less is fine too).

    iv.   *Display->Screen:* Adjust the video RAM you would like the VM to use (I give it 64MB).

    v.   Click on *OK* once you are done configuring the machine.

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5. Start, log into, and test the VM

    i.   Select the VM in the left pane of VirtualBox, double-click on it to start it.

    ii.   Login with the password "gb760".

    iii. Click on the "Show Applications" button at the bottom right of the screen, type in "terminal" in the search bar and select the Terminal application (or press Enter).

    iv. Type in "ping www.google.com" in the command line that opens up, you should see output of the form "64 bytes from…".

6. Change the VM resolution

    i.   Start the Settings application from the "Show Applications" button as in step 5.

    ii.   Select the "Display" button in the left pane.

    iii. Set the resolution to something reasonably large (I use 1920x1440).

    iv. Set the scaling to 200% or larger, click on Apply.

7. Create an SSH key, add it to your Github account

Useful note: You can copy and paste to/from your host machine (i.e. your laptop) and your VM.

    i.   Open the Terminal application as you did in step 5.

    ii.   Create an SSH key by typing in `ssh-keygen -t ed25519 -C` "your_email@wisc.edu" (make sure the quotes contains your wisc.edu email ID).

    iii. When you are prompted to "Enter a file in which to save the key", press Enter to use the default file location (/home/gb760/.ssh/id_ed25519.pub). When prompted to enter a passphrase, leave it blank (twice) and press enter.

    iv. Print out the SSH public key with the command: `cat ~/.ssh/id_ed25519.pub`, copy this key to the clipboard by selecting it, then right-click -> Copy.

    v.   Go to the [Github SSH settings page](#) (you will need to login) and click on New SSH Key.

    vi. Set the Title as "GENBUS760" and paste the key you copied earlier into the Key box.

    vii. Click on Add SSH Key.

Test whether you added your SSH key correctly with the following command (to be run in a Terminal): `ssh -T git@github.com` (type in yes if prompted to continue connecting).

The output of this command should be "Hi [your GitHub username]! You've successfully authenticated, but Github does not provide shell access".

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