Linux Router on Debian 10.05 installation

Date: 2020/09/12
Companion guide for: https://blog.notnot.ninja/2020/08/29/lab-vm/

Use either the Graphical install (this guide) or text based Install
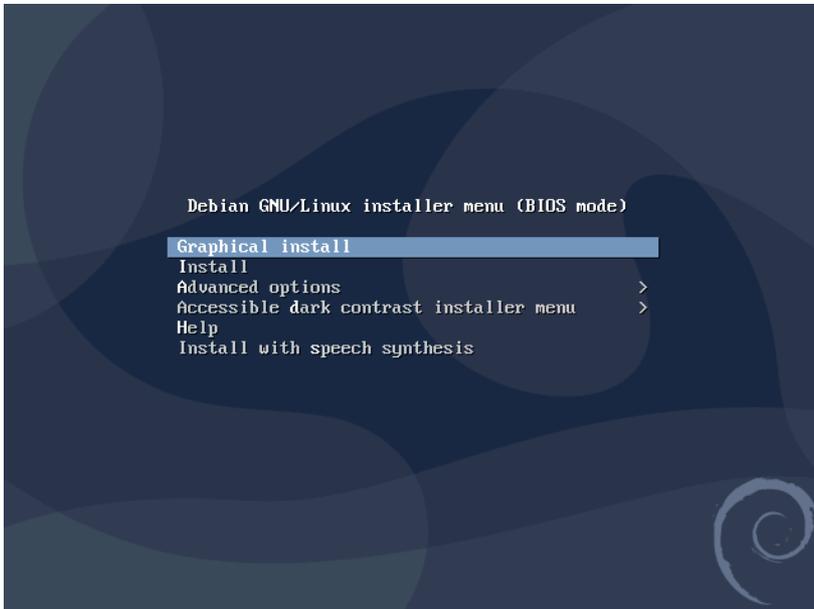
Pick your language

Pick your country

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:

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

Screenshot   Go Back   Continue

Configure the keyboard

Keymap to use:

- **American English**
- Albanian
- Arabic
- Asturian
- Bangladesh
- Belarusian
- Bengali
- Belgian
- Bosnian
- Brazilian
- British English
- Bulgarian (BDS layout)
- Bulgarian (phonetic layout)
- Burmese
- Canadian French
- Canadian Multilingual
- Catalan

Screenshot   Go Back   Continue

Load installer components from CD

Loading additional components

Retrieving partman-jfs

It is only required to configure eth0 (Home/Office network), the installer will first try to set the IP settings for this network device by using DHCP. We will later change the IP address to a static 192.168.1.10

Configure the network

Your system has multiple network interfaces. Choose the one to use as the primary network interface during the installation. If possible, the first connected network interface found has been selected.

Primary network interface:

eth0: Ethernet
eth1: Ethernet

Screenshot   Go Back   Continue

Configure the network

Please enter the hostname for this system.

The hostname is a single word that identifies your system to the network. If you don't know what your hostname should be, consult your network administrator. If you are setting up your own home network, you can make something up here.

Hostname:

router

Screenshot   Go Back   Continue

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:

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Set up users and passwords

You need to set a password for 'root', the system administrative account. A malicious or unqualified user with root access can have disastrous results, so you should take care to choose a root password that is not easy to guess. It should not be a word found in dictionaries, or a word that could be easily associated with you.

A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.

The root user should not have an empty password. If you leave this empty, the root account will be disabled and the system's initial user account will be given the power to become root using the "sudo" command.

Note that you will not be able to see the password as you type it.

Root password:

●●●●●●●●

☐ Show Password in Clear

Please enter the same root password again to verify that you have typed it correctly.

Re-enter password to verify:

●●●●●●●●

☐ Show Password in Clear

| Screenshot | | Go Back | Continue |

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debian

Set up users and passwords

A user account will be created for you to use instead of the root account for non-administrative activities.

Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.

Full name for the new user:

philipf

| Screenshot | | Go Back | Continue |

debian

Set up users and passwords

Select a username for the new account. Your first name is a reasonable choice. The username should start with a lower-case letter, which can be followed by any combination of numbers and more lower-case letters.

Username for your account:

philipf

Screenshot   Go Back   Continue

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debian

Set up users and passwords

A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.

Choose a password for the new user:

●●●●●●●●

☐ Show Password in Clear

Please enter the same user password again to verify you have typed it correctly.

Re-enter password to verify:

●●●●●●●●

☐ Show Password in Clear

Screenshot   Go Back   Continue

Configure the clock

If the desired time zone is not listed, then please go back to the step "Choose language" and select a country that uses the desired time zone (the country where you live or are located).

Select a location in your time zone:

Auckland
Chatham Islands

Screenshot   Go Back   Continue

Unfortunately because of the small disk size we cannot use the Guided mode. If manual partition is causing issues for you increase the VMs disk size.

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

Screenshot   Go Back   Continue

Partition disks

This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.

Guided partitioning
Configure iSCSI volumes

SCSI2 (0,0,0) (sda) - 1.1 GB Msft Virtual Disk

Undo changes to partitions
Finish partitioning and write changes to disk

[Screenshot] [Help]   [Go Back] [Continue]

Partition disks

You have selected an entire device to partition. If you proceed with creating a new partition table on the device, then all current partitions will be removed.

Note that you will be able to undo this operation later if you wish.
Create new empty partition table on this device?

○ No
◉ Yes

[Screenshot]   [Go Back] [Continue]

debian

Partition disks

This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.

> **Guided partitioning**
> **Configure software RAID**
> **Configure the Logical Volume Manager**
> **Configure encrypted volumes**
> **Configure iSCSI volumes**
>
> ▽ **SCSI2 (0,0,0) (sda) - 1.1 GB Msft Virtual Disk**
> > **pri/log   1.1 GB   FREE SPACE**
>
> **Undo changes to partitions**
> **Finish partitioning and write changes to disk**

[Screenshot] [Help]   [Go Back] [Continue]

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debian

Partition disks

How to use this free space:

Create a new partition
Automatically partition the free space
Show Cylinder/Head/Sector information

[Screenshot] [Help]   [Go Back] [Continue]

Partition disks

The maximum size for this partition is 1.1 GB.

Hint: "max" can be used as a shortcut to specify the maximum size, or enter a percentage (e.g. "20%") to use that percentage of the maximum size.

New partition size:

1GB

Screenshot   Go Back   Continue

Partition disks

Type for the new partition:

Primary
Logical

Screenshot   Go Back   Continue

Partition disks

Please choose whether you want the new partition to be created at the beginning or at the end of the available space.

Location for the new partition:

Beginning
End

Screenshot   Go Back   Continue

Partition disks

You are editing partition #1 of SCSI2 (0,0,0) (sda). No existing file system was detected in this partition.

Partition settings:

Use as:	Ext4 journaling file system
Mount point:	/
Mount options:	defaults
Label:	none
Reserved blocks:	5%
Typical usage:	standard
Bootable flag:	**on**

Delete the partition
Done setting up the partition

Screenshot   Help   Go Back   Continue

debian

Partition disks

You are editing partition #1 of SCSI2 (0,0,0) (sda). No existing file system was detected in this partition.
Partition settings:

Use as:	Ext4 journaling file system
Mount point:	/
Mount options:	defaults
Label:	none
Reserved blocks:	5%
Typical usage:	standard
Bootable flag:	on

Delete the partition

Done setting up the partition

[Screenshot] [Help]   [Go Back] [Continue]

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debian

Partition disks

This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.

Guided partitioning
Configure software RAID
Configure the Logical Volume Manager
Configure encrypted volumes
Configure iSCSI volumes

▽ SCSI2 (0,0,0) (sda) - 1.1 GB Msft Virtual Disk
   >   #1   primary   999.3 MB   B   f   ext4   /
   >   pri/log   73.4 MB   FREE SPACE

Undo changes to partitions
Finish partitioning and write changes to disk

[Screenshot] [Help]   [Go Back] [Continue]

Partition disks

How to use this free space:

- **Create a new partition**
- **Automatically partition the free space**
- **Show Cylinder/Head/Sector information**

[Screenshot] [Help]   [Go Back] [Continue]

Partition disks

The maximum size for this partition is 73.4 MB.

Hint: "max" can be used as a shortcut to specify the maximum size, or enter a percentage (e.g. "20%") to use that percentage of the maximum size.

New partition size:

73.4 MB

[Screenshot]   [Go Back] [Continue]

Partition disks

Type for the new partition:

Primary

Logical

Screenshot   Go Back   Continue

Partition disks

You are editing partition #5 of SCSI2 (0,0,0) (sda). No existing file system was detected in this partition.

Partition settings:

Use as: swap area

Bootable flag: off

Delete the partition

Done setting up the partition

Screenshot   Help   Go Back   Continue

Partition disks

This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.

    Guided partitioning
    Configure software RAID
    Configure the Logical Volume Manager
    Configure encrypted volumes
    Configure iSCSI volumes

▽ SCSI2 (0,0,0) (sda) - 1.1 GB Msft Virtual Disk
    >   #1   primary   999.3 MB   B   f   ext4   /
    >   #5   logical   71.3 MB   f   swap   swap

    Undo changes to partitions
    Finish partitioning and write changes to disk

[Screenshot] [Help]   [Go Back] [Continue]

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:
    SCSI2 (0,0,0) (sda)

The following partitions are going to be formatted:
    partition #1 of SCSI2 (0,0,0) (sda) as ext4
    partition #5 of SCSI2 (0,0,0) (sda) as swap
Write the changes to disks?

○ No
⦿ Yes

[Screenshot]   [Continue]

Install the base system

Installing the base system

Extracting util-linux...

Configure the package manager

Your installation CD or DVD has been scanned; its label is:

Debian GNU/Linux 10.5.0 _Buster_ - Official amd64 NETINST 20200801-11:34

You now have the option to scan additional CDs or DVDs for use by the package manager (apt). Normally these should be from the same set as the installation CD/DVD. If you do not have any additional CDs or DVDs available, this step can just be skipped.

If you wish to scan another CD or DVD, please insert it now.

Scan another CD or DVD?

⦿ No

◯ Yes

Screenshot   Go Back   Continue

Configure the package manager

The goal is to find a mirror of the Debian archive that is close to you on the network -- be aware that nearby countries, or even your own, may not be the best choice.

Debian archive mirror country:

- Lithuania
- Luxembourg
- Macedonia, Republic of
- Mexico
- Moldova
- Netherlands
- New Caledonia
- New Zealand
- Norway
- Philippines
- Poland
- Portugal
- Romania
- Russian Federation
- Réunion

Screenshot   Go Back   Continue

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:

- ftp.nz.debian.org
- ftp.citylink.co.nz
- mirror.fsmg.org.nz
- deb.debian.org
- debian-archive.trafficmanager.net

Screenshot   Go Back   Continue

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 · Go Back · Continue

Configure the package manager

Configuring apt

Retrieving file 4 of 5

Cancel

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 week, sending statistics to the distribution developers. The collected statistics can be viewed on https://popcon.debian.org/.

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

Participate in the package usage survey?

◉ No

○ Yes

Screenshot   Continue

The **standard system utilities are not required**

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:

☐ **Debian desktop environment**
☐ **... GNOME**
☐ **... Xfce**
☐ **... KDE Plasma**
☐ **... Cinnamon**
☐ **... MATE**
☐ **... LXDE**
☐ **... LXQt**
☐ **web server**
☐ **print server**
☑ **SSH server**
☐ **standard system utilities**

Screenshot   Continue

Install the GRUB boot loader on a hard disk

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 the master boot record of your first hard drive.

Warning: If the installer failed to detect another operating system that is present on your computer, modifying the master boot record will make that operating system temporarily unbootable, though GRUB can be manually configured later to boot it.

Install the GRUB boot loader to the master boot record?

○ No

⦿ Yes

Screenshot   Go Back   Continue

Install the GRUB boot loader on a hard disk

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 on the master boot record of your first hard drive. If you prefer, you can install GRUB elsewhere on the drive, or to another drive, or even to a floppy.

Device for boot loader installation:

Enter device manually

/dev/sda (scsi-3600224809830e666c45a4f0cee3f4cfa)

Screenshot   Go Back   Continue

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.

Screenshot   Go Back   Continue

GNU GRUB   version 2.02+dfsg1-20+deb10u2

```
*Debian GNU/Linux
 Advanced options for Debian GNU/Linux
```

Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, `e' to edit the commands before booting or `c'
for a command-line.
The highlighted entry will be executed automatically in 2s.

```
Debian GNU/Linux 10 router tty1

router login:
```

EOF

```
Debian GNU/Linux 10 router tty1

router login:
```