Quick Start

Clone the repository into the machine:

```
git clone --recurse-submodules https://github.com/Masshiro/PyRTC-dev.git && cd PyRTC-dev
```

Some Python packages should be installed:

```
pip install scikit-image opencv-python soundfile matplotlib
```

Get pre-built docker image and adjust its tag:

```
docker pull quanwei99/pyrtc
docker tag quanwei99/pyrtc:latest pyrtc_image:latest
```

Download test video file into corresponding foler:

```
wget -O share/input/testmedia/test.y4m
https://media.xiph.org/video/derf/y4m/FourPeople_1280x720_60.y4m
```

Create Docker network:

```
make network
```

Make sure `Containernet` is ready for use:

```
sudo apt-get install ansible
sudo ansible-playbook -i "localhost," -c local modules/containernet/ansible/install.yml
python -m venv modules/containernet/venv
source modules/containernet/venv/bin/activate
pip install modules/containernet/
deactivate
```

Run trace-driven simulation:

```
python demo.py
python utils/draw.py
```

Run topology-based simulation:

```
source modules/containernet/venv/bin/activate
sudo -E env PATH=$PATH python topo/topo_dumbbell.py
sudo -E env PATH=$PATH python topo/topo_parkinglot.py
python topo/visual.py
```

The generated figures will be stored at `share/output/figures`.