Pantheon Report

Generated at 2020-02-29 07:01:15 (UTC).
Tested in mahimahi: `mm-delay 40 mm-link 50mbps.trace 50mbps.trace --uplink-queue=droptail --uplink-queue-args=packets=300`
Repeated the test of 2 congestion control schemes once.
Each test lasted for 30 seconds running 1 flow.

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System info:
Linux 5.3.0-26-generic
net.core.default_qdisc = fq
net.core.rmem_default = 212992
net.core.rmem_max = 212992
net.core.wmem_default = 212992
net.core.wmem_max = 212992
net.ipv4.tcp_rmem = 4096 131072 6291456
net.ipv4.tcp_wmem = 4096 16384 4194304
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Git summary:
branch: master @ d435662f23dde151f7eac1146902c63644d5f1e5
third_party/aurora @ f3e943d61015b39960854ba6391797e0c7984d74
third_party/aurora-model @ e292c316c23fb837255c4e142e40590d154bbe95
third_party/eagle-plus @ 8a898299012022e9eb279dd38afd891e7fa67ee6
 M net-em/net-em/net_em/envs/net_em_env.py
third_party/eagle-v1 @ c68d985e042be5c30704c0aee48c363861951a95
third_party/eagle-v2 @ c8a1737b3c84d7d49eada5b8785045d272a70120
third_party/eagle-v3 @ 50d676bd6e47e3e29a3ce914a6e50b2c6f15136b
 M sender-receiver/sender-receiver/sender_receiver/__pycache__/__init__.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/__init__.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/datagram_pb2.cpython-36.
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/helpers.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/project_root.cpython-36.
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/receiver.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/sender_receiver_env.cpyt
 M sender-receiver/sender-receiver/sender_receiver/envs/connect-Eagle/connect-Eagle/Sender.c
 M sender-receiver/sender-receiver/sender_receiver/envs/experts/python_bbr.py
 M sender-receiver/sender-receiver/sender_receiver/envs/logs/action_prob_logs.txt
 M sender-receiver/sender-receiver/sender_receiver/envs/logs/log.txt
 D sender-receiver/sender-receiver/sender_receiver/envs/models/training_models/model-xentrop
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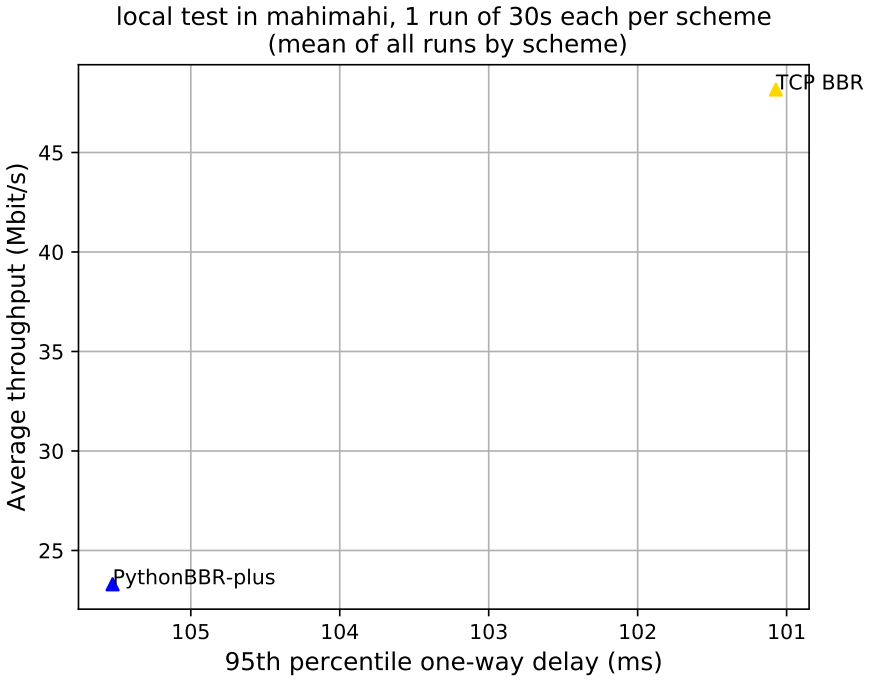
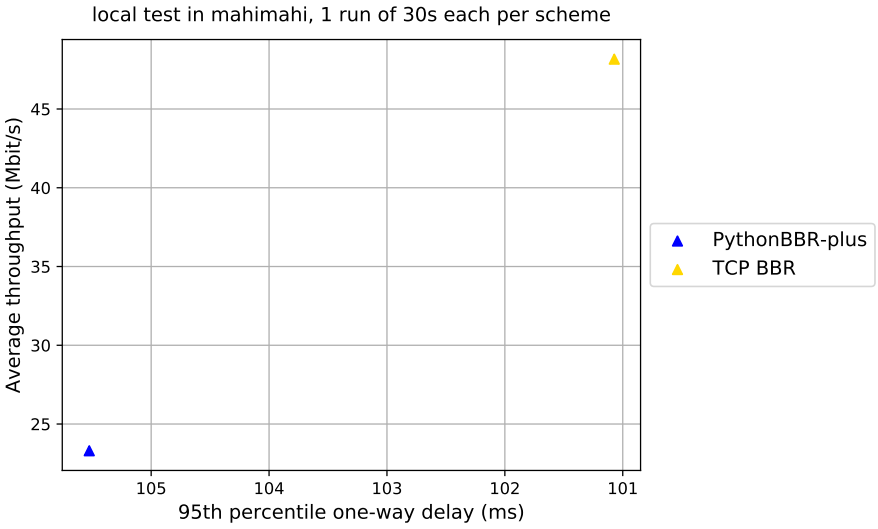
 M sender-receiver/sender-receiver/sender_receiver/envs/models/training_models/model-xentrop
 M sender-receiver/sender-receiver/sender_receiver/envs/sender_receiver_env.py
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```


local test in mahimahi, 1 run of 30s each per scheme
(mean of all runs by scheme)
TCP BBR
PythonBBR-plus
Average throughput (Mbit/s)
45
40
35
30
25
105
104
103
102
101
95th percentile one-way delay (ms)


local test in mahimahi, 1 run of 30s each per scheme
Average throughput (Mbit/s)
45
40
35
30
25
105
104
103
102
101
95th percentile one-way delay (ms)
PythonBBR-plus
TCP BBR

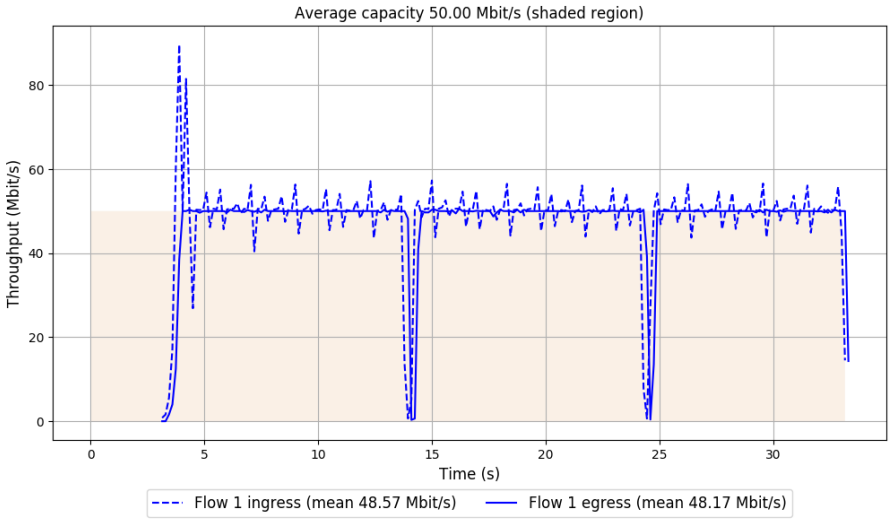
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	1	48.17	101.07	0.97
PythonBBR-plus	1	23.30	105.53	0.80

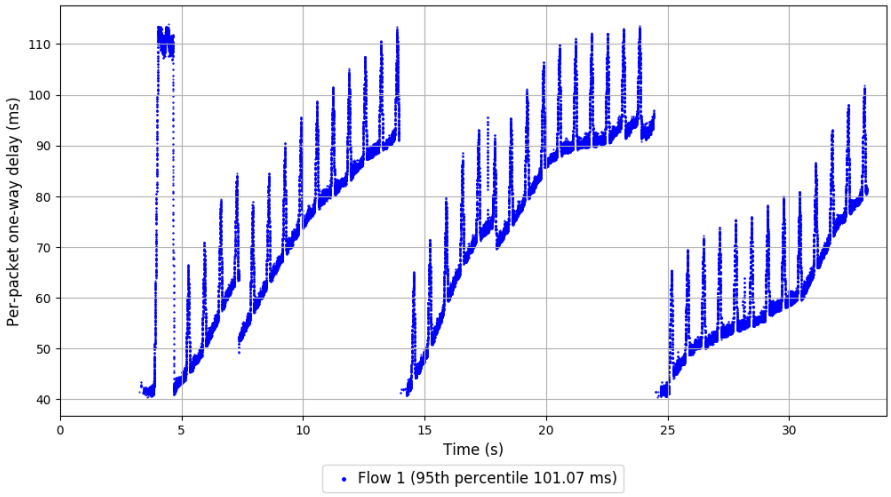
```
Run 1: Statistics of TCP BBR

Start at: 2020-02-29 06:59:39
End at: 2020-02-29 07:00:09

# Below is generated by plot.py at 2020-02-29 07:01:14
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 48.17 Mbit/s (96.3% utilization)
95th percentile per-packet one-way delay: 101.072 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 48.17 Mbit/s
95th percentile per-packet one-way delay: 101.072 ms
Loss rate: 0.97%
```

Run 1: Report of TCP BBR — Data Link





```
Run 1: Statistics of PythonBBR-plus

Start at: 2020-02-29 06:59:03
End at: 2020-02-29 06:59:33

# Below is generated by plot.py at 2020-02-29 07:01:14
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 23.30 Mbit/s (46.6% utilization)
95th percentile per-packet one-way delay: 105.525 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 23.30 Mbit/s
95th percentile per-packet one-way delay: 105.525 ms
Loss rate: 0.80%
```

Run 1: Report of PythonBBR-plus — Data Link