Run Torp on BMv2

1 INSTRUCTIONS

Requirements. Existing prototype depends on two libraries: `p4c`, and `bmv2`. In Ubuntu 20.04, the two libraries can be installed with the instructions at:

https://github.com/p4lang/behavioral-model#dependencies
https://github.com/p4lang/p4c#getting-started

Detailed steps. In what follows, we present detailed steps of running Torp on bmv2.

Step#1. Modify the path information in **env.sh**. You should change the value of **BMV2_PATH** to the correct path of `bmv2` folder, e.g., **$THIS_DIR/../bmv2**.

Step#2. Change the Mininet topologic specified in **topo.txt** on your demand. The first two lines of **topo.txt** specify the number of switches and that of hosts, respectively. In the following, each line specifies a specific link between two devices. For example, "h1 s1" indicates that there is a link between the host h1 and the switch s1. By default, the topologic consists of a ToR switch that runs Torp, one receiver switch, one routing switch and two hosts that are directly connected to the ToR switch.

Step#3. Compile the P4-14 code of Torp and start Mininet with command:

```
./run_bmv2.sh
```

After that, Mininet will start the simulated topologic, where switches run Torp.

Step#4. Exit Mininet and clean up the environment with commands:

```
exit
./cleanup.sh
```