Nvidia Jetpack 6 Jetson Orin Nano Software User Guide

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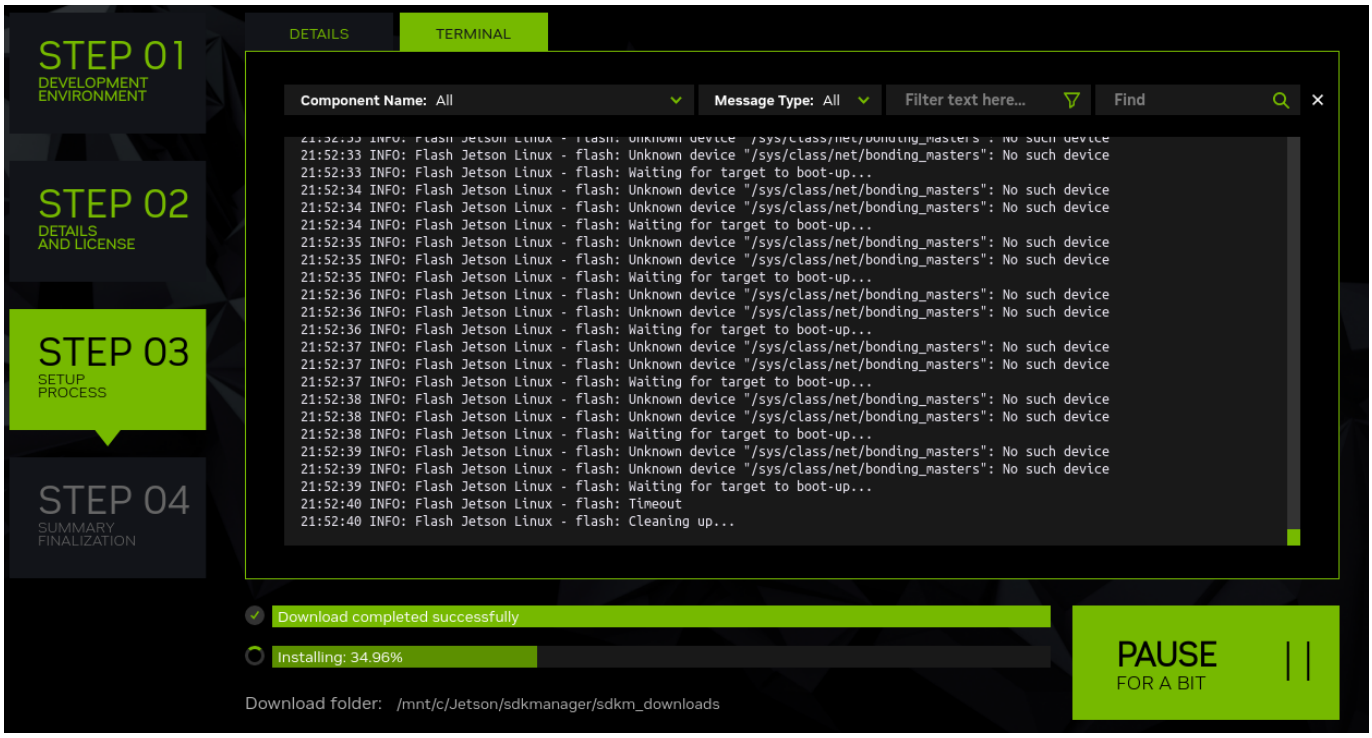


Specifications:

- Product Name: Jetpack 6
- SDK Manager Version: Latest
- Operating Systems: Linux Ubuntu 22.04, Windows

Product Information

Jetpack 6 is a software development kit used for installing and managing various software packages, including PyTorch, TorchAudio, and TorchVision.

Product Usage Instructions

Installing Jetpack 6 Using SDK Manager:

- Download the SDK Manager from the Nvidia website.
- Follow the steps provided on the Nvidia website to install Jetpack 6 using the SDK Manager.

Installing PyTorch Package:

After installing Jetpack 6, download the PyTorch package directly from the PyTorch website using the command: `pip3 install torch torchaudio torchvision`

Checking CUDA Availability:

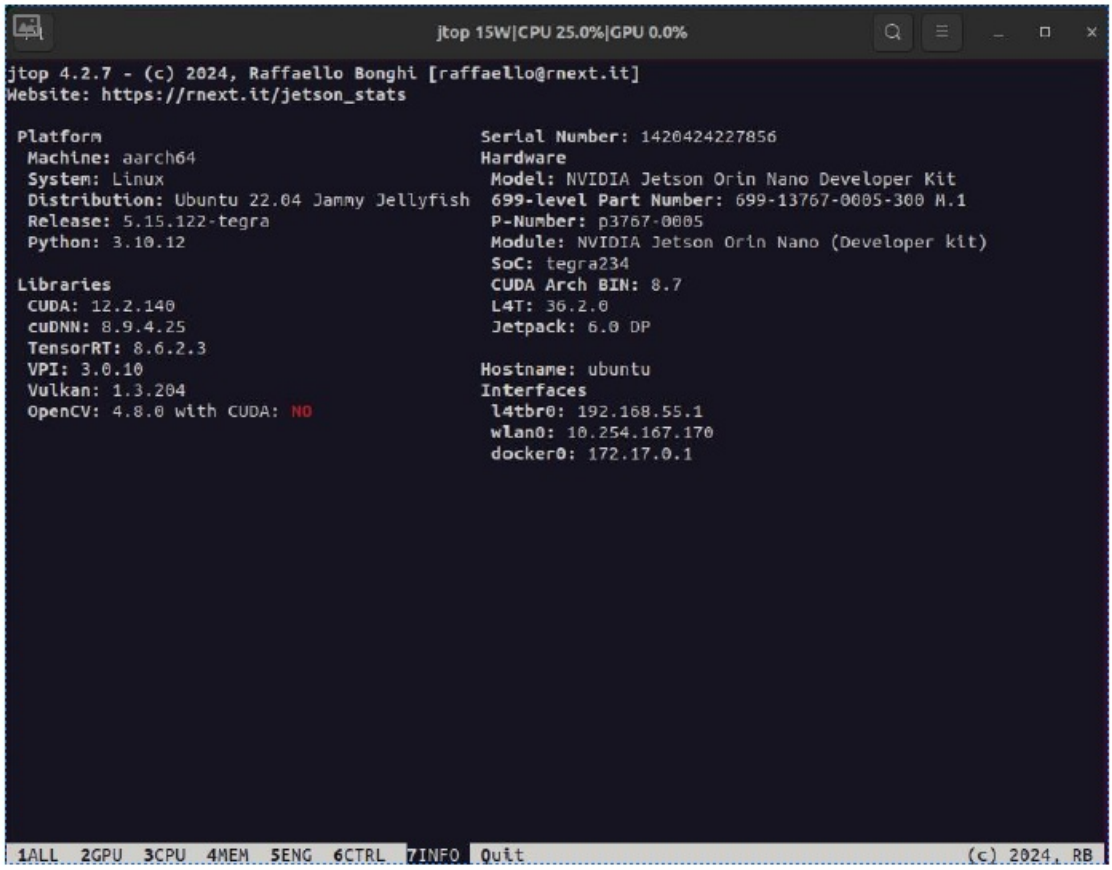
Run the following code to check if CUDA is available:

```
import torch
import torchaudio

if torch.cuda.is_available():
    print("CUDA is enabled.")
else:
    print("CUDA is not enabled.")

print("Torch version:", torch.__version__)
print("TorchVision version:", torch.__version__)
print("TorchAudio version:", torchaudio.__version)
```

Checking Nvidia GPU Status:

To check Nvidia GPU status, use the command:
`nvidia-smi`

Hello,
I'm using Jetpack 6 and installing it with the SDK manager. Below are the version information files that came after the installation:



INSTALLATION

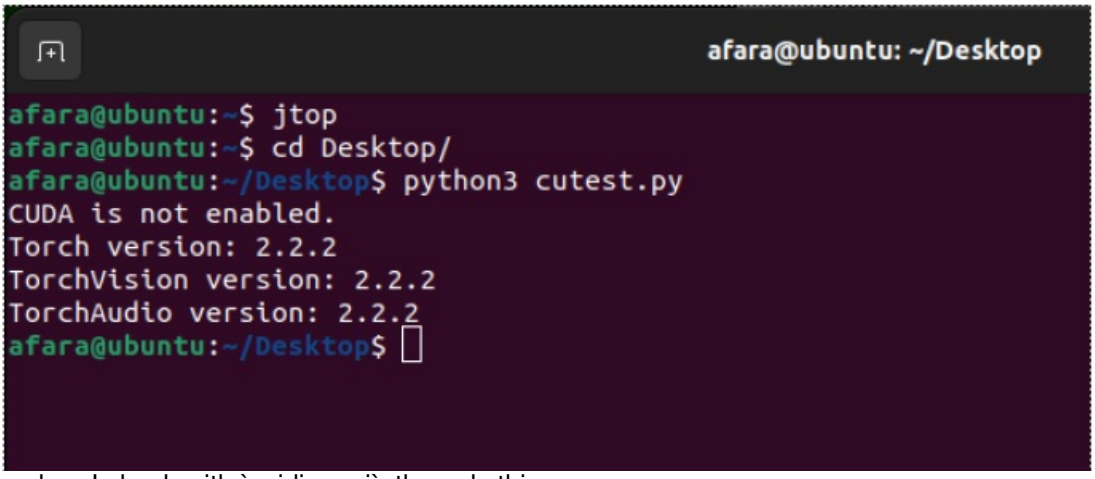
While installing, I'm precisely following the steps on the Nvidia website.
Additionally, I'm getting the same response with `nvcc –version`. Then, I'm downloaded the PyTorch package directly from the PyTorch website using `pip3 install torch torchaudio torchvision`. Finally, by running the code below, I'm obtaining version information:
import torch import torchaudio

# Check if CUDA is available
if torch.cuda.is_available(): print(“CUDA is enabled.”) else:

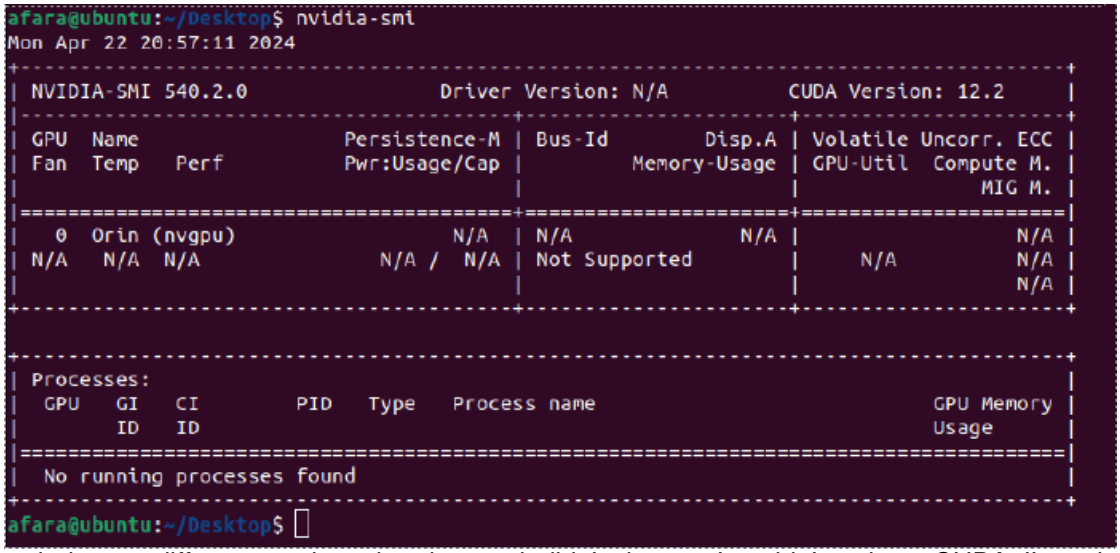
print(“CUDA is not enabled.”)

# Print Torch and TorchVision versions
print(“Torch version:”, torch.__version__) print(“TorchVision version:”, torch.__version__)

# Print TorchAudio version
print(“TorchAudio version:”, torchaudio.__version__)



Additionally, when I check with `nvidia-smi`, the only thing



I’ve downloaded many different versions, but the result didn’t change, I couldn’t activate CUDA. I’ve reinstalled it many times. I’ve tried it with a Linux Ubuntu 22.04 computer via SDK Manager and also tried it with a Windows device, but nothing changed.

Note: I’ve also downloaded these libraries using pip3 and conda (miniconda3), but the result didn’t change. While providing the versions, I request you to share how to download them and, if possible, the terminal commands.
Note: When I print rand after importing the torch library, I received a response, so the torch part also worked.
We’re quite exhausted and our work has been greatly delayed due to all of these situations. We urgently request your assistance. We kindly ask you to please provide us with a quick response on this matter.

How i download conda

I downloaded the file first.
Then I ran `bash Miniconda3-latest-Linux-x86_64.sh` (worked)

What else did I do for PyTorch?

First, I got the entire folder.
`git clone –recursive https://github.com/pytorch/pytorch`
`cd pytorch`
if you are updating an existing checkout
`git submodule sync`
`git submodule update –init –recursive`

Then I ran these codes inside the file.
`conda install cmake ninja`
Run this command from the PyTorch directory after cloning the source code using the “Get the PyTorch Source“ section below
`pip install -r requirements.txt`

I tried these commands but they didn’t work (both inside and outside of pytorch).
Add this package on intel x86 processor machines only
`conda install intel::mkl-static intel::mkl-include`
Add these packages if torch. distributed is needed
`conda install pkg-config libuv`
I tried adding this again with the above conda install intel, but the result didn’t change. `export _GLIBCXX_USE_CXX11_ABI=1`
And finally, I tried the following codes inside pytorch.

#try 1
`export CMAKE_PREFIX_PATH=${CONDA_PREFIX:-“$(dirname $(which conda))/../”}` `python setup.py develop`

#try 2
`export CMAKE_PREFIX_PATH=${CONDA_PREFIX:-“$(dirname $(Miniconda3))/../”}` `python setup.py develop`
However, in both cases, after 80%, the Jetson froze and didn’t come back. I checked if CUDA was active many times, but the result didn’t change.
I’ve really tried a lot of things.

I’ve watched a lot of videos, and now my head is quite confused. I need a step-by-step guide on what exactly I need to do.
I’m using Jetson Orin Nano (developer kit), Jetpack 6 Ubuntu 22.04.”

- Best Regards,
- Good Works
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Frequently Asked Questions

How do I download conda?
To download conda, follow these steps:

- Download the Miniconda installer file.
- Run the following command in the terminal: `bash Miniconda3-latest-Linux-x86_64.sh`

What else can I do for PyTorch installation?

To further set up PyTorch, follow these steps:

Clone the PyTorch repository using: `git clone --recursive` **https://github.com/pytorch/pytorch**

- Navigate into the cloned directory and run: `conda install cmake ninja`
- Install additional requirements by running: `pip install -r requirements.txt`
- If needed, add the following packages:
    - `conda install intel::mkl-static intel::mkl-include` (for Intel x86 processors)
    - `conda install pkg-config libuv` (if torch.distributed is needed)
- Set environment variable: `export _GLIBCXX_USE_CXX11_ABI=1`
- Try running the setup script with different CMAKE_PREFIX_PATH configurations.

Documents / Resources

	**Nvidia Jetpack 6 Jetson Orin Nano Software** [pdf] User Guide Jetpack 6 Jetson Orin Nano Software, Jetpack 6, Jetson Orin Nano Software, Orin Nano Software, Nano Software, Software

References

- **GitHub - pytorch/pytorch: Tensors and Dynamic neural networks in Python with strong GPU acceleration**
- **User Manual**