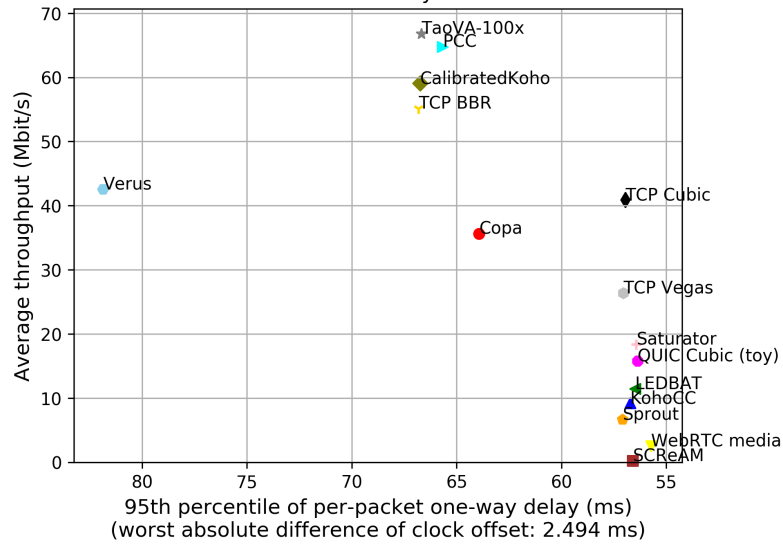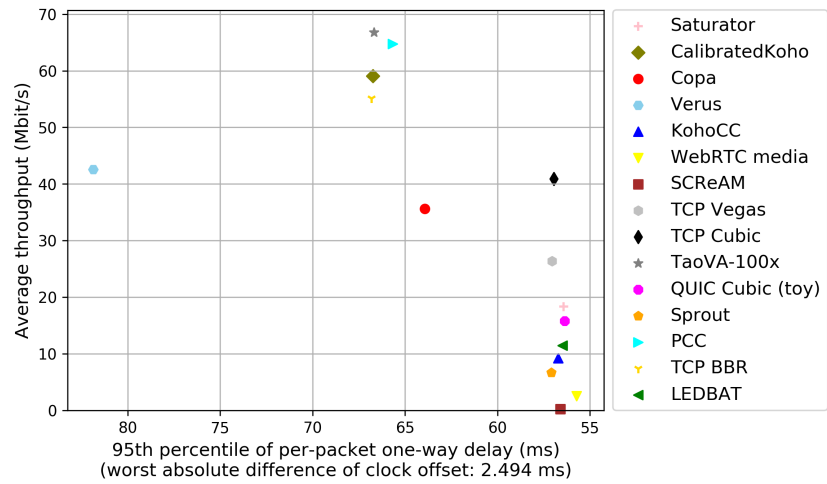**Pantheon Summary** (Generated at Sun, 11 Jun 2017 01:09:16 +0000 with pantheon version `e44e21ab50520045378f626dc5b5e21d0473d7b8`)

Repeated the test of 15 congestion control schemes once.

Each test lasted for 30 seconds running 1 flow.

Data path **from** Colombia Ethernet **to** AWS Brazil 2 Ethernet.

NTP offset measured against gps.ntp.br.

```
git branch: master @ e44e21ab50520045378f626dc5b5e21d0473d7b8
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ dae96123232f1bcb37725348fa2378691ce26725
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-stimuli @ fc73a85ca16c34366d1888dc8a0d0d88d4ebf2a7
third_party/pantheon-tunnel @ 4893799ab83a43fa2d3236507d168f461e1243ed
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```
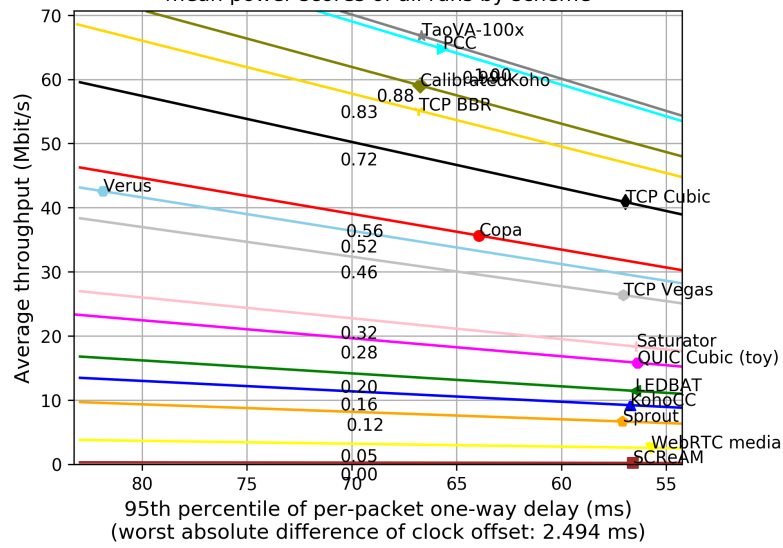
test from Colombia Ethernet to AWS Brazil 2 Ethernet, run 1 of 30s each per scheme
mean of all runs by scheme

test from Colombia Ethernet to AWS Brazil 2 Ethernet, run 1 of 30s each per scheme

test from Colombia Ethernet to AWS Brazil 2 Ethernet, run 1 of 30s each per scheme
mean power scores of all runs by scheme

```
Run 1: Statistics of TCP BBR

Start at: Sun, 11 Jun 2017 01:00:19 +0000
End at: Sun, 11 Jun 2017 01:00:49 +0000
Local clock offset: 0.715 ms
Remote clock offset: -1.451 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:37 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.15 Mbit/s
95th percentile per-packet one-way delay: 66.820 ms
Loss rate: 6.91%
-- Flow 1:
Average throughput: 55.15 Mbit/s
95th percentile per-packet one-way delay: 66.820 ms
Loss rate: 6.91%
```
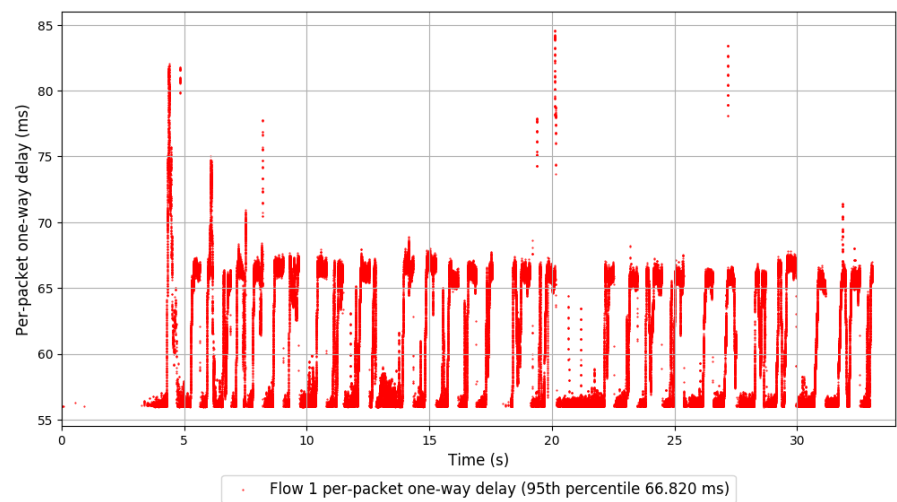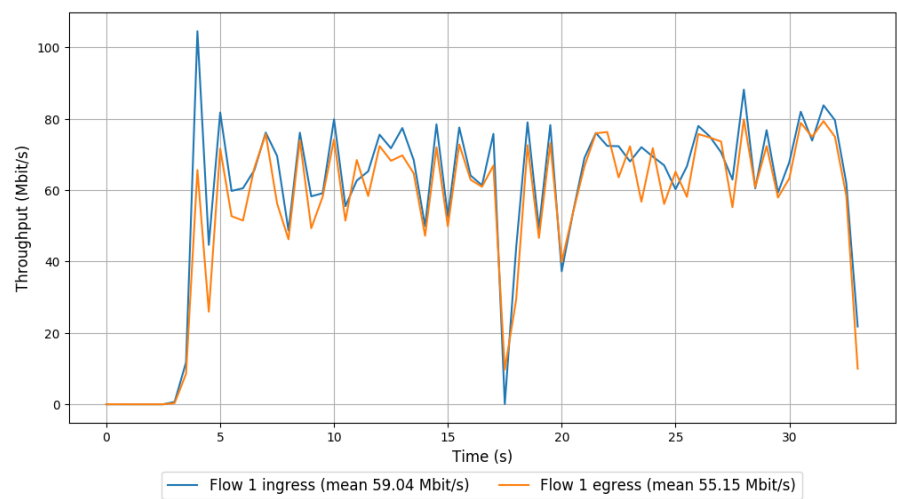
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 59.04 Mbit/s) —— Flow 1 egress (mean 55.15 Mbit/s)

· Flow 1 per-packet one-way delay (95th percentile 66.820 ms)

```
Run 1: Statistics of CalibratedKoho

Start at: Sun, 11 Jun 2017 01:02:58 +0000
End at: Sun, 11 Jun 2017 01:03:28 +0000
Local clock offset: 0.613 ms
Remote clock offset: -0.938 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:38 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.05 Mbit/s
95th percentile per-packet one-way delay: 66.743 ms
Loss rate: 3.13%
-- Flow 1:
Average throughput: 59.05 Mbit/s
95th percentile per-packet one-way delay: 66.743 ms
Loss rate: 3.13%
```
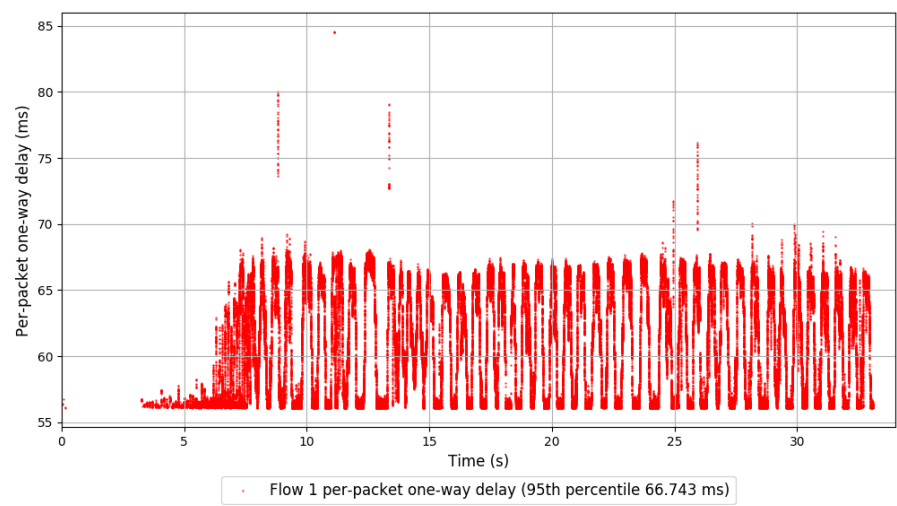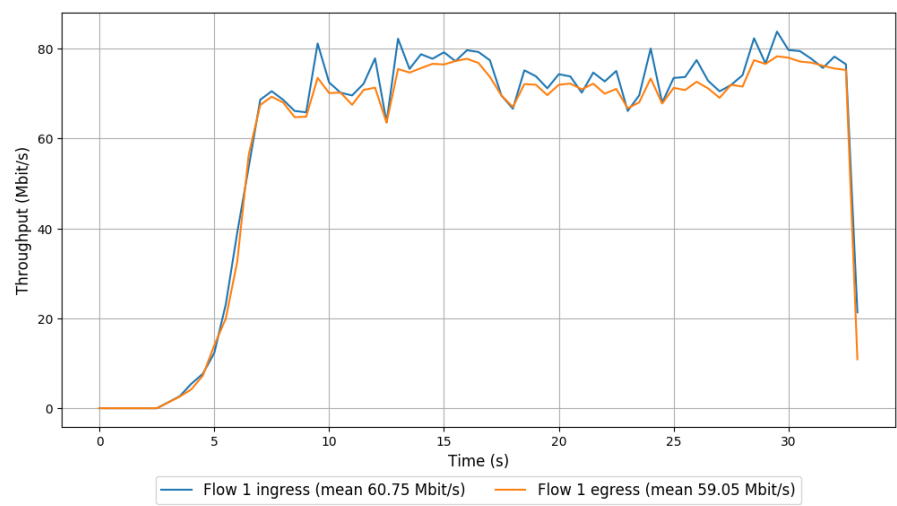
Run 1: Report of CalibratedKoho — Data Link

```
Run 1: Statistics of Copa

Start at: Sun, 11 Jun 2017 00:52:35 +0000
End at: Sun, 11 Jun 2017 00:53:05 +0000
Local clock offset: 0.899 ms
Remote clock offset: -1.507 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:47 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.64 Mbit/s
95th percentile per-packet one-way delay: 63.924 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 35.64 Mbit/s
95th percentile per-packet one-way delay: 63.924 ms
Loss rate: 0.86%
```
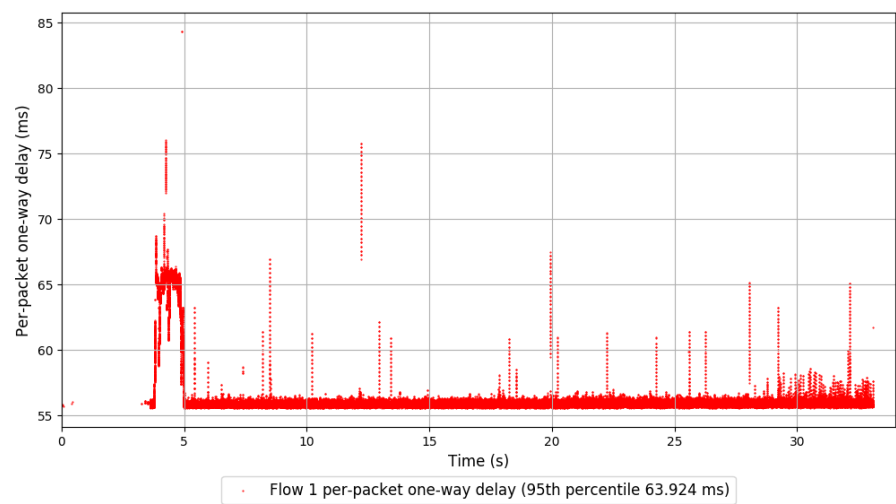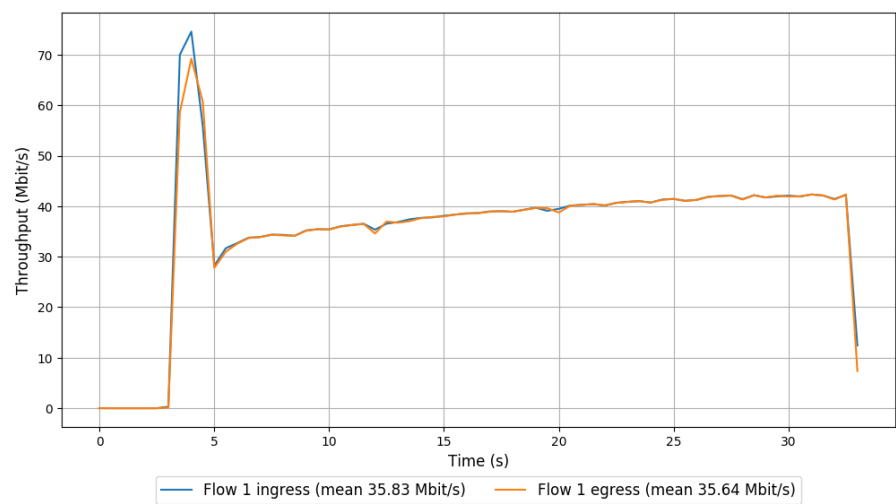
Run 1: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: Sun, 11 Jun 2017 00:51:16 +0000
End at: Sun, 11 Jun 2017 00:51:46 +0000
Local clock offset: 0.903 ms
Remote clock offset: -1.367 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:47 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.88 Mbit/s
95th percentile per-packet one-way delay: 56.955 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 40.88 Mbit/s
95th percentile per-packet one-way delay: 56.955 ms
Loss rate: 0.96%
```
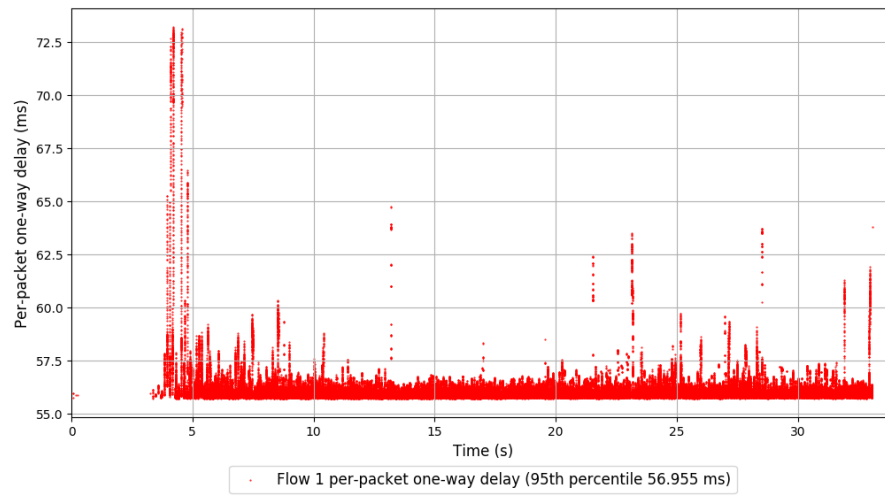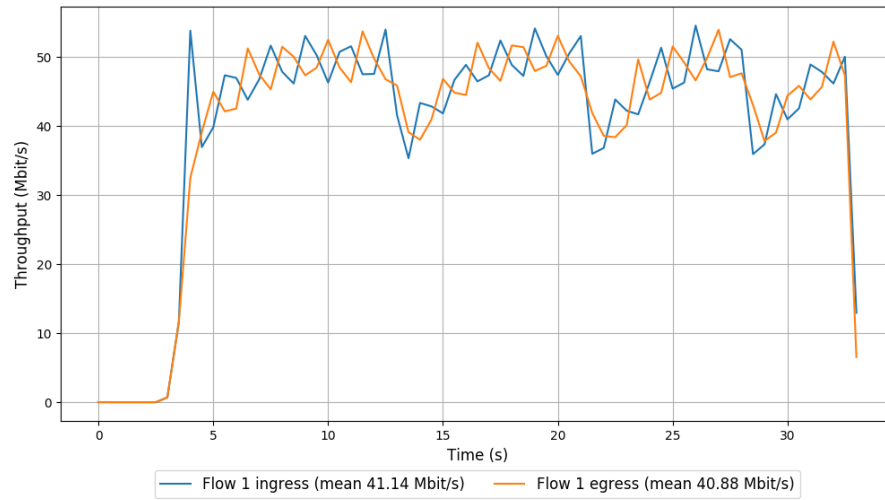
Run 1: Report of TCP Cubic — Data Link

```
Run 1: Statistics of KohoCC

Start at: Sun, 11 Jun 2017 00:56:31 +0000
End at: Sun, 11 Jun 2017 00:57:01 +0000
Local clock offset: 0.793 ms
Remote clock offset: -1.025 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:47 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 56.715 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 56.715 ms
Loss rate: 0.39%
```
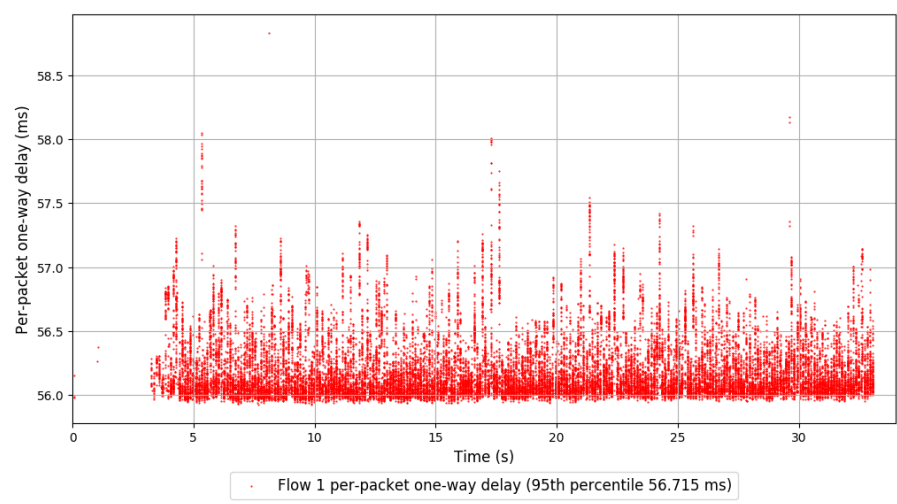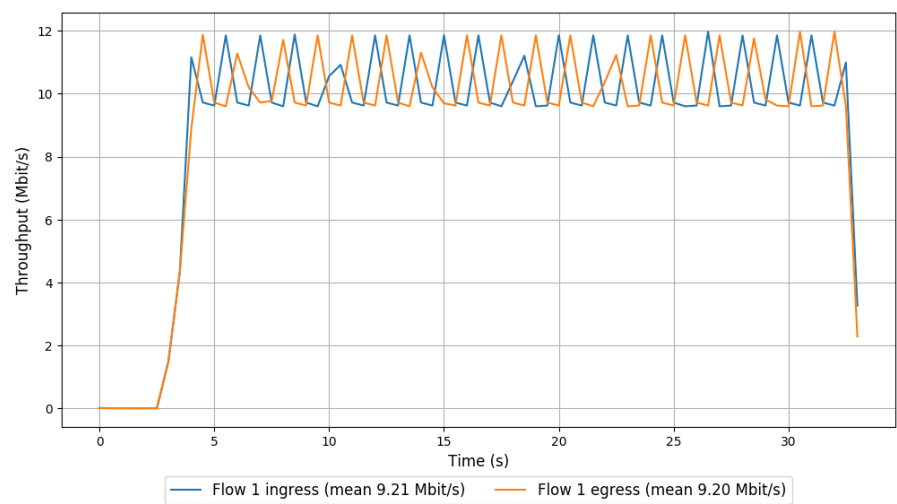
Run 1: Report of KohoCC — Data Link

```
Run 1: Statistics of LEDBAT

Start at: Sun, 11 Jun 2017 00:44:47 +0000
End at: Sun, 11 Jun 2017 00:45:17 +0000
Local clock offset: 1.029 ms
Remote clock offset: -1.28 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:49 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.42 Mbit/s
95th percentile per-packet one-way delay: 56.490 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 11.42 Mbit/s
95th percentile per-packet one-way delay: 56.490 ms
Loss rate: 0.62%
```
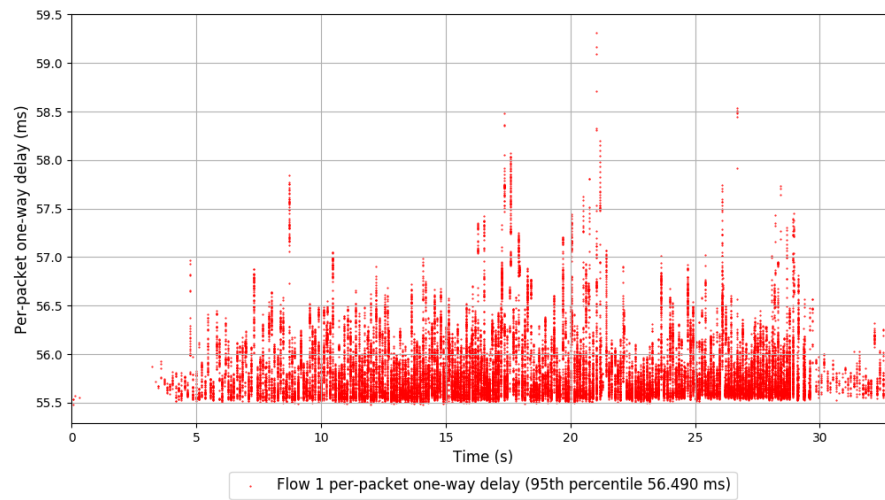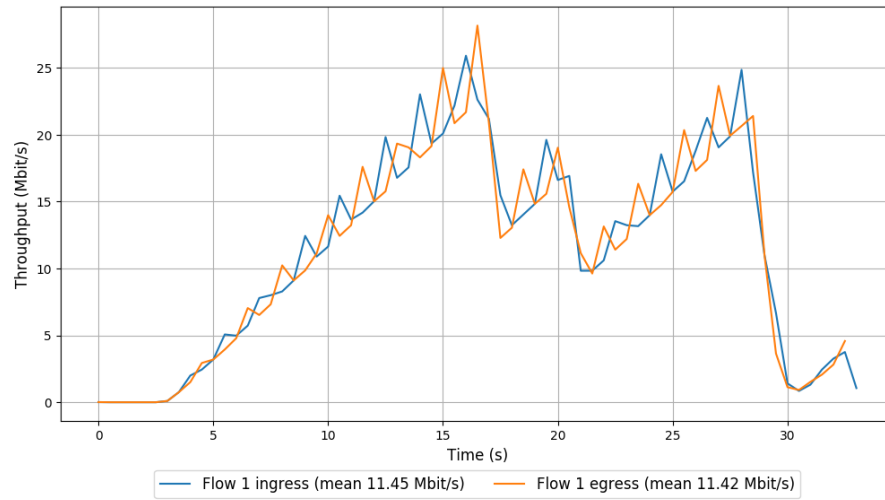
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 11.45 Mbit/s)   Flow 1 egress (mean 11.42 Mbit/s)

Flow 1 per-packet one-way delay (95th percentile 56.490 ms)

```
Run 1: Statistics of PCC

Start at: Sun, 11 Jun 2017 00:49:58 +0000
End at: Sun, 11 Jun 2017 00:50:28 +0000
Local clock offset: 0.991 ms
Remote clock offset: -1.299 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:57 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.75 Mbit/s
95th percentile per-packet one-way delay: 65.659 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 64.75 Mbit/s
95th percentile per-packet one-way delay: 65.659 ms
Loss rate: 2.39%
```
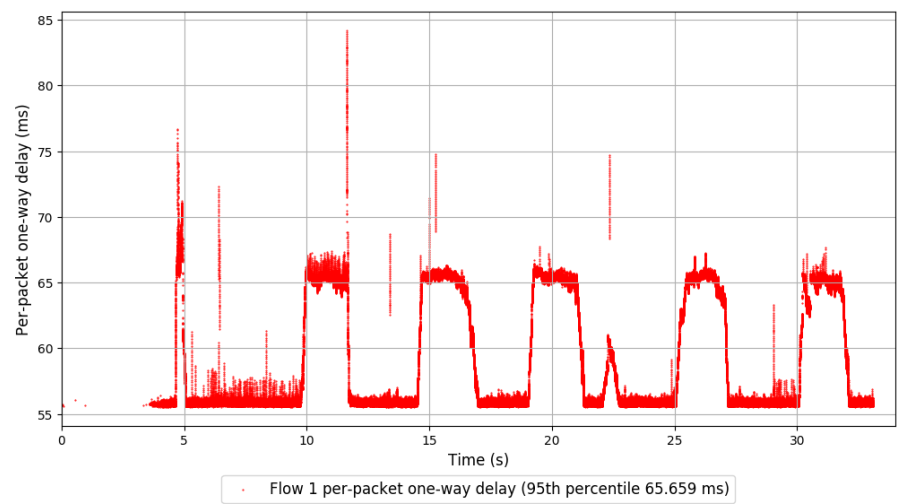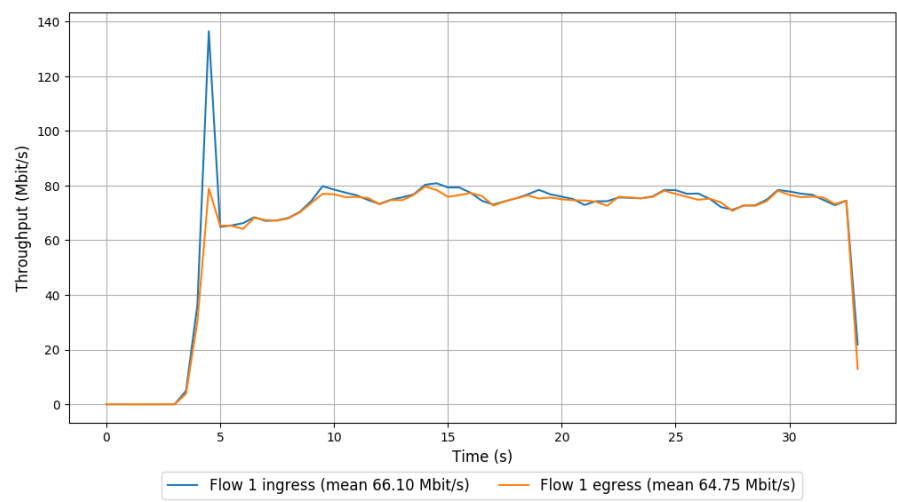
Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 66.10 Mbit/s)   Flow 1 egress (mean 64.75 Mbit/s)

Flow 1 per-packet one-way delay (95th percentile 65.659 ms)

```
Run 1: Statistics of QUIC Cubic (toy)

Start at: Sun, 11 Jun 2017 00:48:42 +0000
End at: Sun, 11 Jun 2017 00:49:12 +0000
Local clock offset: 0.934 ms
Remote clock offset: -1.532 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:57 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.80 Mbit/s
95th percentile per-packet one-way delay: 56.359 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 15.80 Mbit/s
95th percentile per-packet one-way delay: 56.359 ms
Loss rate: 0.85%
```
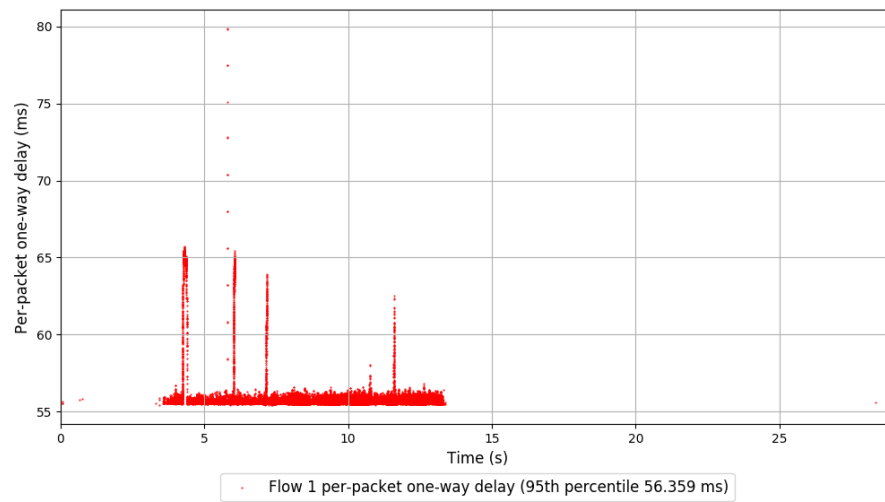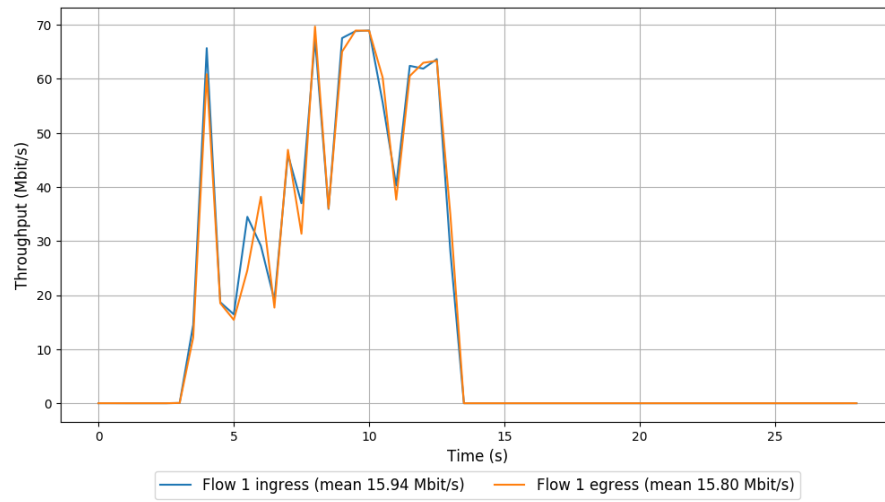
Run 1: Report of QUIC Cubic (toy) — Data Link

Flow 1 ingress (mean 15.94 Mbit/s) — Flow 1 egress (mean 15.80 Mbit/s)

Flow 1 per-packet one-way delay (95th percentile 56.359 ms)

```
Run 1: Statistics of Saturator

Start at: Sun, 11 Jun 2017 00:57:48 +0000
End at: Sun, 11 Jun 2017 00:58:18 +0000
Local clock offset: 0.808 ms
Remote clock offset: -0.992 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:57 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.33 Mbit/s
95th percentile per-packet one-way delay: 56.418 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 18.33 Mbit/s
95th percentile per-packet one-way delay: 56.418 ms
Loss rate: 0.91%
```
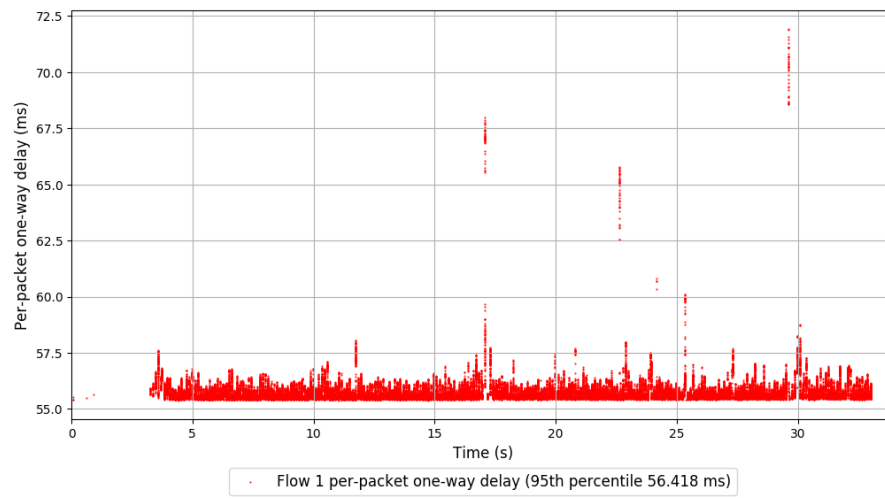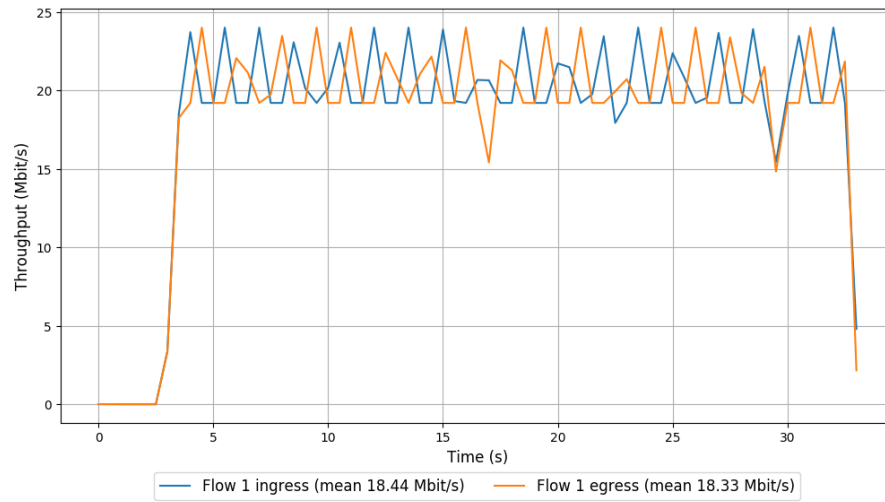
Run 1: Report of Saturator — Data Link

Flow 1 ingress (mean 18.44 Mbit/s)   Flow 1 egress (mean 18.33 Mbit/s)

Flow 1 per-packet one-way delay (95th percentile 56.418 ms)

```
Run 1: Statistics of SCReAM

Start at: Sun, 11 Jun 2017 00:59:05 +0000
End at: Sun, 11 Jun 2017 00:59:35 +0000
Local clock offset: 0.734 ms
Remote clock offset: -1.396 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:57 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 56.595 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 56.595 ms
Loss rate: 0.25%
```
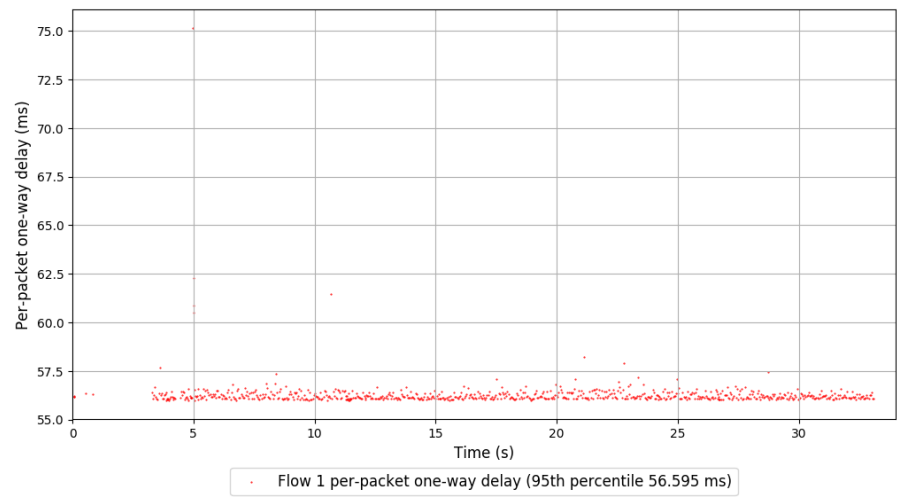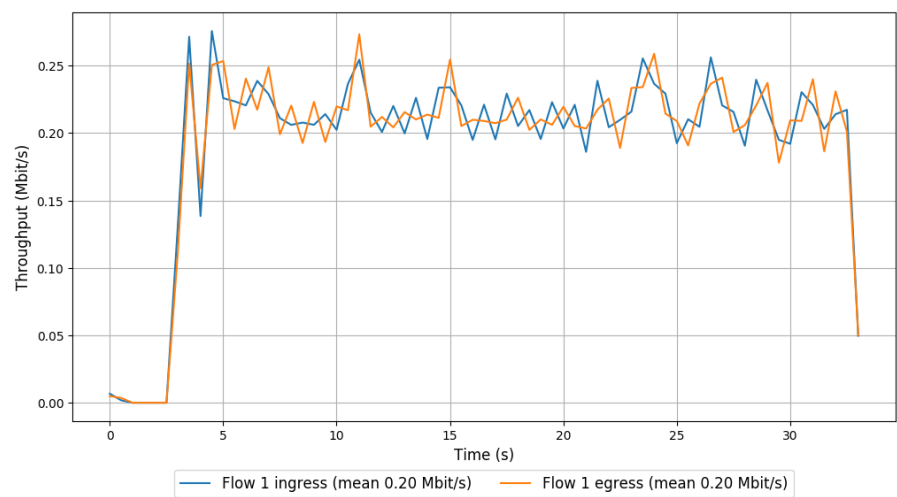
Run 1: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.20 Mbit/s)   Flow 1 egress (mean 0.20 Mbit/s)

Flow 1 per-packet one-way delay (95th percentile 56.595 ms)

```
Run 1: Statistics of Sprout

Start at: Sun, 11 Jun 2017 00:47:26 +0000
End at: Sun, 11 Jun 2017 00:47:56 +0000
Local clock offset: 1.041 ms
Remote clock offset: -1.453 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:08:58 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.66 Mbit/s
95th percentile per-packet one-way delay: 57.087 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 6.66 Mbit/s
95th percentile per-packet one-way delay: 57.087 ms
Loss rate: 0.44%
```
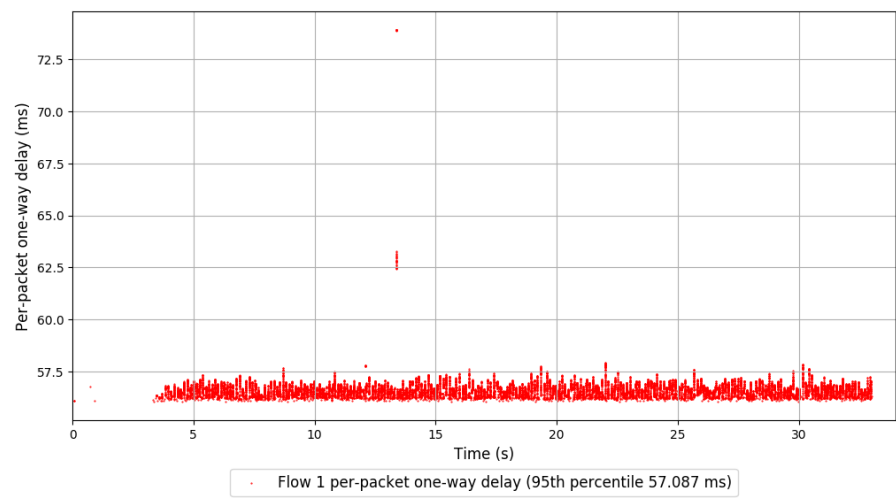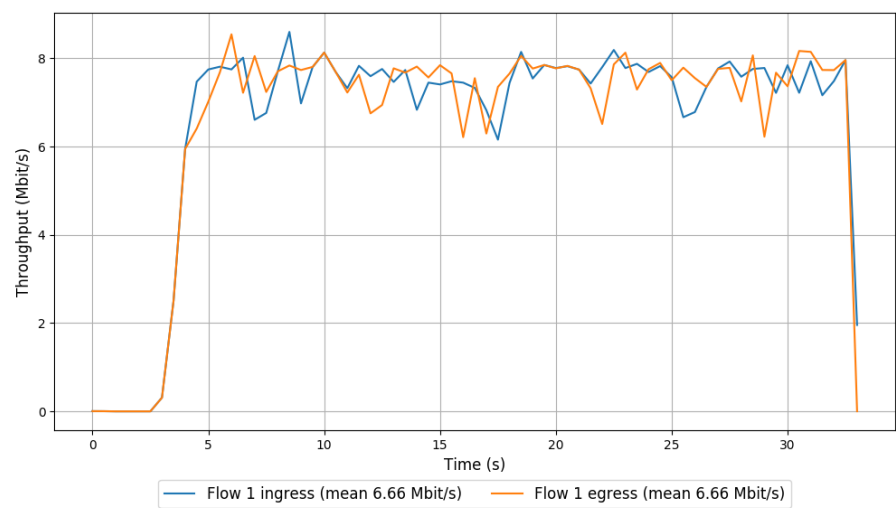
Run 1: Report of Sprout — Data Link

Flow 1 ingress (mean 6.66 Mbit/s)   Flow 1 egress (mean 6.66 Mbit/s)

Flow 1 per-packet one-way delay (95th percentile 57.087 ms)

```
Run 1: Statistics of TaoVA-100x

Start at: Sun, 11 Jun 2017 00:46:03 +0000
End at: Sun, 11 Jun 2017 00:46:33 +0000
Local clock offset: 1.032 ms
Remote clock offset: -1.432 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:09:14 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.79 Mbit/s
95th percentile per-packet one-way delay: 66.688 ms
Loss rate: 13.00%
-- Flow 1:
Average throughput: 66.79 Mbit/s
95th percentile per-packet one-way delay: 66.688 ms
Loss rate: 13.00%
```
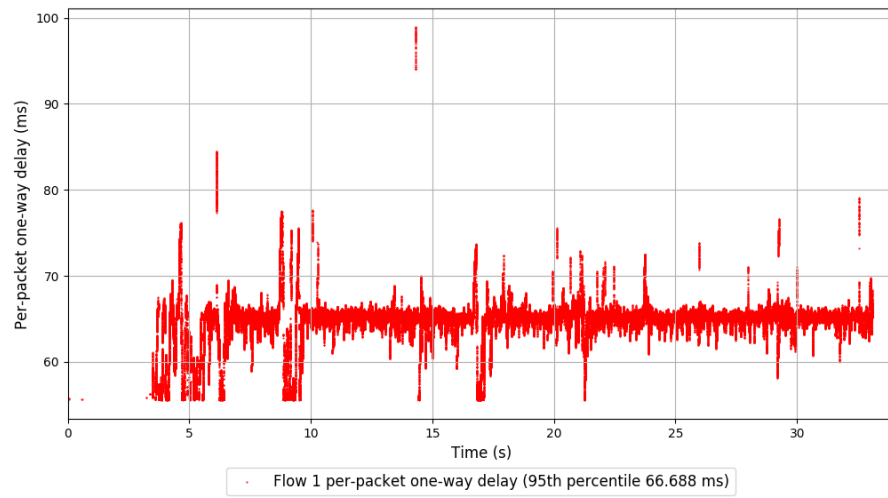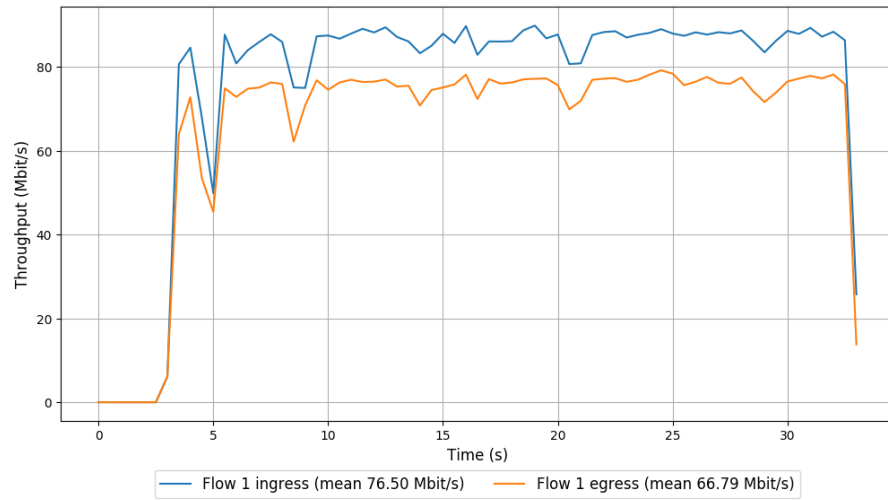
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 76.50 Mbit/s) Flow 1 egress (mean 66.79 Mbit/s)

. Flow 1 per-packet one-way delay (95th percentile 66.688 ms)

```
Run 1: Statistics of TCP Vegas

Start at: Sun, 11 Jun 2017 01:01:41 +0000
End at: Sun, 11 Jun 2017 01:02:11 +0000
Local clock offset: 0.694 ms
Remote clock offset: -1.188 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:09:14 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.37 Mbit/s
95th percentile per-packet one-way delay: 57.056 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 26.37 Mbit/s
95th percentile per-packet one-way delay: 57.056 ms
Loss rate: 0.69%
```
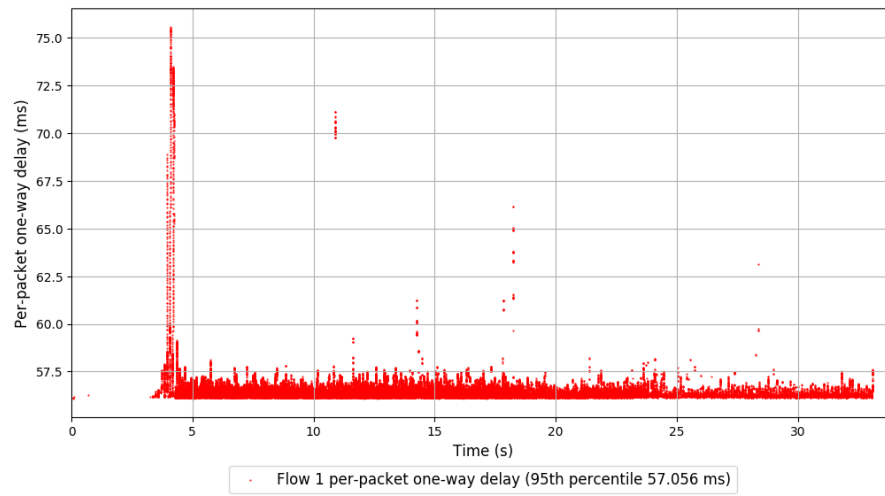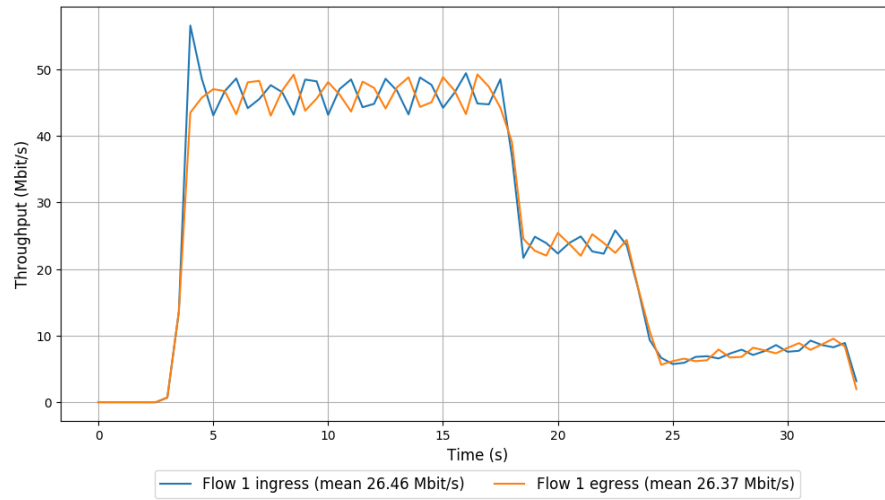
Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 26.46 Mbit/s)   Flow 1 egress (mean 26.37 Mbit/s)

Flow 1 per-packet one-way delay (95th percentile 57.056 ms)

```
Run 1: Statistics of Verus

Start at: Sun, 11 Jun 2017 00:55:09 +0000
End at: Sun, 11 Jun 2017 00:55:39 +0000
Local clock offset: 0.892 ms
Remote clock offset: -1.339 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:09:14 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 42.56 Mbit/s
95th percentile per-packet one-way delay: 81.867 ms
Loss rate: 65.99%
-- Flow 1:
Average throughput: 42.56 Mbit/s
95th percentile per-packet one-way delay: 81.867 ms
Loss rate: 65.99%
```
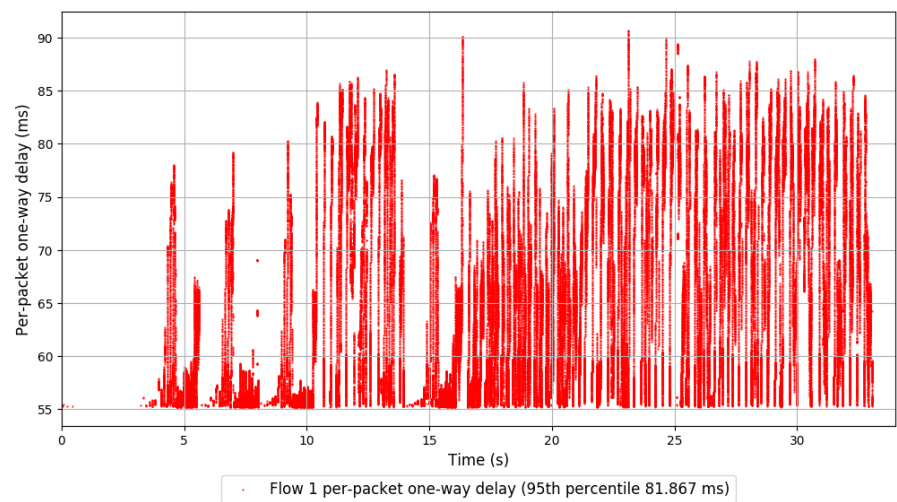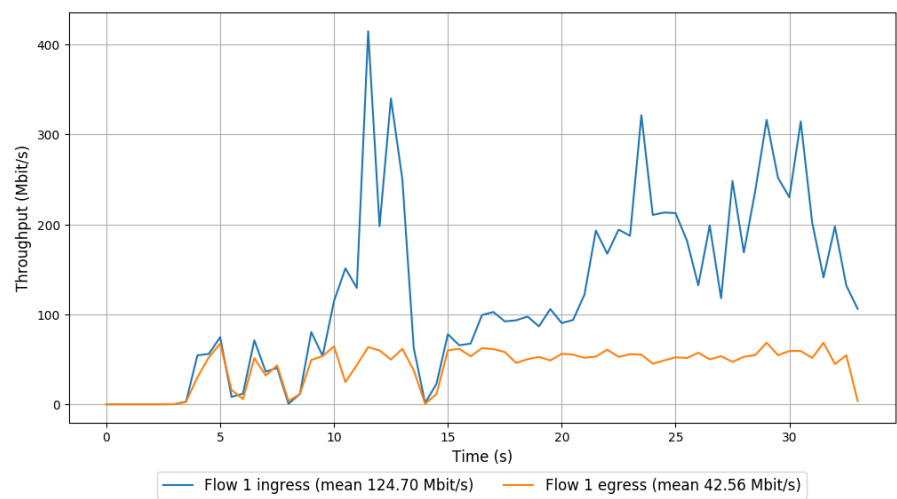
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 124.70 Mbit/s)   Flow 1 egress (mean 42.56 Mbit/s)

Flow 1 per-packet one-way delay (95th percentile 81.867 ms)

```
Run 1: Statistics of WebRTC media

Start at: Sun, 11 Jun 2017 00:53:54 +0000
End at: Sun, 11 Jun 2017 00:54:24 +0000
Local clock offset: 0.929 ms
Remote clock offset: -1.078 ms


# Below is generated by plot.py at Sun, 11 Jun 2017 01:09:14 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 55.729 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 55.729 ms
Loss rate: 0.41%
```

Run 1: Report of WebRTC media — Data Link