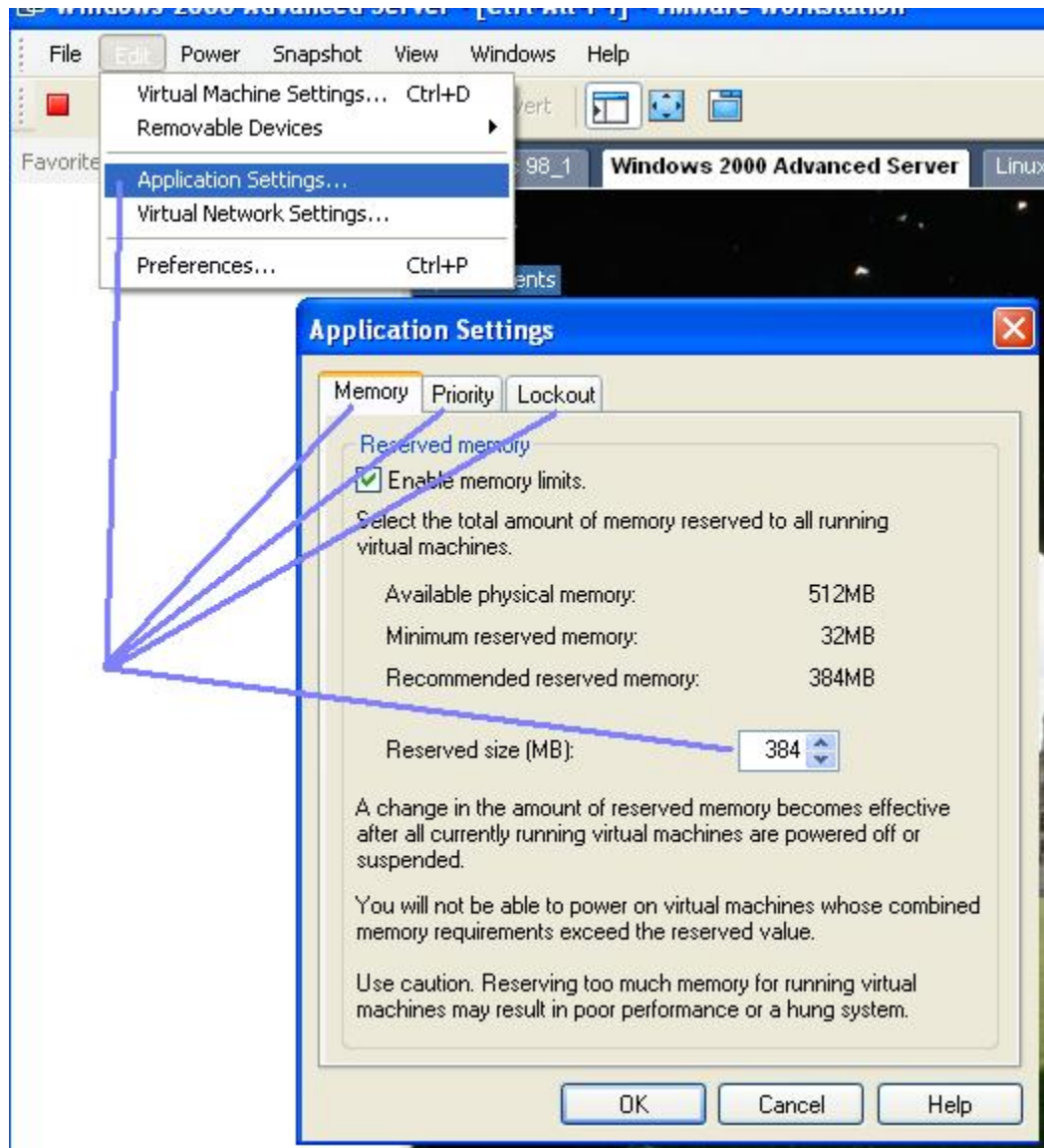


A. Installing VMWare

1. We are just following instruction on the screen.
2. But there is only one note “do not let VMWare disable auto-run feature of your cd drivers”.

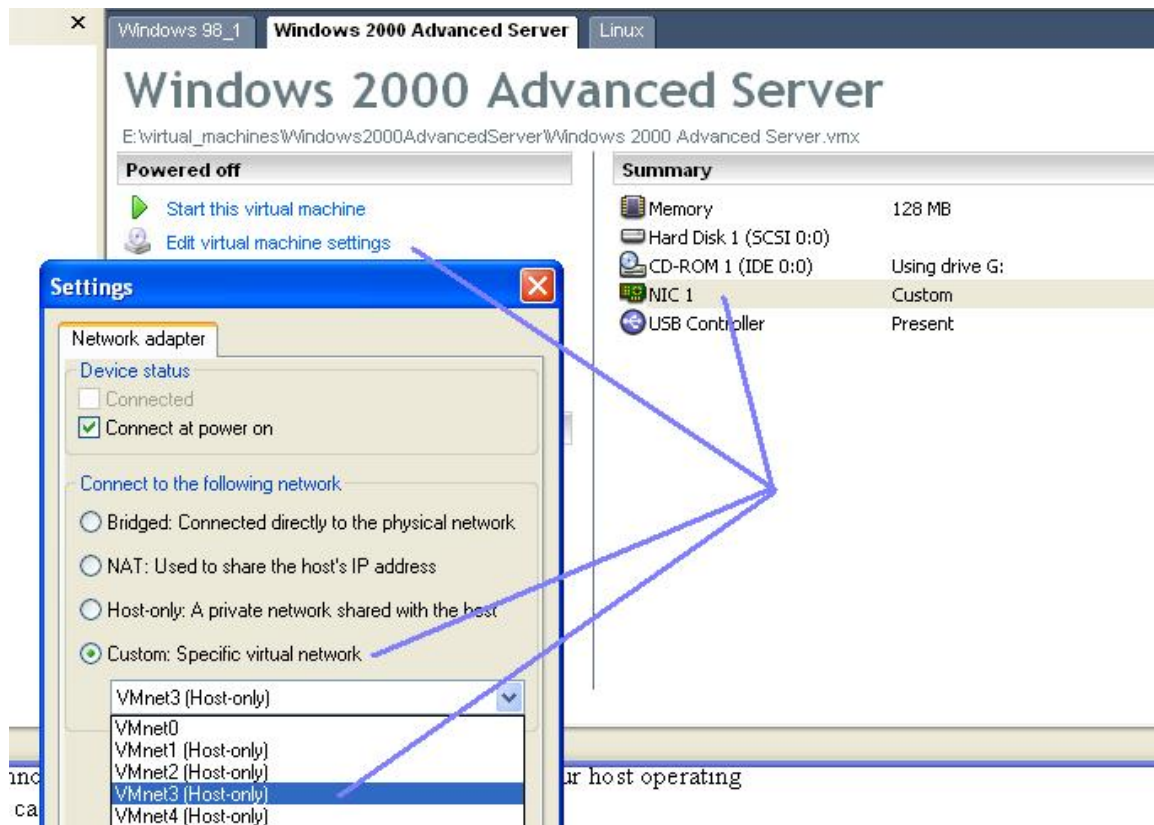
B. Configure VMWare

1. Open VMWare
2. Open “Edit/Application Settings...”
3. We can customize the total amount of memory could be used for running VMWare and all of its virtual machines by selecting “Memory” tab
4. We can customize how sensitive VMWare react to switching keyboard – mouse from the host operating system to clients’ operating systems on virtual machines by selecting “Priority” tab
5. We can set up Administrator password to limit the ability to create new virtual machine, edit virtual machines’ configuration, and changing virtual network by selecting “Lockout” tab.



C. Some common terms

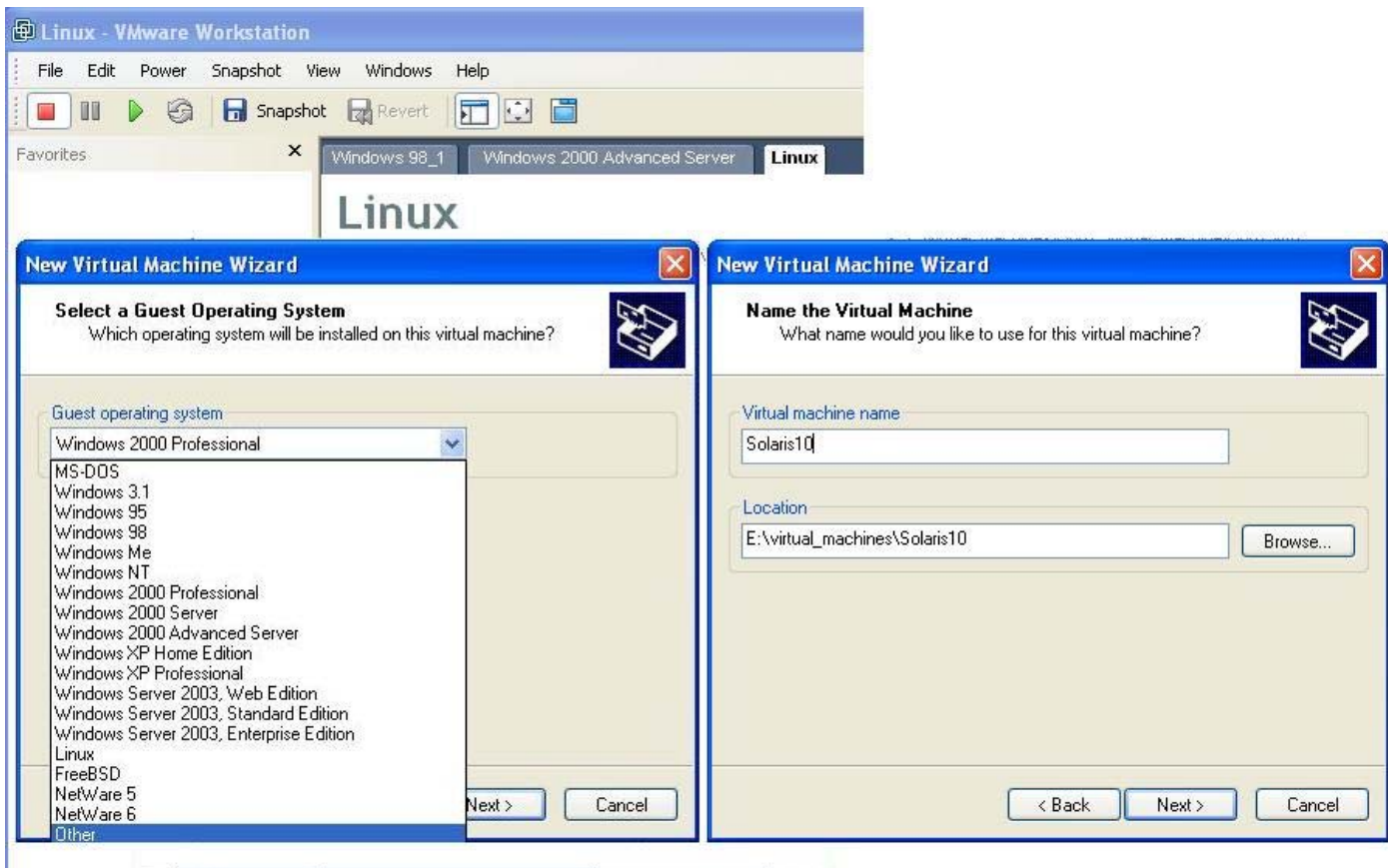
1. Host machine/Host operating system: Host machine is the real machine that you are installing VMWare software on. Host operating system is the operating system on your host machine.
2. Client machines/Virtual machines: Client machines or virtual machines are not real machines, they are created by VMWare software and they can only operate on a host machine with VMWare installed.
3. Client operating systems: Client operating system is the operating system that was installed on a client/virtual machine.
4. VMNetwork interface: An unreal network interface that is created by VMWare software on the host machine so the host machine can to connect to its client networks. All virtual network interfaces (VMNetwork interfaces) could be configured just as normal network interface. All VMNetwork interfaces will be found under "ControlPanel/Network connections/..." of the host operating system. By default, they will be named "VMware Network Adapter VMnet<number>". Each virtual network will also be attached to an appropriate virtual hub by default, for example: VMnetwork1 will connect to VMNet1 (virtual hub1).
5. VMNet/VMHub: They are virtual hubs/switches that can not be seen from host operating system. VMWare software will create a virtual hub for each of its virtual network card. Each virtual machine can be attached to a virtual hub by using its configuration form.



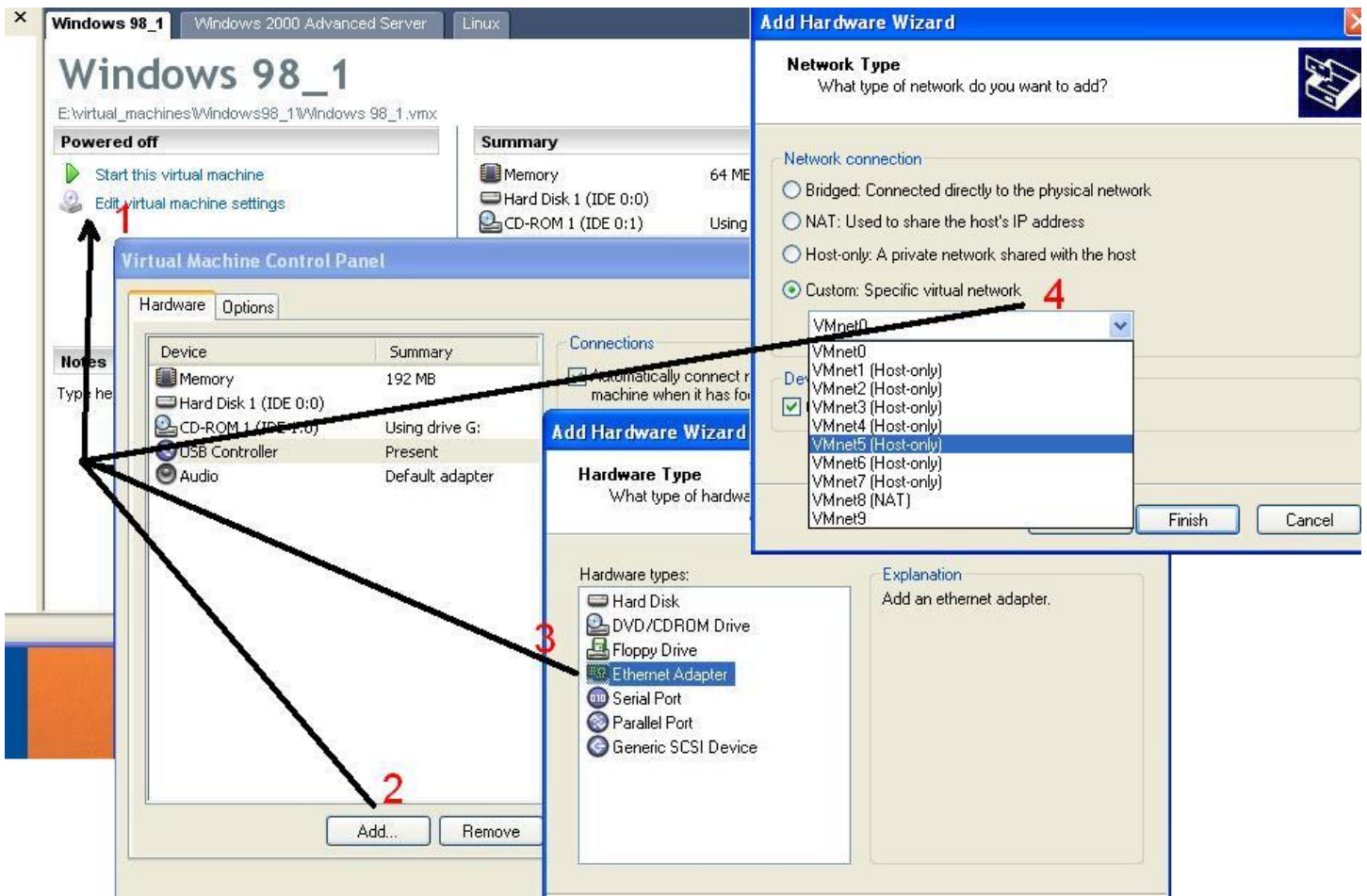
D. Installing a guest operating system on a virtual machine

1. Open VMWare Workstation
2. Select menu "File / New virtual machine"

3. Follow the instruction of VMWare software. VMware will ask for configuration of the new virtual machine. Selecting “typical configuration” because we can always change the configuration of our machine later.
4. Select the appropriate operating system will be installed on the new virtual machine (this could help VMware to give us a better recommendation on virtual machine’s configuration). If the operating system that we are going to install is not in the list, just simply select “other”. The next dialog will let us give this new virtual machine a name. You will also be asked for the type of networking for this virtual machine, select “do not use a network connection” for now. You can always add a new network card and change network type later



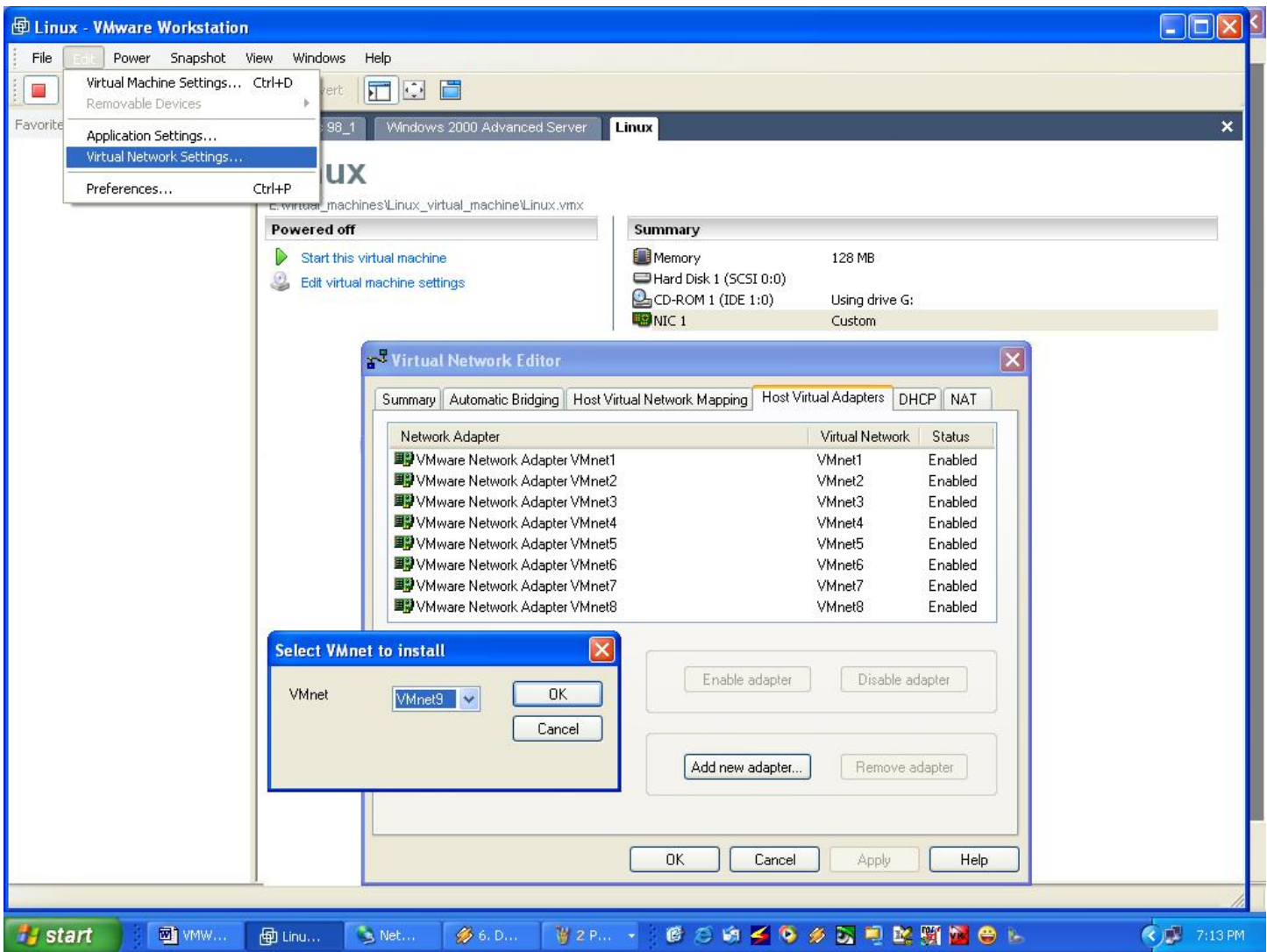
5. After finish creating the virtual machine, use menu “File /Open” to open the virtual machine. On the configuration page, select “Edit virtual machine setting/ Add ...” to add a new network card for this virtual machine.



6. Insert Operating System install CD into CD, click on “Start this virtual machine” to boot the machine. Perform necessary steps to install new operating system on virtual machine same as on a real machine.
7. Do not power-off your virtual machine because it could damage the virtual operating system and the file system on that virtual machine. Practice a safe shutdown procedure as you would do on a real machine.

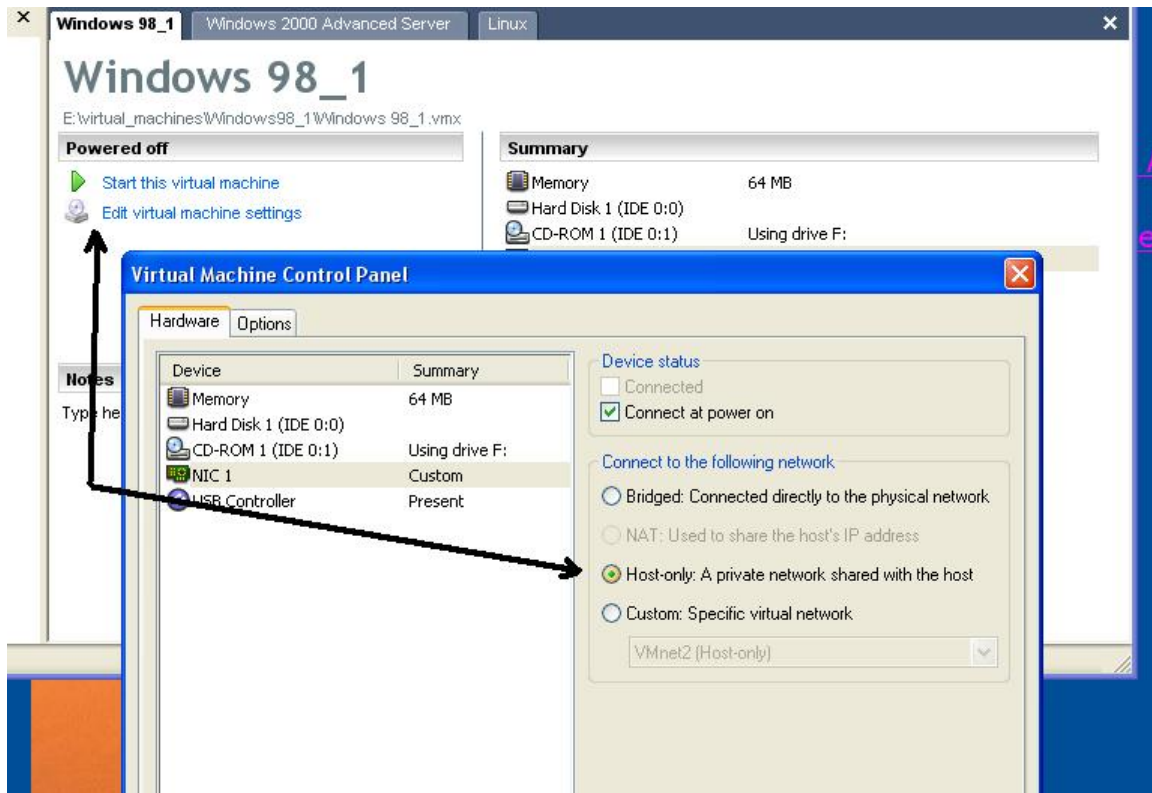
E. Adding a new VMNetwork interface to host operating system

1. Open VMWare Workstation
2. Open “Edit/Virtual Network Settings...”
3. Select “Host Virtual Adapters”
4. Click on “Add new adapter”, select an available network card from drop down list then click OK to complete.
5. Repeat step 4 to add another VMNetwork interface.
6. When you complete, click on OK or Apply. It will take a couple minutes for VMWare to complete adding virtual network interface to the host operating system.



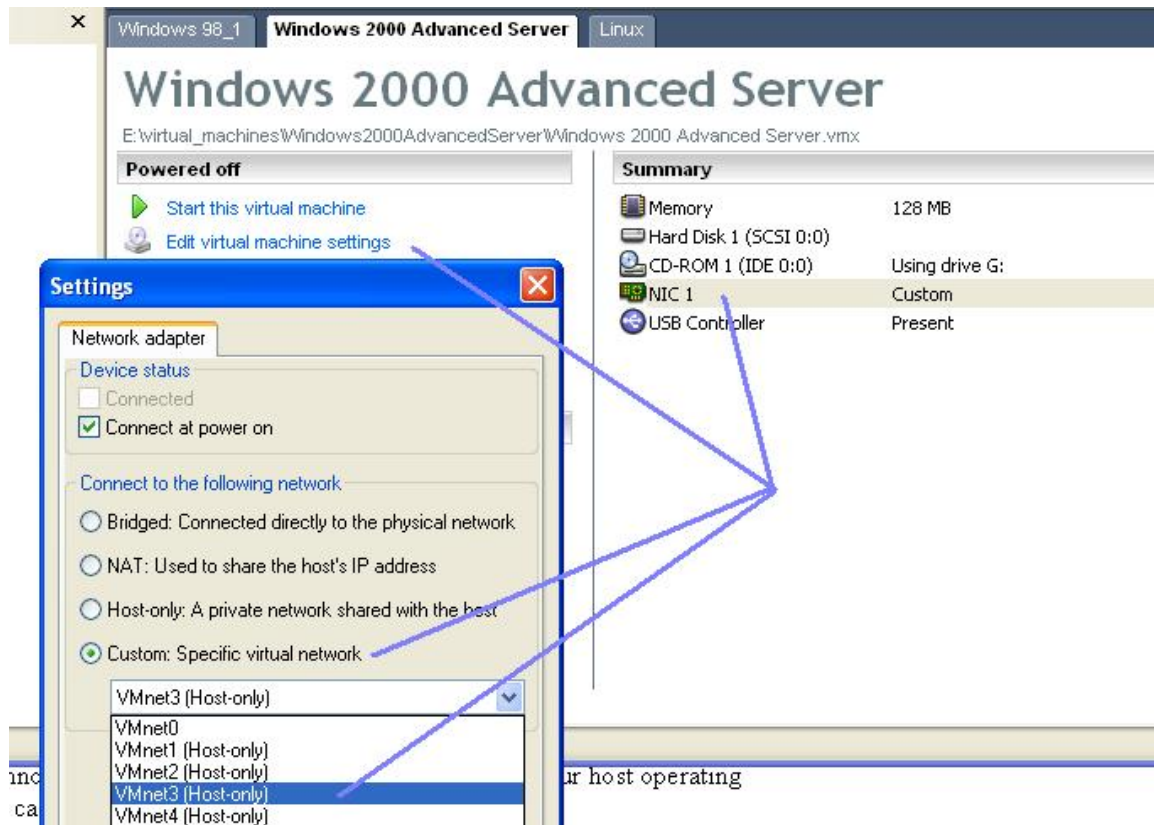
F. Building only one subnet on host machine:

1. By default the VMNetwork interface1 from your hostmachine (Control panel/Network setting/...) will be used to connect your host machine with your virtual network. Write down IP address of that VMWare Network interface. This will be the Gateway IP for all of your client machines
2. Open VMWare
3. With EACH virtual machine, select "Edit Virtual machine setting/NIC1" then select "Host-only:....." see the picture attached
4. Boot the virtual machine then set appropriate IP - MASK for virtual machine. Default gateway will be the IP address of VMWare network interface1
5. Reboot the virtual machine the use PING command to test



G. Building more than one subnets (customize your subnets)

1. With each network, you have to add a new VMWare Network Interface.
2. You have to understand IP range + Mask
3. The VMWare Network interfaces will play the role as gateways. Each VMWare Network Interface will help HOST machine connect to appropriate subnet on corresponding VMNet (Hub)
4. Assign IP and Mask of each sub-net to appropriate VMWare Network Interface
5. With each virtual machine of the same subnet, go to "Edit virtual machine setting/NIC1" then select appropriate VMNet/Hub that the virtual machine will belongs to (Custom: VMNet/Hub)
6. Boot the virtual machine. Set IP + Mask of appropriate subnet for that virtual machine, reboot then PING to test (all virtual machine can PING to HOST but you cannot see machine belongs to difference subnet unless your host operating system can function as a router). If you want some tips to enable routing ability on your current windows operating system then check this website out:
http://www.windownetworking.com/articles_tutorials/w2kprout.html



for example :

you want to have 4 subnets with MASK 255.255.255.0:

- Subnet 1 will have IP range from 192.168.1.1 to 192.168.1.254
- Subnet 2 will have IP range from 192.168.2.1 to 192.168.2.254
- Subnet 3 will have IP range from 192.168.3.1 to 192.168.3.254
- Subnet 2 will have IP range from 192.168.4.1 to 192.168.4.254

You can use MVWare Network Interface1 with IP address 192.168.1.1 as default gateway for this subnet, any client on this subnet will use VMNet1 (Hub1), and host machine will connect to this subnet by using VMWare Network interface1.

Again, you can use MVWare Network Interface2 with IP address 192.168.2.1 as default gateway for this subnet, any client on this subnet will use VMNet2 (Hub2), and host machine will connect to this subnet by using VMWare Network interface2.

And so on...

H. Building subnet using DHCP and NAT

I do not have any experience on building network with these techniques.