



# NVIDIA Driver Installation Quickstart Guide

## Installation Guide

# Table of Contents

Chapter 1. Introduction.....	1
1.1. Pre-Installation Requirements.....	1
1.2. Installer Formats.....	1
Chapter 2. Runfile Installers.....	2
Chapter 3. Package Managers.....	3

---

# Chapter 1. Introduction

The purpose of this document is to provide some quick start notes for installing NVIDIA drivers on Linux distributions for servers. For more comprehensive information on installing CUDA Toolkit and drivers on various Linux distributions (for both workstation and server variants), refer to the [CUDA Installation Guide for Linux](#).

## 1.1. Pre-Installation Requirements

Before installing the NVIDIA driver on Linux, some pre-installation steps are recommended to:

1. Verify the system has a CUDA-capable GPU
2. Verify the system is running a supported version of Linux
3. Verify the system has build tools such as make, gcc installed
4. Verify the system has correct Linux kernel headers

For more detailed steps on completing each of these pre-installation steps, refer to the [pre-installation actions](#) in the CUDA Installation Guide for Linux.



Note: Mixing installation methods (e.g. .run installers and .deb/.rpm packages) may result in driver conflicts and an unusable system. Refer to [this](#) section in the guide above for other pre-install actions to handle conflicting installation methods.

## 1.2. Installer Formats

NVIDIA drivers are available in three formats for use with Linux distributions:

- ▶ [Runfile installers](#)
- ▶ [Package managers](#)
- ▶ [Containerized drivers](#)

---

## Chapter 2. Runfile Installers

NVIDIA drivers are available as `.run` installer packages for use with Linux distributions from the NVIDIA [driver downloads](#) site. Select the `.run` package for your GPU product.

This page also includes links to all the current and previous driver releases: <https://www.nvidia.com/en-us/drivers/unix>.

The `.run` can also be downloaded using `wget` or `curl` as shown in the example below:

```
$ BASE_URL=https://us.download.nvidia.com/tesla
$ DRIVER_VERSION=550.54.14
$ curl -fSsl -O $BASE_URL/$DRIVER_VERSION/NVIDIA-Linux-x86_64-$DRIVER_VERSION.run
```

Once the `.run` installer has been downloaded, the NVIDIA driver can be installed:

```
$ sudo sh NVIDIA-Linux-x86_64-$DRIVER_VERSION.run
```

Follow the prompts on the screen during the installation. For more advanced options on using the `.run` installer, see the `--help` option or refer to the [README](#).

---

## Chapter 3. Package Managers

The Package Manager installation interfaces with your system's package management system. When using RPM or Deb, the downloaded package is a repository package. Such a package only informs the package manager where to find the actual installation packages, but will not install them.

For installation instructions, refer to <https://docs.nvidia.com/cuda/cuda-installation-guide-linux/index.html>.

## Notice

This document is provided for information purposes only and shall not be regarded as a warranty of a certain functionality, condition, or quality of a product. NVIDIA Corporation ("NVIDIA") makes no representations or warranties, expressed or implied, as to the accuracy or completeness of the information contained in this document and assumes no responsibility for any errors contained herein. NVIDIA shall have no liability for the consequences or use of such information or for any infringement of patents or other rights of third parties that may result from its use. This document is not a commitment to develop, release, or deliver any Material (defined below), code, or functionality.

NVIDIA reserves the right to make corrections, modifications, enhancements, improvements, and any other changes to this document, at any time without notice.

Customer should obtain the latest relevant information before placing orders and should verify that such information is current and complete.

NVIDIA products are sold subject to the NVIDIA standard terms and conditions of sale supplied at the time of order acknowledgement, unless otherwise agreed in an individual sales agreement signed by authorized representatives of NVIDIA and customer ("Terms of Sale"). NVIDIA hereby expressly objects to applying any customer general terms and conditions with regards to the purchase of the NVIDIA product referenced in this document. No contractual obligations are formed either directly or indirectly by this document.

NVIDIA products are not designed, authorized, or warranted to be suitable for use in medical, military, aircraft, space, or life support equipment, nor in applications where failure or malfunction of the NVIDIA product can reasonably be expected to result in personal injury, death, or property or environmental damage. NVIDIA accepts no liability for inclusion and/or use of NVIDIA products in such equipment or applications and therefore such inclusion and/or use is at customer's own risk.

NVIDIA makes no representation or warranty that products based on this document will be suitable for any specified use. Testing of all parameters of each product is not necessarily performed by NVIDIA. It is customer's sole responsibility to evaluate and determine the applicability of any information contained in this document, ensure the product is suitable and fit for the application planned by customer, and perform the necessary testing for the application in order to avoid a default of the application or the product. Weaknesses in customer's product designs may affect the quality and reliability of the NVIDIA product and may result in additional or different conditions and/or requirements beyond those contained in this document. NVIDIA accepts no liability related to any default, damage, costs, or problem which may be based on or attributable to: (i) the use of the NVIDIA product in any manner that is contrary to this document or (ii) customer product designs.

No license, either expressed or implied, is granted under any NVIDIA patent right, copyright, or other NVIDIA intellectual property right under this document. Information published by NVIDIA regarding third-party products or services does not constitute a license from NVIDIA to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property rights of the third party, or a license from NVIDIA under the patents or other intellectual property rights of NVIDIA.

Reproduction of information in this document is permissible only if approved in advance by NVIDIA in writing, reproduced without alteration and in full compliance with all applicable export laws and regulations, and accompanied by all associated conditions, limitations, and notices.

THIS DOCUMENT AND ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS, AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, "MATERIALS") ARE BEING PROVIDED "AS IS." NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE MATERIALS, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL NVIDIA BE LIABLE FOR ANY DAMAGES, INCLUDING WITHOUT LIMITATION ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF ANY USE OF THIS DOCUMENT, EVEN IF NVIDIA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Notwithstanding any damages that customer might incur for any reason whatsoever, NVIDIA's aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the Terms of Sale for the product.

## Trademarks

NVIDIA and the NVIDIA logo are trademarks and/or registered trademarks of NVIDIA Corporation in the United States and other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

## Copyright

© 2019-2024 NVIDIA Corporation and affiliates. All rights reserved.