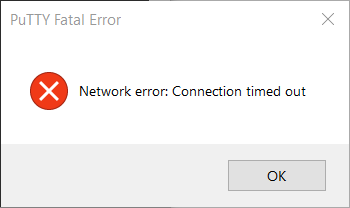
# Access Linux Server Remotely Using SSH - Putty | Windows CMD | GitBash | MobaXterm

* Putty is a free and open source terminal
* It is widely used for remote access to servers via ssh
* Issues when trying to establish ssh connection to the vm via nat network
* 
* This can happen because your VM is using NAT networking (which is typical with the 10.0.2.x address in VirtualBox), you usually need to set up port forwarding in the VM settings so that SSH requests from your host machine are forwarded to port 2222 on the VM.
* The set the settings like this

**Open VirtualBox Settings**

1. **Shut down** your VM (if it’s running).
2. In the **VirtualBox Manager**, select your VM and click **Settings**.

**2. Go to Network Settings**

1. Click the **Network** tab.
2. Ensure the **Adapter** is attached to **NAT**.
3. Click the **Advanced** drop-down to reveal more settings.
4. Click the **Port Forwarding** button.

**3. Add a Port Forwarding Rule**

1. In the **Port Forwarding** window, click the **+** icon to add a new rule.
2. Fill in the details, for example:
   * **Name:** SSH
   * **Protocol:** TCP
   * **Host IP:** (Leave blank or set to 127.0.0.1—either works; if you specify 127.0.0.1, you must connect via 127.0.0.1 on the host)
   * **Host Port:** 2222 (or any unused port on your host machine)
   * **Guest IP:** (Leave blank or set to the VM’s NAT IP, e.g., 10.0.2.15. Leaving it blank often works fine, but you can specify 10.0.2.15 if you prefer.)
   * **Guest Port:** 2222

The important part is that the **Guest Port** is 2222 because your VM is listening for SSH on port 2222.

**Start the VM and Connect via SSH**

1. Boot up the VM again.
2. From your **host machine**, open PuTTY (or another SSH client).
3. **Connect to** 127.0.0.1 (or your host IP if you left Host IP blank) **on port** 2222.
   * In PuTTY, that means:
     + **Host Name (or IP address):** 127.0.0.1
     + **Port:** 2222
4. Click **Open** and log in with your VM’s credentials.

**Example: Using PuTTY with the Forwarded Port**

1. **Session → Host Name:** 127.0.0.1
2. **Session → Port:** 2222
3. **Connection Type:** SSH
4. Click **Open**.
5. Login using your user name (You can know your login or username using whoami command)

* **To connect to ssh via cmd line or git bash**
* Command - ssh root@ip\_addr