Install TensorFlow GPU support

REF:HTTPS://WWW.TENSORFLOW.ORG/INSTALL/GPU

Software requirements

NVIDIA® GPU drivers —CUDA® 11.0 requires 450.x or higher.

CUDA® Toolkit —TensorFlow supports CUDA® 11 (TensorFlow >= 2.4.0)

After installation CUDA toolkit, open windows command prompt (administrator)

type this 4 lines of command

```
C:\>  SET PATH=C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v11.0\bin;%PATH%
C:\>  SET PATH=C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v11.0\extras\CUPTI\lib64;%PATH%
C:\>  SET PATH=C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v11.0\include;%PATH%
C:\>  SET PATH=C:\tools\cuda\bin;%PATH%
```

cuDNN SDK 8.0.4 cuDNN versions

After downloading and extracted the file, copy the files into the C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\version of your cuda\

Version	Python version	Compiler	Build tools	cuDNN	CUDA
tensorflow-2.5.0	3.6-3.9	GCC 7.3.1	Bazel 3.1.0	8.1	11.2
tensorflow-2.4.0	3.6-3.8	GCC 7.3.1	Bazel 3.1.0	8.0	11.0
tensorflow-2.3.0	3.5-3.8	GCC 7.3.1	Bazel 3.1.0	7.6	10.1
tensorflow-2.2.0	3.5-3.8	GCC 7.3.1	Bazel 2.0.0	7.6	10.1
tensorflow-2.1.0	2.7, 3.5-3.7	GCC 7.3.1	Bazel 0.27.1	7.6	10.1
tensorflow-2.0.0	2.7, 3.3-3.7	GCC 7.3.1	Bazel 0.26.1	7.4	10.0

GPU

Tested build configurations

Linux

CPU

CUDA-Enabled NVIDIA Quadro and NVIDIA RTX

GPU	Compute Capability
Quadro RTX A6000	8.6
Quadro RTX A4000	8.6
Quadro RTX A5000	8.6
Quadro RTX 8000	7.5
Quadro RTX 6000	7.5
Quadro RTX 5000	7.5
Quadro RTX 4000	7.5
Quadro GV100	7.0
Quadro GP100	6.0
Quadro P6000	6.1
Quadro P5000	6.1
Quadro P4000	6.1
Quadro P2200	6.1
Quadro P2000	6.1
Quadro P1000	6.1
Quadro P620	6.1
Quadro P600	6.1
Quadro P400	6.1
Quadro M6000 24GB	5.2
Quadro M6000	5.2
Quadro K6000	3.5
Quadro M5000	5.2
Quadro K5200	3.5
Quadro K5000	3.0
Quadro M4000	5.2
Quadro K4200	3.0

Quadro Mobile Products

GPU	Compute Capability
RTX 3060	8.6
RTX 3060Ti	8.6
RTX 5000	7.5
RTX 4000	7.5
RTX 3000	7.5
T2000	7.5
T1000	7.5
P620	6.1
P520	6.1
Quadro P5200	6.1
Quadro P4200	6.1
Quadro P3200	6.1
Quadro P5000	6.1
Quadro P4000	6.1
Quadro P3000	6.1
Quadro P2000	6.1
Quadro P1000	6.1
Quadro P600	6.1
Quadro P500	6.1
Quadro M5500M	5.2
Quadro M2200	5.2
Quadro M1200	5.0
Quadro M620	5.2
Quadro M520	5.0
Quadro K6000M	3.0
Quadro K5200M	3.0
Quadro K5100M	3.0
Quadro M5000M	5.0
Quadro K500M	3.0
Quadro K4200M	3.0
Quadro K4100M	3.0
Quadro M4000M	5.0
Quadro K3100M	3.0
Quadro M3000M	5.0
Quadro K2200M	3.0
Quadro K2100M	3.0
Quadro M2000M	5.0
Quadro K1100M	3.0
Quadro M1000M	5.0
Quadro K620M	5.0
Quadro K610M	3.5
Quadro M600M	5.0
Quadro K510M	3.5
Quadro M500M	5.0

Test the installation

```
import tensorflow
print(tensorflow.__version__)
import tensorflow.python.platform.build_info as build
#print(build.build_info)
print(build.build_info['cuda_version'])
print(build.build_info['cudnn_version'])
```

Output

```
2021-05-22 14:37:42.949845: I tensorflow/stream_executor/platform/default/dso_loader.cc:48] Successfully opened dynamic library cudart64_101.dll
2.3.0
64_101
64_7

Process finished with exit code 0
```

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