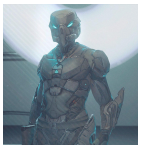
# Synaptron Setup on a Docker Container (beta)

Latest version 1_1_15



**BEFORE YOU START**

The docker containers supplied run with " --gpus all " flag, so they rely on you having the correct nvidia driver installed already…(for most Nvidia drivers they are universal, but if your driver asks then we use CUDA version 12.4)

**Install on host NVIDIA Container Toolkit** (previously called `nvidia-docker2`):

```
sudo curl -s -L https://nvidia.github.io/nvidia-docker/gpgkey | sudo
apt-key add -
distribution=$(. /etc/os-release;echo $ID$VERSION_ID)
curl -s -L
https://nvidia.github.io/nvidia-docker/$distribution/nvidia-docker.list |
sudo tee /etc/apt/sources.list.d/nvidia-docker.list
sudo apt-get update
sudo apt-get install -y nvidia-docker2
sudo systemctl restart docker
```

```
CHECKLIST

NVIDIA Driver on Host: The host must have the correct NVIDIA drivers
installed for Docker to access the GPU. If the driver is outdated or
incompatible with the NVIDIA Container Toolkit, GPU passthrough won't work.

NVIDIA Container Toolkit: The host must have the NVIDIA Container Toolkit
installed and properly configured. Without it, Docker won't be able to
interface with the GPU on the host.

Docker Version: Docker 19.03 or higher is required for the --gpus option to
work. If an older version is installed, Docker won't support GPU
passthrough directly.
```

OK now download the latest synaptron.tar file…

**Synaptron Inference Install**

The commands below will create the docker image from the .tar file you downloaded and then run a container (this will automatically start the synaptron install process and launch it at the end of the process)

**NOTE : Node name is a friendly name you choose to make it easy to identify your node, must be at least 16 characters (no spaces)**

sudo docker load -i /path/to/your-image.tar
(OPTIONAL)  Sudo docker images

Note, node name must be min, 16 characters long.
sudo docker run -e NAME=<**YOURNODENAME**>  --gpus all -it timpi-synaptron-ubuntu-1_2_15

(OPTIONAL)  SEE NODE NAME : sudo docker exec **<Your Container ID>** cat /synaptron/.name
(OPTIONAL)  SEE NODE GUID : sudo docker exec **<Your Container ID>** cat /synaptron/.wilson

***
**Congratulations you are DONE, and have completed the Synaptron node installation.**
***

Once running you should see something like this, you can keep it running in interactive mode or you can stop the container and relaunch in silent mode

```
++Rcv raw: b'\x81\x0b{"type":6}\x1e'
++Rcv decoded: fin=1 opcode=1 data=b'{"type":6}\x1e'
```

Silent mode launch
sudo docker start  **<Your Container ID>**

**NOTE**: The above docker run was without the `--rm` flag with the `docker run` command:so it will not remove the container on stop.  Instructions to restart on exit are below:-

## ADDITIONAL commands

**To restart a synaptron container after an exit …**
sudo docker start -ia **<Your Container ID>**

****Benchmark-Image**
sudo docker exec -it **<Your Container ID>** bash -c 'cd /synaptron && source /opt/miniconda/bin/activate synap && python OPTIMUM.pyc --bench-image'

****Show node name**
sudo docker exec **<Your Container ID>** cat /synaptron/.name

Just some Notes…

Note in interactive mode, for the LLM model here you can see first time using the model must load shards into memory which takes time….