

Upgrade Debian 10 to Debian 11

This walk-through explains the steps to upgrade from Debian 10 to Debian 11. Since I had to upgrade my motherboard (after 16 years of operation!) (see [Machines](#)) I could not access the internet before upgrading Debian to *Bullseye*. In my specific case this is because the *B550m* motherboard from Asrock is equipped with a Realtek RTL8111H NIC which is only supported in kernels newer than 4.19, and Debian 10 is still based on Linux kernel 4.19. Several attempts to install a newer Realtek driver failed, therefore I decided to upgrade to Debian 11 offline through an iso image.

Steps

1. Backup essential folders and files

- /etc
- /var/lib/dpkg
- /var/lib/apt/extended_states
- output of `dpkg --get-selections "*" > selections`

```
sudo dpkg --get-selections "*" > selections
```

- /home directory and hidden files to prevent some applications from overwriting existing user settings with new defaults

- ### 2. Download [Debian iso](#) file and copy it to your host's home directory. Make sure you download the iso containing all desktop environments, or the one matching your installed desktop environment.
- ### 3. Add the iso file to fstab so it will mount when rebooting. At the bottom of fstab enter the following line:

```
/home/user/debian-11.6.0-amd64-DVD-1.iso /media/cdrom/ iso9660 loop 0 0
```

- ### 4. Record the session. It is strongly recommended that you use the `/usr/bin/script` program to record a transcript of the upgrade session. Then if a problem occurs, you will have a log of what happened, and if needed, can provide exact information in a bug report. To start the recording, type:

```
script -t 2>~/upgrade-bullseye1.time -a ~/upgrade-bullseye1.script
```

- ### 5. Do a minimal system upgrade first:

```
sudo apt upgrade --without-new-pkgs
```

- ### 6. Avoid libreoffice to be installed. Hold the package:

```
sudo apt-mark hold libreoffice*
```

- ### 7. Do the distro upgrade:

```
sudo apt full-upgrade
```

- ### 8. Remove the hold:

```
sudo apt-mark unhold libreoffice*
```

Show all packages on hold:

```
sudo apt-mark showhold
```

9. After you have completed the upgrade, you can stop script by typing exit at the prompt. If you have used the -t switch for script you can use the scriptreplay program to replay the whole session:

```
sudo scriptreplay ~/upgrade-bullseyestep.time ~/upgrade-bullseyestep.script
```

10. Remove folders which should but could not be removed during the upgrade
11. Remove obsolete packages

```
sudo apt autoremove
```

12. Configure NIC:

```
sudo vim /etc/network/interfaces
```

Replace content with:

```
# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto enp0s5
iface enp0s5 inet static
    address 192.168.2.236
    netmask 255.255.255.0
    gateway 192.168.2.254
    dns-domain sweet.home
    dns-nameservers 192.168.2.254
```

13. Reboot, then check internet is accessible
14. Change host name

```
sudo hostnamectl set-hostname <new-host-name>
sudo vim /etc/hosts
```

Links

- Upgrade without internet [How to upgrade Debian 10 to Debian 11 without internet?](#)
- Mount iso [How to mount an ISO image/file under Linux](#)
- Mount using fstab: [Mount ISO using fstab \(Linux tutorial\)](#)
- Backup [How to Upgrade Debian 10 to Debian 11](#)

- Debian [Upgrades from Debian 10 \(buster\)](#)
- Network [Linux Show / Display Available Network Interfaces](#)
- Network [How to set up static IP address on Debian Linux 10/11](#)
- Apt sources [Add Debian 11 Bullseye official repositories to sources.list](#)
- Hold packages [How to prevent updating of a specific package?](#)
- Host name [Change hostname on Debian](#)

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Last update: **2023/01/20 14:07**

