**Title: How to SSH without a password**

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**OS: Ubuntu 16.10**

**Intro:**

In the last document on how to ping two different vms I was able to setup and configure two Virtual-Box vms to ping one another. So, go to that document first and learn how to setup the two machines. We will need that configuration to continue. Once completed come back here, if you have trouble finding the other document then feel free to email me or get in contact with me. The title should be “How to ping

**Part 1:**

* If you want to be able to ssh into the other machine, then do the following:
  + *apt-get install openssh-client*
  + *service ssh restart*
* You will need to be root in order to do the following:
  + *nano /etc/ssh/ssh\_config*
  + Un-comment the port number 22 and protocol 2 about 35 lines down the file.
  + service ssh restart
* Do not be root for any of the following steps unless specified.
  + If you have the same names as before, let’s be on the master1 machine in the /home directory.
  + Type the following:
    - *mkdir ~/.ssh*
    - *chmod 700 ~/.ssh*
    - *cd ~/.ssh*
    - *ssh-keygen -t rsa -C “your email”*
  + Now there should be an id\_rsa and a id\_rsa.pub in this directory. The id\_rsa is your private key and the other one is the public key. The known\_host file is what keeps track of all the ssh connections that you made before.

**Part2:**

Now let’s move the file over to the other machine.

* + *scp -p id\_rsa.pub* [*master2@10.0.0.20*](mailto:master2@10.0.0.20)*:*
  + Don’t forget the colon after the command.
  + If you get an error, try service ssh restart. Now if that doesn’t work you can run */etc/init.d/ssh restart*, *ssh* [*master2@10.0.0.20*](mailto:master2@10.0.0.20) *-p port #*, or run the ssh debug by *ssh -vvv* [master2@10.0.0.20](mailto:master2@10.0.0.20).
* Let’s ssh into our other machine.
  + *ssh* [*master2@10.0.0.20*](mailto:master2@10.0.0.20)
  + *cd /home*
  + mkdir ~/.ssh
  + *chmod 700 ~/.ssh*
  + *cat id\_rsa.pub >> ~/.ssh/authorized\_keys*
  + *chmod 600 ~/.ssh/authorized\_keys*
  + *mv id\_rsa.pub ~/.ssh*
  + *exit*
* Now we are back onto our master1 machine.
  + Remove the public key “id\_rsa.pub” on the master1 machine.
  + Log back into the second machine again, “master2”.
  + *ssh* [*master2@10.0.0.20*](mailto:master2@10.0.0.20)
* Now we have to become root just for this one purpose.
  + nano /etc/ssh/sshd\_config
  + We are going to edit the following lines to:
    - PermitRootLogin no
    - PasswordAuthentication no
    - UsePAM no
  + */etc/init.d/ssh restar*t
  + *exit*

**Part 4:**

This part is extra and I’m including it just because it goes with the topic. If you want to be able to connect to your virtual box via from your host computer, the one that is used to create the virtual machines or use the virtual machines.

* Go into the master1 vm Settings->Network->Adapter 3.
* Click on “Enable Network Adapter”
* Go to Attached to, and scroll down to “Bridged Adapter”.
* Start the machine.
* *ifconfig*
* Before you had lo, enp0s8, and enp0s3. You should now have enp0s9 and right under it you should have an IP address close to the one of the host computer IPV4 address.
* Startup putty, type in the vm enp0s9 address and log in like normal.

**Other:**

Now when you log out and ssh back into the machine again it should not prompt a password for the connection. This can also be done for the opposite way as well, but if you get lost anywhere here is the original url of where I found most of these instructions: <https://www.howtoforge.com/set-up-ssh-with-public-key-authentication-debian-etch> . There are plenty of different options for the type of keys that you can use, rsa is just one of them.

If you are getting stuck, then google is your friend and the -vvv option for ssh is going to help is some aspects. Another thing to keep an eye out for is the permissions, remember 700 for the .ssh, 600 for authorized\_keys and 400 for the public and private keys. Remember if you’re getting stuck or can’t find the document then please feel free to get in touch with me.