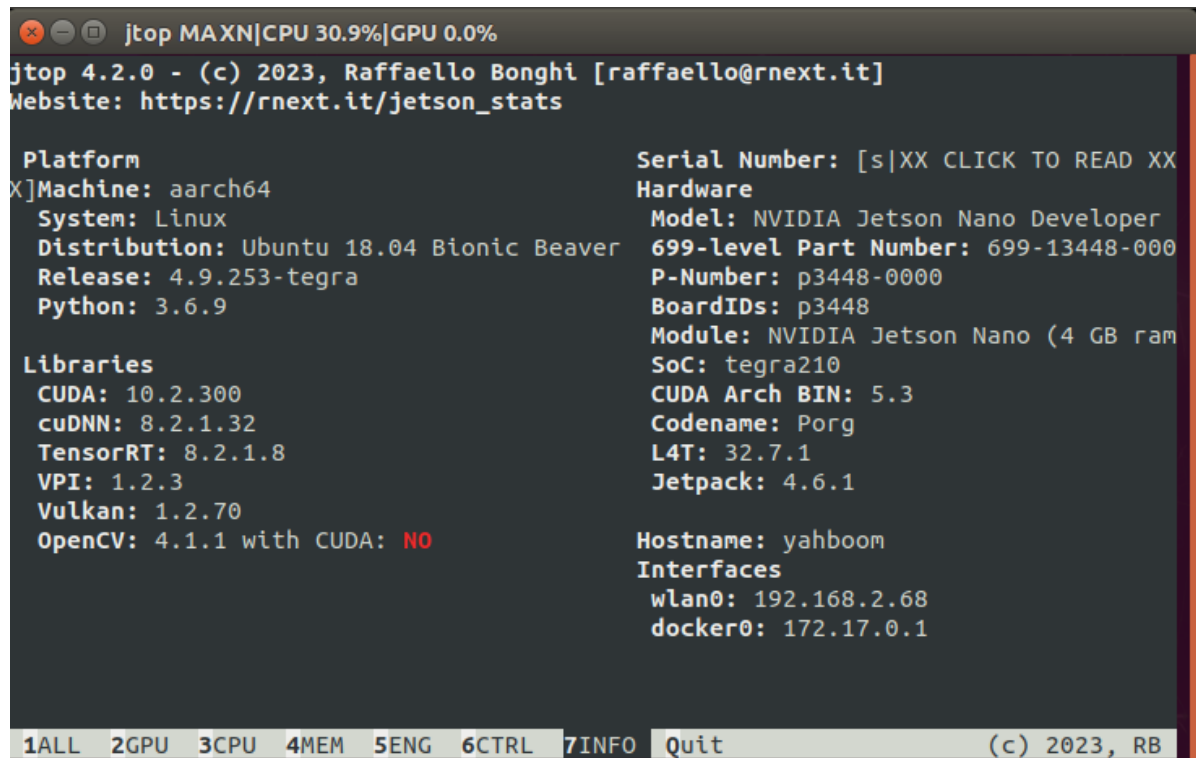


DeepStream environment construction

1. Instructions before construction

This tutorial is applicable to self built images. If you are using the YAHBOOM version of the image, you can ignore this tutorial

2. Jetson nano configuration for this tutorial



```
jtop MAXN|CPU 30.9%|GPU 0.0%
jtop 4.2.0 - (c) 2023, Raffaello Bonghi [raffaello@rnext.it]
Website: https://rnext.it/jetson_stats

Platform
X]Machine: aarch64
System: Linux
Distribution: Ubuntu 18.04 Bionic Beaver
Release: 4.9.253-tegra
Python: 3.6.9

Serial Number: [s|XX CLICK TO READ XX
Hardware
Model: NVIDIA Jetson Nano Developer
699-level Part Number: 699-13448-000
P-Number: p3448-0000
BoardIDs: p3448
Module: NVIDIA Jetson Nano (4 GB ram
SoC: tegra210
CUDA Arch BIN: 5.3
Codename: Porg
L4T: 32.7.1
Jetpack: 4.6.1

Libraries
CUDA: 10.2.300
cuDNN: 8.2.1.32
TensorRT: 8.2.1.8
VPI: 1.2.3
Vulkan: 1.2.70
OpenCV: 4.1.1 with CUDA: NO

Hostname: yahboom
Interfaces
wlan0: 192.168.2.68
docker0: 172.17.0.1

1ALL 2GPU 3CPU 4MEM 5ENG 6CTRL 7INFO Quit (c) 2023, RB
```

After checking on the official website, this configuration can only be downloaded from Deepstream6.0 version website: https://docs.nvidia.com/metropolis/deepstream/dev-guide/text/DS_Quickstart.html#update-bsp-library.

3. Start building

3.1 Download related dependencies

```
sudo apt install \
libssl1.1 \
libgststreamer1.0-0 \
gststreamer1.0-tools \
gststreamer1.0-plugins-good \
gststreamer1.0-plugins-bad \
gststreamer1.0-plugins-ugly \
gststreamer1.0-libav \
libgststreamer-plugins-base1.0-dev \
libgststrtspserver-1.0-0 \
libjansson4 \
libyaml-cpp-dev
```

3.2 Download and install librdkafka

```
git clone https://github.com/edenhill/librdkafka.git
cd librdkafka
git reset --hard 7101c2310341ab3f4675fc565f64f0967e135a6a
./configure
make -j2
sudo make install
sudo mkdir -p /opt/nvidia/deepstream/deepstream-6.0/lib
sudo cp /usr/local/lib/librdkafka* /opt/nvidia/deepstream/deepstream-6.0/lib
```

3.3 Installing Deepstream

Find it by logging in here

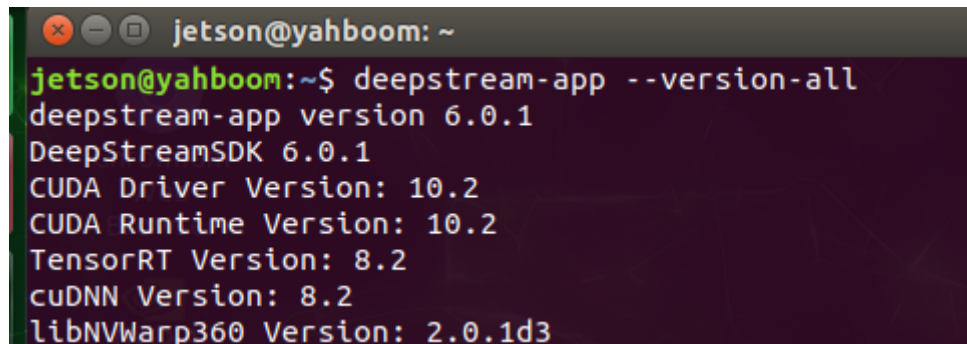
<https://developer.nvidia.com/embedded/deepstream-on-jetson-downloads-archived>

deepstream_sdk_v6.0.1_Jetson.tbz2 and download it. Or you can find the deepstream in the attachment of the environment we provided_sdk_v6.0.1_Jetson.tbz2 and transmit it to Jetson nano. Run the command to install

```
sudo tar -xvf deepstream_sdk_v6.0.1_jetson.tbz2 -C
cd /opt/nvidia/deepstream/deepstream-6.0
sudo ./install.sh
sudo ldconfig
```

4. Verification

1. Deepstream app -- version all to view the installed version

A terminal window with a dark background and light-colored text. The prompt is 'jetson@yahboom: ~'. The command 'deepstream-app --version-all' has been executed, resulting in the following output: 'deepstream-app version 6.0.1', 'DeepStreamSDK 6.0.1', 'CUDA Driver Version: 10.2', 'CUDA Runtime Version: 10.2', 'TensorRT Version: 8.2', 'cuDNN Version: 8.2', and 'libNVWarp360 Version: 2.0.1d3'.

```
jetson@yahboom: ~
jetson@yahboom:~$ deepstream-app --version-all
deepstream-app version 6.0.1
DeepStreamSDK 6.0.1
CUDA Driver Version: 10.2
CUDA Runtime Version: 10.2
TensorRT Version: 8.2
cuDNN Version: 8.2
libNVWarp360 Version: 2.0.1d3
```

2. Go to /opt/nvidia/deepstream/deepstream/samples/configurations/deepstream app and run a case study

```
cd /opt/nvidia/deepstream/deepstream/samples/configs/deepstream-app
sudo deepstream-app -c source2_1080p_dec_infer-resnet_demux_int8.txt
```

Wait for a period of time, and the result shown in the figure indicates that the deepstream installation was successful.

appendix

Other reference links: <https://zhuanlan.zhihu.com/p/460637017>

