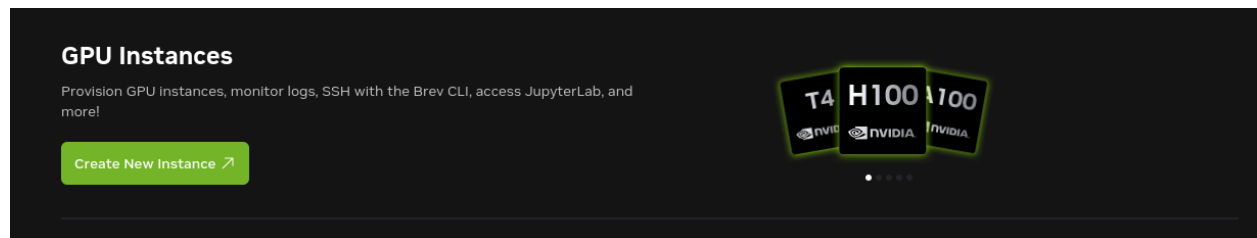


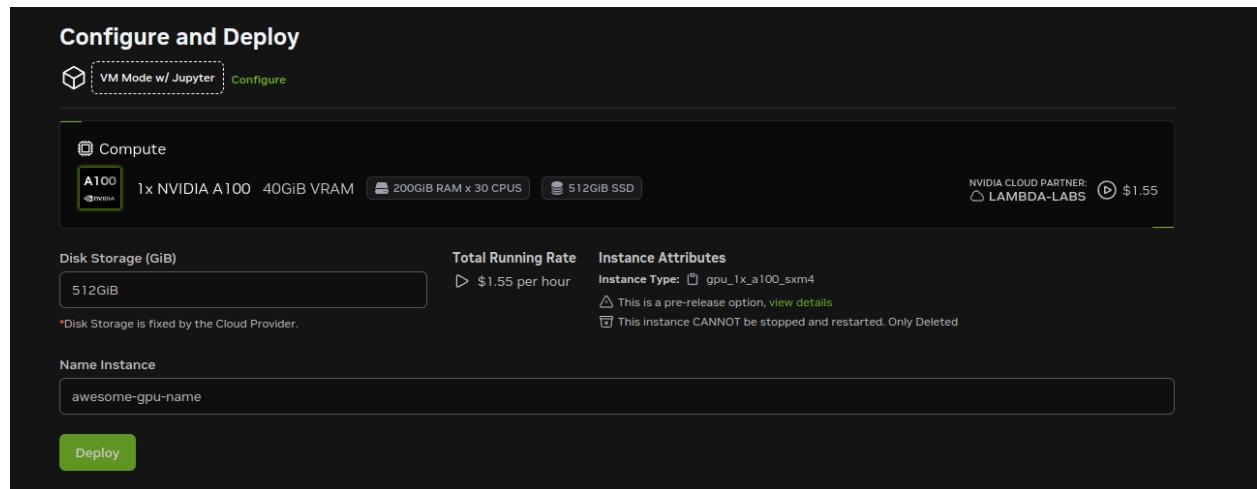
Environment creation for PhysicsNemo workshop

This document explains the process of creating a working Python environment for physicsnemo workshop on Brev.

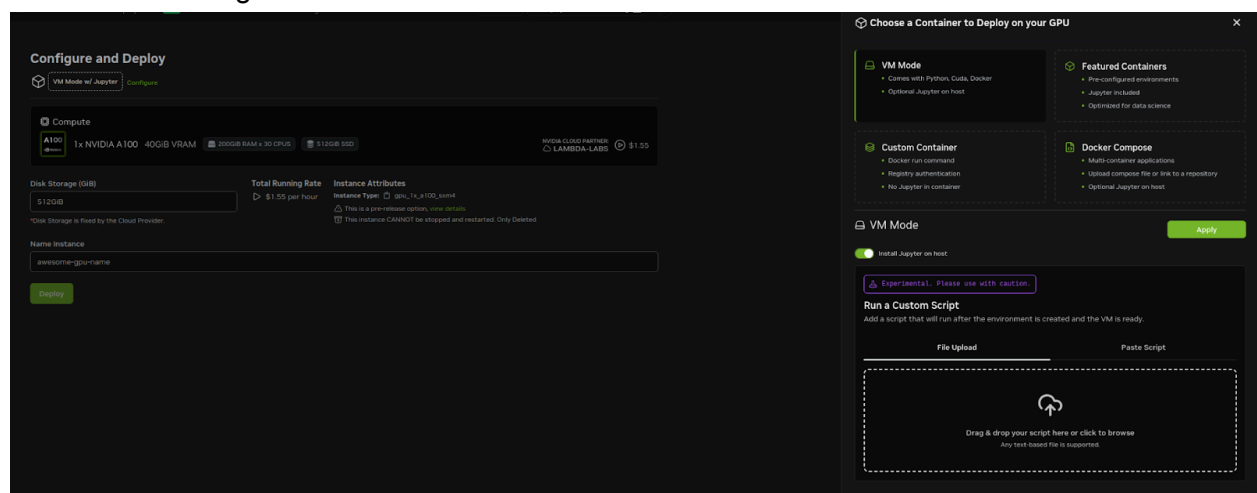
1. Create a Brev instance with the physicsnemo Docker image:



2. Go to the next screen:



3. Click configure and choose Custom Container



4. Use Docker Image URL as follows: nvcr.io/nvidia/physicsnemo/physicsnemo:25.03

Choose a Container to Deploy on your GPU

VM Mode

- Comes with Python, Cuda, Docker
- Optional Jupyter on host

Featured Containers

- Pre-configured environments
- Jupyter included
- Optimized for data science

Custom Container

- Docker run command
- Registry authentication
- No Jupyter in container

Docker Compose

- Multi-container applications
- Upload compose file or link to a repository
- Optional Jupyter on host

Custom Container

Apply

* Docker Image URL

nvidia/cuda

Some custom containers may produce unexpected results if they interfere with the host system. Use with discretion.

Entrypoint Command (optional)

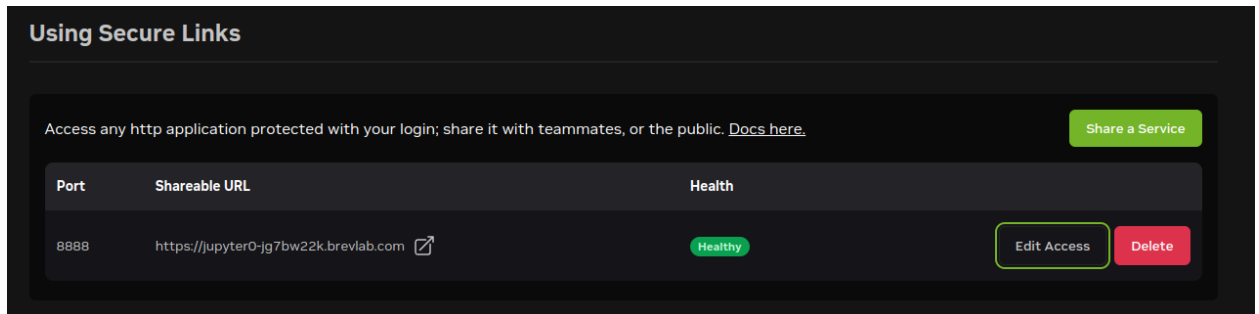
Registry (optional)

registry url

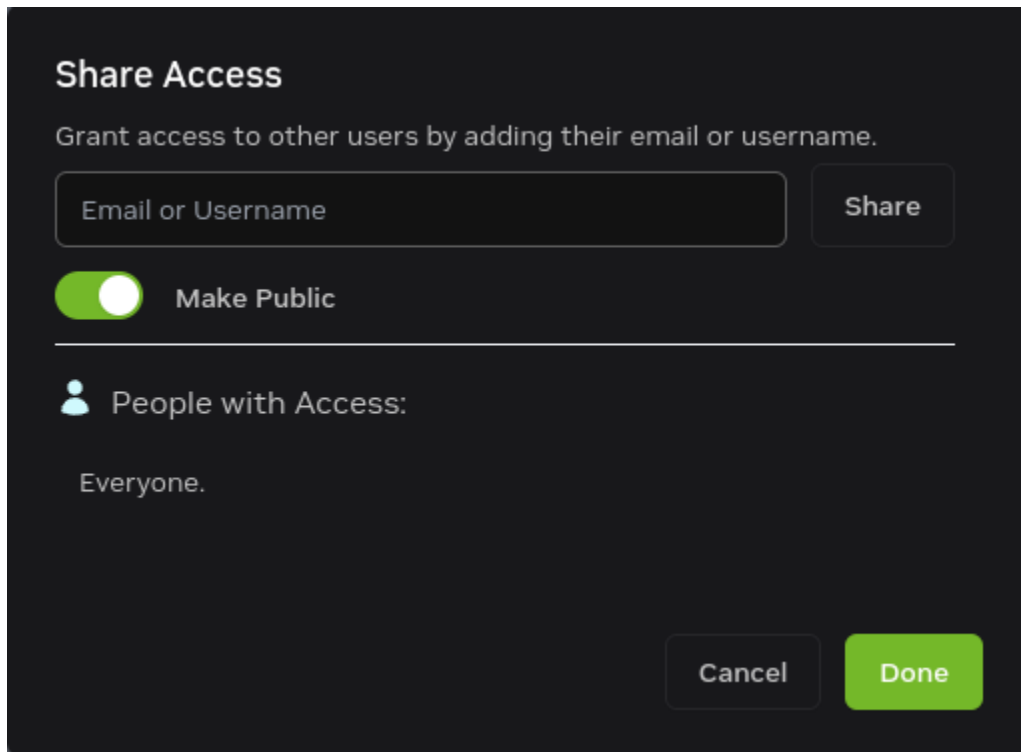
username

password

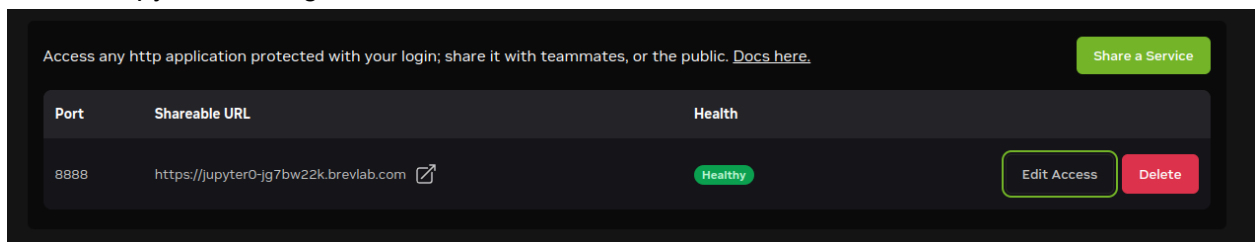
5. Click 'Apply' and then 'Deploy'
6. Go get a cup of coffee as it will take a few minutes to create the instance and deploy.
7. Click 'Edit Access'



8. Make access public:



9. Access Jupyterlab using the link above:



10. Open a Terminal in Jupyterlab and install uv as follows: **curl -LsSf https://astral.sh/uv/install.sh | sh**

11. Follow post installation instructions on the screen.

12. Create a new environment using virtualenv as follows: **python -m venv physicsnemo**

13. Run **source physicsnemo/bin/activate** to activate the environment
14. Install nvidia-physicsnemo in the new environment after activating it using the following
pip install nvidia-physicsnemo
15. Install dgl and physicsnemo sym
pip install dgl -f https://data.dgl.ai/wheels/torch-2.4/cu124/repo.html --no-deps
pip install Cython
pip install nvidia-physicsnemo.sym --no-build-isolation
16. Install `ipykernel` as follows: **pip install ipykernel**
17. Clone lab inside workspace:
cd /workspace
git clone https://github.com/hasethinvd/physicsnemo_workshop.git
18. Register python environment as ipykernel **python -m ipykernel install --user --name=physicsnemo --display-name "physicsnemo_test"**
19. For pyvista viz on brev **apt-get install -y libgl1-mesa-dev xvfb libosmesa6**