

Tutorial: Installing Windows 3.11 with (working) drivers! [Updated]

Post by [Glijnos](#) » 11. Mar 2021, 13:18

{mod note}This is a copy of a [tutorial created by user Glijnos back in 2012](#). Unfortunately Glijnos made a lot of use of IMG tags, which the forum now deprecates for security reasons (offsite images can be substituted with nasty stuff that we won't go into), hence his tutorial was ruined. Presented below is the same tutorial using local attachments, broken into multiple posts so that each post can remain below the forums three attachments limit

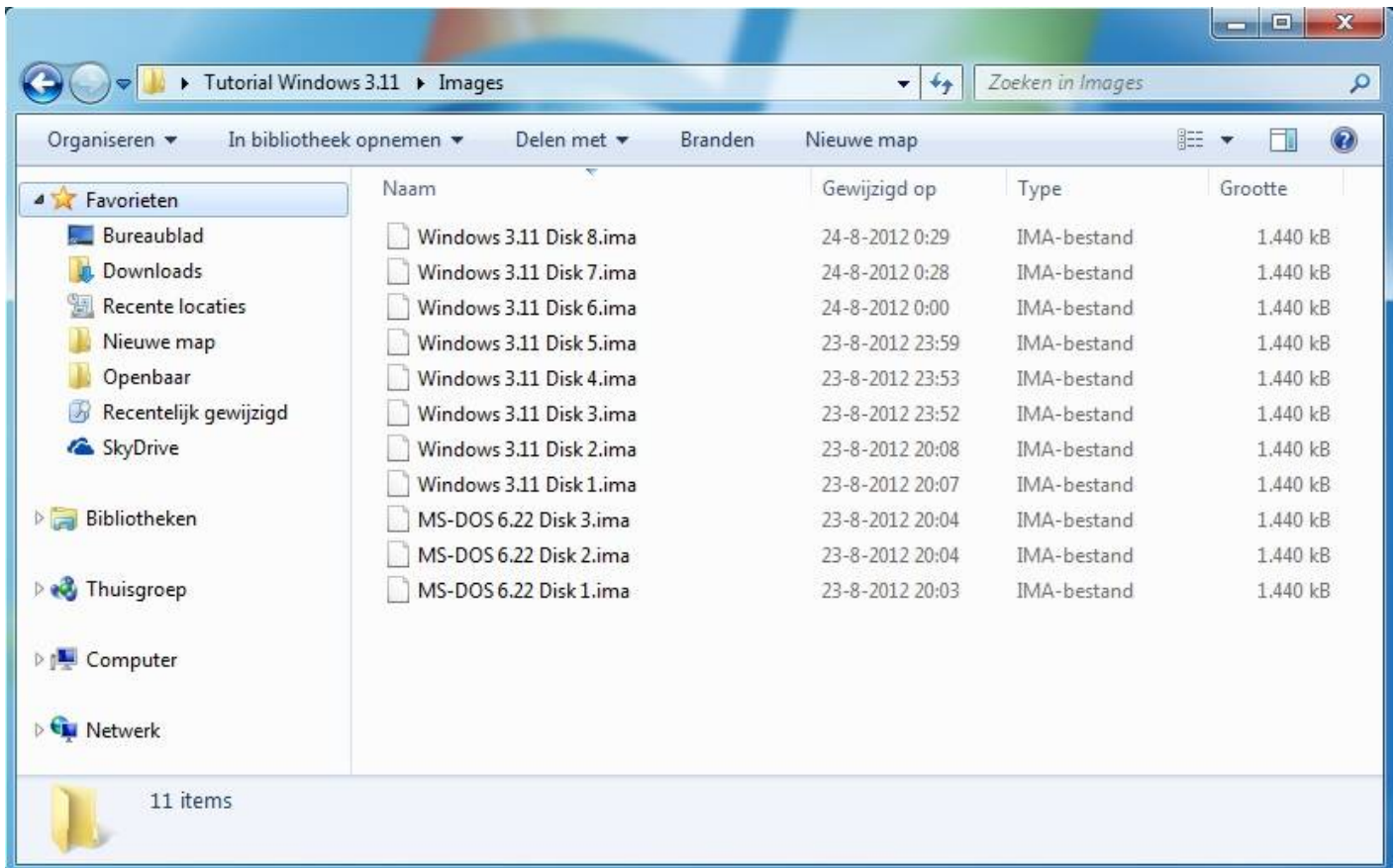
Tutorial: Installing Windows For Workgroups 3.11 (Windows 3.11) on VirtualBox with full driver support.

Introduction

For this Tutorial VirtualBox has to be installed (correctly) on your computer.

This tutorial was tested on the hosts Windows 7 SP1 and Linux (Ubuntu 11.04). But should probably work on other hosts as well.

For this tutorial I used my 3.5-inch floppy disks of MS-DOS 6.22 and Windows 3.11. My present pc no longer has a floppy disk drive, so I used an old pc to create floppy images (.IMA) from my old floppy's.

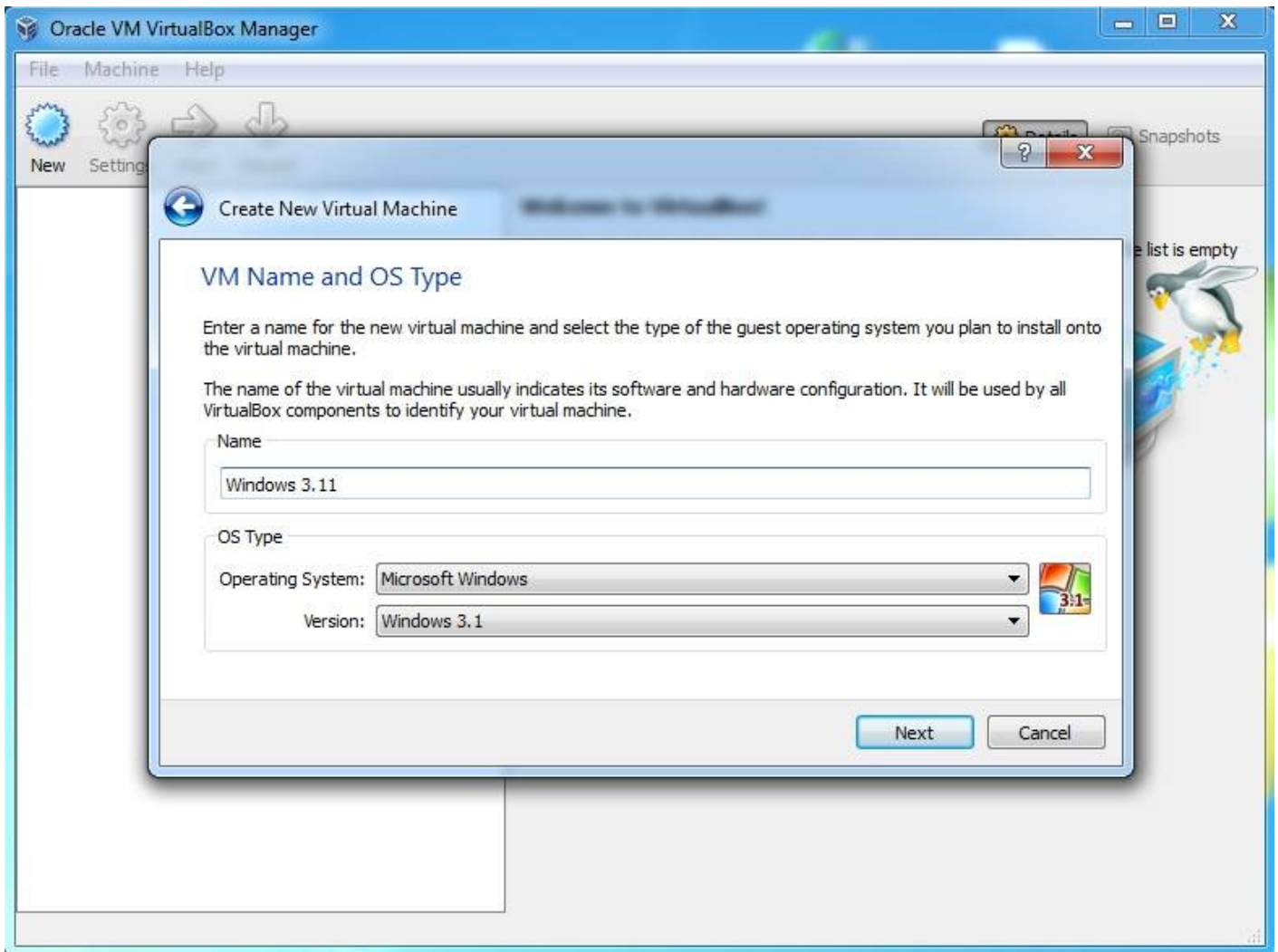


floppyimages.jpg (55.78 KiB) Viewed 90277 times

Now that we have created the floppy images we can start to configure VirtualBox.

Create a virtual machine

Create in VirtualBox a new virtual machine with the name Windows 3.11 or any name you like. By OS Type select the Operating System: Microsoft Window. Under version select: Windows 3.1.



virtualboxnewvm.jpg (50.34 KiB) Viewed 90277 times

Hit Next.

By memory use the default Base memory size of 32 megabyte.

Hit Next.

Create a new hard disk.

Hit Next.

Use the default file type: VDI (Others may also work).

Hit Next.

By storage details use the option you like (I used Dynamically allocated)

Hit Next.

If you like, you can give the virtual disk another name or location.

Use the default disk size of 1,00 Gigabyte (MS-DOS 6.22 can only recognise hard disks up to 2.1 GB)

Hit Next, then two times Create to create the virtual machine.

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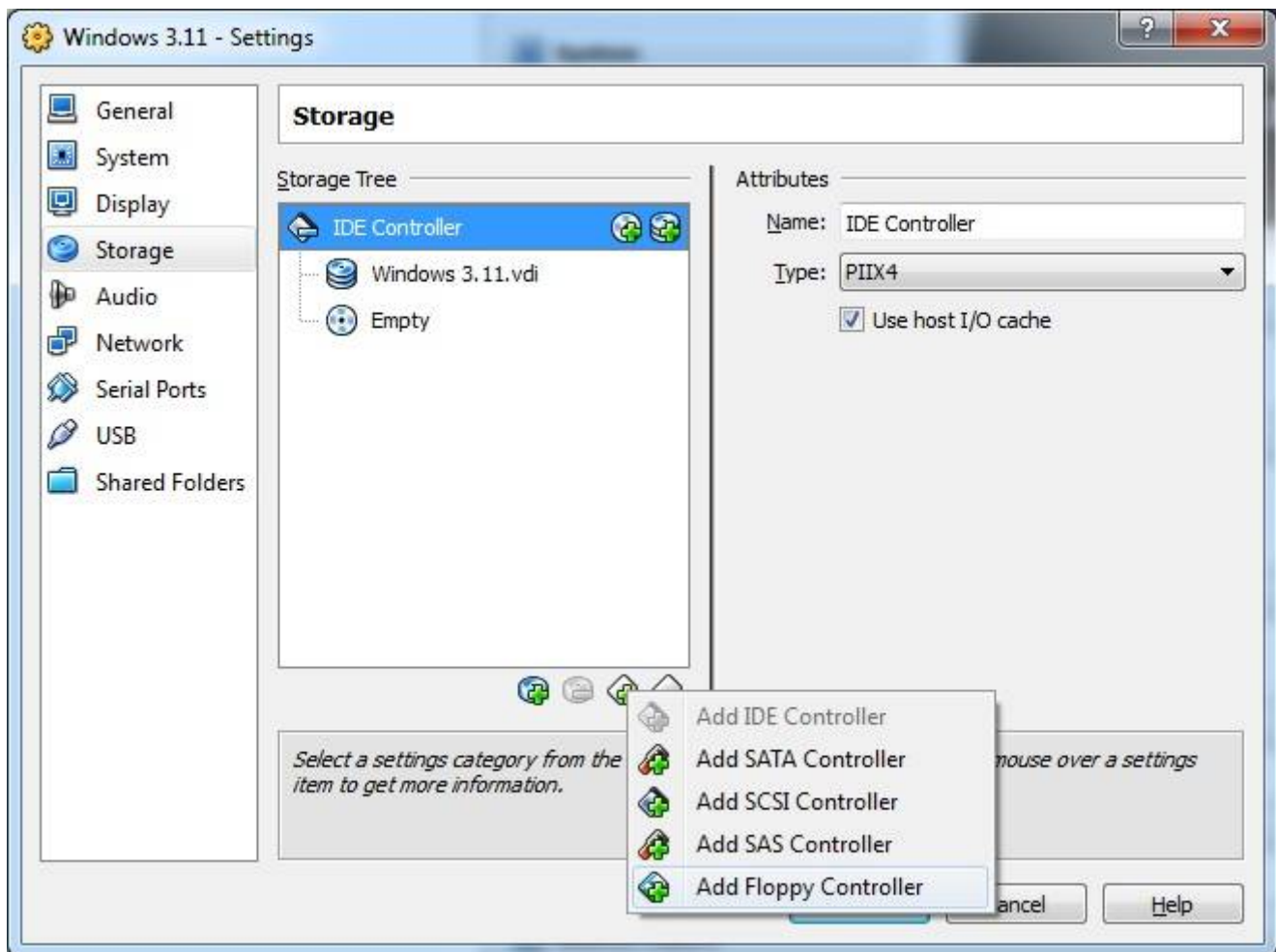
Joined: 22. Aug 2012, 22:28

[Adding a Floppy Controller](#)

Post by [Glijnos](#) » 11. Mar 2021, 13:27

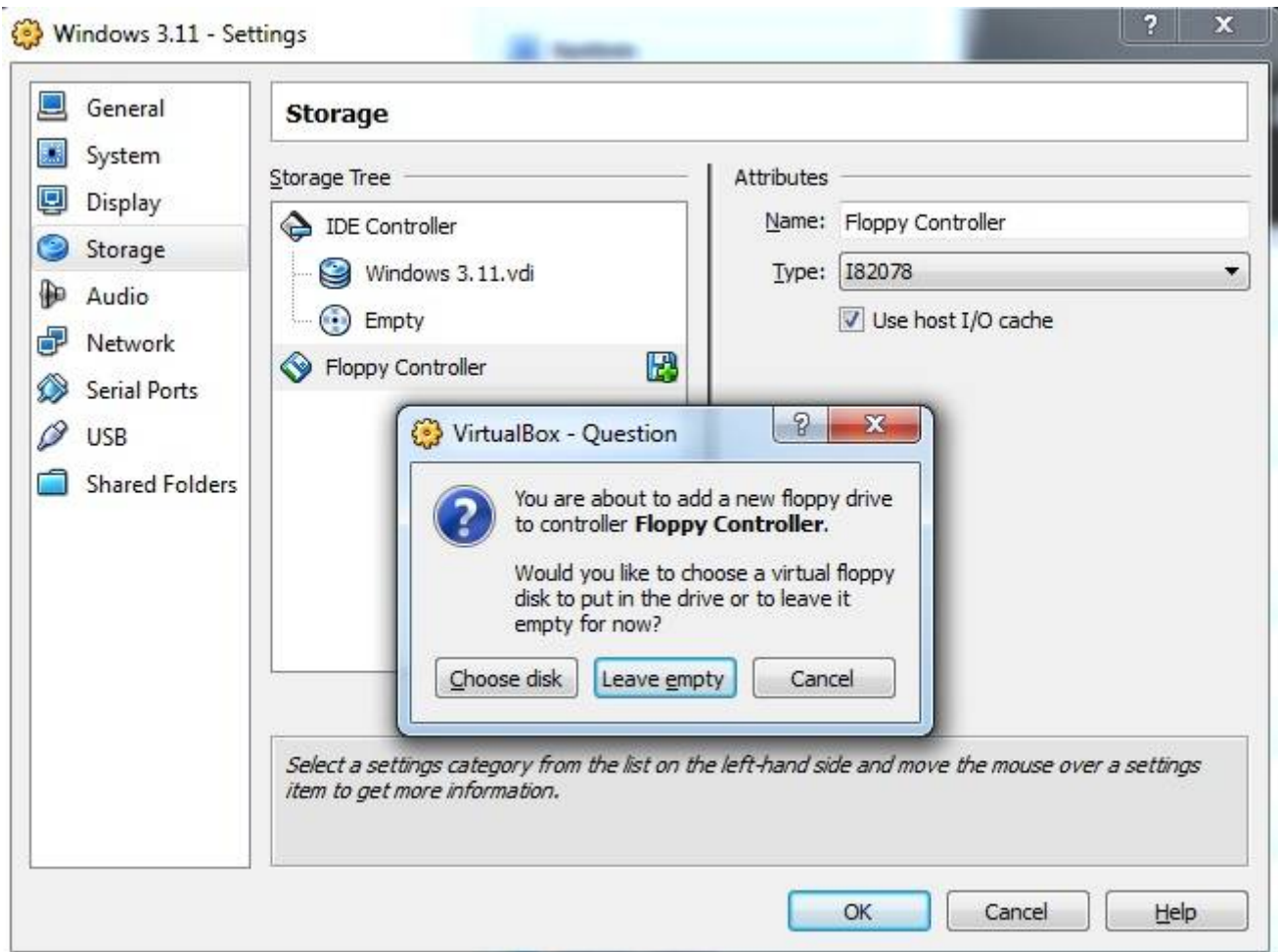
Before you start the virtual machine you have to add a floppy controller.

Right click on the new virtual machine, then Settings, under Storage click: Add floppy controller.



newvmcreatedfloppy.jpg (38.54 KiB) Viewed 90193 times

Add the newly added controller click on the green plus(+). A new window will popup, select: leave empty.



floppyleaveempty.jpg (44.12 KiB) Viewed 90193 times

Now that this is finished you can start the virtual machine.

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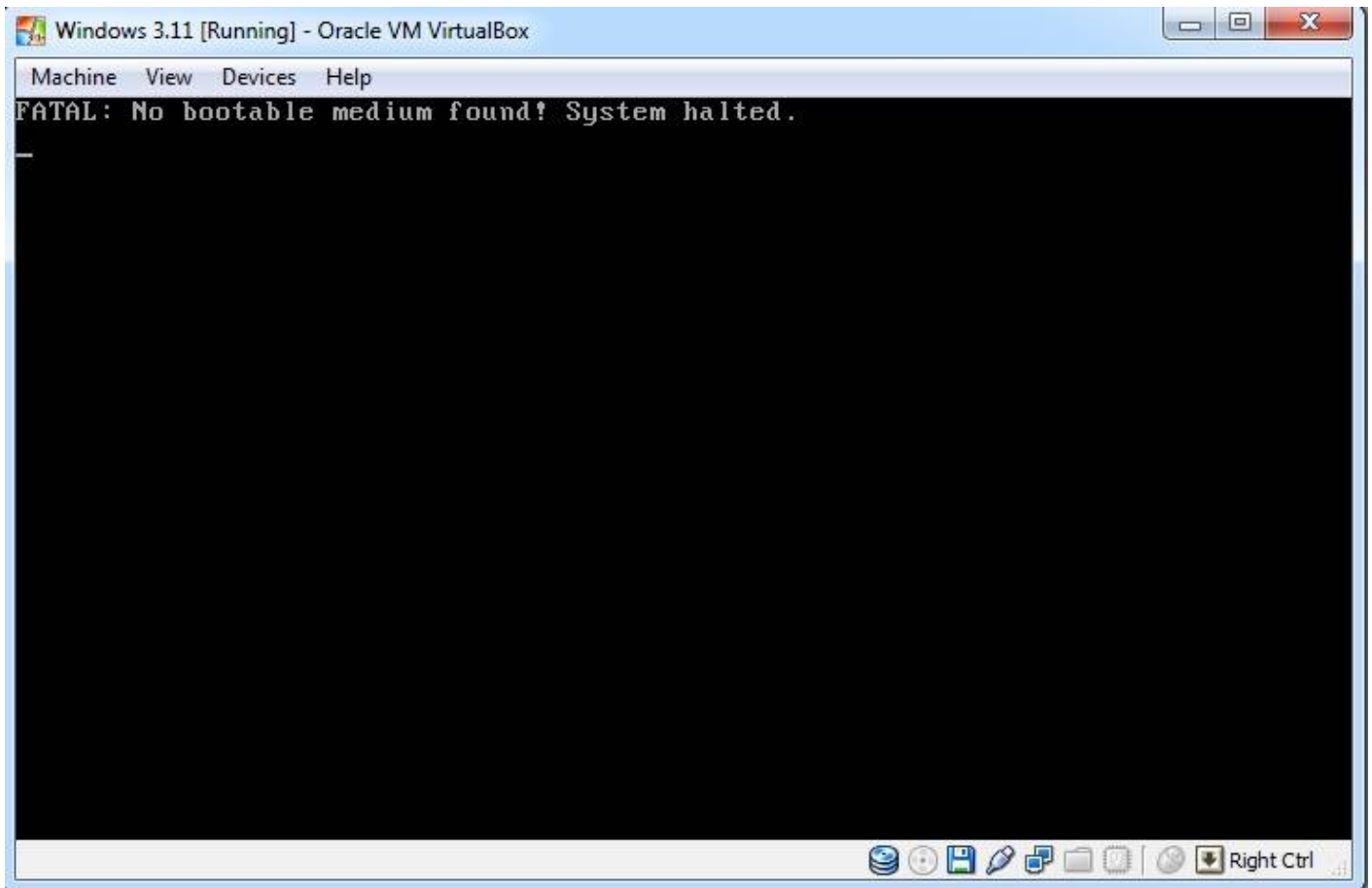
Joined: 22. Aug 2012, 22:28

[Selecting the MS-DOS Boot floppy](#)

[Post](#) by [Glijnos](#) » 11. Mar 2021, 13:34

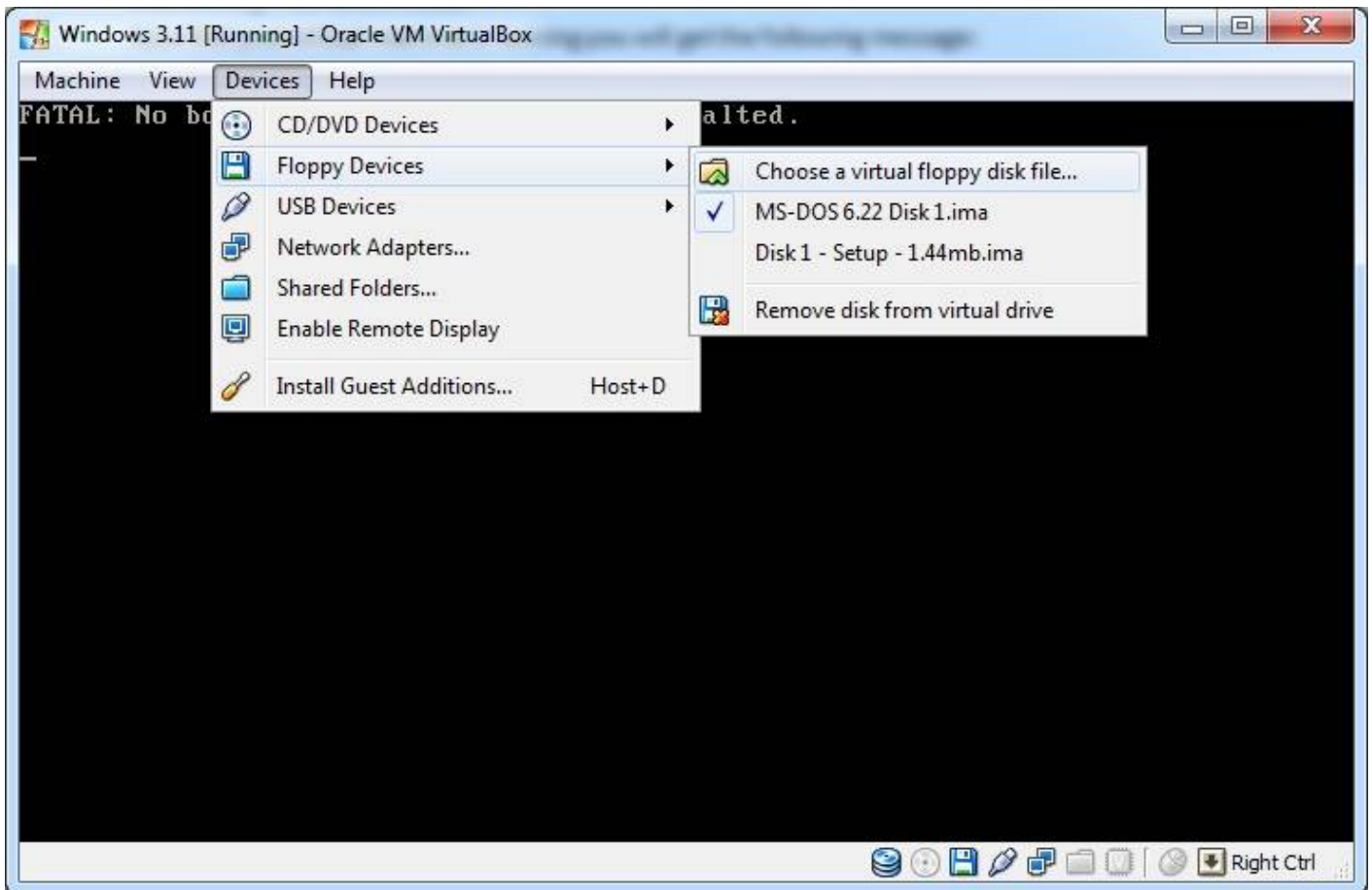
MS-DOS is needed to run Windows 3.11. You can see Windows 3.11 as a graphical shell that depends on MS-DOS architecture.

Now that your virtual machine is running you will get the following message:



vmrunninghalted.jpg (18.19 KiB) Viewed 90084 times

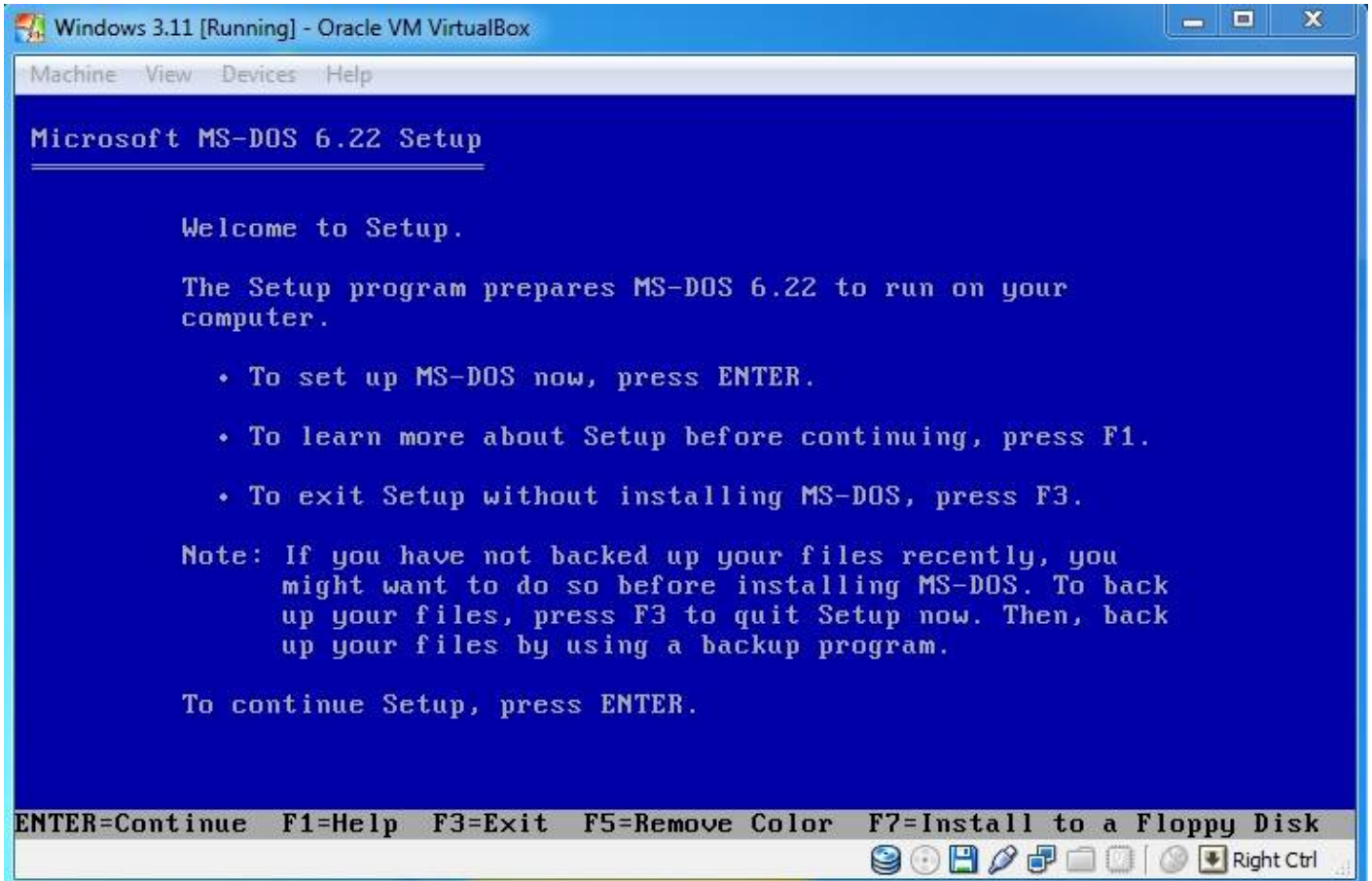
In the menu bar click on devices then --> Floppy Devices --> Choose a virtual floppy disk file... then select your first MS-DOS 6.22 setup floppy image file.



vmrunningselectmsdosflo.jpg (32.7 KiB) Viewed 90084 times

Hit Right Ctrl + R or use the menu bar --> Machine --> Reset to reboot the virtual machine.

After the reboot VirtualBox loads the floppy Image and it will show the MS-DOS setup screen.



msdossetup.jpg (49.46 KiB) Viewed 90084 times

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[Installing MS-DOS 6.22 \(Format virtual hard disk\)](#)

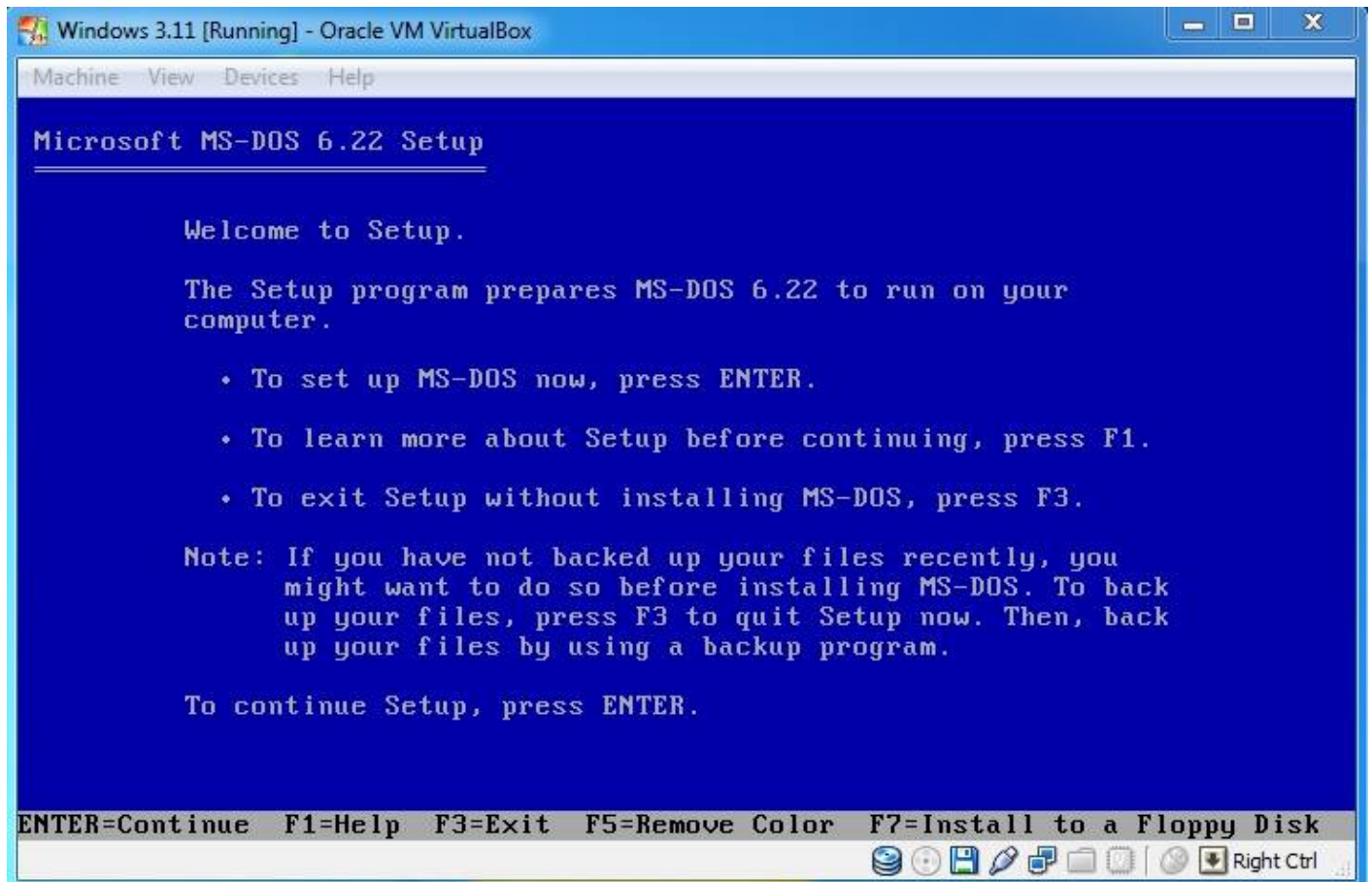
Post by [Glijnos](#) » 11. Mar 2021, 13:40

Hit Enter to start the setup.

Next Choose: Configure Unallocated disk space.

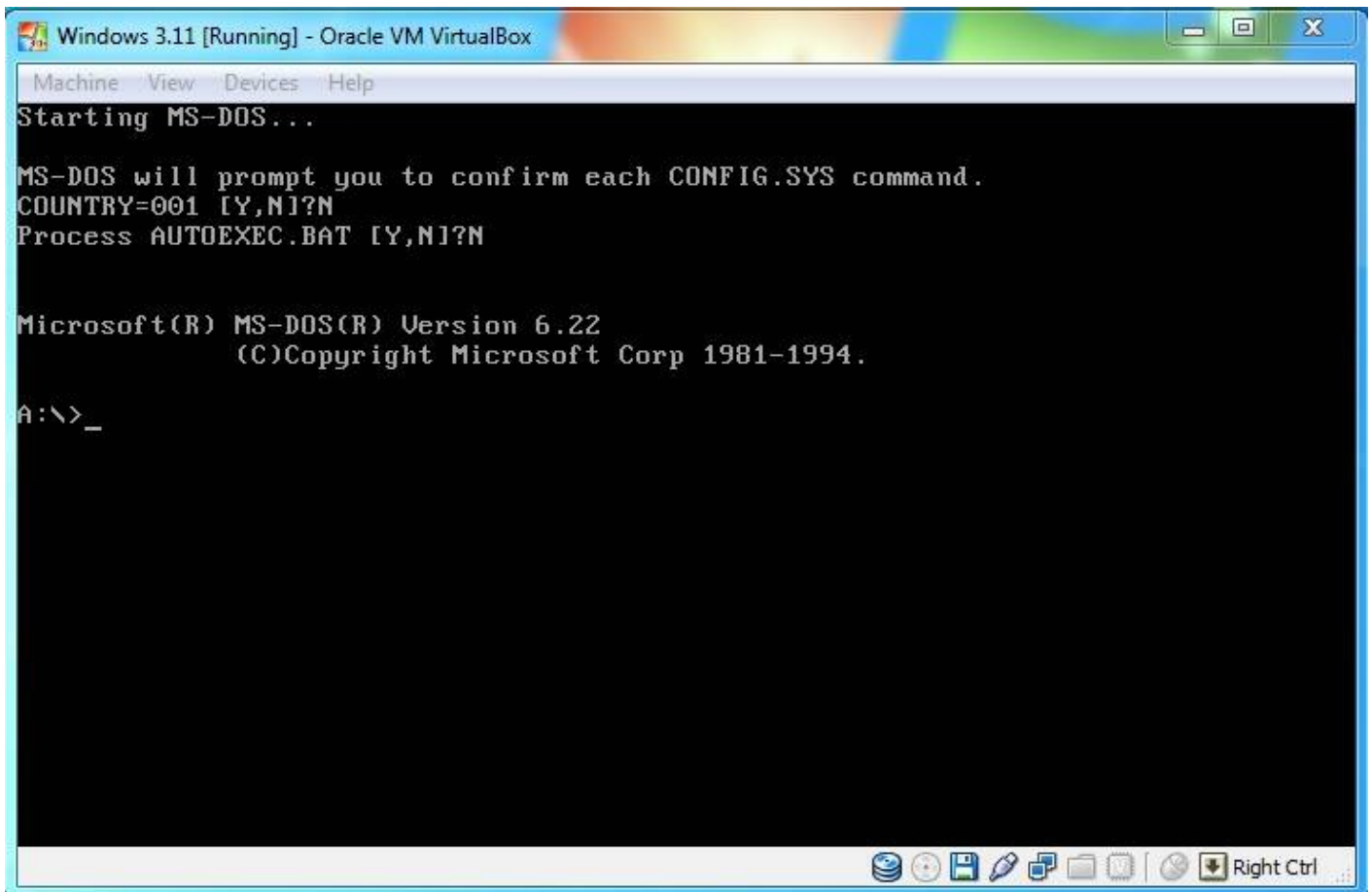
Next, hit Enter to reboot your virtual machine.

After the reboot MS-DOS will format the virtual hard disk.



msdosformat.jpg (31.13 KiB) Viewed 90132 times

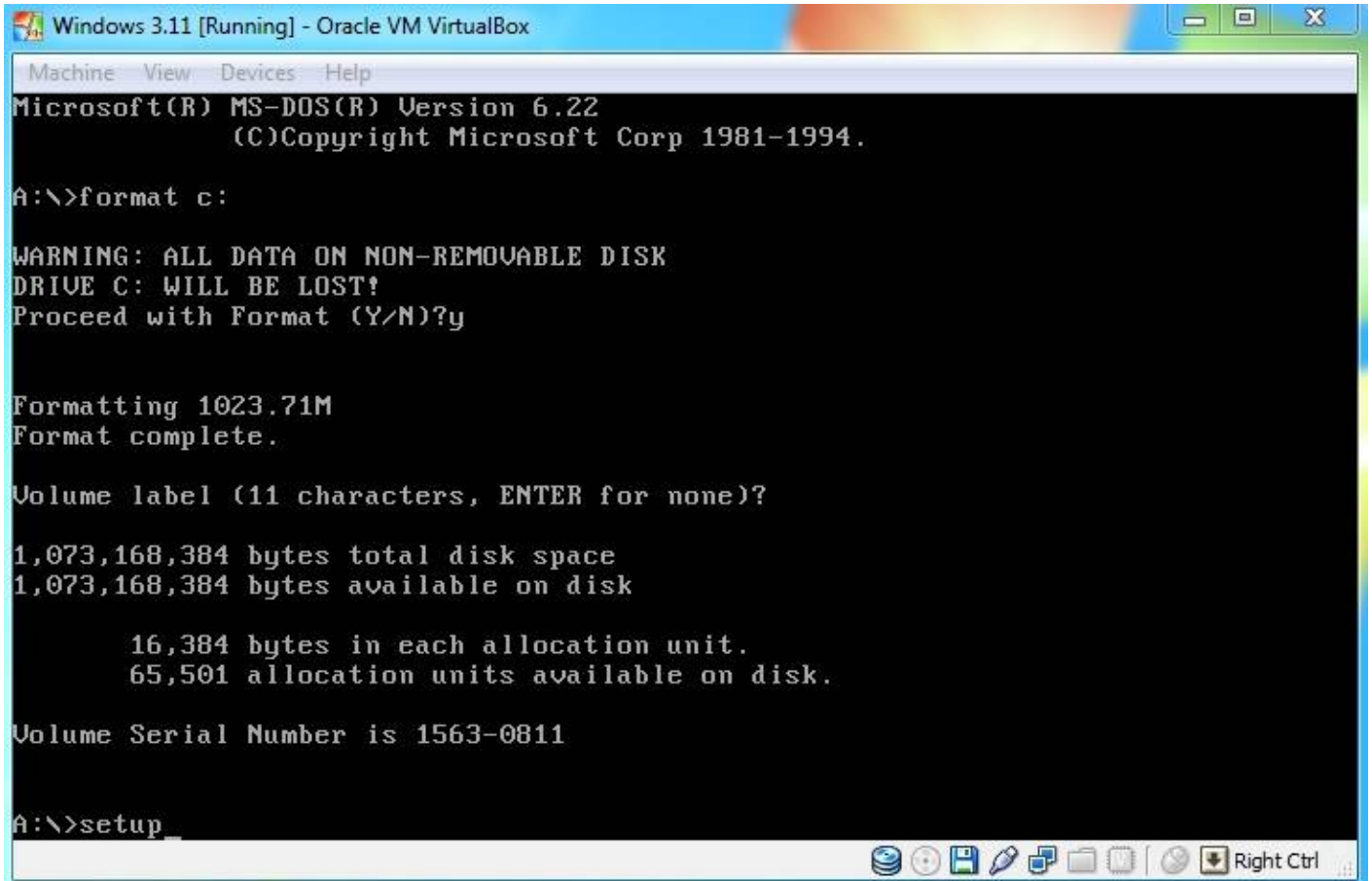
If the formatting hangs on 0%, then you have to reboot the virtual machine (right ctrl + R) and hit F8 until you see the following screen:



msdossetuphitf8screen.jpg (26.61 KiB) Viewed 90132 times

Refuse loading of AUTOEXEC.BAT

When the A:\> prompt will appears, give the command "format c:" and enter the command "setup" once formatting is done.



msdossetuphitf8screenfo.jpg (41.05 KiB) Viewed 90132 times

when the MS-DOS setup is running again you can follow the instructions on screen for installing MS-DOS.

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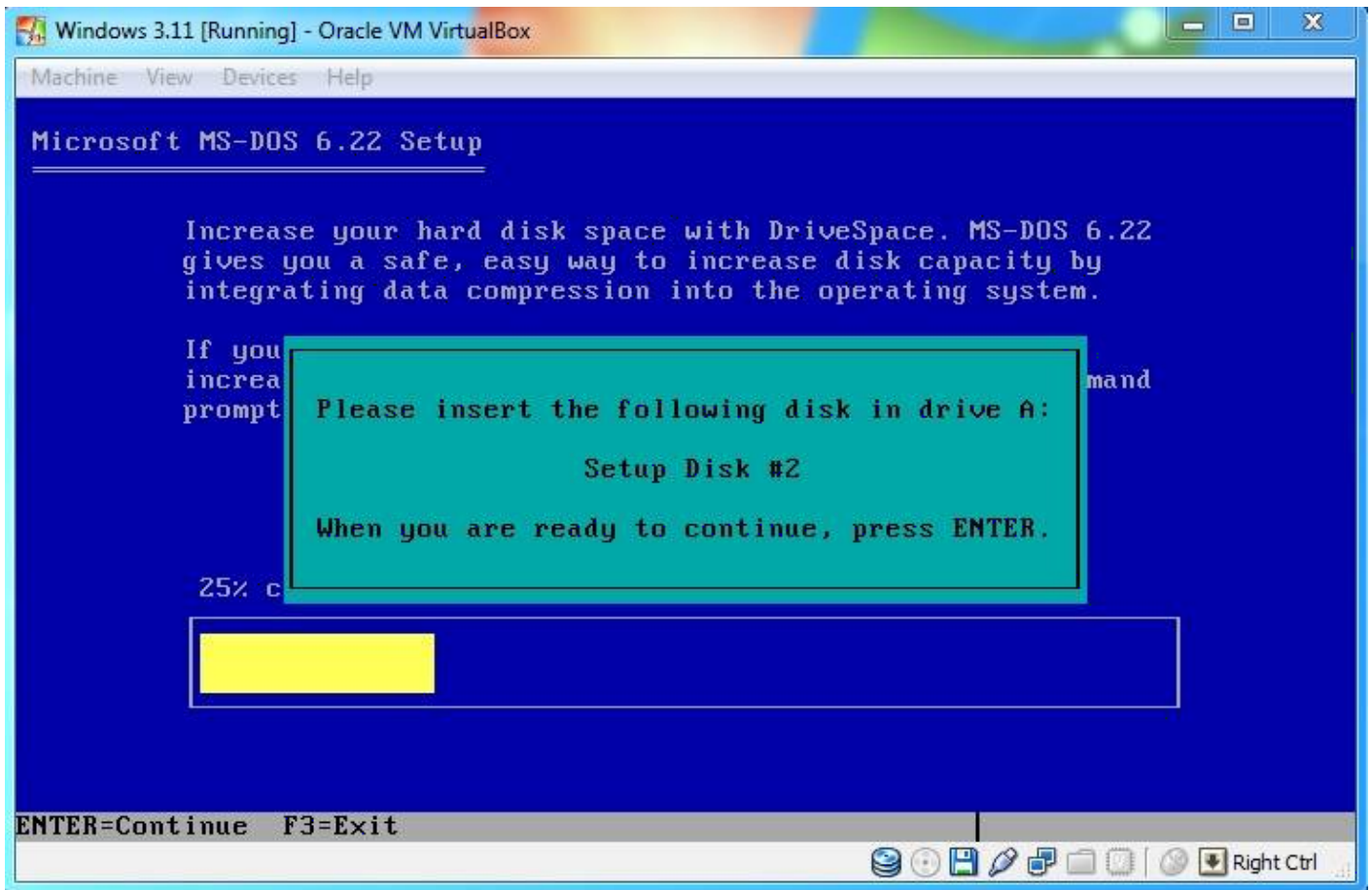
[Installing MS-DOS 6.22 \(Continued\)](#)

Post by [Glijnos](#) » 11. Mar 2021, 13:48

When the MS-DOS setup asks for Setup Disk #2, you have to load the next MS-DOS Floppy image.

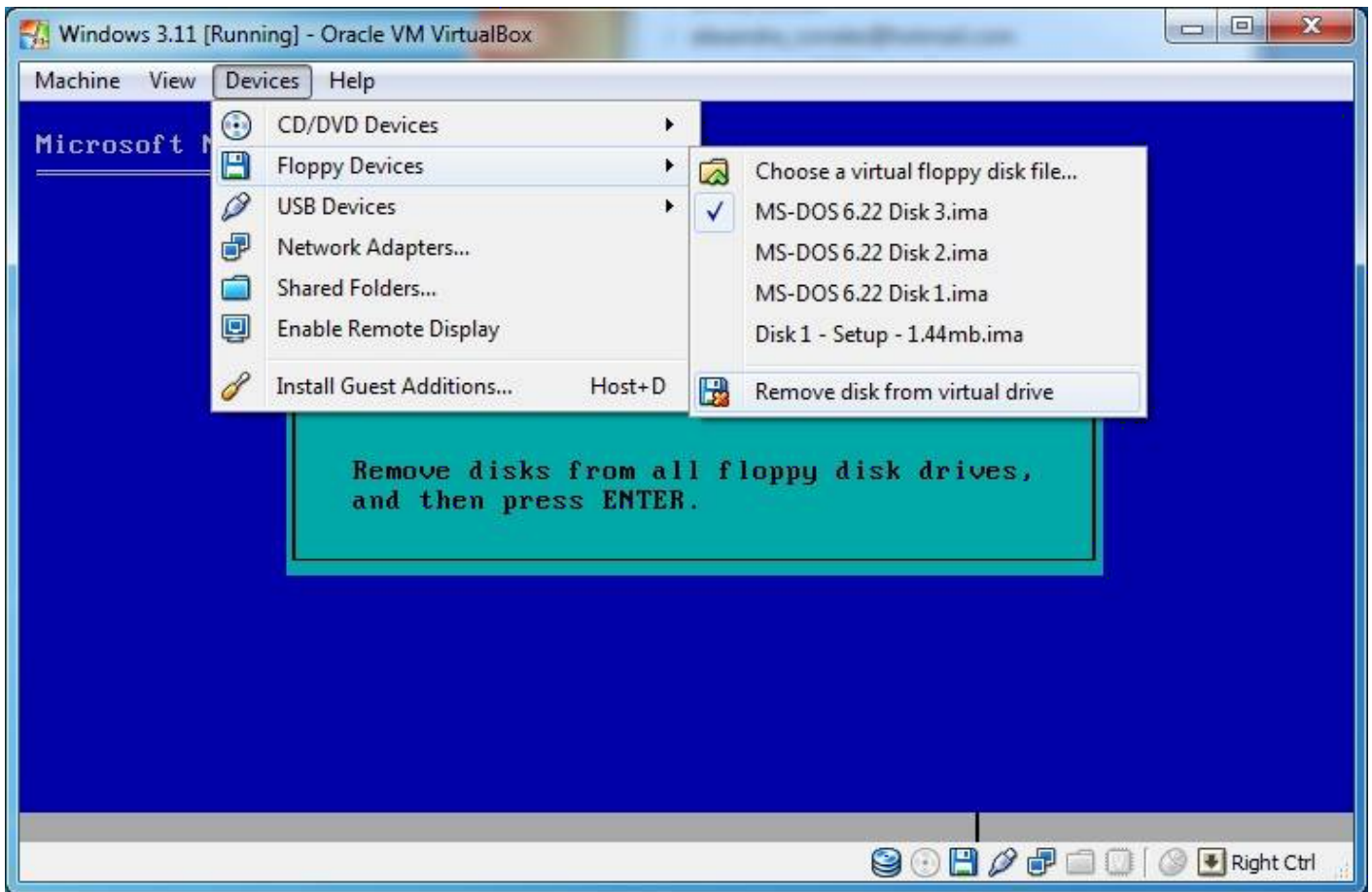
Click on devices in the menu bar again, then --> Floppy Devices --> Choose a virtual floppy disk file... then select your next MS-DOS 6.22 floppy image file.

Use the same method for disk #3.



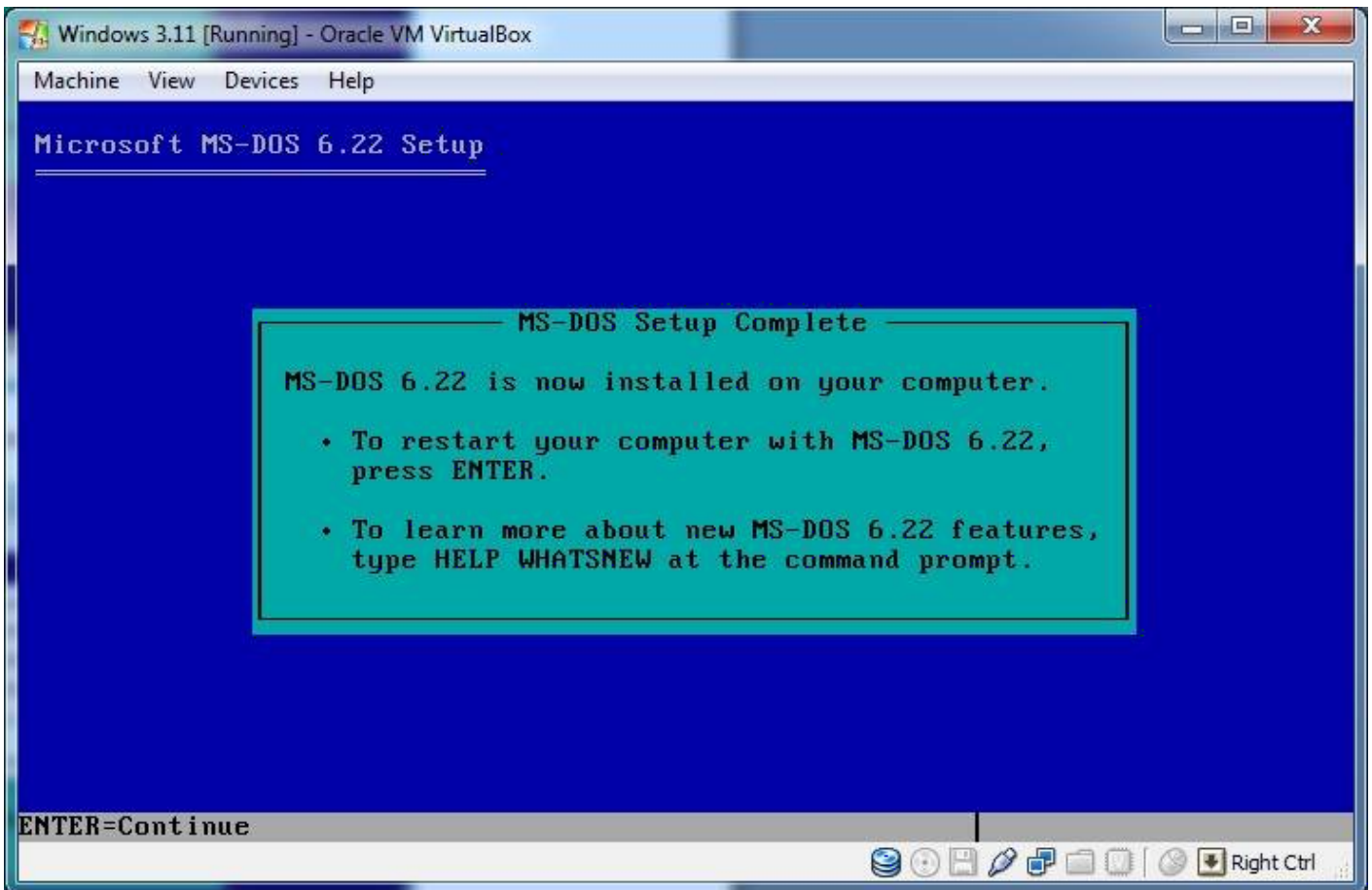
msdossetupnewdisk.jpg (43.79 KiB) Viewed 90132 times

When the setup is done, remove the floppy disk from the virtual drive, and press ENTER.



msdossetupfinishremoved.jpg (41.01 KiB) Viewed 90132 times

Setup complete:



msdossetupfinishfinal.jpg (33.21 KiB) Viewed 90132 times

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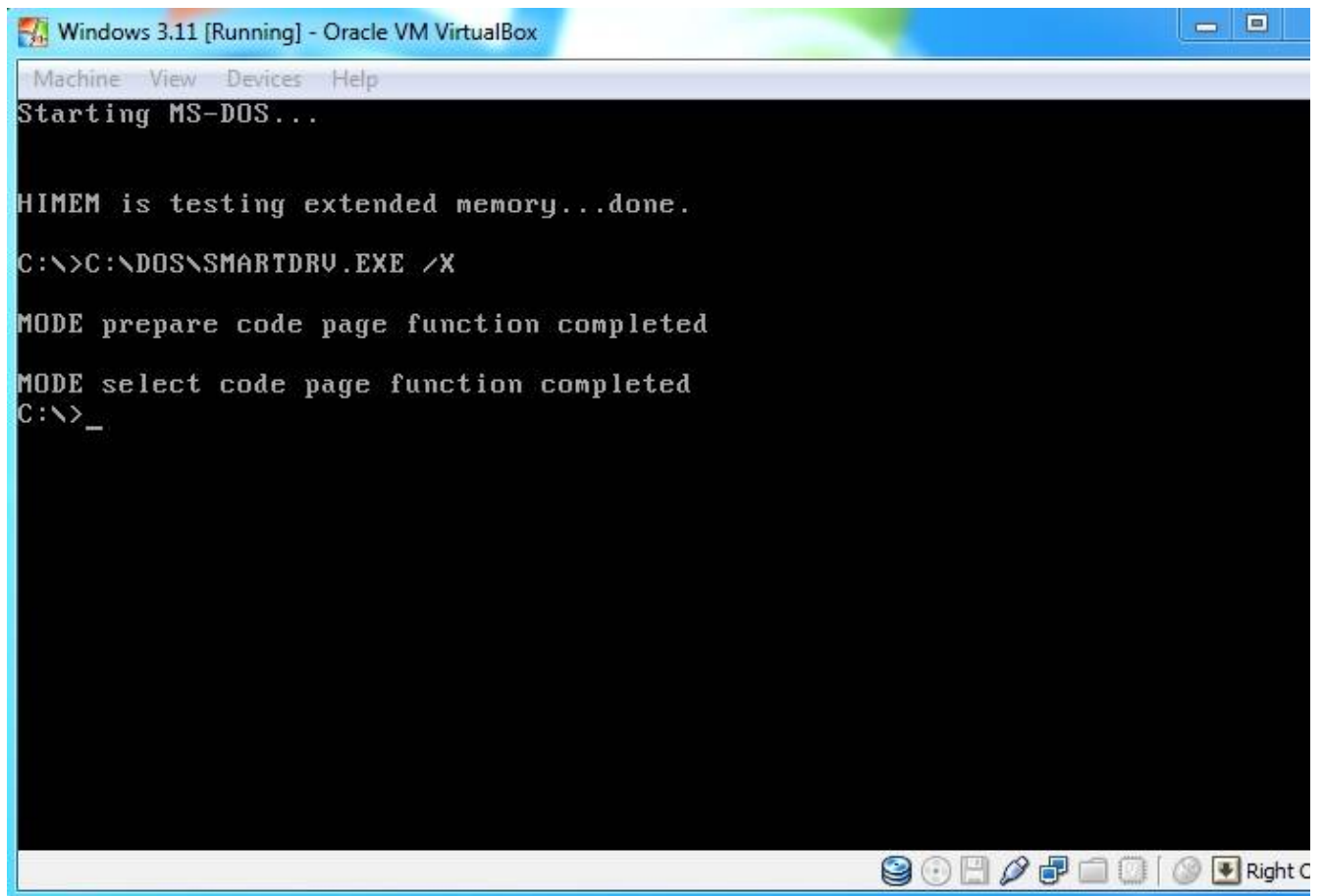
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[Installing MS-DOS 6.22 \(Continued\)](#)

Post by [Glijnos](#) » 11. Mar 2021, 13:50

After the reboot the MS-DOS 6.22 prompt will be loaded.

Attachments



dosprompt.jpg (26.34 KiB) Viewed 90133 times

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[Installing Windows 3.11](#)

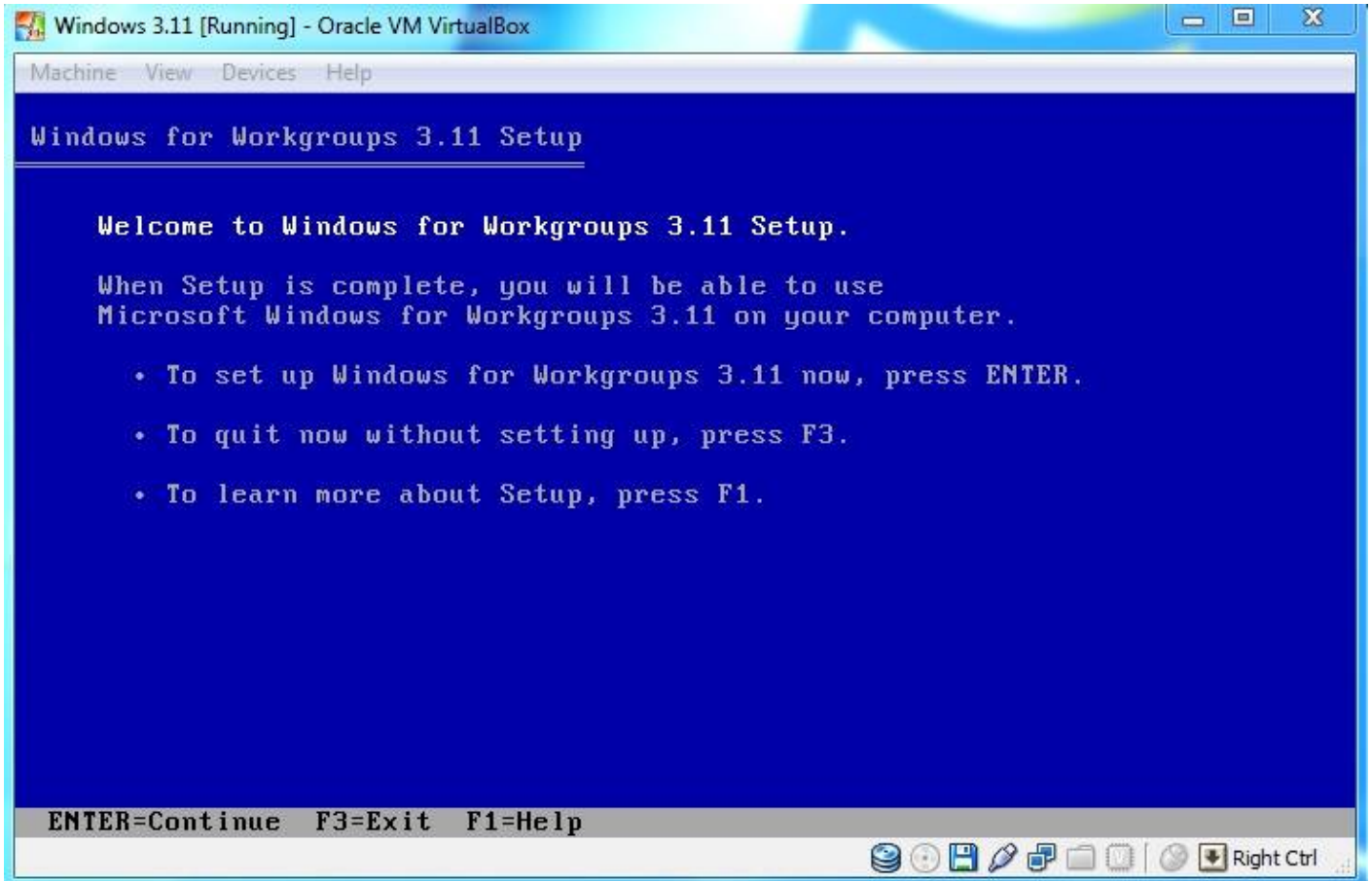
[Post](#) by [Glijnos](#) » 11. Mar 2021, 13:55

Now that MS-DOS is installed we can start to run the Windows 3.11 setup.

Click on devices in the menu bar again then --> Floppy Devices --> Choose a virtual floppy disk file... then select your first Windows 3.11 floppy image file.

At the C:\> prompt, give the command "A:\>" and enter the command 'setup' once the prompt A:\> will appear and hit enter.

The Windows for Workgroups 3.11 setup screen will appear.

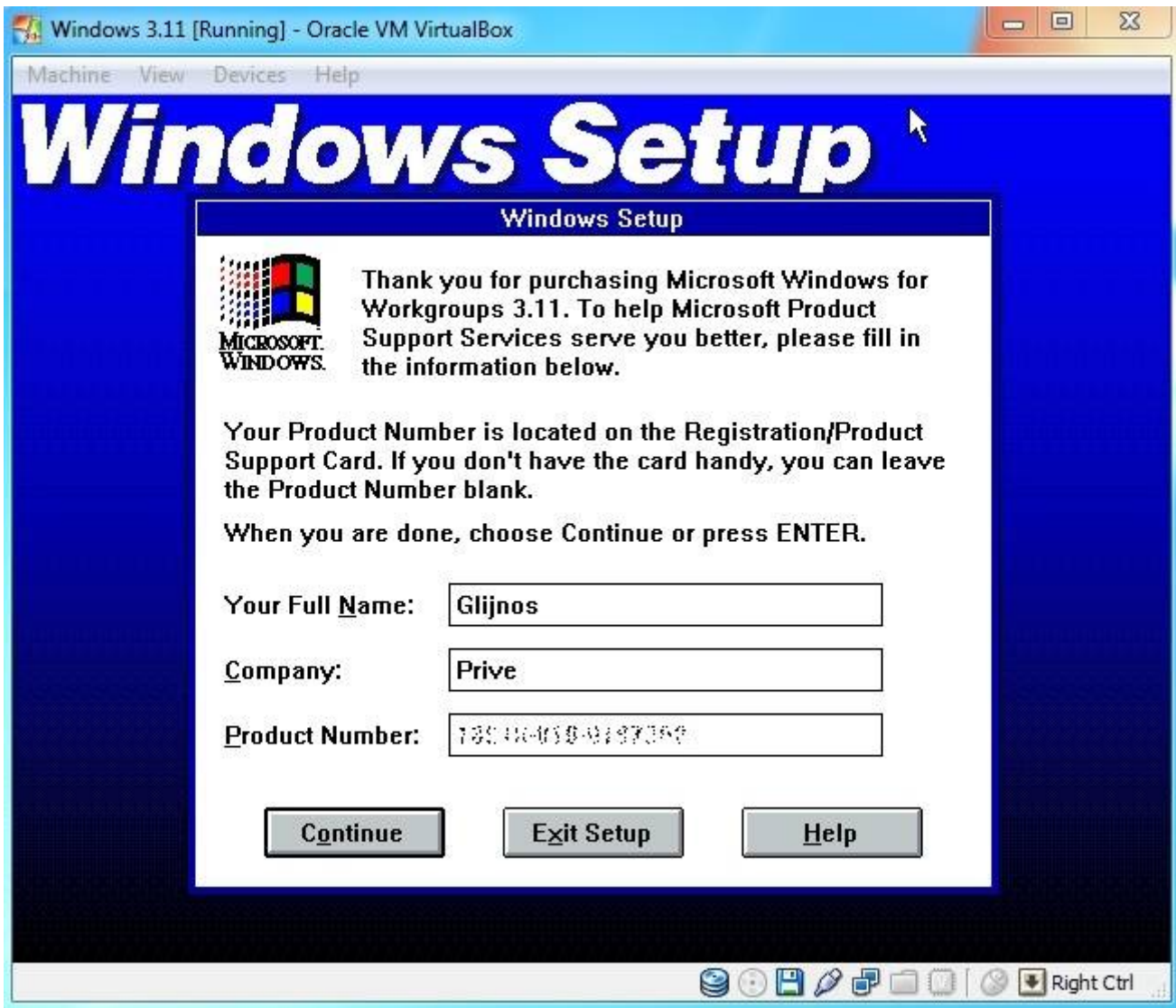


311setupscreen.jpg (36.69 KiB) Viewed 90133 times

Hit enter to setup Windows for Workgroups 3.11.

On the next screen choose the Express Setup with the enter key (the express setup is usually fine). Windows will now be installed. When the setup asks for disk 2, click on devices in the menu bar again then --> Floppy Devices --> Choose a virtual floppy disk file... then select your next Windows 3.11 floppy image file.

After that the setup will reboot to a more graphical style and ask for your name, company and product number (use your windows 3.11 product number)

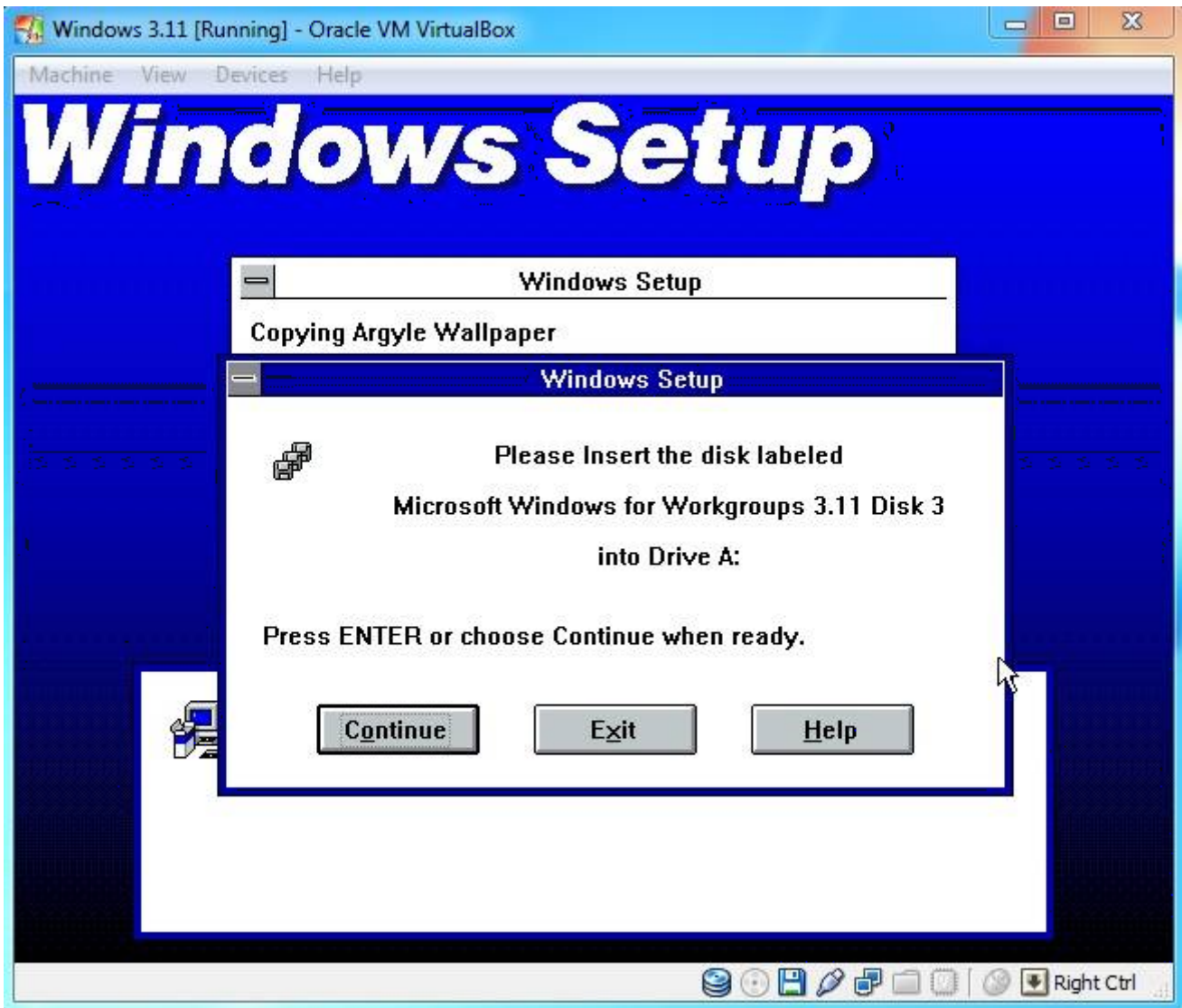


311setupproductnumber.jpg (60.39 KiB) Viewed 90133 times

Click Continue.

Verify your information and Click Continue.

The setup will now continue. When it ask for the next disk, select your next Windows 3.11 floppy image and hit Enter.



311setupfloppydisk3.jpg (47.49 KiB) Viewed 90133 times

Repeat this action for the following floppy disks.

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[Installing Windows 3.11 \(Continued\)](#)

Post by [Glijnos](#) » 11. Mar 2021, 13:58

When it asks for printer installation, just leave the "No Printer Attached" option selected and press the Install button.

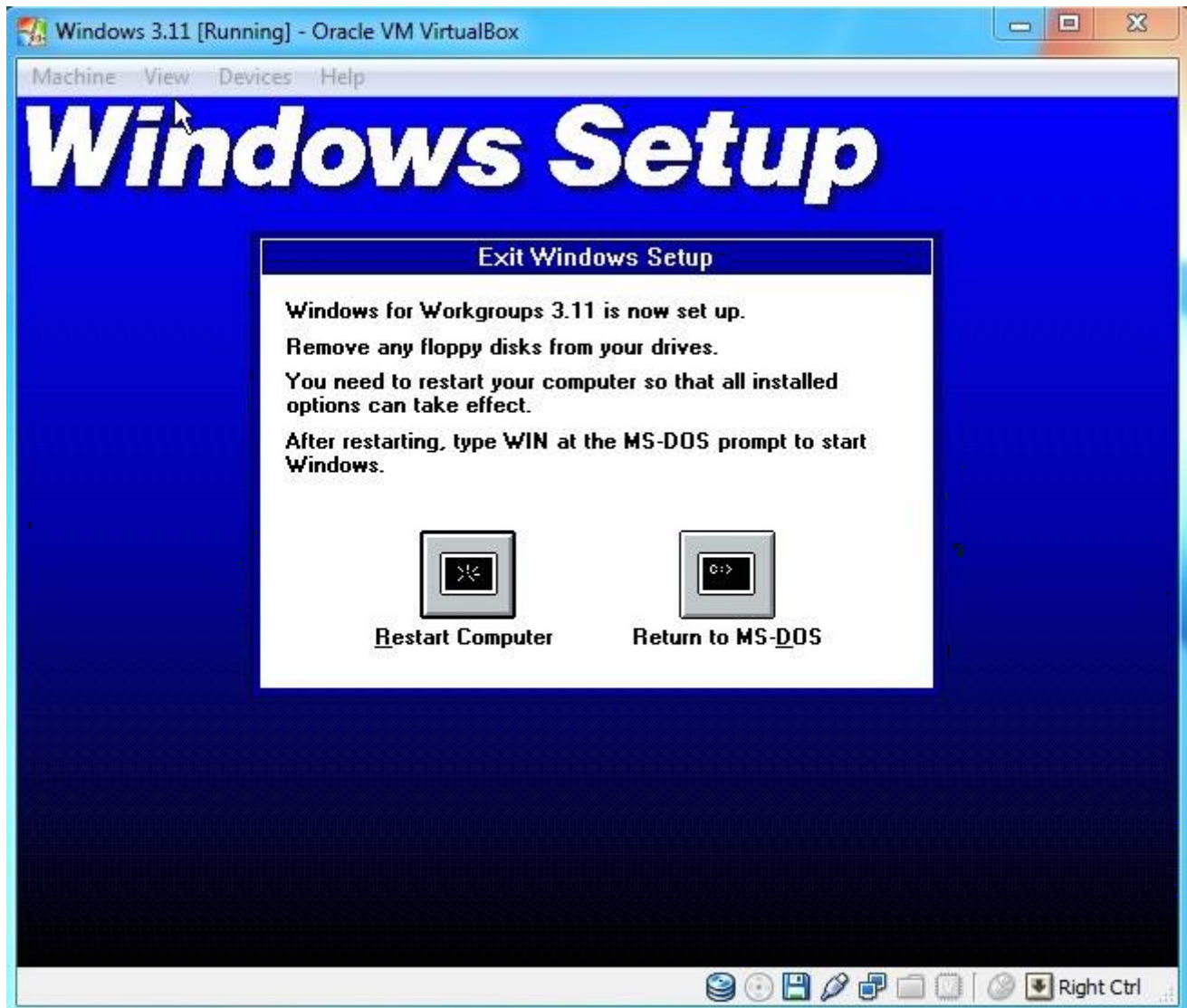
When it asks for Network Setup, just press continue (You have to configure this later).

When it asks for the application name for C:\DOS\EDIT.COM, leave the default "MS-DOS Editor" option enabled and press OK.

You can choose to either Run Tutorial or Skip Tutorial.

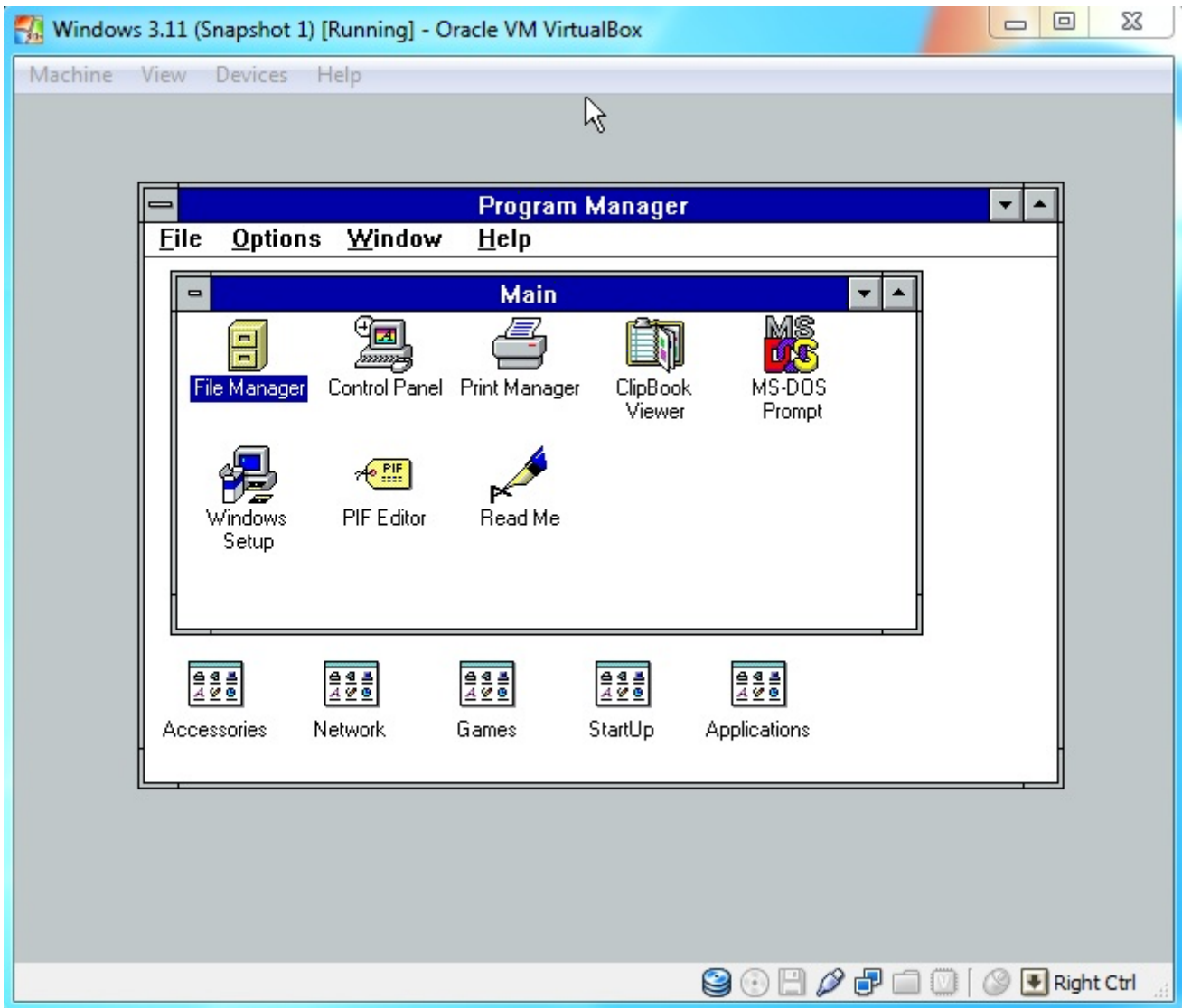
Setup complete!

Remove your last floppy Image and press Restart Computer.



311setupcomplete.jpg (49.87 KiB) Viewed 90133 times

After the reboot, you can type win into the MS-DOS command line to see your new, working Windows 3.11! It is fully usable at this point, but continue with the rest of this tutorial to enable network support, CD-ROM drivers, video drivers, sound drivers and Internet Explorer.



311windows.jpg (76.71 KiB) Viewed 90132 times

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Joined: 22. Aug 2012, 22:28

[Adding CD-ROM Support](#)

Post by [Glijnos](#) » 11. Mar 2021, 14:08

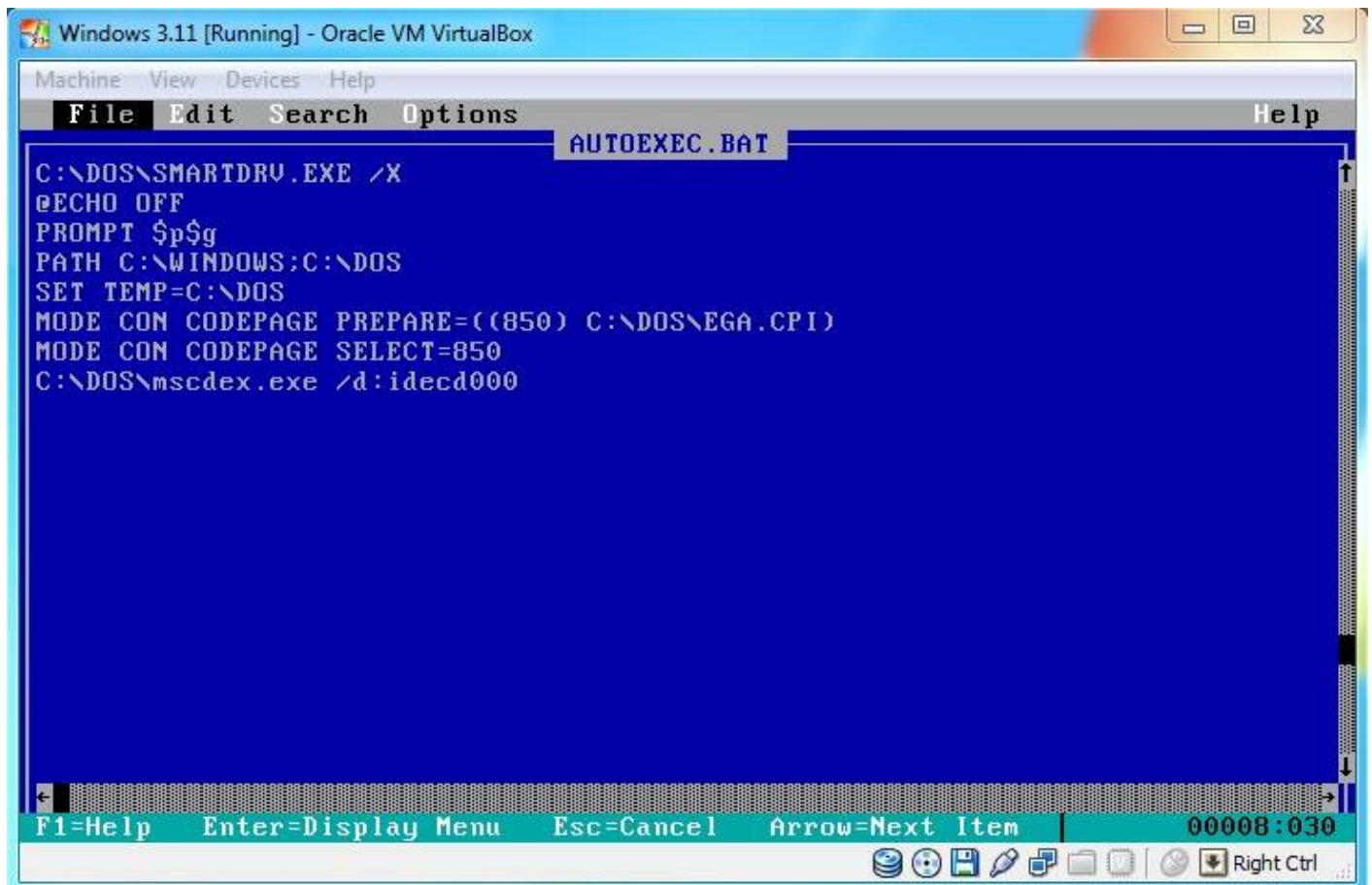
It works quicker to load all drivers and setup files on a single CD-ROM disk image than on multiple floppy's images, so the first thing we need to do is to configure the ms-dos/Win 3.11 installation to recognise the VirtualBox (virtual) CD-ROM drive.

Search the web for the file AOATAPI.SYS and Copy the AOATAPI.SYS file to a floppy disk image, or use the CD-ROM driver floppy Image that I already made for you.

Start your virtual machine. Load the floppy Image, and then type COPY A:\AOATAPI.SYS C: at the command prompt to copy the AOATAPI.SYS file to your C: drive.

After that you must edit your AUTOEXEC.BAT and CONFIG.SYS files.

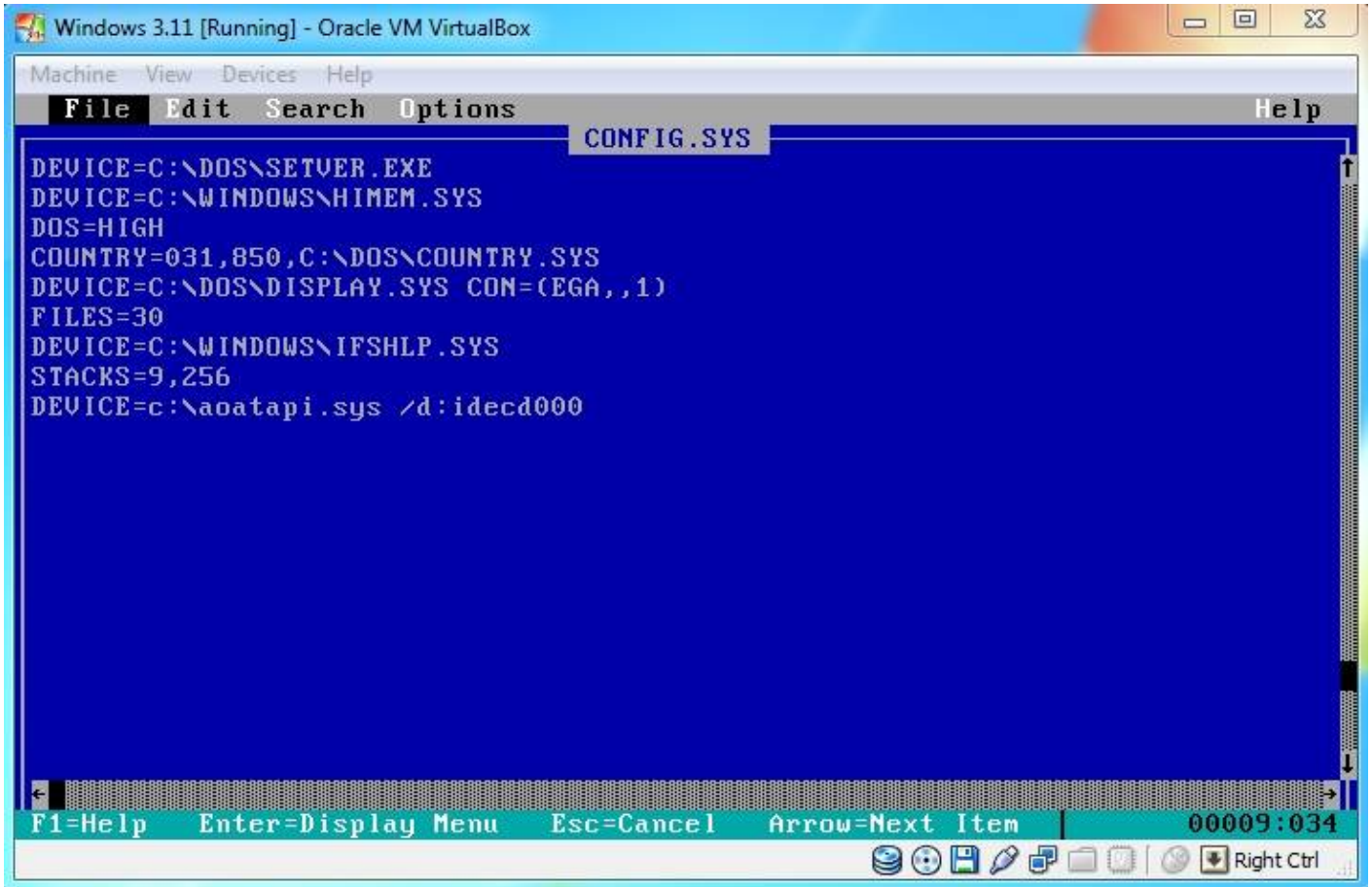
At the C:\ command prompt type EDIT AUTOEXEC.BAT. Place the line: c:\dos\mscdex.exe /d:idecd000 in the autoexec.bat and save, then exit (use the Alt key to activate the menu).



```
C:\DOS\SMARTDRV.EXE /X
@ECHO OFF
PROMPT $p$g
PATH C:\WINDOWS;C:\DOS
SET TEMP=C:\DOS
MODE COM CODEPAGE PREPARE=((850) C:\DOS\EGA.CPI)
MODE COM CODEPAGE SELECT=850
C:\DOS\mscdex.exe /d:idecd000
```

cdromeditautoexec.jpg (45.24 KiB) Viewed 90131 times

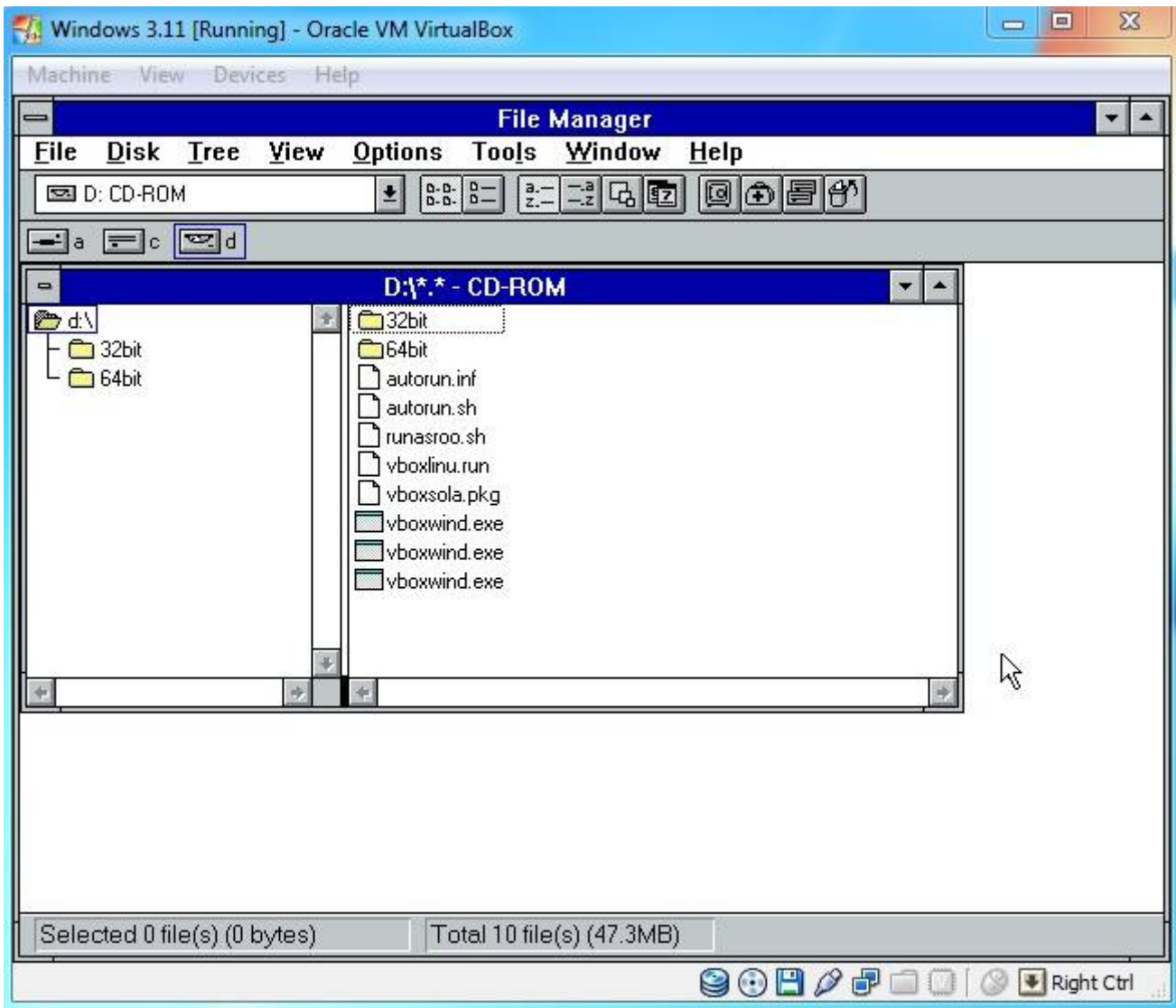
At the C:\ prompt type EDIT CONFIG.SYS. Place the line device=c:\aoatapi.sys /d:idecd000 in the config.sys and then save, then exit.



cdromeditconfig.jpg (45.65 KiB) Viewed 90131 times

Restart the virtual machine and go into windows. Open the File Manager and now you will see Drive D for the CD ROM.

I loaded the VirtualBox Guest additions for testing.



cdromloaded.jpg (45.47 KiB) Viewed 90131 times

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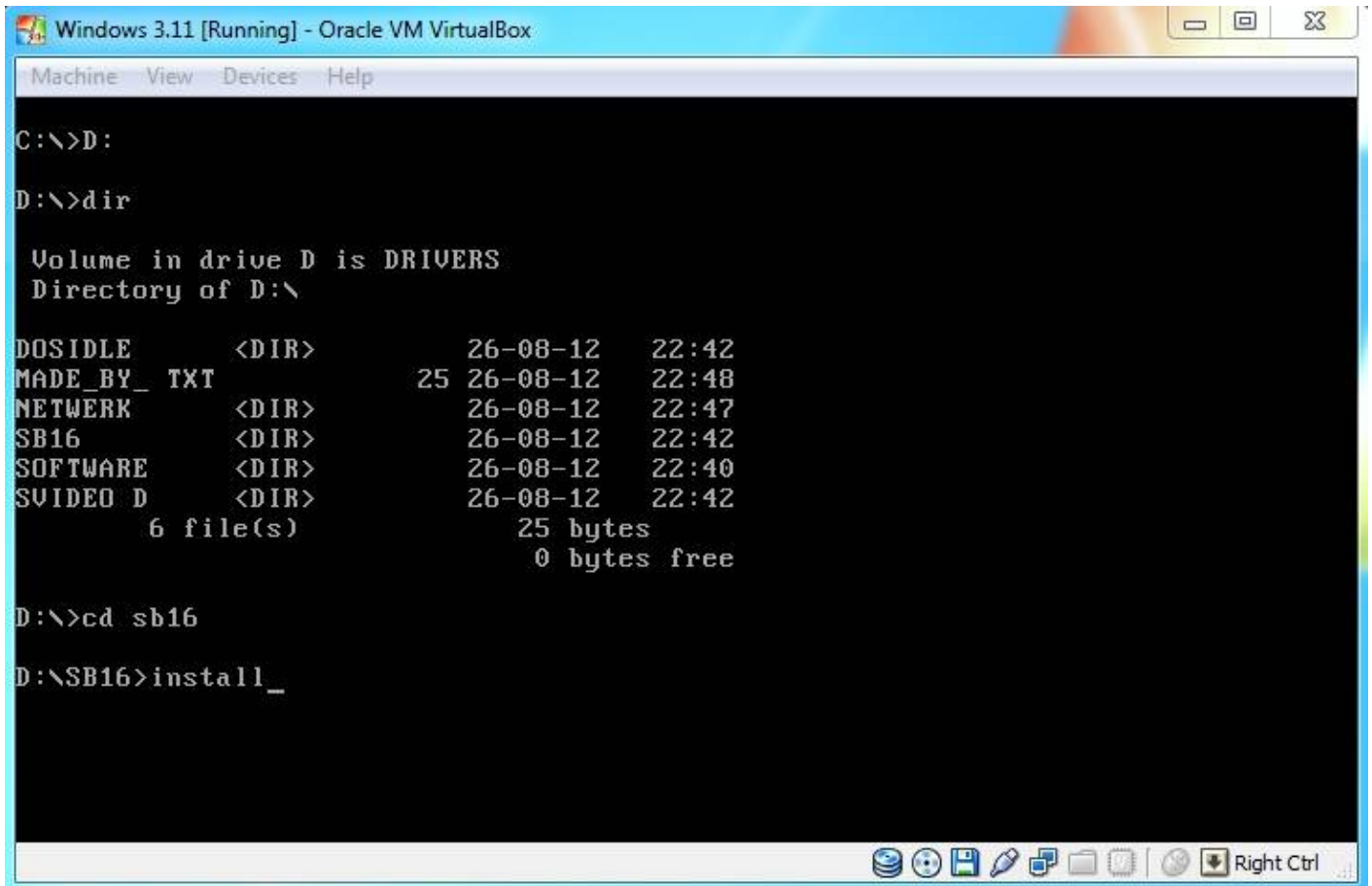
Joined: 22. Aug 2012, 22:28

[Sound Card Installation](#)

Post by [Glijnos](#) » 11. Mar 2021, 14:12

Search the web for the Sound Blaster 16/AWE for DOS/Windows 3.1 drivers and Copy them to a CD-ROM disk image or floppy disk image, or use the CD-ROM disk image that I already made for you. Start-up MS-DOS to a C:\ prompt. Load the floppy or CD image, access the SoundBlaster 16 drivers on the A: or D: drive, then type install.

Note: On my driver CDROM type CD sb16 at the command prompt and then install.



```
C:\>D:
D:\>dir

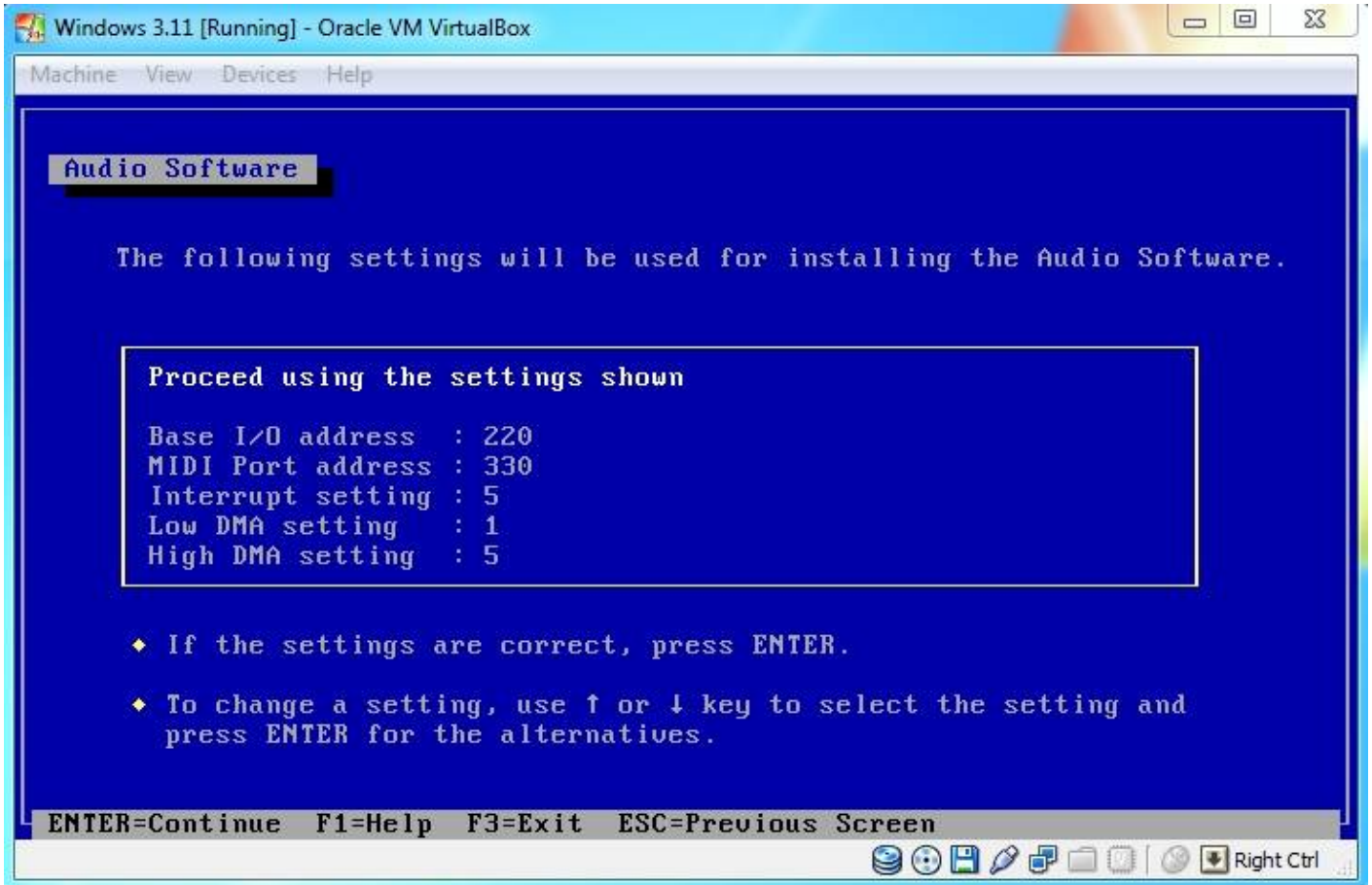
Volume in drive D is DRIVERS
Directory of D:\

DOSIDLE      <DIR>          26-08-12   22:42
MADE_BY_ TXT      25 26-08-12   22:48
NETWORK      <DIR>          26-08-12   22:47
SB16         <DIR>          26-08-12   22:42
SOFTWARE     <DIR>          26-08-12   22:40
SVIDEO D     <DIR>          26-08-12   22:42
             6 file(s)      25 bytes
             0 bytes free

D:\>cd sb16
D:\SB16>install_
```

soundinstallcmd.jpg (32.32 KiB) Viewed 90243 times

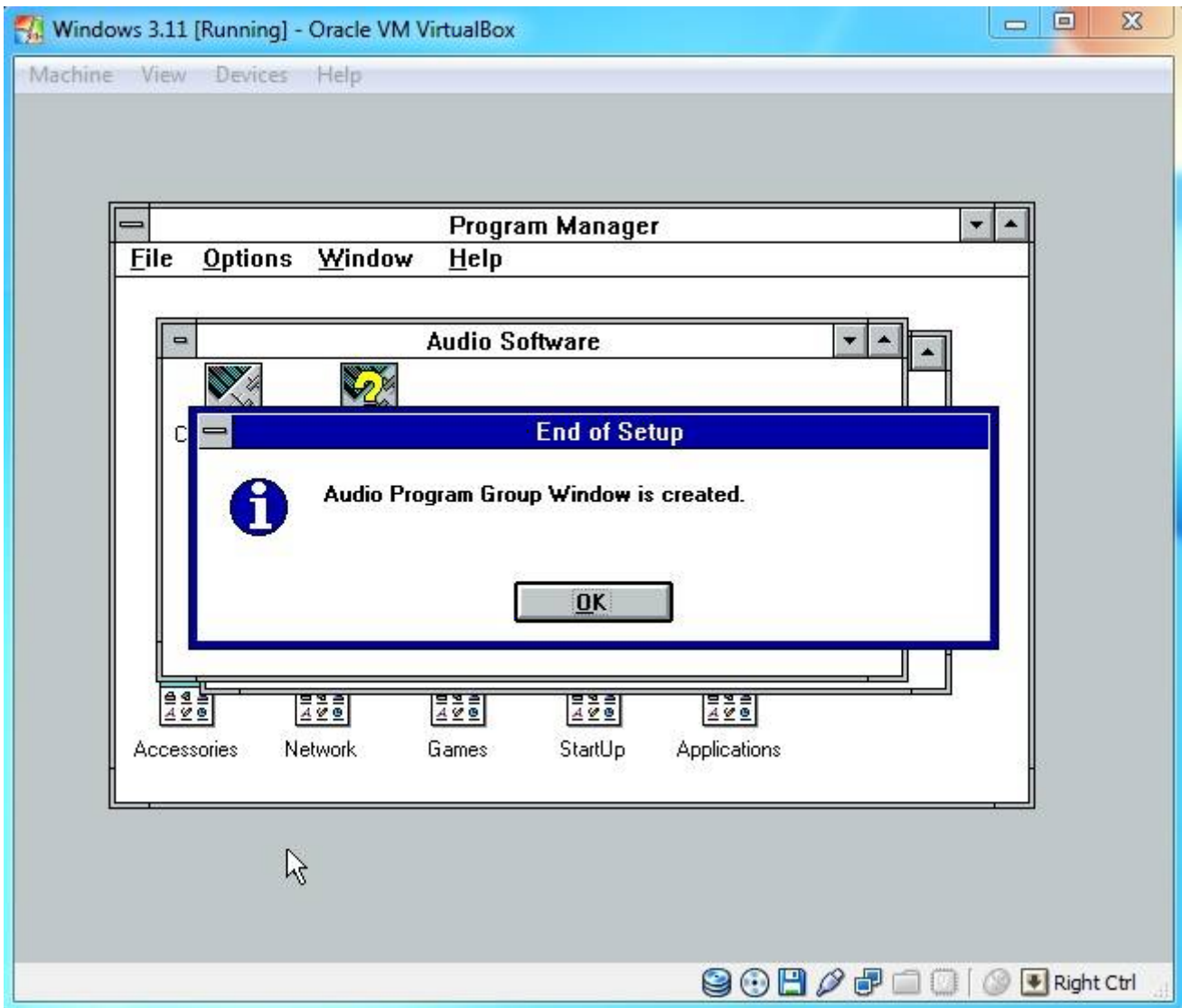
Accept all of the defaults in the installation.



soundinstallsettings.jpg (45.51 KiB) Viewed 90243 times

When the installation is complete you can run windows with sound.

When you run windows it will create a Audio Program Group automatically.



soundwindows311.jpg (38.2 KiB) Viewed 90243 times

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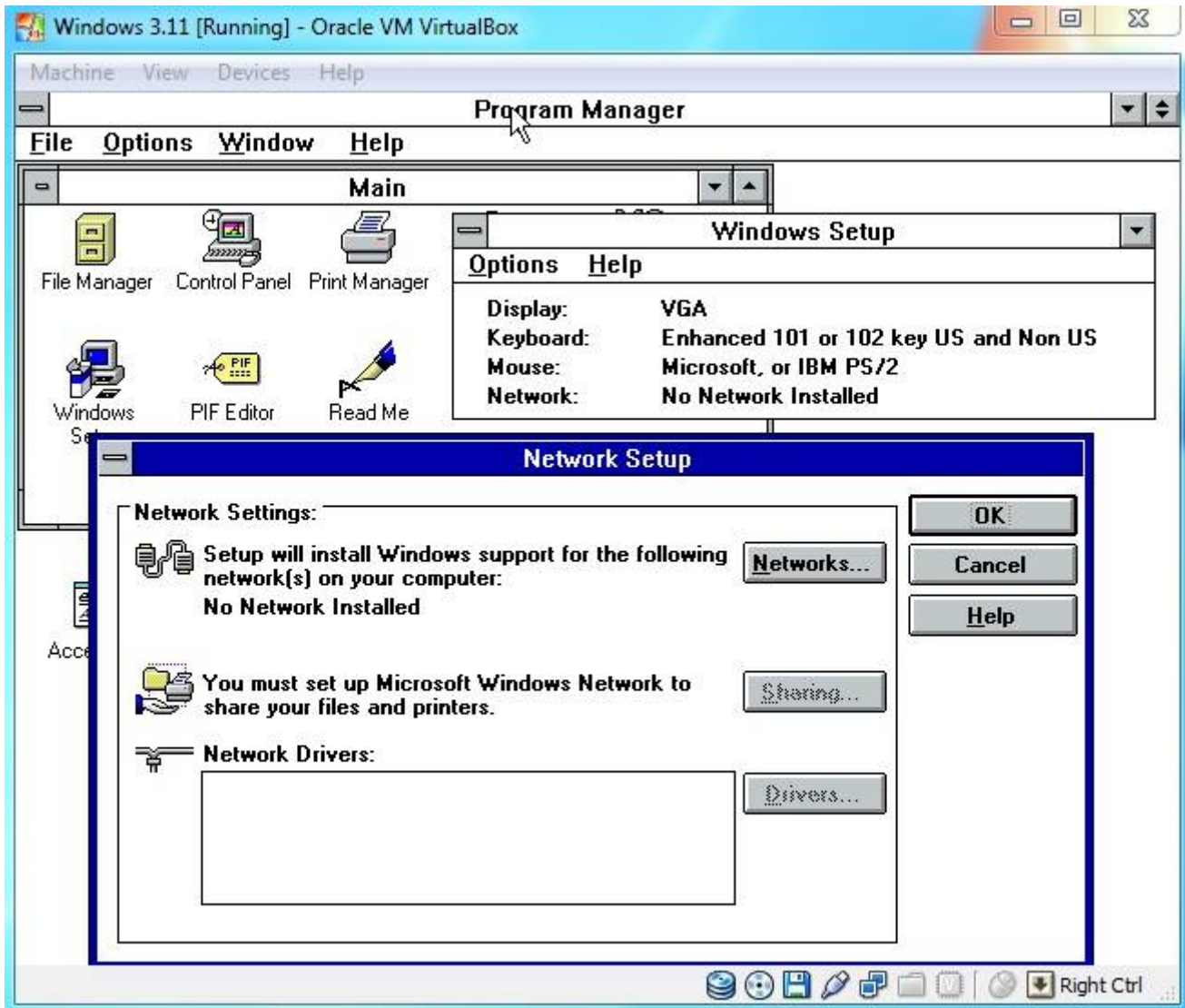
Joined: 22. Aug 2012, 22:28

[Network Installation](#)

Post by [Glijnos](#) » 11. Mar 2021, 14:16

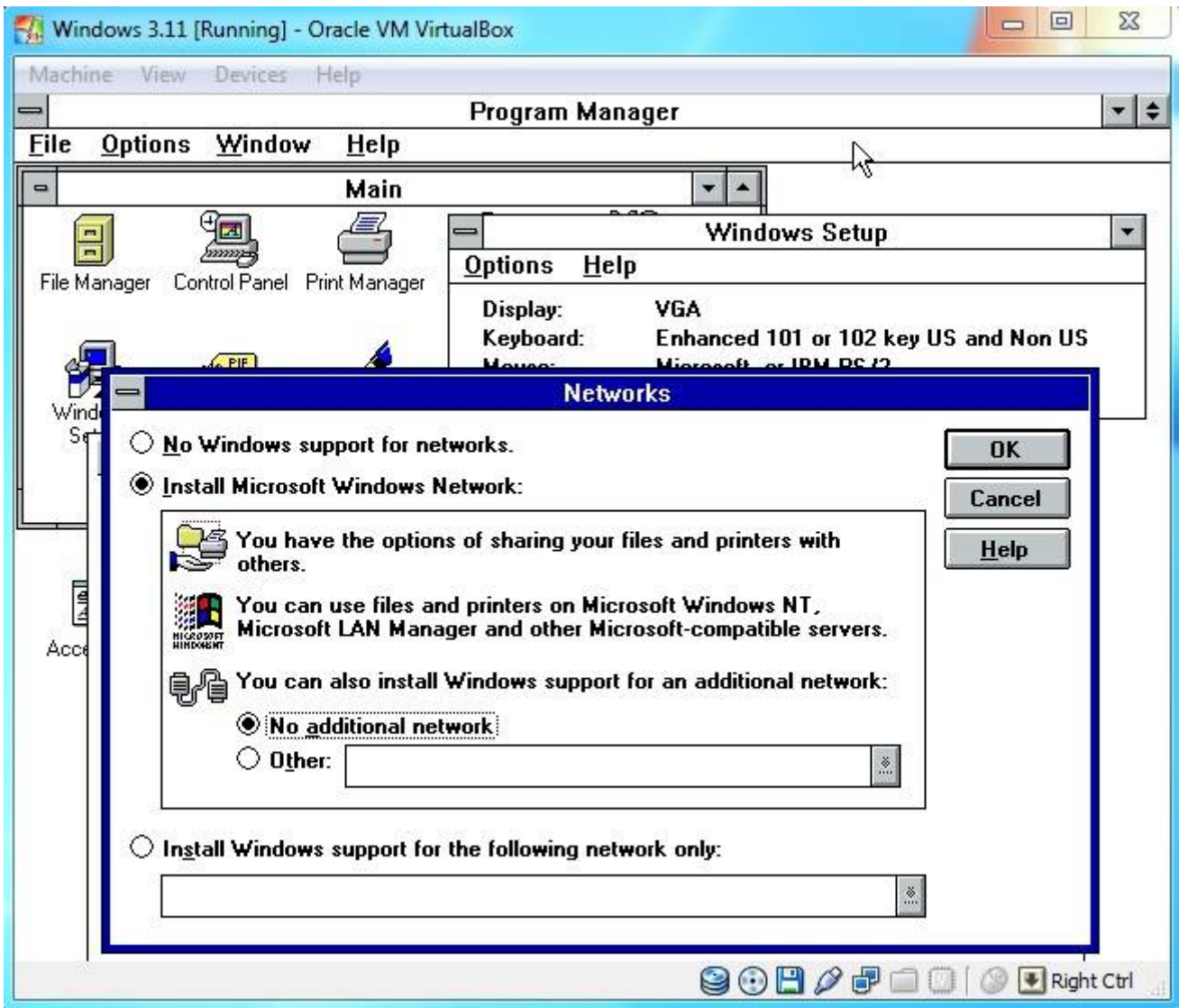
Search the web for the "AMD PCNET Family (NDIS2/NDIS3)" driver and the " Microsoft TCP-IP-32 3.11b"drivers for Windows 3.11. Copy them to a CD-ROM disk Image or floppy disk Image, or use the CD-ROM disk Image that I already made for you.

Boot into windows 3.11 and open the program group "Main". In "Main" open the program "Windows Setup", click "options" and then "Change Network Settings".



networksetup.jpg (60.12 KiB) Viewed 90132 times

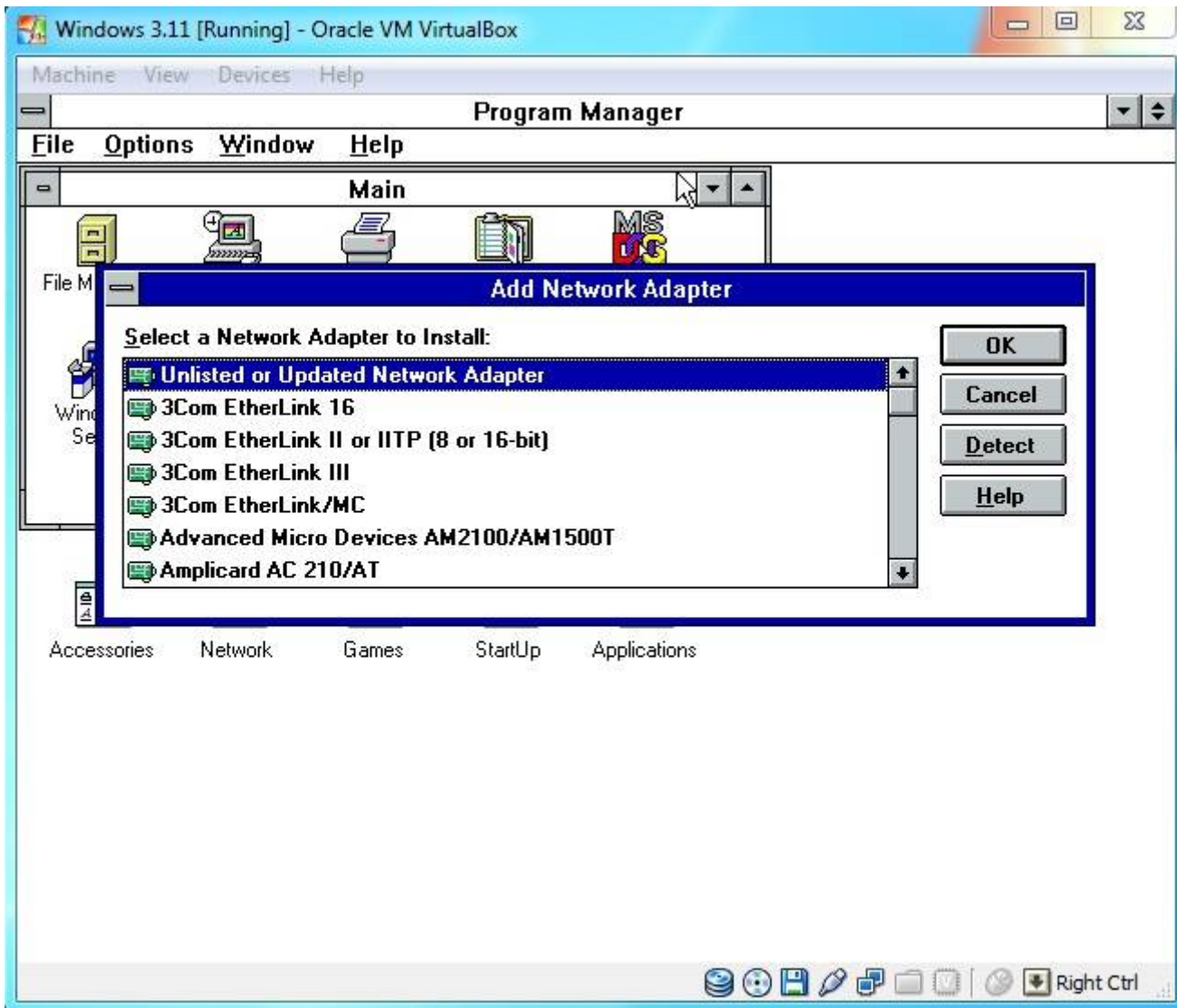
On the "Network Setup" screen click on networks. On the next screen select "Install Microsoft Windows Network" and hit "OK".



networkinstallnetwork.jpg (65.24 KiB) Viewed 90132 times

Click "OK" again on the "Network Setup" screen.

On the "Add Network Adapter" screen select the "Unlisted or Updated Network Adapter" option and click "OK".



networksetupunlisted.jpg (51.35 KiB) Viewed 90132 times

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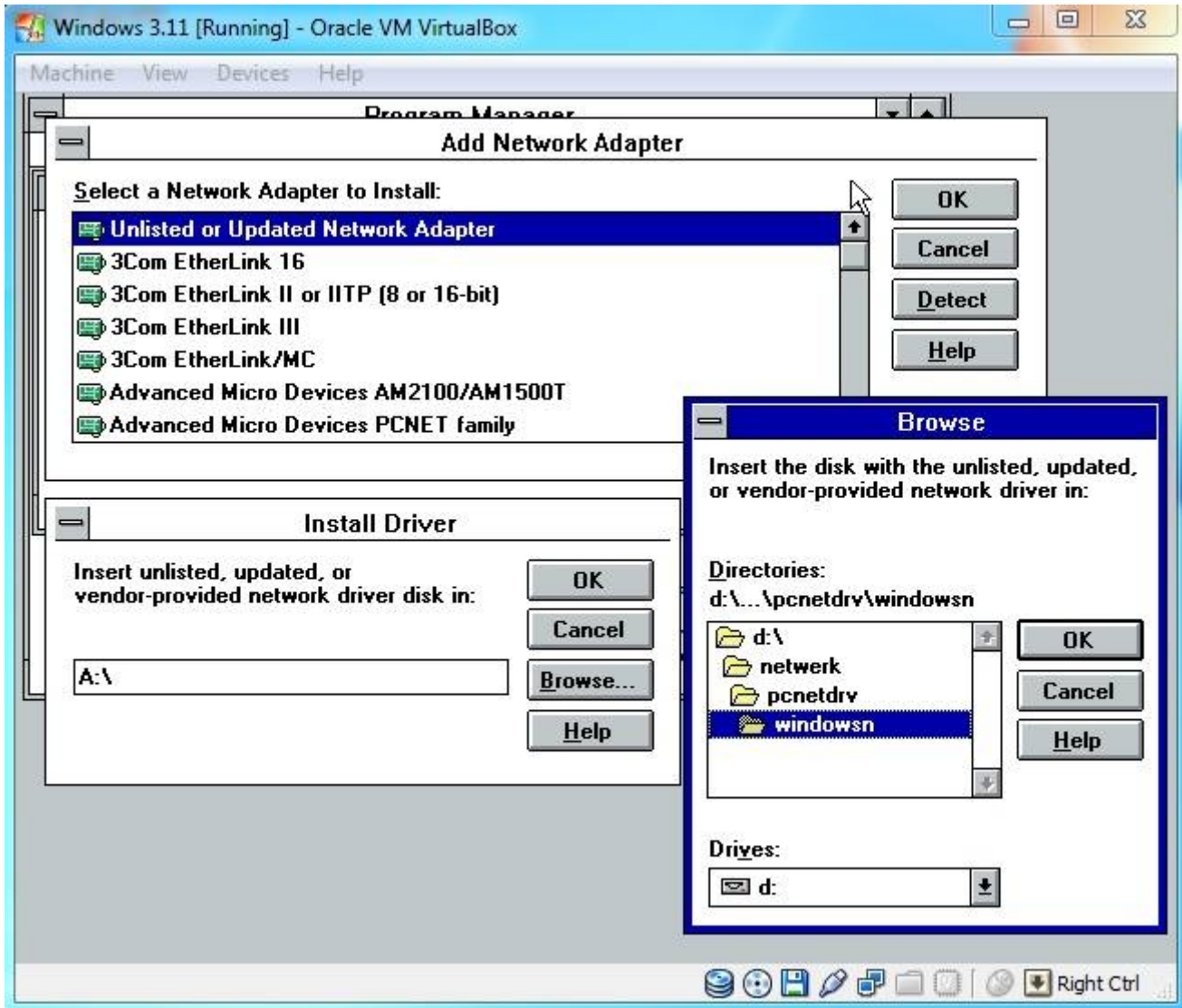
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Joined: 22. Aug 2012, 22:28

[Network Installation \(Continued\)](#)

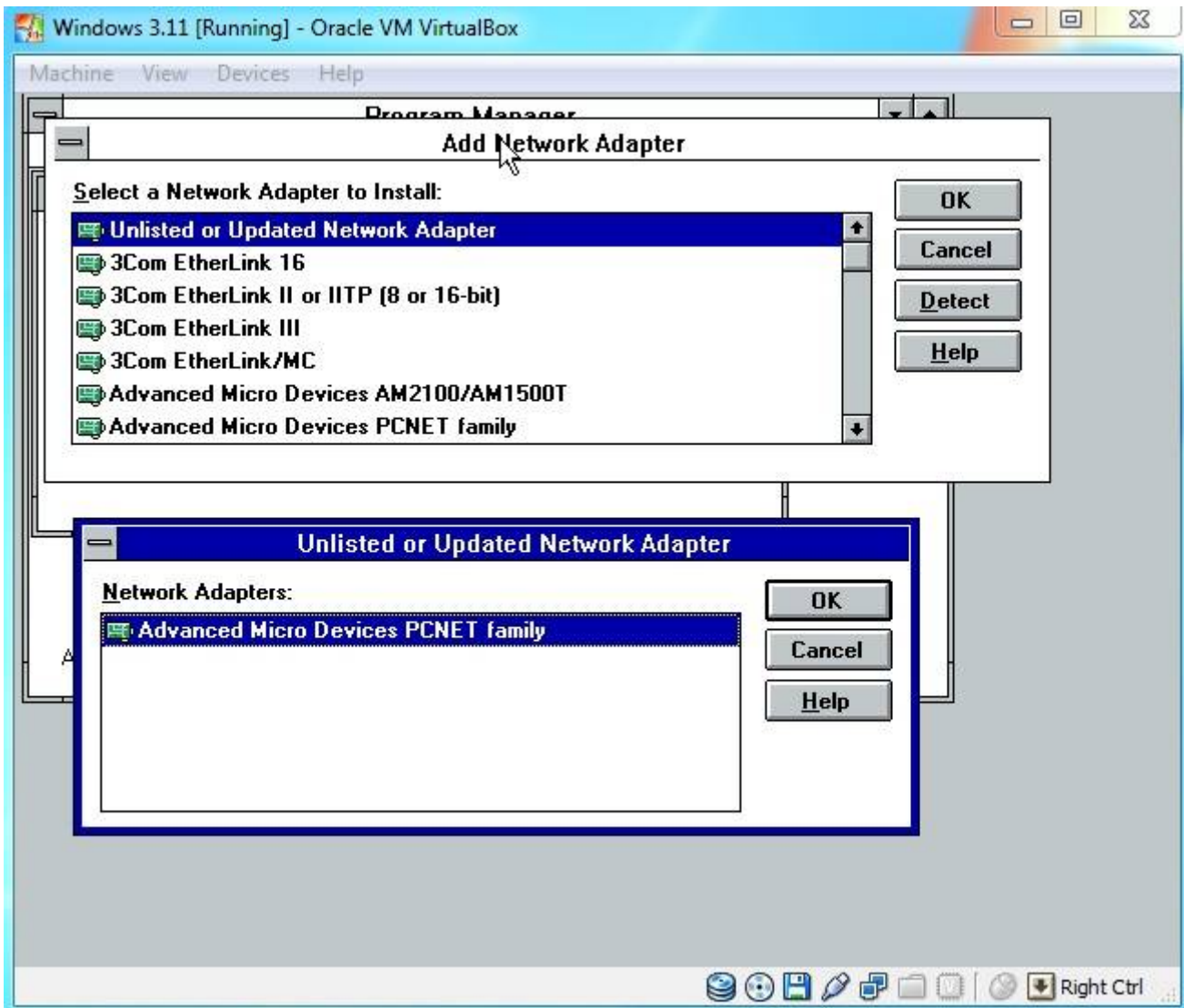
Post by [Glijnos](#) » 11. Mar 2021, 14:19

On the CDROM drive or Floppy disk Image select the directory where you stored the " AMD PCNET Family " drivers --> windowsnetdrv (windowesn) and click "OK".



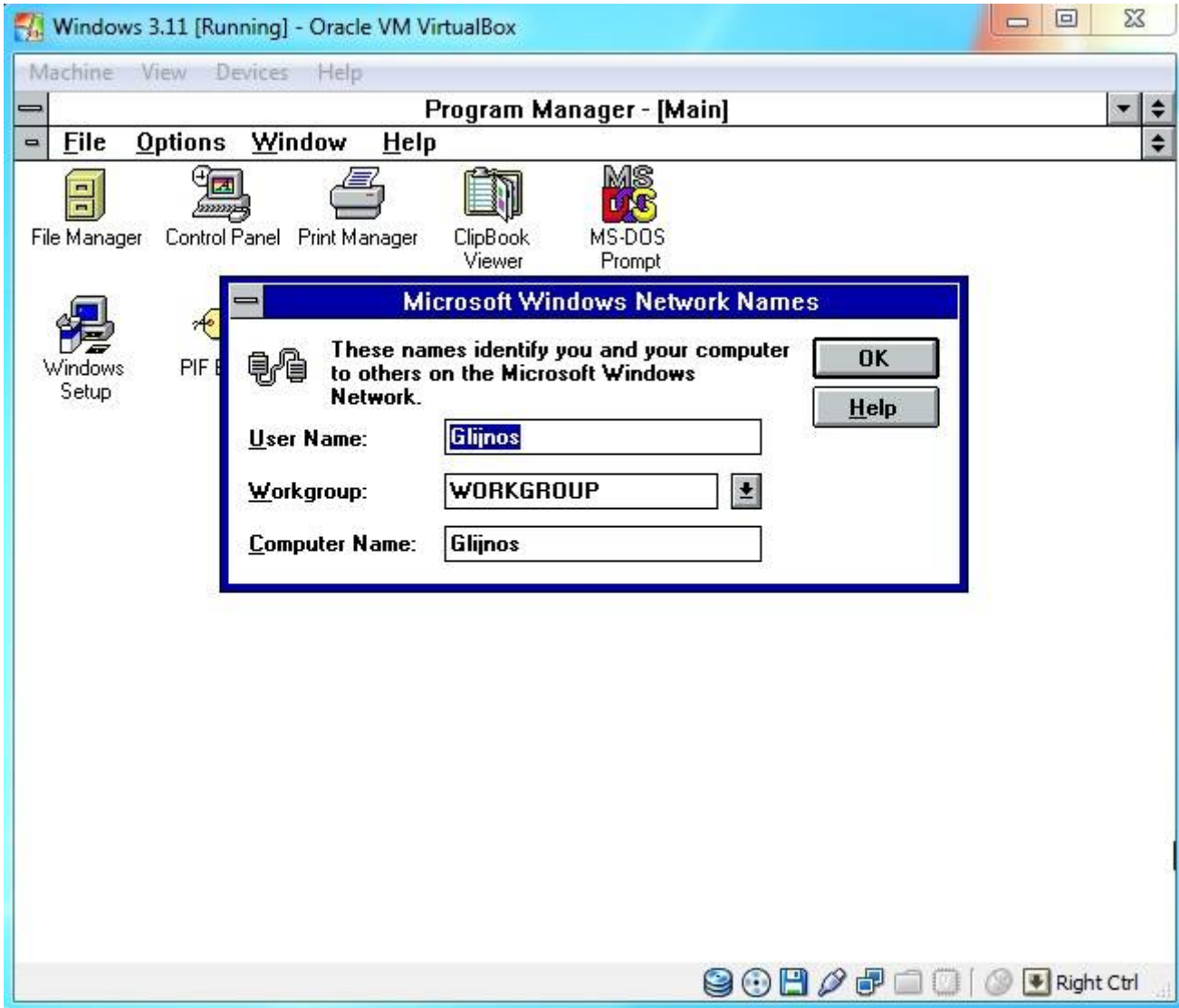
networkdriverlocationse.jpg (61.76 KiB) Viewed 90132 times

And "OK" again, then select the "Advanced Micro Devices PCNET family" driver and click "OK" again.



networkdriveramdselect.jpg (51.05 KiB) Viewed 90132 times

Enter an User Name, Workgroup and Computer Name or keep the defaults and click "OK" again.



networkcomputename.jpg (42.49 KiB) Viewed 90132 times

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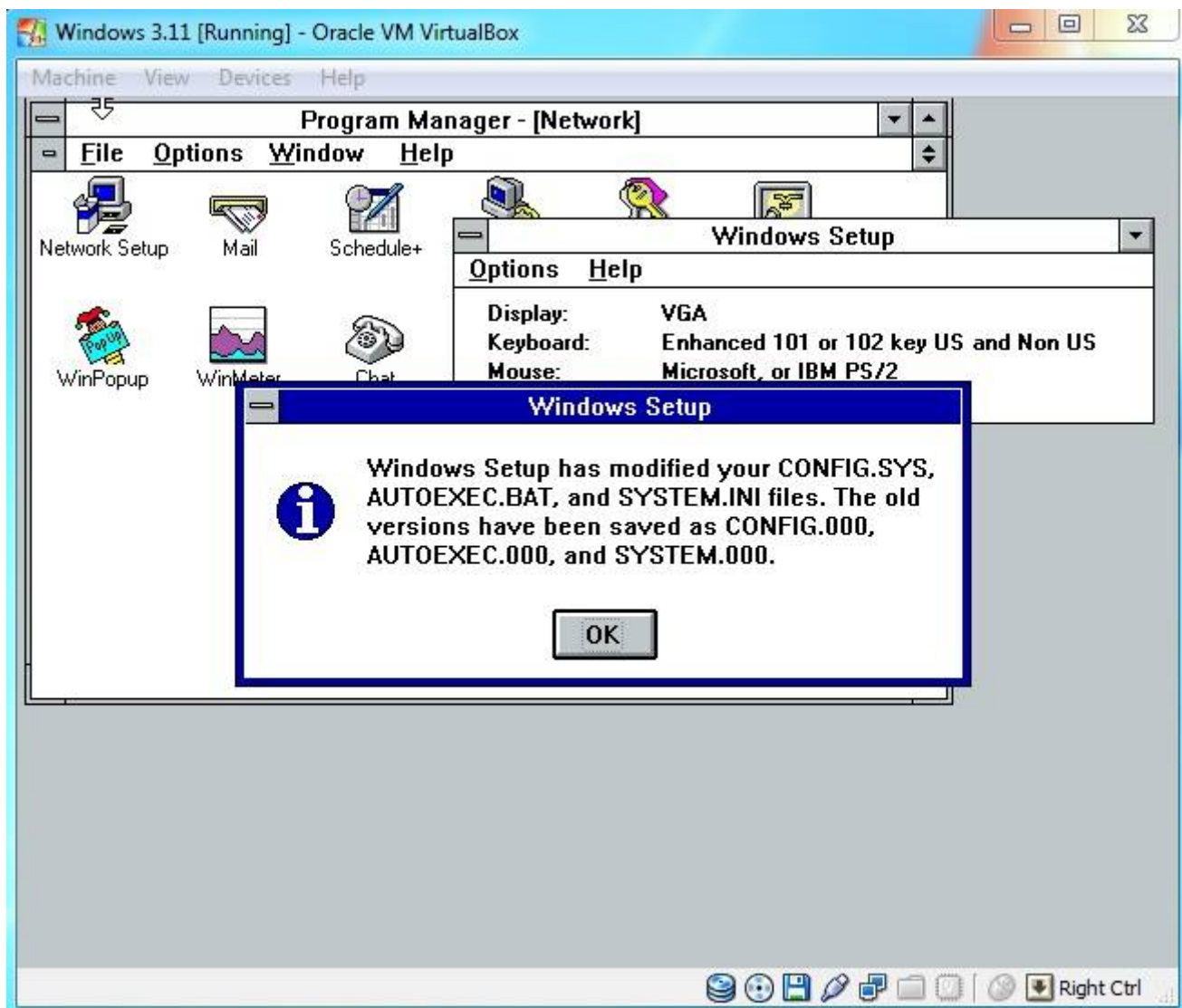
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[Network Installation \(Continued\)](#)

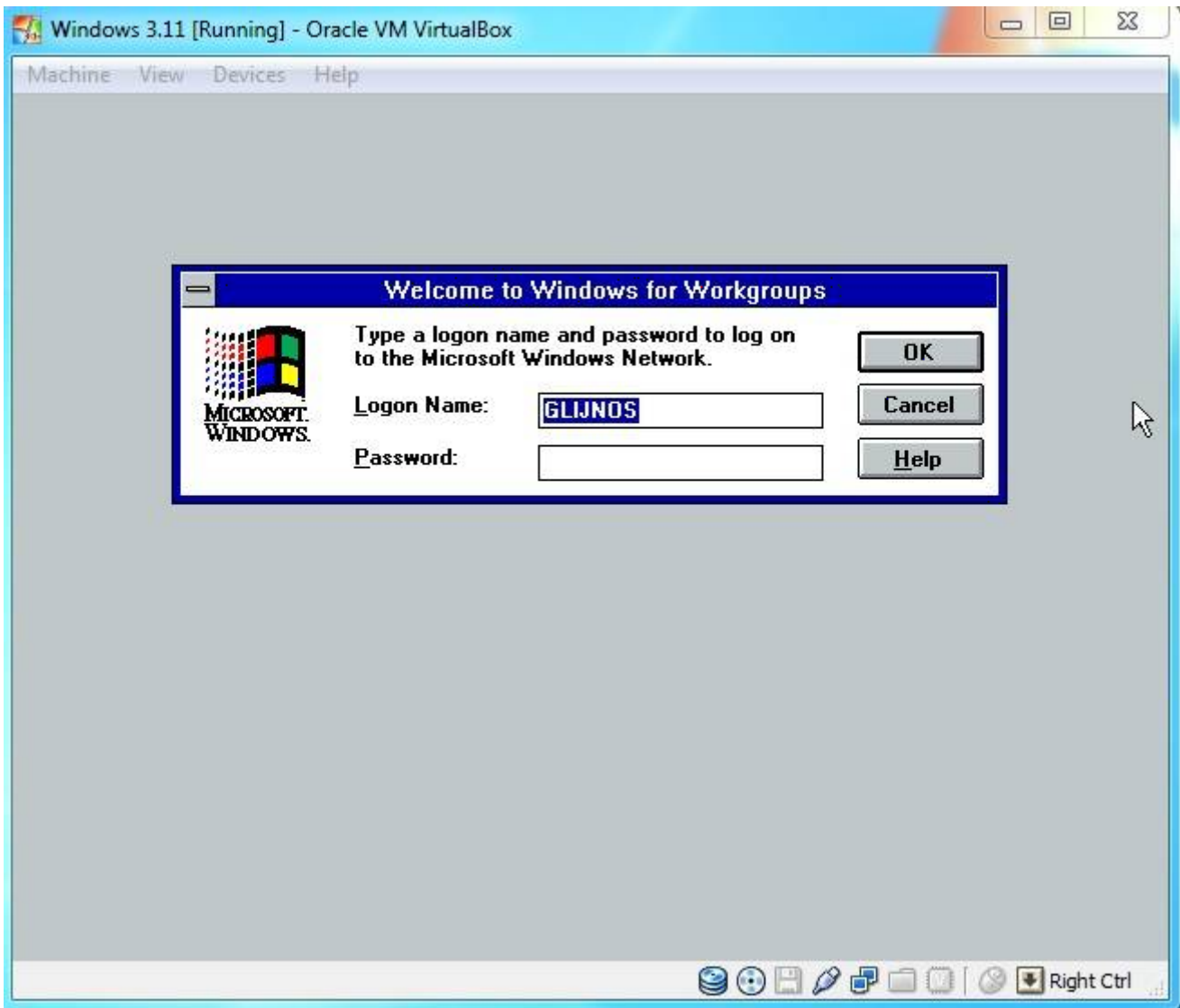
Post by [Glijnos](#) » 11. Mar 2021, 14:22

When the setup asks for your Windows 3.11 Disk 7 and 8 floppy, load them and Click "OK".
When the installation is complete click "OK" and then click "Restart Computer".
Don't forget to remove your windows 3.11 installation floppy!



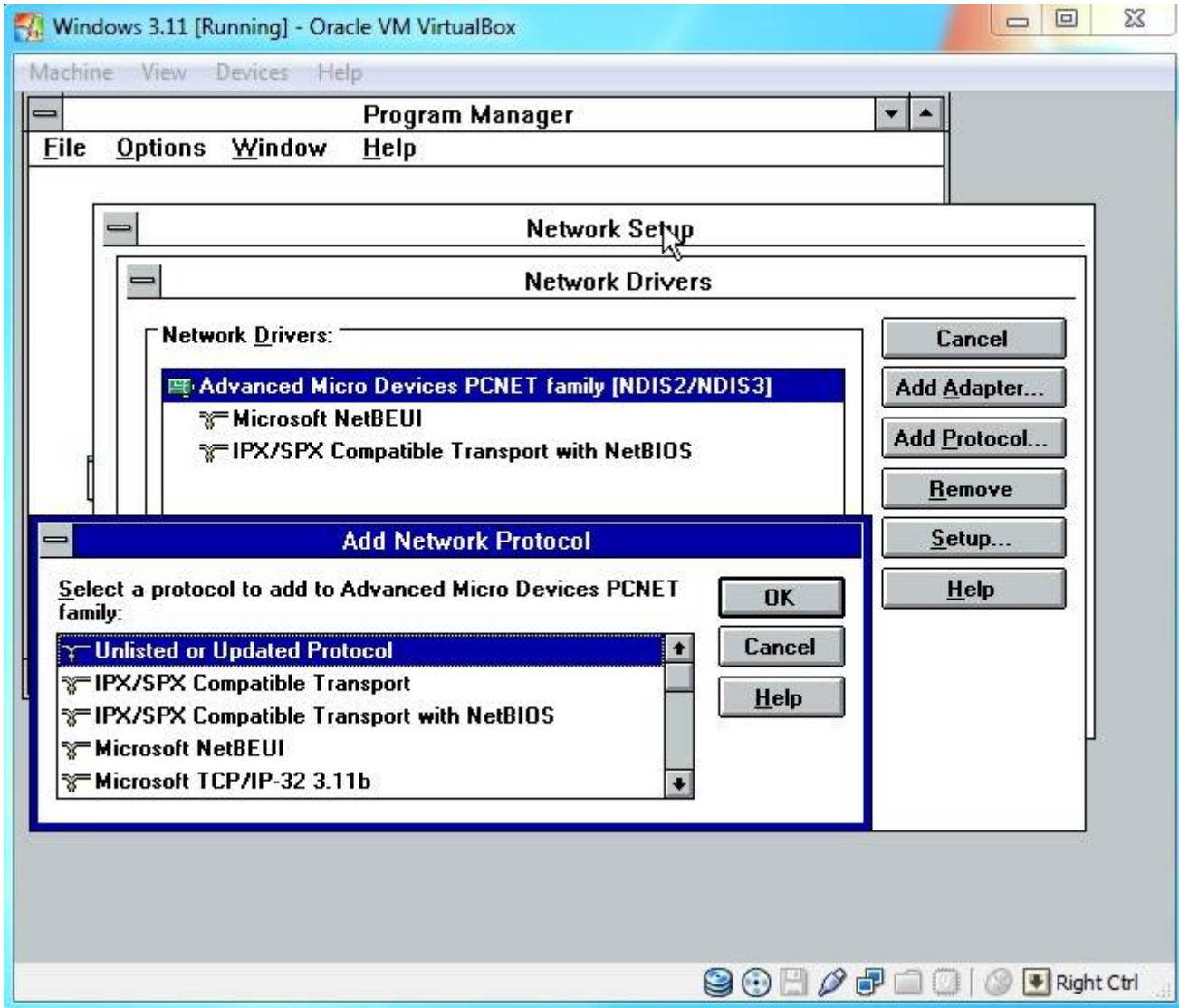
networksetupfinishmodif.jpg (50.58 KiB) Viewed 90086 times

When the reboot is complete start Windows Again. You get the messenger: welcome to Windows for Workgroups. Click "OK" to make a new password or "Cancel" the start the Program Manager.



welcomecq.jpg (31.09 KiB) Viewed 90086 times

Go to the program group "Network" and click "Network Setup". On the Network setup click on "Drivers", then "Add protocol" and select "Unlisted or Updated Protocol", then hit "ÖK".



networkprotocolsetup.jpg (59.64 KiB) Viewed 90086 times

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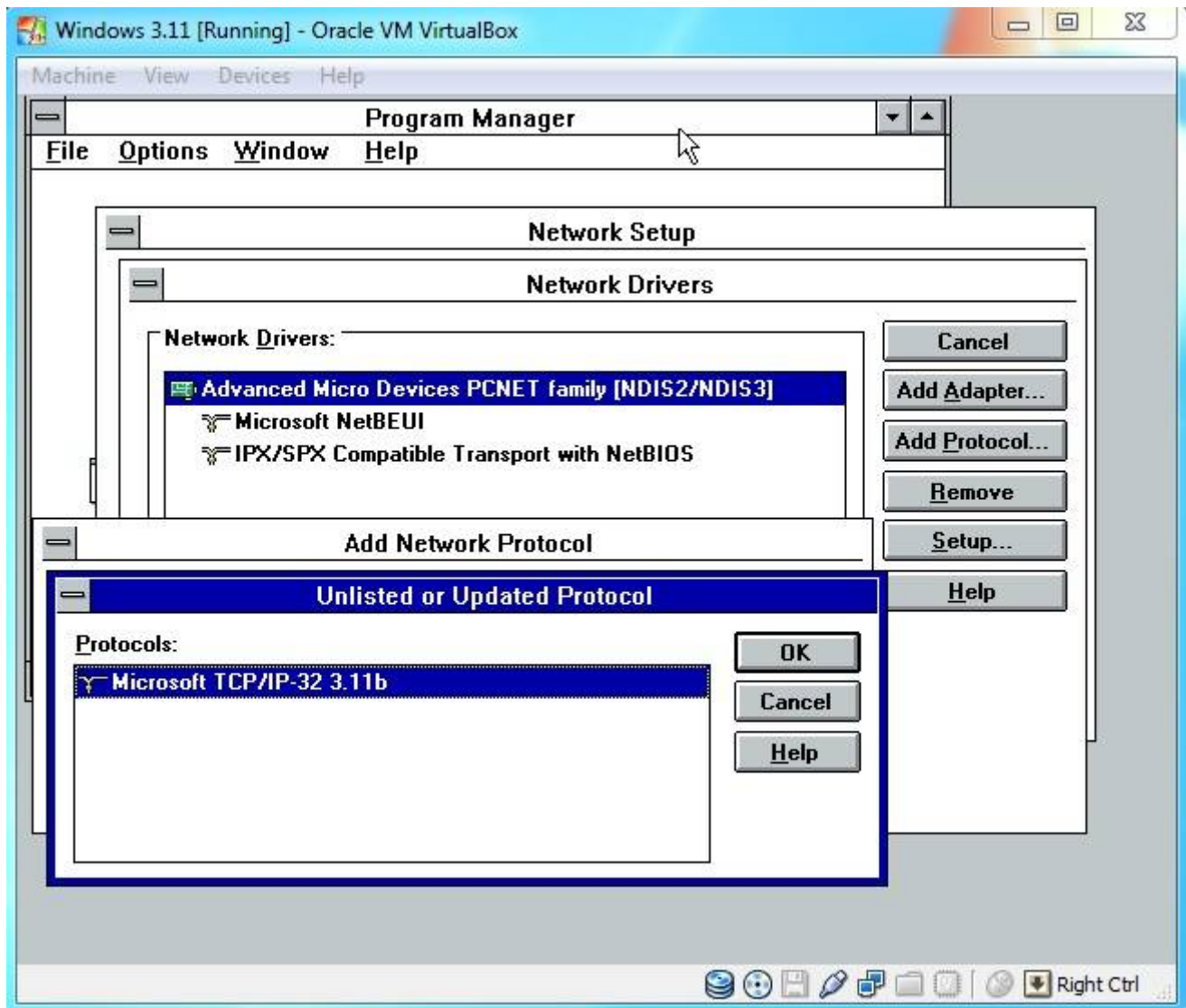
Joined: 22. Aug 2012, 22:28

[Network Installation \(Continued\)](#)

Post by [Glijnos](#) » 11. Mar 2021, 14:24

On the CDROM drive or Floppy disk Image select the directory where you stored the "Microsoft tcpip311b" drivers and click "OK".

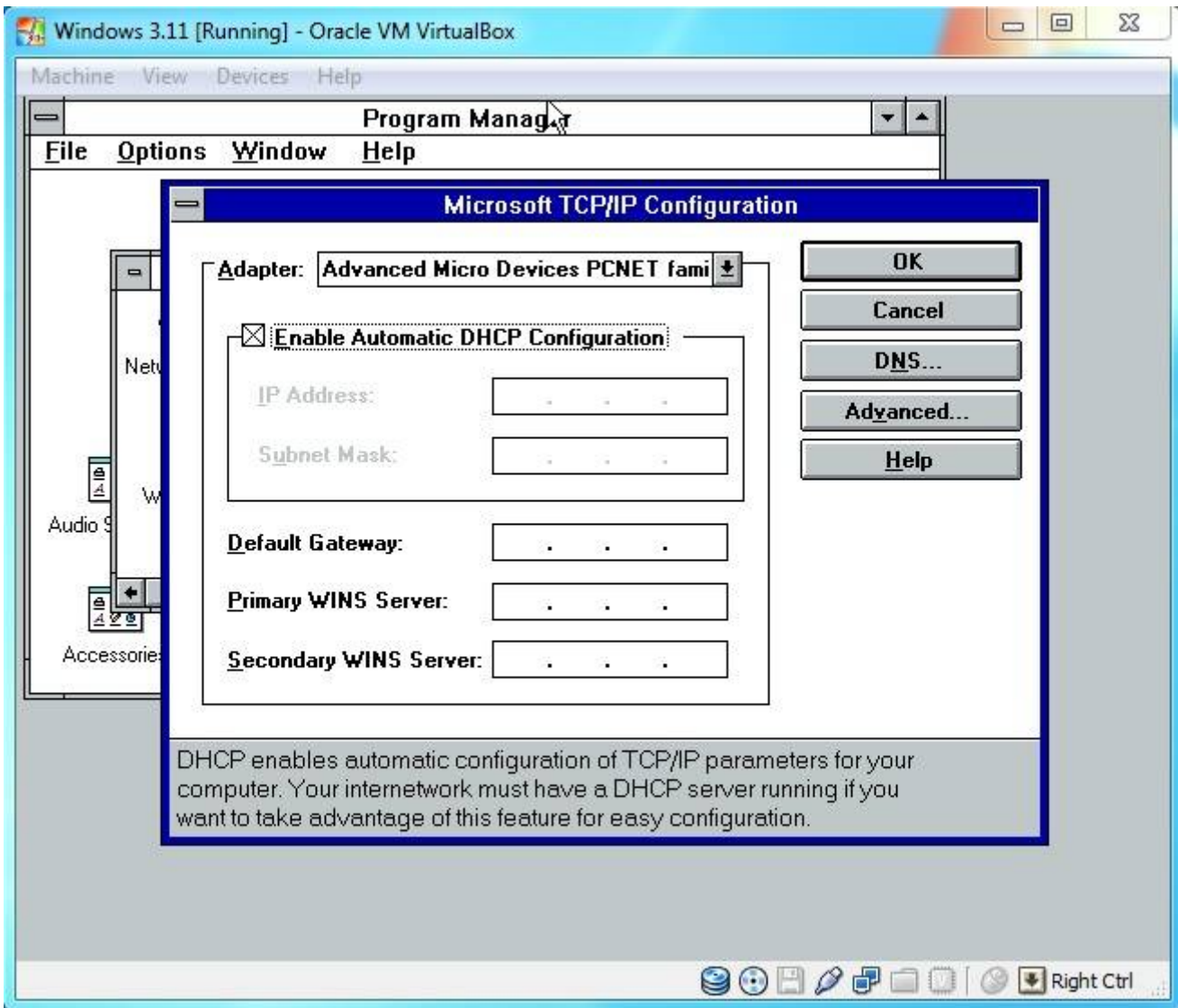
Select the Microsoft TCP/IP32 3.11b protocol and click "OK" again.



networkmicrosoftprotoco.jpg (53.93 KiB) Viewed 89827 times

When the installation is complete click "Close", after that click "OK".

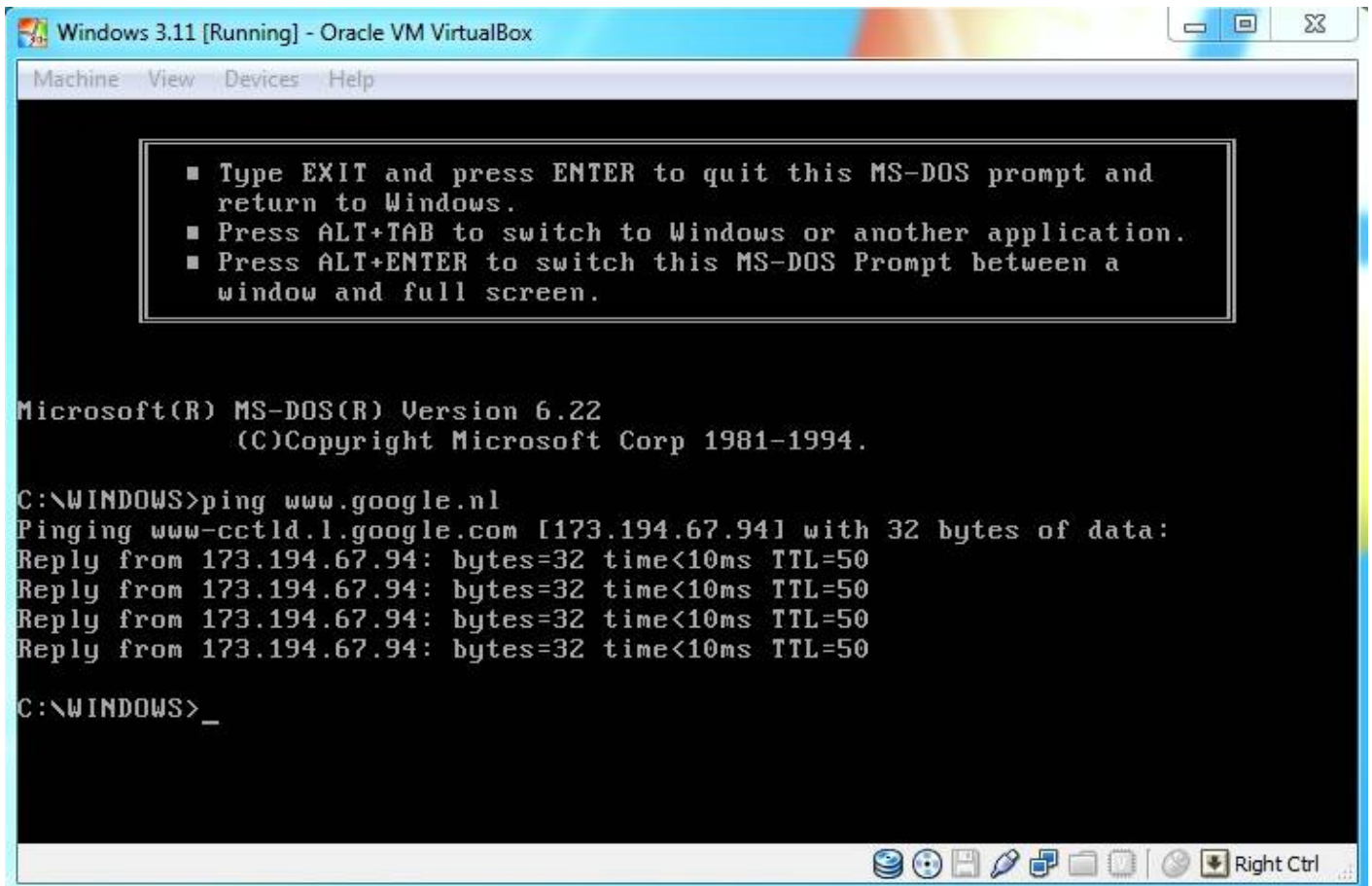
When the "Microsoft TCP/IP configuration" window pops up select "Enable Automatic DHCP configuration" or use your own configuration and hit "OK".



networkdhcp.jpg (53.92 KiB) Viewed 89827 times

Click on "Restart Computer" to finish the installation.

To confirm that networking is working at this stage, try opening a MS-DOS Prompt from the "Main" group and type "ping <http://www.google.nl>".



networkping.jpg (54.55 KiB) Viewed 89827 times

If you get a reply, then your network installation is working correctly. Type exit to return to windows.

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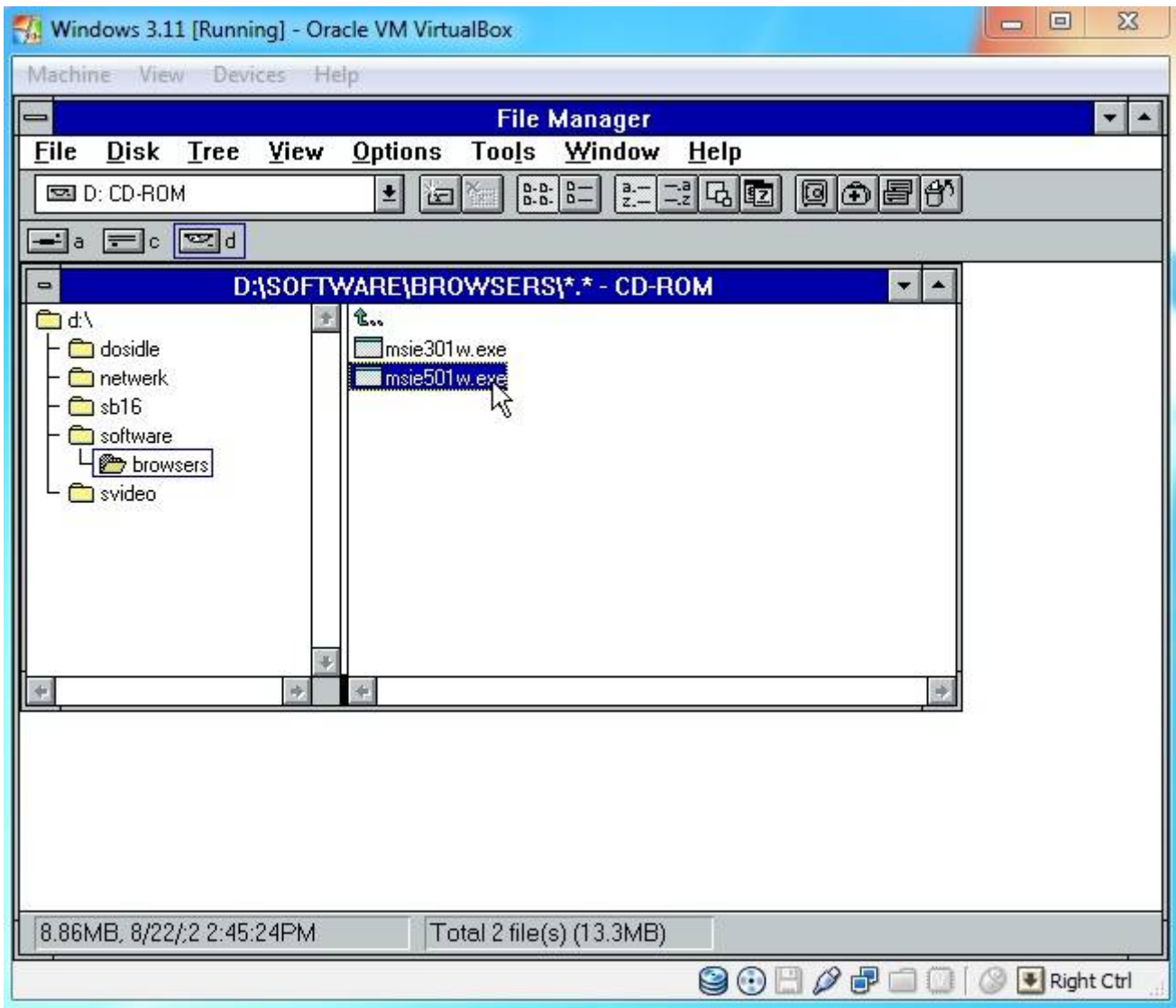
[Installing Internet Explorer 5.01](#)

[Post](#) by [Glijnos](#) » 11. Mar 2021, 14:28

To browse the internet you need to install a browser.

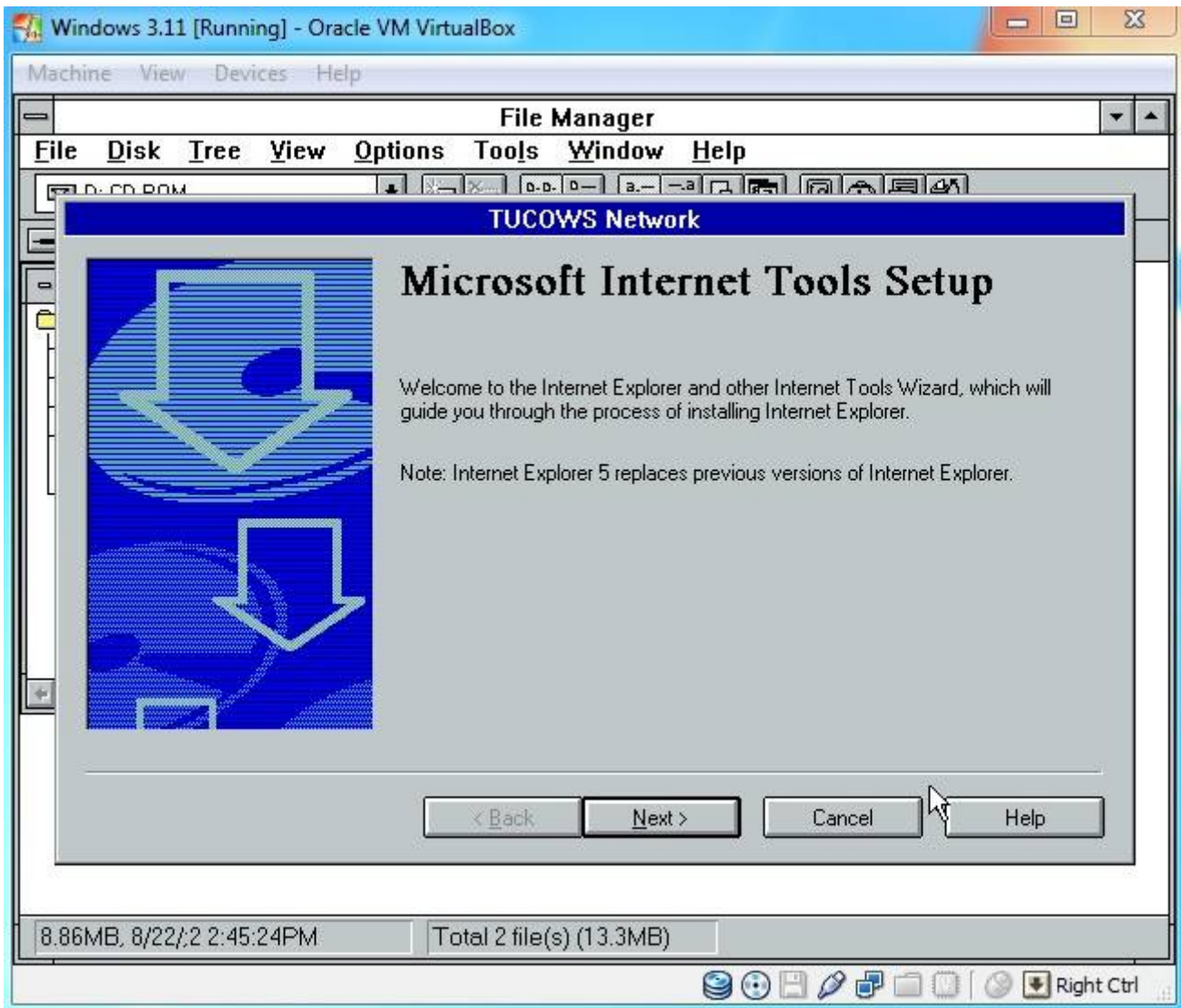
Search the web for the "Internet Explorer 5 (windows 3.11)" and copy the installer to a CD-ROM disk Image. You can also use the CD-ROM disk image that I made for you.

In windows open the File Manager, open your D:\ drive and run the msie501w311 installer.



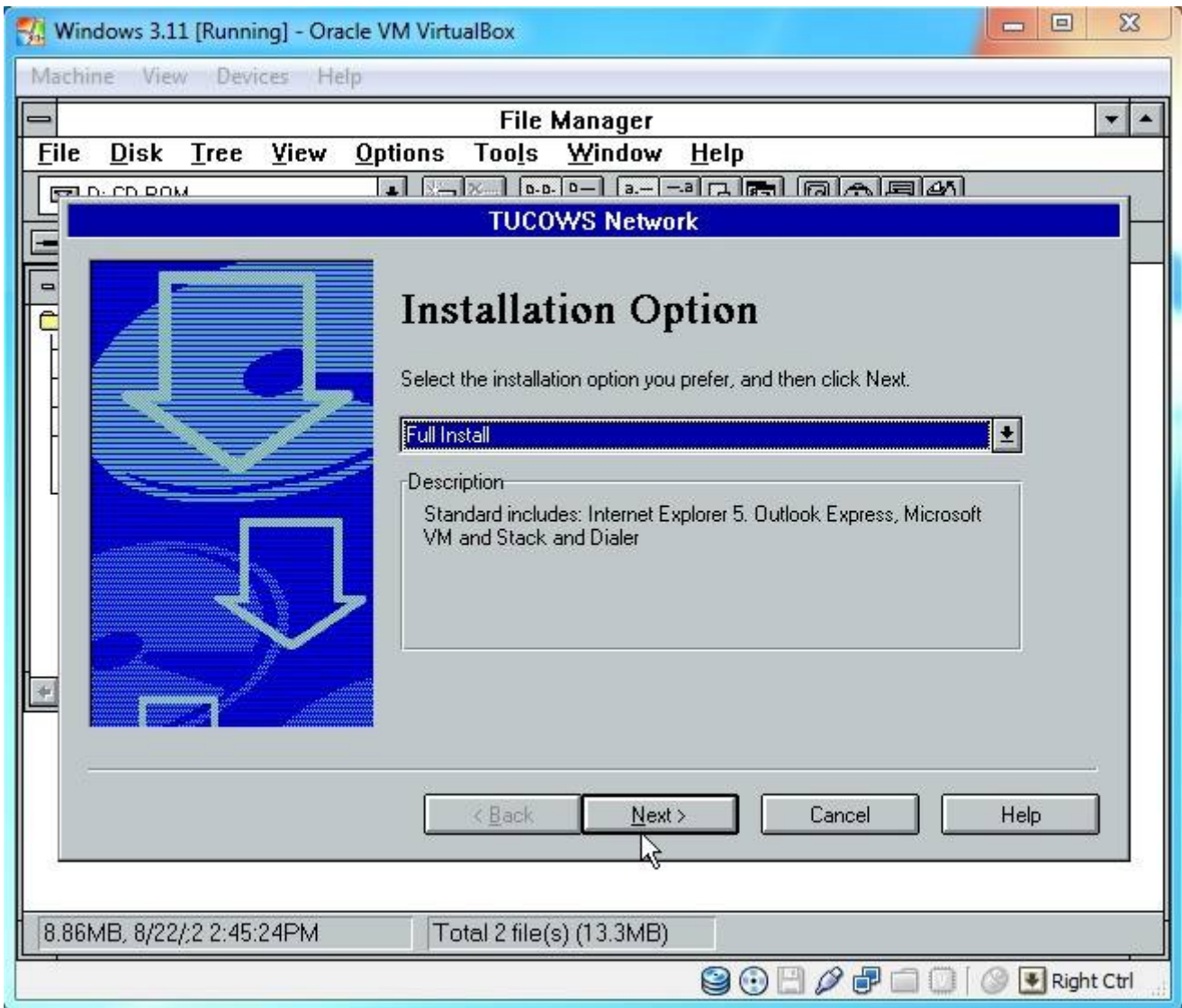
ie5setupbrowse.jpg (45.28 KiB) Viewed 89869 times

WinZip will extract the installation files and start the setup.



ie5setup.jpg (58.7 KiB) Viewed 89869 times

Click "Next >" and accept the agreement. Click "Next >" again.
Use the default Full install and click "Next >".



ie5setupfullinstall.jpg (61.88 KiB) Viewed 89869 times

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