

Requirements

The experiments in the corresponding paper were run on SLURM compute nodes running CentOS 7 with Intel Xeon Silver 4214 processors at 2.20 GHz and 512GB of memory. Each job was allowed to use up to 8 processor cores, 64GB of memory, and had a time limit of 1 hour.

The artifact requires at least 8 cpu cores and 64GB of memory. The artifact will run on systems with lower memory, but some verification jobs will likely run out of memory more quickly.

We provide here a VirtualBox virtual machine image with all code and experiment artifacts pre-installed. The virtual machine image was built using VirtualBox version 6.1. The image uses Ubuntu 20.04, with the username dnnf and password dnnf.

Dependencies

The DNNF tool has several external dependencies for installation and use, which are pre-installed in the provided virtual machine:

- python3.7
- python2.7
- gcc
- virtualenv
- DNNV: <https://github.com/dlshriver/DNNV>, commit hash f067a65
- tensorflow: <https://github.com/dlshriver/tensorfuzz>, commit hash a81df1b
 - tensorflow-gpu>=1.6,<1.7
 - numpy>=1.16,<1.17
 - absl-py>=0.11,<0.12
 - scipy>=1.2,<1.3
 - pyflann>=1.6,<1.7
 - onnx>=1.6,<1.7
- eran: <https://github.com/eth-sri/eran>, commit hash 0bbd864
- neurify: <https://github.com/dlshriver/Neurify>, commit hash 621a3d2
- planet: <https://github.com/progirep/planet>, commit hash a898a86
- reluplex: <https://github.com/dlshriver/ReluplexCav2017>, commit hash 7976635

- cleverhans==3.0.1
- numpy>=1.18,<1.20
- onnx>=1.7,<1.8
- pandas>=1.1<1.2
- tensorflow>=1.15,<2.0
- torch>=1.6,<1.7
- torchvision>=0.7,<0.8