Pantheon Report

Generated at 2017-12-12 17:01:44 (UTC).

Data path: GCE Tokyo Ethernet (*remote*) →GCE Iowa 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.
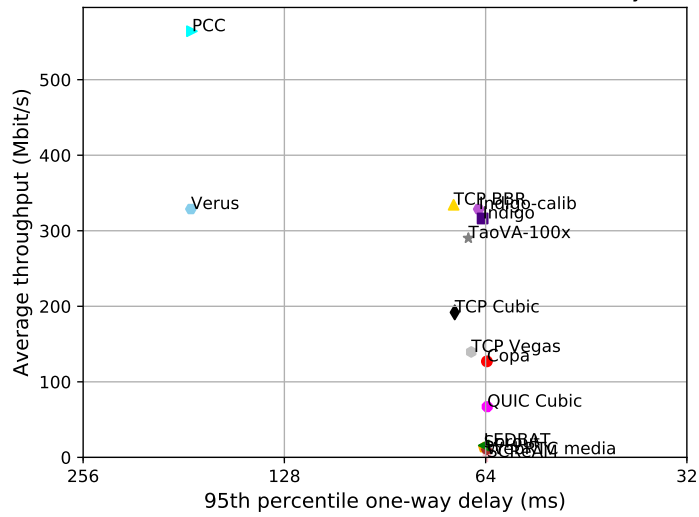
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

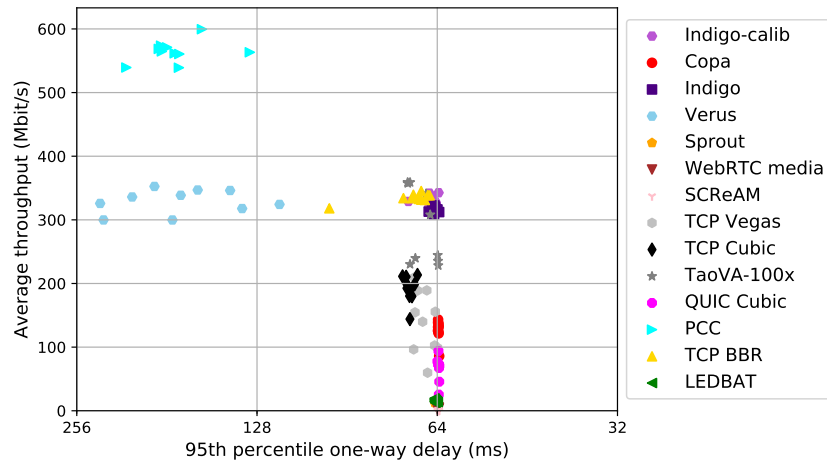Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

```
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 GCE Tokyo Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from GCE Tokyo Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows

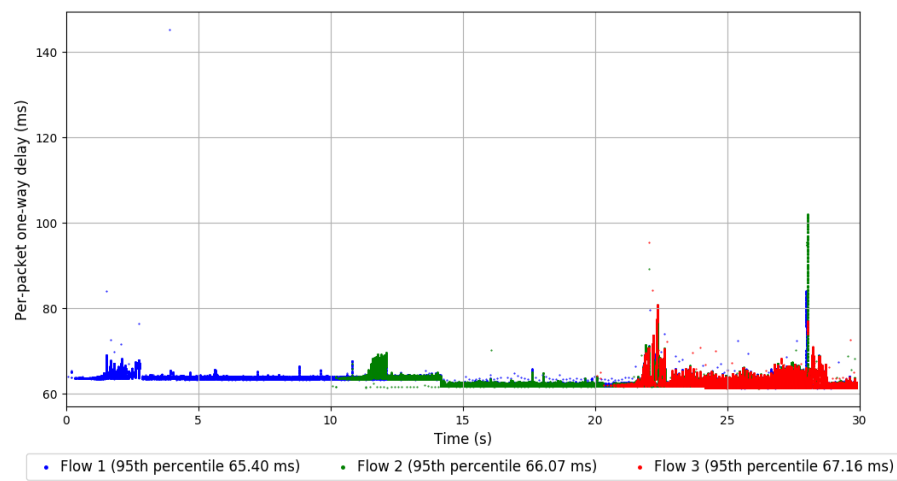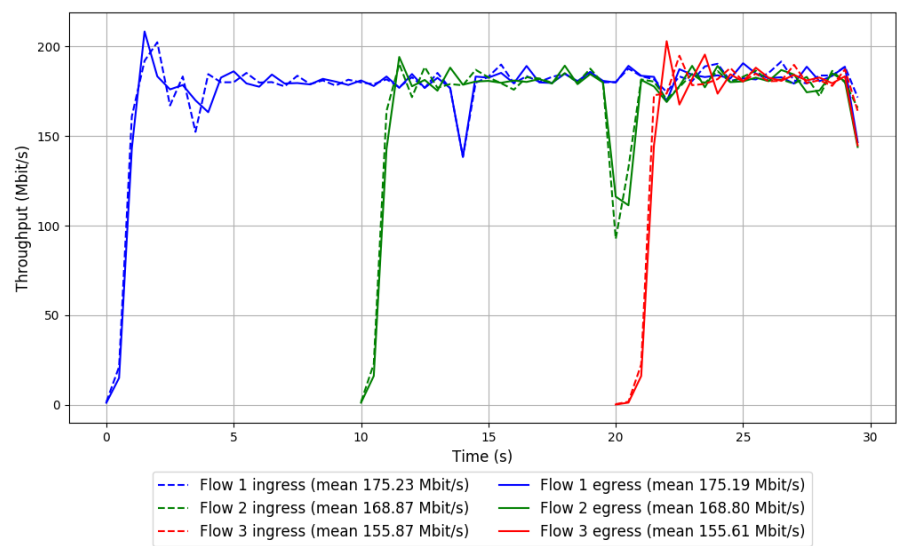| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	171.60	167.92	156.14	69.77	71.84	74.89	0.46	0.69	1.51
TCP Cubic	10	103.34	92.57	82.53	71.29	70.61	69.10	0.49	0.76	1.94
LEDBAT	10	7.67	9.65	5.16	64.42	64.23	63.88	1.01	1.10	2.05
PCC	10	514.78	46.30	57.86	176.86	165.82	165.44	2.76	2.56	3.45
QUIC Cubic	10	39.00	31.16	22.75	63.33	63.72	63.20	0.70	1.16	2.16
SCReAM	10	0.24	0.21	0.22	107.80	63.46	63.21	0.37	0.66	1.07
WebRTC media	10	2.30	1.39	0.57	63.63	63.60	63.43	0.58	0.74	1.76
Sprout	9	6.47	6.41	6.15	64.42	64.46	64.35	0.55	0.74	1.56
TaoVA-100x	10	158.93	147.44	131.84	66.36	68.06	69.28	0.37	0.68	3.02
TCP Vegas	10	59.32	74.77	92.92	65.28	67.06	67.34	0.36	0.57	1.34
Verus	10	197.10	152.54	90.89	173.52	175.12	166.80	2.10	1.77	2.21
Copa	10	72.71	58.40	60.71	63.71	140.57	63.60	0.31	0.60	1.97
Indigo	10	169.31	155.11	136.68	64.30	65.04	65.44	0.40	0.63	1.40
Indigo-calib	10	179.29	159.02	136.73	64.68	66.02	67.79	0.37	0.57	1.46

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-12 11:46:07
End at: 2017-12-12 11:46:37


# Below is generated by plot.py at 2017-12-12 15:56:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.56 Mbit/s
95th percentile per-packet one-way delay: 65.880 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 175.19 Mbit/s
95th percentile per-packet one-way delay: 65.397 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 168.80 Mbit/s
95th percentile per-packet one-way delay: 66.073 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 155.61 Mbit/s
95th percentile per-packet one-way delay: 67.156 ms
Loss rate: 1.43%
```
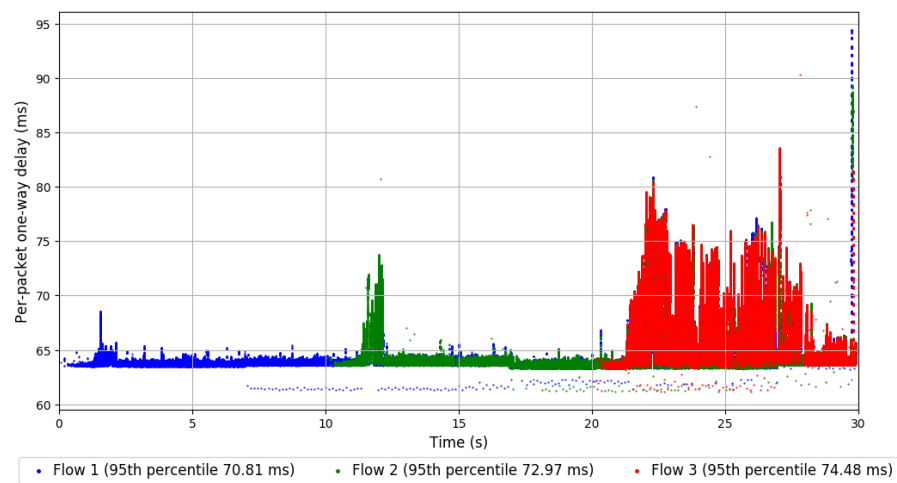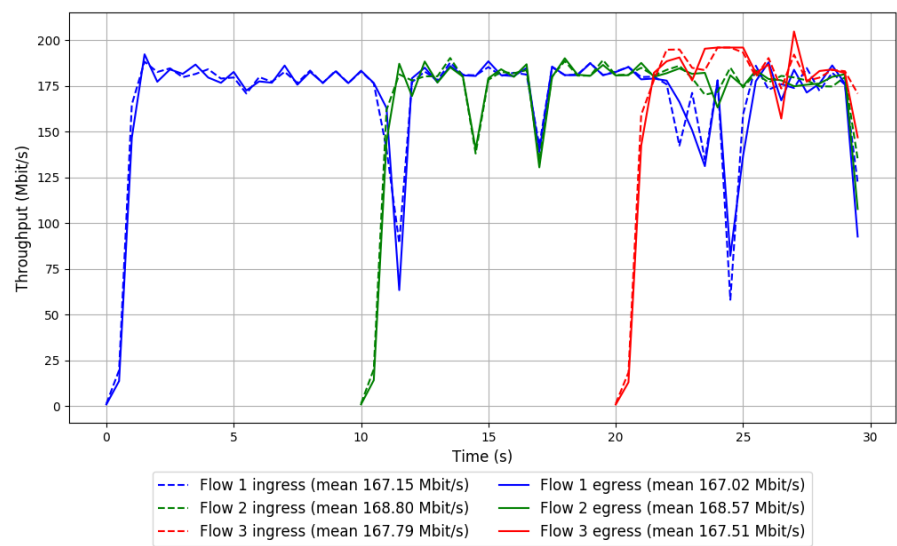
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2017-12-12 11:58:34
End at: 2017-12-12 11:59:04

# Below is generated by plot.py at 2017-12-12 15:56:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.08 Mbit/s
95th percentile per-packet one-way delay: 72.888 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 167.02 Mbit/s
95th percentile per-packet one-way delay: 70.807 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 168.57 Mbit/s
95th percentile per-packet one-way delay: 72.973 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 167.51 Mbit/s
95th percentile per-packet one-way delay: 74.481 ms
Loss rate: 1.45%
```
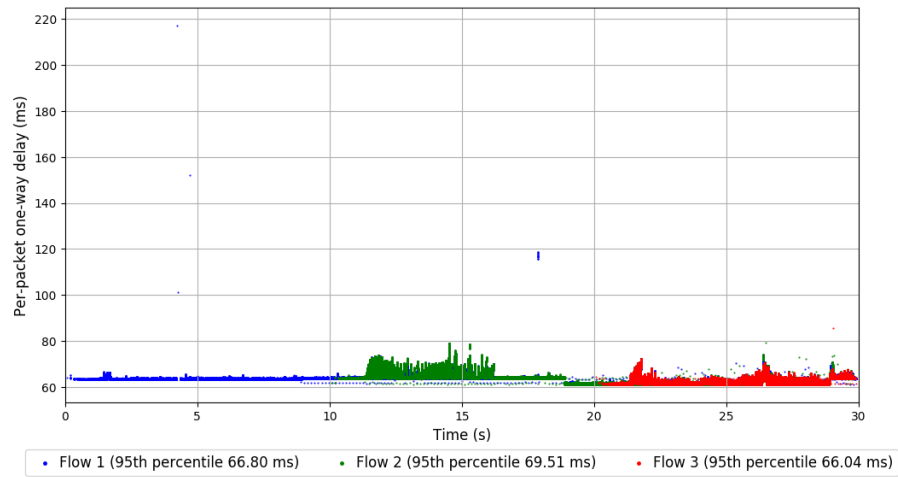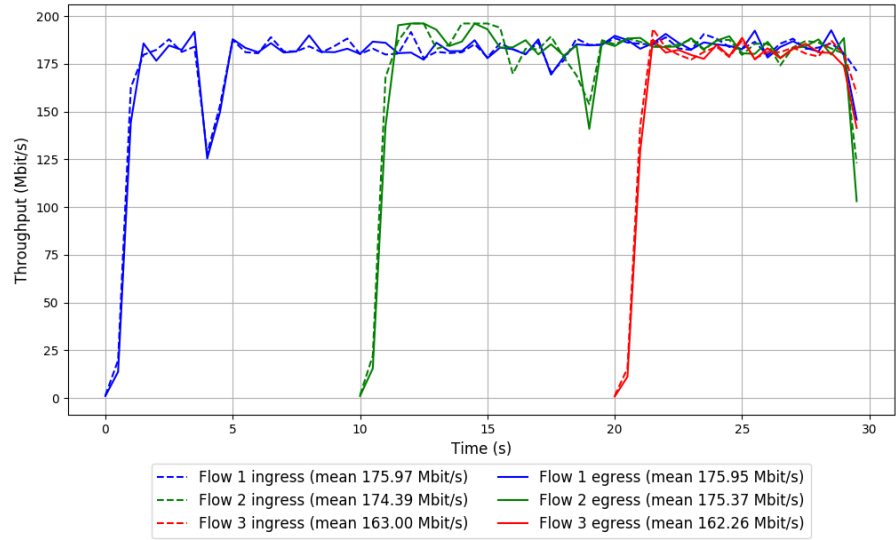
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 167.15 Mbit/s)   Flow 1 egress (mean 167.02 Mbit/s)
Flow 2 ingress (mean 168.80 Mbit/s)   Flow 2 egress (mean 168.57 Mbit/s)
Flow 3 ingress (mean 167.79 Mbit/s)   Flow 3 egress (mean 167.51 Mbit/s)

Flow 1 (95th percentile 70.81 ms)   Flow 2 (95th percentile 72.97 ms)   Flow 3 (95th percentile 74.48 ms)

7

```
Run 3: Statistics of TCP BBR

Start at: 2017-12-12 12:11:02
End at: 2017-12-12 12:11:32


# Below is generated by plot.py at 2017-12-12 15:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.32 Mbit/s
95th percentile per-packet one-way delay: 68.070 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 175.95 Mbit/s
95th percentile per-packet one-way delay: 66.798 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 175.37 Mbit/s
95th percentile per-packet one-way delay: 69.509 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 162.26 Mbit/s
95th percentile per-packet one-way delay: 66.041 ms
Loss rate: 1.48%
```
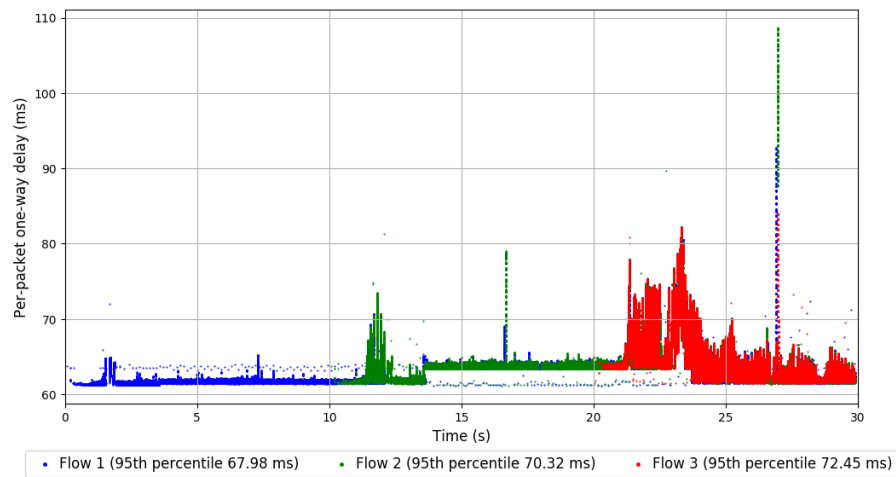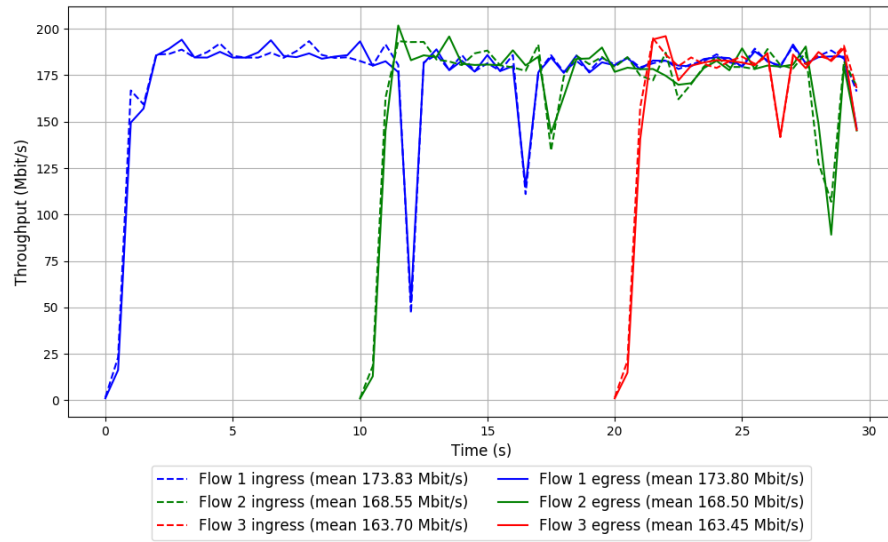
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2017-12-12 12:23:48
End at: 2017-12-12 12:24:18


# Below is generated by plot.py at 2017-12-12 15:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.54 Mbit/s
95th percentile per-packet one-way delay: 70.147 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 173.80 Mbit/s
95th percentile per-packet one-way delay: 67.985 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 168.50 Mbit/s
95th percentile per-packet one-way delay: 70.324 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 163.45 Mbit/s
95th percentile per-packet one-way delay: 72.455 ms
Loss rate: 1.45%
```
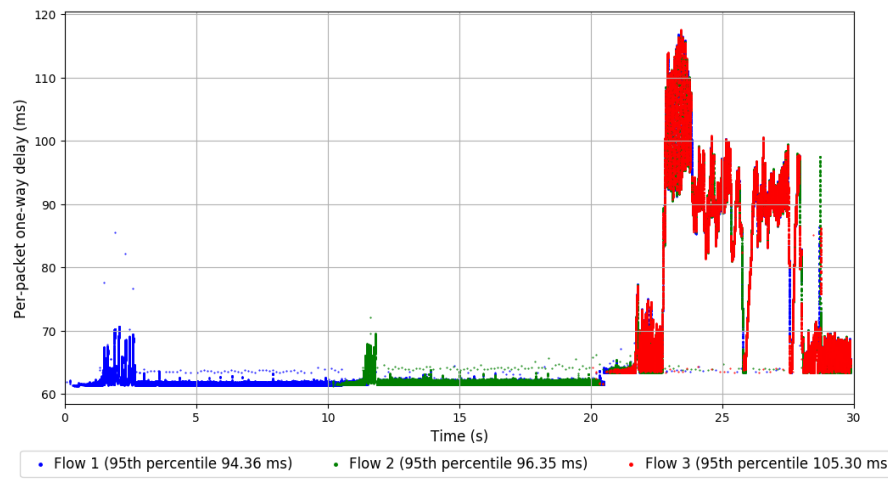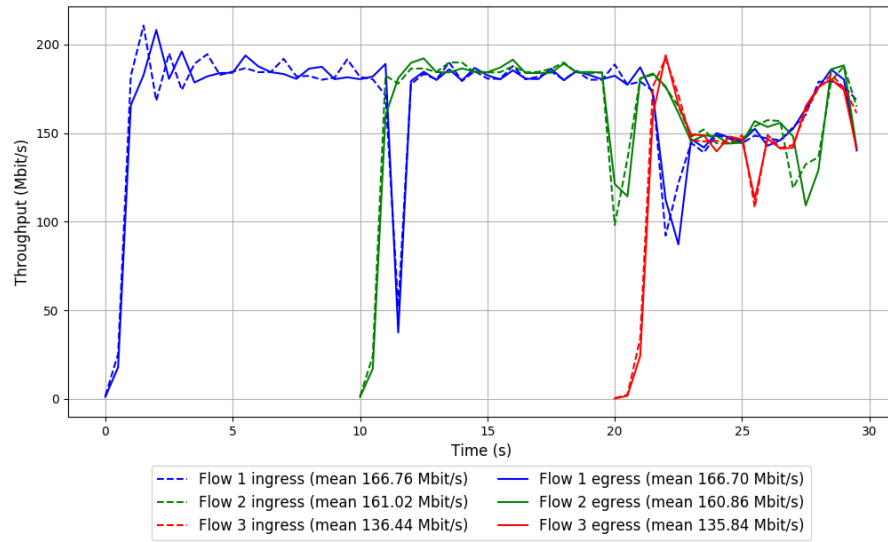
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 173.83 Mbit/s) --- Flow 1 egress (mean 173.80 Mbit/s)
Flow 2 ingress (mean 168.55 Mbit/s) --- Flow 2 egress (mean 168.50 Mbit/s)
Flow 3 ingress (mean 163.70 Mbit/s) --- Flow 3 egress (mean 163.45 Mbit/s)

Flow 1 (95th percentile 67.98 ms)   Flow 2 (95th percentile 70.32 ms)   Flow 3 (95th percentile 72.45 ms)

11

```
Run 5: Statistics of TCP BBR

Start at: 2017-12-12 12:36:31
End at: 2017-12-12 12:37:01


# Below is generated by plot.py at 2017-12-12 15:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.12 Mbit/s
95th percentile per-packet one-way delay: 96.927 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 166.70 Mbit/s
95th percentile per-packet one-way delay: 94.359 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 160.86 Mbit/s
95th percentile per-packet one-way delay: 96.350 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 135.84 Mbit/s
95th percentile per-packet one-way delay: 105.296 ms
Loss rate: 1.77%
```
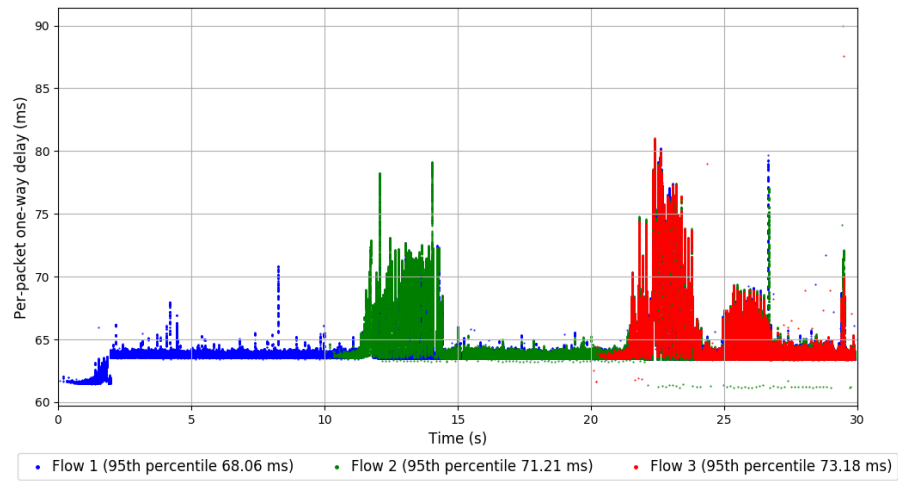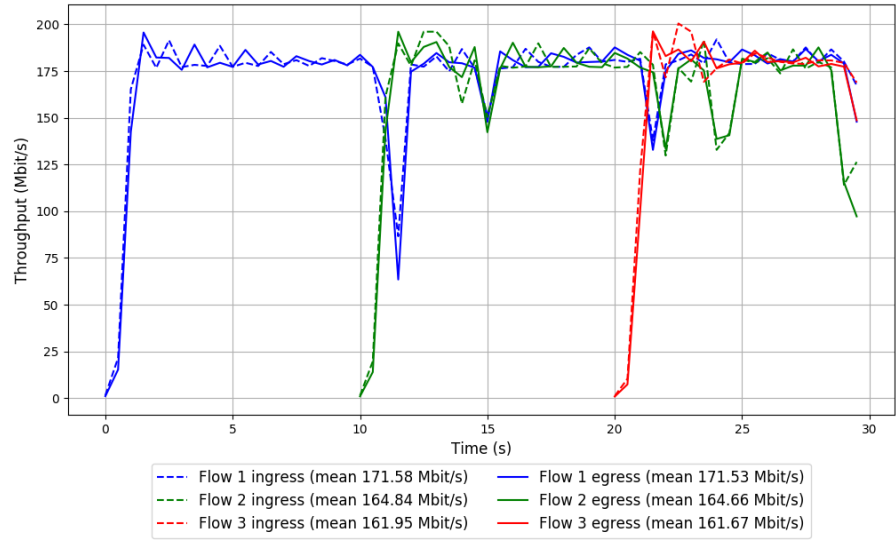
Run 5: Report of TCP BBR — Data Link

13

```
Run 6: Statistics of TCP BBR

Start at: 2017-12-12 12:49:19
End at: 2017-12-12 12:49:49


# Below is generated by plot.py at 2017-12-12 15:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.03 Mbit/s
95th percentile per-packet one-way delay: 70.426 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 171.53 Mbit/s
95th percentile per-packet one-way delay: 68.065 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 164.66 Mbit/s
95th percentile per-packet one-way delay: 71.209 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 161.67 Mbit/s
95th percentile per-packet one-way delay: 73.183 ms
Loss rate: 1.48%
```
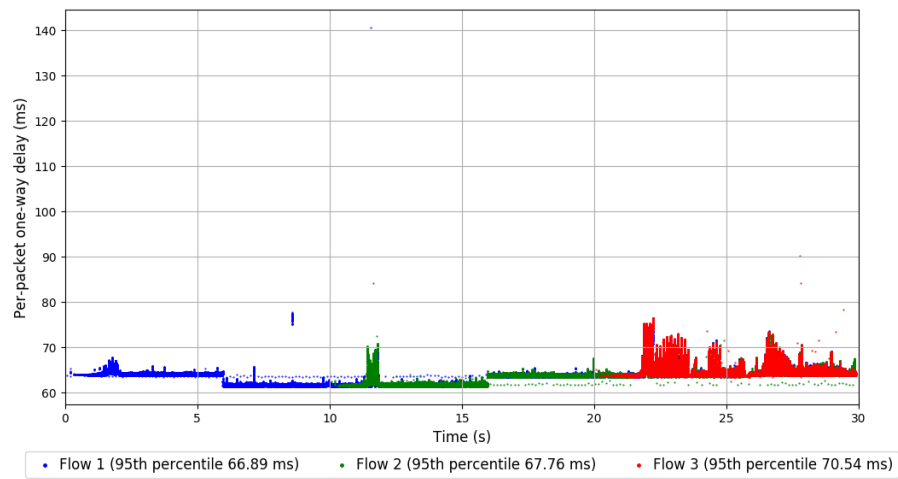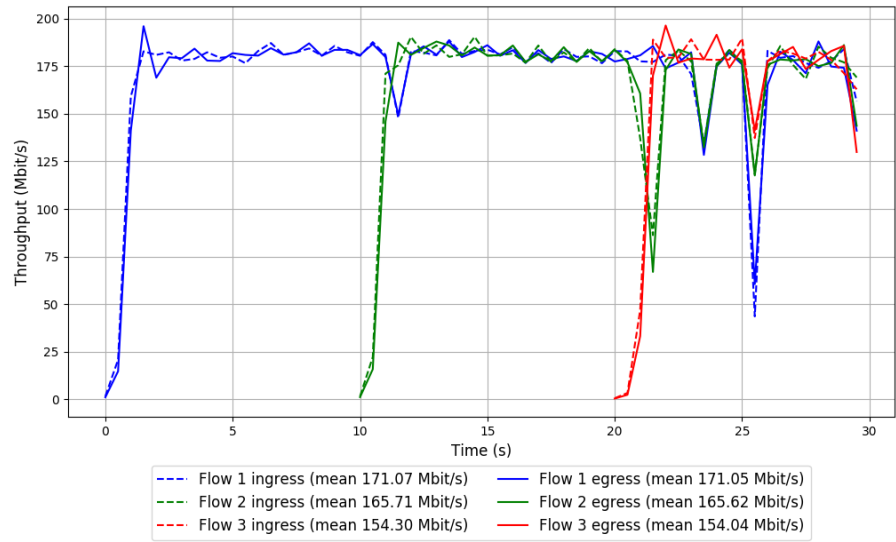
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 171.58 Mbit/s)   Flow 1 egress (mean 171.53 Mbit/s)
Flow 2 ingress (mean 164.84 Mbit/s)   Flow 2 egress (mean 164.66 Mbit/s)
Flow 3 ingress (mean 161.95 Mbit/s)   Flow 3 egress (mean 161.67 Mbit/s)

Flow 1 (95th percentile 68.06 ms)   Flow 2 (95th percentile 71.21 ms)   Flow 3 (95th percentile 73.18 ms)

15

```
Run 7: Statistics of TCP BBR

Start at: 2017-12-12 13:01:55
End at: 2017-12-12 13:02:25


# Below is generated by plot.py at 2017-12-12 15:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.75 Mbit/s
95th percentile per-packet one-way delay: 68.062 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 171.05 Mbit/s
95th percentile per-packet one-way delay: 66.895 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 165.62 Mbit/s
95th percentile per-packet one-way delay: 67.757 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 154.04 Mbit/s
95th percentile per-packet one-way delay: 70.536 ms
Loss rate: 1.45%
```
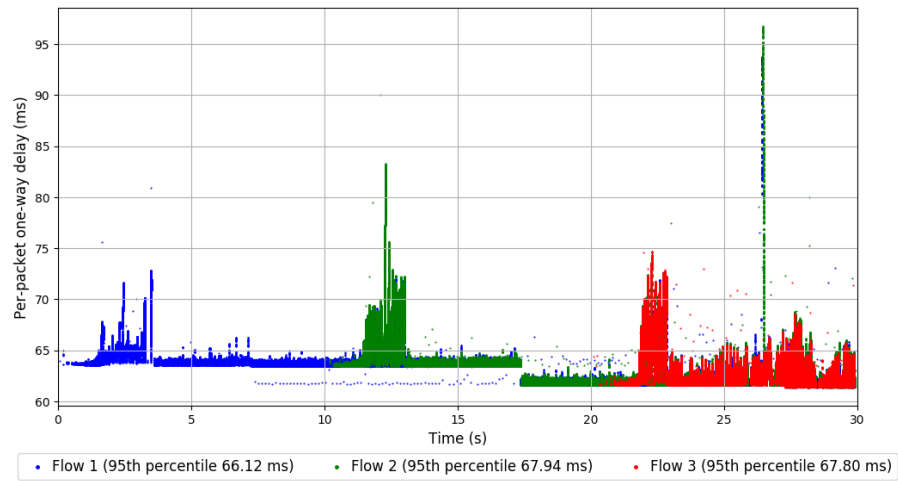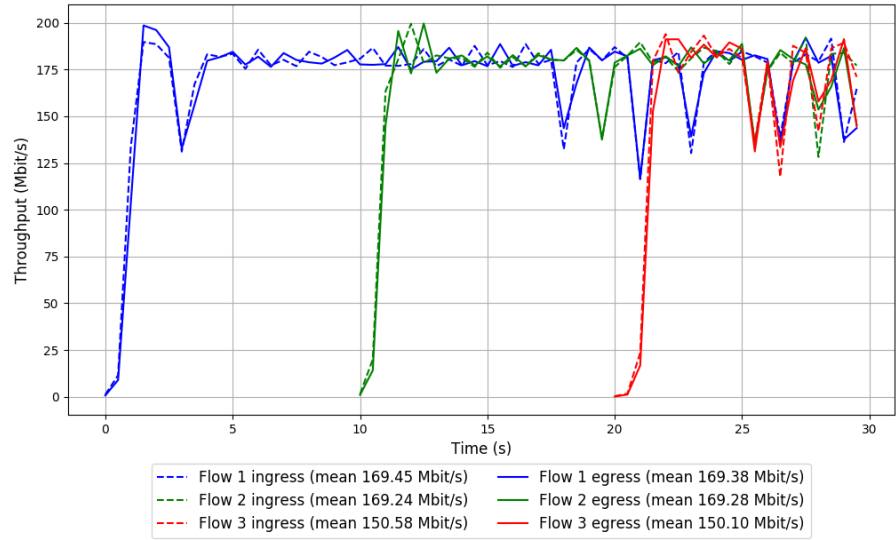
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 171.07 Mbit/s)   Flow 1 egress (mean 171.05 Mbit/s)
Flow 2 ingress (mean 165.71 Mbit/s)   Flow 2 egress (mean 165.62 Mbit/s)
Flow 3 ingress (mean 154.30 Mbit/s)   Flow 3 egress (mean 154.04 Mbit/s)

Flow 1 (95th percentile 66.89 ms)   Flow 2 (95th percentile 67.76 ms)   Flow 3 (95th percentile 70.54 ms)

```
Run 8: Statistics of TCP BBR

Start at: 2017-12-12 13:14:34
End at: 2017-12-12 13:15:04

# Below is generated by plot.py at 2017-12-12 15:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.17 Mbit/s
95th percentile per-packet one-way delay: 67.133 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 169.38 Mbit/s
95th percentile per-packet one-way delay: 66.120 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 169.28 Mbit/s
95th percentile per-packet one-way delay: 67.939 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 150.10 Mbit/s
95th percentile per-packet one-way delay: 67.796 ms
Loss rate: 1.66%
```
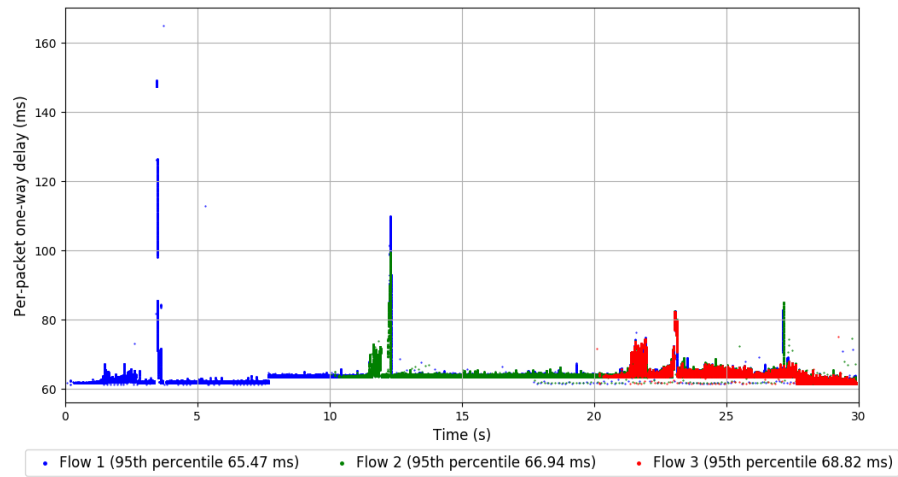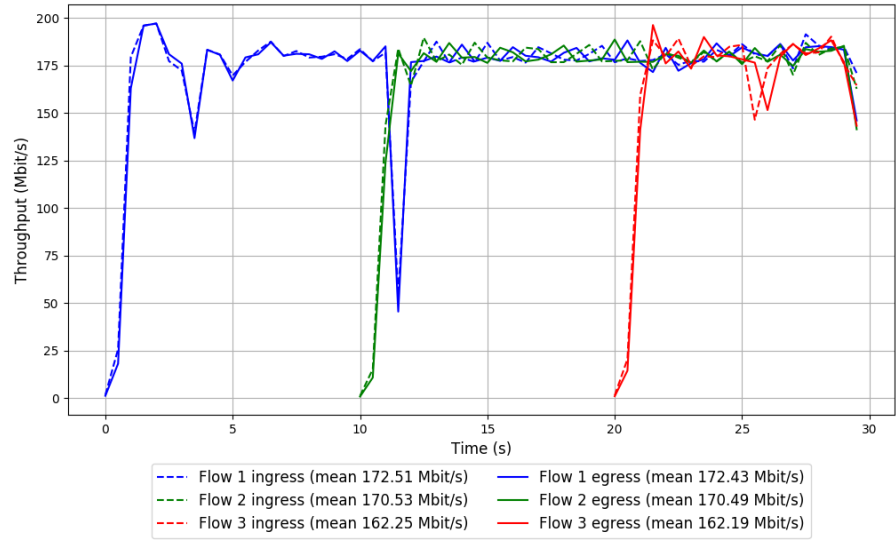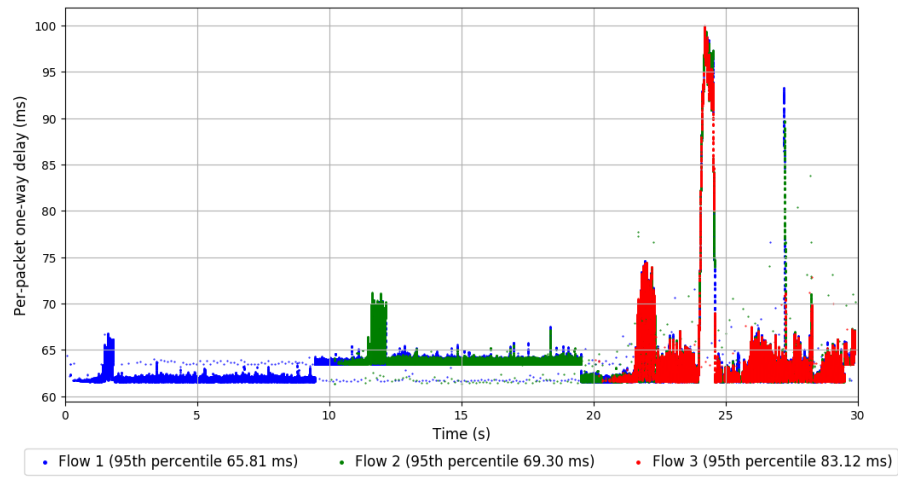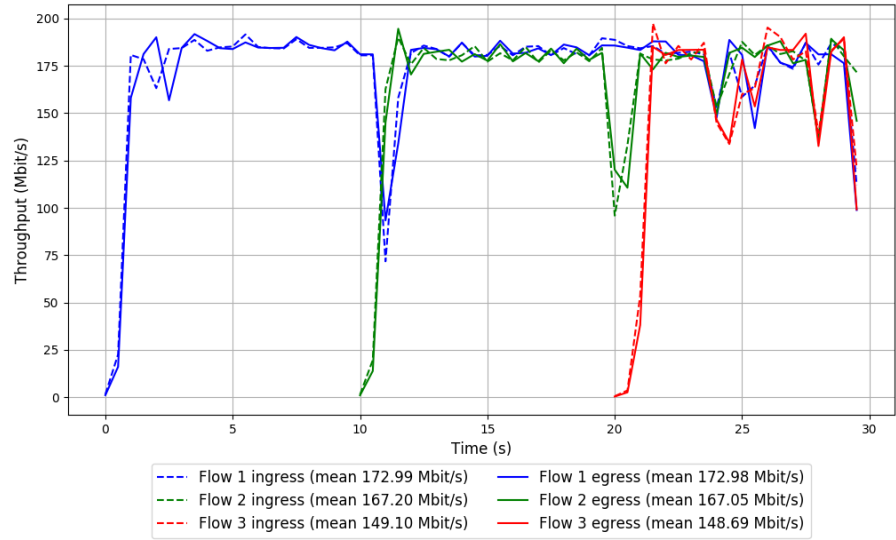
Run 8: Report of TCP BBR — Data Link

- Flow 1 ingress (mean 169.45 Mbit/s)
- Flow 1 egress (mean 169.38 Mbit/s)
- Flow 2 ingress (mean 169.24 Mbit/s)
- Flow 2 egress (mean 169.28 Mbit/s)
- Flow 3 ingress (mean 150.58 Mbit/s)
- Flow 3 egress (mean 150.10 Mbit/s)

- Flow 1 (95th percentile 66.12 ms)
- Flow 2 (95th percentile 67.94 ms)
- Flow 3 (95th percentile 67.80 ms)

19

```
Run 9: Statistics of TCP BBR

Start at: 2017-12-12 13:27:04
End at: 2017-12-12 13:27:34


# Below is generated by plot.py at 2017-12-12 16:02:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.90 Mbit/s
95th percentile per-packet one-way delay: 66.353 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 172.43 Mbit/s
95th percentile per-packet one-way delay: 65.472 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 170.49 Mbit/s
95th percentile per-packet one-way delay: 66.937 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 162.19 Mbit/s
95th percentile per-packet one-way delay: 68.817 ms
Loss rate: 1.38%
```
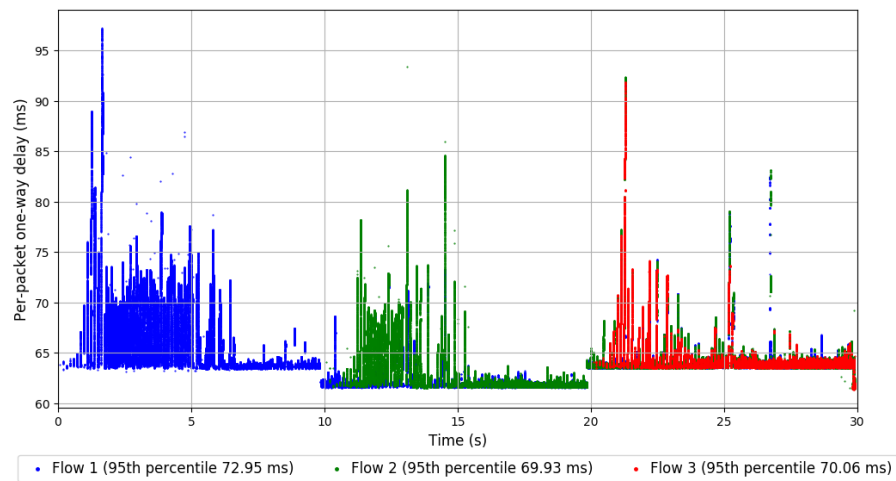
Run 9: Report of TCP BBR — Data Link

```
Run 10: Statistics of TCP BBR

Start at: 2017-12-12 13:39:32
End at: 2017-12-12 13:40:02

# Below is generated by plot.py at 2017-12-12 16:02:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.83 Mbit/s
95th percentile per-packet one-way delay: 68.682 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 172.98 Mbit/s
95th percentile per-packet one-way delay: 65.806 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 167.05 Mbit/s
95th percentile per-packet one-way delay: 69.296 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 148.69 Mbit/s
95th percentile per-packet one-way delay: 83.116 ms
Loss rate: 1.54%
```
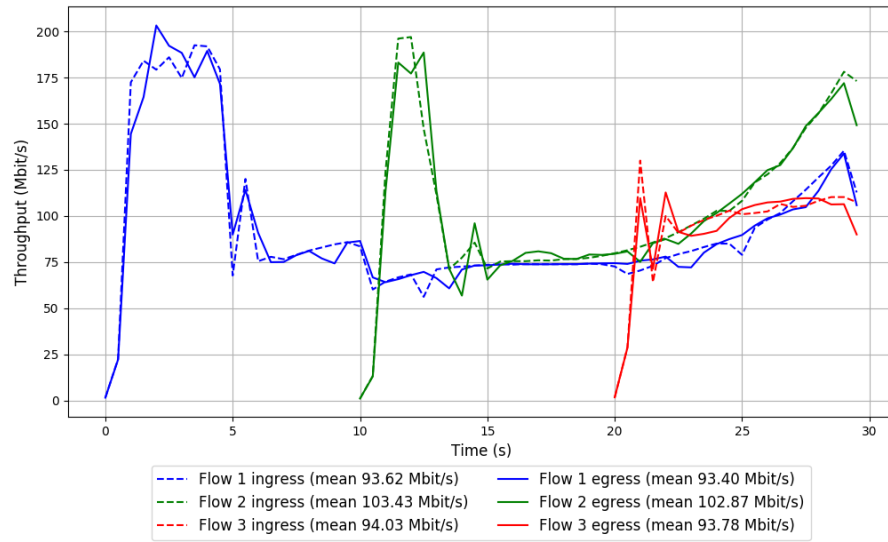
Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-12 11:40:21
End at: 2017-12-12 11:40:52

# Below is generated by plot.py at 2017-12-12 16:02:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 192.52 Mbit/s
95th percentile per-packet one-way delay: 71.925 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 93.40 Mbit/s
95th percentile per-packet one-way delay: 72.953 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 102.87 Mbit/s
95th percentile per-packet one-way delay: 69.934 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 93.78 Mbit/s
95th percentile per-packet one-way delay: 70.058 ms
Loss rate: 1.48%
```
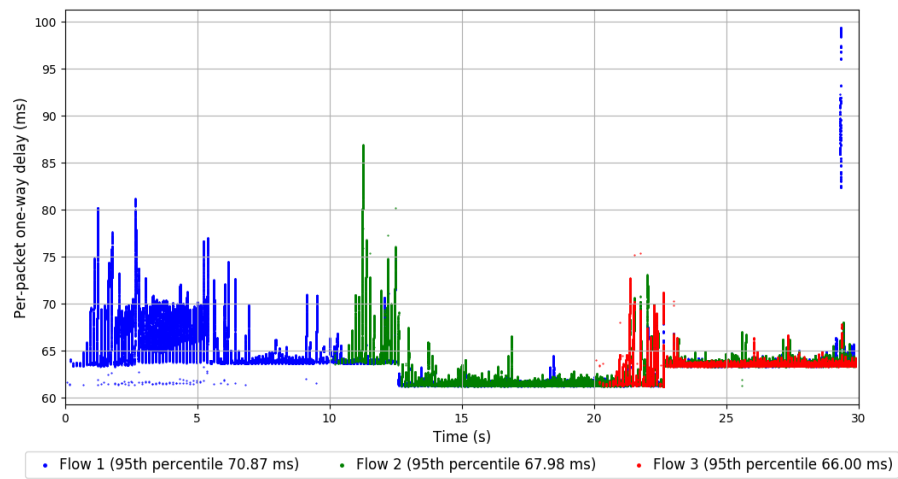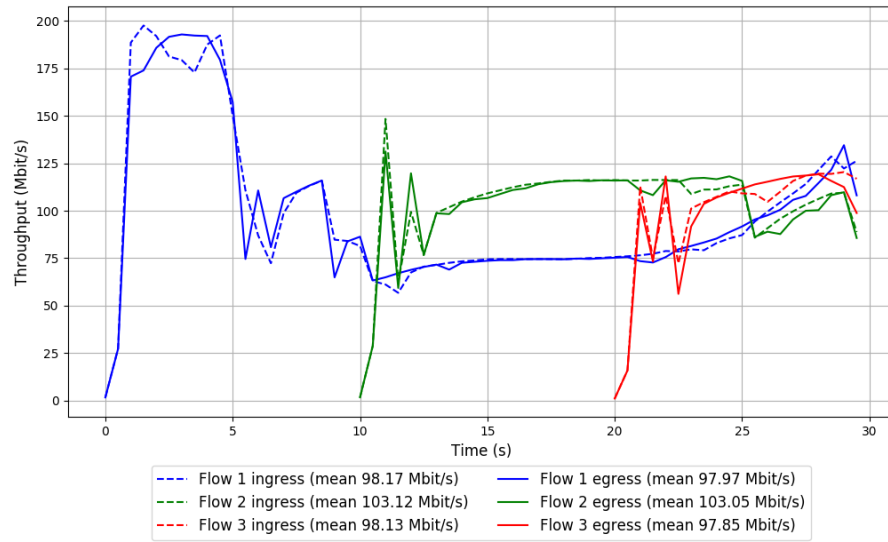
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2017-12-12 11:52:59
End at: 2017-12-12 11:53:29

# Below is generated by plot.py at 2017-12-12 16:02:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 198.62 Mbit/s
95th percentile per-packet one-way delay: 69.843 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 97.97 Mbit/s
95th percentile per-packet one-way delay: 70.873 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 103.05 Mbit/s
95th percentile per-packet one-way delay: 67.981 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 97.85 Mbit/s
95th percentile per-packet one-way delay: 65.997 ms
Loss rate: 1.55%
```
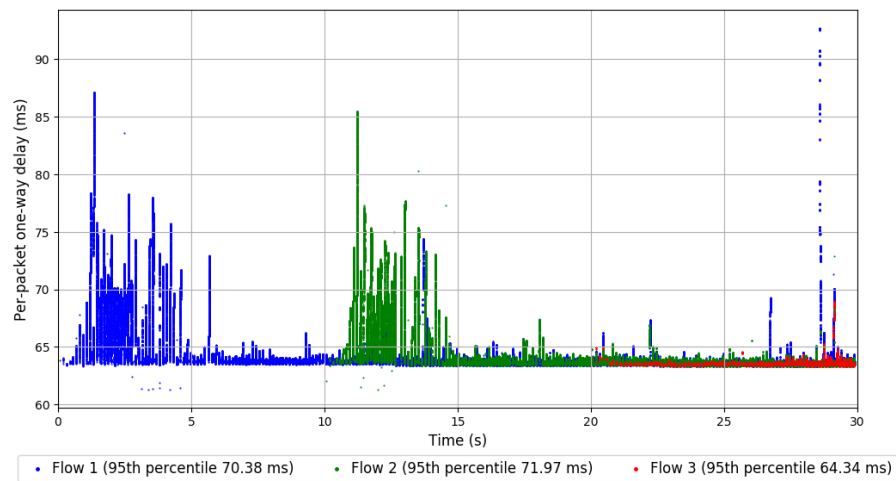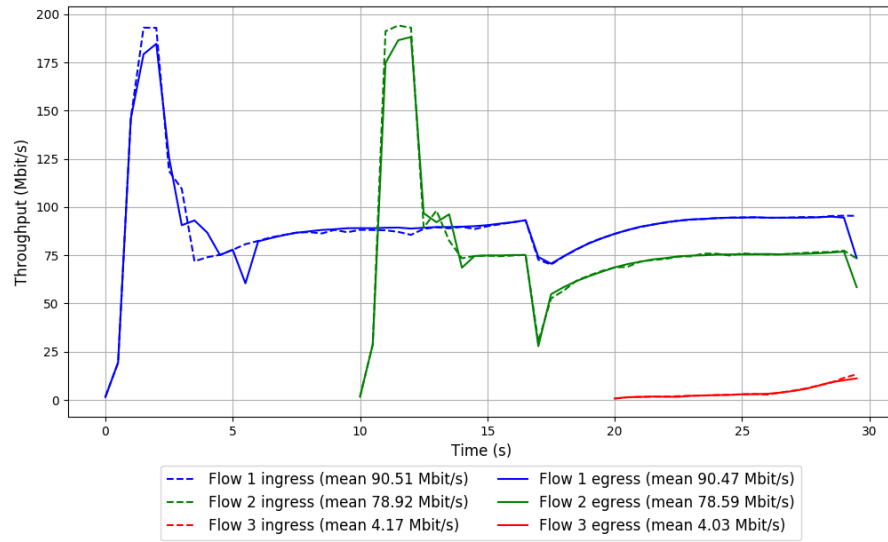
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2017-12-12 12:05:29
End at: 2017-12-12 12:05:59


# Below is generated by plot.py at 2017-12-12 16:02:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 144.02 Mbit/s
95th percentile per-packet one-way delay: 71.092 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 90.47 Mbit/s
95th percentile per-packet one-way delay: 70.380 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 78.59 Mbit/s
95th percentile per-packet one-way delay: 71.975 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 64.340 ms
Loss rate: 4.52%
```
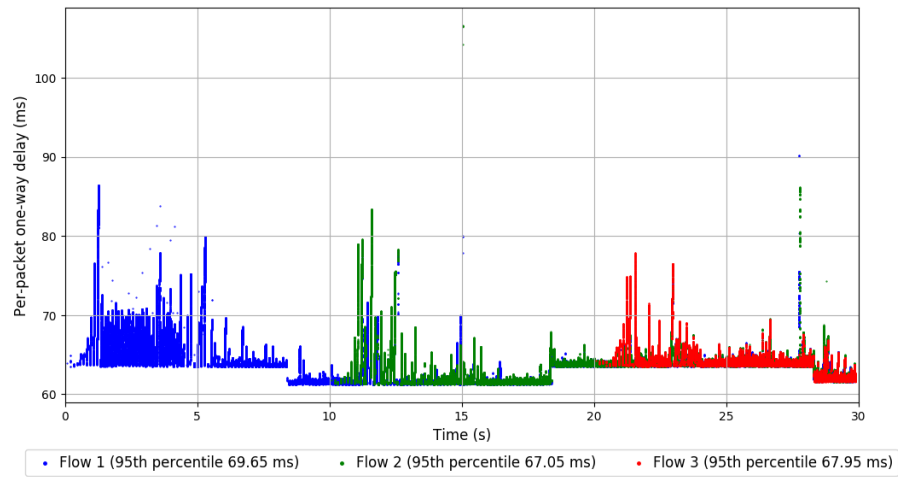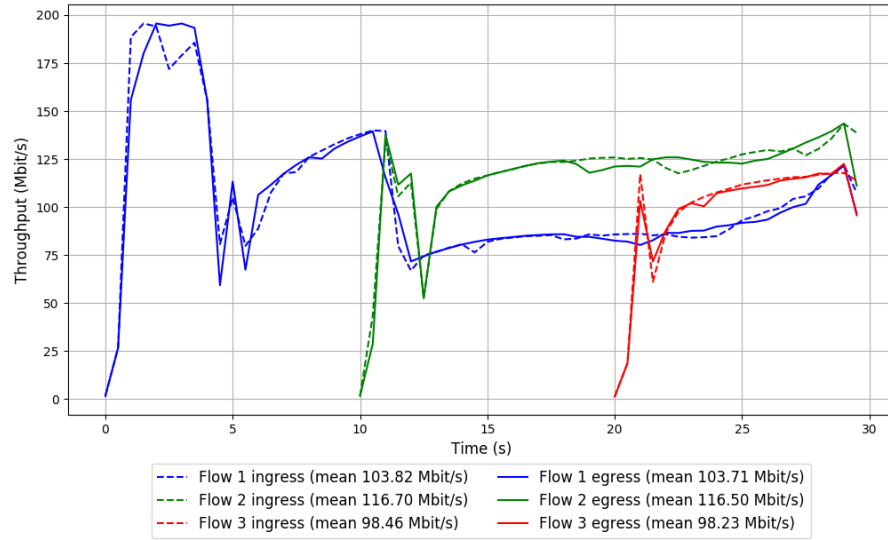
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2017-12-12 12:17:53
End at: 2017-12-12 12:18:23

# Below is generated by plot.py at 2017-12-12 16:02:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 213.43 Mbit/s
95th percentile per-packet one-way delay: 69.054 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 103.71 Mbit/s
95th percentile per-packet one-way delay: 69.650 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 116.50 Mbit/s
95th percentile per-packet one-way delay: 67.045 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 98.23 Mbit/s
95th percentile per-packet one-way delay: 67.955 ms
Loss rate: 1.49%
```
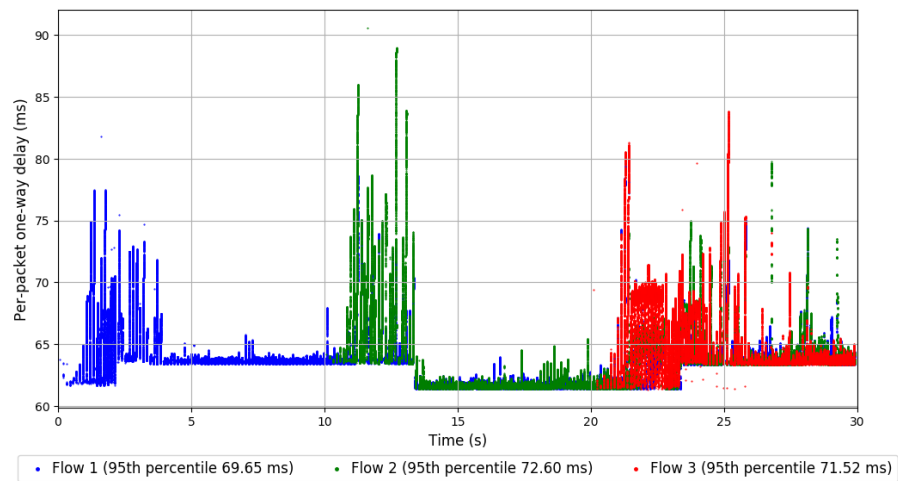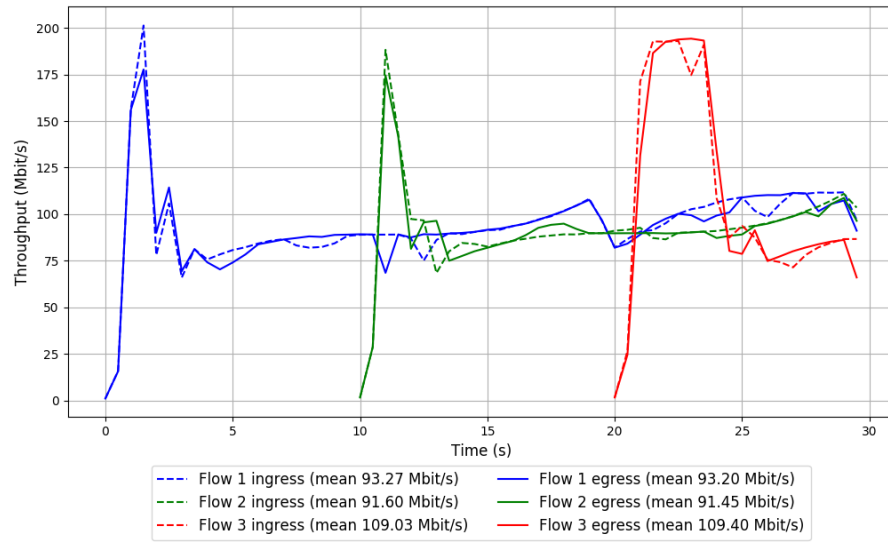
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2017-12-12 12:30:38
End at: 2017-12-12 12:31:08


# Below is generated by plot.py at 2017-12-12 16:02:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 189.80 Mbit/s
95th percentile per-packet one-way delay: 71.078 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 93.20 Mbit/s
95th percentile per-packet one-way delay: 69.648 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 91.45 Mbit/s
95th percentile per-packet one-way delay: 72.603 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 109.40 Mbit/s
95th percentile per-packet one-way delay: 71.521 ms
Loss rate: 1.01%
```
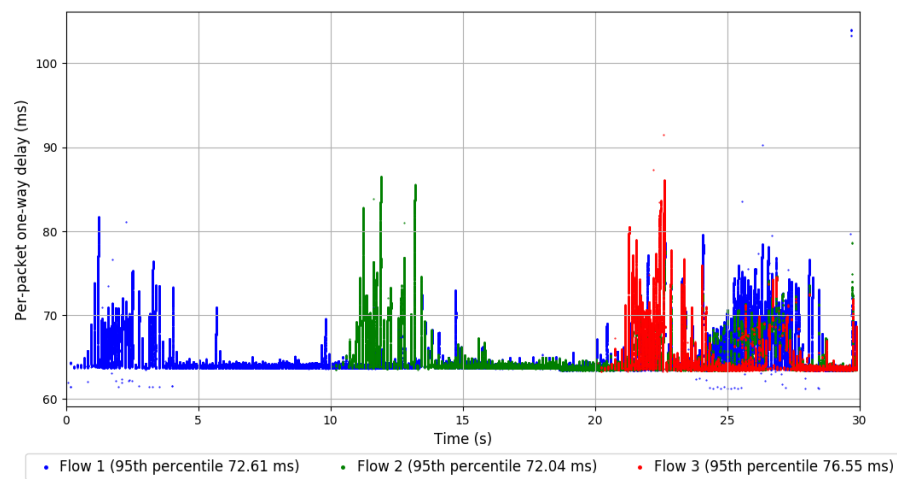
Run 5: Report of TCP Cubic — Data Link

```
Run 6: Statistics of TCP Cubic

Start at: 2017-12-12 12:43:23
End at: 2017-12-12 12:43:53


# Below is generated by plot.py at 2017-12-12 16:02:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.22 Mbit/s
95th percentile per-packet one-way delay: 73.131 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 129.63 Mbit/s
95th percentile per-packet one-way delay: 72.605 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 78.12 Mbit/s
95th percentile per-packet one-way delay: 72.043 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 91.01 Mbit/s
95th percentile per-packet one-way delay: 76.545 ms
Loss rate: 1.22%
```
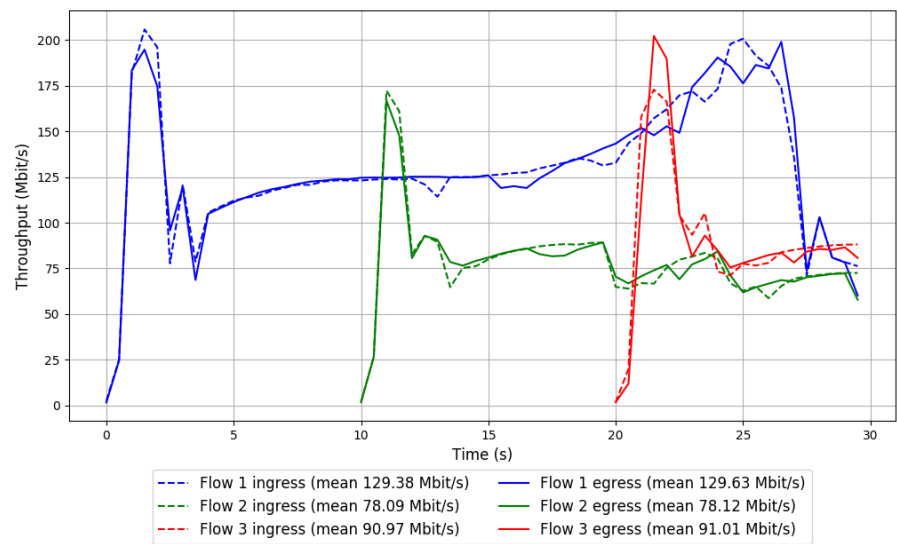
Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2017-12-12 12:56:15
End at: 2017-12-12 12:56:45


# Below is generated by plot.py at 2017-12-12 16:03:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 198.73 Mbit/s
95th percentile per-packet one-way delay: 71.909 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 105.62 Mbit/s
95th percentile per-packet one-way delay: 72.151 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 84.86 Mbit/s
95th percentile per-packet one-way delay: 72.093 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 111.66 Mbit/s
95th percentile per-packet one-way delay: 69.905 ms
Loss rate: 0.99%
```
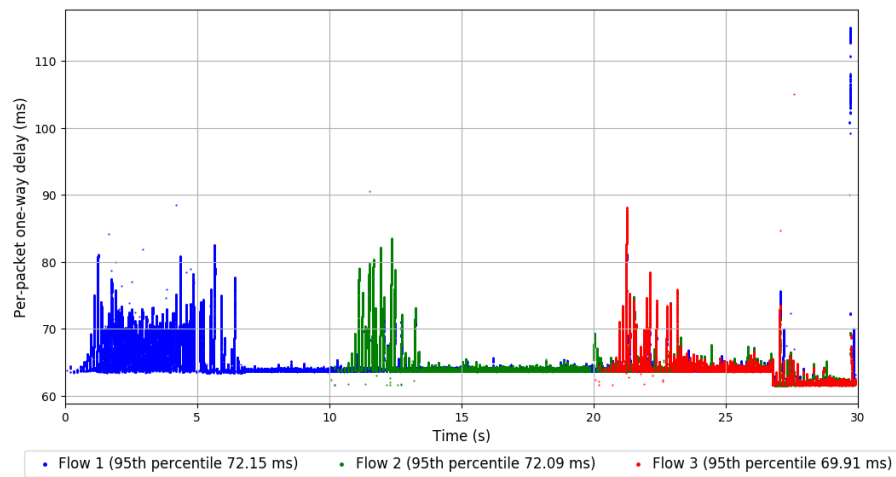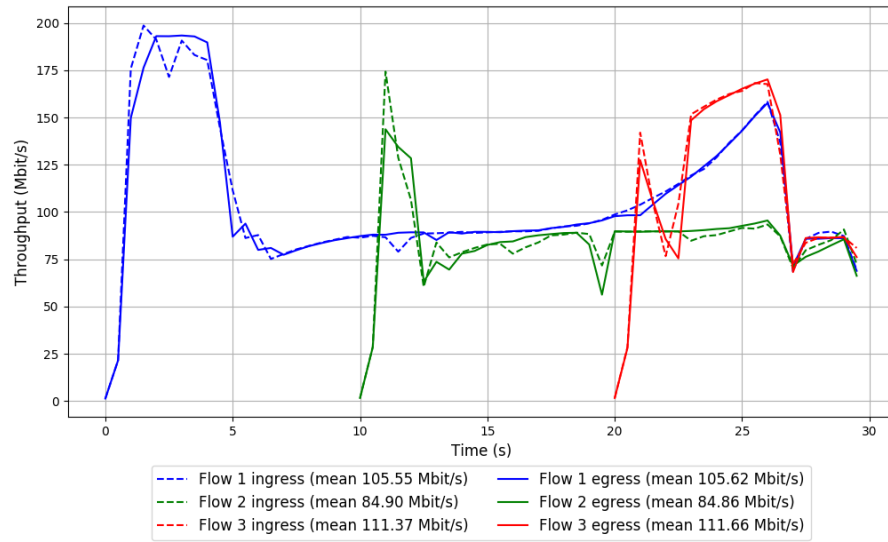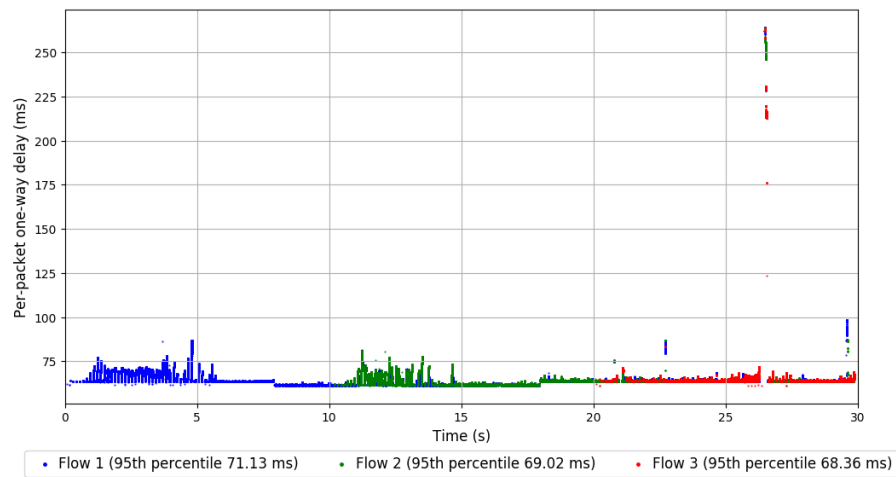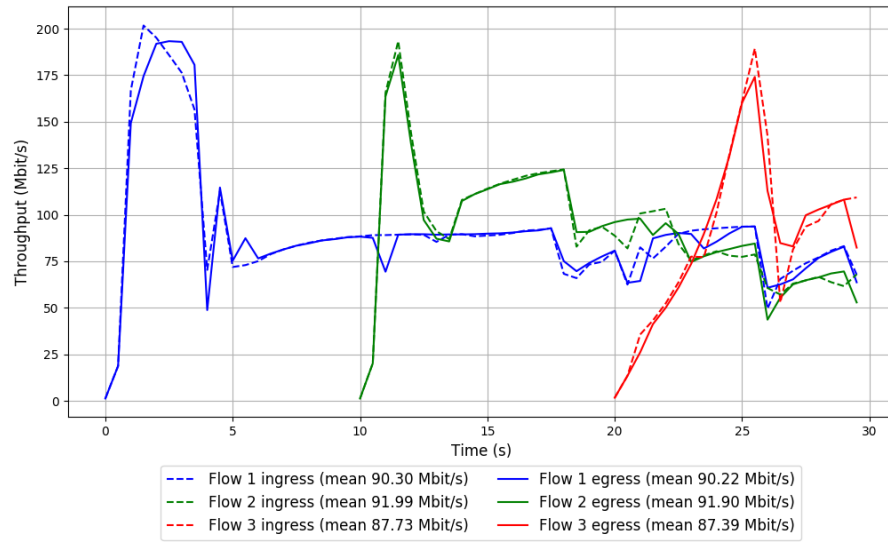
Run 7: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 105.55 Mbit/s) --- Flow 1 egress (mean 105.62 Mbit/s)
Flow 2 ingress (mean 84.90 Mbit/s) --- Flow 2 egress (mean 84.86 Mbit/s)
Flow 3 ingress (mean 111.37 Mbit/s) --- Flow 3 egress (mean 111.66 Mbit/s)

Flow 1 (95th percentile 72.15 ms)   Flow 2 (95th percentile 72.09 ms)   Flow 3 (95th percentile 69.91 ms)

```
Run 8: Statistics of TCP Cubic

Start at: 2017-12-12 13:08:43
End at: 2017-12-12 13:09:13


# Below is generated by plot.py at 2017-12-12 16:03:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 179.92 Mbit/s
95th percentile per-packet one-way delay: 70.533 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 90.22 Mbit/s
95th percentile per-packet one-way delay: 71.127 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 91.90 Mbit/s
95th percentile per-packet one-way delay: 69.015 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 87.39 Mbit/s
95th percentile per-packet one-way delay: 68.358 ms
Loss rate: 1.65%
```
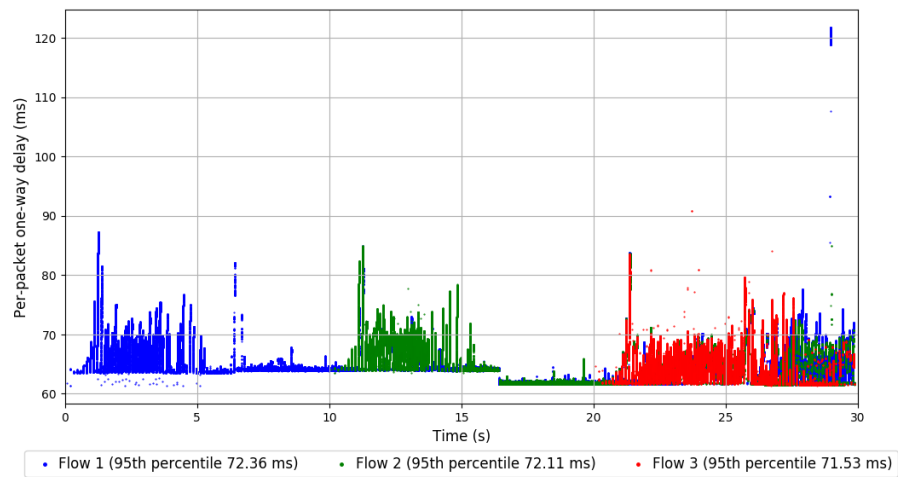
Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2017-12-12 13:21:25
End at: 2017-12-12 13:21:55


# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 210.57 Mbit/s
95th percentile per-packet one-way delay: 72.130 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 115.25 Mbit/s
95th percentile per-packet one-way delay: 72.357 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 80.45 Mbit/s
95th percentile per-packet one-way delay: 72.110 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 127.99 Mbit/s
95th percentile per-packet one-way delay: 71.529 ms
Loss rate: 0.81%
```
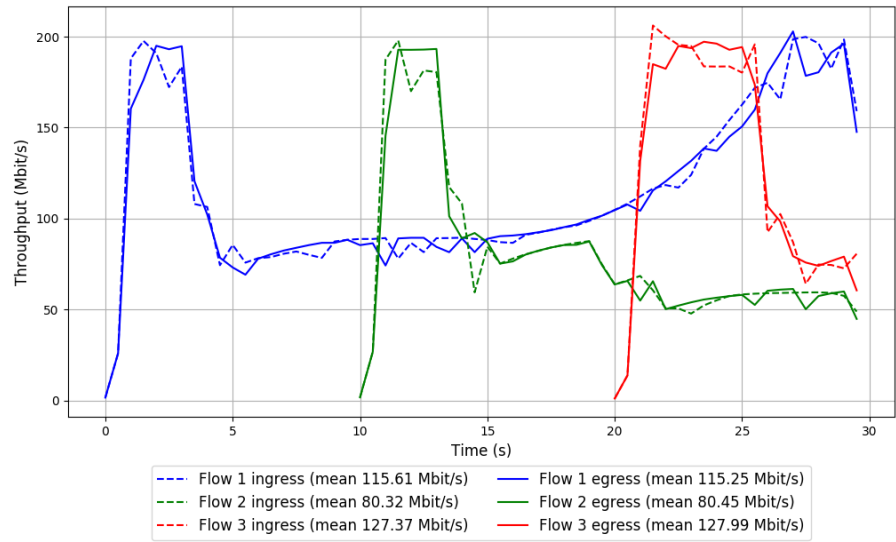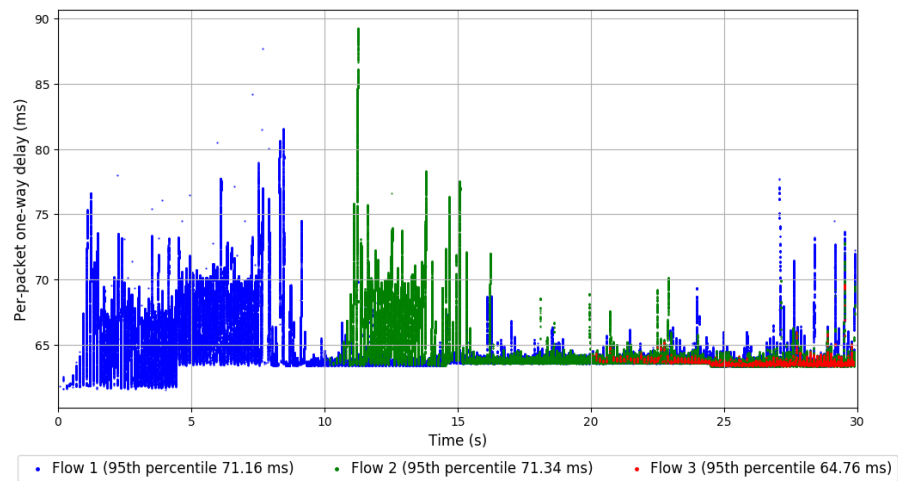
Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 115.61 Mbit/s) --- Flow 1 egress (mean 115.25 Mbit/s)
Flow 2 ingress (mean 80.32 Mbit/s) --- Flow 2 egress (mean 80.45 Mbit/s)
Flow 3 ingress (mean 127.37 Mbit/s) --- Flow 3 egress (mean 127.99 Mbit/s)

Flow 1 (95th percentile 72.36 ms) · Flow 2 (95th percentile 72.11 ms) · Flow 3 (95th percentile 71.53 ms)

```
Run 10: Statistics of TCP Cubic

Start at: 2017-12-12 13:33:57
End at: 2017-12-12 13:34:27


# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 180.33 Mbit/s
95th percentile per-packet one-way delay: 71.198 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 113.96 Mbit/s
95th percentile per-packet one-way delay: 71.163 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 97.93 Mbit/s
95th percentile per-packet one-way delay: 71.338 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 64.757 ms
Loss rate: 4.72%
```
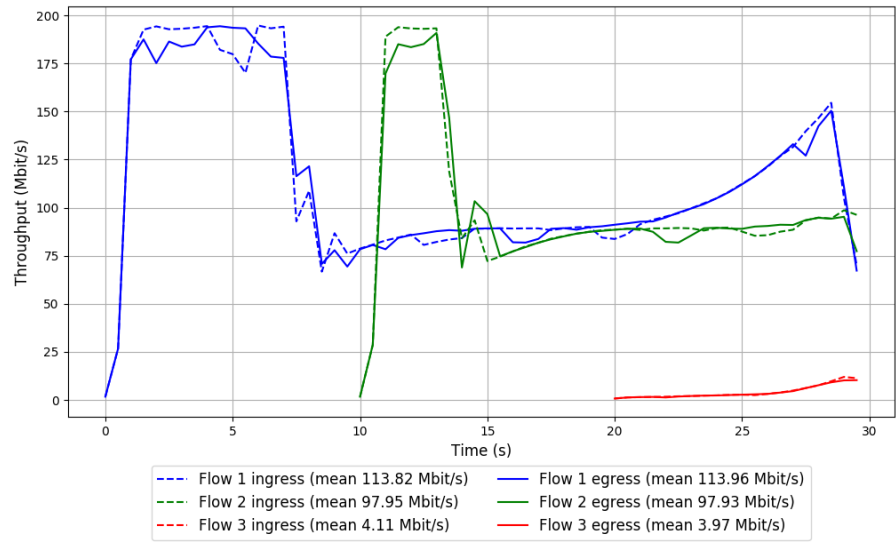
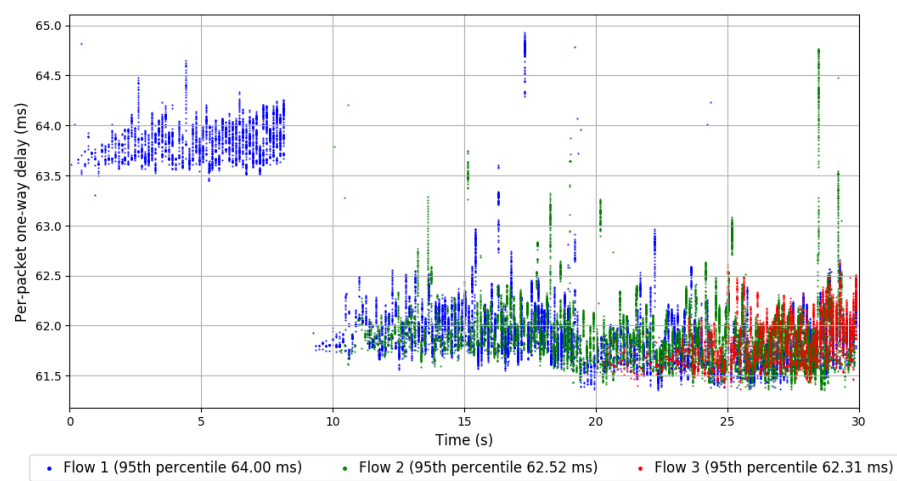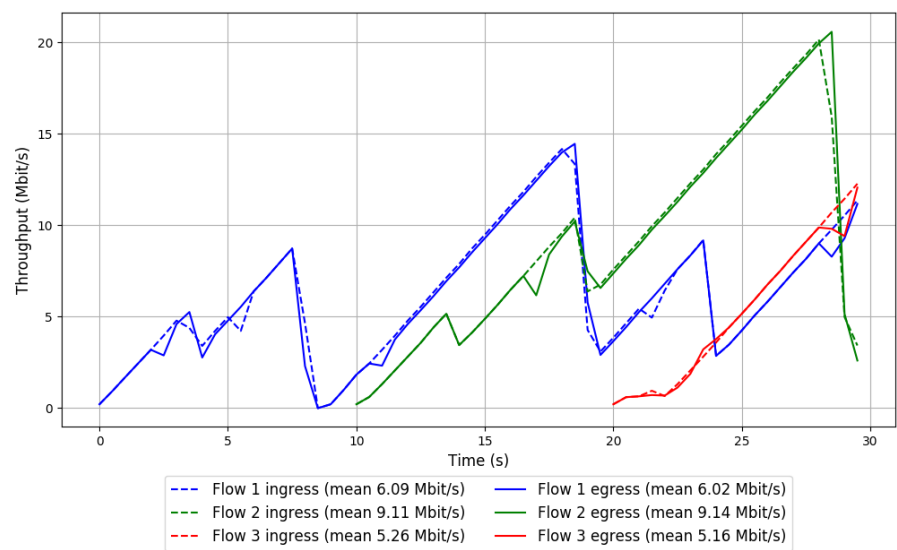Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2017-12-12 11:37:12
End at: 2017-12-12 11:37:42

# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.76 Mbit/s
95th percentile per-packet one-way delay: 63.843 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 6.02 Mbit/s
95th percentile per-packet one-way delay: 64.001 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 9.14 Mbit/s
95th percentile per-packet one-way delay: 62.522 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 5.16 Mbit/s
95th percentile per-packet one-way delay: 62.306 ms
Loss rate: 3.01%
```
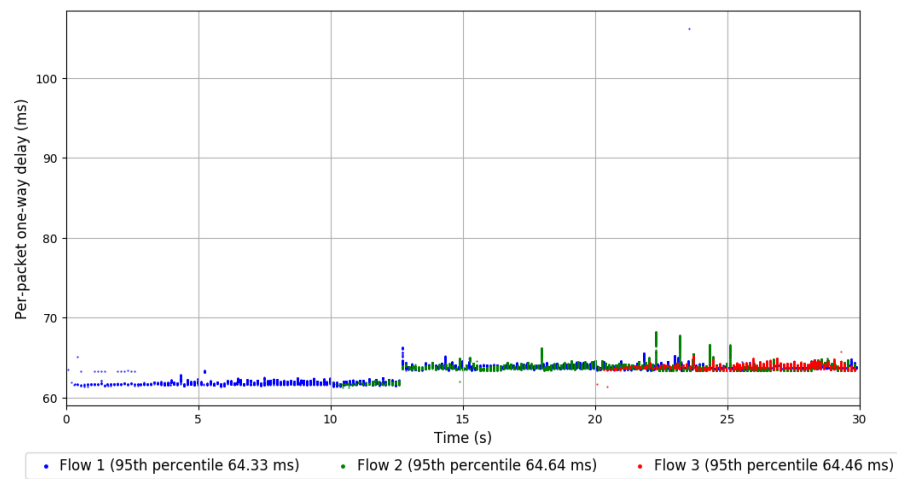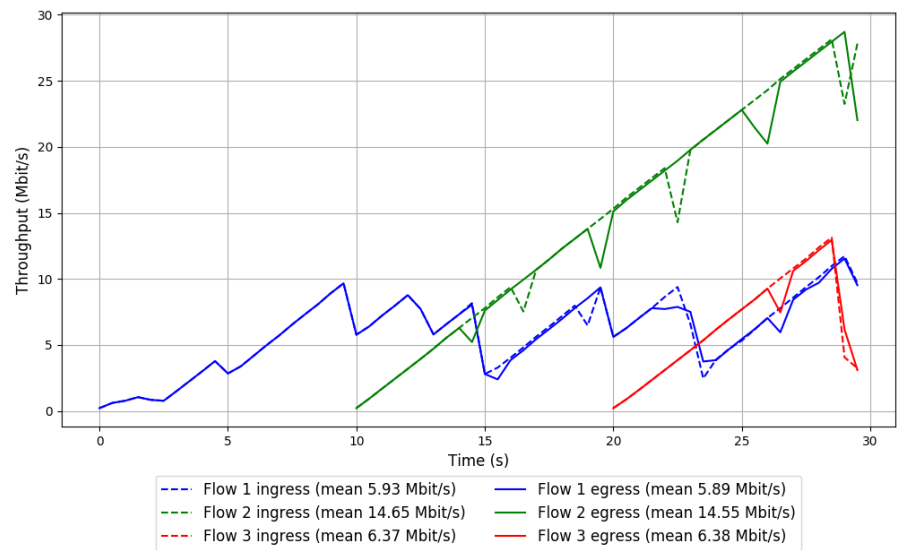
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 6.09 Mbit/s)   Flow 1 egress (mean 6.02 Mbit/s)
Flow 2 ingress (mean 9.11 Mbit/s)   Flow 2 egress (mean 9.14 Mbit/s)
Flow 3 ingress (mean 5.26 Mbit/s)   Flow 3 egress (mean 5.16 Mbit/s)

• Flow 1 (95th percentile 64.00 ms)   • Flow 2 (95th percentile 62.52 ms)   • Flow 3 (95th percentile 62.31 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2017-12-12 11:49:49
End at: 2017-12-12 11:50:19

# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.61 Mbit/s
95th percentile per-packet one-way delay: 64.507 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 5.89 Mbit/s
95th percentile per-packet one-way delay: 64.335 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 14.55 Mbit/s
95th percentile per-packet one-way delay: 64.636 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 6.38 Mbit/s
95th percentile per-packet one-way delay: 64.462 ms
Loss rate: 1.10%
```
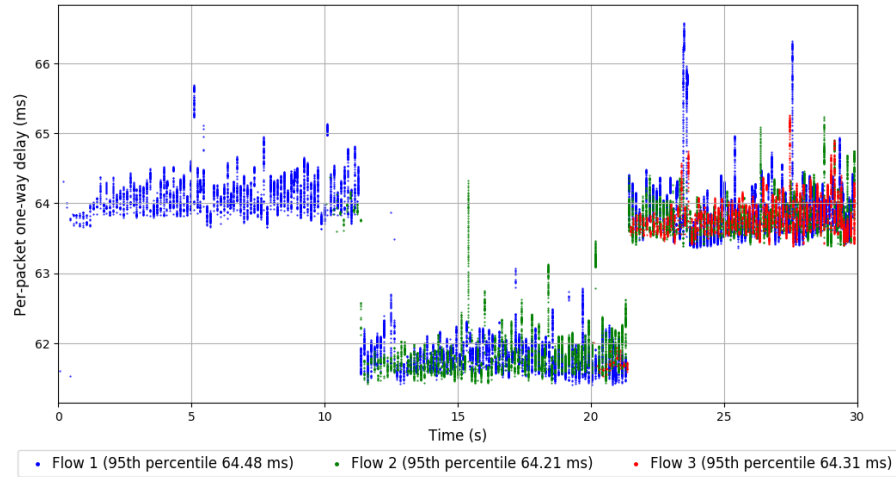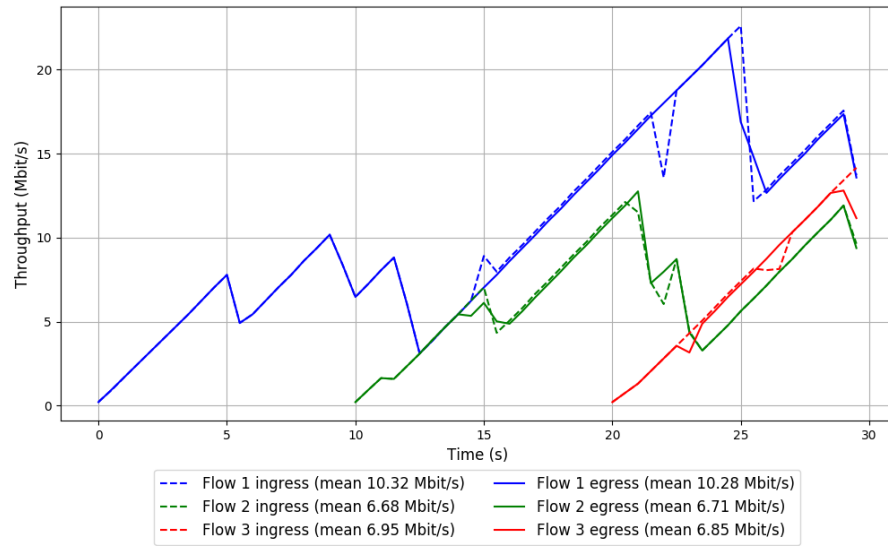
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2017-12-12 12:02:20
End at: 2017-12-12 12:02:50

# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.96 Mbit/s
95th percentile per-packet one-way delay: 64.411 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 10.28 Mbit/s
95th percentile per-packet one-way delay: 64.476 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 64.208 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 64.310 ms
Loss rate: 2.62%
```
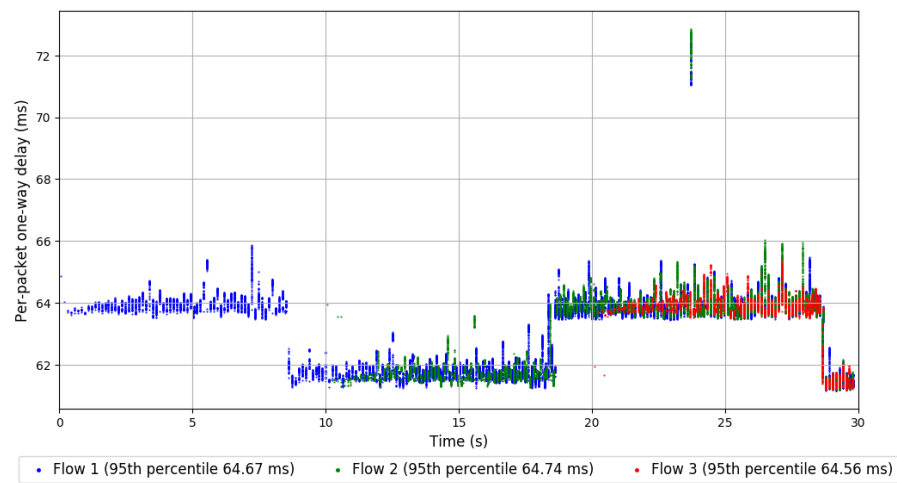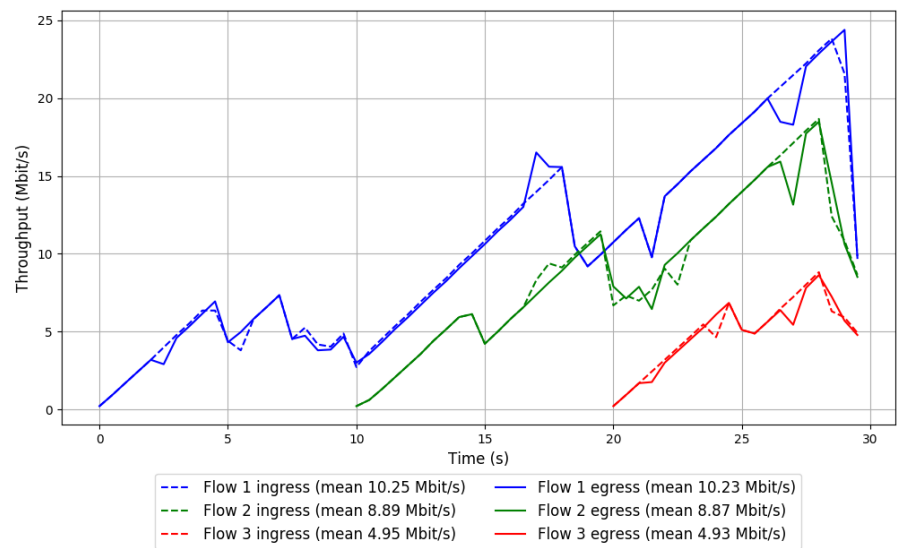
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2017-12-12 12:14:43
End at: 2017-12-12 12:15:13


# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.73 Mbit/s
95th percentile per-packet one-way delay: 64.679 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 10.23 Mbit/s
95th percentile per-packet one-way delay: 64.666 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 8.87 Mbit/s
95th percentile per-packet one-way delay: 64.741 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 4.93 Mbit/s
95th percentile per-packet one-way delay: 64.562 ms
Loss rate: 1.73%
```

Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2017-12-12 12:27:28
End at: 2017-12-12 12:27:58

# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.56 Mbit/s
95th percentile per-packet one-way delay: 64.676 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 8.46 Mbit/s
95th percentile per-packet one-way delay: 64.702 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 14.68 Mbit/s
95th percentile per-packet one-way delay: 64.683 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 64.524 ms
Loss rate: 2.72%
```
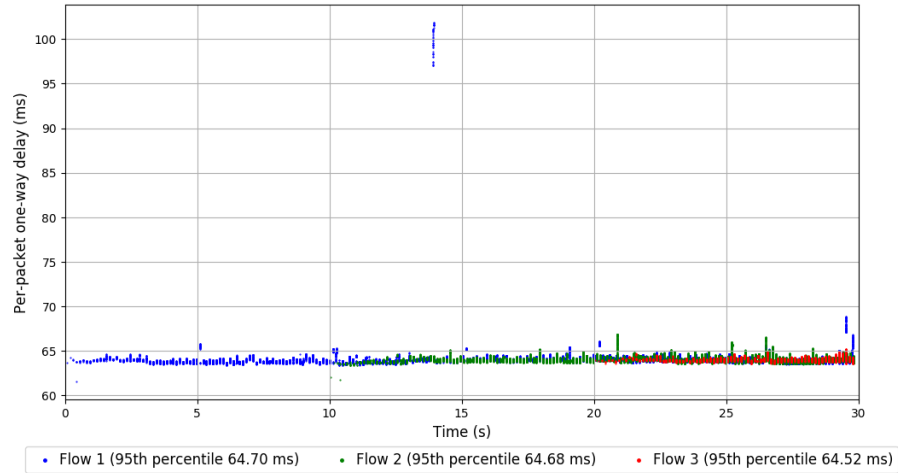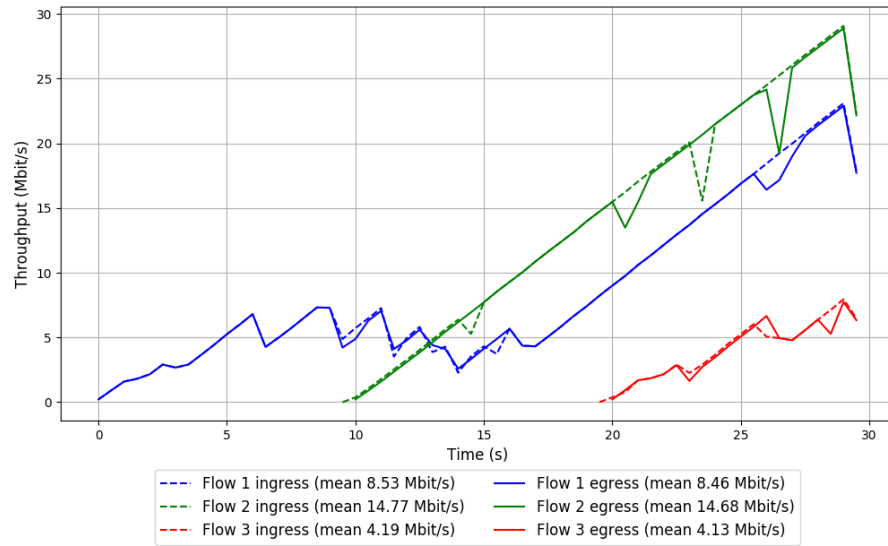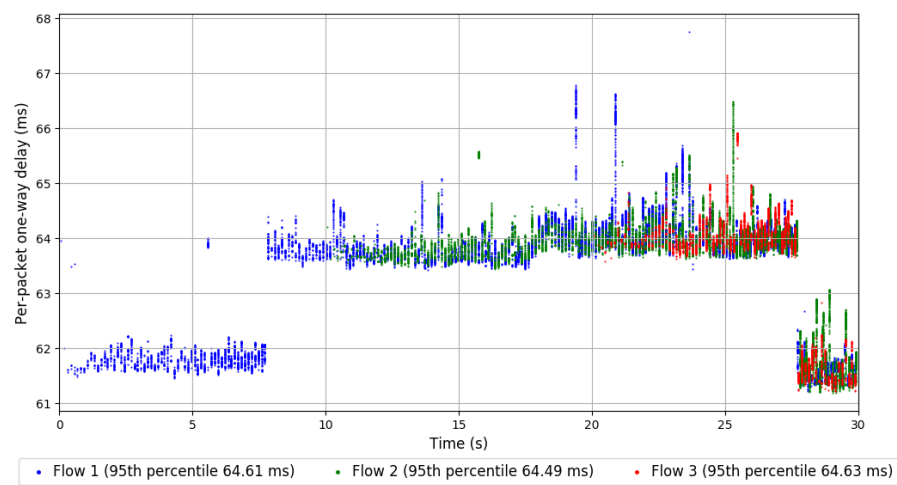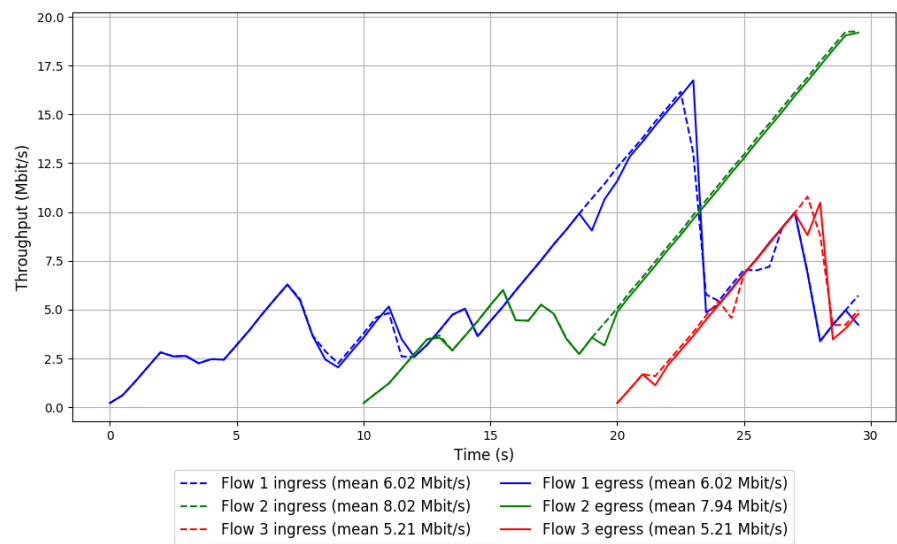
Run 5: Report of LEDBAT — Data Link

```
Run 6: Statistics of LEDBAT

Start at: 2017-12-12 12:40:14
End at: 2017-12-12 12:40:44


# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.00 Mbit/s
95th percentile per-packet one-way delay: 64.574 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 6.02 Mbit/s
95th percentile per-packet one-way delay: 64.610 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 64.493 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 5.21 Mbit/s
95th percentile per-packet one-way delay: 64.626 ms
Loss rate: 1.34%
```

Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2017-12-12 12:53:05
End at: 2017-12-12 12:53:35

# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.72 Mbit/s
95th percentile per-packet one-way delay: 64.393 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 64.300 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 6.45 Mbit/s
95th percentile per-packet one-way delay: 64.675 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 64.060 ms
Loss rate: 2.38%
```
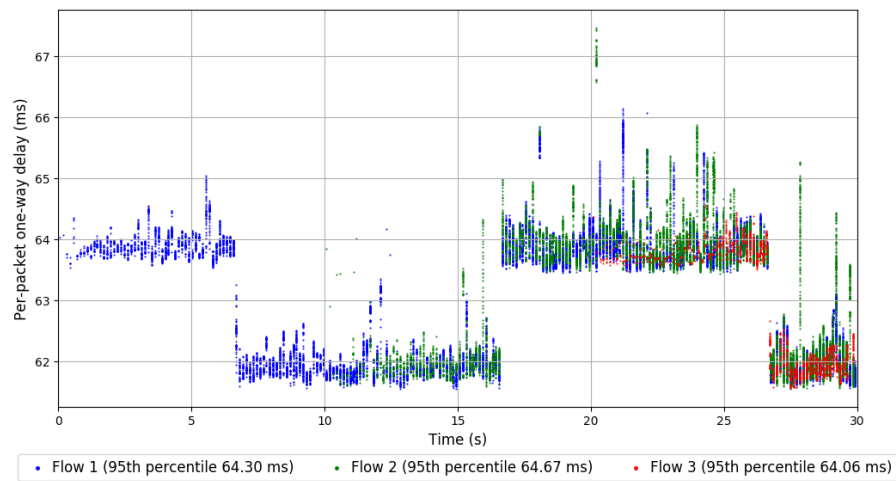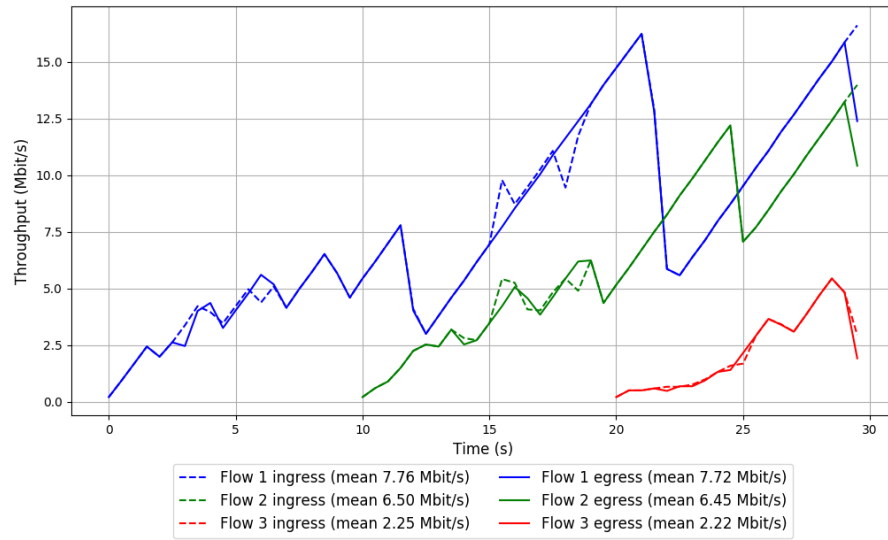
Run 7: Report of LEDBAT — Data Link

Flow 1 ingress (mean 7.76 Mbit/s) — Flow 1 egress (mean 7.72 Mbit/s)
Flow 2 ingress (mean 6.50 Mbit/s) — Flow 2 egress (mean 6.45 Mbit/s)
Flow 3 ingress (mean 2.25 Mbit/s) — Flow 3 egress (mean 2.22 Mbit/s)

Flow 1 (95th percentile 64.30 ms) · Flow 2 (95th percentile 64.67 ms) · Flow 3 (95th percentile 64.06 ms)

```
Run 8: Statistics of LEDBAT

Start at: 2017-12-12 13:05:33
End at: 2017-12-12 13:06:03

# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.23 Mbit/s
95th percentile per-packet one-way delay: 64.719 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 5.25 Mbit/s
95th percentile per-packet one-way delay: 64.527 ms
Loss rate: 1.65%
-- Flow 2:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 64.807 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 65.090 ms
Loss rate: 1.33%
```
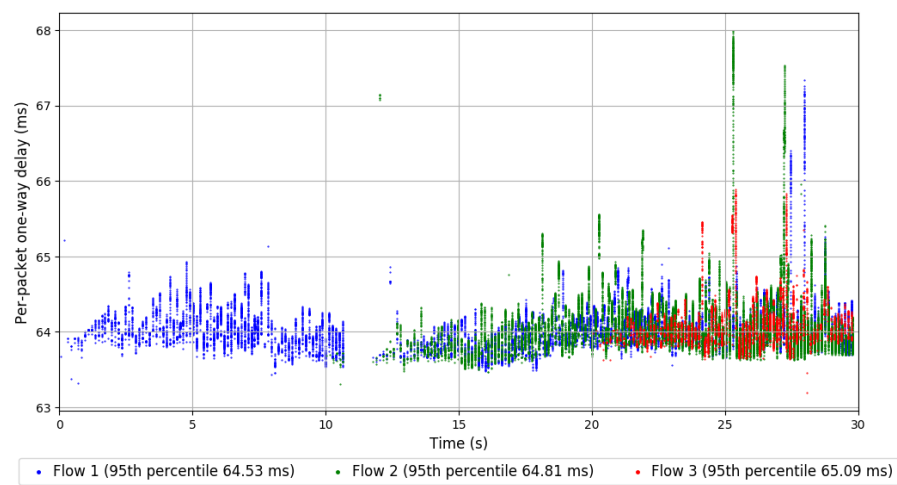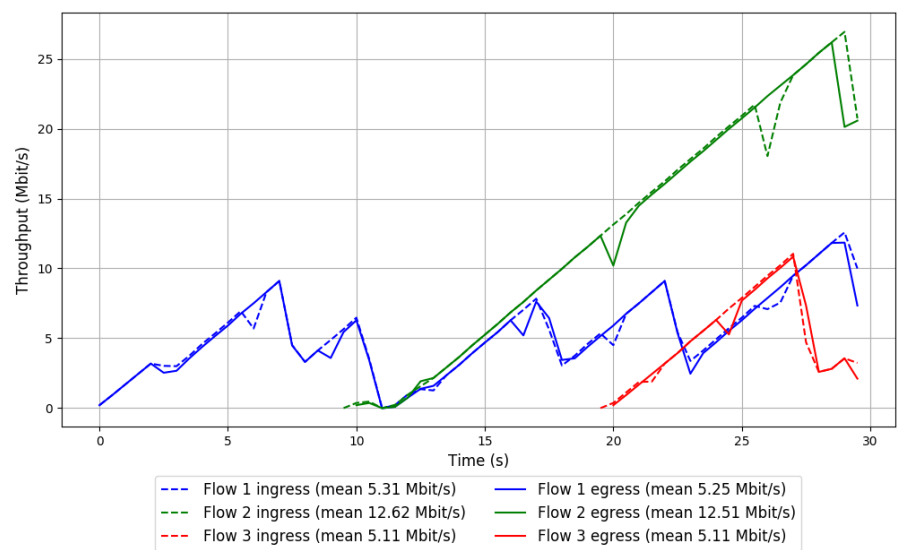
Run 8: Report of LEDBAT — Data Link

```
Run 9: Statistics of LEDBAT

Start at: 2017-12-12 13:18:16
End at: 2017-12-12 13:18:46

# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.85 Mbit/s
95th percentile per-packet one-way delay: 64.273 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 10.23 Mbit/s
95th percentile per-packet one-way delay: 64.351 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 5.56 Mbit/s
95th percentile per-packet one-way delay: 64.228 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 62.282 ms
Loss rate: 2.14%
```
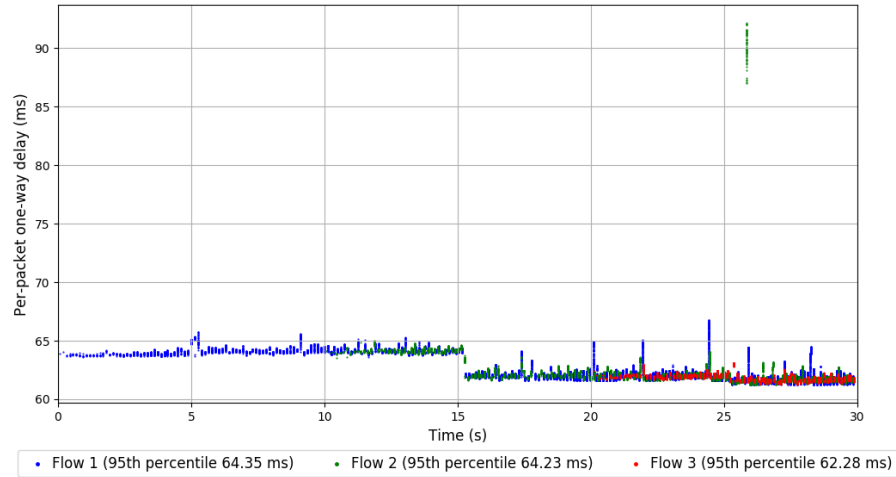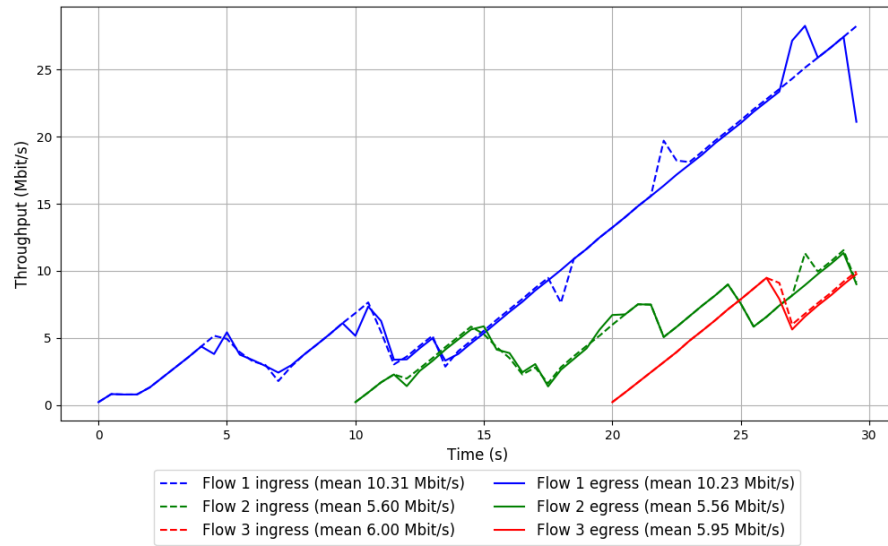
Run 9: Report of LEDBAT — Data Link

```
Run 10: Statistics of LEDBAT

Start at: 2017-12-12 13:30:48
End at: 2017-12-12 13:31:18


# Below is generated by plot.py at 2017-12-12 16:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.22 Mbit/s
95th percentile per-packet one-way delay: 64.100 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 64.261 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 10.14 Mbit/s
95th percentile per-packet one-way delay: 63.329 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 5.70 Mbit/s
95th percentile per-packet one-way delay: 62.575 ms
Loss rate: 2.16%
```
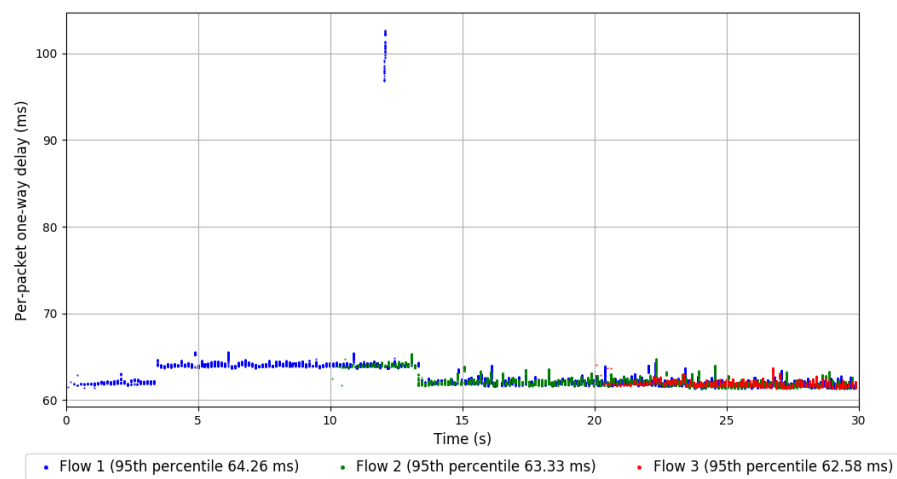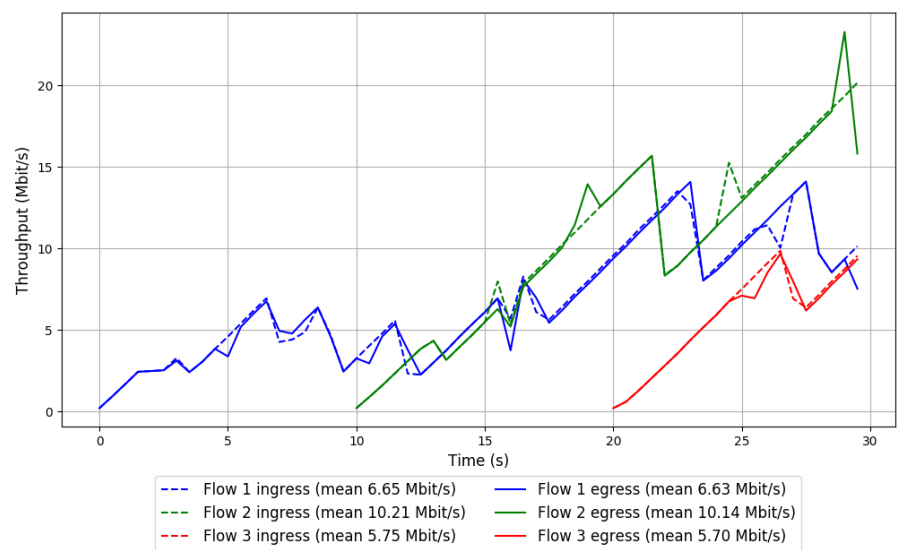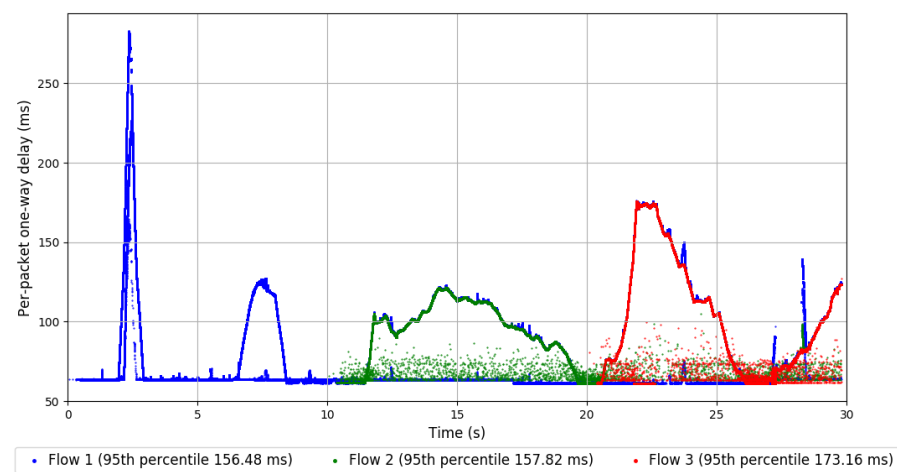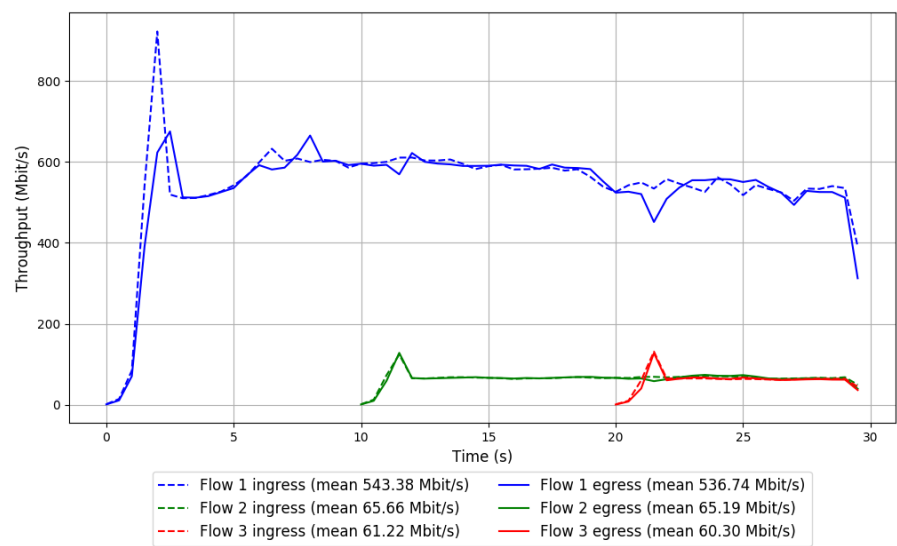
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-12-12 11:42:24
End at: 2017-12-12 11:42:54


# Below is generated by plot.py at 2017-12-12 16:13:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 599.57 Mbit/s
95th percentile per-packet one-way delay: 158.195 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 536.74 Mbit/s
95th percentile per-packet one-way delay: 156.481 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 65.19 Mbit/s
95th percentile per-packet one-way delay: 157.816 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 60.30 Mbit/s
95th percentile per-packet one-way delay: 173.160 ms
Loss rate: 2.90%
```

Run 1: Report of PCC — Data Link

- Flow 1 ingress (mean 543.38 Mbit/s)
- Flow 1 egress (mean 536.74 Mbit/s)
- Flow 2 ingress (mean 65.66 Mbit/s)
- Flow 2 egress (mean 65.19 Mbit/s)
- Flow 3 ingress (mean 61.22 Mbit/s)
- Flow 3 egress (mean 60.30 Mbit/s)

- Flow 1 (95th percentile 156.48 ms)
- Flow 2 (95th percentile 157.82 ms)
- Flow 3 (95th percentile 173.16 ms)

```
Run 2: Statistics of PCC

Start at: 2017-12-12 11:54:54
End at: 2017-12-12 11:55:24

# Below is generated by plot.py at 2017-12-12 16:13:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 564.68 Mbit/s
95th percentile per-packet one-way delay: 184.566 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 500.95 Mbit/s
95th percentile per-packet one-way delay: 187.222 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 67.55 Mbit/s
95th percentile per-packet one-way delay: 112.378 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 62.81 Mbit/s
95th percentile per-packet one-way delay: 110.298 ms
Loss rate: 1.34%
```
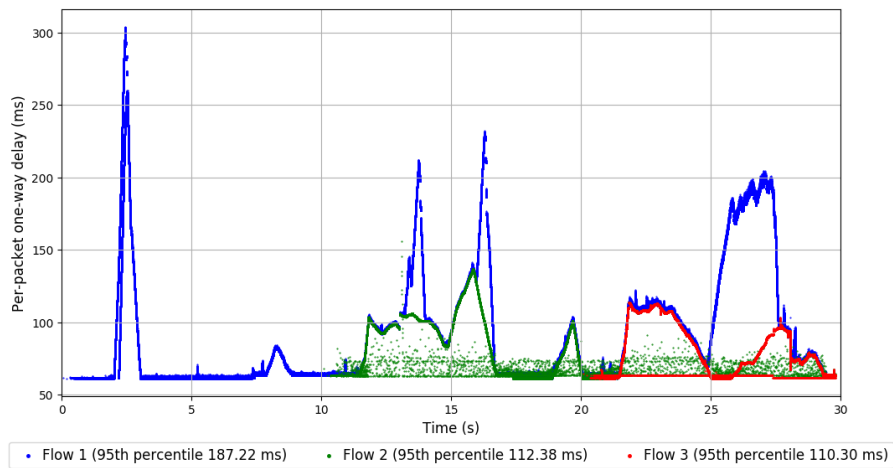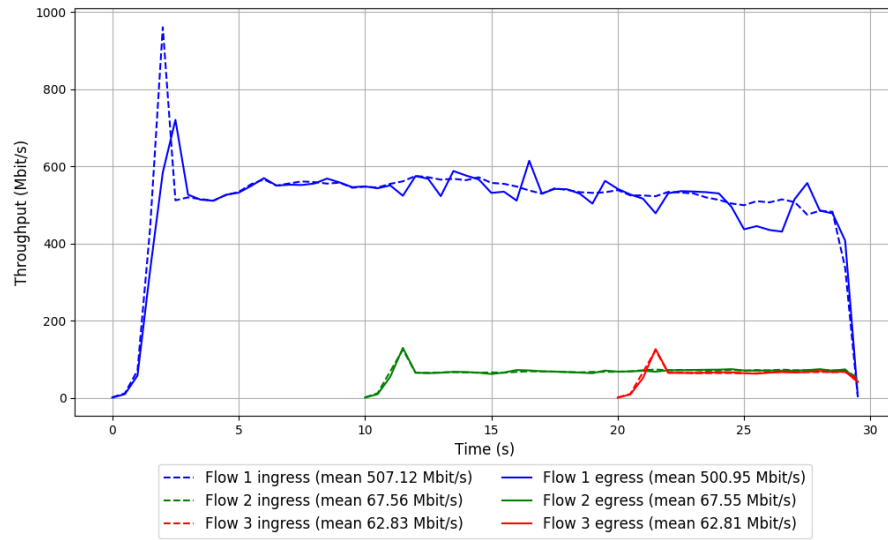
Run 2: Report of PCC — Data Link

Flow 1 ingress (mean 507.12 Mbit/s) ---- Flow 1 egress (mean 500.95 Mbit/s)
Flow 2 ingress (mean 67.56 Mbit/s) ---- Flow 2 egress (mean 67.55 Mbit/s)
Flow 3 ingress (mean 62.83 Mbit/s) ---- Flow 3 egress (mean 62.81 Mbit/s)

Flow 1 (95th percentile 187.22 ms)   Flow 2 (95th percentile 112.38 ms)   Flow 3 (95th percentile 110.30 ms)

67

```
Run 3: Statistics of PCC

Start at: 2017-12-12 12:07:21
End at: 2017-12-12 12:07:51


# Below is generated by plot.py at 2017-12-12 16:13:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 563.31 Mbit/s
95th percentile per-packet one-way delay: 131.589 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 516.71 Mbit/s
95th percentile per-packet one-way delay: 132.476 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 62.72 Mbit/s
95th percentile per-packet one-way delay: 126.471 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 15.55 Mbit/s
95th percentile per-packet one-way delay: 121.665 ms
Loss rate: 1.43%
```
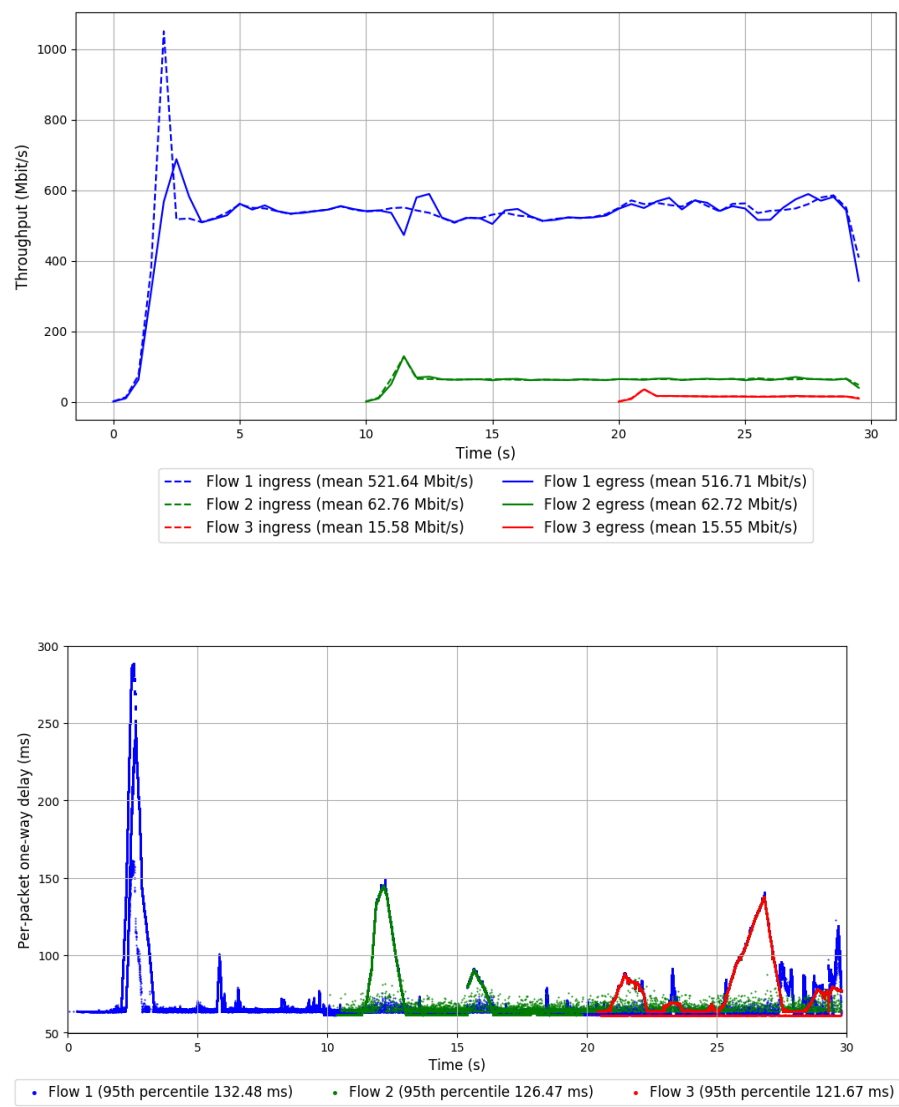
Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 521.64 Mbit/s) --- Flow 1 egress (mean 516.71 Mbit/s)
Flow 2 ingress (mean 62.76 Mbit/s) --- Flow 2 egress (mean 62.72 Mbit/s)
Flow 3 ingress (mean 15.58 Mbit/s) --- Flow 3 egress (mean 15.55 Mbit/s)

Flow 1 (95th percentile 132.48 ms)　　Flow 2 (95th percentile 126.47 ms)　　Flow 3 (95th percentile 121.67 ms)

```
Run 4: Statistics of PCC

Start at: 2017-12-12 12:20:02
End at: 2017-12-12 12:20:32


# Below is generated by plot.py at 2017-12-12 16:13:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 560.57 Mbit/s
95th percentile per-packet one-way delay: 172.569 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 534.41 Mbit/s
95th percentile per-packet one-way delay: 172.613 ms
Loss rate: 2.14%
-- Flow 2:
Average throughput: 9.32 Mbit/s
95th percentile per-packet one-way delay: 171.776 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 61.17 Mbit/s
95th percentile per-packet one-way delay: 172.313 ms
Loss rate: 3.42%
```
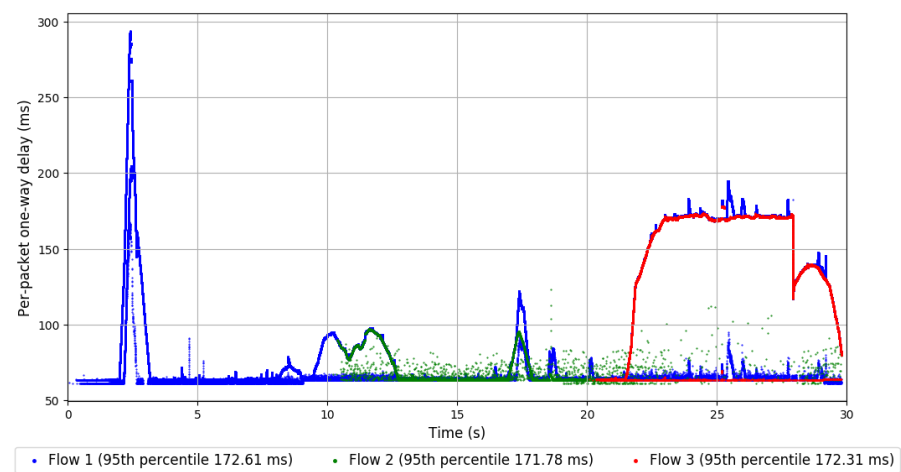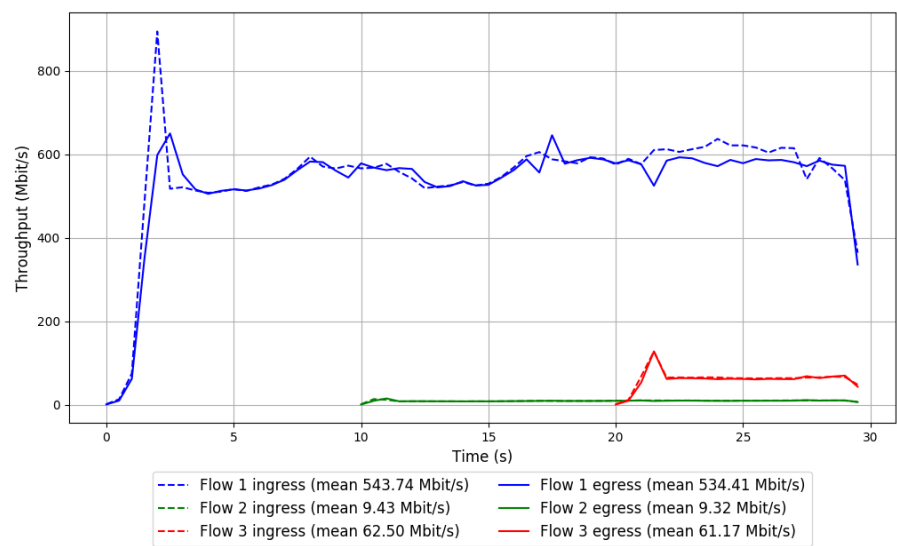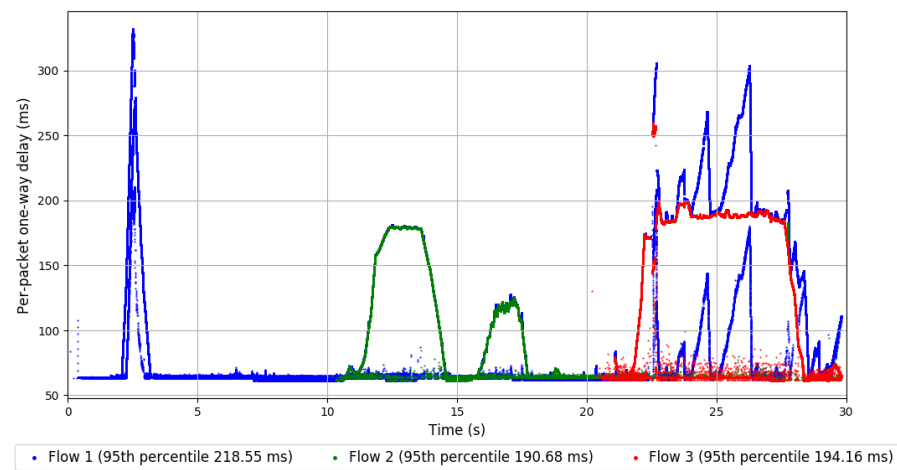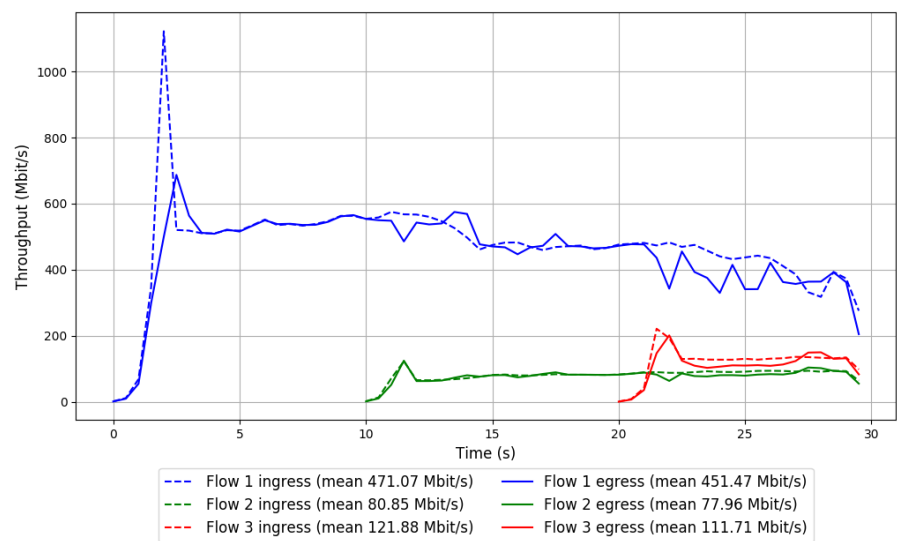
Run 4: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 543.74 Mbit/s) ——— Flow 1 egress (mean 534.41 Mbit/s)
- - - - Flow 2 ingress (mean 9.43 Mbit/s) ——— Flow 2 egress (mean 9.32 Mbit/s)
- - - - Flow 3 ingress (mean 62.50 Mbit/s) ——— Flow 3 egress (mean 61.17 Mbit/s)

- Flow 1 (95th percentile 172.61 ms) · Flow 2 (95th percentile 171.78 ms) · Flow 3 (95th percentile 172.31 ms)

```
Run 5: Statistics of PCC

Start at: 2017-12-12 12:32:44
End at: 2017-12-12 12:33:14


# Below is generated by plot.py at 2017-12-12 16:13:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 539.37 Mbit/s
95th percentile per-packet one-way delay: 211.568 ms
Loss rate: 4.99%
-- Flow 1:
Average throughput: 451.47 Mbit/s
95th percentile per-packet one-way delay: 218.552 ms
Loss rate: 4.63%
-- Flow 2:
Average throughput: 77.96 Mbit/s
95th percentile per-packet one-way delay: 190.677 ms
Loss rate: 4.23%
-- Flow 3:
Average throughput: 111.71 Mbit/s
95th percentile per-packet one-way delay: 194.164 ms
Loss rate: 10.14%
```
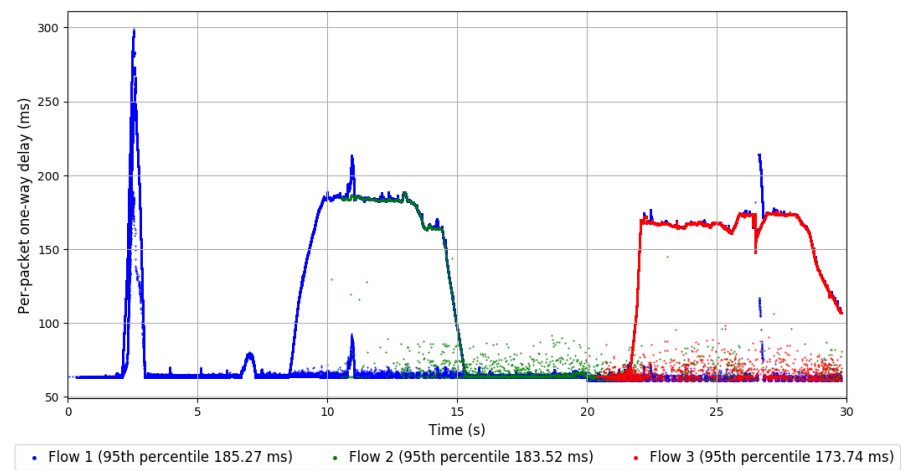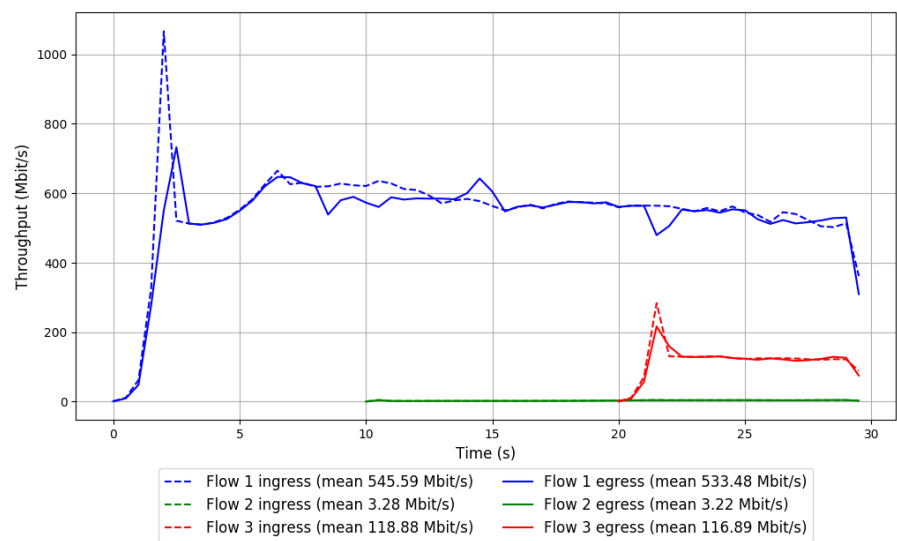
Run 5: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 471.07 Mbit/s) ——— Flow 1 egress (mean 451.47 Mbit/s)
- - - - Flow 2 ingress (mean 80.85 Mbit/s) ——— Flow 2 egress (mean 77.96 Mbit/s)
- - - - Flow 3 ingress (mean 121.88 Mbit/s) ——— Flow 3 egress (mean 111.71 Mbit/s)

- Flow 1 (95th percentile 218.55 ms) - Flow 2 (95th percentile 190.68 ms) - Flow 3 (95th percentile 194.16 ms)

73

```
Run 6: Statistics of PCC

Start at: 2017-12-12 12:45:31
End at: 2017-12-12 12:46:01


# Below is generated by plot.py at 2017-12-12 16:14:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.72 Mbit/s
95th percentile per-packet one-way delay: 185.121 ms
Loss rate: 2.66%
-- Flow 1:
Average throughput: 533.48 Mbit/s
95th percentile per-packet one-way delay: 185.272 ms
Loss rate: 2.63%
-- Flow 2:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 183.520 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 116.89 Mbit/s
95th percentile per-packet one-way delay: 173.739 ms
Loss rate: 3.08%
```
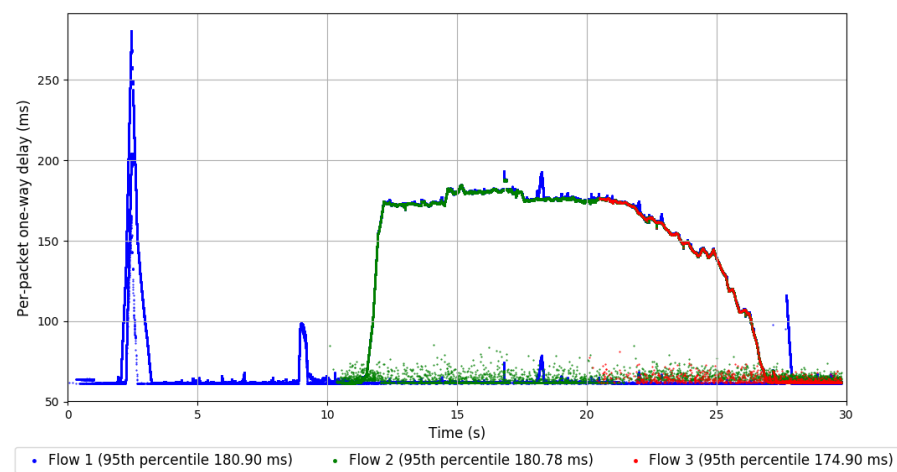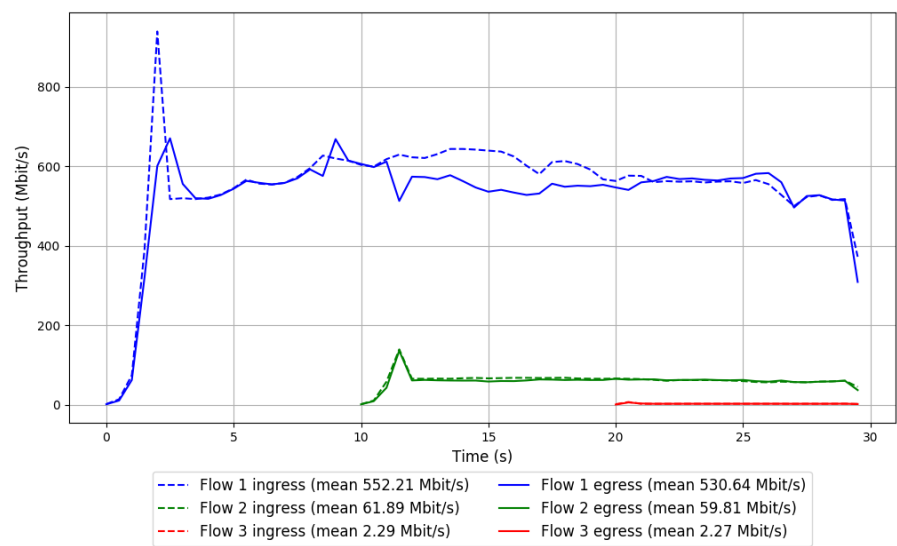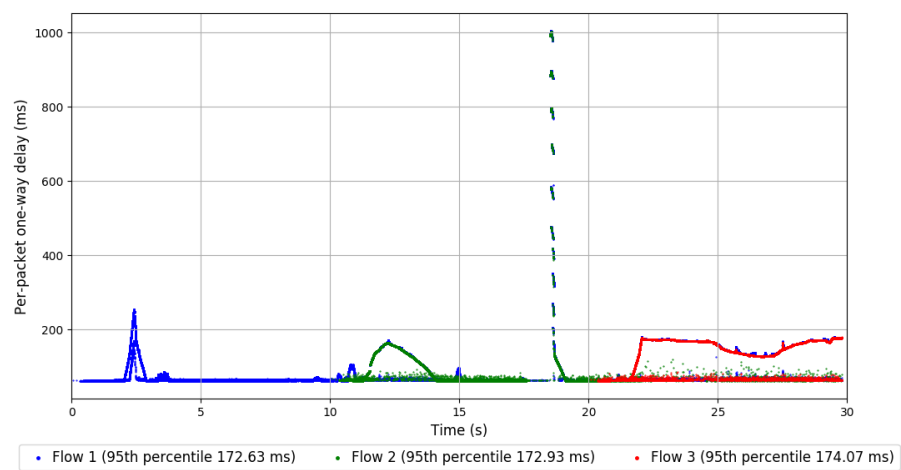
Run 6: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 545.59 Mbit/s) —— Flow 1 egress (mean 533.48 Mbit/s)
- - - - Flow 2 ingress (mean 3.28 Mbit/s) —— Flow 2 egress (mean 3.22 Mbit/s)
- - - - Flow 3 ingress (mean 118.88 Mbit/s) —— Flow 3 egress (mean 116.89 Mbit/s)

• Flow 1 (95th percentile 185.27 ms)   • Flow 2 (95th percentile 183.52 ms)   • Flow 3 (95th percentile 173.74 ms)

```
Run 7: Statistics of PCC

Start at: 2017-12-12 12:58:10
End at: 2017-12-12 12:58:40

# Below is generated by plot.py at 2017-12-12 16:14:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 571.01 Mbit/s
95th percentile per-packet one-way delay: 180.880 ms
Loss rate: 4.29%
-- Flow 1:
Average throughput: 530.64 Mbit/s
95th percentile per-packet one-way delay: 180.896 ms
Loss rate: 4.30%
-- Flow 2:
Average throughput: 59.81 Mbit/s
95th percentile per-packet one-way delay: 180.775 ms
Loss rate: 4.07%
-- Flow 3:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 174.898 ms
Loss rate: 2.33%
```
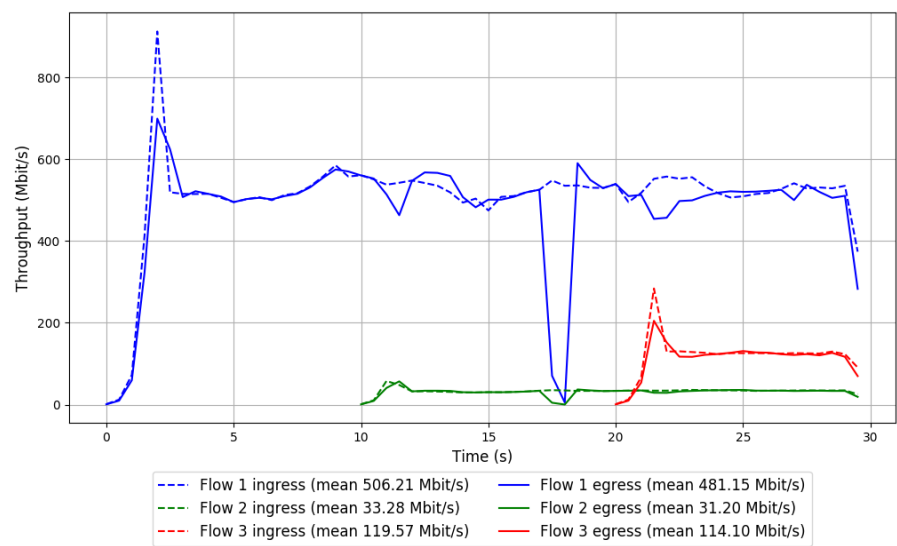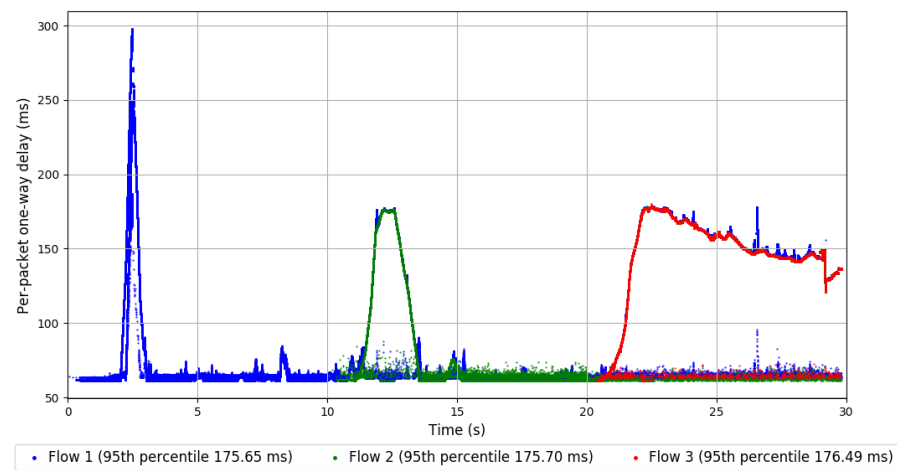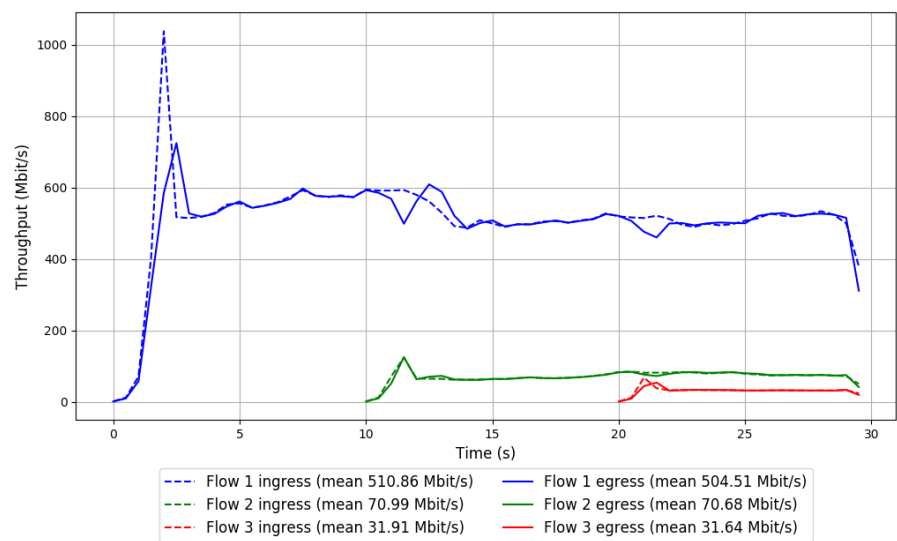
Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 552.21 Mbit/s) --- Flow 1 egress (mean 530.64 Mbit/s)
Flow 2 ingress (mean 61.89 Mbit/s) --- Flow 2 egress (mean 59.81 Mbit/s)
Flow 3 ingress (mean 2.29 Mbit/s) --- Flow 3 egress (mean 2.27 Mbit/s)

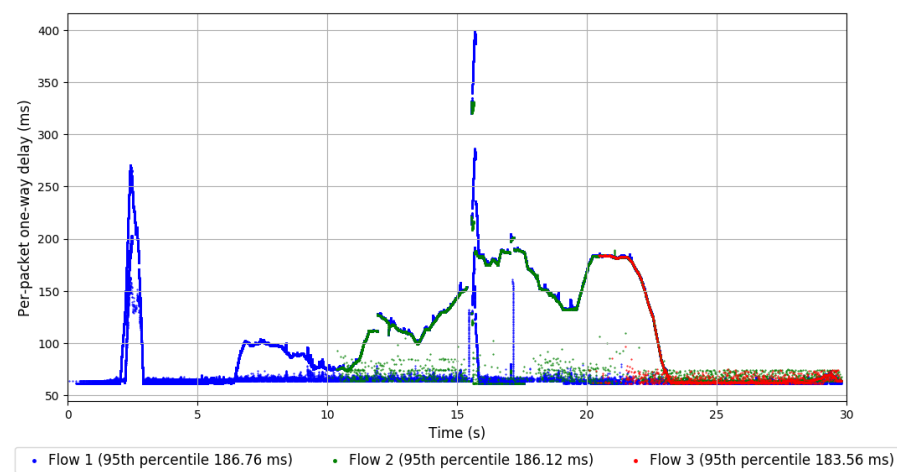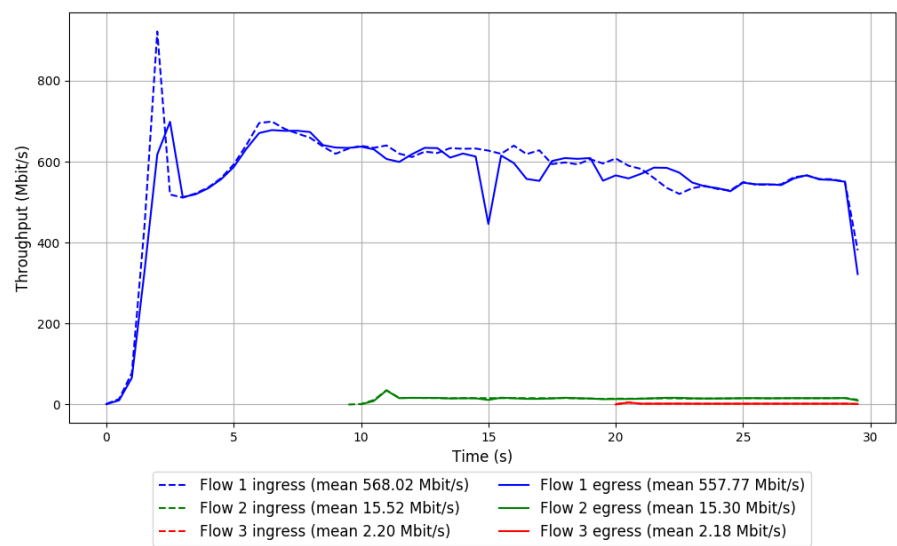Flow 1 (95th percentile 180.90 ms) • Flow 2 (95th percentile 180.78 ms) • Flow 3 (95th percentile 174.90 ms)

```
Run 8: Statistics of PCC

Start at: 2017-12-12 13:10:50
End at: 2017-12-12 13:11:20


# Below is generated by plot.py at 2017-12-12 16:14:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 539.09 Mbit/s
95th percentile per-packet one-way delay: 172.844 ms
Loss rate: 5.44%
-- Flow 1:
Average throughput: 481.15 Mbit/s
95th percentile per-packet one-way delay: 172.630 ms
Loss rate: 5.35%
-- Flow 2:
Average throughput: 31.20 Mbit/s
95th percentile per-packet one-way delay: 172.928 ms
Loss rate: 6.87%
-- Flow 3:
Average throughput: 114.10 Mbit/s
95th percentile per-packet one-way delay: 174.071 ms
Loss rate: 5.79%
```
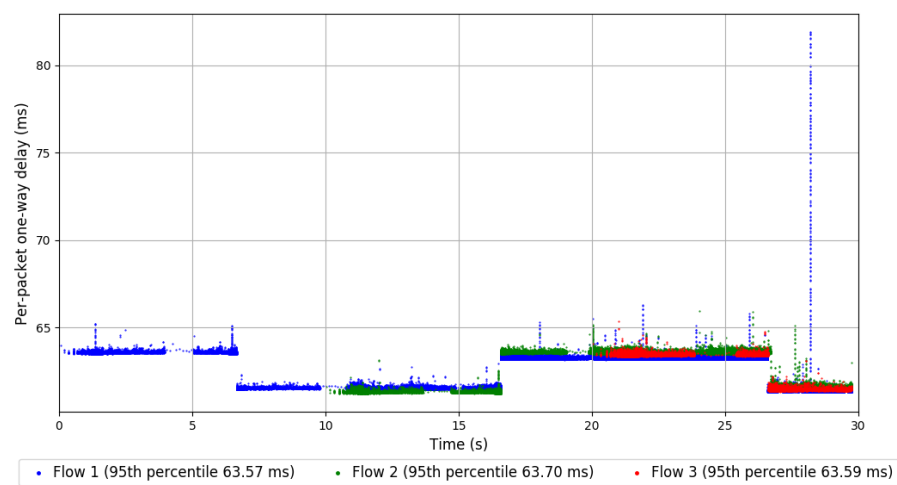
Run 8: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 506.21 Mbit/s) —— Flow 1 egress (mean 481.15 Mbit/s)
- - - - Flow 2 ingress (mean 33.28 Mbit/s) —— Flow 2 egress (mean 31.20 Mbit/s)
- - - - Flow 3 ingress (mean 119.57 Mbit/s) —— Flow 3 egress (mean 114.10 Mbit/s)

- Flow 1 (95th percentile 172.63 ms)   • Flow 2 (95th percentile 172.93 ms)   • Flow 3 (95th percentile 174.07 ms)

79

```
Run 9: Statistics of PCC

Start at: 2017-12-12 13:23:21
End at: 2017-12-12 13:23:51


# Below is generated by plot.py at 2017-12-12 16:23:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 561.69 Mbit/s
95th percentile per-packet one-way delay: 175.673 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 504.51 Mbit/s
95th percentile per-packet one-way delay: 175.651 ms
Loss rate: 1.66%
-- Flow 2:
Average throughput: 70.68 Mbit/s
95th percentile per-packet one-way delay: 175.701 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 31.64 Mbit/s
95th percentile per-packet one-way delay: 176.491 ms
Loss rate: 2.15%
```
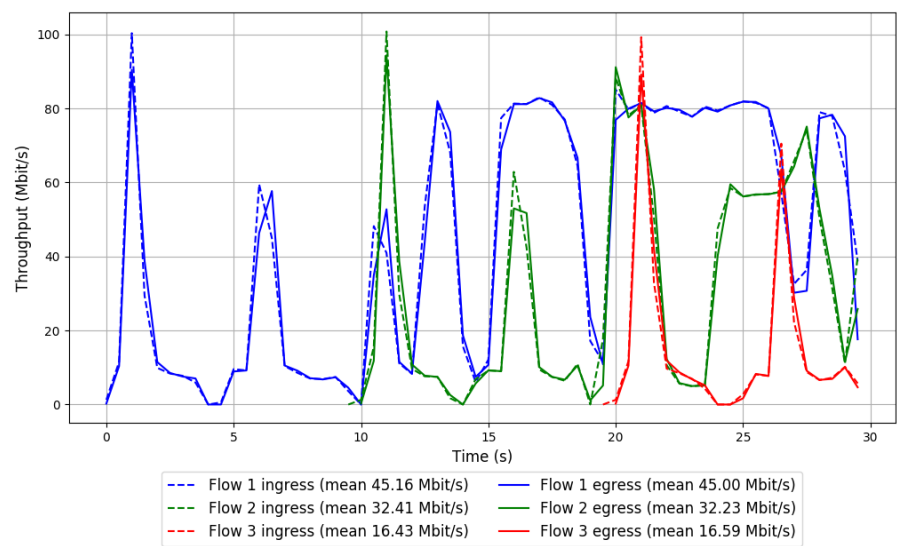
Run 9: Report of PCC — Data Link

Flow 1 ingress (mean 510.86 Mbit/s)   Flow 1 egress (mean 504.51 Mbit/s)
Flow 2 ingress (mean 70.99 Mbit/s)   Flow 2 egress (mean 70.68 Mbit/s)
Flow 3 ingress (mean 31.91 Mbit/s)   Flow 3 egress (mean 31.64 Mbit/s)

Flow 1 (95th percentile 175.65 ms)   Flow 2 (95th percentile 175.70 ms)   Flow 3 (95th percentile 176.49 ms)

81

```
Run 10: Statistics of PCC

Start at: 2017-12-12 13:35:52
End at: 2017-12-12 13:36:22


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 568.64 Mbit/s
95th percentile per-packet one-way delay: 186.741 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 557.77 Mbit/s
95th percentile per-packet one-way delay: 186.760 ms
Loss rate: 2.22%
-- Flow 2:
Average throughput: 15.30 Mbit/s
95th percentile per-packet one-way delay: 186.124 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 183.558 ms
Loss rate: 1.92%
```
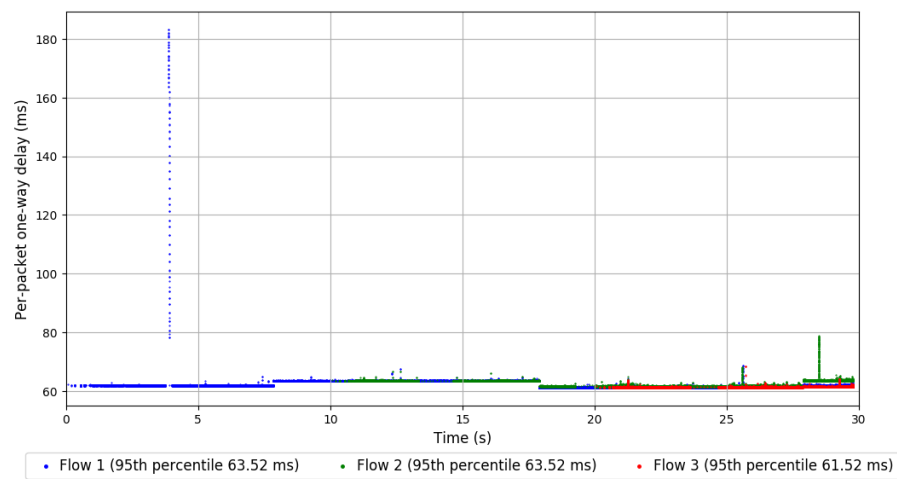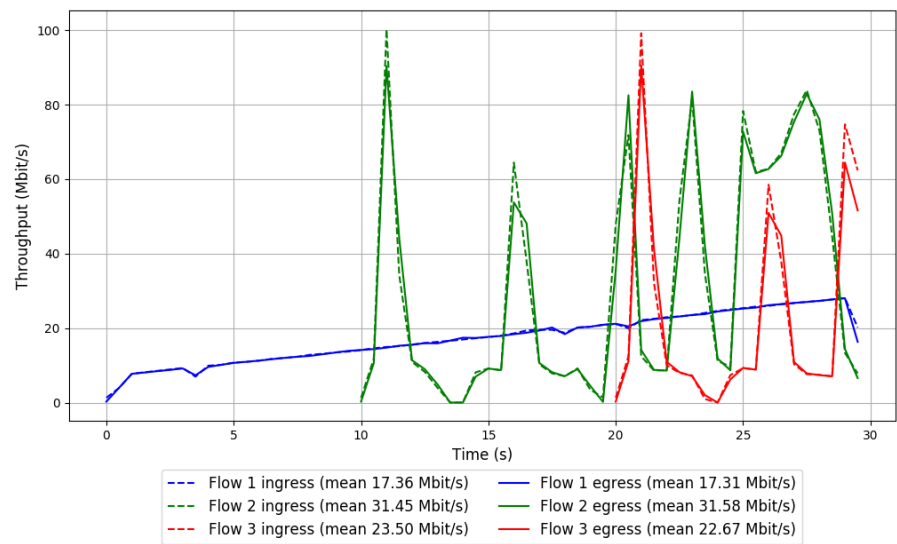
Run 10: Report of PCC — Data Link

- - - Flow 1 ingress (mean 568.02 Mbit/s)   —— Flow 1 egress (mean 557.77 Mbit/s)
- - - Flow 2 ingress (mean 15.52 Mbit/s)   —— Flow 2 egress (mean 15.30 Mbit/s)
- - - Flow 3 ingress (mean 2.20 Mbit/s)   —— Flow 3 egress (mean 2.18 Mbit/s)

- Flow 1 (95th percentile 186.76 ms)   • Flow 2 (95th percentile 186.12 ms)   • Flow 3 (95th percentile 183.56 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-12 11:44:35
End at: 2017-12-12 11:45:05


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.82 Mbit/s
95th percentile per-packet one-way delay: 63.629 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 45.00 Mbit/s
95th percentile per-packet one-way delay: 63.568 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 32.23 Mbit/s
95th percentile per-packet one-way delay: 63.695 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 16.59 Mbit/s
95th percentile per-packet one-way delay: 63.591 ms
Loss rate: 0.71%
```
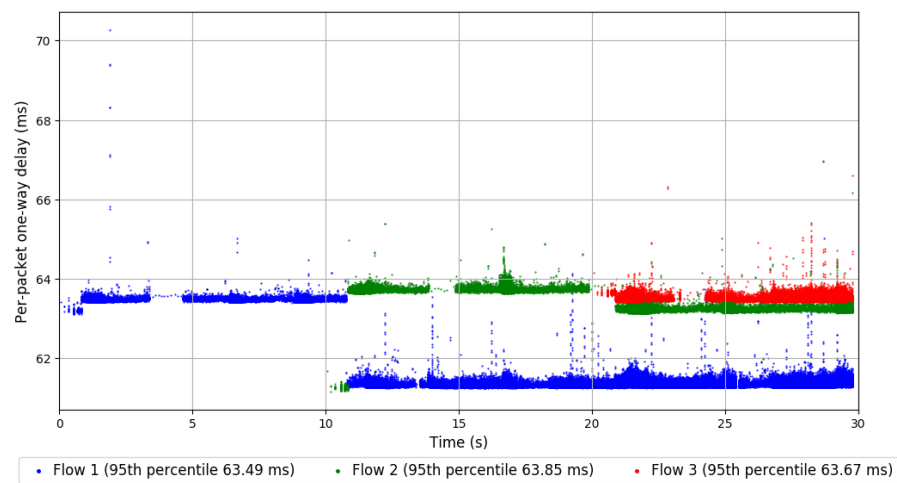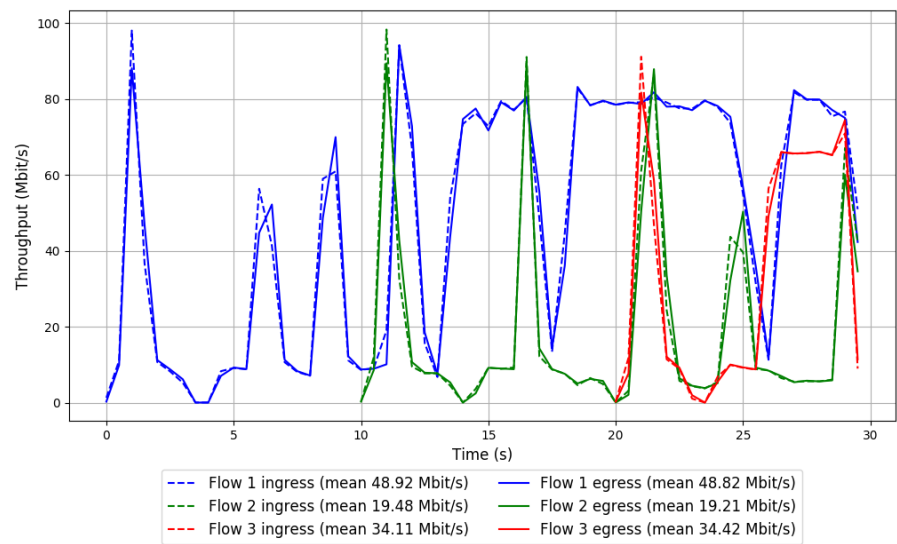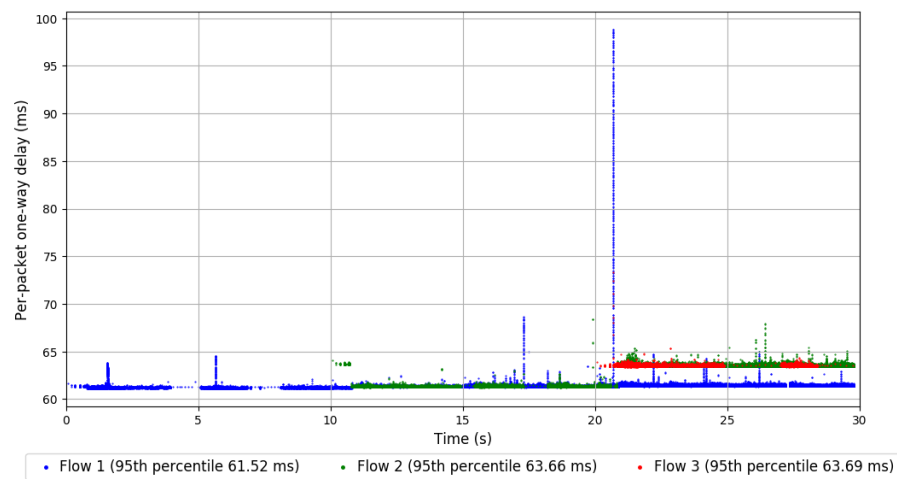
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-12 11:57:03
End at: 2017-12-12 11:57:33

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.67 Mbit/s
95th percentile per-packet one-way delay: 63.511 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 17.31 Mbit/s
95th percentile per-packet one-way delay: 63.520 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 31.58 Mbit/s
95th percentile per-packet one-way delay: 63.523 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 22.67 Mbit/s
95th percentile per-packet one-way delay: 61.515 ms
Loss rate: 4.74%
```
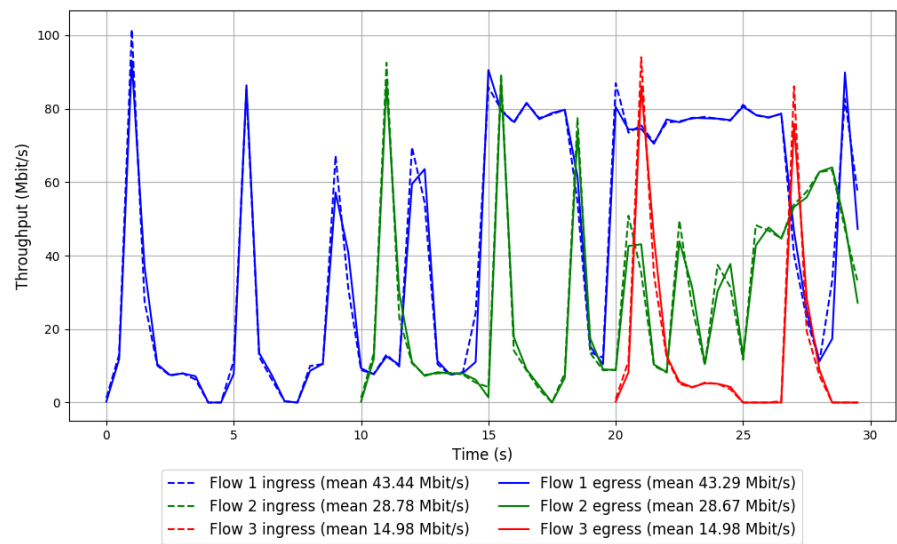
Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 17.36 Mbit/s) --- Flow 1 egress (mean 17.31 Mbit/s)
Flow 2 ingress (mean 31.45 Mbit/s) --- Flow 2 egress (mean 31.58 Mbit/s)
Flow 3 ingress (mean 23.50 Mbit/s) --- Flow 3 egress (mean 22.67 Mbit/s)

Flow 1 (95th percentile 63.52 ms)   Flow 2 (95th percentile 63.52 ms)   Flow 3 (95th percentile 61.52 ms)

87

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-12-12 12:09:30
End at: 2017-12-12 12:10:00

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.80 Mbit/s
95th percentile per-packet one-way delay: 63.713 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 48.82 Mbit/s
95th percentile per-packet one-way delay: 63.493 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 19.21 Mbit/s
95th percentile per-packet one-way delay: 63.848 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 34.42 Mbit/s
95th percentile per-packet one-way delay: 63.672 ms
Loss rate: 0.38%
```
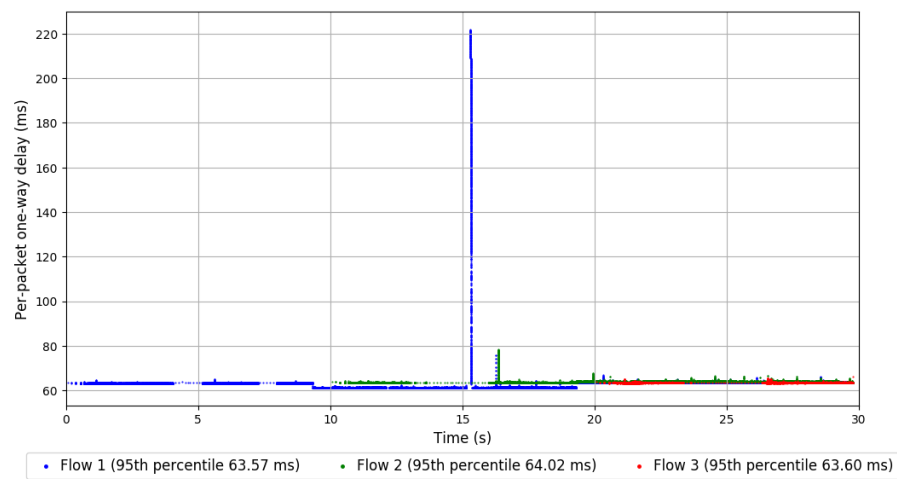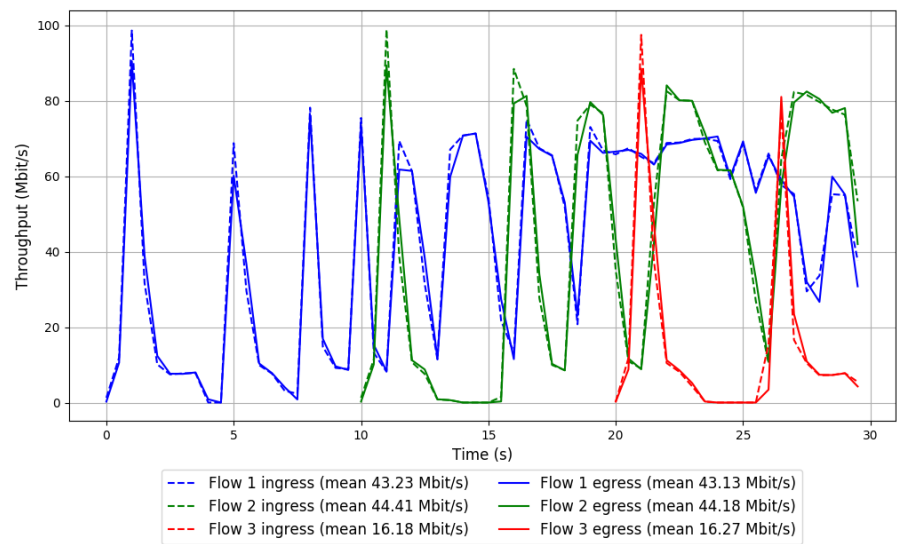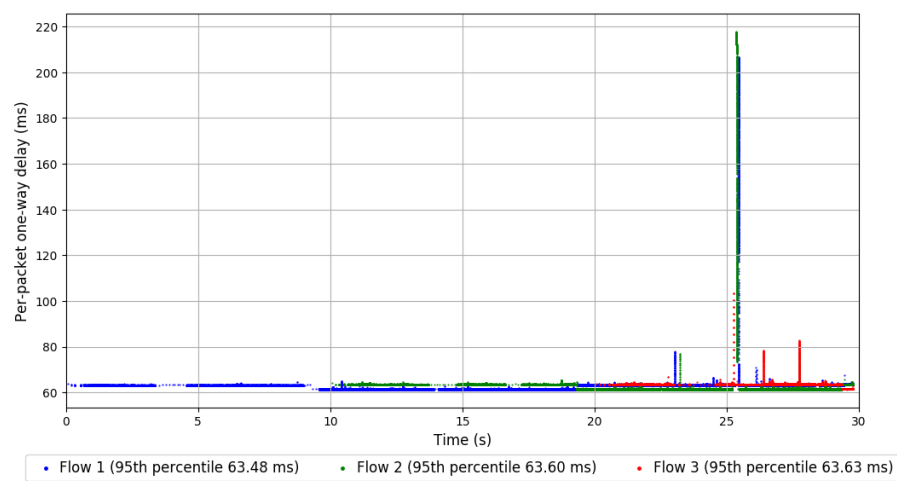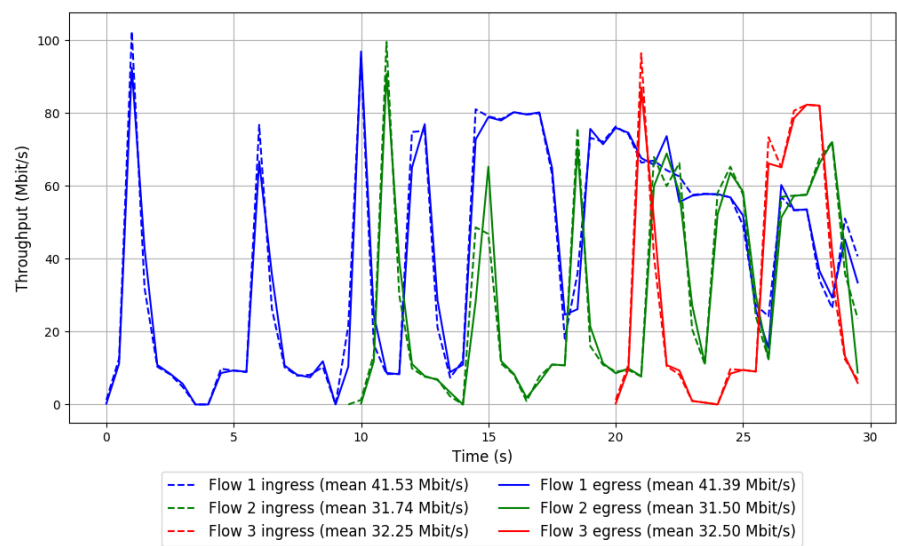
Run 3: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 48.92 Mbit/s)   —— Flow 1 egress (mean 48.82 Mbit/s)
- - - Flow 2 ingress (mean 19.48 Mbit/s)   —— Flow 2 egress (mean 19.21 Mbit/s)
- - - Flow 3 ingress (mean 34.11 Mbit/s)   —— Flow 3 egress (mean 34.42 Mbit/s)

- Flow 1 (95th percentile 63.49 ms)   • Flow 2 (95th percentile 63.85 ms)   • Flow 3 (95th percentile 63.67 ms)

89

```
Run 4: Statistics of QUIC Cubic

Start at: 2017-12-12 12:22:10
End at: 2017-12-12 12:22:40

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.17 Mbit/s
95th percentile per-packet one-way delay: 63.568 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 43.29 Mbit/s
95th percentile per-packet one-way delay: 61.519 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 28.67 Mbit/s
95th percentile per-packet one-way delay: 63.664 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 14.98 Mbit/s
95th percentile per-packet one-way delay: 63.685 ms
Loss rate: 0.00%
```
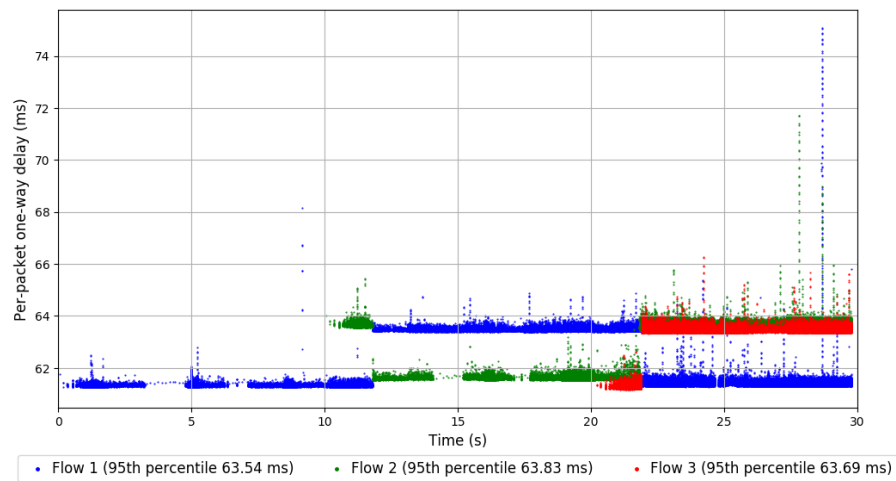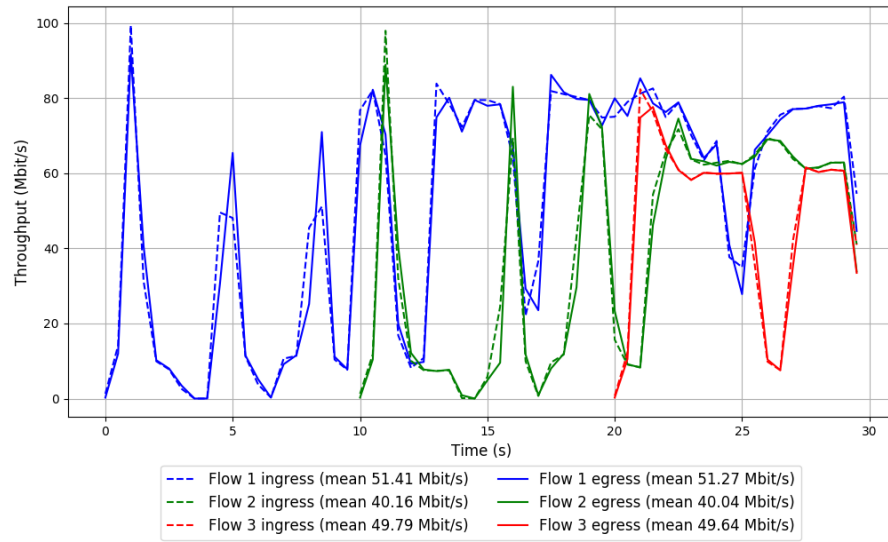
Run 4: Report of QUIC Cubic — Data Link

91

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-12-12 12:34:52
End at: 2017-12-12 12:35:22

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.74 Mbit/s
95th percentile per-packet one-way delay: 63.964 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 43.13 Mbit/s
95th percentile per-packet one-way delay: 63.573 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 44.18 Mbit/s
95th percentile per-packet one-way delay: 64.018 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 16.27 Mbit/s
95th percentile per-packet one-way delay: 63.603 ms
Loss rate: 0.68%
```
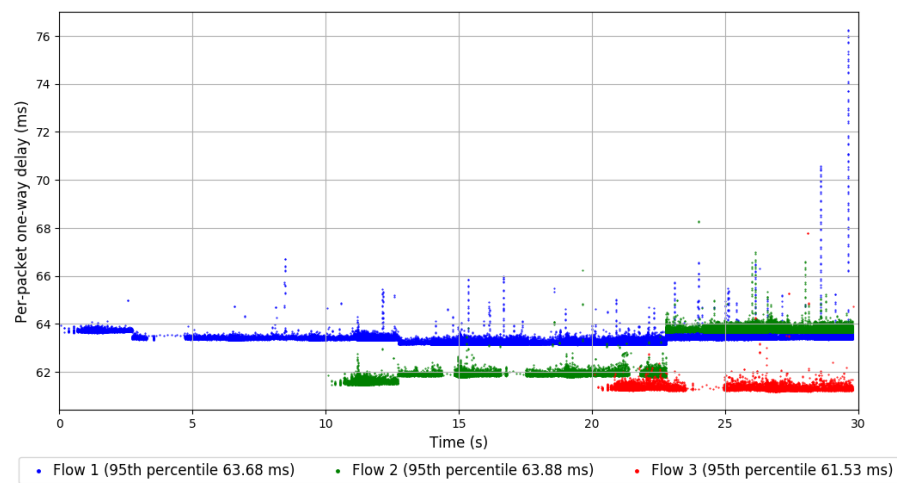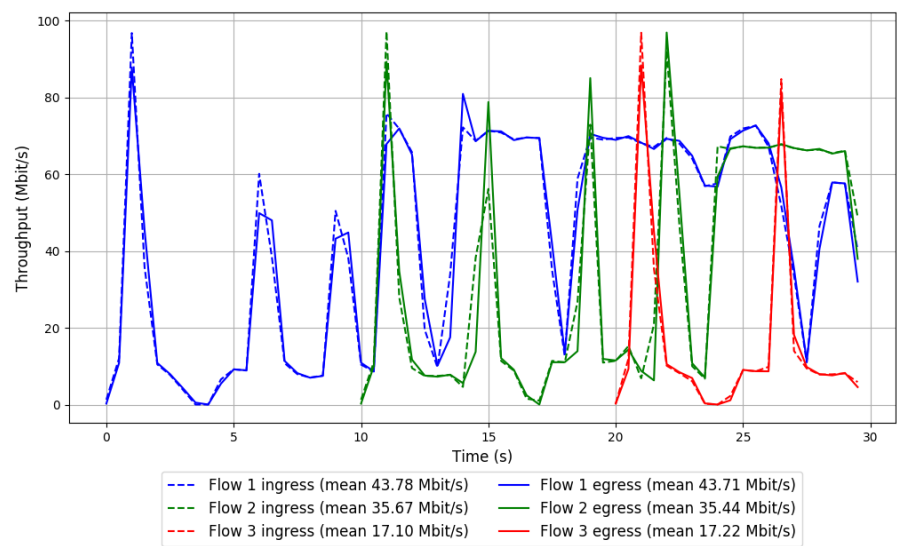
Run 5: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 43.23 Mbit/s) —— Flow 1 egress (mean 43.13 Mbit/s)
- - - Flow 2 ingress (mean 44.41 Mbit/s) —— Flow 2 egress (mean 44.18 Mbit/s)
- - - Flow 3 ingress (mean 16.18 Mbit/s) —— Flow 3 egress (mean 16.27 Mbit/s)

• Flow 1 (95th percentile 63.57 ms)   • Flow 2 (95th percentile 64.02 ms)   • Flow 3 (95th percentile 63.60 ms)

93

```
Run 6: Statistics of QUIC Cubic

Start at: 2017-12-12 12:47:42
End at: 2017-12-12 12:48:12


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.92 Mbit/s
95th percentile per-packet one-way delay: 63.566 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 41.39 Mbit/s
95th percentile per-packet one-way delay: 63.485 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 31.50 Mbit/s
95th percentile per-packet one-way delay: 63.598 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 63.628 ms
Loss rate: 0.48%
```
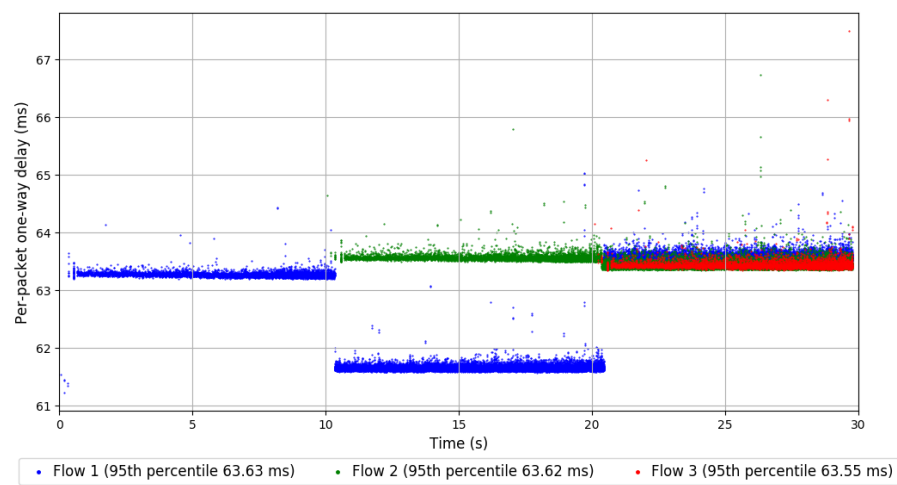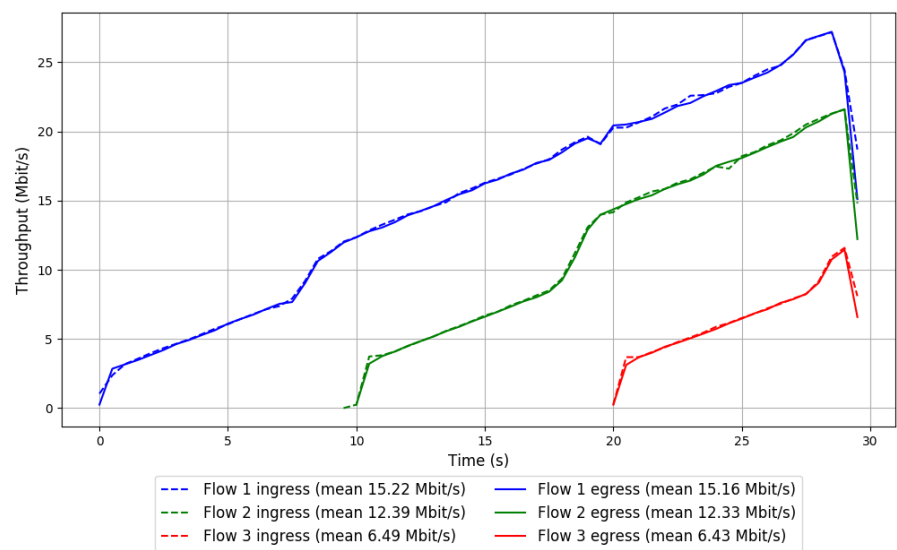
Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 41.53 Mbit/s) Flow 1 egress (mean 41.39 Mbit/s)
Flow 2 ingress (mean 31.74 Mbit/s) Flow 2 egress (mean 31.50 Mbit/s)
Flow 3 ingress (mean 32.25 Mbit/s) Flow 3 egress (mean 32.50 Mbit/s)

Flow 1 (95th percentile 63.48 ms)   Flow 2 (95th percentile 63.60 ms)   Flow 3 (95th percentile 63.63 ms)

```
Run 7: Statistics of QUIC Cubic

Start at: 2017-12-12 13:00:19
End at: 2017-12-12 13:00:49


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.00 Mbit/s
95th percentile per-packet one-way delay: 63.705 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 51.27 Mbit/s
95th percentile per-packet one-way delay: 63.543 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 40.04 Mbit/s
95th percentile per-packet one-way delay: 63.833 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 49.64 Mbit/s
95th percentile per-packet one-way delay: 63.691 ms
Loss rate: 1.56%
```
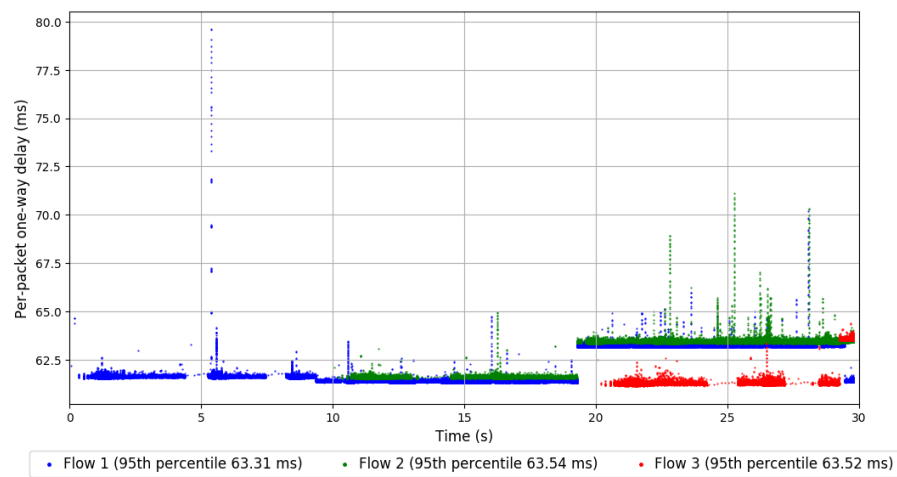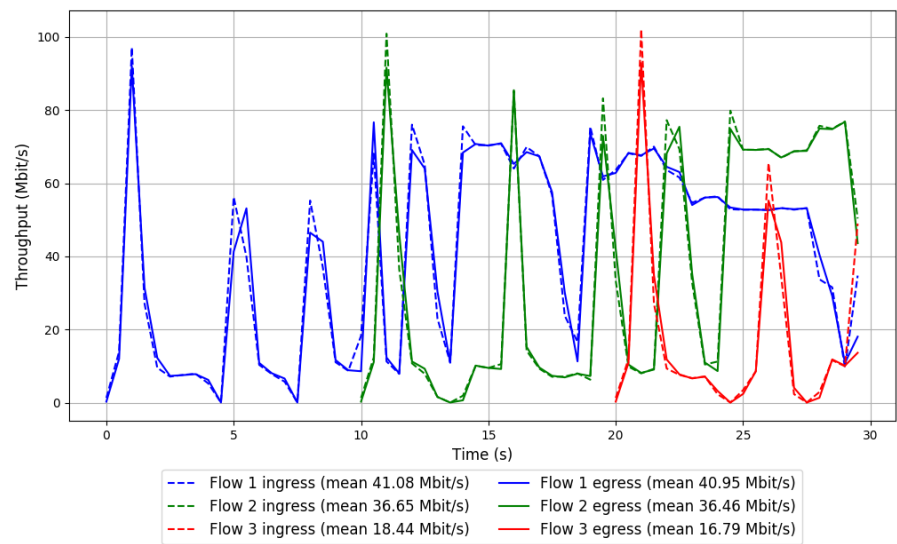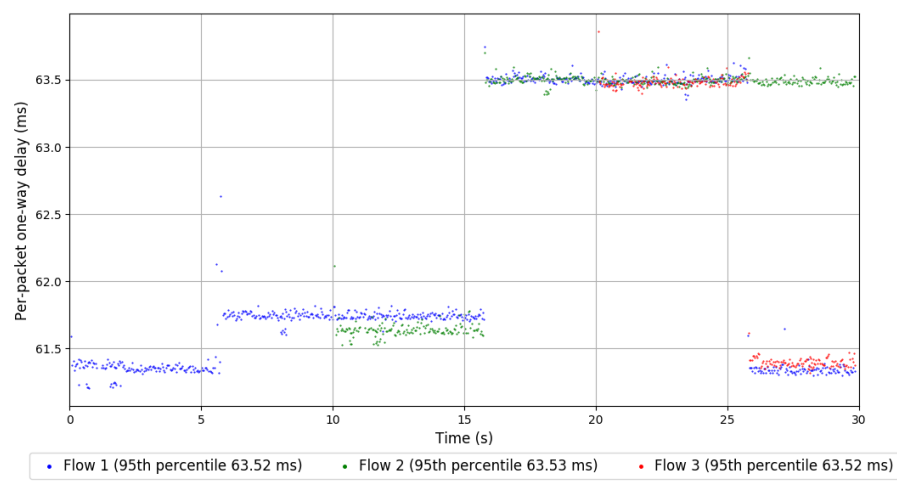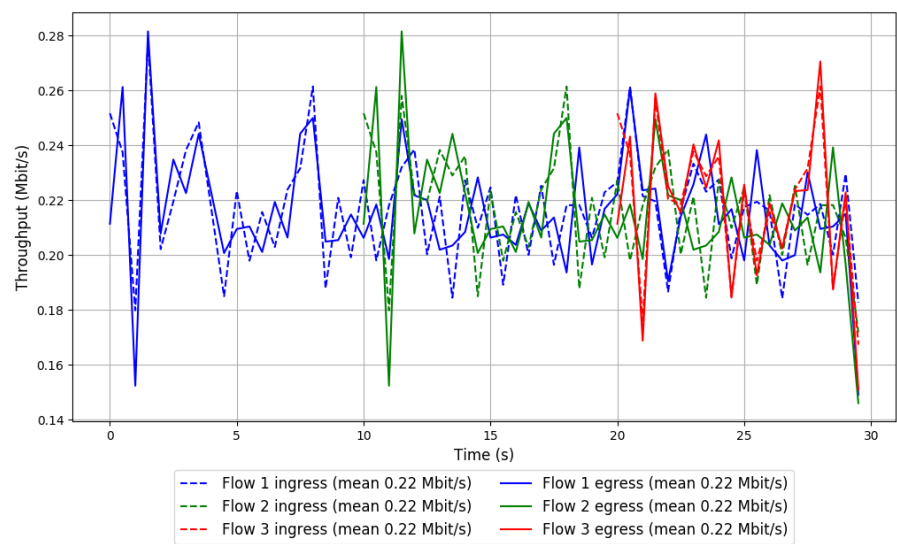
Run 7: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 51.41 Mbit/s) — Flow 1 egress (mean 51.27 Mbit/s)
Flow 2 ingress (mean 40.16 Mbit/s) — Flow 2 egress (mean 40.04 Mbit/s)
Flow 3 ingress (mean 49.79 Mbit/s) — Flow 3 egress (mean 49.64 Mbit/s)

Flow 1 (95th percentile 63.54 ms) • Flow 2 (95th percentile 63.83 ms) • Flow 3 (95th percentile 63.69 ms)
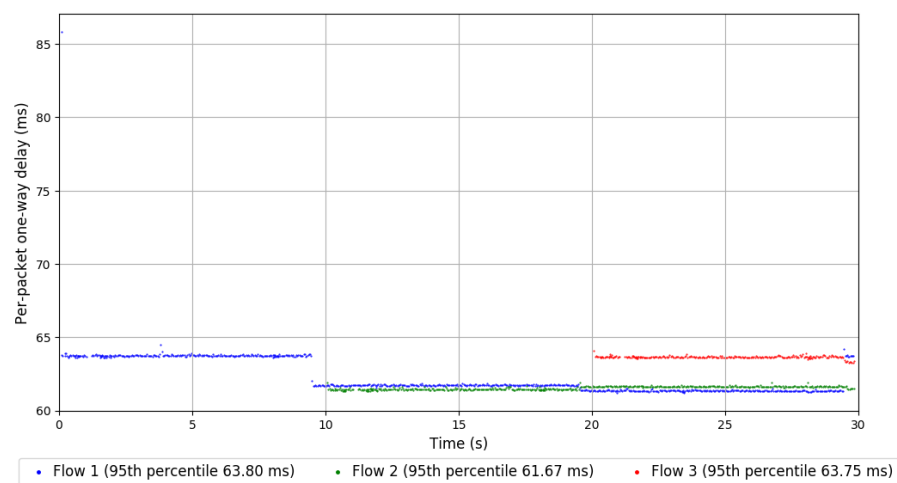
```
Run 8: Statistics of QUIC Cubic

Start at: 2017-12-12 13:12:59
End at: 2017-12-12 13:13:29


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.82 Mbit/s
95th percentile per-packet one-way delay: 63.780 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 43.71 Mbit/s
95th percentile per-packet one-way delay: 63.677 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 35.44 Mbit/s
95th percentile per-packet one-way delay: 63.880 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 17.22 Mbit/s
95th percentile per-packet one-way delay: 61.528 ms
Loss rate: 0.69%
```
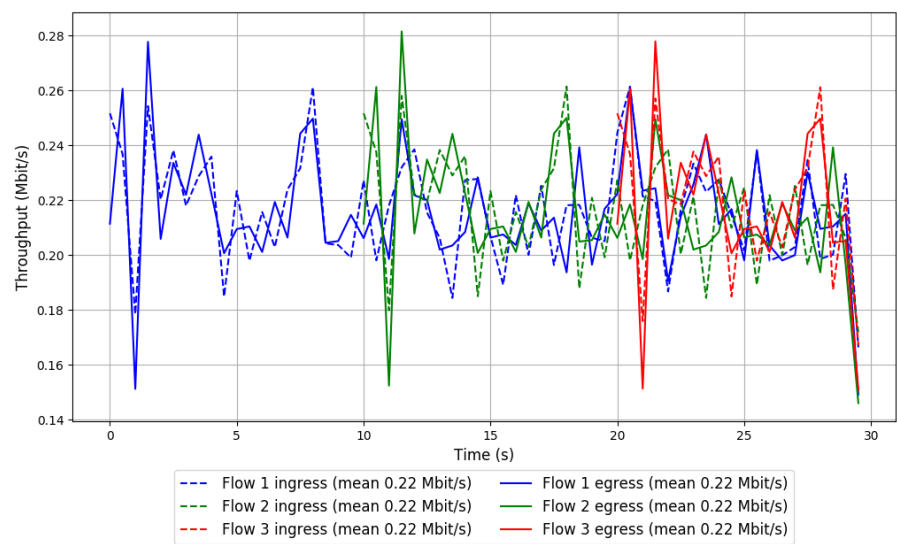
Run 8: Report of QUIC Cubic — Data Link

```
Run 9: Statistics of QUIC Cubic

Start at: 2017-12-12 13:25:31
End at: 2017-12-12 13:26:01

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.44 Mbit/s
95th percentile per-packet one-way delay: 63.622 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 15.16 Mbit/s
95th percentile per-packet one-way delay: 63.630 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 12.33 Mbit/s
95th percentile per-packet one-way delay: 63.615 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 63.549 ms
Loss rate: 2.31%
```

Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 15.22 Mbit/s) --- Flow 1 egress (mean 15.16 Mbit/s)
Flow 2 ingress (mean 12.39 Mbit/s) --- Flow 2 egress (mean 12.33 Mbit/s)
Flow 3 ingress (mean 6.49 Mbit/s) --- Flow 3 egress (mean 6.43 Mbit/s)

Flow 1 (95th percentile 63.63 ms)   Flow 2 (95th percentile 63.62 ms)   Flow 3 (95th percentile 63.55 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2017-12-12 13:38:02
End at: 2017-12-12 13:38:32

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.62 Mbit/s
95th percentile per-packet one-way delay: 63.479 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 40.95 Mbit/s
95th percentile per-packet one-way delay: 63.306 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 36.46 Mbit/s
95th percentile per-packet one-way delay: 63.538 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 16.79 Mbit/s
95th percentile per-packet one-way delay: 63.524 ms
Loss rate: 10.08%
```
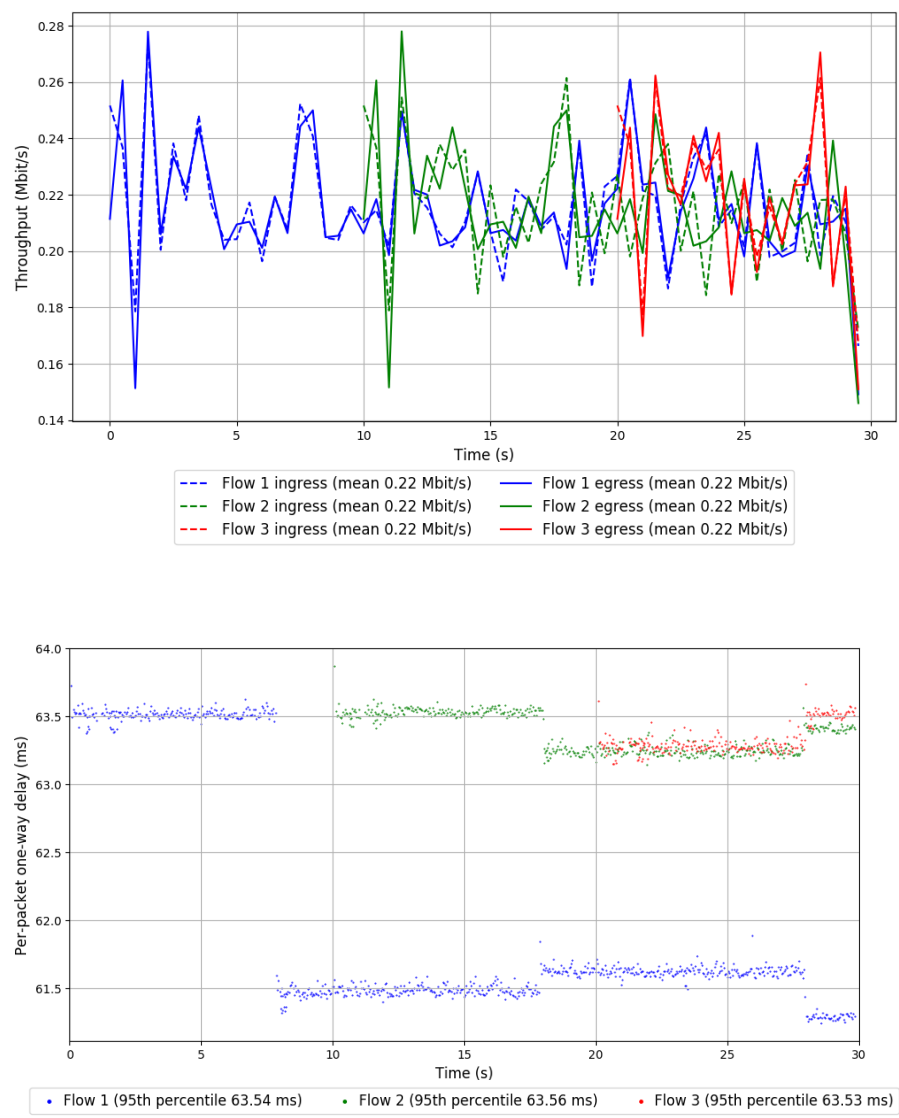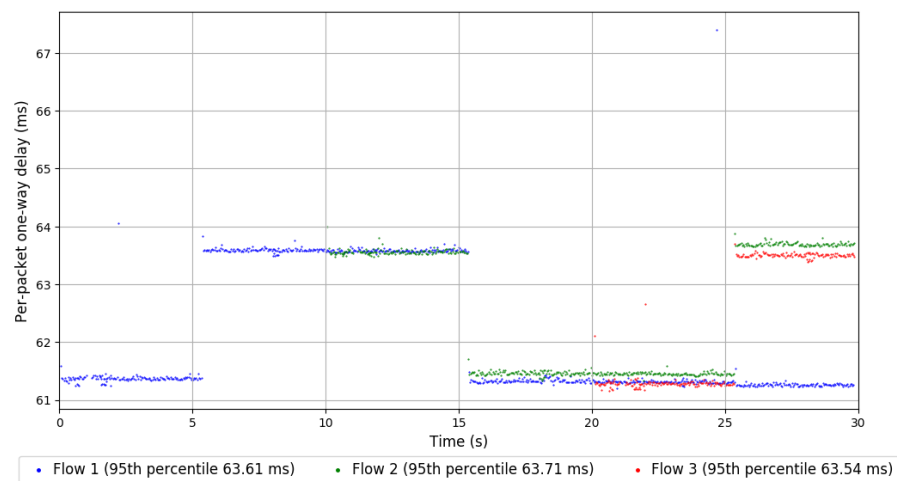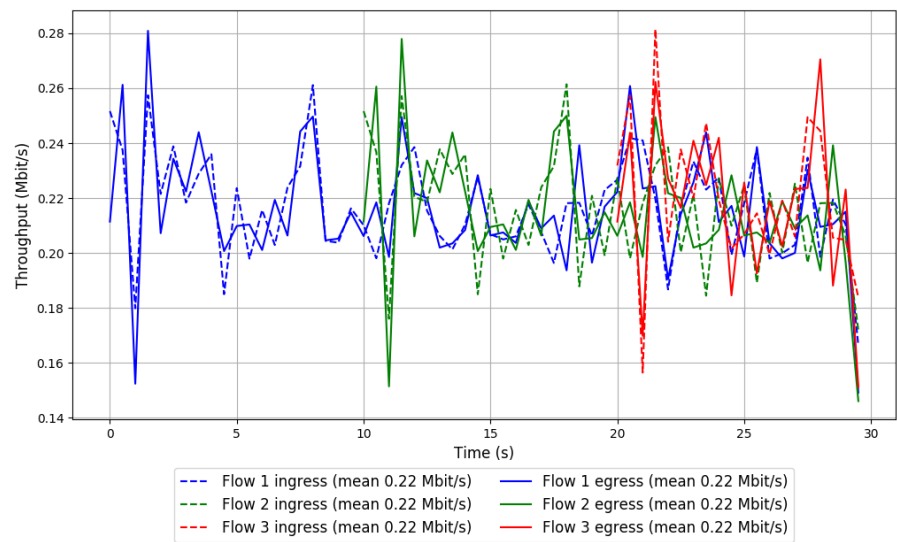
Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 41.08 Mbit/s) --- Flow 1 egress (mean 40.95 Mbit/s)
Flow 2 ingress (mean 36.65 Mbit/s) --- Flow 2 egress (mean 36.46 Mbit/s)
Flow 3 ingress (mean 18.44 Mbit/s) --- Flow 3 egress (mean 16.79 Mbit/s)

Flow 1 (95th percentile 63.31 ms) • Flow 2 (95th percentile 63.54 ms) • Flow 3 (95th percentile 63.52 ms)
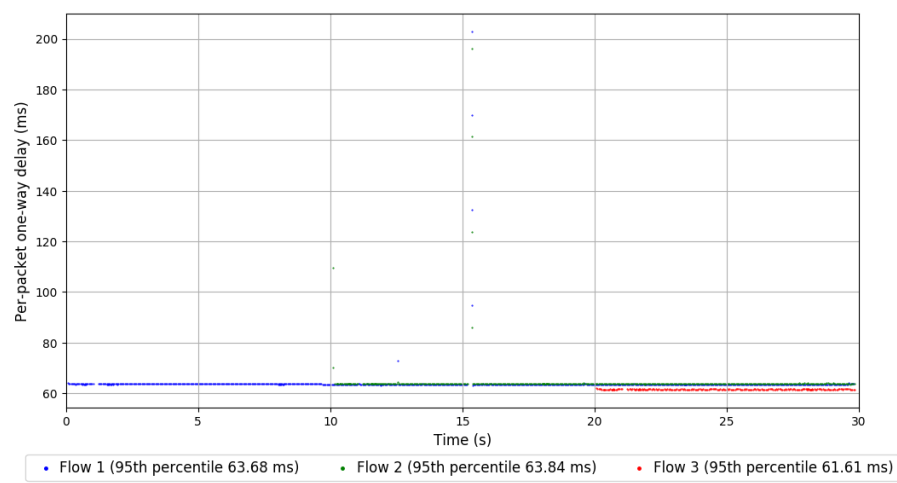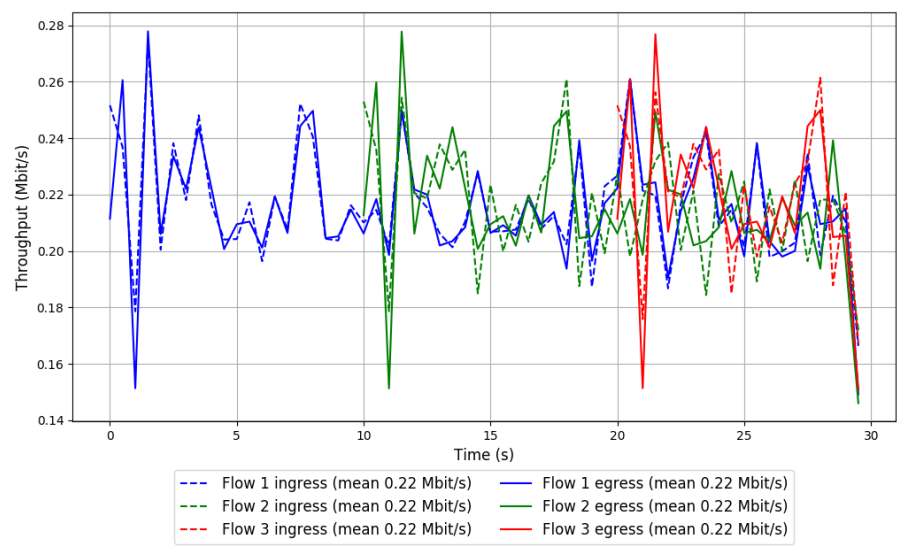
```
Run 1: Statistics of SCReAM

Start at: 2017-12-12 11:38:36
End at: 2017-12-12 11:39:06

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.526 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.524 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.532 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.519 ms
Loss rate: 1.10%
```

Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2017-12-12 11:51:12
End at: 2017-12-12 11:51:42

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.768 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.795 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.674 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.752 ms
Loss rate: 1.10%
```
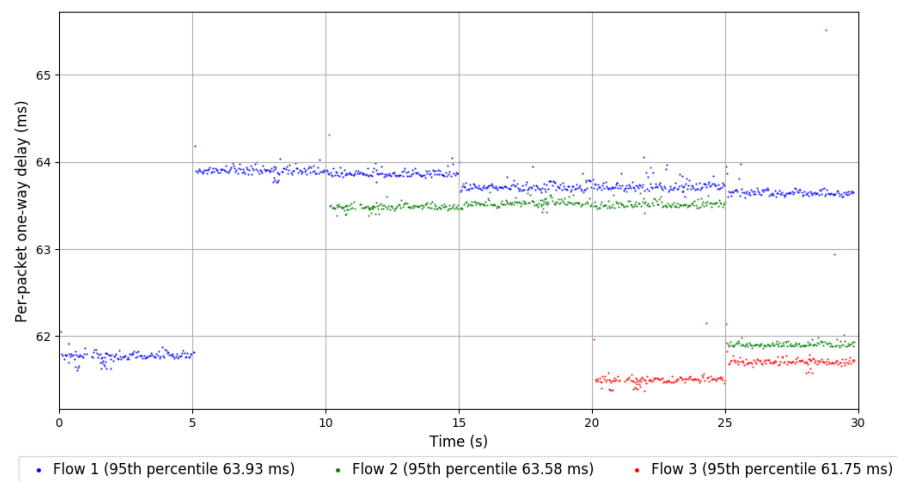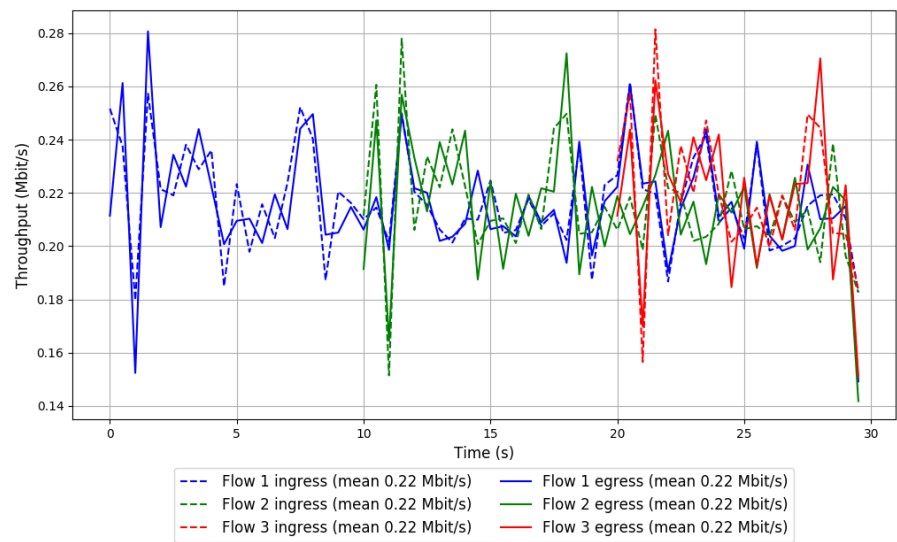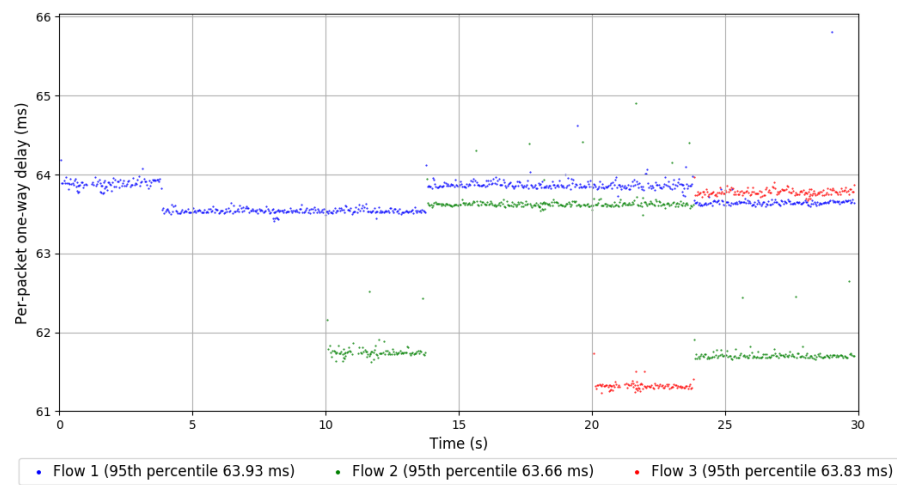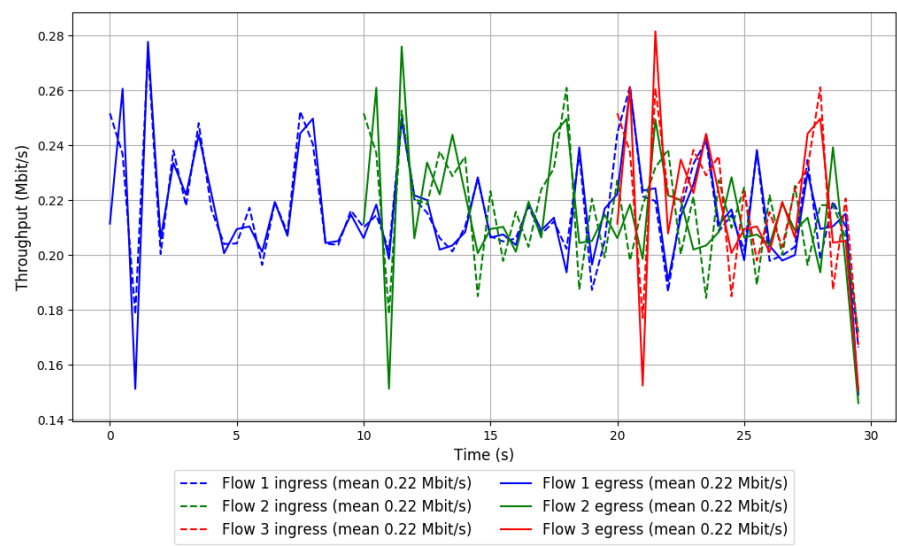
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2017-12-12 12:03:43
End at: 2017-12-12 12:04:13


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.555 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.543 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.565 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.535 ms
Loss rate: 1.10%
```

Run 3: Report of SCReAM — Data Link

109

```
Run 4: Statistics of SCReAM

Start at: 2017-12-12 12:16:06
End at: 2017-12-12 12:16:36


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.678 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.611 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.710 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.536 ms
Loss rate: 1.10%
```
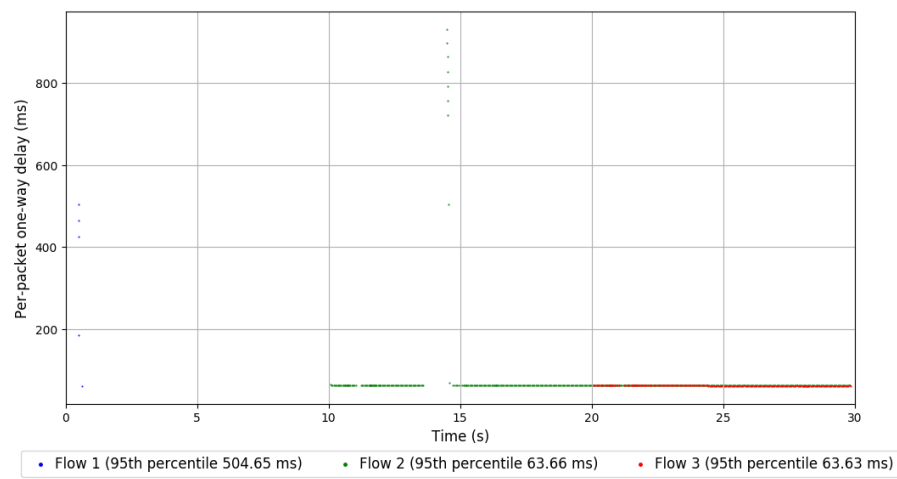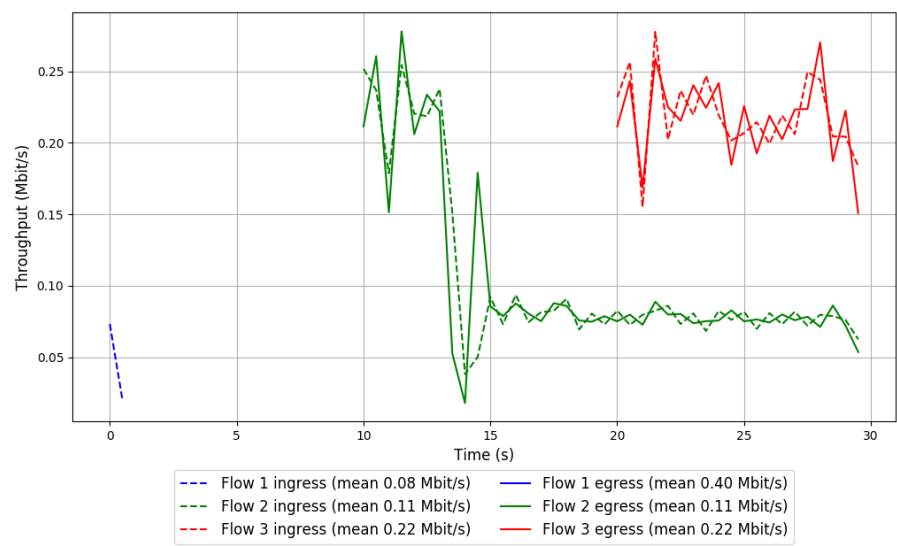
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2017-12-12 12:28:52
End at: 2017-12-12 12:29:22

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.761 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.676 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.838 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.606 ms
Loss rate: 1.10%
```

Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2017-12-12 12:41:36
End at: 2017-12-12 12:42:06


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.907 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.929 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.578 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.746 ms
Loss rate: 1.10%
```
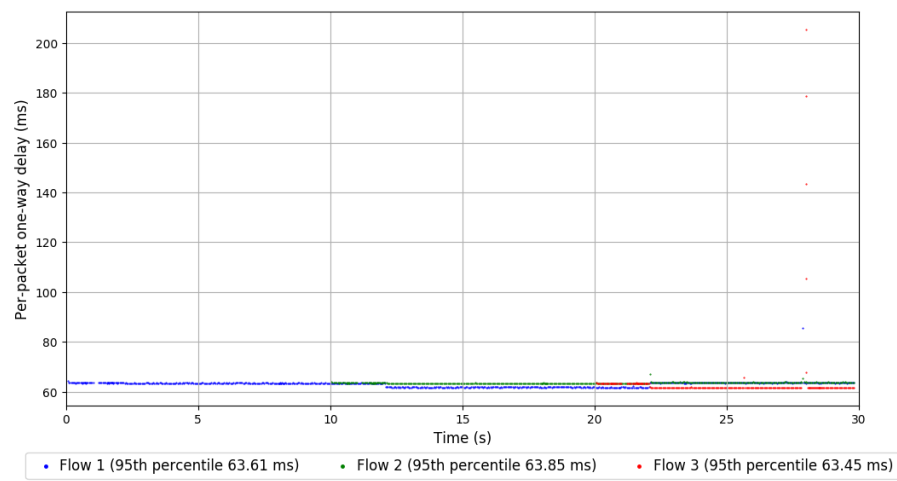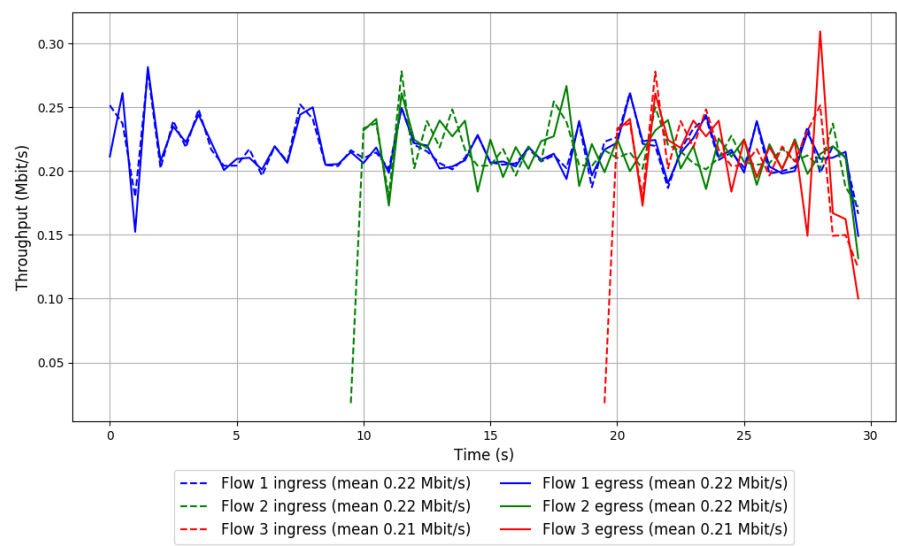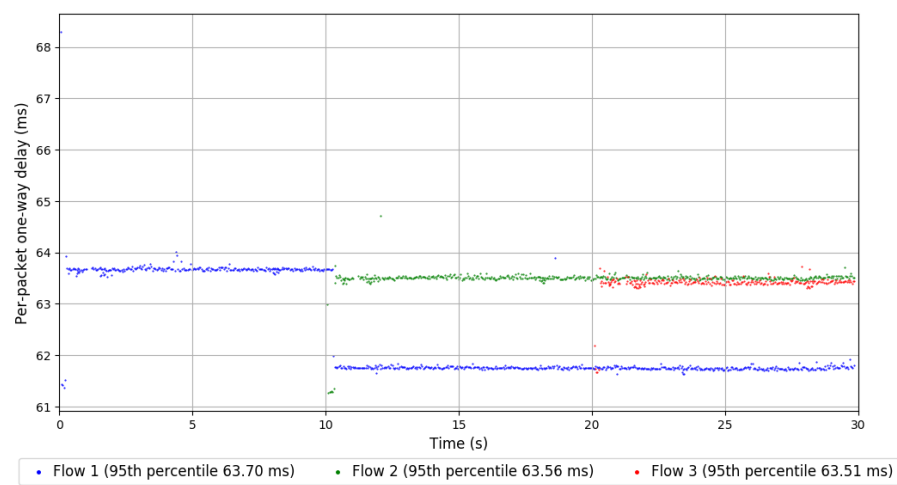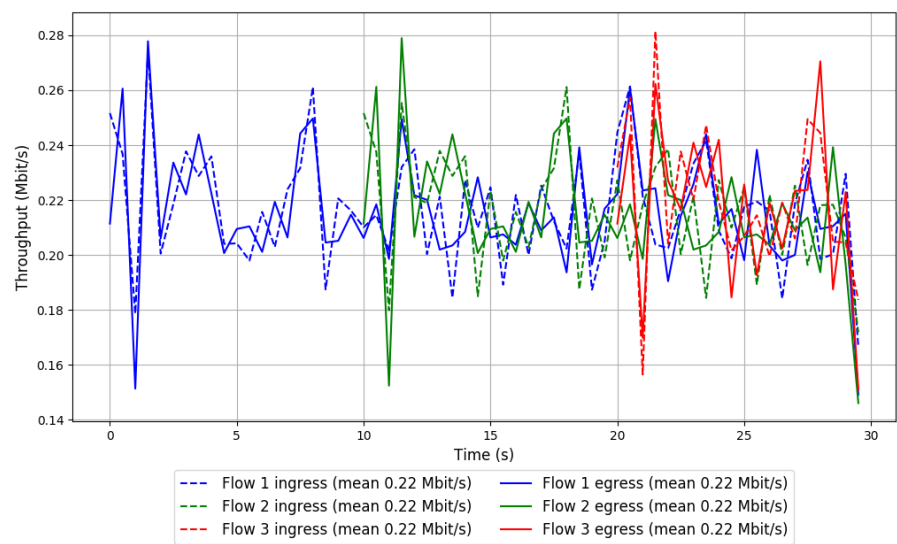
Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2017-12-12 12:54:28
End at: 2017-12-12 12:54:58


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.913 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.933 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.660 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.830 ms
Loss rate: 1.10%
```
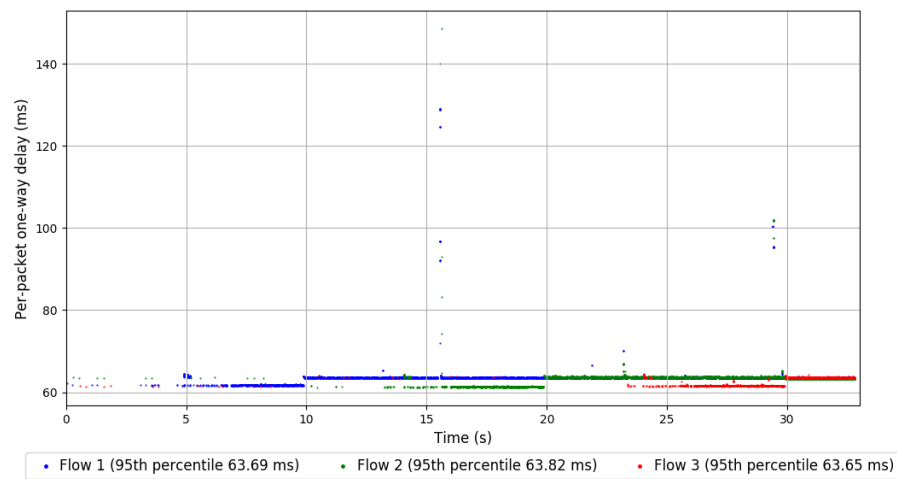
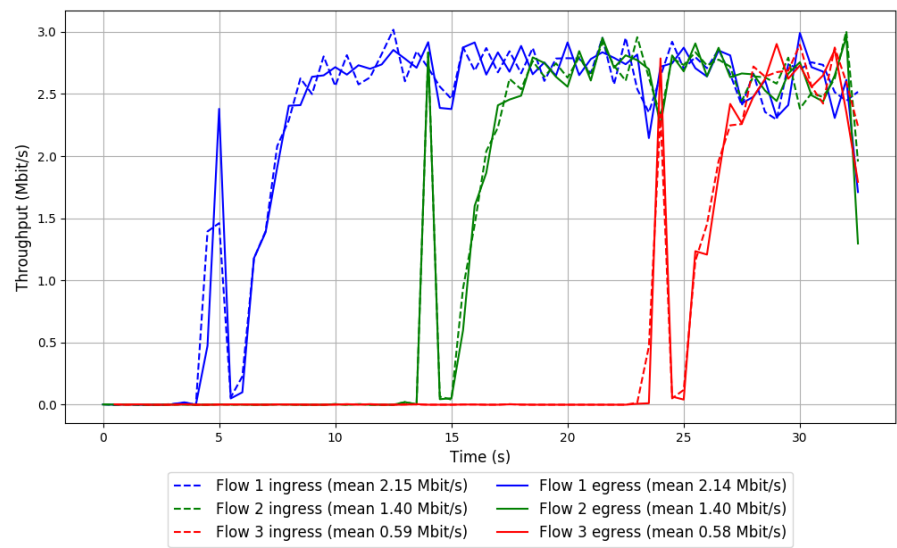# Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2017-12-12 13:06:57
End at: 2017-12-12 13:07:27


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 63.657 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 504.650 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 63.658 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.627 ms
Loss rate: 1.10%
```

Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2017-12-12 13:19:39
End at: 2017-12-12 13:20:09

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.815 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.613 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.849 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 63.454 ms
Loss rate: 0.85%
```
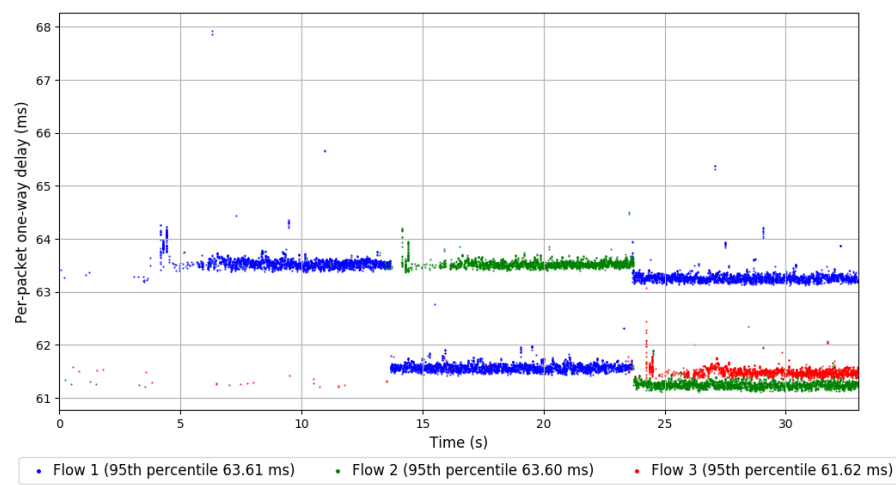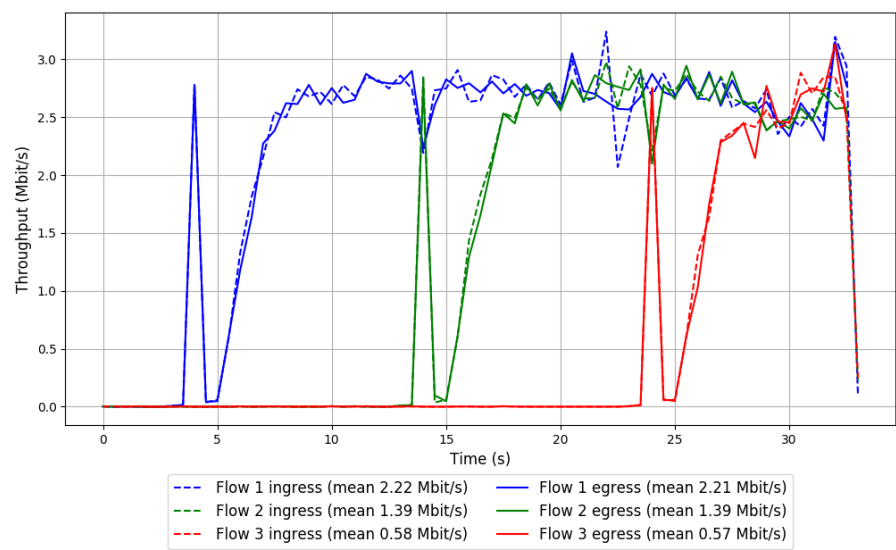
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2017-12-12 13:32:11
End at: 2017-12-12 13:32:41


# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.686 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.700 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.562 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.510 ms
Loss rate: 1.10%
```

Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2017-12-12 11:37:54
End at: 2017-12-12 11:38:24

# Below is generated by plot.py at 2017-12-12 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 63.772 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 63.688 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 63.818 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 63.652 ms
Loss rate: 2.44%
```
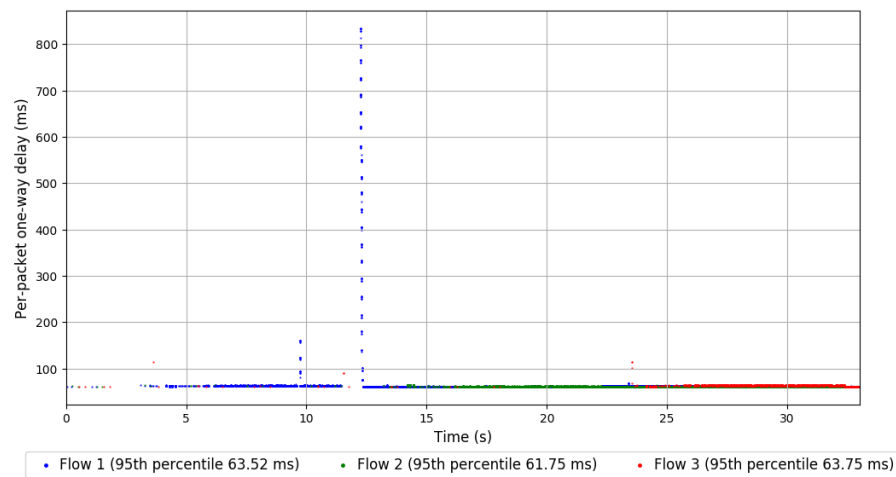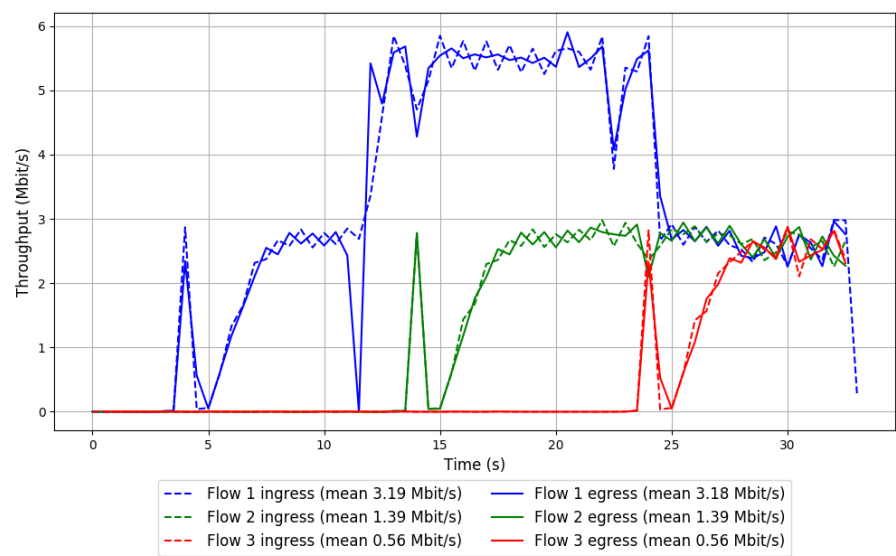
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-12-12 11:50:31
End at: 2017-12-12 11:51:01

# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 63.600 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 63.612 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 63.602 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 61.617 ms
Loss rate: 1.25%
```
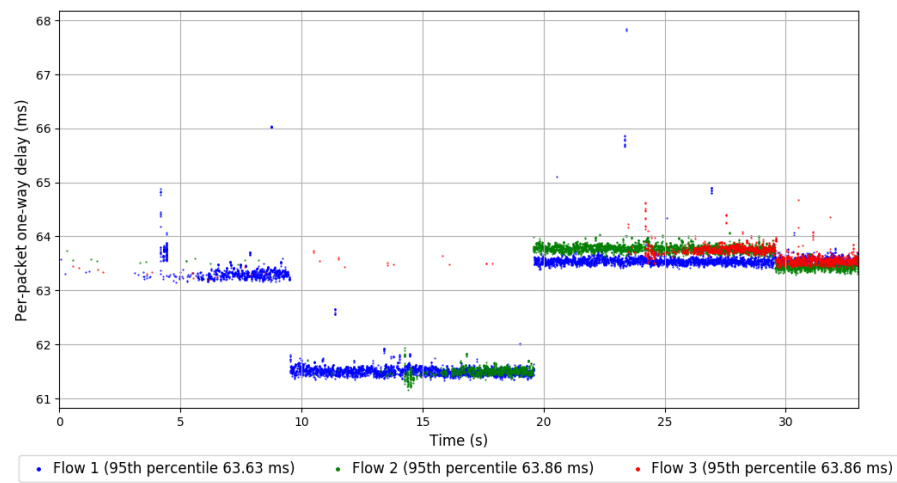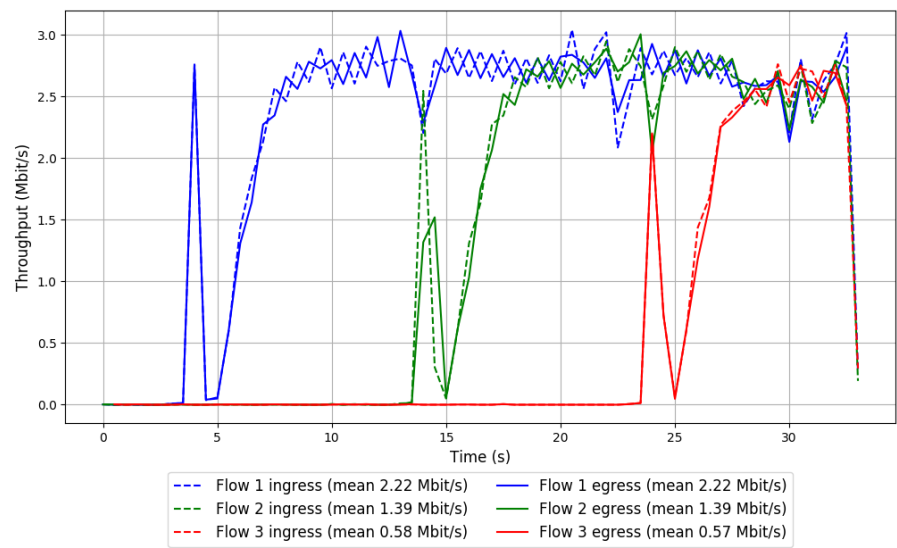
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2017-12-12 12:03:02
End at: 2017-12-12 12:03:32

# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 63.602 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 63.523 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 61.750 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 63.751 ms
Loss rate: 1.51%
```
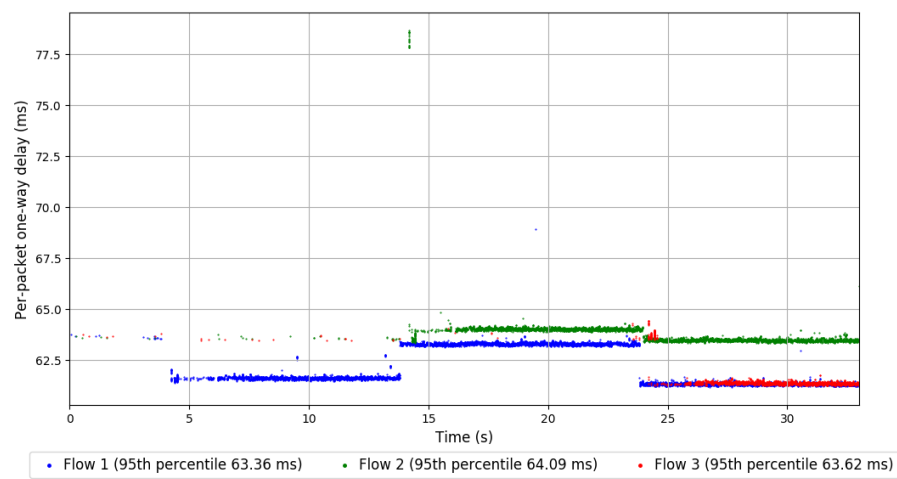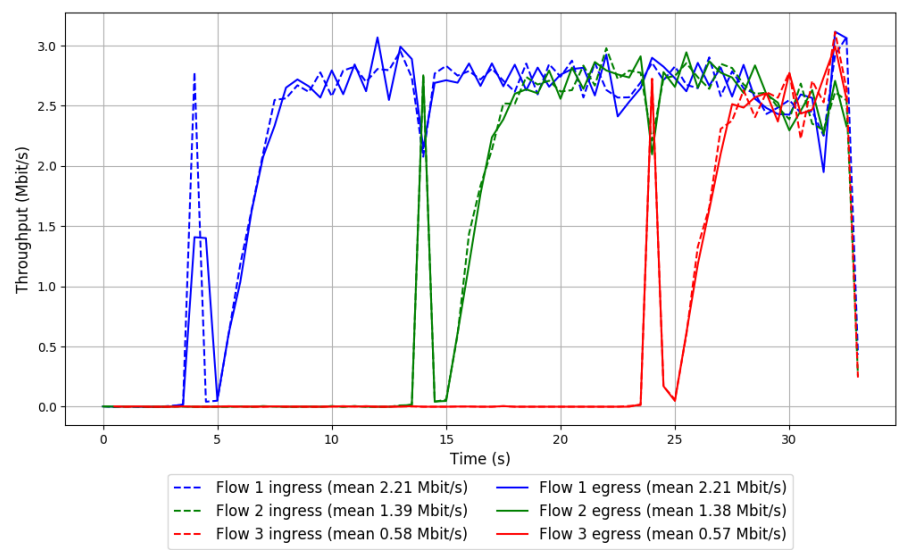
Run 3: Report of WebRTC media — Data Link

- - - - Flow 1 ingress (mean 3.19 Mbit/s) —— Flow 1 egress (mean 3.18 Mbit/s)
- - - - Flow 2 ingress (mean 1.39 Mbit/s) —— Flow 2 egress (mean 1.39 Mbit/s)
- - - - Flow 3 ingress (mean 0.56 Mbit/s) —— Flow 3 egress (mean 0.56 Mbit/s)

• Flow 1 (95th percentile 63.52 ms)   • Flow 2 (95th percentile 61.75 ms)   • Flow 3 (95th percentile 63.75 ms)

```
Run 4: Statistics of WebRTC media

Start at: 2017-12-12 12:15:25
End at: 2017-12-12 12:15:55


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.15 Mbit/s
95th percentile per-packet one-way delay: 63.828 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 63.631 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 63.862 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 63.859 ms
Loss rate: 1.58%
```
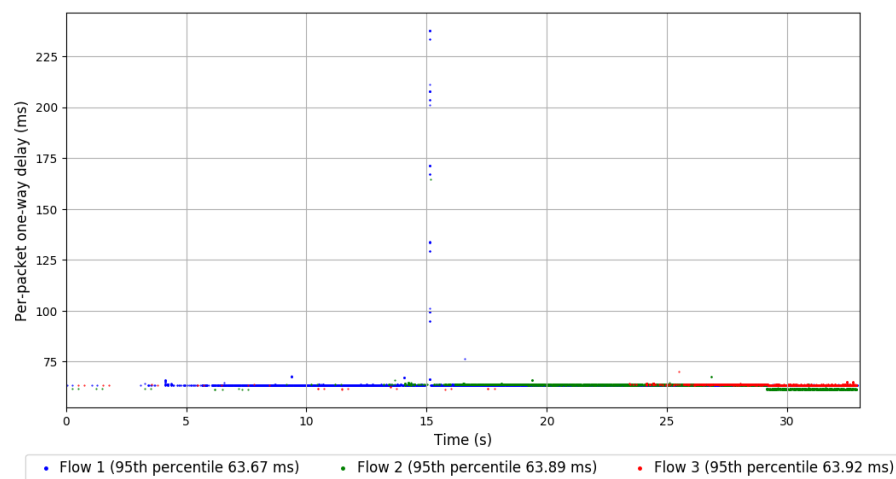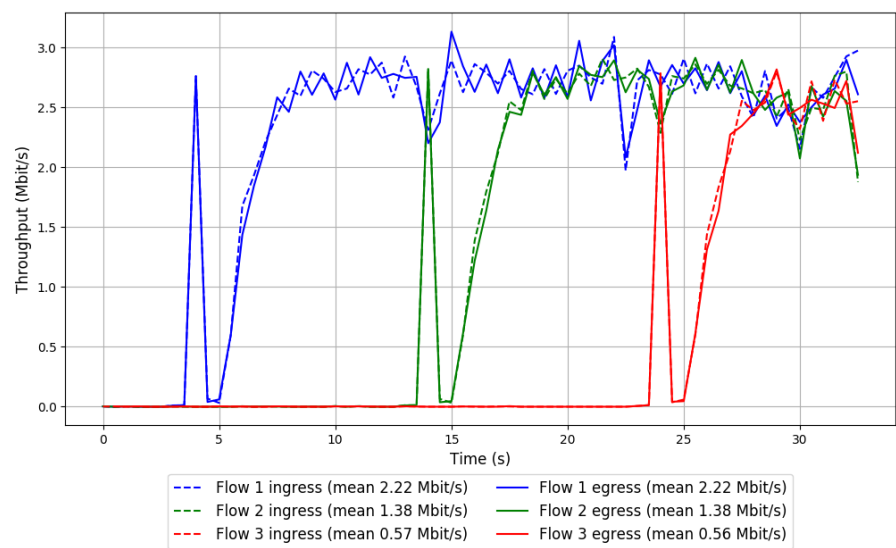
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2017-12-12 12:28:11
End at: 2017-12-12 12:28:41


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 64.043 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 63.360 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 64.095 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 63.623 ms
Loss rate: 1.83%
```
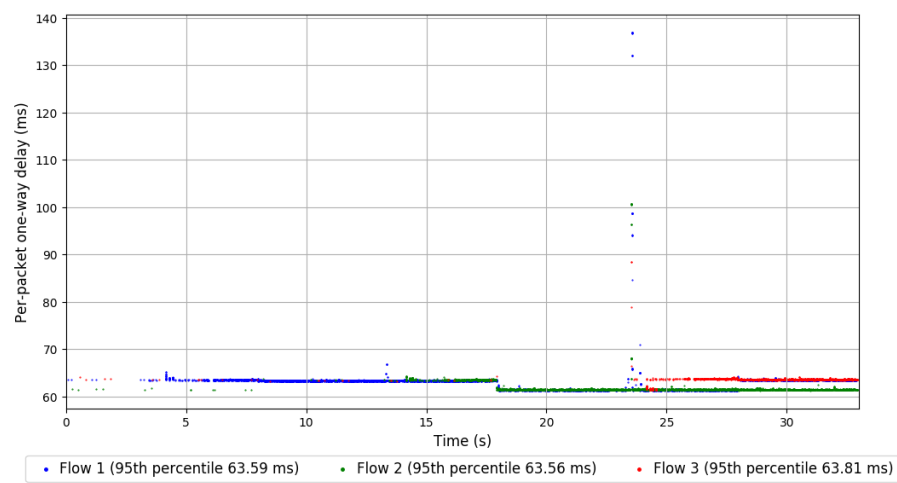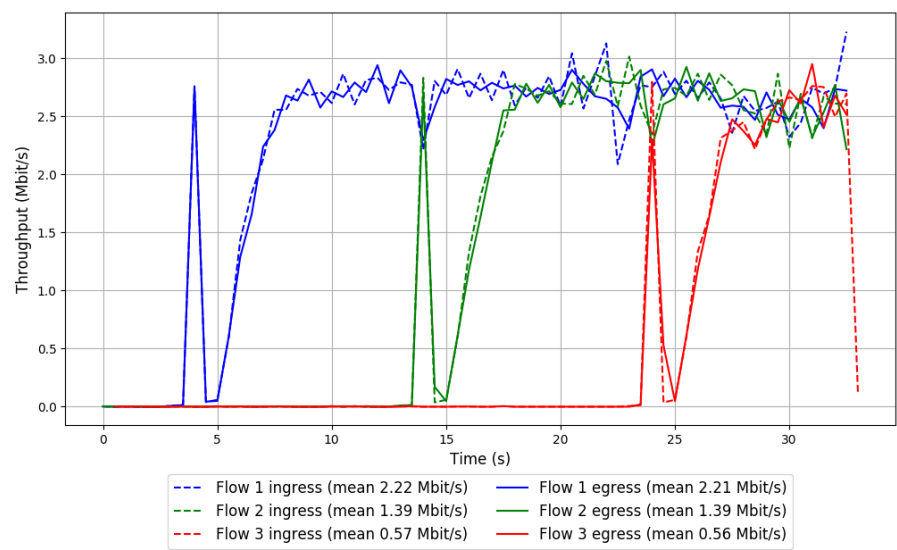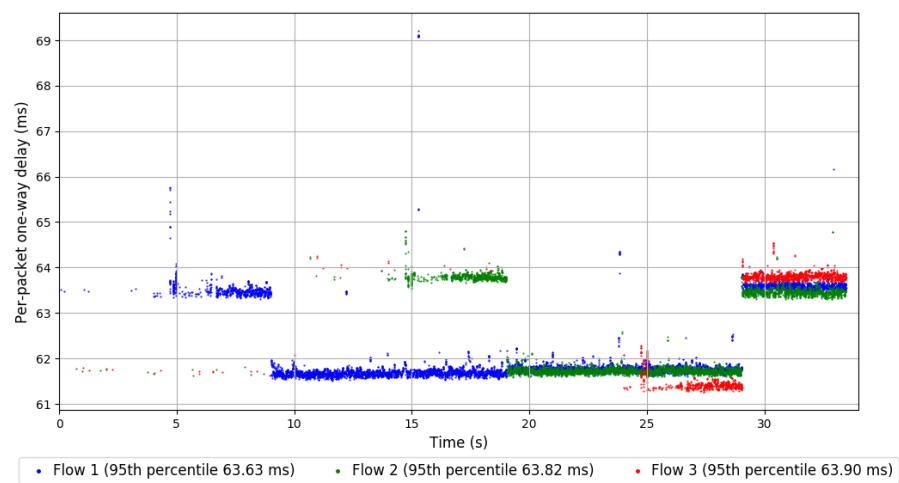
Run 5: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.21 Mbit/s)   Flow 1 egress (mean 2.21 Mbit/s)
Flow 2 ingress (mean 1.39 Mbit/s)   Flow 2 egress (mean 1.38 Mbit/s)
Flow 3 ingress (mean 0.58 Mbit/s)   Flow 3 egress (mean 0.57 Mbit/s)

Flow 1 (95th percentile 63.36 ms)   Flow 2 (95th percentile 64.09 ms)   Flow 3 (95th percentile 63.62 ms)

```
Run 6: Statistics of WebRTC media

Start at: 2017-12-12 12:40:55
End at: 2017-12-12 12:41:25


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 63.859 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 63.671 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 63.894 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 63.925 ms
Loss rate: 1.88%
```
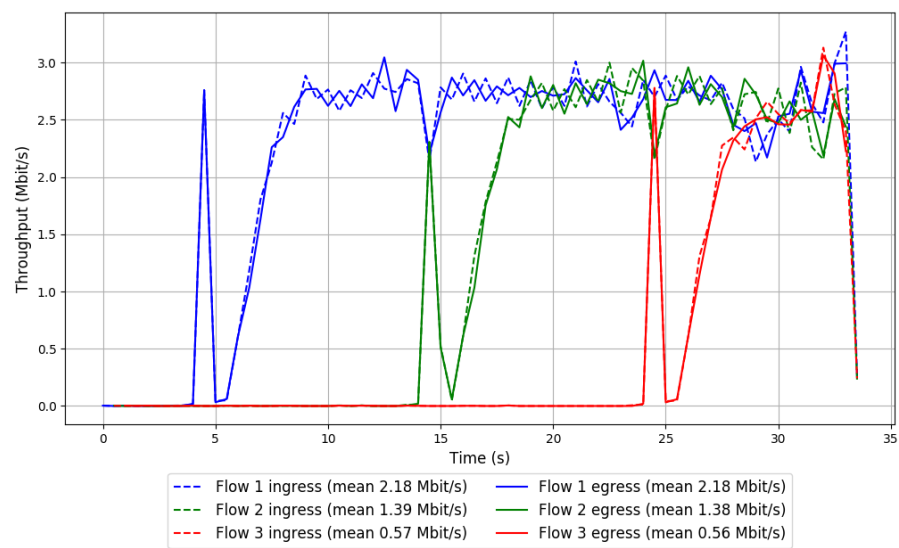
Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-12-12 12:53:47
End at: 2017-12-12 12:54:17


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 63.707 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 63.591 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 63.563 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 63.815 ms
Loss rate: 1.96%
```
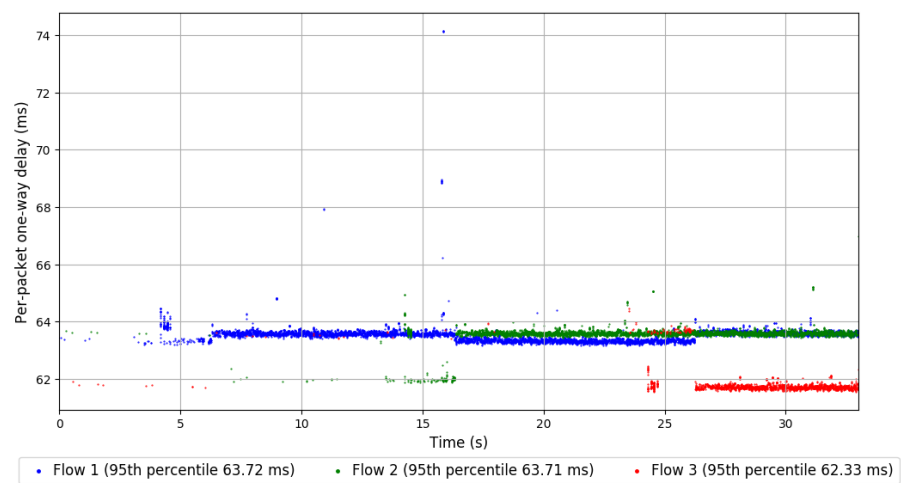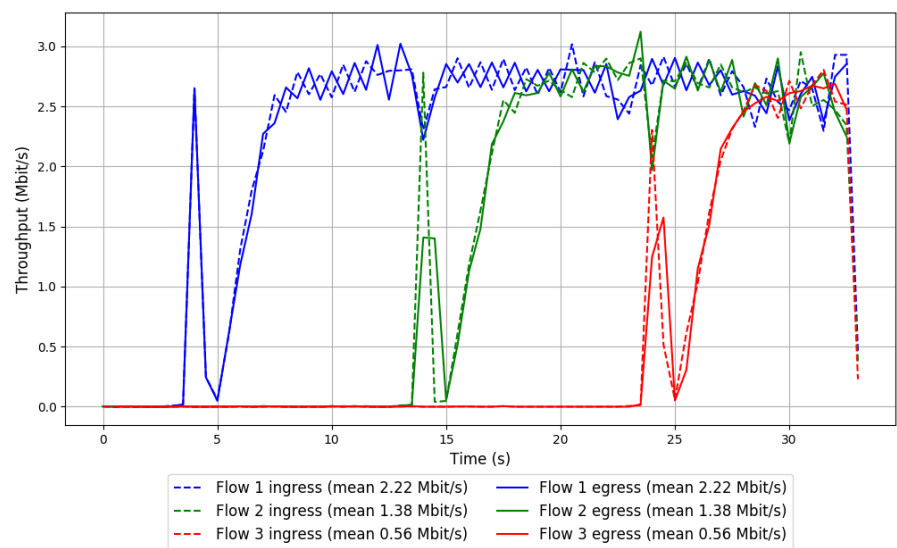
Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2017-12-12 13:06:16
End at: 2017-12-12 13:06:46


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 63.828 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 63.632 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 63.822 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 63.903 ms
Loss rate: 1.78%
```
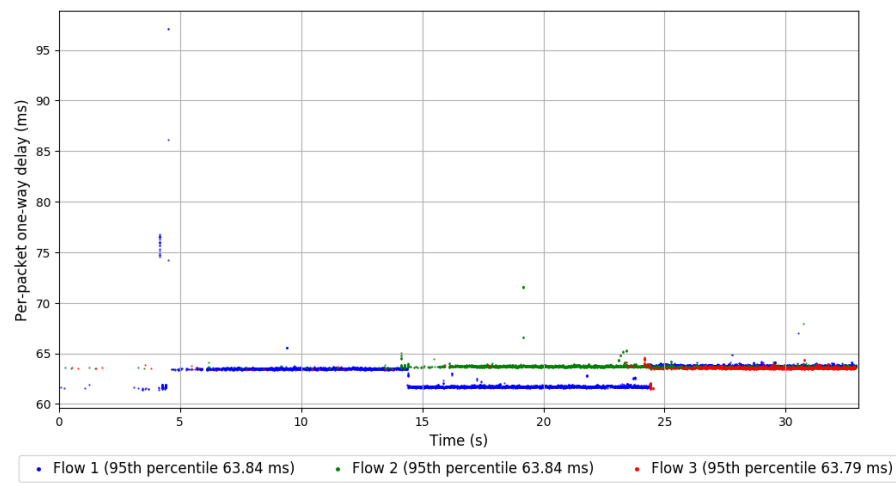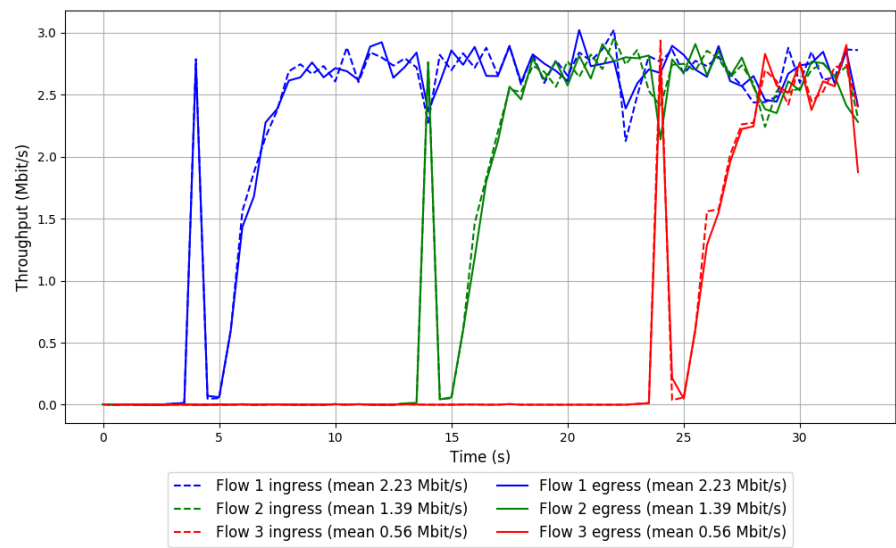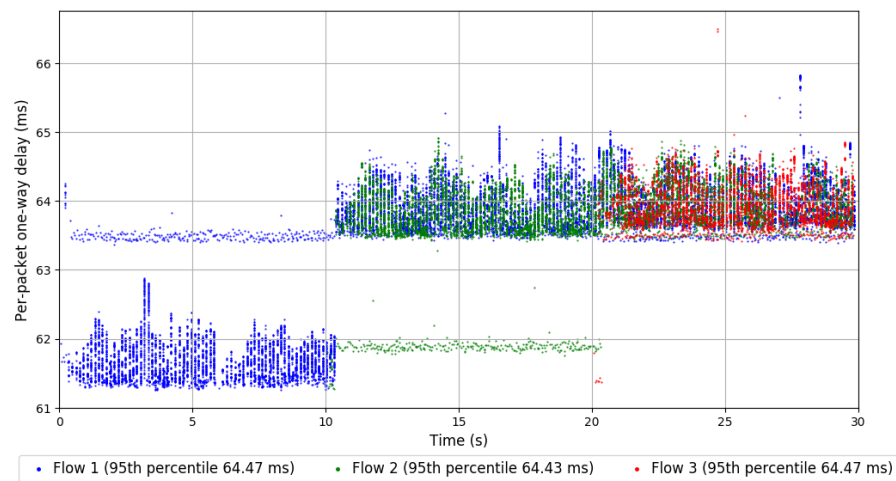
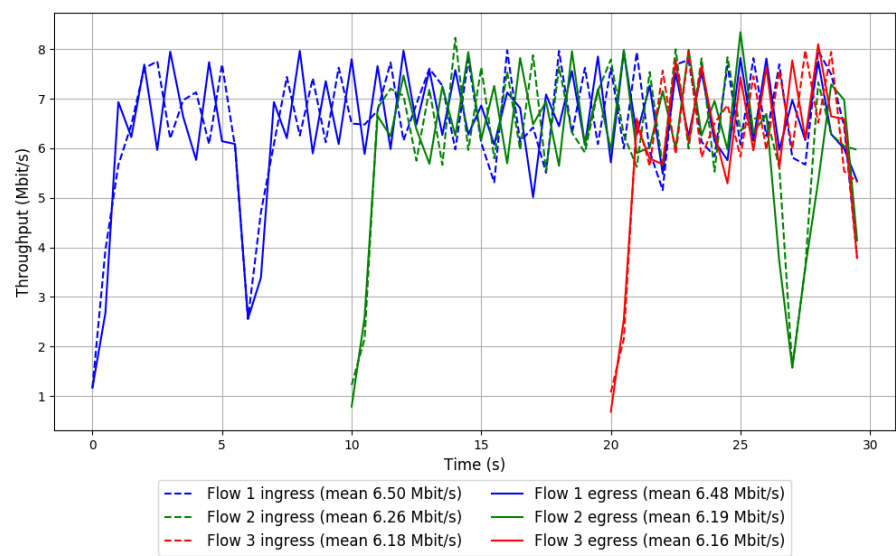Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2017-12-12 13:18:58
End at: 2017-12-12 13:19:28

# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 63.706 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 63.717 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 63.712 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 62.332 ms
Loss rate: 1.35%
```

Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-12-12 13:31:30
End at: 2017-12-12 13:32:00

# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.15 Mbit/s
95th percentile per-packet one-way delay: 63.839 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 63.841 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 63.841 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 63.794 ms
Loss rate: 2.00%
```
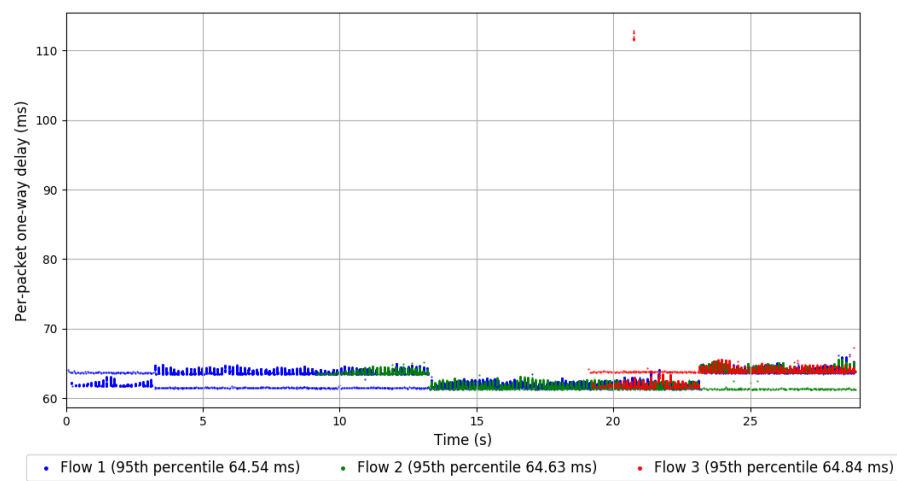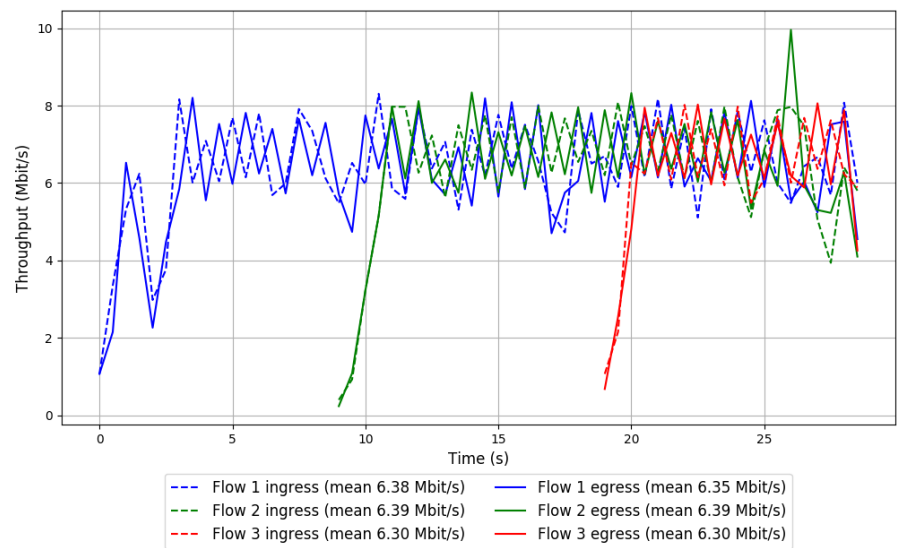
Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2017-12-12 11:36:31
End at: 2017-12-12 11:37:01

# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.60 Mbit/s
95th percentile per-packet one-way delay: 64.456 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 64.467 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 6.19 Mbit/s
95th percentile per-packet one-way delay: 64.428 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 6.16 Mbit/s
95th percentile per-packet one-way delay: 64.472 ms
Loss rate: 1.75%
```

Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-12-12 11:49:07
End at: 2017-12-12 11:49:37


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.86 Mbit/s
95th percentile per-packet one-way delay: 64.612 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 64.538 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 64.628 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 64.836 ms
Loss rate: 1.39%
```
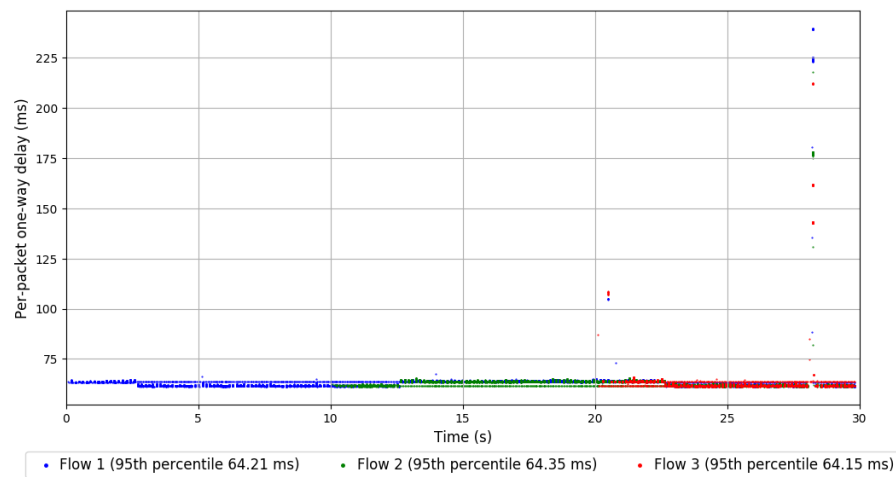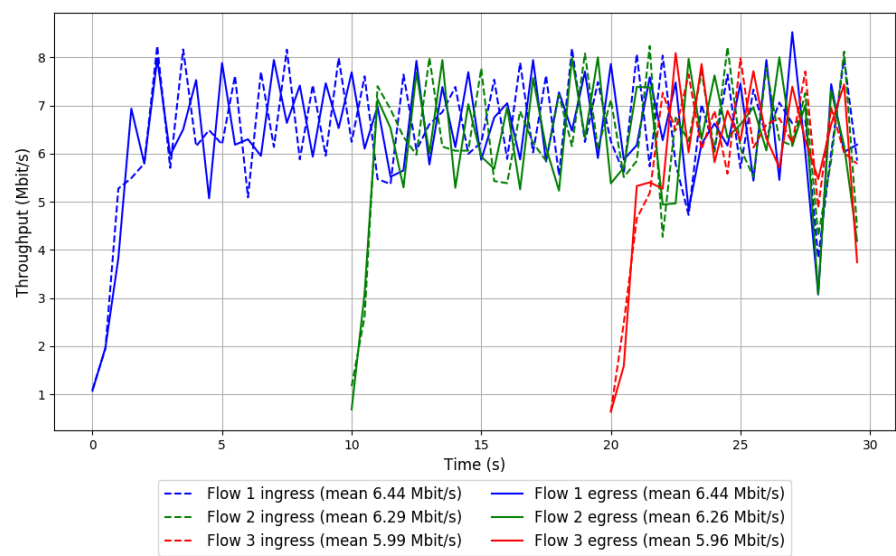
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-12-12 12:01:39
End at: 2017-12-12 12:02:09


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.54 Mbit/s
95th percentile per-packet one-way delay: 64.261 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 64.211 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 64.350 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 5.96 Mbit/s
95th percentile per-packet one-way delay: 64.152 ms
Loss rate: 1.75%
```
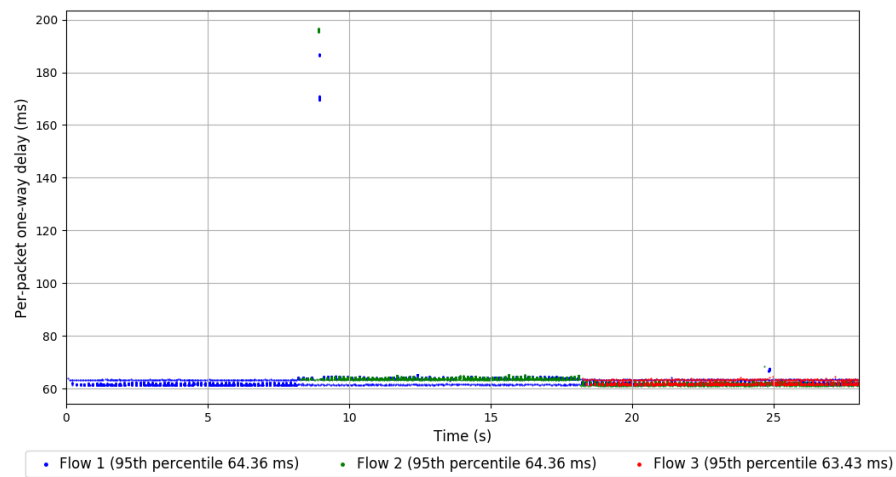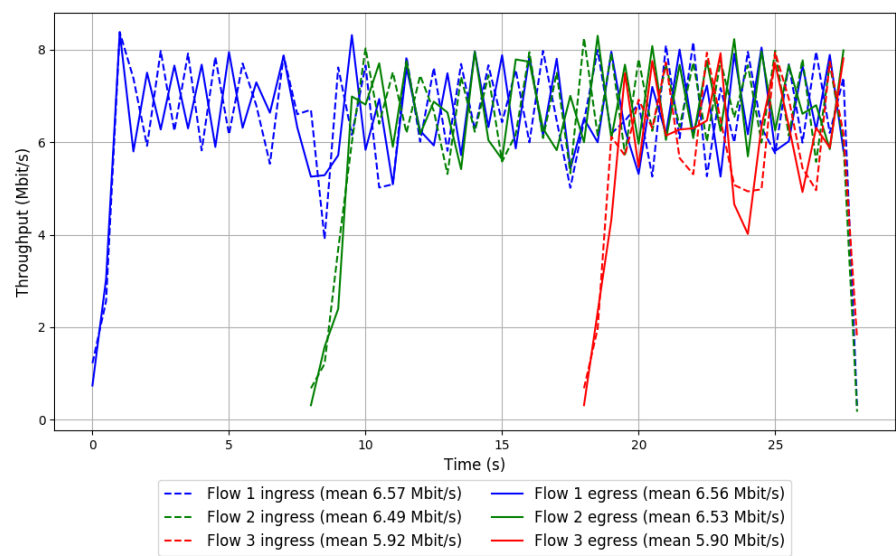
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2017-12-12 12:14:01
End at: 2017-12-12 12:14:31


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.23 Mbit/s
95th percentile per-packet one-way delay: 64.320 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 64.364 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 64.358 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 5.90 Mbit/s
95th percentile per-packet one-way delay: 63.432 ms
Loss rate: 1.70%
```
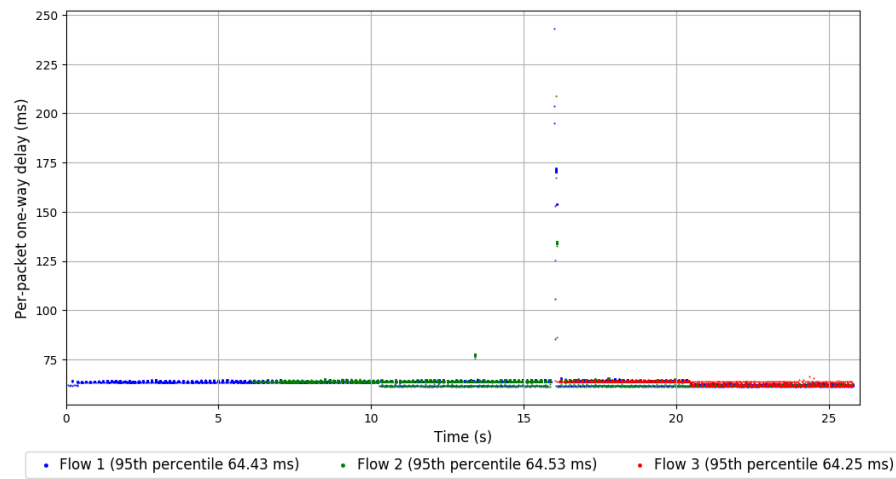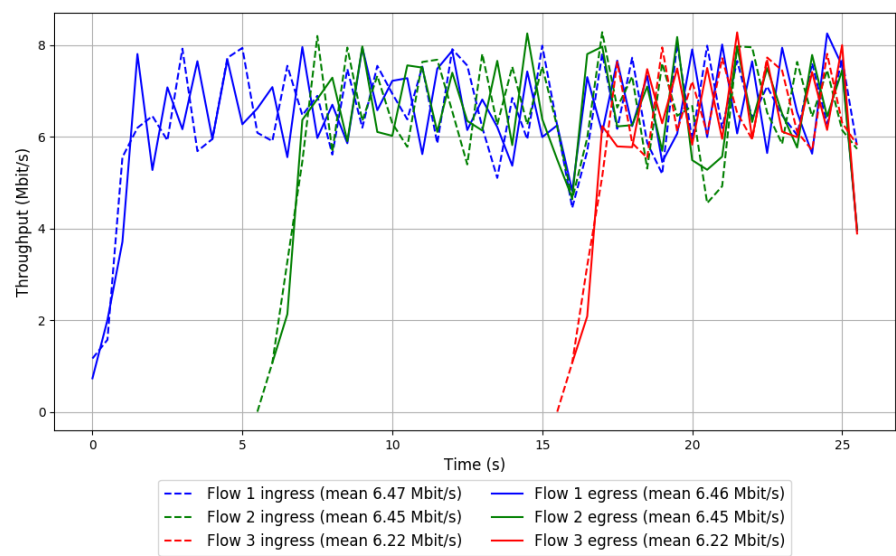
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2017-12-12 12:26:47
End at: 2017-12-12 12:27:17


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.76 Mbit/s
95th percentile per-packet one-way delay: 64.447 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 64.427 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 6.45 Mbit/s
95th percentile per-packet one-way delay: 64.535 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 6.22 Mbit/s
95th percentile per-packet one-way delay: 64.251 ms
Loss rate: 1.57%
```
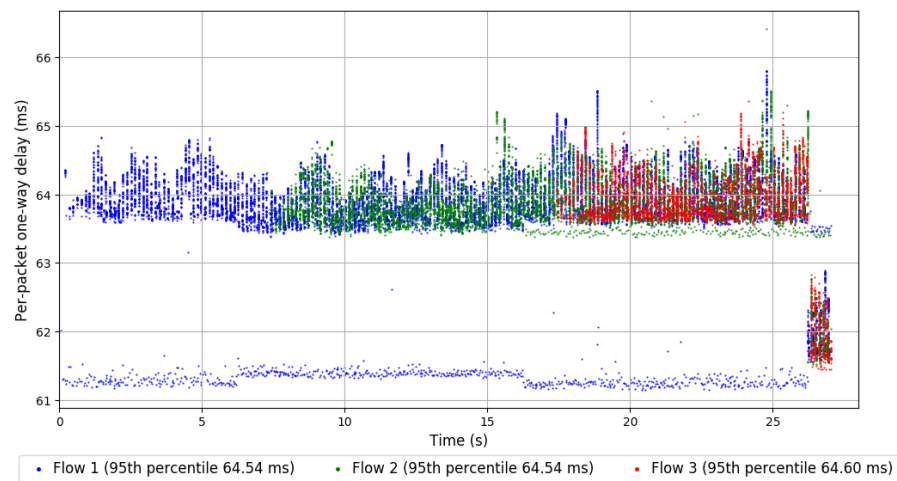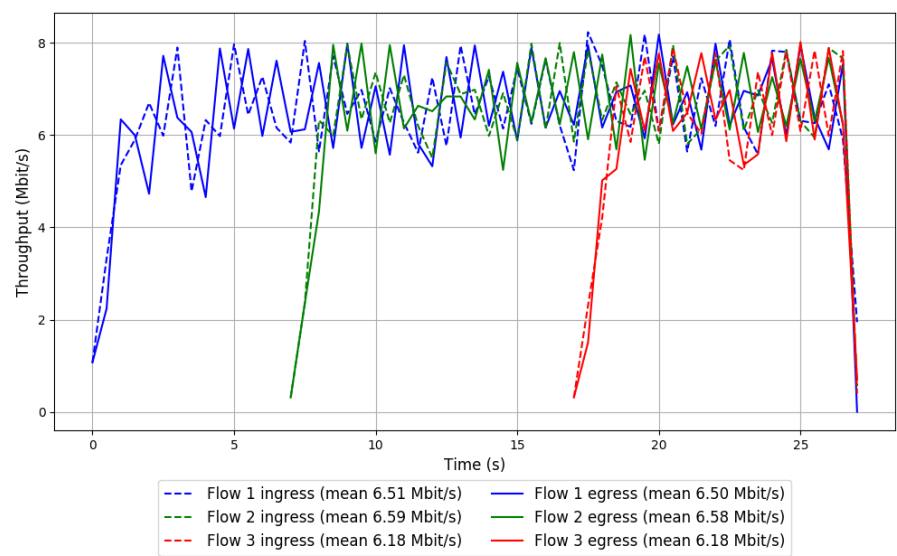
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2017-12-12 12:39:32
End at: 2017-12-12 12:40:02


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.53 Mbit/s
95th percentile per-packet one-way delay: 64.552 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 64.544 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 6.58 Mbit/s
95th percentile per-packet one-way delay: 64.543 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 6.18 Mbit/s
95th percentile per-packet one-way delay: 64.603 ms
Loss rate: 1.09%
```
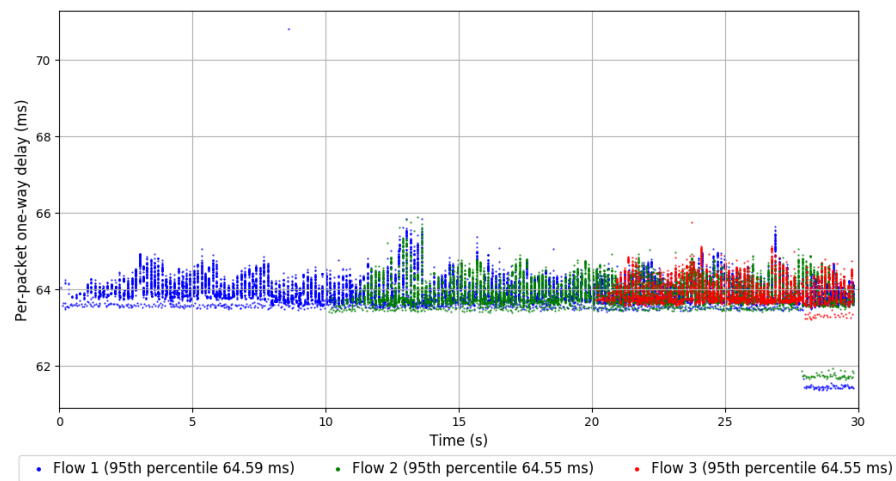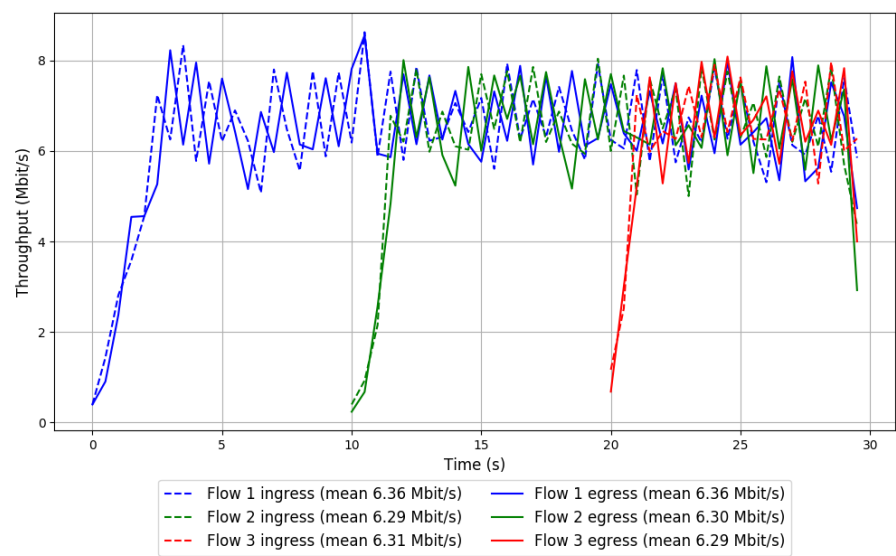
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2017-12-12 12:52:23
End at: 2017-12-12 12:52:53


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.58 Mbit/s
95th percentile per-packet one-way delay: 64.573 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 6.36 Mbit/s
95th percentile per-packet one-way delay: 64.589 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 64.548 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 6.29 Mbit/s
95th percentile per-packet one-way delay: 64.552 ms
Loss rate: 1.83%
```
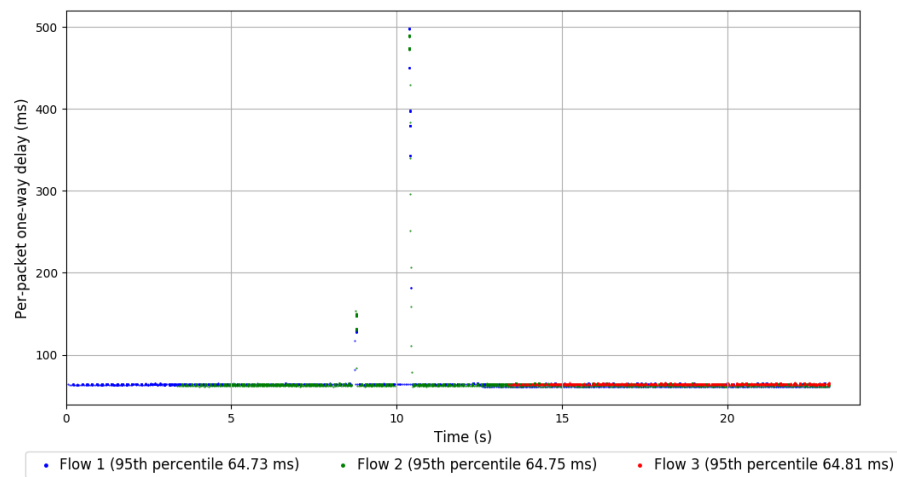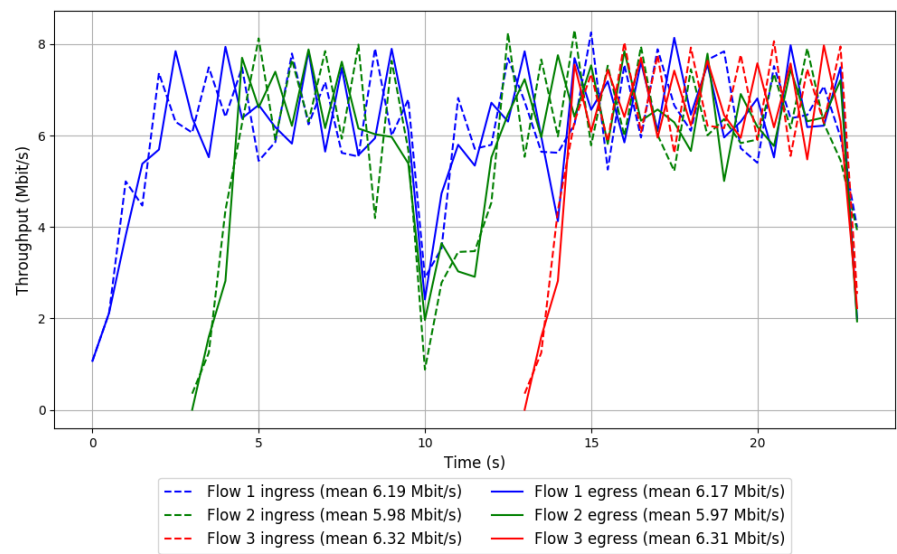
Run 7: Report of Sprout — Data Link

Run 8: Statistics of Sprout

Start at: 2017-12-12 13:04:52
End at: 2017-12-12 13:05:22

Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2017-12-12 13:17:35
End at: 2017-12-12 13:18:05


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.32 Mbit/s
95th percentile per-packet one-way delay: 64.282 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 64.244 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 64.345 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 6.22 Mbit/s
95th percentile per-packet one-way delay: 64.271 ms
Loss rate: 1.26%
```
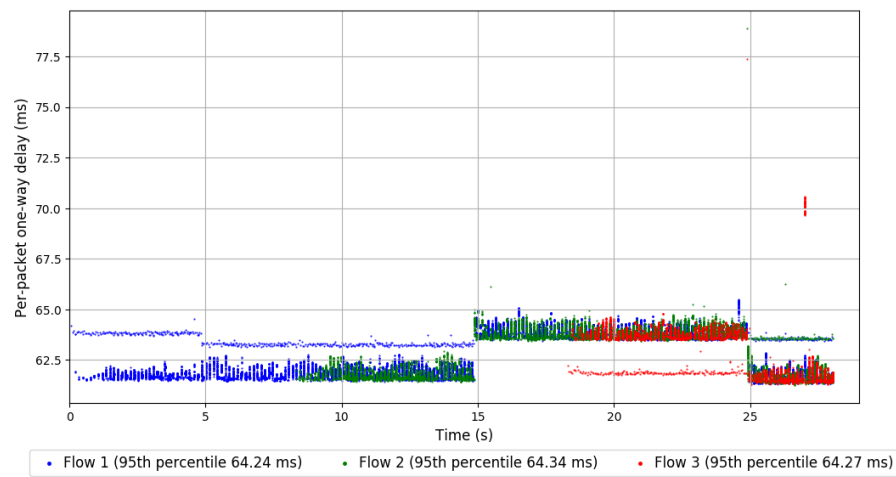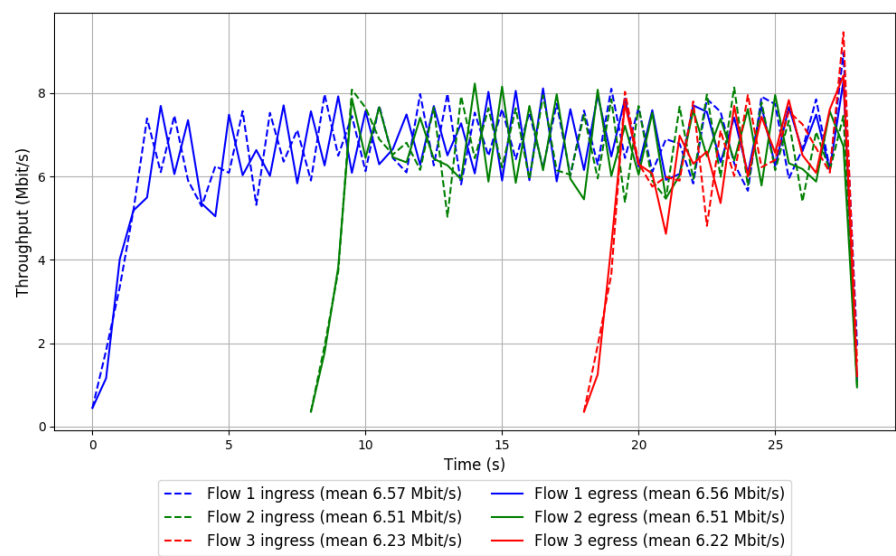
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-12-12 13:30:07
End at: 2017-12-12 13:30:37


# Below is generated by plot.py at 2017-12-12 16:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.78 Mbit/s
95th percentile per-packet one-way delay: 64.399 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 64.370 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 64.396 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 6.10 Mbit/s
95th percentile per-packet one-way delay: 64.582 ms
Loss rate: 1.66%
```
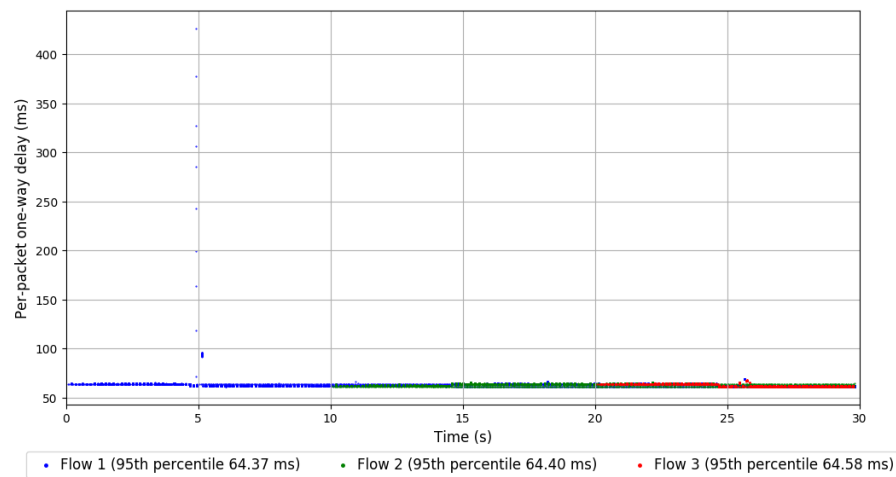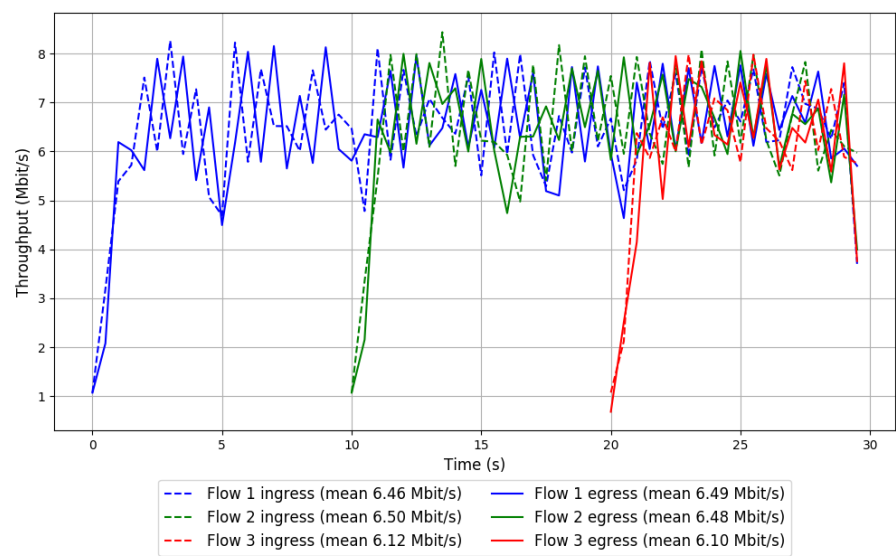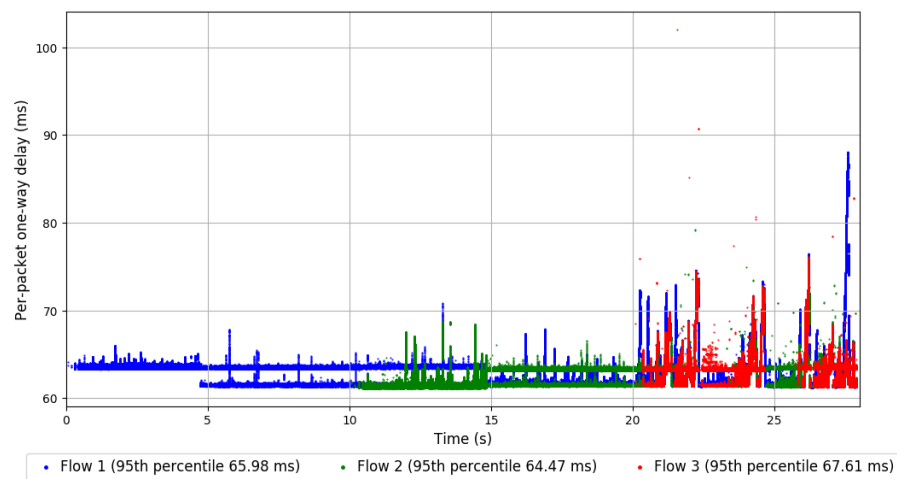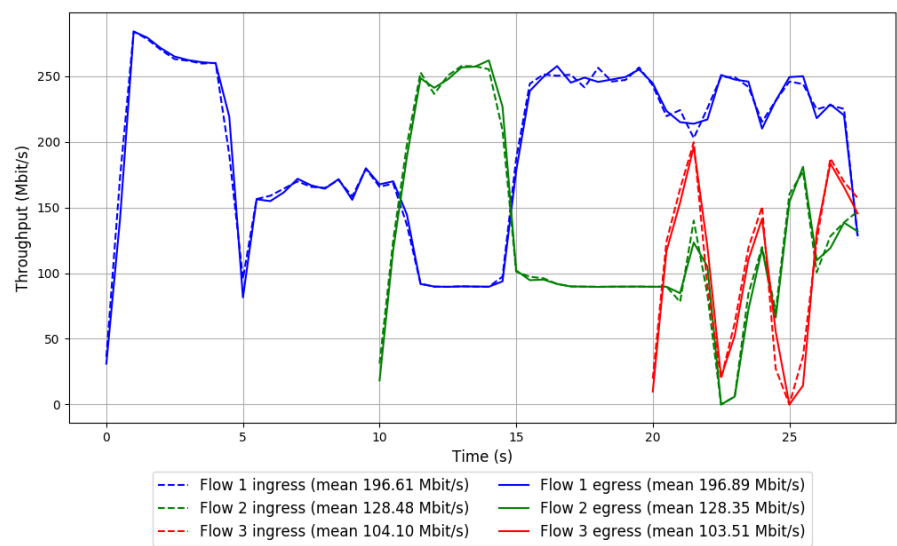
Run 10: Report of Sprout — Data Link

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

Start at: 2017-12-12 11:41:15
End at: 2017-12-12 11:41:45

# Below is generated by plot.py at 2017-12-12 16:26:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.13 Mbit/s
95th percentile per-packet one-way delay: 65.749 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 196.89 Mbit/s
95th percentile per-packet one-way delay: 65.980 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 128.35 Mbit/s
95th percentile per-packet one-way delay: 64.469 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 103.51 Mbit/s
95th percentile per-packet one-way delay: 67.606 ms
Loss rate: 2.12%
```

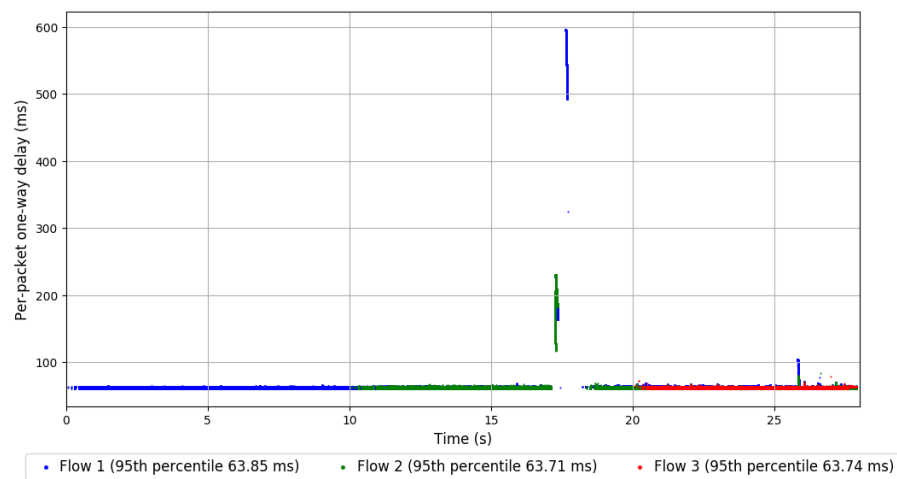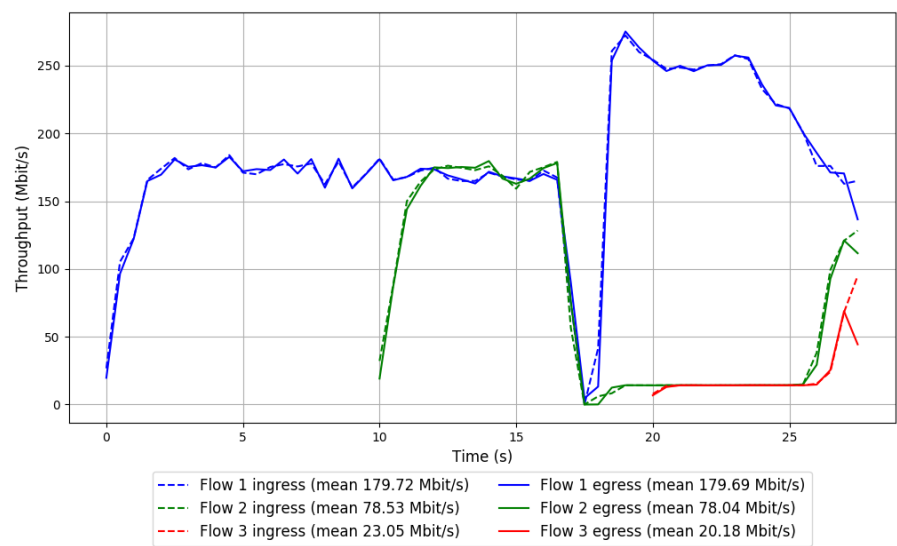Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2017-12-12 11:53:52
End at: 2017-12-12 11:54:22

# Below is generated by plot.py at 2017-12-12 16:26:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 235.32 Mbit/s
95th percentile per-packet one-way delay: 63.818 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 179.69 Mbit/s
95th percentile per-packet one-way delay: 63.850 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 78.04 Mbit/s
95th percentile per-packet one-way delay: 63.712 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 20.18 Mbit/s
95th percentile per-packet one-way delay: 63.741 ms
Loss rate: 13.89%
```

Run 2: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 179.72 Mbit/s) —— Flow 1 egress (mean 179.69 Mbit/s)
- - - Flow 2 ingress (mean 78.53 Mbit/s) —— Flow 2 egress (mean 78.04 Mbit/s)
- - - Flow 3 ingress (mean 23.05 Mbit/s) —— Flow 3 egress (mean 20.18 Mbit/s)

• Flow 1 (95th percentile 63.85 ms)   • Flow 2 (95th percentile 63.71 ms)   • Flow 3 (95th percentile 63.74 ms)
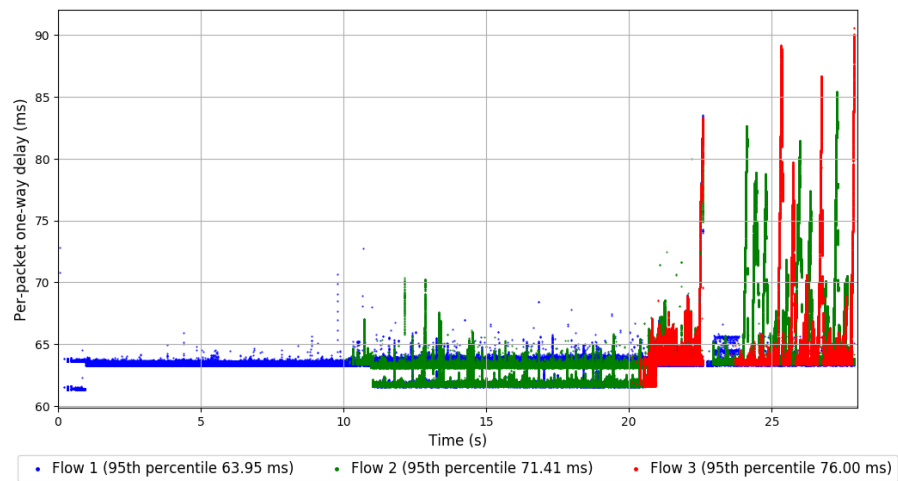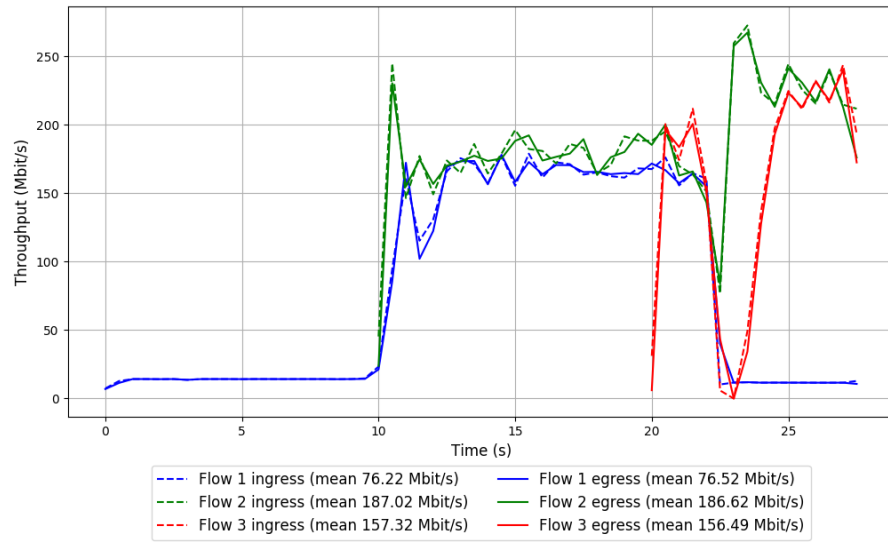
```
Run 3: Statistics of TaoVA-100x

Start at: 2017-12-12 12:06:18
End at: 2017-12-12 12:06:48

# Below is generated by plot.py at 2017-12-12 16:26:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 239.77 Mbit/s
95th percentile per-packet one-way delay: 69.616 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 76.52 Mbit/s
95th percentile per-packet one-way delay: 63.951 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 186.62 Mbit/s
95th percentile per-packet one-way delay: 71.409 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 156.49 Mbit/s
95th percentile per-packet one-way delay: 75.999 ms
Loss rate: 2.10%
```

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

Flow 1 ingress (mean 76.22 Mbit/s)   Flow 1 egress (mean 76.52 Mbit/s)
Flow 2 ingress (mean 187.02 Mbit/s)   Flow 2 egress (mean 186.62 Mbit/s)
Flow 3 ingress (mean 157.32 Mbit/s)   Flow 3 egress (mean 156.49 Mbit/s)

Flow 1 (95th percentile 63.95 ms)   Flow 2 (95th percentile 71.41 ms)   Flow 3 (95th percentile 76.00 ms)

```
Run 4: Statistics of TaoVA-100x

Start at: 2017-12-12 12:18:47
End at: 2017-12-12 12:19:17

# Below is generated by plot.py at 2017-12-12 16:28:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.91 Mbit/s
95th percentile per-packet one-way delay: 71.054 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 212.48 Mbit/s
95th percentile per-packet one-way delay: 72.148 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 211.89 Mbit/s
95th percentile per-packet one-way delay: 68.244 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 37.58 Mbit/s
95th percentile per-packet one-way delay: 72.297 ms
Loss rate: 0.61%
```
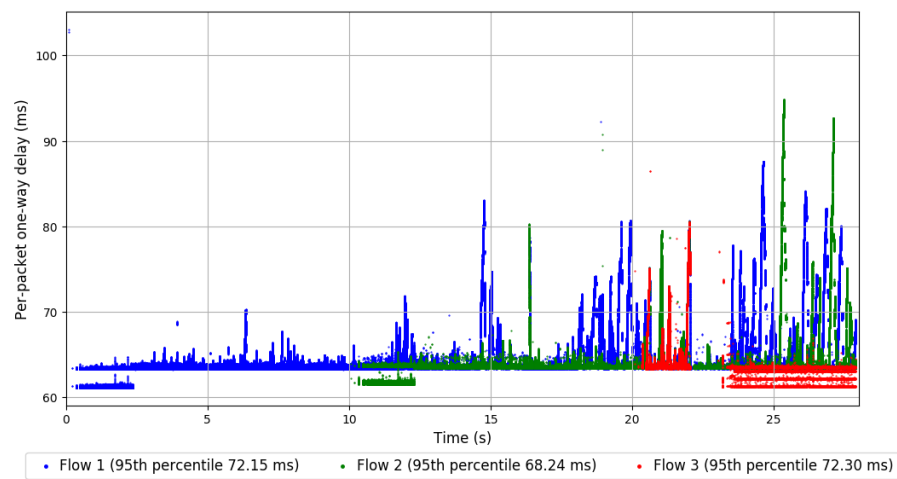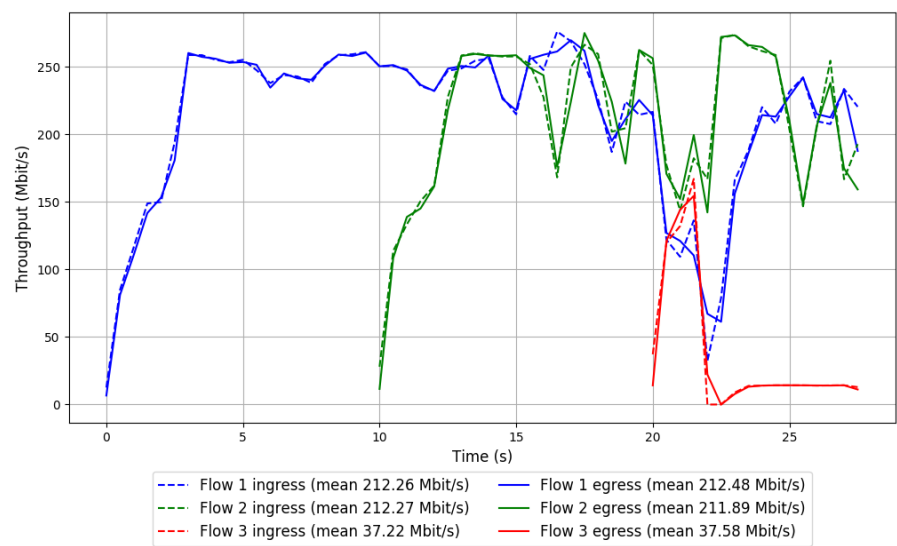
Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2017-12-12 12:31:31
End at: 2017-12-12 12:32:01


# Below is generated by plot.py at 2017-12-12 16:28:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 341.25 Mbit/s
95th percentile per-packet one-way delay: 66.791 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 204.96 Mbit/s
95th percentile per-packet one-way delay: 68.300 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 148.23 Mbit/s
95th percentile per-packet one-way delay: 64.057 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 147.88 Mbit/s
95th percentile per-packet one-way delay: 65.092 ms
Loss rate: 2.43%
```
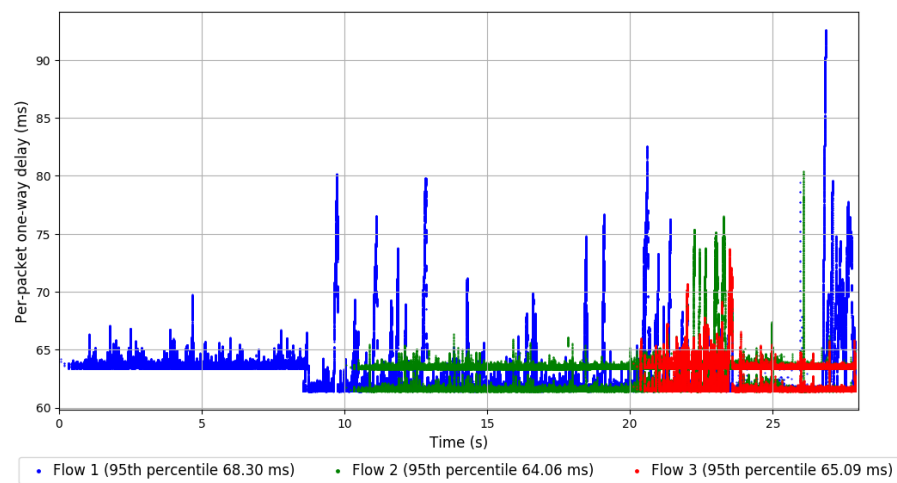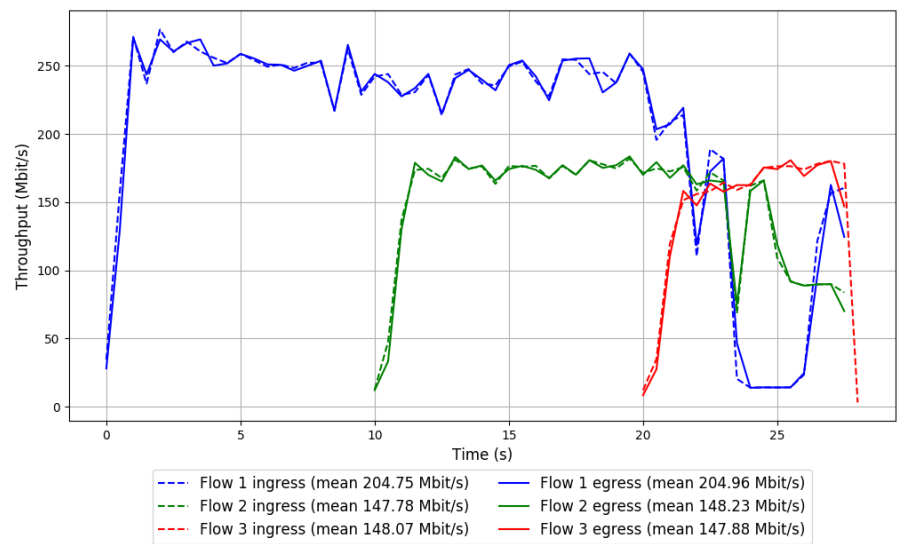
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 204.75 Mbit/s) ---- Flow 1 egress (mean 204.96 Mbit/s) ——
Flow 2 ingress (mean 147.78 Mbit/s) ---- Flow 2 egress (mean 148.23 Mbit/s) ——
Flow 3 ingress (mean 148.07 Mbit/s) ---- Flow 3 egress (mean 147.88 Mbit/s) ——

Flow 1 (95th percentile 68.30 ms)   Flow 2 (95th percentile 64.06 ms)   Flow 3 (95th percentile 65.09 ms)

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

Start at: 2017-12-12 12:44:16
End at: 2017-12-12 12:44:46

# Below is generated by plot.py at 2017-12-12 16:28:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.94 Mbit/s
95th percentile per-packet one-way delay: 71.726 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 199.75 Mbit/s
95th percentile per-packet one-way delay: 65.811 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 162.69 Mbit/s
95th percentile per-packet one-way delay: 75.308 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 196.68 Mbit/s
95th percentile per-packet one-way delay: 80.303 ms
Loss rate: 1.89%
```
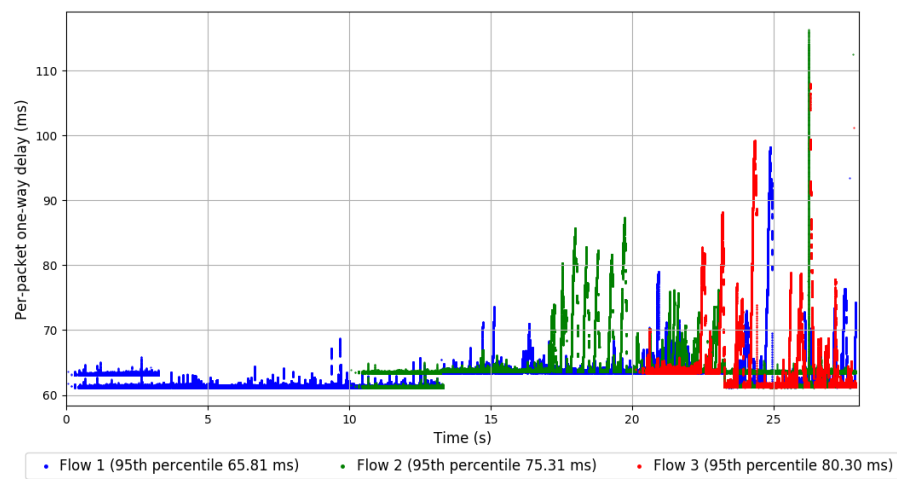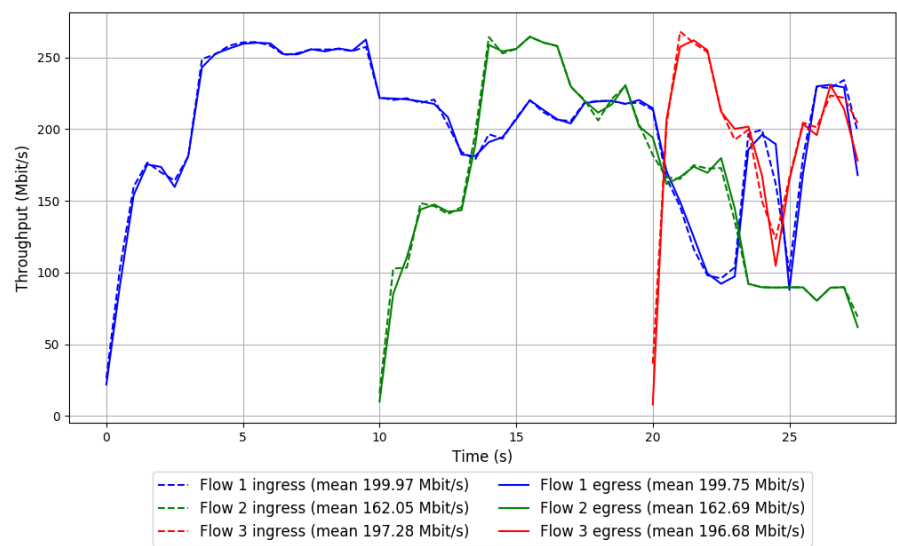
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 199.97 Mbit/s) --- Flow 1 egress (mean 199.75 Mbit/s)
Flow 2 ingress (mean 162.05 Mbit/s) --- Flow 2 egress (mean 162.69 Mbit/s)
Flow 3 ingress (mean 197.28 Mbit/s) --- Flow 3 egress (mean 196.68 Mbit/s)

Flow 1 (95th percentile 65.81 ms) • Flow 2 (95th percentile 75.31 ms) • Flow 3 (95th percentile 80.30 ms)

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

Start at: 2017-12-12 12:57:07
End at: 2017-12-12 12:57:37


# Below is generated by plot.py at 2017-12-12 16:31:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 228.28 Mbit/s
95th percentile per-packet one-way delay: 63.759 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 120.77 Mbit/s
95th percentile per-packet one-way delay: 63.834 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 103.50 Mbit/s
95th percentile per-packet one-way delay: 63.640 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 147.23 Mbit/s
95th percentile per-packet one-way delay: 63.655 ms
Loss rate: 1.06%
```
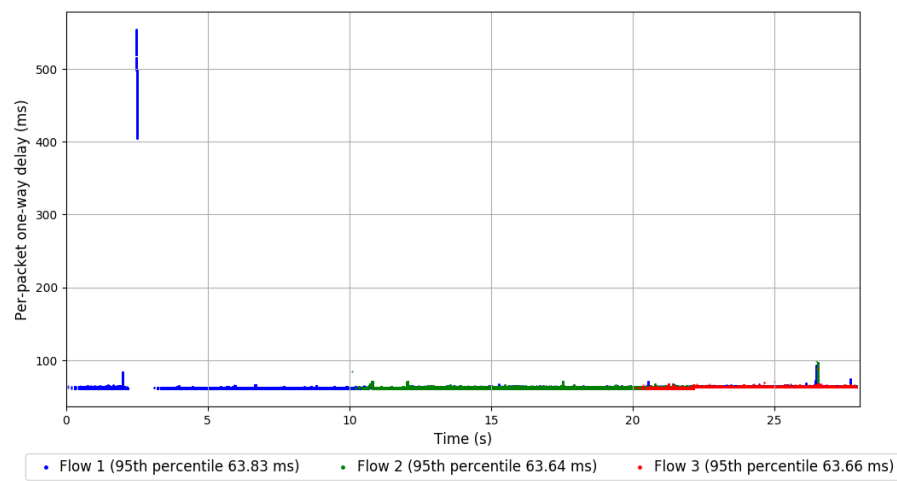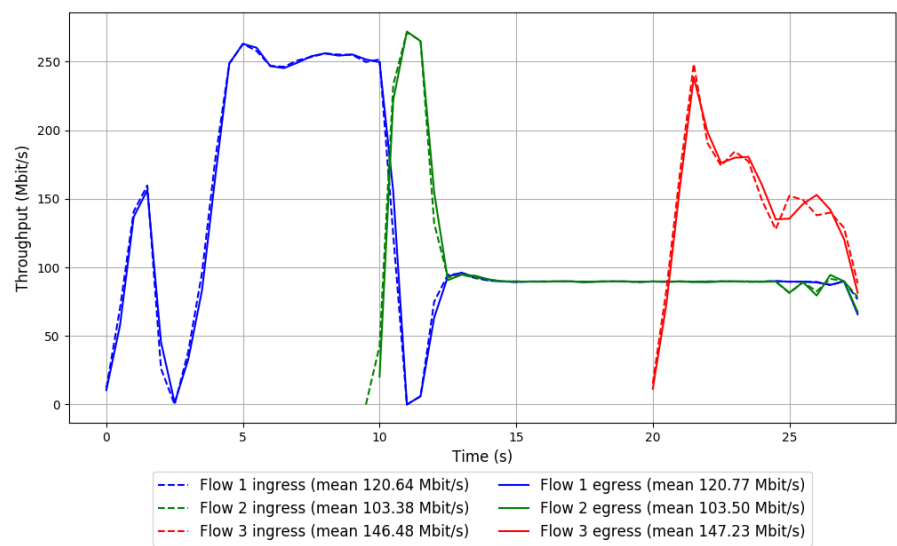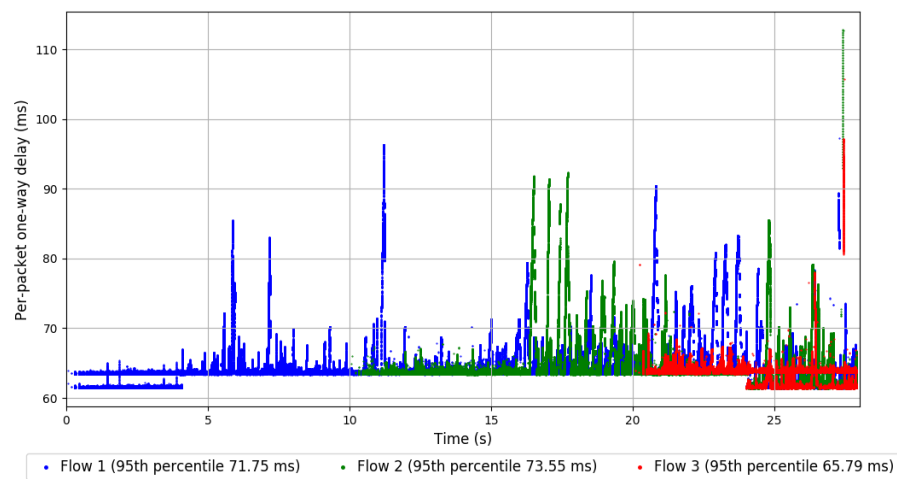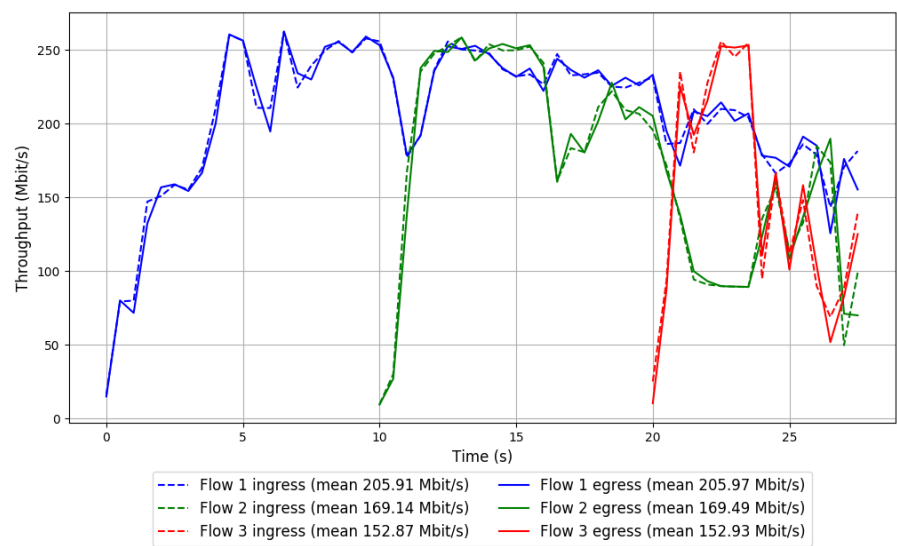
Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 120.64 Mbit/s) Flow 1 egress (mean 120.77 Mbit/s)
Flow 2 ingress (mean 103.38 Mbit/s) Flow 2 egress (mean 103.50 Mbit/s)
Flow 3 ingress (mean 146.48 Mbit/s) Flow 3 egress (mean 147.23 Mbit/s)

Flow 1 (95th percentile 63.83 ms) Flow 2 (95th percentile 63.64 ms) Flow 3 (95th percentile 63.66 ms)

177

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

Start at: 2017-12-12 13:09:35
End at: 2017-12-12 13:10:05


# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.38 Mbit/s
95th percentile per-packet one-way delay: 71.676 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 205.97 Mbit/s
95th percentile per-packet one-way delay: 71.752 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 169.49 Mbit/s
95th percentile per-packet one-way delay: 73.547 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 152.93 Mbit/s
95th percentile per-packet one-way delay: 65.792 ms
Loss rate: 1.53%
```

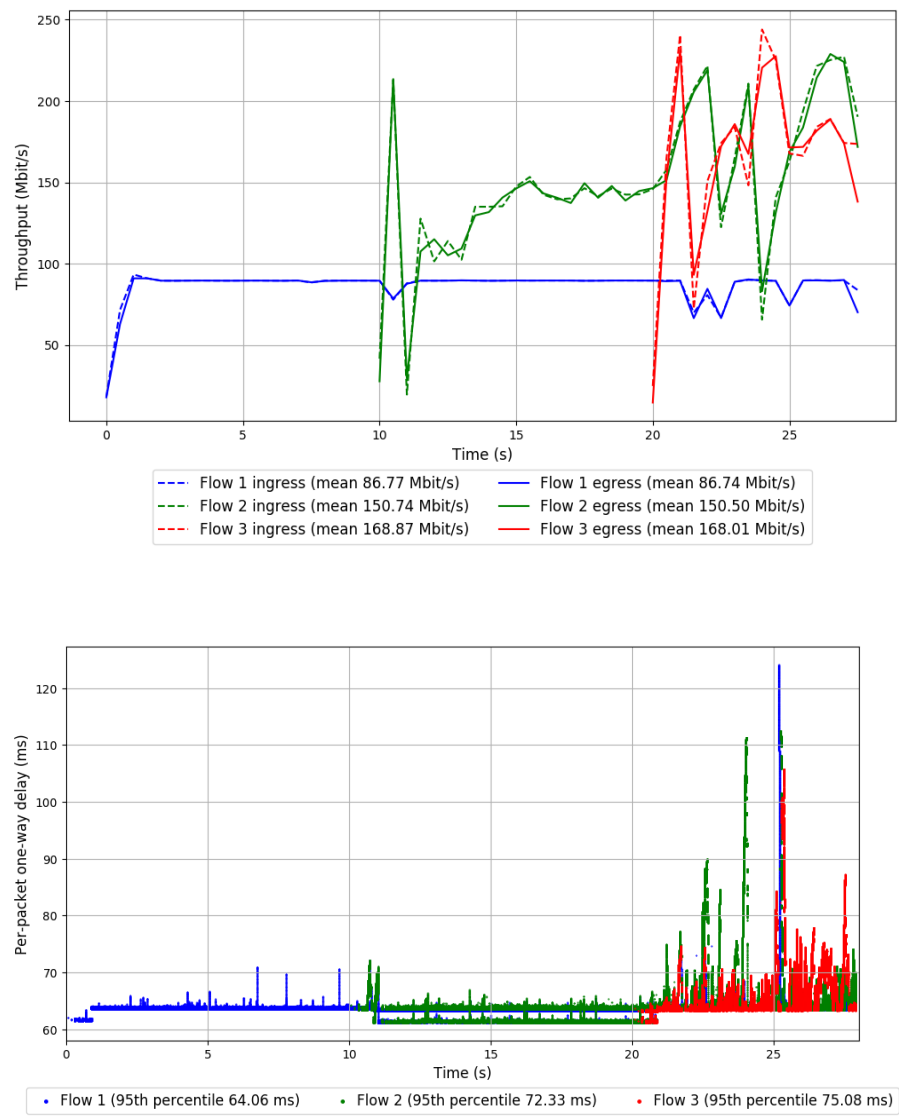Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 205.91 Mbit/s) --- Flow 1 egress (mean 205.97 Mbit/s)
Flow 2 ingress (mean 169.14 Mbit/s) --- Flow 2 egress (mean 169.49 Mbit/s)
Flow 3 ingress (mean 152.87 Mbit/s) --- Flow 3 egress (mean 152.93 Mbit/s)

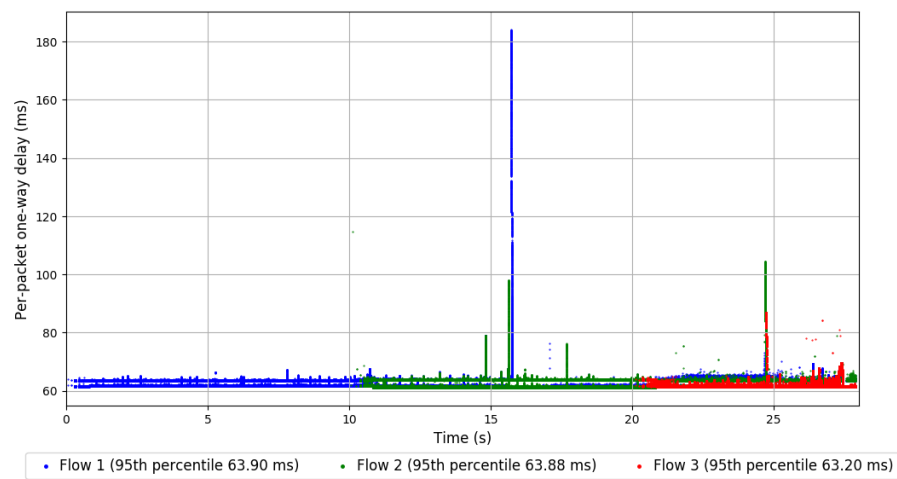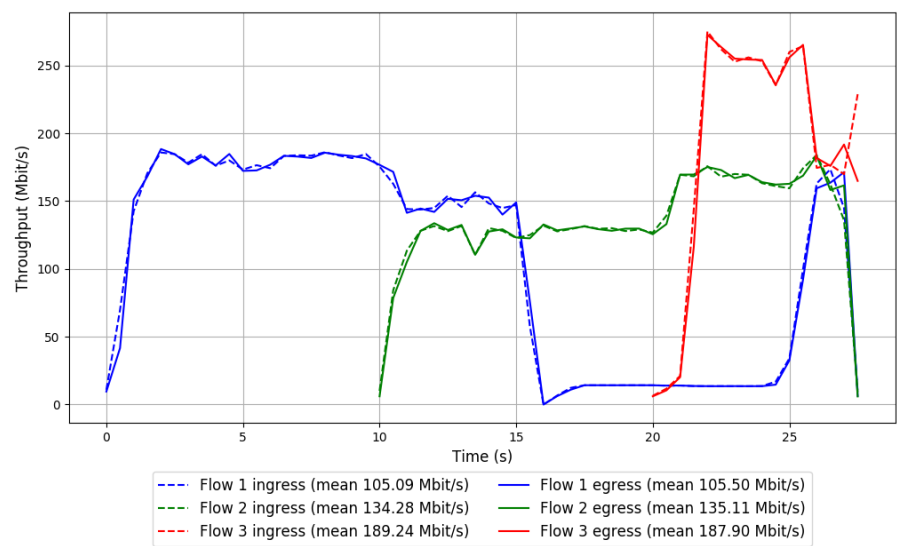Flow 1 (95th percentile 71.75 ms) • Flow 2 (95th percentile 73.55 ms) • Flow 3 (95th percentile 65.79 ms)

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

Start at: 2017-12-12 13:22:18
End at: 2017-12-12 13:22:48

# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 230.26 Mbit/s
95th percentile per-packet one-way delay: 71.065 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 86.74 Mbit/s
95th percentile per-packet one-way delay: 64.060 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 150.50 Mbit/s
95th percentile per-packet one-way delay: 72.327 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 168.01 Mbit/s
95th percentile per-packet one-way delay: 75.084 ms
Loss rate: 2.26%
```

Run 9: Report of TaoVA-100x — Data Link

- --- Flow 1 ingress (mean 86.77 Mbit/s) — Flow 1 egress (mean 86.74 Mbit/s)
- --- Flow 2 ingress (mean 150.74 Mbit/s) — Flow 2 egress (mean 150.50 Mbit/s)
- --- Flow 3 ingress (mean 168.87 Mbit/s) — Flow 3 egress (mean 168.01 Mbit/s)

- Flow 1 (95th percentile 64.06 ms)
- Flow 2 (95th percentile 72.33 ms)
- Flow 3 (95th percentile 75.08 ms)

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

Start at: 2017-12-12 13:34:49
End at: 2017-12-12 13:35:19


# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 244.52 Mbit/s
95th percentile per-packet one-way delay: 63.879 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 105.50 Mbit/s
95th percentile per-packet one-way delay: 63.895 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 135.11 Mbit/s
95th percentile per-packet one-way delay: 63.885 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 187.90 Mbit/s
95th percentile per-packet one-way delay: 63.203 ms
Loss rate: 2.27%
```
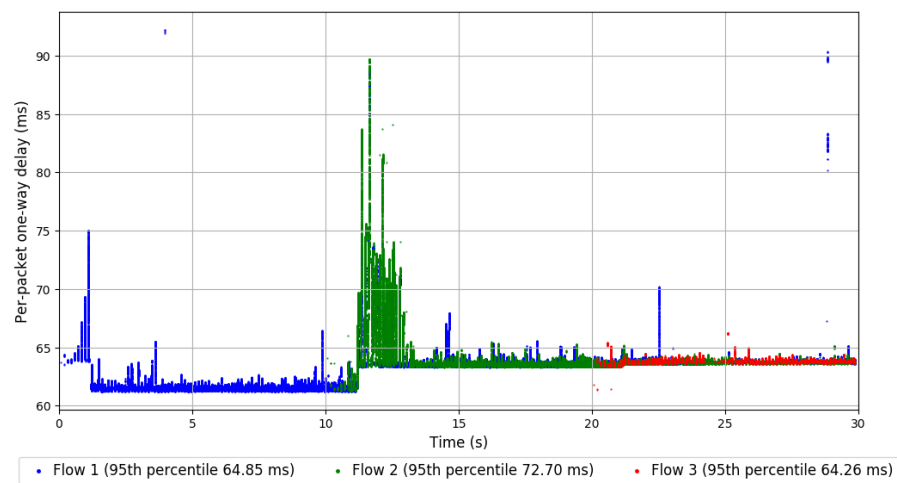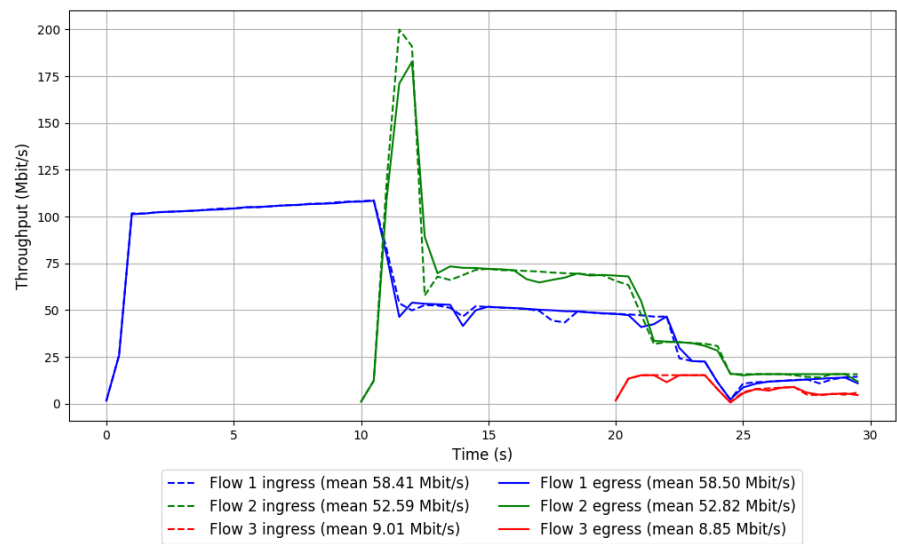
Run 10: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2017-12-12 11:45:20
End at: 2017-12-12 11:45:50


# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.46 Mbit/s
95th percentile per-packet one-way delay: 70.080 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 58.50 Mbit/s
95th percentile per-packet one-way delay: 64.849 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 52.82 Mbit/s
95th percentile per-packet one-way delay: 72.705 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 64.259 ms
Loss rate: 2.96%
```
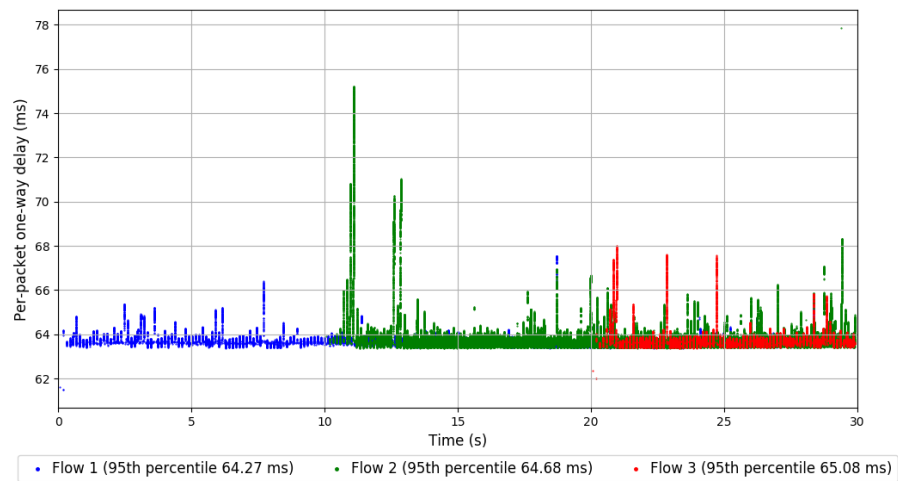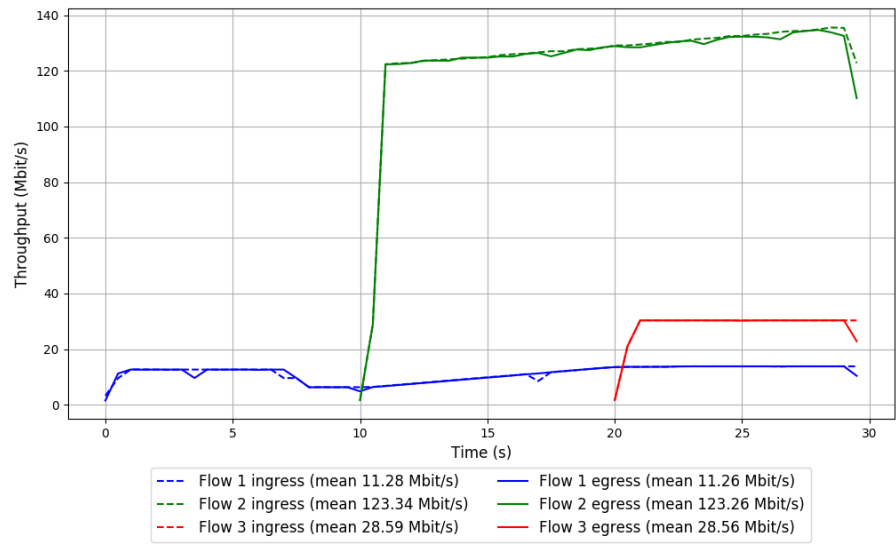
Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 58.41 Mbit/s) --- Flow 1 egress (mean 58.50 Mbit/s)
Flow 2 ingress (mean 52.59 Mbit/s) --- Flow 2 egress (mean 52.82 Mbit/s)
Flow 3 ingress (mean 9.01 Mbit/s) --- Flow 3 egress (mean 8.85 Mbit/s)

Flow 1 (95th percentile 64.85 ms) Flow 2 (95th percentile 72.70 ms) Flow 3 (95th percentile 64.26 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2017-12-12 11:57:47
End at: 2017-12-12 11:58:17


# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 102.58 Mbit/s
95th percentile per-packet one-way delay: 64.655 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 64.270 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 123.26 Mbit/s
95th percentile per-packet one-way delay: 64.684 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 28.56 Mbit/s
95th percentile per-packet one-way delay: 65.076 ms
Loss rate: 1.33%
```
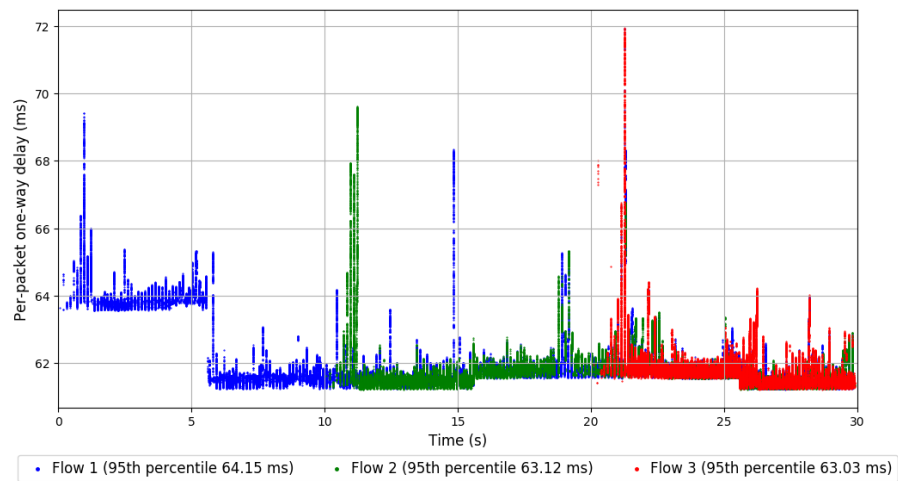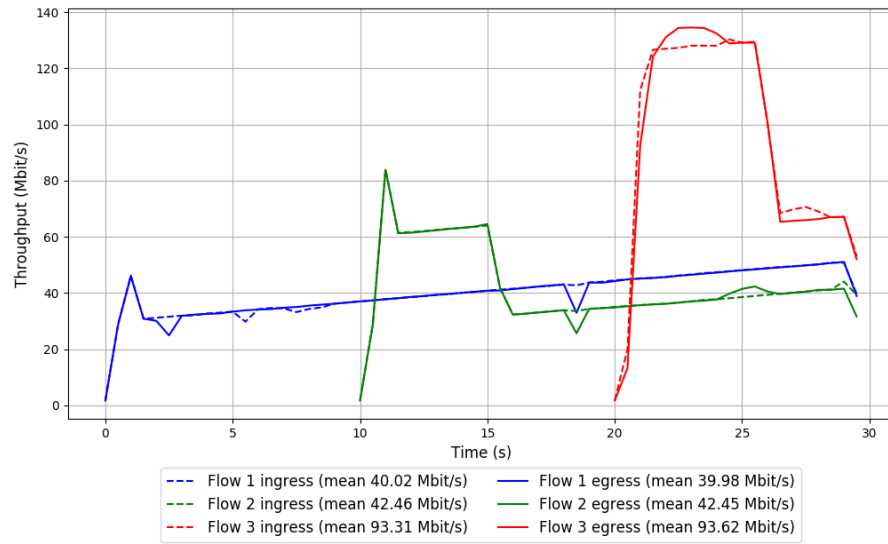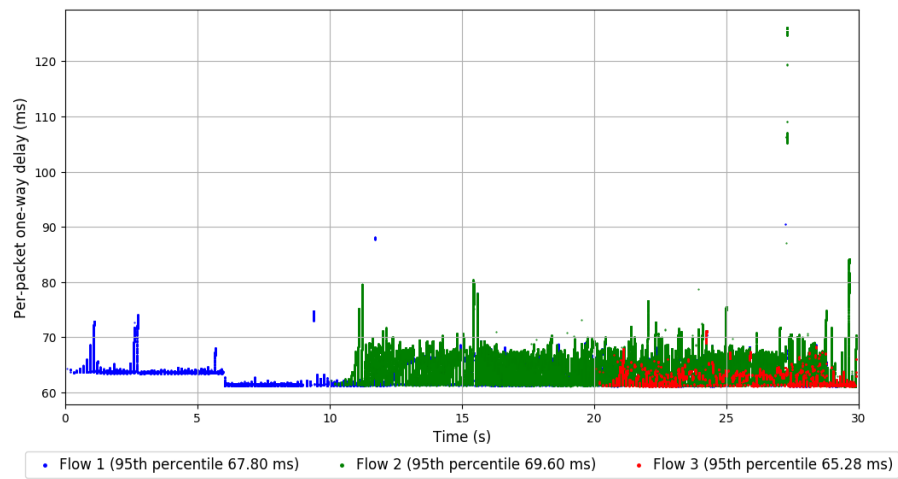
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-12-12 12:10:16
End at: 2017-12-12 12:10:46

# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.94 Mbit/s
95th percentile per-packet one-way delay: 63.937 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 39.98 Mbit/s
95th percentile per-packet one-way delay: 64.154 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 42.45 Mbit/s
95th percentile per-packet one-way delay: 63.125 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 93.62 Mbit/s
95th percentile per-packet one-way delay: 63.033 ms
Loss rate: 0.92%
```
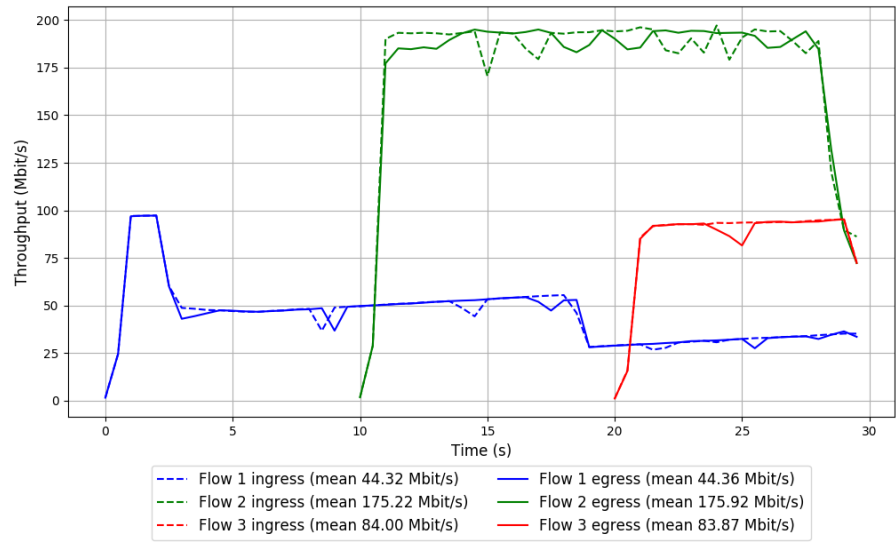
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2017-12-12 12:22:55
End at: 2017-12-12 12:23:25


# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 188.84 Mbit/s
95th percentile per-packet one-way delay: 69.074 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 44.36 Mbit/s
95th percentile per-packet one-way delay: 67.797 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 175.92 Mbit/s
95th percentile per-packet one-way delay: 69.600 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 83.87 Mbit/s
95th percentile per-packet one-way delay: 65.285 ms
Loss rate: 1.44%
```
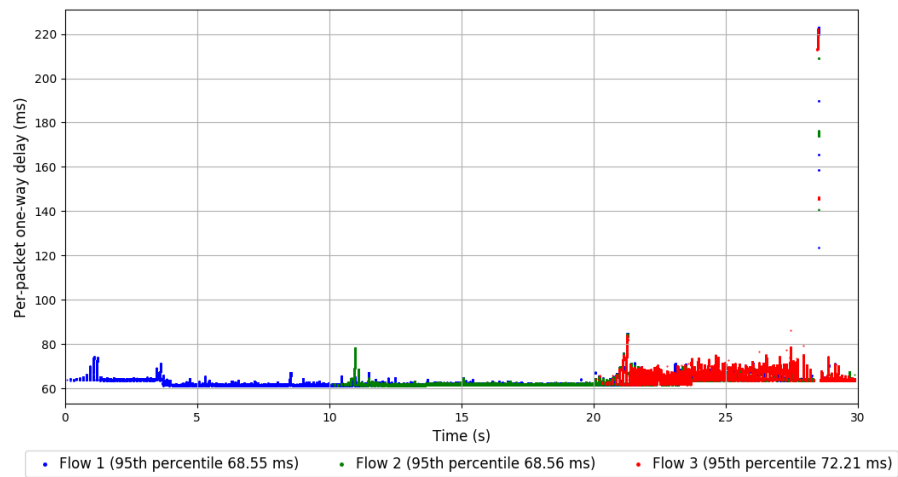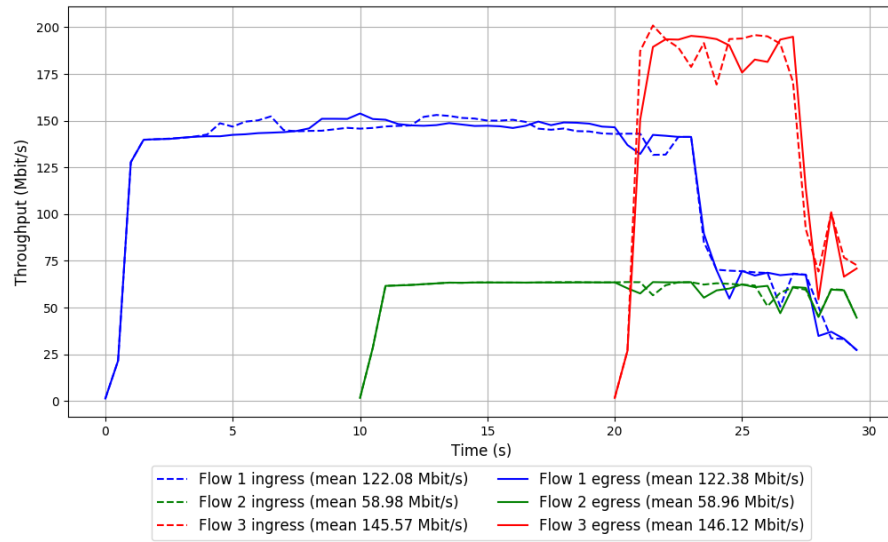
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2017-12-12 12:35:38
End at: 2017-12-12 12:36:08

# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 209.57 Mbit/s
95th percentile per-packet one-way delay: 69.860 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 122.38 Mbit/s
95th percentile per-packet one-way delay: 68.548 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 58.96 Mbit/s
95th percentile per-packet one-way delay: 68.556 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 146.12 Mbit/s
95th percentile per-packet one-way delay: 72.211 ms
Loss rate: 0.91%
```
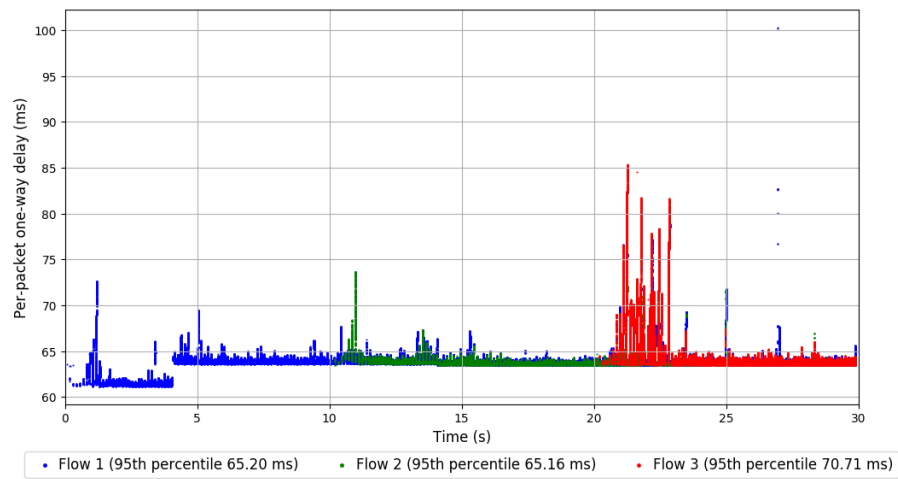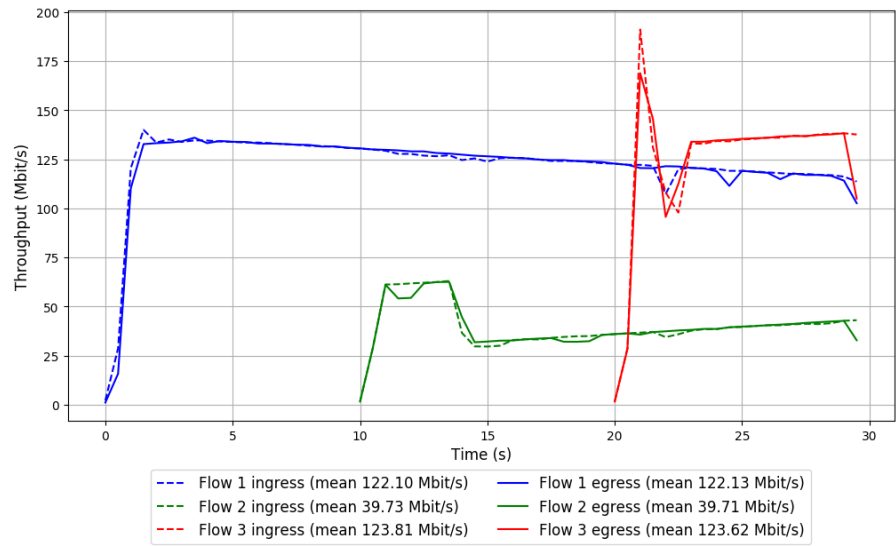
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 122.08 Mbit/s) — Flow 1 egress (mean 122.38 Mbit/s)
Flow 2 ingress (mean 58.98 Mbit/s) — Flow 2 egress (mean 58.96 Mbit/s)
Flow 3 ingress (mean 145.57 Mbit/s) — Flow 3 egress (mean 146.12 Mbit/s)

Flow 1 (95th percentile 68.55 ms)   Flow 2 (95th percentile 68.56 ms)   Flow 3 (95th percentile 72.21 ms)

```
Run 6: Statistics of TCP Vegas

Start at: 2017-12-12 12:48:27
End at: 2017-12-12 12:48:57

# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 189.18 Mbit/s
95th percentile per-packet one-way delay: 66.624 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 122.13 Mbit/s
95th percentile per-packet one-way delay: 65.202 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 39.71 Mbit/s
95th percentile per-packet one-way delay: 65.164 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 123.62 Mbit/s
95th percentile per-packet one-way delay: 70.711 ms
Loss rate: 1.41%
```
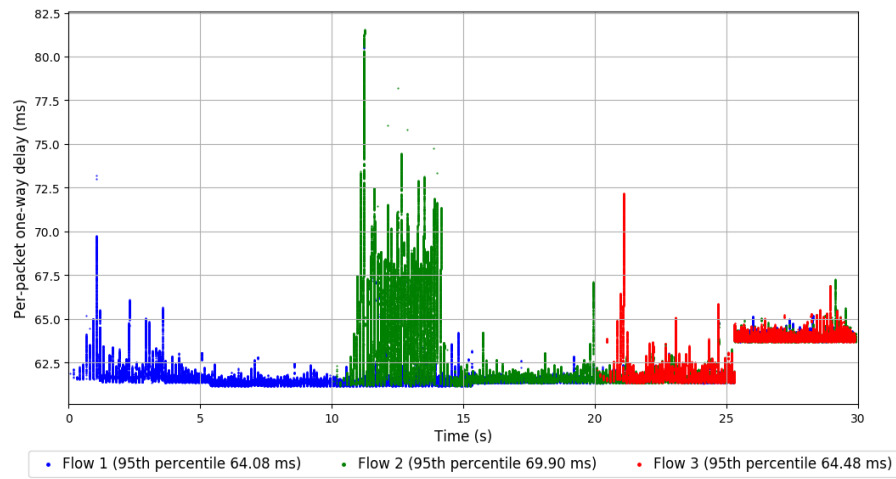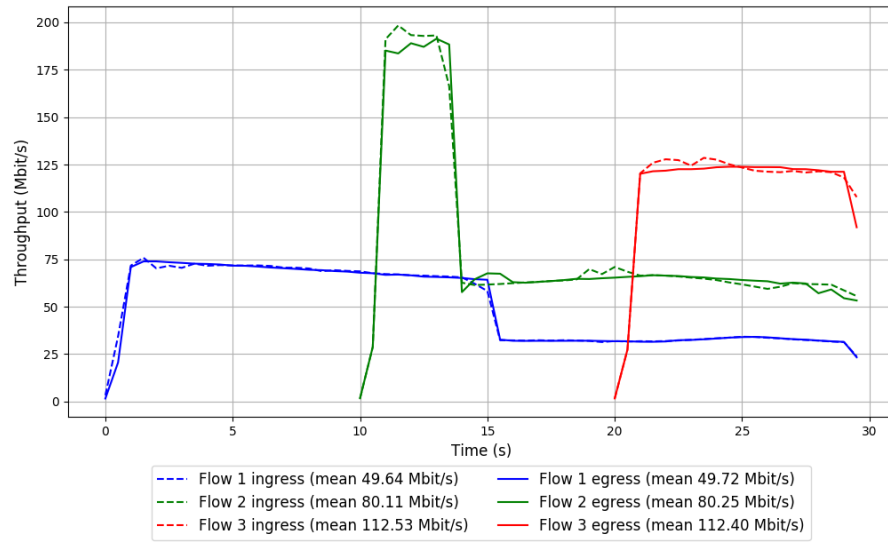
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2017-12-12 13:01:06
End at: 2017-12-12 13:01:36


# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.92 Mbit/s
95th percentile per-packet one-way delay: 67.701 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 49.72 Mbit/s
95th percentile per-packet one-way delay: 64.085 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 80.25 Mbit/s
95th percentile per-packet one-way delay: 69.900 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 112.40 Mbit/s
95th percentile per-packet one-way delay: 64.484 ms
Loss rate: 1.36%
```
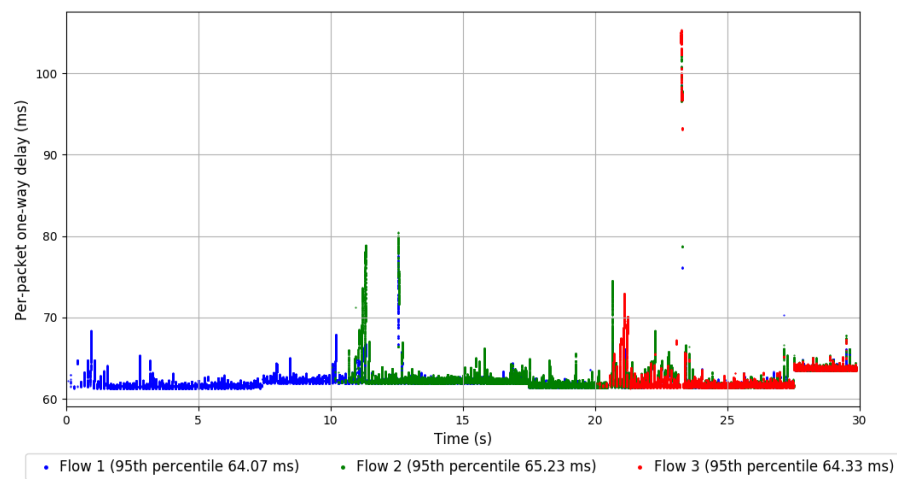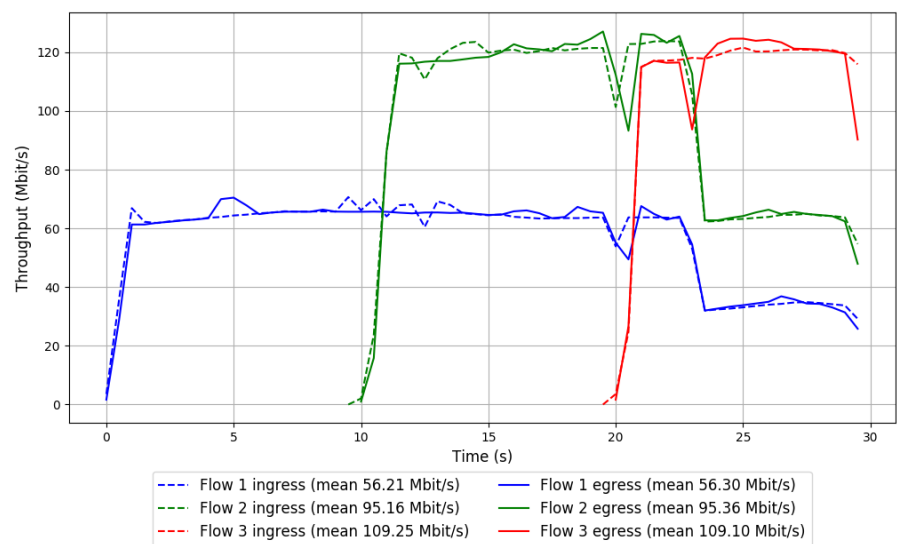
Run 7: Report of TCP Vegas — Data Link

```
Run 8: Statistics of TCP Vegas

Start at: 2017-12-12 13:13:44
End at: 2017-12-12 13:14:14


# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 155.63 Mbit/s
95th percentile per-packet one-way delay: 64.484 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 56.30 Mbit/s
95th percentile per-packet one-way delay: 64.073 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 95.36 Mbit/s
95th percentile per-packet one-way delay: 65.235 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 109.10 Mbit/s
95th percentile per-packet one-way delay: 64.334 ms
Loss rate: 1.37%
```
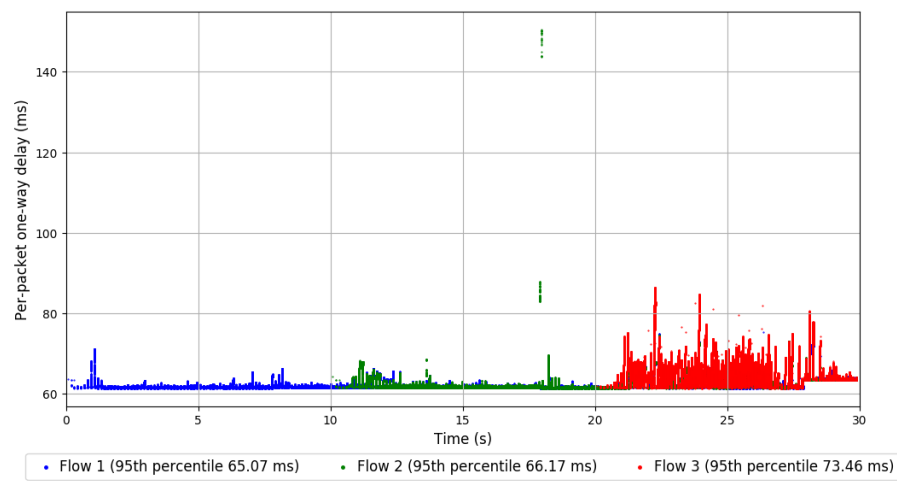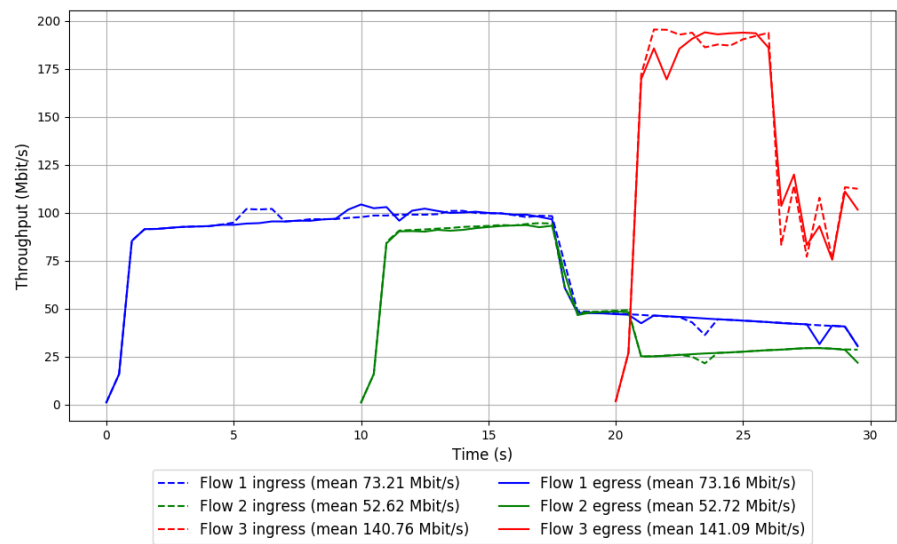
Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2017-12-12 13:26:13
End at: 2017-12-12 13:26:43

# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.59 Mbit/s
95th percentile per-packet one-way delay: 69.717 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 73.16 Mbit/s
95th percentile per-packet one-way delay: 65.070 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 52.72 Mbit/s
95th percentile per-packet one-way delay: 66.175 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 141.09 Mbit/s
95th percentile per-packet one-way delay: 73.464 ms
Loss rate: 1.01%
```
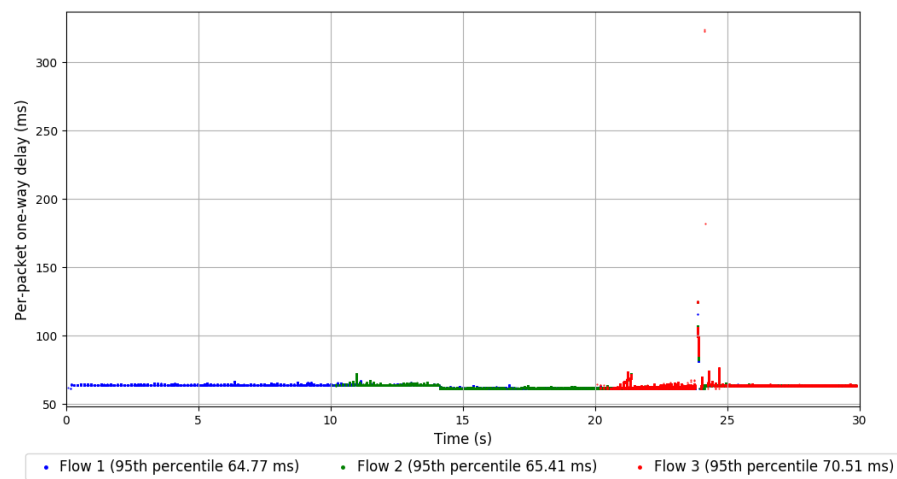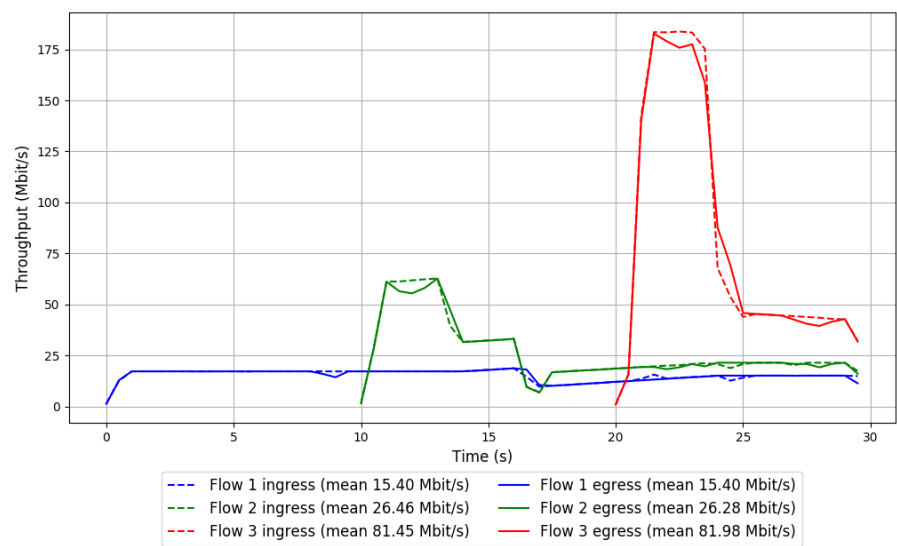
Run 9: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 73.21 Mbit/s) --- Flow 1 egress (mean 73.16 Mbit/s)
Flow 2 ingress (mean 52.62 Mbit/s) --- Flow 2 egress (mean 52.72 Mbit/s)
Flow 3 ingress (mean 140.76 Mbit/s) --- Flow 3 egress (mean 141.09 Mbit/s)

Flow 1 (95th percentile 65.07 ms)   Flow 2 (95th percentile 66.17 ms)   Flow 3 (95th percentile 73.46 ms)

```
Run 10: Statistics of TCP Vegas

Start at: 2017-12-12 13:38:47
End at: 2017-12-12 13:39:17


# Below is generated by plot.py at 2017-12-12 16:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.80 Mbit/s
95th percentile per-packet one-way delay: 66.426 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 15.40 Mbit/s
95th percentile per-packet one-way delay: 64.769 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 26.28 Mbit/s
95th percentile per-packet one-way delay: 65.409 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 81.98 Mbit/s
95th percentile per-packet one-way delay: 70.507 ms
Loss rate: 0.65%
```
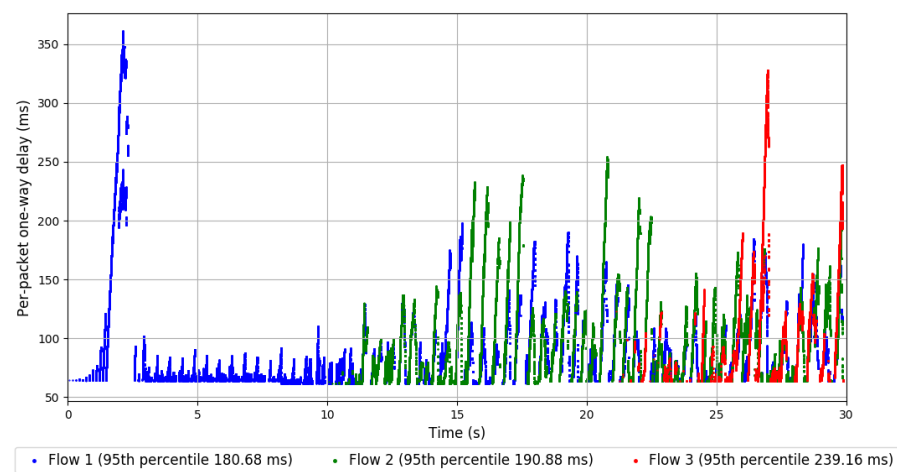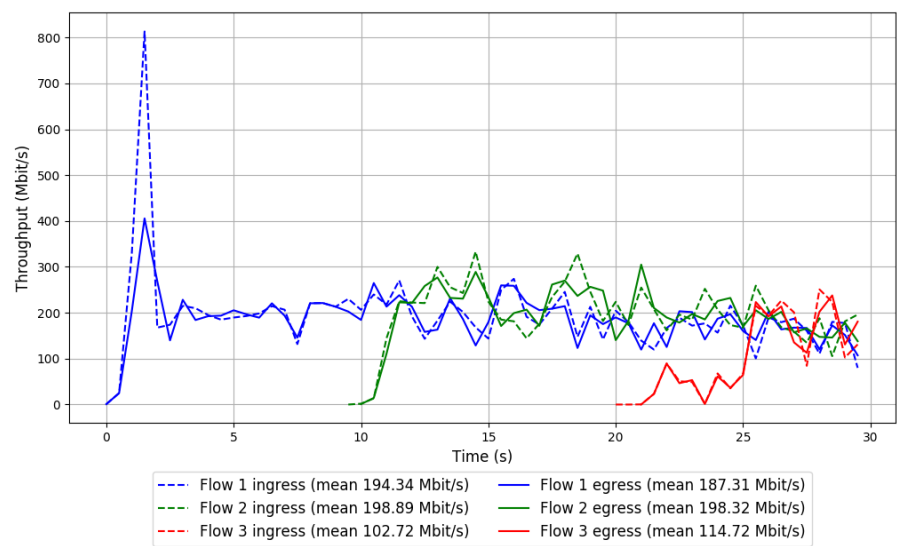
Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2017-12-12 11:35:23
End at: 2017-12-12 11:35:53

# Below is generated by plot.py at 2017-12-12 16:39:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.51 Mbit/s
95th percentile per-packet one-way delay: 189.888 ms
Loss rate: 2.60%
-- Flow 1:
Average throughput: 187.31 Mbit/s
95th percentile per-packet one-way delay: 180.684 ms
Loss rate: 4.14%
-- Flow 2:
Average throughput: 198.32 Mbit/s
95th percentile per-packet one-way delay: 190.884 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 114.72 Mbit/s
95th percentile per-packet one-way delay: 239.156 ms
Loss rate: 0.38%
```
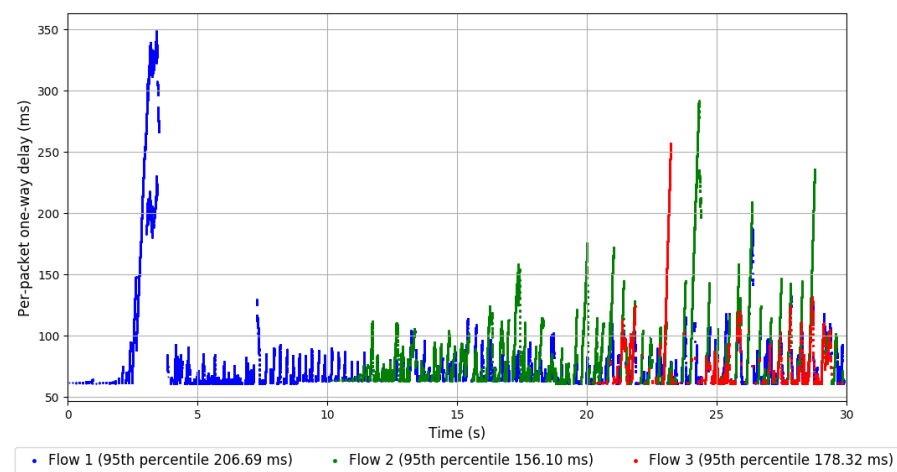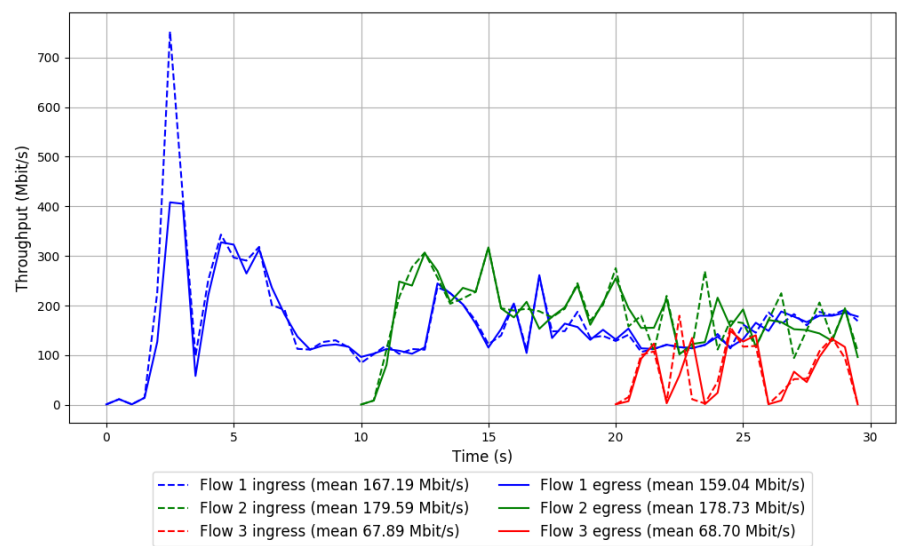
Run 1: Report of Verus — Data Link

205

```
Run 2: Statistics of Verus

Start at: 2017-12-12 11:48:03
End at: 2017-12-12 11:48:33


# Below is generated by plot.py at 2017-12-12 16:39:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.80 Mbit/s
95th percentile per-packet one-way delay: 177.209 ms
Loss rate: 3.40%
-- Flow 1:
Average throughput: 159.04 Mbit/s
95th percentile per-packet one-way delay: 206.685 ms
Loss rate: 5.28%
-- Flow 2:
Average throughput: 178.73 Mbit/s
95th percentile per-packet one-way delay: 156.101 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 68.70 Mbit/s
95th percentile per-packet one-way delay: 178.323 ms
Loss rate: 0.10%
```
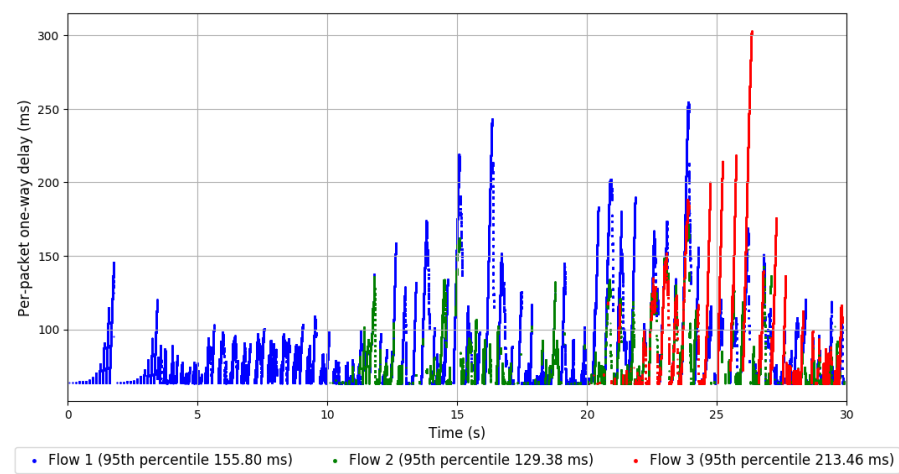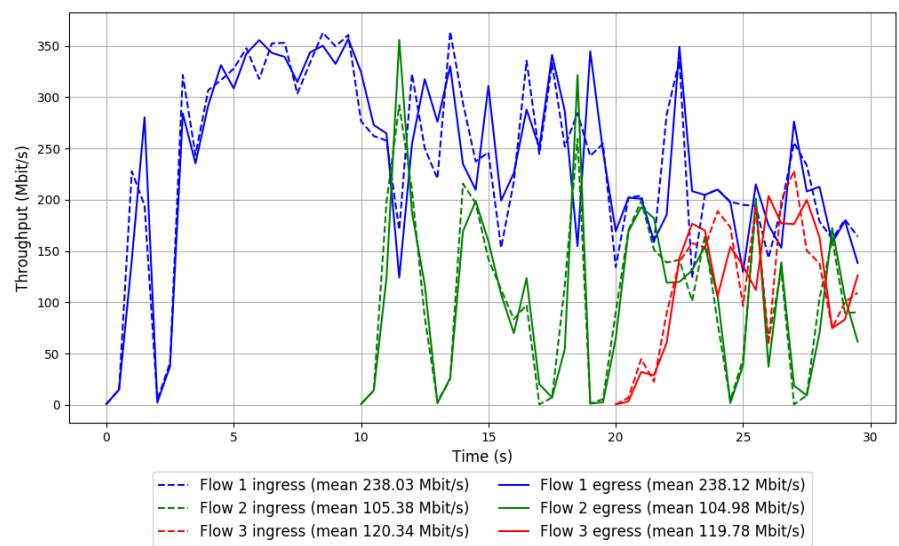
Run 2: Report of Verus — Data Link

- Flow 1 ingress (mean 167.19 Mbit/s) — Flow 1 egress (mean 159.04 Mbit/s)
- Flow 2 ingress (mean 179.59 Mbit/s) — Flow 2 egress (mean 178.73 Mbit/s)
- Flow 3 ingress (mean 67.89 Mbit/s) — Flow 3 egress (mean 68.70 Mbit/s)

- Flow 1 (95th percentile 206.69 ms)
- Flow 2 (95th percentile 156.10 ms)
- Flow 3 (95th percentile 178.32 ms)

```
Run 3: Statistics of Verus

Start at: 2017-12-12 12:00:31
End at: 2017-12-12 12:01:01


# Below is generated by plot.py at 2017-12-12 16:39:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 346.90 Mbit/s
95th percentile per-packet one-way delay: 160.797 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 238.12 Mbit/s
95th percentile per-packet one-way delay: 155.803 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 104.98 Mbit/s
95th percentile per-packet one-way delay: 129.384 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 119.78 Mbit/s
95th percentile per-packet one-way delay: 213.457 ms
Loss rate: 0.01%
```
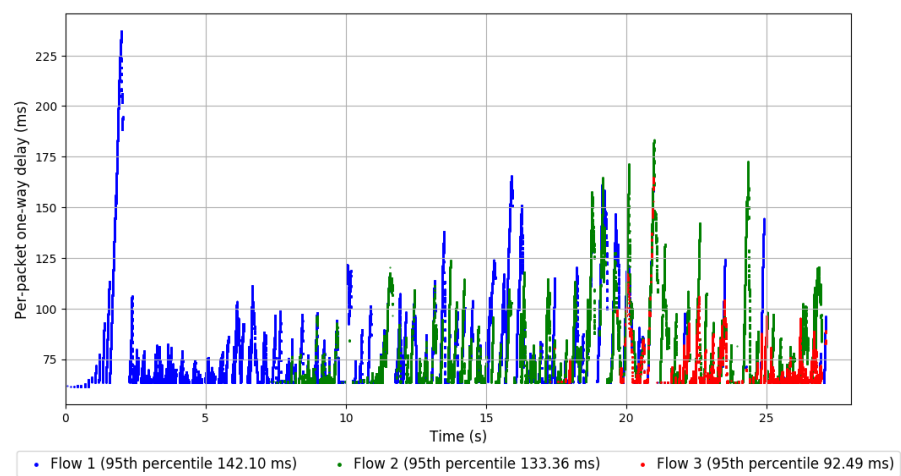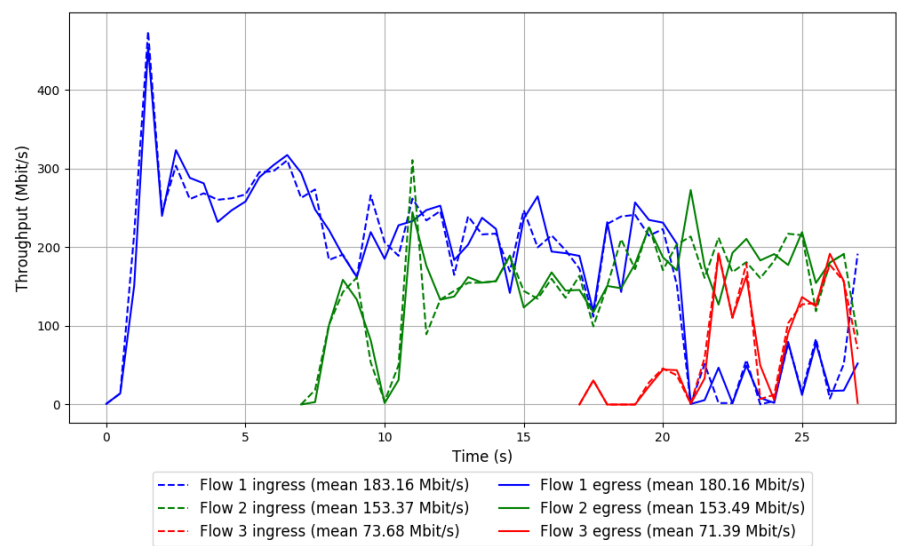
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2017-12-12 12:12:58
End at: 2017-12-12 12:13:28


# Below is generated by plot.py at 2017-12-12 16:39:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.76 Mbit/s
95th percentile per-packet one-way delay: 135.530 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 180.16 Mbit/s
95th percentile per-packet one-way delay: 142.100 ms
Loss rate: 2.06%
-- Flow 2:
Average throughput: 153.49 Mbit/s
95th percentile per-packet one-way delay: 133.358 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 71.39 Mbit/s
95th percentile per-packet one-way delay: 92.492 ms
Loss rate: 4.66%
```
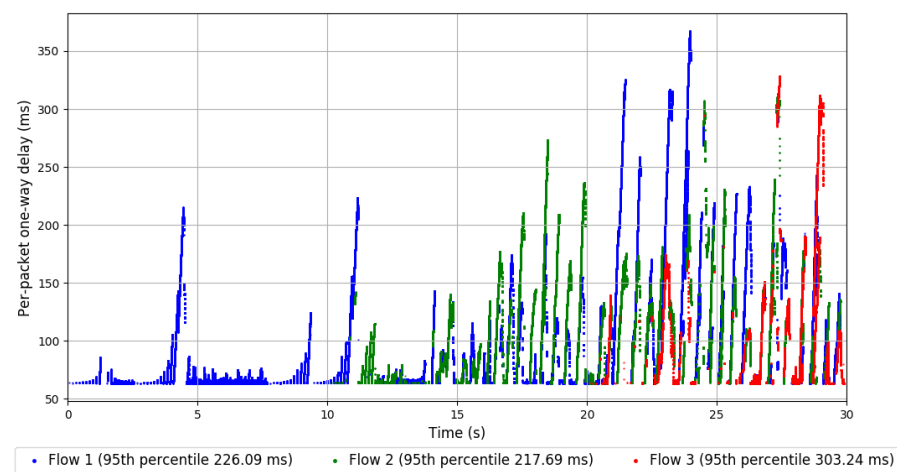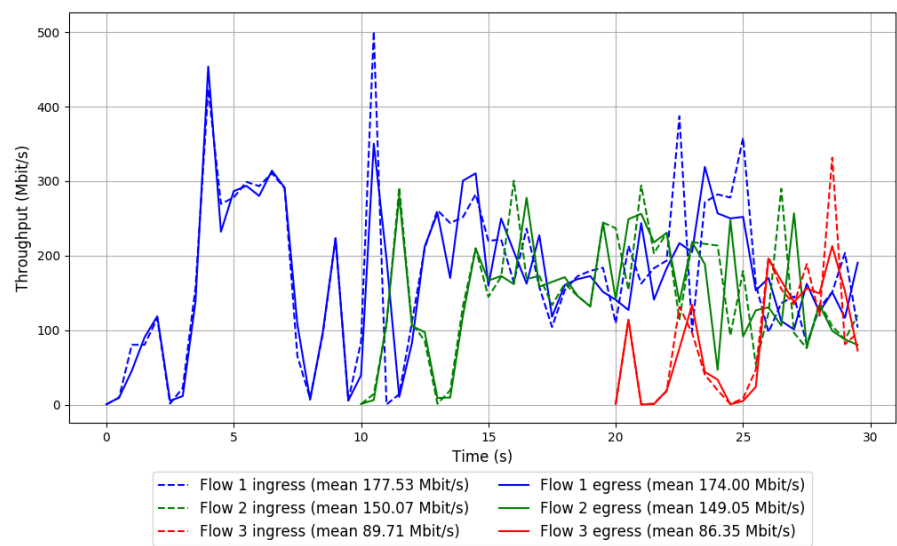
Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 183.16 Mbit/s) --- Flow 1 egress (mean 180.16 Mbit/s)
Flow 2 ingress (mean 153.37 Mbit/s) --- Flow 2 egress (mean 153.49 Mbit/s)
Flow 3 ingress (mean 73.68 Mbit/s) --- Flow 3 egress (mean 71.39 Mbit/s)

Flow 1 (95th percentile 142.10 ms) Flow 2 (95th percentile 133.36 ms) Flow 3 (95th percentile 92.49 ms)

```
Run 5: Statistics of Verus

Start at: 2017-12-12 12:25:43
End at: 2017-12-12 12:26:13


# Below is generated by plot.py at 2017-12-12 16:39:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.85 Mbit/s
95th percentile per-packet one-way delay: 230.961 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 174.00 Mbit/s
95th percentile per-packet one-way delay: 226.086 ms
Loss rate: 1.85%
-- Flow 2:
Average throughput: 149.05 Mbit/s
95th percentile per-packet one-way delay: 217.692 ms
Loss rate: 2.04%
-- Flow 3:
Average throughput: 86.35 Mbit/s
95th percentile per-packet one-way delay: 303.242 ms
Loss rate: 4.98%
```
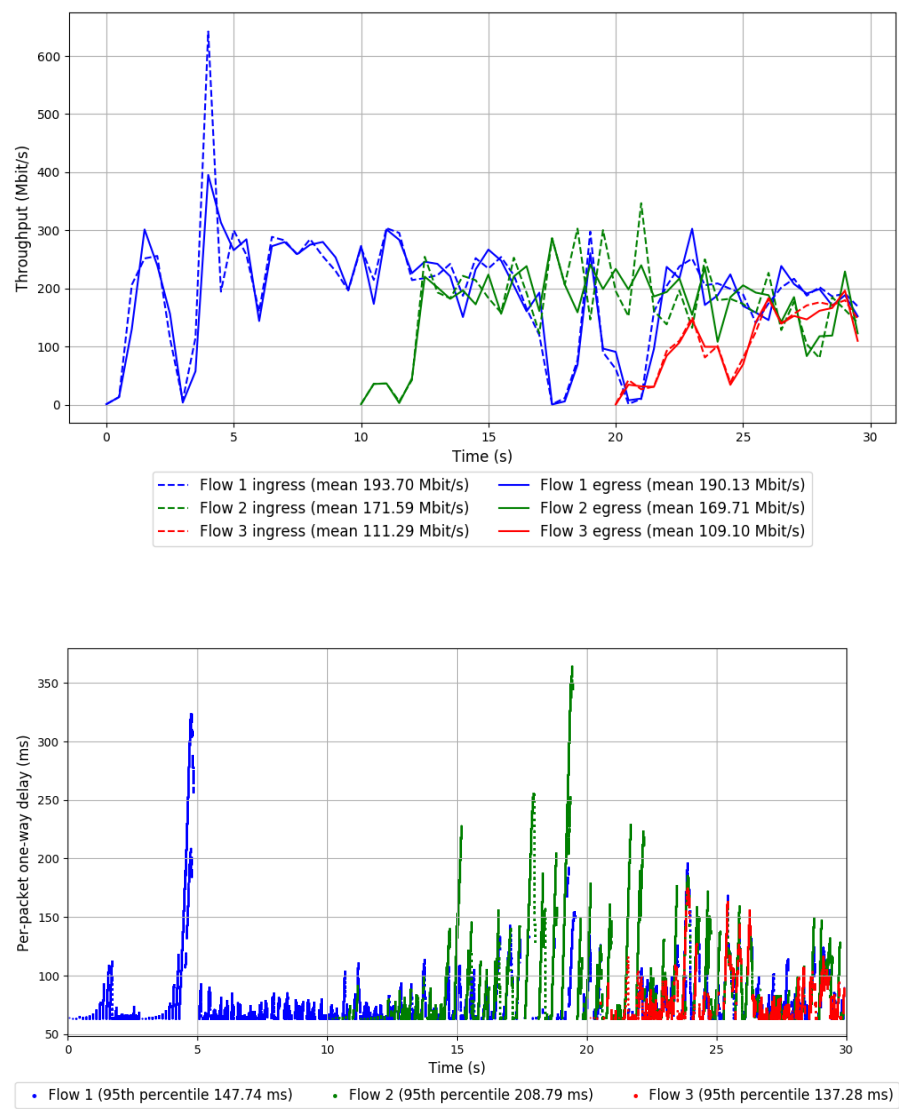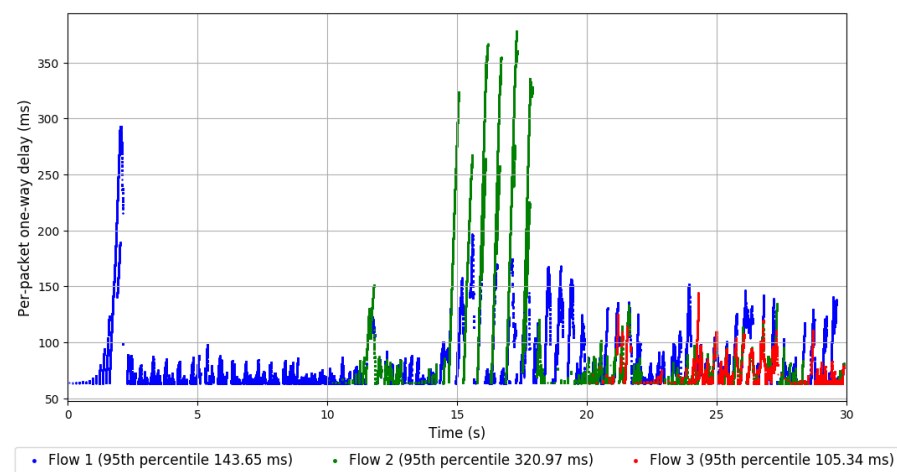
Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 177.53 Mbit/s) — Flow 1 egress (mean 174.00 Mbit/s)
Flow 2 ingress (mean 150.07 Mbit/s) — Flow 2 egress (mean 149.05 Mbit/s)
Flow 3 ingress (mean 89.71 Mbit/s) — Flow 3 egress (mean 86.35 Mbit/s)

Flow 1 (95th percentile 226.09 ms) — Flow 2 (95th percentile 217.69 ms) — Flow 3 (95th percentile 303.24 ms)

```
Run 6: Statistics of Verus

Start at: 2017-12-12 12:38:25
End at: 2017-12-12 12:38:55


# Below is generated by plot.py at 2017-12-12 16:41:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.61 Mbit/s
95th percentile per-packet one-way delay: 171.622 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 190.13 Mbit/s
95th percentile per-packet one-way delay: 147.742 ms
Loss rate: 2.25%
-- Flow 2:
Average throughput: 169.71 Mbit/s
95th percentile per-packet one-way delay: 208.795 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 109.10 Mbit/s
95th percentile per-packet one-way delay: 137.283 ms
Loss rate: 3.23%
```
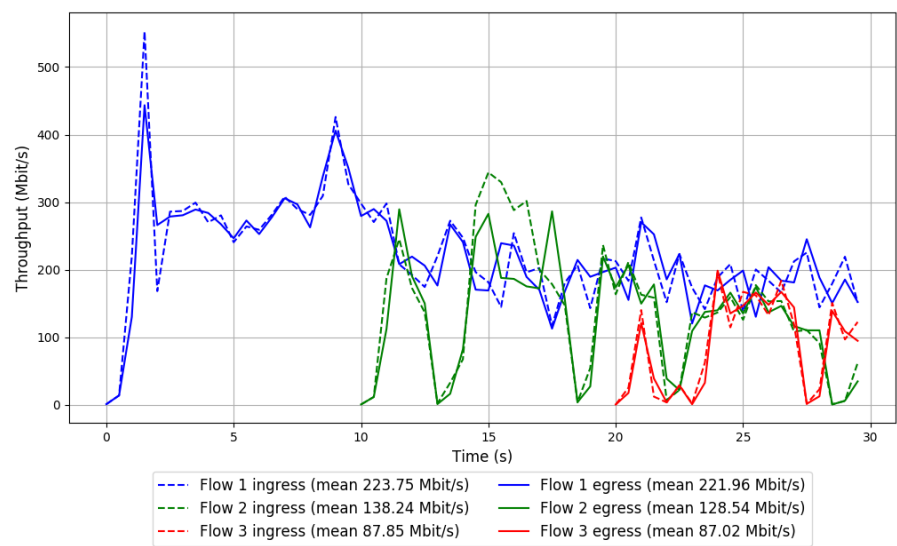
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2017-12-12 12:51:16
End at: 2017-12-12 12:51:46

# Below is generated by plot.py at 2017-12-12 16:41:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.95 Mbit/s
95th percentile per-packet one-way delay: 206.882 ms
Loss rate: 2.90%
-- Flow 1:
Average throughput: 221.96 Mbit/s
95th percentile per-packet one-way delay: 143.649 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 128.54 Mbit/s
95th percentile per-packet one-way delay: 320.968 ms
Loss rate: 7.61%
-- Flow 3:
Average throughput: 87.02 Mbit/s
95th percentile per-packet one-way delay: 105.344 ms
Loss rate: 2.20%
```
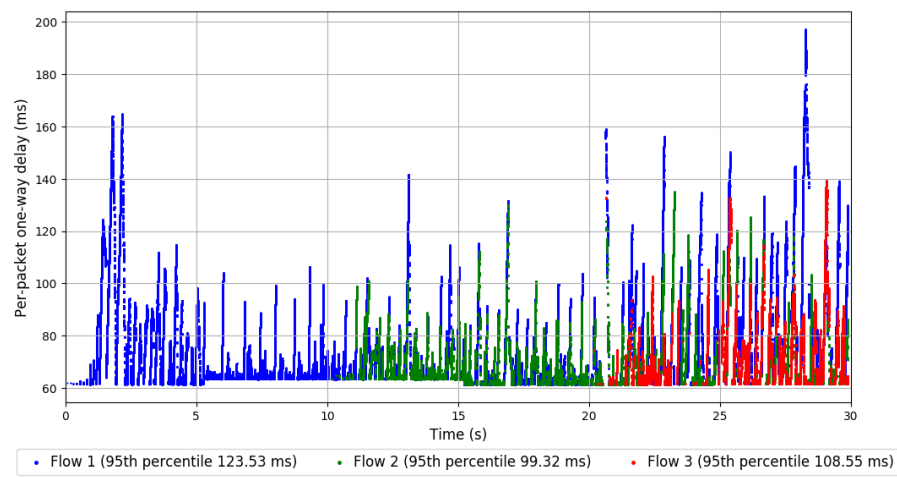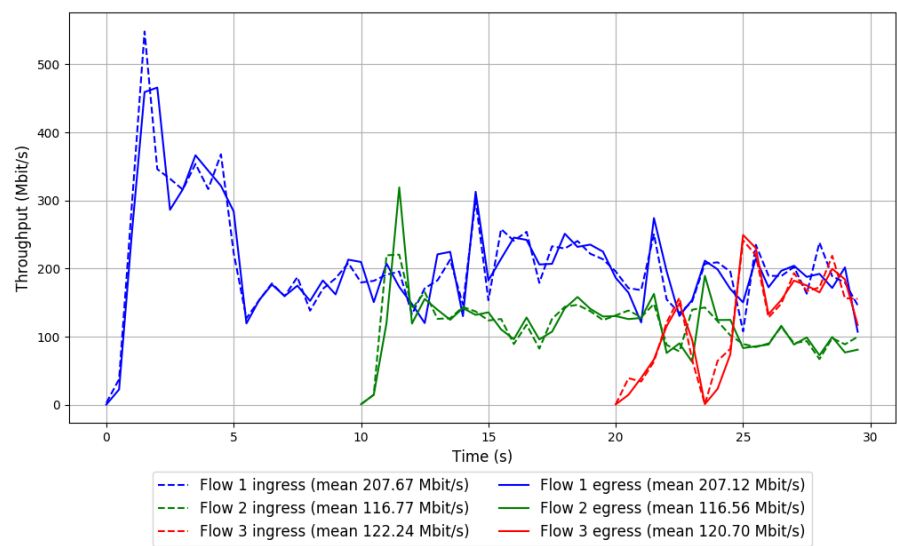
Run 7: Report of Verus — Data Link

217

```
Run 8: Statistics of Verus

Start at: 2017-12-12 13:03:46
End at: 2017-12-12 13:04:16

# Below is generated by plot.py at 2017-12-12 16:42:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.27 Mbit/s
95th percentile per-packet one-way delay: 117.381 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 207.12 Mbit/s
95th percentile per-packet one-way delay: 123.531 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 116.56 Mbit/s
95th percentile per-packet one-way delay: 99.320 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 120.70 Mbit/s
95th percentile per-packet one-way delay: 108.547 ms
Loss rate: 2.49%
```
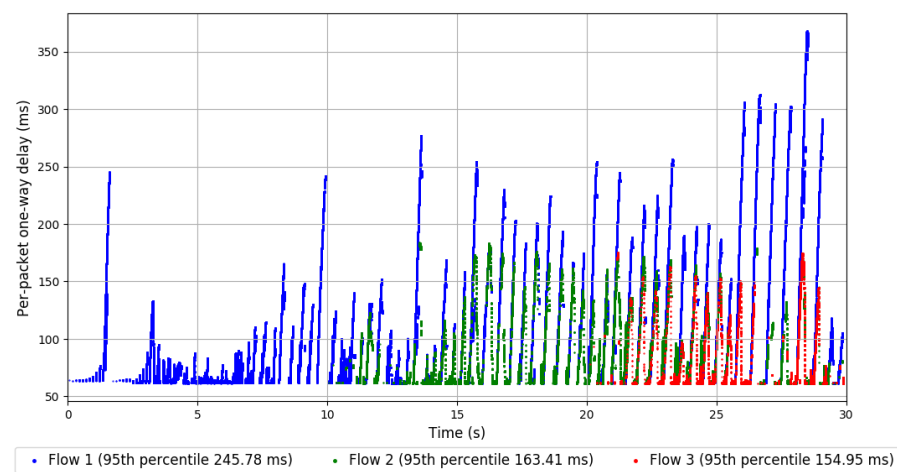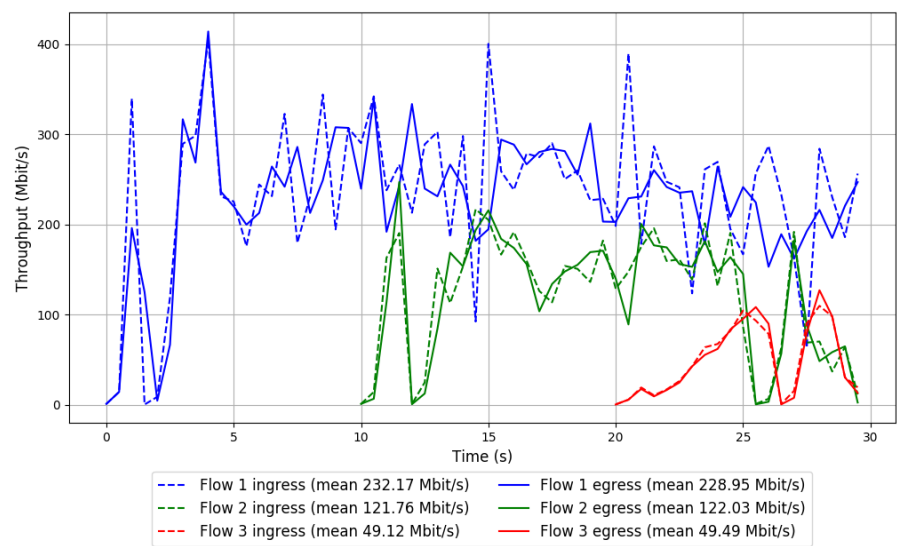
Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 207.67 Mbit/s) --- Flow 1 egress (mean 207.12 Mbit/s)
Flow 2 ingress (mean 116.77 Mbit/s) --- Flow 2 egress (mean 116.56 Mbit/s)
Flow 3 ingress (mean 122.24 Mbit/s) --- Flow 3 egress (mean 120.70 Mbit/s)

Flow 1 (95th percentile 123.53 ms)　Flow 2 (95th percentile 99.32 ms)　Flow 3 (95th percentile 108.55 ms)

```
Run 9: Statistics of Verus

Start at: 2017-12-12 13:16:29
End at: 2017-12-12 13:16:59


# Below is generated by plot.py at 2017-12-12 16:44:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.82 Mbit/s
95th percentile per-packet one-way delay: 234.005 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 228.95 Mbit/s
95th percentile per-packet one-way delay: 245.775 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 122.03 Mbit/s
95th percentile per-packet one-way delay: 163.411 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 49.49 Mbit/s
95th percentile per-packet one-way delay: 154.951 ms
Loss rate: 0.83%
```
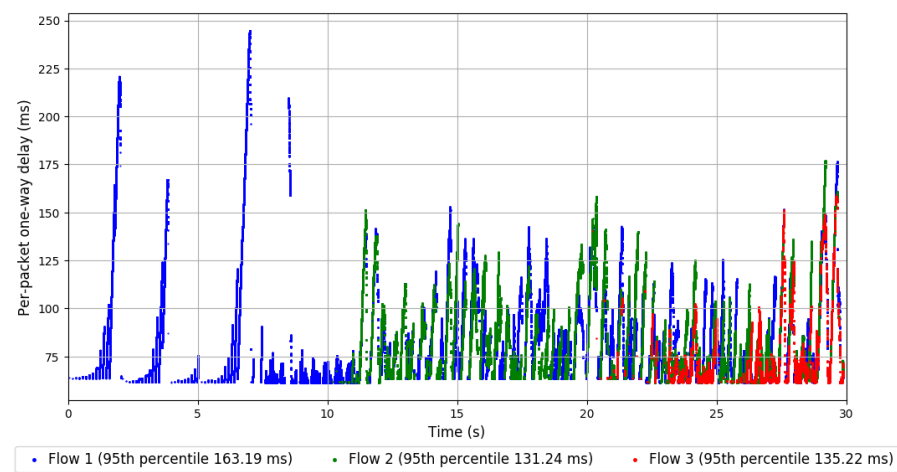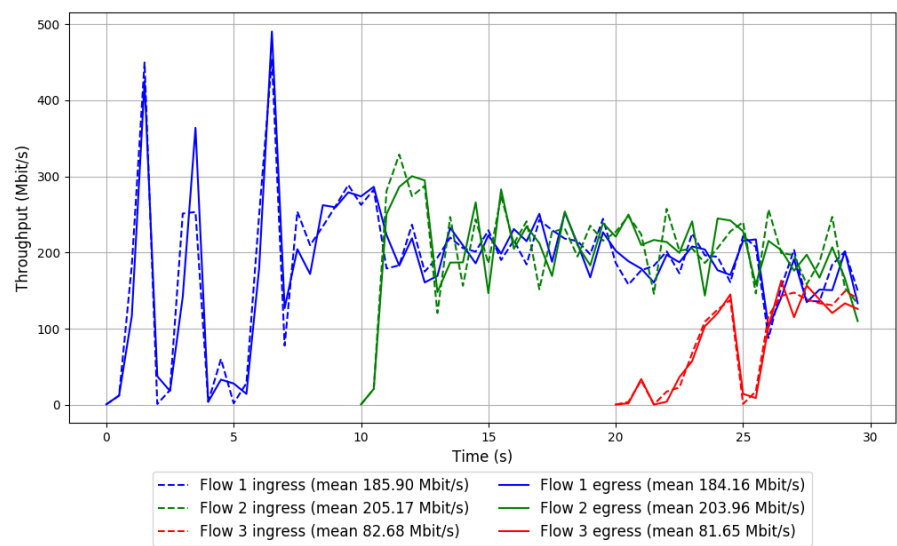
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2017-12-12 13:28:59
End at: 2017-12-12 13:29:29


# Below is generated by plot.py at 2017-12-12 16:45:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 346.16 Mbit/s
95th percentile per-packet one-way delay: 141.950 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 184.16 Mbit/s
95th percentile per-packet one-way delay: 163.186 ms
Loss rate: 1.35%
-- Flow 2:
Average throughput: 203.96 Mbit/s
95th percentile per-packet one-way delay: 131.239 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 81.65 Mbit/s
95th percentile per-packet one-way delay: 135.221 ms
Loss rate: 3.24%
```

Run 10: Report of Verus — Data Link

223

```
Run 1: Statistics of Copa

Start at: 2017-12-12 11:34:29
End at: 2017-12-12 11:34:59

# Below is generated by plot.py at 2017-12-12 16:45:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 129.96 Mbit/s
95th percentile per-packet one-way delay: 63.733 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 68.01 Mbit/s
95th percentile per-packet one-way delay: 63.782 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 68.04 Mbit/s
95th percentile per-packet one-way delay: 63.672 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 65.97 Mbit/s
95th percentile per-packet one-way delay: 63.719 ms
Loss rate: 2.11%
```
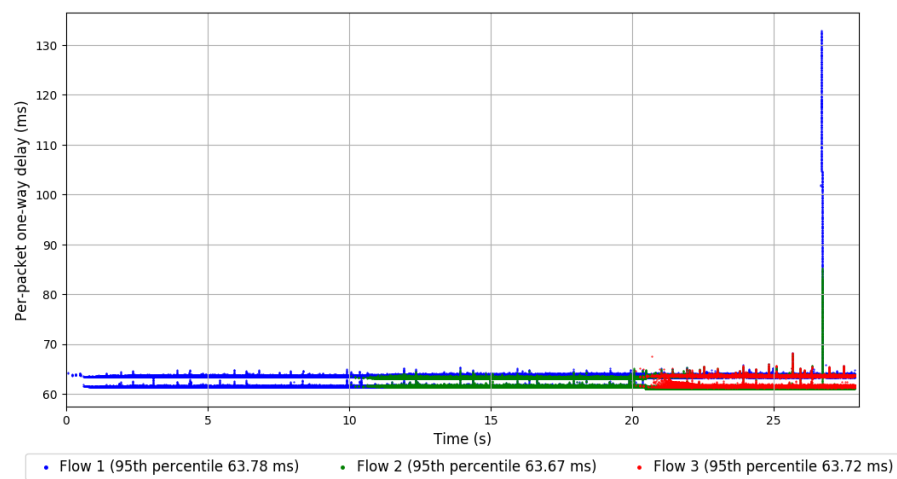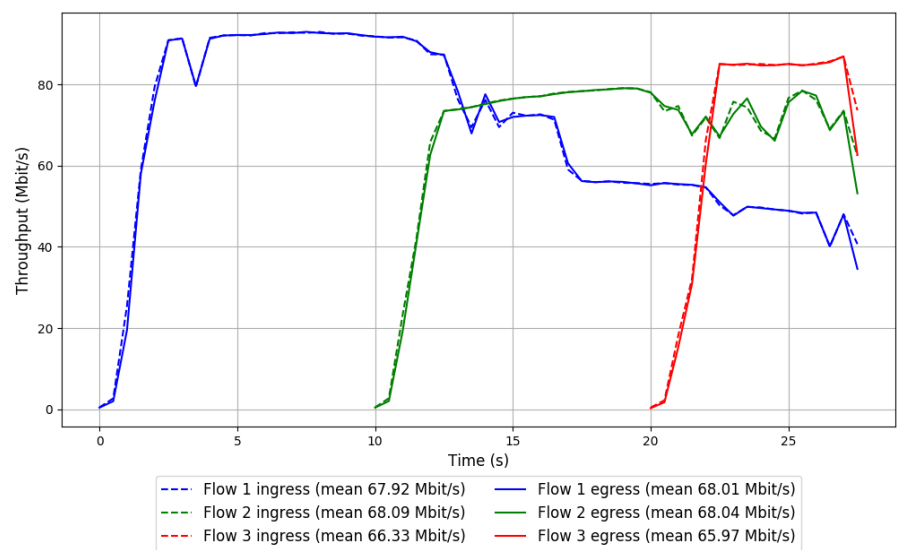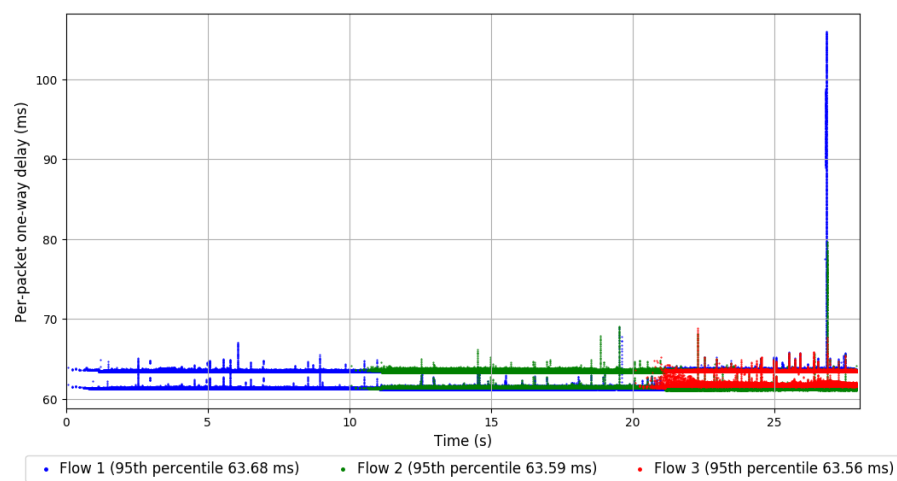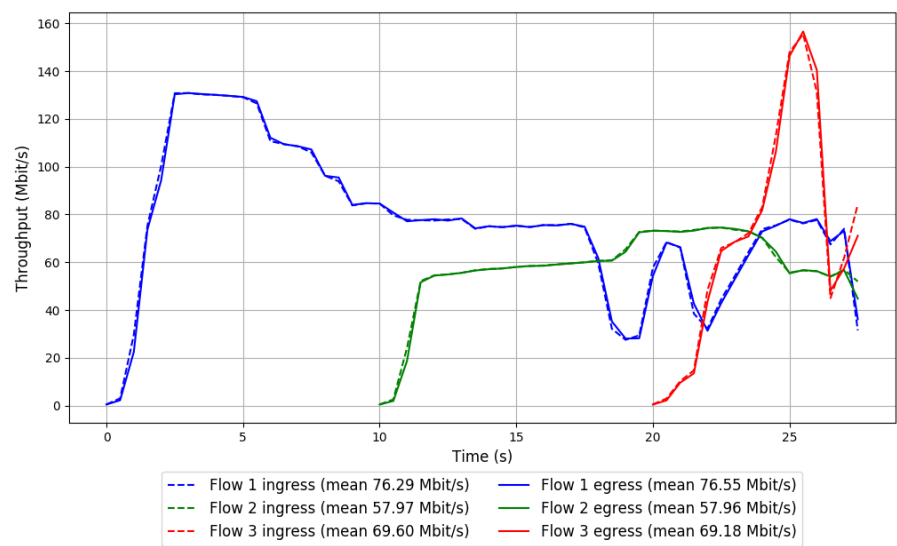
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 67.92 Mbit/s) --- Flow 1 egress (mean 68.01 Mbit/s)
Flow 2 ingress (mean 68.09 Mbit/s) --- Flow 2 egress (mean 68.04 Mbit/s)
Flow 3 ingress (mean 66.33 Mbit/s) --- Flow 3 egress (mean 65.97 Mbit/s)

Flow 1 (95th percentile 63.78 ms)   Flow 2 (95th percentile 63.67 ms)   Flow 3 (95th percentile 63.72 ms)

225

```
Run 2: Statistics of Copa

Start at: 2017-12-12 11:47:08
End at: 2017-12-12 11:47:38

# Below is generated by plot.py at 2017-12-12 16:45:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.09 Mbit/s
95th percentile per-packet one-way delay: 63.653 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 76.55 Mbit/s
95th percentile per-packet one-way delay: 63.681 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 57.96 Mbit/s
95th percentile per-packet one-way delay: 63.591 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 69.18 Mbit/s
95th percentile per-packet one-way delay: 63.562 ms
Loss rate: 2.14%
```
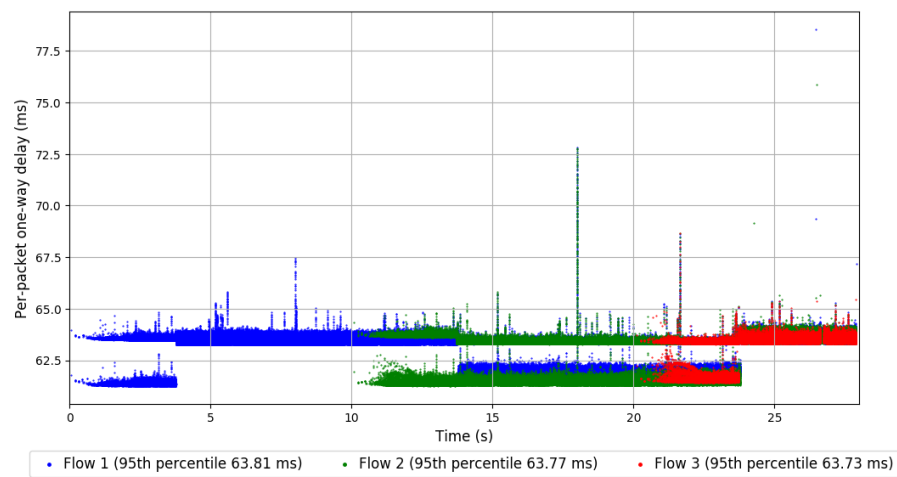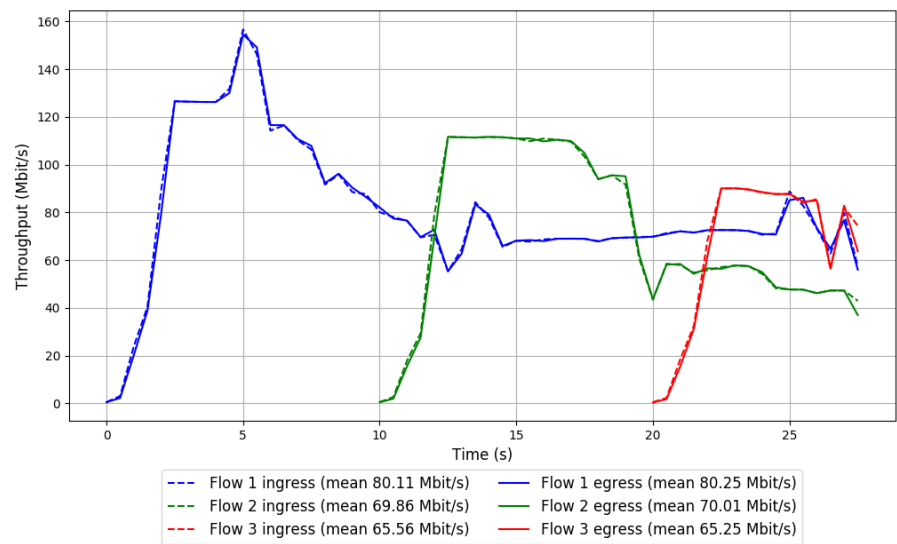
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2017-12-12 11:59:36
End at: 2017-12-12 12:00:06

# Below is generated by plot.py at 2017-12-12 16:45:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 143.33 Mbit/s
95th percentile per-packet one-way delay: 63.791 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 80.25 Mbit/s
95th percentile per-packet one-way delay: 63.807 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 70.01 Mbit/s
95th percentile per-packet one-way delay: 63.772 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 65.25 Mbit/s
95th percentile per-packet one-way delay: 63.731 ms
Loss rate: 2.02%
```
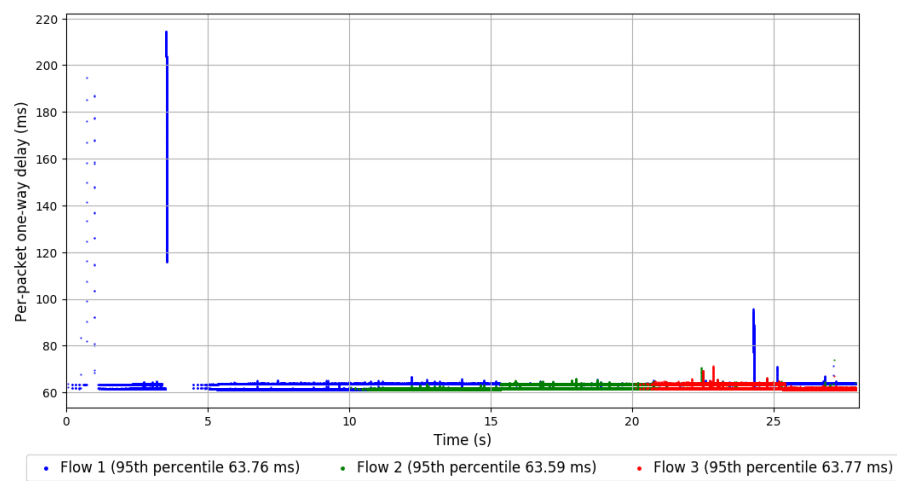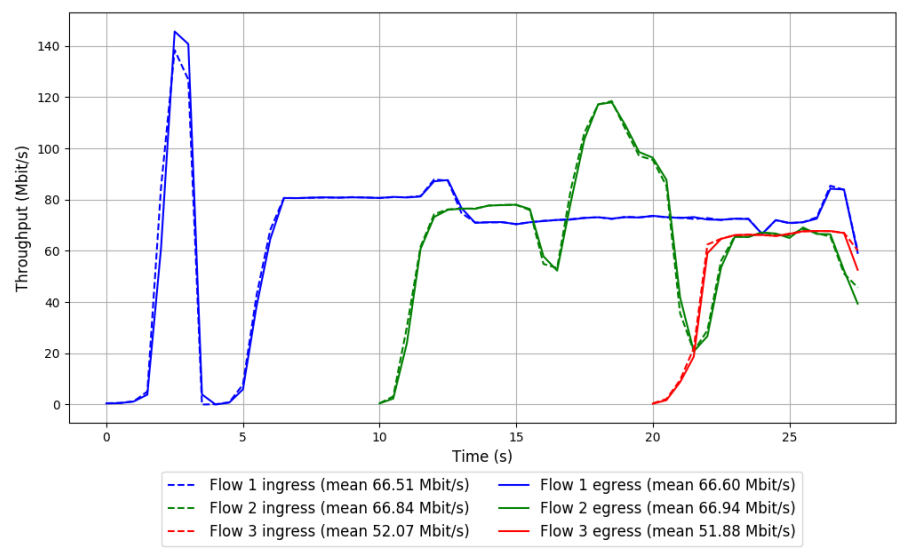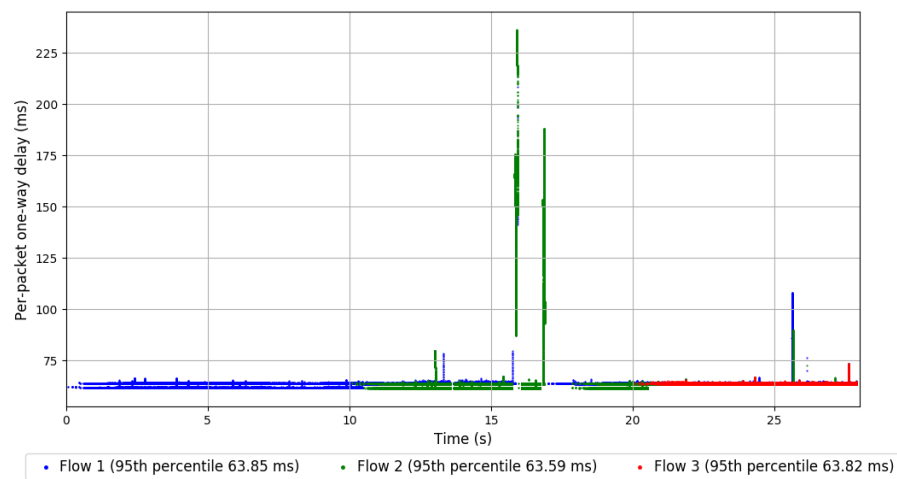
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 80.11 Mbit/s) ---- Flow 1 egress (mean 80.25 Mbit/s)
Flow 2 ingress (mean 69.86 Mbit/s) ---- Flow 2 egress (mean 70.01 Mbit/s)
Flow 3 ingress (mean 65.56 Mbit/s) ---- Flow 3 egress (mean 65.25 Mbit/s)

Flow 1 (95th percentile 63.81 ms) • Flow 2 (95th percentile 63.77 ms) • Flow 3 (95th percentile 63.73 ms)

229

```
Run 4: Statistics of Copa

Start at: 2017-12-12 12:12:04
End at: 2017-12-12 12:12:34

# Below is generated by plot.py at 2017-12-12 16:45:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 123.97 Mbit/s
95th percentile per-packet one-way delay: 63.727 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 66.60 Mbit/s
95th percentile per-packet one-way delay: 63.759 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 66.94 Mbit/s
95th percentile per-packet one-way delay: 63.591 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 51.88 Mbit/s
95th percentile per-packet one-way delay: 63.773 ms
Loss rate: 1.94%
```
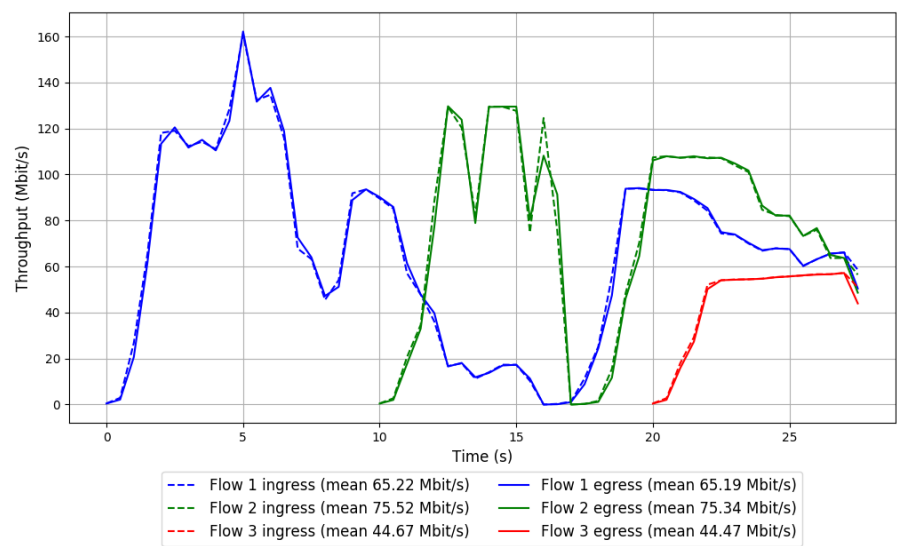
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2017-12-12 12:24:49
End at: 2017-12-12 12:25:19


# Below is generated by plot.py at 2017-12-12 16:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.88 Mbit/s
95th percentile per-packet one-way delay: 63.823 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 65.19 Mbit/s
95th percentile per-packet one-way delay: 63.854 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 75.34 Mbit/s
95th percentile per-packet one-way delay: 63.587 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 44.47 Mbit/s
95th percentile per-packet one-way delay: 63.817 ms
Loss rate: 2.03%
```
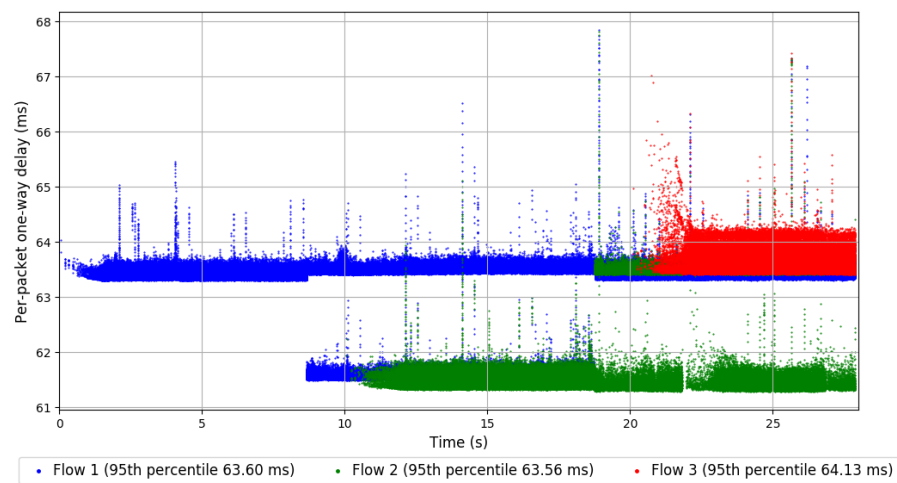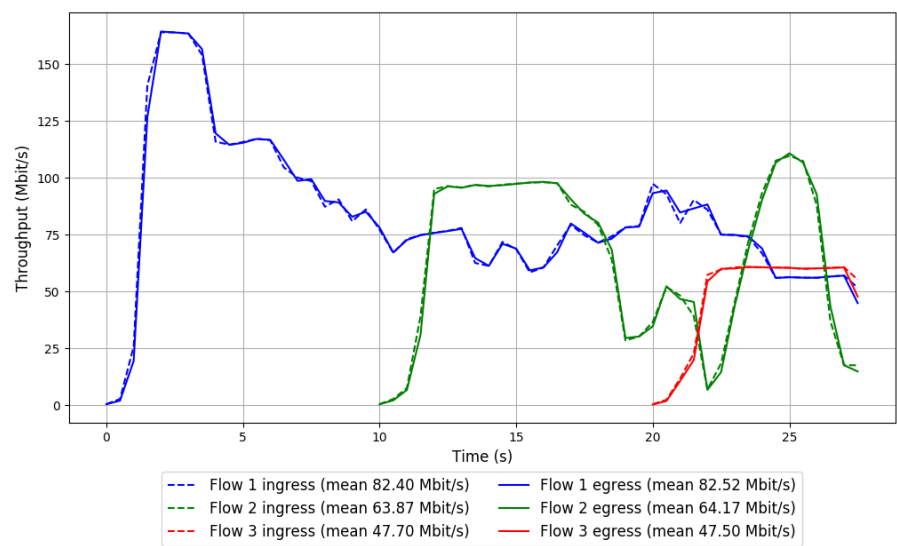
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 65.22 Mbit/s) --- Flow 1 egress (mean 65.19 Mbit/s)
Flow 2 ingress (mean 75.52 Mbit/s) --- Flow 2 egress (mean 75.34 Mbit/s)
Flow 3 ingress (mean 44.67 Mbit/s) --- Flow 3 egress (mean 44.47 Mbit/s)

Flow 1 (95th percentile 63.85 ms) • Flow 2 (95th percentile 63.59 ms) • Flow 3 (95th percentile 63.82 ms)

233

```
Run 6: Statistics of Copa

Start at: 2017-12-12 12:37:31
End at: 2017-12-12 12:38:01

# Below is generated by plot.py at 2017-12-12 16:47:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.89 Mbit/s
95th percentile per-packet one-way delay: 63.691 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 82.52 Mbit/s
95th percentile per-packet one-way delay: 63.597 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 64.17 Mbit/s
95th percentile per-packet one-way delay: 63.556 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 47.50 Mbit/s
95th percentile per-packet one-way delay: 64.127 ms
Loss rate: 2.02%
```
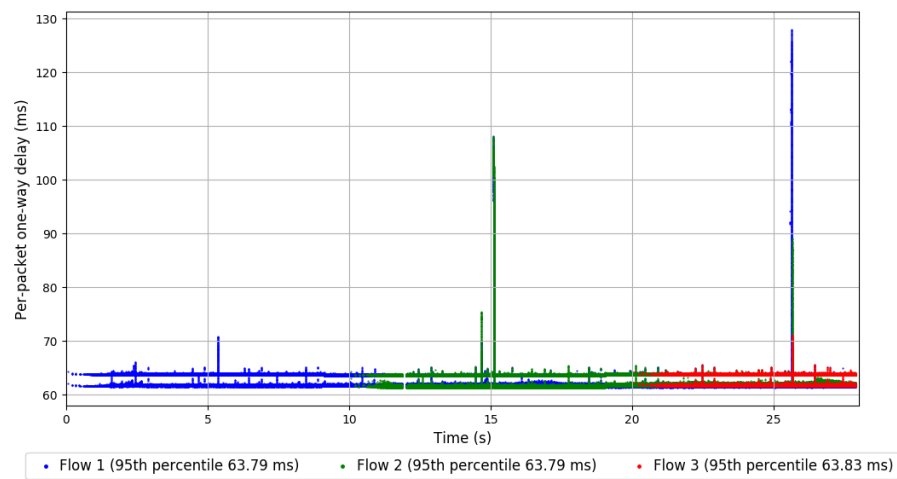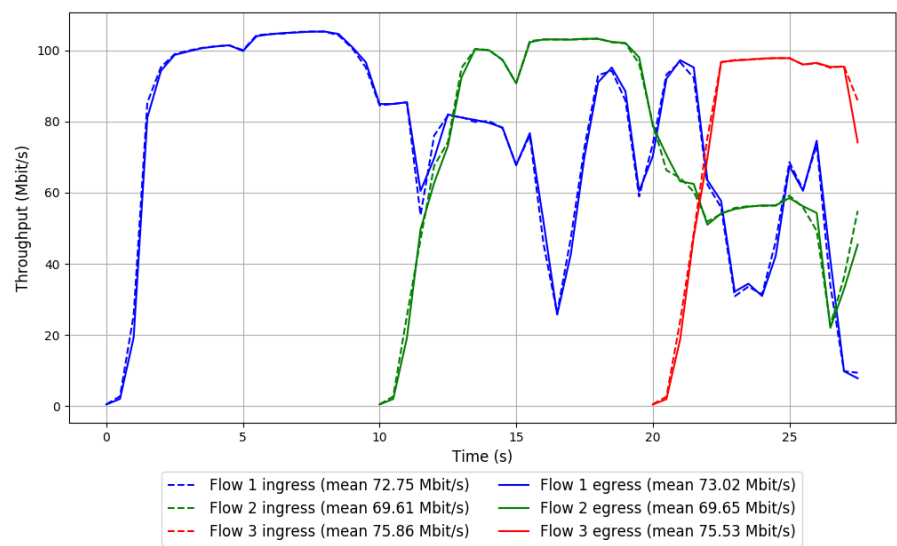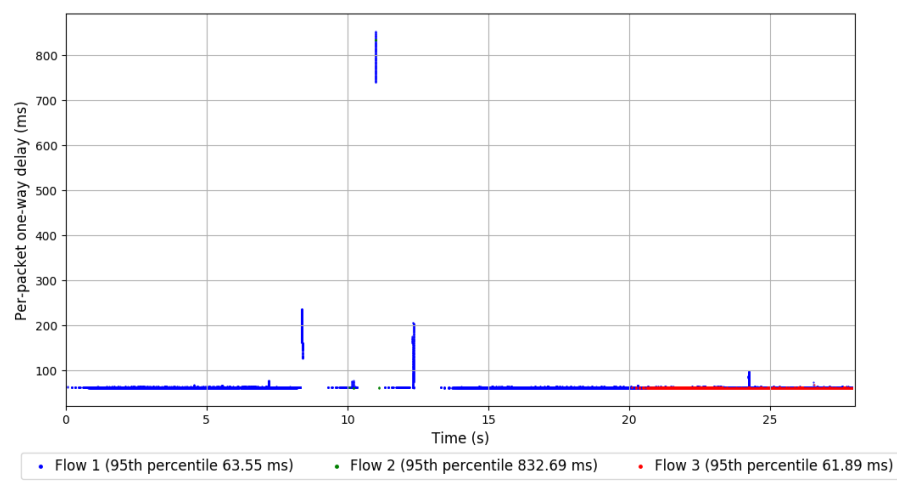
Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2017-12-12 12:50:20
End at: 2017-12-12 12:50:50


# Below is generated by plot.py at 2017-12-12 16:47:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.83 Mbit/s
95th percentile per-packet one-way delay: 63.800 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 73.02 Mbit/s
95th percentile per-packet one-way delay: 63.792 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 69.65 Mbit/s
95th percentile per-packet one-way delay: 63.794 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 75.53 Mbit/s
95th percentile per-packet one-way delay: 63.826 ms
Loss rate: 1.99%
```
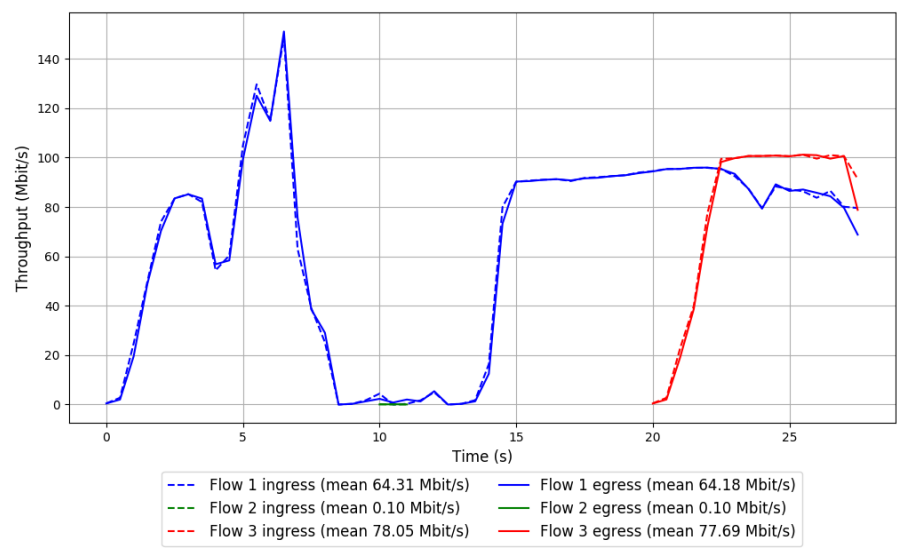
Run 7: Report of Copa — Data Link

```
Run 8: Statistics of Copa

Start at: 2017-12-12 13:02:56
End at: 2017-12-12 13:03:26

# Below is generated by plot.py at 2017-12-12 16:47:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.99 Mbit/s
95th percentile per-packet one-way delay: 63.527 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 64.18 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 832.689 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 77.69 Mbit/s
95th percentile per-packet one-way delay: 61.893 ms
Loss rate: 2.01%
```
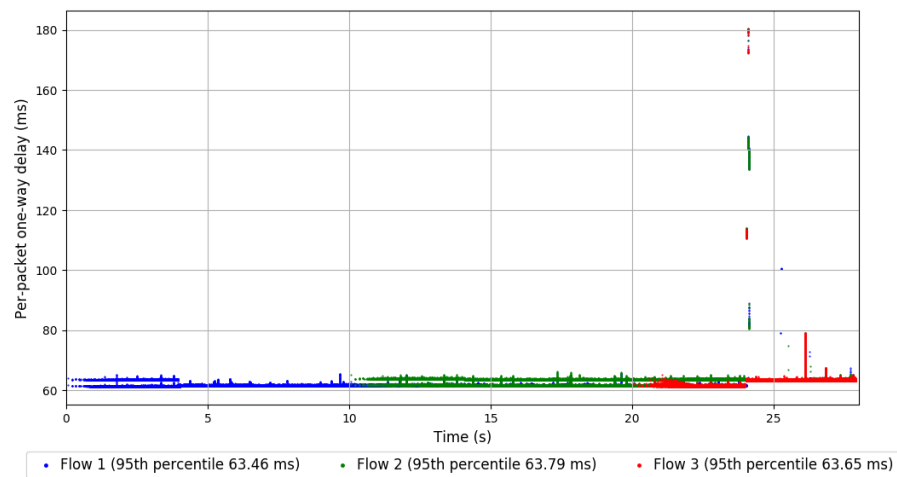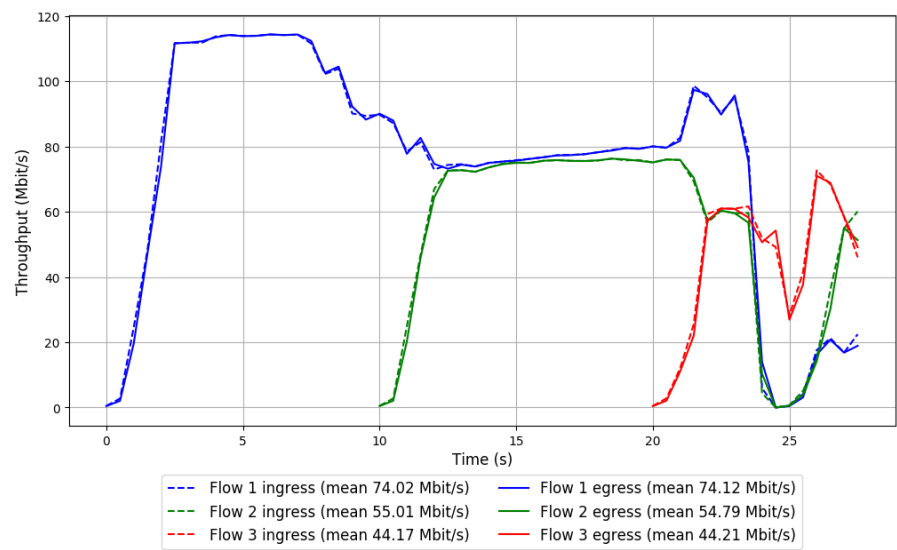
Run 8: Report of Copa — Data Link

Flow 1 ingress (mean 64.31 Mbit/s) —— Flow 1 egress (mean 64.18 Mbit/s)
Flow 2 ingress (mean 0.10 Mbit/s) —— Flow 2 egress (mean 0.10 Mbit/s)
Flow 3 ingress (mean 78.05 Mbit/s) —— Flow 3 egress (mean 77.69 Mbit/s)

• Flow 1 (95th percentile 63.55 ms) • Flow 2 (95th percentile 832.69 ms) • Flow 3 (95th percentile 61.89 ms)

239

```
Run 9: Statistics of Copa

Start at: 2017-12-12 13:15:35
End at: 2017-12-12 13:16:05


# Below is generated by plot.py at 2017-12-12 16:48:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 121.60 Mbit/s
95th percentile per-packet one-way delay: 63.657 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 74.12 Mbit/s
95th percentile per-packet one-way delay: 63.460 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 54.79 Mbit/s
95th percentile per-packet one-way delay: 63.790 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 44.21 Mbit/s
95th percentile per-packet one-way delay: 63.650 ms
Loss rate: 1.46%
```
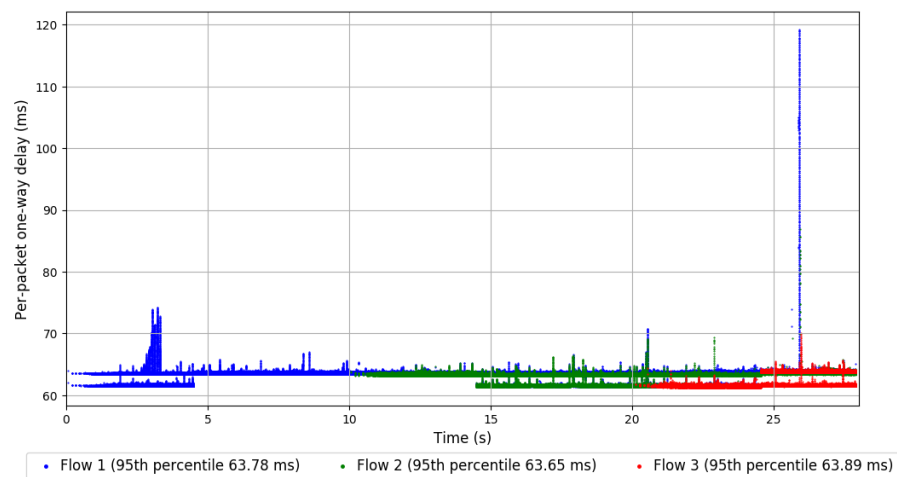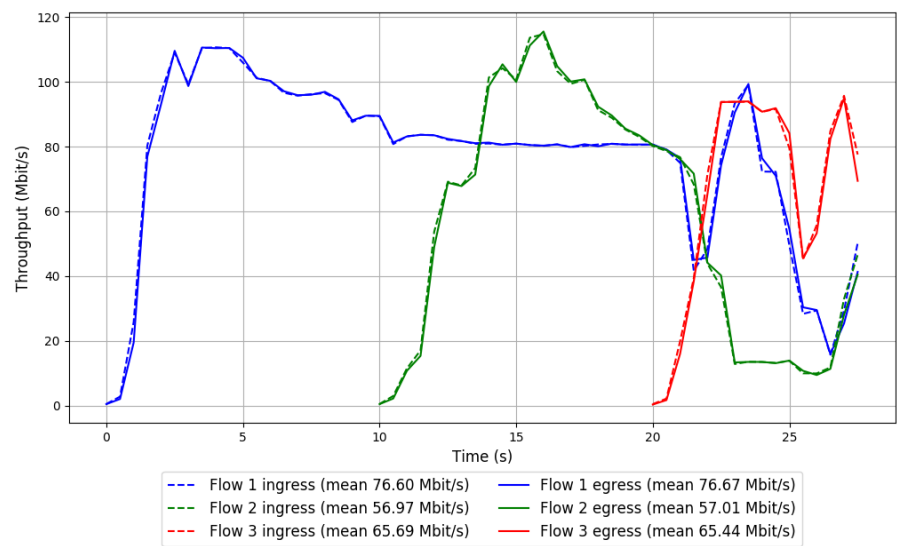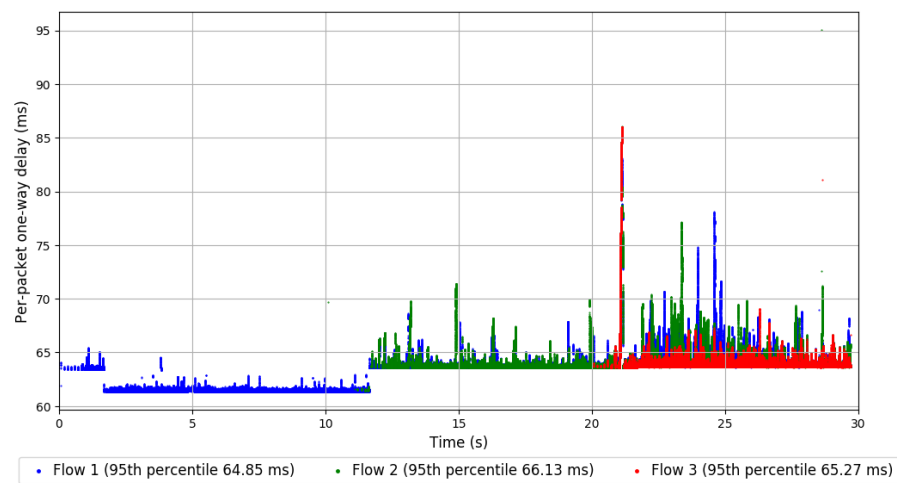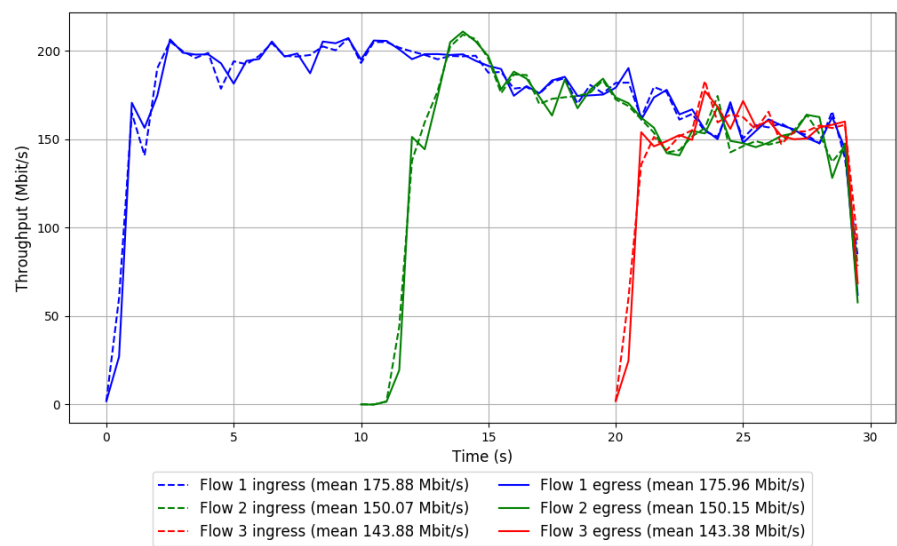
Run 9: Report of Copa — Data Link

```
Run 10: Statistics of Copa

Start at: 2017-12-12 13:28:05
End at: 2017-12-12 13:28:35

# Below is generated by plot.py at 2017-12-12 16:48:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 131.42 Mbit/s
95th percentile per-packet one-way delay: 63.797 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 76.67 Mbit/s
95th percentile per-packet one-way delay: 63.777 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 57.01 Mbit/s
95th percentile per-packet one-way delay: 63.652 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 65.44 Mbit/s
95th percentile per-packet one-way delay: 63.890 ms
Loss rate: 1.94%
```

Run 10: Report of Copa — Data Link

Flow 1 ingress (mean 76.60 Mbit/s) --- Flow 1 egress (mean 76.67 Mbit/s)
Flow 2 ingress (mean 56.97 Mbit/s) --- Flow 2 egress (mean 57.01 Mbit/s)
Flow 3 ingress (mean 65.69 Mbit/s) --- Flow 3 egress (mean 65.44 Mbit/s)

Flow 1 (95th percentile 63.78 ms) Flow 2 (95th percentile 63.65 ms) Flow 3 (95th percentile 63.89 ms)

```
Run 1: Statistics of Indigo

Start at: 2017-12-12 11:43:29
End at: 2017-12-12 11:43:59

# Below is generated by plot.py at 2017-12-12 16:51:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.90 Mbit/s
95th percentile per-packet one-way delay: 65.307 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 175.96 Mbit/s
95th percentile per-packet one-way delay: 64.847 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 150.15 Mbit/s
95th percentile per-packet one-way delay: 66.128 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 143.38 Mbit/s
95th percentile per-packet one-way delay: 65.273 ms
Loss rate: 1.62%
```
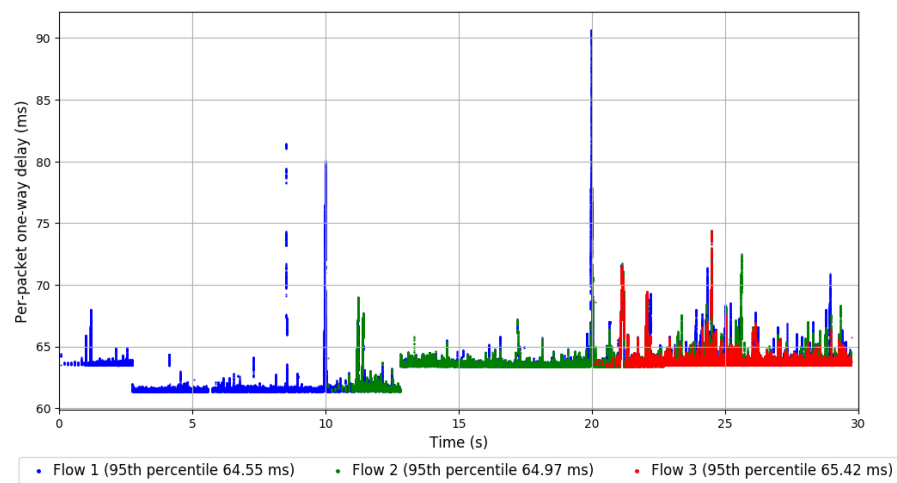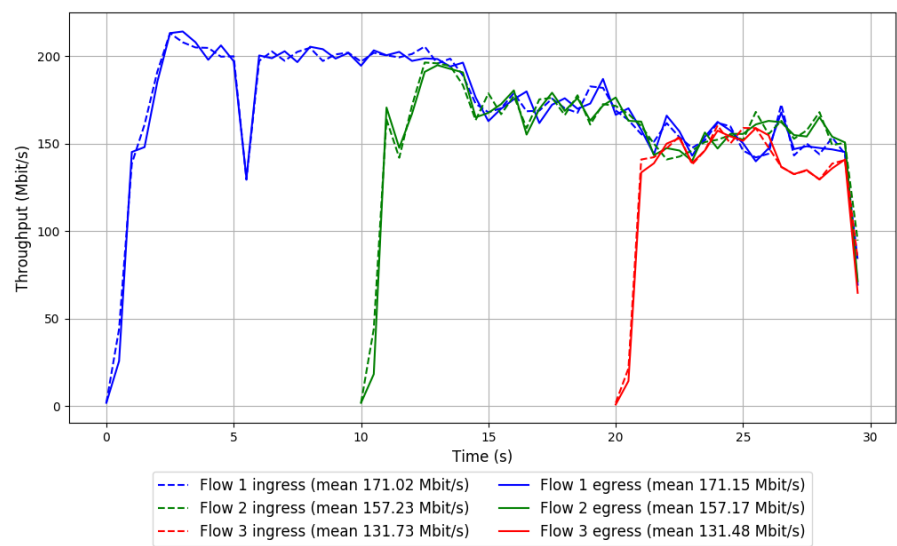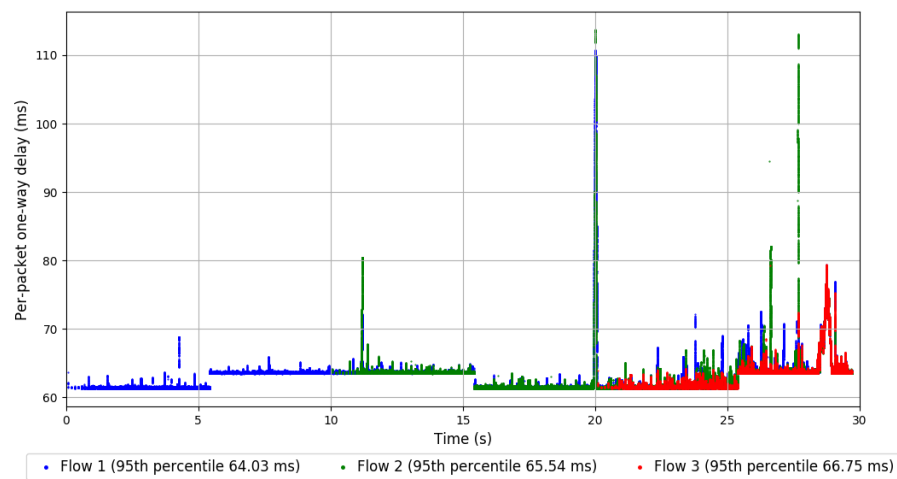
Run 1: Report of Indigo — Data Link

Flow 1 ingress (mean 175.88 Mbit/s)   Flow 1 egress (mean 175.96 Mbit/s)
Flow 2 ingress (mean 150.07 Mbit/s)   Flow 2 egress (mean 150.15 Mbit/s)
Flow 3 ingress (mean 143.88 Mbit/s)   Flow 3 egress (mean 143.38 Mbit/s)

Flow 1 (95th percentile 64.85 ms)   Flow 2 (95th percentile 66.13 ms)   Flow 3 (95th percentile 65.27 ms)

```
Run 2: Statistics of Indigo

Start at: 2017-12-12 11:55:58
End at: 2017-12-12 11:56:28

# Below is generated by plot.py at 2017-12-12 16:51:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.74 Mbit/s
95th percentile per-packet one-way delay: 64.848 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 171.15 Mbit/s
95th percentile per-packet one-way delay: 64.550 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 157.17 Mbit/s
95th percentile per-packet one-way delay: 64.966 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 131.48 Mbit/s
95th percentile per-packet one-way delay: 65.425 ms
Loss rate: 1.46%
```
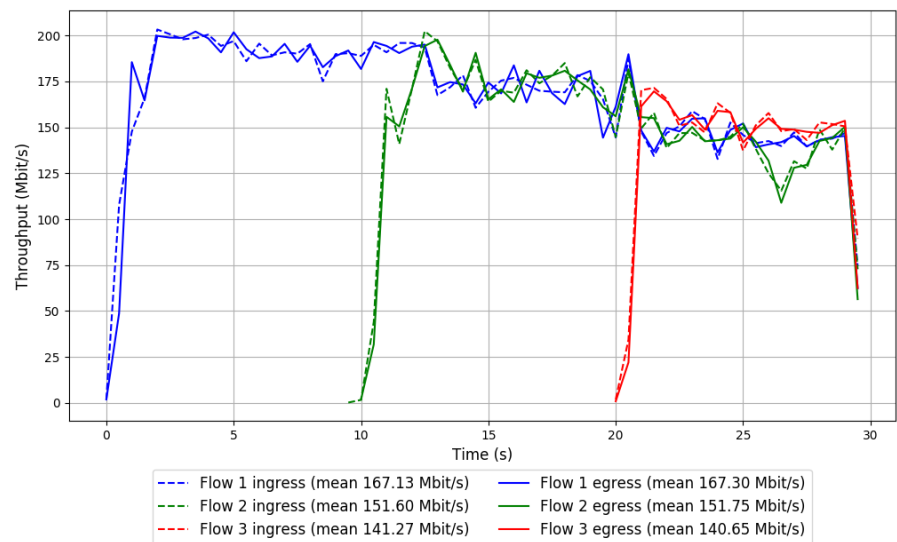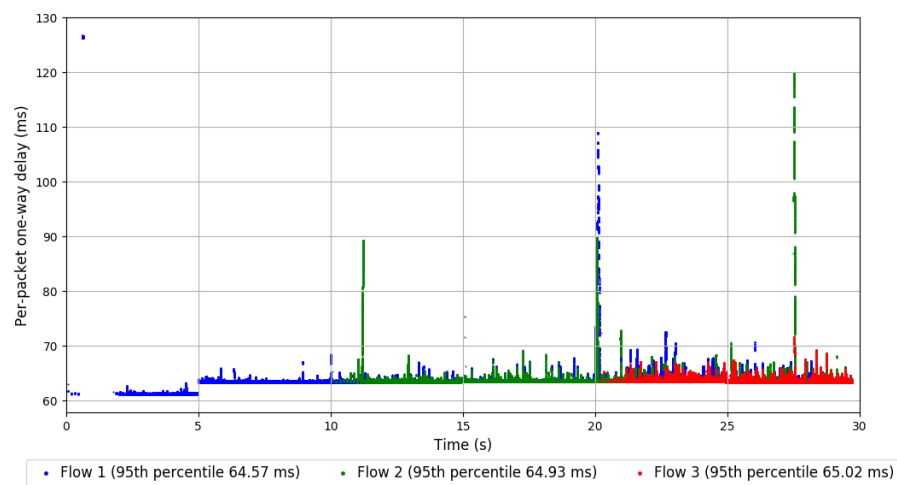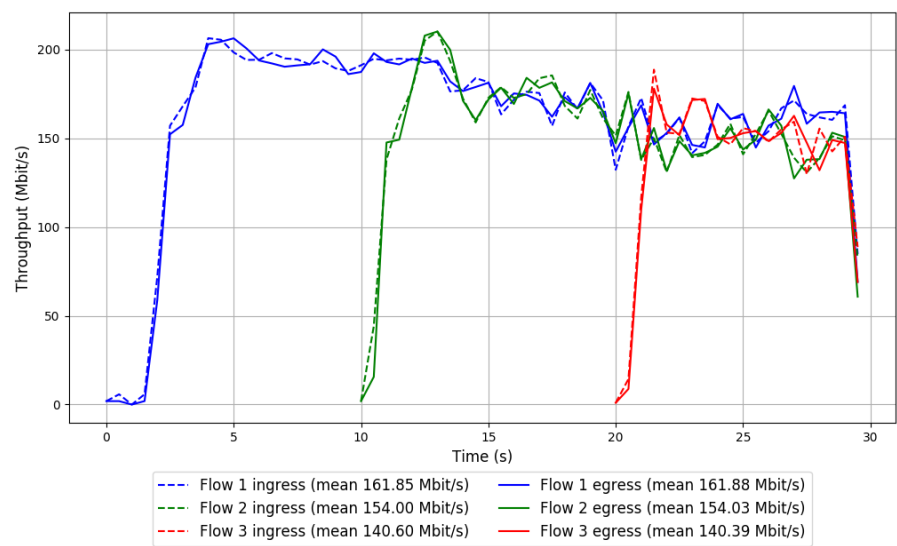
Run 2: Report of Indigo — Data Link

Flow 1 ingress (mean 171.02 Mbit/s)   Flow 1 egress (mean 171.15 Mbit/s)
Flow 2 ingress (mean 157.23 Mbit/s)   Flow 2 egress (mean 157.17 Mbit/s)
Flow 3 ingress (mean 131.73 Mbit/s)   Flow 3 egress (mean 131.48 Mbit/s)

Flow 1 (95th percentile 64.55 ms)   Flow 2 (95th percentile 64.97 ms)   Flow 3 (95th percentile 65.42 ms)

```
Run 3: Statistics of Indigo

Start at: 2017-12-12 12:08:26
End at: 2017-12-12 12:08:56

# Below is generated by plot.py at 2017-12-12 16:51:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 313.40 Mbit/s
95th percentile per-packet one-way delay: 64.685 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 167.30 Mbit/s
95th percentile per-packet one-way delay: 64.035 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 151.75 Mbit/s
95th percentile per-packet one-way delay: 65.539 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 140.65 Mbit/s
95th percentile per-packet one-way delay: 66.752 ms
Loss rate: 1.66%
```
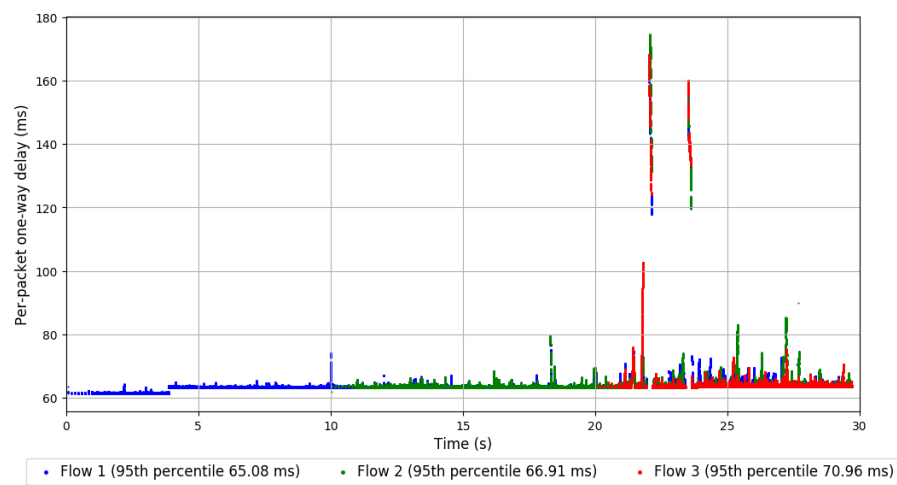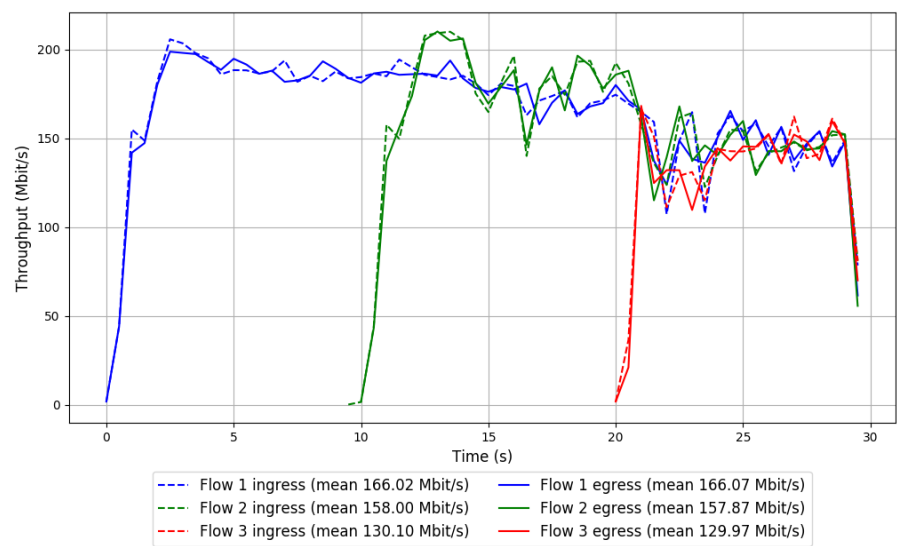
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2017-12-12 12:21:06
End at: 2017-12-12 12:21:36

# Below is generated by plot.py at 2017-12-12 16:52:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.83 Mbit/s
95th percentile per-packet one-way delay: 64.780 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 161.88 Mbit/s
95th percentile per-packet one-way delay: 64.566 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 154.03 Mbit/s
95th percentile per-packet one-way delay: 64.931 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 140.39 Mbit/s
95th percentile per-packet one-way delay: 65.015 ms
Loss rate: 1.49%
```
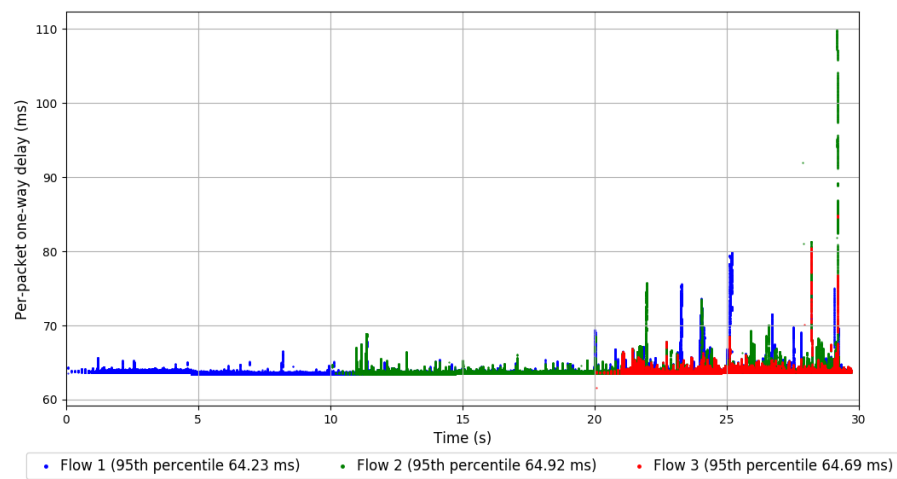
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2017-12-12 12:33:47
End at: 2017-12-12 12:34:17


# Below is generated by plot.py at 2017-12-12 16:52:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 312.90 Mbit/s
95th percentile per-packet one-way delay: 66.144 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 166.07 Mbit/s
95th percentile per-packet one-way delay: 65.079 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 157.87 Mbit/s
95th percentile per-packet one-way delay: 66.910 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 129.97 Mbit/s
95th percentile per-packet one-way delay: 70.961 ms
Loss rate: 1.38%
```
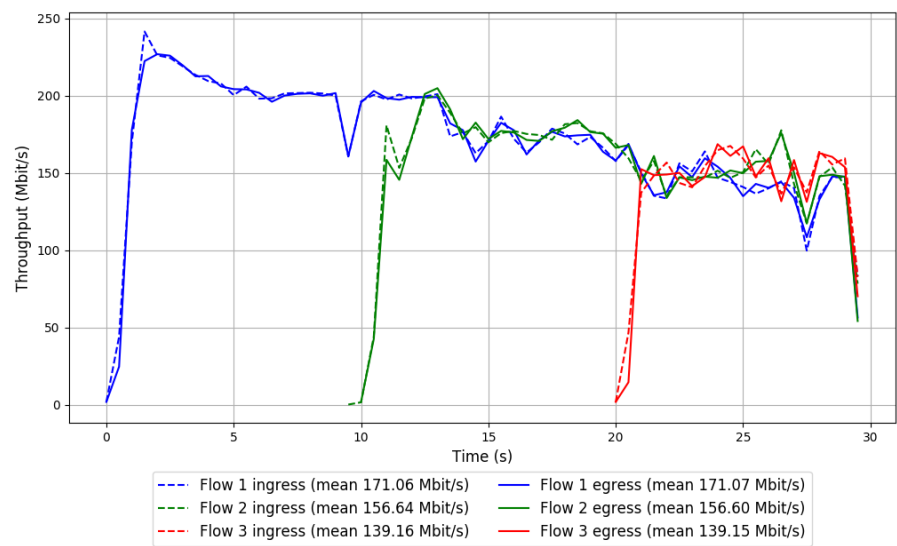
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2017-12-12 12:46:36
End at: 2017-12-12 12:47:06

# Below is generated by plot.py at 2017-12-12 16:53:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.05 Mbit/s
95th percentile per-packet one-way delay: 64.534 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 171.07 Mbit/s
95th percentile per-packet one-way delay: 64.234 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 156.60 Mbit/s
95th percentile per-packet one-way delay: 64.915 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 139.15 Mbit/s
95th percentile per-packet one-way delay: 64.690 ms
Loss rate: 1.27%
```
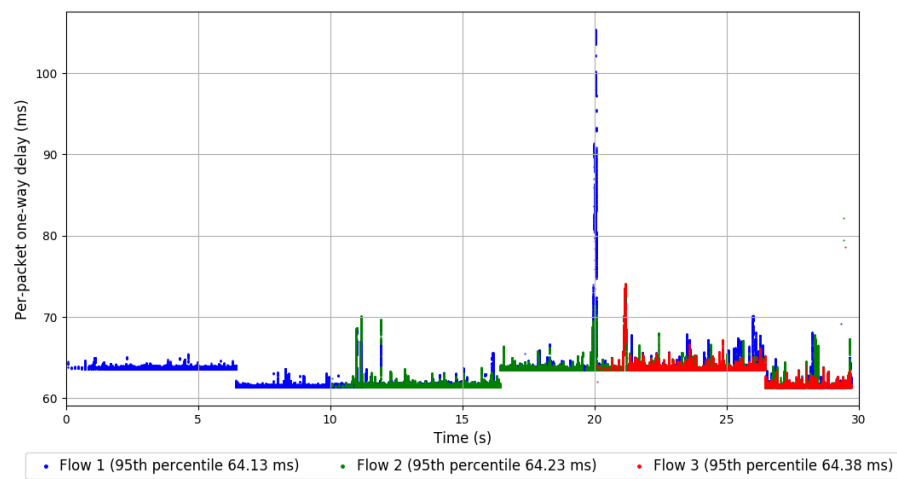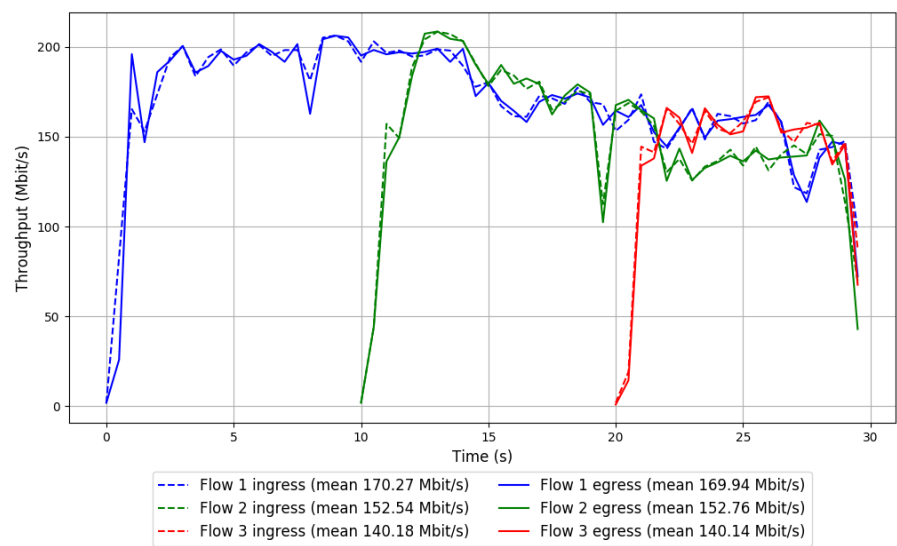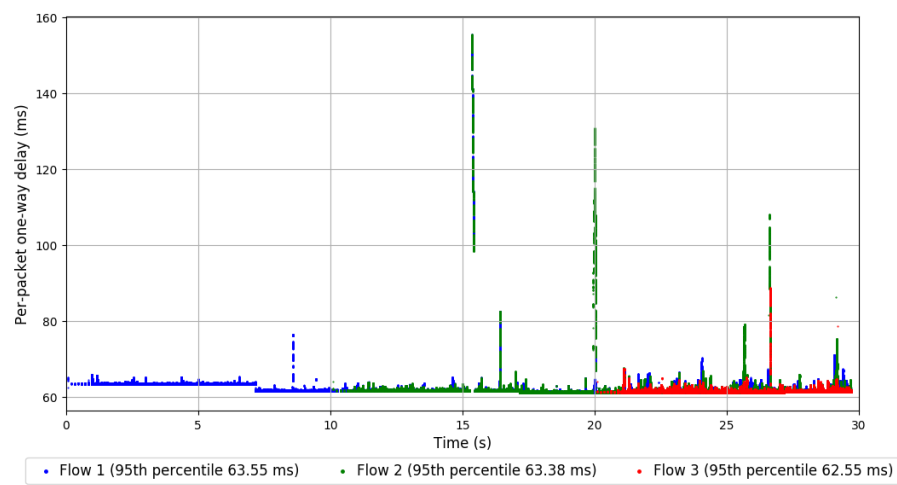
Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2017-12-12 12:59:15
End at: 2017-12-12 12:59:45

# Below is generated by plot.py at 2017-12-12 16:54:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.53 Mbit/s
95th percentile per-packet one-way delay: 64.206 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 169.94 Mbit/s
95th percentile per-packet one-way delay: 64.130 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 152.76 Mbit/s
95th percentile per-packet one-way delay: 64.226 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 140.14 Mbit/s
95th percentile per-packet one-way delay: 64.378 ms
Loss rate: 1.45%
```
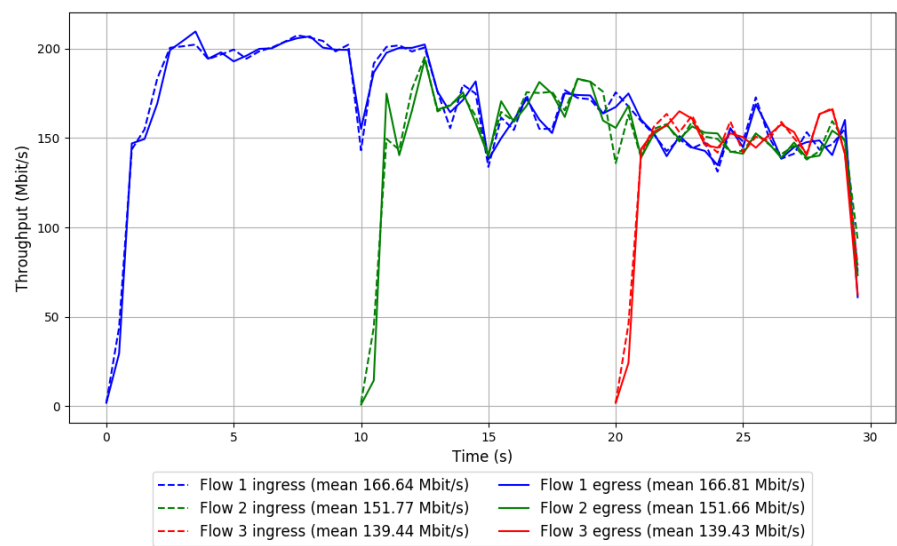
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2017-12-12 13:11:54
End at: 2017-12-12 13:12:24


# Below is generated by plot.py at 2017-12-12 16:54:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 312.22 Mbit/s
95th percentile per-packet one-way delay: 63.534 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 166.81 Mbit/s
95th percentile per-packet one-way delay: 63.550 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 151.66 Mbit/s
95th percentile per-packet one-way delay: 63.385 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 139.43 Mbit/s
95th percentile per-packet one-way delay: 62.548 ms
Loss rate: 1.27%
```
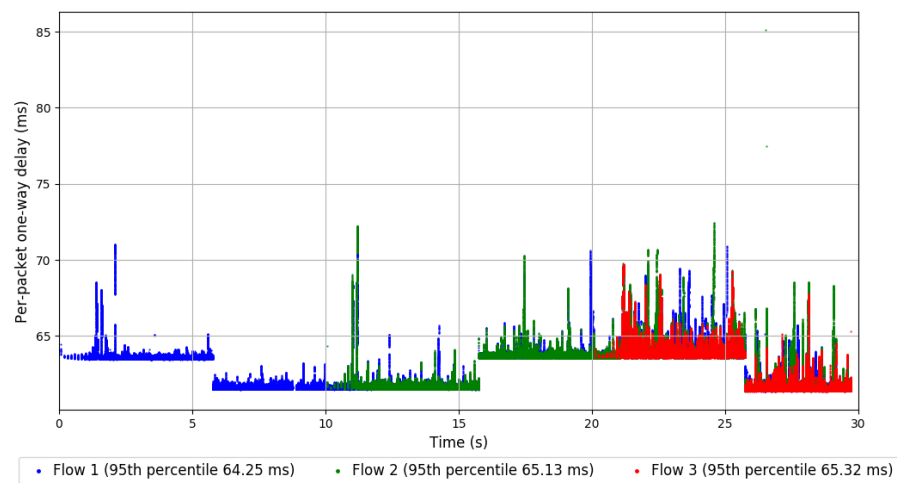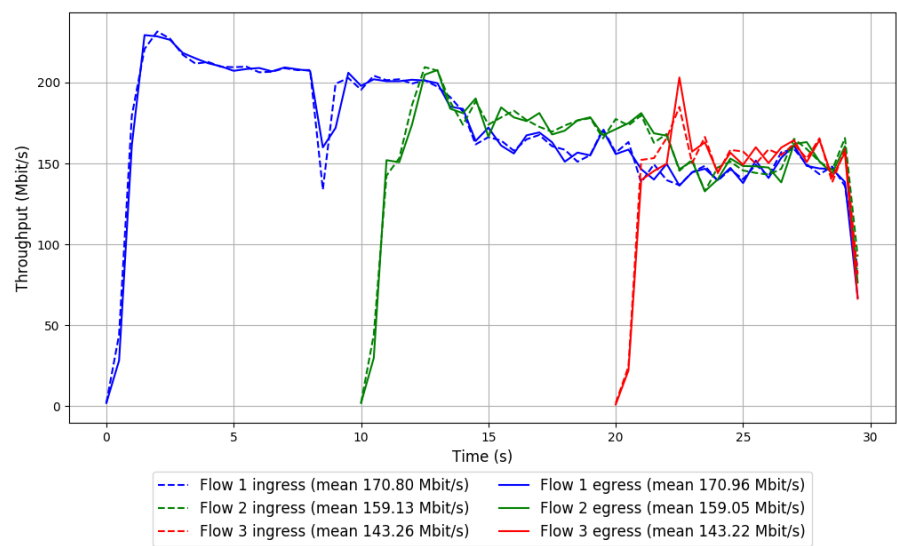
Run 8: Report of Indigo — Data Link

259

```
Run 9: Statistics of Indigo

Start at: 2017-12-12 13:24:25
End at: 2017-12-12 13:24:55


# Below is generated by plot.py at 2017-12-12 16:57:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.58 Mbit/s
95th percentile per-packet one-way delay: 64.691 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 170.96 Mbit/s
95th percentile per-packet one-way delay: 64.250 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 159.05 Mbit/s
95th percentile per-packet one-way delay: 65.130 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 143.22 Mbit/s
95th percentile per-packet one-way delay: 65.324 ms
Loss rate: 1.27%
```
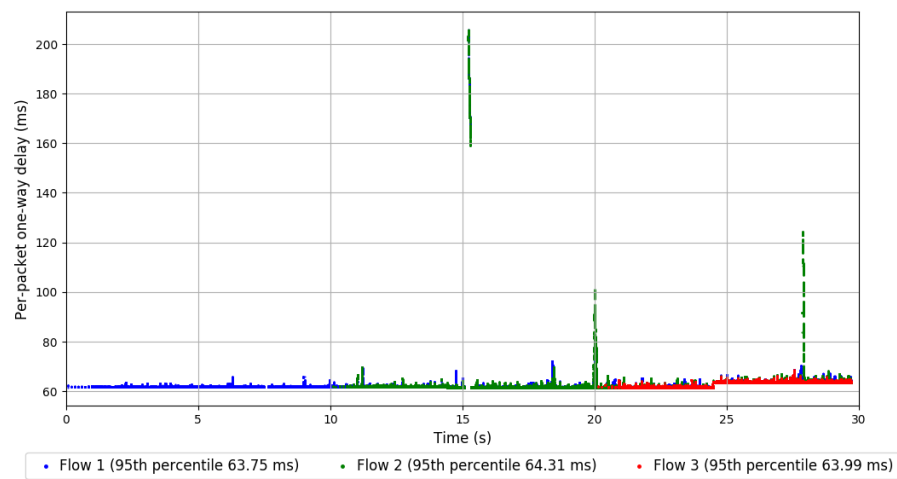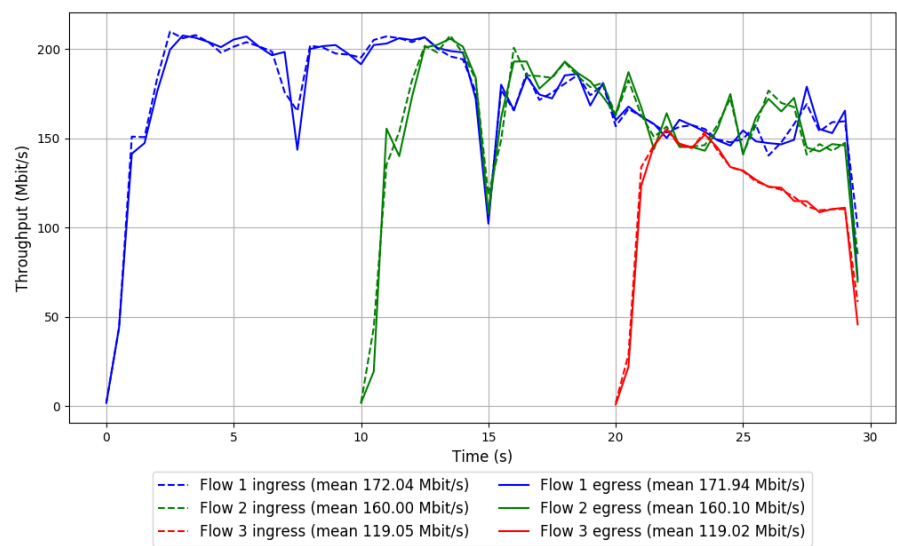
Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2017-12-12 13:36:57
End at: 2017-12-12 13:37:27


# Below is generated by plot.py at 2017-12-12 16:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.32 Mbit/s
95th percentile per-packet one-way delay: 63.947 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 171.94 Mbit/s
95th percentile per-packet one-way delay: 63.754 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 160.10 Mbit/s
95th percentile per-packet one-way delay: 64.309 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 119.02 Mbit/s
95th percentile per-packet one-way delay: 63.988 ms
Loss rate: 1.17%
```

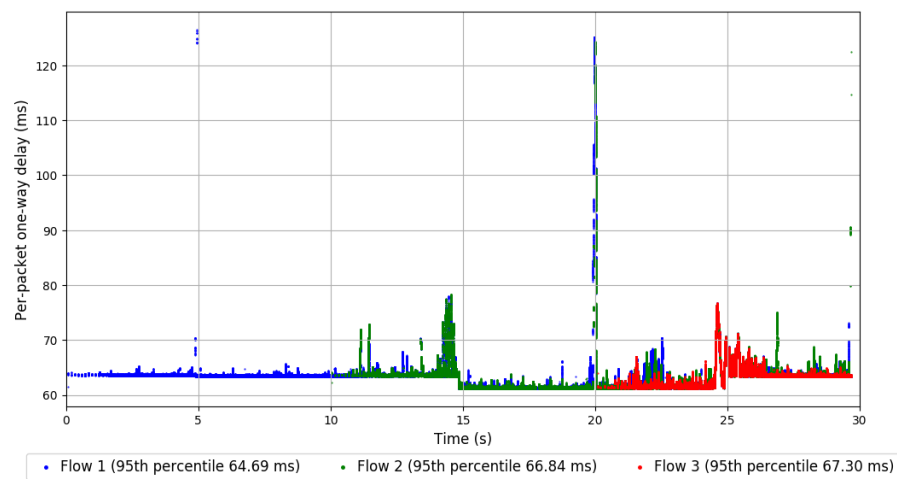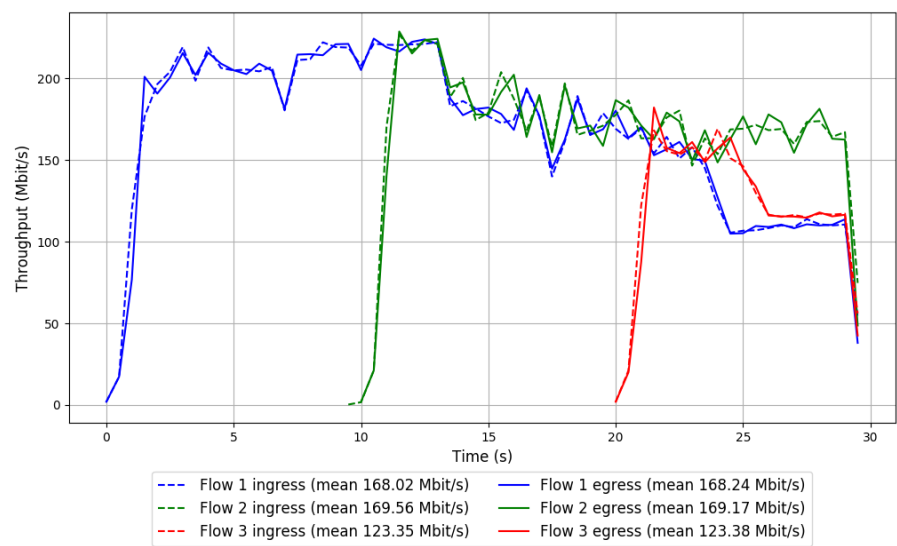Run 10: Report of Indigo — Data Link

263

```
Run 1: Statistics of Indigo-calib

Start at: 2017-12-12 11:39:16
End at: 2017-12-12 11:39:46

# Below is generated by plot.py at 2017-12-12 16:57:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.27 Mbit/s
95th percentile per-packet one-way delay: 66.072 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 168.24 Mbit/s
95th percentile per-packet one-way delay: 64.688 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 169.17 Mbit/s
95th percentile per-packet one-way delay: 66.841 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 123.38 Mbit/s
95th percentile per-packet one-way delay: 67.301 ms
Loss rate: 1.25%
```

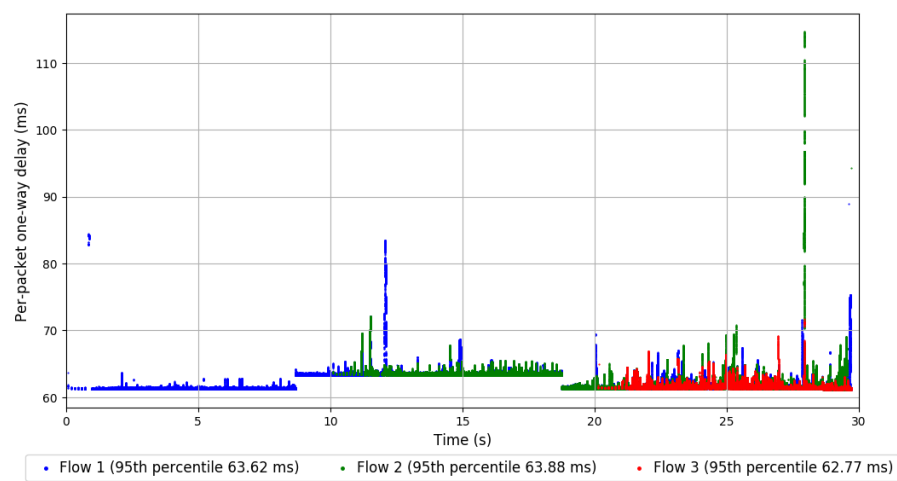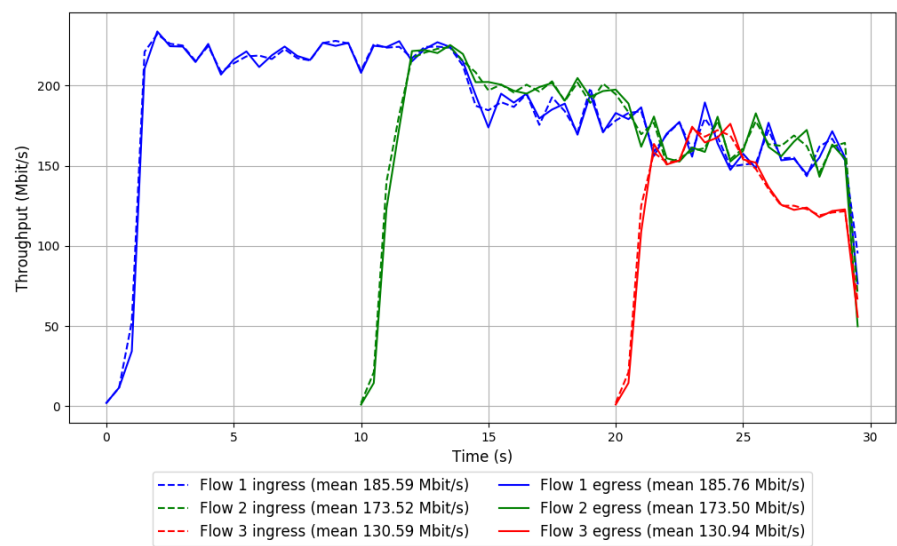Run 1: Report of Indigo-calib — Data Link

265

```
Run 2: Statistics of Indigo-calib

Start at: 2017-12-12 11:51:52
End at: 2017-12-12 11:52:22


# Below is generated by plot.py at 2017-12-12 16:58:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.66 Mbit/s
95th percentile per-packet one-way delay: 63.671 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 185.76 Mbit/s
95th percentile per-packet one-way delay: 63.620 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 173.50 Mbit/s
95th percentile per-packet one-way delay: 63.879 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 130.94 Mbit/s
95th percentile per-packet one-way delay: 62.771 ms
Loss rate: 1.01%
```

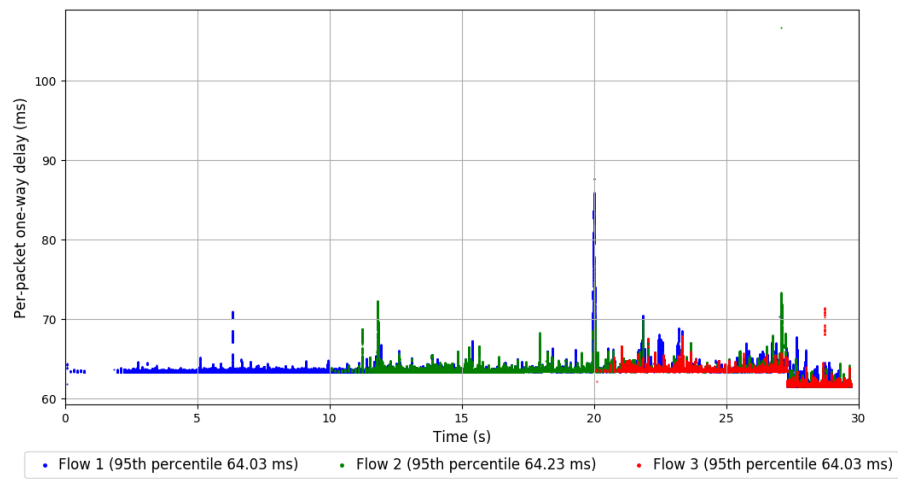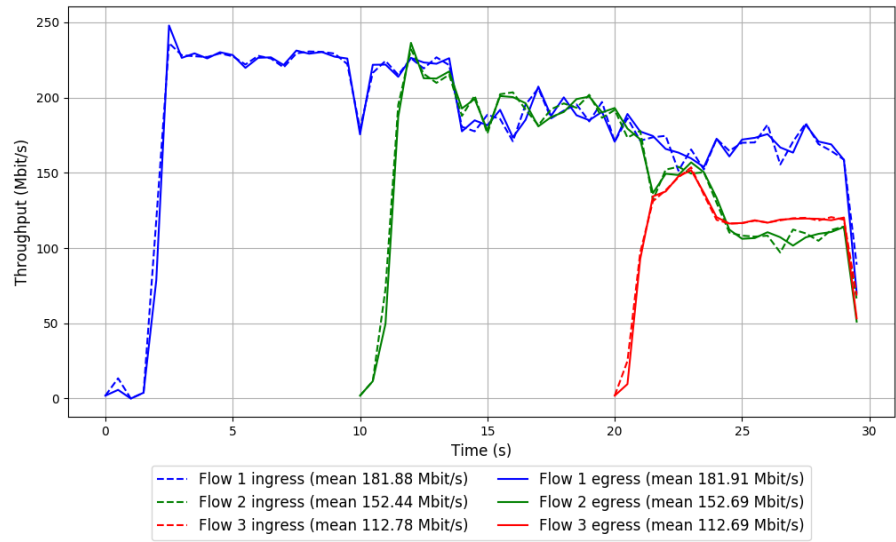# Run 2: Report of Indigo-calib — Data Link

```
Run 3: Statistics of Indigo-calib

Start at: 2017-12-12 12:04:24
End at: 2017-12-12 12:04:54


# Below is generated by plot.py at 2017-12-12 16:59:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 319.66 Mbit/s
95th percentile per-packet one-way delay: 64.102 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 181.91 Mbit/s
95th percentile per-packet one-way delay: 64.035 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 152.69 Mbit/s
95th percentile per-packet one-way delay: 64.228 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 112.69 Mbit/s
95th percentile per-packet one-way delay: 64.032 ms
Loss rate: 1.37%
```

Run 3: Report of Indigo-calib — Data Link

```
Run 4: Statistics of Indigo-calib

Start at: 2017-12-12 12:16:47
End at: 2017-12-12 12:17:17


# Below is generated by plot.py at 2017-12-12 17:00:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.13 Mbit/s
95th percentile per-packet one-way delay: 65.300 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 177.31 Mbit/s
95th percentile per-packet one-way delay: 64.428 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 165.30 Mbit/s
95th percentile per-packet one-way delay: 66.382 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 147.55 Mbit/s
95th percentile per-packet one-way delay: 66.160 ms
Loss rate: 1.82%
```
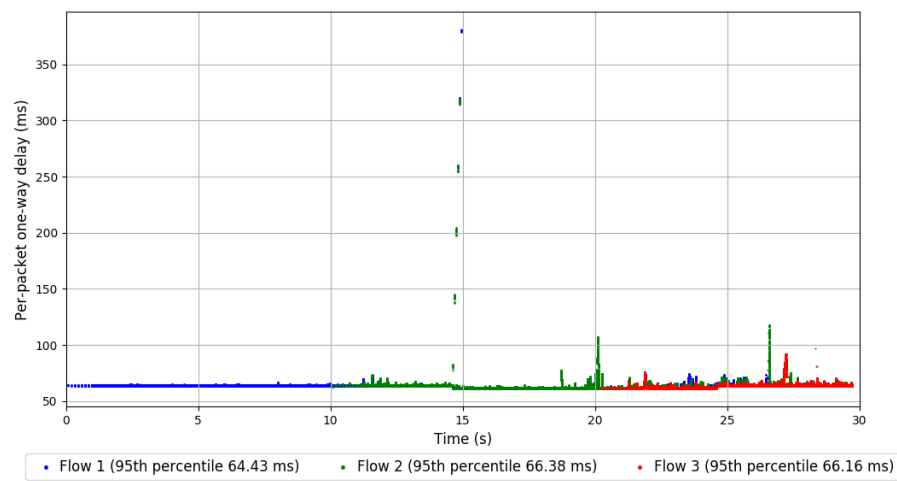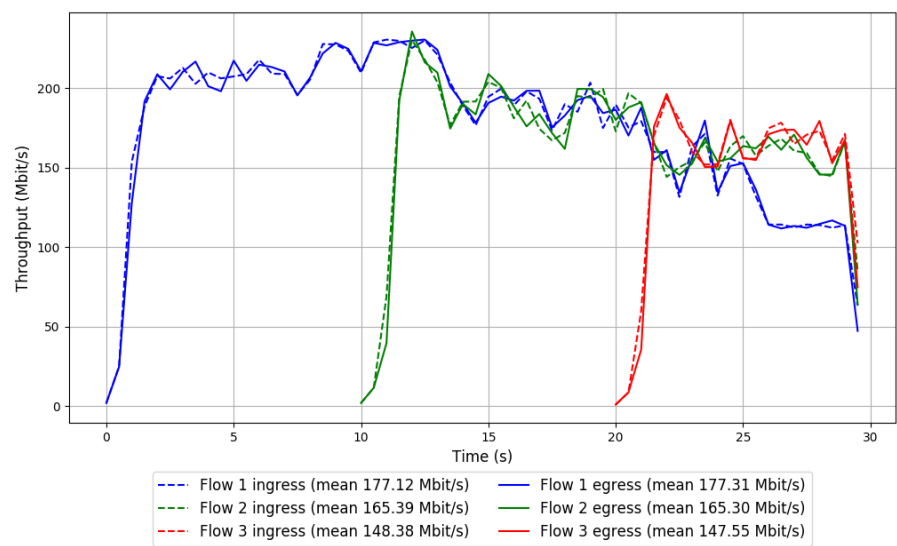
Run 4: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 177.12 Mbit/s) --- Flow 1 egress (mean 177.31 Mbit/s)
Flow 2 ingress (mean 165.39 Mbit/s) --- Flow 2 egress (mean 165.30 Mbit/s)
Flow 3 ingress (mean 148.38 Mbit/s) --- Flow 3 egress (mean 147.55 Mbit/s)

Flow 1 (95th percentile 64.43 ms)   Flow 2 (95th percentile 66.38 ms)   Flow 3 (95th percentile 66.16 ms)

271

```
Run 5: Statistics of Indigo-calib

Start at: 2017-12-12 12:29:32
End at: 2017-12-12 12:30:02

# Below is generated by plot.py at 2017-12-12 17:00:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.44 Mbit/s
95th percentile per-packet one-way delay: 64.447 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 178.05 Mbit/s
95th percentile per-packet one-way delay: 64.277 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 154.81 Mbit/s
95th percentile per-packet one-way delay: 64.550 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 149.99 Mbit/s
95th percentile per-packet one-way delay: 64.617 ms
Loss rate: 1.34%
```
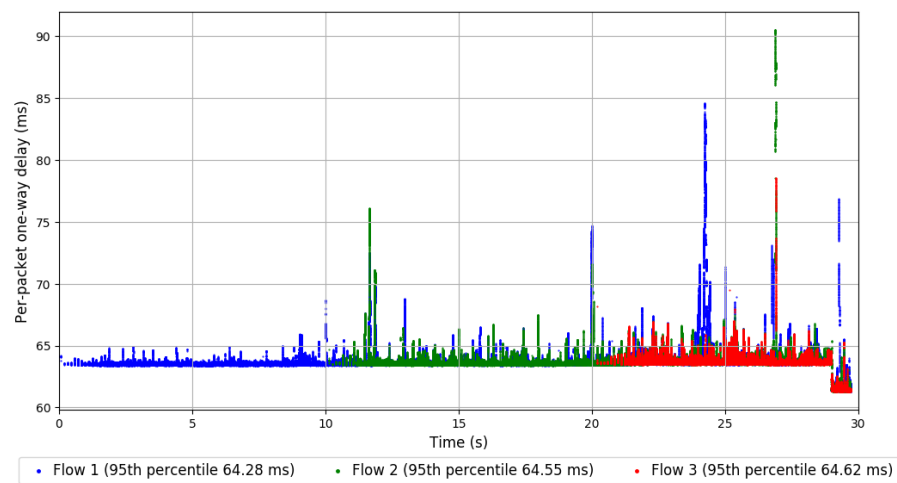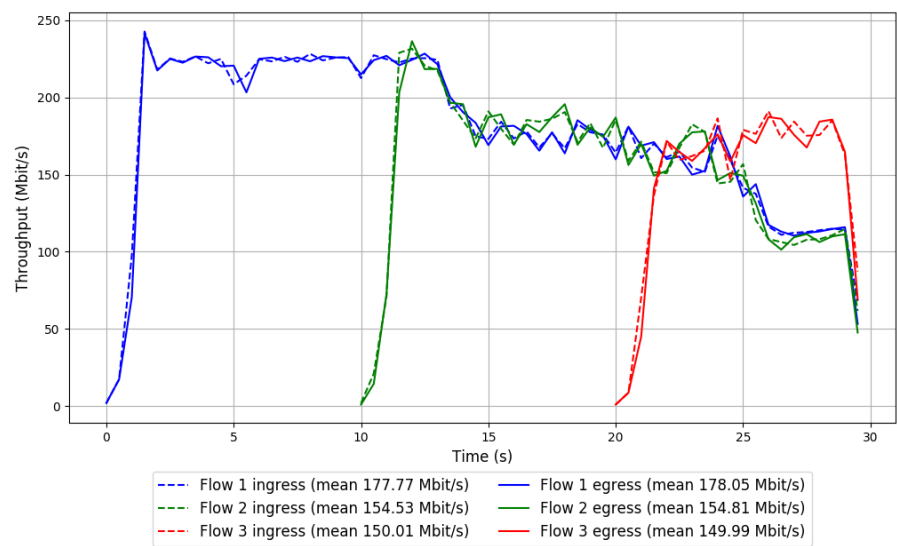
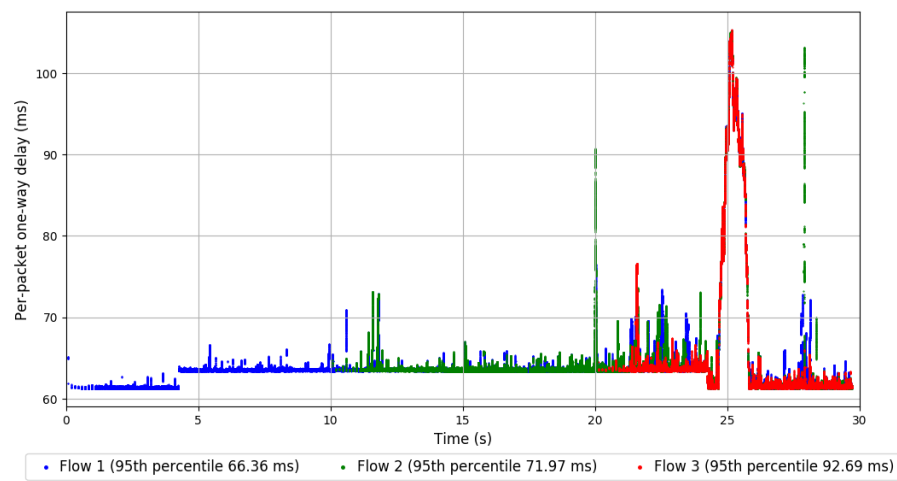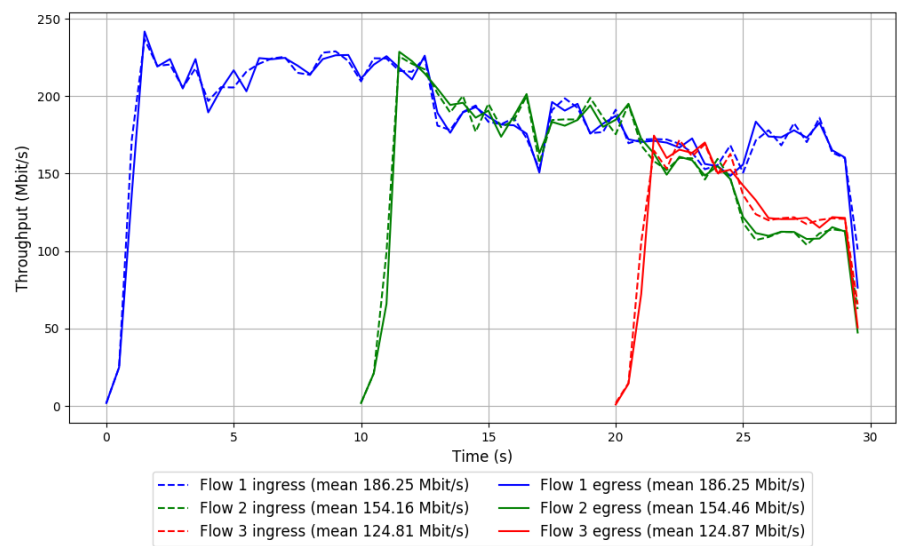Run 5: Report of Indigo-calib — Data Link

```
Run 6: Statistics of Indigo-calib

Start at: 2017-12-12 12:42:17
End at: 2017-12-12 12:42:47

# Below is generated by plot.py at 2017-12-12 17:00:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.94 Mbit/s
95th percentile per-packet one-way delay: 71.512 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 186.25 Mbit/s
95th percentile per-packet one-way delay: 66.358 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 154.46 Mbit/s
95th percentile per-packet one-way delay: 71.973 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 124.87 Mbit/s
95th percentile per-packet one-way delay: 92.690 ms
Loss rate: 1.24%
```

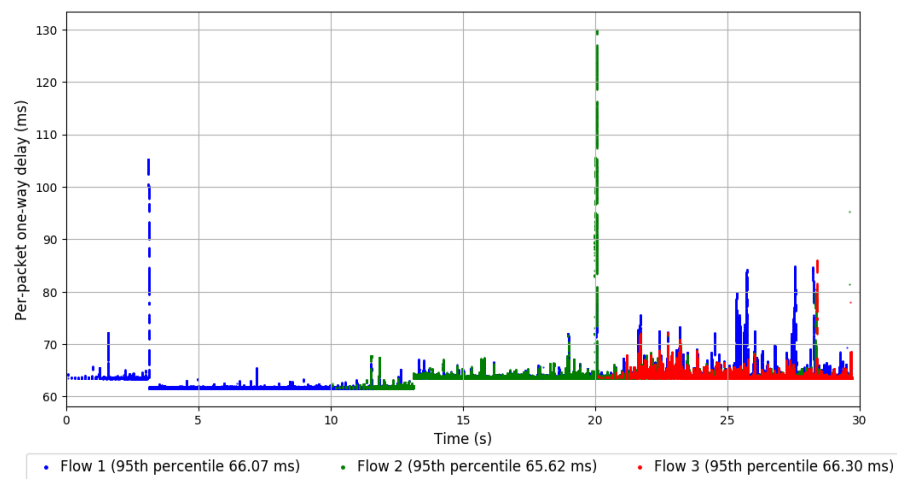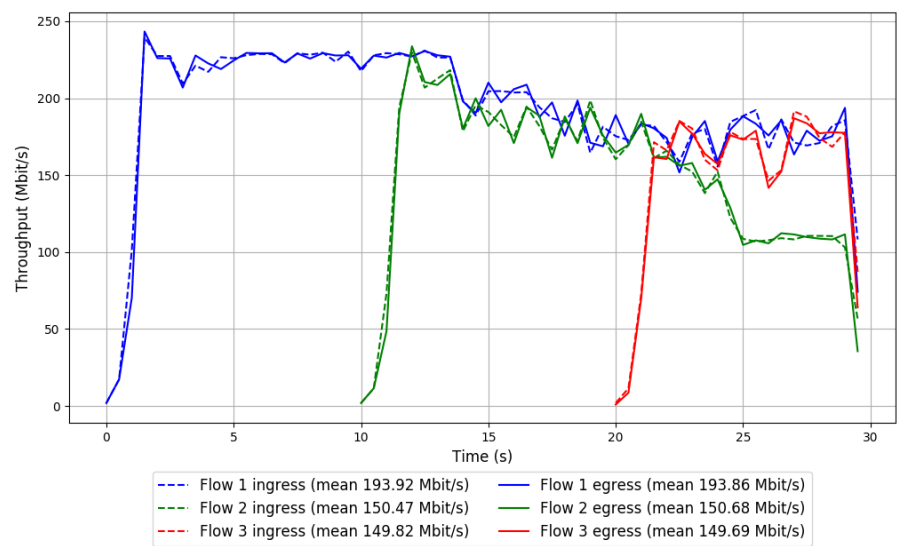Run 6: Report of Indigo-calib — Data Link

```
Run 7: Statistics of Indigo-calib

Start at: 2017-12-12 12:55:08
End at: 2017-12-12 12:55:38

# Below is generated by plot.py at 2017-12-12 17:01:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 341.97 Mbit/s
95th percentile per-packet one-way delay: 65.959 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 193.86 Mbit/s
95th percentile per-packet one-way delay: 66.070 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 150.68 Mbit/s
95th percentile per-packet one-way delay: 65.616 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 149.69 Mbit/s
95th percentile per-packet one-way delay: 66.300 ms
Loss rate: 1.40%
```

Run 7: Report of Indigo-calib — Data Link

277

```
Run 8: Statistics of Indigo-calib

Start at: 2017-12-12 13:07:38
End at: 2017-12-12 13:08:08

# Below is generated by plot.py at 2017-12-12 17:01:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.46 Mbit/s
95th percentile per-packet one-way delay: 65.169 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 174.12 Mbit/s
95th percentile per-packet one-way delay: 64.668 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 149.94 Mbit/s
95th percentile per-packet one-way delay: 65.399 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 151.41 Mbit/s
95th percentile per-packet one-way delay: 66.191 ms
Loss rate: 1.88%
```
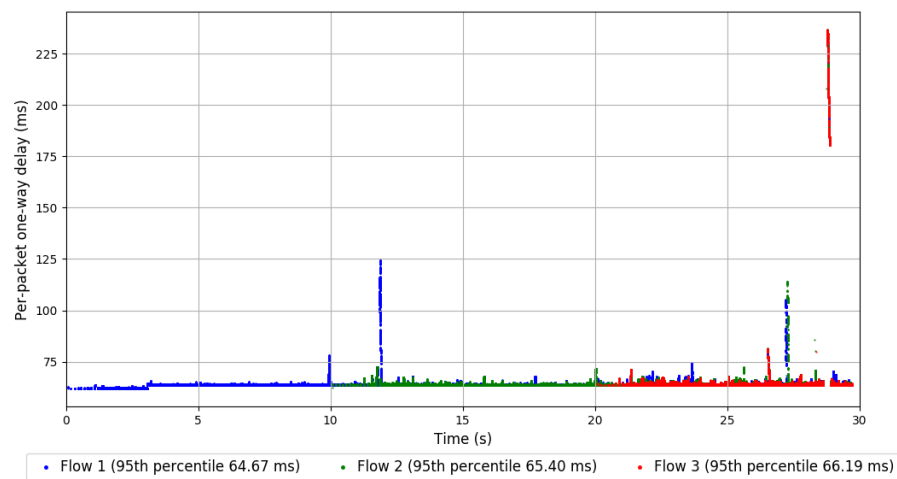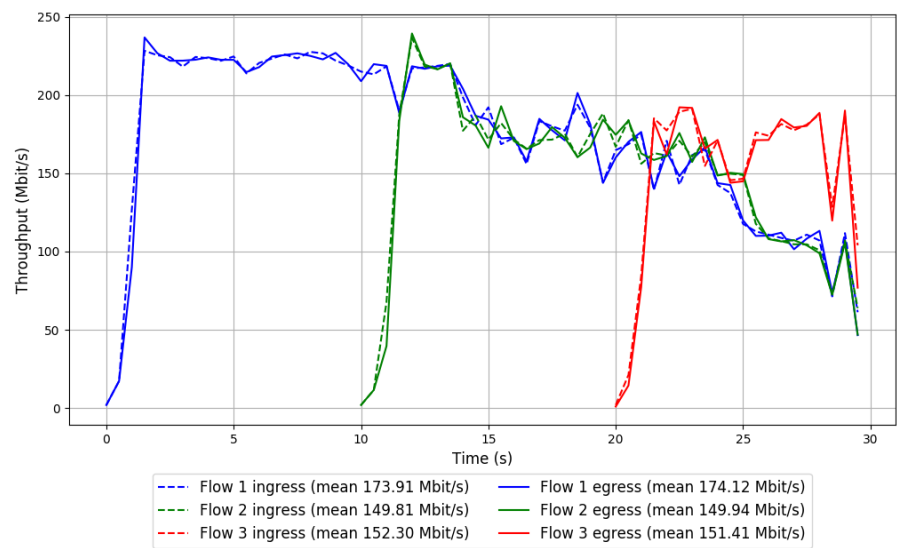
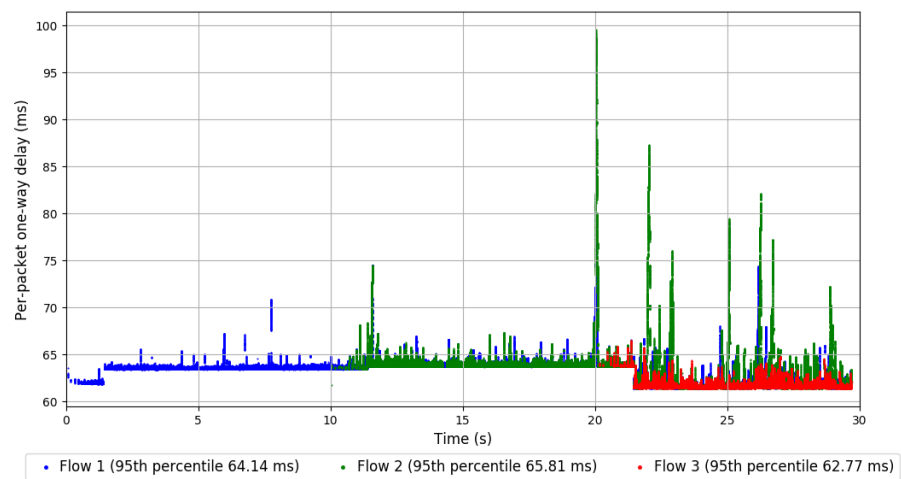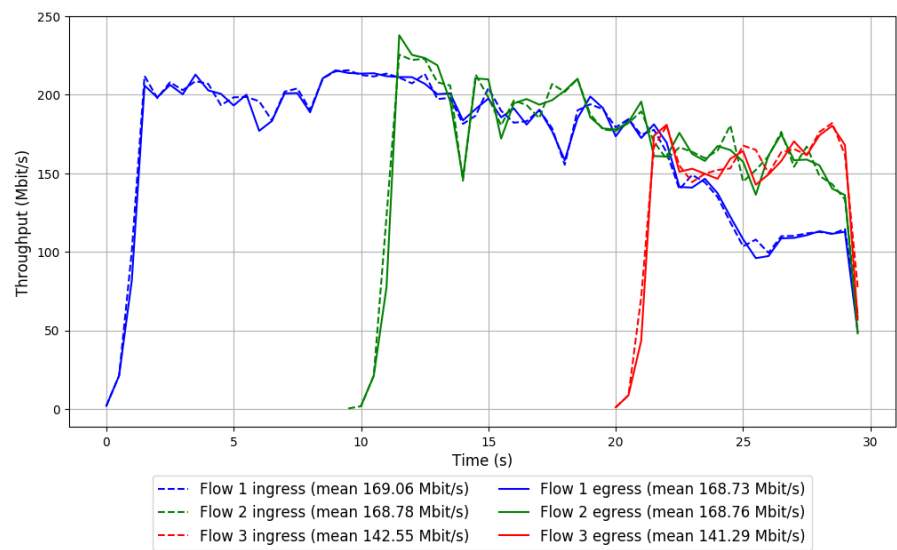## Run 8: Report of Indigo-calib — Data Link

279

```
Run 9: Statistics of Indigo-calib

Start at: 2017-12-12 13:20:20
End at: 2017-12-12 13:20:50

# Below is generated by plot.py at 2017-12-12 17:01:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.99 Mbit/s
95th percentile per-packet one-way delay: 64.356 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 168.73 Mbit/s
95th percentile per-packet one-way delay: 64.140 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 168.76 Mbit/s
95th percentile per-packet one-way delay: 65.814 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 141.29 Mbit/s
95th percentile per-packet one-way delay: 62.773 ms
Loss rate: 2.19%
```

Run 9: Report of Indigo-calib — Data Link

```
Run 10: Statistics of Indigo-calib

Start at: 2017-12-12 13:32:52
End at: 2017-12-12 13:33:22

# Below is generated by plot.py at 2017-12-12 17:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.29 Mbit/s
95th percentile per-packet one-way delay: 64.880 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 178.65 Mbit/s
95th percentile per-packet one-way delay: 64.549 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 150.89 Mbit/s
95th percentile per-packet one-way delay: 65.538 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 135.51 Mbit/s
95th percentile per-packet one-way delay: 65.046 ms
Loss rate: 1.14%
```

Run 10: Report of Indigo-calib — Data Link