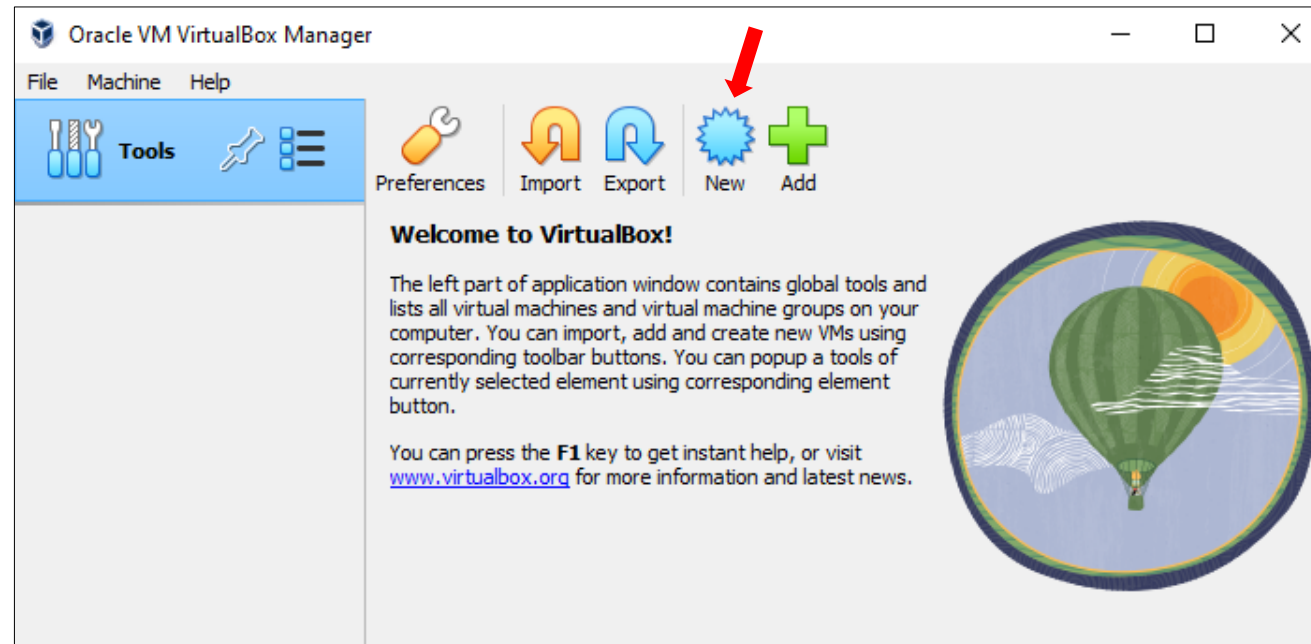


Installation

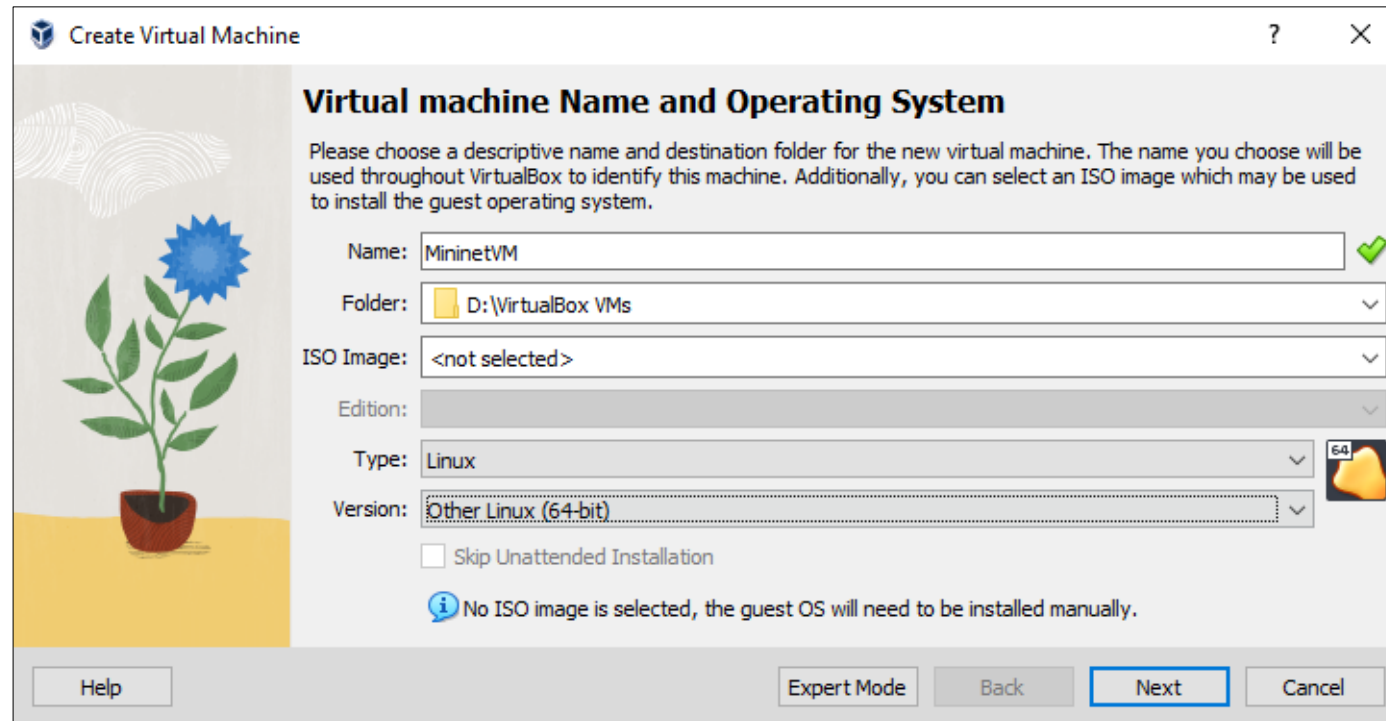
Installation Guide

1. Download VirtualBox and install it on your computer.
2. Download *MininetVM.rar* (the link is on LMS) and extract it.
3. Launch the VirtualBox software.
4. Press *New*.



Installation Guide

5. Set the 'name' to *MininetVM*.
6. Set the 'type' to *Linux*.
7. Choose 'version' *Other Linux 64-bit*.
8. Press *Next*.



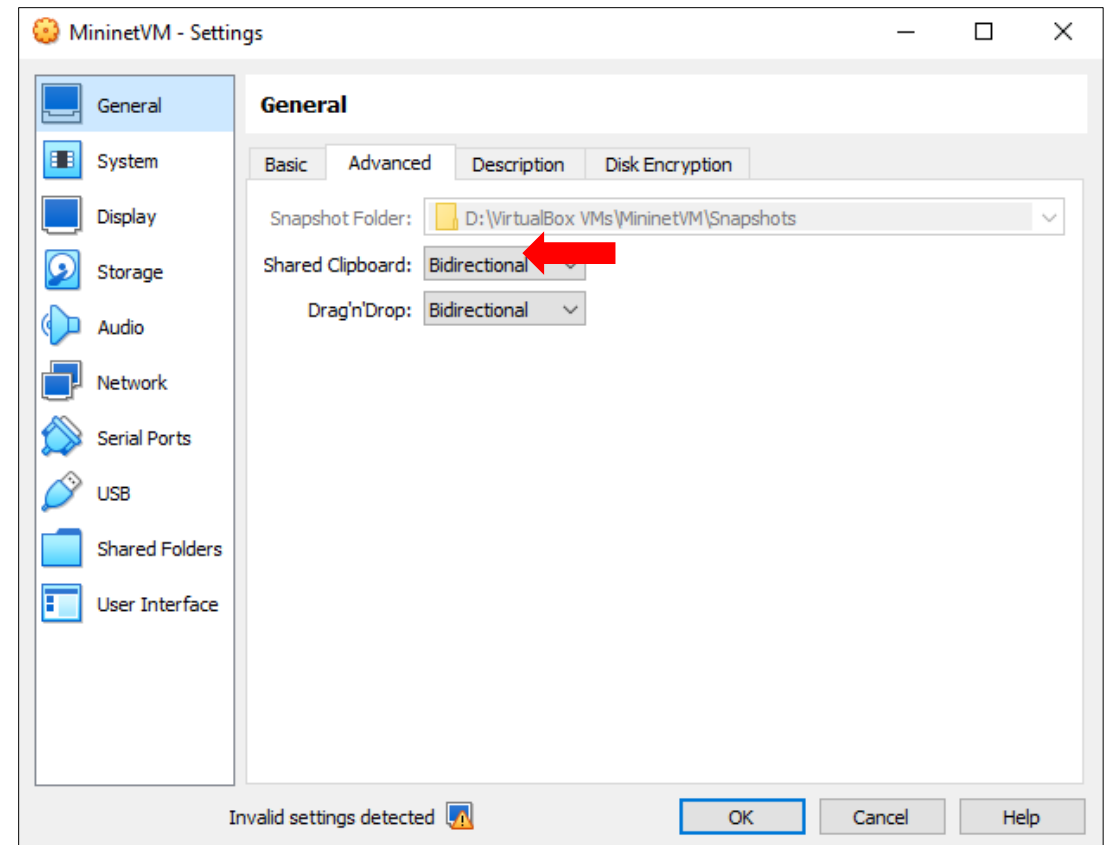
Installation Guide

9. Assign 1024 MB of RAM and press *Next*.
10. Choose 'use an existing virtual hard disk file'.
11. Press the directory icon.
12. Press *Add* and pick the uncompressed file *MininetVM.vdi*.
13. Press *Choose*.
14. Start the MininetVM (password: mininet).

Shared clipboard

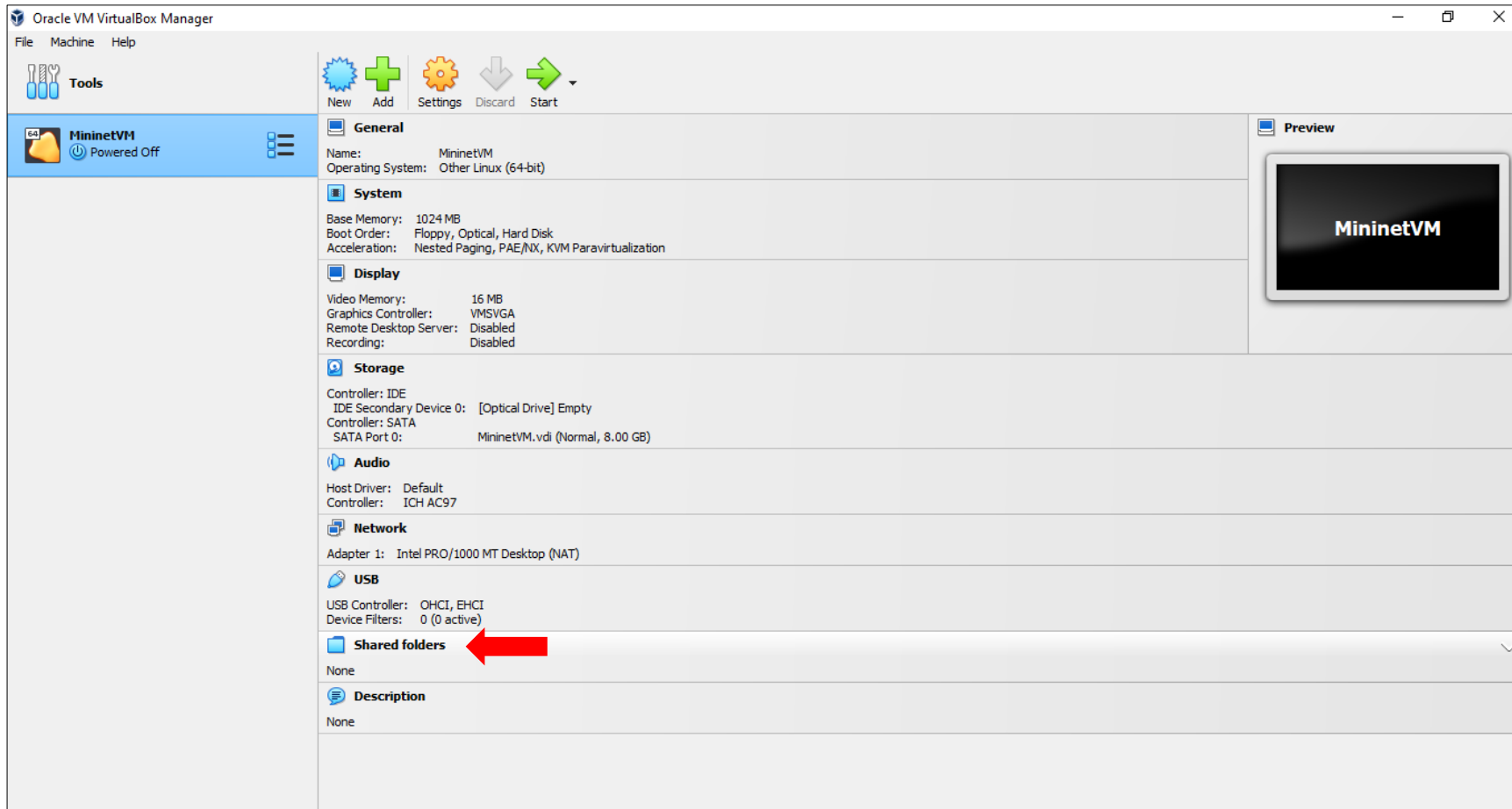
- Go to the machine settings in General -> *Advanced* and set the shared clipboard to *Bidirectional*.

- Paste to ^{editor}Leafpad:
 - **ctrl + V**
- Paste to Terminal:
 - **ctrl + shift + V**



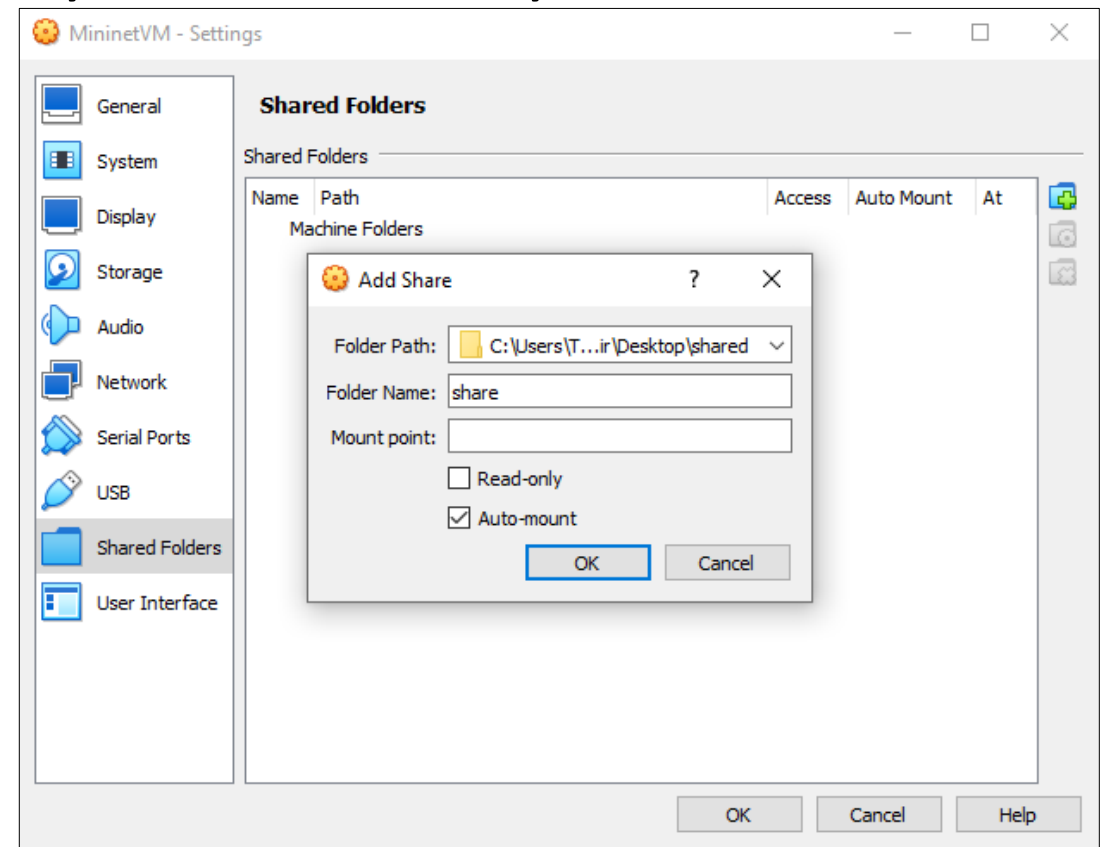
Shared folder (mount a folder from windows in lubuntu)

- Power off the MininetVM, then in VirtualBox click on *Shared folders*.



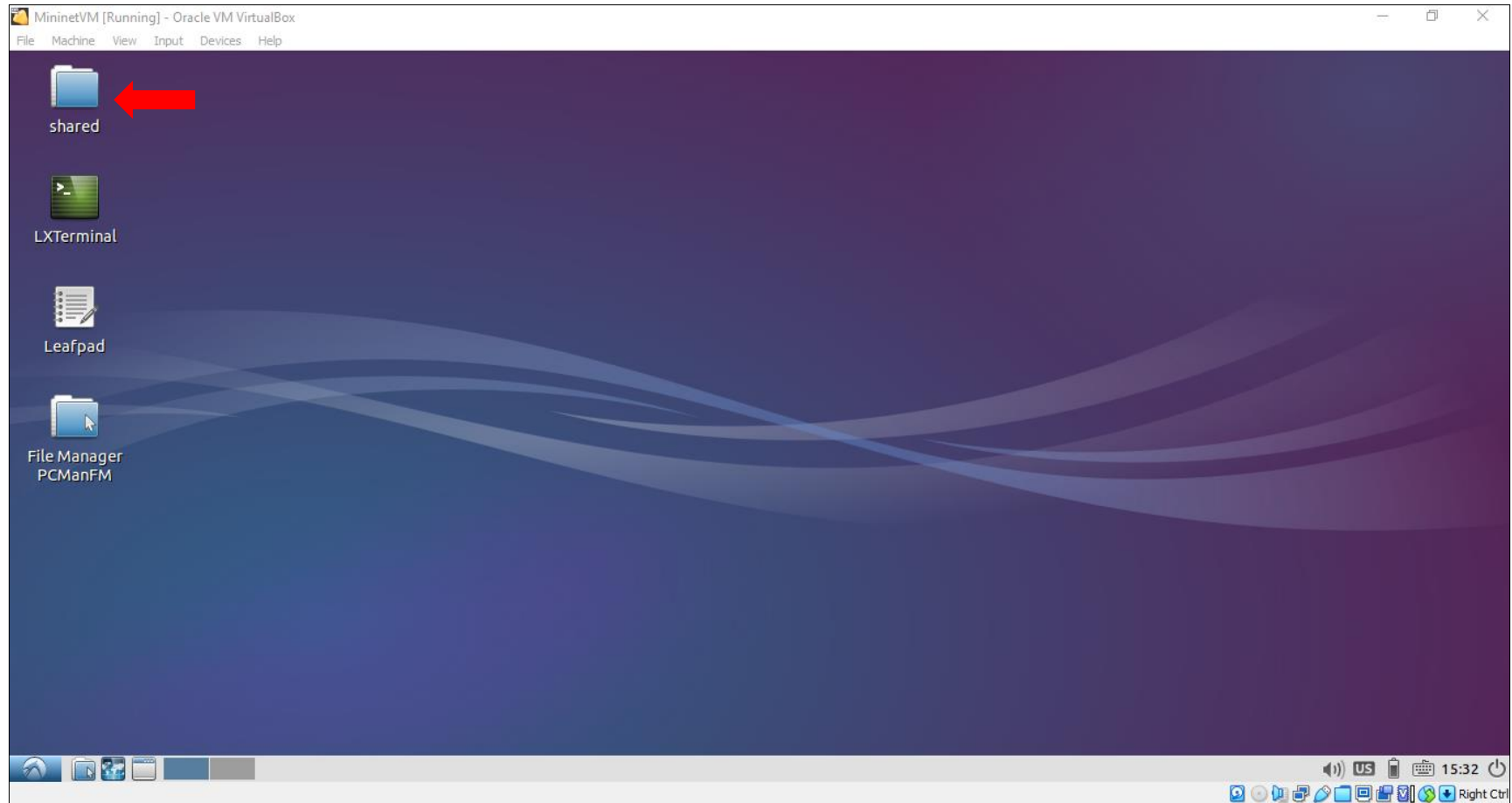
Shared folder

- Press Add (the plus button).
- Point the 'Folder Path' to a folder of your choice on your host machine.
- In the 'Name' field, write *share*.
- Check the box *Auto-mount*.
- Press *OK* and again *OK*.
- Start the MininetVM.



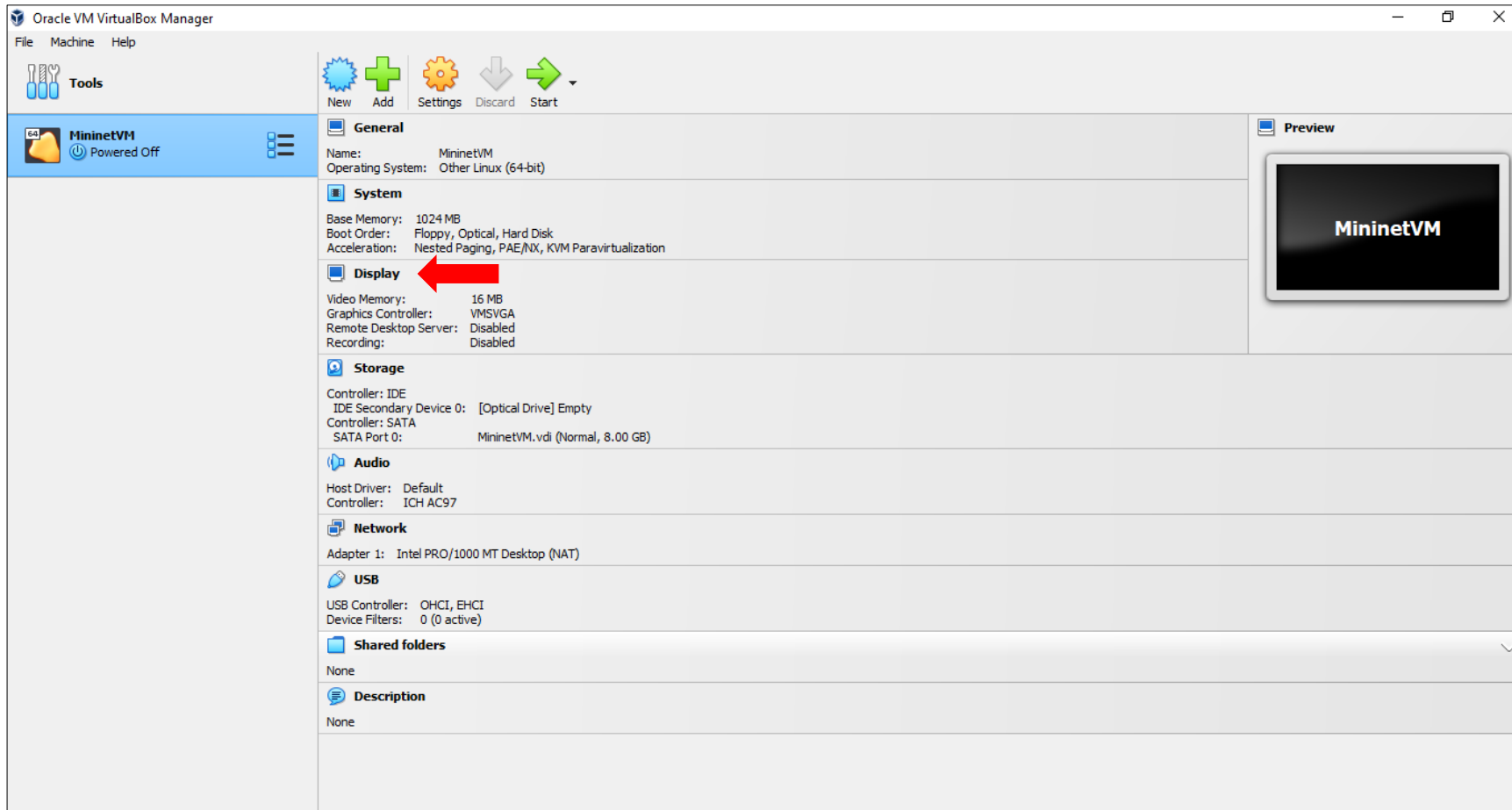
Shared folder

- Open *shared* folder on desktop.



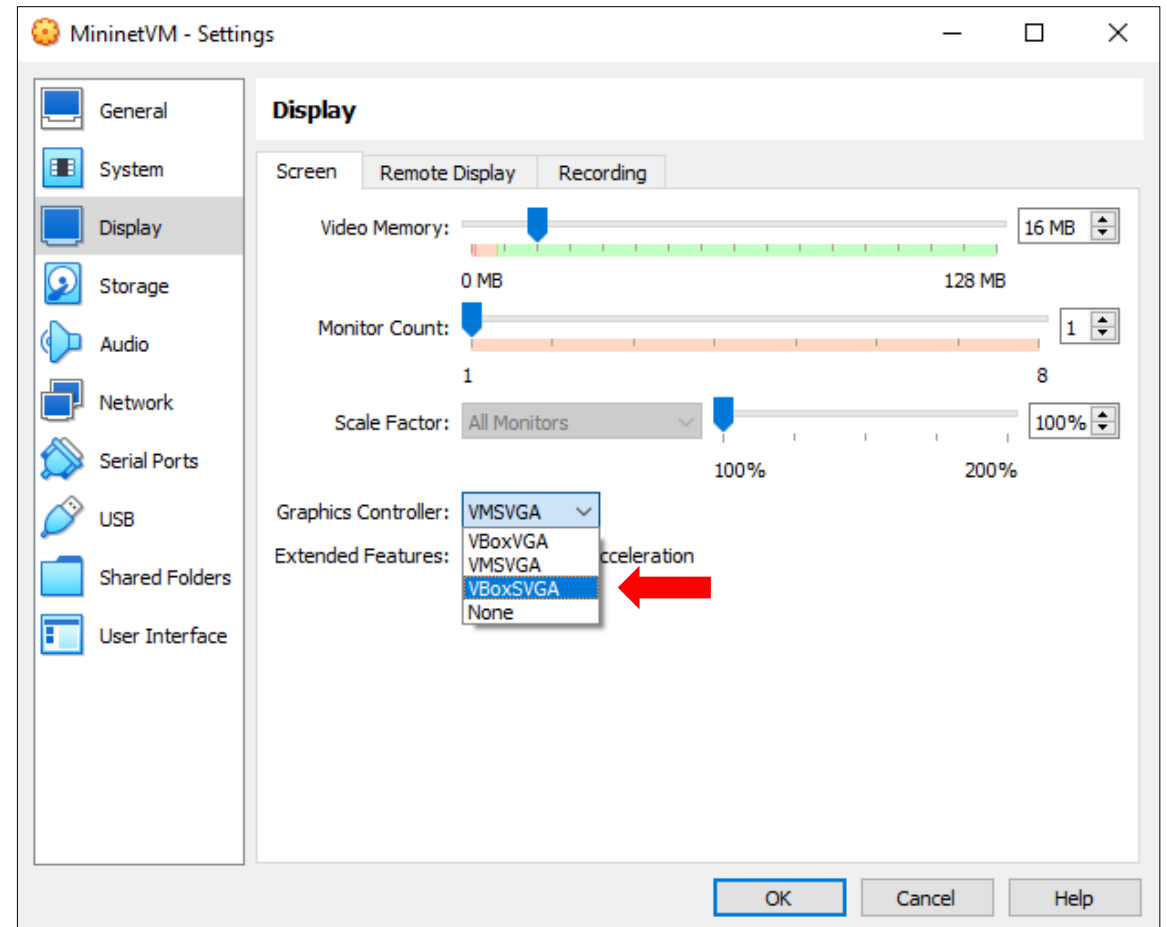
Full Screen

- Power off the MininetVM, then in VirtualBox click on *Display*.



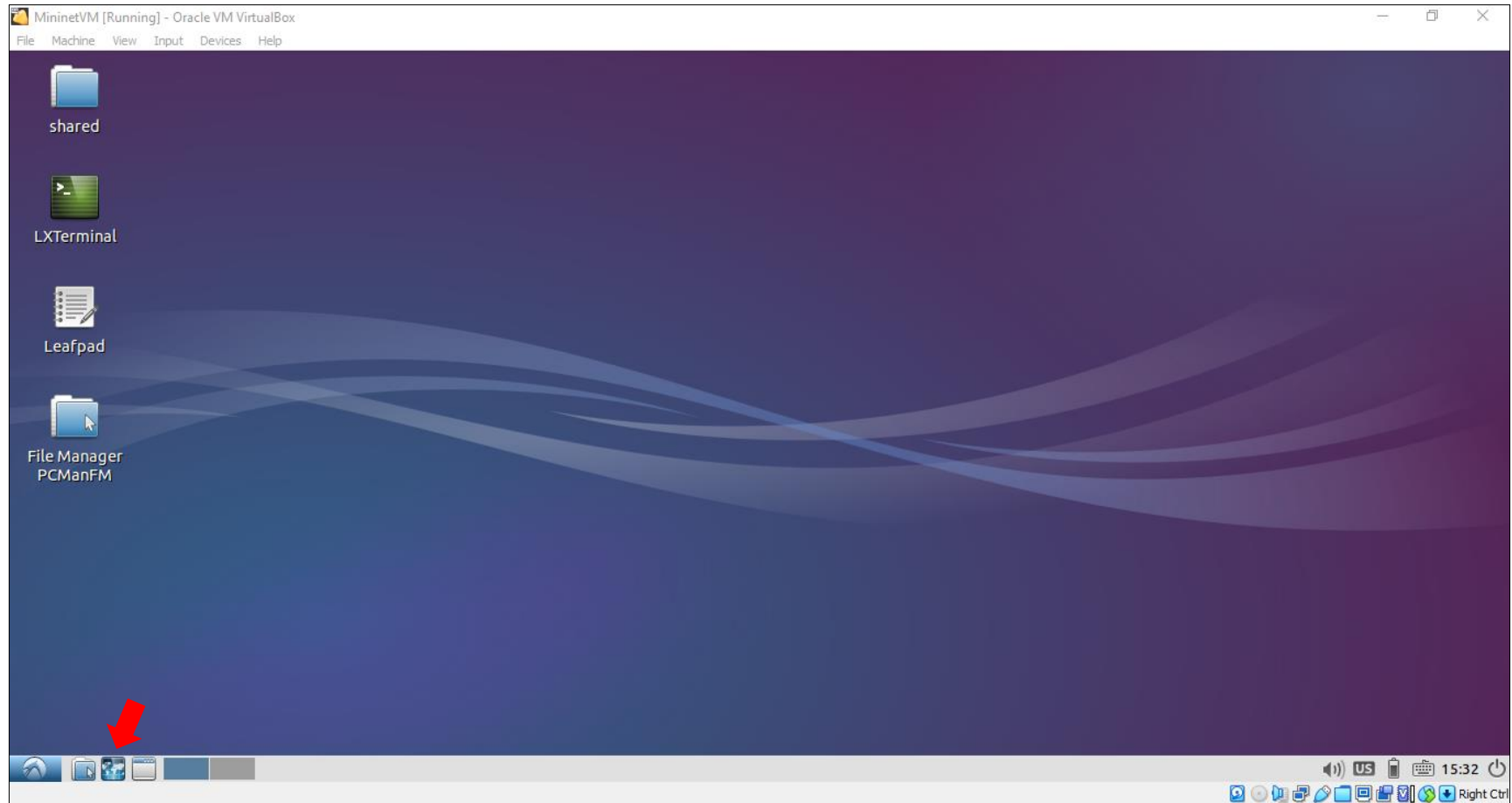
Full Screen

- Set the 'graphics controller' to *VBoxSVGA*.
- Press *OK*.
- Start the MininetVM.
- Click on the maximize button of the MininetVM window.



Internet Connectivity

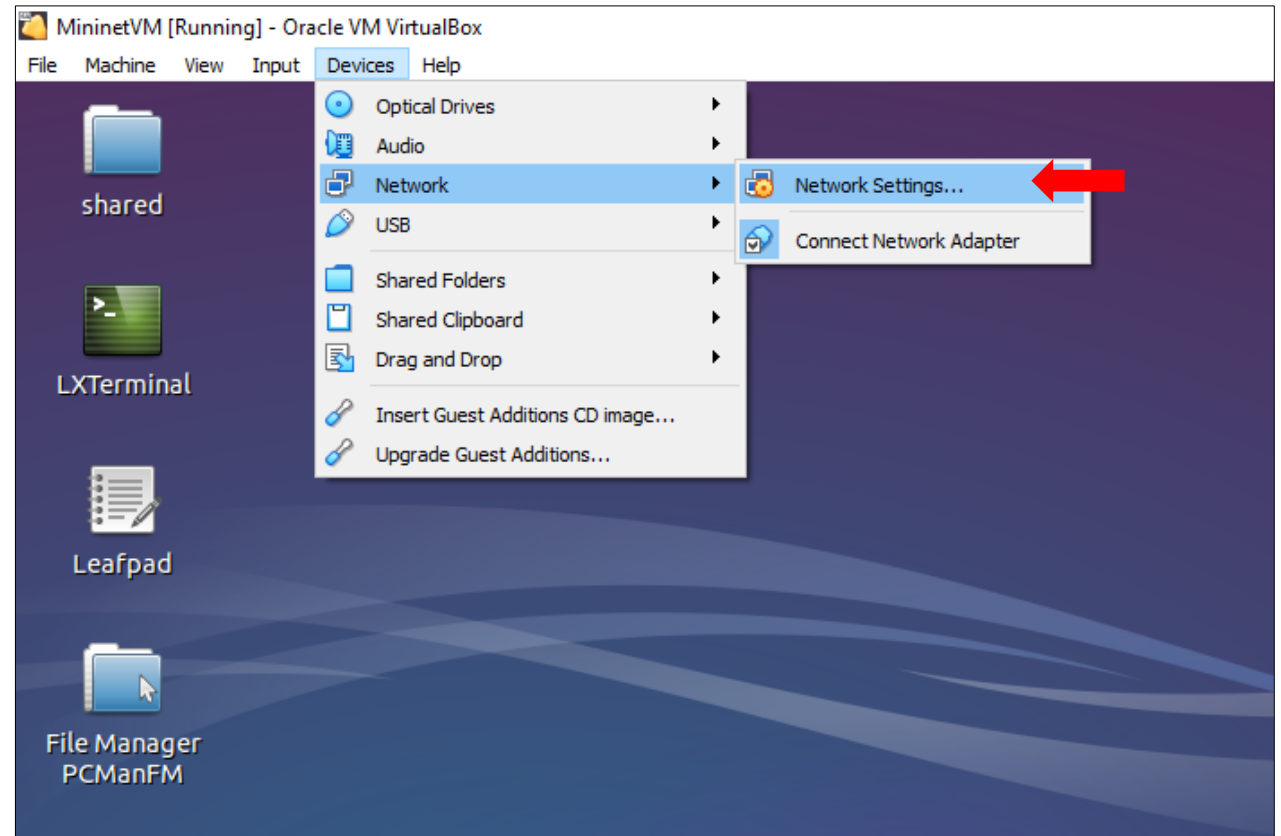
- The icon of the web browser is on the bottom left corner.



Connection Problem

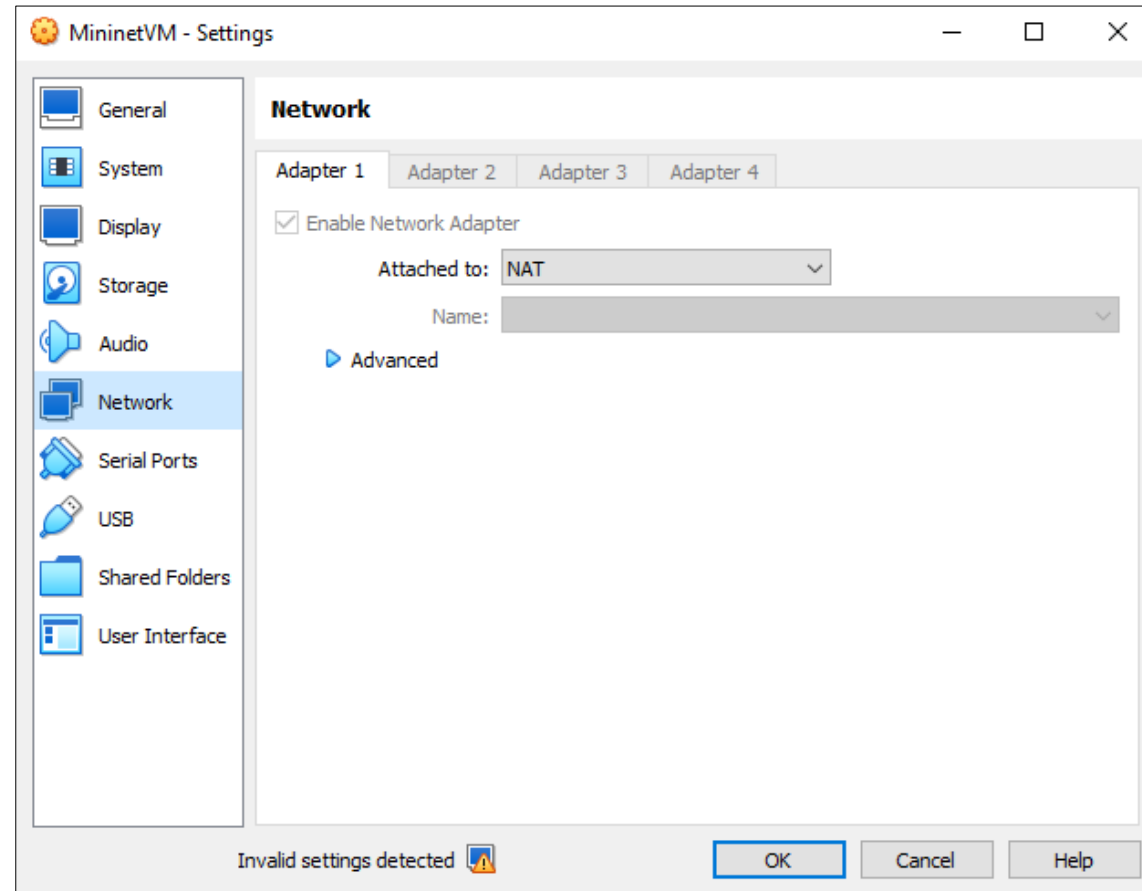
- If there is a problem with internet connectivity, first check the network adapter.

1. Go to Devices ->
Network ->
Network Settings...



Connection Problem

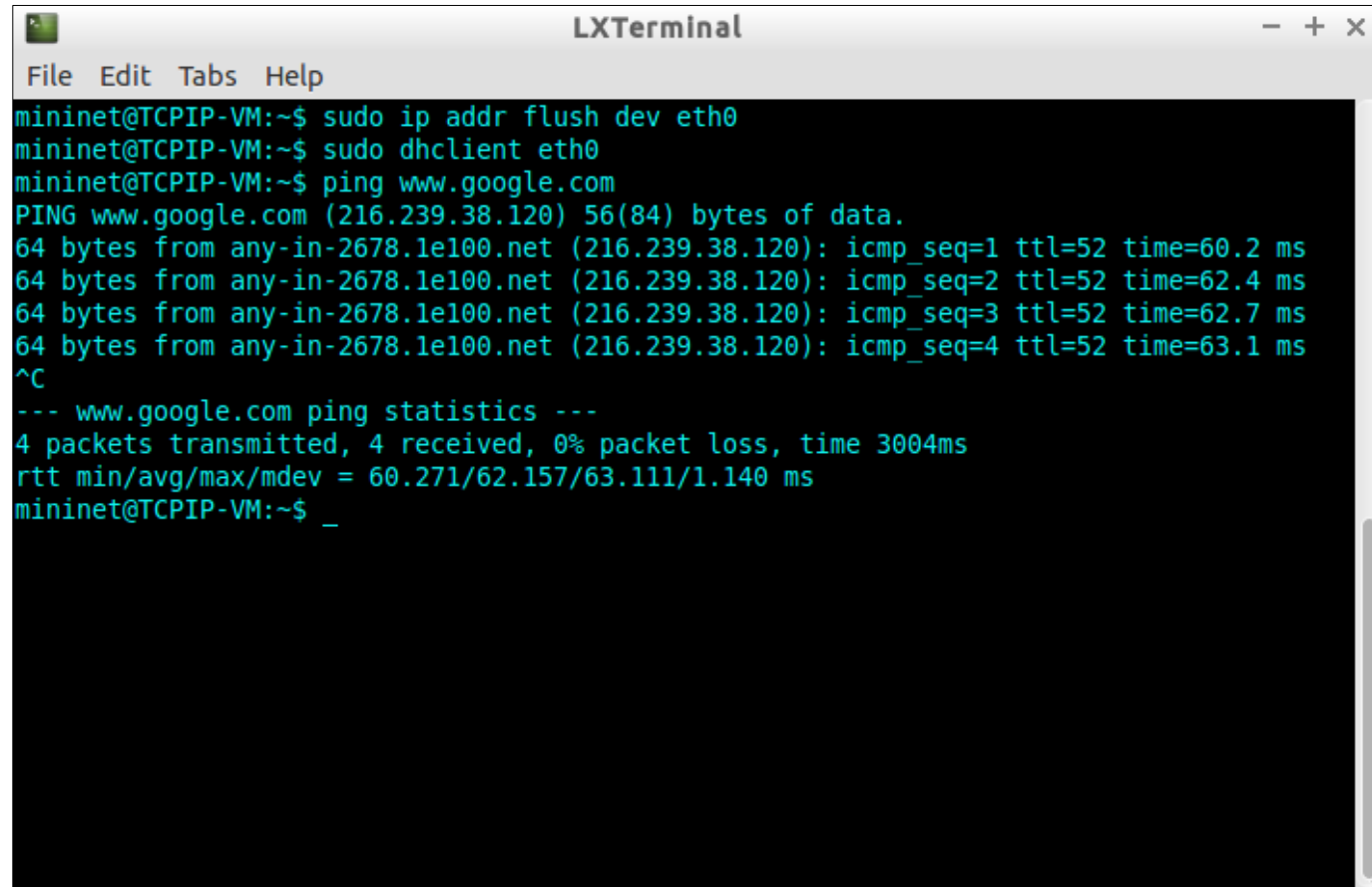
2. Make sure that the network adapter is set to *NAT*.



Connection Problem

3. Open the LXTerminal on desktop and use these commands:

- `$ sudo mn -c`
- `$ sudo ip addr flush dev eth0`
- `$ sudo dhclient eth0`
- `$ ping www.google.com`



```
LXTerminal
File Edit Tabs Help
mininet@TCPIP-VM:~$ sudo ip addr flush dev eth0
mininet@TCPIP-VM:~$ sudo dhclient eth0
mininet@TCPIP-VM:~$ ping www.google.com
PING www.google.com (216.239.38.120) 56(84) bytes of data.
64 bytes from any-in-2678.1e100.net (216.239.38.120): icmp_seq=1 ttl=52 time=60.2 ms
64 bytes from any-in-2678.1e100.net (216.239.38.120): icmp_seq=2 ttl=52 time=62.4 ms
64 bytes from any-in-2678.1e100.net (216.239.38.120): icmp_seq=3 ttl=52 time=62.7 ms
64 bytes from any-in-2678.1e100.net (216.239.38.120): icmp_seq=4 ttl=52 time=63.1 ms
^C
--- www.google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3004ms
rtt min/avg/max/mdev = 60.271/62.157/63.111/1.140 ms
mininet@TCPIP-VM:~$ _
```

Close MininetVM

faster and less time to boot

- No need to power off the virtual machine. **Save the machine state.**

