Pantheon Report

Generated at 2017-12-06 02:37:23 (UTC).

Data path: Colombia Ethernet (*remote*) →AWS Brazil 2 Ethernet (*local*).

Repeated the test of 14 congestion control schemes 10 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

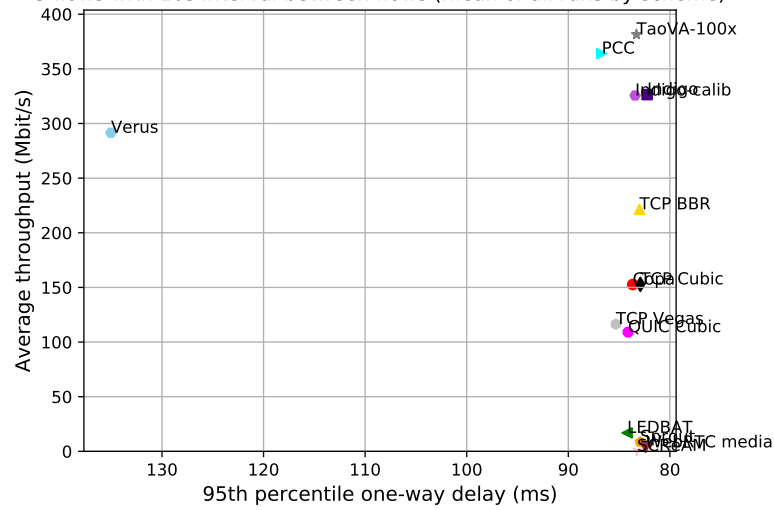Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

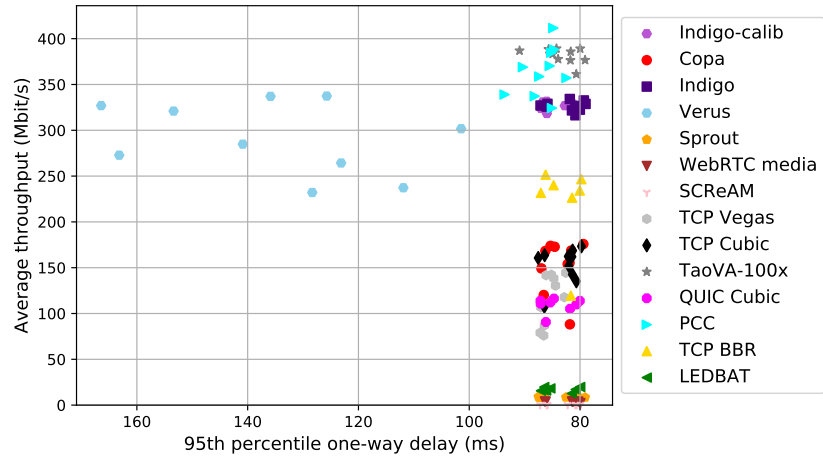NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: indigos @ e3a57ad5ac5cfcaca0e3f983c8dd4cc3509e0262
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ b5b7c38e8391001927dc41c6cfa2627d03dde737
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-cellular @ aee99e8eb842cb053f8c9a80e28cd256a930bbc2
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/indigo-no-cwnd @ 3e58442c04028a11d7b02456e137604633ba2d6c
third_party/indigo-no-delivery-rate @ 57caa40858b964906edff4876d5a7e5bfff666c5
third_party/indigo-no-queuing-delay @ 03455460fd1a8ffbdad86fabb936fdca204b80db
third_party/indigo-no-send-rate @ b39dfa6b2c5f19cb7cd89626cb4f5bb81f9fecda
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
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 Colombia Ethernet to AWS Brazil 2 Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from Colombia Ethernet to AWS Brazil 2 Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows

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scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	7	101.21	120.51	111.52	282.25	82.18	82.17	0.57	0.93	2.01
TCP Cubic	10	81.36	75.40	65.59	82.55	81.87	83.28	0.60	1.06	1.96
LEDBAT	8	10.56	7.81	3.64	83.23	83.18	83.43	0.90	1.77	3.65
PCC	10	283.09	66.87	112.17	86.94	85.75	85.99	9.38	12.27	17.25
QUIC Cubic	8	64.07	54.25	28.07	83.73	83.13	83.12	0.76	0.80	2.93
SCReAM	7	0.22	0.21	0.22	82.36	82.26	82.31	0.55	0.96	1.57
WebRTC media	7	1.84	1.34	0.49	82.26	81.58	82.01	0.61	0.65	2.62
Sprout	9	4.61	4.26	3.53	82.20	81.97	82.78	0.67	1.02	2.69
TaoVA-100x	10	221.75	197.49	118.78	83.22	82.89	82.39	2.07	3.88	8.15
TCP Vegas	10	58.34	57.39	61.13	84.85	83.98	85.10	0.59	0.97	1.90
Verus	10	194.22	105.10	86.24	132.87	113.30	118.02	6.10	9.08	15.29
Copa	10	80.91	78.50	76.52	82.90	82.74	82.83	0.65	1.01	2.81
Indigo	10	174.05	163.50	136.81	81.41	81.79	81.85	3.79	5.69	14.32
Indigo-calib	10	175.18	161.05	135.67	82.06	81.96	82.98	4.36	6.92	14.36

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-05 19:14:24
End at: 2017-12-05 19:14:54
Local clock offset: 1.469 ms
Remote clock offset: 3.401 ms


# Below is generated by plot.py at 2017-12-06 01:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 119.51 Mbit/s
95th percentile per-packet one-way delay: 81.658 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 1478.883 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 120.97 Mbit/s
95th percentile per-packet one-way delay: 81.671 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 102.69 Mbit/s
95th percentile per-packet one-way delay: 80.594 ms
Loss rate: 2.01%
```
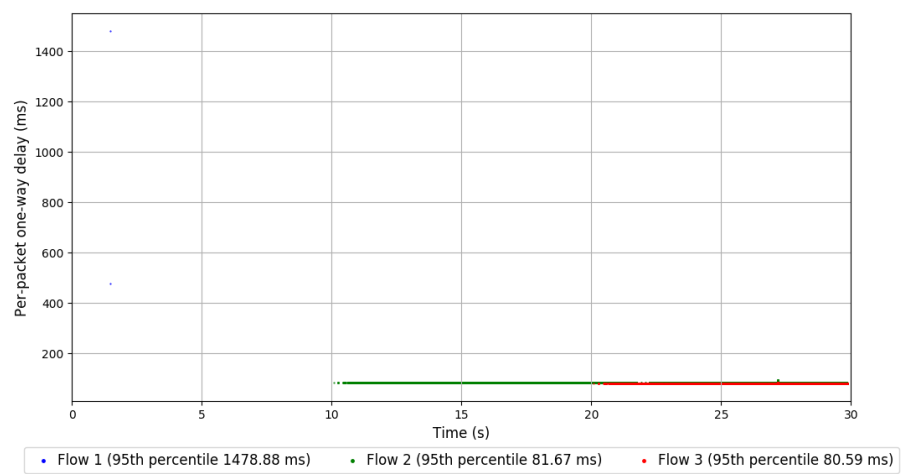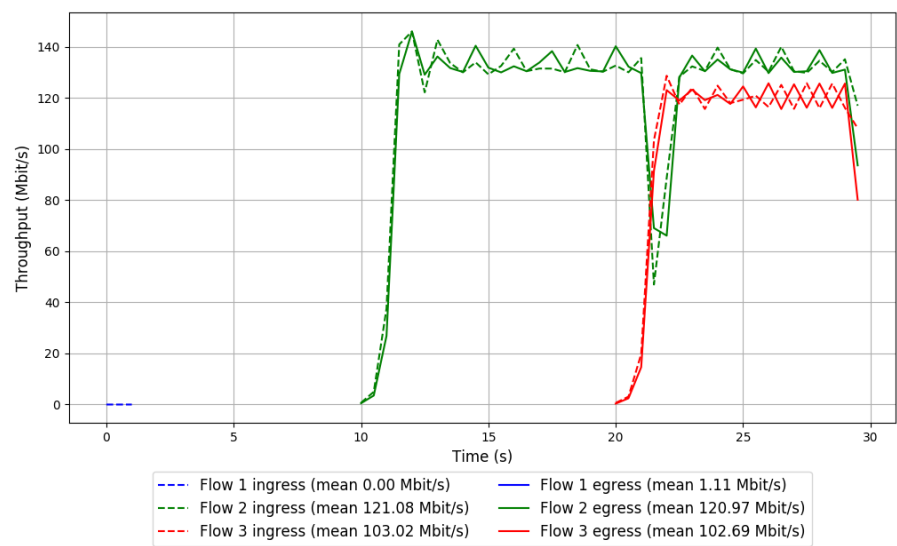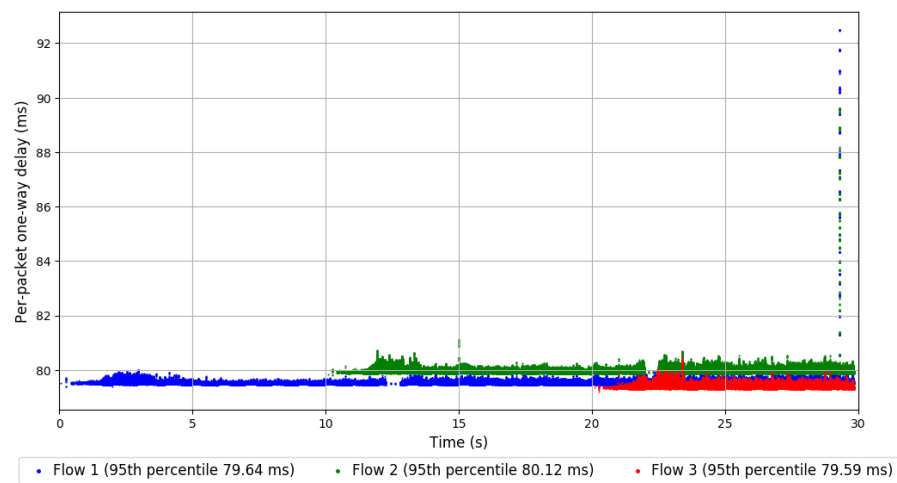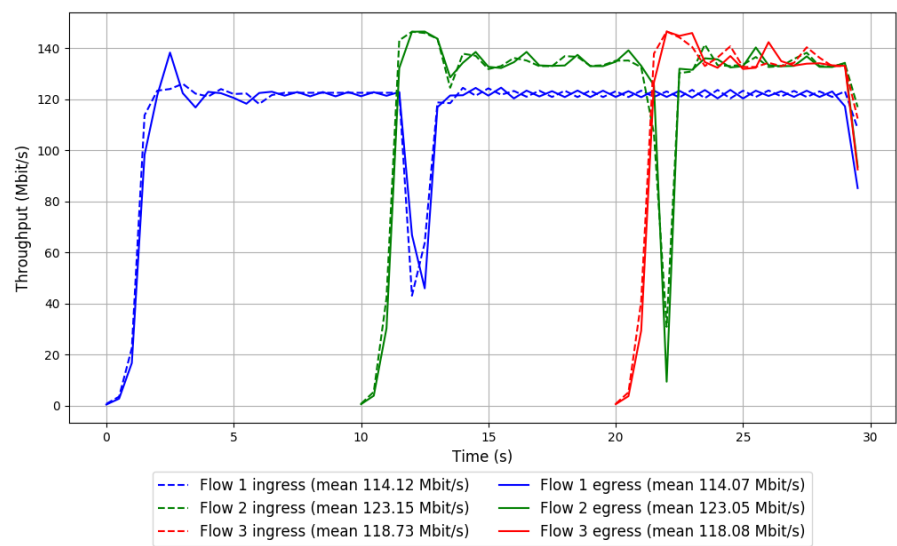
Run 1: Report of TCP BBR — Data Link

Throughput (Mbit/s) vs Time (s)

- - - Flow 1 ingress (mean 0.00 Mbit/s) —— Flow 1 egress (mean 1.11 Mbit/s)
- - - Flow 2 ingress (mean 121.08 Mbit/s) —— Flow 2 egress (mean 120.97 Mbit/s)
- - - Flow 3 ingress (mean 103.02 Mbit/s) —— Flow 3 egress (mean 102.69 Mbit/s)

Per-packet one-way delay (ms) vs Time (s)

• Flow 1 (95th percentile 1478.88 ms) • Flow 2 (95th percentile 81.67 ms) • Flow 3 (95th percentile 80.59 ms)
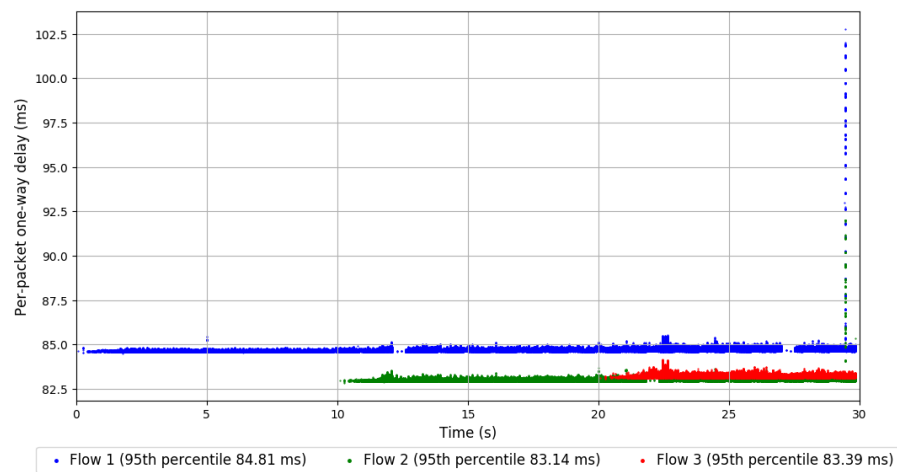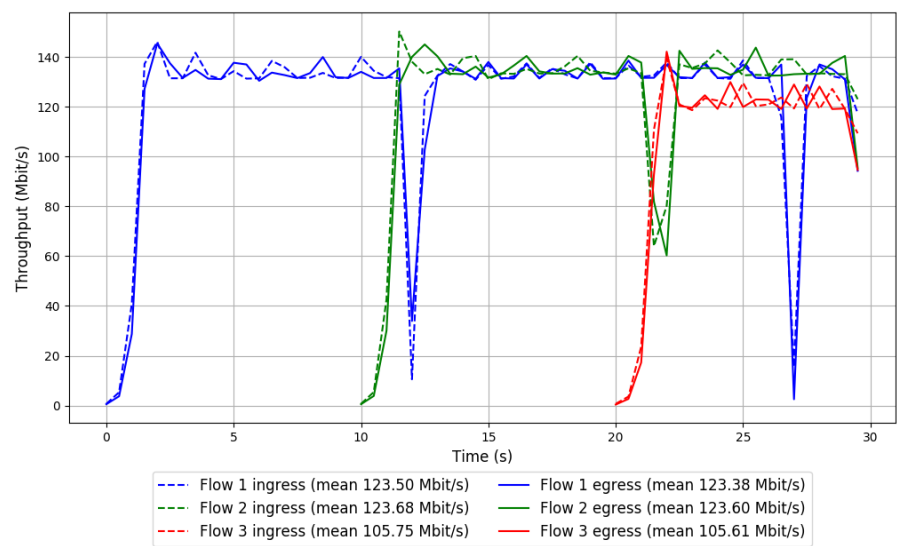
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```
Run 2: Statistics of TCP BBR

Start at: 2017-12-05 19:34:35
End at: 2017-12-05 19:35:05
Local clock offset: 1.597 ms
Remote clock offset: 4.034 ms

# Below is generated by plot.py at 2017-12-06 01:48:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 234.27 Mbit/s
95th percentile per-packet one-way delay: 80.048 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 114.07 Mbit/s
95th percentile per-packet one-way delay: 79.645 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 123.05 Mbit/s
95th percentile per-packet one-way delay: 80.124 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 118.08 Mbit/s
95th percentile per-packet one-way delay: 79.591 ms
Loss rate: 1.92%
```

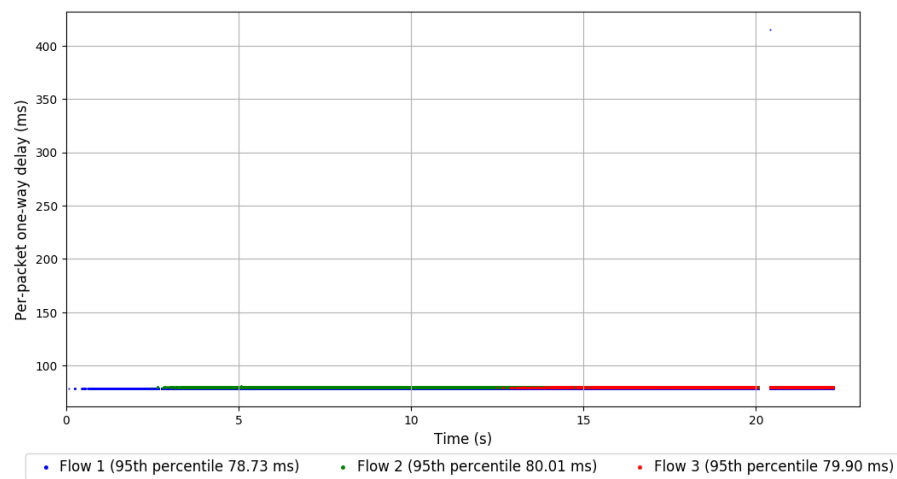Run 2: Report of TCP BBR — Data Link
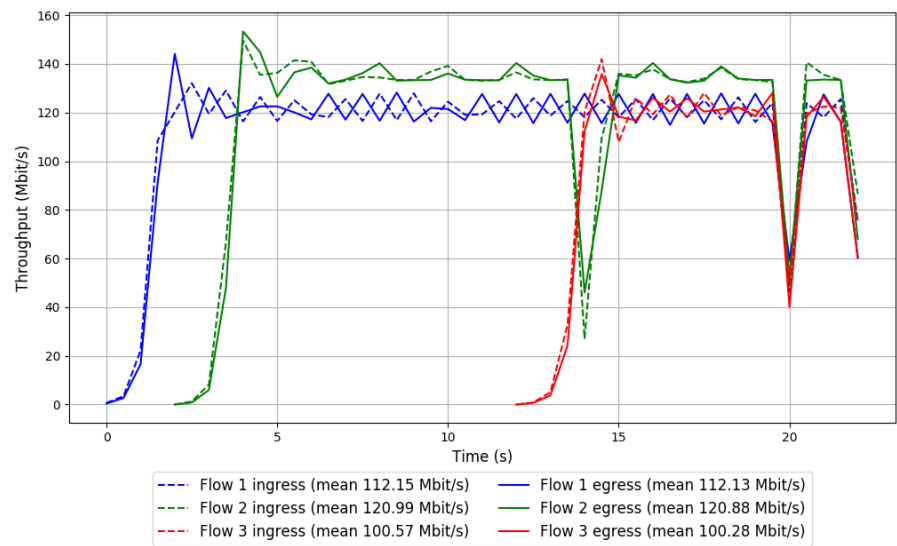
```
Run 3: Statistics of TCP BBR

Start at: 2017-12-05 19:54:58
End at: 2017-12-05 19:55:28
Local clock offset: 1.402 ms
Remote clock offset: -0.347 ms


# Below is generated by plot.py at 2017-12-06 01:48:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 240.07 Mbit/s
95th percentile per-packet one-way delay: 84.768 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 123.38 Mbit/s
95th percentile per-packet one-way delay: 84.812 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 123.60 Mbit/s
95th percentile per-packet one-way delay: 83.145 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 105.61 Mbit/s
95th percentile per-packet one-way delay: 83.393 ms
Loss rate: 1.81%
```
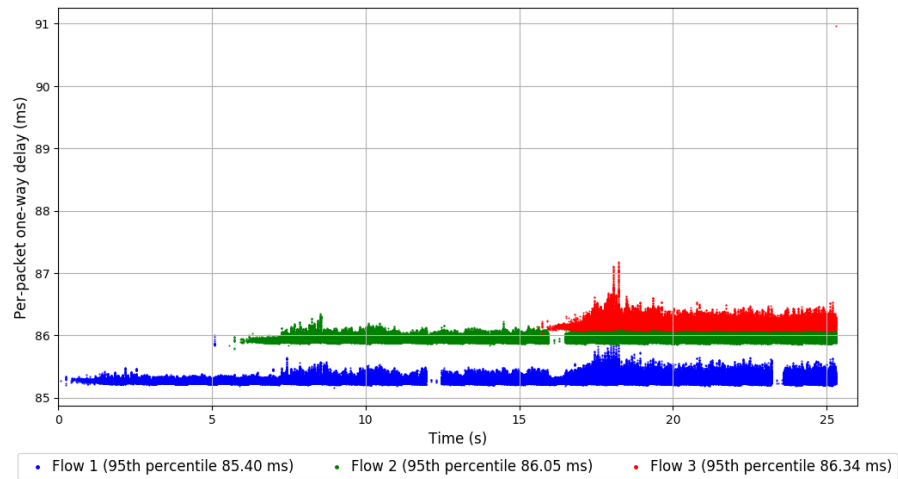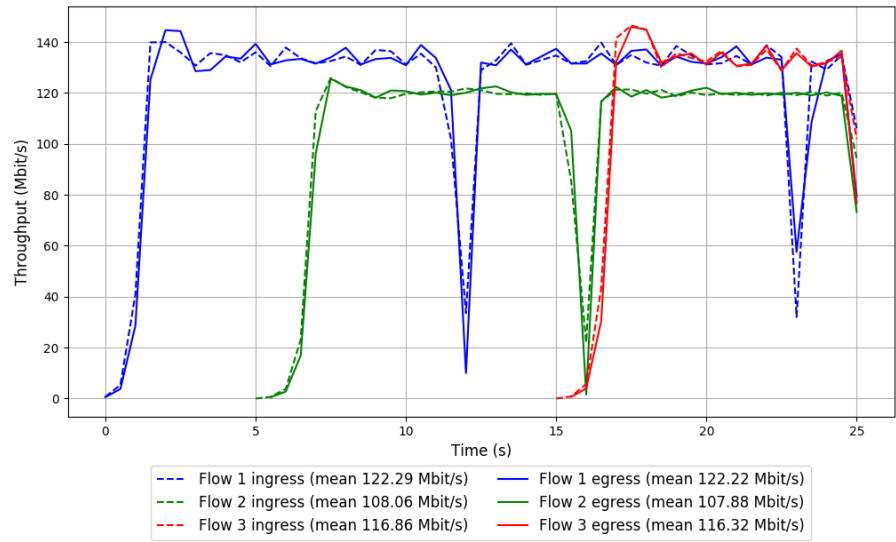
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 123.50 Mbit/s)   Flow 1 egress (mean 123.38 Mbit/s)
Flow 2 ingress (mean 123.68 Mbit/s)   Flow 2 egress (mean 123.60 Mbit/s)
Flow 3 ingress (mean 105.75 Mbit/s)   Flow 3 egress (mean 105.61 Mbit/s)

Flow 1 (95th percentile 84.81 ms)   Flow 2 (95th percentile 83.14 ms)   Flow 3 (95th percentile 83.39 ms)

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Run 4: Statistics of TCP BBR

Start at: 2017-12-05 20:15:06
End at: 2017-12-05 20:15:36
Local clock offset: 1.123 ms
Remote clock offset: 5.749 ms
```

Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 112.15 Mbit/s)   Flow 1 egress (mean 112.13 Mbit/s)
Flow 2 ingress (mean 120.99 Mbit/s)   Flow 2 egress (mean 120.88 Mbit/s)
Flow 3 ingress (mean 100.57 Mbit/s)   Flow 3 egress (mean 100.28 Mbit/s)

Flow 1 (95th percentile 78.73 ms)   Flow 2 (95th percentile 80.01 ms)   Flow 3 (95th percentile 79.90 ms)

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```
Run 5: Statistics of TCP BBR

Start at: 2017-12-05 20:35:15
End at: 2017-12-05 20:35:45
Local clock offset: 0.682 ms
Remote clock offset: 0.263 ms


# Below is generated by plot.py at 2017-12-06 01:48:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.56 Mbit/s
95th percentile per-packet one-way delay: 86.210 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 122.22 Mbit/s
95th percentile per-packet one-way delay: 85.399 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 107.88 Mbit/s
95th percentile per-packet one-way delay: 86.054 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 116.32 Mbit/s
95th percentile per-packet one-way delay: 86.338 ms
Loss rate: 2.04%
```
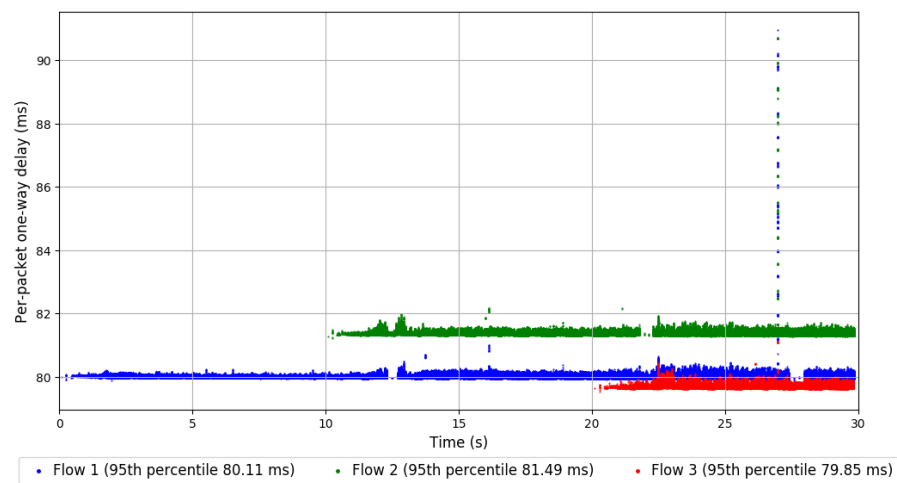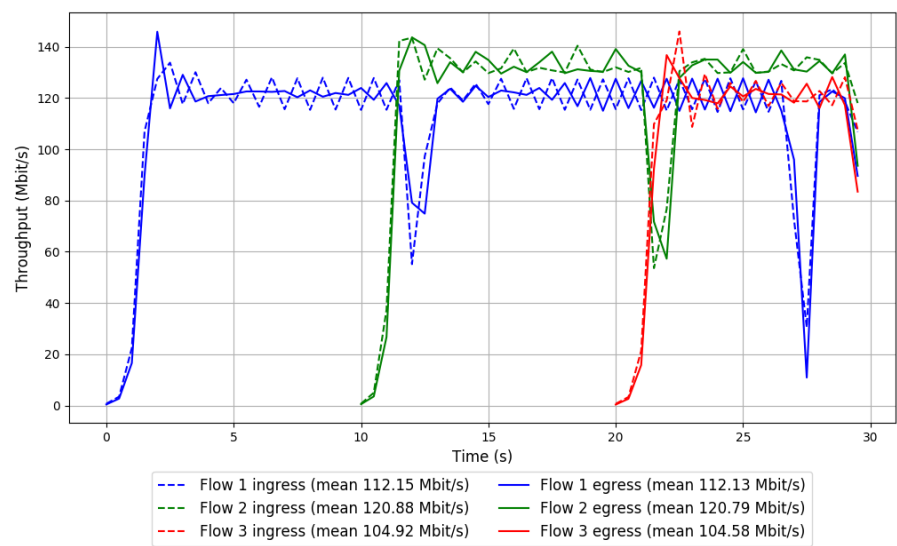
Run 5: Report of TCP BBR — Data Link

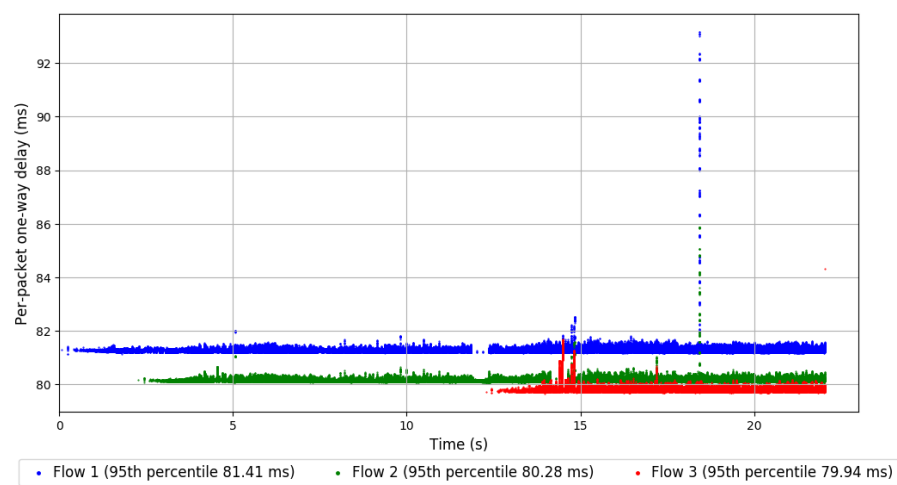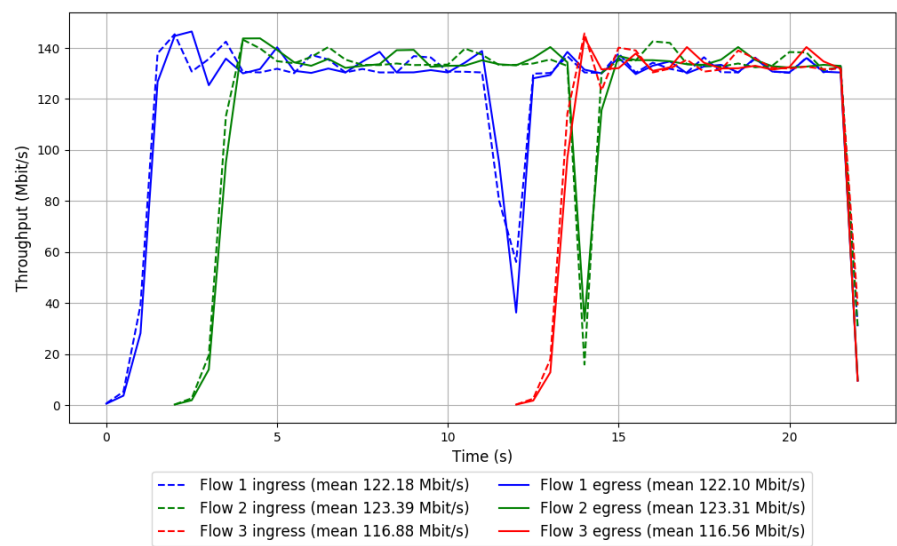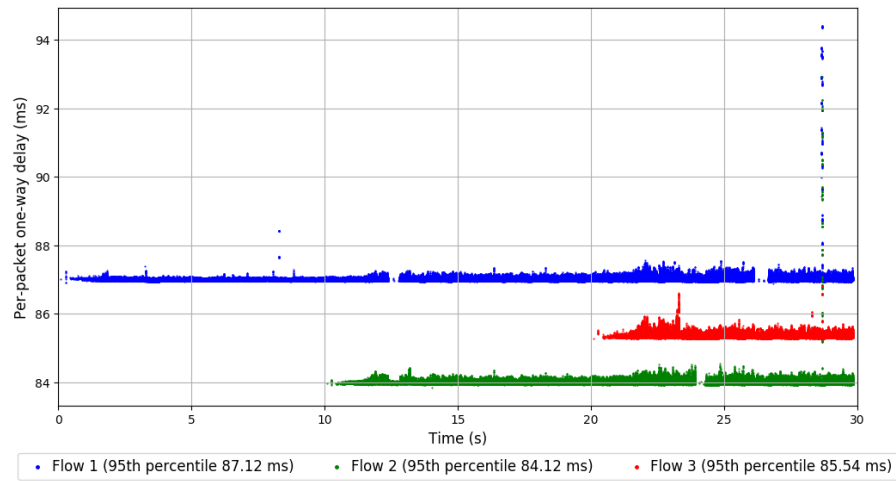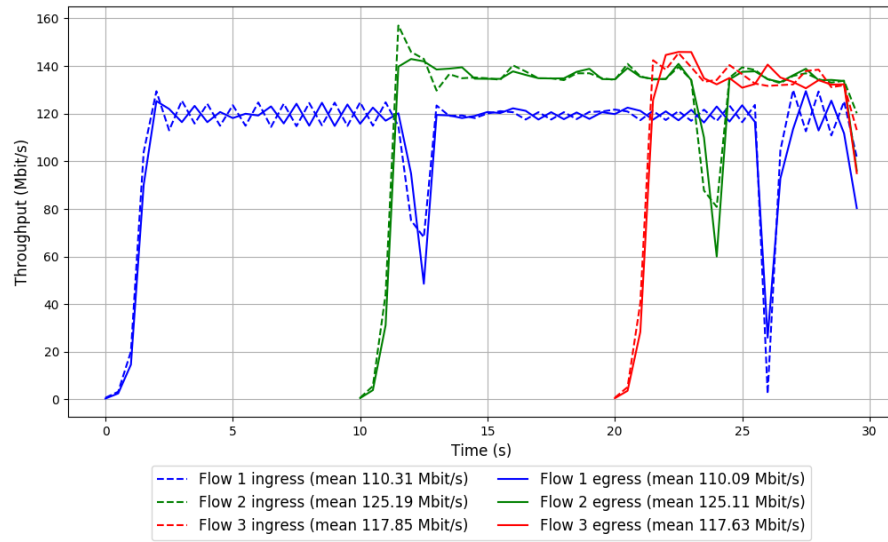

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```
Run 6: Statistics of TCP BBR

Start at: 2017-12-05 20:55:28
End at: 2017-12-05 20:55:58
Local clock offset: 0.253 ms
Remote clock offset: 4.606 ms


# Below is generated by plot.py at 2017-12-06 01:48:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 226.44 Mbit/s
95th percentile per-packet one-way delay: 81.434 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 112.13 Mbit/s
95th percentile per-packet one-way delay: 80.114 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 120.79 Mbit/s
95th percentile per-packet one-way delay: 81.487 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 104.58 Mbit/s
95th percentile per-packet one-way delay: 79.854 ms
Loss rate: 2.30%
```

Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 112.15 Mbit/s) — Flow 1 egress (mean 112.13 Mbit/s)
Flow 2 ingress (mean 120.88 Mbit/s) — Flow 2 egress (mean 120.79 Mbit/s)
Flow 3 ingress (mean 104.92 Mbit/s) — Flow 3 egress (mean 104.58 Mbit/s)

Flow 1 (95th percentile 80.11 ms)   Flow 2 (95th percentile 81.49 ms)   Flow 3 (95th percentile 79.85 ms)
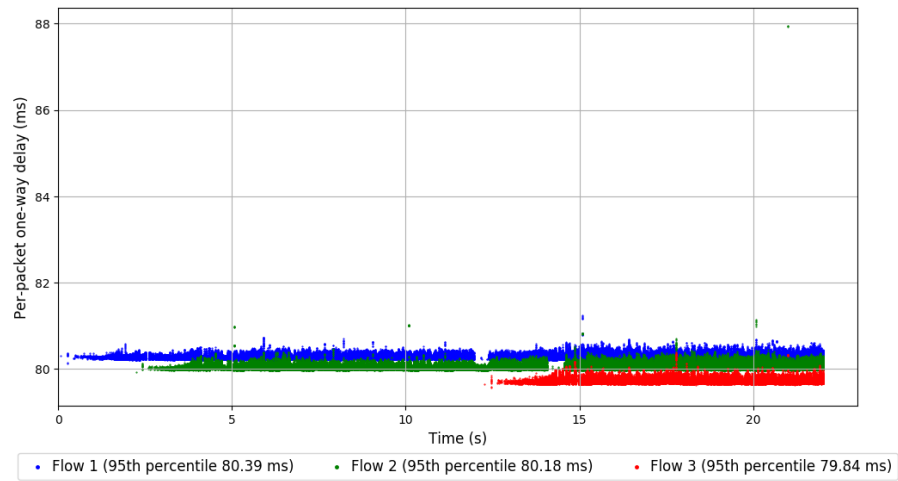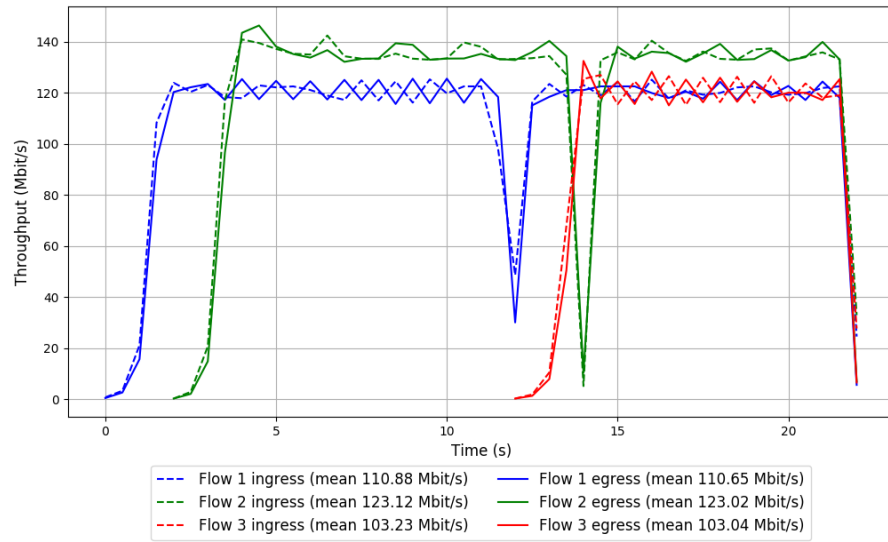
15

```
Run 7: Statistics of TCP BBR

Start at: 2017-12-05 21:15:45
End at: 2017-12-05 21:16:15
Local clock offset: 0.062 ms
Remote clock offset: 2.996 ms
```

Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 122.18 Mbit/s)   Flow 1 egress (mean 122.10 Mbit/s)
Flow 2 ingress (mean 123.39 Mbit/s)   Flow 2 egress (mean 123.31 Mbit/s)
Flow 3 ingress (mean 116.88 Mbit/s)   Flow 3 egress (mean 116.56 Mbit/s)

Flow 1 (95th percentile 81.41 ms)   Flow 2 (95th percentile 80.28 ms)   Flow 3 (95th percentile 79.94 ms)

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```
Run 8: Statistics of TCP BBR

Start at: 2017-12-05 21:35:36
End at: 2017-12-05 21:36:06
Local clock offset: -0.108 ms
Remote clock offset: -3.062 ms


# Below is generated by plot.py at 2017-12-06 01:48:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 231.67 Mbit/s
95th percentile per-packet one-way delay: 87.078 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 110.09 Mbit/s
95th percentile per-packet one-way delay: 87.119 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 125.11 Mbit/s
95th percentile per-packet one-way delay: 84.123 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 117.63 Mbit/s
95th percentile per-packet one-way delay: 85.538 ms
Loss rate: 1.90%
```
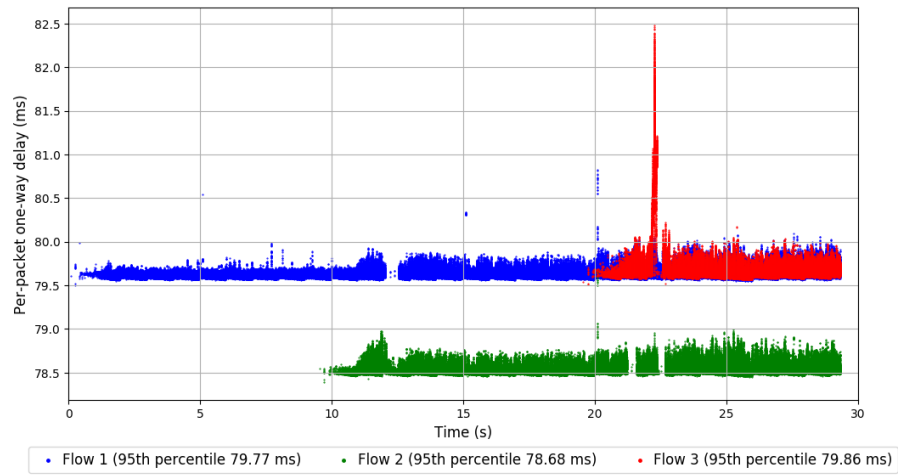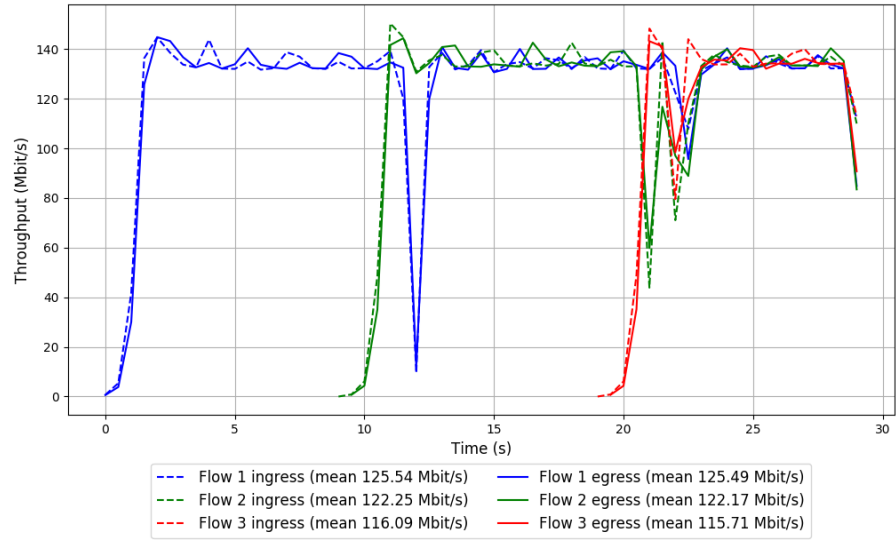
Run 8: Report of TCP BBR — Data Link

Flow 1 ingress (mean 110.31 Mbit/s)   Flow 1 egress (mean 110.09 Mbit/s)
Flow 2 ingress (mean 125.19 Mbit/s)   Flow 2 egress (mean 125.11 Mbit/s)
Flow 3 ingress (mean 117.85 Mbit/s)   Flow 3 egress (mean 117.63 Mbit/s)

Flow 1 (95th percentile 87.12 ms)   Flow 2 (95th percentile 84.12 ms)   Flow 3 (95th percentile 85.54 ms)

```
Run 9: Statistics of TCP BBR

Start at: 2017-12-05 21:55:45
End at: 2017-12-05 21:56:15
Local clock offset: -0.769 ms
Remote clock offset: 2.105 ms
```

Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 110.88 Mbit/s) ---- Flow 1 egress (mean 110.65 Mbit/s)
Flow 2 ingress (mean 123.12 Mbit/s) ---- Flow 2 egress (mean 123.02 Mbit/s)
Flow 3 ingress (mean 103.23 Mbit/s) ---- Flow 3 egress (mean 103.04 Mbit/s)

Flow 1 (95th percentile 80.39 ms)   Flow 2 (95th percentile 80.18 ms)   Flow 3 (95th percentile 79.84 ms)

```
Run 10: Statistics of TCP BBR

Start at: 2017-12-05 22:16:03
End at: 2017-12-05 22:16:33
Local clock offset: -1.548 ms
Remote clock offset: 1.276 ms


# Below is generated by plot.py at 2017-12-06 01:51:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 246.63 Mbit/s
95th percentile per-packet one-way delay: 79.769 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 125.49 Mbit/s
95th percentile per-packet one-way delay: 79.774 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 122.17 Mbit/s
95th percentile per-packet one-way delay: 78.683 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 115.71 Mbit/s
95th percentile per-packet one-way delay: 79.861 ms
Loss rate: 2.06%
```
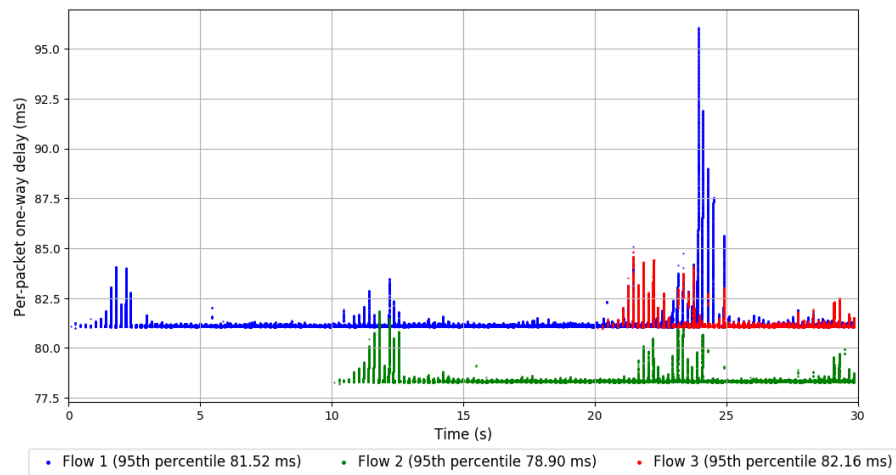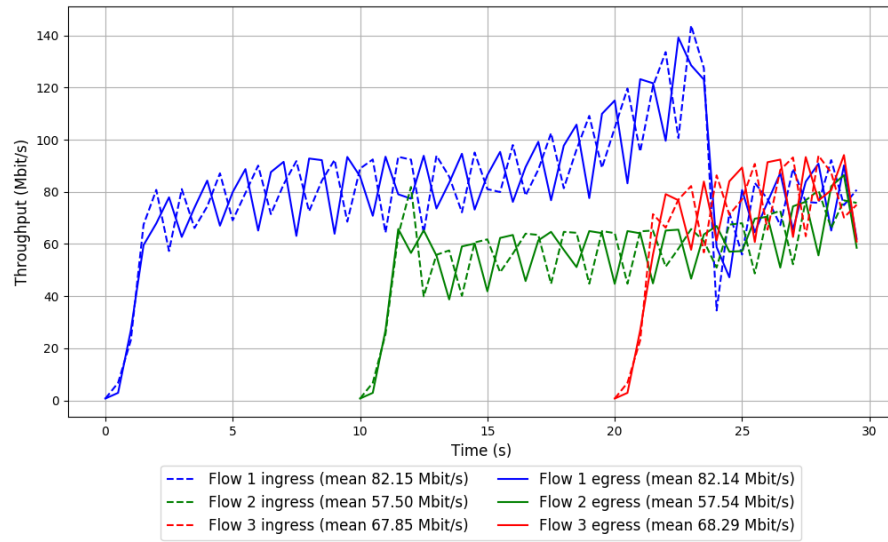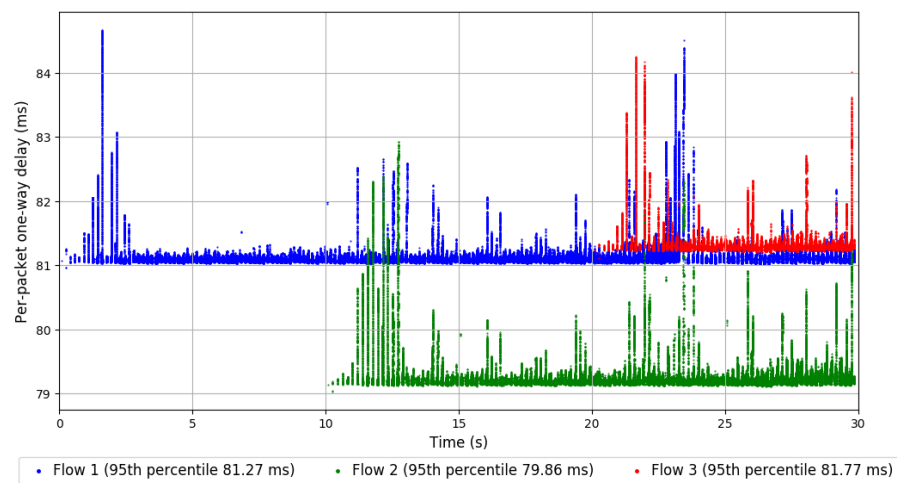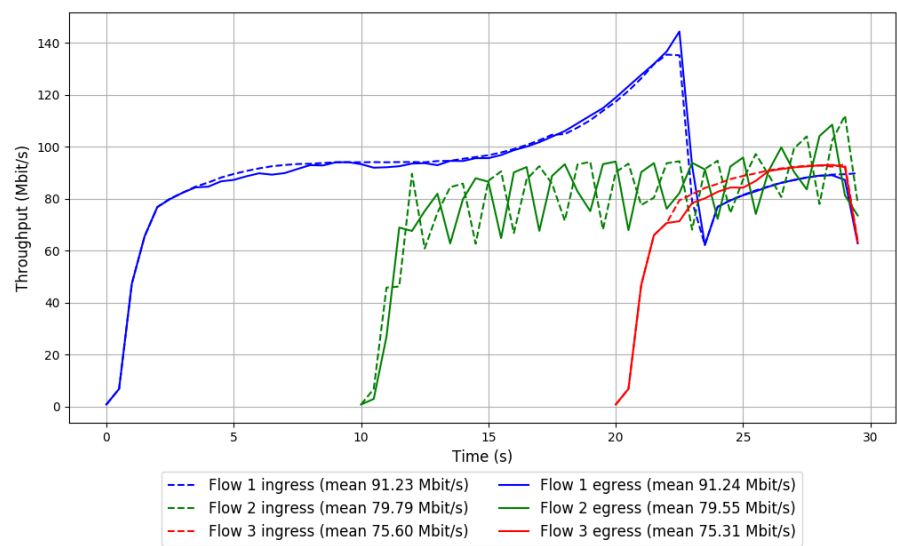
Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-05 19:09:14
End at: 2017-12-05 19:09:44
Local clock offset: 1.543 ms
Remote clock offset: 3.719 ms


# Below is generated by plot.py at 2017-12-06 01:51:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 142.63 Mbit/s
95th percentile per-packet one-way delay: 81.386 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 82.14 Mbit/s
95th percentile per-packet one-way delay: 81.520 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 57.54 Mbit/s
95th percentile per-packet one-way delay: 78.899 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 68.29 Mbit/s
95th percentile per-packet one-way delay: 82.161 ms
Loss rate: 1.07%
```
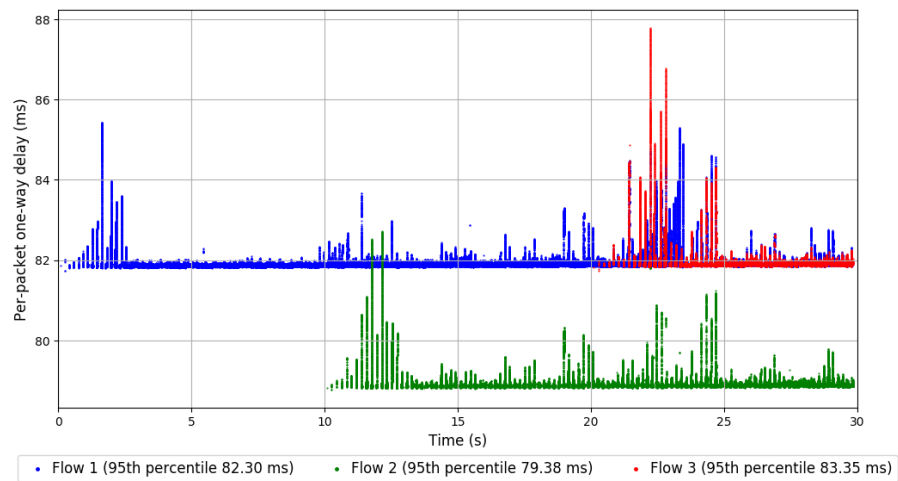
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2017-12-05 19:29:23
End at: 2017-12-05 19:29:53
Local clock offset: 1.524 ms
Remote clock offset: 3.536 ms


# Below is generated by plot.py at 2017-12-06 01:51:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.66 Mbit/s
95th percentile per-packet one-way delay: 81.342 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 91.24 Mbit/s
95th percentile per-packet one-way delay: 81.274 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 79.55 Mbit/s
95th percentile per-packet one-way delay: 79.863 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 75.31 Mbit/s
95th percentile per-packet one-way delay: 81.771 ms
Loss rate: 2.07%
```
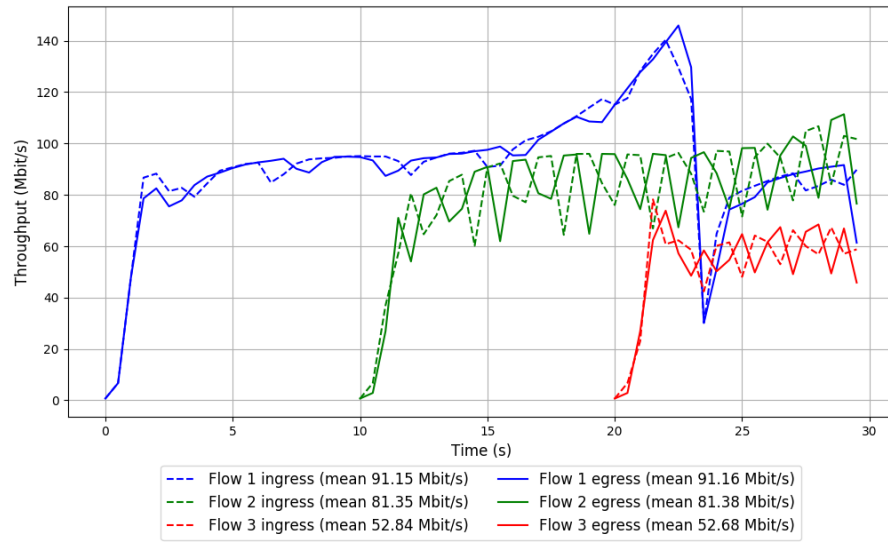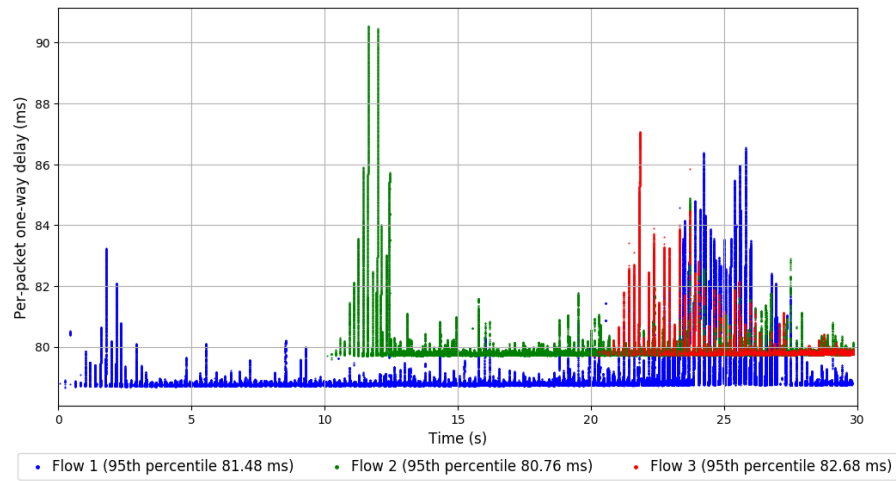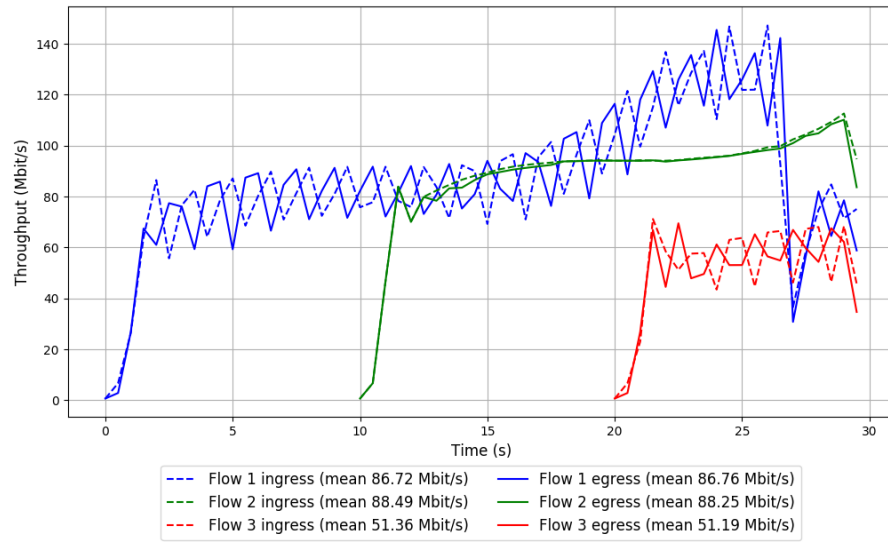
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 91.23 Mbit/s)   Flow 1 egress (mean 91.24 Mbit/s)
Flow 2 ingress (mean 79.79 Mbit/s)   Flow 2 egress (mean 79.55 Mbit/s)
Flow 3 ingress (mean 75.60 Mbit/s)   Flow 3 egress (mean 75.31 Mbit/s)

Flow 1 (95th percentile 81.27 ms)   Flow 2 (95th percentile 79.86 ms)   Flow 3 (95th percentile 81.77 ms)

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```
Run 3: Statistics of TCP Cubic

Start at: 2017-12-05 19:49:44
End at: 2017-12-05 19:50:14
Local clock offset: 1.464 ms
Remote clock offset: 3.626 ms


# Below is generated by plot.py at 2017-12-06 01:51:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 162.34 Mbit/s
95th percentile per-packet one-way delay: 82.125 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 91.16 Mbit/s
95th percentile per-packet one-way delay: 82.295 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 81.38 Mbit/s
95th percentile per-packet one-way delay: 79.381 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 52.68 Mbit/s
95th percentile per-packet one-way delay: 83.350 ms
Loss rate: 2.21%
```
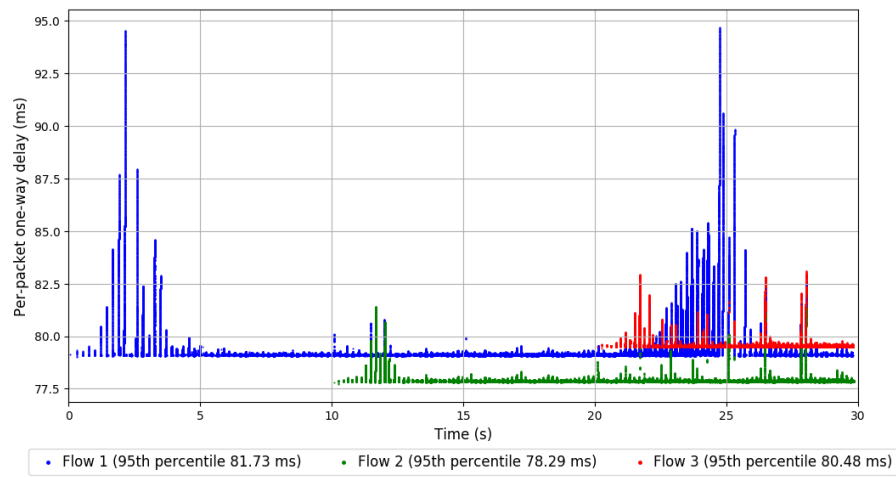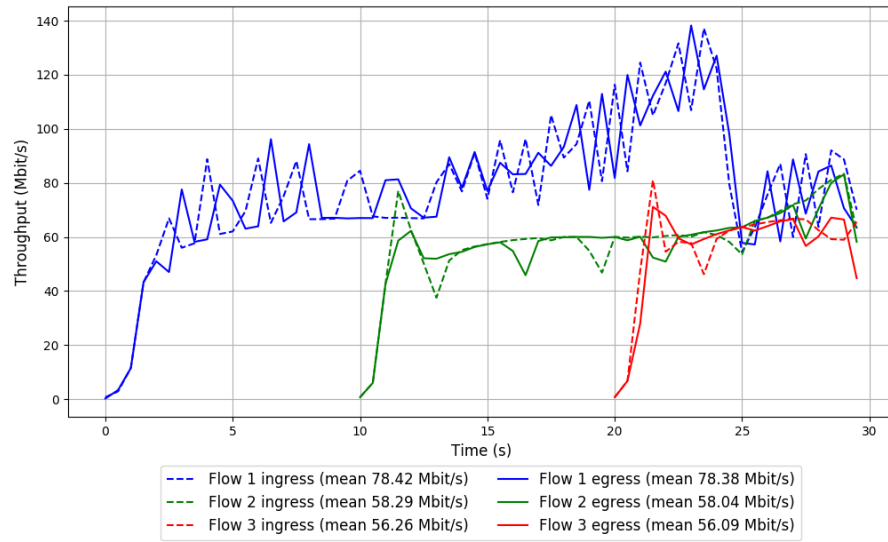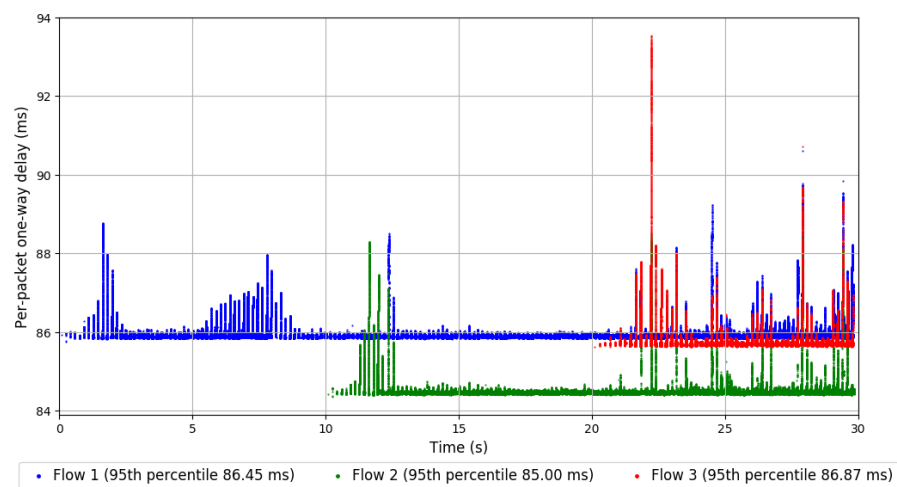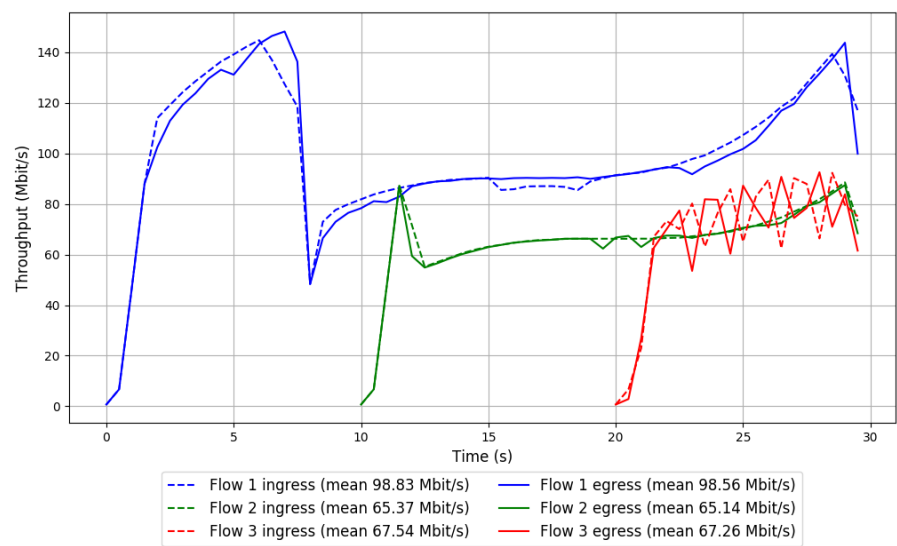
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2017-12-05 20:09:54
End at: 2017-12-05 20:10:24
Local clock offset: 1.177 ms
Remote clock offset: 6.0 ms


# Below is generated by plot.py at 2017-12-06 01:51:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 162.04 Mbit/s
95th percentile per-packet one-way delay: 81.465 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 86.76 Mbit/s
95th percentile per-packet one-way delay: 81.477 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 88.25 Mbit/s
95th percentile per-packet one-way delay: 80.756 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 51.19 Mbit/s
95th percentile per-packet one-way delay: 82.679 ms
Loss rate: 1.78%
```

Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 86.72 Mbit/s) --- Flow 1 egress (mean 86.76 Mbit/s)
Flow 2 ingress (mean 88.49 Mbit/s) --- Flow 2 egress (mean 88.25 Mbit/s)
Flow 3 ingress (mean 51.36 Mbit/s) --- Flow 3 egress (mean 51.19 Mbit/s)

Flow 1 (95th percentile 81.48 ms) • Flow 2 (95th percentile 80.76 ms) • Flow 3 (95th percentile 82.68 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2017-12-05 20:30:03
End at: 2017-12-05 20:30:33
Local clock offset: 0.809 ms
Remote clock offset: 6.206 ms

# Below is generated by plot.py at 2017-12-06 01:51:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.16 Mbit/s
95th percentile per-packet one-way delay: 80.659 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 78.38 Mbit/s
95th percentile per-packet one-way delay: 81.727 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 58.04 Mbit/s
95th percentile per-packet one-way delay: 78.293 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 56.09 Mbit/s
95th percentile per-packet one-way delay: 80.484 ms
Loss rate: 2.01%
```
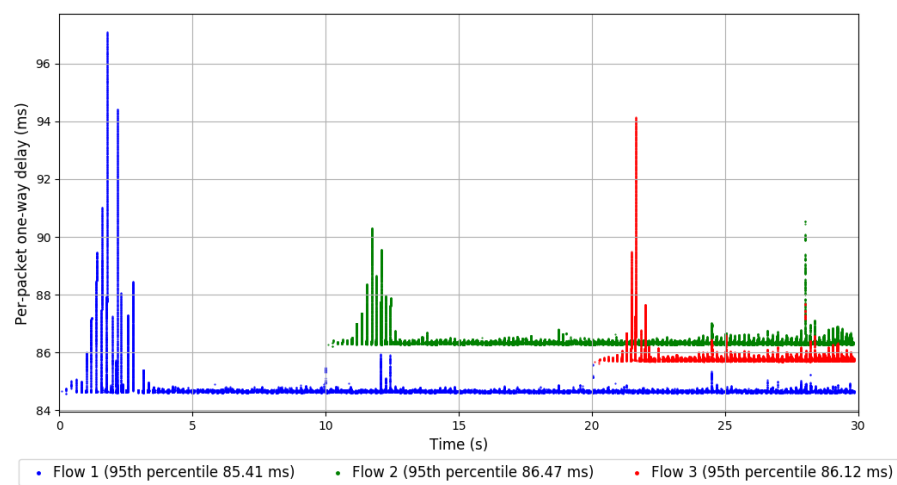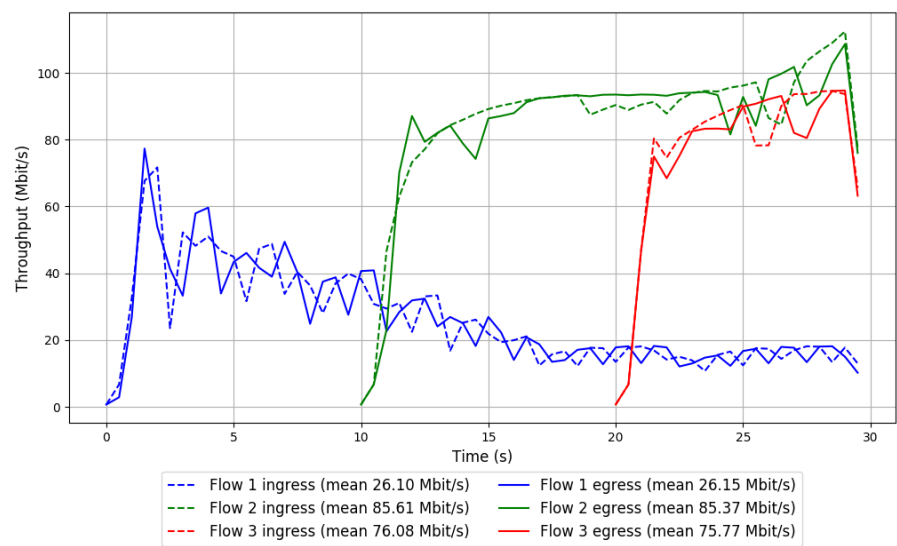
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 78.42 Mbit/s) Flow 1 egress (mean 78.38 Mbit/s)
Flow 2 ingress (mean 58.29 Mbit/s) Flow 2 egress (mean 58.04 Mbit/s)
Flow 3 ingress (mean 56.26 Mbit/s) Flow 3 egress (mean 56.09 Mbit/s)

Flow 1 (95th percentile 81.73 ms) Flow 2 (95th percentile 78.29 ms) Flow 3 (95th percentile 80.48 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2017-12-05 20:50:10
End at: 2017-12-05 20:50:40
Local clock offset: 0.377 ms
Remote clock offset: -0.957 ms


# Below is generated by plot.py at 2017-12-06 01:51:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 163.66 Mbit/s
95th percentile per-packet one-way delay: 86.382 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 98.56 Mbit/s
95th percentile per-packet one-way delay: 86.454 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 65.14 Mbit/s
95th percentile per-packet one-way delay: 84.996 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 67.26 Mbit/s
95th percentile per-packet one-way delay: 86.872 ms
Loss rate: 2.32%
```
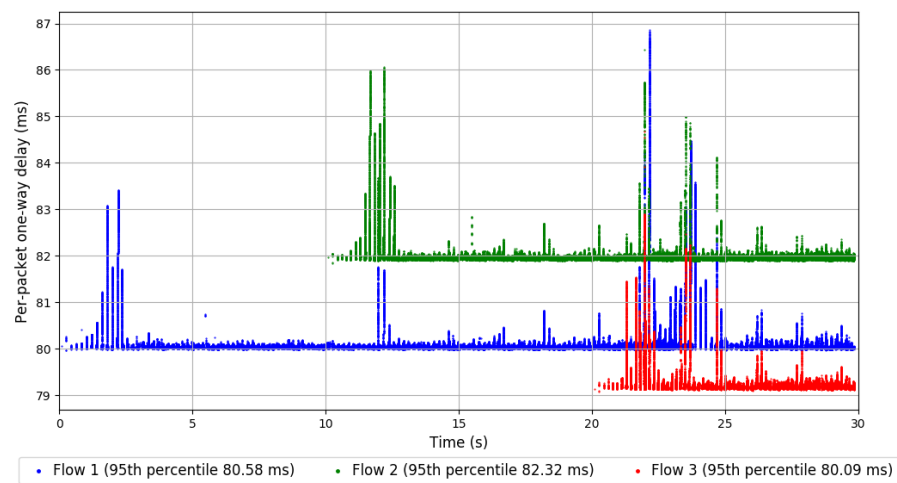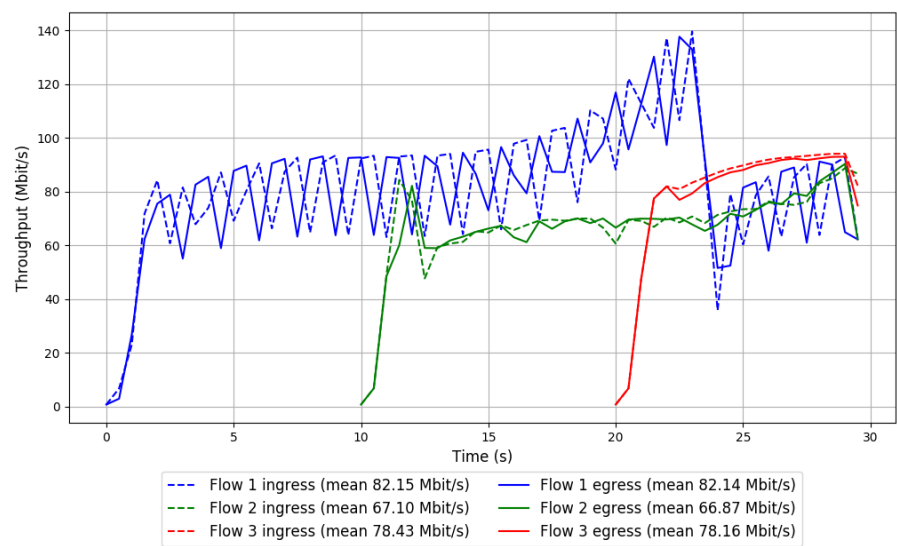
Run 6: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 98.83 Mbit/s) --- Flow 1 egress (mean 98.56 Mbit/s)
Flow 2 ingress (mean 65.37 Mbit/s) --- Flow 2 egress (mean 65.14 Mbit/s)
Flow 3 ingress (mean 67.54 Mbit/s) --- Flow 3 egress (mean 67.26 Mbit/s)

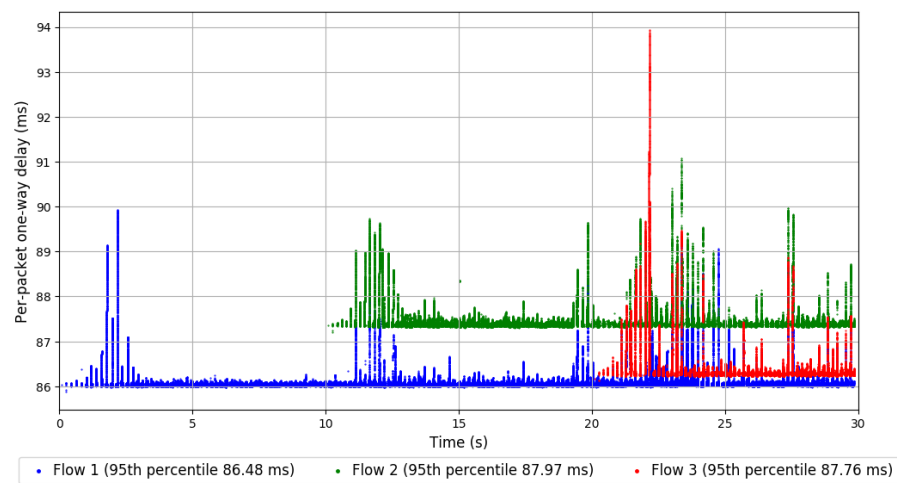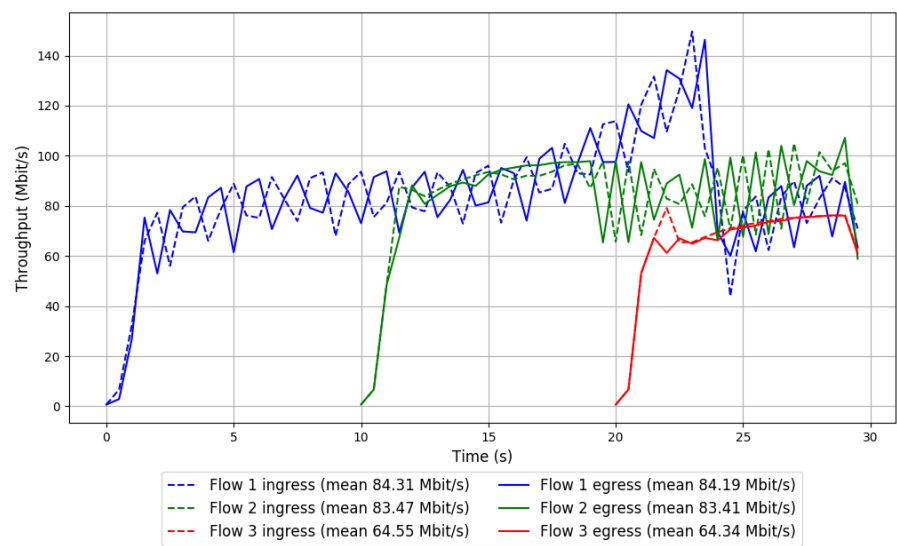Flow 1 (95th percentile 86.45 ms)   Flow 2 (95th percentile 85.00 ms)   Flow 3 (95th percentile 86.87 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2017-12-05 21:10:35
End at: 2017-12-05 21:11:05
Local clock offset: 0.148 ms
Remote clock offset: -2.412 ms


# Below is generated by plot.py at 2017-12-06 01:51:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.52 Mbit/s
95th percentile per-packet one-way delay: 86.434 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 26.15 Mbit/s
95th percentile per-packet one-way delay: 85.410 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 85.37 Mbit/s
95th percentile per-packet one-way delay: 86.469 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 75.77 Mbit/s
95th percentile per-packet one-way delay: 86.123 ms
Loss rate: 2.10%
```

Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2017-12-05 21:30:27
End at: 2017-12-05 21:30:57
Local clock offset: -0.042 ms
Remote clock offset: 2.178 ms


# Below is generated by plot.py at 2017-12-06 01:52:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 152.04 Mbit/s
95th percentile per-packet one-way delay: 82.012 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 82.14 Mbit/s
95th percentile per-packet one-way delay: 80.583 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 66.87 Mbit/s
95th percentile per-packet one-way delay: 82.322 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 78.16 Mbit/s
95th percentile per-packet one-way delay: 80.088 ms
Loss rate: 2.02%
```
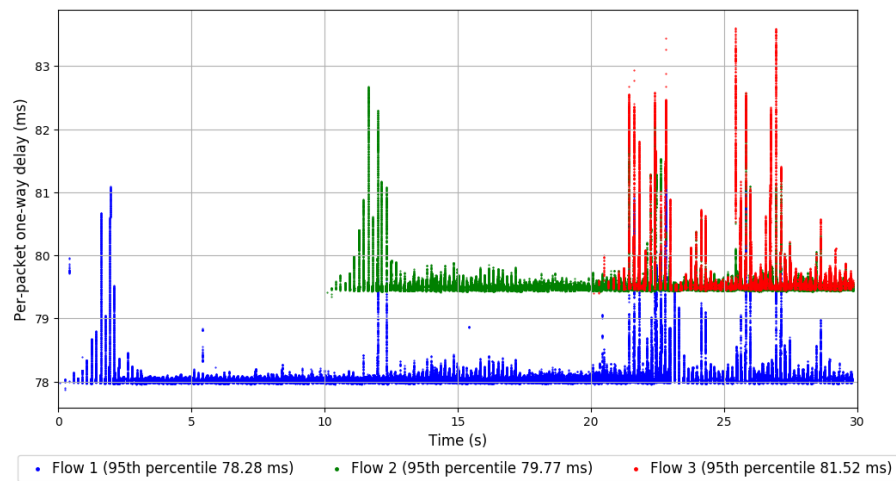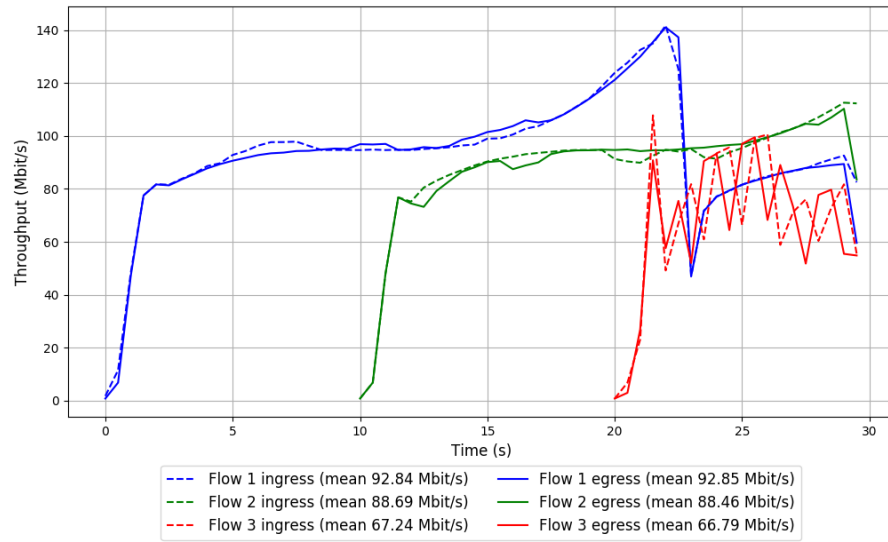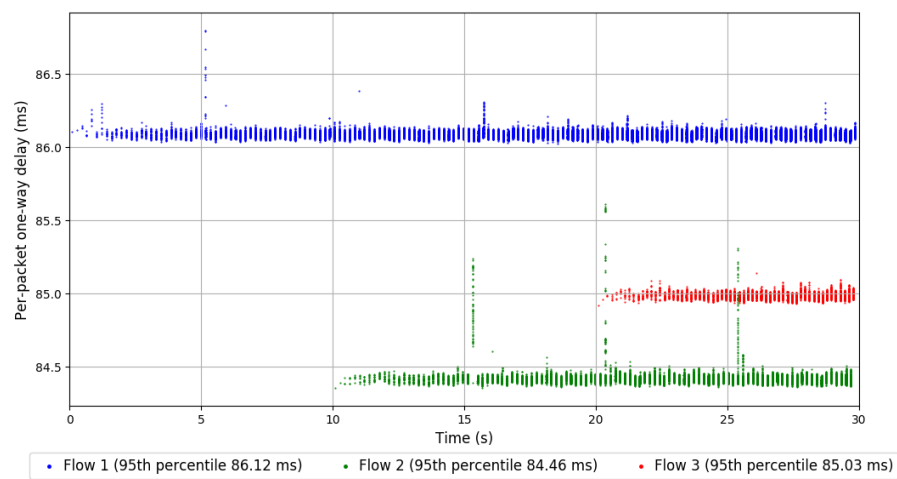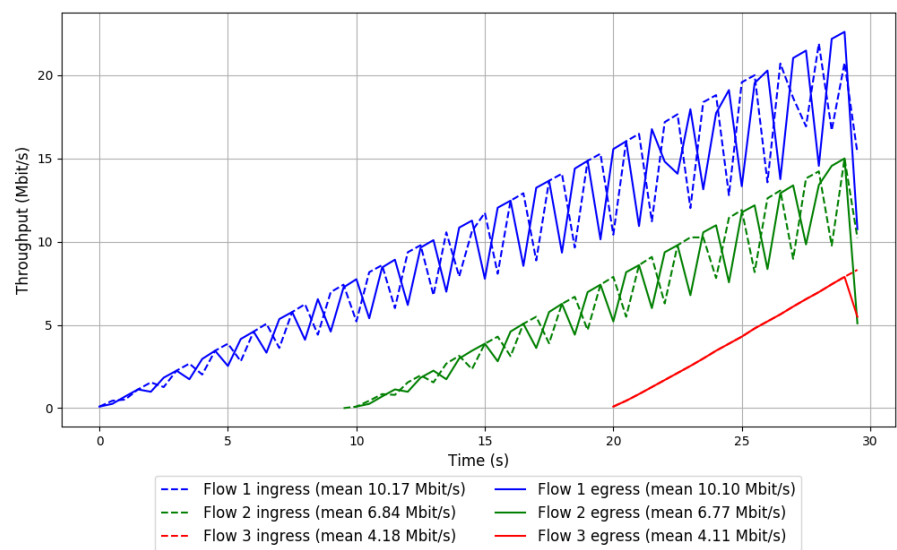
Run 8: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 82.15 Mbit/s)   Flow 1 egress (mean 82.14 Mbit/s)
Flow 2 ingress (mean 67.10 Mbit/s)   Flow 2 egress (mean 66.87 Mbit/s)
Flow 3 ingress (mean 78.43 Mbit/s)   Flow 3 egress (mean 78.16 Mbit/s)

Flow 1 (95th percentile 80.58 ms)   Flow 2 (95th percentile 82.32 ms)   Flow 3 (95th percentile 80.09 ms)

```
Run 9: Statistics of TCP Cubic

Start at: 2017-12-05 21:50:32
End at: 2017-12-05 21:51:02
Local clock offset: -0.602 ms
Remote clock offset: -3.806 ms


# Below is generated by plot.py at 2017-12-06 01:52:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 160.61 Mbit/s
95th percentile per-packet one-way delay: 87.544 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 84.19 Mbit/s
95th percentile per-packet one-way delay: 86.481 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 83.41 Mbit/s
95th percentile per-packet one-way delay: 87.970 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 64.34 Mbit/s
95th percentile per-packet one-way delay: 87.757 ms
Loss rate: 1.99%
```
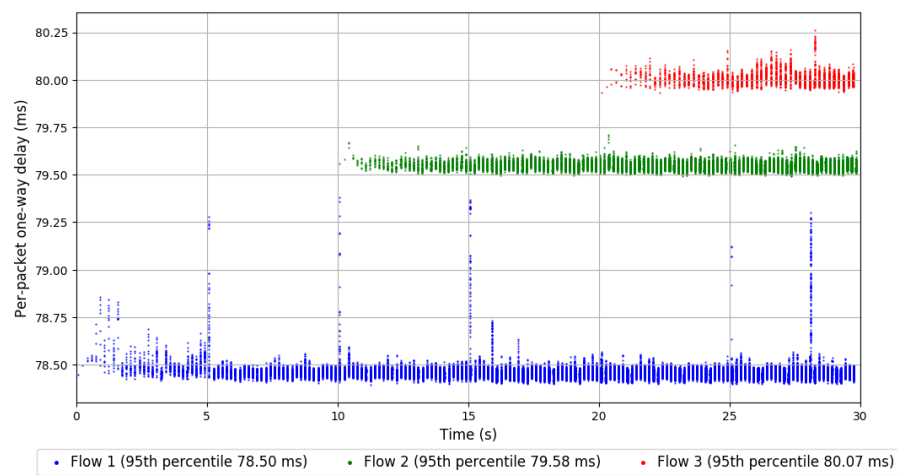
Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 84.31 Mbit/s)   Flow 1 egress (mean 84.19 Mbit/s)
Flow 2 ingress (mean 83.47 Mbit/s)   Flow 2 egress (mean 83.41 Mbit/s)
Flow 3 ingress (mean 64.55 Mbit/s)   Flow 3 egress (mean 64.34 Mbit/s)

Flow 1 (95th percentile 86.48 ms)   Flow 2 (95th percentile 87.97 ms)   Flow 3 (95th percentile 87.76 ms)

```
Run 10: Statistics of TCP Cubic

Start at: 2017-12-05 22:10:50
End at: 2017-12-05 22:11:20
Local clock offset: -1.345 ms
Remote clock offset: 2.12 ms


# Below is generated by plot.py at 2017-12-06 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 173.33 Mbit/s
95th percentile per-packet one-way delay: 79.741 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 92.85 Mbit/s
95th percentile per-packet one-way delay: 78.285 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 88.46 Mbit/s
95th percentile per-packet one-way delay: 79.772 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 66.79 Mbit/s
95th percentile per-packet one-way delay: 81.520 ms
Loss rate: 2.07%
```
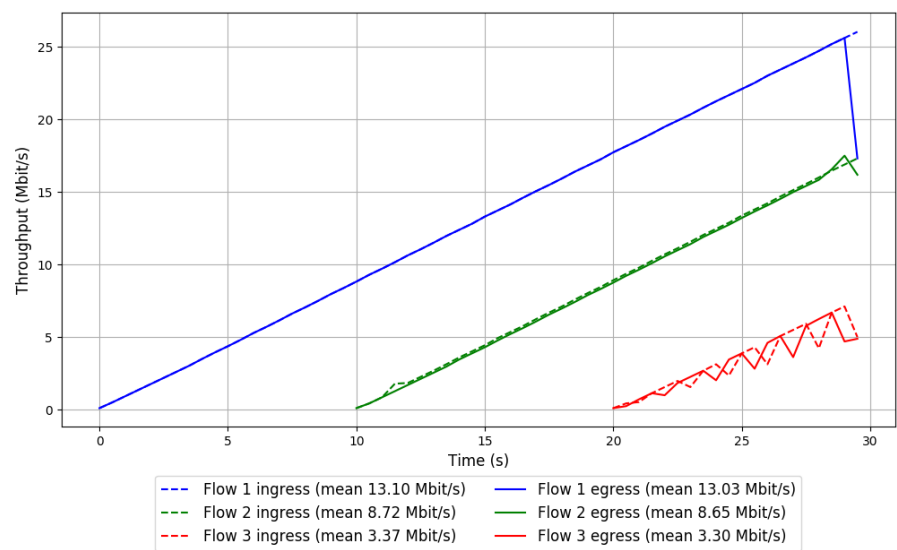
Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2017-12-05 19:13:09
End at: 2017-12-05 19:13:39
Local clock offset: 1.436 ms
Remote clock offset: -1.123 ms

# Below is generated by plot.py at 2017-12-06 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.90 Mbit/s
95th percentile per-packet one-way delay: 86.117 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 10.10 Mbit/s
95th percentile per-packet one-way delay: 86.121 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 84.456 ms
Loss rate: 1.90%
-- Flow 3:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 85.025 ms
Loss rate: 3.41%
```
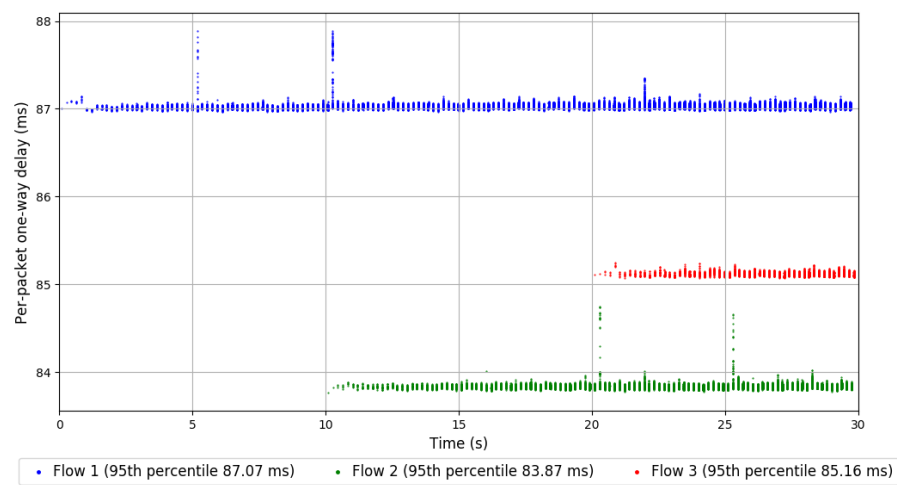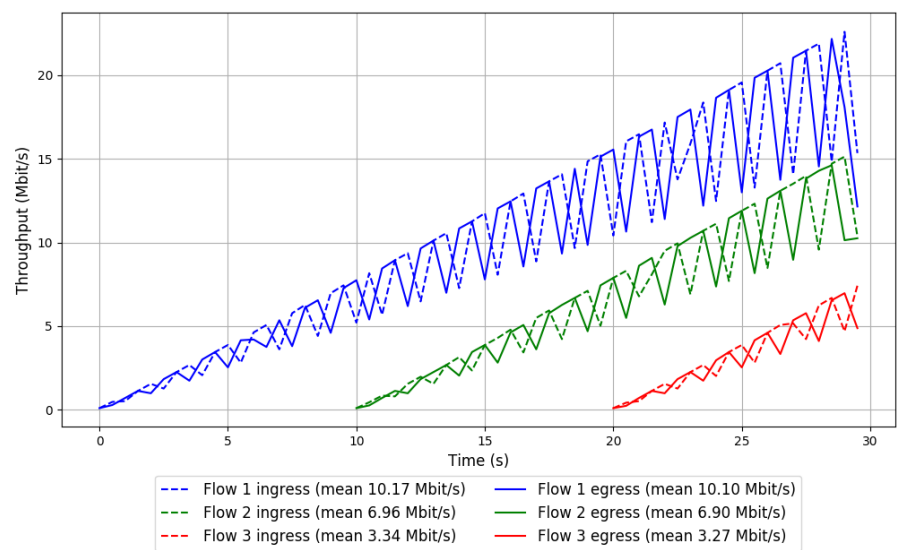
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 10.17 Mbit/s) --- Flow 1 egress (mean 10.10 Mbit/s)
Flow 2 ingress (mean 6.84 Mbit/s) --- Flow 2 egress (mean 6.77 Mbit/s)
Flow 3 ingress (mean 4.18 Mbit/s) --- Flow 3 egress (mean 4.11 Mbit/s)

• Flow 1 (95th percentile 86.12 ms) • Flow 2 (95th percentile 84.46 ms) • Flow 3 (95th percentile 85.03 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2017-12-05 19:33:20
End at: 2017-12-05 19:33:50
Local clock offset: 1.548 ms
Remote clock offset: 3.367 ms

# Below is generated by plot.py at 2017-12-06 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.81 Mbit/s
95th percentile per-packet one-way delay: 79.966 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 13.03 Mbit/s
95th percentile per-packet one-way delay: 78.497 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 8.65 Mbit/s
95th percentile per-packet one-way delay: 79.583 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 80.074 ms
Loss rate: 3.83%
```
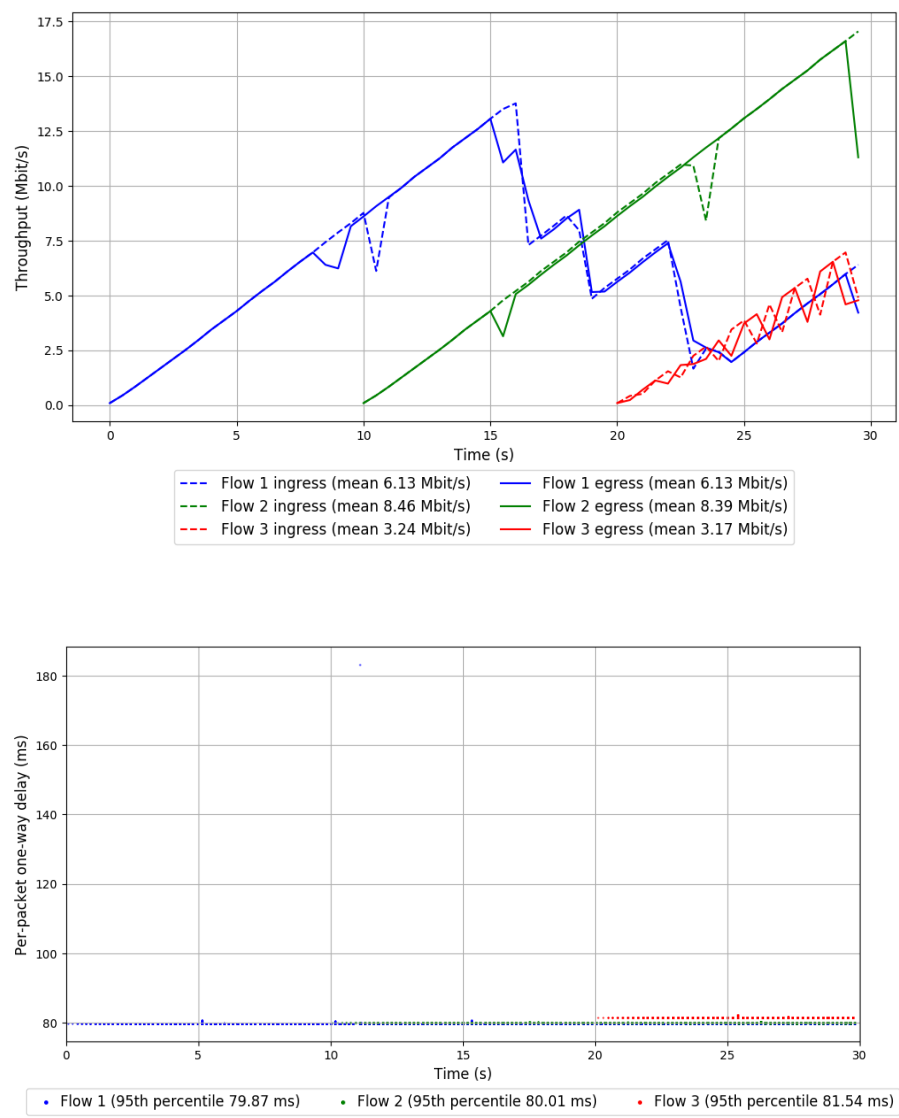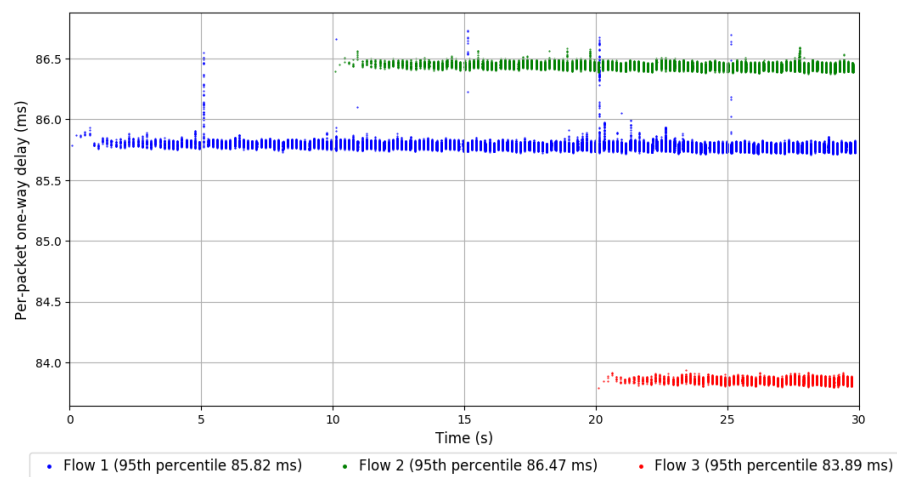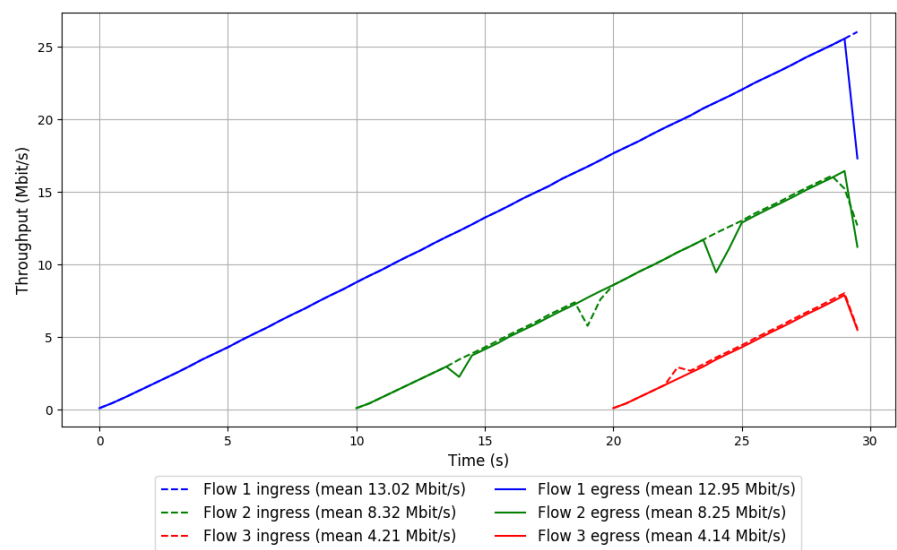
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2017-12-05 19:53:43
End at: 2017-12-05 19:54:13
Local clock offset: 1.349 ms
Remote clock offset: 4.22 ms
```

Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 8.28 Mbit/s) — Flow 1 egress (mean 8.21 Mbit/s)
Flow 2 ingress (mean 8.40 Mbit/s) — Flow 2 egress (mean 8.33 Mbit/s)
Flow 3 ingress (mean 4.06 Mbit/s) — Flow 3 egress (mean 3.99 Mbit/s)

Flow 1 (95th percentile 78.77 ms) • Flow 2 (95th percentile 78.33 ms) • Flow 3 (95th percentile 79.86 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2017-12-05 20:13:50
End at: 2017-12-05 20:14:20
Local clock offset: 1.132 ms
Remote clock offset: 0.113 ms

# Below is generated by plot.py at 2017-12-06 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.68 Mbit/s
95th percentile per-packet one-way delay: 87.060 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 10.10 Mbit/s
95th percentile per-packet one-way delay: 87.066 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 6.90 Mbit/s
95th percentile per-packet one-way delay: 83.870 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 85.160 ms
Loss rate: 3.83%
```
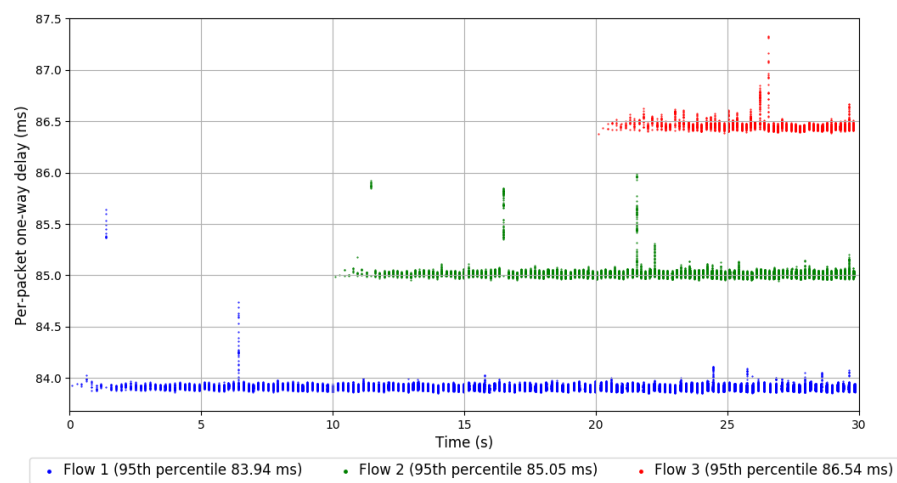
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 10.17 Mbit/s) --- Flow 1 egress (mean 10.10 Mbit/s)
Flow 2 ingress (mean 6.96 Mbit/s) --- Flow 2 egress (mean 6.90 Mbit/s)
Flow 3 ingress (mean 3.34 Mbit/s) --- Flow 3 egress (mean 3.27 Mbit/s)

Flow 1 (95th percentile 87.07 ms) • Flow 2 (95th percentile 83.87 ms) • Flow 3 (95th percentile 85.16 ms)
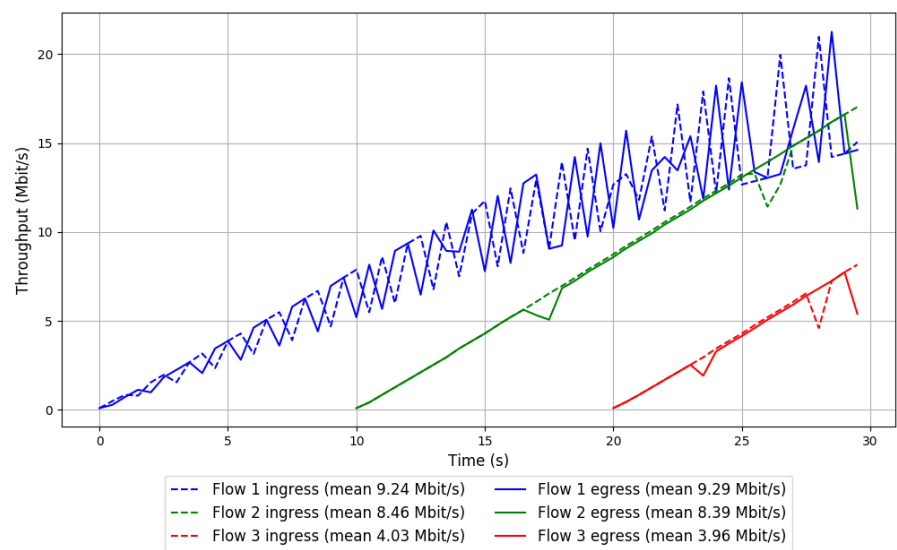
51

```
Run 5: Statistics of LEDBAT

Start at: 2017-12-05 20:34:00
End at: 2017-12-05 20:34:30
Local clock offset: 0.708 ms
Remote clock offset: 5.179 ms

# Below is generated by plot.py at 2017-12-06 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.72 Mbit/s
95th percentile per-packet one-way delay: 81.488 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 6.13 Mbit/s
95th percentile per-packet one-way delay: 79.867 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 80.013 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 3.17 Mbit/s
95th percentile per-packet one-way delay: 81.540 ms
Loss rate: 3.91%
```
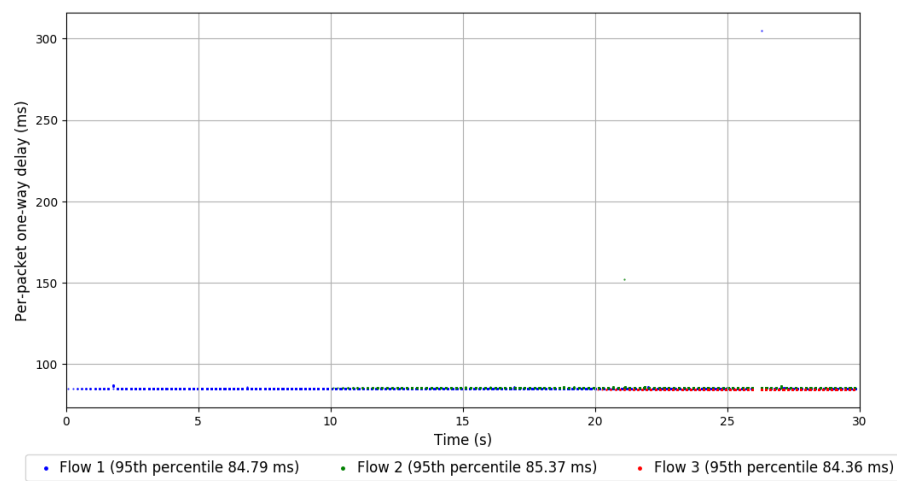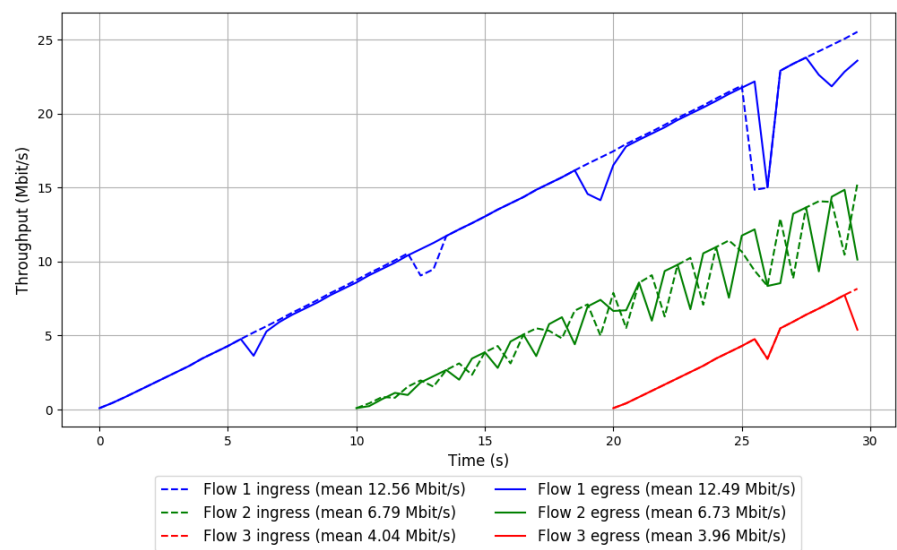
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 6.13 Mbit/s) — — — Flow 1 egress (mean 6.13 Mbit/s)
Flow 2 ingress (mean 8.46 Mbit/s) — — — Flow 2 egress (mean 8.39 Mbit/s)
Flow 3 ingress (mean 3.24 Mbit/s) — — — Flow 3 egress (mean 3.17 Mbit/s)

Flow 1 (95th percentile 79.87 ms) • Flow 2 (95th percentile 80.01 ms) • Flow 3 (95th percentile 81.54 ms)

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```
Run 6: Statistics of LEDBAT

Start at: 2017-12-05 20:54:13
End at: 2017-12-05 20:54:43
Local clock offset: 0.241 ms
Remote clock offset: -0.838 ms


# Below is generated by plot.py at 2017-12-06 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.73 Mbit/s
95th percentile per-packet one-way delay: 86.458 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 85.818 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 8.25 Mbit/s
95th percentile per-packet one-way delay: 86.474 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 83.885 ms
Loss rate: 3.42%
```
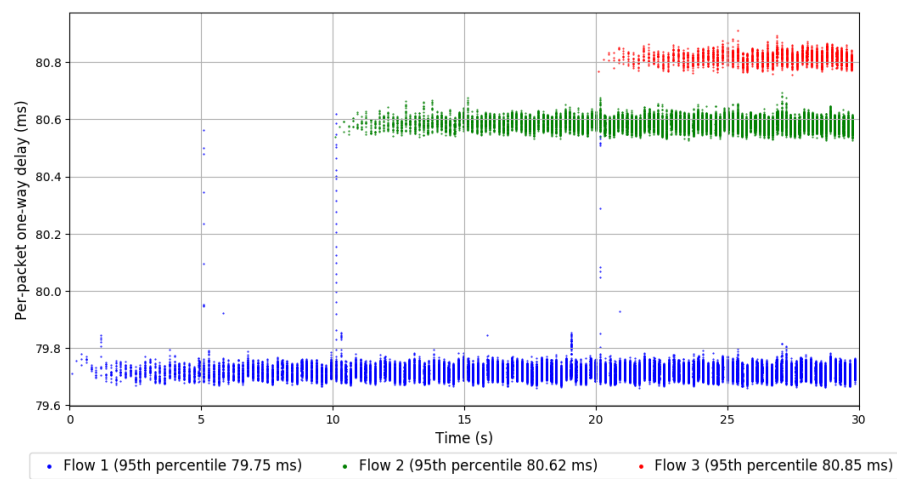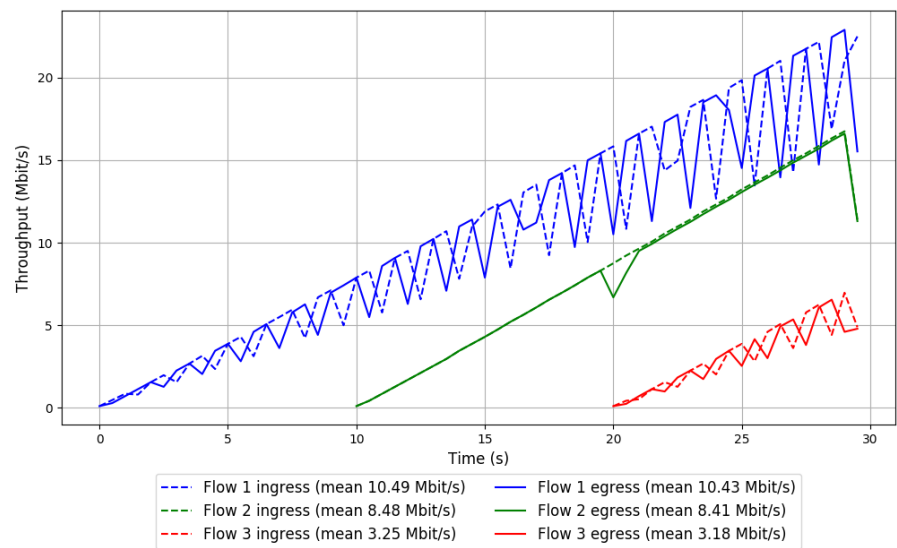
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2017-12-05 21:14:30
End at: 2017-12-05 21:15:00
Local clock offset: 0.115 ms
Remote clock offset: -1.847 ms
```

Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2017-12-05 21:34:21
End at: 2017-12-05 21:34:51
Local clock offset: -0.166 ms
Remote clock offset: -2.788 ms

# Below is generated by plot.py at 2017-12-06 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.13 Mbit/s
95th percentile per-packet one-way delay: 86.442 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 9.29 Mbit/s
95th percentile per-packet one-way delay: 83.941 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 85.050 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 3.96 Mbit/s
95th percentile per-packet one-way delay: 86.540 ms
Loss rate: 3.48%
```
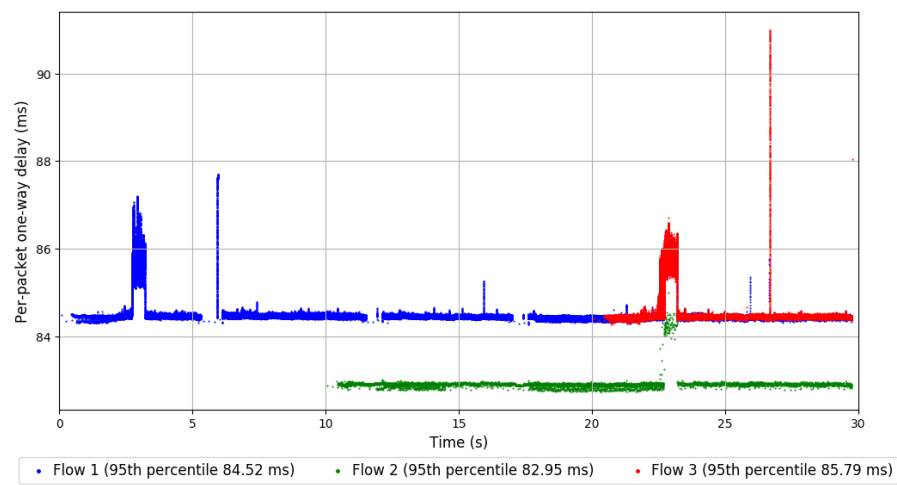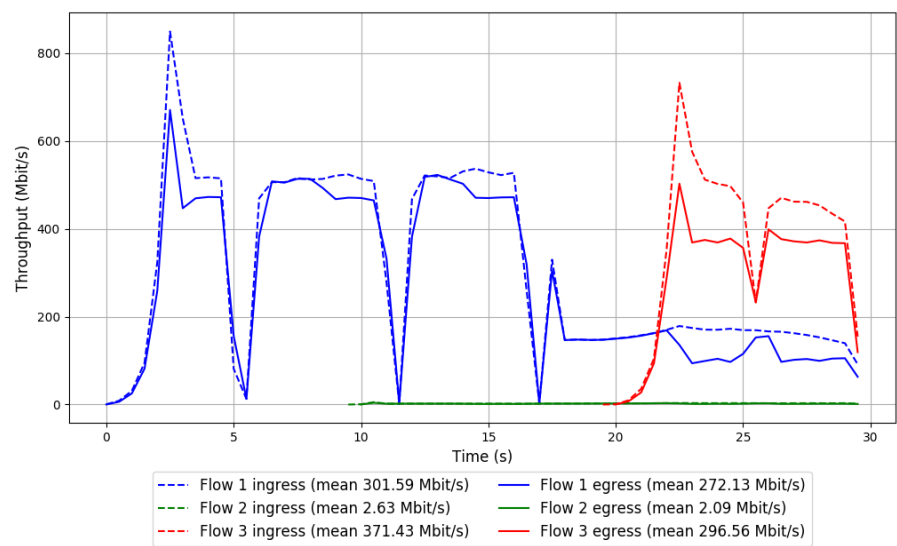
Run 8: Report of LEDBAT — Data Link

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```
Run 9: Statistics of LEDBAT

Start at: 2017-12-05 21:54:30
End at: 2017-12-05 21:55:00
Local clock offset: -0.821 ms
Remote clock offset: -3.029 ms


# Below is generated by plot.py at 2017-12-06 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.23 Mbit/s
95th percentile per-packet one-way delay: 85.354 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 84.790 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 85.372 ms
Loss rate: 1.90%
-- Flow 3:
Average throughput: 3.96 Mbit/s
95th percentile per-packet one-way delay: 84.361 ms
Loss rate: 3.48%
```
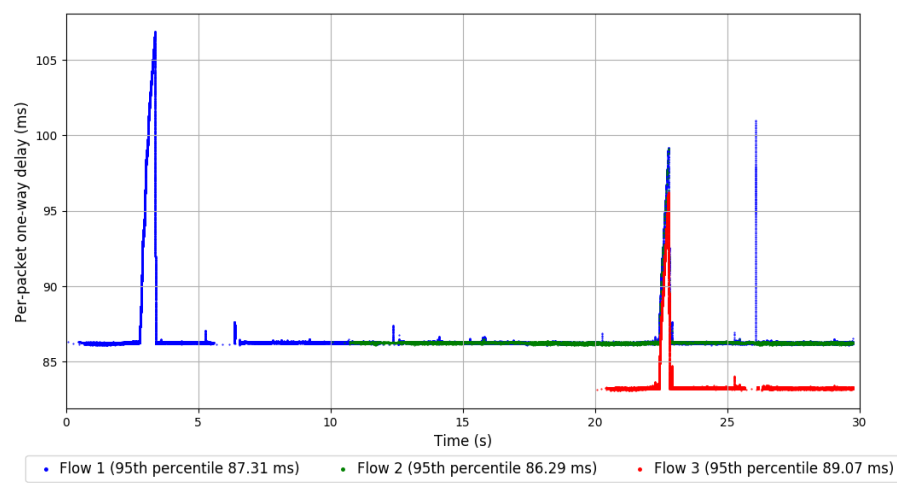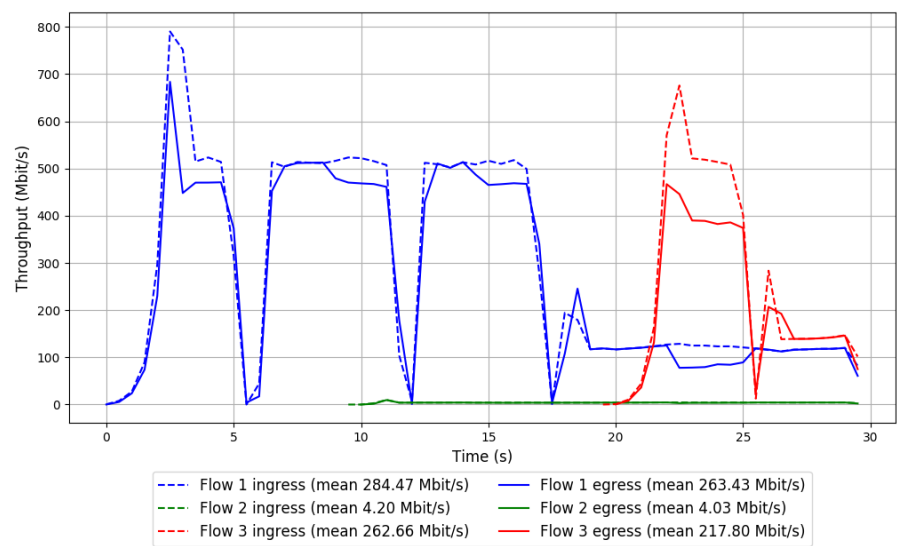
Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.56 Mbit/s) --- Flow 1 egress (mean 12.49 Mbit/s)
Flow 2 ingress (mean 6.79 Mbit/s) --- Flow 2 egress (mean 6.73 Mbit/s)
Flow 3 ingress (mean 4.04 Mbit/s) --- Flow 3 egress (mean 3.96 Mbit/s)

• Flow 1 (95th percentile 84.79 ms)   • Flow 2 (95th percentile 85.37 ms)   • Flow 3 (95th percentile 84.36 ms)

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```
Run 10: Statistics of LEDBAT

Start at: 2017-12-05 22:14:47
End at: 2017-12-05 22:15:17
Local clock offset: -1.478 ms
Remote clock offset: 0.556 ms

# Below is generated by plot.py at 2017-12-06 01:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.01 Mbit/s
95th percentile per-packet one-way delay: 80.796 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 10.43 Mbit/s
95th percentile per-packet one-way delay: 79.751 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 8.41 Mbit/s
95th percentile per-packet one-way delay: 80.618 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 80.849 ms
Loss rate: 3.87%
```
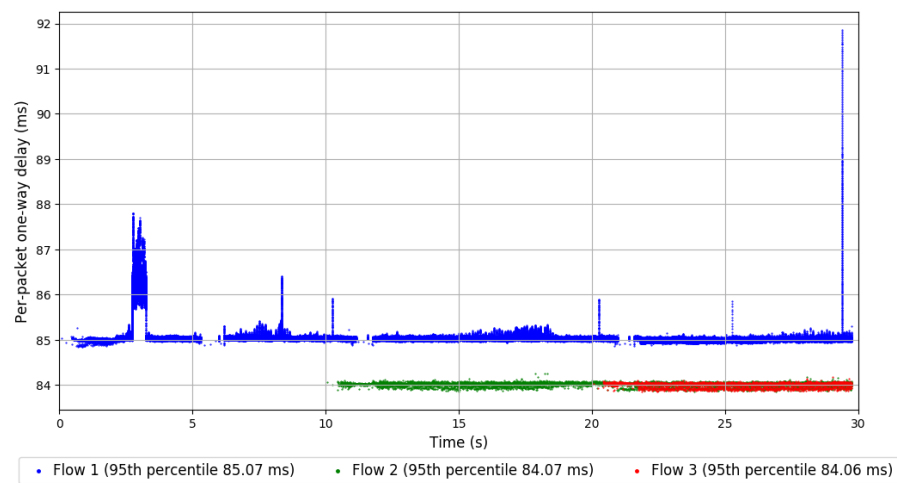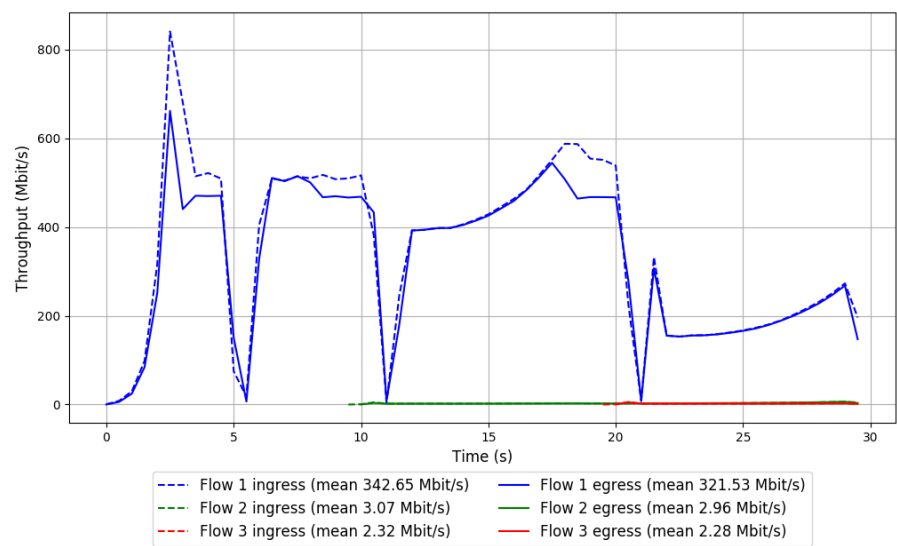
Run 10: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 10.49 Mbit/s) —— Flow 1 egress (mean 10.43 Mbit/s)
- - - Flow 2 ingress (mean 8.48 Mbit/s) —— Flow 2 egress (mean 8.41 Mbit/s)
- - - Flow 3 ingress (mean 3.25 Mbit/s) —— Flow 3 egress (mean 3.18 Mbit/s)

• Flow 1 (95th percentile 79.75 ms)　　• Flow 2 (95th percentile 80.62 ms)　　• Flow 3 (95th percentile 80.85 ms)

63

```
Run 1: Statistics of PCC

Start at: 2017-12-05 19:02:31
End at: 2017-12-05 19:03:01
Local clock offset: 1.343 ms
Remote clock offset: -1.151 ms


# Below is generated by plot.py at 2017-12-06 01:56:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 370.22 Mbit/s
95th percentile per-packet one-way delay: 85.468 ms
Loss rate: 13.55%
-- Flow 1:
Average throughput: 272.13 Mbit/s
95th percentile per-packet one-way delay: 84.522 ms
Loss rate: 10.28%
-- Flow 2:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 82.953 ms
Loss rate: 21.30%
-- Flow 3:
Average throughput: 296.56 Mbit/s
95th percentile per-packet one-way delay: 85.793 ms
Loss rate: 21.49%
```
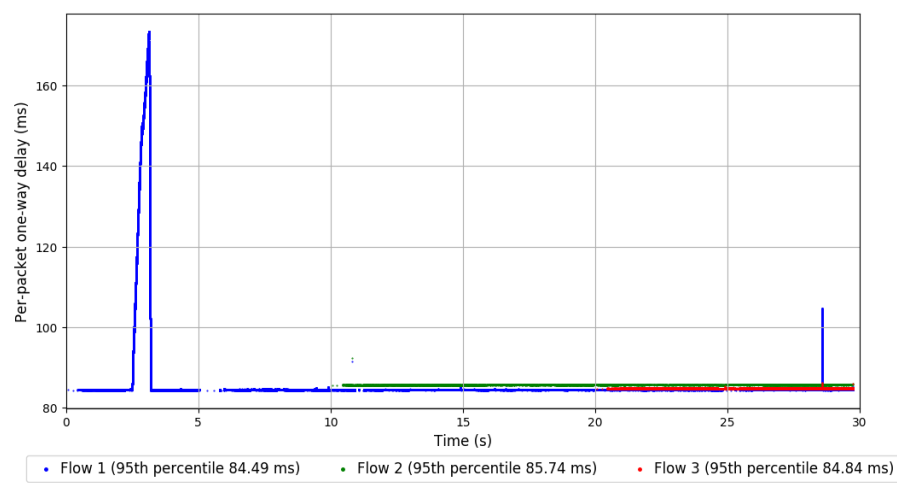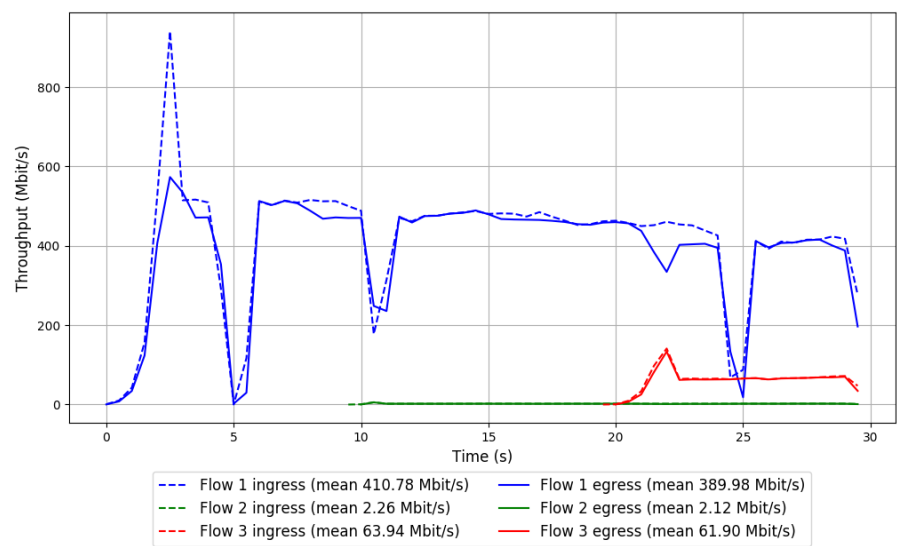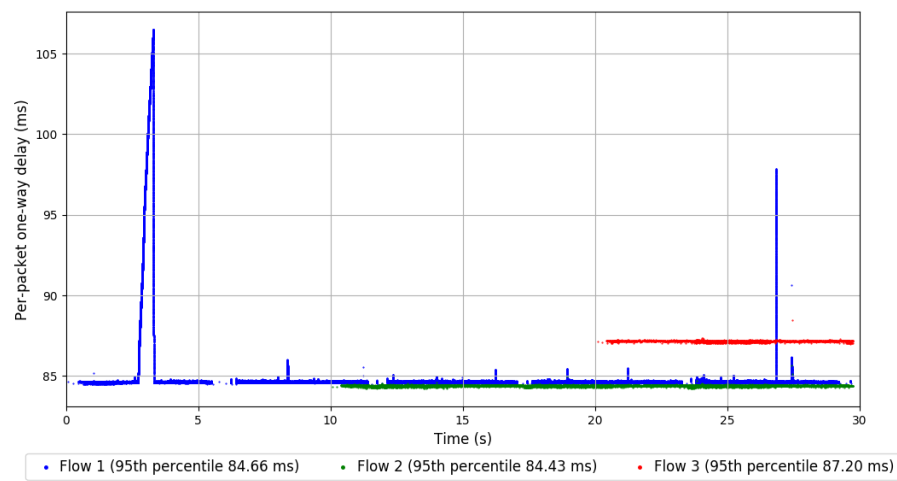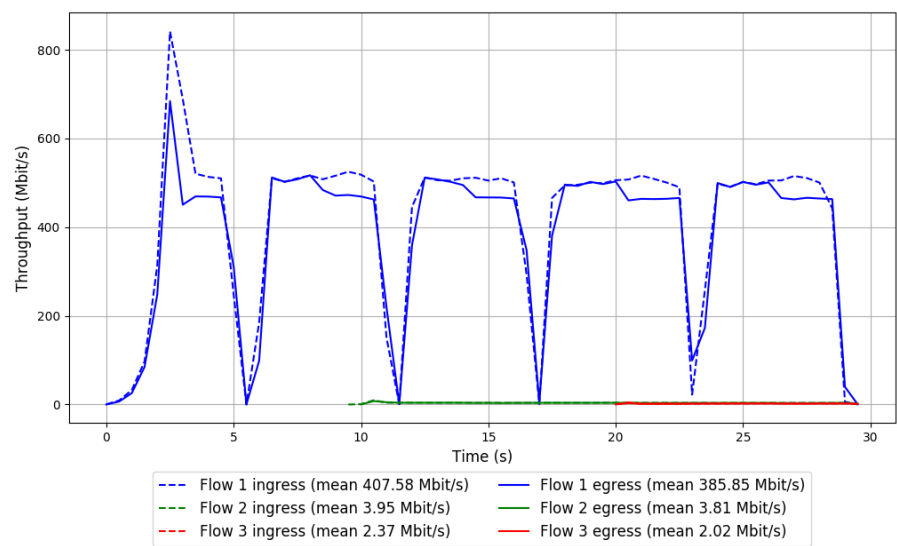
Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 301.59 Mbit/s) — — —   Flow 1 egress (mean 272.13 Mbit/s)
Flow 2 ingress (mean 2.63 Mbit/s) — — —   Flow 2 egress (mean 2.09 Mbit/s)
Flow 3 ingress (mean 371.43 Mbit/s) — — —   Flow 3 egress (mean 296.56 Mbit/s)

Flow 1 (95th percentile 84.52 ms)   Flow 2 (95th percentile 82.95 ms)   Flow 3 (95th percentile 85.79 ms)

65

```
Run 2: Statistics of PCC

Start at: 2017-12-05 19:22:41
End at: 2017-12-05 19:23:12
Local clock offset: 1.533 ms
Remote clock offset: -1.218 ms


# Below is generated by plot.py at 2017-12-06 01:56:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.19 Mbit/s
95th percentile per-packet one-way delay: 88.180 ms
Loss rate: 10.35%
-- Flow 1:
Average throughput: 263.43 Mbit/s
95th percentile per-packet one-way delay: 87.312 ms
Loss rate: 7.92%
-- Flow 2:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 86.287 ms
Loss rate: 4.96%
-- Flow 3:
Average throughput: 217.80 Mbit/s
95th percentile per-packet one-way delay: 89.072 ms
Loss rate: 18.48%
```
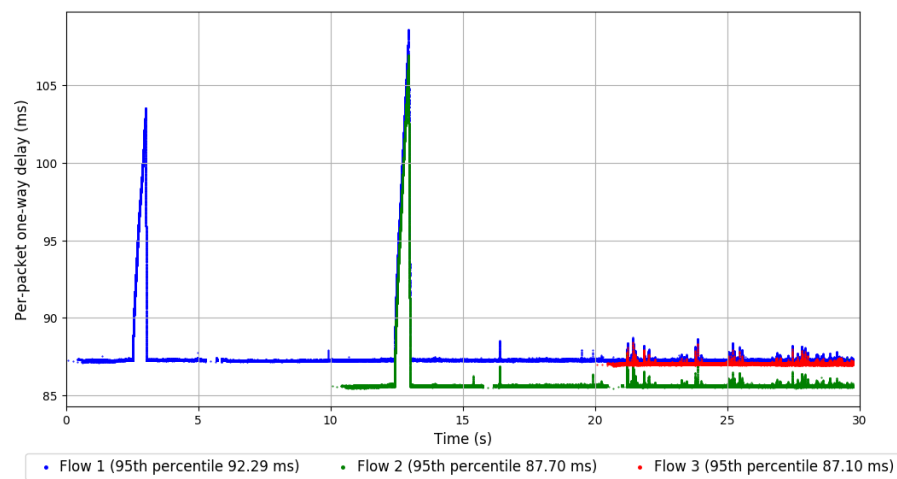
Run 2: Report of PCC — Data Link

Flow 1 ingress (mean 284.47 Mbit/s) — Flow 1 egress (mean 263.43 Mbit/s)
Flow 2 ingress (mean 4.20 Mbit/s) — Flow 2 egress (mean 4.03 Mbit/s)
Flow 3 ingress (mean 262.66 Mbit/s) — Flow 3 egress (mean 217.80 Mbit/s)

Flow 1 (95th percentile 87.31 ms)   Flow 2 (95th percentile 86.29 ms)   Flow 3 (95th percentile 89.07 ms)
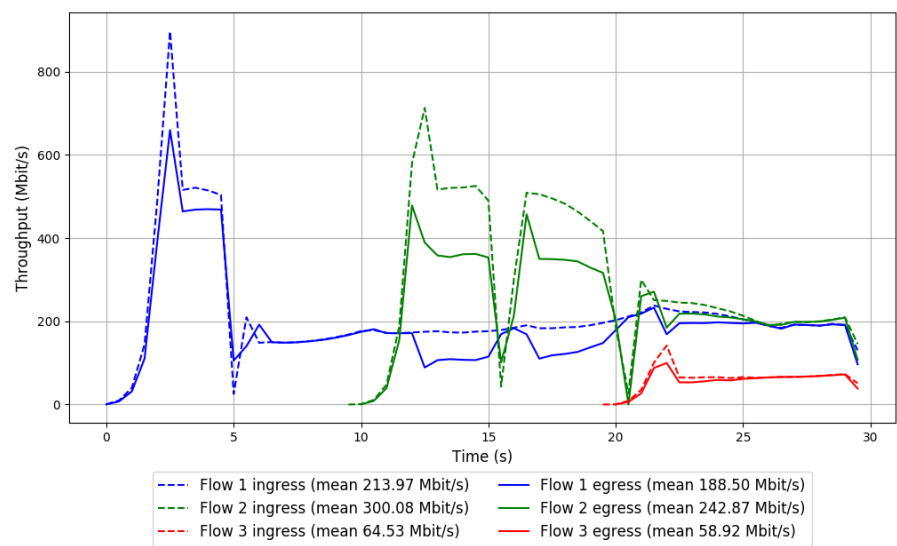
```
Run 3: Statistics of PCC

Start at: 2017-12-05 19:43:00
End at: 2017-12-05 19:43:30
Local clock offset: 1.551 ms
Remote clock offset: -1.056 ms


# Below is generated by plot.py at 2017-12-06 01:56:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.24 Mbit/s
95th percentile per-packet one-way delay: 85.072 ms
Loss rate: 6.67%
-- Flow 1:
Average throughput: 321.53 Mbit/s
95th percentile per-packet one-way delay: 85.072 ms
Loss rate: 6.69%
-- Flow 2:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 84.073 ms
Loss rate: 4.43%
-- Flow 3:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 84.063 ms
Loss rate: 3.51%
```

Run 3: Report of PCC — Data Link

69

```
Run 4: Statistics of PCC

Start at: 2017-12-05 20:03:20
End at: 2017-12-05 20:03:50
Local clock offset: 1.215 ms
Remote clock offset: 0.191 ms

# Below is generated by plot.py at 2017-12-06 01:57:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.58 Mbit/s
95th percentile per-packet one-way delay: 84.817 ms
Loss rate: 5.56%
-- Flow 1:
Average throughput: 389.98 Mbit/s
95th percentile per-packet one-way delay: 84.494 ms
Loss rate: 5.60%
-- Flow 2:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 85.744 ms
Loss rate: 6.77%
-- Flow 3:
Average throughput: 61.90 Mbit/s
95th percentile per-packet one-way delay: 84.837 ms
Loss rate: 4.84%
```
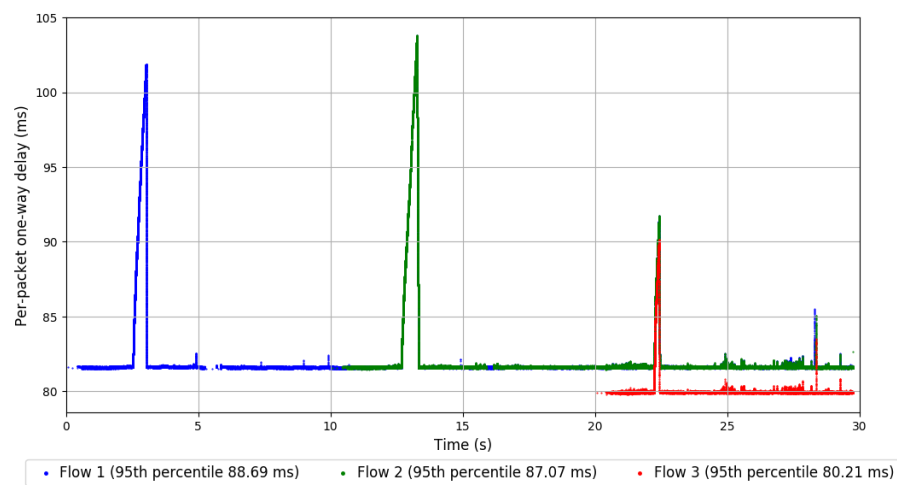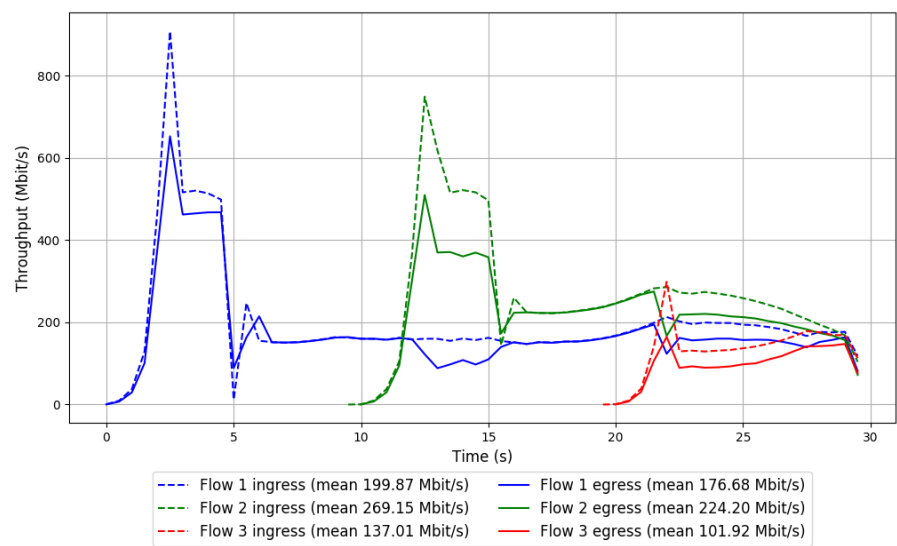
Run 4: Report of PCC — Data Link

Flow 1 ingress (mean 410.78 Mbit/s) --- Flow 1 egress (mean 389.98 Mbit/s)
Flow 2 ingress (mean 2.26 Mbit/s) --- Flow 2 egress (mean 2.12 Mbit/s)
Flow 3 ingress (mean 63.94 Mbit/s) --- Flow 3 egress (mean 61.90 Mbit/s)

Flow 1 (95th percentile 84.49 ms)   Flow 2 (95th percentile 85.74 ms)   Flow 3 (95th percentile 84.84 ms)

```
Run 5: Statistics of PCC

Start at: 2017-12-05 20:23:27
End at: 2017-12-05 20:23:57
Local clock offset: 0.967 ms
Remote clock offset: -0.392 ms


# Below is generated by plot.py at 2017-12-06 01:57:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.12 Mbit/s
95th percentile per-packet one-way delay: 84.658 ms
Loss rate: 5.85%
-- Flow 1:
Average throughput: 385.85 Mbit/s
95th percentile per-packet one-way delay: 84.656 ms
Loss rate: 5.84%
-- Flow 2:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 84.426 ms
Loss rate: 4.42%
-- Flow 3:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 87.200 ms
Loss rate: 16.19%
```
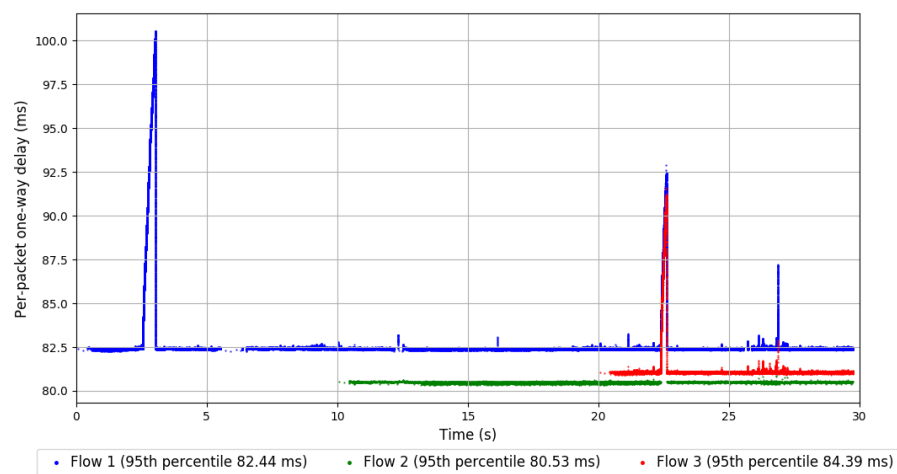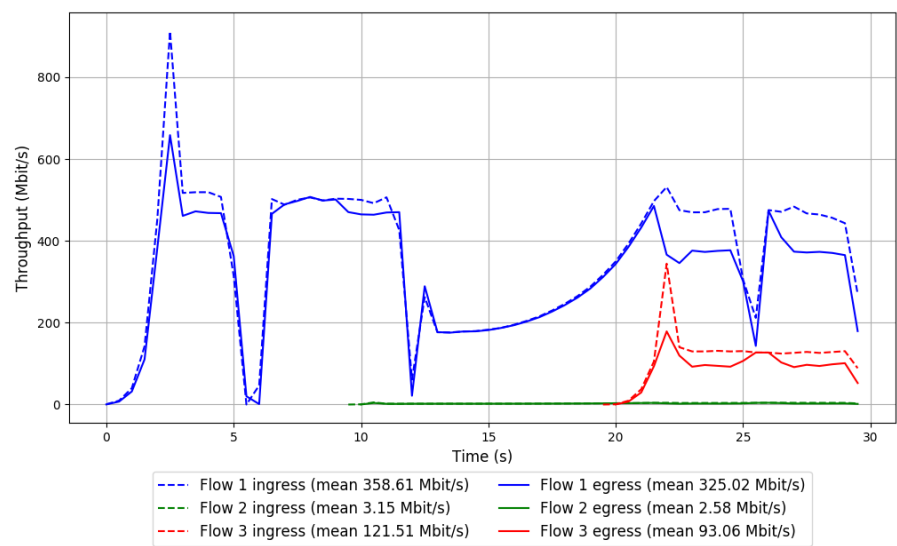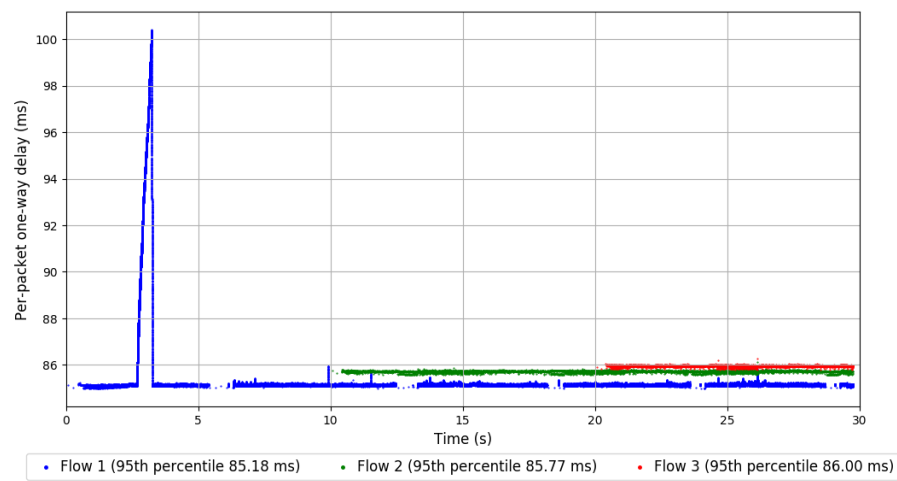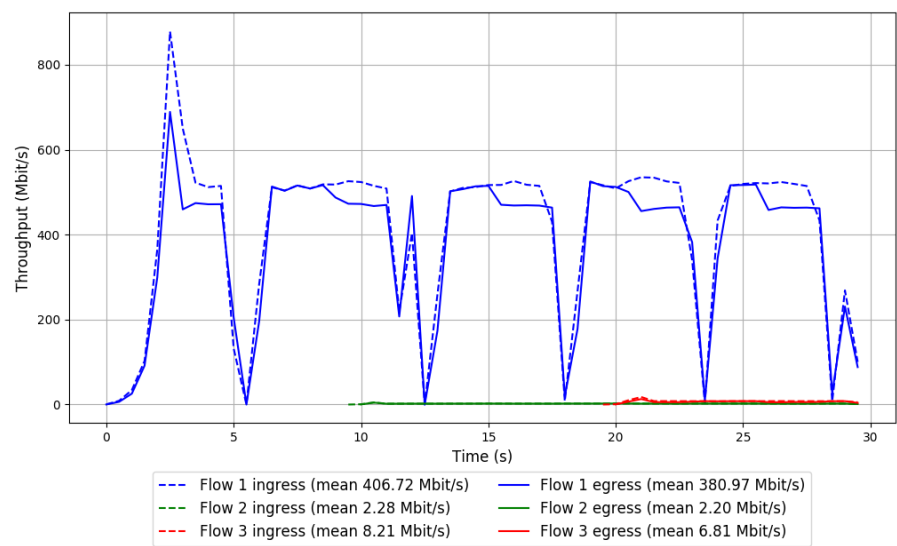
Run 5: Report of PCC — Data Link

Flow 1 ingress (mean 407.58 Mbit/s) — Flow 1 egress (mean 385.85 Mbit/s)
Flow 2 ingress (mean 3.95 Mbit/s) — Flow 2 egress (mean 3.81 Mbit/s)
Flow 3 ingress (mean 2.37 Mbit/s) — Flow 3 egress (mean 2.02 Mbit/s)

Flow 1 (95th percentile 84.66 ms) — Flow 2 (95th percentile 84.43 ms) — Flow 3 (95th percentile 87.20 ms)

```
Run 6: Statistics of PCC

Start at: 2017-12-05 20:43:38
End at: 2017-12-05 20:44:08
Local clock offset: 0.451 ms
Remote clock offset: -0.964 ms

# Below is generated by plot.py at 2017-12-06 01:57:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 368.92 Mbit/s
95th percentile per-packet one-way delay: 90.313 ms
Loss rate: 15.67%
-- Flow 1:
Average throughput: 188.50 Mbit/s
95th percentile per-packet one-way delay: 92.289 ms
Loss rate: 12.40%
-- Flow 2:
Average throughput: 242.87 Mbit/s
95th percentile per-packet one-way delay: 87.703 ms
Loss rate: 19.75%
-- Flow 3:
Average throughput: 58.92 Mbit/s
95th percentile per-packet one-way delay: 87.104 ms
Loss rate: 10.27%
```
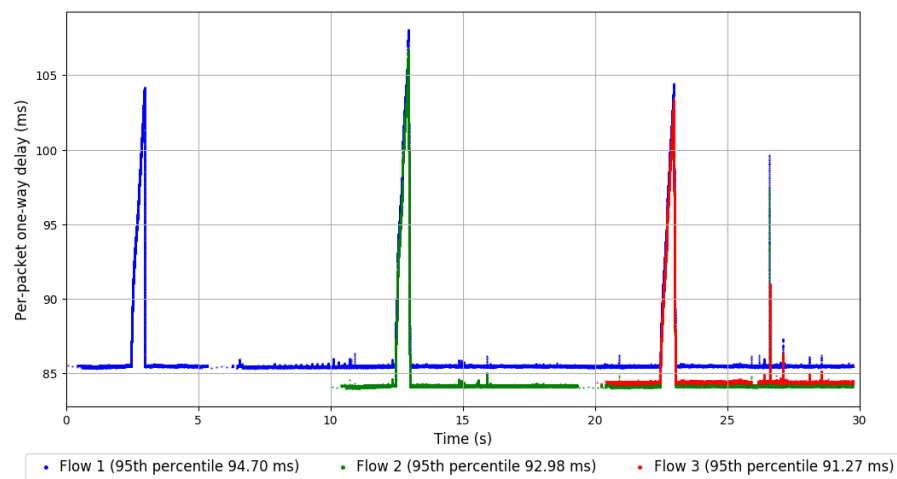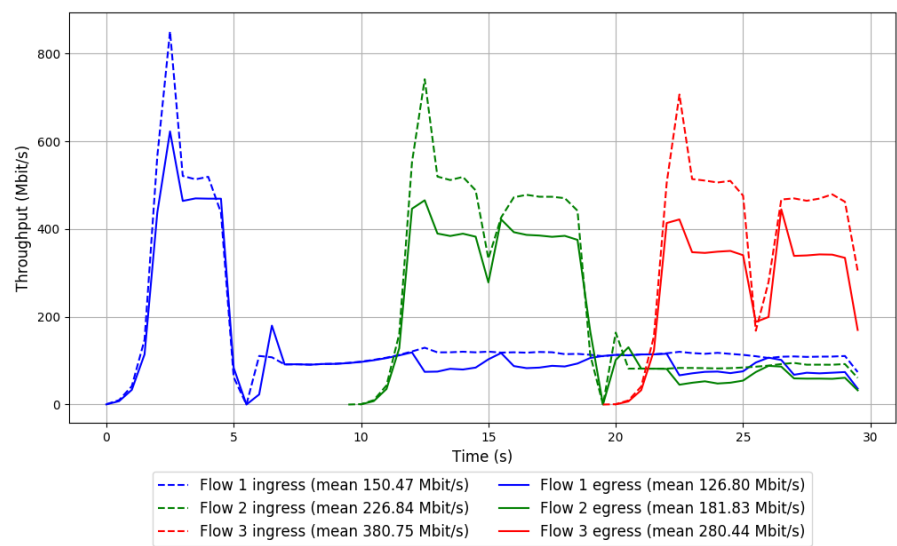
Run 6: Report of PCC — Data Link

Flow 1 ingress (mean 213.97 Mbit/s) Flow 1 egress (mean 188.50 Mbit/s)
Flow 2 ingress (mean 300.08 Mbit/s) Flow 2 egress (mean 242.87 Mbit/s)
Flow 3 ingress (mean 64.53 Mbit/s) Flow 3 egress (mean 58.92 Mbit/s)

Flow 1 (95th percentile 92.29 ms)   Flow 2 (95th percentile 87.70 ms)   Flow 3 (95th percentile 87.10 ms)

75

```
Run 7: Statistics of PCC

Start at: 2017-12-05 21:03:54
End at: 2017-12-05 21:04:24
Local clock offset: 0.194 ms
Remote clock offset: 3.498 ms

# Below is generated by plot.py at 2017-12-06 01:57:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.67 Mbit/s
95th percentile per-packet one-way delay: 87.363 ms
Loss rate: 15.92%
-- Flow 1:
Average throughput: 176.68 Mbit/s
95th percentile per-packet one-way delay: 88.693 ms
Loss rate: 12.11%
-- Flow 2:
Average throughput: 224.20 Mbit/s
95th percentile per-packet one-way delay: 87.073 ms
Loss rate: 17.41%
-- Flow 3:
Average throughput: 101.92 Mbit/s
95th percentile per-packet one-way delay: 80.210 ms
Loss rate: 26.89%
```
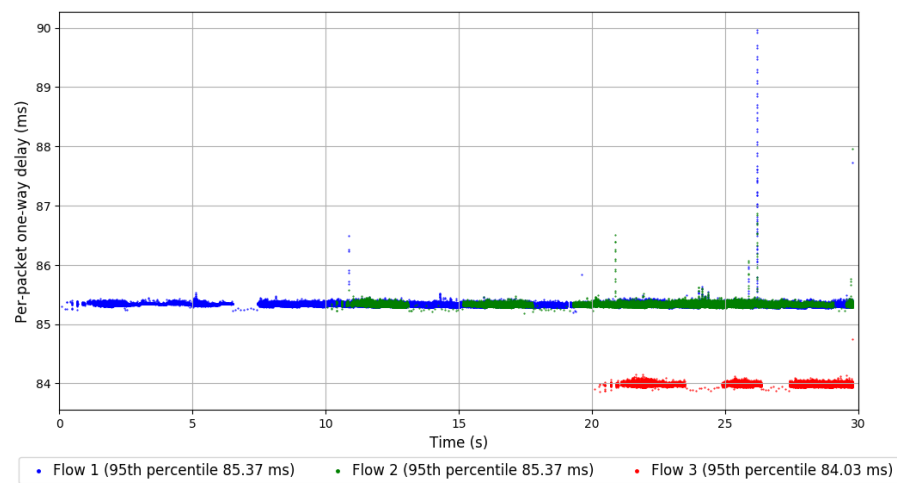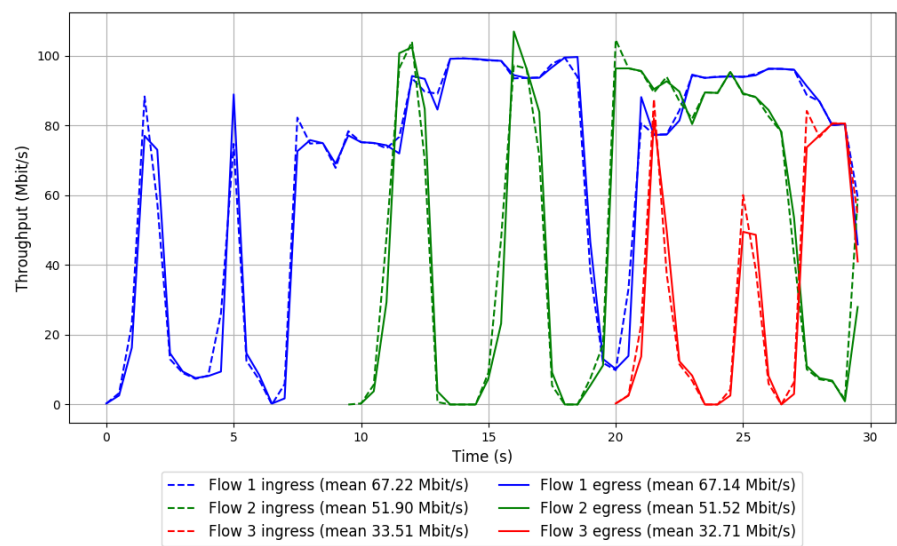
Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 199.87 Mbit/s) ----- Flow 1 egress (mean 176.68 Mbit/s) ——
Flow 2 ingress (mean 269.15 Mbit/s) ----- Flow 2 egress (mean 224.20 Mbit/s) ——
Flow 3 ingress (mean 137.01 Mbit/s) ----- Flow 3 egress (mean 101.92 Mbit/s) ——

Flow 1 (95th percentile 88.69 ms) • Flow 2 (95th percentile 87.07 ms) • Flow 3 (95th percentile 80.21 ms)

```
Run 8: Statistics of PCC

Start at: 2017-12-05 21:23:55
End at: 2017-12-05 21:24:25
Local clock offset: 0.016 ms
Remote clock offset: 1.913 ms


# Below is generated by plot.py at 2017-12-06 01:58:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.11 Mbit/s
95th percentile per-packet one-way delay: 82.444 ms
Loss rate: 11.41%
-- Flow 1:
Average throughput: 325.02 Mbit/s
95th percentile per-packet one-way delay: 82.444 ms
Loss rate: 9.88%
-- Flow 2:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 80.528 ms
Loss rate: 18.77%
-- Flow 3:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 84.389 ms
Loss rate: 24.73%
```
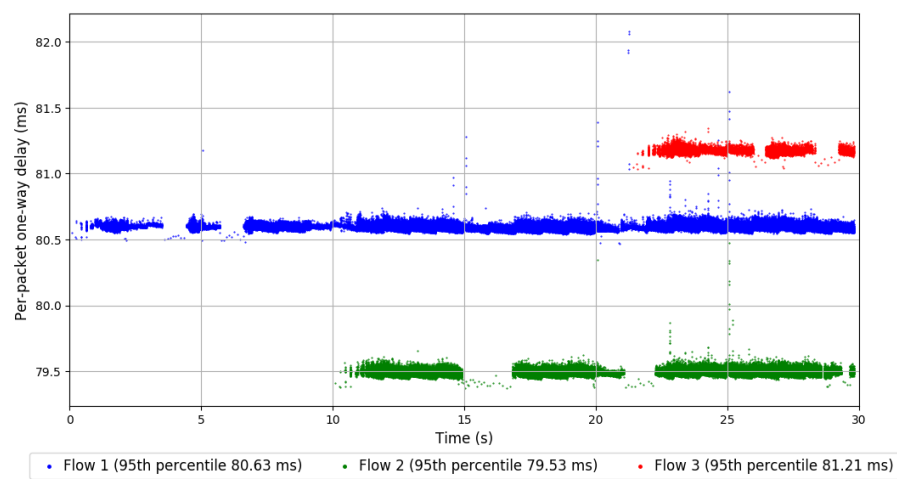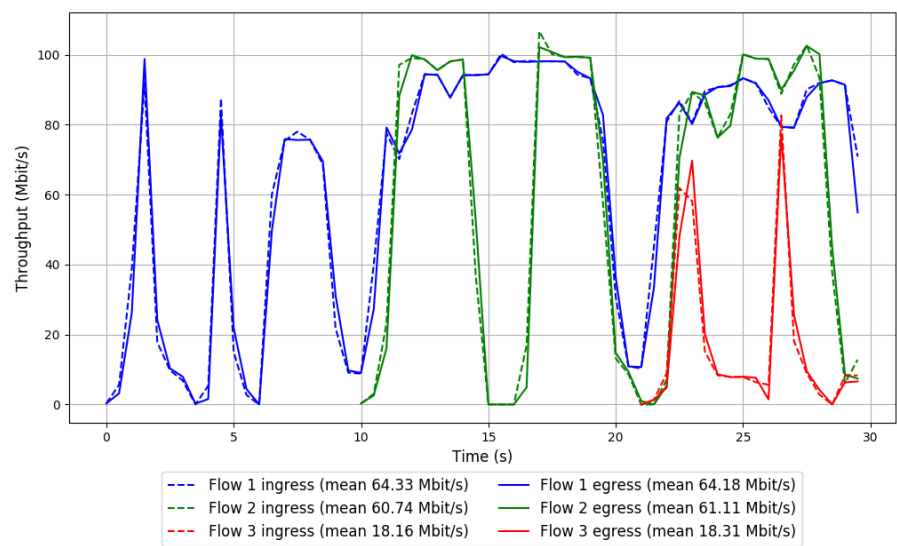
Run 8: Report of PCC — Data Link

```
Run 9: Statistics of PCC

Start at: 2017-12-05 21:44:03
End at: 2017-12-05 21:44:33
Local clock offset: -0.331 ms
Remote clock offset: -3.356 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.65 Mbit/s
95th percentile per-packet one-way delay: 85.187 ms
Loss rate: 6.93%
-- Flow 1:
Average throughput: 380.97 Mbit/s
95th percentile per-packet one-way delay: 85.179 ms
Loss rate: 6.86%
-- Flow 2:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 85.770 ms
Loss rate: 4.39%
-- Flow 3:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 86.000 ms
Loss rate: 18.49%
```
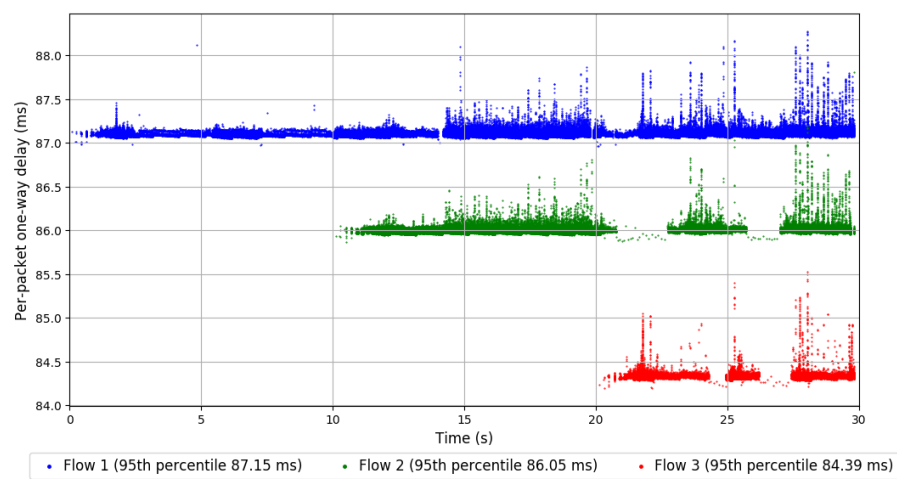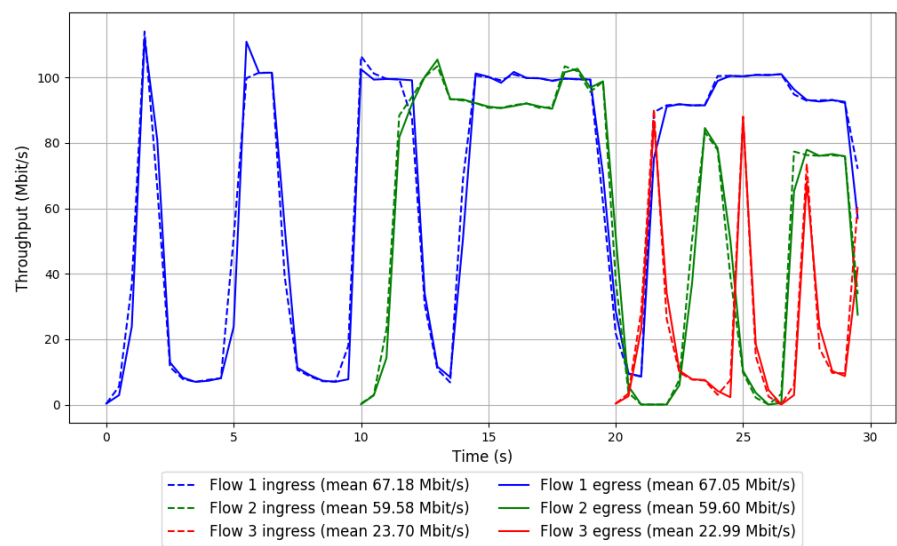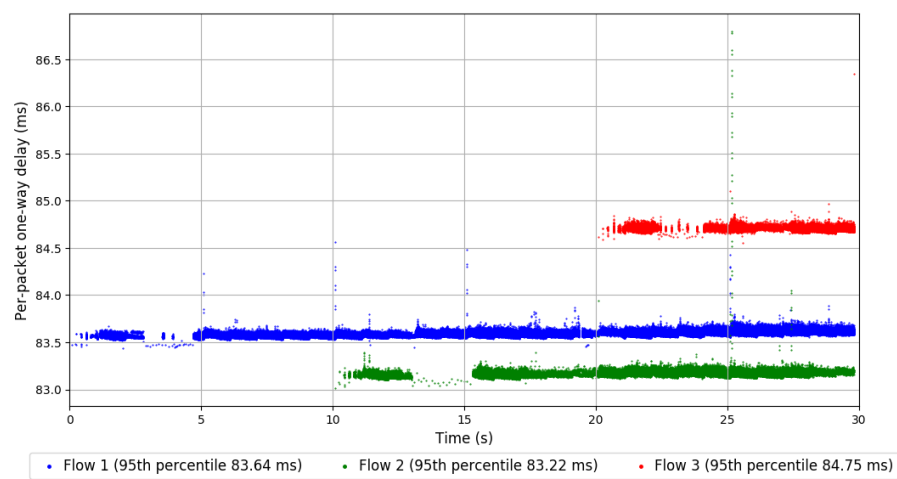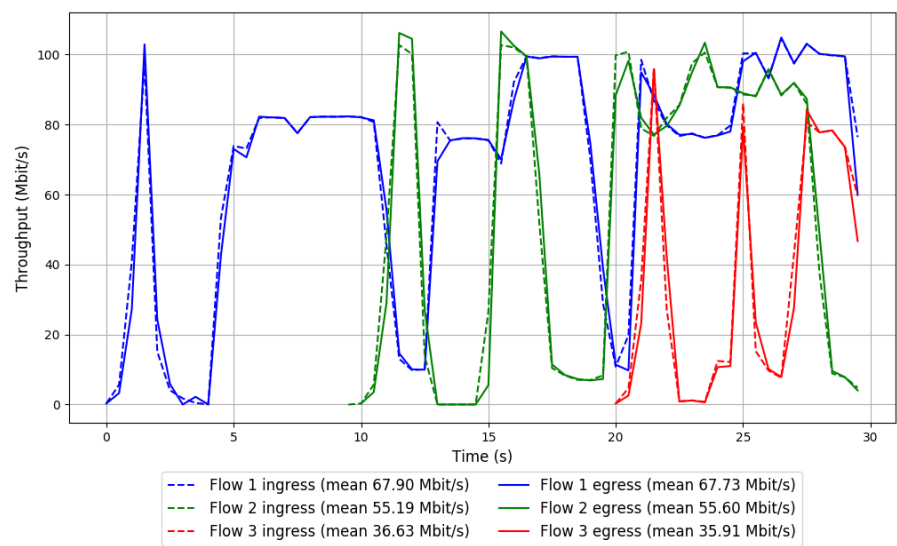
Run 9: Report of PCC — Data Link

Flow 1 ingress (mean 406.72 Mbit/s) —— Flow 1 egress (mean 380.97 Mbit/s)
Flow 2 ingress (mean 2.28 Mbit/s) —— Flow 2 egress (mean 2.20 Mbit/s)
Flow 3 ingress (mean 8.21 Mbit/s) —— Flow 3 egress (mean 6.81 Mbit/s)

Flow 1 (95th percentile 85.18 ms)   Flow 2 (95th percentile 85.77 ms)   Flow 3 (95th percentile 86.00 ms)

81

```
Run 10: Statistics of PCC

Start at: 2017-12-05 22:04:09
End at: 2017-12-05 22:04:39
Local clock offset: -1.098 ms
Remote clock offset: -3.939 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.02 Mbit/s
95th percentile per-packet one-way delay: 93.616 ms
Loss rate: 21.08%
-- Flow 1:
Average throughput: 126.80 Mbit/s
95th percentile per-packet one-way delay: 94.696 ms
Loss rate: 16.21%
-- Flow 2:
Average throughput: 181.83 Mbit/s
95th percentile per-packet one-way delay: 92.979 ms
Loss rate: 20.51%
-- Flow 3:
Average throughput: 280.44 Mbit/s
95th percentile per-packet one-way delay: 91.265 ms
Loss rate: 27.59%
```
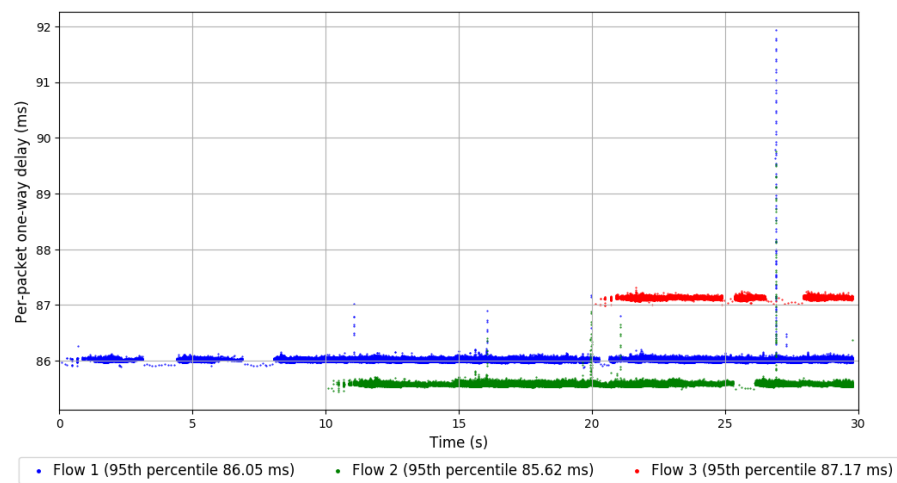
Run 10: Report of PCC — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-05 18:57:04
End at: 2017-12-05 18:57:34
Local clock offset: 1.133 ms
Remote clock offset: -2.087 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.02 Mbit/s
95th percentile per-packet one-way delay: 85.366 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 67.14 Mbit/s
95th percentile per-packet one-way delay: 85.366 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 51.52 Mbit/s
95th percentile per-packet one-way delay: 85.370 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 32.71 Mbit/s
95th percentile per-packet one-way delay: 84.027 ms
Loss rate: 4.03%
```
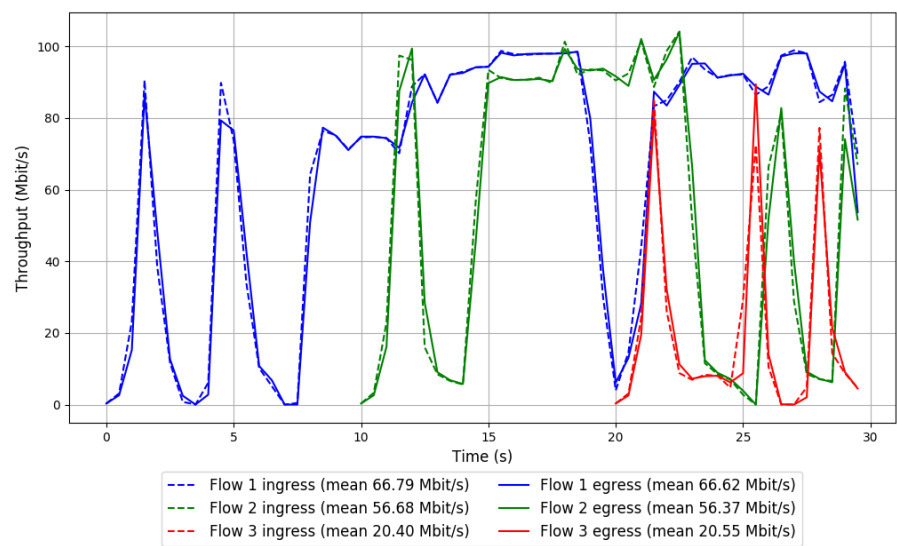
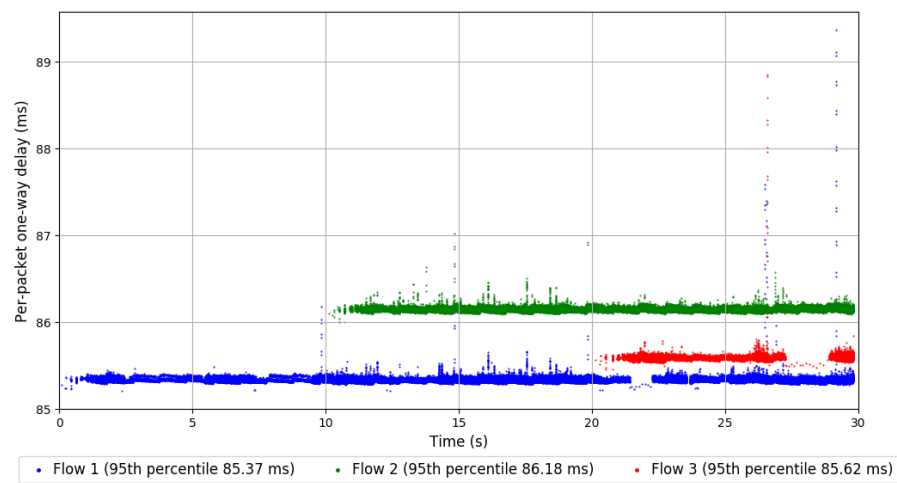Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-05 19:17:14
End at: 2017-12-05 19:17:44
Local clock offset: 1.454 ms
Remote clock offset: 2.655 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 109.86 Mbit/s
95th percentile per-packet one-way delay: 80.661 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 64.18 Mbit/s
95th percentile per-packet one-way delay: 80.633 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 61.11 Mbit/s
95th percentile per-packet one-way delay: 79.535 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 18.31 Mbit/s
95th percentile per-packet one-way delay: 81.214 ms
Loss rate: 1.15%
```
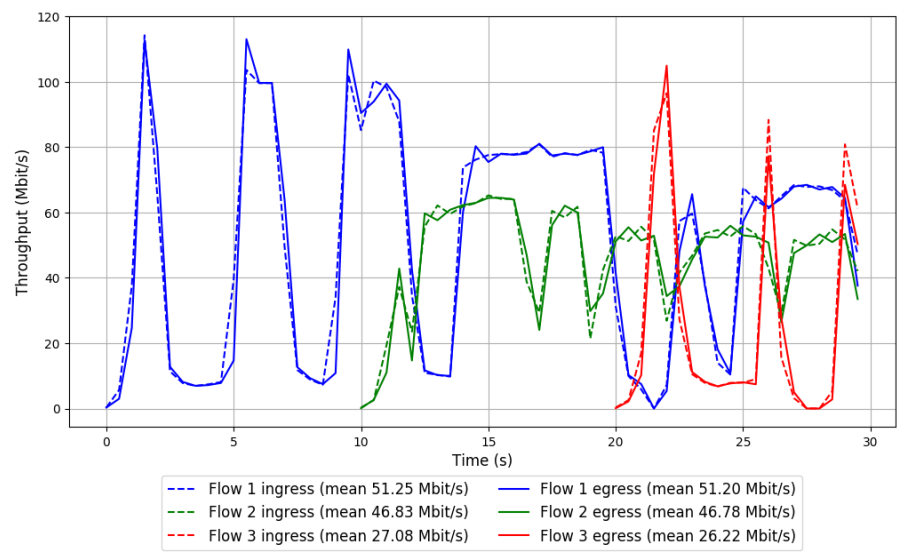
Run 2: Report of QUIC Cubic — Data Link
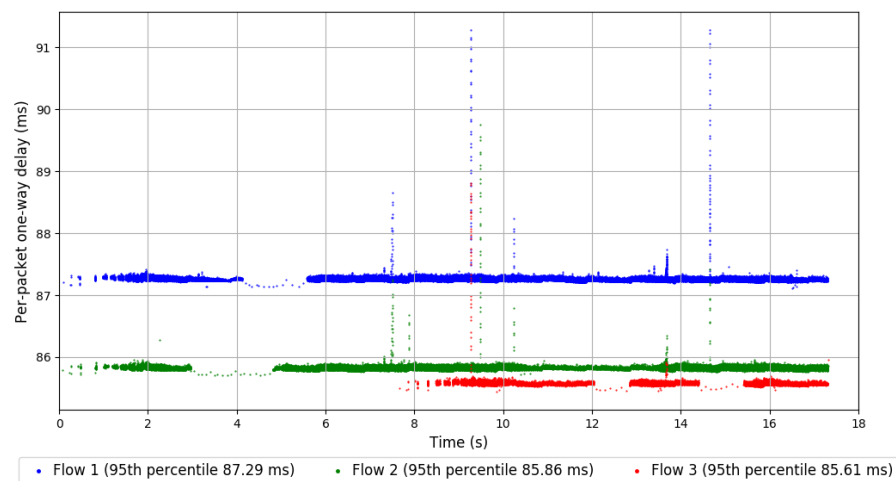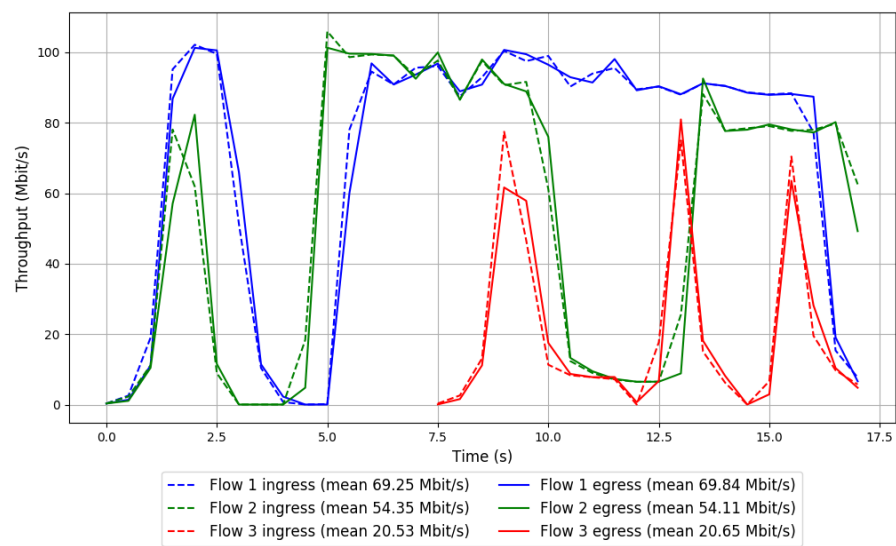
```
Run 3: Statistics of QUIC Cubic

Start at: 2017-12-05 19:37:33
End at: 2017-12-05 19:38:03
Local clock offset: 1.522 ms
Remote clock offset: -2.15 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 114.03 Mbit/s
95th percentile per-packet one-way delay: 87.143 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 67.05 Mbit/s
95th percentile per-packet one-way delay: 87.154 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 59.60 Mbit/s
95th percentile per-packet one-way delay: 86.051 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 22.99 Mbit/s
95th percentile per-packet one-way delay: 84.391 ms
Loss rate: 4.62%
```

Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 67.18 Mbit/s) --- Flow 1 egress (mean 67.05 Mbit/s)
Flow 2 ingress (mean 59.58 Mbit/s) --- Flow 2 egress (mean 59.60 Mbit/s)
Flow 3 ingress (mean 23.70 Mbit/s) --- Flow 3 egress (mean 22.99 Mbit/s)

Flow 1 (95th percentile 87.15 ms) • Flow 2 (95th percentile 86.05 ms) • Flow 3 (95th percentile 84.39 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2017-12-05 19:57:50
End at: 2017-12-05 19:58:20
Local clock offset: 1.367 ms
Remote clock offset: -0.377 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 116.34 Mbit/s
95th percentile per-packet one-way delay: 84.710 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 67.73 Mbit/s
95th percentile per-packet one-way delay: 83.645 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 55.60 Mbit/s
95th percentile per-packet one-way delay: 83.215 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 35.91 Mbit/s
95th percentile per-packet one-way delay: 84.749 ms
Loss rate: 3.61%
```
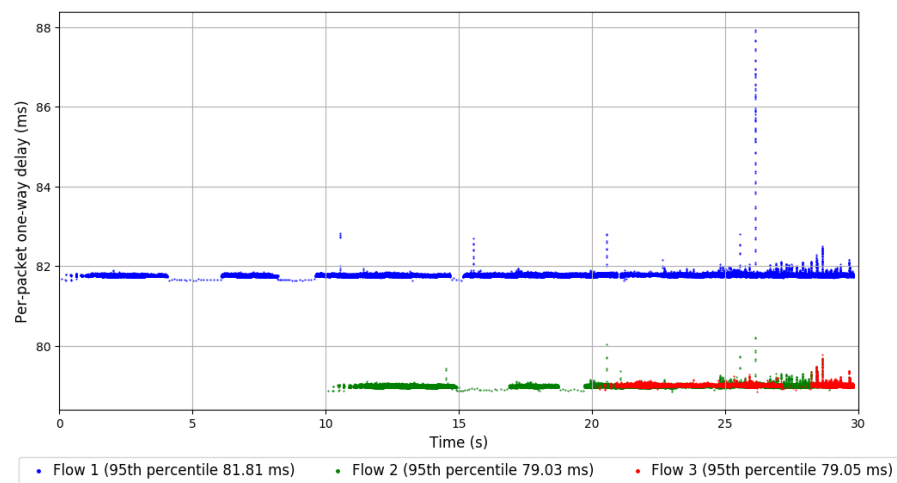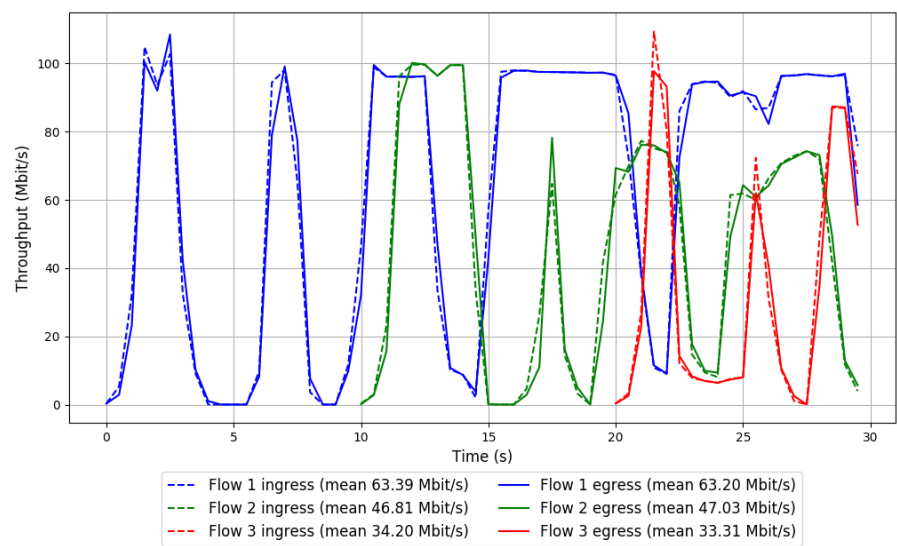
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 67.90 Mbit/s)   Flow 1 egress (mean 67.73 Mbit/s)
Flow 2 ingress (mean 55.19 Mbit/s)   Flow 2 egress (mean 55.60 Mbit/s)
Flow 3 ingress (mean 36.63 Mbit/s)   Flow 3 egress (mean 35.91 Mbit/s)

Flow 1 (95th percentile 83.64 ms)   Flow 2 (95th percentile 83.22 ms)   Flow 3 (95th percentile 84.75 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-12-05 20:17:59
End at: 2017-12-05 20:18:29
Local clock offset: 1.084 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 110.68 Mbit/s
95th percentile per-packet one-way delay: 87.109 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 66.62 Mbit/s
95th percentile per-packet one-way delay: 86.051 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 56.37 Mbit/s
95th percentile per-packet one-way delay: 85.620 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 20.55 Mbit/s
95th percentile per-packet one-way delay: 87.167 ms
Loss rate: 0.40%
```
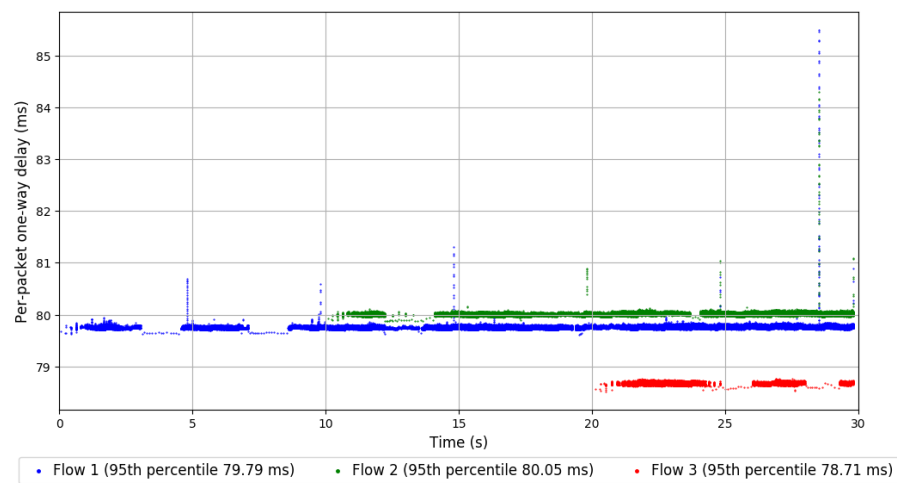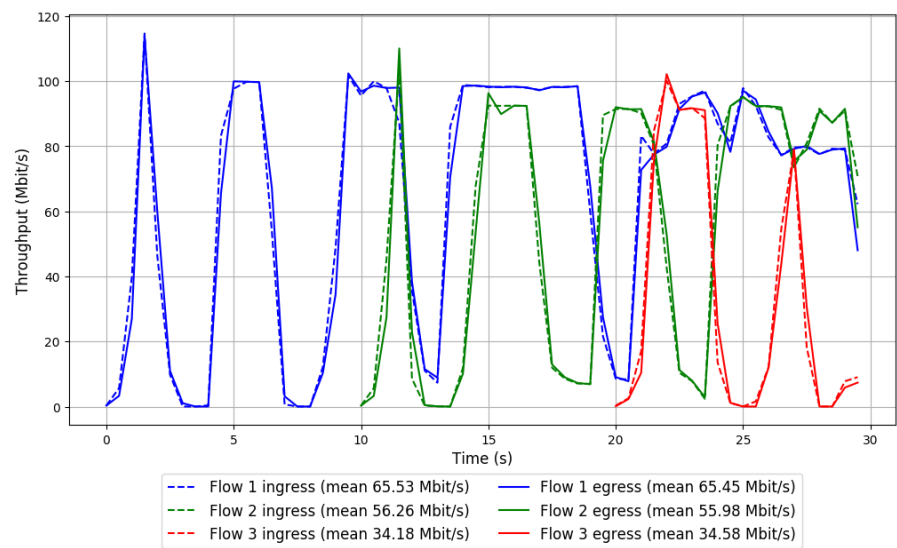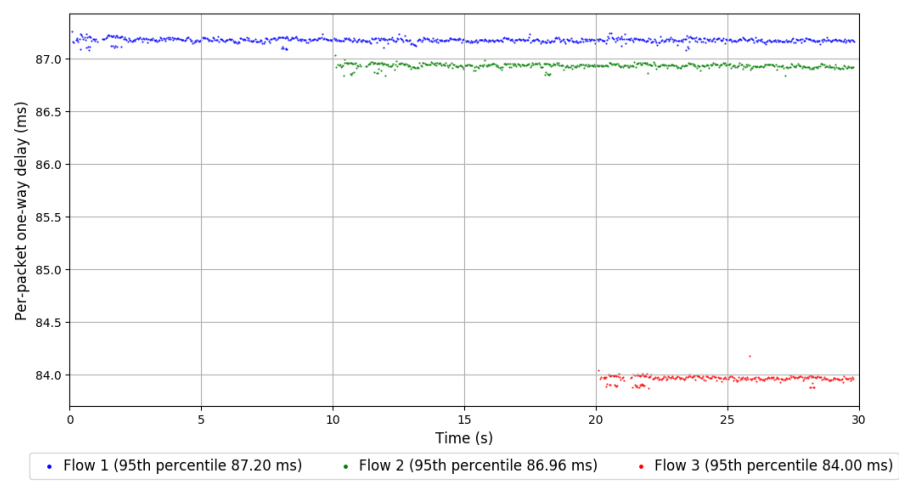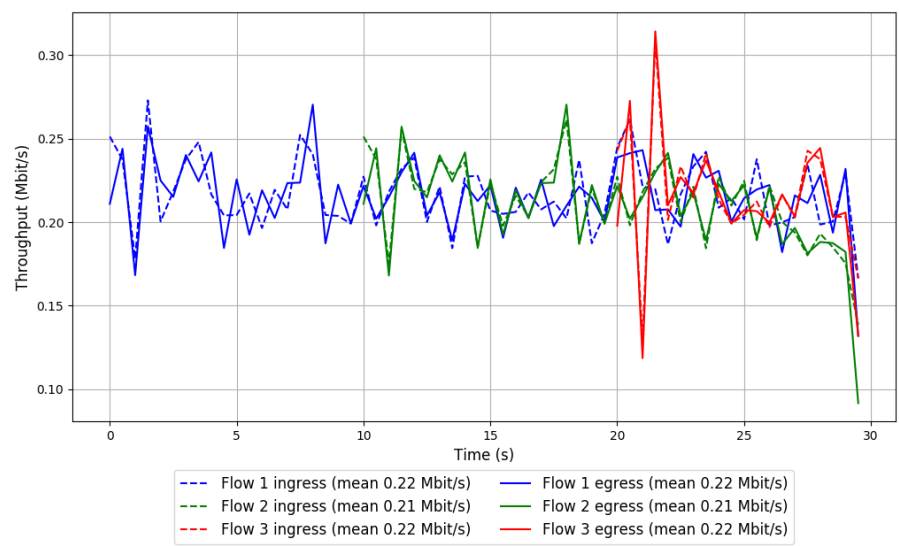
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 66.79 Mbit/s)   Flow 1 egress (mean 66.62 Mbit/s)
Flow 2 ingress (mean 56.68 Mbit/s)   Flow 2 egress (mean 56.37 Mbit/s)
Flow 3 ingress (mean 20.40 Mbit/s)   Flow 3 egress (mean 20.55 Mbit/s)

Flow 1 (95th percentile 86.05 ms)   Flow 2 (95th percentile 85.62 ms)   Flow 3 (95th percentile 87.17 ms)

```
Run 6: Statistics of QUIC Cubic

Start at: 2017-12-05 20:38:10
End at: 2017-12-05 20:38:40
Local clock offset: 0.631 ms
Remote clock offset: -0.736 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.72 Mbit/s
95th percentile per-packet one-way delay: 86.164 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 51.20 Mbit/s
95th percentile per-packet one-way delay: 85.368 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 46.78 Mbit/s
95th percentile per-packet one-way delay: 86.178 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 26.22 Mbit/s
95th percentile per-packet one-way delay: 85.625 ms
Loss rate: 4.83%
```
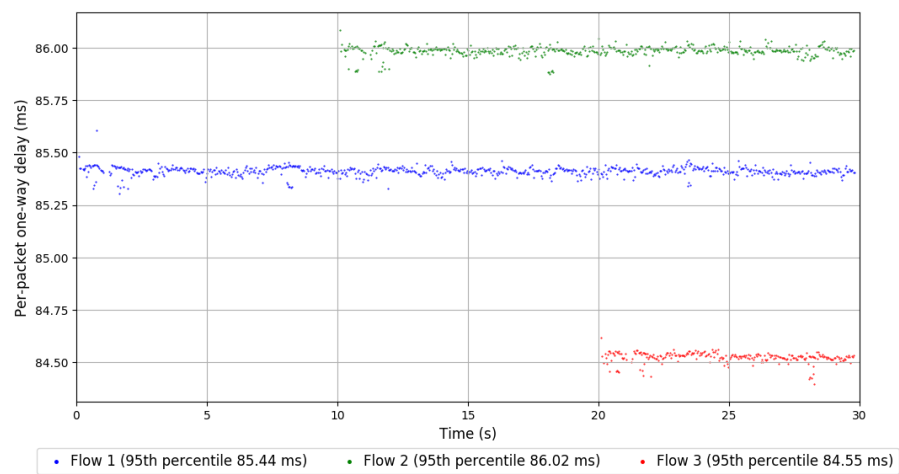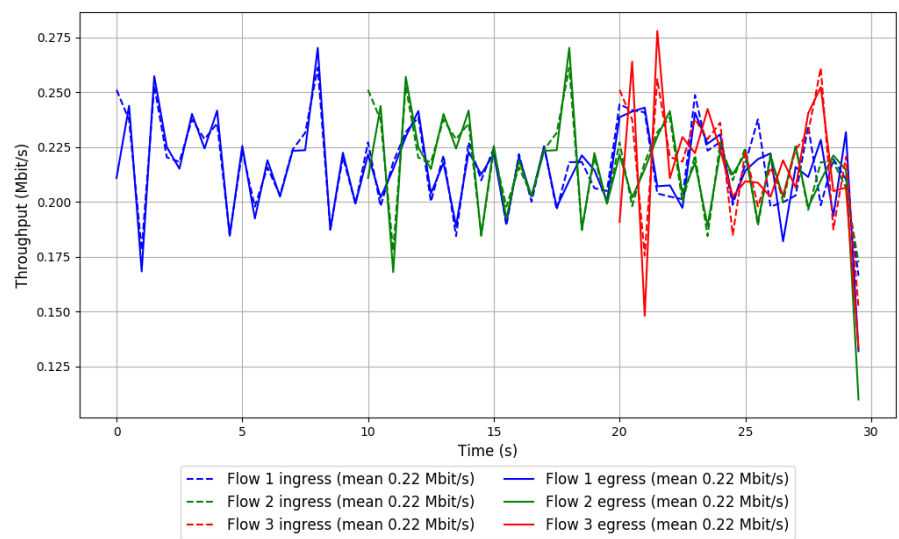
Run 6: Report of QUIC Cubic — Data Link

Run 7: Statistics of QUIC Cubic

Start at: 2017-12-05 20:58:27
End at: 2017-12-05 20:58:57
Local clock offset: 0.178 ms
Remote clock offset: -1.87 ms

Run 7: Report of QUIC Cubic — Data Link

```
Run 8: Statistics of QUIC Cubic

Start at: 2017-12-05 21:18:33
End at: 2017-12-05 21:19:03
Local clock offset: 0.09 ms
Remote clock offset: 3.285 ms
```

Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 75.03 Mbit/s)   Flow 1 egress (mean 74.80 Mbit/s)
Flow 2 ingress (mean 58.63 Mbit/s)   Flow 2 egress (mean 58.38 Mbit/s)
Flow 3 ingress (mean 21.61 Mbit/s)   Flow 3 egress (mean 20.46 Mbit/s)

Flow 1 (95th percentile 79.75 ms)   Flow 2 (95th percentile 79.63 ms)   Flow 3 (95th percentile 81.31 ms)

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```
Run 9: Statistics of QUIC Cubic

Start at: 2017-12-05 21:38:33
End at: 2017-12-05 21:39:03
Local clock offset: -0.169 ms
Remote clock offset: 1.589 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.20 Mbit/s
95th percentile per-packet one-way delay: 81.799 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 63.20 Mbit/s
95th percentile per-packet one-way delay: 81.805 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 47.03 Mbit/s
95th percentile per-packet one-way delay: 79.027 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.31 Mbit/s
95th percentile per-packet one-way delay: 79.045 ms
Loss rate: 4.24%
```
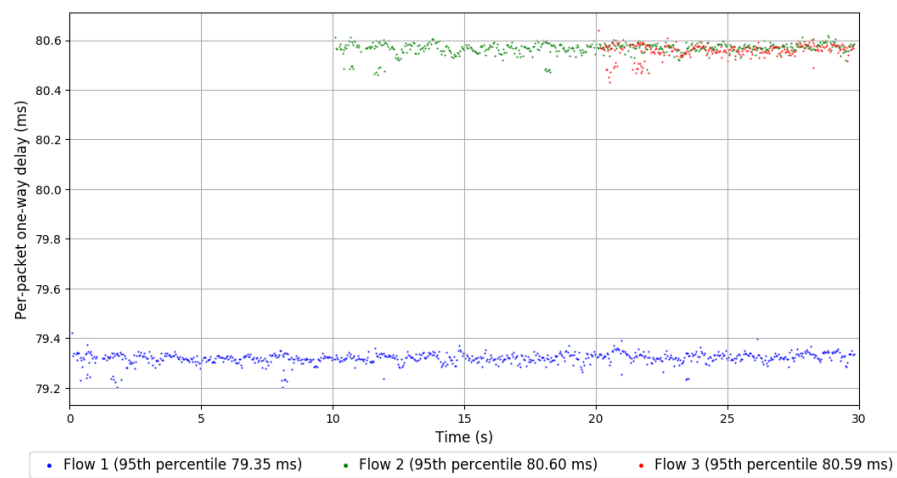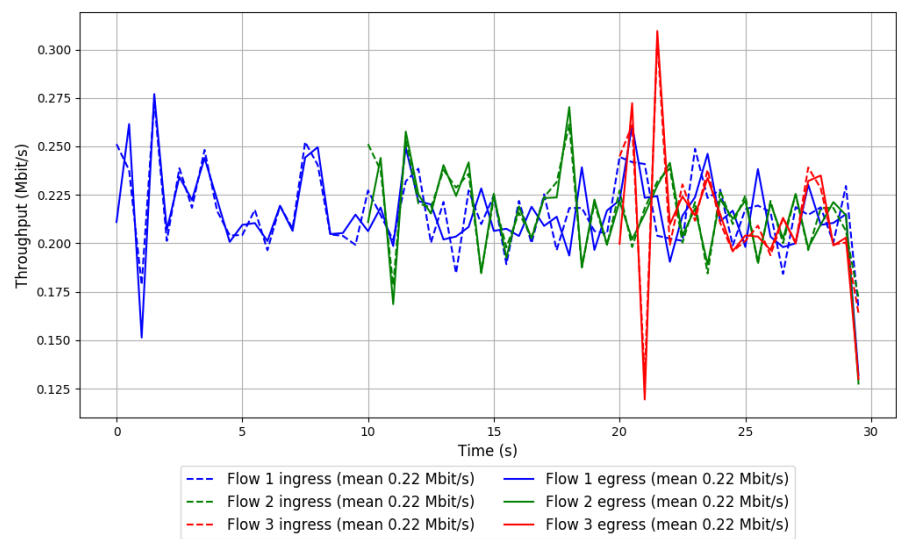
Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 63.39 Mbit/s)   Flow 1 egress (mean 63.20 Mbit/s)
Flow 2 ingress (mean 46.81 Mbit/s)   Flow 2 egress (mean 47.03 Mbit/s)
Flow 3 ingress (mean 34.20 Mbit/s)   Flow 3 egress (mean 33.31 Mbit/s)

Flow 1 (95th percentile 81.81 ms)   Flow 2 (95th percentile 79.03 ms)   Flow 3 (95th percentile 79.05 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2017-12-05 21:58:44
End at: 2017-12-05 21:59:14
Local clock offset: -0.971 ms
Remote clock offset: 1.574 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.84 Mbit/s
95th percentile per-packet one-way delay: 80.034 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 65.45 Mbit/s
95th percentile per-packet one-way delay: 79.794 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 55.98 Mbit/s
95th percentile per-packet one-way delay: 80.048 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 34.58 Mbit/s
95th percentile per-packet one-way delay: 78.712 ms
Loss rate: 0.54%
```
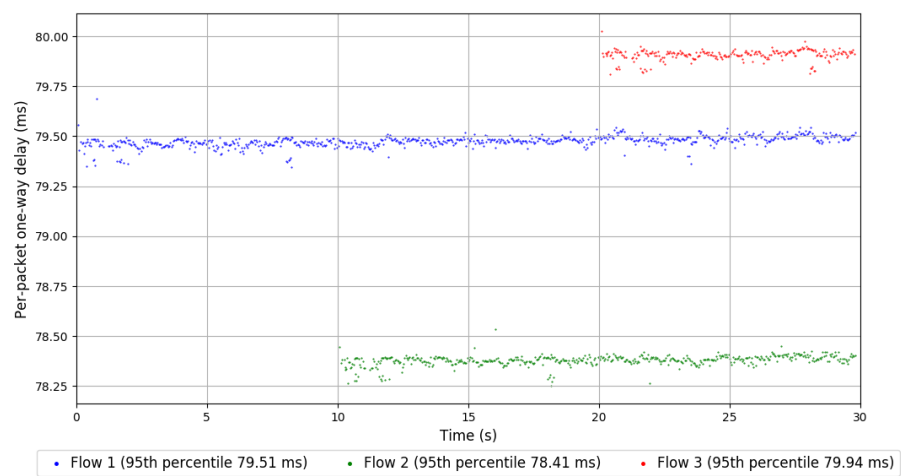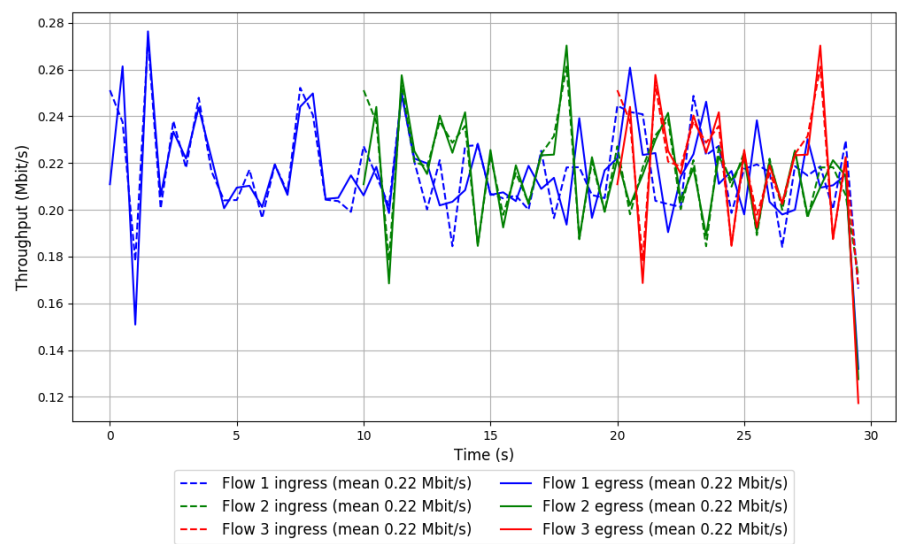
Run 10: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2017-12-05 19:01:18
End at: 2017-12-05 19:01:48
Local clock offset: 1.283 ms
Remote clock offset: -2.242 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 87.200 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.205 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 86.961 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.997 ms
Loss rate: 1.52%
```
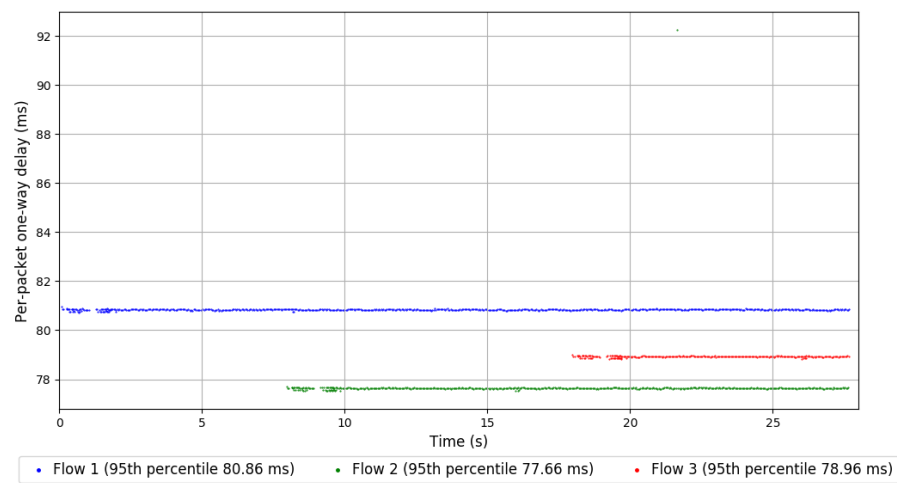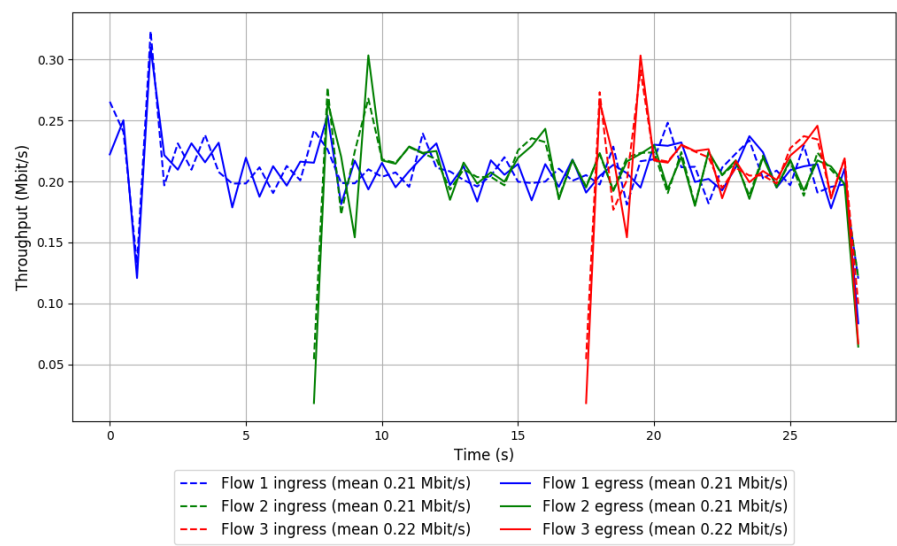
Run 1: Report of SCReAM — Data Link
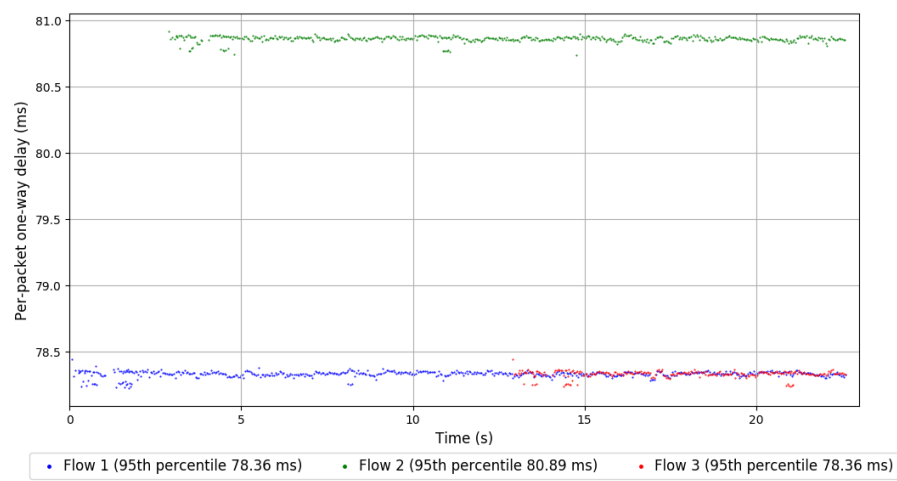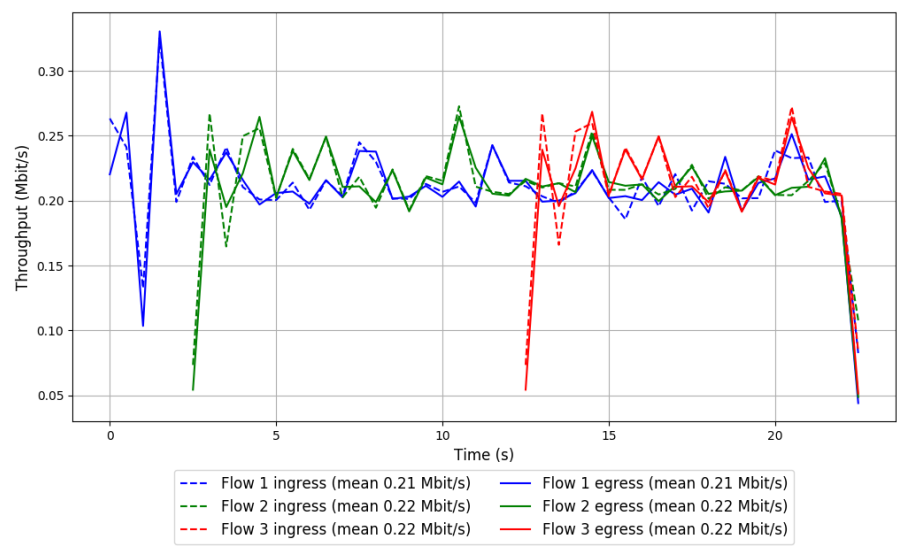
```
Run 2: Statistics of SCReAM

Start at: 2017-12-05 19:21:28
End at: 2017-12-05 19:21:58
Local clock offset: 1.503 ms
Remote clock offset: -2.333 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 86.005 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.439 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.016 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.551 ms
Loss rate: 1.53%
```
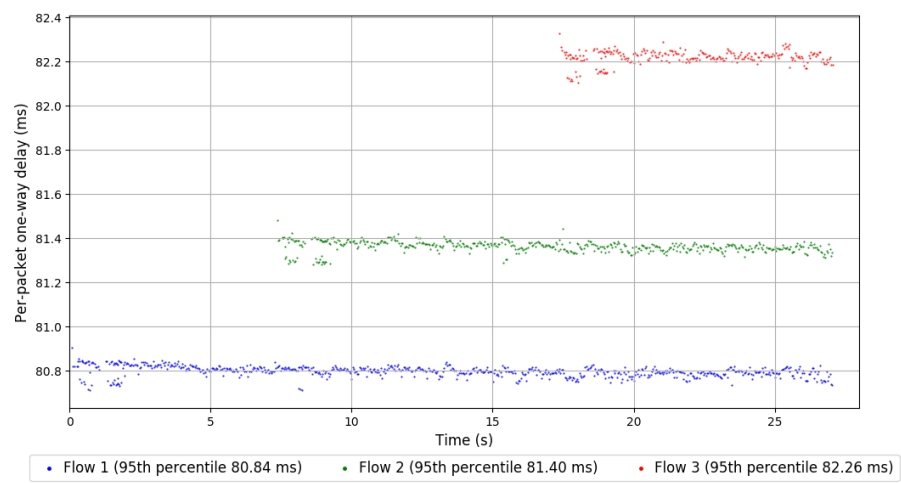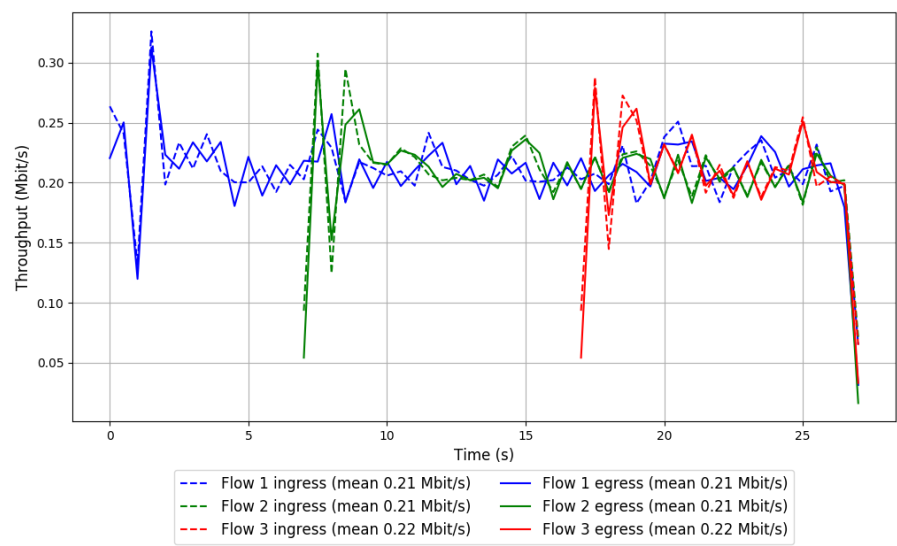
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2017-12-05 19:41:47
End at: 2017-12-05 19:42:17
Local clock offset: 1.546 ms
Remote clock offset: 2.94 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 80.590 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.348 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.597 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.592 ms
Loss rate: 1.52%
```
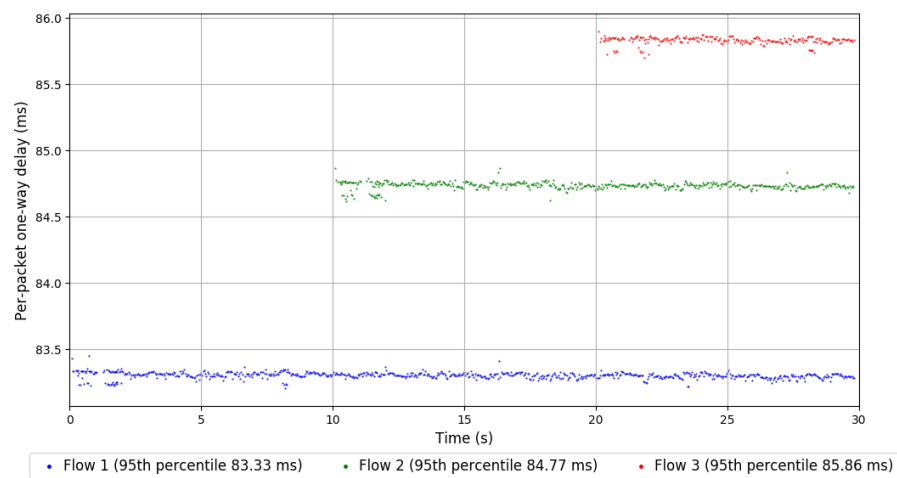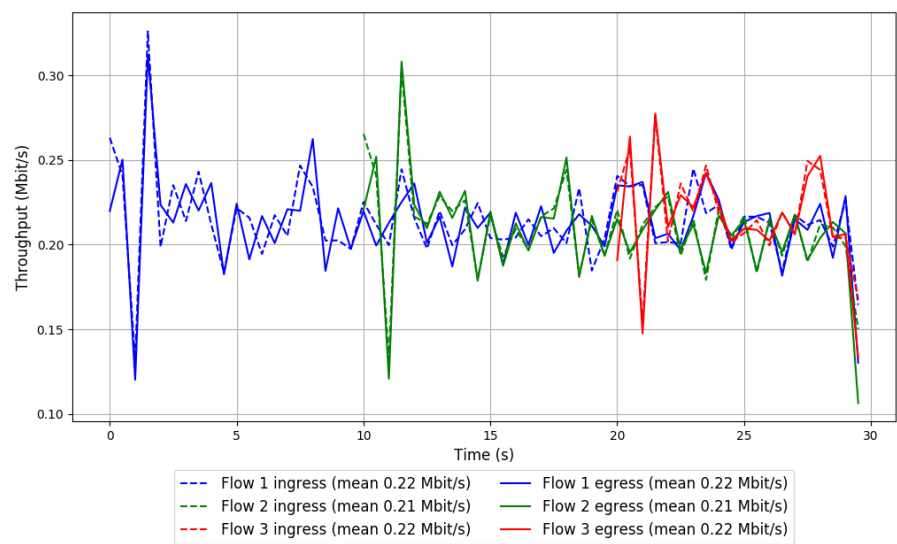
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2017-12-05 20:02:07
End at: 2017-12-05 20:02:37
Local clock offset: 1.28 ms
Remote clock offset: 4.697 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 79.921 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.514 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.408 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.938 ms
Loss rate: 1.87%
```

Run 4: Report of SCReAM — Data Link
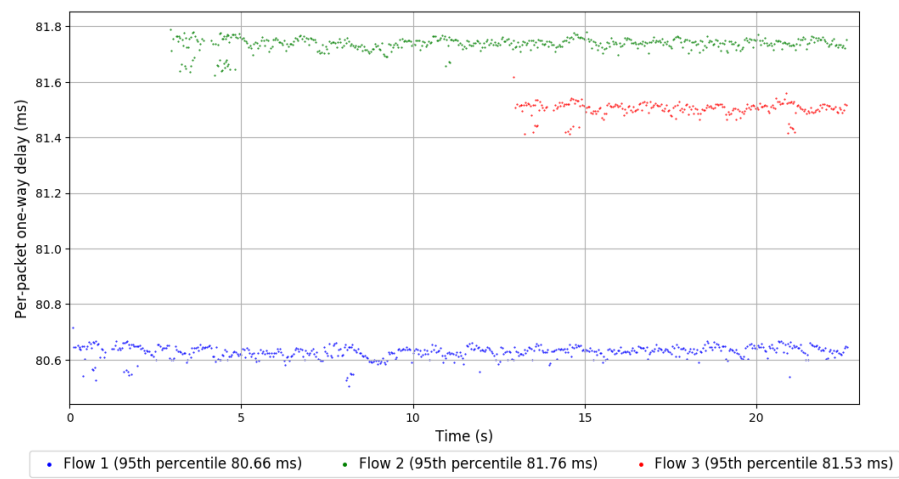
```
Run 5: Statistics of SCReAM

Start at: 2017-12-05 20:22:13
End at: 2017-12-05 20:22:43
Local clock offset: 0.928 ms
Remote clock offset: 6.111 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 80.858 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 80.864 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 77.662 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.957 ms
Loss rate: 1.52%
```

Run 5: Report of SCReAM — Data Link

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```
Run 6: Statistics of SCReAM

Start at: 2017-12-05 20:42:24
End at: 2017-12-05 20:42:54
Local clock offset: 0.541 ms
Remote clock offset: 5.317 ms
```
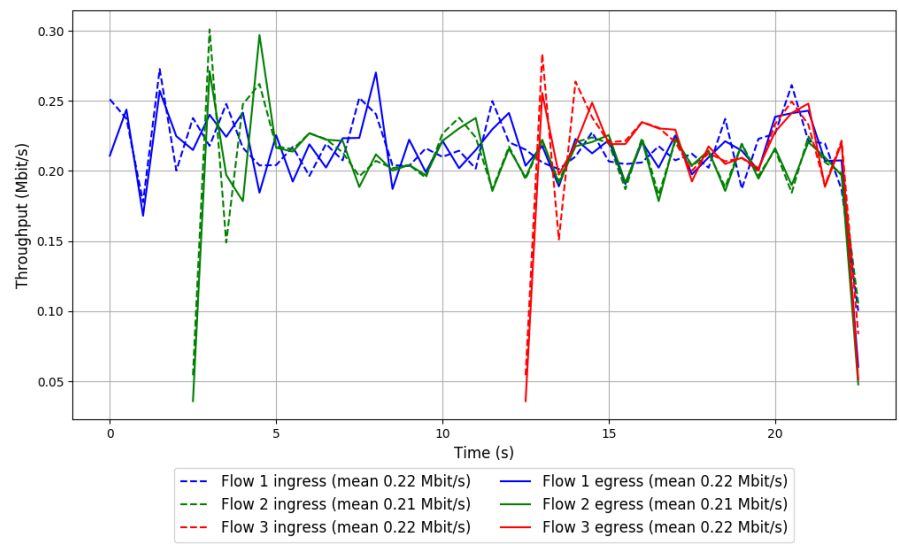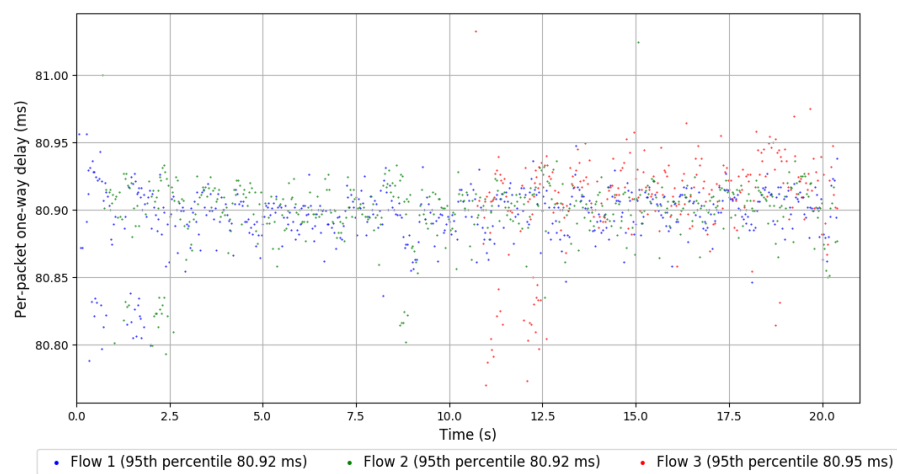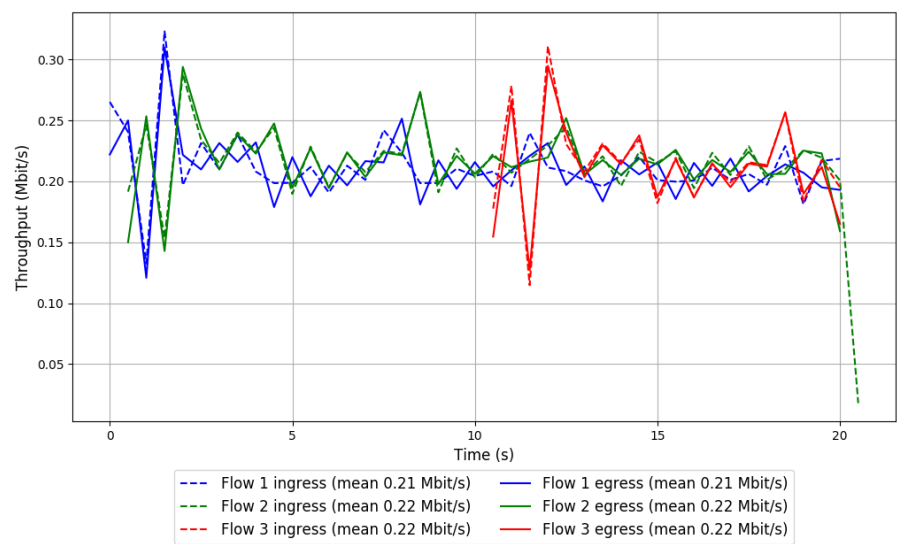
Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2017-12-05 21:02:41
End at: 2017-12-05 21:03:11
Local clock offset: 0.203 ms
Remote clock offset: 2.939 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 82.236 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 80.836 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 81.399 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.258 ms
Loss rate: 1.52%
```
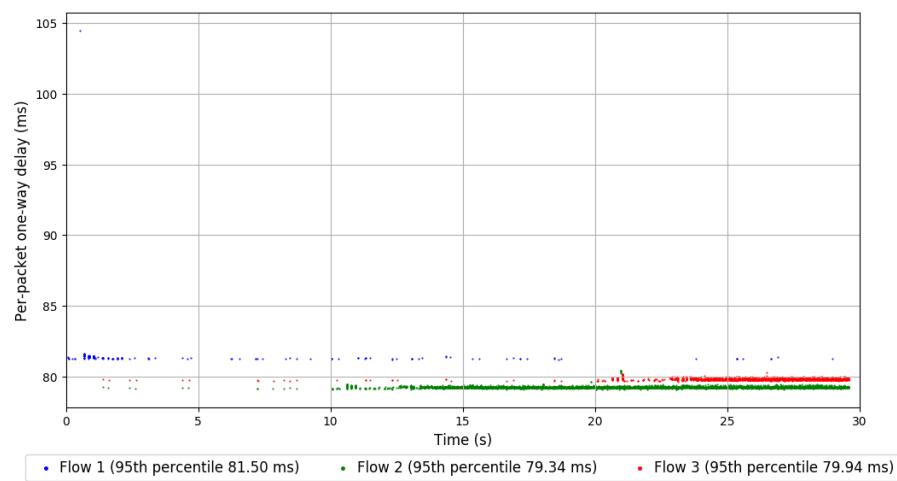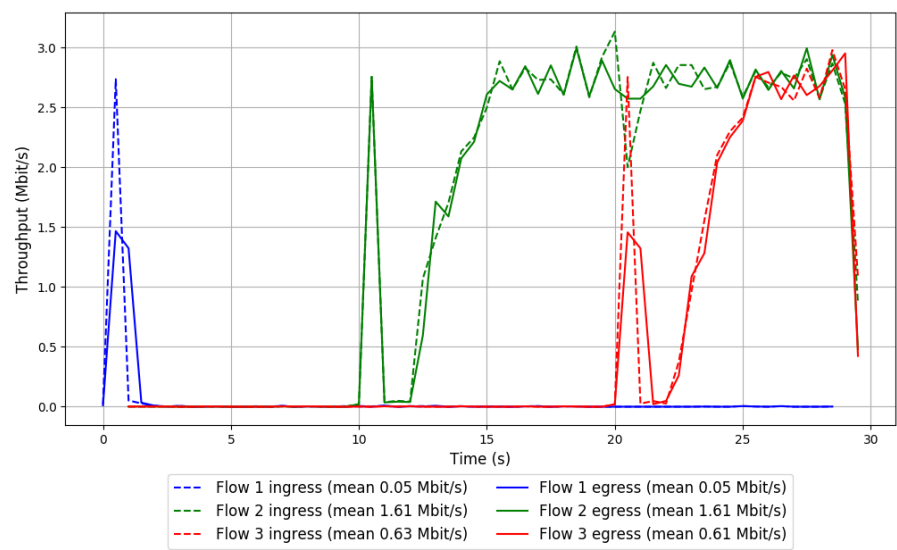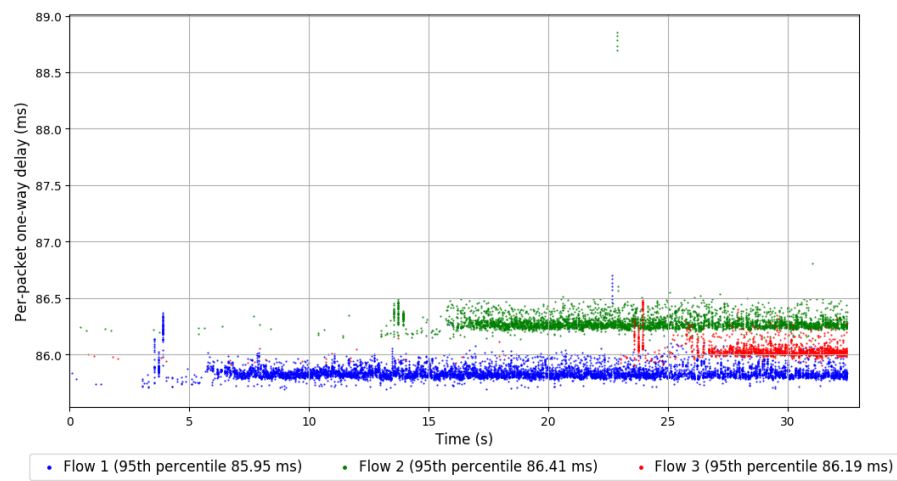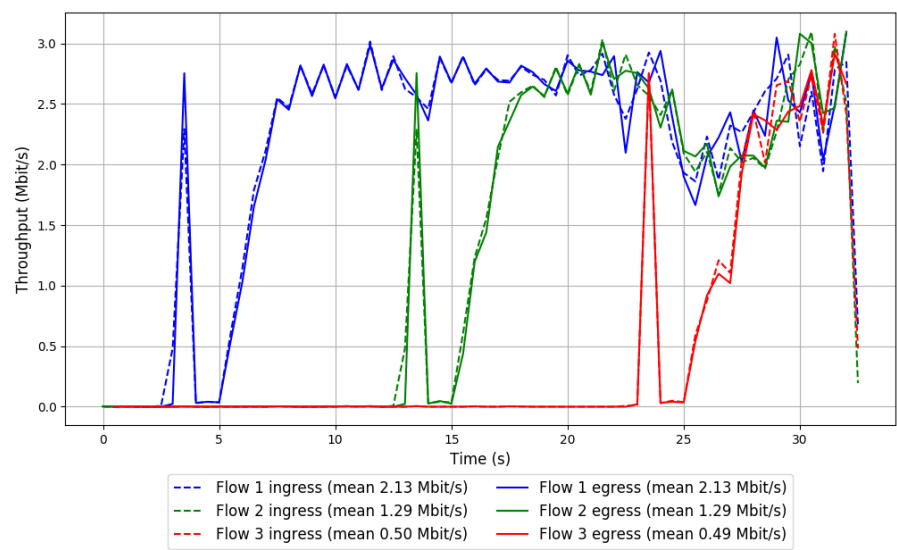
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2017-12-05 21:22:42
End at: 2017-12-05 21:23:12
Local clock offset: 0.047 ms
Remote clock offset: -1.706 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 85.846 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.335 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 84.769 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.862 ms
Loss rate: 1.53%
```

Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2017-12-05 21:42:49
End at: 2017-12-05 21:43:19
Local clock offset: -0.301 ms
Remote clock offset: 1.973 ms
```

Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2017-12-05 22:02:55
End at: 2017-12-05 22:03:25
Local clock offset: -1.058 ms
Remote clock offset: 2.364 ms
```

Run 10: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.21 Mbit/s)   Flow 1 egress (mean 0.21 Mbit/s)
Flow 2 ingress (mean 0.22 Mbit/s)   Flow 2 egress (mean 0.22 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s)   Flow 3 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 80.92 ms)   Flow 2 (95th percentile 80.92 ms)   Flow 3 (95th percentile 80.95 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2017-12-05 18:58:28
End at: 2017-12-05 18:58:58
Local clock offset: 1.218 ms
Remote clock offset: 3.605 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 79.923 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 81.495 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 79.344 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 79.940 ms
Loss rate: 2.45%
```

Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-12-05 19:18:35
End at: 2017-12-05 19:19:05
Local clock offset: 1.543 ms
Remote clock offset: -2.369 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 86.341 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 85.955 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 86.409 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 86.194 ms
Loss rate: 2.47%
```
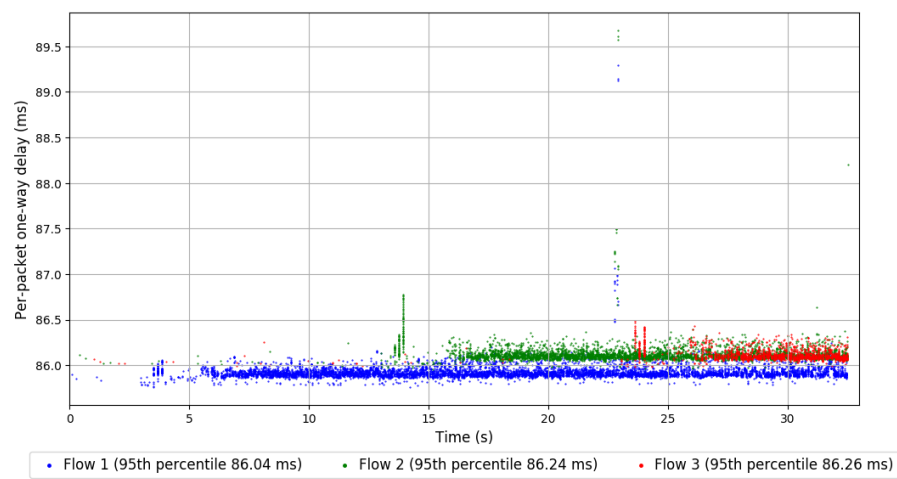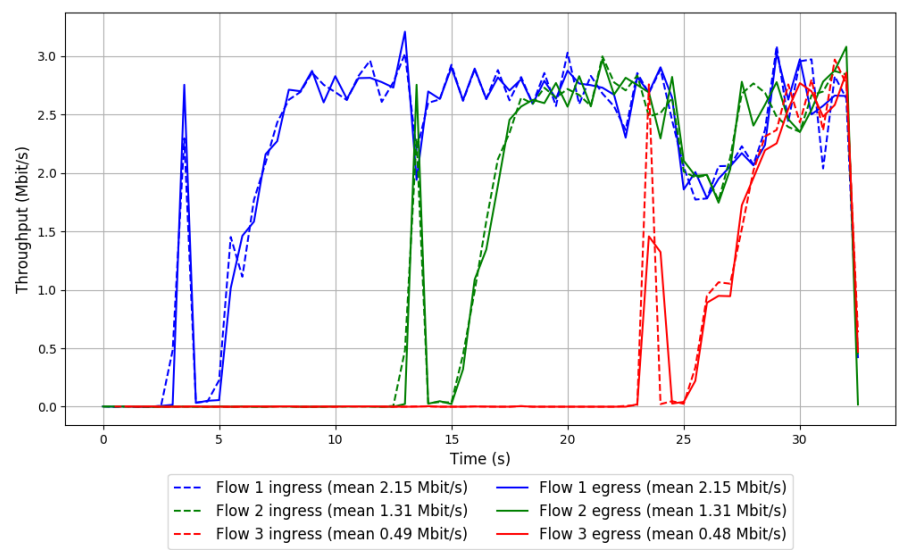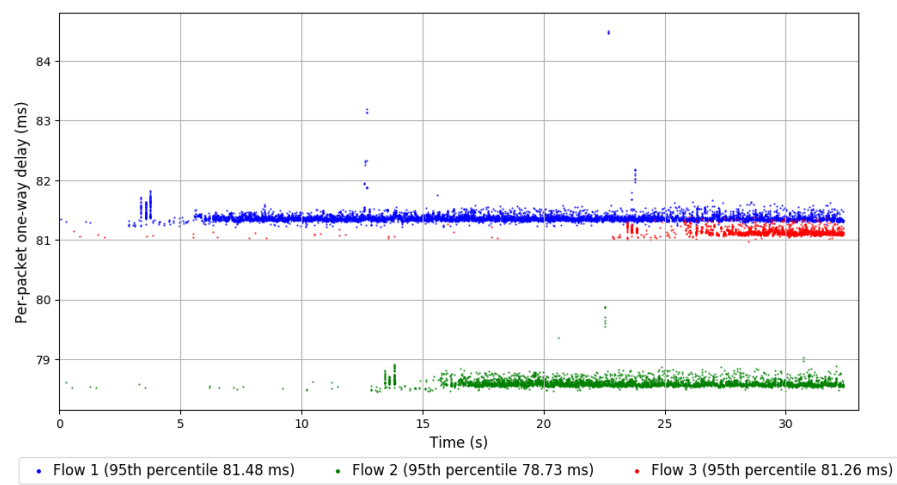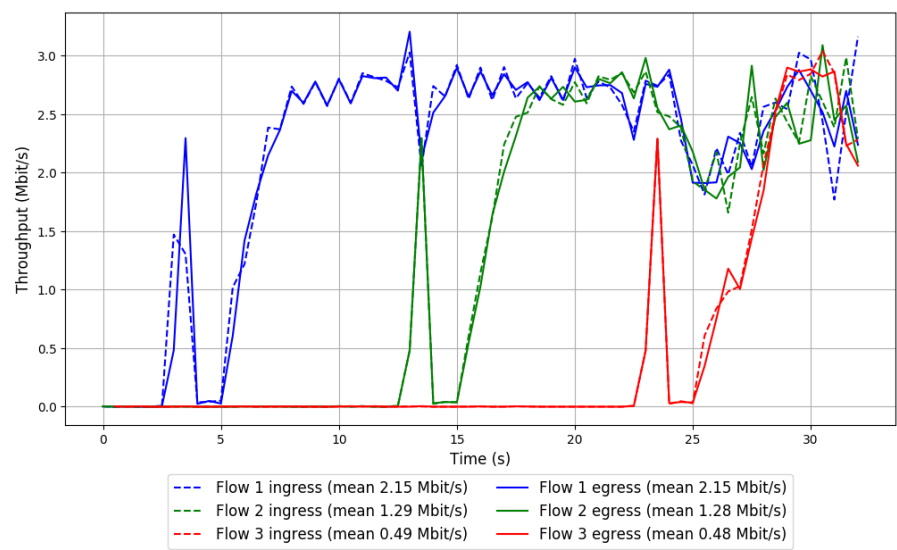
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2017-12-05 19:38:54
End at: 2017-12-05 19:39:24
Local clock offset: 1.598 ms
Remote clock offset: 3.393 ms
```

Run 3: Report of WebRTC media — Data Link

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```
Run 4: Statistics of WebRTC media

Start at: 2017-12-05 19:59:12
End at: 2017-12-05 19:59:42
Local clock offset: 1.301 ms
Remote clock offset: -0.854 ms
```

Run 4: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.12 Mbit/s)   Flow 1 egress (mean 1.12 Mbit/s)
Flow 2 ingress (mean 1.16 Mbit/s)   Flow 2 egress (mean 1.16 Mbit/s)
Flow 3 ingress (mean 1.02 Mbit/s)   Flow 3 egress (mean 1.00 Mbit/s)

Flow 1 (95th percentile 87.04 ms)   Flow 2 (95th percentile 85.36 ms)   Flow 3 (95th percentile 84.06 ms)

```
Run 5: Statistics of WebRTC media

Start at: 2017-12-05 20:19:19
End at: 2017-12-05 20:19:49
Local clock offset: 1.096 ms
Remote clock offset: 0.729 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 86.194 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 86.038 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 86.241 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 86.258 ms
Loss rate: 2.59%
```
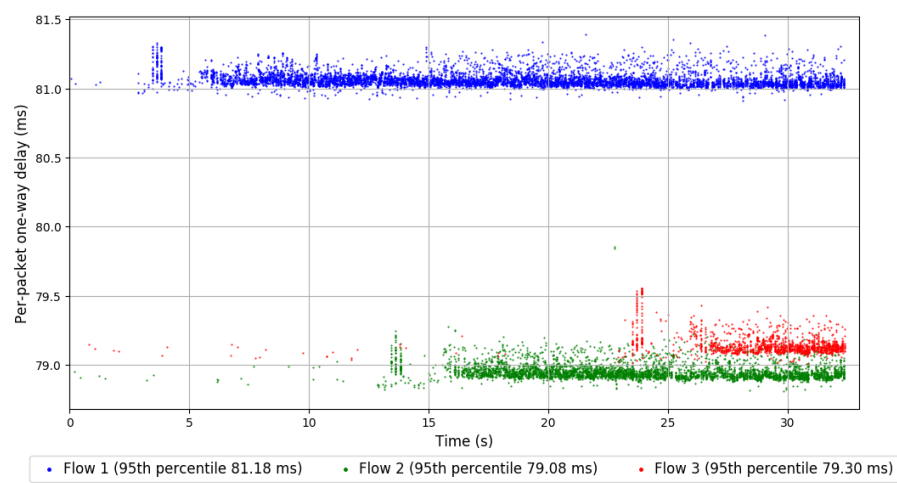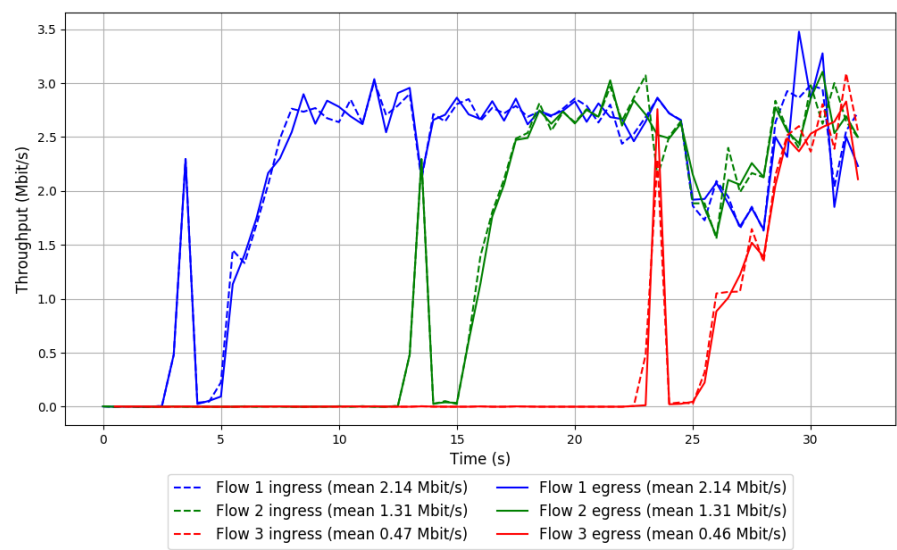
Run 5: Report of WebRTC media — Data Link
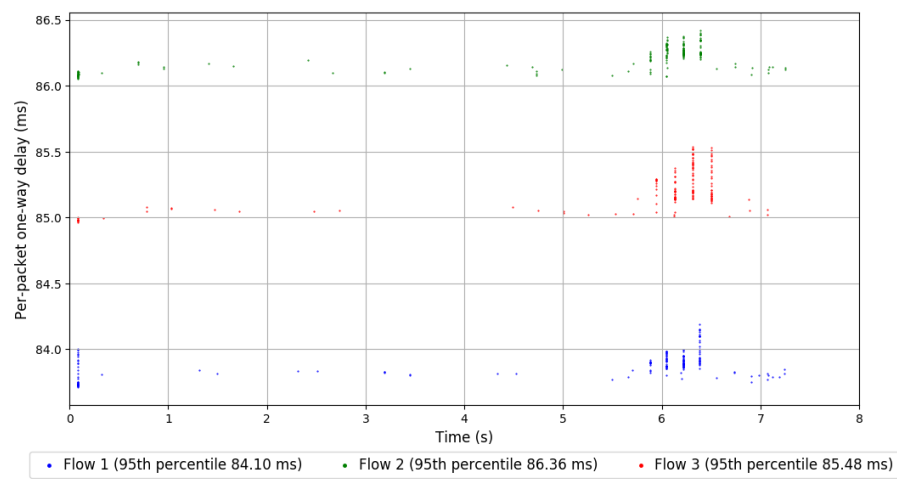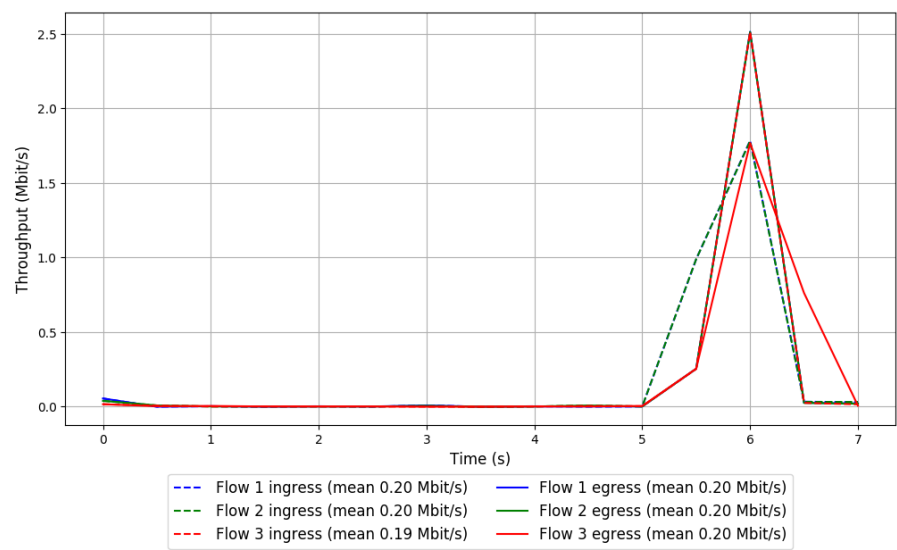
```
Run 6: Statistics of WebRTC media

Start at: 2017-12-05 20:39:30
End at: 2017-12-05 20:40:00
Local clock offset: 0.548 ms
Remote clock offset: 5.06 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 81.442 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 81.477 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 78.729 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 81.258 ms
Loss rate: 2.20%
```
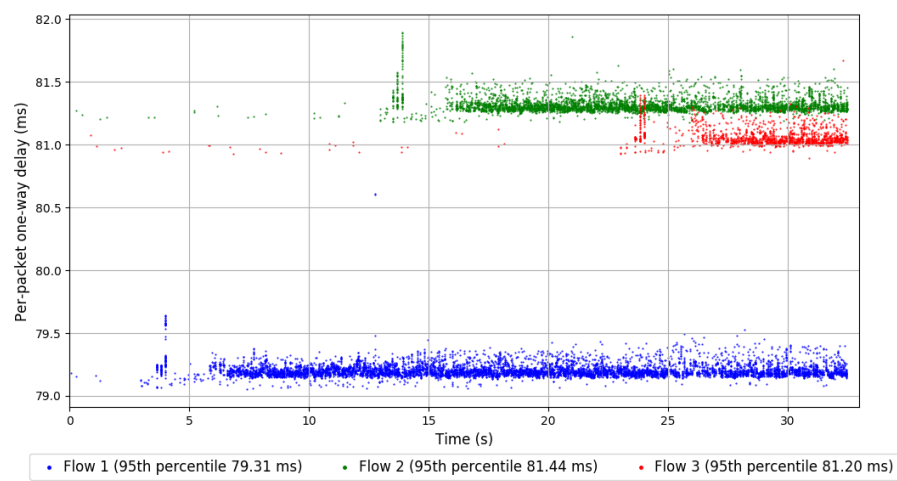
Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-12-05 20:59:46
End at: 2017-12-05 21:00:16
Local clock offset: 0.237 ms
Remote clock offset: 4.547 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 81.137 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 81.177 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 79.077 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 79.299 ms
Loss rate: 3.67%
```
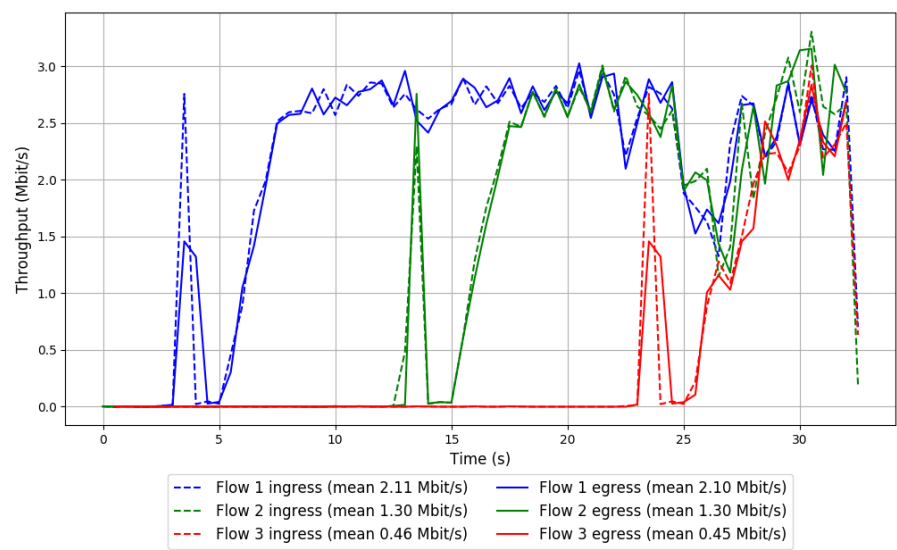
Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2017-12-05 21:19:52
End at: 2017-12-05 21:20:22
Local clock offset: 0.066 ms
Remote clock offset: -2.179 ms
```

Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2017-12-05 21:39:54
End at: 2017-12-05 21:40:24
Local clock offset: -0.192 ms
Remote clock offset: 1.373 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 81.367 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 79.305 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 81.443 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 81.205 ms
Loss rate: 2.94%
```
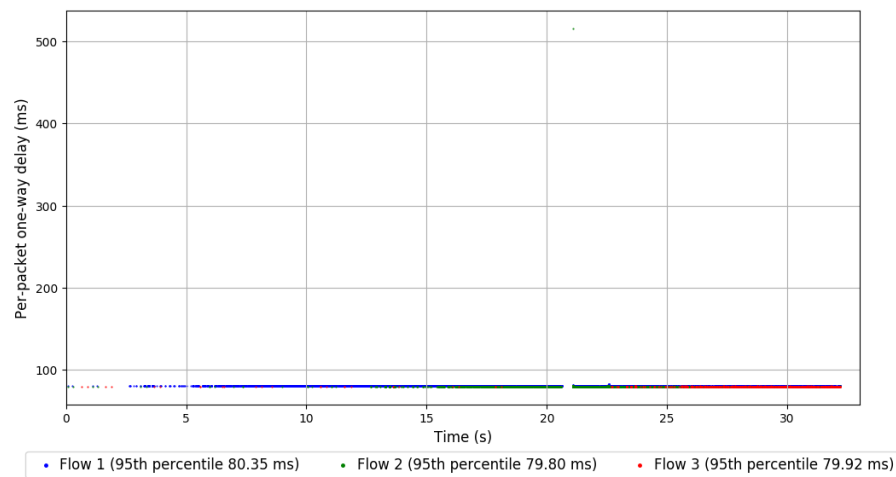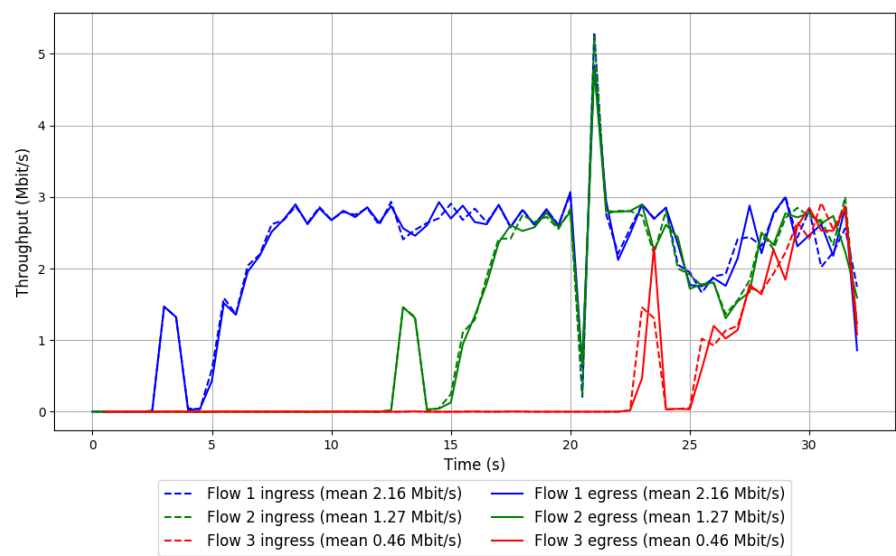
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-12-05 22:00:05
End at: 2017-12-05 22:00:35
Local clock offset: -0.962 ms
Remote clock offset: 1.977 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 80.310 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 80.347 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 79.802 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 79.920 ms
Loss rate: 2.00%
```
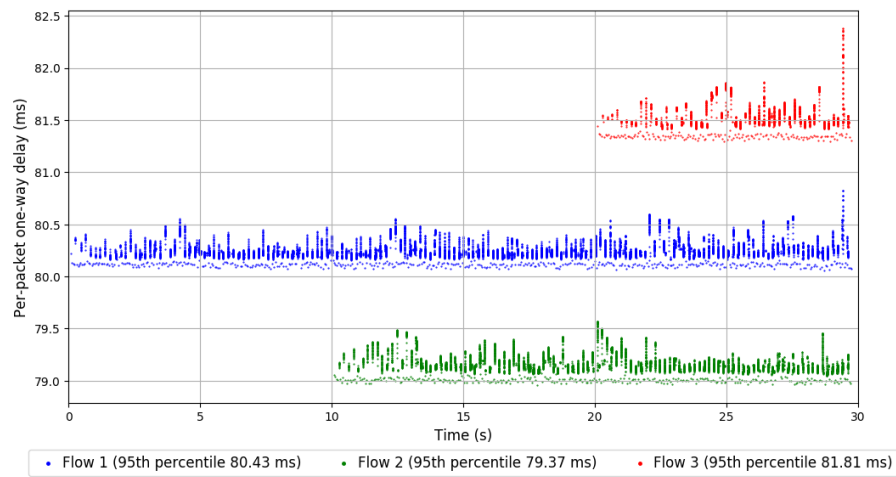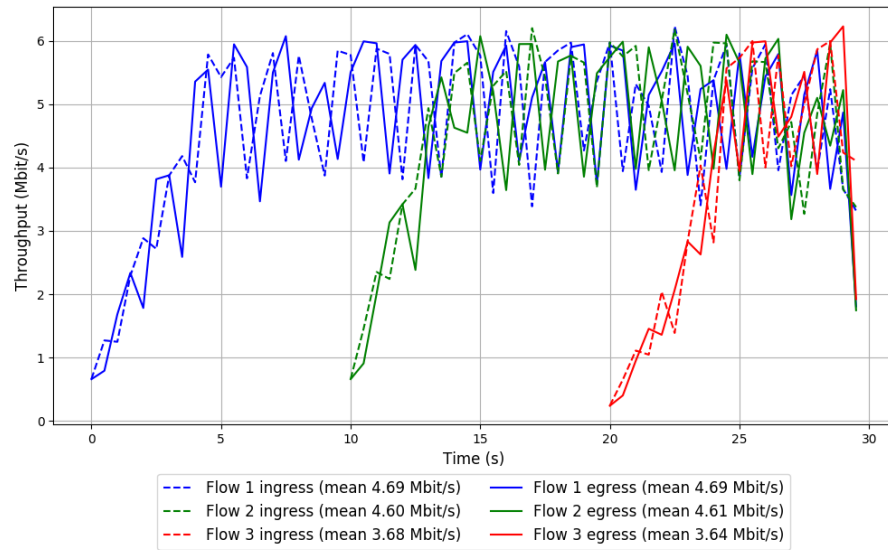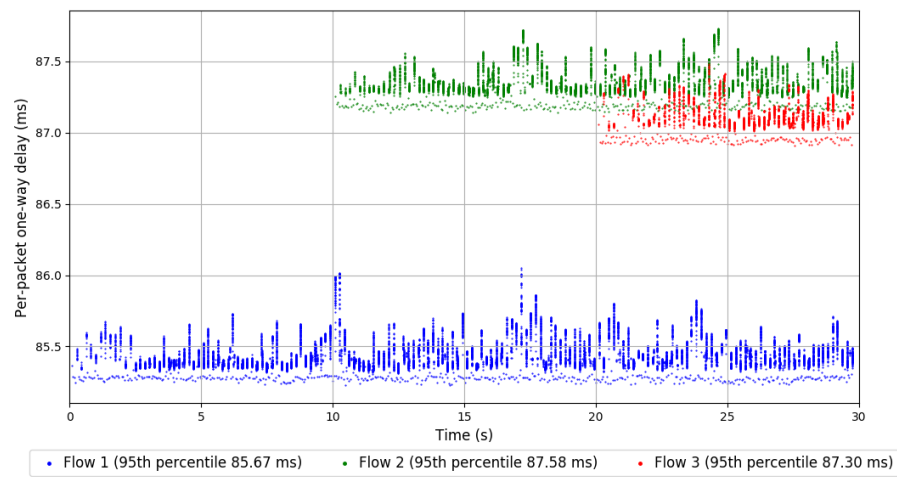
Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2017-12-05 19:11:54
End at: 2017-12-05 19:12:24
Local clock offset: 1.505 ms
Remote clock offset: 3.154 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.92 Mbit/s
95th percentile per-packet one-way delay: 81.543 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 4.69 Mbit/s
95th percentile per-packet one-way delay: 80.432 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 4.61 Mbit/s
95th percentile per-packet one-way delay: 79.369 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 81.812 ms
Loss rate: 3.02%
```
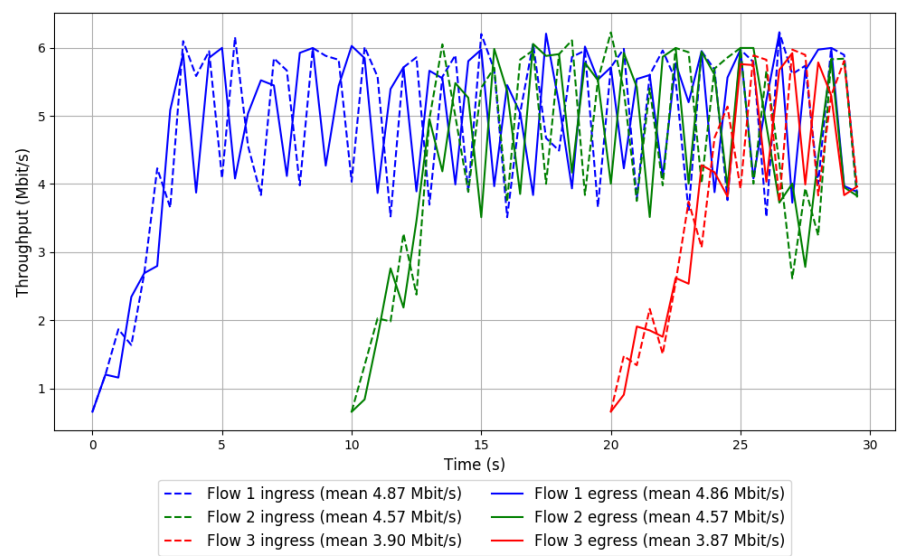
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-12-05 19:32:06
End at: 2017-12-05 19:32:36
Local clock offset: 1.482 ms
Remote clock offset: -2.312 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.14 Mbit/s
95th percentile per-packet one-way delay: 87.493 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 4.86 Mbit/s
95th percentile per-packet one-way delay: 85.671 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 4.57 Mbit/s
95th percentile per-packet one-way delay: 87.578 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 87.303 ms
Loss rate: 2.58%
```
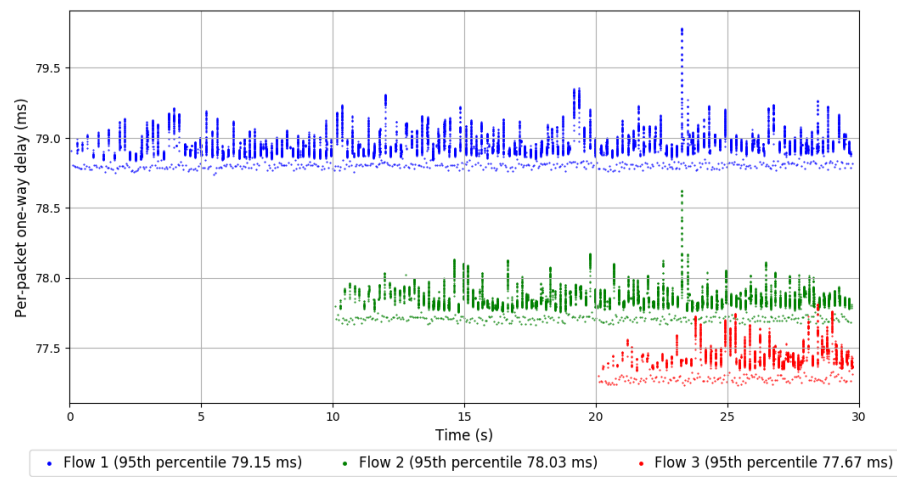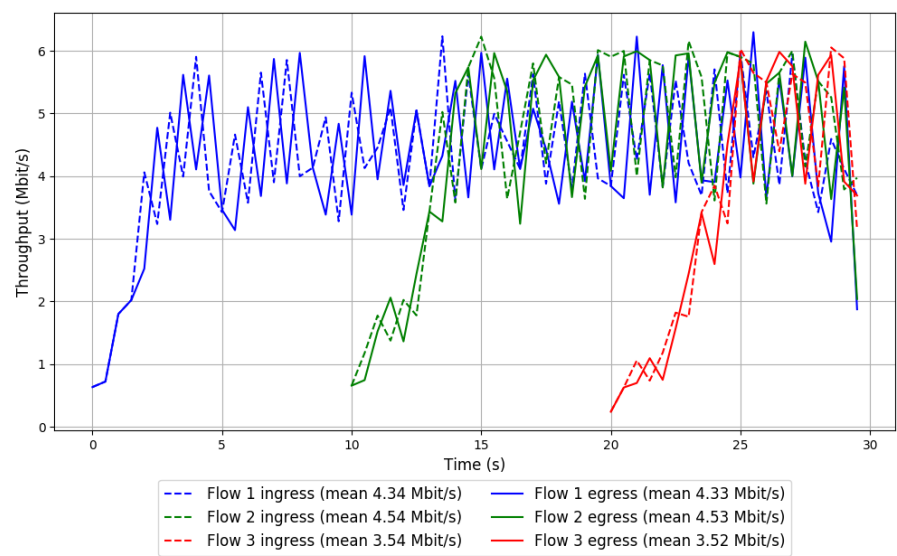
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-12-05 19:52:29
End at: 2017-12-05 19:52:59
Local clock offset: 1.463 ms
Remote clock offset: 5.159 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.47 Mbit/s
95th percentile per-packet one-way delay: 79.097 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 79.153 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 4.53 Mbit/s
95th percentile per-packet one-way delay: 78.030 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 77.675 ms
Loss rate: 2.24%
```
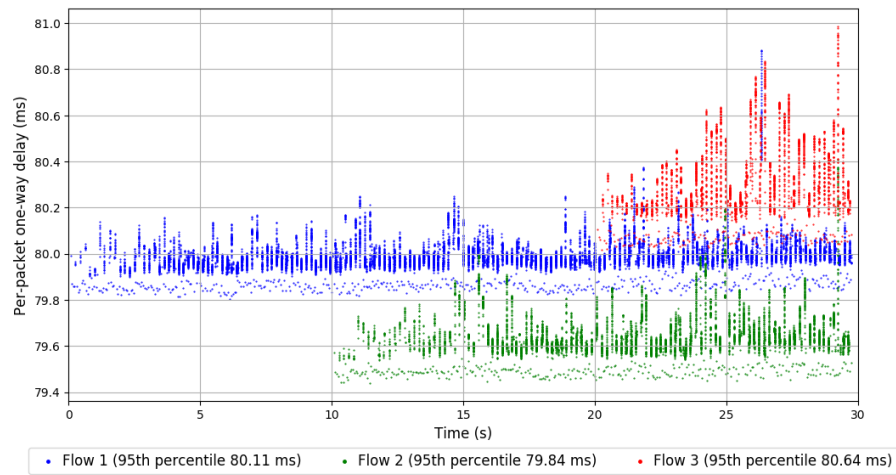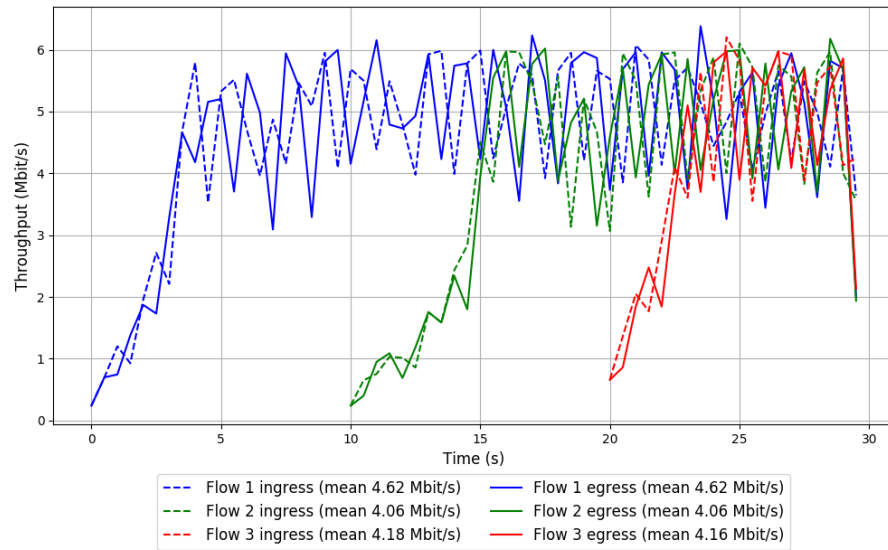
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2017-12-05 20:12:36
End at: 2017-12-05 20:13:06
Local clock offset: 1.064 ms
Remote clock offset: 5.481 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.66 Mbit/s
95th percentile per-packet one-way delay: 80.394 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 80.110 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 79.845 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 80.642 ms
Loss rate: 2.57%
```

Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2017-12-05 20:32:46
End at: 2017-12-05 20:33:16
Local clock offset: 0.763 ms
Remote clock offset: 5.419 ms

# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 80.018 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 4.76 Mbit/s
95th percentile per-packet one-way delay: 79.895 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 78.368 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 80.193 ms
Loss rate: 3.90%
```
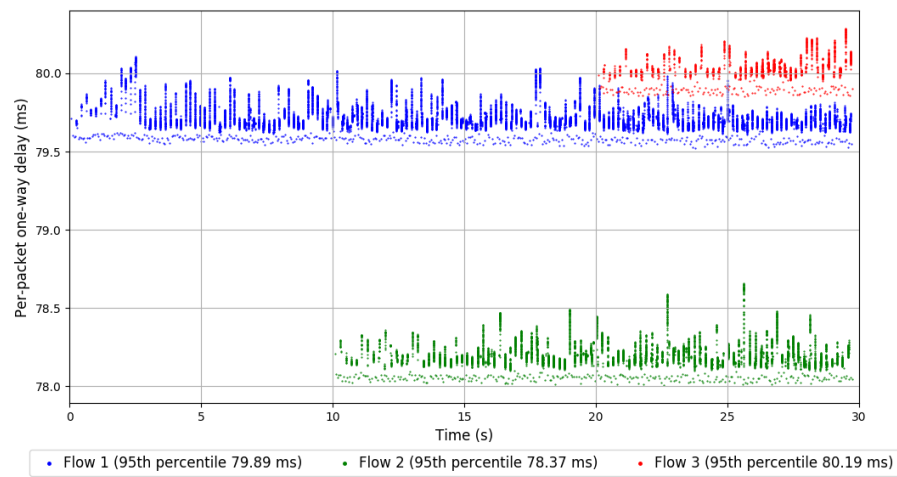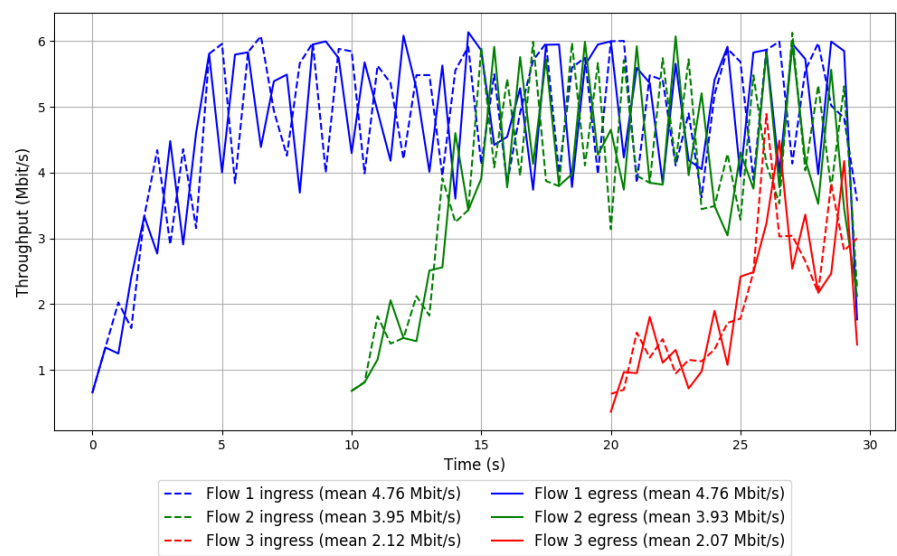
Run 5: Report of Sprout — Data Link
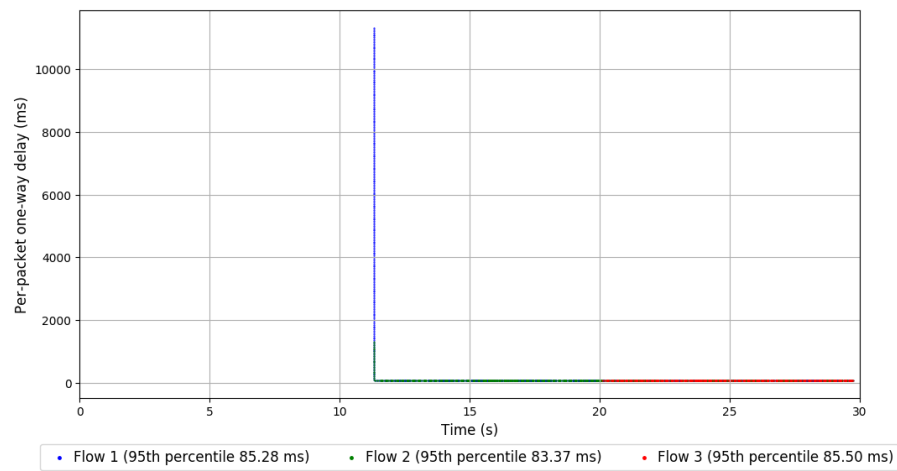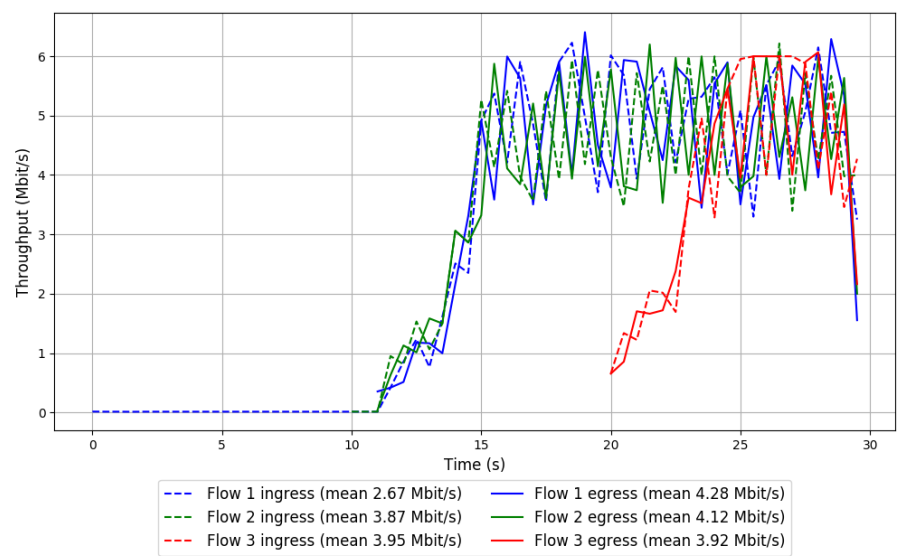
```
Run 6: Statistics of Sprout

Start at: 2017-12-05 20:52:58
End at: 2017-12-05 20:53:28
Local clock offset: 0.297 ms
Remote clock offset: -0.195 ms
```

Run 6: Report of Sprout — Data Link
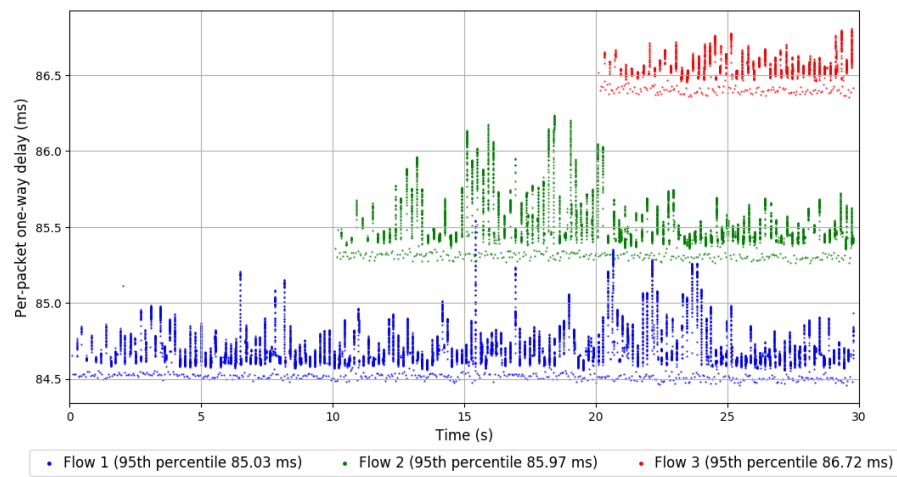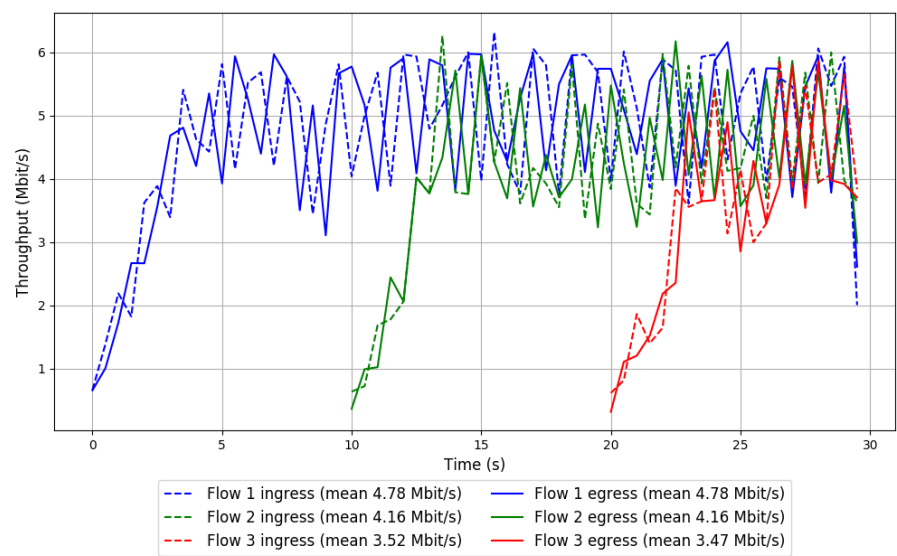

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```
Run 7: Statistics of Sprout

Start at: 2017-12-05 21:13:16
End at: 2017-12-05 21:13:46
Local clock offset: 0.038 ms
Remote clock offset: -1.749 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.66 Mbit/s
95th percentile per-packet one-way delay: 86.570 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 85.027 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 85.966 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 3.47 Mbit/s
95th percentile per-packet one-way delay: 86.721 ms
Loss rate: 2.83%
```
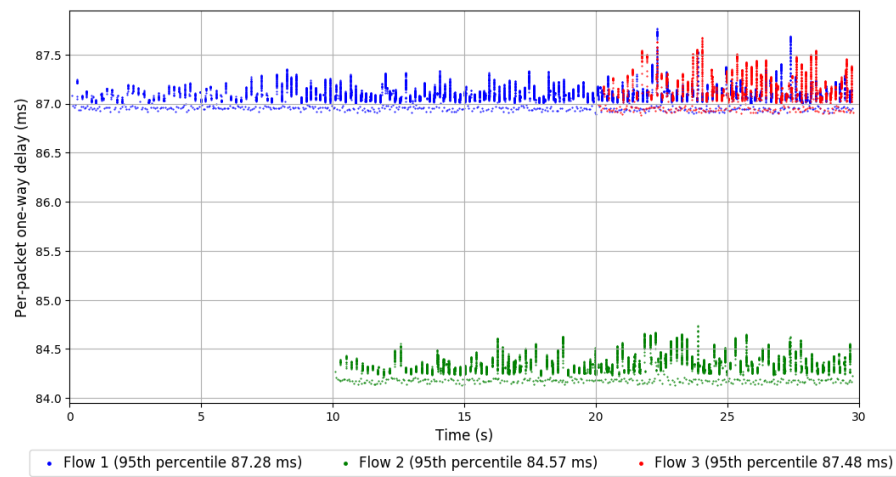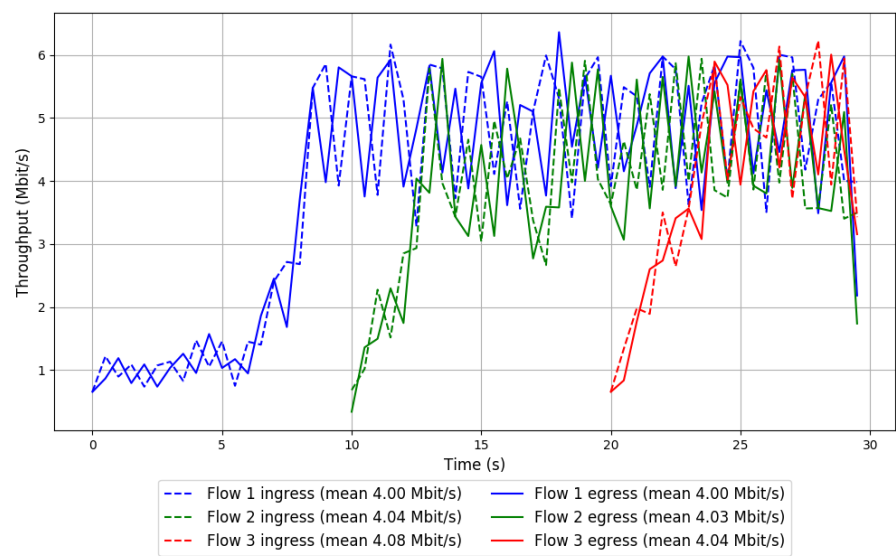
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2017-12-05 21:33:07
End at: 2017-12-05 21:33:37
Local clock offset: -0.068 ms
Remote clock offset: -3.02 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.98 Mbit/s
95th percentile per-packet one-way delay: 87.315 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 87.278 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 84.573 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 87.485 ms
Loss rate: 2.23%
```
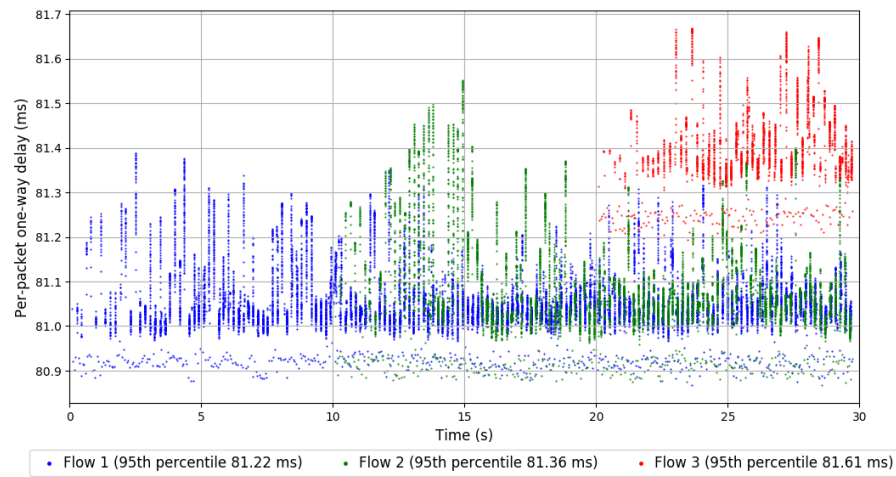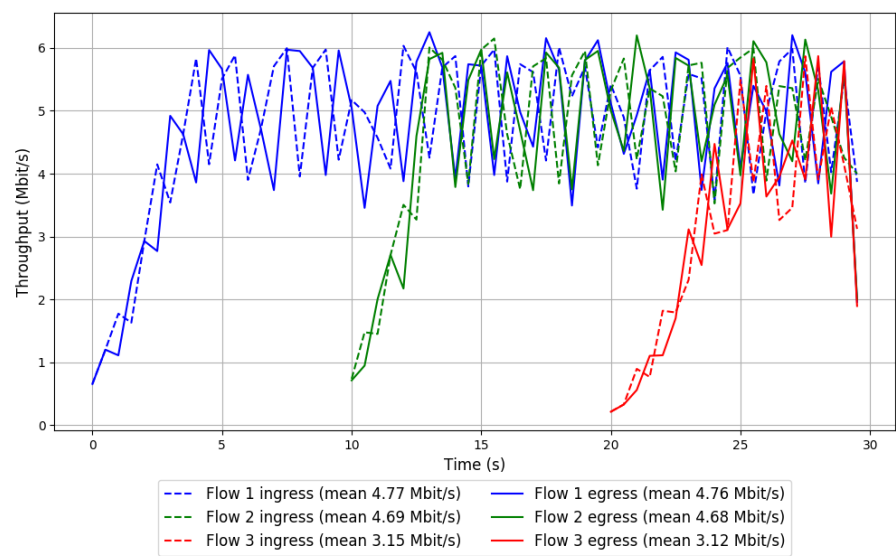
Run 8: Report of Sprout — Data Link

Run 9: Statistics of Sprout

Start at: 2017-12-05 21:53:15
End at: 2017-12-05 21:53:45
Local clock offset: -0.747 ms
Remote clock offset: 0.782 ms

Below is generated by plot.py at 2017-12-06 02:02:01
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.87 Mbit/s
95th percentile per-packet one-way delay: 81.416 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 4.76 Mbit/s
95th percentile per-packet one-way delay: 81.224 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 4.68 Mbit/s
95th percentile per-packet one-way delay: 81.361 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 81.605 ms
Loss rate: 2.65%
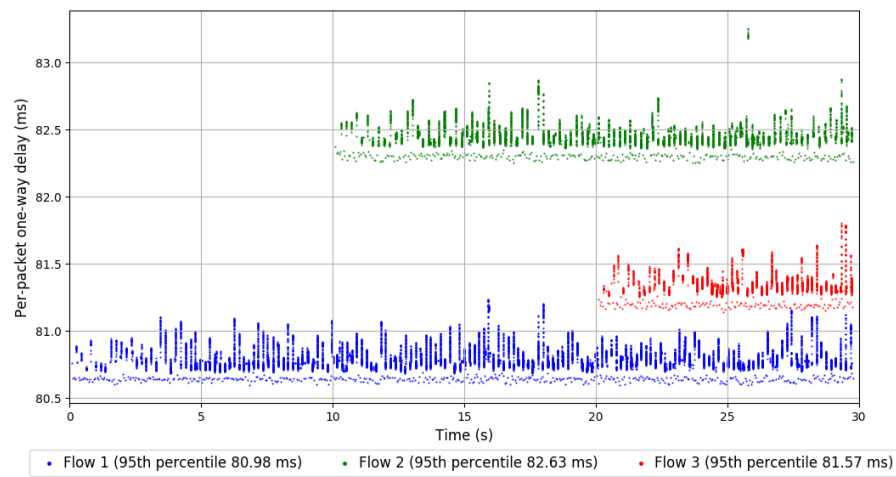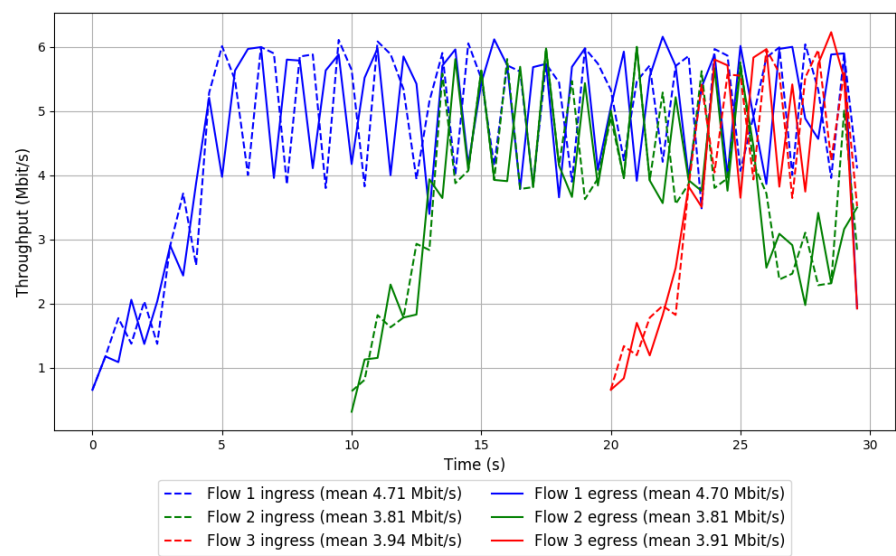
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-12-05 22:13:33
End at: 2017-12-05 22:14:03
Local clock offset: -1.504 ms
Remote clock offset: 0.613 ms


# Below is generated by plot.py at 2017-12-06 02:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 82.527 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 4.70 Mbit/s
95th percentile per-packet one-way delay: 80.984 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 82.626 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 81.571 ms
Loss rate: 2.20%
```

Run 10: Report of Sprout — Data Link

- Flow 1 ingress (mean 4.71 Mbit/s)
- Flow 1 egress (mean 4.70 Mbit/s)
- Flow 2 ingress (mean 3.81 Mbit/s)
- Flow 2 egress (mean 3.81 Mbit/s)
- Flow 3 ingress (mean 3.94 Mbit/s)
- Flow 3 egress (mean 3.91 Mbit/s)

- Flow 1 (95th percentile 80.98 ms)
- Flow 2 (95th percentile 82.63 ms)
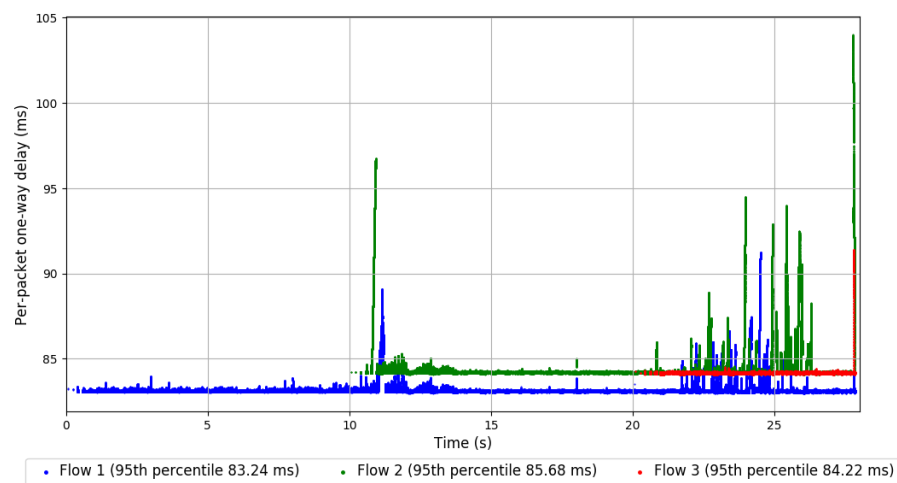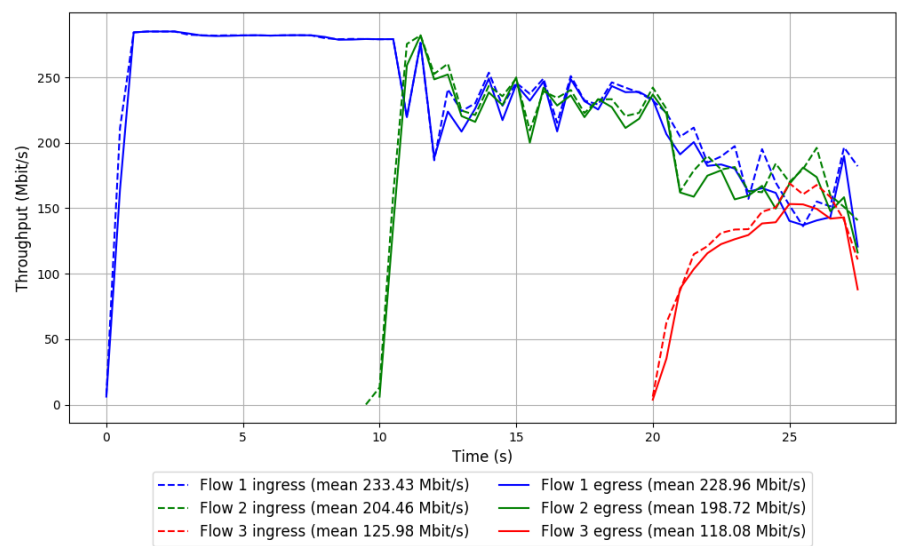- Flow 3 (95th percentile 81.57 ms)

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

Start at: 2017-12-05 19:07:26
End at: 2017-12-05 19:07:56
Local clock offset: 1.475 ms
Remote clock offset: -1.308 ms


# Below is generated by plot.py at 2017-12-06 02:10:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.21 Mbit/s
95th percentile per-packet one-way delay: 84.250 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 228.96 Mbit/s
95th percentile per-packet one-way delay: 83.240 ms
Loss rate: 2.50%
-- Flow 2:
Average throughput: 198.72 Mbit/s
95th percentile per-packet one-way delay: 85.678 ms
Loss rate: 3.74%
-- Flow 3:
Average throughput: 118.08 Mbit/s
95th percentile per-packet one-way delay: 84.223 ms
Loss rate: 8.25%
```

Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 233.43 Mbit/s) — — — Flow 1 egress (mean 228.96 Mbit/s) ———
Flow 2 ingress (mean 204.46 Mbit/s) — — — Flow 2 egress (mean 198.72 Mbit/s) ———
Flow 3 ingress (mean 125.98 Mbit/s) — — — Flow 3 egress (mean 118.08 Mbit/s) ———

Flow 1 (95th percentile 83.24 ms)   Flow 2 (95th percentile 85.68 ms)   Flow 3 (95th percentile 84.22 ms)

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

Start at: 2017-12-05 19:27:28
End at: 2017-12-05 19:27:58
Local clock offset: 1.541 ms
Remote clock offset: 2.306 ms


# Below is generated by plot.py at 2017-12-06 02:10:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 385.84 Mbit/s
95th percentile per-packet one-way delay: 81.681 ms
Loss rate: 3.74%
-- Flow 1:
Average throughput: 217.38 Mbit/s
95th percentile per-packet one-way delay: 81.679 ms
Loss rate: 2.34%
-- Flow 2:
Average throughput: 190.00 Mbit/s
95th percentile per-packet one-way delay: 81.703 ms
Loss rate: 4.34%
-- Flow 3:
Average throughput: 166.84 Mbit/s
95th percentile per-packet one-way delay: 79.557 ms
Loss rate: 8.33%
```
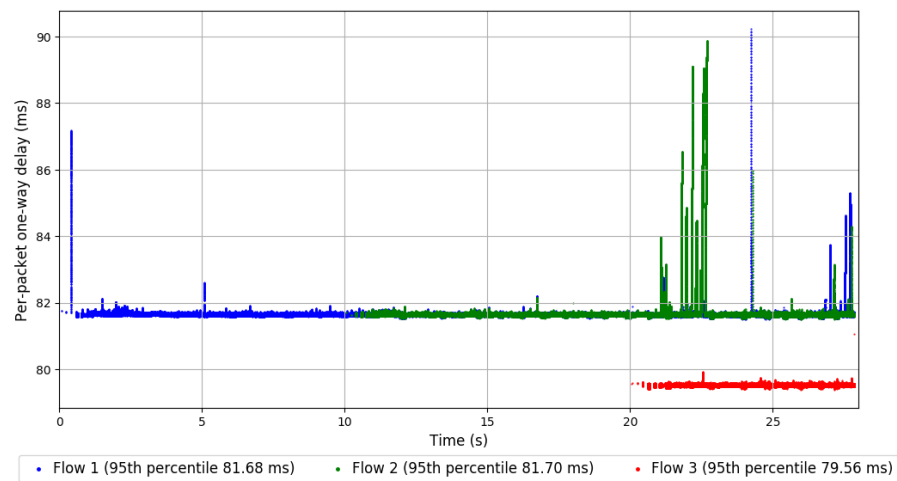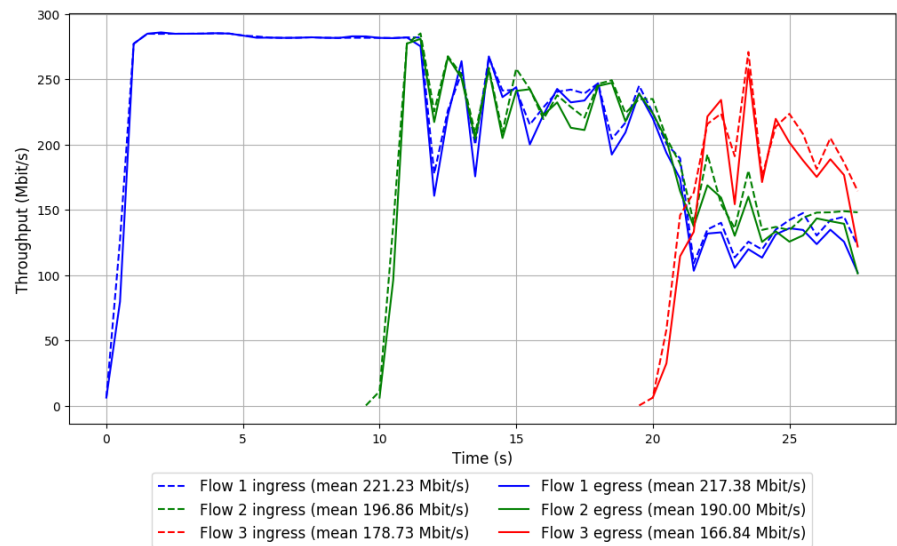
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 221.23 Mbit/s) --- Flow 1 egress (mean 217.38 Mbit/s)
Flow 2 ingress (mean 196.86 Mbit/s) --- Flow 2 egress (mean 190.00 Mbit/s)
Flow 3 ingress (mean 178.73 Mbit/s) --- Flow 3 egress (mean 166.84 Mbit/s)

Flow 1 (95th percentile 81.68 ms) Flow 2 (95th percentile 81.70 ms) Flow 3 (95th percentile 79.56 ms)
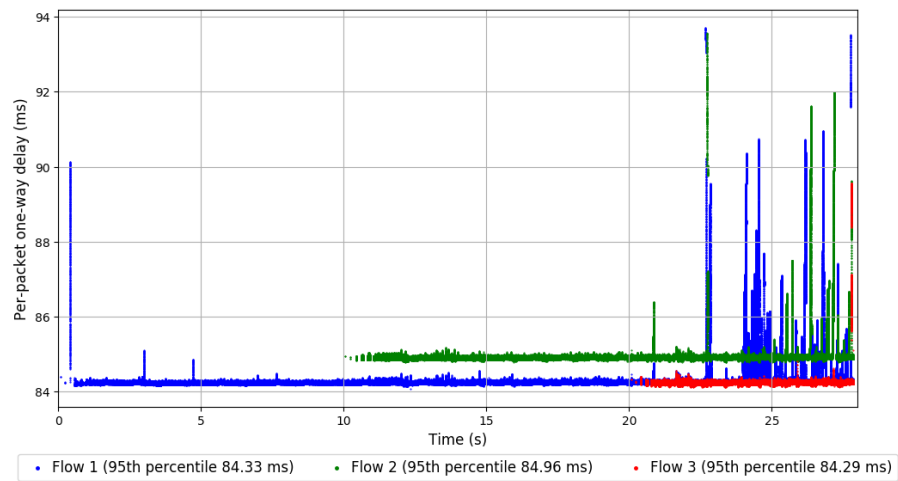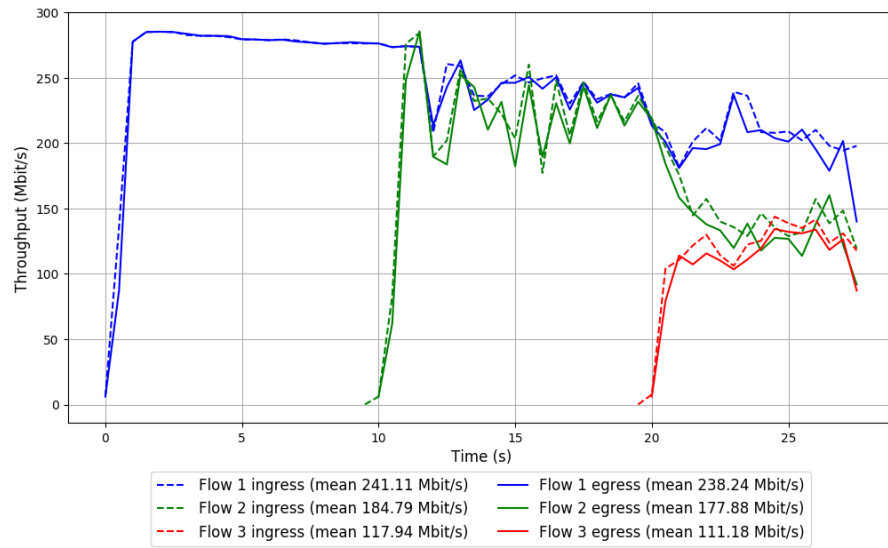
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```
Run 3: Statistics of TaoVA-100x

Start at: 2017-12-05 19:47:52
End at: 2017-12-05 19:48:22
Local clock offset: 1.546 ms
Remote clock offset: -1.588 ms

# Below is generated by plot.py at 2017-12-06 02:10:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.32 Mbit/s
95th percentile per-packet one-way delay: 84.945 ms
Loss rate: 3.15%
-- Flow 1:
Average throughput: 238.24 Mbit/s
95th percentile per-packet one-way delay: 84.334 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 177.88 Mbit/s
95th percentile per-packet one-way delay: 84.964 ms
Loss rate: 4.64%
-- Flow 3:
Average throughput: 111.18 Mbit/s
95th percentile per-packet one-way delay: 84.292 ms
Loss rate: 7.70%
```

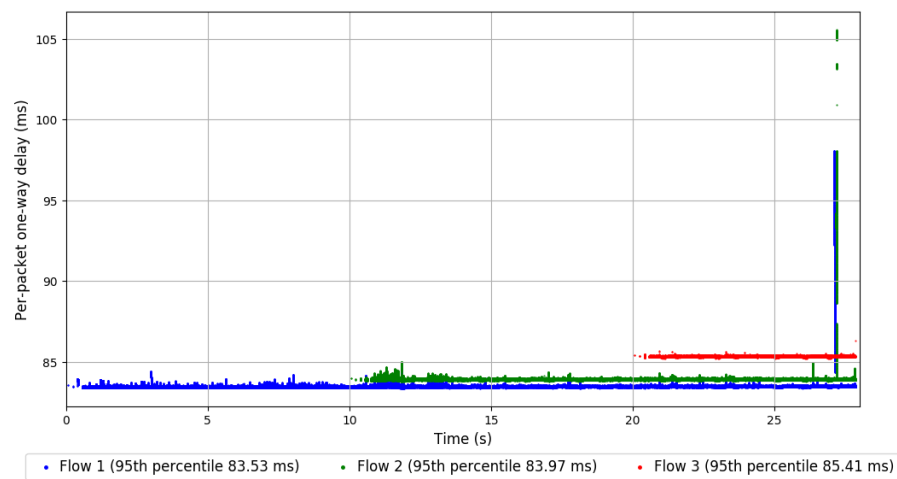Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 241.11 Mbit/s) --- Flow 1 egress (mean 238.24 Mbit/s)
Flow 2 ingress (mean 184.79 Mbit/s) --- Flow 2 egress (mean 177.88 Mbit/s)
Flow 3 ingress (mean 117.94 Mbit/s) --- Flow 3 egress (mean 111.18 Mbit/s)

Flow 1 (95th percentile 84.33 ms)   Flow 2 (95th percentile 84.96 ms)   Flow 3 (95th percentile 84.29 ms)
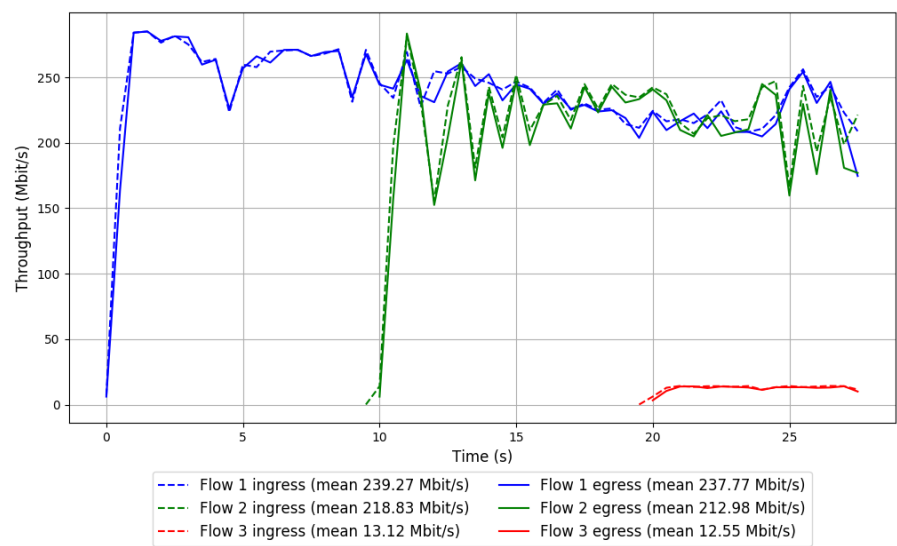
```
Run 4: Statistics of TaoVA-100x

Start at: 2017-12-05 20:08:07
End at: 2017-12-05 20:08:37
Local clock offset: 1.15 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2017-12-06 02:10:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.71 Mbit/s
95th percentile per-packet one-way delay: 83.958 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 237.77 Mbit/s
95th percentile per-packet one-way delay: 83.525 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 212.98 Mbit/s
95th percentile per-packet one-way delay: 83.971 ms
Loss rate: 3.58%
-- Flow 3:
Average throughput: 12.55 Mbit/s
95th percentile per-packet one-way delay: 85.412 ms
Loss rate: 6.40%
```
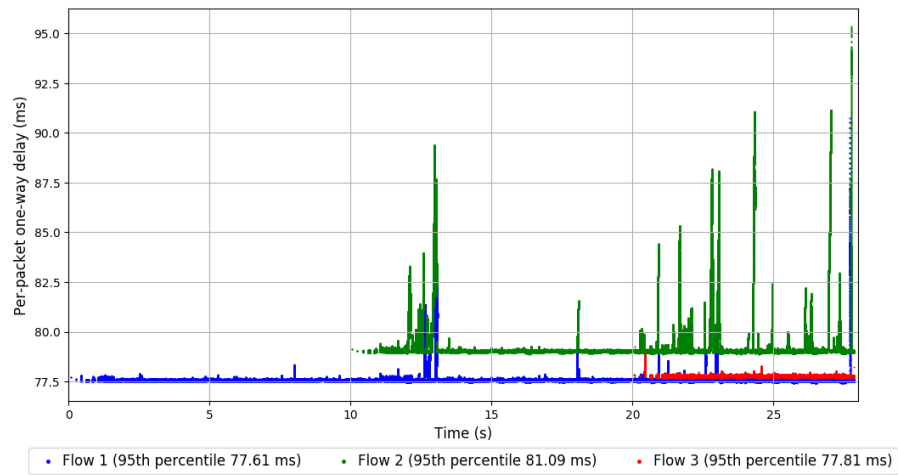
Run 4: Report of TaoVA-100x — Data Link

- --- Flow 1 ingress (mean 239.27 Mbit/s)   — Flow 1 egress (mean 237.77 Mbit/s)
- --- Flow 2 ingress (mean 218.83 Mbit/s)   — Flow 2 egress (mean 212.98 Mbit/s)
- --- Flow 3 ingress (mean 13.12 Mbit/s)   — Flow 3 egress (mean 12.55 Mbit/s)

- Flow 1 (95th percentile 83.53 ms)   • Flow 2 (95th percentile 83.97 ms)   • Flow 3 (95th percentile 85.41 ms)

```
Run 5: Statistics of TaoVA-100x

Start at: 2017-12-05 20:28:16
End at: 2017-12-05 20:28:46
Local clock offset: 0.861 ms
Remote clock offset: 6.337 ms


# Below is generated by plot.py at 2017-12-06 02:10:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.66 Mbit/s
95th percentile per-packet one-way delay: 79.087 ms
Loss rate: 3.94%
-- Flow 1:
Average throughput: 215.92 Mbit/s
95th percentile per-packet one-way delay: 77.605 ms
Loss rate: 2.55%
-- Flow 2:
Average throughput: 184.65 Mbit/s
95th percentile per-packet one-way delay: 81.095 ms
Loss rate: 4.76%
-- Flow 3:
Average throughput: 151.54 Mbit/s
95th percentile per-packet one-way delay: 77.811 ms
Loss rate: 8.36%
```
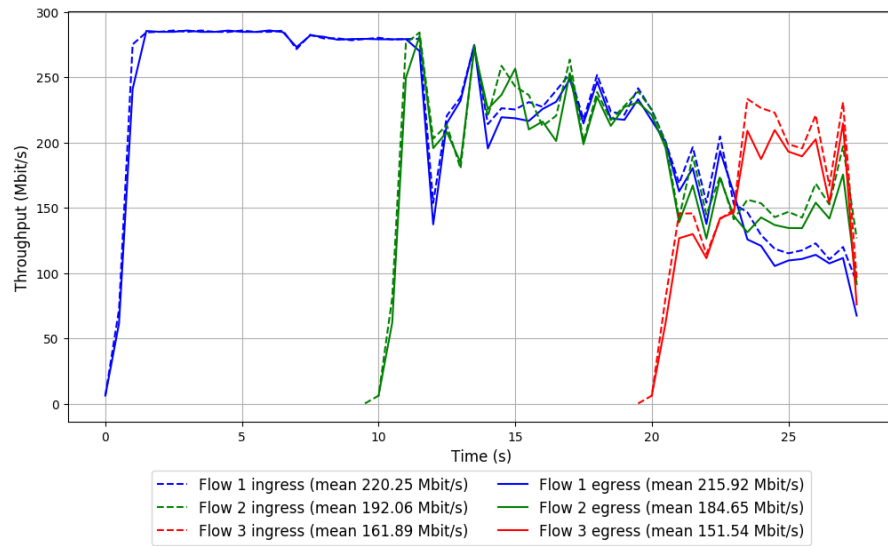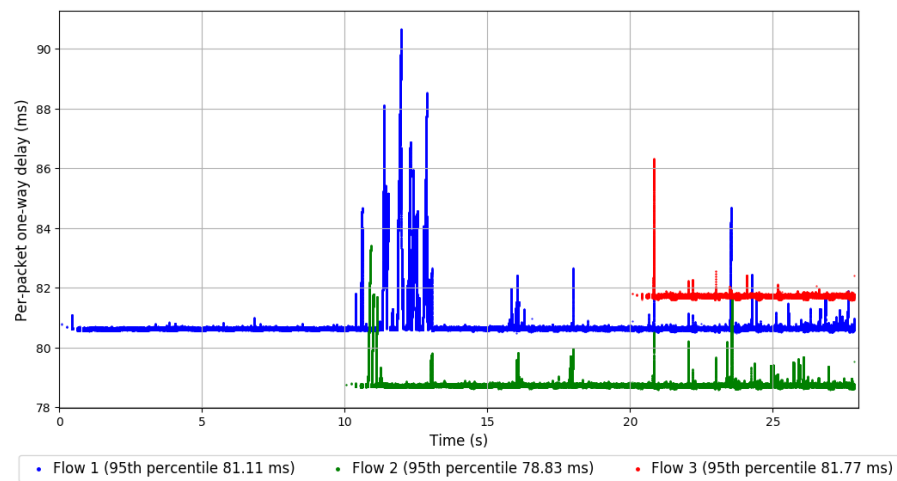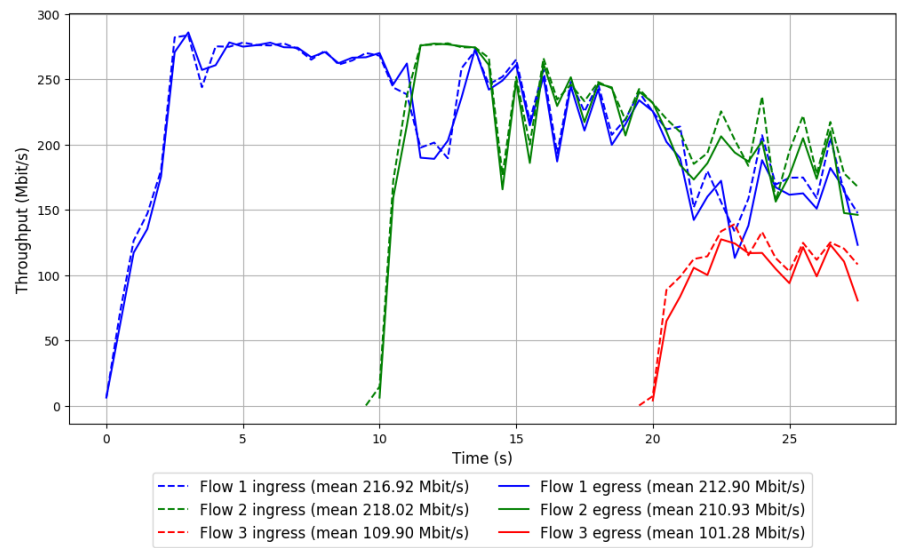
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 220.25 Mbit/s) — — — Flow 1 egress (mean 215.92 Mbit/s)
Flow 2 ingress (mean 192.06 Mbit/s) — — — Flow 2 egress (mean 184.65 Mbit/s)
Flow 3 ingress (mean 161.89 Mbit/s) — — — Flow 3 egress (mean 151.54 Mbit/s)

Flow 1 (95th percentile 77.61 ms) · Flow 2 (95th percentile 81.09 ms) · Flow 3 (95th percentile 77.81 ms)

```
Run 6: Statistics of TaoVA-100x

Start at: 2017-12-05 20:48:20
End at: 2017-12-05 20:48:50
Local clock offset: 0.419 ms
Remote clock offset: 4.565 ms


# Below is generated by plot.py at 2017-12-06 02:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.42 Mbit/s
95th percentile per-packet one-way delay: 81.733 ms
Loss rate: 3.65%
-- Flow 1:
Average throughput: 212.90 Mbit/s
95th percentile per-packet one-way delay: 81.109 ms
Loss rate: 2.45%
-- Flow 2:
Average throughput: 210.93 Mbit/s
95th percentile per-packet one-way delay: 78.835 ms
Loss rate: 4.14%
-- Flow 3:
Average throughput: 101.28 Mbit/s
95th percentile per-packet one-way delay: 81.770 ms
Loss rate: 9.81%
```
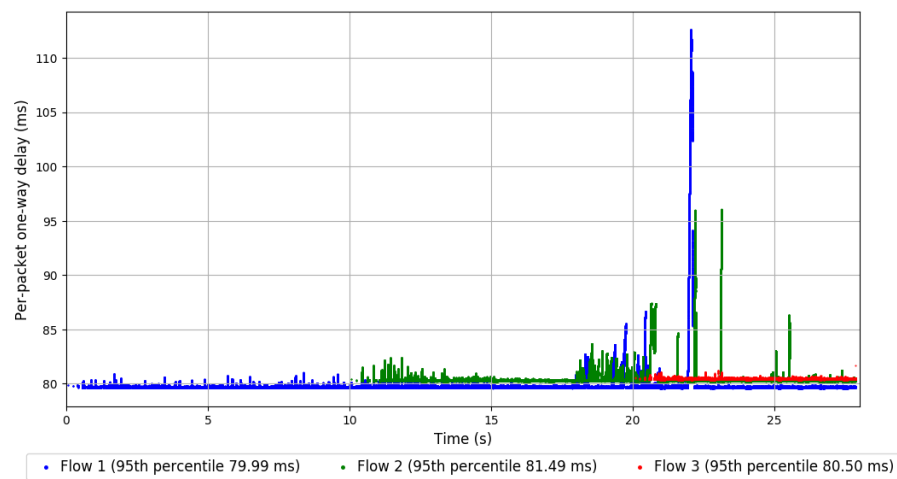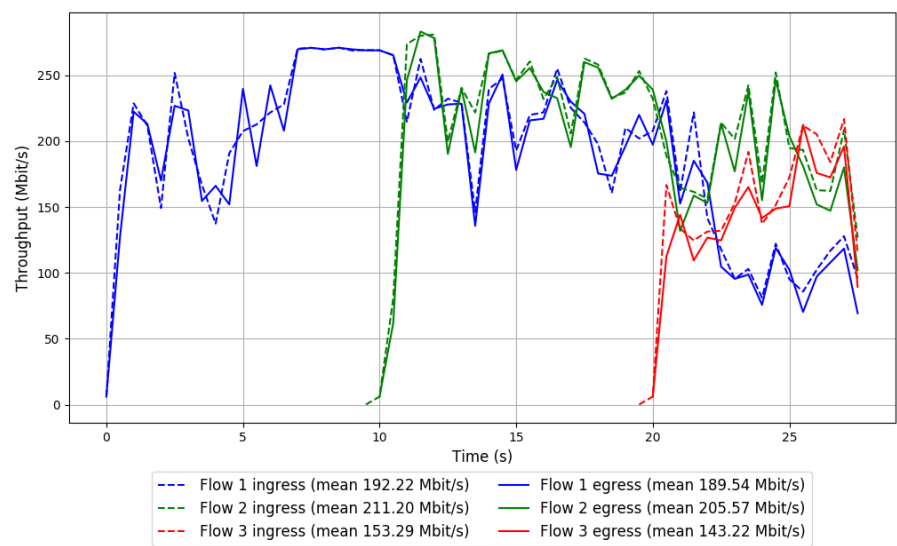
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 216.92 Mbit/s) — Flow 1 egress (mean 212.90 Mbit/s)
Flow 2 ingress (mean 218.02 Mbit/s) — Flow 2 egress (mean 210.93 Mbit/s)
Flow 3 ingress (mean 109.90 Mbit/s) — Flow 3 egress (mean 101.28 Mbit/s)

Flow 1 (95th percentile 81.11 ms) · Flow 2 (95th percentile 78.83 ms) · Flow 3 (95th percentile 81.77 ms)

175

```
Run 7: Statistics of TaoVA-100x

Start at: 2017-12-05 21:08:45
End at: 2017-12-05 21:09:15
Local clock offset: 0.108 ms
Remote clock offset: 3.234 ms


# Below is generated by plot.py at 2017-12-06 02:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.30 Mbit/s
95th percentile per-packet one-way delay: 80.677 ms
Loss rate: 3.34%
-- Flow 1:
Average throughput: 189.54 Mbit/s
95th percentile per-packet one-way delay: 79.991 ms
Loss rate: 1.99%
-- Flow 2:
Average throughput: 205.57 Mbit/s
95th percentile per-packet one-way delay: 81.487 ms
Loss rate: 3.58%
-- Flow 3:
Average throughput: 143.22 Mbit/s
95th percentile per-packet one-way delay: 80.504 ms
Loss rate: 8.54%
```
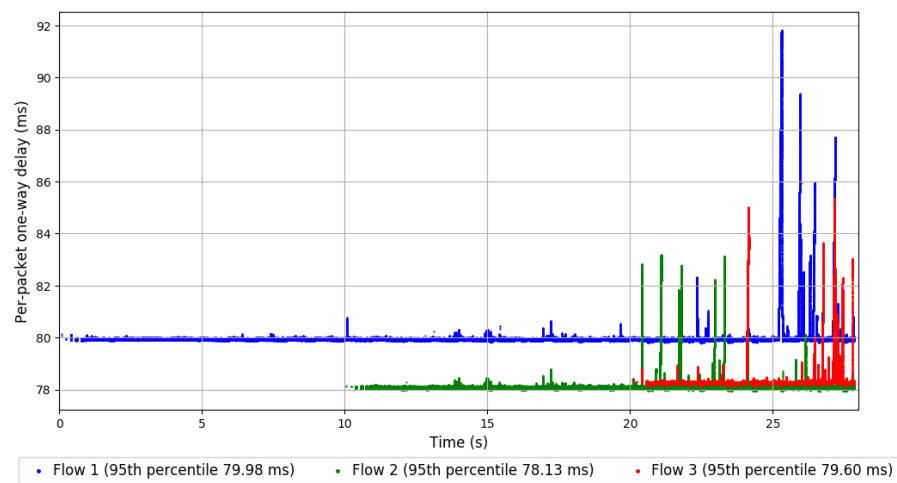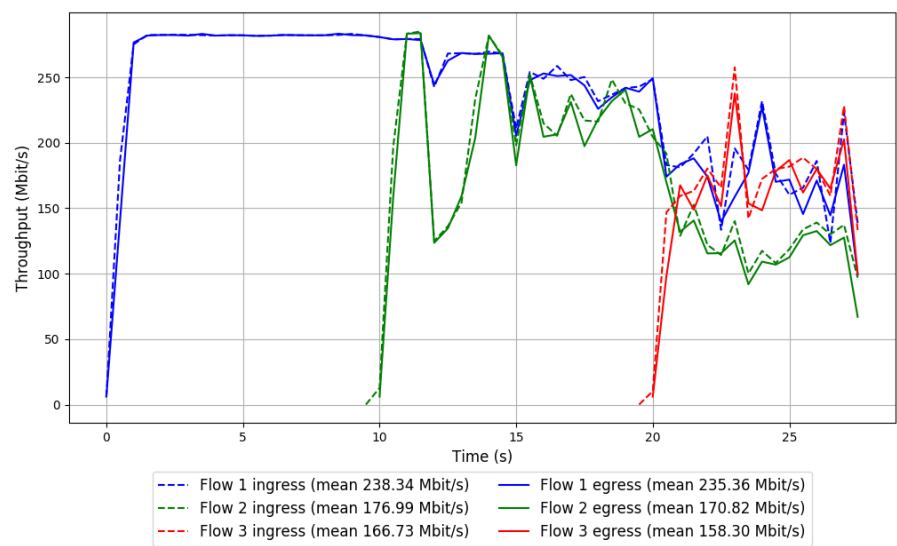
Run 7: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 192.22 Mbit/s) —— Flow 1 egress (mean 189.54 Mbit/s)
- - - Flow 2 ingress (mean 211.20 Mbit/s) —— Flow 2 egress (mean 205.57 Mbit/s)
- - - Flow 3 ingress (mean 153.29 Mbit/s) —— Flow 3 egress (mean 143.22 Mbit/s)

- Flow 1 (95th percentile 79.99 ms)   • Flow 2 (95th percentile 81.49 ms)   • Flow 3 (95th percentile 80.50 ms)
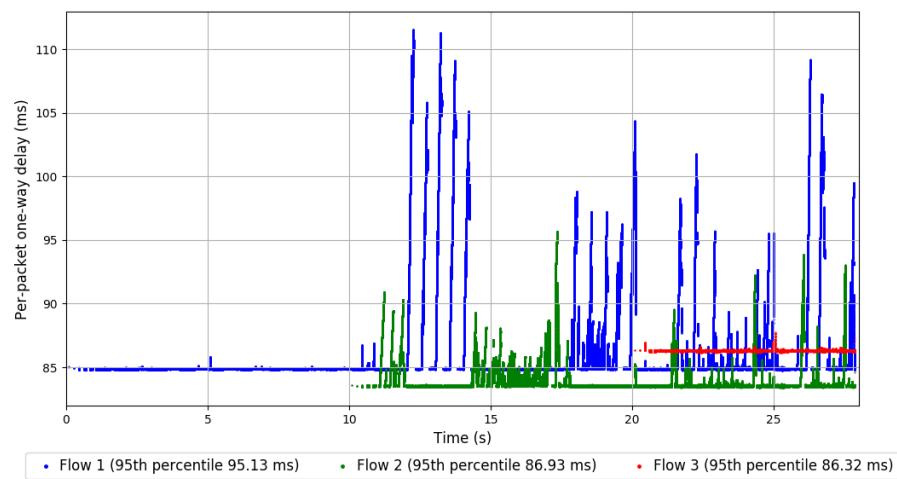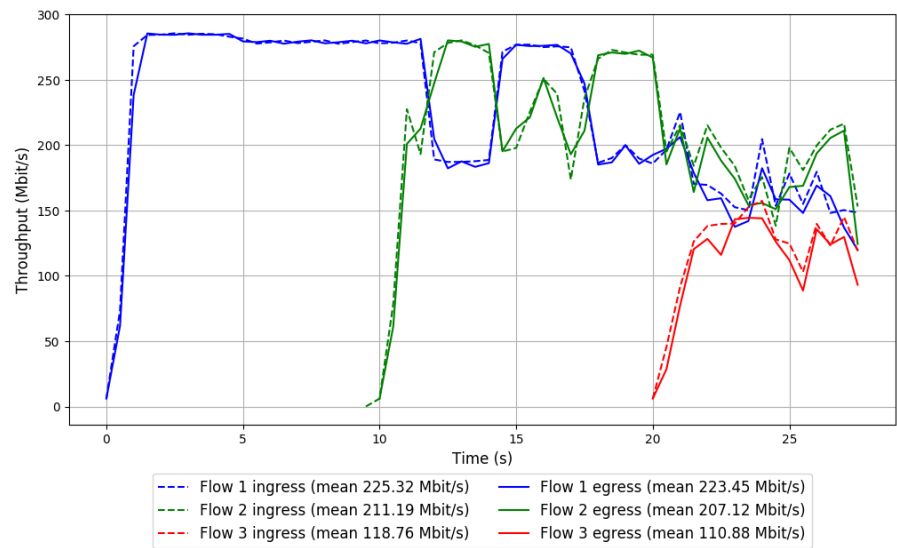
177

```
Run 8: Statistics of TaoVA-100x

Start at: 2017-12-05 21:28:39
End at: 2017-12-05 21:29:09
Local clock offset: -0.016 ms
Remote clock offset: 2.897 ms

# Below is generated by plot.py at 2017-12-06 02:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.13 Mbit/s
95th percentile per-packet one-way delay: 79.972 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 235.36 Mbit/s
95th percentile per-packet one-way delay: 79.979 ms
Loss rate: 1.85%
-- Flow 2:
Average throughput: 170.82 Mbit/s
95th percentile per-packet one-way delay: 78.132 ms
Loss rate: 4.39%
-- Flow 3:
Average throughput: 158.30 Mbit/s
95th percentile per-packet one-way delay: 79.602 ms
Loss rate: 7.07%
```
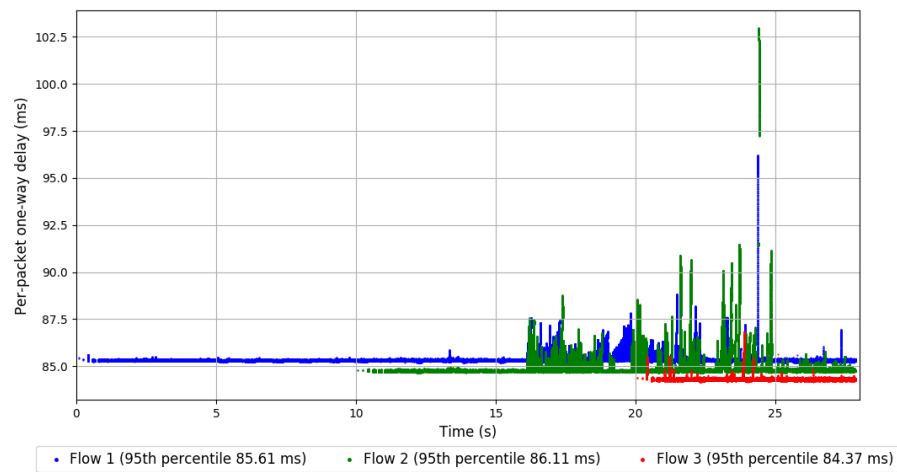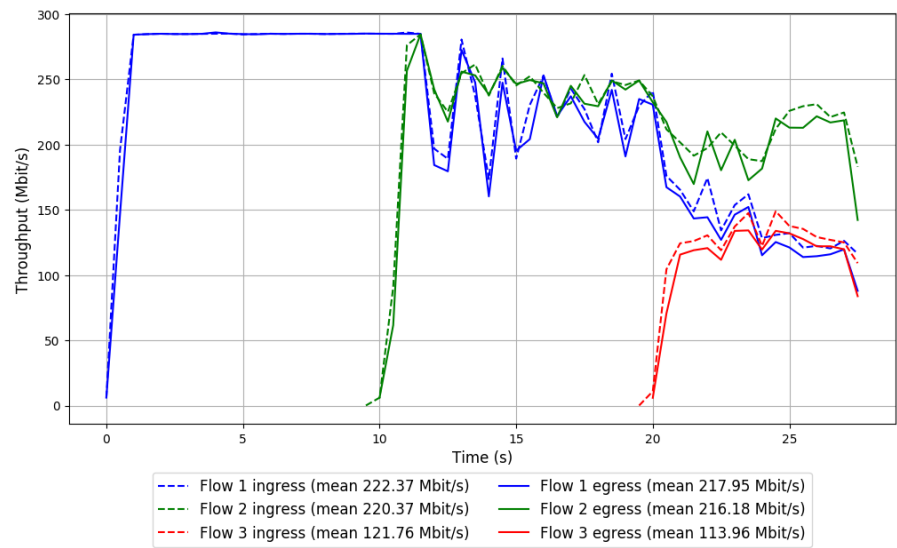
Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 238.34 Mbit/s)   Flow 1 egress (mean 235.36 Mbit/s)
Flow 2 ingress (mean 176.99 Mbit/s)   Flow 2 egress (mean 170.82 Mbit/s)
Flow 3 ingress (mean 166.73 Mbit/s)   Flow 3 egress (mean 158.30 Mbit/s)

Flow 1 (95th percentile 79.98 ms)   Flow 2 (95th percentile 78.13 ms)   Flow 3 (95th percentile 79.60 ms)

179

```
Run 9: Statistics of TaoVA-100x

Start at: 2017-12-05 21:48:41
End at: 2017-12-05 21:49:12
Local clock offset: -0.52 ms
Remote clock offset: -2.906 ms

# Below is generated by plot.py at 2017-12-06 02:19:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 386.95 Mbit/s
95th percentile per-packet one-way delay: 90.917 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 223.45 Mbit/s
95th percentile per-packet one-way delay: 95.130 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 207.12 Mbit/s
95th percentile per-packet one-way delay: 86.928 ms
Loss rate: 2.82%
-- Flow 3:
Average throughput: 110.88 Mbit/s
95th percentile per-packet one-way delay: 86.324 ms
Loss rate: 8.63%
```
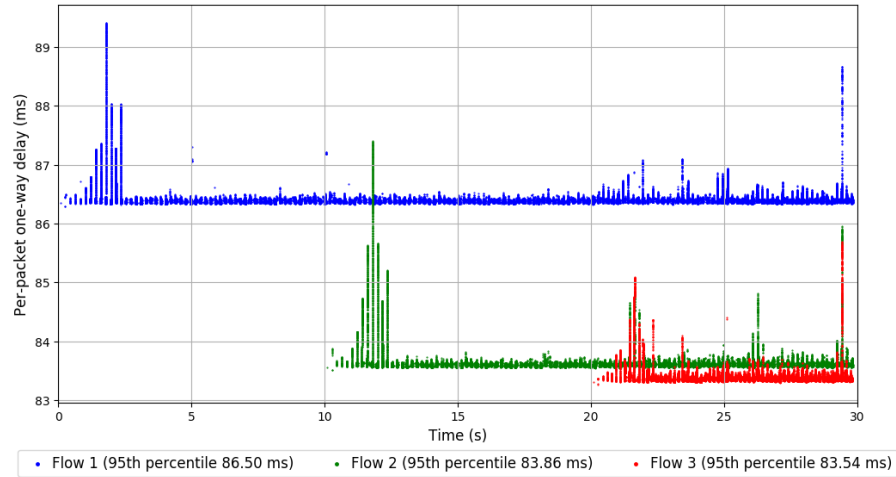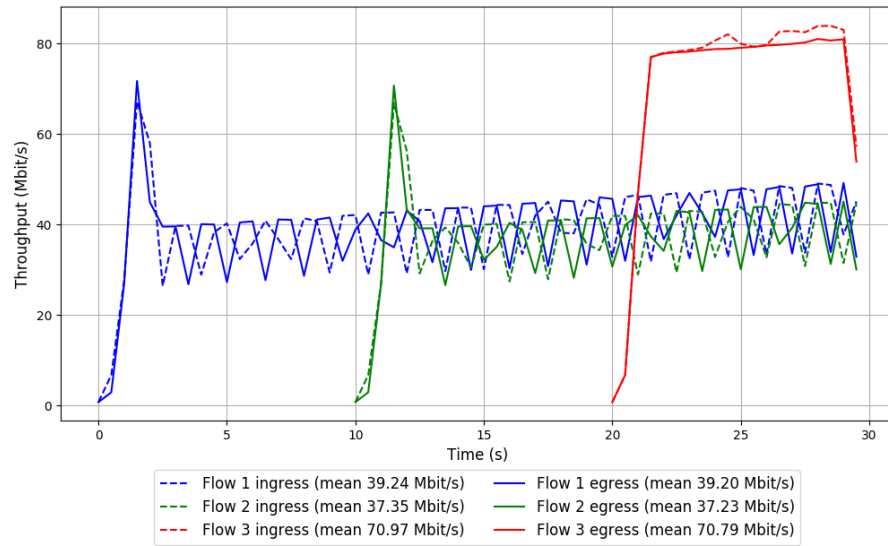
Run 9: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 225.32 Mbit/s) —— Flow 1 egress (mean 223.45 Mbit/s)
- - - Flow 2 ingress (mean 211.19 Mbit/s) —— Flow 2 egress (mean 207.12 Mbit/s)
- - - Flow 3 ingress (mean 118.76 Mbit/s) —— Flow 3 egress (mean 110.88 Mbit/s)

• Flow 1 (95th percentile 95.13 ms)　　• Flow 2 (95th percentile 86.93 ms)　　• Flow 3 (95th percentile 86.32 ms)

```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-05 22:09:02
End at: 2017-12-05 22:09:32
Local clock offset: -1.278 ms
Remote clock offset: -3.249 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.39 Mbit/s
95th percentile per-packet one-way delay: 85.683 ms
Loss rate: 3.17%
-- Flow 1:
Average throughput: 217.95 Mbit/s
95th percentile per-packet one-way delay: 85.606 ms
Loss rate: 2.58%
-- Flow 2:
Average throughput: 216.18 Mbit/s
95th percentile per-packet one-way delay: 86.105 ms
Loss rate: 2.82%
-- Flow 3:
Average throughput: 113.96 Mbit/s
95th percentile per-packet one-way delay: 84.368 ms
Loss rate: 8.38%
```
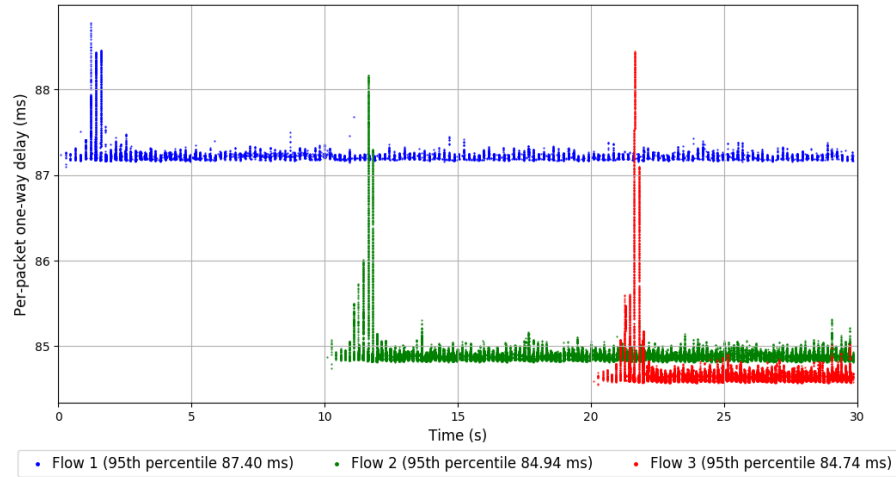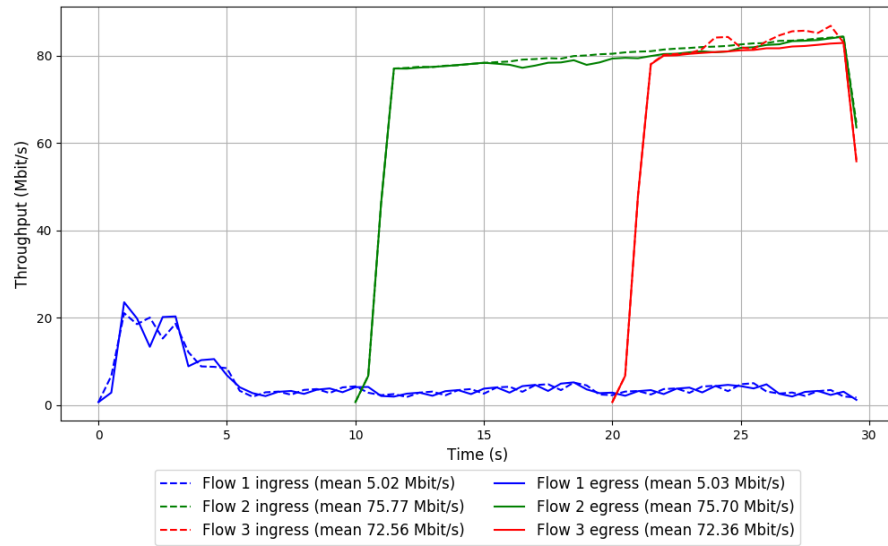
Run 10: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2017-12-05 19:10:36
End at: 2017-12-05 19:11:06
Local clock offset: 1.55 ms
Remote clock offset: -1.305 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.01 Mbit/s
95th percentile per-packet one-way delay: 86.432 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 39.20 Mbit/s
95th percentile per-packet one-way delay: 86.502 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 37.23 Mbit/s
95th percentile per-packet one-way delay: 83.860 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 70.79 Mbit/s
95th percentile per-packet one-way delay: 83.542 ms
Loss rate: 1.93%
```
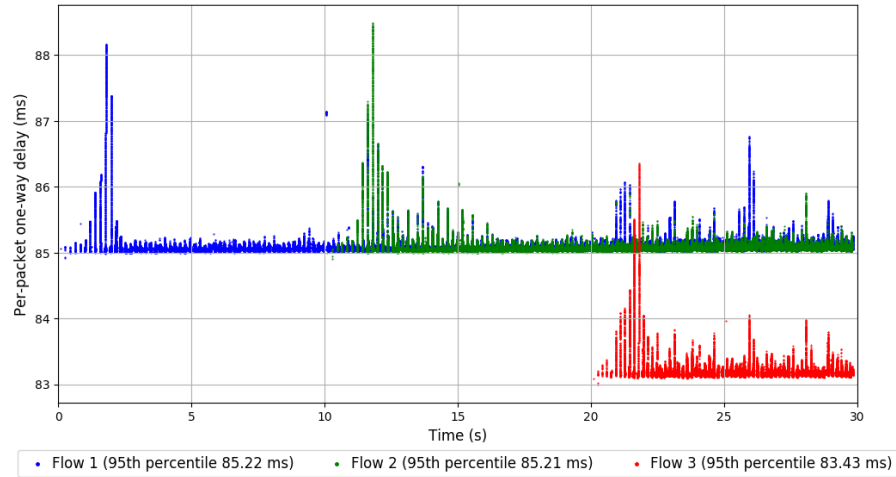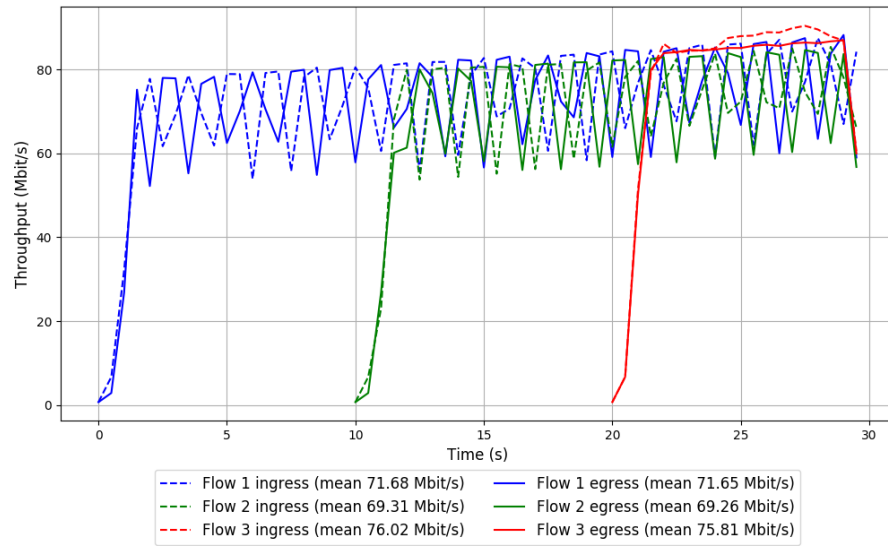
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2017-12-05 19:30:47
End at: 2017-12-05 19:31:17
Local clock offset: 1.561 ms
Remote clock offset: -2.578 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.97 Mbit/s
95th percentile per-packet one-way delay: 87.198 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 87.404 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 75.70 Mbit/s
95th percentile per-packet one-way delay: 84.937 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 72.36 Mbit/s
95th percentile per-packet one-way delay: 84.744 ms
Loss rate: 1.93%
```
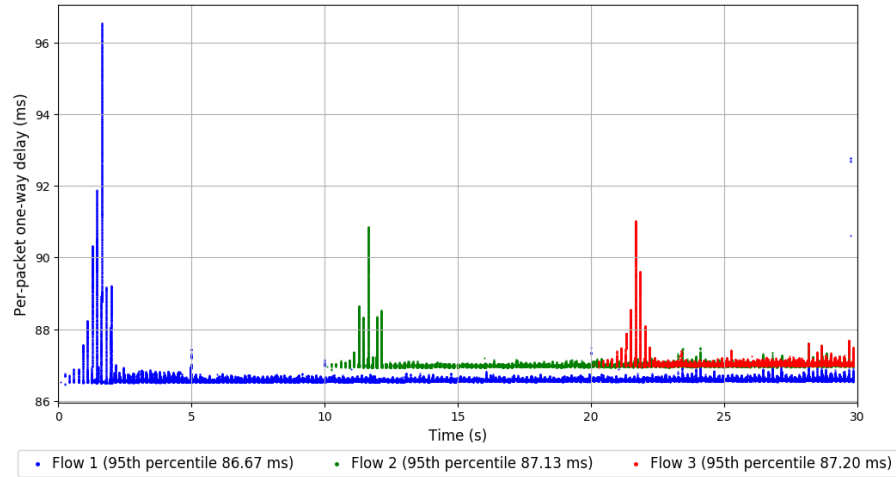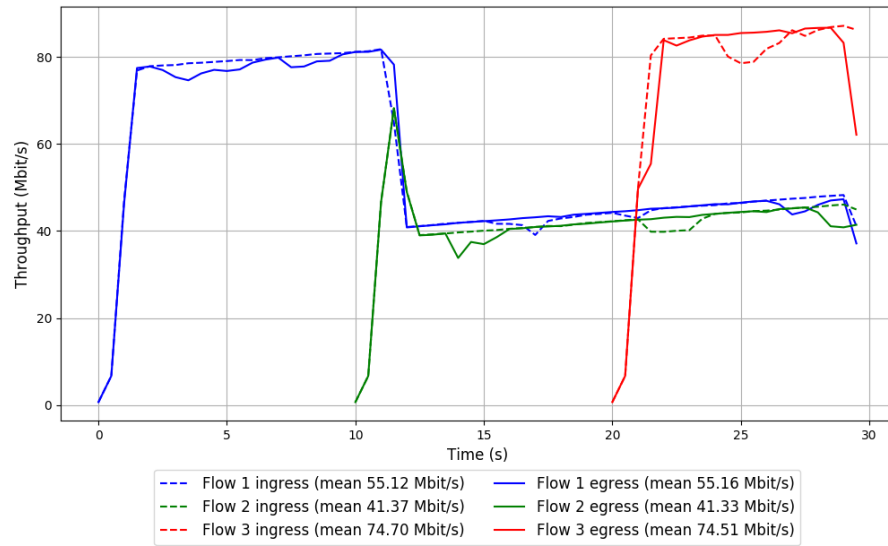
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-12-05 19:51:07
End at: 2017-12-05 19:51:37
Local clock offset: 1.444 ms
Remote clock offset: -0.555 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 142.40 Mbit/s
95th percentile per-packet one-way delay: 85.189 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 71.65 Mbit/s
95th percentile per-packet one-way delay: 85.216 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 69.26 Mbit/s
95th percentile per-packet one-way delay: 85.210 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 83.431 ms
Loss rate: 1.93%
```
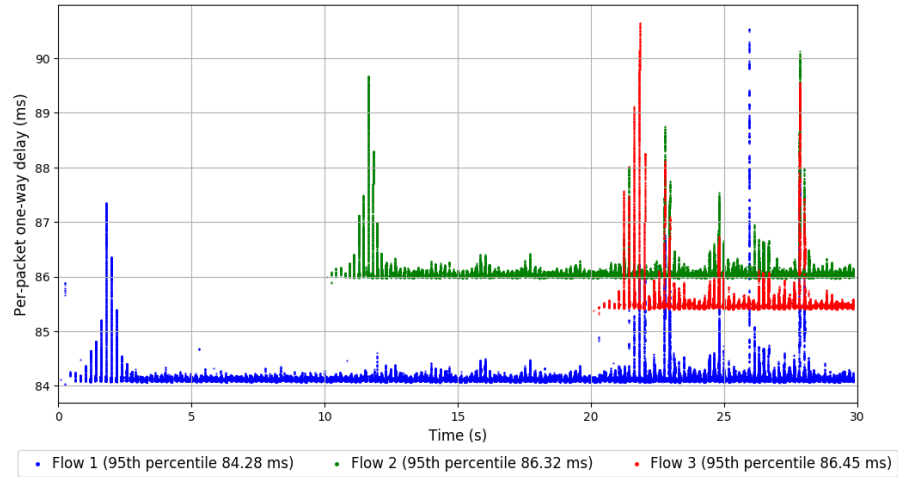
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 71.68 Mbit/s)   Flow 1 egress (mean 71.65 Mbit/s)
Flow 2 ingress (mean 69.31 Mbit/s)   Flow 2 egress (mean 69.26 Mbit/s)
Flow 3 ingress (mean 76.02 Mbit/s)   Flow 3 egress (mean 75.81 Mbit/s)

• Flow 1 (95th percentile 85.22 ms)   • Flow 2 (95th percentile 85.21 ms)   • Flow 3 (95th percentile 83.43 ms)
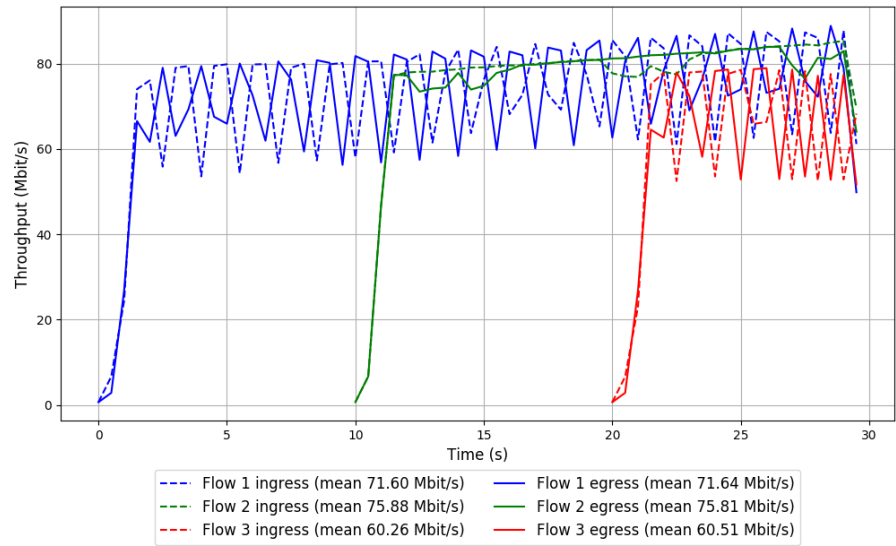
189

```
Run 4: Statistics of TCP Vegas

Start at: 2017-12-05 20:11:17
End at: 2017-12-05 20:11:47
Local clock offset: 1.165 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 106.96 Mbit/s
95th percentile per-packet one-way delay: 87.085 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 55.16 Mbit/s
95th percentile per-packet one-way delay: 86.670 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 41.33 Mbit/s
95th percentile per-packet one-way delay: 87.131 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 74.51 Mbit/s
95th percentile per-packet one-way delay: 87.198 ms
Loss rate: 1.97%
```
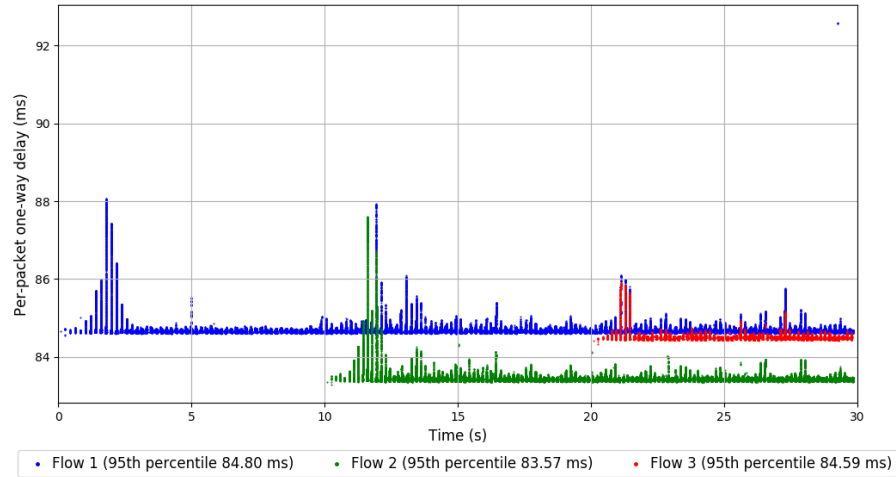
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2017-12-05 20:31:24
End at: 2017-12-05 20:31:54
Local clock offset: 0.805 ms
Remote clock offset: -0.303 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.74 Mbit/s
95th percentile per-packet one-way delay: 86.131 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 71.64 Mbit/s
95th percentile per-packet one-way delay: 84.280 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 86.324 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 60.51 Mbit/s
95th percentile per-packet one-way delay: 86.446 ms
Loss rate: 1.44%
```
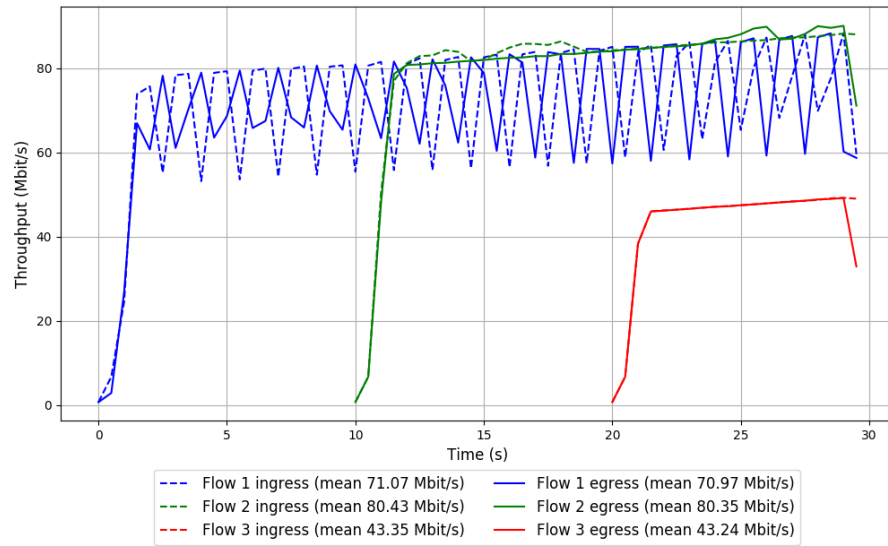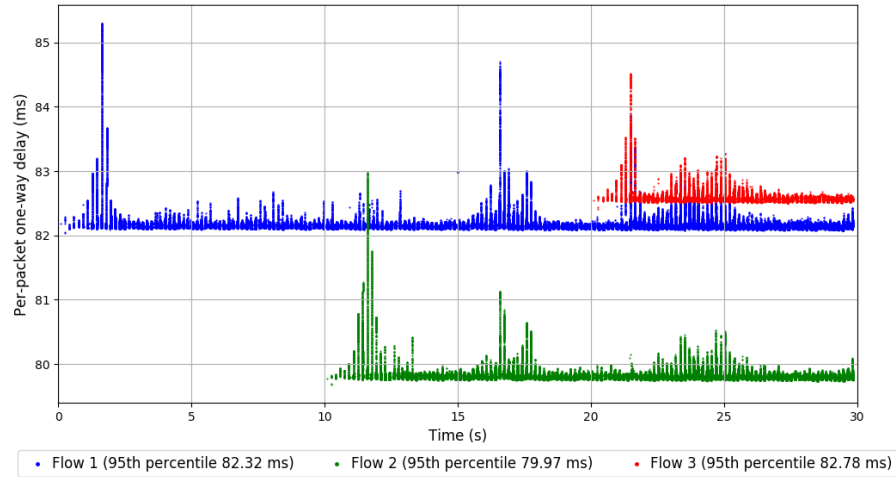
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 71.60 Mbit/s)   Flow 1 egress (mean 71.64 Mbit/s)
Flow 2 ingress (mean 75.88 Mbit/s)   Flow 2 egress (mean 75.81 Mbit/s)
Flow 3 ingress (mean 60.26 Mbit/s)   Flow 3 egress (mean 60.51 Mbit/s)

• Flow 1 (95th percentile 84.28 ms)   • Flow 2 (95th percentile 86.32 ms)   • Flow 3 (95th percentile 86.45 ms)

193

```
Run 6: Statistics of TCP Vegas

Start at: 2017-12-05 20:51:35
End at: 2017-12-05 20:52:05
Local clock offset: 0.326 ms
Remote clock offset: 0.041 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.40 Mbit/s
95th percentile per-packet one-way delay: 84.734 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 70.97 Mbit/s
95th percentile per-packet one-way delay: 84.797 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 80.35 Mbit/s
95th percentile per-packet one-way delay: 83.569 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 43.24 Mbit/s
95th percentile per-packet one-way delay: 84.594 ms
Loss rate: 1.92%
```
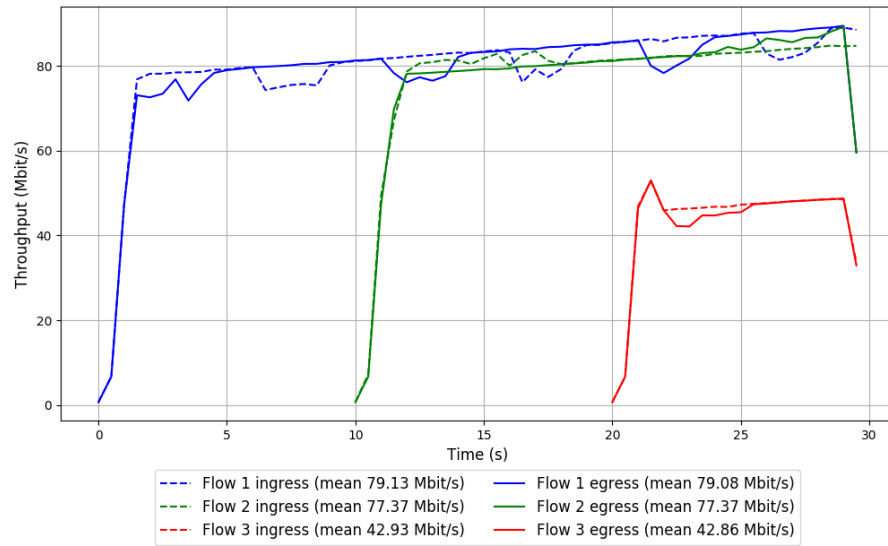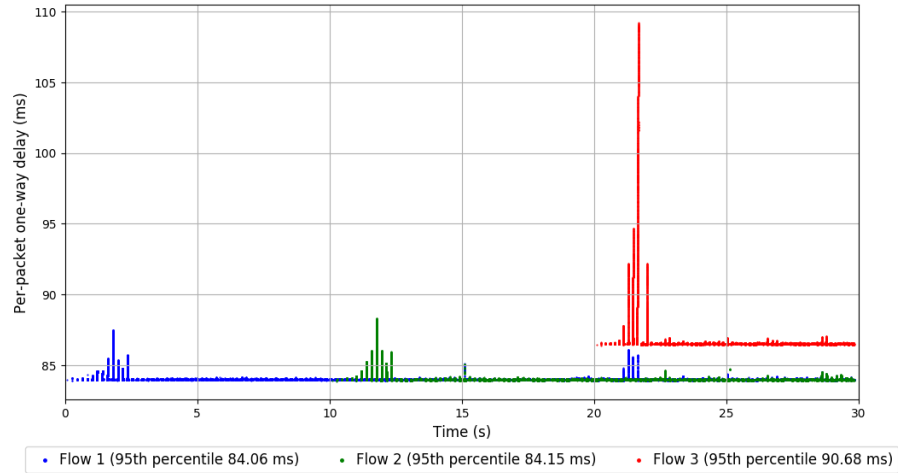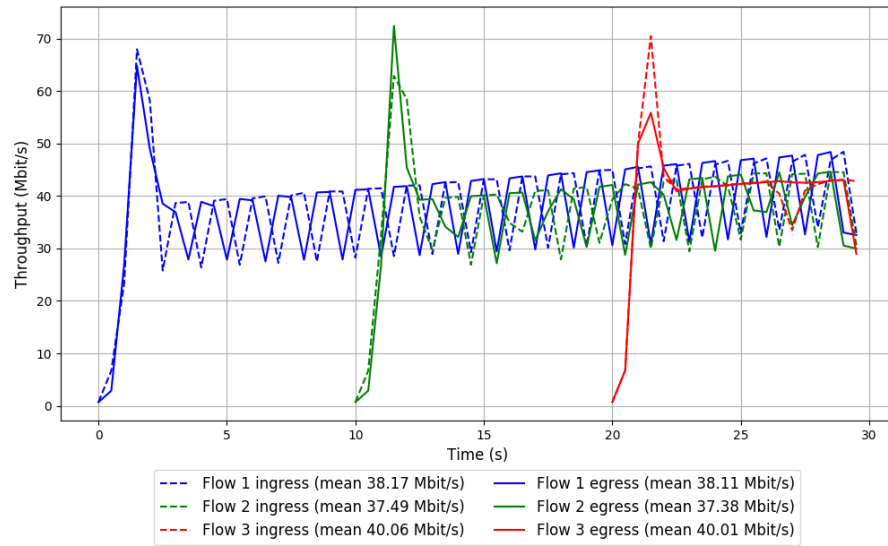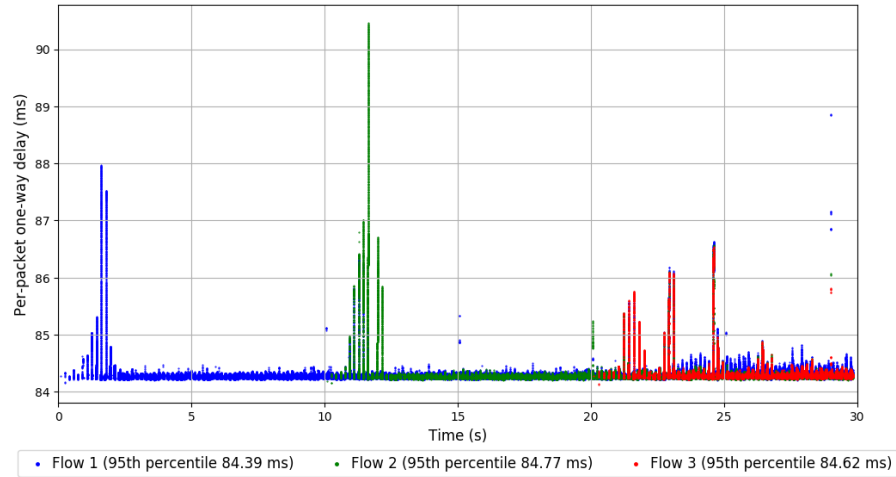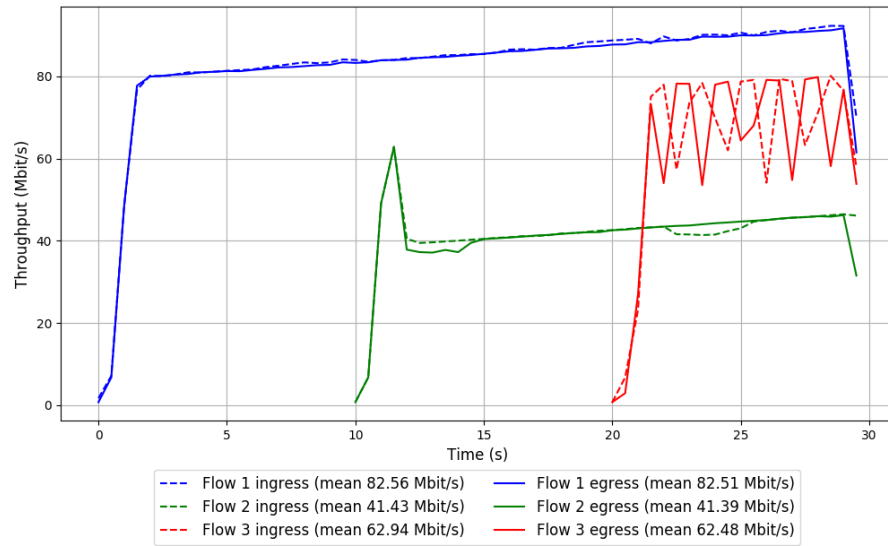
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2017-12-05 21:11:54
End at: 2017-12-05 21:12:24
Local clock offset: 0.135 ms
Remote clock offset: 2.368 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 144.42 Mbit/s
95th percentile per-packet one-way delay: 82.579 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 79.08 Mbit/s
95th percentile per-packet one-way delay: 82.324 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 77.37 Mbit/s
95th percentile per-packet one-way delay: 79.968 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 42.86 Mbit/s
95th percentile per-packet one-way delay: 82.784 ms
Loss rate: 1.92%
```

Run 7: Report of TCP Vegas — Data Link

- Flow 1 ingress (mean 79.13 Mbit/s)
- Flow 1 egress (mean 79.08 Mbit/s)
- Flow 2 ingress (mean 77.37 Mbit/s)
- Flow 2 egress (mean 77.37 Mbit/s)
- Flow 3 ingress (mean 42.93 Mbit/s)
- Flow 3 egress (mean 42.86 Mbit/s)

- Flow 1 (95th percentile 82.32 ms)
- Flow 2 (95th percentile 79.97 ms)
- Flow 3 (95th percentile 82.78 ms)

197

```
Run 8: Statistics of TCP Vegas

Start at: 2017-12-05 21:31:49
End at: 2017-12-05 21:32:19
Local clock offset: -0.038 ms
Remote clock offset: -2.675 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.00 Mbit/s
95th percentile per-packet one-way delay: 86.557 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 38.11 Mbit/s
95th percentile per-packet one-way delay: 84.065 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 37.38 Mbit/s
95th percentile per-packet one-way delay: 84.151 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 40.01 Mbit/s
95th percentile per-packet one-way delay: 90.681 ms
Loss rate: 1.82%
```

Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2017-12-05 21:51:54
End at: 2017-12-05 21:52:24
Local clock offset: -0.64 ms
Remote clock offset: -2.622 ms

# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.41 Mbit/s
95th percentile per-packet one-way delay: 84.437 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 82.51 Mbit/s
95th percentile per-packet one-way delay: 84.393 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 41.39 Mbit/s
95th percentile per-packet one-way delay: 84.771 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 62.48 Mbit/s
95th percentile per-packet one-way delay: 84.616 ms
Loss rate: 2.14%
```
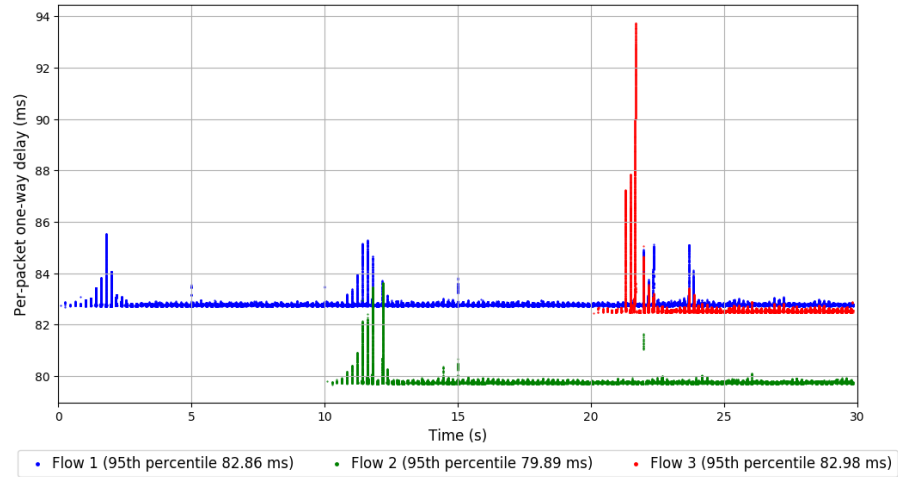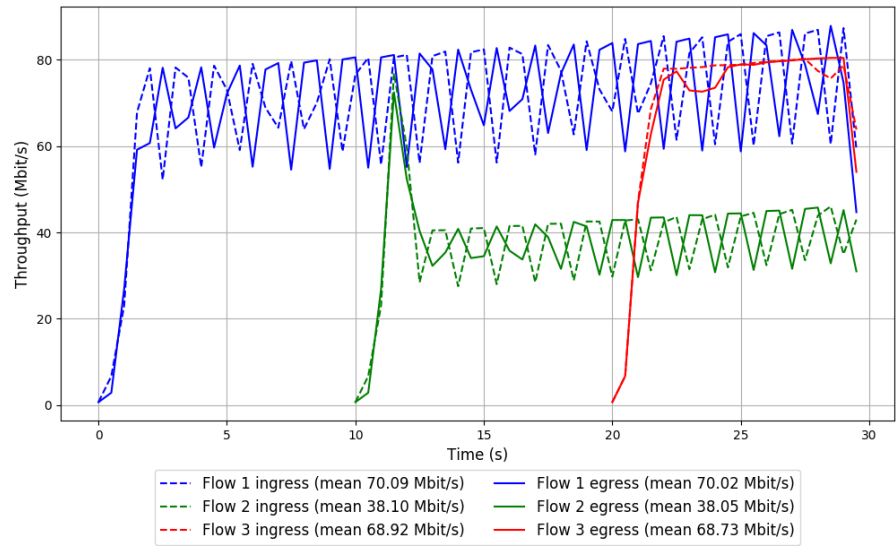
Run 9: Report of TCP Vegas — Data Link

```
Run 10: Statistics of TCP Vegas

Start at: 2017-12-05 22:12:13
End at: 2017-12-05 22:12:43
Local clock offset: -1.394 ms
Remote clock offset: 0.353 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.75 Mbit/s
95th percentile per-packet one-way delay: 82.844 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 70.02 Mbit/s
95th percentile per-packet one-way delay: 82.862 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 38.05 Mbit/s
95th percentile per-packet one-way delay: 79.892 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 68.73 Mbit/s
95th percentile per-packet one-way delay: 82.978 ms
Loss rate: 1.97%
```
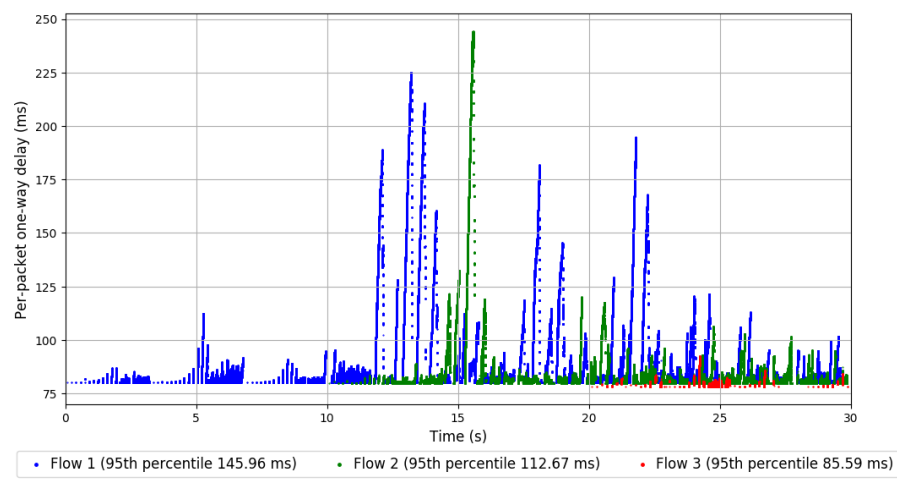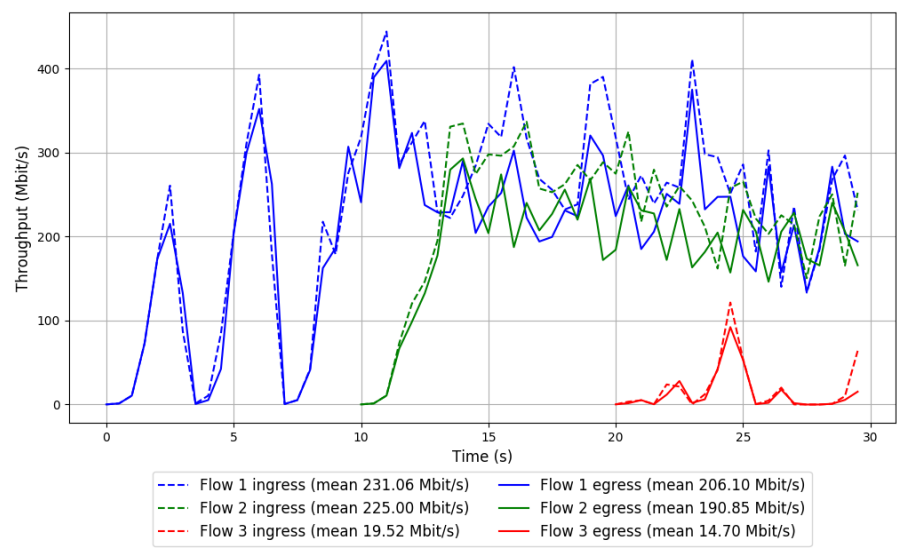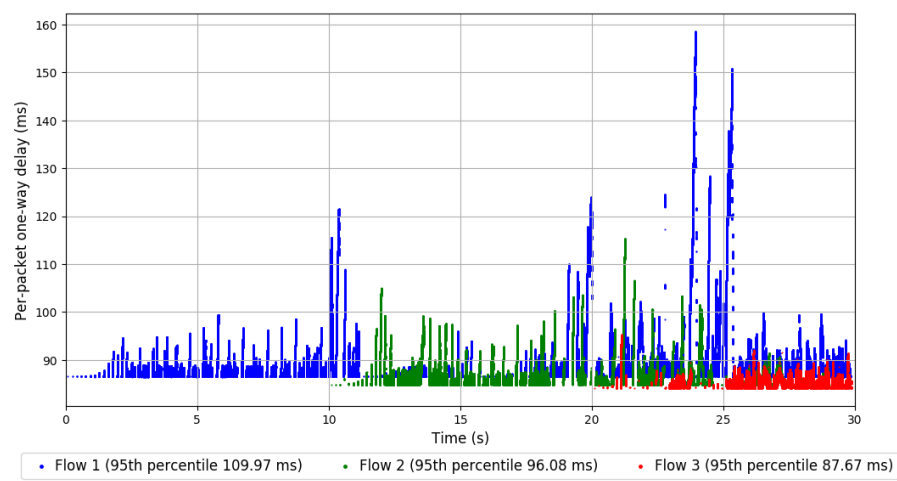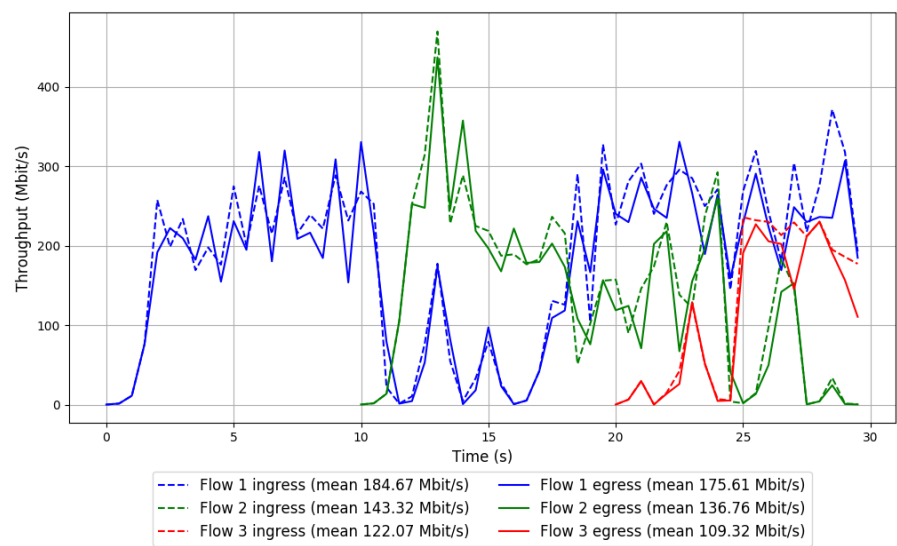
Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2017-12-05 19:05:47
End at: 2017-12-05 19:06:17
Local clock offset: 1.415 ms
Remote clock offset: 3.587 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.05 Mbit/s
95th percentile per-packet one-way delay: 135.869 ms
Loss rate: 13.46%
-- Flow 1:
Average throughput: 206.10 Mbit/s
95th percentile per-packet one-way delay: 145.957 ms
Loss rate: 11.52%
-- Flow 2:
Average throughput: 190.85 Mbit/s
95th percentile per-packet one-way delay: 112.674 ms
Loss rate: 15.95%
-- Flow 3:
Average throughput: 14.70 Mbit/s
95th percentile per-packet one-way delay: 85.587 ms
Loss rate: 25.22%
```
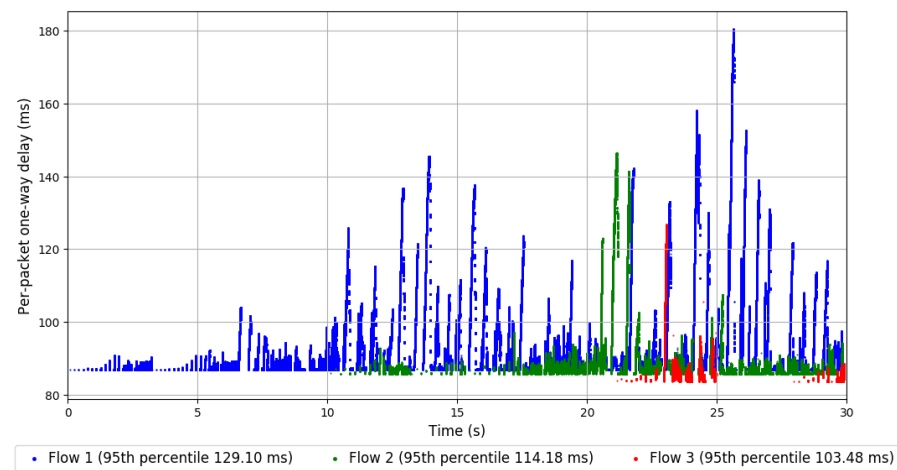
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2017-12-05 19:25:49
End at: 2017-12-05 19:26:19
Local clock offset: 1.534 ms
Remote clock offset: -1.988 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 301.68 Mbit/s
95th percentile per-packet one-way delay: 101.459 ms
Loss rate: 6.31%
-- Flow 1:
Average throughput: 175.61 Mbit/s
95th percentile per-packet one-way delay: 109.966 ms
Loss rate: 5.57%
-- Flow 2:
Average throughput: 136.76 Mbit/s
95th percentile per-packet one-way delay: 96.078 ms
Loss rate: 5.38%
-- Flow 3:
Average throughput: 109.32 Mbit/s
95th percentile per-packet one-way delay: 87.675 ms
Loss rate: 11.83%
```

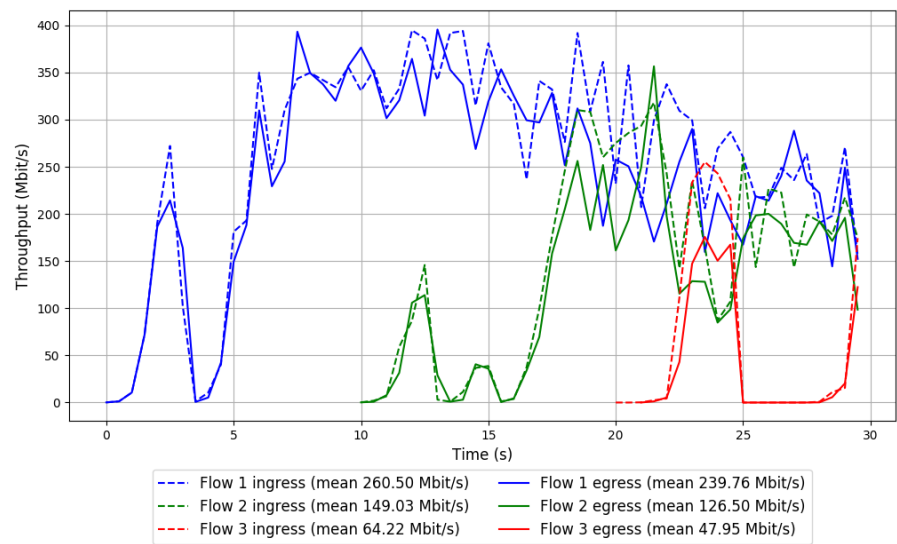# Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2017-12-05 19:46:09
End at: 2017-12-05 19:46:39
Local clock offset: 1.525 ms
Remote clock offset: -1.698 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.37 Mbit/s
95th percentile per-packet one-way delay: 125.722 ms
Loss rate: 11.86%
-- Flow 1:
Average throughput: 239.76 Mbit/s
95th percentile per-packet one-way delay: 129.104 ms
Loss rate: 8.57%
-- Flow 2:
Average throughput: 126.50 Mbit/s
95th percentile per-packet one-way delay: 114.181 ms
Loss rate: 15.84%
-- Flow 3:
Average throughput: 47.95 Mbit/s
95th percentile per-packet one-way delay: 103.485 ms
Loss rate: 33.82%
```

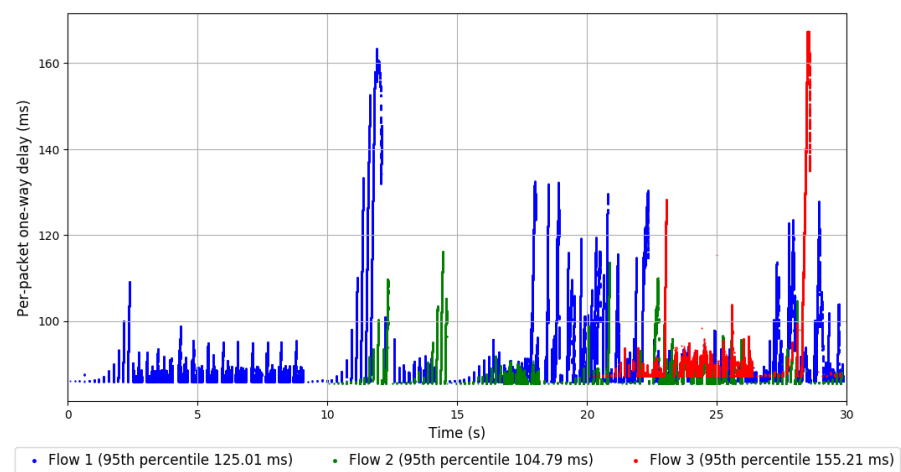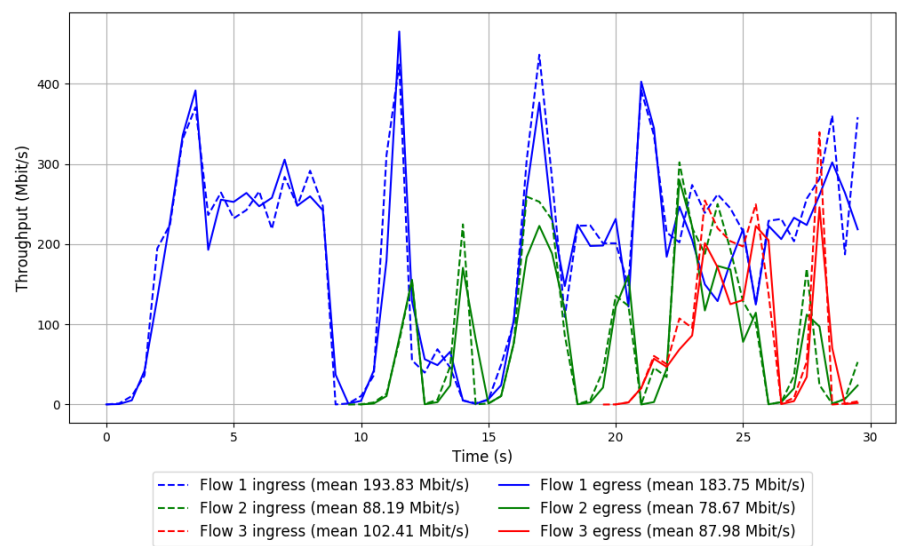Run 3: Report of Verus — Data Link

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```
Run 4: Statistics of Verus

Start at: 2017-12-05 20:06:33
End at: 2017-12-05 20:07:03
Local clock offset: 1.239 ms
Remote clock offset: -1.036 ms


# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 264.31 Mbit/s
95th percentile per-packet one-way delay: 123.120 ms
Loss rate: 8.02%
-- Flow 1:
Average throughput: 183.75 Mbit/s
95th percentile per-packet one-way delay: 125.008 ms
Loss rate: 5.62%
-- Flow 2:
Average throughput: 78.67 Mbit/s
95th percentile per-packet one-way delay: 104.790 ms
Loss rate: 11.61%
-- Flow 3:
Average throughput: 87.98 Mbit/s
95th percentile per-packet one-way delay: 155.212 ms
Loss rate: 15.57%
```

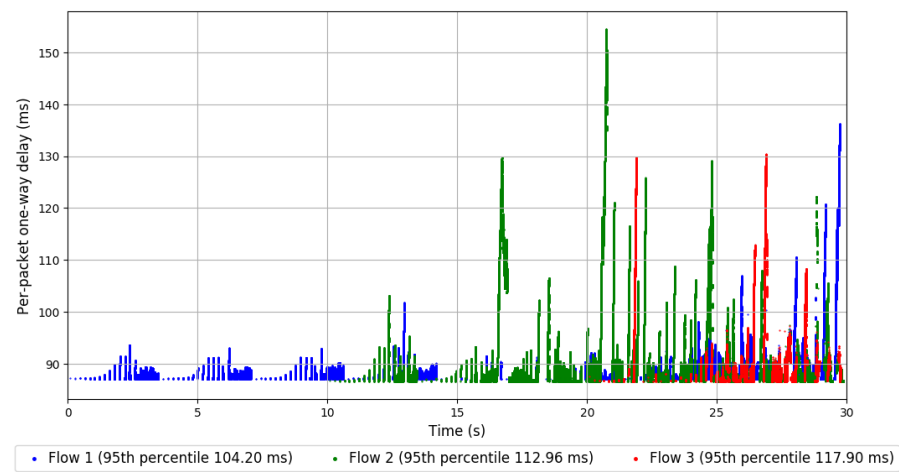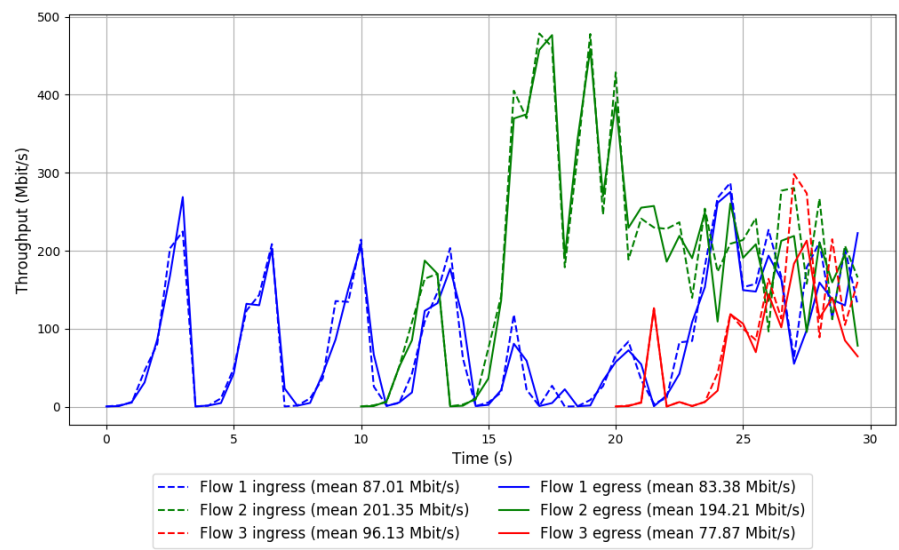## Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2017-12-05 20:26:44
End at: 2017-12-05 20:27:14
Local clock offset: 0.816 ms
Remote clock offset: -0.26 ms

# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 237.26 Mbit/s
95th percentile per-packet one-way delay: 111.888 ms
Loss rate: 6.31%
-- Flow 1:
Average throughput: 83.38 Mbit/s
95th percentile per-packet one-way delay: 104.204 ms
Loss rate: 4.02%
-- Flow 2:
Average throughput: 194.21 Mbit/s
95th percentile per-packet one-way delay: 112.958 ms
Loss rate: 4.22%
-- Flow 3:
Average throughput: 77.87 Mbit/s
95th percentile per-packet one-way delay: 117.898 ms
Loss rate: 21.20%
```

Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2017-12-05 20:46:46
End at: 2017-12-05 20:47:16
Local clock offset: 0.433 ms
Remote clock offset: -0.35 ms

# Below is generated by plot.py at 2017-12-06 02:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 284.85 Mbit/s
95th percentile per-packet one-way delay: 140.869 ms
Loss rate: 4.17%
-- Flow 1:
Average throughput: 193.24 Mbit/s
95th percentile per-packet one-way delay: 146.881 ms
Loss rate: 3.46%
-- Flow 2:
Average throughput: 92.31 Mbit/s
95th percentile per-packet one-way delay: 111.938 ms
Loss rate: 6.82%
-- Flow 3:
Average throughput: 95.42 Mbit/s
95th percentile per-packet one-way delay: 107.460 ms
Loss rate: 3.14%
```
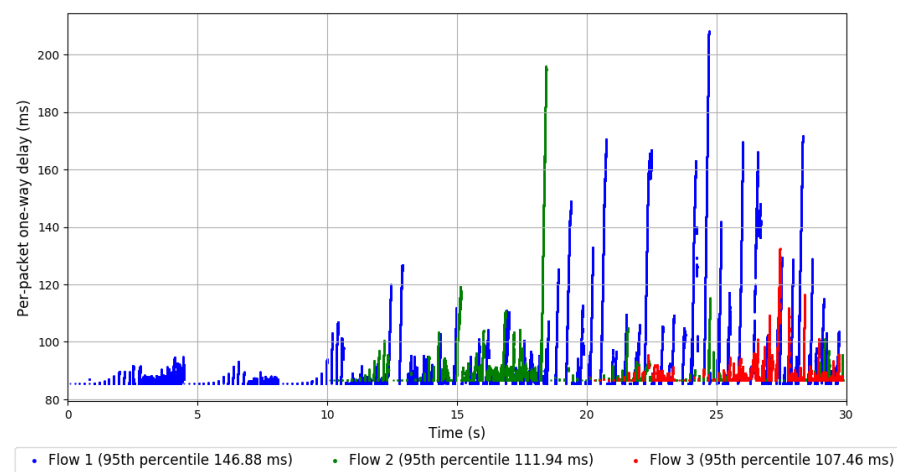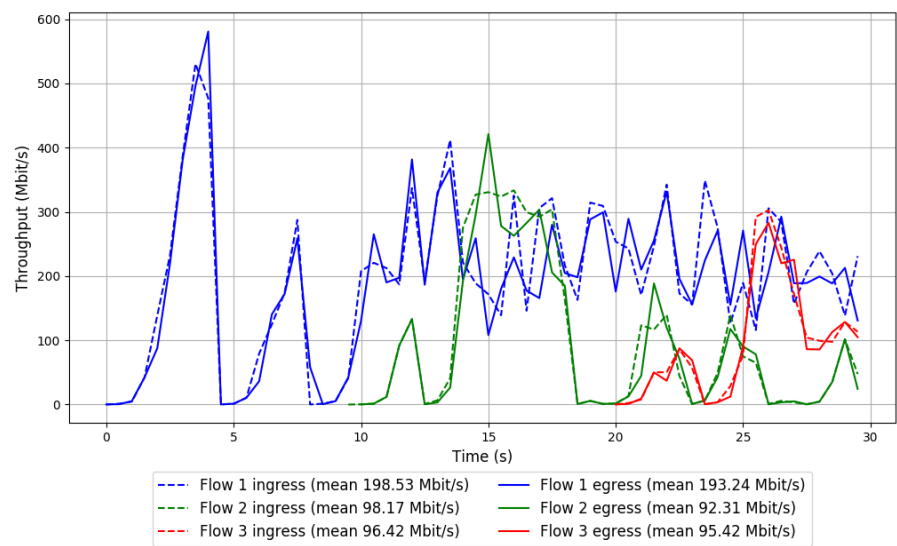
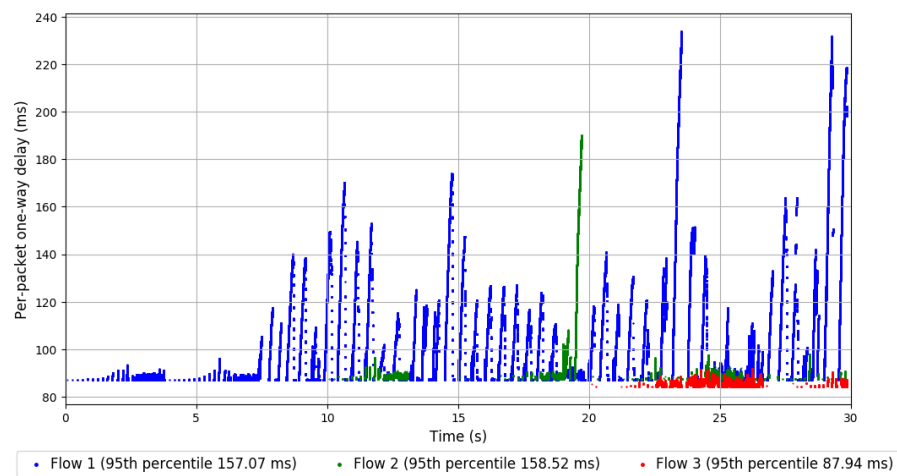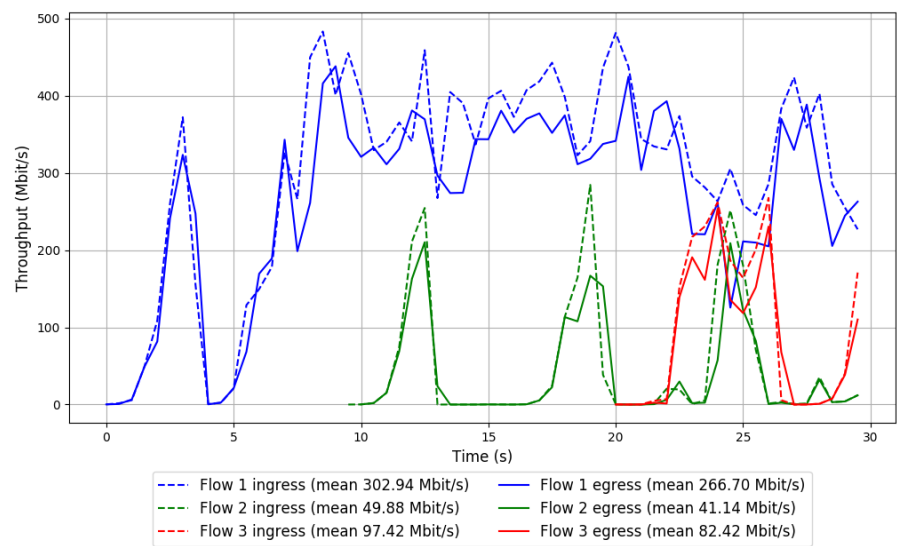## Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2017-12-05 21:07:04
End at: 2017-12-05 21:07:34
Local clock offset: 0.083 ms
Remote clock offset: -2.34 ms

# Below is generated by plot.py at 2017-12-06 02:22:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.96 Mbit/s
95th percentile per-packet one-way delay: 153.372 ms
Loss rate: 12.61%
-- Flow 1:
Average throughput: 266.70 Mbit/s
95th percentile per-packet one-way delay: 157.066 ms
Loss rate: 11.62%
-- Flow 2:
Average throughput: 41.14 Mbit/s
95th percentile per-packet one-way delay: 158.520 ms
Loss rate: 18.25%
-- Flow 3:
Average throughput: 82.42 Mbit/s
95th percentile per-packet one-way delay: 87.945 ms
Loss rate: 16.05%
```

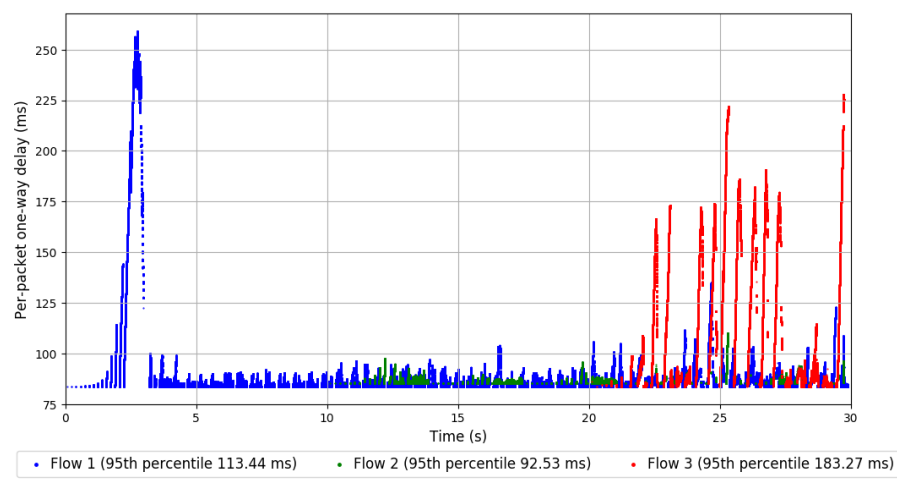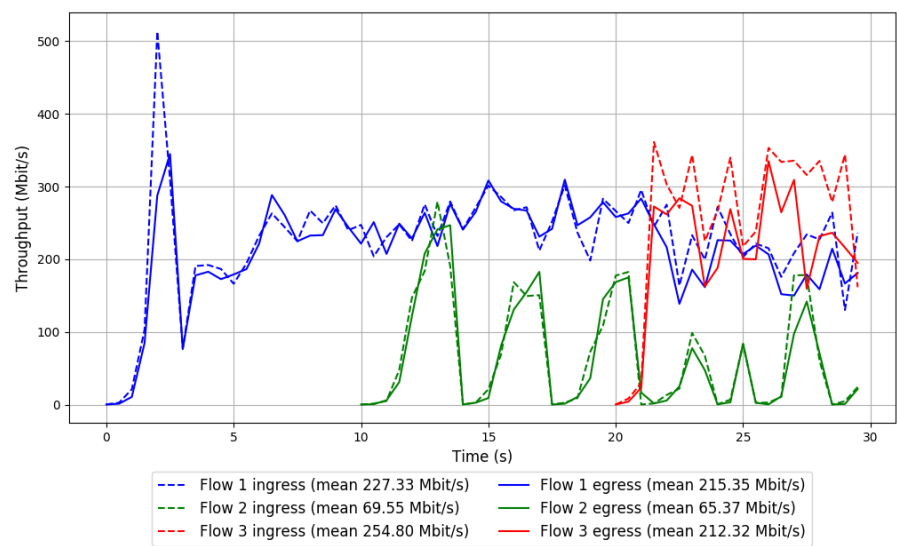## Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2017-12-05 21:27:02
End at: 2017-12-05 21:27:32
Local clock offset: -0.003 ms
Remote clock offset: -2.758 ms


# Below is generated by plot.py at 2017-12-06 02:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.94 Mbit/s
95th percentile per-packet one-way delay: 166.442 ms
Loss rate: 8.77%
-- Flow 1:
Average throughput: 215.35 Mbit/s
95th percentile per-packet one-way delay: 113.442 ms
Loss rate: 5.41%
-- Flow 2:
Average throughput: 65.37 Mbit/s
95th percentile per-packet one-way delay: 92.525 ms
Loss rate: 5.98%
-- Flow 3:
Average throughput: 212.32 Mbit/s
95th percentile per-packet one-way delay: 183.268 ms
Loss rate: 19.28%
```

Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 227.33 Mbit/s)   Flow 1 egress (mean 215.35 Mbit/s)
Flow 2 ingress (mean 69.55 Mbit/s)   Flow 2 egress (mean 65.37 Mbit/s)
Flow 3 ingress (mean 254.80 Mbit/s)   Flow 3 egress (mean 212.32 Mbit/s)

Flow 1 (95th percentile 113.44 ms)   Flow 2 (95th percentile 92.53 ms)   Flow 3 (95th percentile 183.27 ms)

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```
Run 9: Statistics of Verus

Start at: 2017-12-05 21:47:11
End at: 2017-12-05 21:47:41
Local clock offset: -0.436 ms
Remote clock offset: 0.939 ms

# Below is generated by plot.py at 2017-12-06 02:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 232.08 Mbit/s
95th percentile per-packet one-way delay: 128.336 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 157.58 Mbit/s
95th percentile per-packet one-way delay: 127.657 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 60.83 Mbit/s
95th percentile per-packet one-way delay: 100.746 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 105.17 Mbit/s
95th percentile per-packet one-way delay: 157.477 ms
Loss rate: 4.77%
```
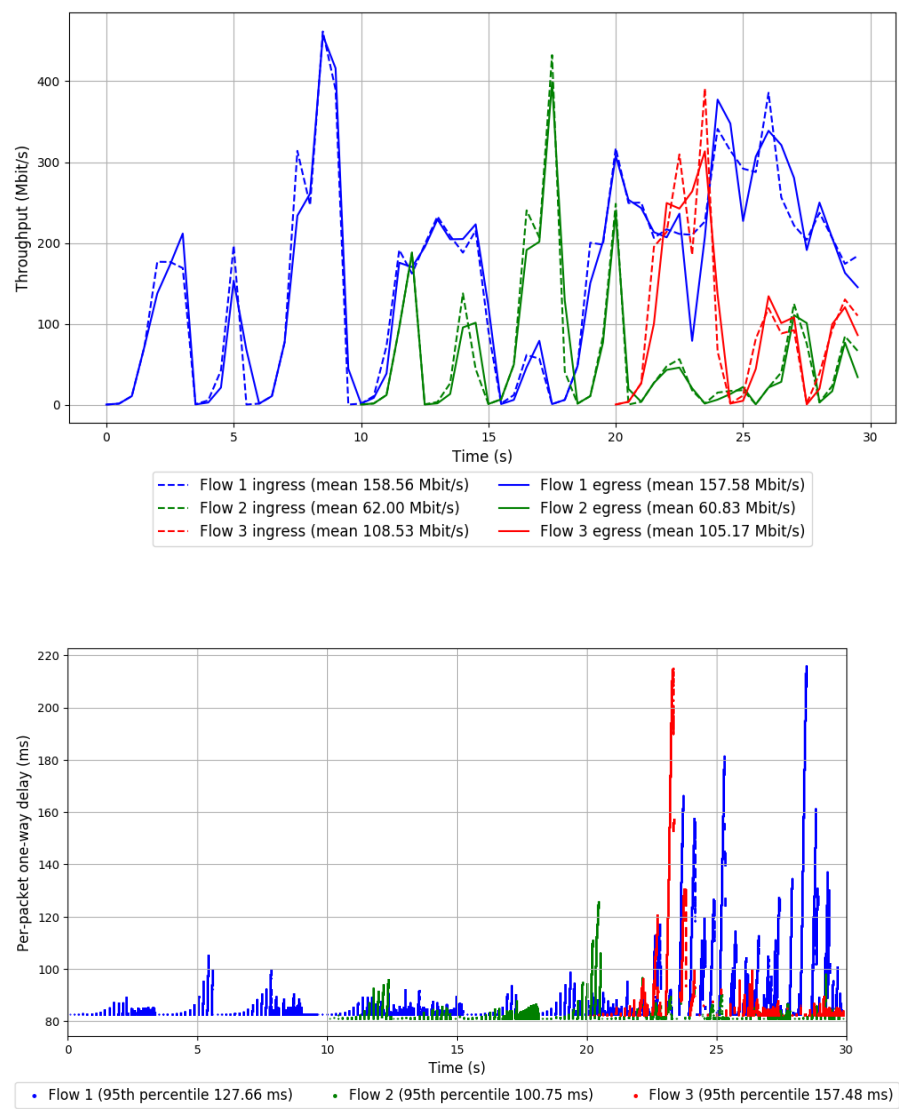
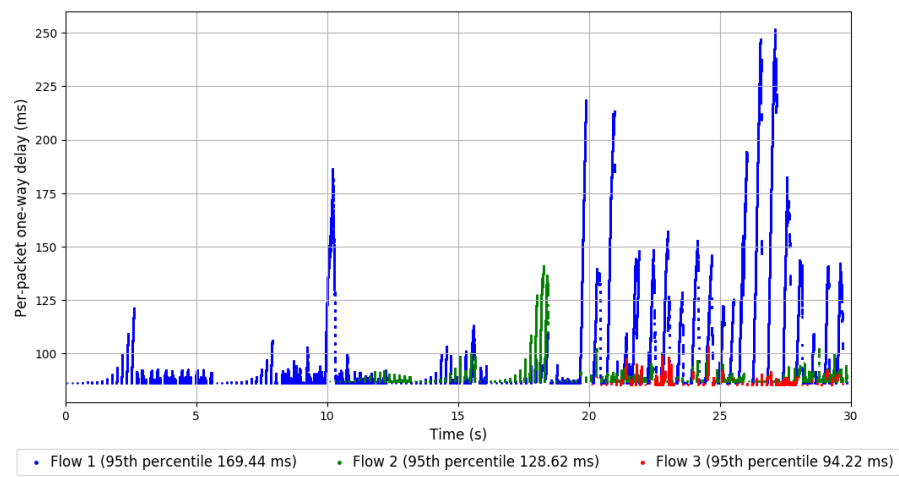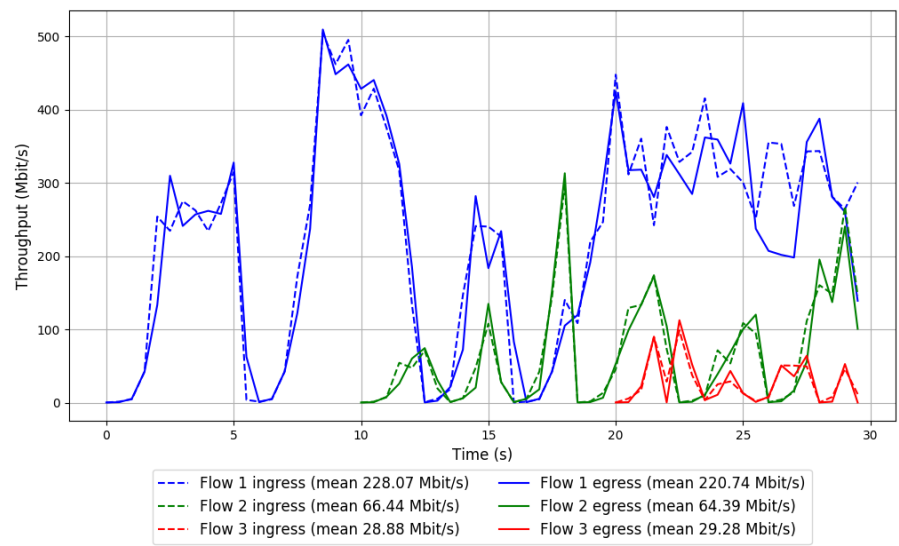# Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2017-12-05 22:07:17
End at: 2017-12-05 22:07:47
Local clock offset: -1.216 ms
Remote clock offset: -4.164 ms


# Below is generated by plot.py at 2017-12-06 02:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.82 Mbit/s
95th percentile per-packet one-way delay: 163.183 ms
Loss rate: 3.74%
-- Flow 1:
Average throughput: 220.74 Mbit/s
95th percentile per-packet one-way delay: 169.439 ms
Loss rate: 3.76%
-- Flow 2:
Average throughput: 64.39 Mbit/s
95th percentile per-packet one-way delay: 128.618 ms
Loss rate: 4.03%
-- Flow 3:
Average throughput: 29.28 Mbit/s
95th percentile per-packet one-way delay: 94.218 ms
Loss rate: 2.02%
```

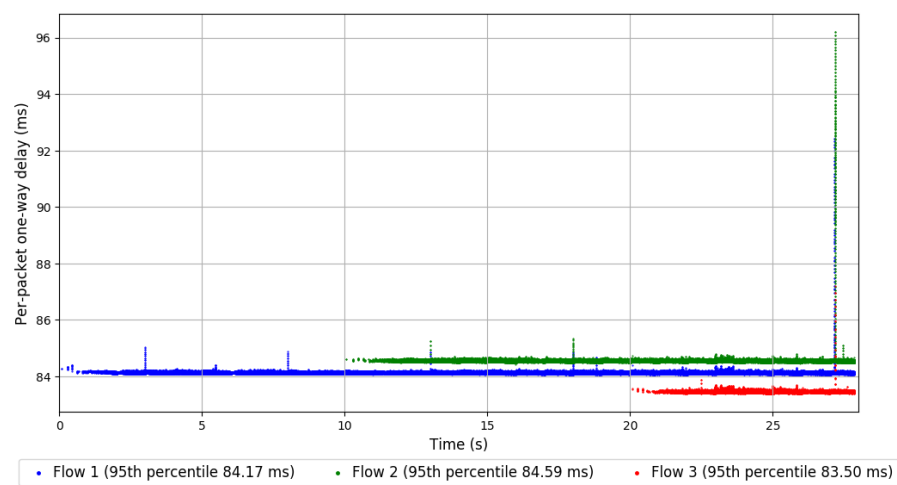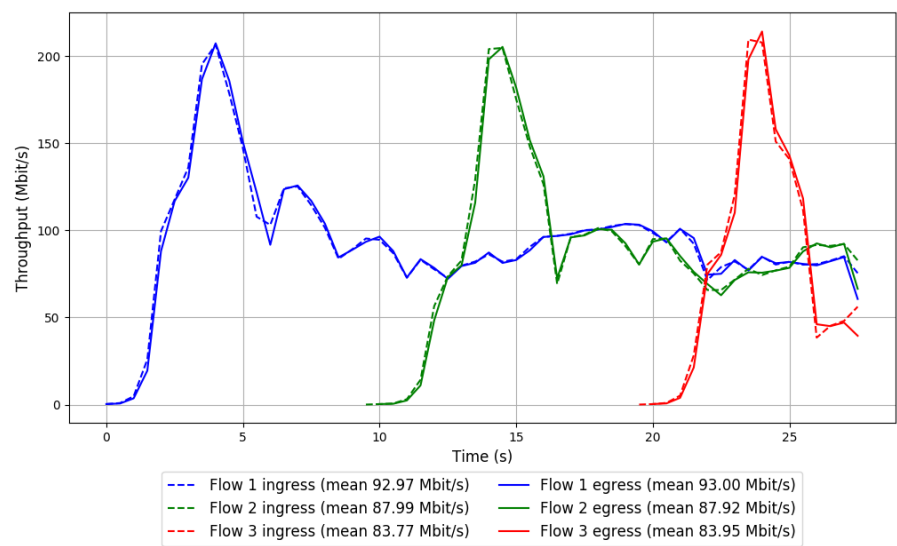# Run 10: Report of Verus — Data Link

```
Run 1: Statistics of Copa

Start at: 2017-12-05 18:55:34
End at: 2017-12-05 18:56:04
Local clock offset: 1.027 ms
Remote clock offset: -1.353 ms


# Below is generated by plot.py at 2017-12-06 02:22:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 172.84 Mbit/s
95th percentile per-packet one-way delay: 84.578 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 93.00 Mbit/s
95th percentile per-packet one-way delay: 84.172 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 87.92 Mbit/s
95th percentile per-packet one-way delay: 84.593 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 83.95 Mbit/s
95th percentile per-packet one-way delay: 83.499 ms
Loss rate: 1.90%
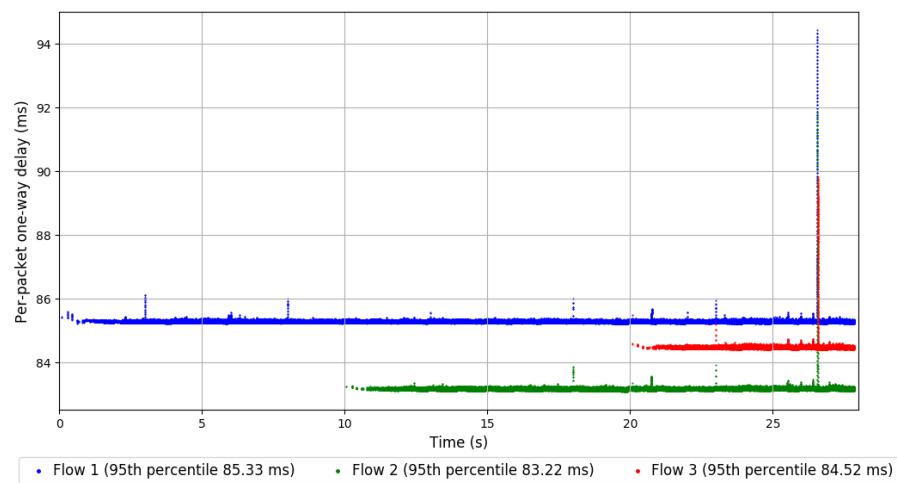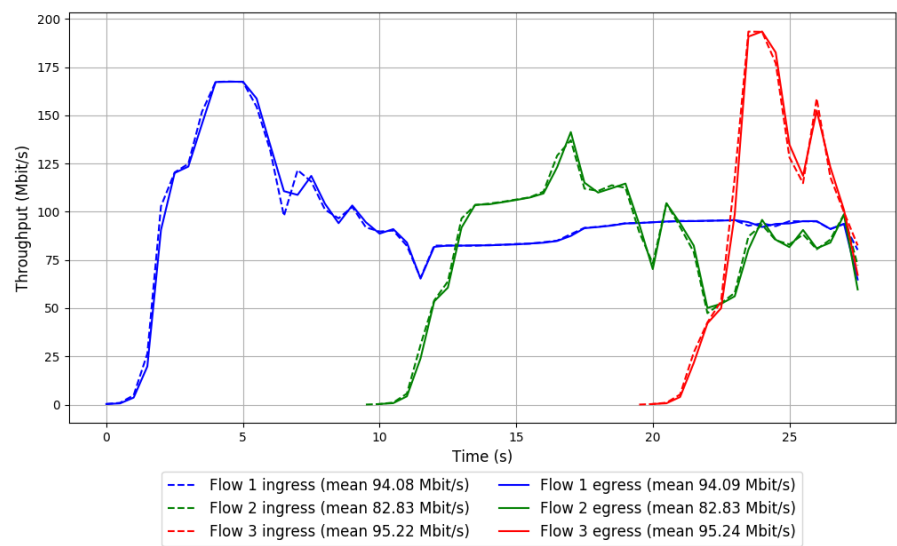```

Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2017-12-05 19:15:44
End at: 2017-12-05 19:16:14
Local clock offset: 1.543 ms
Remote clock offset: -1.348 ms

Below is generated by plot.py at 2017-12-06 02:22:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 173.84 Mbit/s
95th percentile per-packet one-way delay: 85.325 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 94.09 Mbit/s
95th percentile per-packet one-way delay: 85.332 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 82.83 Mbit/s
95th percentile per-packet one-way delay: 83.219 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 84.521 ms
Loss rate: 2.10%
```
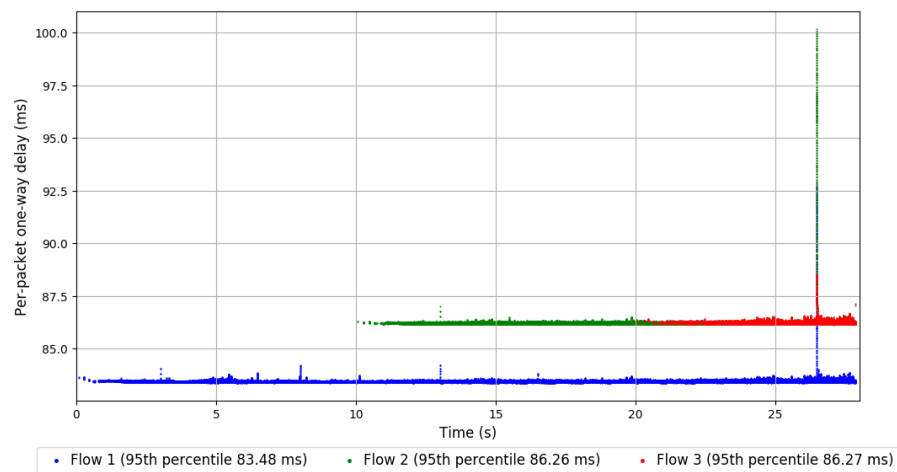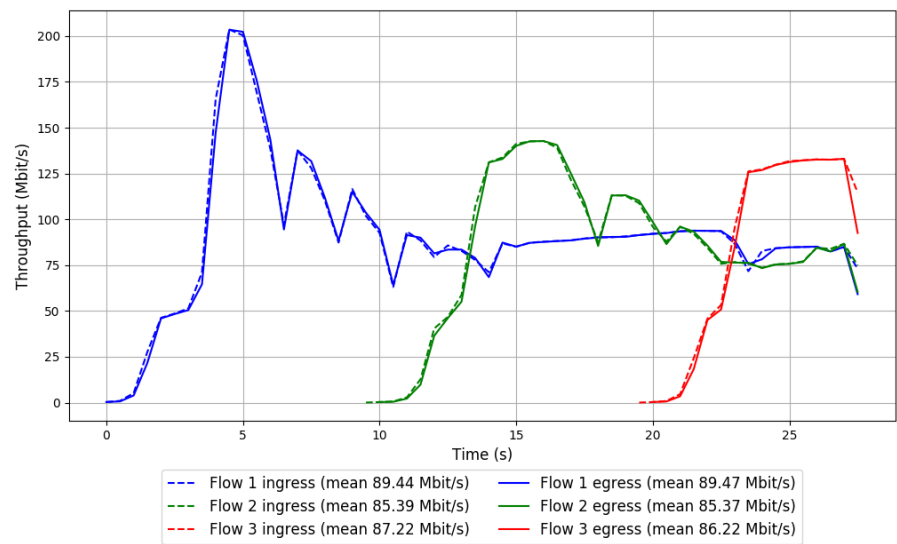
# Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2017-12-05 19:36:03
End at: 2017-12-05 19:36:33
Local clock offset: 1.512 ms
Remote clock offset: -1.511 ms

Below is generated by plot.py at 2017-12-06 02:23:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 168.28 Mbit/s
95th percentile per-packet one-way delay: 86.256 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 89.47 Mbit/s
95th percentile per-packet one-way delay: 83.482 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 85.37 Mbit/s
95th percentile per-packet one-way delay: 86.263 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 86.22 Mbit/s
95th percentile per-packet one-way delay: 86.273 ms
Loss rate: 3.25%
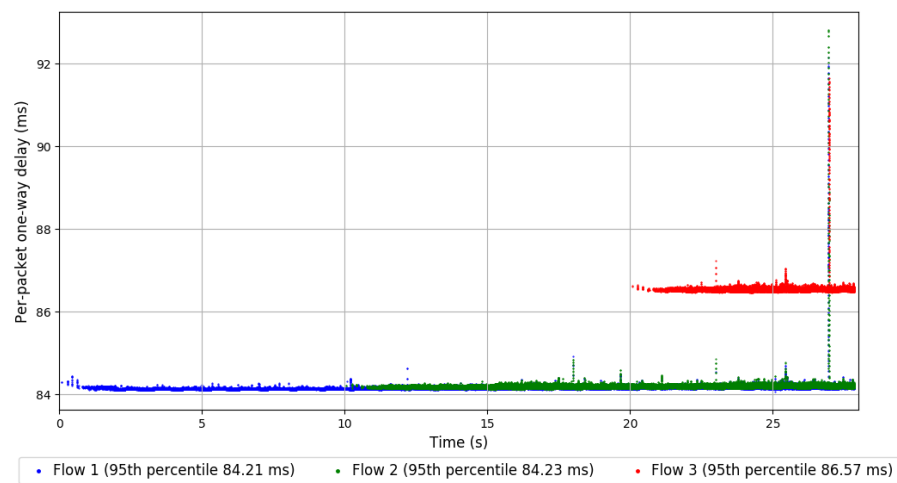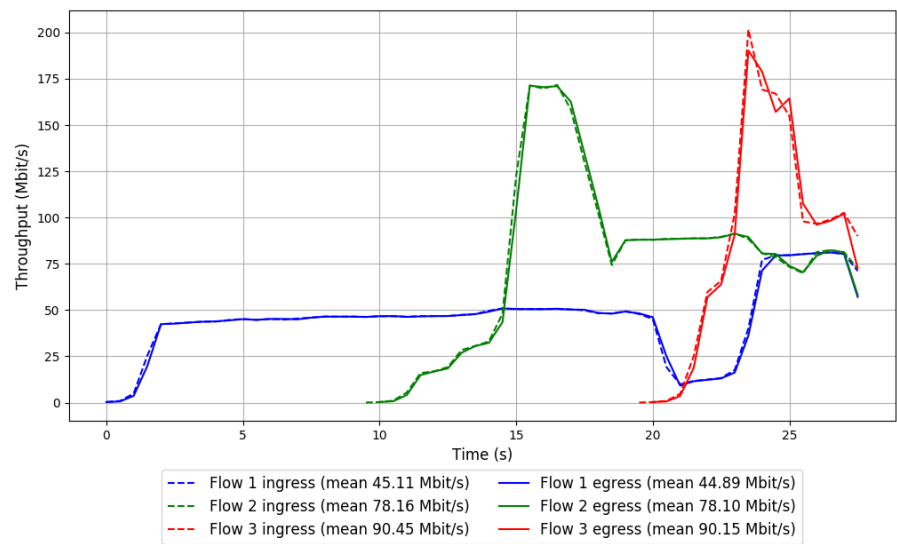```

Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2017-12-05 19:56:25
End at: 2017-12-05 19:56:55
Local clock offset: 1.324 ms
Remote clock offset: -1.091 ms

# Below is generated by plot.py at 2017-12-06 02:23:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.18 Mbit/s
95th percentile per-packet one-way delay: 86.546 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 44.89 Mbit/s
95th percentile per-packet one-way delay: 84.209 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 78.10 Mbit/s
95th percentile per-packet one-way delay: 84.228 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 90.15 Mbit/s
95th percentile per-packet one-way delay: 86.569 ms
Loss rate: 2.46%
```

Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2017-12-05 20:16:31
End at: 2017-12-05 20:17:01
Local clock offset: 1.096 ms
Remote clock offset: 4.881 ms

# Below is generated by plot.py at 2017-12-06 02:24:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.04 Mbit/s
95th percentile per-packet one-way delay: 82.232 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 81.64 Mbit/s
95th percentile per-packet one-way delay: 82.239 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 75.79 Mbit/s
95th percentile per-packet one-way delay: 81.815 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 85.23 Mbit/s
95th percentile per-packet one-way delay: 80.577 ms
Loss rate: 3.24%
```
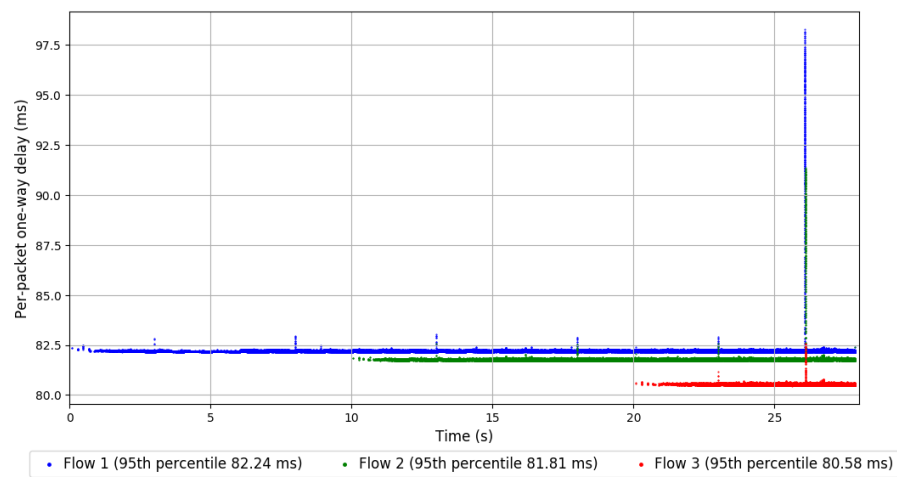
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 81.68 Mbit/s) --- Flow 1 egress (mean 81.64 Mbit/s)
Flow 2 ingress (mean 75.82 Mbit/s) --- Flow 2 egress (mean 75.79 Mbit/s)
Flow 3 ingress (mean 86.21 Mbit/s) --- Flow 3 egress (mean 85.23 Mbit/s)

Flow 1 (95th percentile 82.24 ms) • Flow 2 (95th percentile 81.81 ms) • Flow 3 (95th percentile 80.58 ms)

```
Run 6: Statistics of Copa

Start at: 2017-12-05 20:36:41
End at: 2017-12-05 20:37:11
Local clock offset: 0.606 ms
Remote clock offset: -0.424 ms


# Below is generated by plot.py at 2017-12-06 02:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 149.24 Mbit/s
95th percentile per-packet one-way delay: 86.973 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 90.70 Mbit/s
95th percentile per-packet one-way delay: 86.977 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 84.51 Mbit/s
95th percentile per-packet one-way delay: 85.300 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 15.78 Mbit/s
95th percentile per-packet one-way delay: 86.979 ms
Loss rate: 5.63%
```
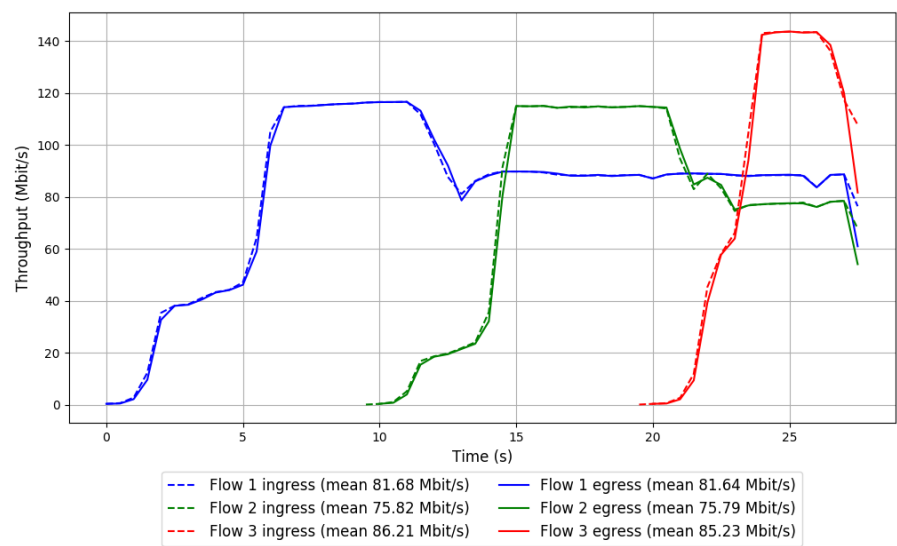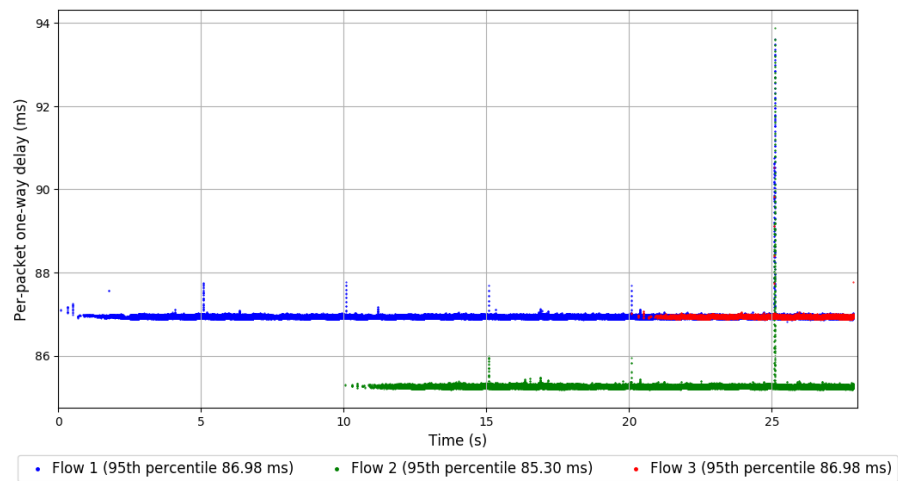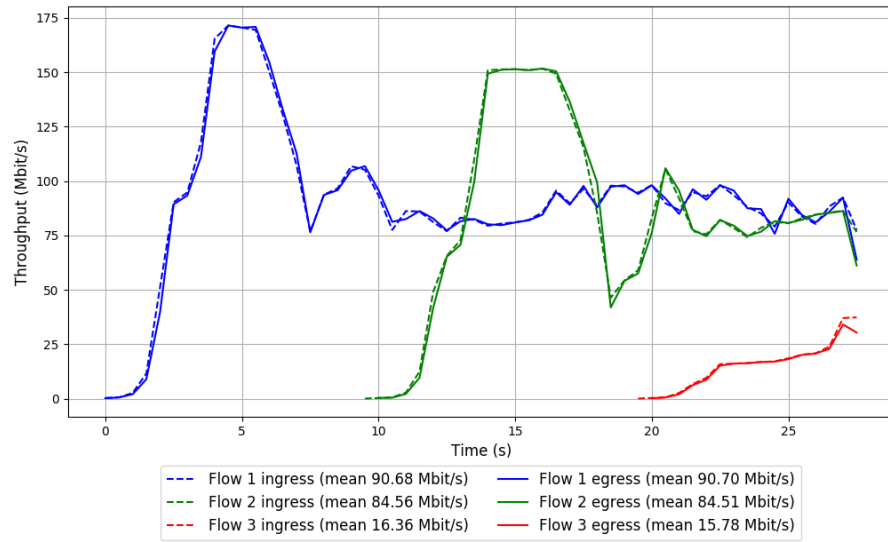
Run 6: Report of Copa — Data Link

Flow 1 ingress (mean 90.68 Mbit/s) --- Flow 1 egress (mean 90.70 Mbit/s)
Flow 2 ingress (mean 84.56 Mbit/s) --- Flow 2 egress (mean 84.51 Mbit/s)
Flow 3 ingress (mean 16.36 Mbit/s) --- Flow 3 egress (mean 15.78 Mbit/s)

Flow 1 (95th percentile 86.98 ms)   Flow 2 (95th percentile 85.30 ms)   Flow 3 (95th percentile 86.98 ms)

```
Run 7: Statistics of Copa

Start at: 2017-12-05 20:56:55
End at: 2017-12-05 20:57:25
Local clock offset: 0.266 ms
Remote clock offset: 4.032 ms


# Below is generated by plot.py at 2017-12-06 02:26:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.70 Mbit/s
95th percentile per-packet one-way delay: 81.594 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 89.40 Mbit/s
95th percentile per-packet one-way delay: 80.512 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 85.18 Mbit/s
95th percentile per-packet one-way delay: 81.608 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 88.39 Mbit/s
95th percentile per-packet one-way delay: 79.075 ms
Loss rate: 2.12%
```
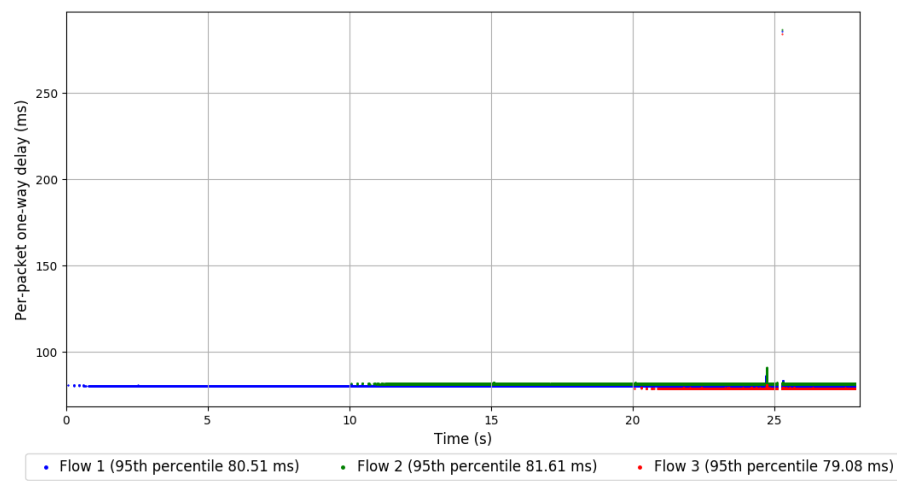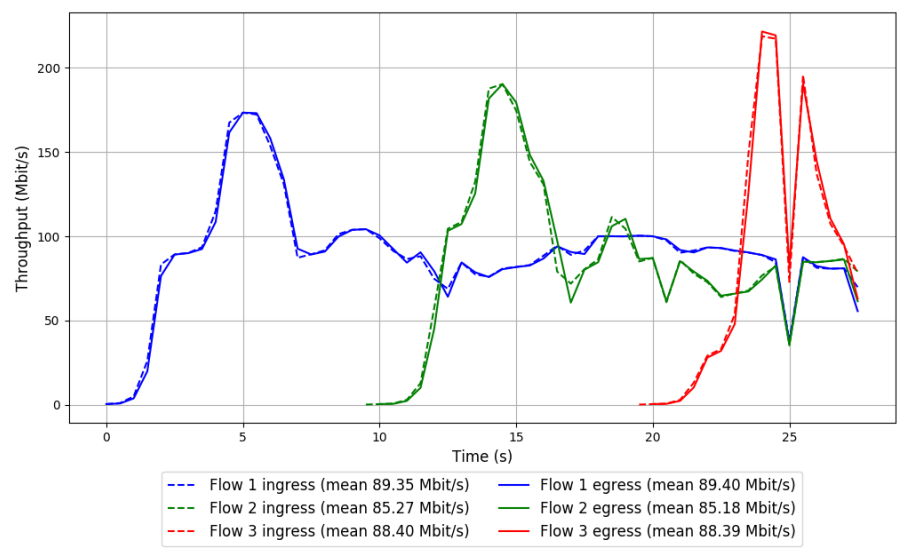
Run 7: Report of Copa — Data Link

```
Run 8: Statistics of Copa

Start at: 2017-12-05 21:17:10
End at: 2017-12-05 21:17:40
Local clock offset: 0.017 ms
Remote clock offset: 2.724 ms


# Below is generated by plot.py at 2017-12-06 02:26:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.17 Mbit/s
95th percentile per-packet one-way delay: 81.827 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 47.47 Mbit/s
95th percentile per-packet one-way delay: 81.835 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 49.36 Mbit/s
95th percentile per-packet one-way delay: 79.088 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 32.44 Mbit/s
95th percentile per-packet one-way delay: 80.319 ms
Loss rate: 2.88%
```
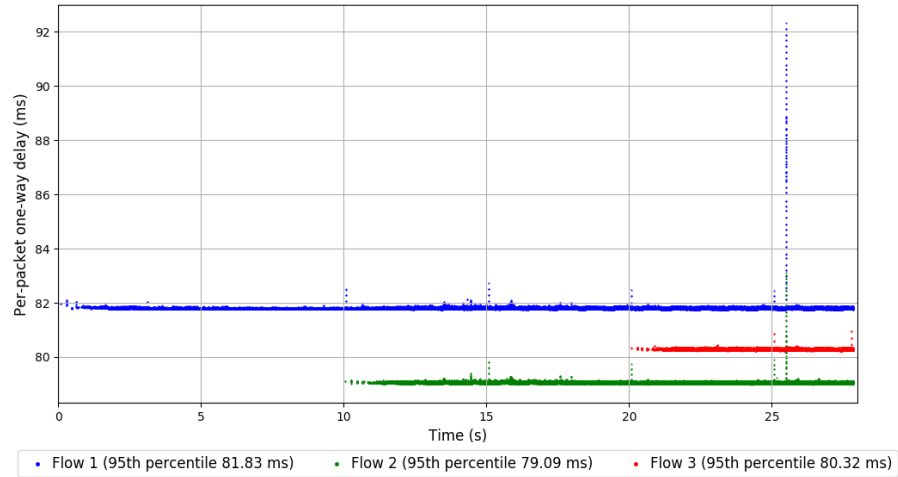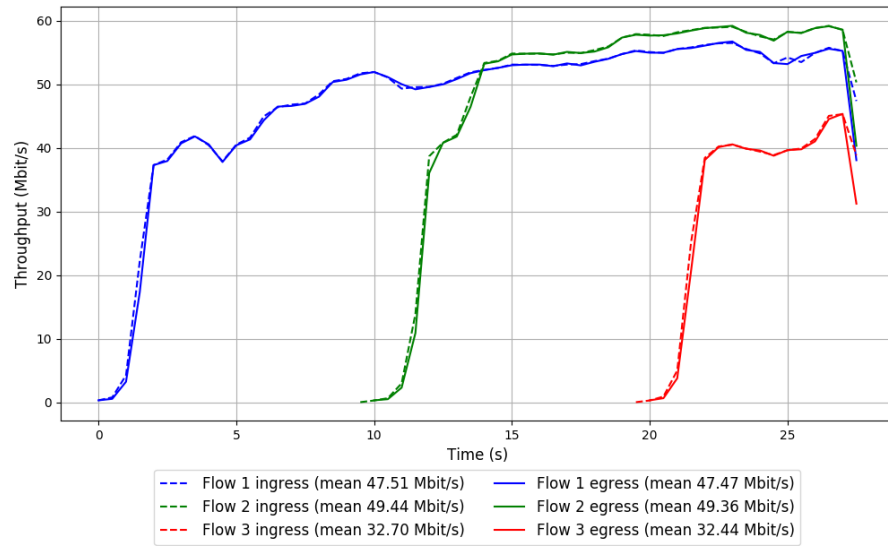
Run 8: Report of Copa — Data Link

```
Run 9: Statistics of Copa

Start at: 2017-12-05 21:37:03
End at: 2017-12-05 21:37:33
Local clock offset: -0.208 ms
Remote clock offset: 1.679 ms


# Below is generated by plot.py at 2017-12-06 02:26:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 155.19 Mbit/s
95th percentile per-packet one-way delay: 81.891 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 85.46 Mbit/s
95th percentile per-packet one-way delay: 80.807 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 67.09 Mbit/s
95th percentile per-packet one-way delay: 81.908 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 81.053 ms
Loss rate: 2.15%
```
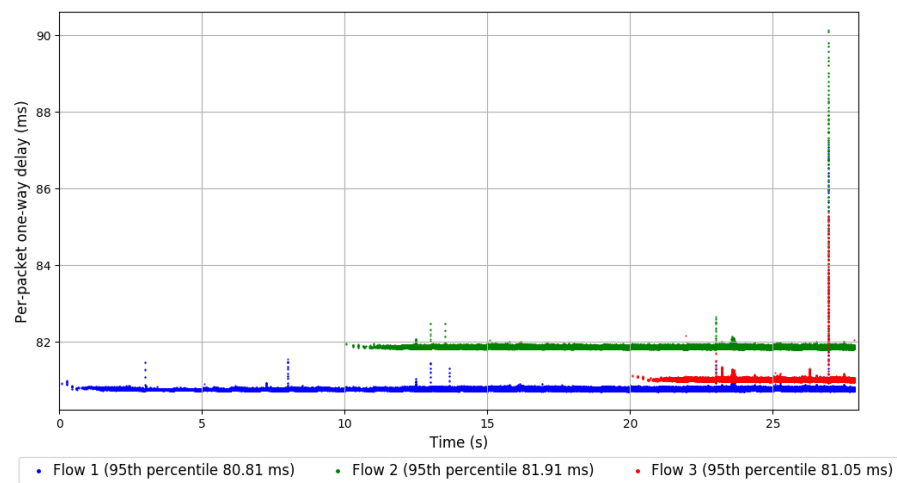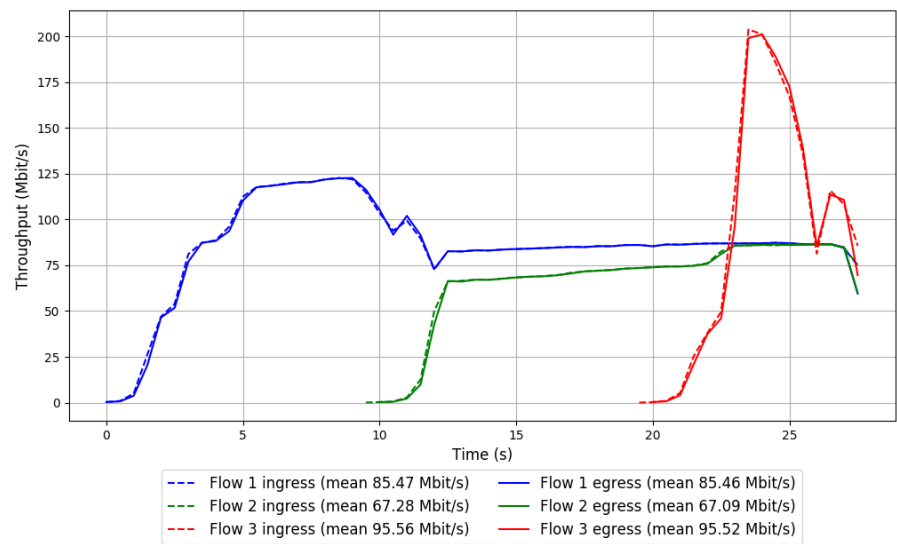
Run 9: Report of Copa — Data Link

Flow 1 ingress (mean 85.47 Mbit/s) — — — Flow 1 egress (mean 85.46 Mbit/s)
Flow 2 ingress (mean 67.28 Mbit/s) — — — Flow 2 egress (mean 67.09 Mbit/s)
Flow 3 ingress (mean 95.56 Mbit/s) — — — Flow 3 egress (mean 95.52 Mbit/s)

Flow 1 (95th percentile 80.81 ms)   •   Flow 2 (95th percentile 81.91 ms)   •   Flow 3 (95th percentile 81.05 ms)

```
Run 10: Statistics of Copa

Start at: 2017-12-05 21:57:10
End at: 2017-12-05 21:57:40
Local clock offset: -0.911 ms
Remote clock offset: 2.866 ms


# Below is generated by plot.py at 2017-12-06 02:27:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 175.80 Mbit/s
95th percentile per-packet one-way delay: 79.399 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 93.02 Mbit/s
95th percentile per-packet one-way delay: 79.392 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 88.87 Mbit/s
95th percentile per-packet one-way delay: 79.408 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 92.30 Mbit/s
95th percentile per-packet one-way delay: 79.389 ms
Loss rate: 2.41%
```
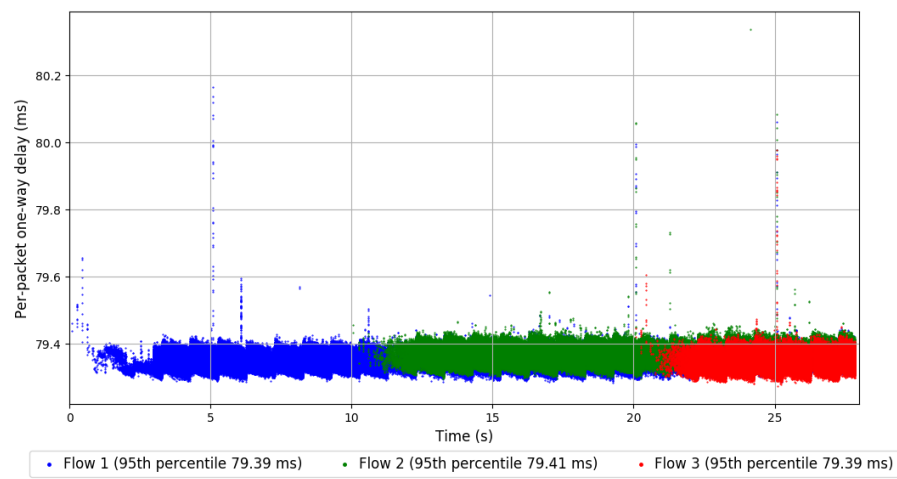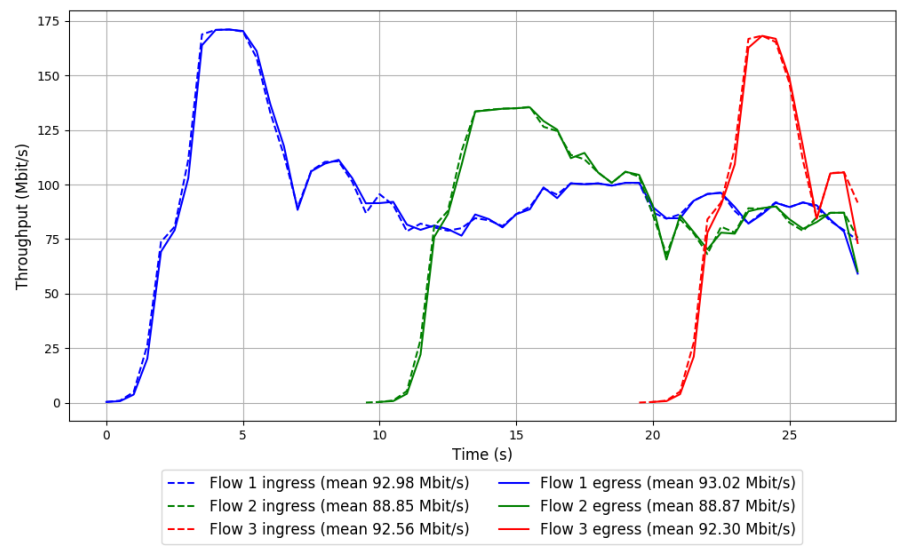
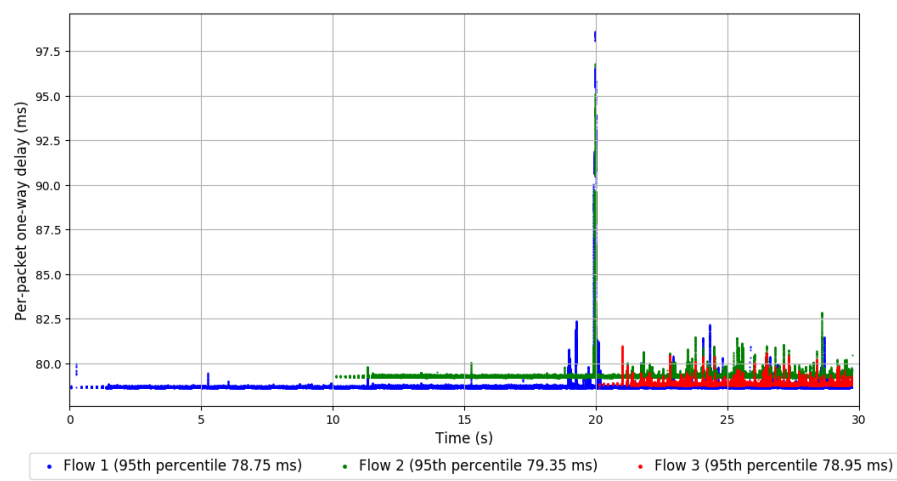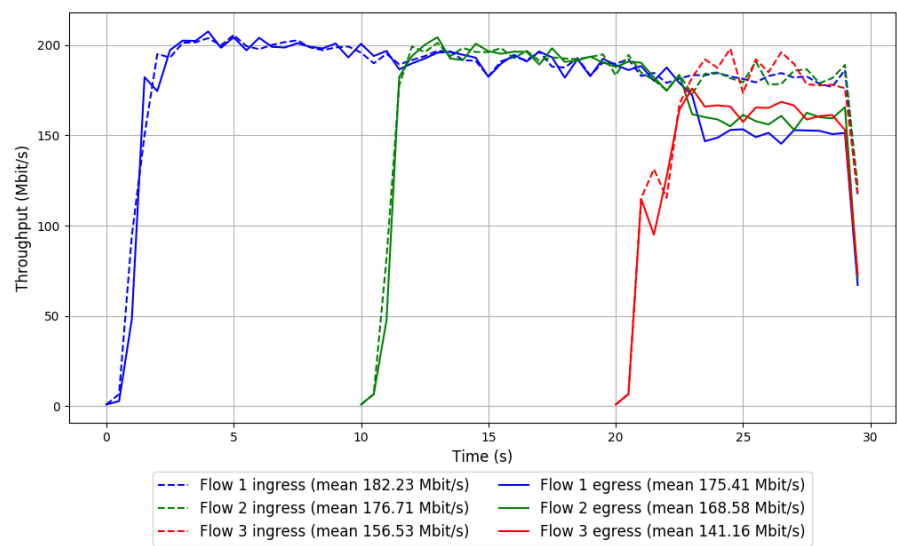## Run 10: Report of Copa — Data Link

```
Run 1: Statistics of Indigo

Start at: 2017-12-05 19:04:04
End at: 2017-12-05 19:04:34
Local clock offset: 1.304 ms
Remote clock offset: 4.529 ms

# Below is generated by plot.py at 2017-12-06 02:27:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.59 Mbit/s
95th percentile per-packet one-way delay: 79.308 ms
Loss rate: 5.69%
-- Flow 1:
Average throughput: 175.41 Mbit/s
95th percentile per-packet one-way delay: 78.747 ms
Loss rate: 4.28%
-- Flow 2:
Average throughput: 168.58 Mbit/s
95th percentile per-packet one-way delay: 79.348 ms
Loss rate: 5.41%
-- Flow 3:
Average throughput: 141.16 Mbit/s
95th percentile per-packet one-way delay: 78.950 ms
Loss rate: 11.36%
```

Run 1: Report of Indigo — Data Link

Flow 1 ingress (mean 182.23 Mbit/s)   Flow 1 egress (mean 175.41 Mbit/s)
Flow 2 ingress (mean 176.71 Mbit/s)   Flow 2 egress (mean 168.58 Mbit/s)
Flow 3 ingress (mean 156.53 Mbit/s)   Flow 3 egress (mean 141.16 Mbit/s)

Flow 1 (95th percentile 78.75 ms)   Flow 2 (95th percentile 79.35 ms)   Flow 3 (95th percentile 78.95 ms)
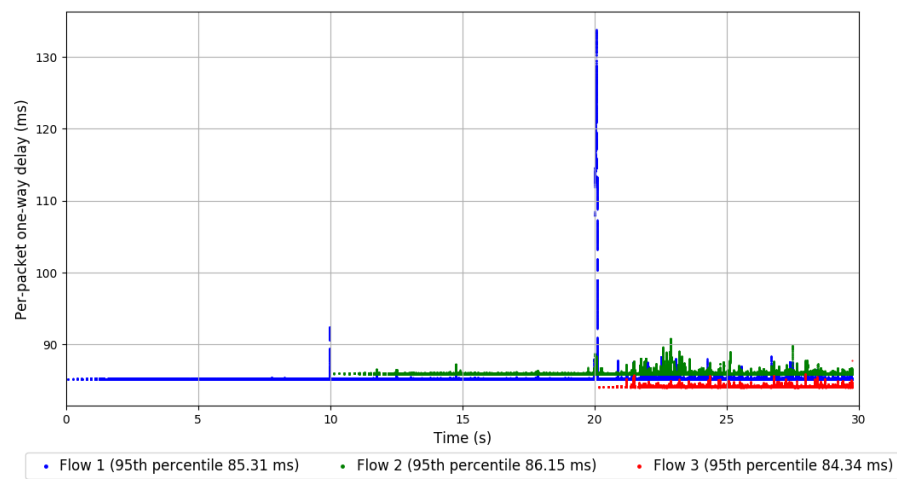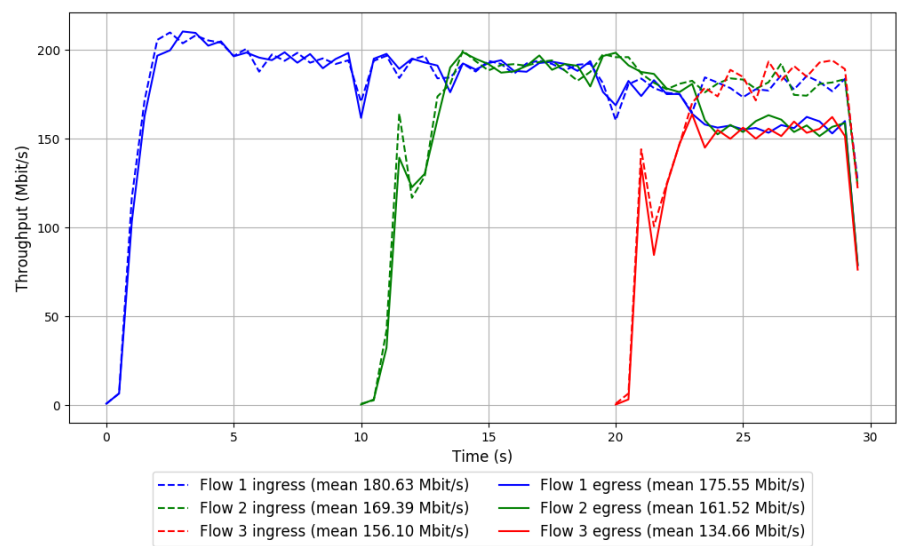
```
Run 2: Statistics of Indigo

Start at: 2017-12-05 19:24:09
End at: 2017-12-05 19:24:39
Local clock offset: 1.53 ms
Remote clock offset: -2.313 ms


# Below is generated by plot.py at 2017-12-06 02:28:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.81 Mbit/s
95th percentile per-packet one-way delay: 86.027 ms
Loss rate: 5.79%
-- Flow 1:
Average throughput: 175.55 Mbit/s
95th percentile per-packet one-way delay: 85.309 ms
Loss rate: 3.35%
-- Flow 2:
Average throughput: 161.52 Mbit/s
95th percentile per-packet one-way delay: 86.153 ms
Loss rate: 5.45%
-- Flow 3:
Average throughput: 134.66 Mbit/s
95th percentile per-packet one-way delay: 84.337 ms
Loss rate: 15.17%
```

Run 2: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 180.63 Mbit/s) — Flow 1 egress (mean 175.55 Mbit/s)
- - - Flow 2 ingress (mean 169.39 Mbit/s) — Flow 2 egress (mean 161.52 Mbit/s)
- - - Flow 3 ingress (mean 156.10 Mbit/s) — Flow 3 egress (mean 134.66 Mbit/s)

- Flow 1 (95th percentile 85.31 ms)   • Flow 2 (95th percentile 86.15 ms)   • Flow 3 (95th percentile 84.34 ms)
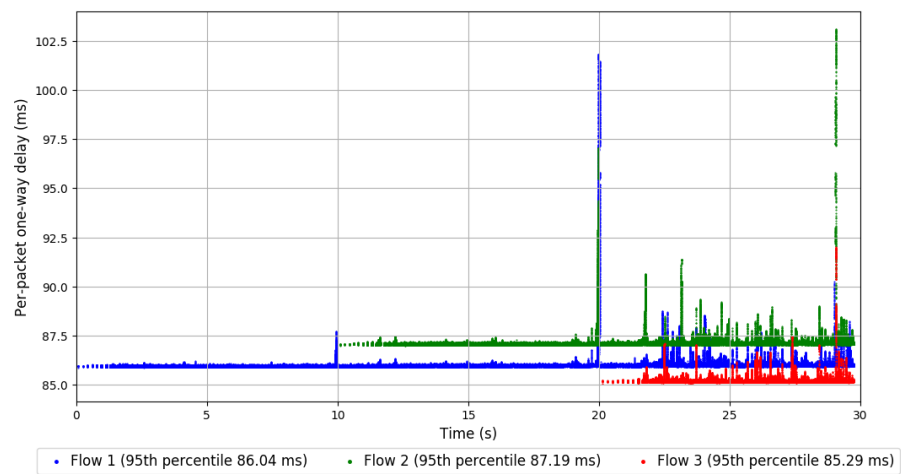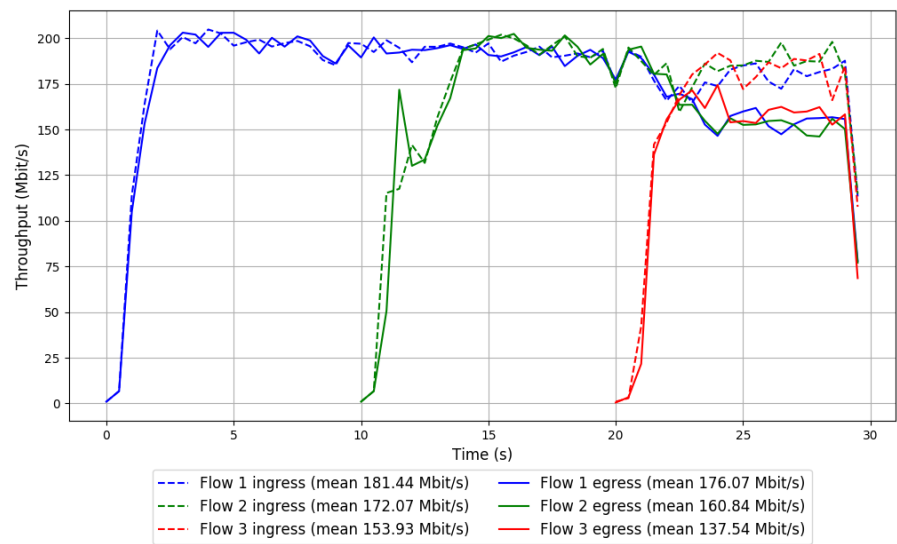
247

```
Run 3: Statistics of Indigo

Start at: 2017-12-05 19:44:28
End at: 2017-12-05 19:44:58
Local clock offset: 1.613 ms
Remote clock offset: -1.871 ms

# Below is generated by plot.py at 2017-12-06 02:29:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.03 Mbit/s
95th percentile per-packet one-way delay: 87.132 ms
Loss rate: 6.03%
-- Flow 1:
Average throughput: 176.07 Mbit/s
95th percentile per-packet one-way delay: 86.041 ms
Loss rate: 3.51%
-- Flow 2:
Average throughput: 160.84 Mbit/s
95th percentile per-packet one-way delay: 87.187 ms
Loss rate: 7.33%
-- Flow 3:
Average throughput: 137.54 Mbit/s
95th percentile per-packet one-way delay: 85.287 ms
Loss rate: 12.19%
```

Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 181.44 Mbit/s)   Flow 1 egress (mean 176.07 Mbit/s)
Flow 2 ingress (mean 172.07 Mbit/s)   Flow 2 egress (mean 160.84 Mbit/s)
Flow 3 ingress (mean 153.93 Mbit/s)   Flow 3 egress (mean 137.54 Mbit/s)

Flow 1 (95th percentile 86.04 ms)   Flow 2 (95th percentile 87.19 ms)   Flow 3 (95th percentile 85.29 ms)

```
Run 4: Statistics of Indigo

Start at: 2017-12-05 20:04:53
End at: 2017-12-05 20:05:23
Local clock offset: 1.183 ms
Remote clock offset: 5.59 ms


# Below is generated by plot.py at 2017-12-06 02:29:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.53 Mbit/s
95th percentile per-packet one-way delay: 80.874 ms
Loss rate: 6.69%
-- Flow 1:
Average throughput: 175.18 Mbit/s
95th percentile per-packet one-way delay: 80.647 ms
Loss rate: 4.30%
-- Flow 2:
Average throughput: 160.92 Mbit/s
95th percentile per-packet one-way delay: 80.898 ms
Loss rate: 6.70%
-- Flow 3:
Average throughput: 139.61 Mbit/s
95th percentile per-packet one-way delay: 79.851 ms
Loss rate: 14.97%
```
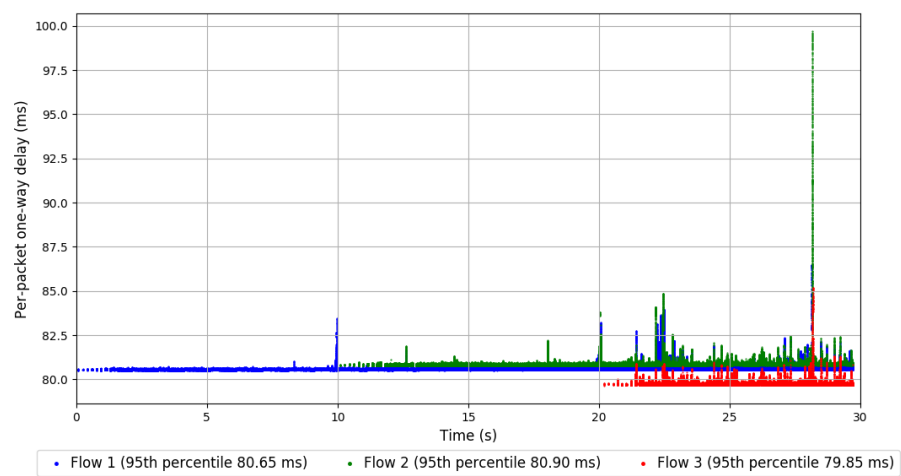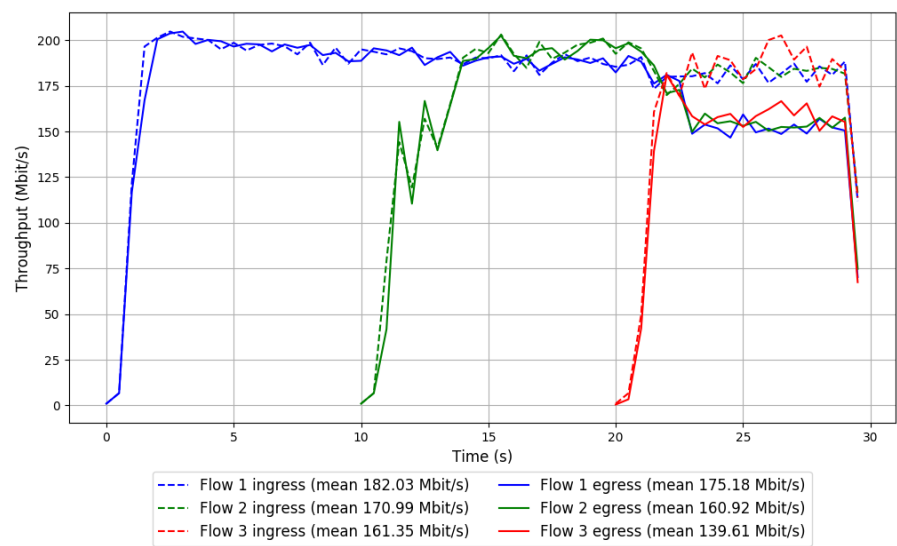
Run 4: Report of Indigo — Data Link

- Flow 1 ingress (mean 182.03 Mbit/s)
- Flow 1 egress (mean 175.18 Mbit/s)
- Flow 2 ingress (mean 170.99 Mbit/s)
- Flow 2 egress (mean 160.92 Mbit/s)
- Flow 3 ingress (mean 161.35 Mbit/s)
- Flow 3 egress (mean 139.61 Mbit/s)

- Flow 1 (95th percentile 80.65 ms)
- Flow 2 (95th percentile 80.90 ms)
- Flow 3 (95th percentile 79.85 ms)

```
Run 5: Statistics of Indigo

Start at: 2017-12-05 20:25:07
End at: 2017-12-05 20:25:38
Local clock offset: 0.873 ms
Remote clock offset: 5.505 ms


# Below is generated by plot.py at 2017-12-06 02:30:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.69 Mbit/s
95th percentile per-packet one-way delay: 81.462 ms
Loss rate: 5.78%
-- Flow 1:
Average throughput: 169.50 Mbit/s
95th percentile per-packet one-way delay: 81.470 ms
Loss rate: 3.48%
-- Flow 2:
Average throughput: 163.82 Mbit/s
95th percentile per-packet one-way delay: 79.983 ms
Loss rate: 5.16%
-- Flow 3:
Average throughput: 135.24 Mbit/s
95th percentile per-packet one-way delay: 81.553 ms
Loss rate: 14.98%
```
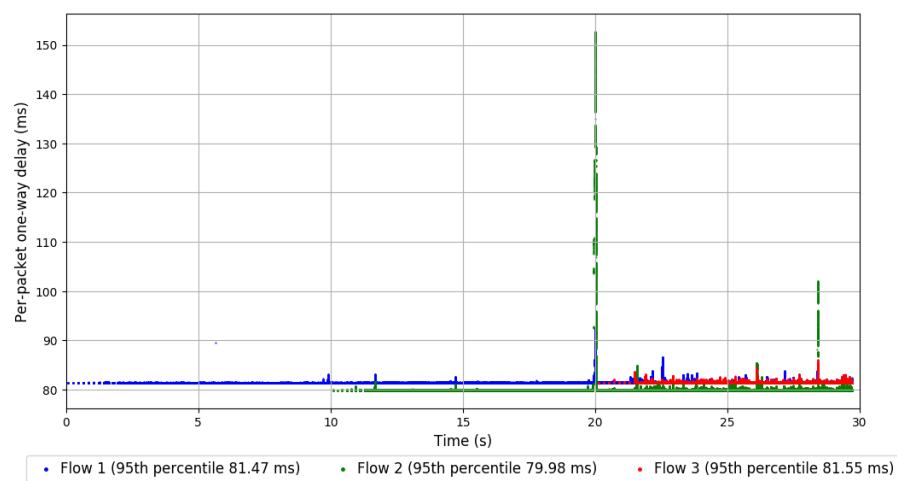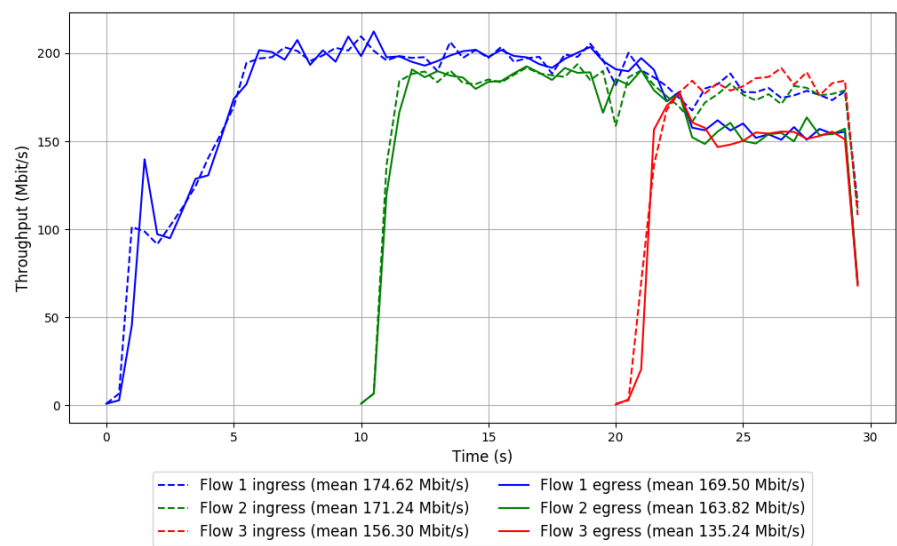
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2017-12-05 20:45:10
End at: 2017-12-05 20:45:40
Local clock offset: 0.477 ms
Remote clock offset: 4.436 ms


# Below is generated by plot.py at 2017-12-06 02:31:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.39 Mbit/s
95th percentile per-packet one-way delay: 80.836 ms
Loss rate: 5.42%
-- Flow 1:
Average throughput: 167.89 Mbit/s
95th percentile per-packet one-way delay: 78.760 ms
Loss rate: 2.60%
-- Flow 2:
Average throughput: 161.12 Mbit/s
95th percentile per-packet one-way delay: 79.268 ms
Loss rate: 6.04%
-- Flow 3:
Average throughput: 129.97 Mbit/s
95th percentile per-packet one-way delay: 81.249 ms
Loss rate: 13.91%
```
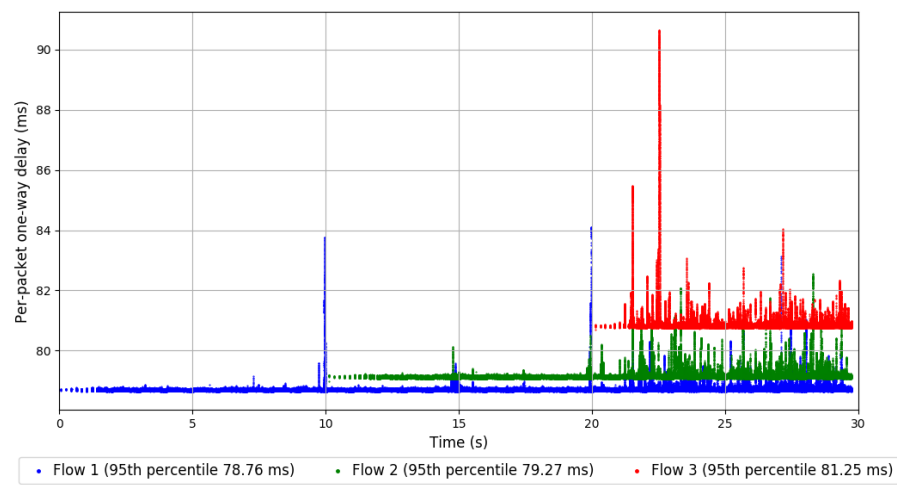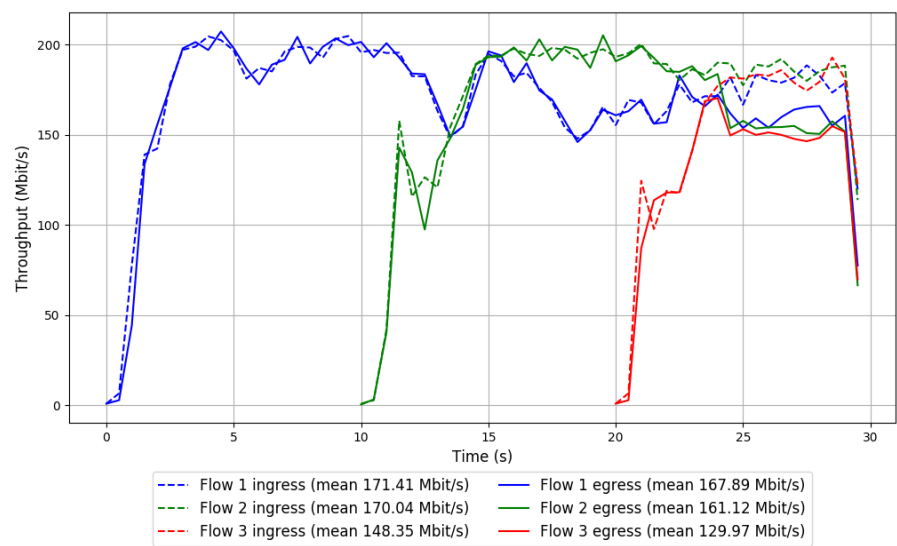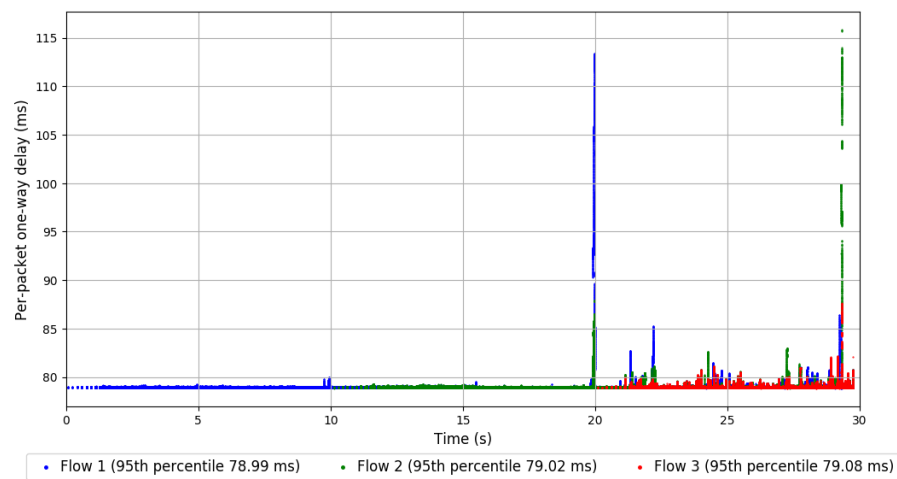
Run 6: Report of Indigo — Data Link

Flow 1 ingress (mean 171.41 Mbit/s) --- Flow 1 egress (mean 167.89 Mbit/s) ———
Flow 2 ingress (mean 170.04 Mbit/s) --- Flow 2 egress (mean 161.12 Mbit/s) ———
Flow 3 ingress (mean 148.35 Mbit/s) --- Flow 3 egress (mean 129.97 Mbit/s) ———

Flow 1 (95th percentile 78.76 ms) • Flow 2 (95th percentile 79.27 ms) • Flow 3 (95th percentile 81.25 ms) •

255

```
Run 7: Statistics of Indigo

Start at: 2017-12-05 21:05:25
End at: 2017-12-05 21:05:55
Local clock offset: 0.188 ms
Remote clock offset: 3.549 ms


# Below is generated by plot.py at 2017-12-06 02:31:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.79 Mbit/s
95th percentile per-packet one-way delay: 79.004 ms
Loss rate: 6.39%
-- Flow 1:
Average throughput: 175.68 Mbit/s
95th percentile per-packet one-way delay: 78.990 ms
Loss rate: 3.93%
-- Flow 2:
Average throughput: 160.61 Mbit/s
95th percentile per-packet one-way delay: 79.016 ms
Loss rate: 6.51%
-- Flow 3:
Average throughput: 144.20 Mbit/s
95th percentile per-packet one-way delay: 79.075 ms
Loss rate: 14.36%
```
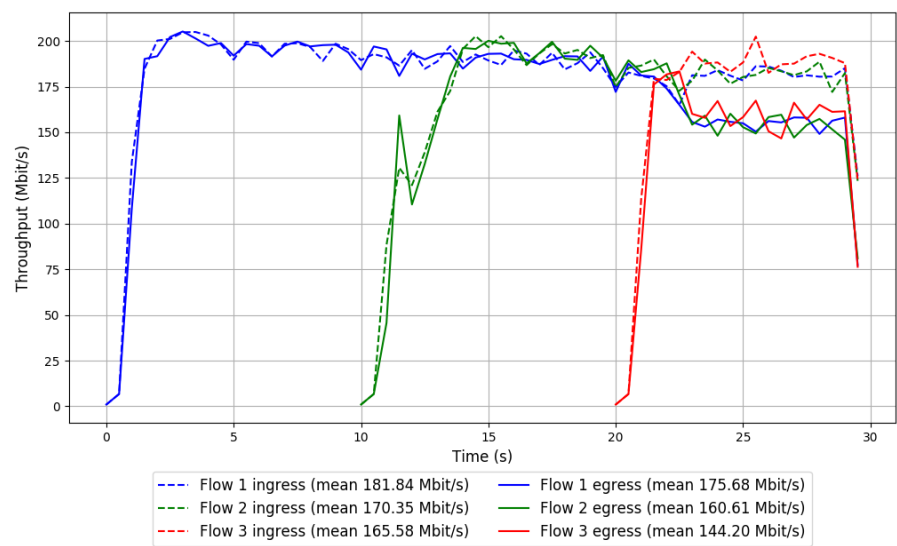
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2017-12-05 21:25:25
End at: 2017-12-05 21:25:55
Local clock offset: 0.021 ms
Remote clock offset: 2.022 ms

# Below is generated by plot.py at 2017-12-06 02:32:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.17 Mbit/s
95th percentile per-packet one-way delay: 81.843 ms
Loss rate: 6.16%
-- Flow 1:
Average throughput: 177.29 Mbit/s
95th percentile per-packet one-way delay: 80.365 ms
Loss rate: 4.49%
-- Flow 2:
Average throughput: 170.33 Mbit/s
95th percentile per-packet one-way delay: 81.877 ms
Loss rate: 4.46%
-- Flow 3:
Average throughput: 136.39 Mbit/s
95th percentile per-packet one-way delay: 81.564 ms
Loss rate: 15.91%
```
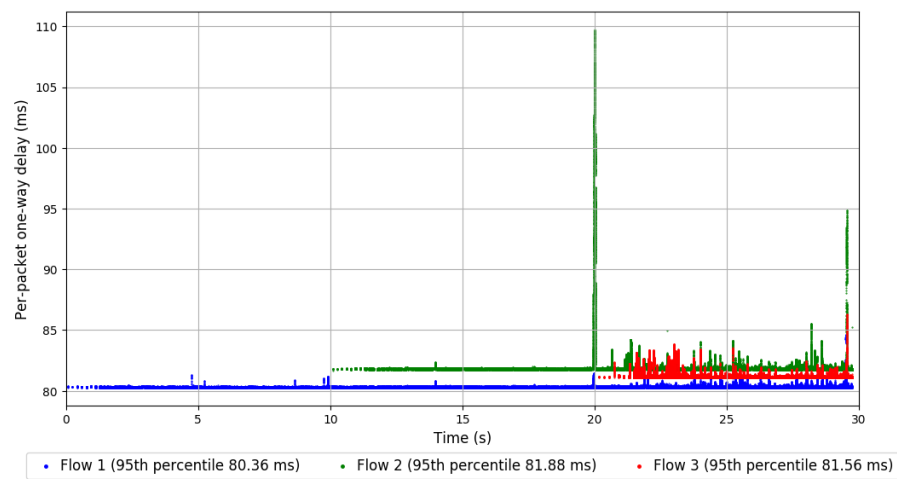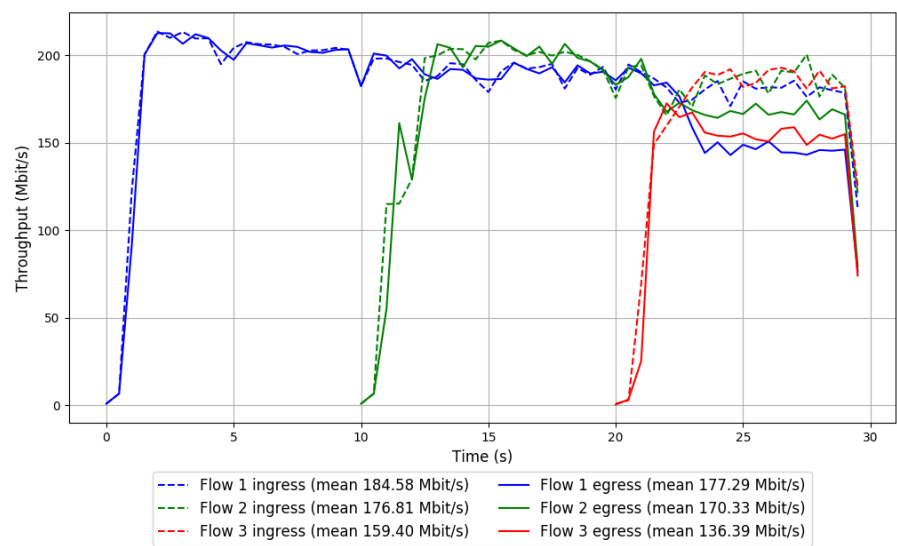
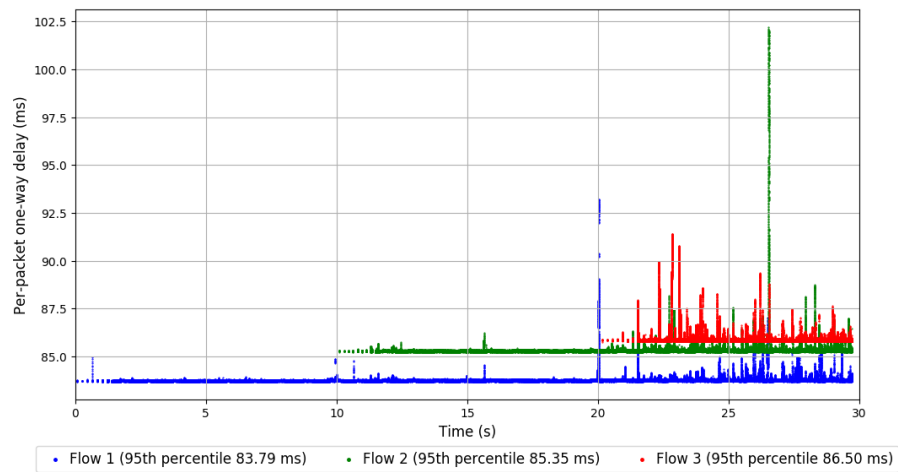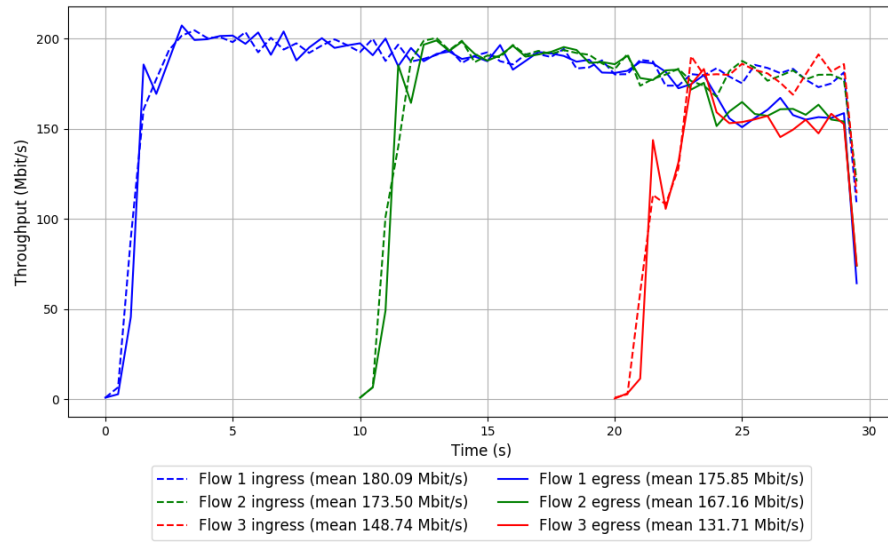Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2017-12-05 21:45:32
End at: 2017-12-05 21:46:02
Local clock offset: -0.429 ms
Remote clock offset: -3.317 ms

# Below is generated by plot.py at 2017-12-06 02:32:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.85 Mbit/s
95th percentile per-packet one-way delay: 85.874 ms
Loss rate: 4.85%
-- Flow 1:
Average throughput: 175.85 Mbit/s
95th percentile per-packet one-way delay: 83.790 ms
Loss rate: 2.90%
-- Flow 2:
Average throughput: 167.16 Mbit/s
95th percentile per-packet one-way delay: 85.353 ms
Loss rate: 4.49%
-- Flow 3:
Average throughput: 131.71 Mbit/s
95th percentile per-packet one-way delay: 86.496 ms
Loss rate: 12.98%
```
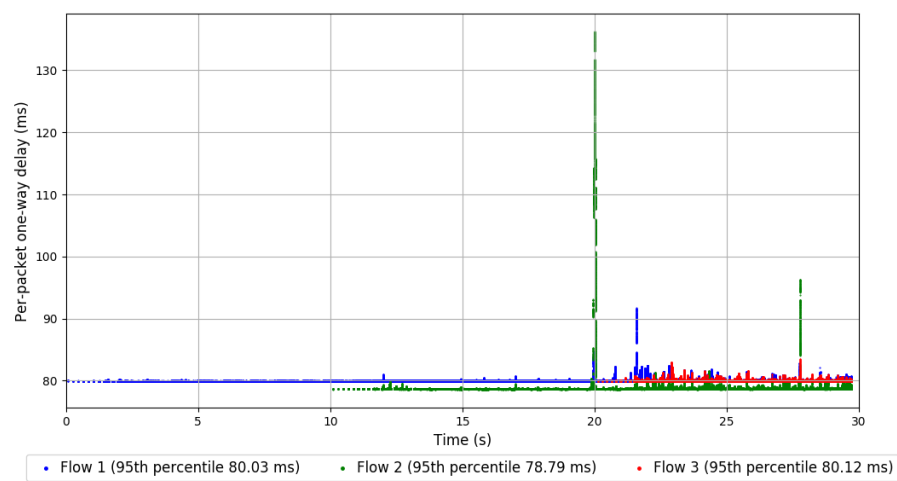
Run 9: Report of Indigo — Data Link

Flow 1 ingress (mean 180.09 Mbit/s) --- Flow 1 egress (mean 175.85 Mbit/s)
Flow 2 ingress (mean 173.50 Mbit/s) --- Flow 2 egress (mean 167.16 Mbit/s)
Flow 3 ingress (mean 148.74 Mbit/s) --- Flow 3 egress (mean 131.71 Mbit/s)

Flow 1 (95th percentile 83.79 ms)   Flow 2 (95th percentile 85.35 ms)   Flow 3 (95th percentile 86.50 ms)
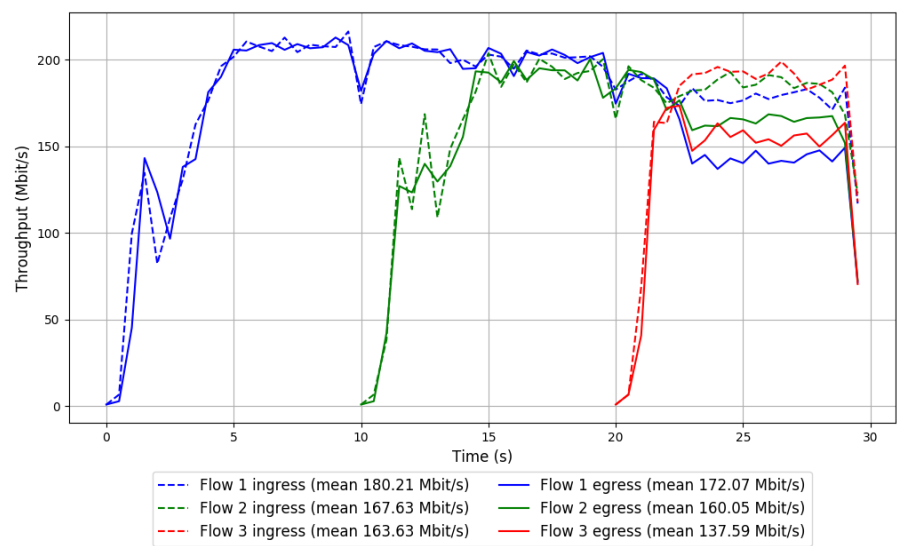
261

```
Run 10: Statistics of Indigo

Start at: 2017-12-05 22:05:40
End at: 2017-12-05 22:06:10
Local clock offset: -1.153 ms
Remote clock offset: 1.339 ms


# Below is generated by plot.py at 2017-12-06 02:33:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.51 Mbit/s
95th percentile per-packet one-way delay: 80.029 ms
Loss rate: 7.06%
-- Flow 1:
Average throughput: 172.07 Mbit/s
95th percentile per-packet one-way delay: 80.031 ms
Loss rate: 5.05%
-- Flow 2:
Average throughput: 160.05 Mbit/s
95th percentile per-packet one-way delay: 78.794 ms
Loss rate: 5.34%
-- Flow 3:
Average throughput: 137.59 Mbit/s
95th percentile per-packet one-way delay: 80.125 ms
Loss rate: 17.36%
```

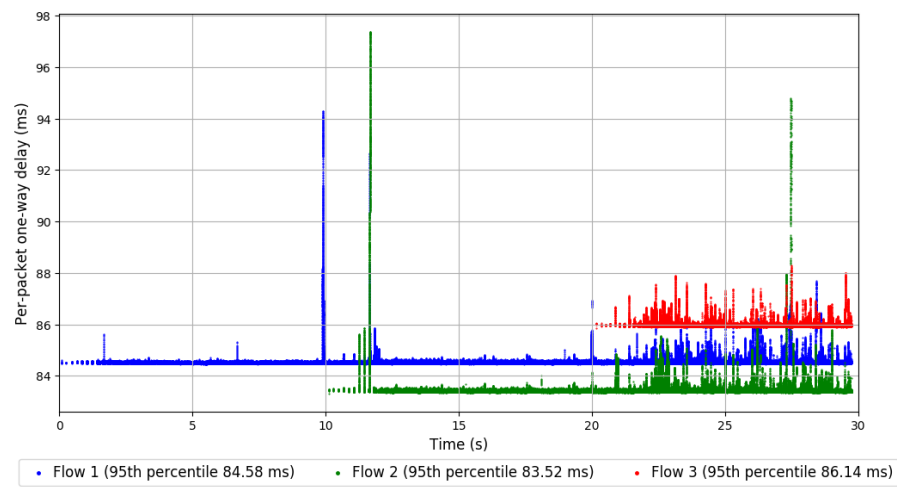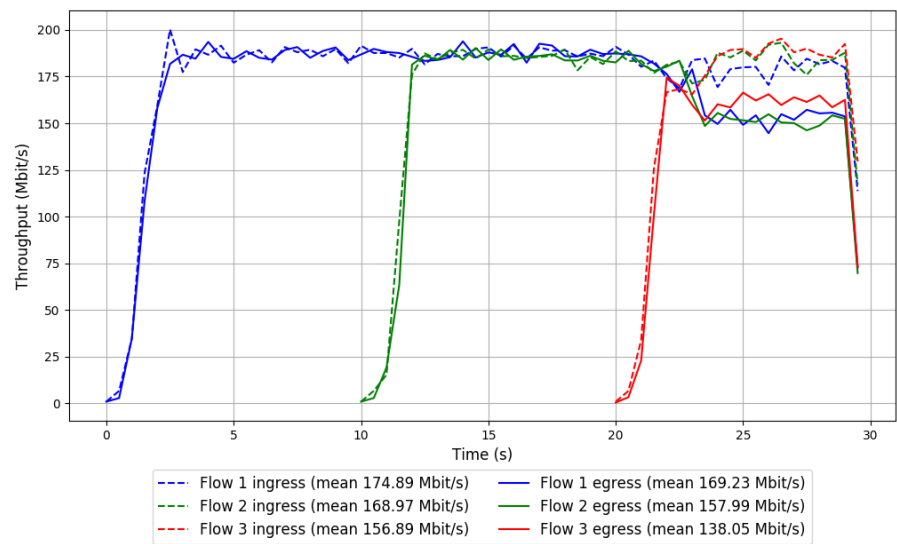Run 10: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-calib

Start at: 2017-12-05 18:59:42
End at: 2017-12-05 19:00:12
Local clock offset: 1.215 ms
Remote clock offset: -1.273 ms


# Below is generated by plot.py at 2017-12-06 02:34:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.31 Mbit/s
95th percentile per-packet one-way delay: 85.987 ms
Loss rate: 6.42%
-- Flow 1:
Average throughput: 169.23 Mbit/s
95th percentile per-packet one-way delay: 84.585 ms
Loss rate: 3.78%
-- Flow 2:
Average throughput: 157.99 Mbit/s
95th percentile per-packet one-way delay: 83.522 ms
Loss rate: 7.27%
-- Flow 3:
Average throughput: 138.05 Mbit/s
95th percentile per-packet one-way delay: 86.135 ms
Loss rate: 13.54%
```

Run 1: Report of Indigo-calib — Data Link

```
Run 2: Statistics of Indigo-calib

Start at: 2017-12-05 19:19:49
End at: 2017-12-05 19:20:19
Local clock offset: 1.466 ms
Remote clock offset: 3.328 ms

# Below is generated by plot.py at 2017-12-06 02:34:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.25 Mbit/s
95th percentile per-packet one-way delay: 80.315 ms
Loss rate: 6.48%
-- Flow 1:
Average throughput: 169.63 Mbit/s
95th percentile per-packet one-way delay: 79.787 ms
Loss rate: 3.90%
-- Flow 2:
Average throughput: 168.10 Mbit/s
95th percentile per-packet one-way delay: 79.793 ms
Loss rate: 5.63%
-- Flow 3:
Average throughput: 127.39 Mbit/s
95th percentile per-packet one-way delay: 80.997 ms
Loss rate: 17.58%
```
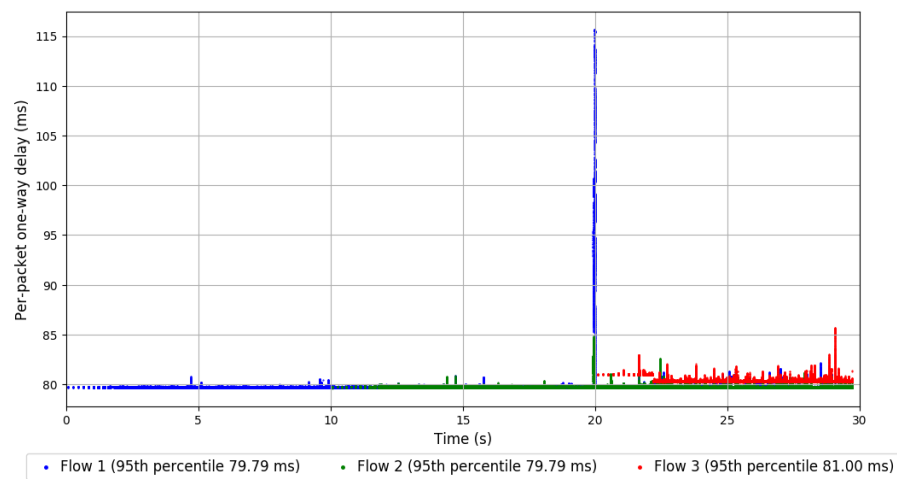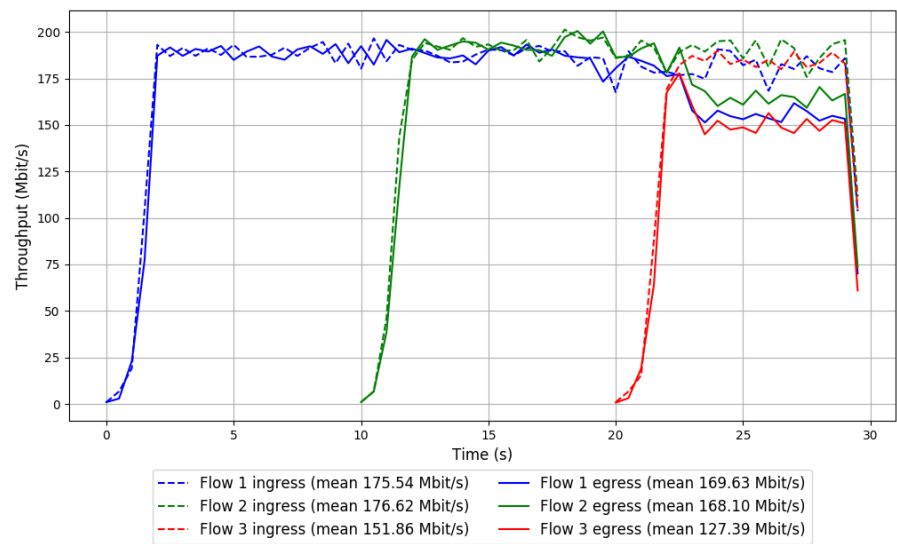
Run 2: Report of Indigo-calib — Data Link

```
Run 3: Statistics of Indigo-calib

Start at: 2017-12-05 19:40:07
End at: 2017-12-05 19:40:37
Local clock offset: 1.592 ms
Remote clock offset: 3.509 ms


# Below is generated by plot.py at 2017-12-06 02:34:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.42 Mbit/s
95th percentile per-packet one-way delay: 81.350 ms
Loss rate: 6.23%
-- Flow 1:
Average throughput: 176.52 Mbit/s
95th percentile per-packet one-way delay: 81.371 ms
Loss rate: 4.70%
-- Flow 2:
Average throughput: 161.01 Mbit/s
95th percentile per-packet one-way delay: 78.425 ms
Loss rate: 5.61%
-- Flow 3:
Average throughput: 134.89 Mbit/s
95th percentile per-packet one-way delay: 80.088 ms
Loss rate: 13.24%
```
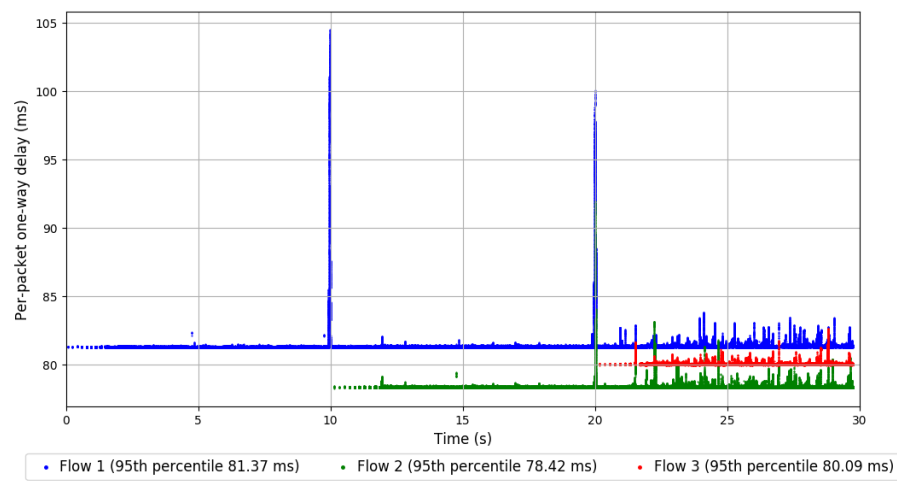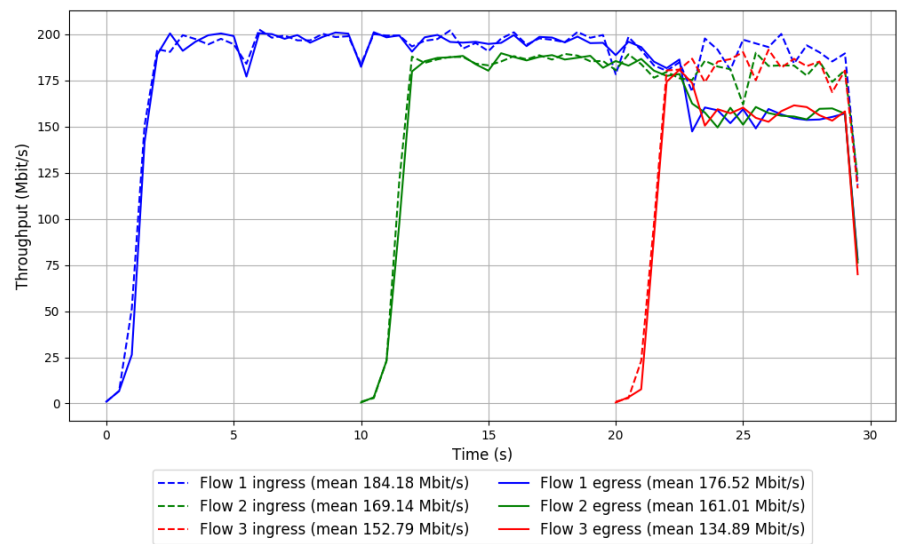
Run 3: Report of Indigo-calib — Data Link

```
Run 4: Statistics of Indigo-calib

Start at: 2017-12-05 20:00:25
End at: 2017-12-05 20:00:55
Local clock offset: 1.334 ms
Remote clock offset: 4.814 ms


# Below is generated by plot.py at 2017-12-06 02:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.47 Mbit/s
95th percentile per-packet one-way delay: 81.176 ms
Loss rate: 8.08%
-- Flow 1:
Average throughput: 175.61 Mbit/s
95th percentile per-packet one-way delay: 78.442 ms
Loss rate: 5.88%
-- Flow 2:
Average throughput: 166.59 Mbit/s
95th percentile per-packet one-way delay: 78.783 ms
Loss rate: 6.15%
-- Flow 3:
Average throughput: 131.09 Mbit/s
95th percentile per-packet one-way delay: 81.448 ms
Loss rate: 20.07%
```
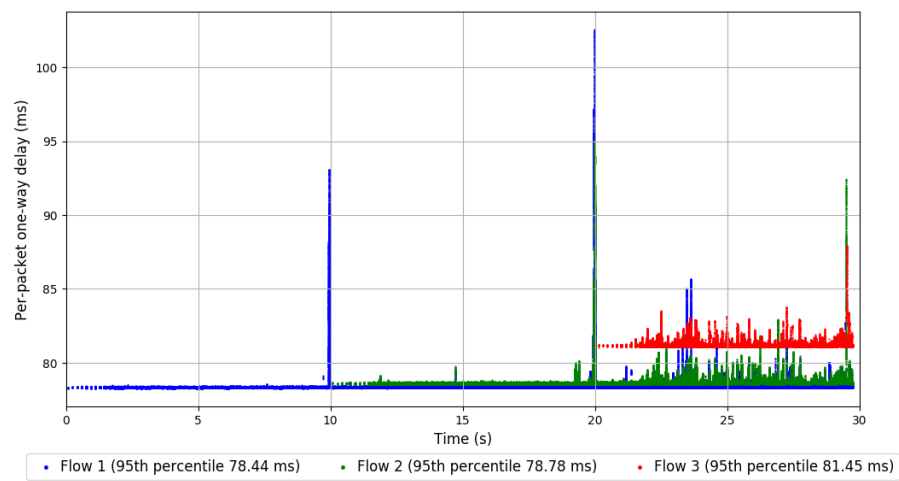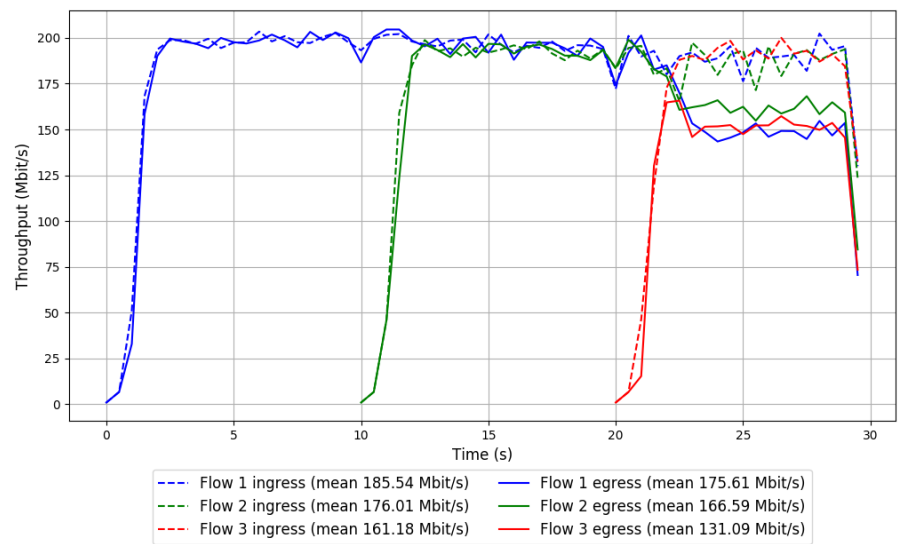
Run 4: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 185.54 Mbit/s)   Flow 1 egress (mean 175.61 Mbit/s)
Flow 2 ingress (mean 176.01 Mbit/s)   Flow 2 egress (mean 166.59 Mbit/s)
Flow 3 ingress (mean 161.18 Mbit/s)   Flow 3 egress (mean 131.09 Mbit/s)

Flow 1 (95th percentile 78.44 ms)   Flow 2 (95th percentile 78.78 ms)   Flow 3 (95th percentile 81.45 ms)

```
Run 5: Statistics of Indigo-calib

Start at: 2017-12-05 20:20:33
End at: 2017-12-05 20:21:03
Local clock offset: 1.003 ms
Remote clock offset: 0.305 ms

# Below is generated by plot.py at 2017-12-06 02:36:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.89 Mbit/s
95th percentile per-packet one-way delay: 86.734 ms
Loss rate: 6.79%
-- Flow 1:
Average throughput: 178.11 Mbit/s
95th percentile per-packet one-way delay: 83.986 ms
Loss rate: 4.38%
-- Flow 2:
Average throughput: 163.98 Mbit/s
95th percentile per-packet one-way delay: 84.045 ms
Loss rate: 6.81%
-- Flow 3:
Average throughput: 137.22 Mbit/s
95th percentile per-packet one-way delay: 86.815 ms
Loss rate: 15.35%
```
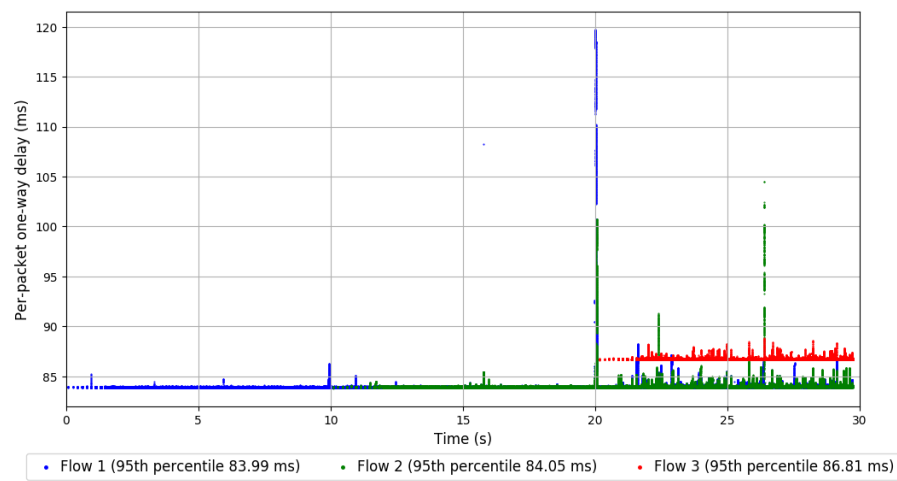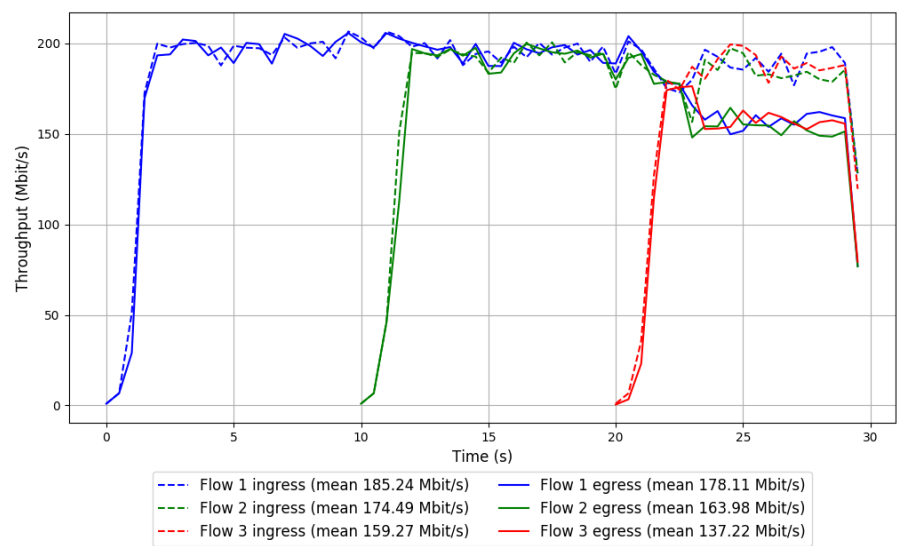
Run 5: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 185.24 Mbit/s) — Flow 1 egress (mean 178.11 Mbit/s)
Flow 2 ingress (mean 174.49 Mbit/s) — Flow 2 egress (mean 163.98 Mbit/s)
Flow 3 ingress (mean 159.27 Mbit/s) — Flow 3 egress (mean 137.22 Mbit/s)

Flow 1 (95th percentile 83.99 ms) Flow 2 (95th percentile 84.05 ms) Flow 3 (95th percentile 86.81 ms)
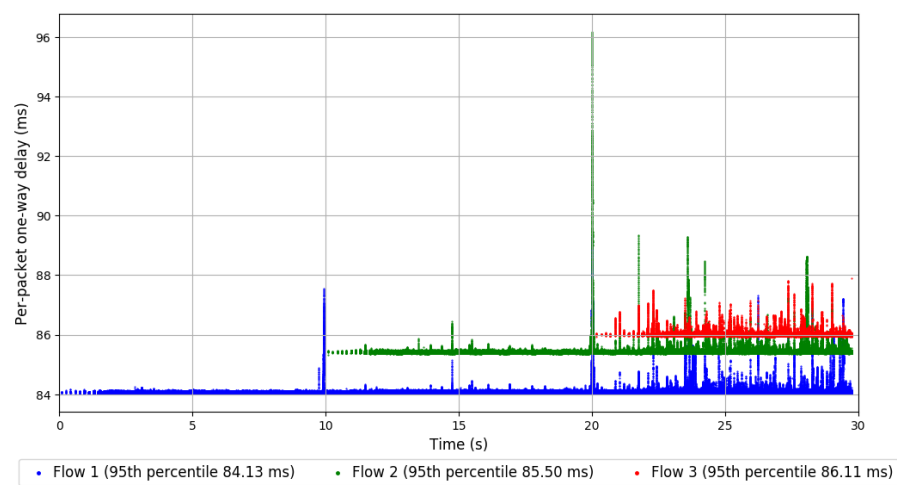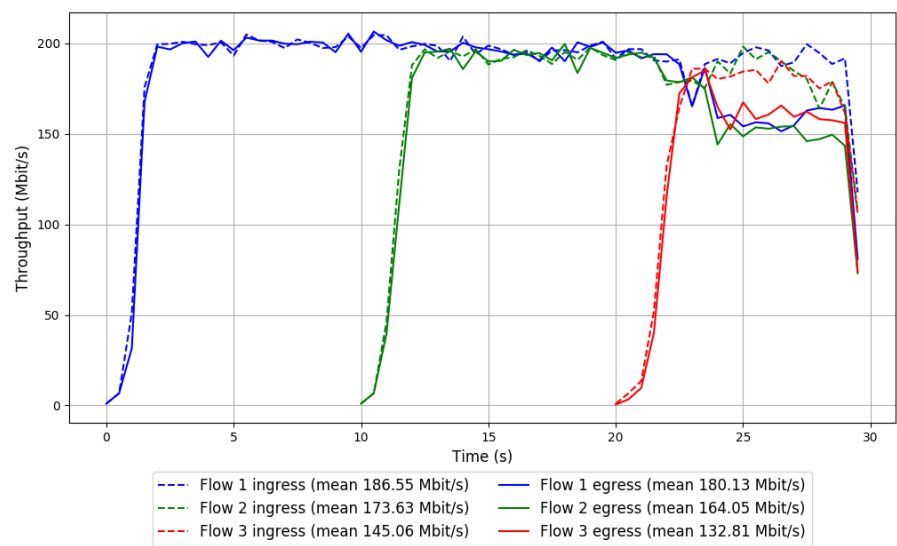
```
Run 6: Statistics of Indigo-calib

Start at: 2017-12-05 20:40:44
End at: 2017-12-05 20:41:14
Local clock offset: 0.579 ms
Remote clock offset: -0.635 ms


# Below is generated by plot.py at 2017-12-06 02:36:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.65 Mbit/s
95th percentile per-packet one-way delay: 86.019 ms
Loss rate: 5.57%
-- Flow 1:
Average throughput: 180.13 Mbit/s
95th percentile per-packet one-way delay: 84.134 ms
Loss rate: 3.98%
-- Flow 2:
Average throughput: 164.05 Mbit/s
95th percentile per-packet one-way delay: 85.495 ms
Loss rate: 6.32%
-- Flow 3:
Average throughput: 132.81 Mbit/s
95th percentile per-packet one-way delay: 86.106 ms
Loss rate: 10.01%
```

Run 6: Report of Indigo-calib — Data Link

```
Run 7: Statistics of Indigo-calib

Start at: 2017-12-05 21:01:00
End at: 2017-12-05 21:01:30
Local clock offset: 0.213 ms
Remote clock offset: 2.806 ms

# Below is generated by plot.py at 2017-12-06 02:36:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.84 Mbit/s
95th percentile per-packet one-way delay: 82.755 ms
Loss rate: 6.49%
-- Flow 1:
Average throughput: 178.23 Mbit/s
95th percentile per-packet one-way delay: 82.769 ms
Loss rate: 3.82%
-- Flow 2:
Average throughput: 157.26 Mbit/s
95th percentile per-packet one-way delay: 81.154 ms
Loss rate: 7.59%
-- Flow 3:
Average throughput: 137.01 Mbit/s
95th percentile per-packet one-way delay: 80.916 ms
Loss rate: 13.66%
```
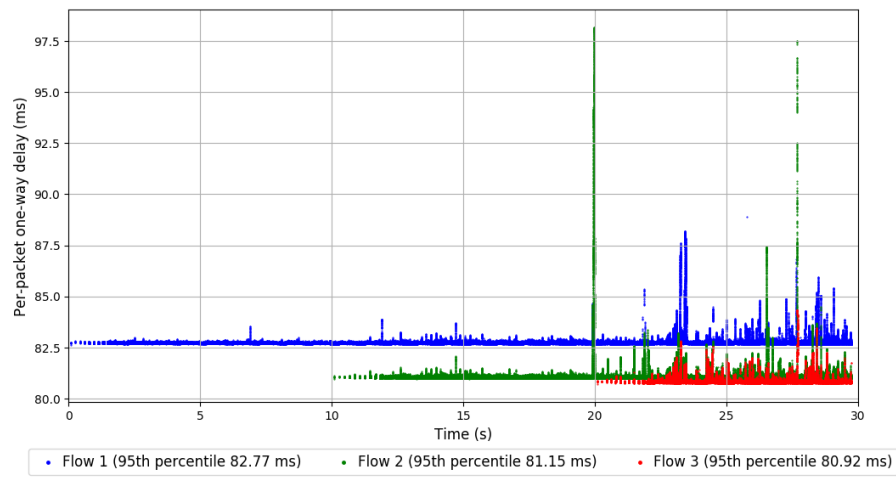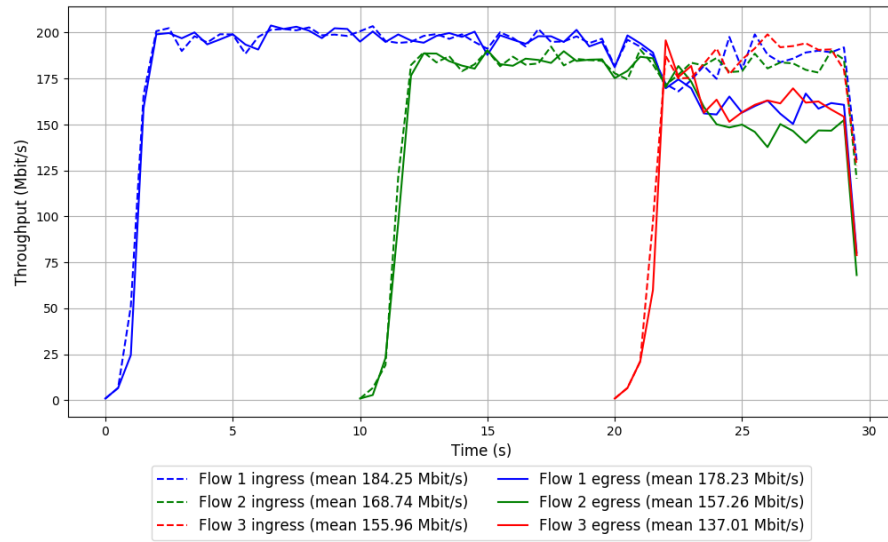
Run 7: Report of Indigo-calib — Data Link

- Flow 1 (95th percentile 82.77 ms)   • Flow 2 (95th percentile 81.15 ms)   • Flow 3 (95th percentile 80.92 ms)

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```
Run 8: Statistics of Indigo-calib

Start at: 2017-12-05 21:21:05
End at: 2017-12-05 21:21:35
Local clock offset: 0.066 ms
Remote clock offset: 3.075 ms


# Below is generated by plot.py at 2017-12-06 02:37:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.50 Mbit/s
95th percentile per-packet one-way delay: 81.430 ms
Loss rate: 6.74%
-- Flow 1:
Average throughput: 167.02 Mbit/s
95th percentile per-packet one-way delay: 81.445 ms
Loss rate: 5.08%
-- Flow 2:
Average throughput: 164.20 Mbit/s
95th percentile per-packet one-way delay: 79.857 ms
Loss rate: 7.55%
-- Flow 3:
Average throughput: 143.35 Mbit/s
95th percentile per-packet one-way delay: 81.525 ms
Loss rate: 10.54%
```
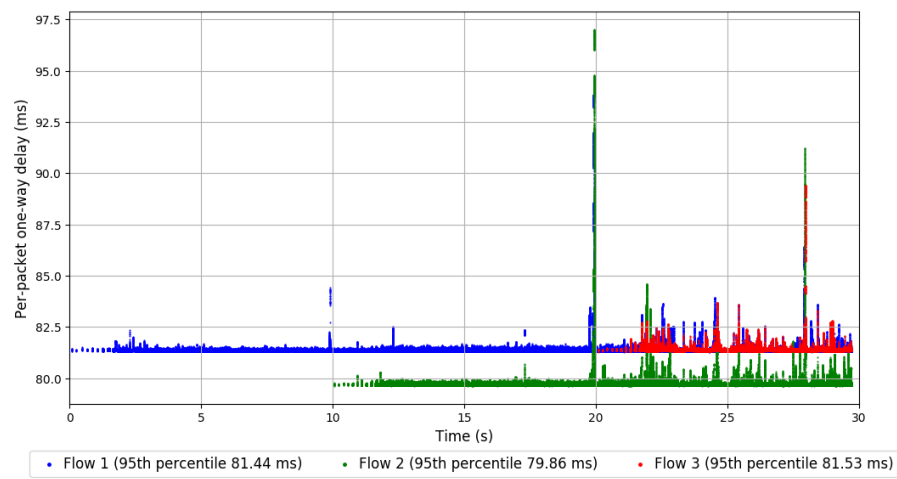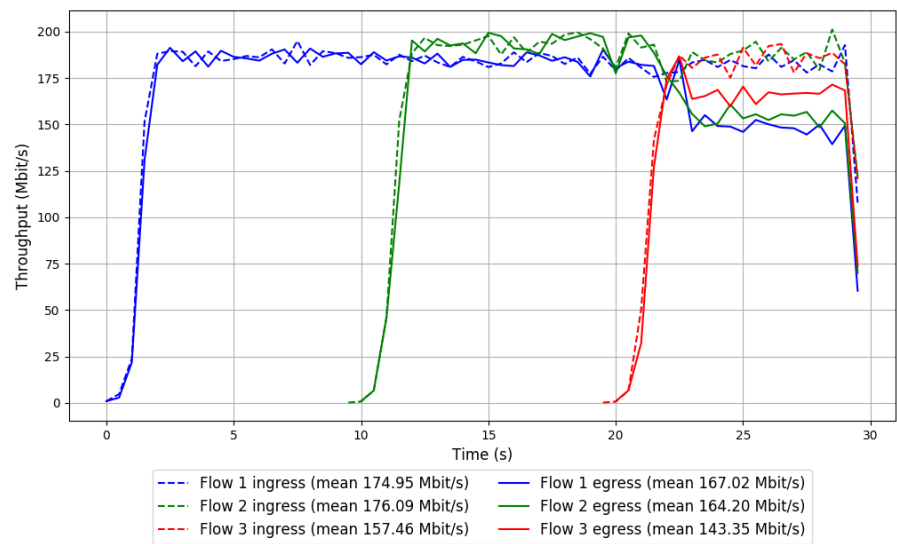
Run 8: Report of Indigo-calib — Data Link

```
Run 9: Statistics of Indigo-calib

Start at: 2017-12-05 21:41:08
End at: 2017-12-05 21:41:38
Local clock offset: -0.232 ms
Remote clock offset: 2.386 ms

# Below is generated by plot.py at 2017-12-06 02:37:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.90 Mbit/s
95th percentile per-packet one-way delay: 81.410 ms
Loss rate: 6.65%
-- Flow 1:
Average throughput: 177.26 Mbit/s
95th percentile per-packet one-way delay: 78.660 ms
Loss rate: 4.80%
-- Flow 2:
Average throughput: 154.22 Mbit/s
95th percentile per-packet one-way delay: 81.471 ms
Loss rate: 7.66%
-- Flow 3:
Average throughput: 141.44 Mbit/s
95th percentile per-packet one-way delay: 81.306 ms
Loss rate: 11.13%
```
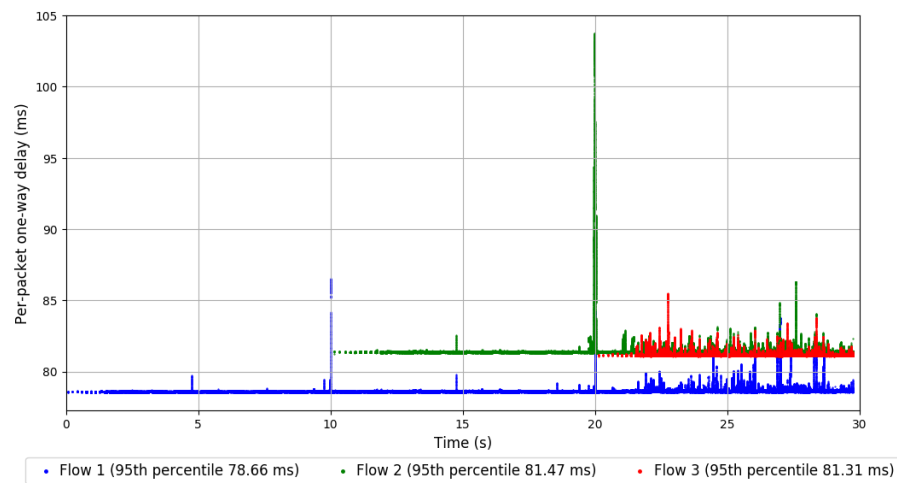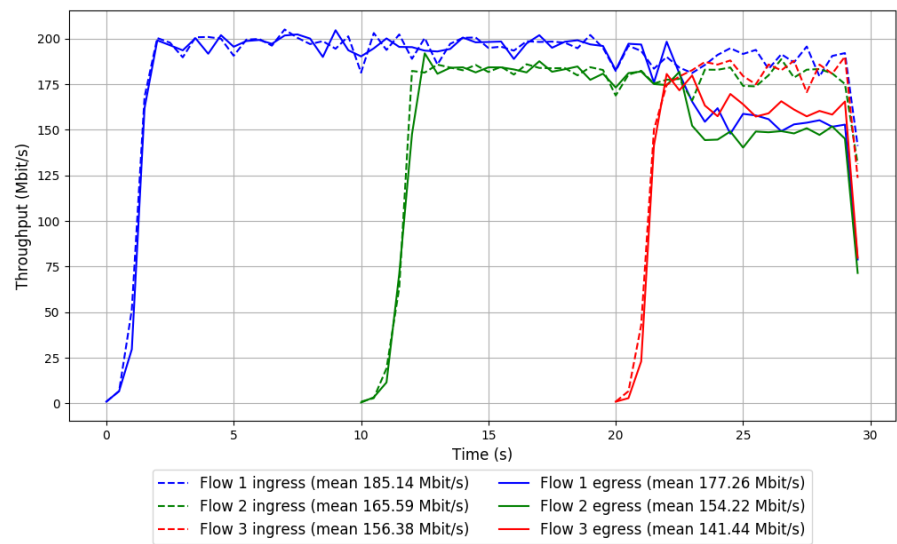
Run 9: Report of Indigo-calib — Data Link

```
Run 10: Statistics of Indigo-calib

Start at: 2017-12-05 22:01:19
End at: 2017-12-05 22:01:49
Local clock offset: -0.984 ms
Remote clock offset: -3.726 ms

# Below is generated by plot.py at 2017-12-06 02:37:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.97 Mbit/s
95th percentile per-packet one-way delay: 87.060 ms
Loss rate: 7.29%
-- Flow 1:
Average throughput: 180.07 Mbit/s
95th percentile per-packet one-way delay: 85.413 ms
Loss rate: 3.29%
-- Flow 2:
Average throughput: 153.09 Mbit/s
95th percentile per-packet one-way delay: 87.091 ms
Loss rate: 8.65%
-- Flow 3:
Average throughput: 133.40 Mbit/s
95th percentile per-packet one-way delay: 84.425 ms
Loss rate: 18.51%
```

Run 10: Report of Indigo-calib — Data Link