**UniFi - How to Install and Update via APT on Debian or Ubuntu**

**Overview**

This article provides the steps to update the UniFi Network Controller on a Debian or Ubuntu system via APT (Advanced Package Tool). If you run into issues following the process described in this article, please take a look at the scripts provided in [this Community post](https://community.ubnt.com/t5/UniFi-Wireless/UniFi-Installation-Scripts-Works-on-Ubuntu-18-04-and-16-04/td-p/2375150) that includes UniFi Network Controller software installation on Ubuntu 18.04 and 16.04 and Debian 8/9.

**NOTES & REQUIREMENTS:**

Before upgrading the UniFi Network Controller, make sure that you have backed up the UniFi Network Controller Database. You will need to make sure that the user has **sudo permissions.**For more information about adding a user to **sudo list**, see [this Debian article.](https://wiki.debian.org/sudo)

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**Introduction**

In order to update the UniFi Network Controller via APT, it is necessary to create source files or edit lines in an existing *sources.lis*t file with Linux text editors: vi or nano. That is the most common method for package updates and installs for these operating systems. The repo structure should be permanent, but if there are any changes they will be pointed out in the UniFi Network Controller software version release posts, found in the [Community](https://community.ui.com/releases).

Follow the instructions below to stay with the current **stable** release, regardless of changes in versions. When there is a new stable release, there will be a post on the [Community](https://community.ui.com/releases) announcing it.

**UniFi Network Controller APT Steps**

**1.**Install required packages before you begin with the following command:

sudo apt-get update && sudo apt-get install ca-certificates apt-transport-https

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**2.**Use the following command to add a new source list:

echo 'deb https://www.ui.com/downloads/unifi/debian stable ubiquiti' | sudo tee /etc/apt/sources.list.d/100-ubnt-unifi.list

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**NOTE:**Trying to click and go to https://www.ui.com/downloads/unifi/debian on a browser will result in a 403 Forbidden page. This is because we do not allow direct listing/access to this link. The URL is only meant to be used when using the CLI commands as in the one shown above.

**3.**Add the GPG Keys. To add the GPG Keys use one of the two methods described below (**Method A is recommended**). When using the commands below, it is assumed you have sudo and wget installed, more information about sudo can be found [here](https://wiki.debian.org/sudo), and wget [here](https://wiki.debian.org/wget).

**User Tip:**For Ubuntu 18.04, run the following commands before installing UniFi in step 4.

wget -qO - https://www.mongodb.org/static/pgp/server-3.4.asc | sudo apt-key add -
echo "deb https://repo.mongodb.org/apt/ubuntu xenial/mongodb-org/3.4 multiverse" | sudo tee /etc/apt/sources.list.d/mongodb-org-3.4.list
sudo apt-get update

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See an example of what scripts the Community is using to install the UniFi Network Controller on Ubuntu 16.04 and 18.04 in [this Community post](https://community.ui.com/questions/UniFi-Installation-Scripts-or-UniFi-Easy-Update-Script-or-UniFi-Lets-Encrypt-or-Ubuntu-16-04-18-04-/ccbc7530-dd61-40a7-82ec-22b17f027776).

**(Method A)**Install the following trusted key into /etc/apt/trusted.gpg.d

sudo wget -O /etc/apt/trusted.gpg.d/unifi-repo.gpg https://dl.ui.com/unifi/unifi-repo.gpg

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**(Method B)** Using apt-key.

sudo apt-key adv --keyserver keyserver.ubuntu.com --recv 06E85760C0A52C50

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**4.**Install and upgrade the UniFi Network Controller.

**WARNING:**On some Distributions, it's possible an incompatible Java release can be installed during this step. We highly recommend running the following before proceeding with step **4**.

* sudo apt-mark hold openjdk-11-\*

This should restrict Ubuntu from automatically installing Java 11. If you wish to undo this later, replace "hold" with "unhold".

sudo apt-get update && sudo apt-get install unifi -y

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**5.**This step may not be required, depending on the Linux distro you have. If your distro does not come with MongoDB, and it's not available in their repo, then please see the MongoDB installation guide. You can find the latest installation guide for Ubuntu [here](https://docs.mongodb.com/v3.0/tutorial/install-mongodb-on-ubuntu/), and Debian [here](https://docs.mongodb.com/v3.0/tutorial/install-mongodb-on-debian/). We recommend at least MongoDB 2.6.10. Some users have changed the backend to use MongoDB 3 successfully too.

**6.**The UniFi Network Controller should now be accessible at the computer's configured local or public IP address, by typing that IP address in a browser's navigation bar (Chrome is recommended). If it is not launching, use the following command: sudo service unifi start.

Other helpful commands are:

* To stop the UniFi service: sudo service unifi stop
* To restart the UniFi service: sudo service unifi restart
* To see the status of UniFi service: sudo service unifi status

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| **warning_25x25.png  We strongly recommend staying with the stable release, but for those users who wish to do otherwise, click here to expand and see possible suite names, as well as code names in the table within.** |

**Log Files Location**

Log files will be essential for any troubleshooting you might perform. Find them here:

* /usr/lib/unifi/logs/server.log
* /usr/lib/unifi/logs/mongod.log

**NOTE:**If your controller is running on a Unix/Linux based system, then you will require superuser (sudo) privileges to access these log files.

**User Notes & Tips**

*These notes have been added thanks to user collaboration.*

* [This Community post](https://community.ui.com/questions/UniFi-Installation-Scripts-or-UniFi-Easy-Update-Script-or-UniFi-Lets-Encrypt-or-Ubuntu-16-04-18-04-/ccbc7530-dd61-40a7-82ec-22b17f027776) shares some scripts for UniFi Controller software installation on Ubuntu 18.04 and 16.04 and Debian 8/9.
* If you are installing in a VM or a headless server, you may encounter entropy issues. This could be anything from slow service start/restart to complete service failure. The fix is to install haveged. This is an external link for a [tutorial](https://www.digitalocean.com/community/tutorials/how-to-setup-additional-entropy-for-cloud-servers-using-haveged) on the subject.
* Since UniFi Controller version 5.6.x the UniFi service does not run as root. This means that you cannot bind to privileged ports (<1024). The controller will fail to start if you try to use these ports.
* The following affects APT versions 1.5 onward (Ubuntu 17.10 and Debian Sid or newer). A recent version of the [apt-secure man page](https://manpages.debian.org/unstable/apt/apt-secure.8.en.html) stated: "*Since version 1.5 changes in the information contained in the Release file about the repository need to be confirmed before APT continues to apply updates from this repository",*meaning that when performing an update from a major version to the next (for example 5.5.x to 5.6.x) the apt-get update will result in an error.
	+ To fix this run the command the following way: apt-get update --allow-releaseinfo-change
	+ If you receive an error stating the command *is not understood in combination with the other options,* users have reported that issuing the following two commands has fixed it: issue apt clean and hit enter, followed by apt-get update and enter.
* The UniFi Controller, when installed on Debian and Ubuntu, will not have a GUI since it's being run as a Service. Please use the service command for starting, stopping and restarting the UniFi Controller.
* If you see the following error on your DNS server, a user reports solving this by forcing the system to use 8.8.8.8 as DNS server, not his ISP.
* At the moment Ubiquiti does not support arm64, hence it is not available via the repo. A download and manual installation will be necessary for this.
* In the **Add the GPG Keys, method B:**[Source: External Link](https://superuser.com/questions/64922/how-to-work-around-blocked-outbound-hkp-port-for-apt-keys). For users behind restrictive firewalls the following command will allow them to import the GPG key:

apt-key adv --keyserver hkp://keyserver.ubuntu.com:80 --recv 06E85760C0A52C50

* Because of the Java 8 dependency, when using UniFi controller 5.7.X some additional steps might be needed. See [this Community post](https://community.ui.com/questions/UVC-NVR-and-JDK-1-8/3a821d41-c788-4c30-898a-5d739315413c#answer/054bee5d-f2ee-4b0e-998d-2f39d0191524) for details.
* The command apt-get is apt in Ubuntu older than 16.04.