



# NVIDIA SDK MANAGER

0.9 Beta 8

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## User Documentation

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# NVIDIA SDK Manager

The **NVIDIA Software Development Kit (SDK) Manager** is an all-in-one tool that bundles developer software and provides an end-to-end development environment setup solution for NVIDIA SDKs.

SDK Manager provides you with:

- Support for different NVIDIA hardware development platforms.
- The ability to flash different operating systems.
- A central location for all your software development needs.
- Quick, easy, and simple setup of your development environment.
- Notifications for software updates keep your system up-to-date with the latest releases.

# Release Notes

## NVIDIA SDK Manager 0.9 Beta 8

### What's New

- This is the initial beta release of NVIDIA SDK Manager; all issues may not yet be documented.

### Known Issues

- During the installation process, clicking **Pause** and **Resume** may cause a component to restart the download process.
- The install location cannot be modified. The components downloaded by SDK Manager will be installed on the system volume drive.
- X Forwarding is not currently supported.
- Installation via the command line is supported, but may require user interaction in a dialog box.
- Command-line install is currently only supported for NVOnline user accounts. Support for DevZone user accounts will be added in a future release.
- If running a command-line silent install with a small terminal window, or if the terminal window is resized while the install is running, the output characters may appear unformatted. To avoid this, run the install from a regular-size (or larger) terminal window.

## System Requirements

Host machine	<ul style="list-style-type: none"> <li>• Ubuntu Linux 16.04 LTS x86_64</li> <li>• Minicom installed</li> <li>• Working Internet connection</li> </ul>
Memory	8GB
Free disk space	~120GB of free disk space on the system volume is needed for each full (host and target) deployed SDK version.
GUI	X11 must be enabled on the host.
Graphics driver	<p>The most recent graphics driver for your GPU will need to be installed on the host system. To update your driver, use one of the following methods:</p> <ul style="list-style-type: none"> <li>• Download the <a href="#">.run file for your particular GPU and OS</a>.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Use the <a href="#">apt-get</a> method.</li> </ul> <p><b>WARNING:</b> Do not mix both the download and apt-get methods, as this is not supported.</p>
Target device	<p>One or more of the following supported development platforms:</p> <ul style="list-style-type: none"> <li>• <a href="#">NVIDIA DRIVE AGX DevKit</a></li> <li>• <a href="#">NVIDIA DRIVE™ PX 2 AutoChauffeur (P2379)</a></li> <li>• <a href="#">NVIDIA DRIVE™ PX 2 AutoCruise (P3407)</a></li> </ul>
Additional hardware	USB cable to connect the Linux host to the target

**Note for QNX users:**

DRIVE QNX SDKs require QNX SDP (version: 7.0.0 – 700-SDP\_3\_build-aarch64-183). For more information, see [QNX SDP Installation Instructions for DRIVE QNX](#).

# Install with the SDK Manager GUI

This section is intended to help you use the NVIDIA SDK Manager GUI to successfully configure your development environment.

## Download SDK Manager

1. SDK Manager works with two NVIDIA systems, [NVOnline](#) and [DevZone](#). Navigate to the appropriate site for your user account, and log in.
2. From the download page, locate `sdkmanager-[version].[build#].zip`.
  - [NVOnline](#) users: turn on active filters by clicking the **Show Groups Only** button, then click the hyperlink for **NVIDIA SDK Manager for DRIVE**.
  - DevZone users: after logging in, go to the [NVIDIA DRIVE Downloads](#) page.
3. Download the file to your host machine.

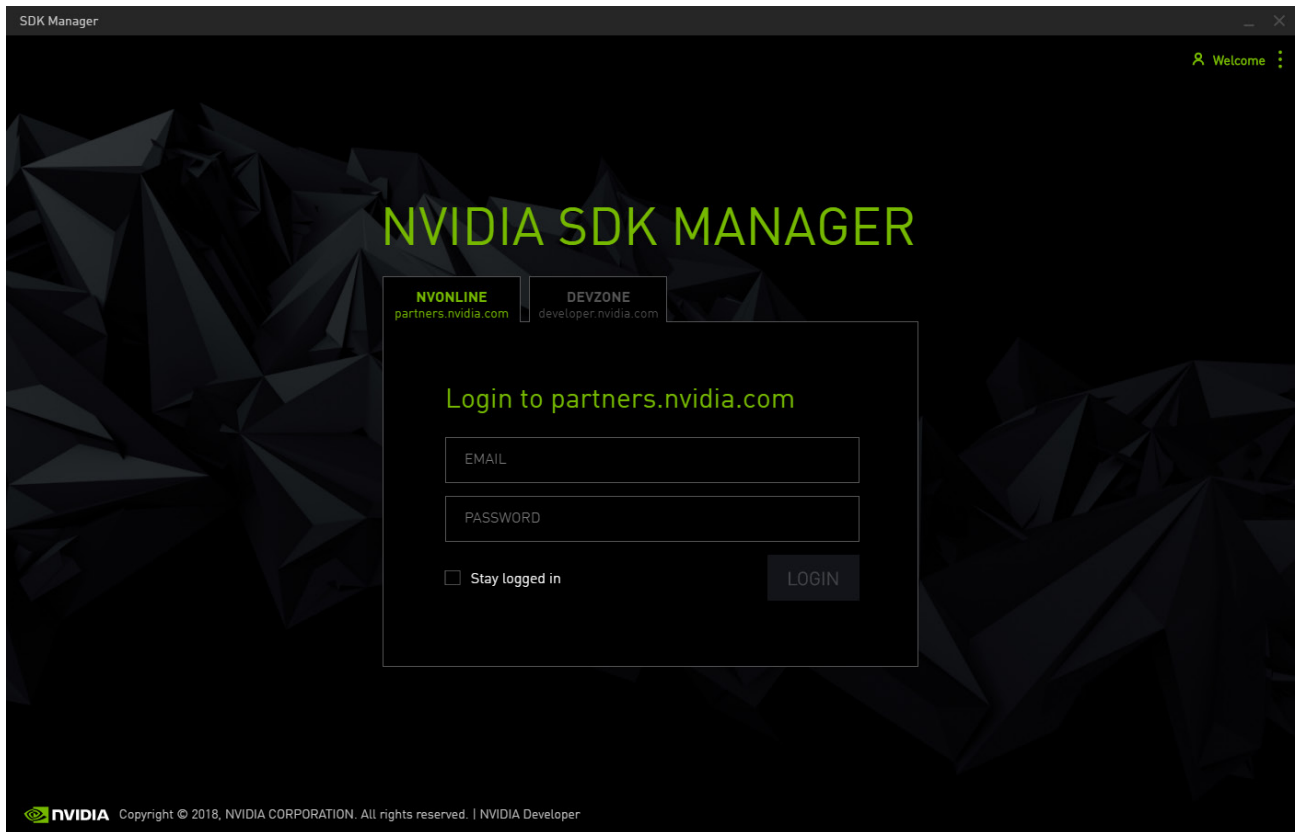
Additional ZIP files containing Electron source code used in SDK Manager are available. You may download these if you wish.

4. Extract the contents of the ZIP file.
5. Double-click on the `sdkmanager` executable file, or open a terminal and launch it with the following command:

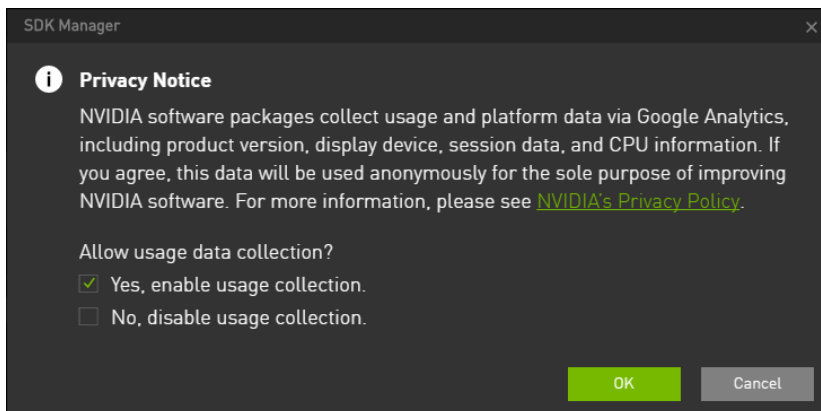
```
./sdkmanager
```

## Log in and Run SDK Manager

1. Select the appropriate login tab for your account type.
  - NVOnline – [partners.nvidia.com](https://partners.nvidia.com)
  - DevZone – [developer.nvidia.com](https://developer.nvidia.com)
2. Enter the credentials for your account type, and click **Login**.



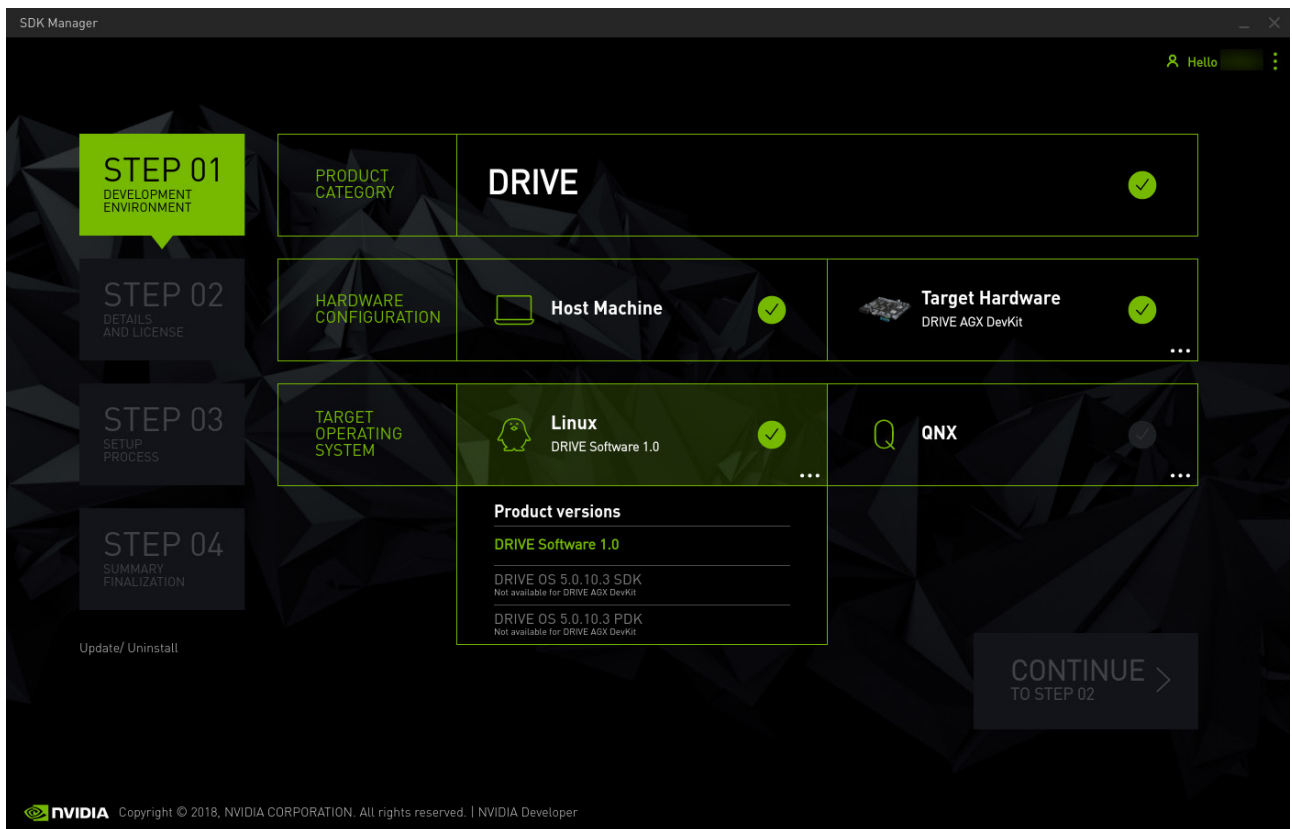
3. Before proceeding, choose whether or not to enable data collection.



## Step 1: Setup the Development Environment

1. From **Step 01 Development Environment**, select the following:
  - From the **Product Category** panel, select the DRIVE development environment.
  - From the **Hardware Configuration** panel, select the host machine and target hardware.
  - From the **Target Operating System** panel, select the desired operating system, such as QNX. Notice that the target operating systems available may change, depending on the options that were selected in the other panels.

An ellipsis (...) in the bottom right corner of a category box indicates that more than one option is available. Clicking on the ellipsis will show a drop-down menu of available options.



**Note:**

Your display may differ from what's shown here. The information in this screen is populated by your NVIDIA user account access and permissions. If you don't see your product category in the available selections, you may need to verify that your NVIDIA account is registered to the required programs.

2. Click **Continue** to proceed to the next steps.

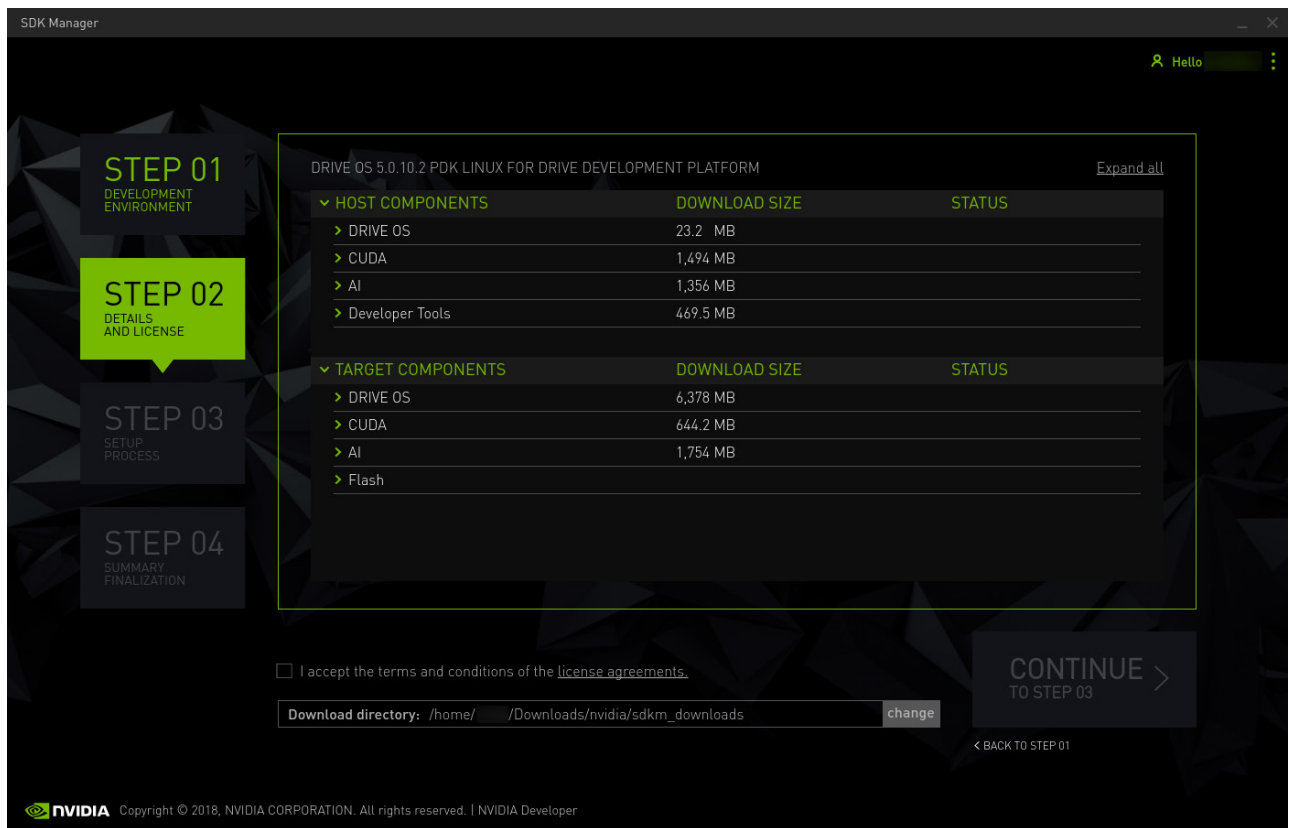
**Note:**

If you are setting up a QNX environment, you will see a pop-up where the path to the QNX toolchain should be entered before proceeding.

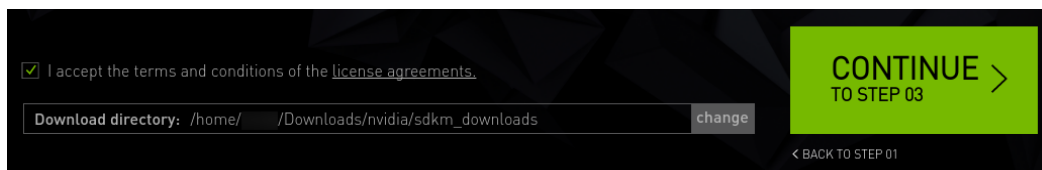


## Step 2: Review Components and Accept Licenses

1. From **Step 02 Details and License**, you can expand the host components and target components panels to review the components that will be installed on your system.



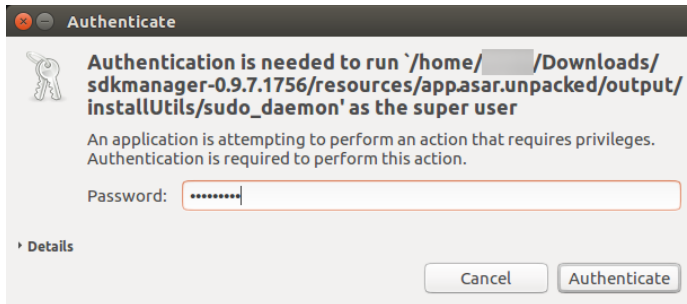
2. To review the licenses, click on the **license agreements** hyperlink at the bottom of the page.



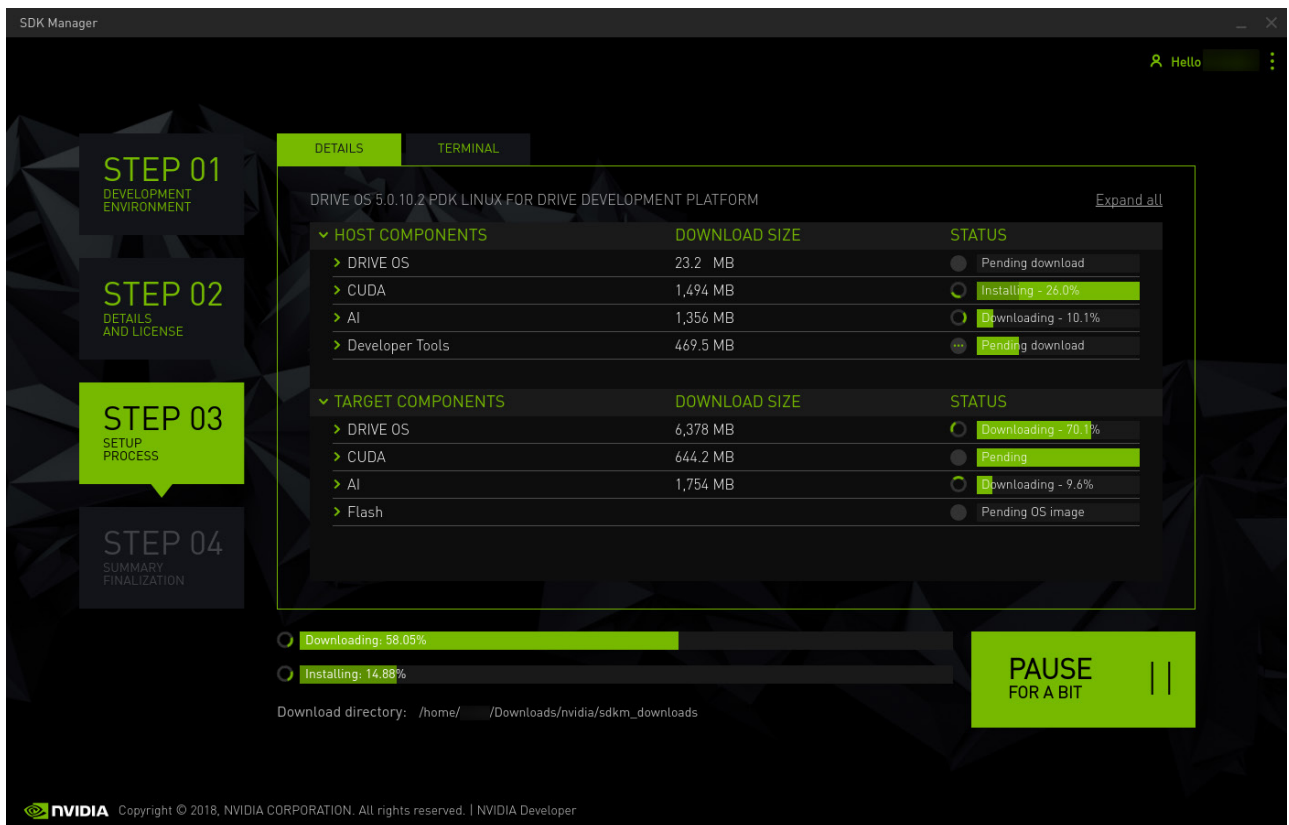
3. Enable the checkbox to accept the terms and conditions of the license agreements.
4. If you want SDK Manager to download all setup files to a location other than the default path, click change, and select the path you wish to use.
5. Select **Continue** to proceed to the next steps.

## Step 3: Installation

1. Before the installation begins, you will be prompted to enter your sudo password.

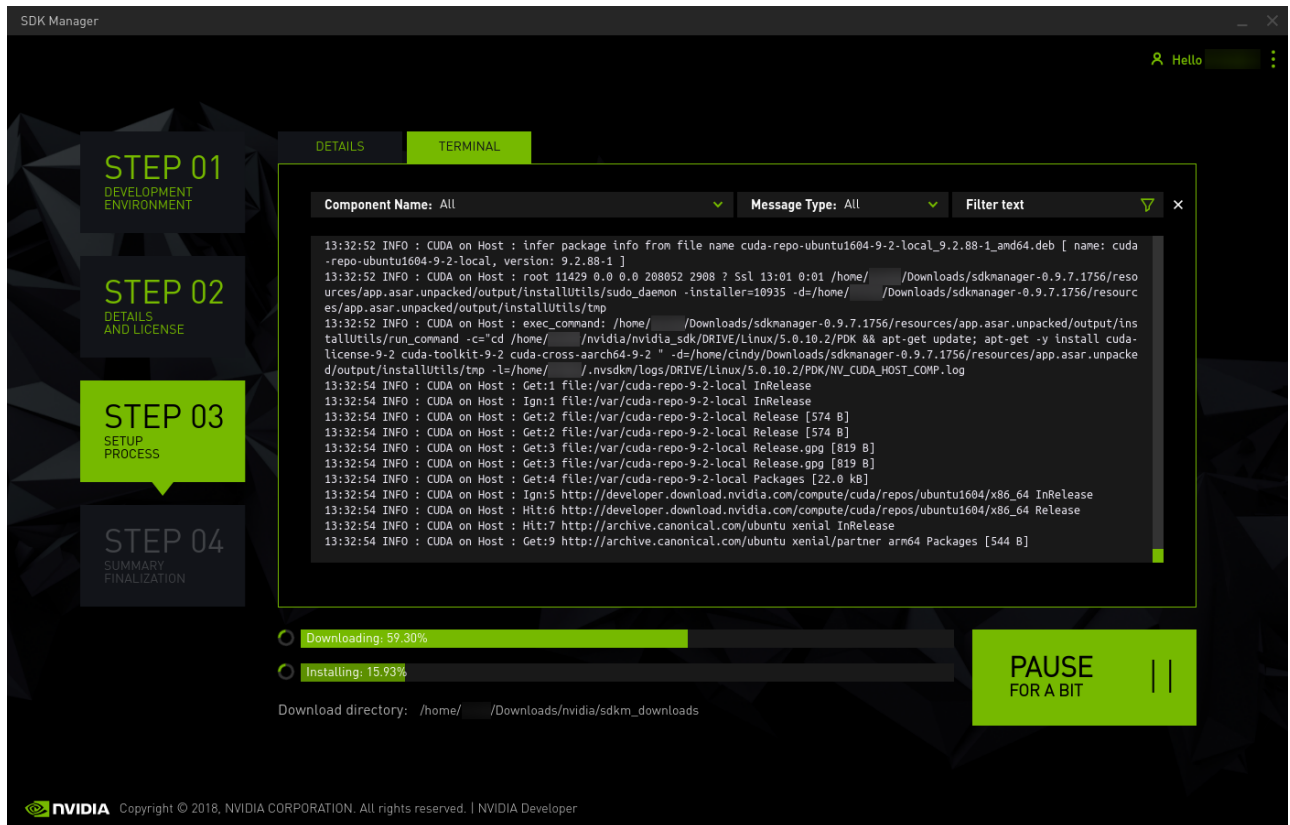


2. The display shows the progress of the download and installation of the software.

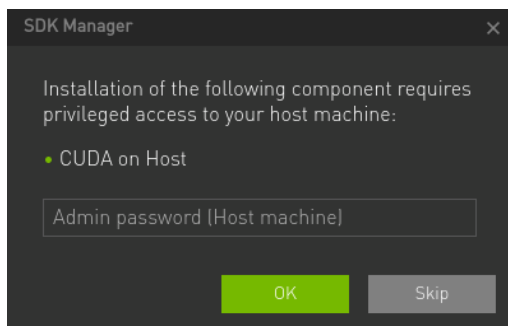


Select **Pause** / **Resume** to toggle the download and installation process.

3. At the top, you can toggle between the **Details** and **Terminal** tabs. The Terminal tab will show the download and installation detailed information. Errors will be highlighted.
4. On the Terminal tab, you can use the **Search** field to filter and search for specific information.

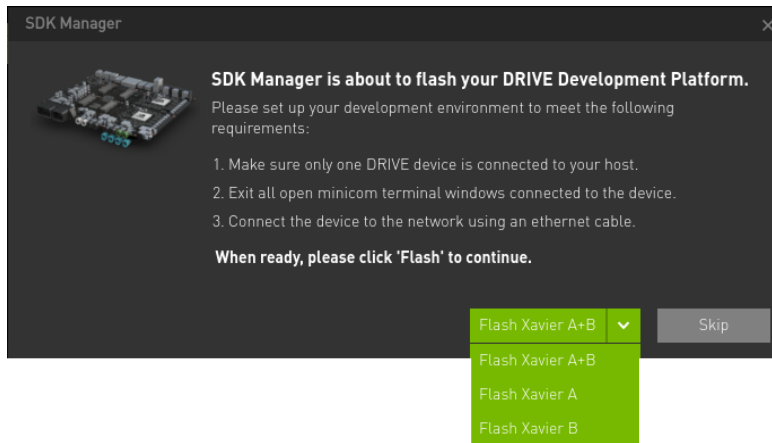


- Depending on your environment, you may receive multiple pop-ups asking you to re-enter the administrator/sudo password on the host machine, so certain packages can be installed.



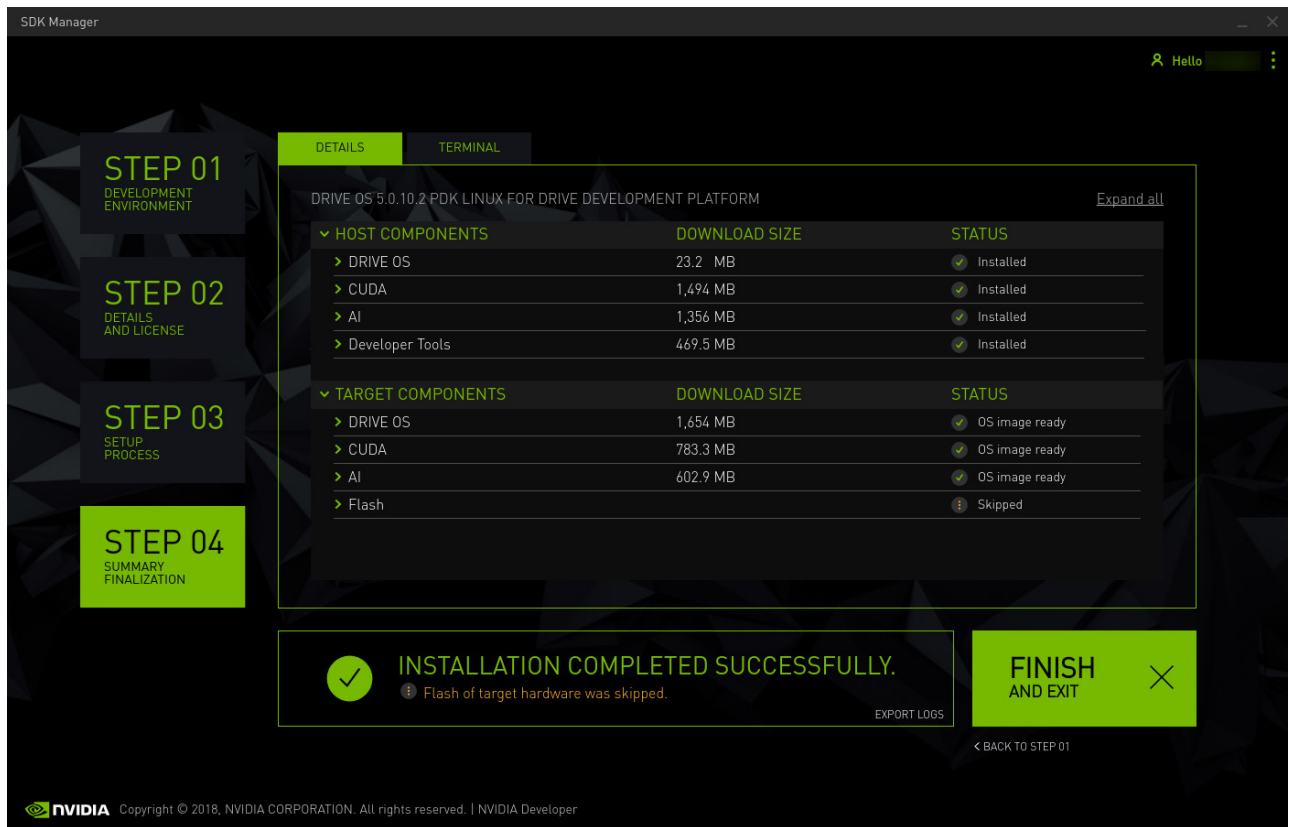
- A dialog will pop up when SDK Manager is ready to flash your target device. The prompt will provide instructions for preparing your device to get it ready for flashing.

**Note:** The instructions in the flashing dialog will vary based on your host and target environment settings.



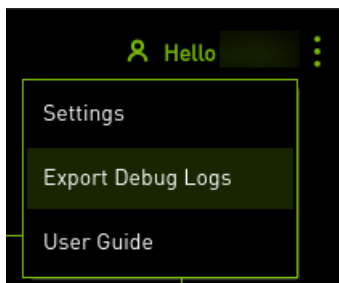
## Step 4: Finalize Setup

1. From **Step 04 Summary Finalization**, you will see a summary of the components that were installed, along with any warnings or errors that were encountered.



2. The **Export Logs** link will create a ZIP file of all log files that were created during installation. This ZIP file will be located in the same folder path where the SDK Manager installer [downloaded all components](#).

Alternatively, you can choose Export Debug Logs from the drop-down menu in the top-right corner.

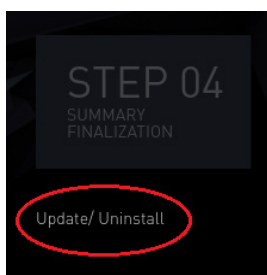


3. Consult **Error Messages** for information on any errors you may encounter.
4. Click **Finish and Exit** to complete the installation.

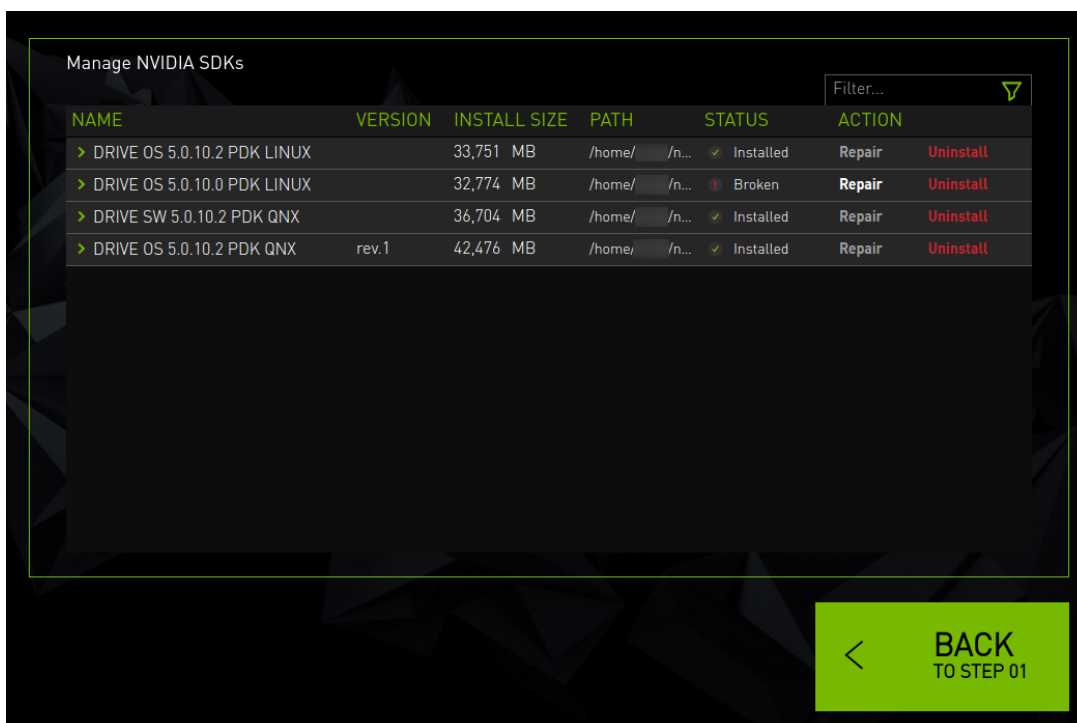
## Repair and Uninstall

To update or uninstall an SDK on your system, [launch SDK Manager again](#).

1. Under the installation step numbers, click the **Update / Uninstall** hyperlink.



2. The **Manage NVIDIA SDKs** screen will show you what's been installed on your system, and you can select whether to repair a broken installation, update an existing SDK, or uninstall an SDK.



## Advanced Options

[Install via the Command Line >](#)

[Install on Multiple Systems >](#)

[Offline Install >](#)

[SDK Manager Settings >](#)

## Install via the Command Line

To run NVIDIA SDK Manager from a terminal in Linux, do the following:

1. [Download and extract SDK Manager](#) to your host machine.
2. Open a terminal, and call SDK Manager from the command line with the following command:

```
./sdkmanager
```

3. Use the parameters below to run an installation from the command line.

### Command-Line Syntax

#### Mandatory Settings

<code>--silent</code> <code>install uninstall update</code>	Silent mode option. This allows SDK Manager to run install, uninstall, or update without displaying a user interface.
<code>--product product_name</code>	Set the product to be installed in silent mode. Example: <code>--product DRIVE</code>
<code>--host</code>	This parameter specifies that the host side components need to be installed.
<code>--targetos target_os</code>	Set the target OS. Example: <code>--targetos Linux</code>
<code>--version</code> <code>Version_SDK/PDK_b#</code>	Set the version of product to be installed or uninstalled. The version contains: version, SDK/PDK, edition and build number, separated by '_'. Example: <code>--version SW_5.0.10.3_PDK_b132</code>
<code>--user user_email</code>	Set the user email to login. <div><b>Note:</b> This will need to be the same email address that is associated with your <a href="#">NVOnline account</a>. Note that only <a href="#">partners.nvidia.com</a> accounts are supported at this time.</div>
<code>--flash a b ab all skip</code>	Set the flashing mode (a, b, ab, all or skip). All refers to all Tegras available on the target hardware. Default is all.

#### Optional Settings

<code>--view none live log</code>	This option allows you to view the silent install while it is in process, output to a log file, or turn off viewing the install completely. Default value is <code>live</code> .
-----------------------------------	--

<code>--target target_hardware</code>	Add this option if components for the specified target hardware need to be installed. Example: <code>--target DDPX</code>
<code>--versionfile string</code>	Use this option when you know which version you want to install, and have the path to the file describing it. <i>This information is provided by your NVIDIA account manager or representative.</i> Example: <code>--versionfile http://link_to_version_json_file</code>
<code>--offline</code>	This option allows you to skip logging into your NVIDIA account, and instead installs SDK Manager offline. If using this option, it is required that you also use the <code>--versionfile</code> string parameter. Example: <code>--offline --versionfile http://link_to_version_json_file</code>
<code>--server string</code>	Add this option when you know the server file details for SDK Manager list of bundles. <i>This information is provided by your NVIDIA account manager or representative.</i> Example: <code>--server http://link_to_server_json_file</code>
<code>--license accept refuse</code>	Set this option to accept or refuse the NVIDIA software licenses.
<code>--query</code>	Prints all options available for the user. Must be executed with the <code>--user</code> setting. Example: <code>--query --user john.doe@example.com</code>
<code>--logs</code>	Exports the log files when the install process is complete.
<code>-h, --help</code>	Displays this usage guide.

## Example

```
$ sdkmanager [--silent install|uninstall] [silent options] ...
$ sdkmanager [--silent update]
$ sdkmanager [--help]
```

For example, to install DRIVE 5.0.10.3 Linux via the command line, use the following:

```
./sdkmanager --silent install --product DRIVE --host --target DDPX
--targetos Linux --version OS_5.0.10.3_SDK_b132
--user john.doe@example.com
```



## Offline Install

SDK Manager allows you to download the various components one time, and reuse the components on multiple hosts with no need to re-download.

SDK Manager also supports fully offline installation with no login required, as long as you have already installed the required generic Ubuntu packages.

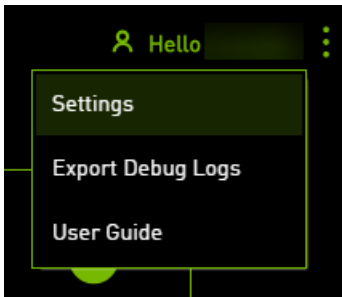
## Install on Multiple Systems

In addition to installing previously downloaded components on multiple hosts (see [Offline Install](#) for more information), SDK Manager also supports the installation of multiple targets from a single host machine.

## SDK Manager Settings

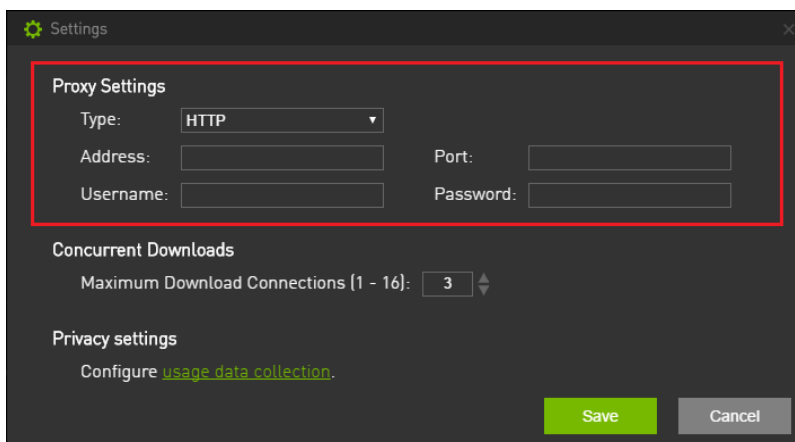
The SDK Manager Settings menu allows you to configure a number of different configuration settings.

1. Launch SDK Manager.
2. Click on the 3 dots in the top right corner and select **Settings**.



### Proxy Settings

In network environments that require a proxy server to access the Internet, the Proxy Settings section of the Settings menu allows you to configure the following:



- **Type** — Select whether to use HTTP or HTTPS.
- **Address** — Set the proxy server IP address.
- **Port** — Set the proxy server port to use.
- **Username** and **Password**, if applicable.

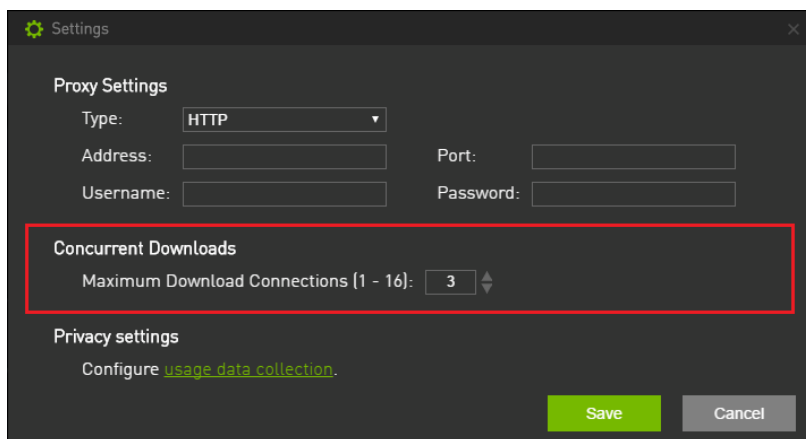
Upon completion, SDK Manager will download with this proxy setting.

#### Note:

Any special characters (for example, !, @, #, etc.) in the username or password field should be URL encoded.

### Concurrent Downloads

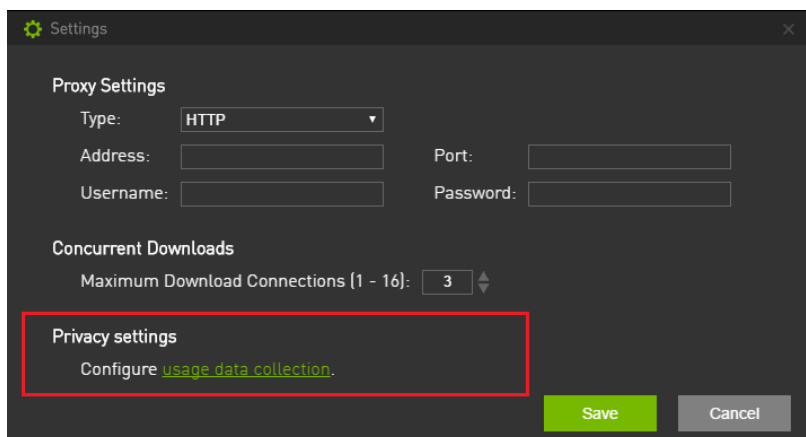
The **Concurrent Downloads** section of the Settings dialog allows you to change the maximum number of concurrent downloads.



- Default number of concurrent downloads: 3
- Maximum number of concurrent downloads: 16

## Privacy Settings

If at any point, you wish to change whether or not to allow data collection, the hyperlink in the **Privacy Settings** section will open a dialog that lets you [enable or disable usage data collection](#).



## QNX SDP Installation Instructions for DRIVE QNX

Use the following section to configure QNX SDP 7.0 to be compatible with DRIVE QNX.

To begin, you will need to use the QNX Software Center application, which at the time of this writing, can be downloaded from

<http://www.qnx.com/download/group.html?programid=29178>. From there, you will be able to download the Linux Host version of the QNX Software Center application. Note that you must be a registered QNX SDP 7.0 user with a myQNX account to download the QNX Software Center.

At the time of this writing, the QNX Software Center 1.3: Installation Note can be found at [http://www.qnx.com/developers/articles/inst\\_6616\\_2.html](http://www.qnx.com/developers/articles/inst_6616_2.html).

**Note:**

For the most up-to-date version of the QNX Software Center Installation Note:

1. Go to the QNX website, [www.qnx.com](http://www.qnx.com), and log in to your myQNX account.
2. Select the **Developers** tab at the top of the page, and click the **QNX Software Center** link.
3. Scroll down the page, and click on the Linux Host link for **See Installation/Release notes**.

Refer to the user guide at

[http://www.qnx.com/download/download/36347/qnx\\_qsc\\_user\\_guide\\_release\\_1.3.pdf](http://www.qnx.com/download/download/36347/qnx_qsc_user_guide_release_1.3.pdf).

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