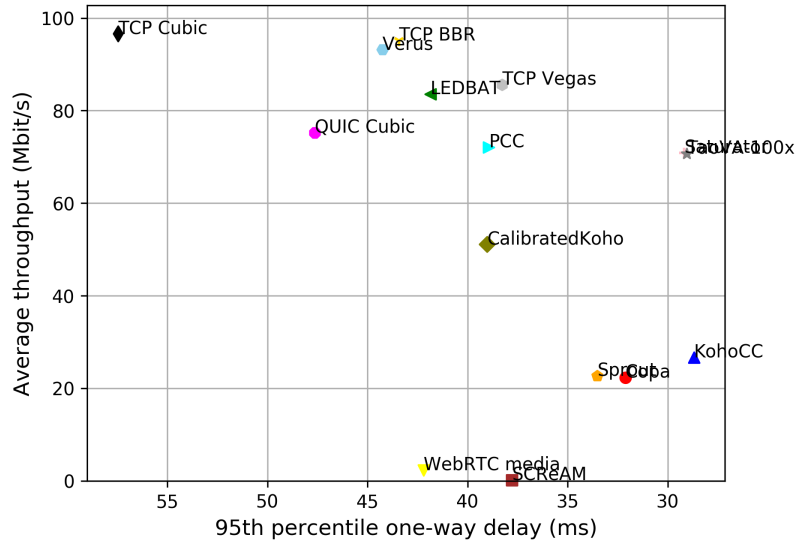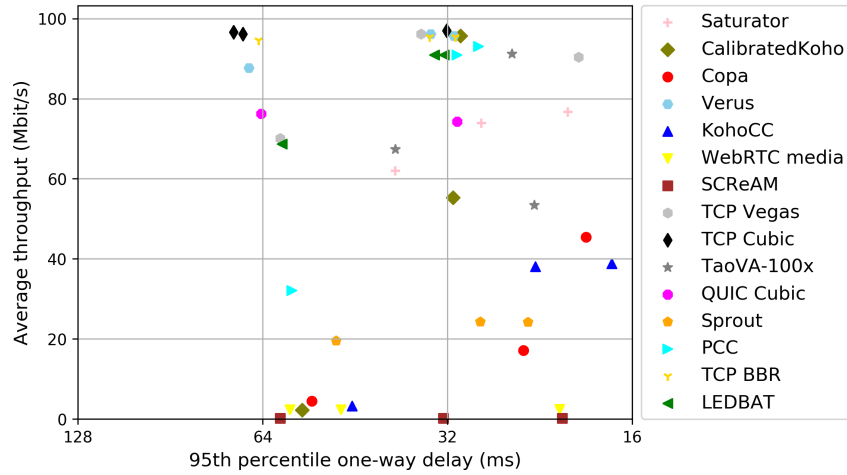**Pantheon Summary** (Generated at Sun, 06 Aug 2017 09:03:28 +0000 with pantheon version `a934ee3822380a12762347e6bc8bd1f3e836e73b`)

Repeated the test of 15 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

Data path: India Ethernet (*remote*) →AWS India 1 Ethernet (*local*).

NTP offset measured against nets.org.sg and has been applied to correct the timestamps in logs.

```
git branch: master @ a934ee3822380a12762347e6bc8bd1f3e836e73b
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 @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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 India Ethernet to AWS India 1 Ethernet, 3 runs of 30s each per scheme
(mean of all runs by scheme)

test from India Ethernet to AWS India 1 Ethernet, 3 runs of 30s each per scheme

scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	95.12	43.44	0.18
CalibratedKoho	3	51.11	39.02	0.06
Copa	3	22.36	32.12	0.02
TCP Cubic	3	96.59	57.47	0.21
KohoCC	3	26.73	28.69	0.07
LEDBAT	3	83.54	41.85	0.19
PCC	3	72.04	38.93	0.14
QUIC Cubic	3	75.26	47.63	0.14
Saturator	3	70.88	29.17	0.11
SCReAM	3	0.22	37.78	0.17
Sprout	3	22.69	33.52	0.12
TaoVA-100x	3	70.68	29.05	0.20
TCP Vegas	3	85.57	38.27	0.10
Verus	3	93.17	44.25	0.16
WebRTC media	3	2.36	42.20	0.16

```
Run 1: Statistics of TCP BBR

Start at: Sun, 06 Aug 2017 07:08:43 +0000
End at: Sun, 06 Aug 2017 07:09:13 +0000
Local clock offset: -0.693 ms
Remote clock offset: -5.644 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:00:28 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 31.085 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 31.085 ms
Loss rate: 0.15%
```
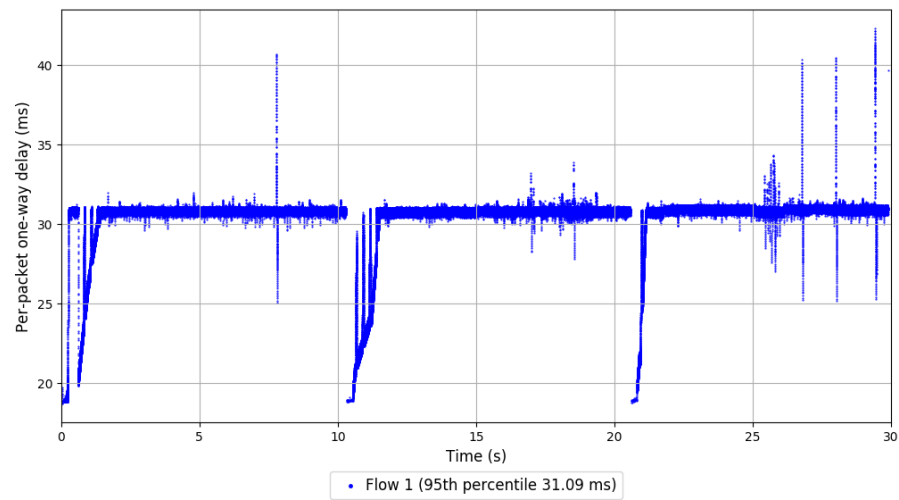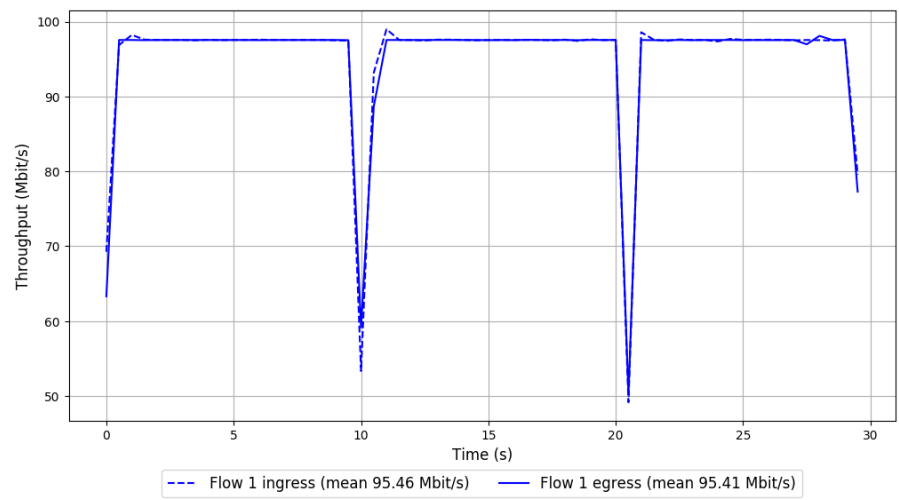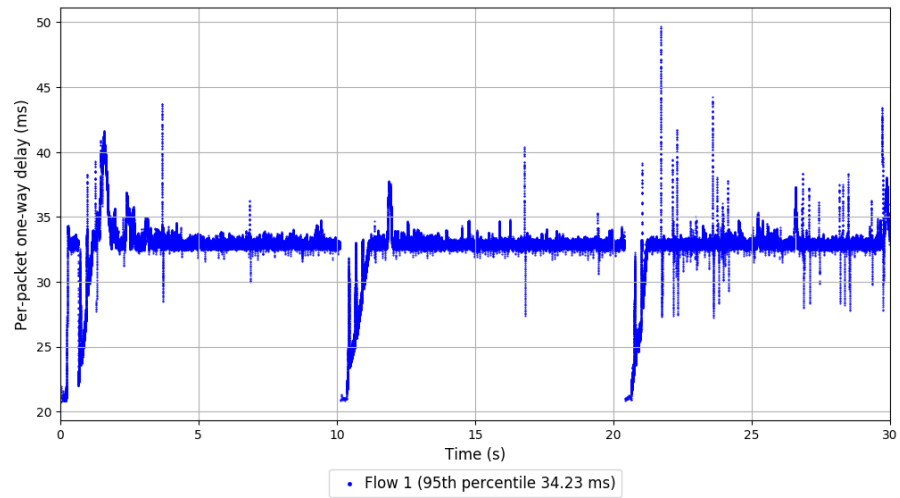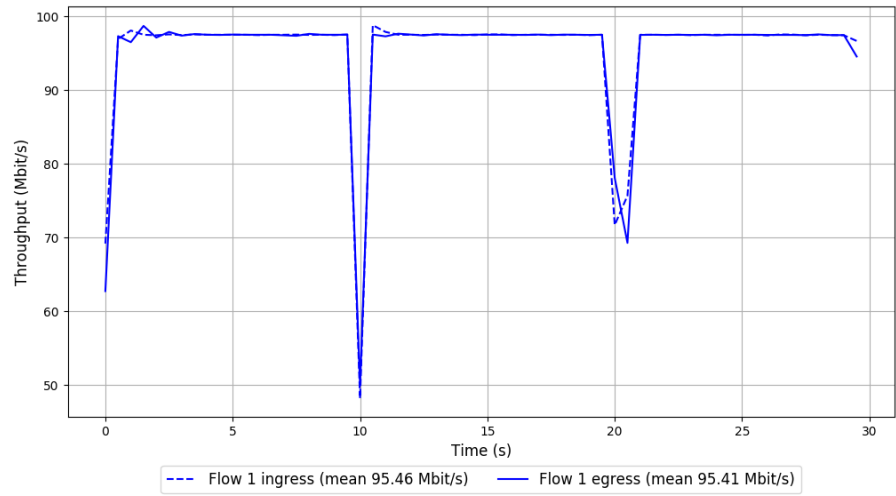
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: Sun, 06 Aug 2017 07:26:23 +0000
End at: Sun, 06 Aug 2017 07:26:53 +0000
Local clock offset: -0.082 ms
Remote clock offset: -6.735 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:00:28 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 34.233 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 34.233 ms
Loss rate: 0.15%
```
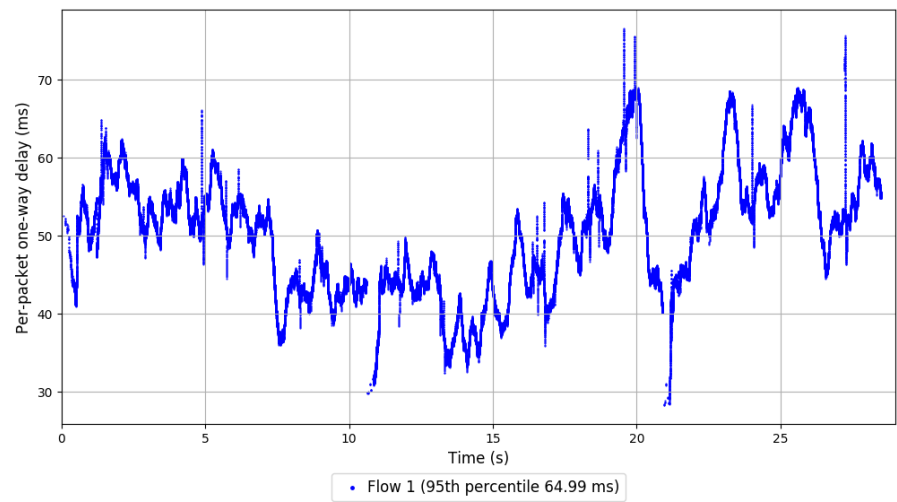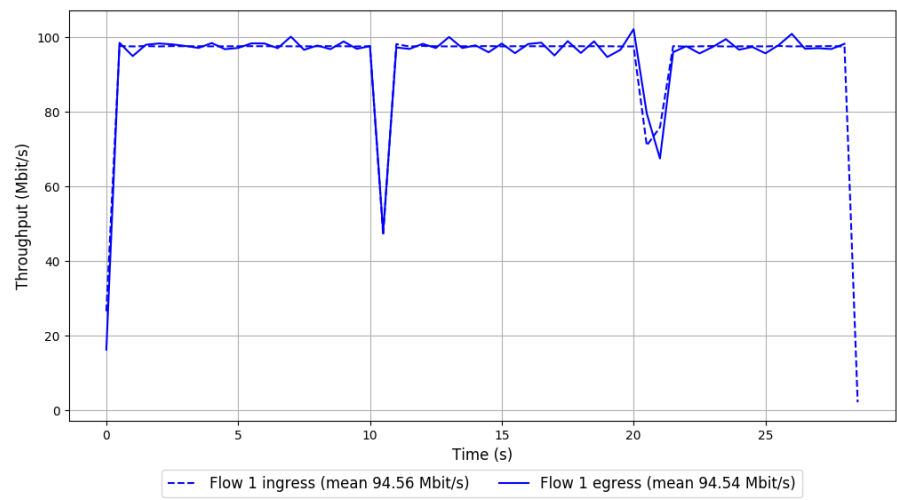
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 95.46 Mbit/s)   Flow 1 egress (mean 95.41 Mbit/s)

Flow 1 (95th percentile 34.23 ms)

```
Run 3: Statistics of TCP BBR

Start at: Sun, 06 Aug 2017 07:44:00 +0000
End at: Sun, 06 Aug 2017 07:44:30 +0000
Local clock offset: -0.904 ms
Remote clock offset: -4.971 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:00:39 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 64.993 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 64.993 ms
Loss rate: 0.24%
```
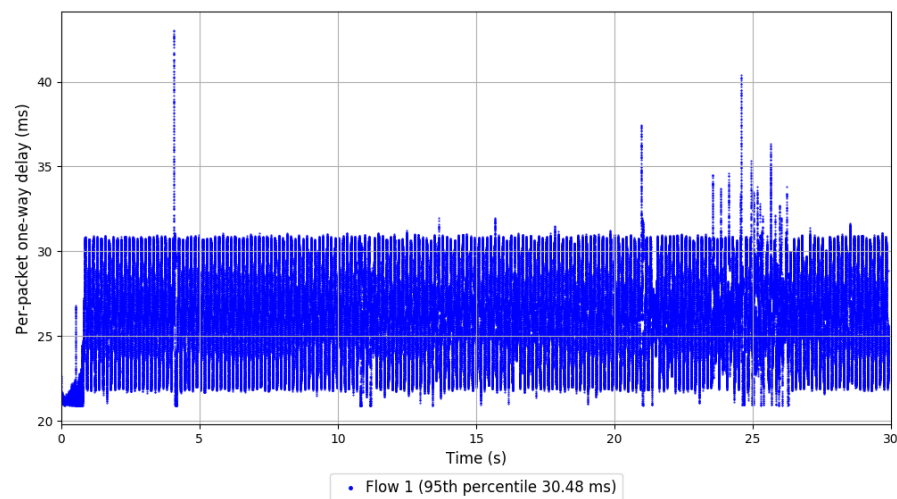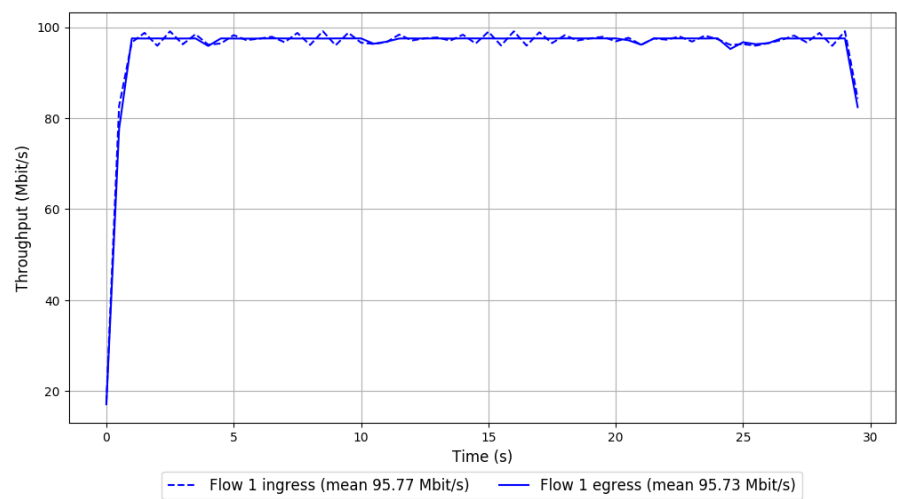
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 94.56 Mbit/s)   Flow 1 egress (mean 94.54 Mbit/s)

Flow 1 (95th percentile 64.99 ms)

```
Run 1: Statistics of CalibratedKoho

Start at: Sun, 06 Aug 2017 07:15:36 +0000
End at: Sun, 06 Aug 2017 07:16:06 +0000
Local clock offset: 1.169 ms
Remote clock offset: -5.721 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:00:40 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 30.477 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 30.477 ms
Loss rate: 0.13%
```

Run 1: Report of CalibratedKoho — Data Link

```
Run 2: Statistics of CalibratedKoho

Start at: Sun, 06 Aug 2017 07:33:17 +0000
End at: Sun, 06 Aug 2017 07:33:47 +0000
Local clock offset: 0.653 ms
Remote clock offset: -6.201 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:00:46 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.33 Mbit/s
95th percentile per-packet one-way delay: 31.358 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.33 Mbit/s
95th percentile per-packet one-way delay: 31.358 ms
Loss rate: 0.00%
```
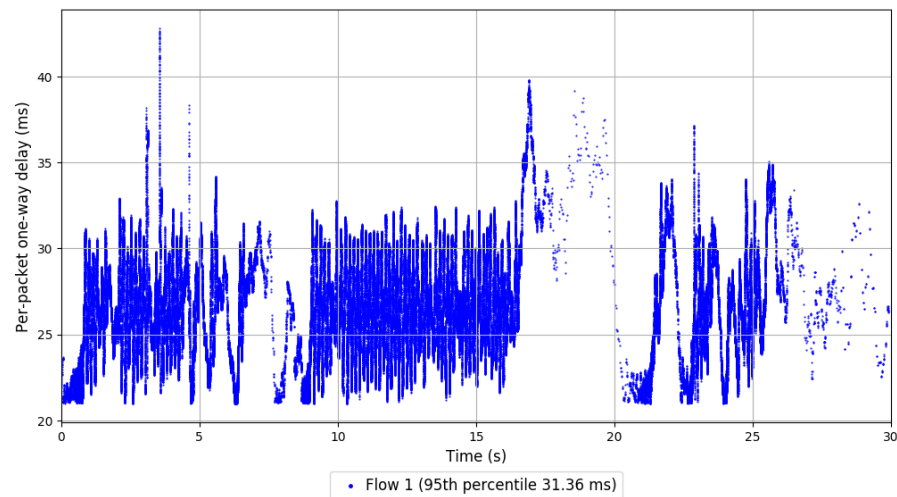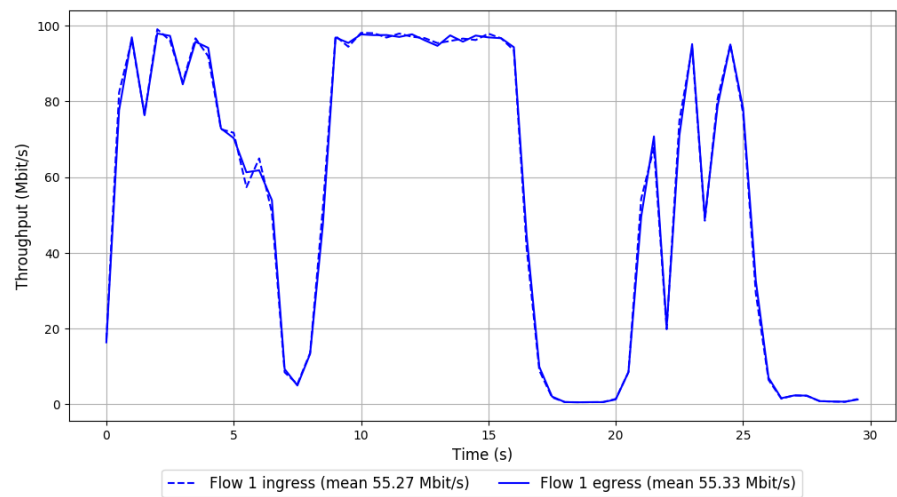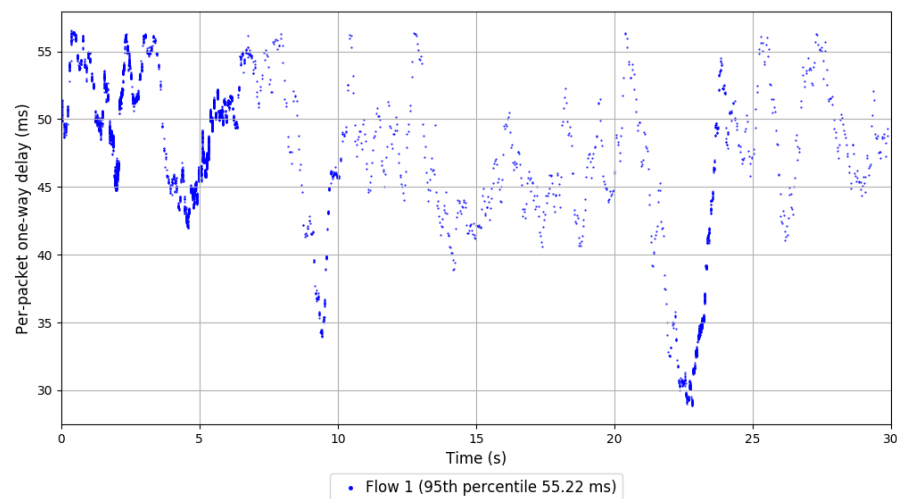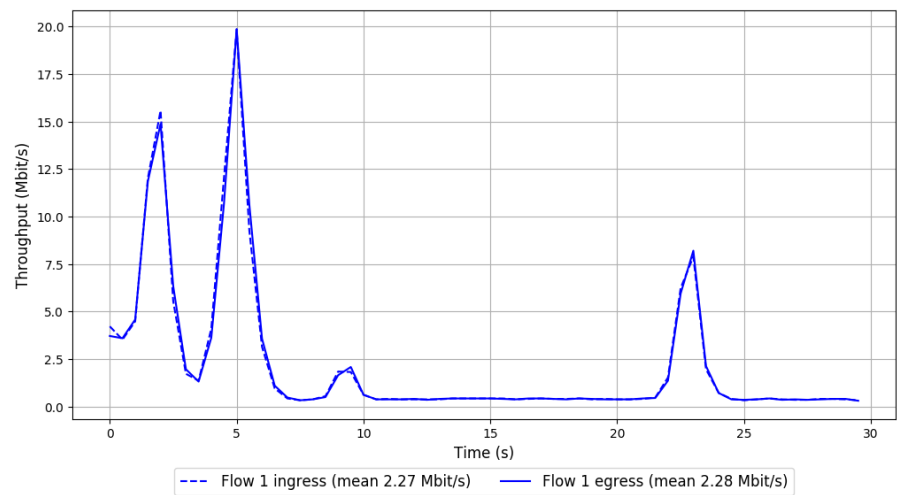
Run 2: Report of CalibratedKoho — Data Link

Flow 1 ingress (mean 55.27 Mbit/s)   Flow 1 egress (mean 55.33 Mbit/s)

• Flow 1 (95th percentile 31.36 ms)

```
Run 3: Statistics of CalibratedKoho

Start at: Sun, 06 Aug 2017 07:50:53 +0000
End at: Sun, 06 Aug 2017 07:51:23 +0000
Local clock offset: -1.743 ms
Remote clock offset: -5.638 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:00:46 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 55.224 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 55.224 ms
Loss rate: 0.04%
```
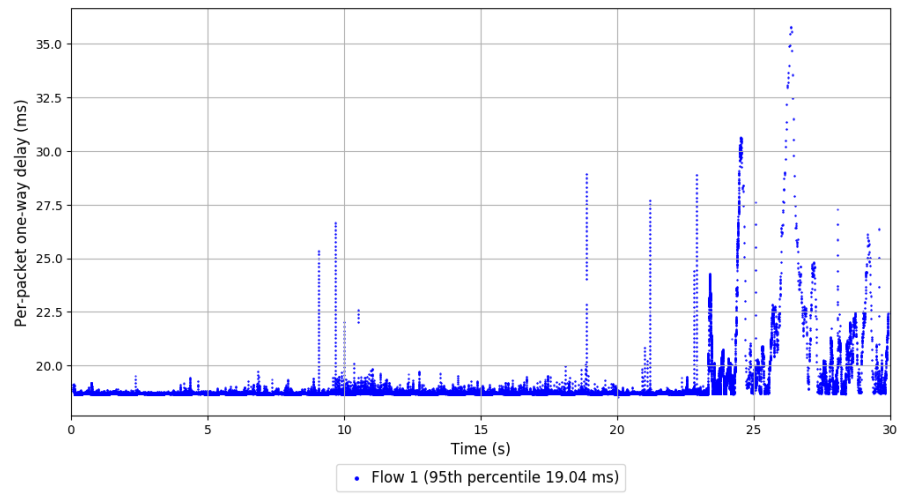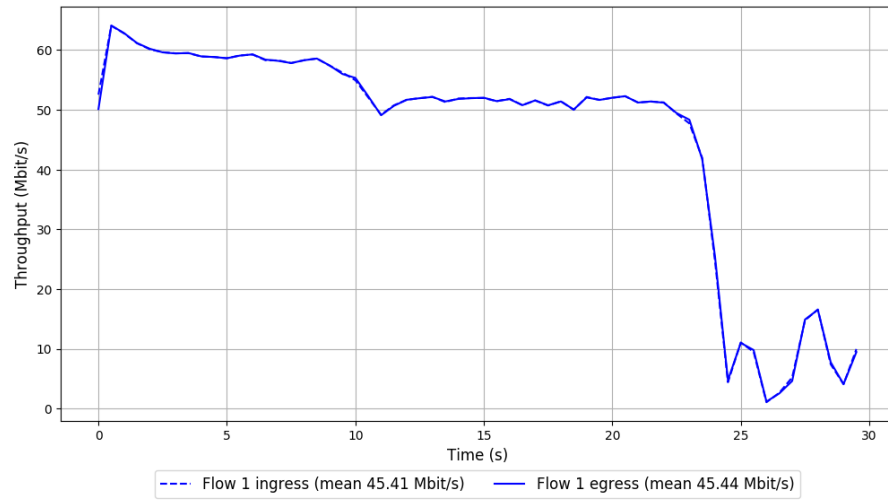
Run 3: Report of CalibratedKoho — Data Link

Flow 1 ingress (mean 2.27 Mbit/s) — Flow 1 egress (mean 2.28 Mbit/s)

Flow 1 (95th percentile 55.22 ms)

```
Run 1: Statistics of Copa

Start at: Sun, 06 Aug 2017 07:16:50 +0000
End at: Sun, 06 Aug 2017 07:17:20 +0000
Local clock offset: -1.473 ms
Remote clock offset: -6.109 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:00:53 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.44 Mbit/s
95th percentile per-packet one-way delay: 19.043 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 45.44 Mbit/s
95th percentile per-packet one-way delay: 19.043 ms
Loss rate: 0.03%
```
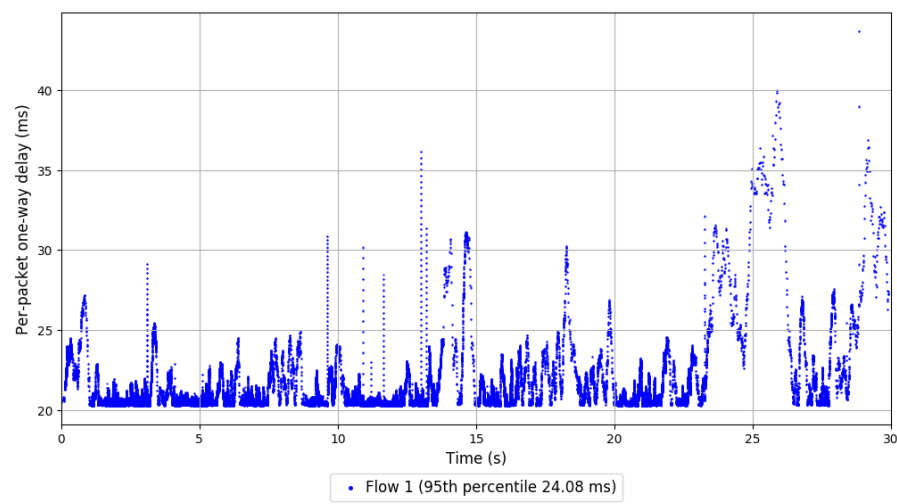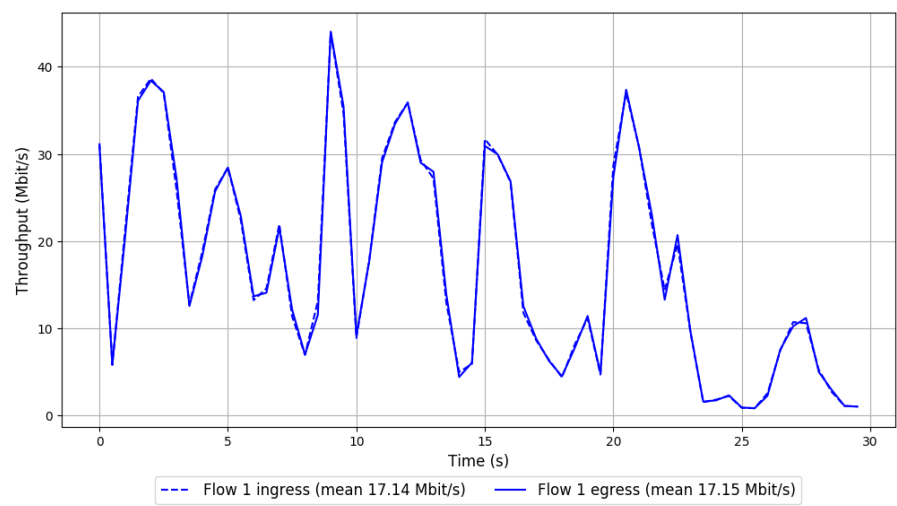
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 45.41 Mbit/s) — Flow 1 egress (mean 45.44 Mbit/s)

Flow 1 (95th percentile 19.04 ms)

```
Run 2: Statistics of Copa

Start at: Sun, 06 Aug 2017 07:34:27 +0000
End at: Sun, 06 Aug 2017 07:34:57 +0000
Local clock offset: 1.569 ms
Remote clock offset: -4.581 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:00:53 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 17.15 Mbit/s
95th percentile per-packet one-way delay: 24.080 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 17.15 Mbit/s
95th percentile per-packet one-way delay: 24.080 ms
Loss rate: 0.01%
```
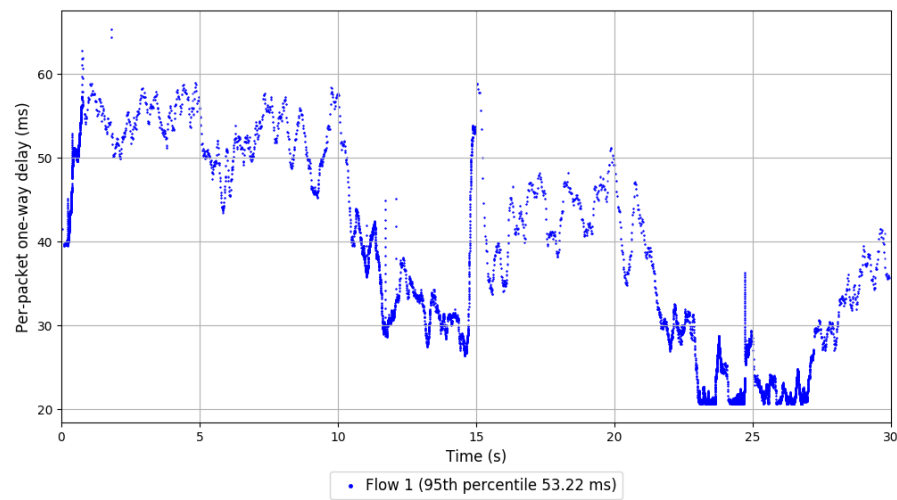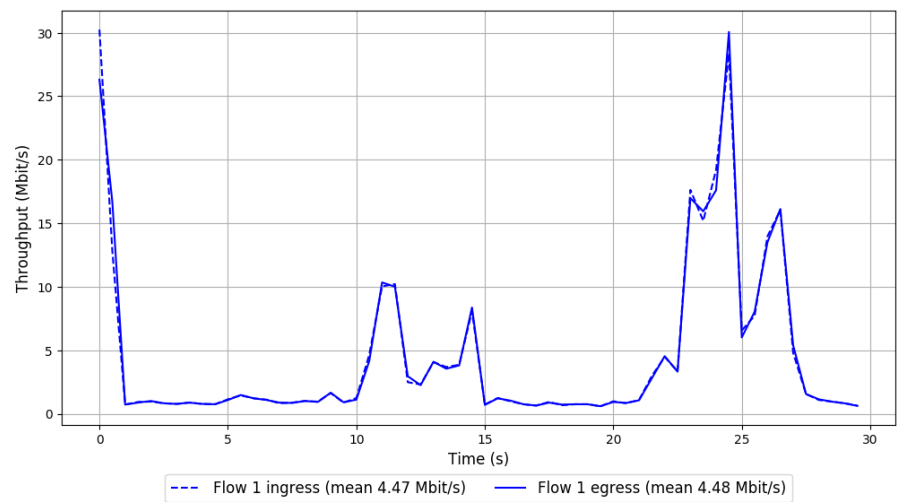
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 17.14 Mbit/s)   Flow 1 egress (mean 17.15 Mbit/s)

Flow 1 (95th percentile 24.08 ms)

19

```
Run 3: Statistics of Copa

Start at: Sun, 06 Aug 2017 07:51:59 +0000
End at: Sun, 06 Aug 2017 07:52:29 +0000
Local clock offset: 0.545 ms
Remote clock offset: -5.88 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:00:54 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 53.223 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 53.223 ms
Loss rate: 0.03%
```

Run 3: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: Sun, 06 Aug 2017 07:22:38 +0000
End at: Sun, 06 Aug 2017 07:23:08 +0000
Local clock offset: -1.792 ms
Remote clock offset: -6.763 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:02 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.02 Mbit/s
95th percentile per-packet one-way delay: 32.122 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 97.02 Mbit/s
95th percentile per-packet one-way delay: 32.122 ms
Loss rate: 0.14%
```
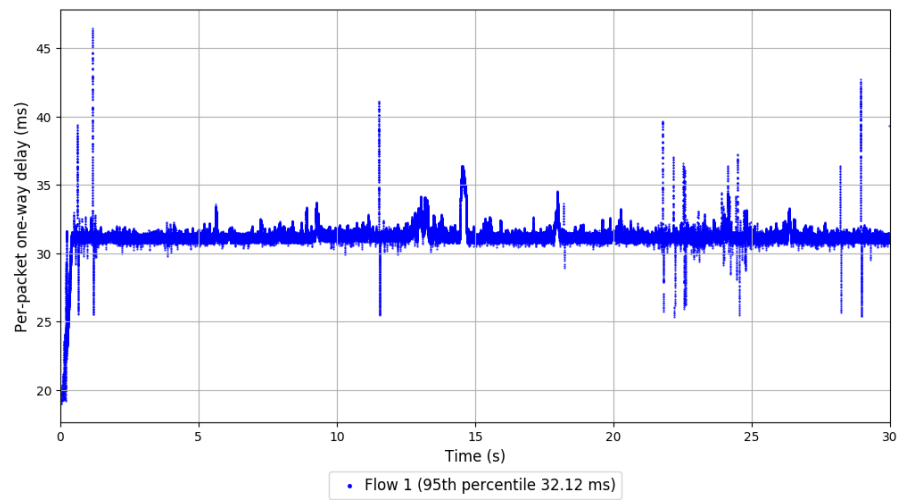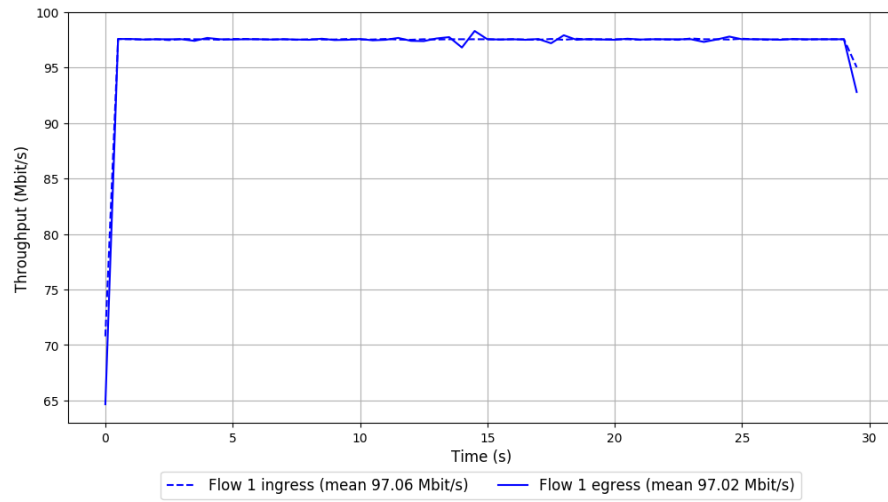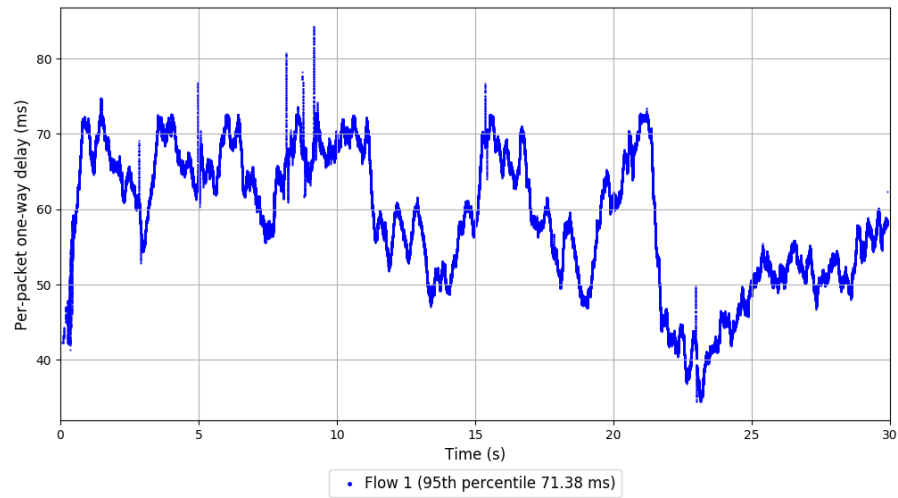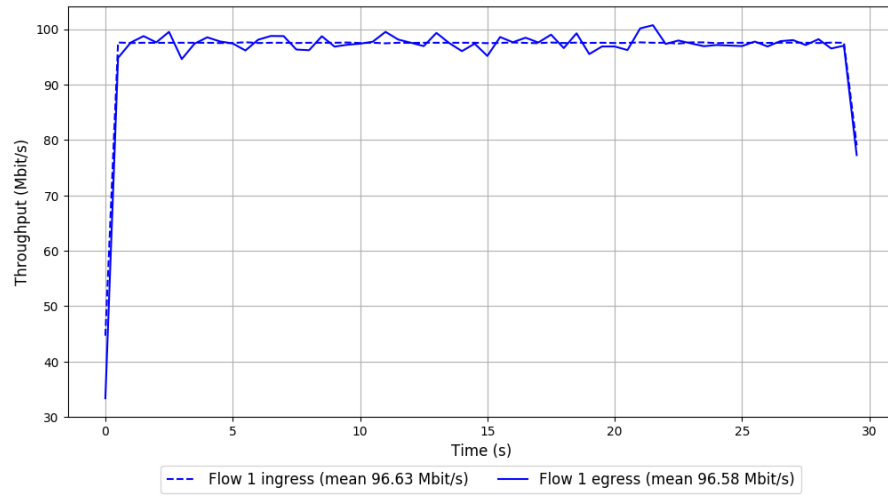
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 97.06 Mbit/s) ---- Flow 1 egress (mean 97.02 Mbit/s) ——

Flow 1 (95th percentile 32.12 ms)

```
Run 2: Statistics of TCP Cubic

Start at: Sun, 06 Aug 2017 07:40:17 +0000
End at: Sun, 06 Aug 2017 07:40:47 +0000
Local clock offset: 2.17 ms
Remote clock offset: -5.824 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:07 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.58 Mbit/s
95th percentile per-packet one-way delay: 71.382 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 96.58 Mbit/s
95th percentile per-packet one-way delay: 71.382 ms
Loss rate: 0.22%
```
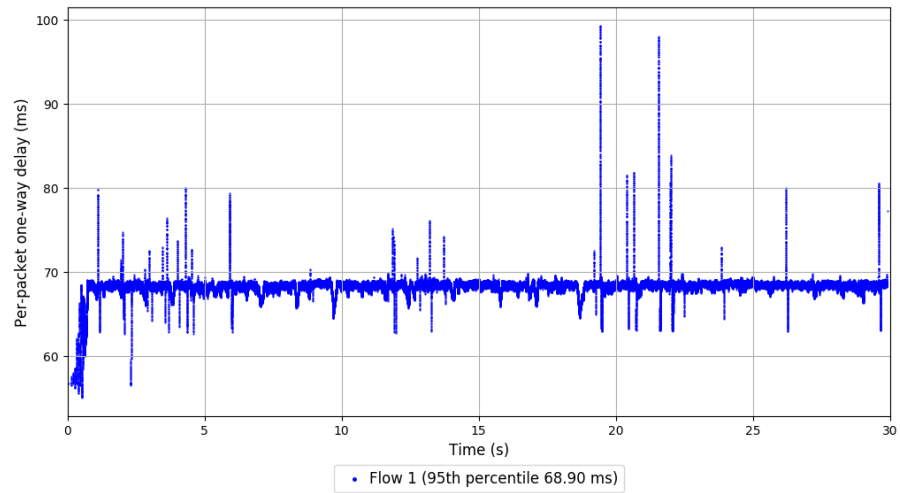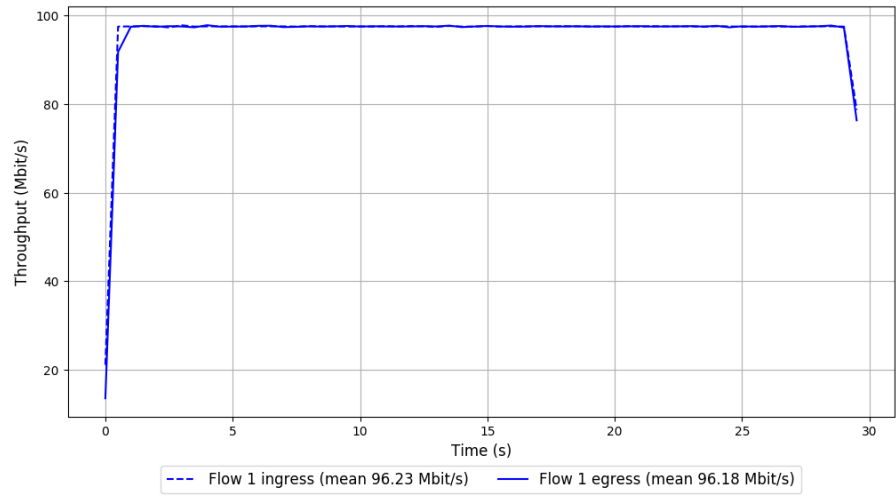
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: Sun, 06 Aug 2017 07:57:48 +0000
End at: Sun, 06 Aug 2017 07:58:18 +0000
Local clock offset: -0.838 ms
Remote clock offset: -5.395 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:19 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.18 Mbit/s
95th percentile per-packet one-way delay: 68.899 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 96.18 Mbit/s
95th percentile per-packet one-way delay: 68.899 ms
Loss rate: 0.27%
```
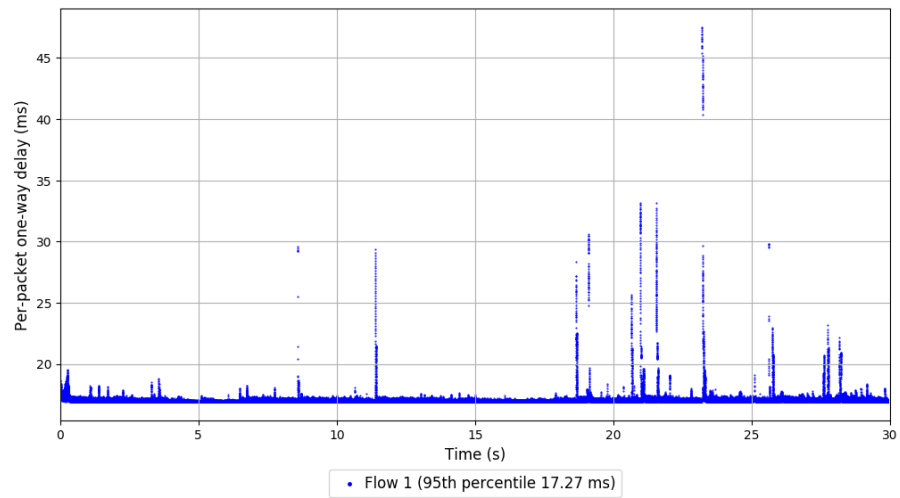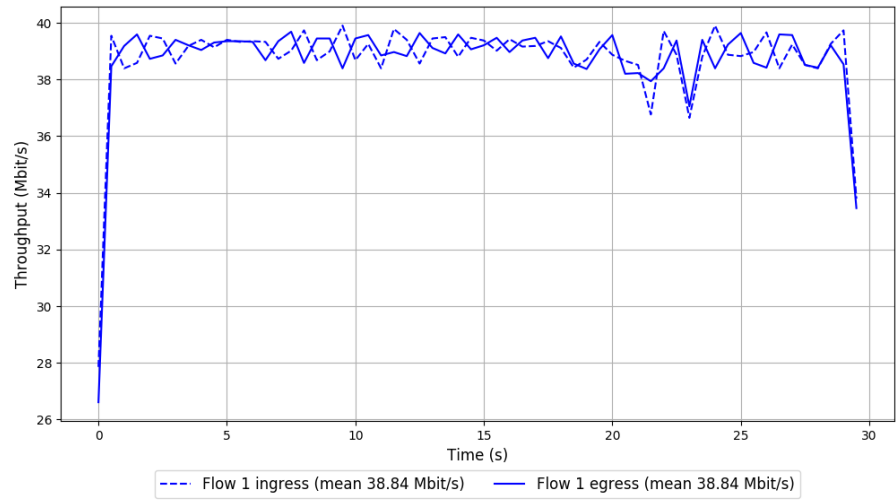
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 96.23 Mbit/s)   Flow 1 egress (mean 96.18 Mbit/s)

Flow 1 (95th percentile 68.90 ms)

```
Run 1: Statistics of KohoCC

Start at: Sun, 06 Aug 2017 07:13:22 +0000
End at: Sun, 06 Aug 2017 07:13:52 +0000
Local clock offset: -1.644 ms
Remote clock offset: -4.754 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:19 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.84 Mbit/s
95th percentile per-packet one-way delay: 17.274 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 38.84 Mbit/s
95th percentile per-packet one-way delay: 17.274 ms
Loss rate: 0.10%
```
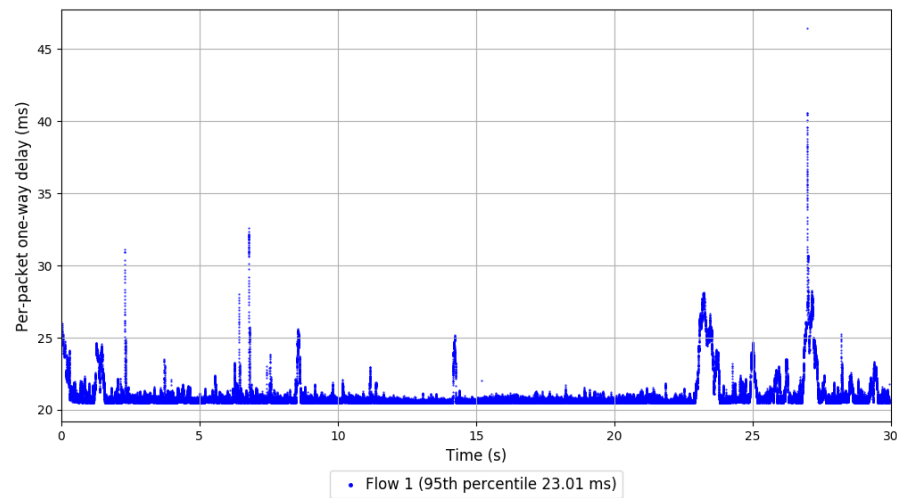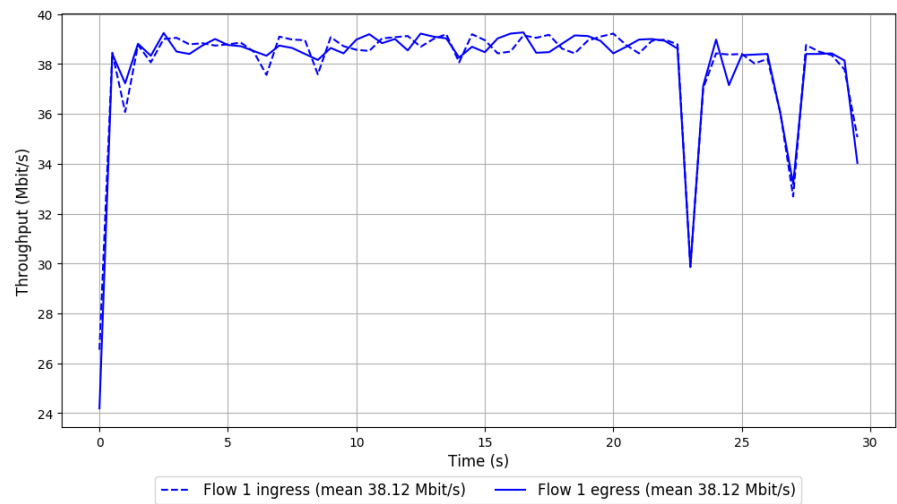
Run 1: Report of KohoCC — Data Link

```
Run 2: Statistics of KohoCC

Start at: Sun, 06 Aug 2017 07:31:03 +0000
End at: Sun, 06 Aug 2017 07:31:33 +0000
Local clock offset: 0.396 ms
Remote clock offset: -5.953 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:19 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.12 Mbit/s
95th percentile per-packet one-way delay: 23.007 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 38.12 Mbit/s
95th percentile per-packet one-way delay: 23.007 ms
Loss rate: 0.10%
```
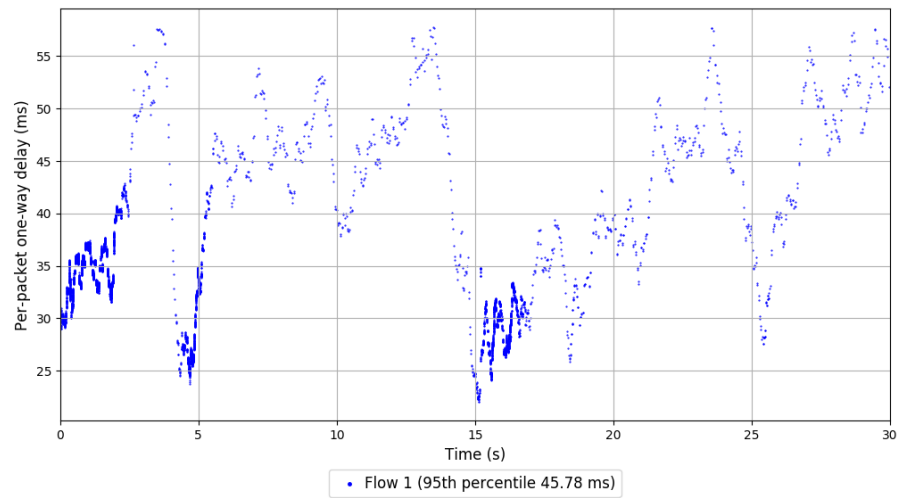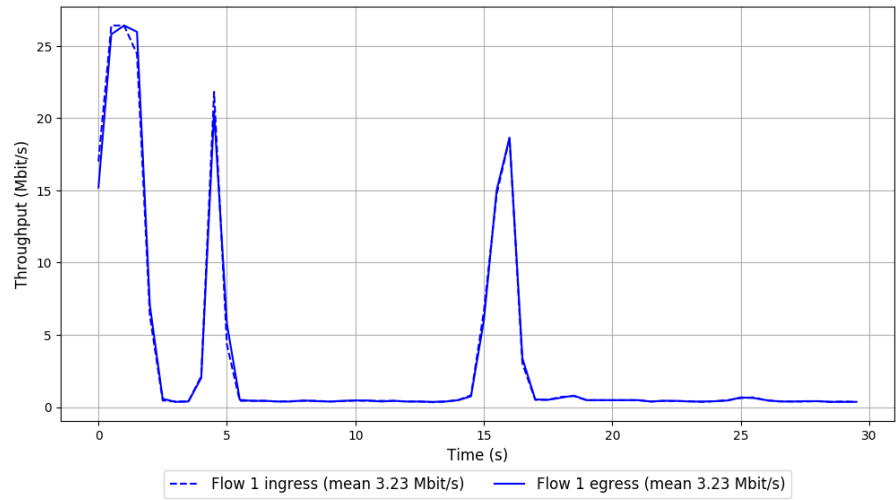
Run 2: Report of KohoCC — Data Link

```
Run 3: Statistics of KohoCC

Start at: Sun, 06 Aug 2017 07:48:41 +0000
End at: Sun, 06 Aug 2017 07:49:11 +0000
Local clock offset: 0.24 ms
Remote clock offset: -4.935 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:19 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.23 Mbit/s
95th percentile per-packet one-way delay: 45.779 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 3.23 Mbit/s
95th percentile per-packet one-way delay: 45.779 ms
Loss rate: 0.02%
```

Run 3: Report of KohoCC — Data Link

```
Run 1: Statistics of LEDBAT

Start at: Sun, 06 Aug 2017 07:18:01 +0000
End at: Sun, 06 Aug 2017 07:18:31 +0000
Local clock offset: 1.702 ms
Remote clock offset: -5.425 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:32 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.95 Mbit/s
95th percentile per-packet one-way delay: 33.593 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 90.95 Mbit/s
95th percentile per-packet one-way delay: 33.593 ms
Loss rate: 0.15%
```
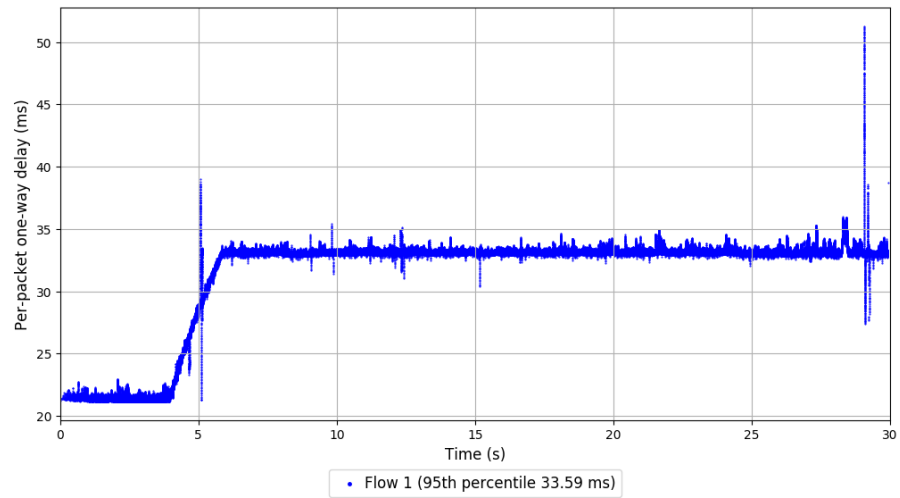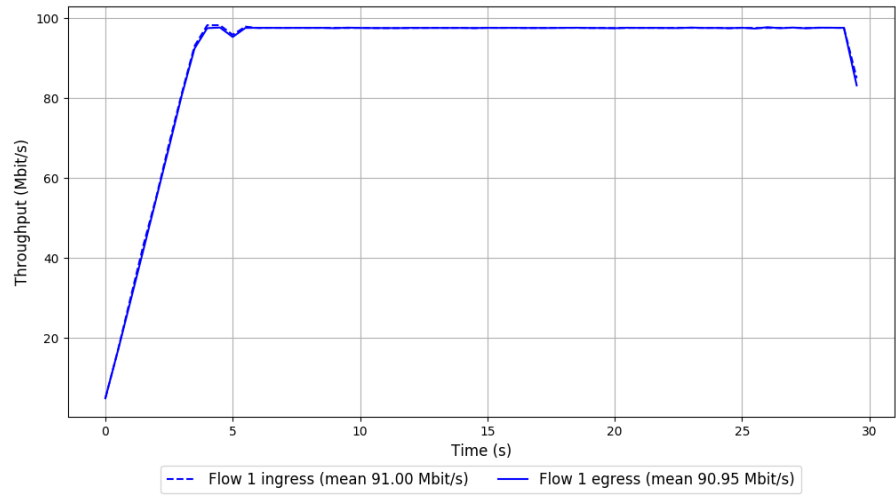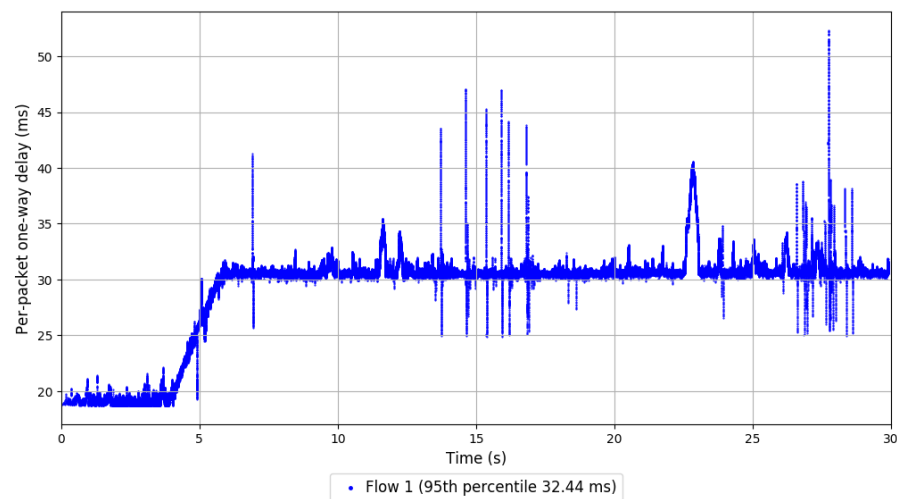
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: Sun, 06 Aug 2017 07:35:33 +0000
End at: Sun, 06 Aug 2017 07:36:04 +0000
Local clock offset: -0.737 ms
Remote clock offset: -5.316 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:32 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.93 Mbit/s
95th percentile per-packet one-way delay: 32.436 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 90.93 Mbit/s
95th percentile per-packet one-way delay: 32.436 ms
Loss rate: 0.15%
```
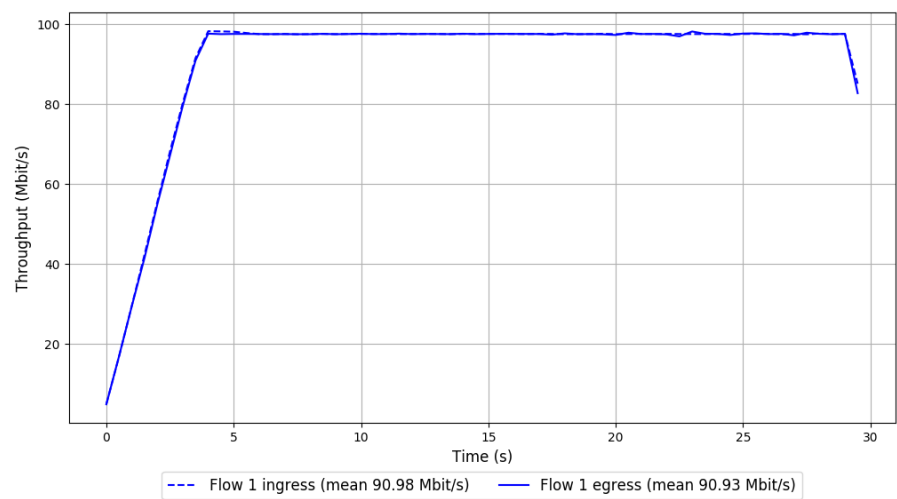
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: Sun, 06 Aug 2017 07:53:05 +0000
End at: Sun, 06 Aug 2017 07:53:35 +0000
Local clock offset: -0.413 ms
Remote clock offset: -4.917 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:42 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.73 Mbit/s
95th percentile per-packet one-way delay: 59.525 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 68.73 Mbit/s
95th percentile per-packet one-way delay: 59.525 ms
Loss rate: 0.28%
```
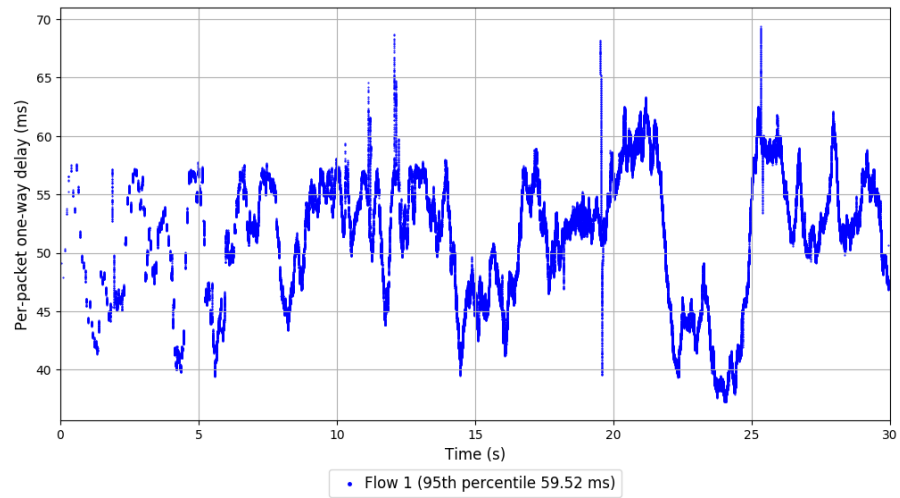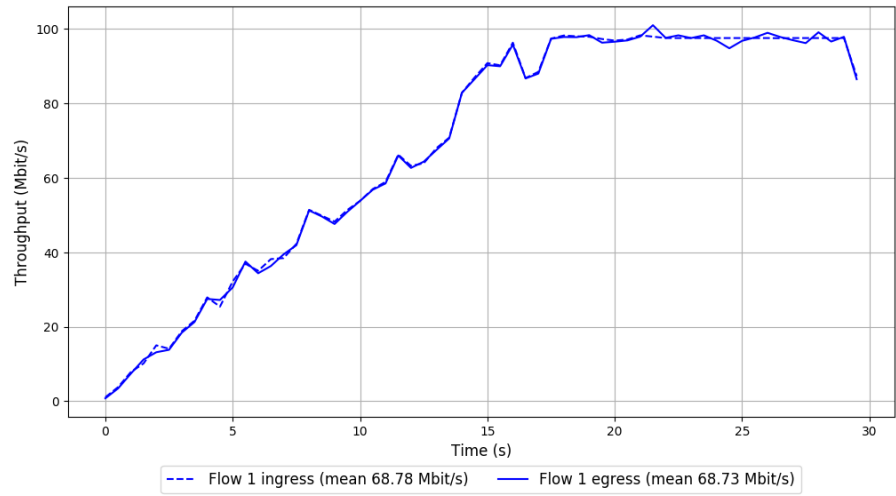
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 68.78 Mbit/s)   Flow 1 egress (mean 68.73 Mbit/s)

Flow 1 (95th percentile 59.52 ms)

```
Run 1: Statistics of PCC

Start at: Sun, 06 Aug 2017 07:09:55 +0000
End at: Sun, 06 Aug 2017 07:10:25 +0000
Local clock offset: 2.788 ms
Remote clock offset: -5.992 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:43 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.07 Mbit/s
95th percentile per-packet one-way delay: 28.512 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 93.07 Mbit/s
95th percentile per-packet one-way delay: 28.512 ms
Loss rate: 0.11%
```
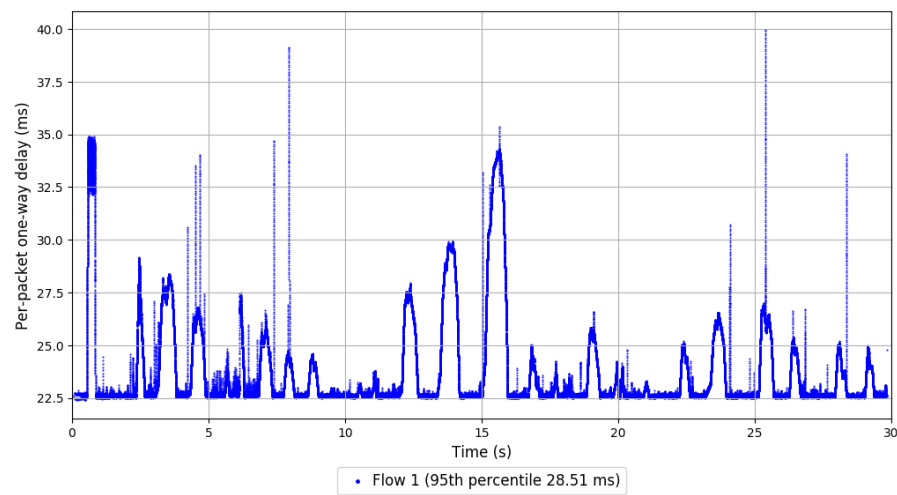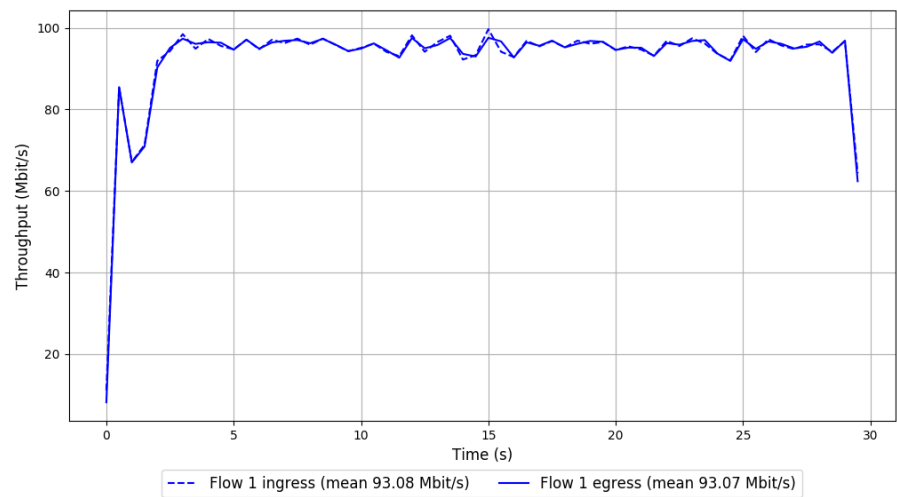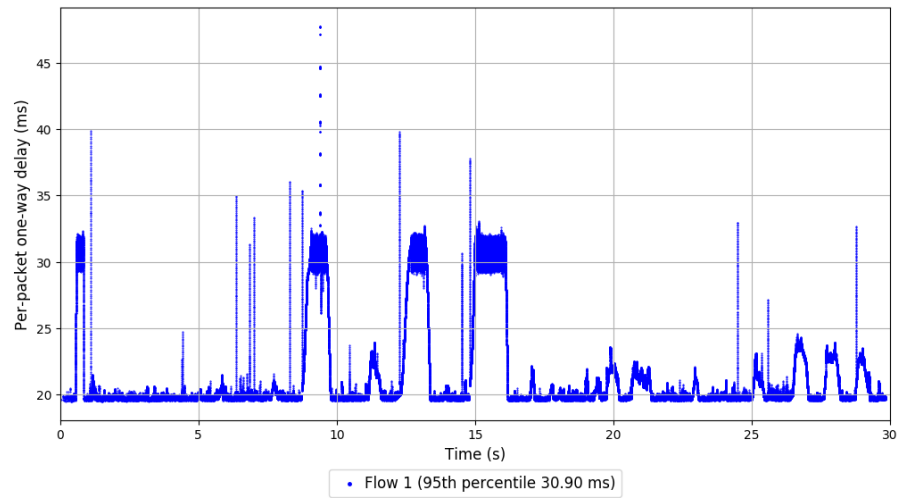
Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 93.08 Mbit/s)   Flow 1 egress (mean 93.07 Mbit/s)

Flow 1 (95th percentile 28.51 ms)

41

```
Run 2: Statistics of PCC

Start at: Sun, 06 Aug 2017 07:27:35 +0000
End at: Sun, 06 Aug 2017 07:28:05 +0000
Local clock offset: 0.805 ms
Remote clock offset: -4.71 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:52 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.94 Mbit/s
95th percentile per-packet one-way delay: 30.896 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 90.94 Mbit/s
95th percentile per-packet one-way delay: 30.896 ms
Loss rate: 0.10%
```
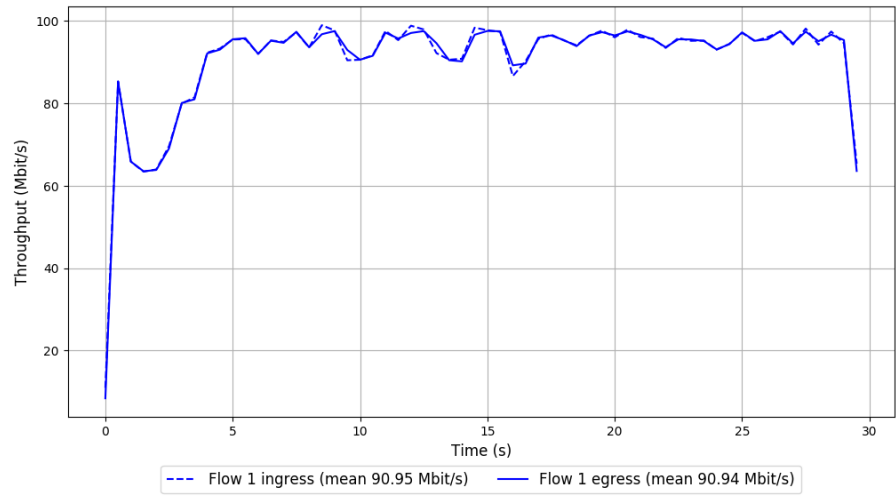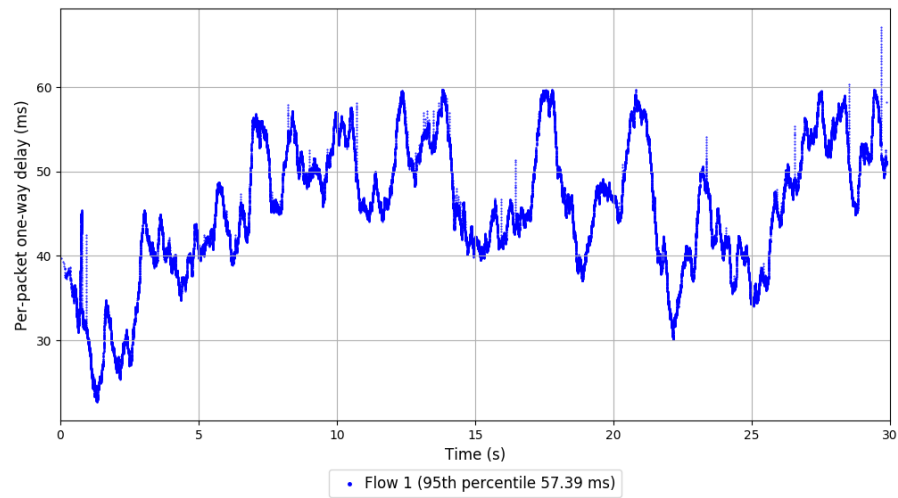
Run 2: Report of PCC — Data Link

Flow 1 ingress (mean 90.95 Mbit/s) --- Flow 1 egress (mean 90.94 Mbit/s)

Flow 1 (95th percentile 30.90 ms)

```
Run 3: Statistics of PCC

Start at: Sun, 06 Aug 2017 07:45:13 +0000
End at: Sun, 06 Aug 2017 07:45:43 +0000
Local clock offset: 1.6 ms
Remote clock offset: -5.595 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:52 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.10 Mbit/s
95th percentile per-packet one-way delay: 57.390 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 32.10 Mbit/s
95th percentile per-packet one-way delay: 57.390 ms
Loss rate: 0.22%
```
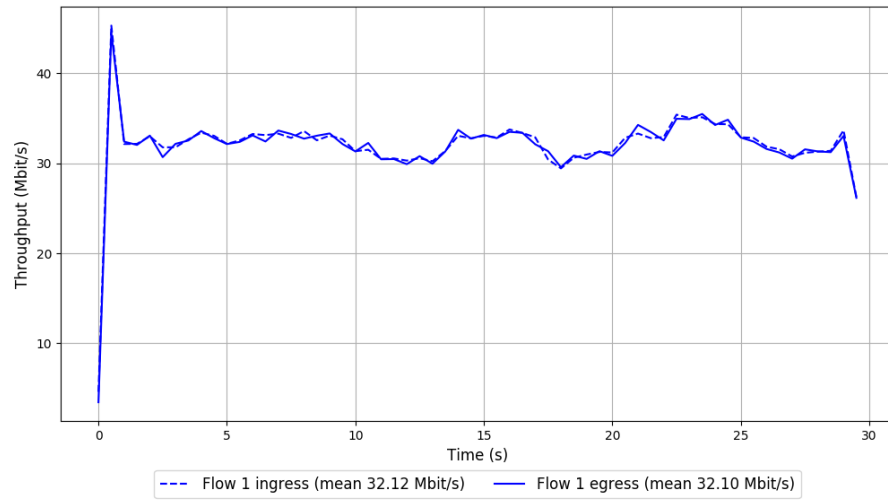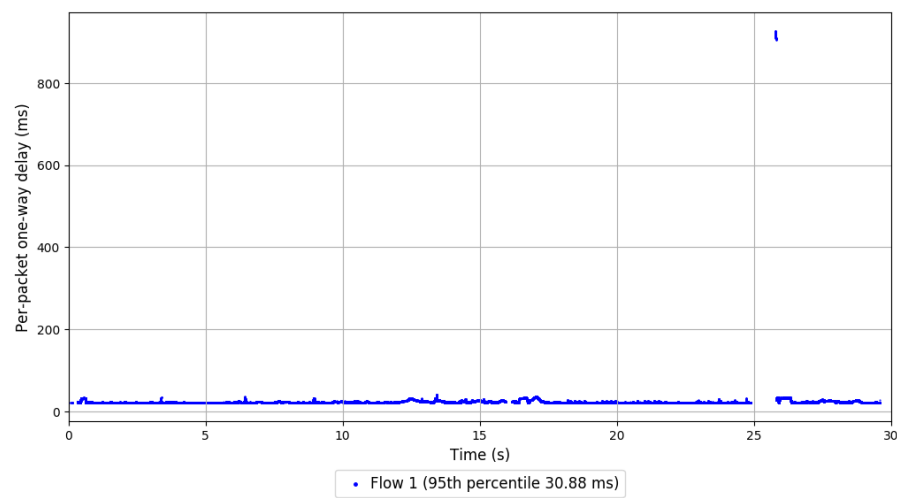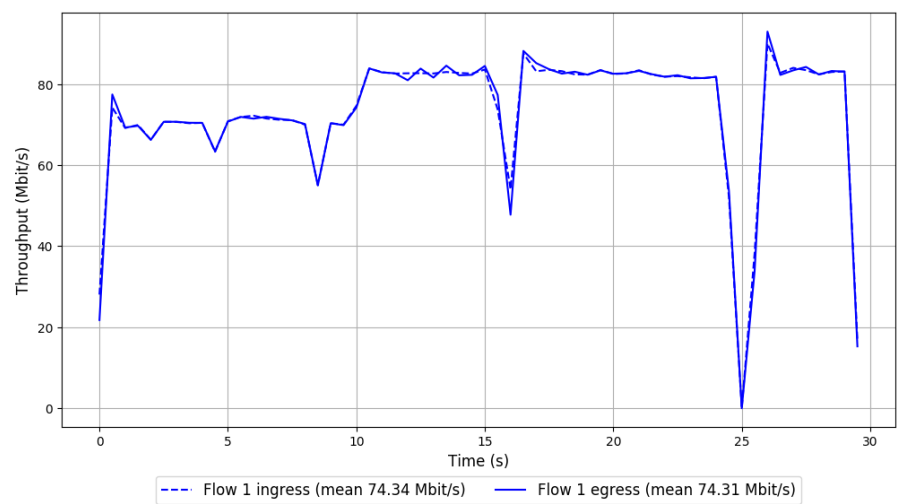
Run 3: Report of PCC — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: Sun, 06 Aug 2017 07:19:14 +0000
End at: Sun, 06 Aug 2017 07:19:44 +0000
Local clock offset: -2.27 ms
Remote clock offset: -4.041 ms
```

Run 1: Report of QUIC Cubic — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of QUIC Cubic

Start at: Sun, 06 Aug 2017 07:36:46 +0000
End at: Sun, 06 Aug 2017 07:37:16 +0000
Local clock offset: 1.619 ms
Remote clock offset: -5.093 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:01:58 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.31 Mbit/s
95th percentile per-packet one-way delay: 30.880 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 74.31 Mbit/s
95th percentile per-packet one-way delay: 30.880 ms
Loss rate: 0.11%
```
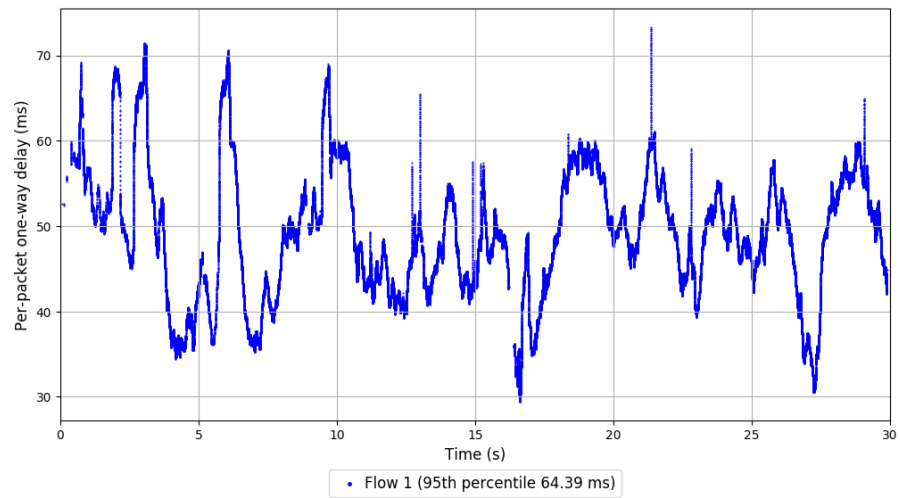
Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 74.34 Mbit/s) ----   Flow 1 egress (mean 74.31 Mbit/s) ——

• Flow 1 (95th percentile 30.88 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: Sun, 06 Aug 2017 07:54:19 +0000
End at: Sun, 06 Aug 2017 07:54:49 +0000
Local clock offset: 1.067 ms
Remote clock offset: -6.327 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:04 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.21 Mbit/s
95th percentile per-packet one-way delay: 64.390 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 76.21 Mbit/s
95th percentile per-packet one-way delay: 64.390 ms
Loss rate: 0.18%
```
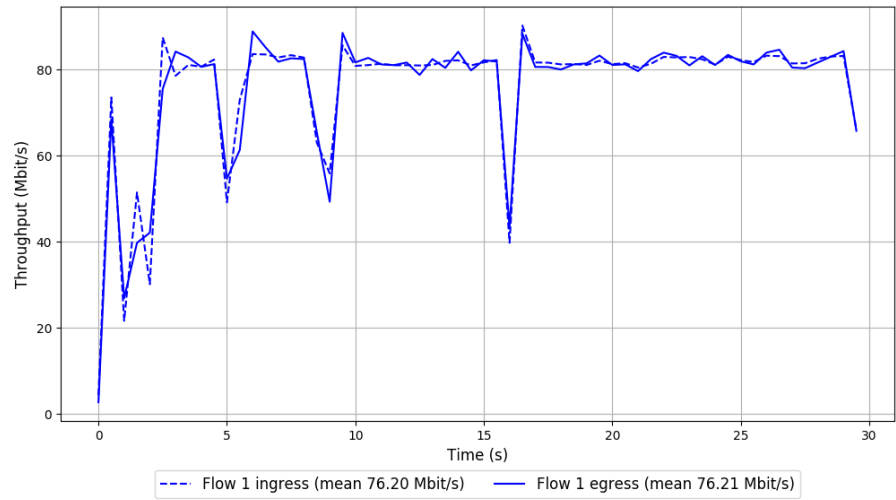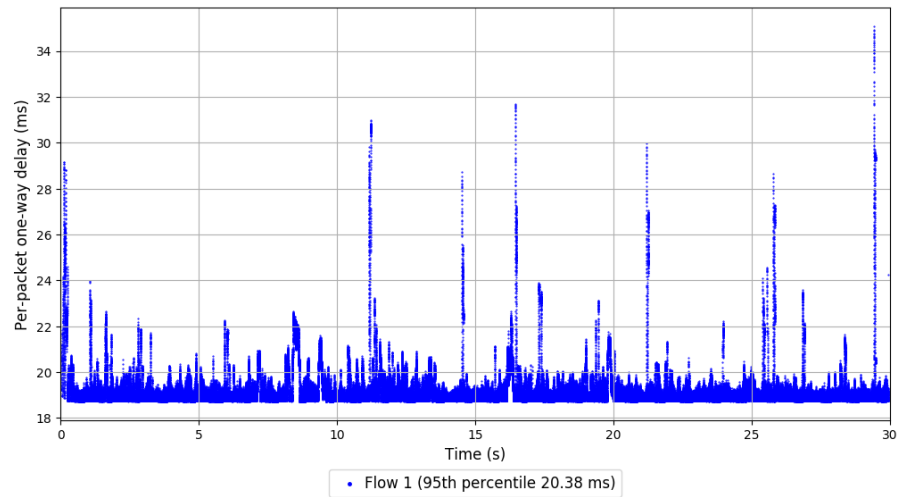
Run 3: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of Saturator

Start at: Sun, 06 Aug 2017 07:20:19 +0000
End at: Sun, 06 Aug 2017 07:20:49 +0000
Local clock offset: 0.118 ms
Remote clock offset: -4.54 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:08 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.72 Mbit/s
95th percentile per-packet one-way delay: 20.384 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 76.72 Mbit/s
95th percentile per-packet one-way delay: 20.384 ms
Loss rate: 0.10%
```
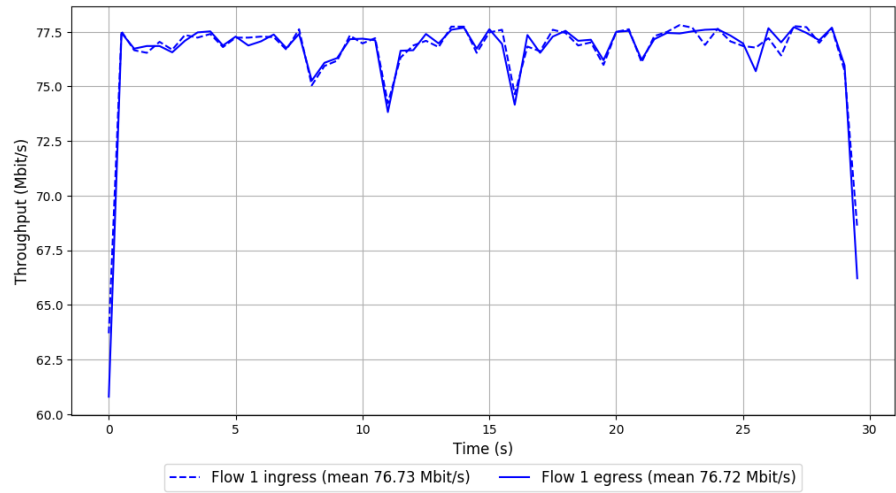
Run 1: Report of Saturator — Data Link

```
Run 2: Statistics of Saturator

Start at: Sun, 06 Aug 2017 07:37:56 +0000
End at: Sun, 06 Aug 2017 07:38:26 +0000
Local clock offset: 0.821 ms
Remote clock offset: -6.352 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:14 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.93 Mbit/s
95th percentile per-packet one-way delay: 28.198 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 73.93 Mbit/s
95th percentile per-packet one-way delay: 28.198 ms
Loss rate: 0.11%
```
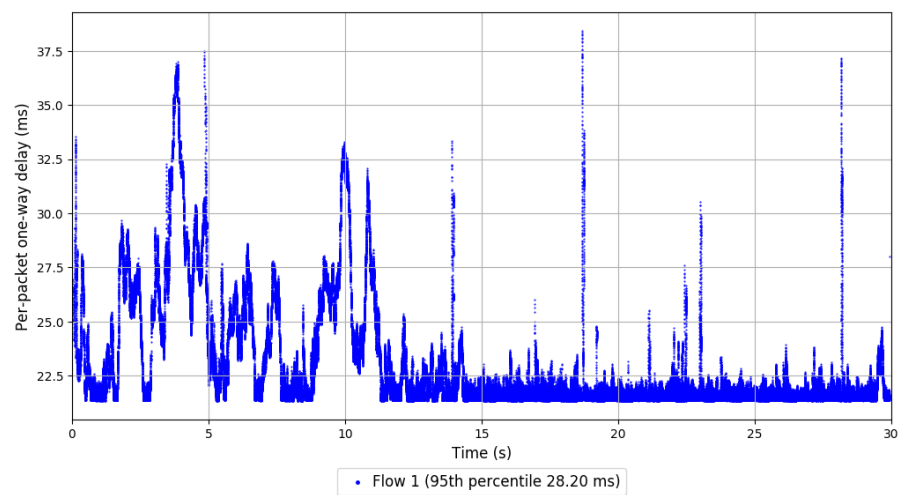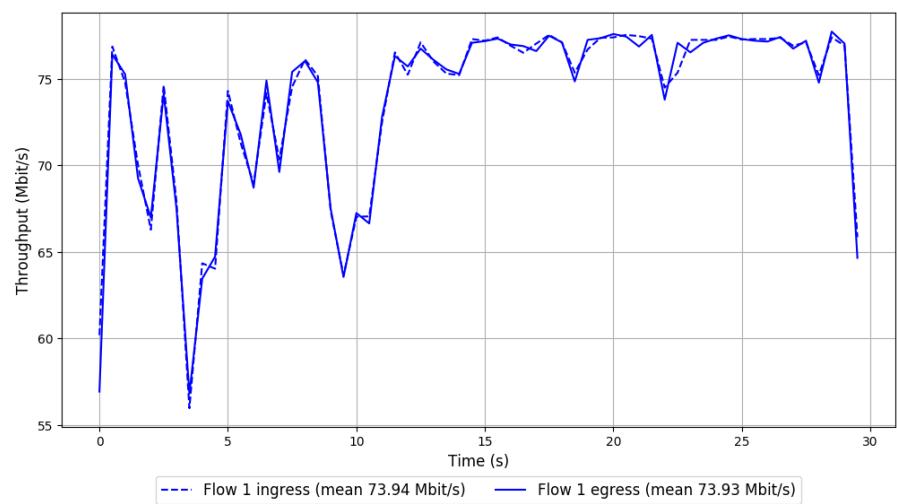
Run 2: Report of Saturator — Data Link

```
Run 3: Statistics of Saturator

Start at: Sun, 06 Aug 2017 07:55:30 +0000
End at: Sun, 06 Aug 2017 07:56:00 +0000
Local clock offset: -0.987 ms
Remote clock offset: -4.414 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:18 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.99 Mbit/s
95th percentile per-packet one-way delay: 38.931 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 61.99 Mbit/s
95th percentile per-packet one-way delay: 38.931 ms
Loss rate: 0.13%
```
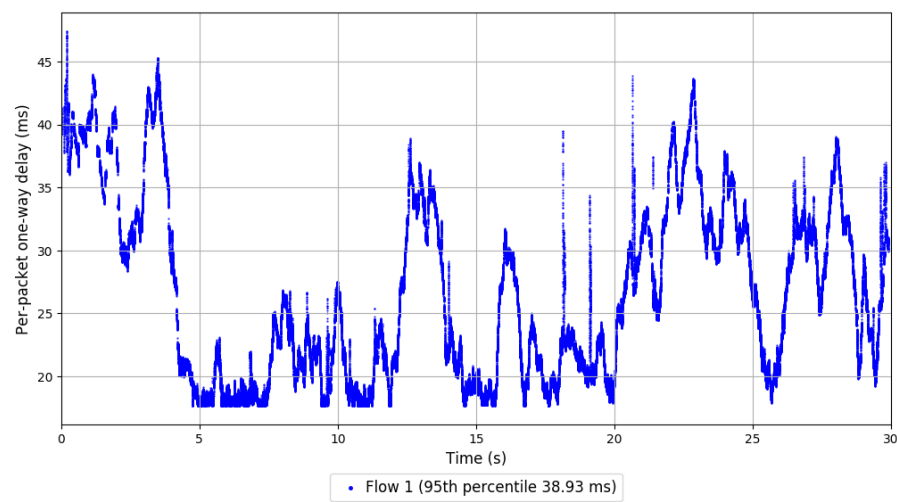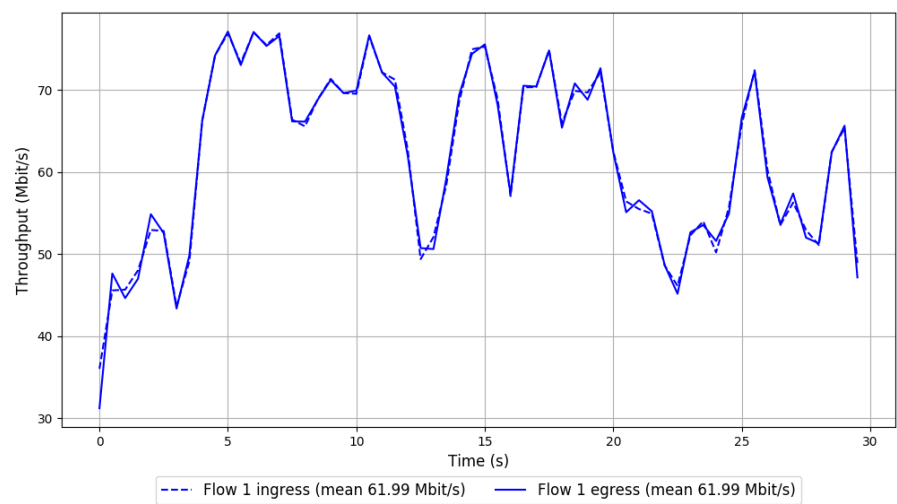
Run 3: Report of Saturator — Data Link

```
Run 1: Statistics of SCReAM

Start at: Sun, 06 Aug 2017 07:21:33 +0000
End at: Sun, 06 Aug 2017 07:22:03 +0000
Local clock offset: 0.105 ms
Remote clock offset: -5.106 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:18 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 20.822 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 20.822 ms
Loss rate: 0.13%
```
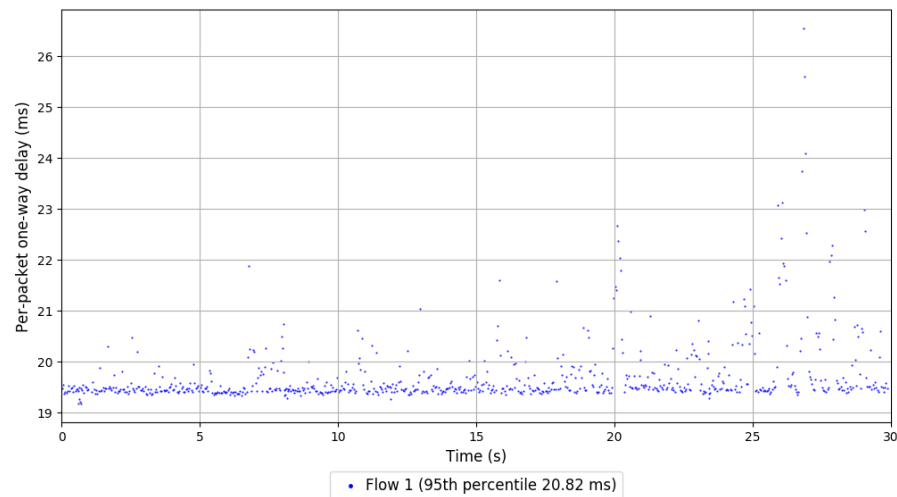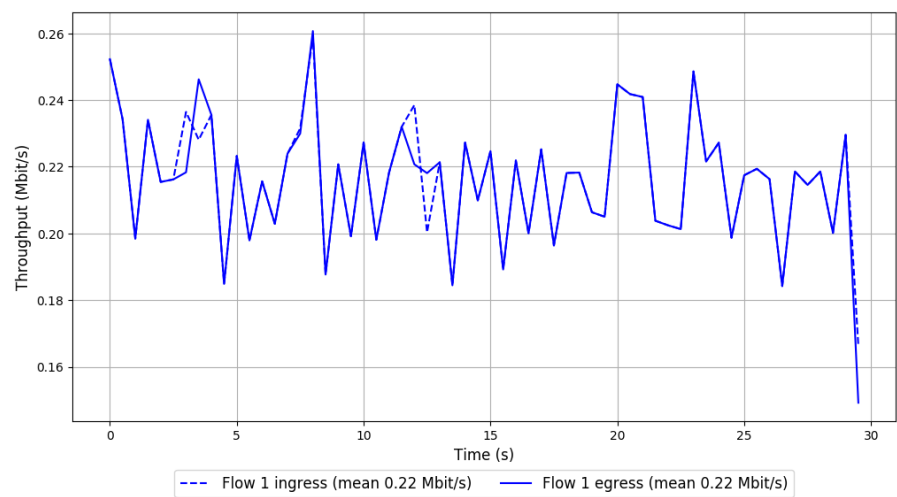
Run 1: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.22 Mbit/s)   Flow 1 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 20.82 ms)

```
Run 2: Statistics of SCReAM

Start at: Sun, 06 Aug 2017 07:39:12 +0000
End at: Sun, 06 Aug 2017 07:39:42 +0000
Local clock offset: 0.86 ms
Remote clock offset: -5.833 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:18 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 32.519 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 32.519 ms
Loss rate: 0.13%
```
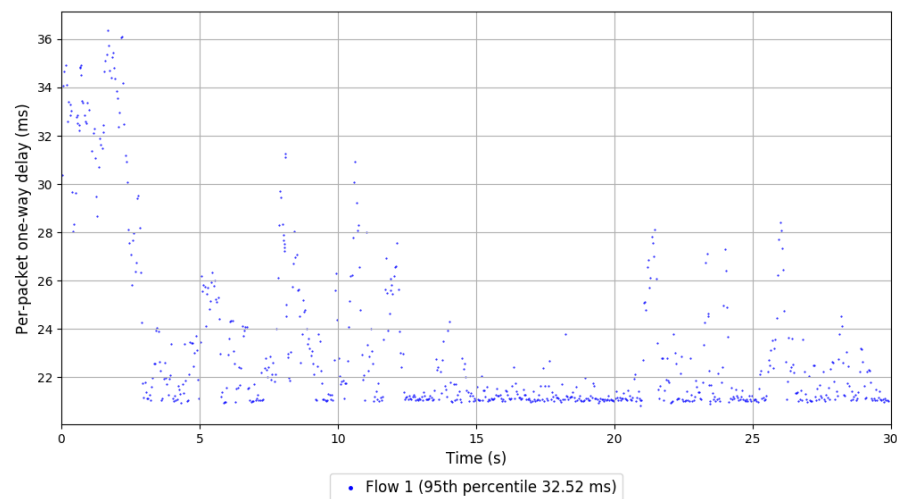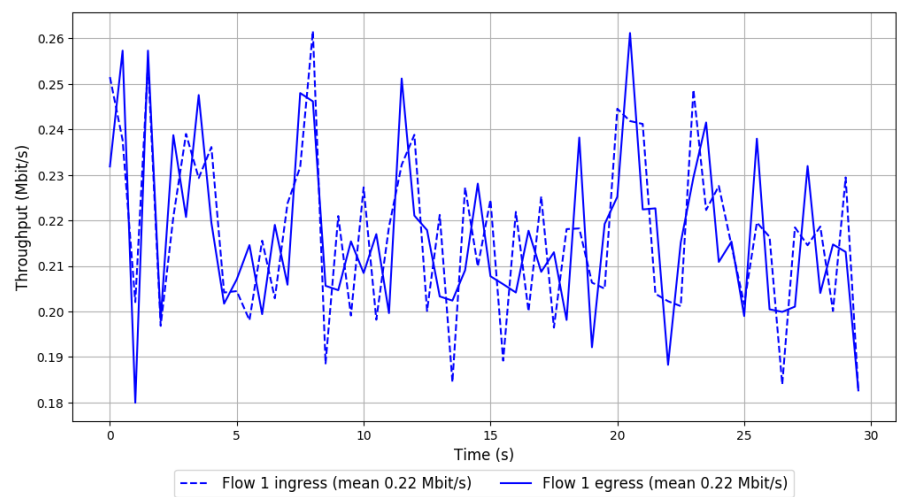
Run 2: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.22 Mbit/s)   Flow 1 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 32.52 ms)

```
Run 3: Statistics of SCReAM

Start at: Sun, 06 Aug 2017 07:56:42 +0000
End at: Sun, 06 Aug 2017 07:57:12 +0000
Local clock offset: 1.01 ms
Remote clock offset: -6.747 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:18 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 59.988 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 59.988 ms
Loss rate: 0.25%
```
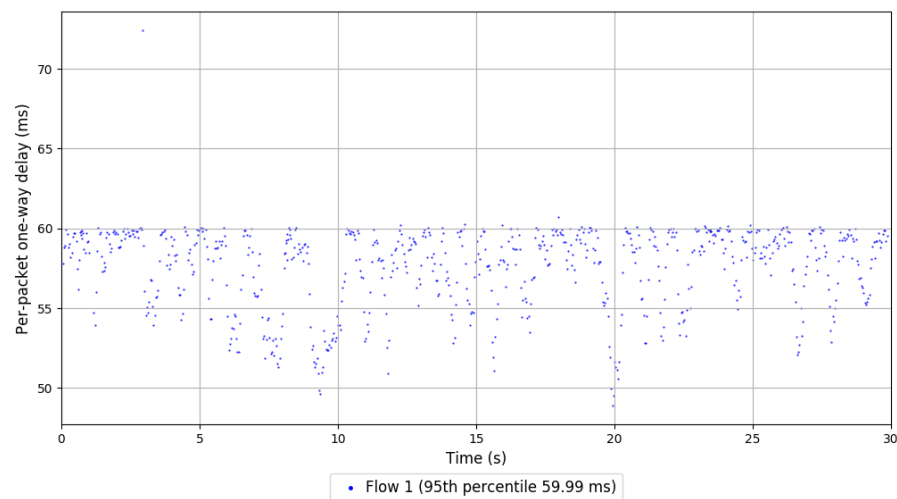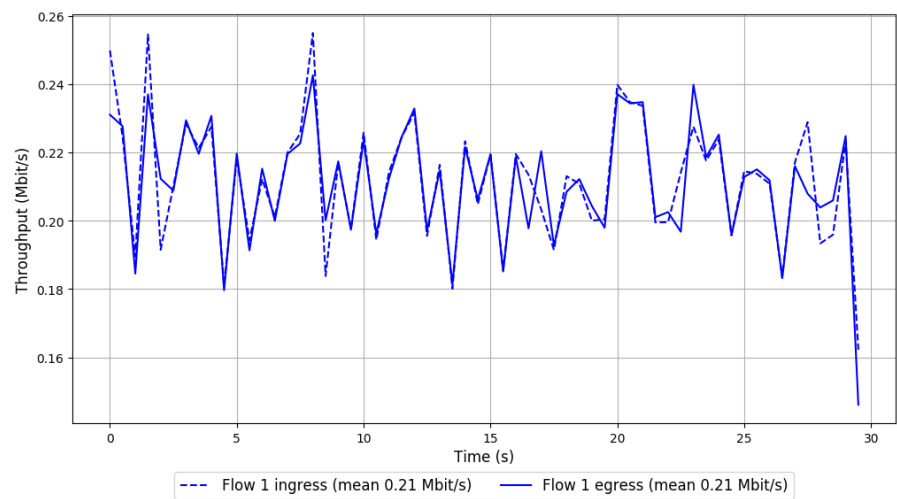
Run 3: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.21 Mbit/s) --- Flow 1 egress (mean 0.21 Mbit/s)

Flow 1 (95th percentile 59.99 ms)

```
Run 1: Statistics of Sprout

Start at: Sun, 06 Aug 2017 07:11:05 +0000
End at: Sun, 06 Aug 2017 07:11:35 +0000
Local clock offset: 2.952 ms
Remote clock offset: -6.233 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:22 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 28.292 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 28.292 ms
Loss rate: 0.13%
```
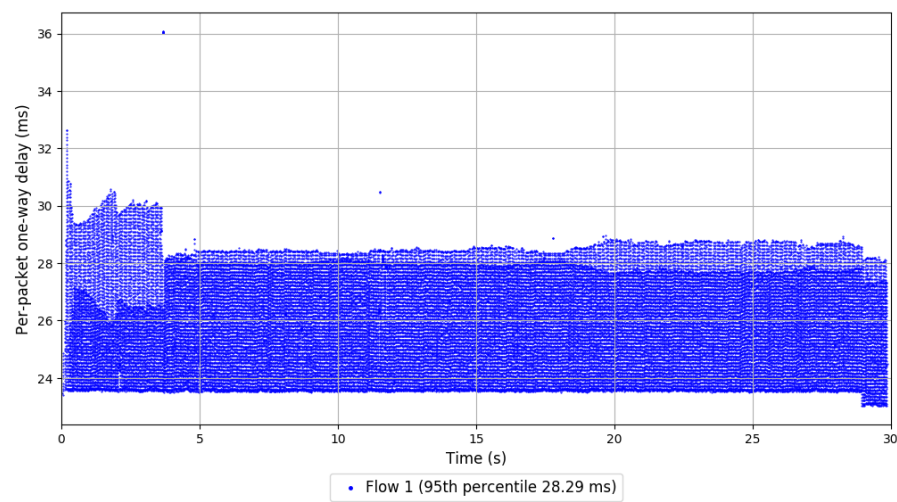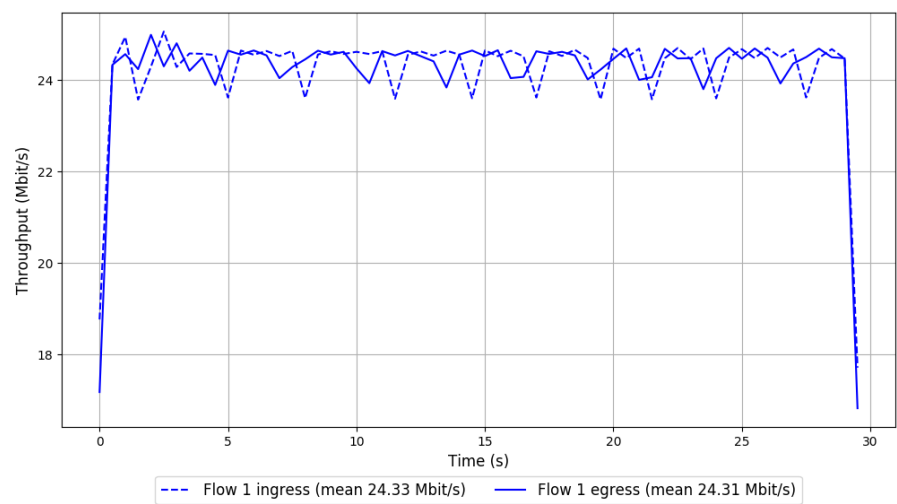
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: Sun, 06 Aug 2017 07:28:45 +0000
End at: Sun, 06 Aug 2017 07:29:15 +0000
Local clock offset: 0.596 ms
Remote clock offset: -3.967 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:23 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.25 Mbit/s
95th percentile per-packet one-way delay: 23.671 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.25 Mbit/s
95th percentile per-packet one-way delay: 23.671 ms
Loss rate: 0.13%
```
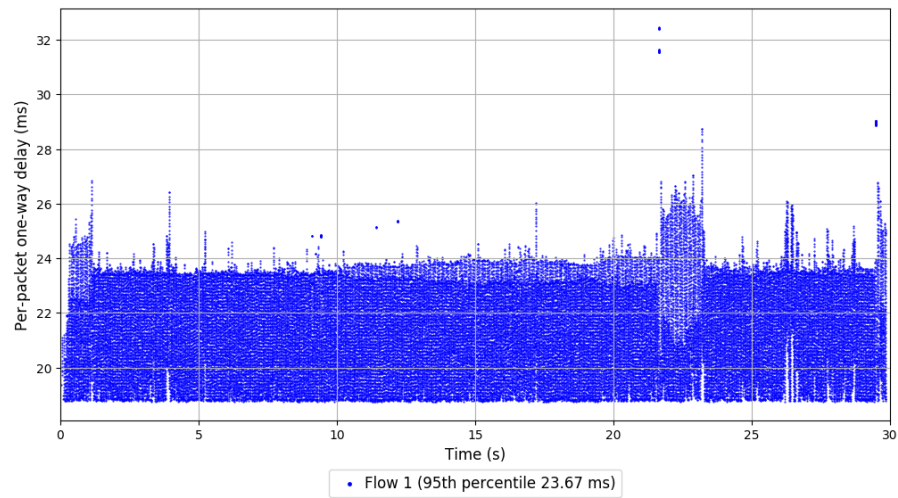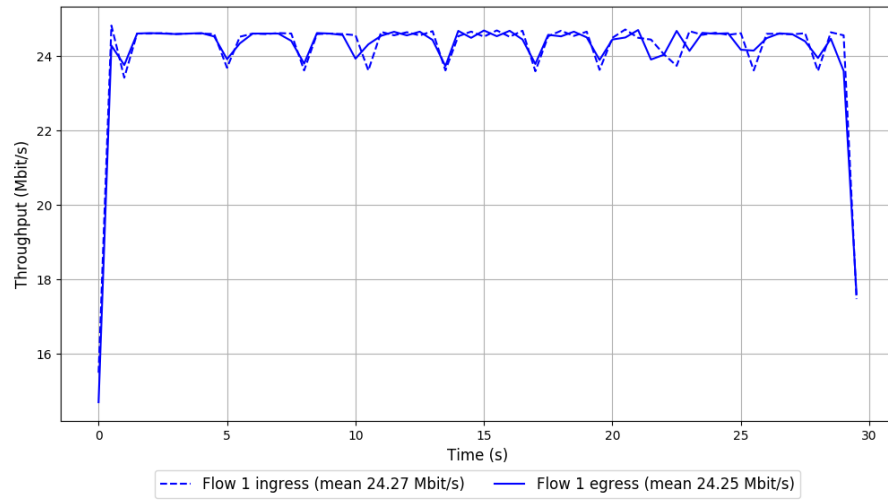
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: Sun, 06 Aug 2017 07:46:21 +0000
End at: Sun, 06 Aug 2017 07:46:51 +0000
Local clock offset: 1.96 ms
Remote clock offset: -5.276 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:25 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 48.583 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 48.583 ms
Loss rate: 0.09%
```
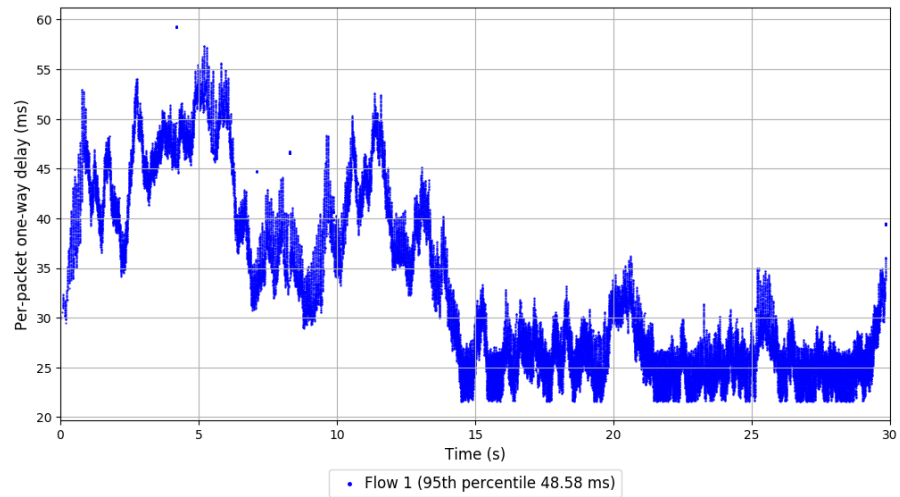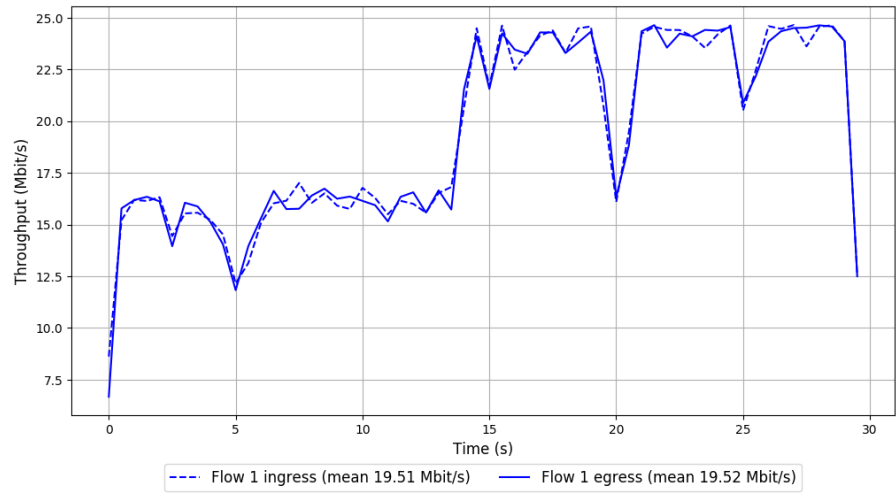
Run 3: Report of Sprout — Data Link

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

Start at: Sun, 06 Aug 2017 07:06:16 +0000
End at: Sun, 06 Aug 2017 07:06:46 +0000
Local clock offset: 1.002 ms
Remote clock offset: -4.952 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:33 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.46 Mbit/s
95th percentile per-packet one-way delay: 23.124 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 53.46 Mbit/s
95th percentile per-packet one-way delay: 23.124 ms
Loss rate: 0.34%
```
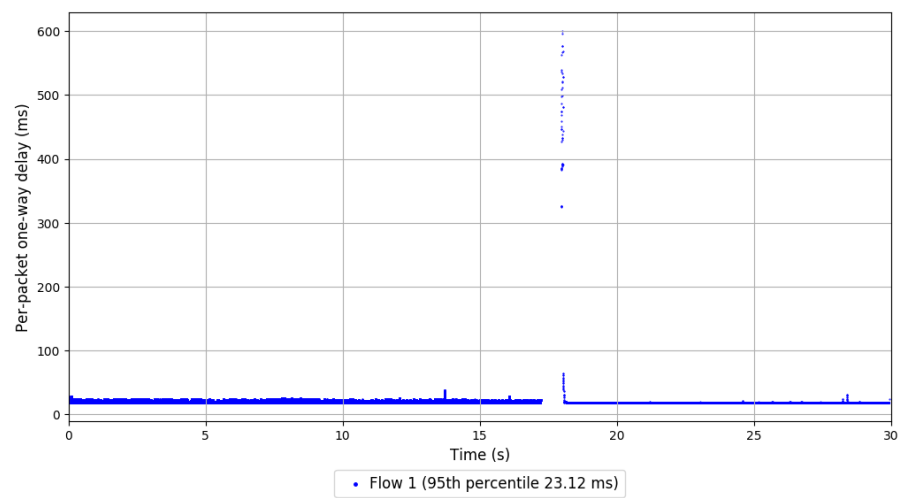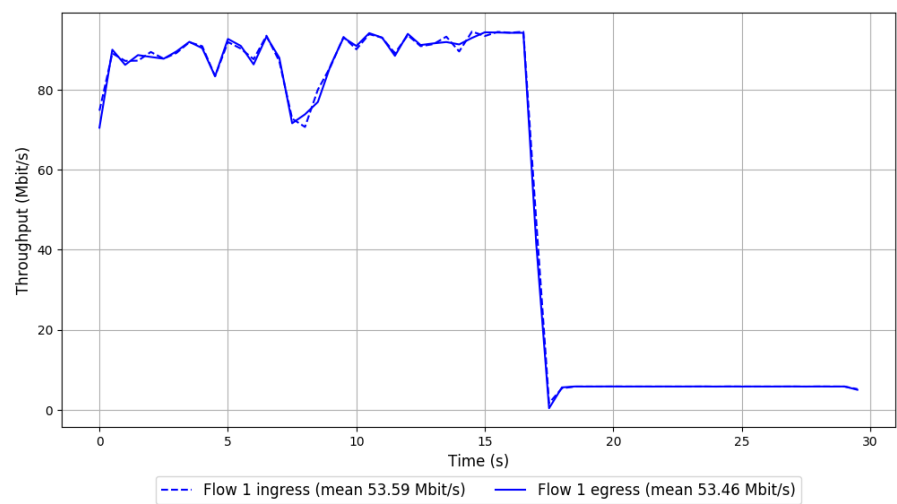
Run 1: Report of TaoVA-100x — Data Link

```
Run 2: Statistics of TaoVA-100x

Start at: Sun, 06 Aug 2017 07:23:50 +0000
End at: Sun, 06 Aug 2017 07:24:20 +0000
Local clock offset: -0.035 ms
Remote clock offset: -6.588 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:44 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.21 Mbit/s
95th percentile per-packet one-way delay: 25.130 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 91.21 Mbit/s
95th percentile per-packet one-way delay: 25.130 ms
Loss rate: 0.11%
```
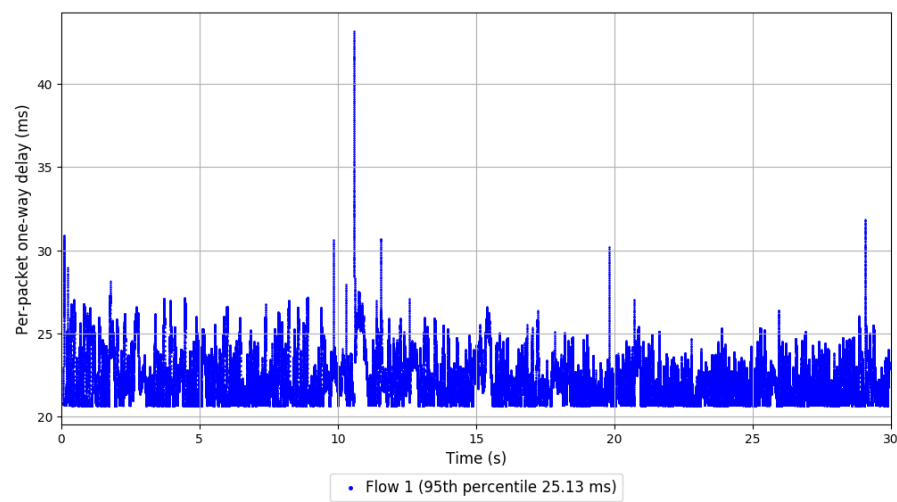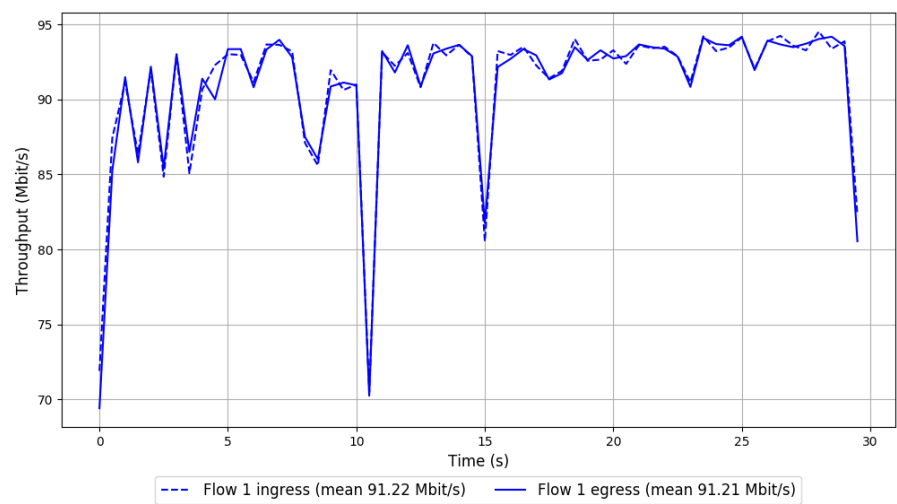
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 91.22 Mbit/s) --- Flow 1 egress (mean 91.21 Mbit/s)

Flow 1 (95th percentile 25.13 ms)

```
Run 3: Statistics of TaoVA-100x

Start at: Sun, 06 Aug 2017 07:41:31 +0000
End at: Sun, 06 Aug 2017 07:42:01 +0000
Local clock offset: 1.099 ms
Remote clock offset: -3.915 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:50 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.37 Mbit/s
95th percentile per-packet one-way delay: 38.908 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 67.37 Mbit/s
95th percentile per-packet one-way delay: 38.908 ms
Loss rate: 0.16%
```
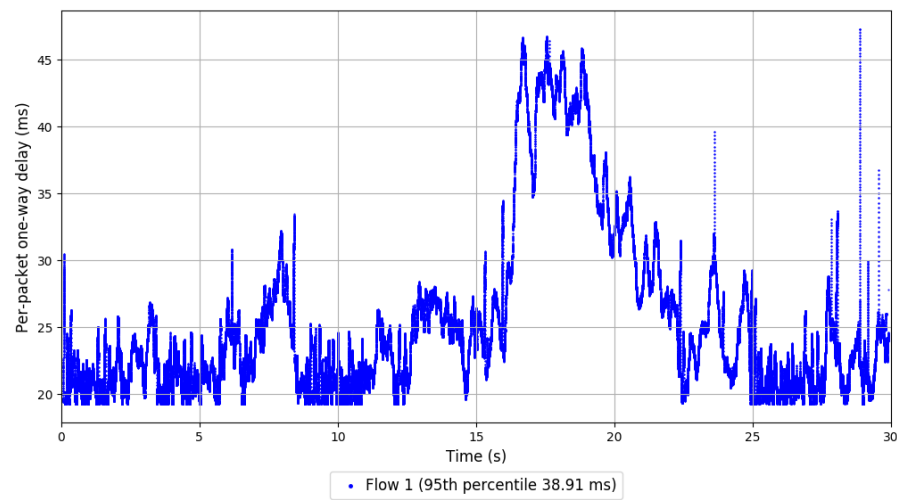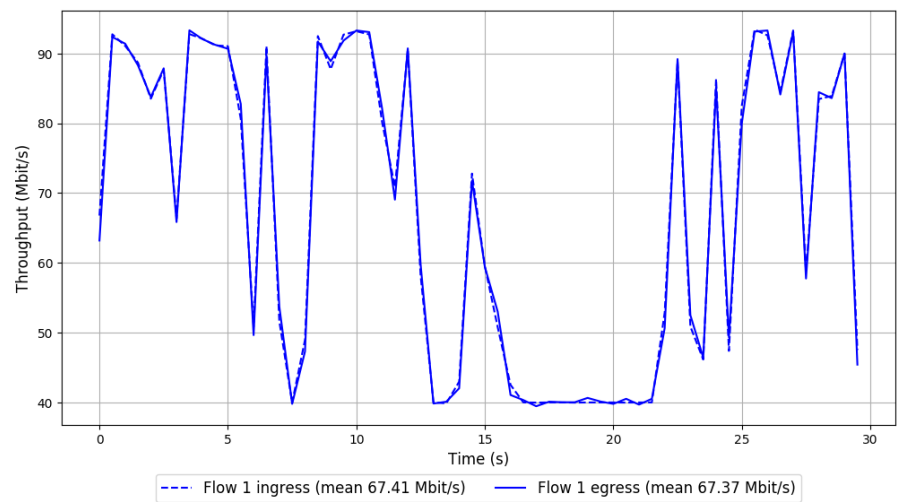
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 67.41 Mbit/s)   Flow 1 egress (mean 67.37 Mbit/s)

Flow 1 (95th percentile 38.91 ms)

```
Run 1: Statistics of TCP Vegas

Start at: Sun, 06 Aug 2017 07:12:11 +0000
End at: Sun, 06 Aug 2017 07:12:41 +0000
Local clock offset: 0.005 ms
Remote clock offset: -4.12 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:02:57 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.40 Mbit/s
95th percentile per-packet one-way delay: 19.566 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 90.40 Mbit/s
95th percentile per-packet one-way delay: 19.566 ms
Loss rate: 0.11%
```
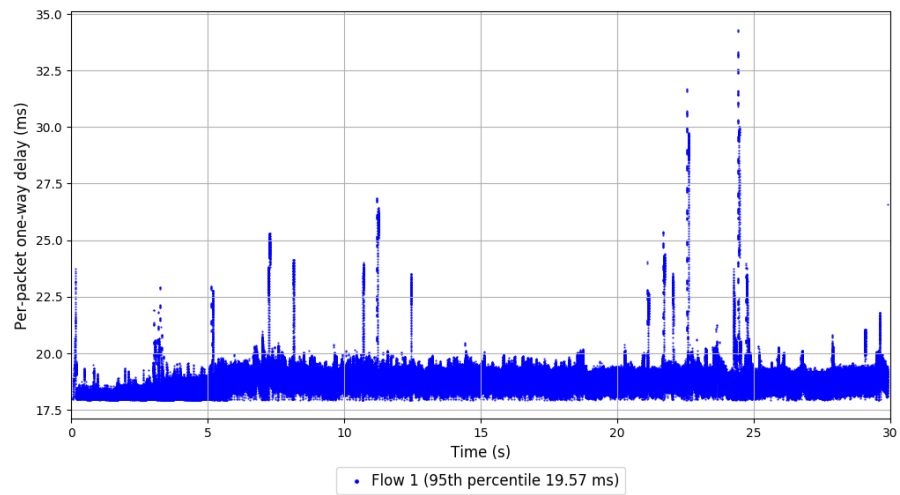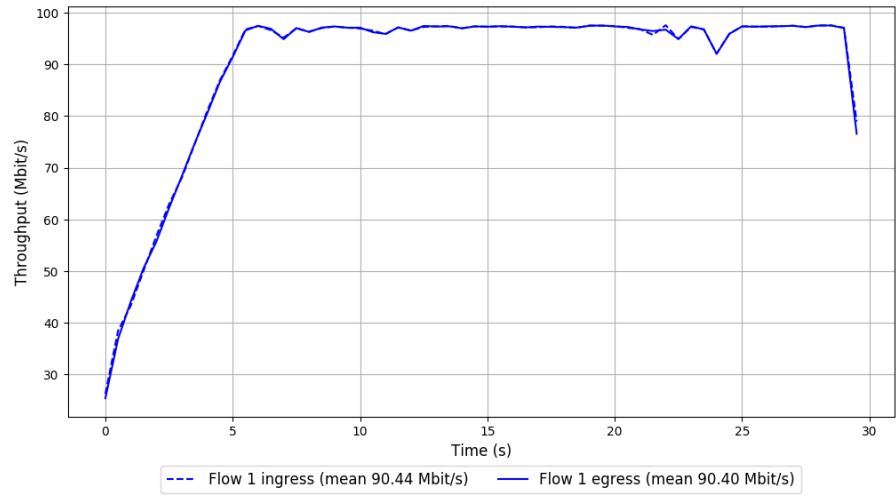
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: Sun, 06 Aug 2017 07:29:51 +0000
End at: Sun, 06 Aug 2017 07:30:21 +0000
Local clock offset: 2.05 ms
Remote clock offset: -6.1 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:03:03 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.18 Mbit/s
95th percentile per-packet one-way delay: 35.325 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 96.18 Mbit/s
95th percentile per-packet one-way delay: 35.325 ms
Loss rate: 0.11%
```
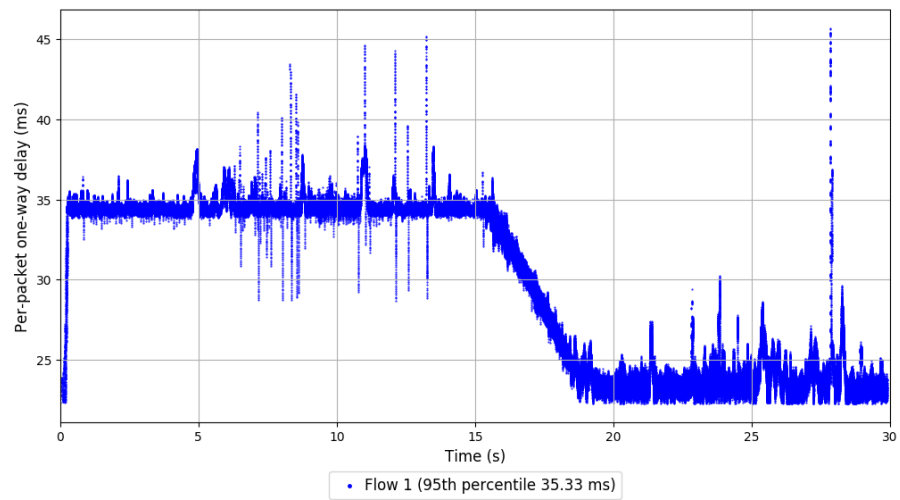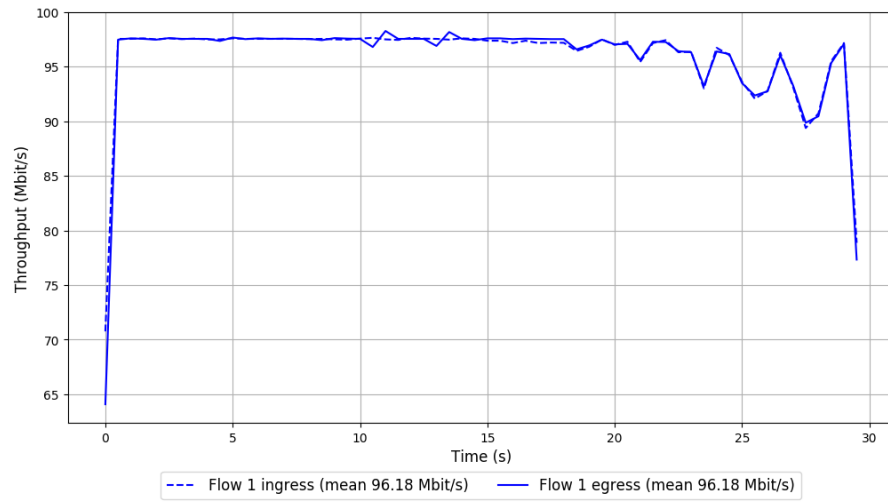
Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 96.18 Mbit/s)   Flow 1 egress (mean 96.18 Mbit/s)

Flow 1 (95th percentile 35.33 ms)

```
Run 3: Statistics of TCP Vegas

Start at: Sun, 06 Aug 2017 07:47:28 +0000
End at: Sun, 06 Aug 2017 07:47:58 +0000
Local clock offset: -1.252 ms
Remote clock offset: -6.841 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:03:08 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.14 Mbit/s
95th percentile per-packet one-way delay: 59.923 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 70.14 Mbit/s
95th percentile per-packet one-way delay: 59.923 ms
Loss rate: 0.09%
```
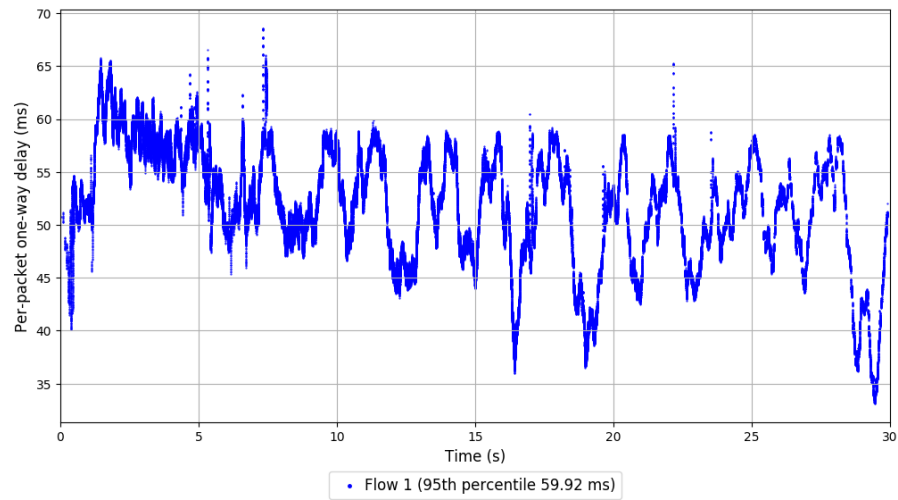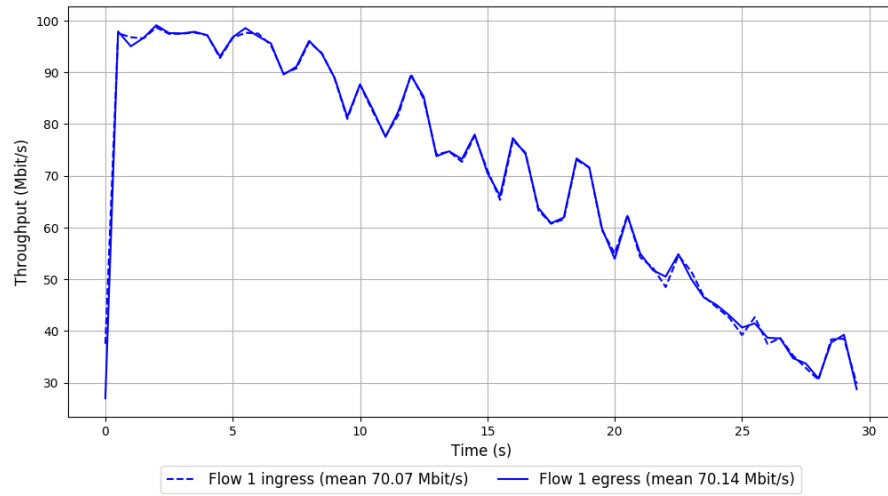
Run 3: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: Sun, 06 Aug 2017 07:07:28 +0000
End at: Sun, 06 Aug 2017 07:07:58 +0000
Local clock offset: 1.43 ms
Remote clock offset: -5.595 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:03:15 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 31.267 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 31.267 ms
Loss rate: 0.13%
```
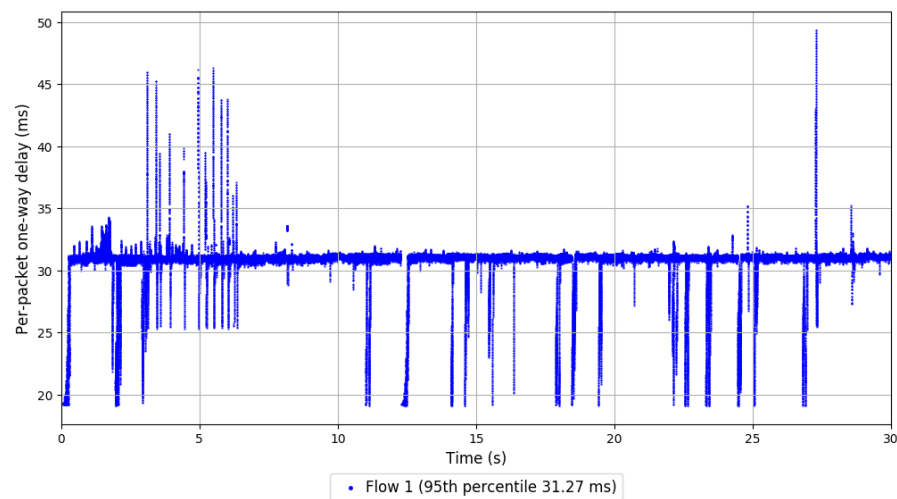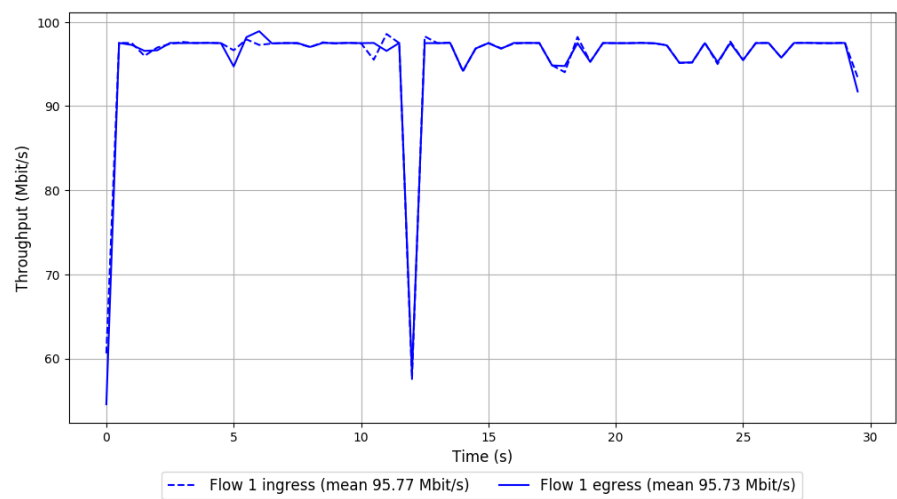
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 95.77 Mbit/s)   Flow 1 egress (mean 95.73 Mbit/s)

Flow 1 (95th percentile 31.27 ms)

```
Run 2: Statistics of Verus

Start at: Sun, 06 Aug 2017 07:25:06 +0000
End at: Sun, 06 Aug 2017 07:25:36 +0000
Local clock offset: 0.565 ms
Remote clock offset: -5.706 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:03:21 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 34.065 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 34.065 ms
Loss rate: 0.14%
```
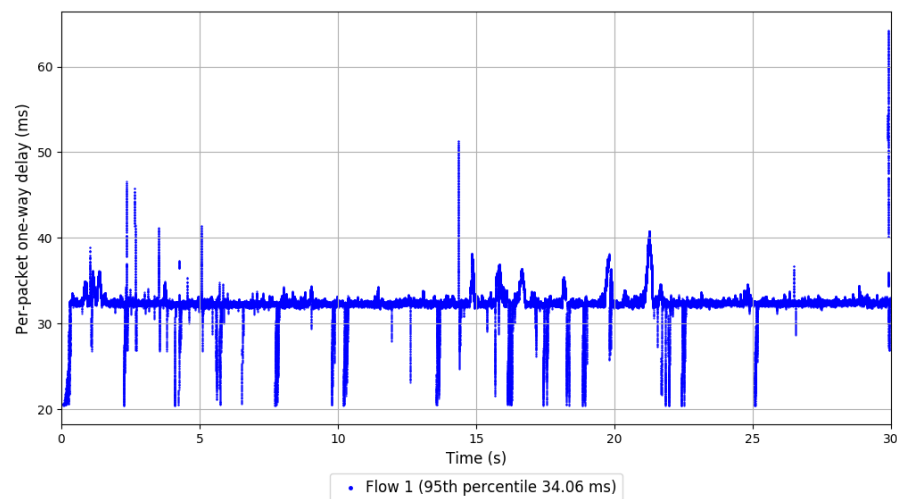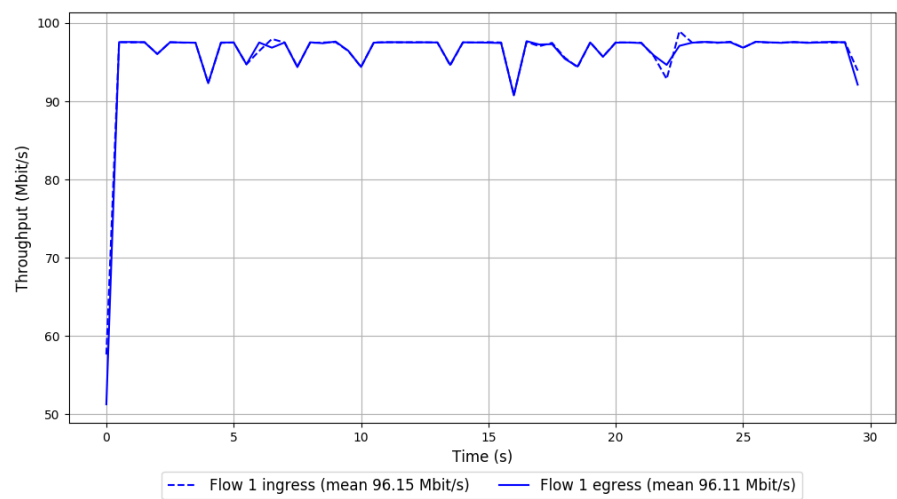
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: Sun, 06 Aug 2017 07:42:44 +0000
End at: Sun, 06 Aug 2017 07:43:14 +0000
Local clock offset: 1.563 ms
Remote clock offset: -5.402 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:03:27 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.68 Mbit/s
95th percentile per-packet one-way delay: 67.421 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 87.68 Mbit/s
95th percentile per-packet one-way delay: 67.421 ms
Loss rate: 0.21%
```
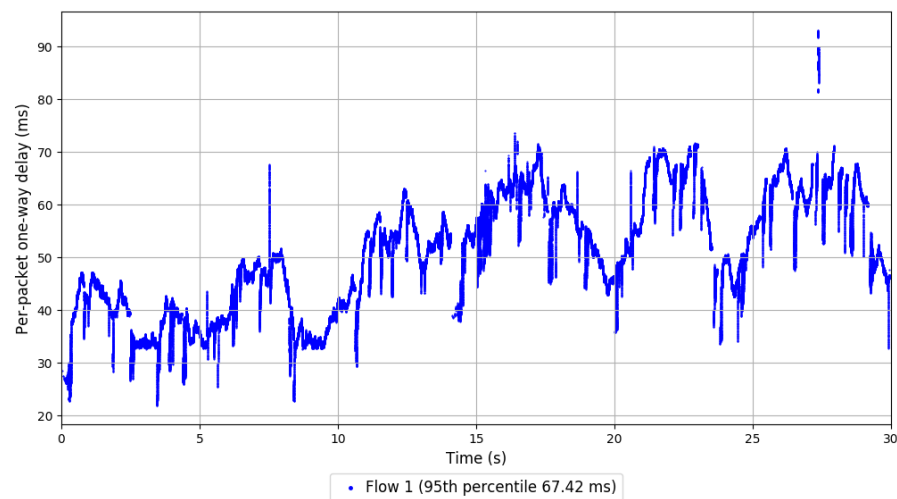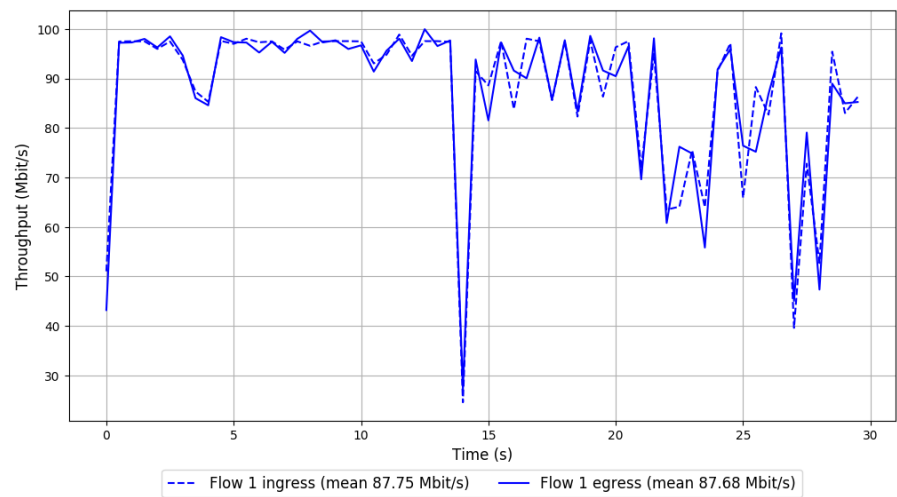
Run 3: Report of Verus — Data Link

```
Run 1: Statistics of WebRTC media

Start at: Sun, 06 Aug 2017 07:14:30 +0000
End at: Sun, 06 Aug 2017 07:15:00 +0000
Local clock offset: 0.712 ms
Remote clock offset: -5.728 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:03:27 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 21.019 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 21.019 ms
Loss rate: 0.13%
```
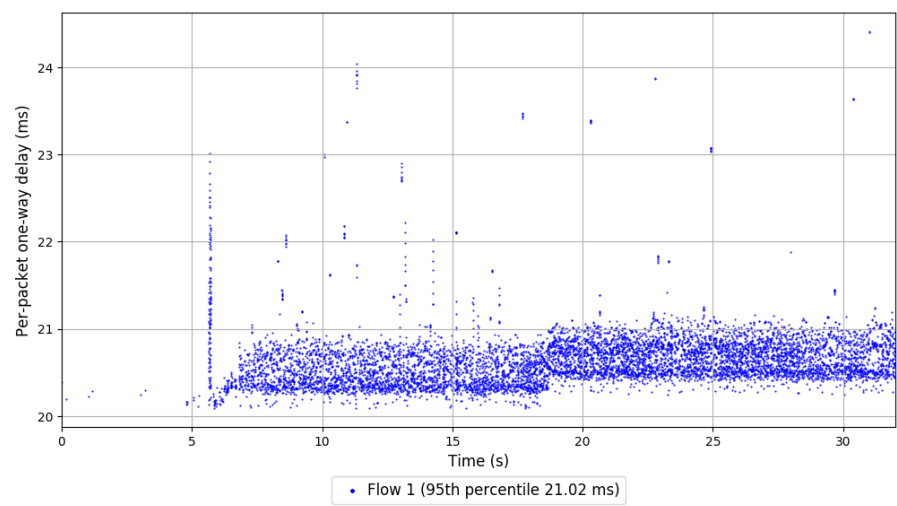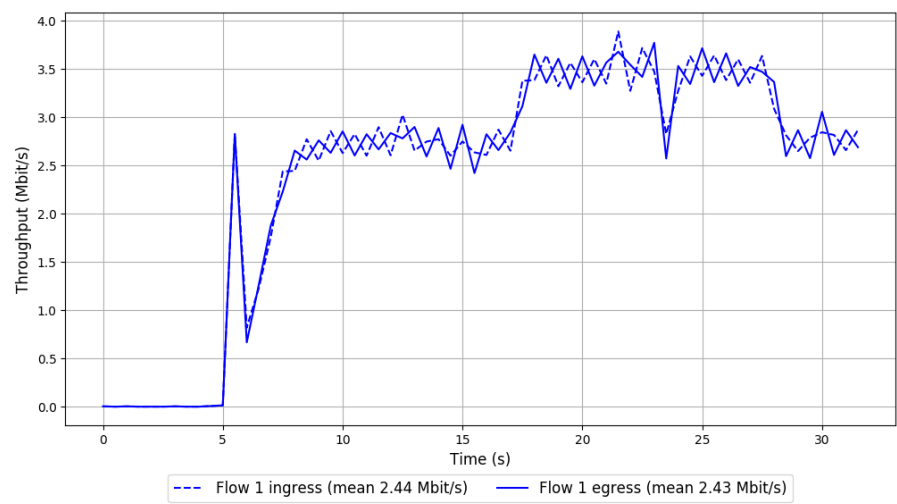
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: Sun, 06 Aug 2017 07:32:11 +0000
End at: Sun, 06 Aug 2017 07:32:41 +0000
Local clock offset: 4.604 ms
Remote clock offset: -5.223 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:03:27 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 47.741 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 47.741 ms
Loss rate: 0.15%
```
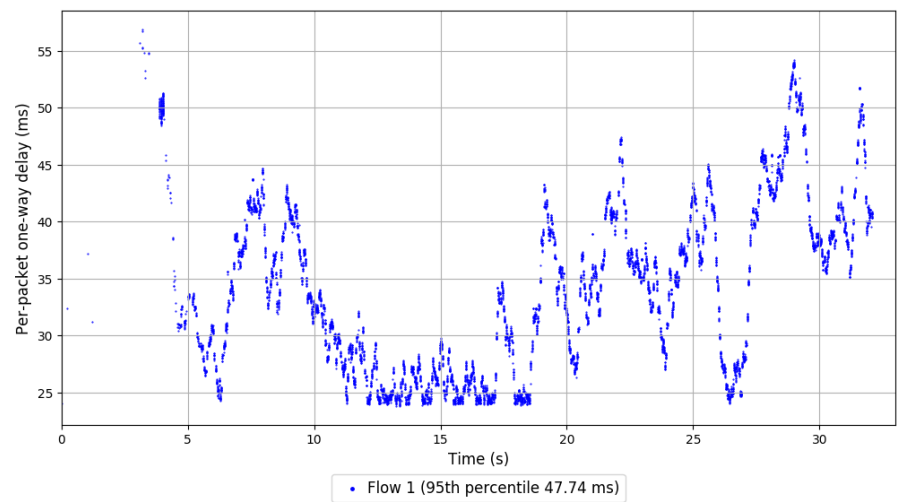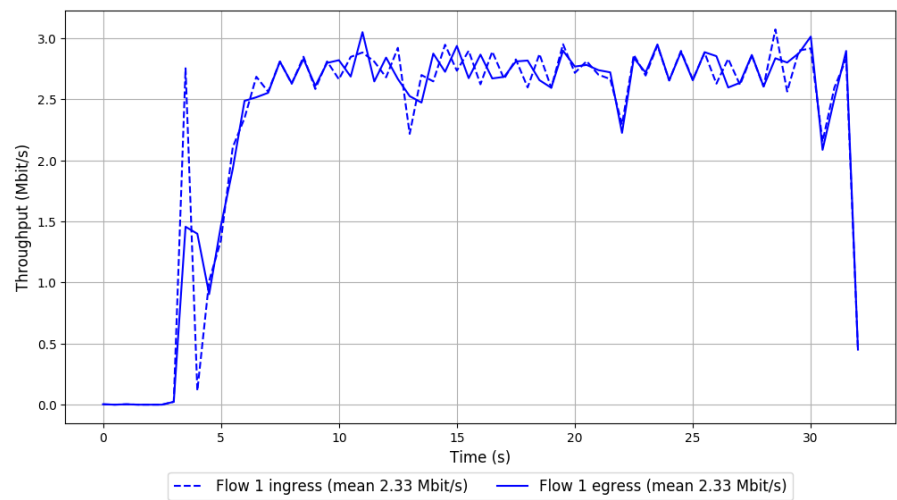
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: Sun, 06 Aug 2017 07:49:47 +0000
End at: Sun, 06 Aug 2017 07:50:17 +0000
Local clock offset: 0.562 ms
Remote clock offset: -4.983 ms


# Below is generated by plot.py at Sun, 06 Aug 2017 09:03:27 +0000
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 57.839 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 57.839 ms
Loss rate: 0.19%
```

Run 3: Report of WebRTC media — Data Link