Linux Debian 12 Virtual Machine Creation

This is an example of creating a VMware Virtual Machine from Debian 12 install media.

Preuss 11/30/2023

OS: Debian 12
OS RAM:8 GB
OS Disk: 25 GB
Software Version: VMware Player 17.5.0 is used.
Other Notes: Windows 11 is the VMware Player host.

File Edit View History Bookmarks Tools Help

Downloading Debian CD/DVD i

https://www.debian.org/CD/http-ftp/#stable

Official CD/DVD images of the *"stable"* release

To install Debian on a machine without an Internet connection, it's possible to use CD images (700 MB each) or DVD images (4.7 GB each). Download the first CD or DVD image file, write it using a CD/DVD recorder (or a USB stick on i386 and amd64 ports), and then reboot from that.

The **first** CD/DVD disk contains all the files necessary to install a standard Debian system.
To avoid needless downloads, please do **not** download other CD or DVD image files unless you know that you need packages on them.

CD
The following links point to image files which are up to 700 MB in size, making them suitable for writing to normal CD-R(W) media:

amd64, arm64, armel, armhf, i386, mips64el, mipsel, ppc64el, s390x

DVD
The following links point to image files which are up to 4.7 GB in size, making them suitable for writing to normal DVD-R/DVD+R and similar media:

amd64, arm64, armel, armhf, i386, mips64el, mipsel, ppc64el, s390x, source

Be sure to have a look at the documentation before you install. **If you read only one document** before installing, read our Installation Howto, a quick walkthrough of the installation process. Other useful documentation includes:

- Installation Guide, the detailed installation instructions
- Debian-Installer Documentation, including the FAQ with common questions and answers
- Debian-Installer Errata, the list of known problems in the installer

The presentation at this time prefers to download the complete install DVD to the local computer.

The presentations computer is using an Intel processor. The presentation downloads the "amd64" option.

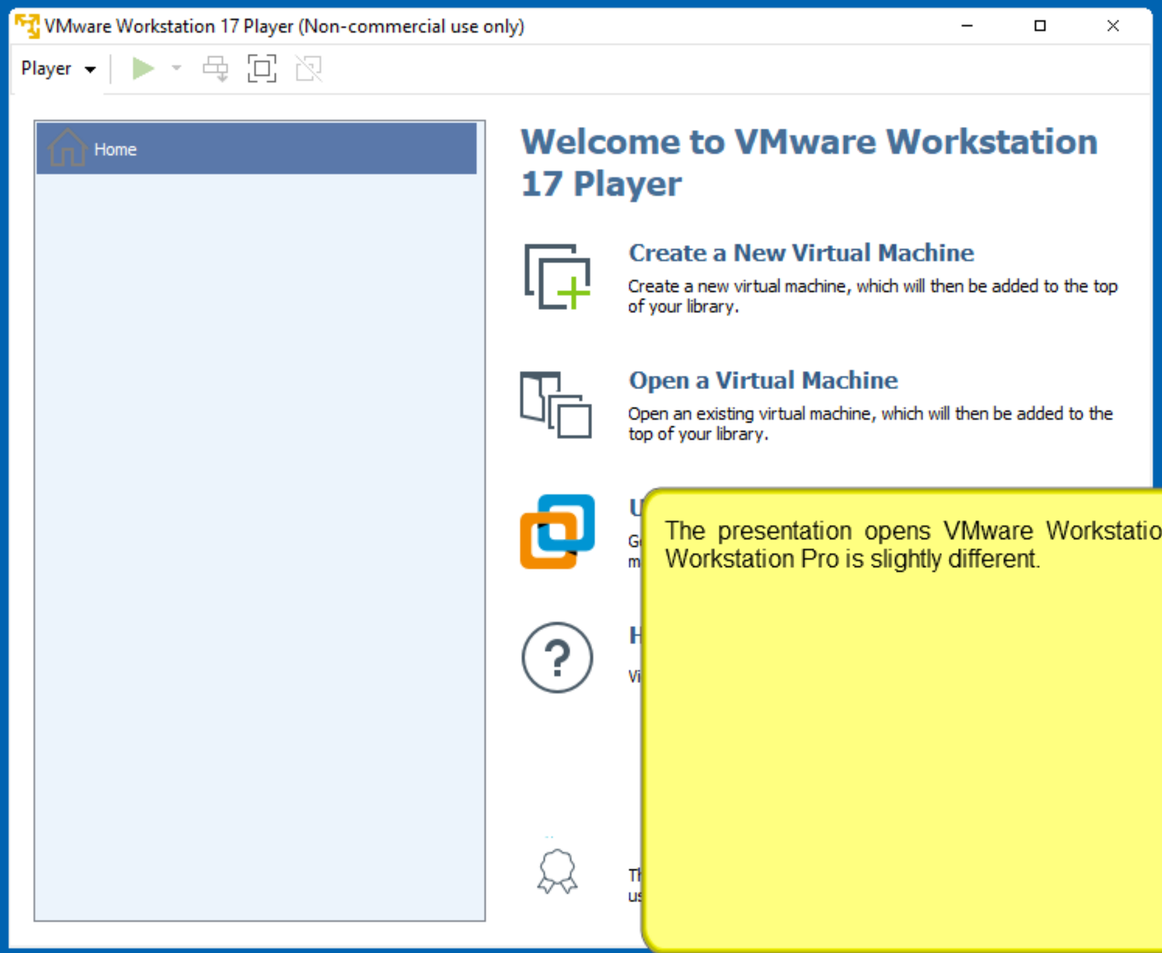
Registered mirrors of the *"debian-cd"* archive

Note that **some mirrors are not up to date** — before downloading, check the version numbe that many sites do not mirror the full set of images (especially the DVD images) due to its size.

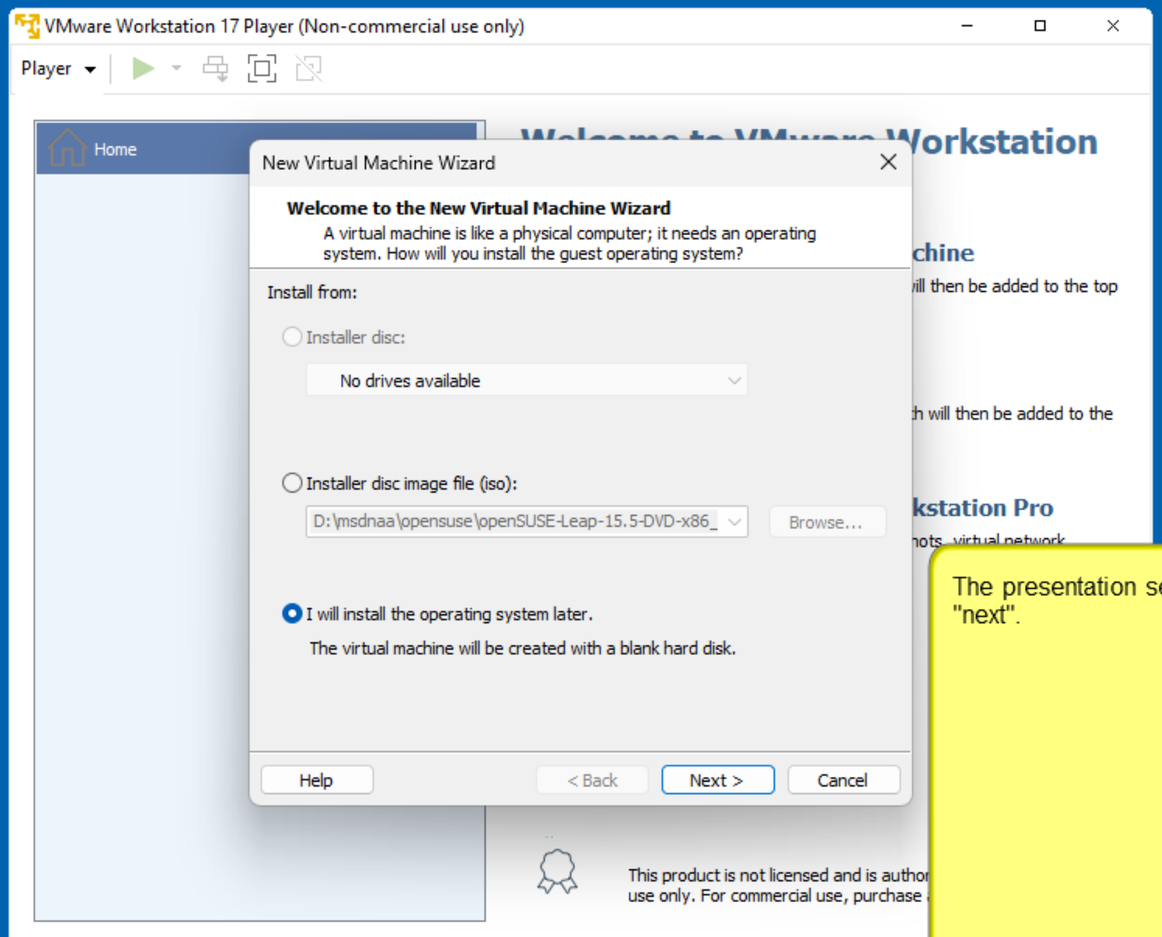
If in doubt, use the primary CD image server in Sweden,

Are you interested in offering the Debian CD images on your mirror? If yes, see the instructions on how to set up a CD image mirror.

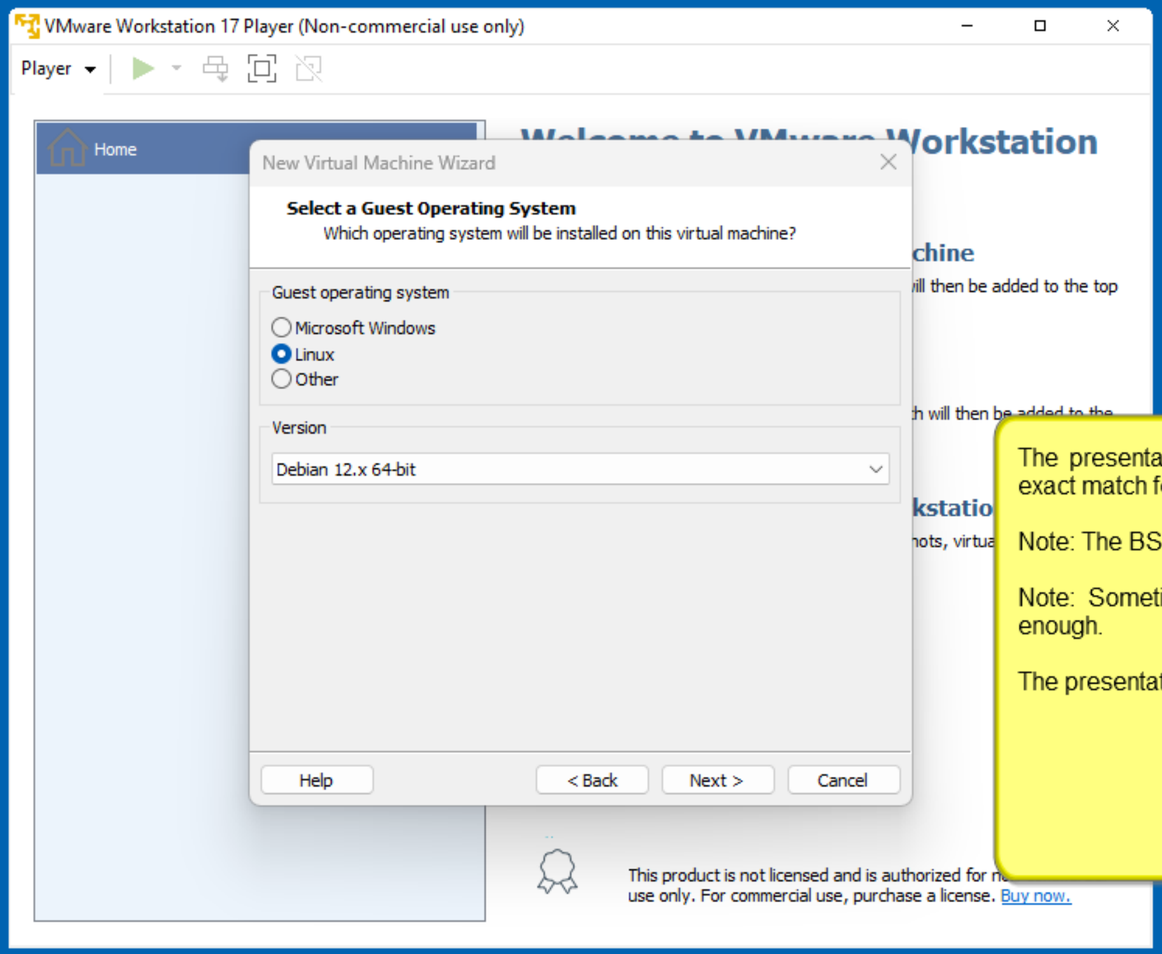
- Argentina: debian.xfree.com.ar: HTTP
- Armenia: mirrors.asnet.am: HTTP
- Australia: debian.mirror.digitalpacific.com.au: HTTP



The presentation opens VMware Workstation Player. Using VMware Workstation Pro is slightly different.



The presentation selects "I will install the operating system later.", then "next".

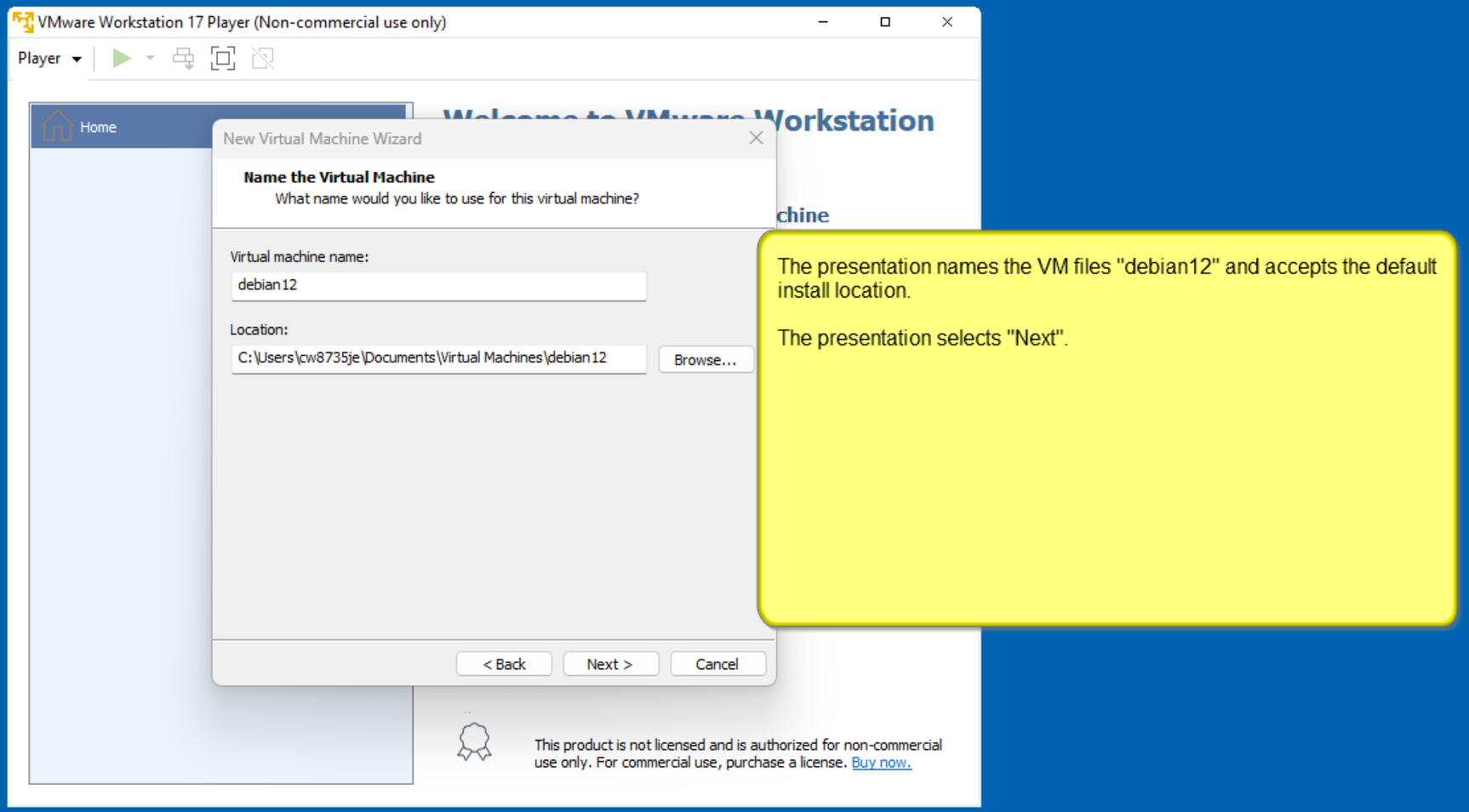


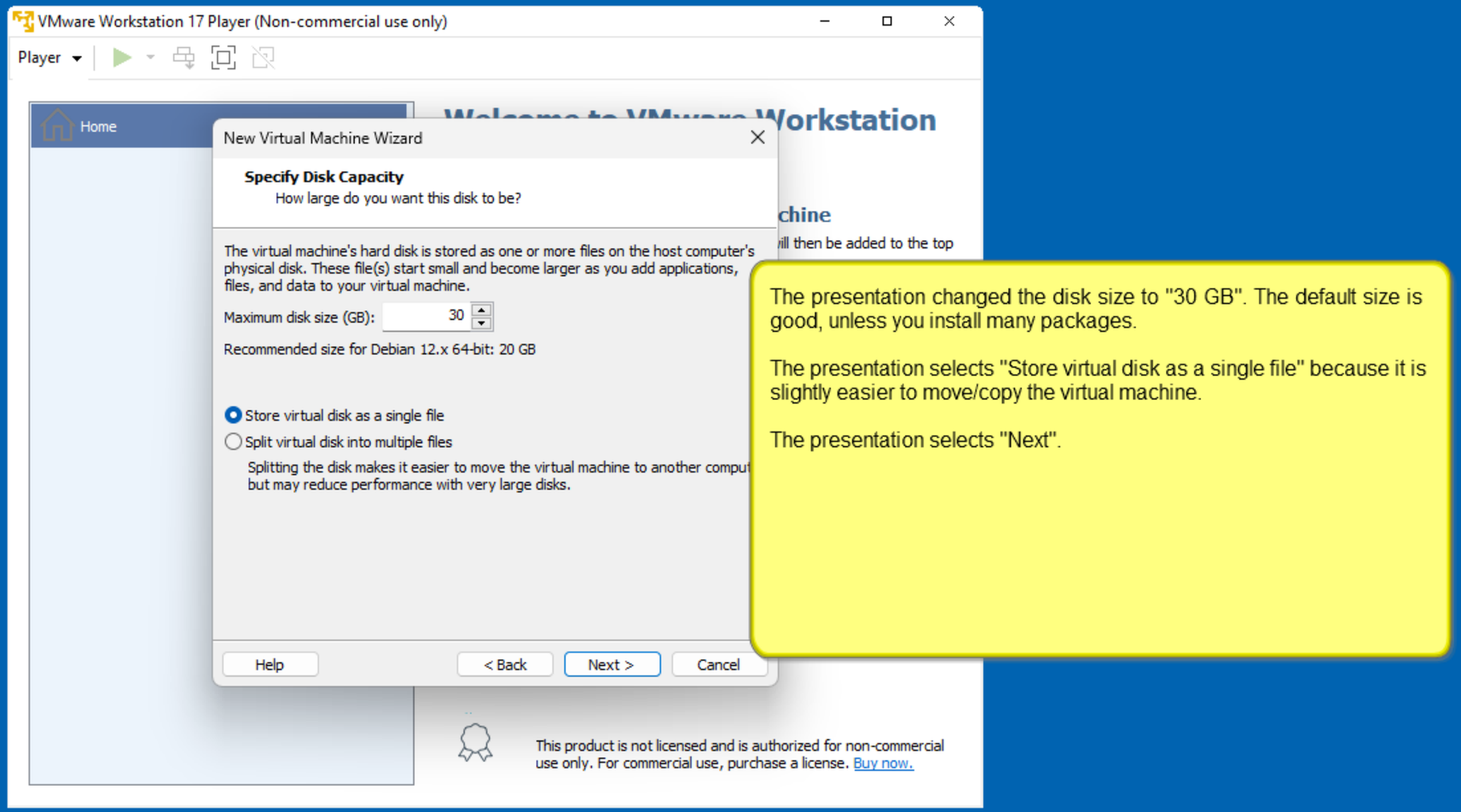
The presentation selects "Linux" and "Debian 12.x 64-bit". This is an exact match for the Debian 12 install.

Note: The BSD operating systems are listed under "Other".

Note: Sometimes you are not able to be exact. Generally, close is enough.

The presentation selects "Next".

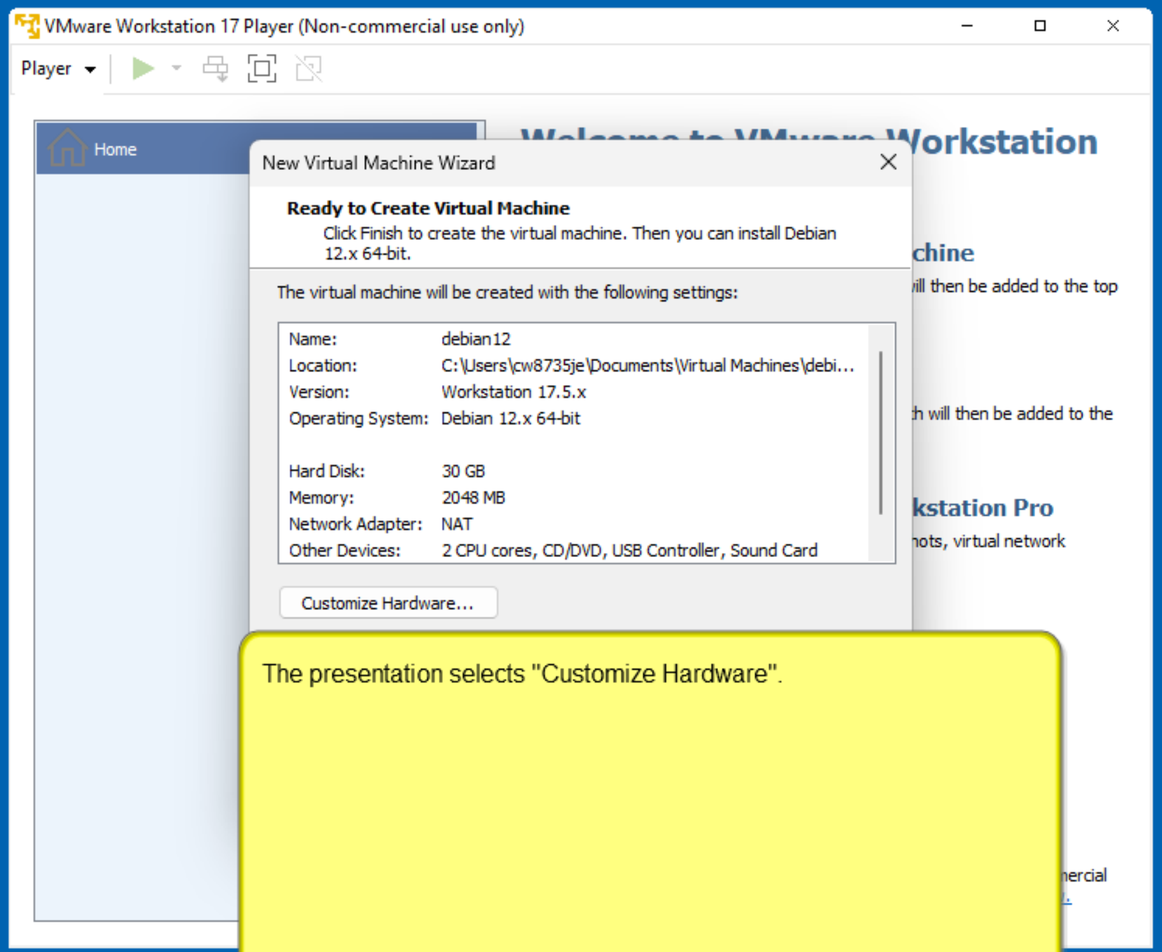

VMware Workstation 17 Player (Non-commercial use only)
Player
Home
New Virtual Machine Wizard
Name the Virtual Machine
What name would you like to use for this virtual machine?
Virtual machine name:
debian12
Location:
C:\Users\cw8735je\Documents\Virtual Machines\debian12
Browse...
< Back
Next >
Cancel
The presentation names the VM files "debian12" and accepts the default install location.
The presentation selects "Next".
This product is not licensed and is authorized for non-commercial use only. For commercial use, purchase a license. Buy now.

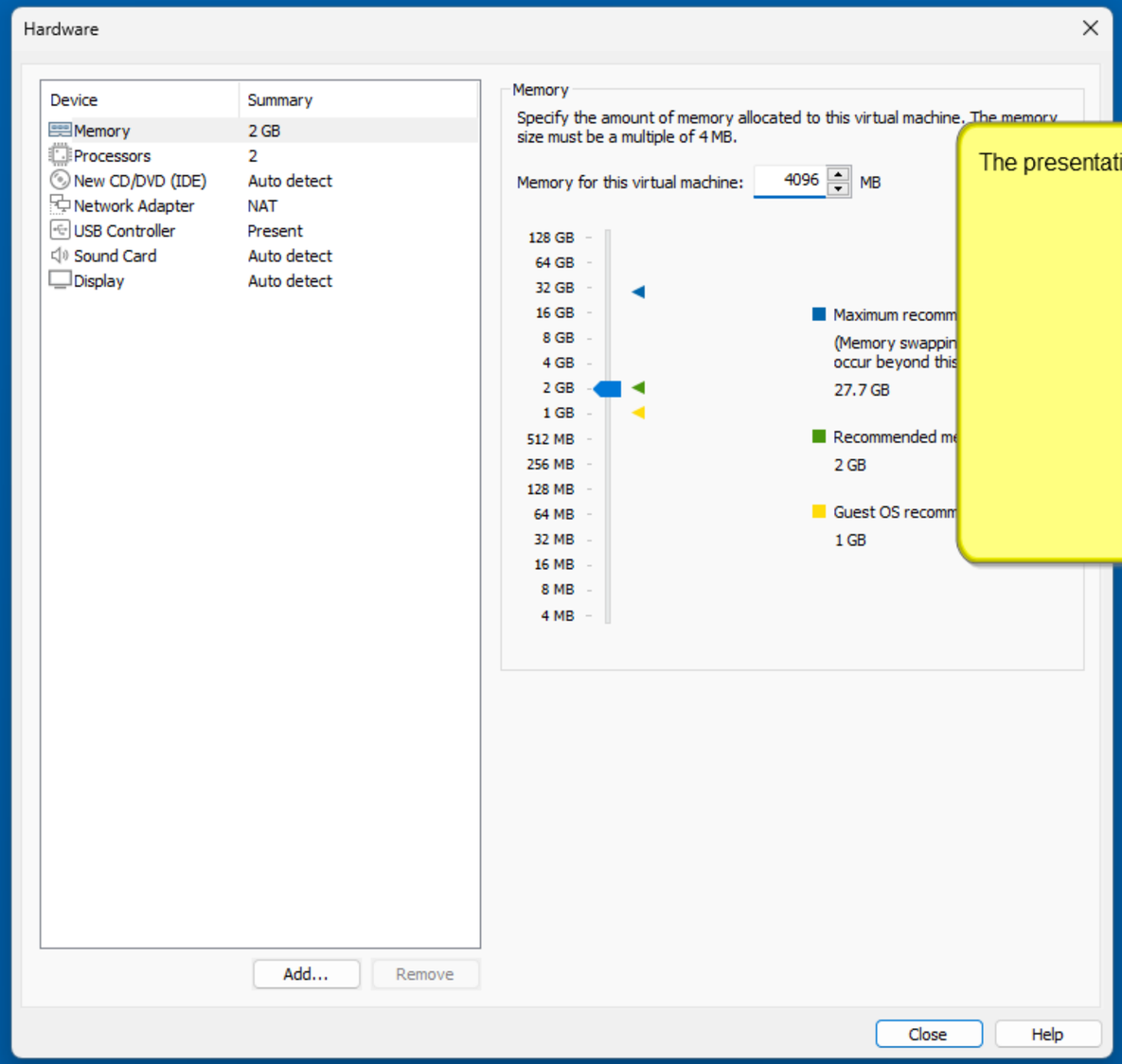


The presentation changed the disk size to "30 GB". The default size is good, unless you install many packages.

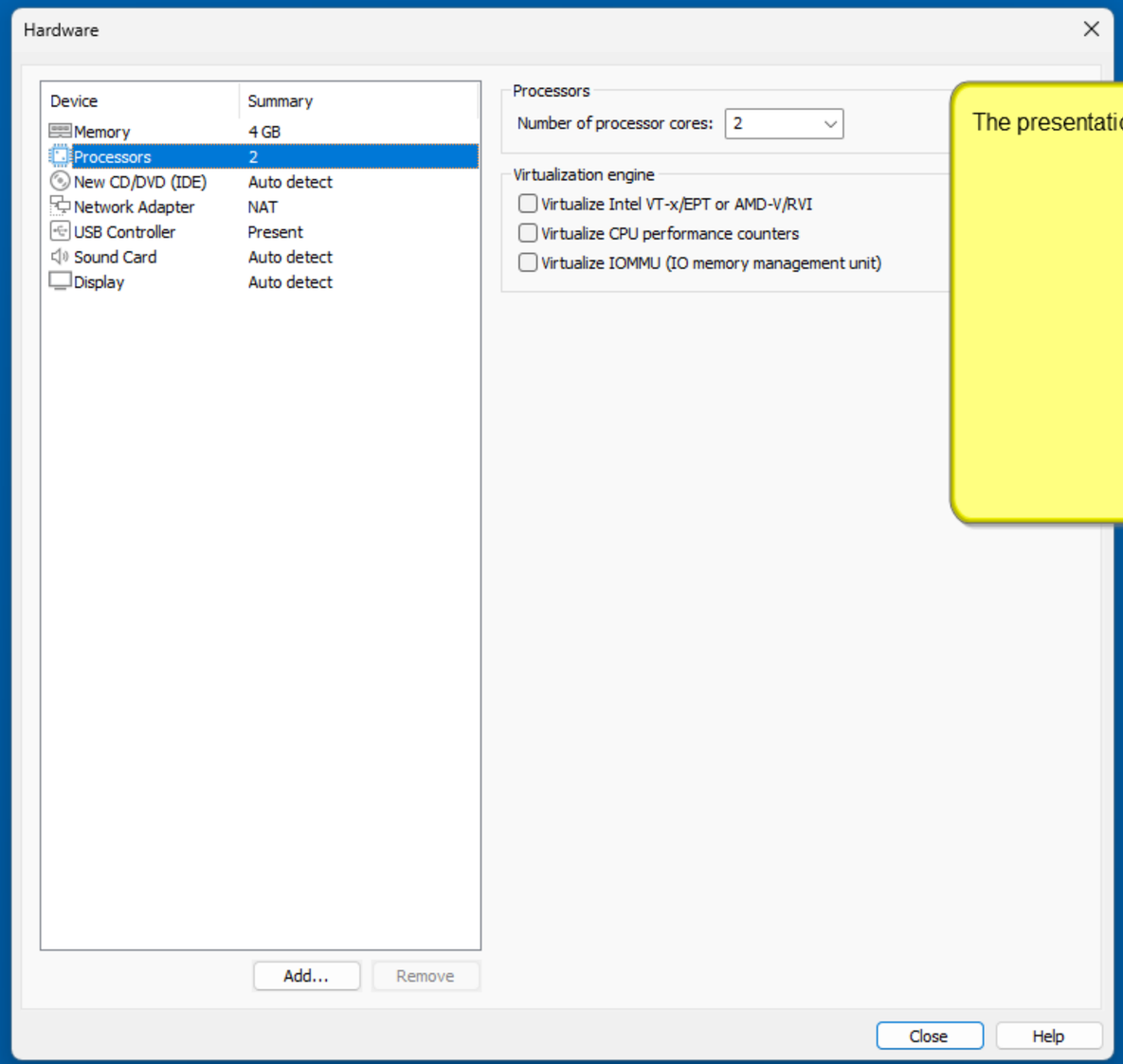
The presentation selects "Store virtual disk as a single file" because it is slightly easier to move/copy the virtual machine.

The presentation selects "Next".

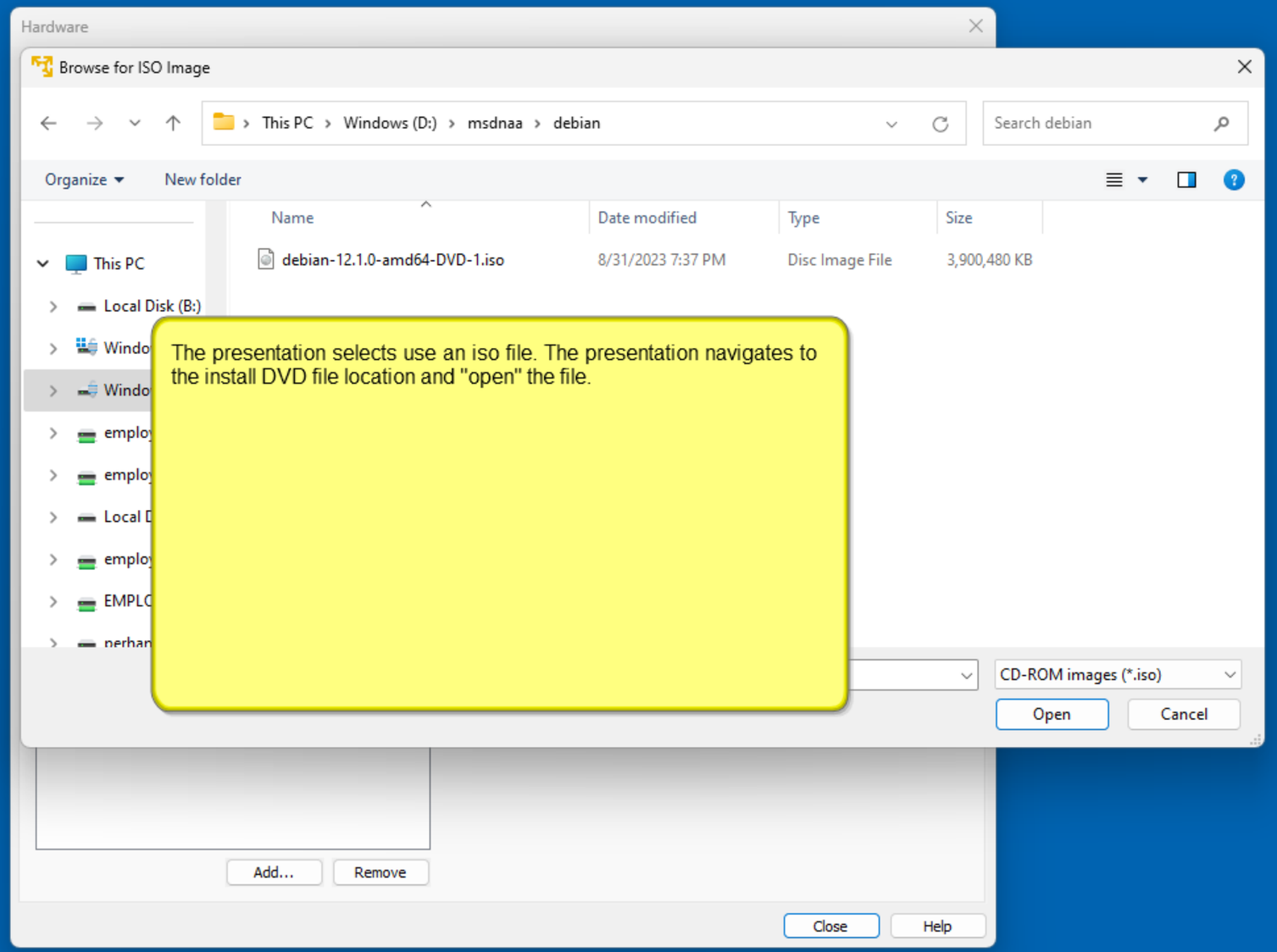

VMware Workstation 17 Player (Non-commercial use only)
Player
Home
New Virtual Machine Wizard
Ready to Create Virtual Machine
Click Finish to create the virtual machine. Then you can install Debian 12.x 64-bit.
The virtual machine will be created with the following settings:
Name: debian12
Location: C:\Users\cw8735je\Documents\Virtual Machines\debi...
Version: Workstation 17.5.x
Operating System: Debian 12.x 64-bit
Hard Disk: 30 GB
Memory: 2048 MB
Network Adapter: NAT
Other Devices: 2 CPU cores, CD/DVD, USB Controller, Sound Card
Customize Hardware...
The presentation selects "Customize Hardware".

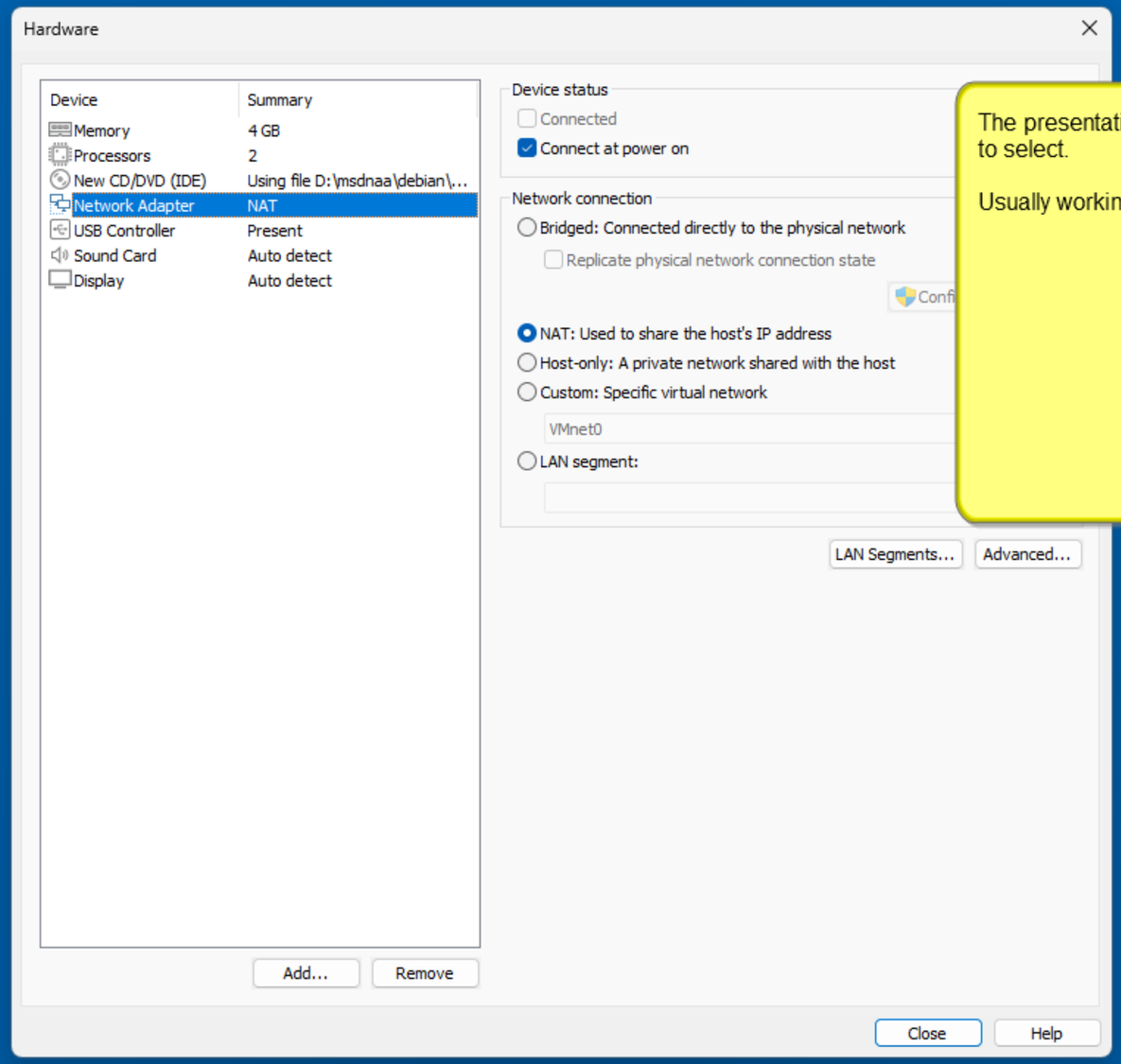


The presentation makes the RAM 4GB.



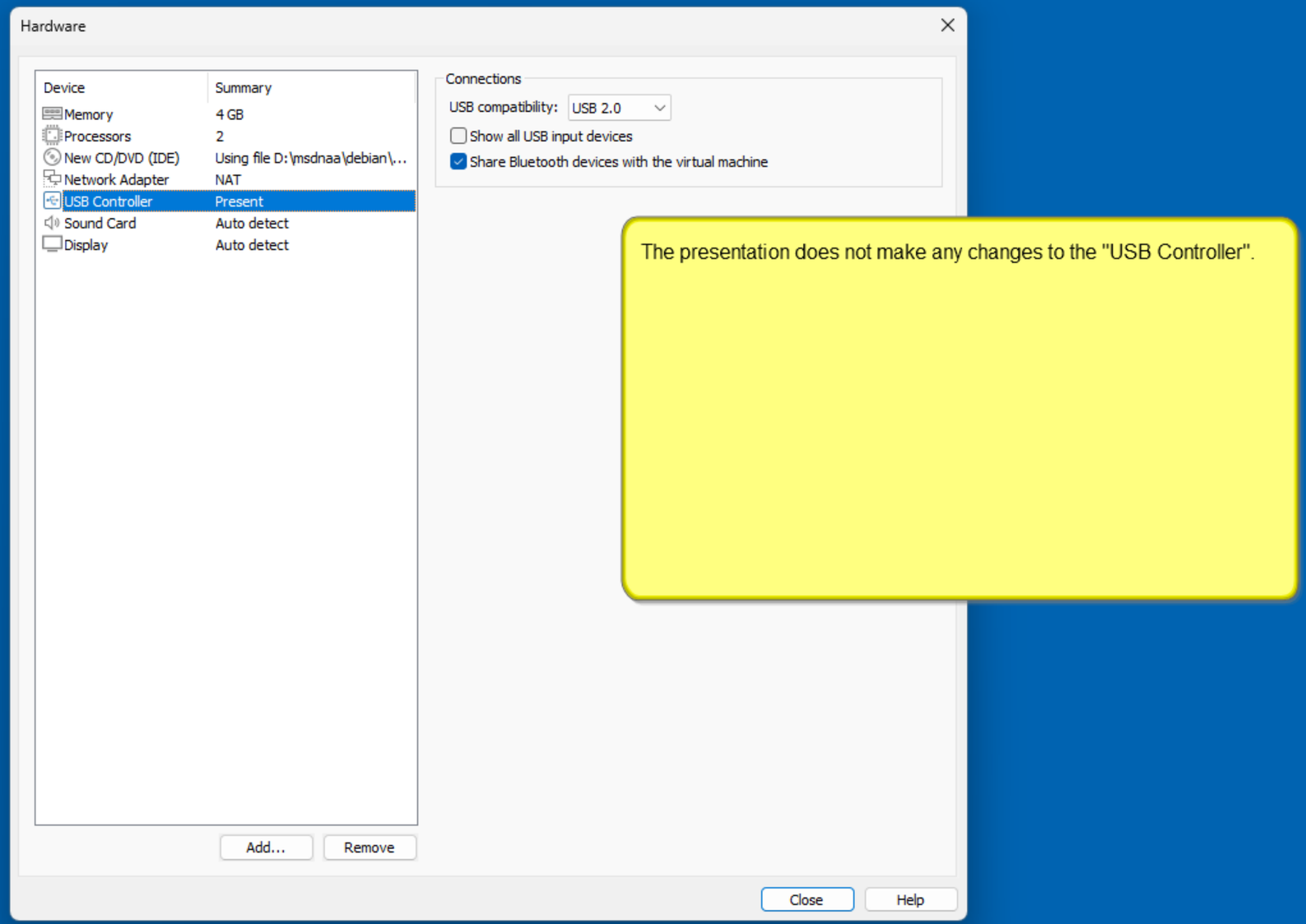
The presentation sets the number of processors to "2".


Hardware
Browse for ISO Image
This PC › Windows (D:) › msdnaa › debian
Search debian
Organize
New folder
Name
Date modified
Type
Size
debian-12.1.0-amd64-DVD-1.iso
8/31/2023 7:37 PM
Disc Image File
3,900,480 KB
This PC
Local Disk (B:)
The presentation selects use an iso file. The presentation navigates to the install DVD file location and "open" the file.
CD-ROM images (*.iso)
Open
Cancel
Add...
Remove
Close
Help

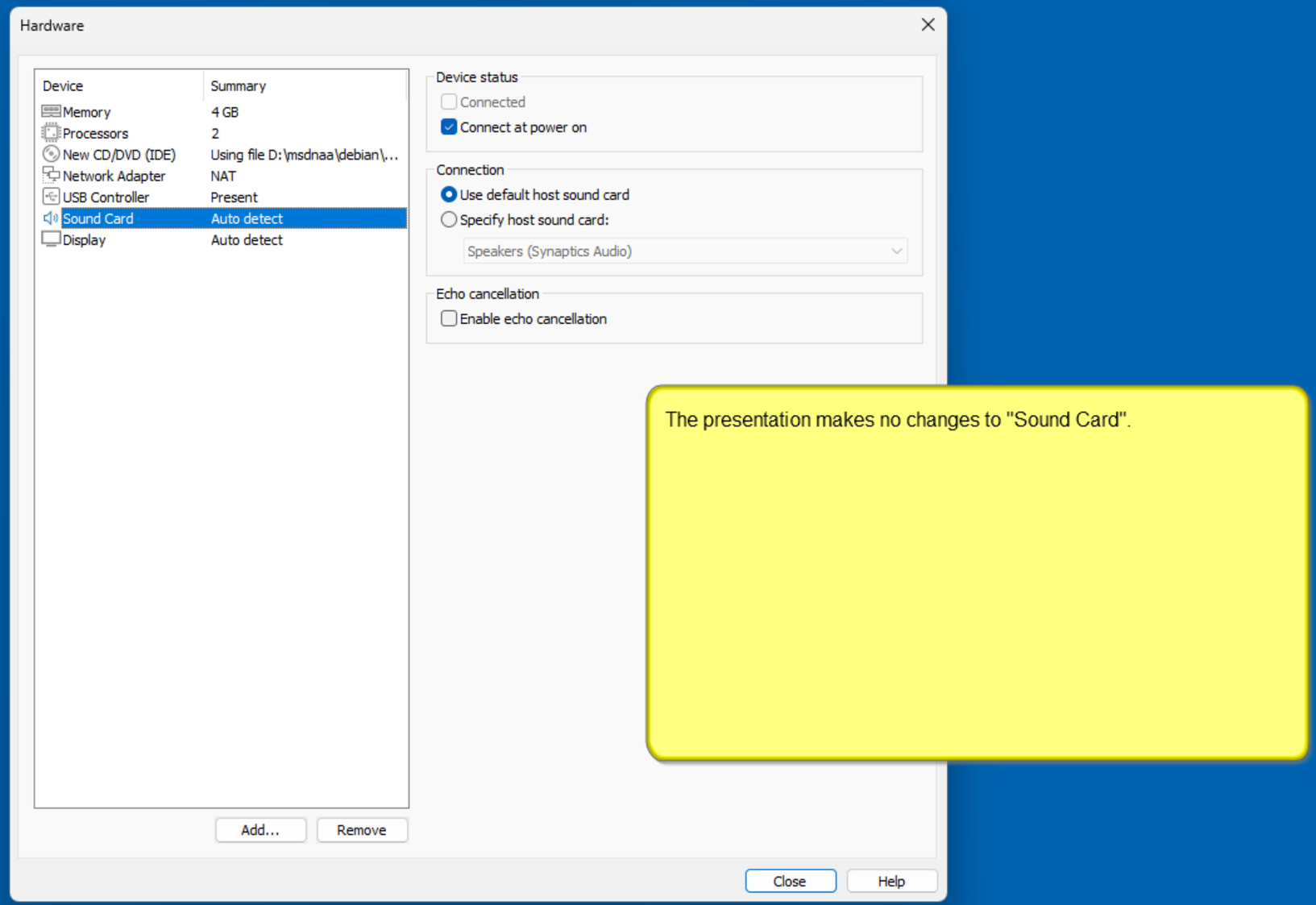


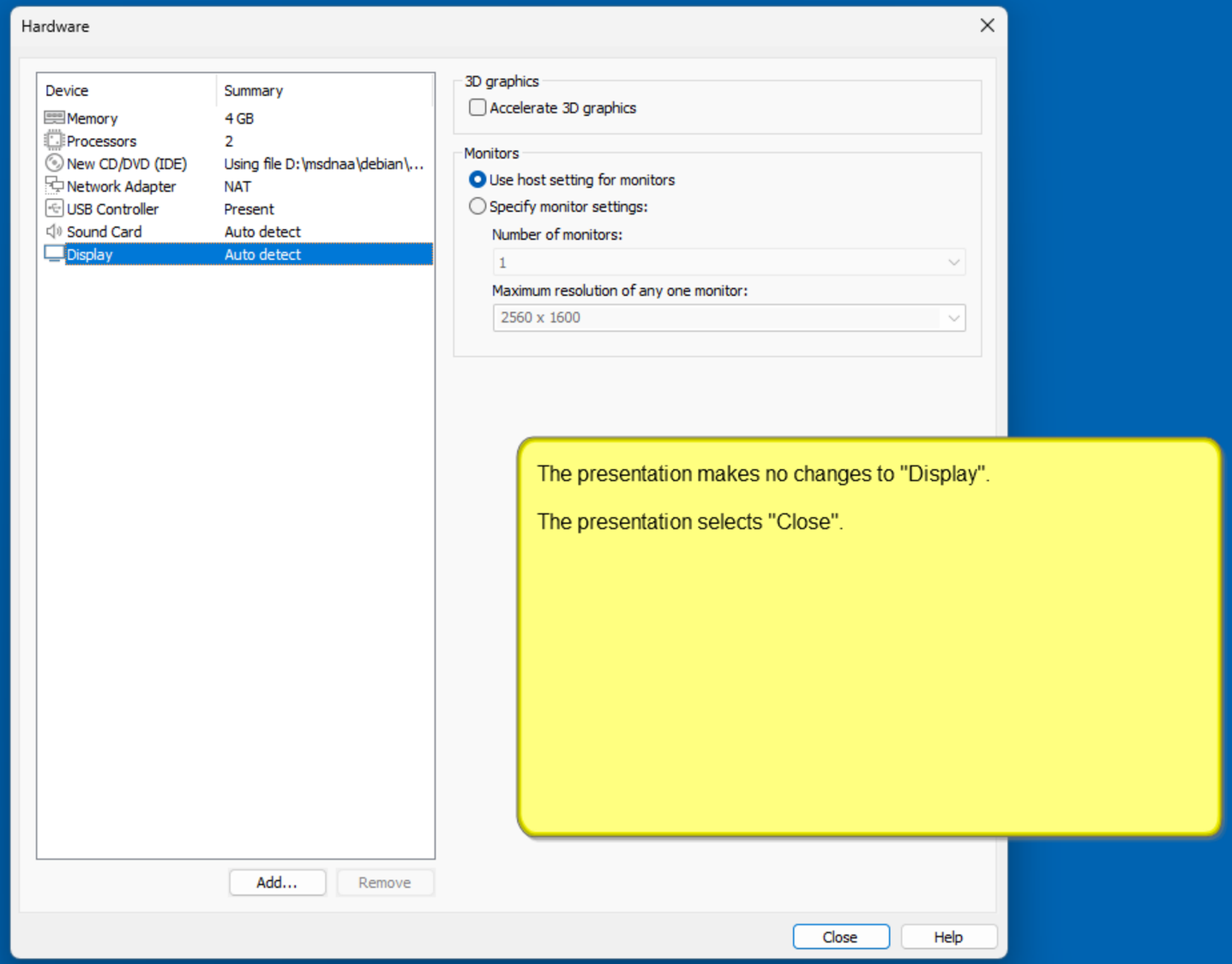
The presentation sets the networking to "NAT". This is the safest option to select.

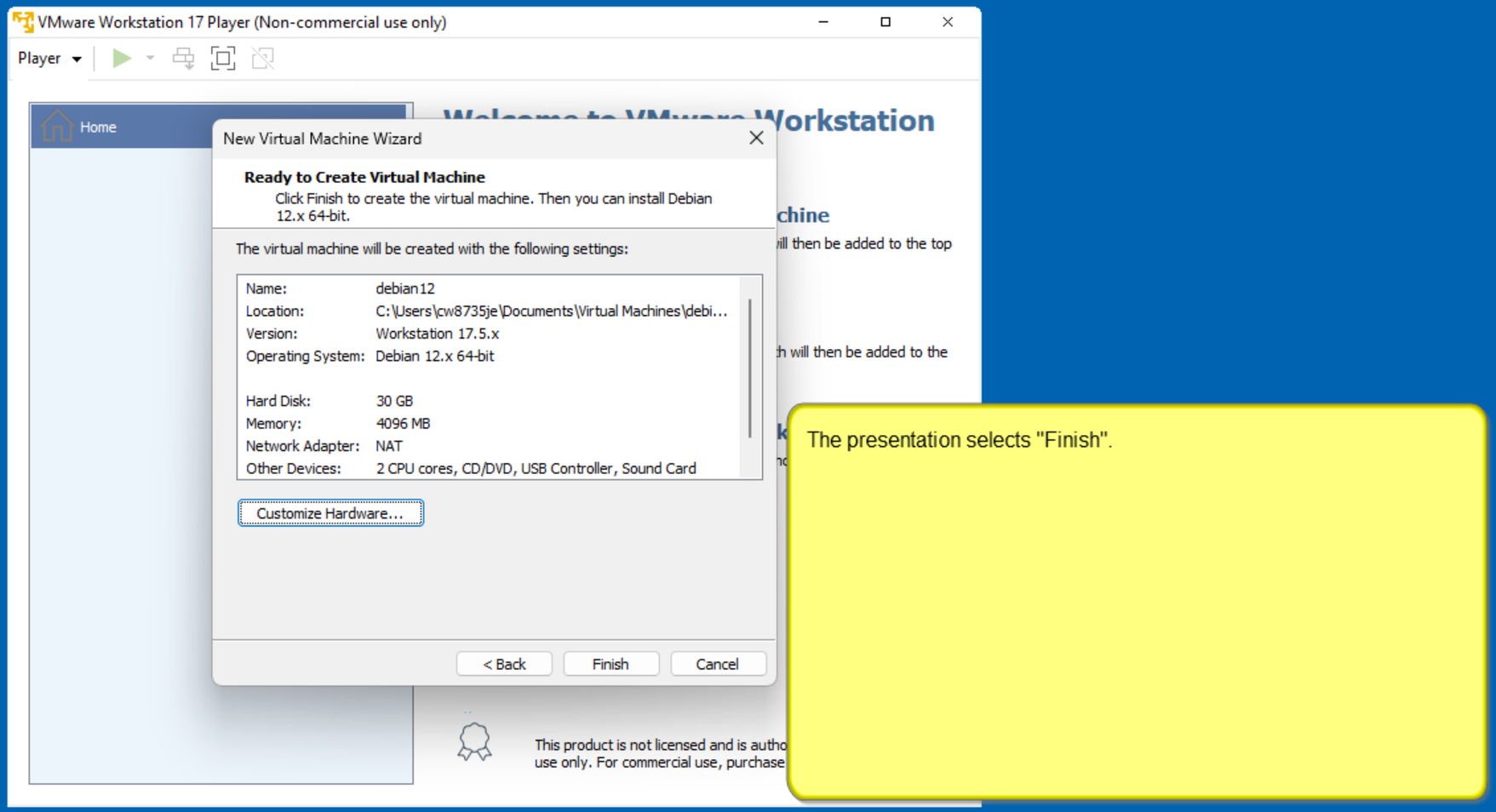
Usually working at home allows using "bridged".

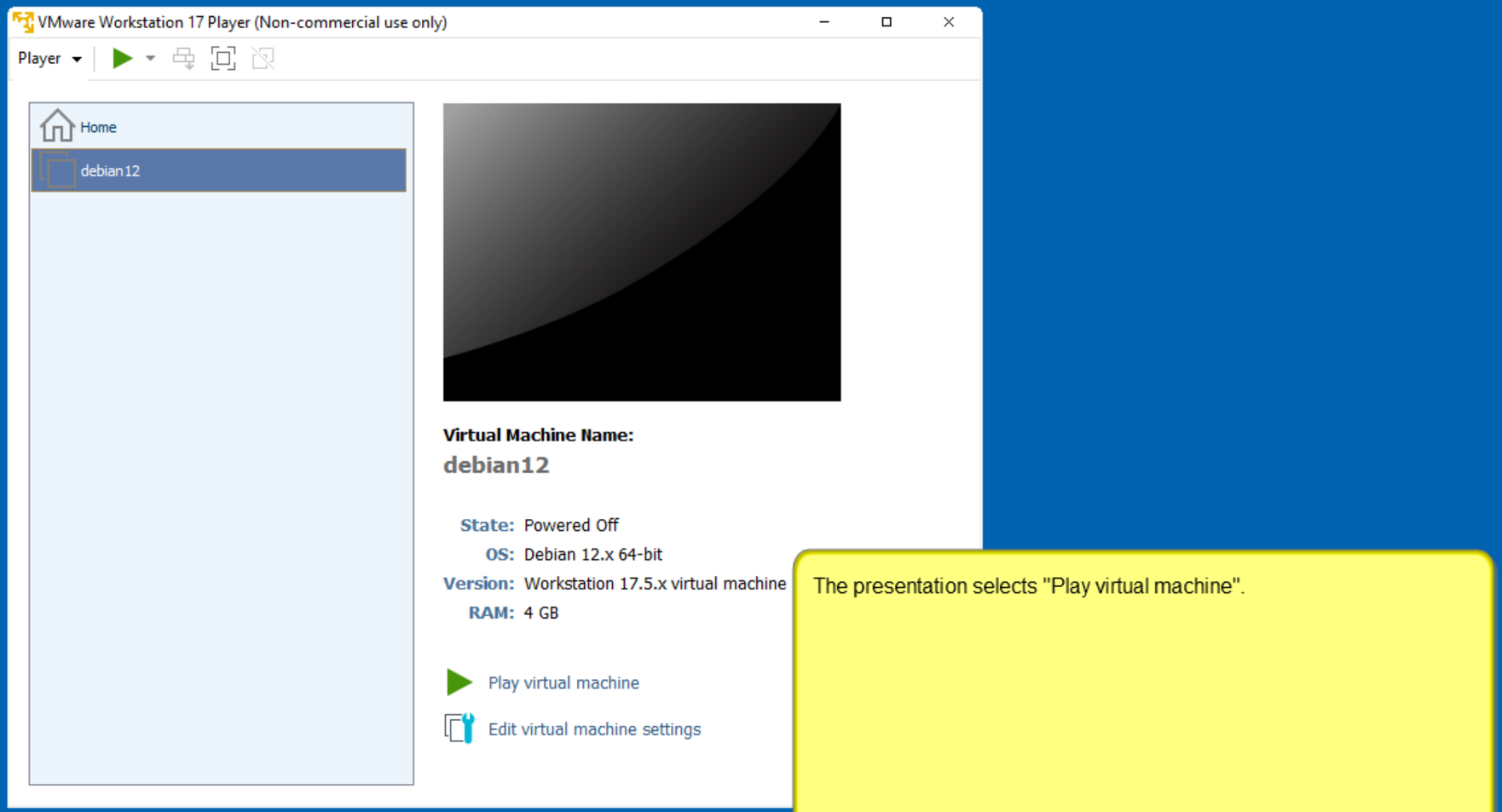


The presentation does not make any changes to the "USB Controller".

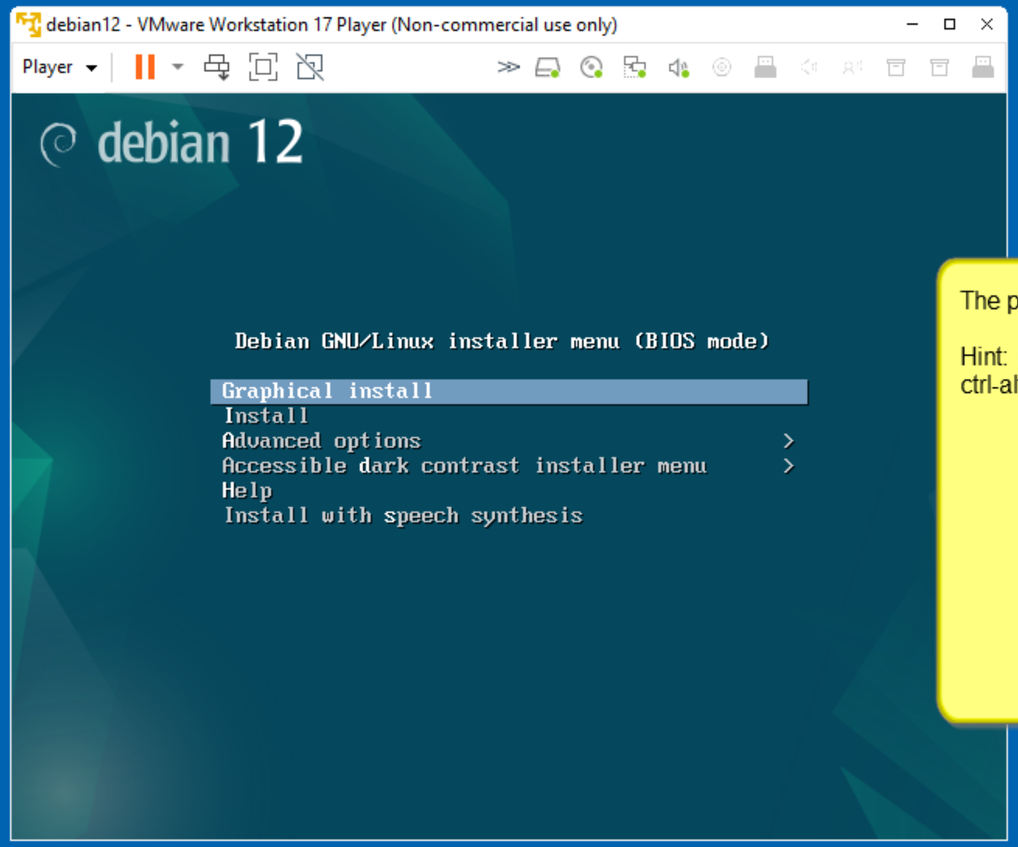

Hardware
Device
Summary
Memory
4 GB
Processors
2
New CD/DVD (IDE)
Using file D:\msdnaa\debian\...
Network Adapter
NAT
USB Controller
Present
Sound Card
Auto detect
Display
Auto detect
Add...
Remove
Device status
Connected
Connect at power on
Connection
Use default host sound card
Specify host sound card:
Speakers (Synaptics Audio)
Echo cancellation
Enable echo cancellation
The presentation makes no changes to "Sound Card".
Close
Help


Hardware
Device
Summary
Memory
4 GB
Processors
2
New CD/DVD (IDE)
Using file D:\msdnaa\debian\...
Network Adapter
NAT
USB Controller
Present
Sound Card
Auto detect
Display
Auto detect
Add...
Remove
3D graphics
Accelerate 3D graphics
Monitors
Use host setting for monitors
Specify monitor settings:
Number of monitors:
1
Maximum resolution of any one monitor:
2560 x 1600
The presentation makes no changes to "Display".
The presentation selects "Close".
Close
Help


VMware Workstation 17 Player (Non-commercial use only)
Player
Home
Welcome to VMware Workstation
New Virtual Machine Wizard
Ready to Create Virtual Machine
Click Finish to create the virtual machine. Then you can install Debian 12.x 64-bit.
The virtual machine will be created with the following settings:
Name: debian12
Location: C:\Users\cw8735je\Documents\Virtual Machines\debi...
Version: Workstation 17.5.x
Operating System: Debian 12.x 64-bit
Hard Disk: 30 GB
Memory: 4096 MB
Network Adapter: NAT
Other Devices: 2 CPU cores, CD/DVD, USB Controller, Sound Card
Customize Hardware...
< Back
Finish
Cancel
This product is not licensed and is autho
use only. For commercial use, purchase
The presentation selects "Finish".



The presentation selects "Play virtual machine".



The presentation selects "Graphical install".

Hint: If you need the mouse out of the Debian 12 box, press the right ctrl-alt keys together.

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Select a language

Choose the language to be used for the installation process. The selected language will also be the default language for the installed system.

Language:

Chinese (Simplified)	-	中文(简体)
Chinese (Traditional)	-	中文(繁體)
Croatian	-	Hrvatski
Czech	-	Čeština
Danish	-	Dansk
Dutch	-	Nederlands
Dzongkha	-	རྫོང་ཁ
English	-	English
Esperanto	-	Esperanto
Estonian	-	Eesti
Finnish	-	Suomi
French	-	Français
Galician	-	Galego
Georgian	-	ქართული
German	-	Deutsch

Screenshot

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Continue

The presentation selects "English".

The presentation selects "Continue".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Select your location

The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.

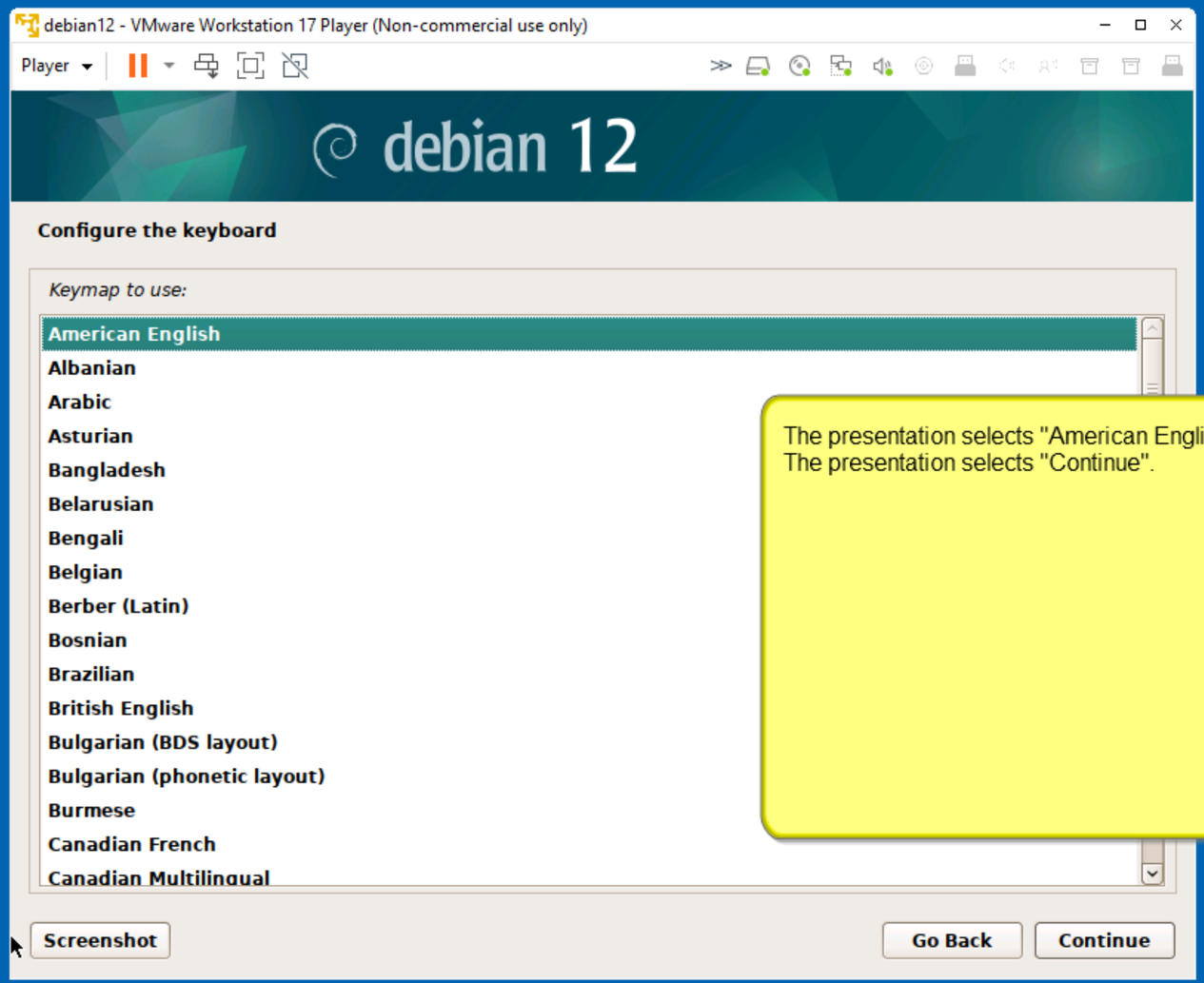
This is a shortlist of locations based on the language you selected. Choose "other" if your location is not listed.

Country, territory or area:

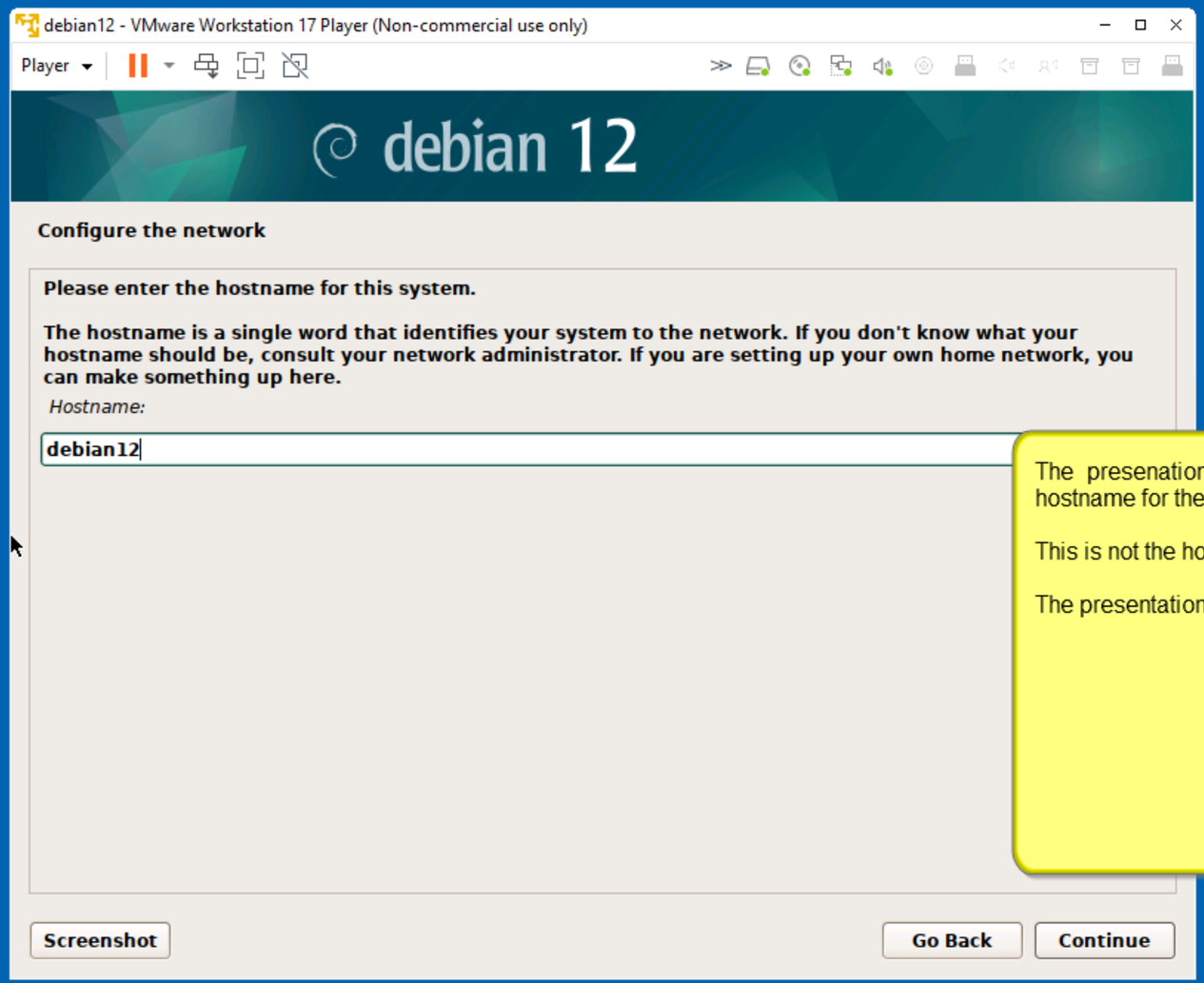
- India
- Ireland
- Israel
- New Zealand
- Nigeria
- Philippines
- Seychelles
- Singapore
- South Africa
- United Kingdom
- United States
- Zambia
- Zimbabwe
- other

Screenshot | Go Back | Continue

The presentation selects "United States".
The presentation selects "Continue".



The presentation selects "American English".
The presentation selects "Continue".



The presenation names the system "debian12". This is setting the hostname for the virtual machine.

This is not the hostname.

The presentation selects "Continue".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Configure the network

The domain name is the part of your Internet address to the right of your host name. It is often something that ends in .com, .net, .edu, or .org. If you are setting up a home network, you can make something up, but make sure you use the same domain name on all your computers.

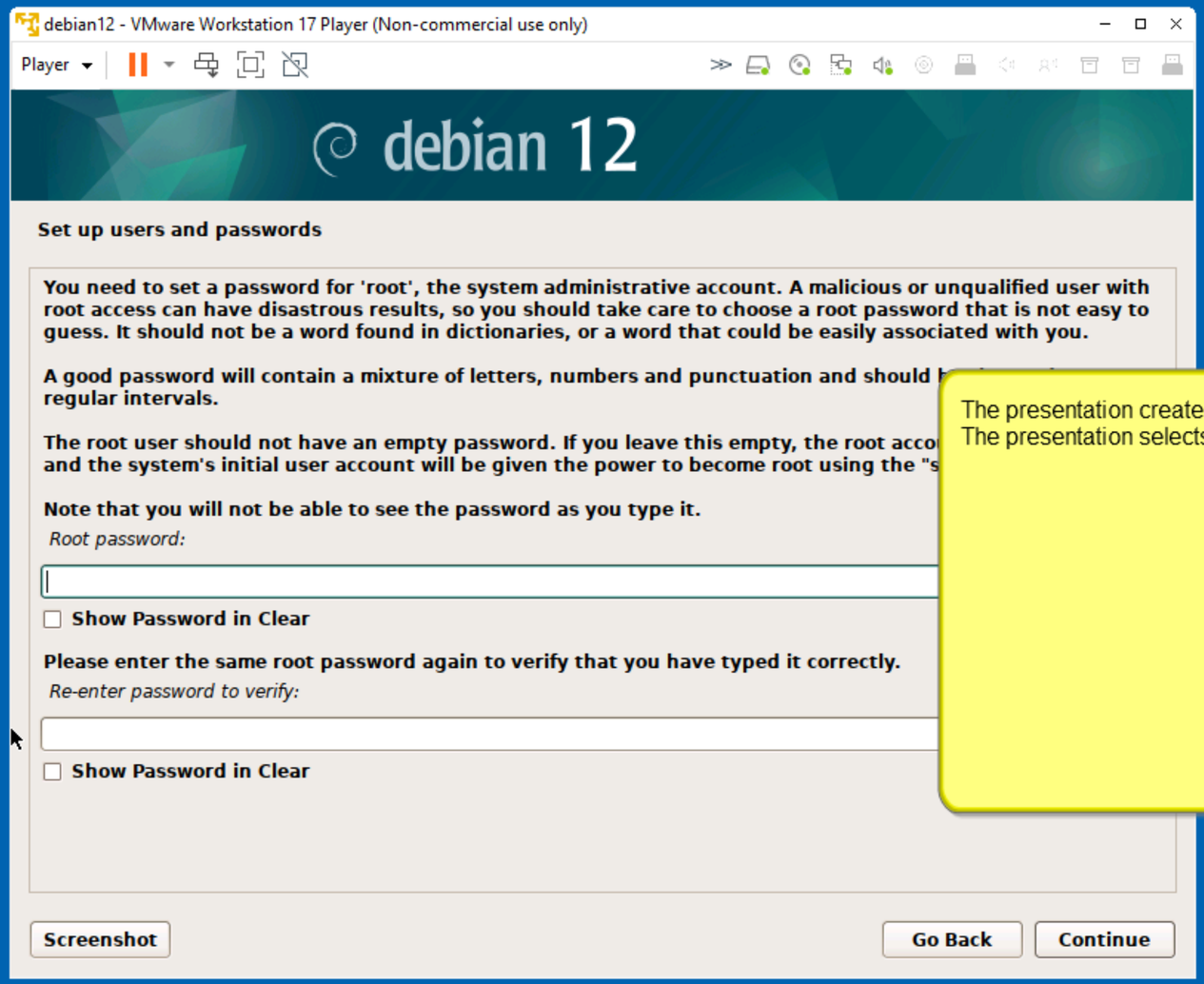
Domain name:

mait.minnesota.edu

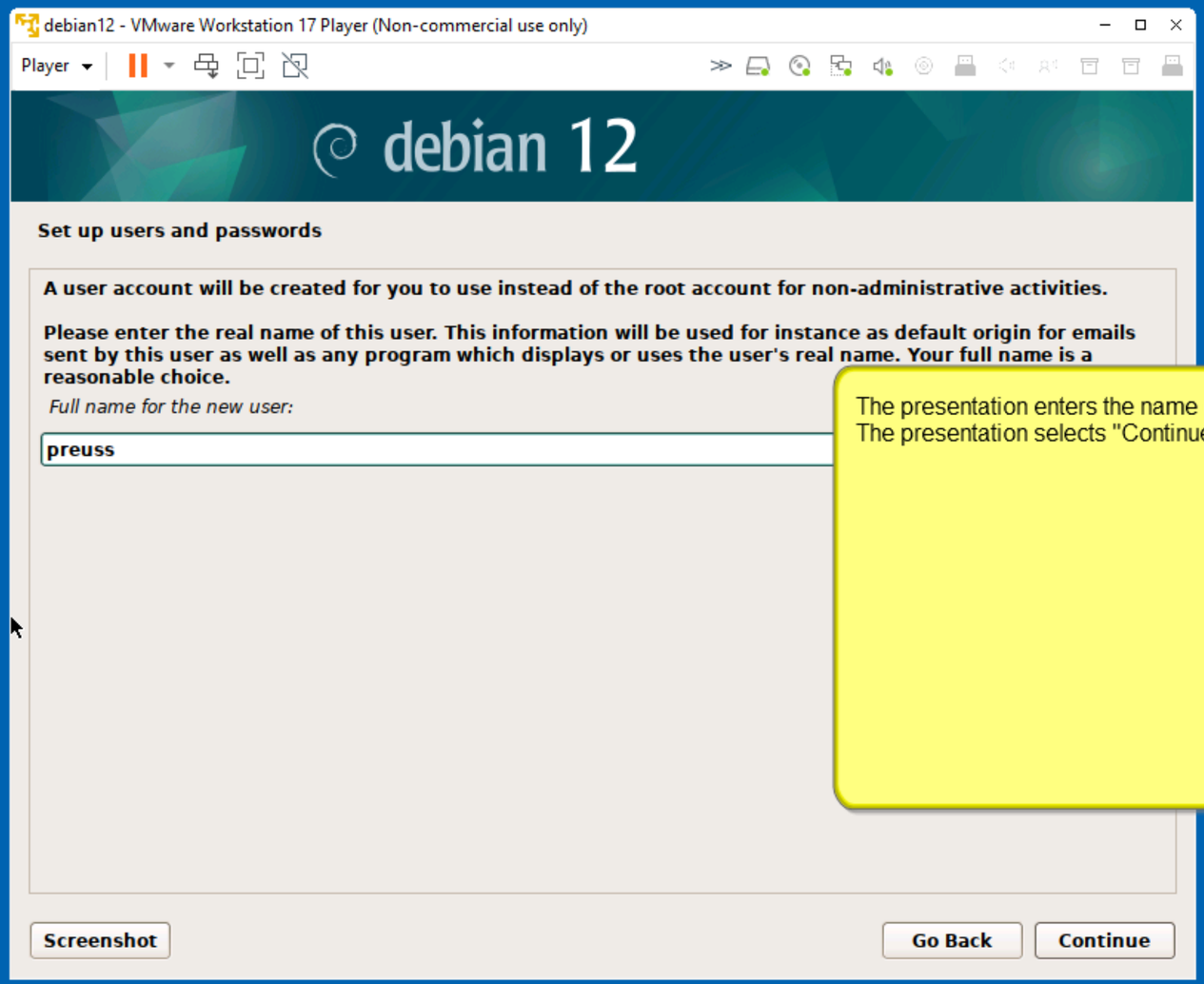
The presentation sets the domain name "mait.minnesota.edu". As noted, you could make up something or just skip this answer.

The presentation selects "Continue".

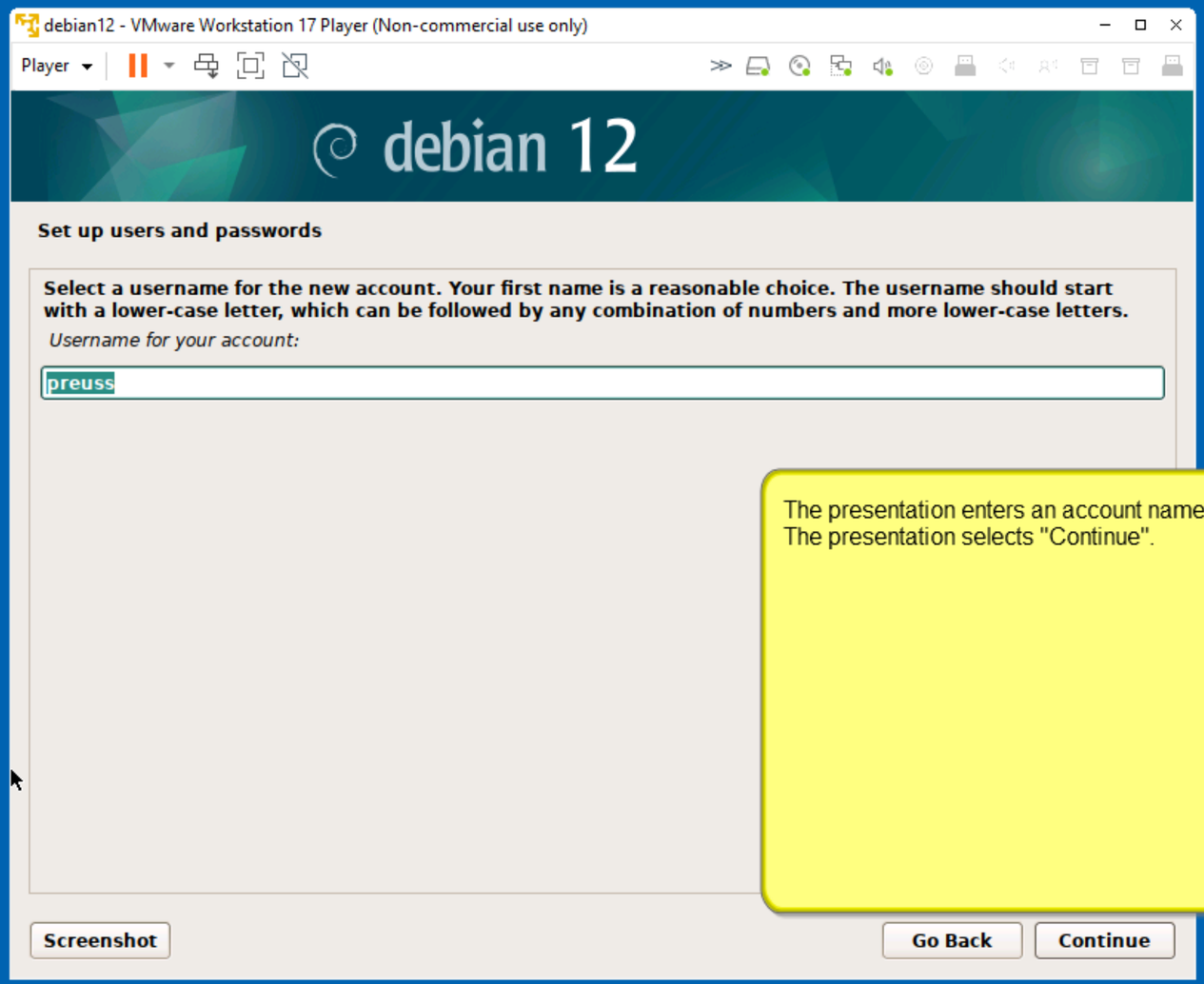
Screenshot **Go Back** **Continue**



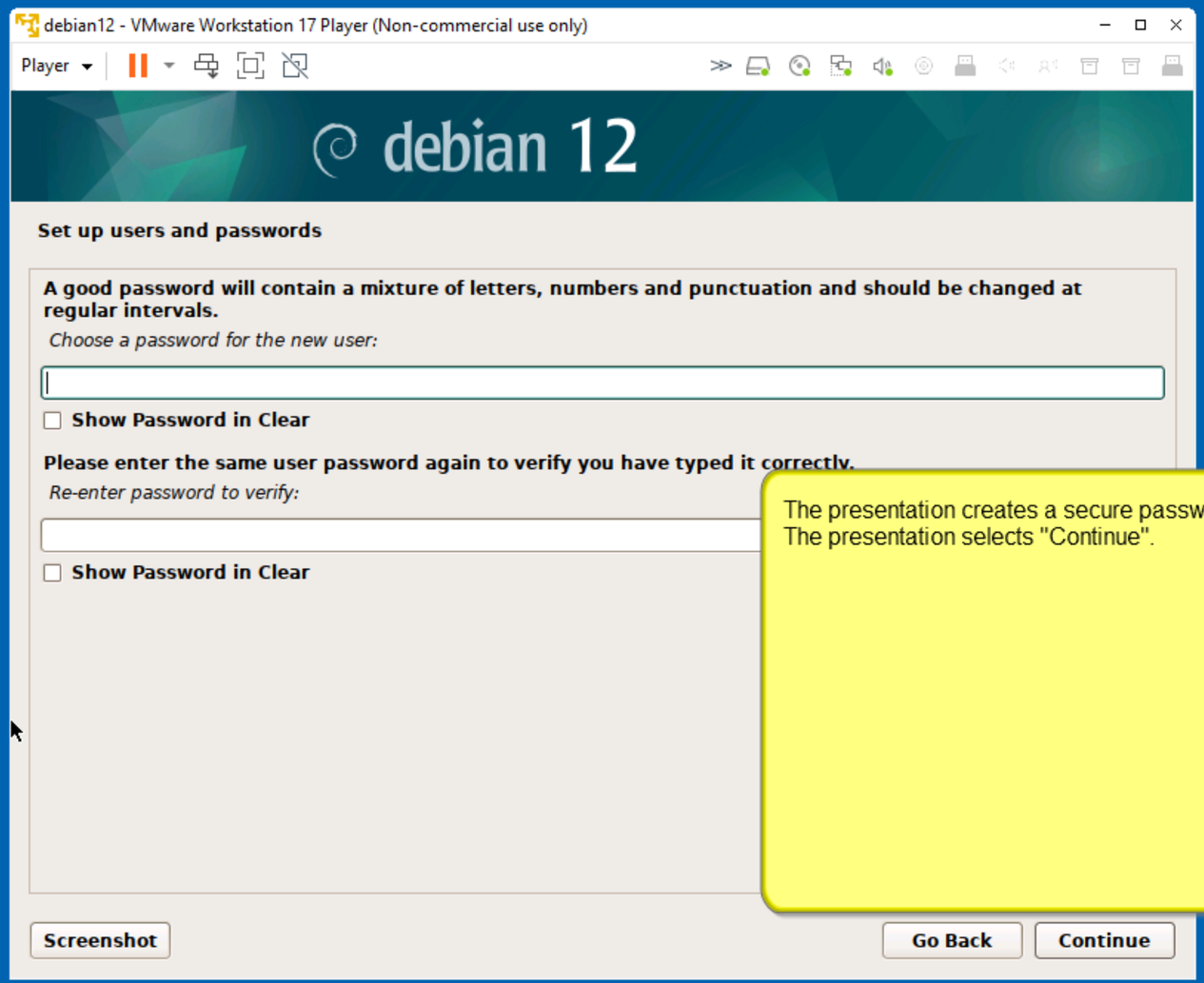
The presentation creates a secure password for the "root" account.
The presentation selects "Continue".



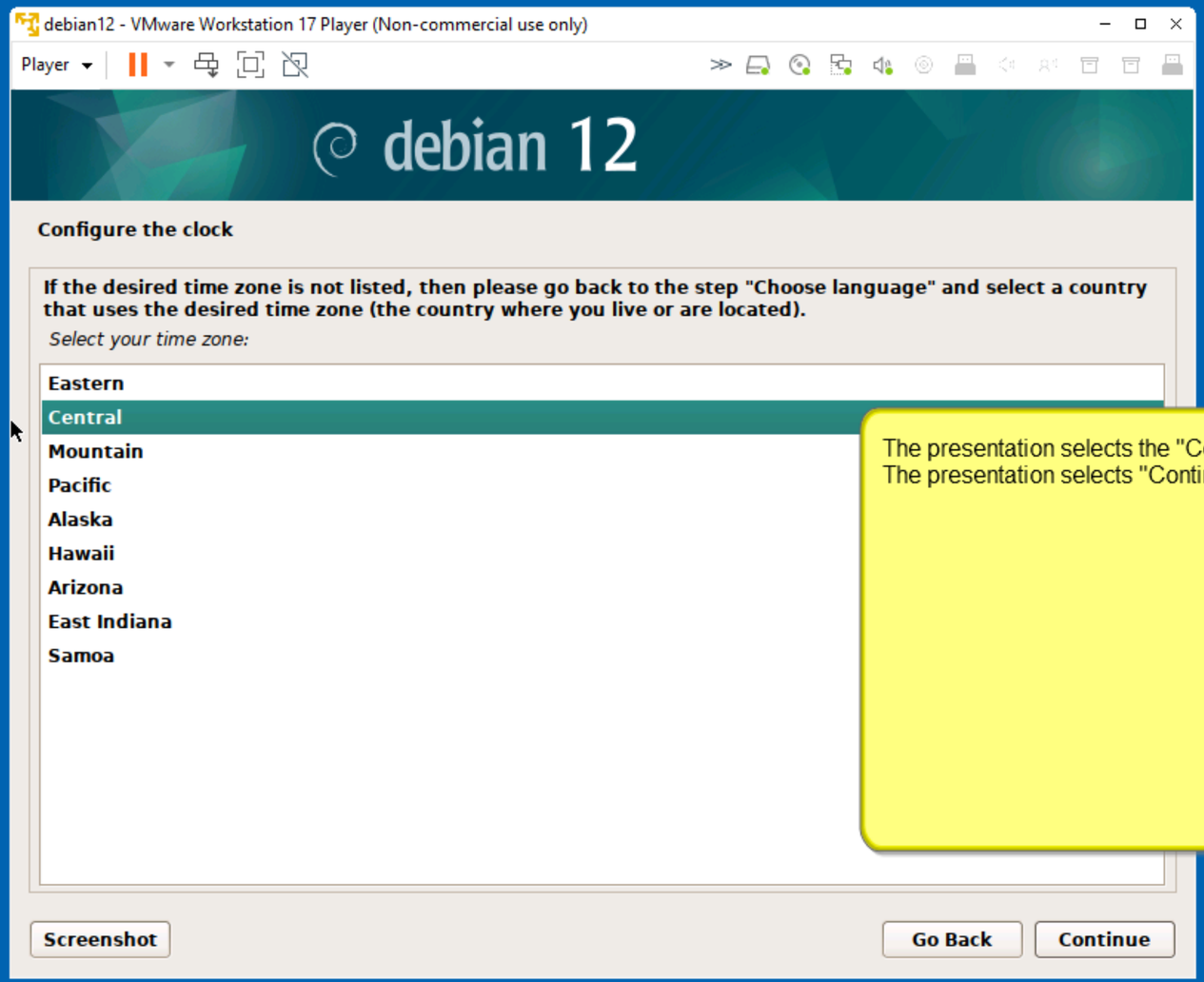
The presentation enters the name of a person using the VM.
The presentation selects "Continue".



The presentation enters an account name.
The presentation selects "Continue".



The presentation creates a secure password for the new account.
The presentation selects "Continue".



The presentation selects the "Central" time zone.
The presentation selects "Continue".

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Player

debian 12

Partition disks

The installer can guide you through partitioning a disk (using different standard schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results.

If you choose guided partitioning for an entire disk, you will next be asked which disk should be used.

Partitioning method:

Guided - use entire disk

Guided - use entire disk and set up LVM

Guided - use entire disk and set up encrypted LVM

Manual

The presentation selects "Guided - use entire disk and set up LVM".
The presentation selects "Continue".

Screenshot

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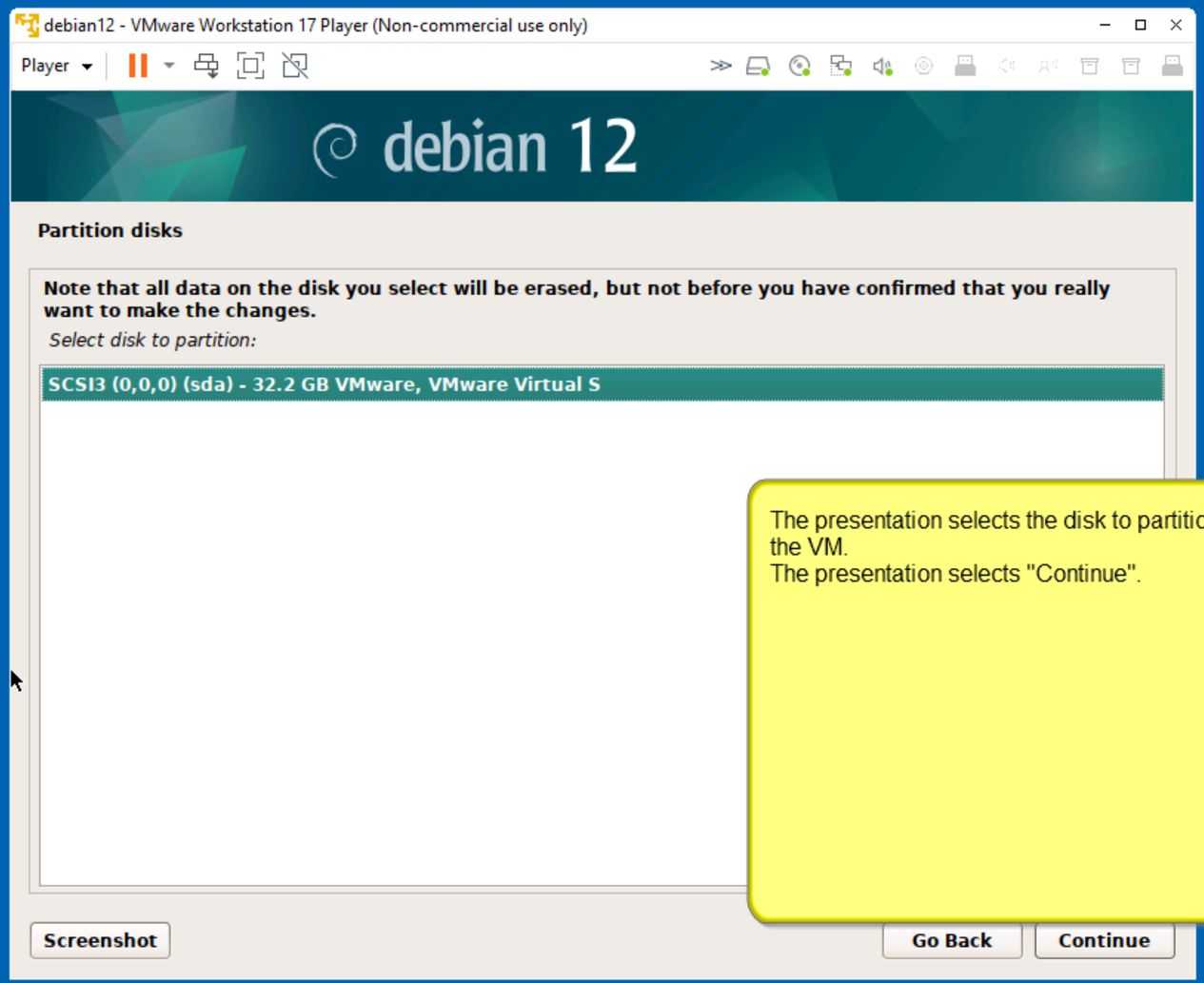
Continue



The presentation selects the disk to partition. This is the disk created for the VM.
The presentation selects "Continue".

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Player

debian 12

Partition disks

Selected for partitioning:

SCSI3 (0,0,0) (sda) - VMware, VMware Virtual S: 32.2 GB

The disk can be partitioned using one of several different schemes. If you are unsure, choose the first one.

Partitioning scheme:

All files in one partition (recommended for new users)

Separate /home partition

Separate /home, /var, and /tmp partitions

Screenshot

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The presentation prefers a "separate /home partition", but that is a personal decision.

The presentation selects "Continue".

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Player

debian 12

Partition disks

Before the Logical Volume Manager can be configured, the current partitioning scheme has to be written to disk. These changes cannot be undone.

After the Logical Volume Manager is configured, no additional changes to the partitioning scheme of disks containing physical volumes are allowed during the ins current partitioning scheme before continuing.

The partition tables of the following devices are change
SCSI3 (0,0,0) (sda)

Write the changes to disks and configure LVM?

- ○ **No**
- ◉ **Yes**

The presentation selects "yes" to partition the disk.
The presentation selects "Continue".

Screenshot **Continue**

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Partition disks

You may use the whole volume group for guided partitioning, or part of it. If you use only part of it, or if you add more disks later, then you will be able to grow logical volumes later using the LVM tools, so using a smaller part of the volume group at installation time may offer more flexibility.

The minimum size of the selected partitioning recipe is 3.5 GB (or 11%); please note choose to install may require more space than this. The maximum available size is 3

Hint: "max" can be used as a shortcut to specify the maximum size, or enter a perc that percentage of the maximum size.

Amount of volume group to use for guided partitioning:

31.7 GB

The presentation sees the entire disk is listed.
The presentation selects "Continue".

Screenshot

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Continue

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Player

debian 12

Partition disks

If you continue, the changes listed below will be written to the disks. Otherwise, you will be able to make further changes manually.

The partition tables of the following devices are changed:
LVM VG debian12-vg, LV home
LVM VG debian12-vg, LV root
LVM VG debian12-vg, LV swap_1
SCSI3 (0,0,0) (sda)

The following partitions are going to be formatted:
LVM VG debian12-vg, LV home as ext4
LVM VG debian12-vg, LV root as ext4
LVM VG debian12-vg, LV swap_1 as swap
partition #1 of SCSI3 (0,0,0) (sda) as ext2

Write the changes to disks?

No

Yes

Screenshot

Continue

The presentation notes the partitioning information. The presentation selects "yes" to continue.
The presentation selects "Continue".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Configure the package manager

Scanning your installation media finds the label:

Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49

**You now have the option of scanning additional media for use by the package manager (apt). Normally these should be from the same set as the one you booted from. If you do no
can just be skipped.**

If you wish to scan more media, please insert another one now.

Scan extra installation media?

- (•) **No**
- ( ) **Yes**

The presentation selects "no" to scan more media. This seems unnecessary with the DVD.
The presentation selects "Continue".

Screenshot **Go Back** **Continue**

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Configure the package manager

A network mirror can be used to supplement the software that is included on the installation media. This may also make newer versions of software available.

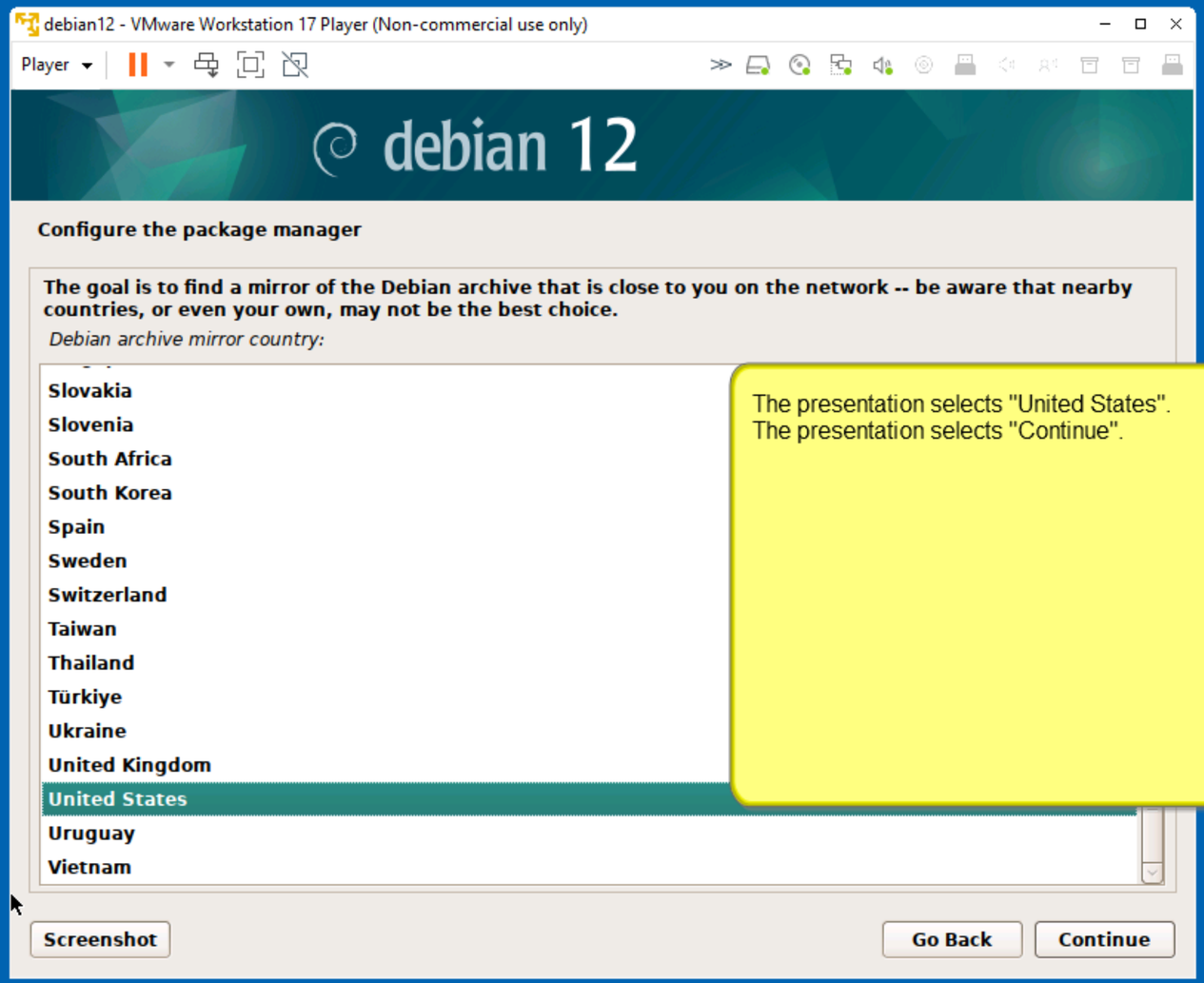
You are installing from a DVD image. Even though it contains a larg missing. If you have a reasonably good Internet connection, use of graphical desktop environment.

Use a network mirror?

- ○ **No**
- ◉ **Yes**

The presentation selects "yes" to use network mirror.
The presentation selects "Continue".

Screenshot **Go Back** **Continue**



The presentation selects "United States".
The presentation selects "Continue".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Configure the package manager

Please select a Debian archive mirror. You should use a mirror in your country or region if you do not know which mirror has the best Internet connection to you.

Usually, deb.debian.org is a good choice.

Debian archive mirror:

- deb.debian.org
- ftp.us.debian.org
- debian.csail.mit.edu
- mirrors.lug.mtu.edu
- debian.cc.lehigh.edu
- mirror.us.oneandone.net
- mirrors.bloomu.edu
- mirrors.namecheap.com
- mirrors.ocf.berkeley.edu
- debian.mirror.constant.com
- mirror.cogentco.com
- mirror.us.leaseweb.net
- mirrors.accretive-networks.net
- debian.cs.binghamton.edu

Screenshot | Go Back | Continue

The presentation selects "deb.debian.org".
The presentation selects "Continue".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Configure the package manager

If you need to use a HTTP proxy to access the outside world, enter the proxy information here. Otherwise, leave this blank.

The proxy information should be given in the standard form of "http://[[user][:pass]@]host[:port]/".

HTTP proxy information (blank for none):

Screenshot

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Continue

The presentation is not using a proxy.
The presentation selects "Continue".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Configuring popularity-contest

The system may anonymously supply the distribution developers with statistics about the most used packages on this system. This information influences decisions such as which packages should go on the first distribution CD.

If you choose to participate, the automatic submission script will run once every
the distribution developers. The collected statistics can be viewed on https://po

This choice can be later modified by running "dpkg-reconfigure popularity-cont

Participate in the package usage survey?

- (•) **No**
- ( ) **Yes**

Screenshot **Go Back** **Continue**

The presentation selects "no". This is a personal decision.
The presentation selects "Continue".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

debian 12

Software selection

At the moment, only the core of the system is installed. To tune the system to your needs, you can choose to install one or more of the following predefined collections of software.

Choose software to install:

- [x] **Debian desktop environment**
- [x] **... GNOME**
- [ ] **... Xfce**
- [ ] **... GNOME Flashback**
- [ ] **... KDE Plasma**
- [ ] **... Cinnamon**
- [ ] **... MATE**
- [ ] **... LXDE**
- [ ] **... LXQt**
- [ ] **web server**
- [x] **SSH server**
- [x] **standard system utilities**

Screenshot **Continue**

The presentation adds the "SSH server" to selected software.
The presentation selects "Continue".

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Player

debian 12

Install the GRUB boot loader

It seems that this new installation is the only operating system on this computer. If so, it should be safe to install the GRUB boot loader to your primary drive (UEFI partition/boot record).

Warning: If your computer has another operating system that the installer failed to detect, this will make that operating system temporarily unbootable, though GRUB can be manu

Install the GRUB boot loader to your primary drive?

- ○ **No**
- ◉ **Yes**

The presentation selects "yes" to install GRUB.
The presentation selects "Continue".

Screenshot **Go Back** **Continue**

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Player

debian 12

Install the GRUB boot loader

You need to make the newly installed system bootable, by installing the GRUB boot loader on a bootable device. The usual way to do this is to install GRUB to your primary drive (UEFI partition/boot record). You may instead install GRUB to a different drive (or partition), or to removable media.

Device for boot loader installation:

Enter device manually

/dev/sda

The presentation installs GRUB on "/dev/sda"
The presentation selects "Continue".

Screenshot **Go Back** **Continue**

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Player

debian 12

Finish the installation

Installation complete

Installation is complete, so it is time to boot into your new system. Make sure to remove the installation media, so that you boot into the new system rather than restarting the installation.

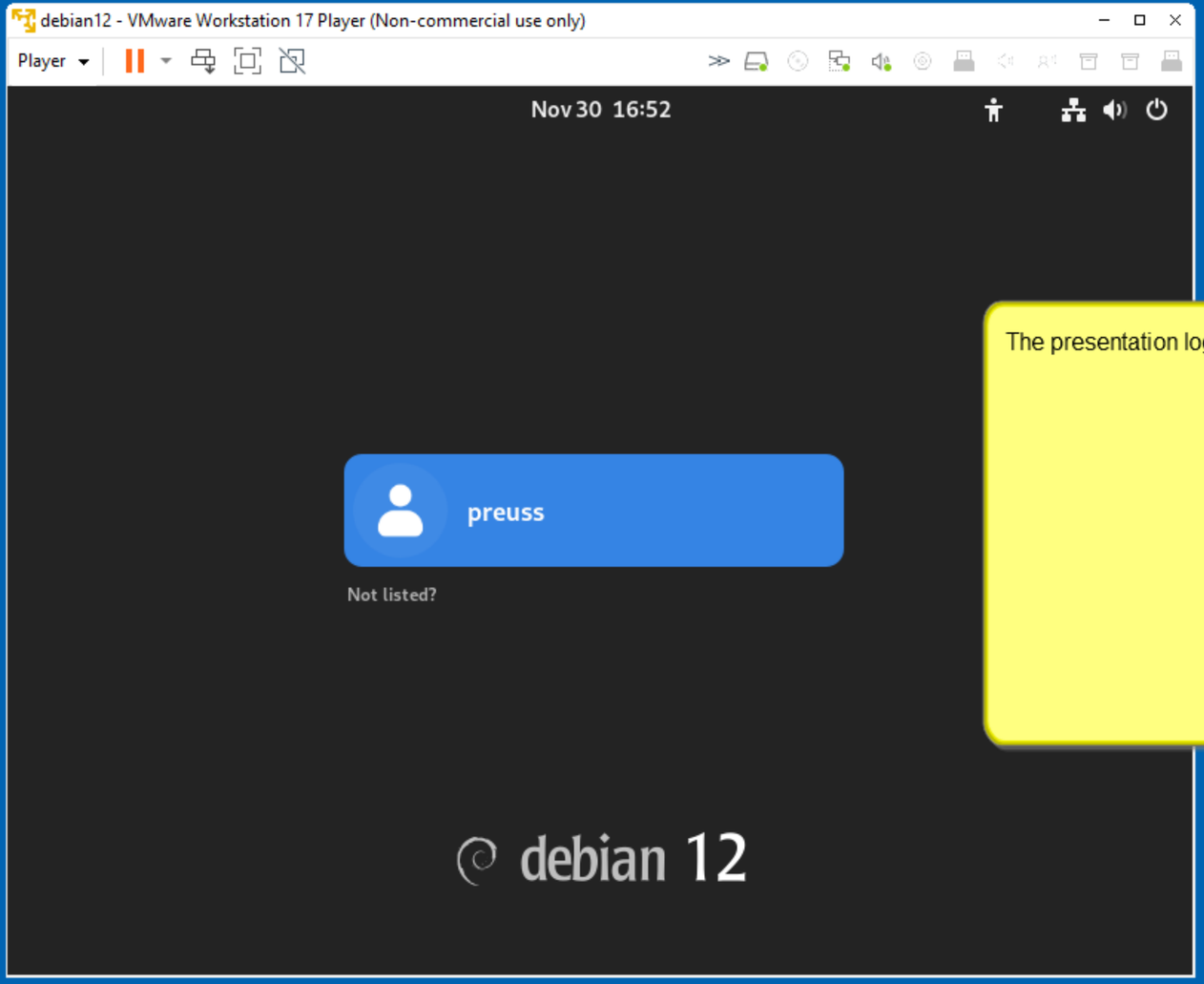
Please choose <Continue> to reboot.

The presentation selects "Continue".

Screenshot

Go Back

Continue



The presentation logs in as the account created earlier.

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Player

Activities Initial Setup Nov 30 16:53

Welcome Next

Welcome!

English ✓ United State

The presentation selects "Next".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Initial Setup Nov 30 16:53

Previous Typing Next

Typing

Select your keyboard layout or an input method.

English (Mali, US, Macintosh)		Preview
English (US)	✓	Preview
English (the divide/multiply toggle the layout)		Preview
Irish		Preview
Scottish Gaelic		Preview

The presentation selects "Next".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Initial Setup Nov 30 16:53

Previous Privacy Next

Privacy

Location Services

Allows applications to determine your geographical location. Uses the Mozilla Location Service (privacy policy).

The presentation disables "Location Services"

The presentation selects "Next".

Privacy controls can be changed at any time from the Settings application.

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities | Initial Setup | Nov 30 16:53

Previous | Online Accounts | Skip

Connect Your Online Accounts

Connect your accounts to easily access your email, online calendar, contacts, documents and photos.

- Google
- Nextcloud
- Microsoft

Accounts can be added and removed at any time from the Settings application.

The presentation selects "Skip".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Initial Setup Nov 30 16:53

Setup Complete

All done!

Debian GNU/Linux is ready to be used. We hope that you love it!

Start Using Debian GNU/Linux

The presentation selects "Start Using Debian GNU/Linux".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities

Nov 30 16:54

The presentation clicks on "Activities".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities

Nov 30 16:54

Type to search

The presentation enters the word "terminal" in the search box.

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities

Nov 30 16:54

term

Terminal

The presentation enters the word "terminal" in the search box.

The presentation double clicks on the Terminal icon.

Software
15 more

Terminator Multiple **termi**nals in one window

PuTTY Terminal Emulator Start a PuTTY **termi**nal session

MATE Terminal Use the command line

Xfce Terminal **Termi**nal Emulator

Terminus A **termi**nal with the capabilities of Guake and **Termi**nator

debian12 - VMware Workstation 17 Player (Non-commercial use only)
Player
Activities
Terminal
Nov 30 16:54
preuss@debian12: ~
preuss@debian12:~$ su
Password:
The presentation becomes "root" using the "su" command and root's password as shown.

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Terminal Nov 30 16:54

preuss@debian12: ~

```
preuss@debian12:~$ su
Password:
root@debian12:/home/preuss# nano -c /etc/sudoers
```

The presentation enters the command "nano -c /etc/sudoers", then "enter".

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Terminal Nov 30 16:55

preuss@debian12: ~

```
 GNU nano 7.2                                                /etc/sudoers
#Defaults:%sudo env_keep += "GREP_COLOR"

# While you shouldn't normally run git as root, you need to with etckeeper
#Defaults:%sudo env_keep += "GIT_AUTHOR_* GIT_COMMITTER_*"

# Per-user preferences; root won't have sensible values for them.
#Defaults:%sudo env_keep += "EMAIL DEBEMAIL DEBFULLNAME"

# "sudo scp" or "sudo rsync" should be able to use your SSH agent.
#Defaults:%sudo env_keep += "SSH_AGENT_PID SSH_AUTH_SOCK"

# Ditto for GPG agent
#Defaults:%sudo env_keep += "GPG_AGENT_INFO"

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "@include" directi

@includedir /etc/sudoers.d

                                [ line 50/55 (90%), col  1/26 (  3%), char 1597/1714 (93%) ]
^G Help      ^O Write Out  ^W Where Is  ^K Cut       ^T Execute   ^C Location  M-U Undo    M-A Set Mark  M-] To Bracket  M-Q Previous
^X Exit      ^R Read File  ^\ Replace   ^U Paste     ^J Justify   ^/ Go To Line M-E Redo    M-6 Copy      ^Q Where Was    M-W Next
```

The presentation notes line 50. This states all members of the "sudo" group may use the sudo command with a password.

The presentation uses crtl-X to exit the file.

debian12 - VMware Workstation 17 Player (Non-commercial use only)
Player
Activities
Terminal
Nov 30 16:55
preuss@debian12: ~
preuss@debian12:~$ su
Password:
root@debian12:/home/preuss# nano -c /etc/sudoers
root@debian12:/home/preuss# usermod -aG sudo preuss
bash: usermod: command not found
root@debian12:/home/preuss# /sbin/usermod -aG sudo preuss
root@debian12:/home/preuss#
The command "/sbin/usermod -aG sudo preuss" makes the login "preuss" a member of the "sudo" group.

debian12 - VMware Workstation 17 Player (Non-commercial use only)
Player

preuss@debian12: ~

```
preuss@debian12:~$ su
Password:
root@debian12:/home/preuss# nano -c /etc/sudoers
root@debian12:/home/preuss# usermod -aG sudo preuss
bash: usermod: command not found
root@debian12:/home/preuss# /sbin/usermod -aG sudo preuss
root@debian12:/home/preuss# cat /etc/group | grep preuss
cdrom:x:24:preuss
floppy:x:25:preuss
sudo:x:27:preuss
audio:x:29:preuss
dip:x:30:preuss
video:x:44:preuss
plugdev:x:46:preuss
users:x:100:preuss
netdev:x:106:preuss
bluetooth:x:111:preuss
lpadmin:x:113:preuss
scanner:x:116:saned,preuss
preuss:x:1000:
root@debian12:/home/preuss#
```

The command shown confirms the login "preuss" is a member of "sudo".

debian12 - VMware Workstation 17 Player (Non-commercial use only)
Player

preuss@debian12: ~

```
preuss@debian12:~$ su
Password:
root@debian12:/home/preuss# nano -c /etc/sudoers
root@debian12:/home/preuss# usermod -aG sudo preuss
bash: usermod: command not found
root@debian12:/home/preuss# /sbin/usermod -aG sudo preuss
root@debian12:/home/preuss# cat /etc/group | grep preuss
cdrom:x:24:preuss
floppy:x:25:preuss
sudo:x:27:preuss
audio:x:29:preuss
dip:x:30:preuss
video:x:44:preuss
plugdev:x:46:preuss
users:x:100:preuss
netdev:
bluetoo
lpadmin
scanner
preuss:
root@de
exit
preuss@
```

The presentation logs out and back into the VM. This is necessary for the group changes to take effect.

Log Out preuss

preuss will be logged out automatically in 60 seconds.

Cancel | Log Out

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Terminal Nov 30 16:57

preuss@debian12: ~

```
preuss@debian12:~$ sudo apt update
[sudo] password for preuss:
```

The presentation opens the terminal and issues the "update" command as shown.

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Terminal Nov 30 16:57

preuss@debian12: ~

```
preuss@debian12:~$ sudo apt update
[sudo] password for preuss:
Ign:1 cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm InRelease
Err:2 cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm Release
  Please use apt-cdrom to make this CD-ROM recognized by APT. apt-get update cannot be used to add new CD-ROMs
Hit:3 http://deb.debian.org/debian bookworm InRelease
Hit:4 http://deb.debian.org/debian bookworm-updates InRelease
Hit:5 http://security.debian.org/debian-security bookworm-security InRelease
Reading package lists... Done
E: The repository 'cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm Release' does not have a Rele
ase file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
preuss@debian12:~$
```

The presentation will modify the apt configuration not to use the DVD.

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Terminal Nov 30 16:58

preuss@debian12: ~

```
preuss@debian12:~$ sudo apt update
[sudo] password for preuss:
Ign:1 cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm InRelease
Err:2 cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm Release
  Please use apt-cdrom to make this CD-ROM recognized by APT. apt-get update cannot be used to add new CD-ROMs
Hit:3 http://deb.debian.org/debian bookworm InRelease
Hit:4 http://deb.debian.org/debian bookworm-updates InRelease
Hit:5 http://security.debian.org/debian-security bookworm-security InRelease
Reading package lists... Done
E: The repository 'cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm Release' does not have a Rele
ase file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
preuss@debian12:~$ sudo nano -c /etc/apt/sources.list
```

The presentation issues the command "sudo nano -c /etc/apt/sources.list".

The password requested is the password for the login "preuss" in example.

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Terminal Nov 30 16:59

preuss@debian12: ~

```
 GNU nano 7.2                                  /etc/apt/sources.list *
#T deb cdrom:[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49]/ bookworm main non-free-firmware

deb http://deb.debian.org/debian/ bookworm main non-free-firmware
deb-src http://deb.debian.org/debian/ bookworm main non-free-firmware

deb http://security.debian.org/debian-security bookworm-security main non-free-firmware
deb-src http://security.debian.org/debian-security bookworm-security main non-free-firmware

# bookworm-updates, to get updates before a point release is made;
# see https://www.debian.org/doc/manuals/debian-reference/ch02.en.html#_updates_and_backports
deb http://deb.debian.org/debian/ bookworm-updates main non-free-firmware
deb-src http://deb.debian.org/debian/ bookworm-updates main non-free-firmware
```

The presenation adds "#T" to line 1 as shown.
The presentation does crtl X and follows the screen to save the file.

```
                [ line  1/13 ( 7%), col  4/142 (  2%), char   3/774 ( 0%) ]
^G Help         ^O Write Out    ^W Where Is     ^K Cut          ^T Execute      ^C Location     M-U Undo        M-A Set Mark    M-] To Bracket  M-Q Previous
^X Exit         ^R Read File    ^\ Replace      ^U Paste        ^J Justify      ^/ Go To Line   M-E Redo        M-6 Copy        ^Q Where Was    M-W Next
```

debian12 - VMware Workstation 17 Player (Non-commercial use only)
Player

preuss@debian12: ~

```
preuss@debian12:~$ sudo apt update
[sudo] password for preuss:
Ign:1 cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm InRelease
Err:2 cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm Release
  Please use apt-cdrom to make this CD-ROM recognized by APT. apt-get update cannot be used to add new CD-ROMs
Hit:3 http://deb.debian.org/debian bookworm InRelease
Hit:4 http://deb.debian.org/debian bookworm-updates InRelease
Hit:5 http://security.debian.org/debian-security bookworm-security InRelease
Reading package lists... Done
E: The repository 'cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm Release' does not have a Rele
ase file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
preuss@debian12:~$ sudo nano -c /etc/apt/sources.list
preuss@debian12:~$ sudo apt update
Hit:1 http://deb.debian.org/debian bookworm InRelease
Hit:2 http://deb.debian.org/debian bookworm-updates InRelease
Hit:3 http://security.debian.org/debian-security bookworm-security
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
preuss@debian12:~$
```

The presentation runs "sudo apt update" as shown.

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities Terminal Nov 30 17:00

preuss@debian12: ~

```
preuss@debian12:~$ sudo apt update
[sudo] password for preuss:
Ign:1 cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm InRelease
Err:2 cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm Release
  Please use apt-cdrom to make this CD-ROM recognized by APT. apt-get update cannot be used to add new CD-ROMs
Hit:3 http://deb.debian.org/debian bookworm InRelease
Hit:4 http://deb.debian.org/debian bookworm-updates InRelease
Hit:5 http://security.debian.org/debian-security bookworm-security InRelease
Reading package lists... Done
E: The repository 'cdrom://[Debian GNU/Linux 12.1.0 _Bookworm_ - Official amd64 DVD Binary-1 with firmware 20230722-10:49] bookworm Release' does not have a Rele
ase file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
preuss@debian12:~$ sudo nano -c /etc/apt/sources.list
preuss@debian12:~$ sudo apt update
Hit:1 http://deb.debian.org/debian bookworm InRelease
Hit:2 http://deb.debian.org/debian bookworm-updates InRelease
Hit:3 http://security.debian.org/debian-security bookworm-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
preuss@debian12:~$ sudo apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
preuss@debian12:~$ sudo apt install firewalld
```

The presentation issues the command "sudo apt upgrade". Nothing is found to upgrade.

The presentation issues "sudo apt install firewalld". This is a easier way to manage a Linux firewall.

debian12 - VMware Workstation 17 Player (Non-commercial use only)
Player

preuss@debian12: ~

```
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
preuss@debian12:~$ sudo nano -c /etc/apt/sources.list
preuss@debian12:~$ sudo apt update
Hit:1 http://deb.debian.org/debian bookworm InRelease
Hit:2 http://deb.debian.org/debian bookworm-updates InRelease
Hit:3 http://security.debian.org/debian-security bookworm-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
preuss@debian12:~$ sudo apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
preuss@debian12:~$ sudo apt install firewalld
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  ipset iptables libip6tc2 libipset13 python3-attr python3-cap-ng python3-firewall python3-json-pointer python3-jsonschema python3-nftables python3-pyrsistent
  python3-rfc3987 python3-uritemplate python3-webcolors
Suggested packages:
  python-attr-doc python-jsonschema-doc
The following NEW packages will be installed:
  firewalld ipset iptables libip6tc2 libipset13 python3-attr python3-cap-ng python3-firewall python3-json-pointer python3-jsonschema python3-nftables
  python3-pyrsistent python3-rfc3987 python3-uritemplate python3-webcolors
0 upgraded, 15 newly installed, 0 to remove and 0 not upgraded.
Need to get 1,271 kB of archives.
After this operation, 8,130 kB of additional disk space will be used.
Do you want to continue? [Y/n]
```

The presentation selects "y" to install firewalld.

debian12 - VMware Workstation 17 Player (Non-commercial use only)
Player

preuss@debian12: ~

```
update-alternatives: using /usr/sbin/iptables-legacy to provide /usr/sbin/iptables (iptables) in auto mode
update-alternatives: using /usr/sbin/ip6tables-legacy to provide /usr/sbin/ip6tables (ip6tables) in auto mode
update-alternatives: using /usr/sbin/iptables-nft to provide /usr/sbin/iptables (iptables) in auto mode
update-alternatives: using /usr/sbin/ip6tables-nft to provide /usr/sbin/ip6tables (ip6tables) in auto mode
update-alternatives: using /usr/sbin/arptables-nft to provide /usr/sbin/arptables (arptables) in auto mode
update-alternatives: using /usr/sbin/ebtables-nft to provide /usr/sbin/ebtables (ebtables) in auto mode
Setting up python3-jsonschema (4.10.3-1) ...
Setting up python3-nftables (1.0.6-2+deb12u2) ...
Setting up firewalld (1.3.3-1~deb12u1) ...
update-alternatives: using /usr/share/polkit-1/actions/org.fedoraproject.FirewallD1.server.policy.choice to provide /usr/share/polkit-1/actions/org.fedoraproject
.FirewallD1.policy (org.fedoraproject.FirewallD1.policy) in auto mode
Created symlink /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service
Created symlink /etc/systemd/system/multi-user.target.wants/firewalld.service
Processing triggers for man-db (2.11.2-2) ...
Processing triggers for dbus (1.14.10-1~deb12u1) ...
Processing triggers for libc-bin (2.36-9+deb12u3) ...
preuss@debian12:~$ sudo systemctl status firewalld
● firewalld.service - firewalld - dynamic firewall daemon
     Loaded: loaded (/lib/systemd/system/firewalld.service; enabled; preset:
     Active: active (running) since Thu 2023-11-30 17:00:18 CST; 18s ago
       Docs: man:firewalld(1)
   Main PID: 6031 (firewalld)
      Tasks: 2 (limit: 4579)
     Memory: 27.7M
        CPU: 257ms
     CGroup: /system.slice/firewalld.service
             └─6031 /usr/bin/python3 /usr/sbin/firewalld --nofork --nopid

Nov 30 17:00:18 debian12 systemd[1]: Starting firewalld.service - firewalld - dynamic firewall daemon...
Nov 30 17:00:18 debian12 systemd[1]: Started firewalld.service - firewalld - dynamic firewall daemon.
preuss@debian12:~$ sudo systemctl start firewalld
preuss@debian12:~$ sudo systemctl enable firewalld
preuss@debian12:~$
```

The presentation issues "sudo systemctl status firewalld" to see if firewalld is running. In this case, it is running.

If firewalld was not running, then the presentation would use
"sudo systemctl start firewalld"
"sudo systemctl enable firewalld"

debian12 - VMware Workstation 17 Player (Non-commercial use only)

Player

Activities

Nov 30 17:01

The presentation is done with the basic installation of Debian 12. The presentation selects the power button icon, then selects "Power off".

Power Off

Suspend

Restart...

Power Off...

Log Out...

Wired

Bluetooth

Balanced

Night Light

Dark Mode