

How to Configure Serial Ports on VMWare Fusion 8

Since the VMWare Fusion software for MACs does not provide a UI for configuring serial ports to use named pipes, we have to modify the VM configuration files (tutor.vmx and tutor-vserver.vmx) to achieve this. The following are the details:

1. Adding the serial ports to the VMs using the UI

- i) Double click on the **VMWare Fusion** icon
- ii) Select the **tutor-server** VM. If the VM is running, shut down the VM by selecting **Virtual Machine/Shut down** at the menu bar.
- iii) Select **Virtual Machine/Settings** and click **Add Device**.
- iv) Select **Serial Port** and hit **Add**.
- v) Enter COM1 in the **Save AS** box and Virtual Machines in **Where** box and hit **Save**.
- vi) Repeat the same procedure to add in the second serial port COM2.
- vii) Select the **tutor** VM. Repeat steps iii) - vi) to add in COM1 and COM2 for the tutor VM.

2. Modifying the *.vmx files

For the tutor-vserver VM:

- i) Double click on the **VMWare Fusion** icon
- ii) Select the **tutor-server** VM. If the VM is running, shut down the VM by selecting **Virtual Machine/Shut down** at the menu bar.
- iii) Press down **control**, do a right click on **tutor-vserver** VM and select **Show config file in Finder**
- iv) Select **tutor-vserver.vmx**. Press down **control**, do a right click and select **open with**. Select **text edit**. Make sure **Smart Quotes** and **Smart Dashes** in **Edit/Substitutions** in **TextEdit** are not selected.
- v) Modify the file as shown below:

```
serial0.present = "TRUE"
serial0.fileType = "pipe"
serial0.startConnected = "TRUE"
serial0.fileName = "/Users/Your_user_name/Documents/Virtual
Machines.localized/com1"
serial1.present = "TRUE"
serial1.fileType = "pipe"
serial1.startConnected = "TRUE"
serial1.fileName = "/Users/Your_user_name/Documents/Virtual
Machines.localized/com2"
```

vi) Close the window and power up the VM by selecting the **Virtual Machines/Start up**

vii) Select **Don't Upgrade** at the next screen. After booting up the VM, log in and run mtip.

For the tutor VM:

i) Double click on the **VMWare Fusion** icon

ii) Select the **tutor** VM. If the VM is running, shut down the VM by selecting **Virtual Machine/Shut down** at the menu bar.

iii) Press down **control**, do a right click on **tutor VM** and select **Show config file in Finder**

iv) Select **tutor.vmx**. Press down **control**, do a right click and select **open with**. Select **text edit**. Make sure **Smart Quotes** and **Smart Dashes** in **Edit/Substitutions** in **TextEdit** are not selected.

v) Modify the file as shown below:

```
serial0.present = "TRUE"
serial0.fileType = "pipe"
serial0.startConnected = "TRUE"
serial0.fileName = "/Users/Your_user_name/Documents/Virtual
Machines.localized/com1"
serial0.pipe.endPoint = "client"
serial1.present = "TRUE"
serial1.fileType = "pipe"
serial1.startConnected = "TRUE"
serial1.fileName = "/Users/Your_user_name/Documents/Virtual
Machines.localized/com2"
serial1.pipe.endPoint = "client"
```

vi) Close the window and power up the VM by selecting the **Virtual Machines/Start up**

vii) Select **Don't Upgrade** at the next screen. After booting up the VM, you should see **Please type <CR> to confirm console setting:** at the tutor and tutor-vserver windows.

How to Configure the LAN adapter on VMWare Fusion 8

For the tutor-vserver VM:

1. Select the tutor-vserver VM.

2. Go to the **Virtual Machine** menu item, select **Network Adapter 2** and select **NAT**
3. Go to **Virtual Machine** menu item and select **shut down**. At the next screen, select **Shut down**.
4. After the VM is shut down, go to **Virtual machine** and select **Start up** to power up the VM.
5. After the VM boots up, log on and then type **ping google.com**
6. If google.com replies, your LAN adapter is configured correctly.
7. Enter `/sbin/ifconfig` to find out the IP address of the eth1 adapter (e.g. 192.168.252.128)

How to Connect to tutor-vserver VM on VMWare Fusion 8

1. To set up for remote gdb, bring up a terminal window on the Mac.
2. Enter **ssh tuser@192.168.252.128** (if 192.168.252.128 is the right IP address for the VM)
3. Enter password **cs444**. You should be logged in and talking to the tutor-vserver VM.
4. Follow the instruction on VMWare-for-Tutor.pdf to complete the set up for remote gdb.