Pantheon Report

Generated at 2017-12-06 02:39:24 (UTC).

Data path: GCE Sydney 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.
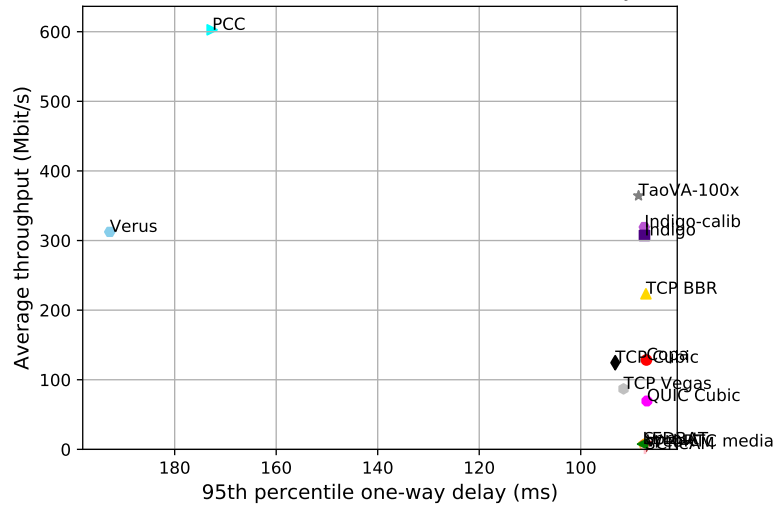
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

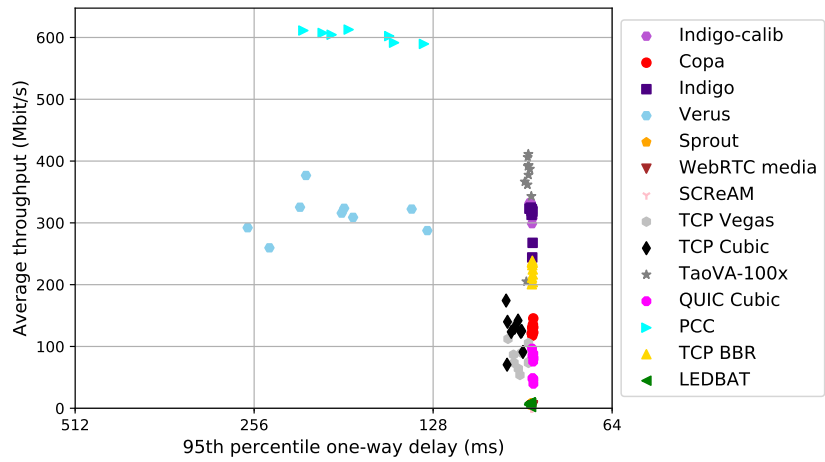Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

```
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 Sydney 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 Sydney Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme
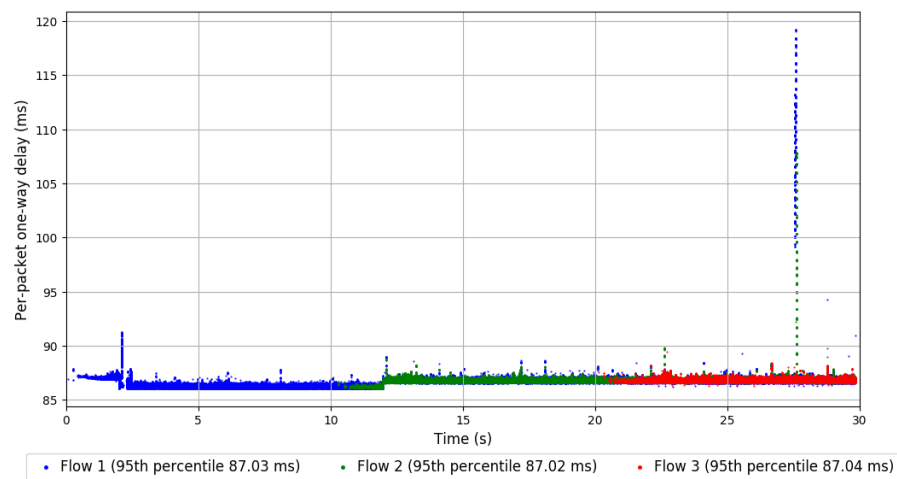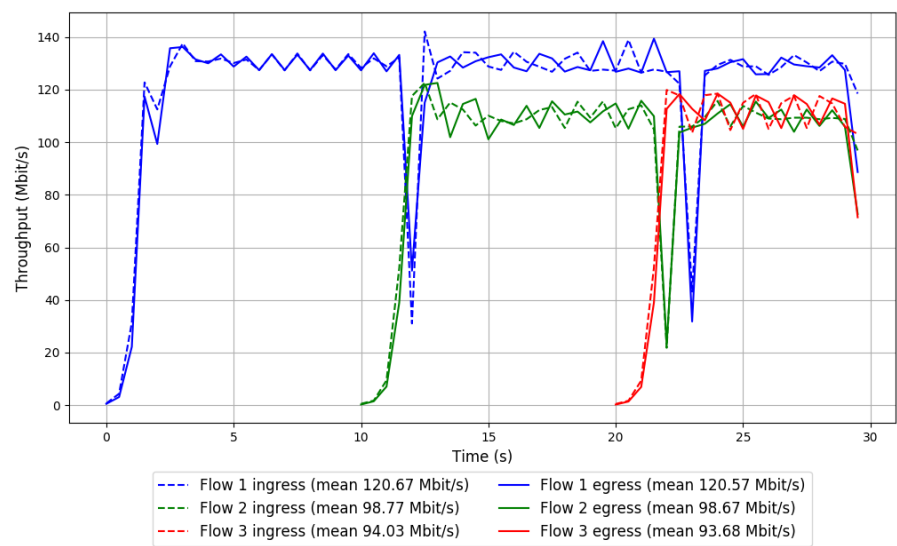### 3 flows with 10s interval between flows

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	117.18	108.11	105.71	87.13	87.14	87.41	0.67	1.07	2.24
TCP Cubic	10	56.16	67.22	70.42	91.56	93.28	95.20	1.76	1.11	2.48
LEDBAT	10	4.64	3.31	2.39	87.92	87.63	87.57	1.27	1.75	3.56
PCC	7	564.27	43.69	19.70	174.44	166.11	167.34	1.84	1.37	2.73
QUIC Cubic	10	81.74	42.25	26.28	88.38	86.95	86.79	0.52	1.62	1.31
SCReAM	6	55.55	0.22	0.22	464.68	87.18	86.92	0.58	0.99	1.69
WebRTC media	10	2.27	1.33	0.50	87.01	87.10	87.04	1.12	1.48	3.13
Sprout	10	3.82	3.78	3.20	87.57	87.60	87.53	1.02	1.32	2.97
TaoVA-100x	10	191.59	195.98	170.46	88.19	89.16	88.82	0.71	1.15	2.96
TCP Vegas	10	32.96	45.31	73.03	89.15	90.82	92.45	0.70	0.82	1.75
Verus	9	200.76	134.12	75.47	195.49	179.05	186.81	2.12	2.34	4.32
Copa	10	75.41	64.01	43.17	86.96	87.04	87.17	0.49	1.00	4.14
Indigo	10	157.79	160.14	135.06	87.16	87.76	87.69	0.54	0.94	1.93
Indigo-calib	10	168.86	159.90	134.37	87.28	87.69	87.67	0.69	1.11	2.39

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-05 21:13:44
End at: 2017-12-05 21:14:14

# Below is generated by plot.py at 2017-12-06 01:42:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 216.57 Mbit/s
95th percentile per-packet one-way delay: 87.027 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 120.57 Mbit/s
95th percentile per-packet one-way delay: 87.027 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 98.67 Mbit/s
95th percentile per-packet one-way delay: 87.017 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 93.68 Mbit/s
95th percentile per-packet one-way delay: 87.044 ms
Loss rate: 2.43%
```
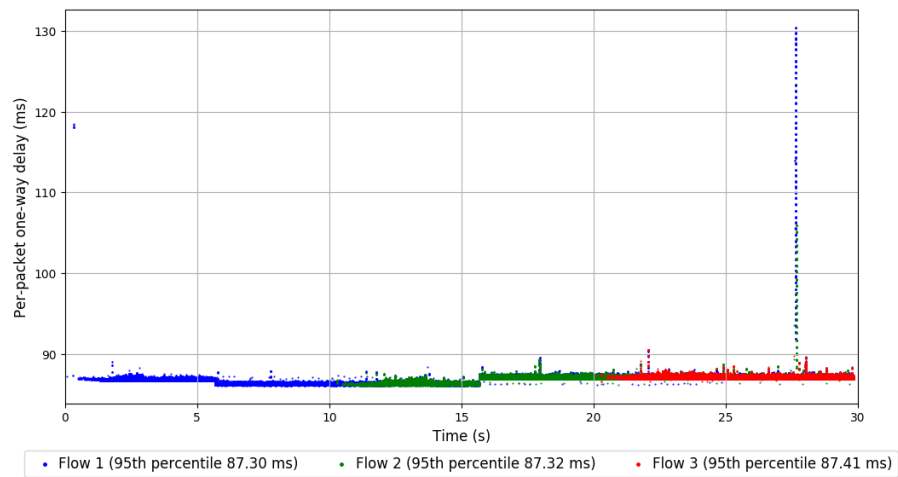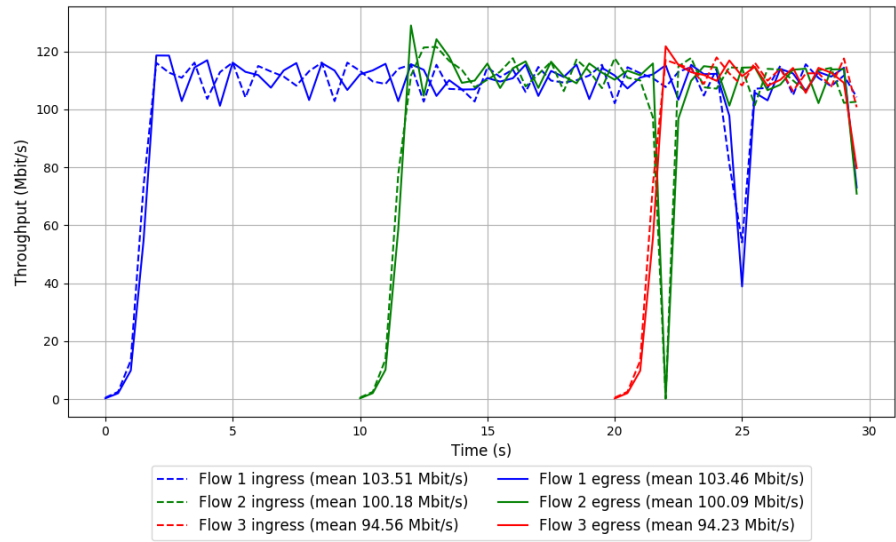
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 120.67 Mbit/s) — — — Flow 1 egress (mean 120.57 Mbit/s)
Flow 2 ingress (mean 98.77 Mbit/s) — — — Flow 2 egress (mean 98.67 Mbit/s)
Flow 3 ingress (mean 94.03 Mbit/s) — — — Flow 3 egress (mean 93.68 Mbit/s)

Flow 1 (95th percentile 87.03 ms)   Flow 2 (95th percentile 87.02 ms)   Flow 3 (95th percentile 87.04 ms)

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Run 2: Statistics of TCP BBR

Start at: 2017-12-05 21:27:21
End at: 2017-12-05 21:27:51

# Below is generated by plot.py at 2017-12-06 01:42:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 200.70 Mbit/s
95th percentile per-packet one-way delay: 87.329 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 103.46 Mbit/s
95th percentile per-packet one-way delay: 87.301 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 100.09 Mbit/s
95th percentile per-packet one-way delay: 87.322 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 94.23 Mbit/s
95th percentile per-packet one-way delay: 87.409 ms
Loss rate: 2.41%
```
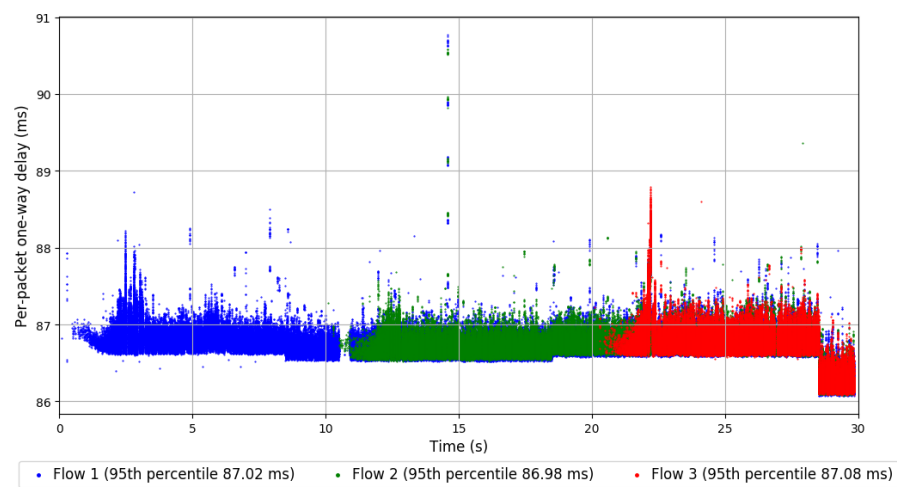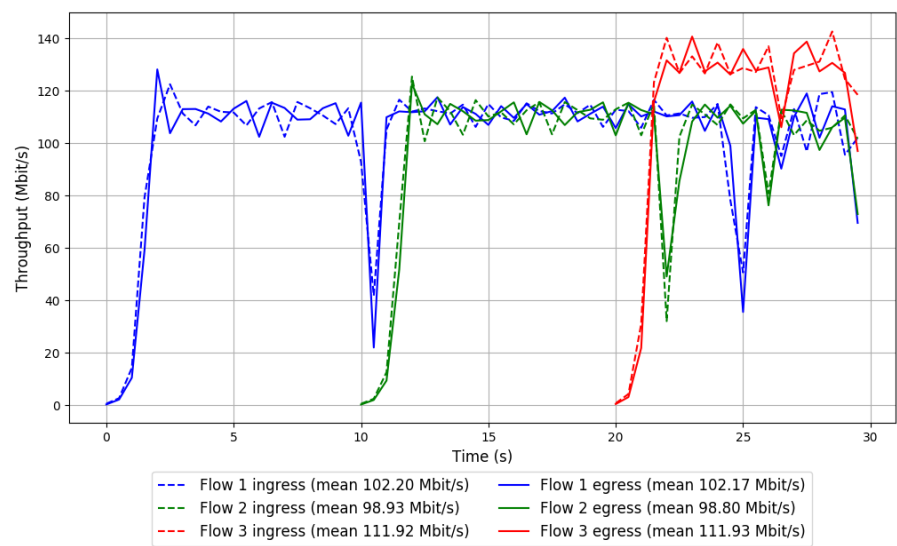
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 103.51 Mbit/s) --- Flow 1 egress (mean 103.46 Mbit/s)
Flow 2 ingress (mean 100.18 Mbit/s) --- Flow 2 egress (mean 100.09 Mbit/s)
Flow 3 ingress (mean 94.56 Mbit/s) --- Flow 3 egress (mean 94.23 Mbit/s)

Flow 1 (95th percentile 87.30 ms) • Flow 2 (95th percentile 87.32 ms) • Flow 3 (95th percentile 87.41 ms)

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Run 3: Statistics of TCP BBR

Start at: 2017-12-05 21:41:08
End at: 2017-12-05 21:41:38

# Below is generated by plot.py at 2017-12-06 01:42:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 204.23 Mbit/s
95th percentile per-packet one-way delay: 87.019 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 102.17 Mbit/s
95th percentile per-packet one-way delay: 87.019 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 98.80 Mbit/s
95th percentile per-packet one-way delay: 86.980 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 111.93 Mbit/s
95th percentile per-packet one-way delay: 87.077 ms
Loss rate: 2.20%
```
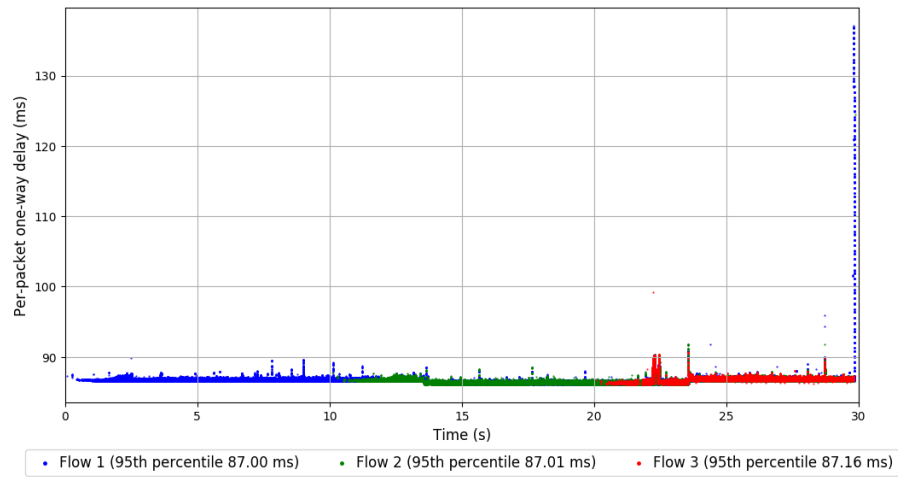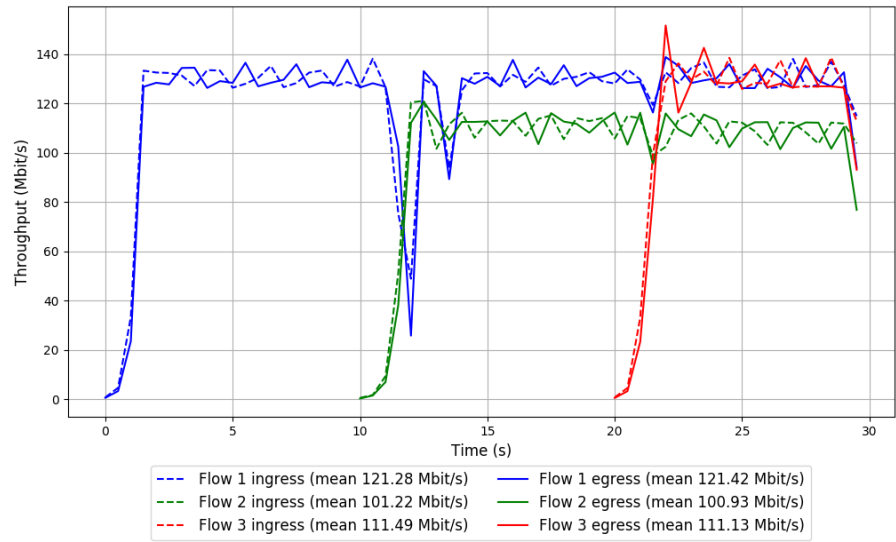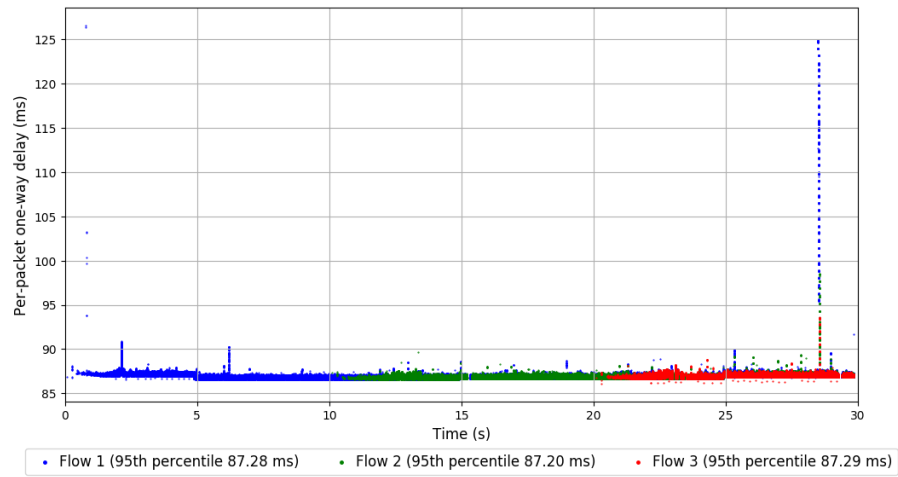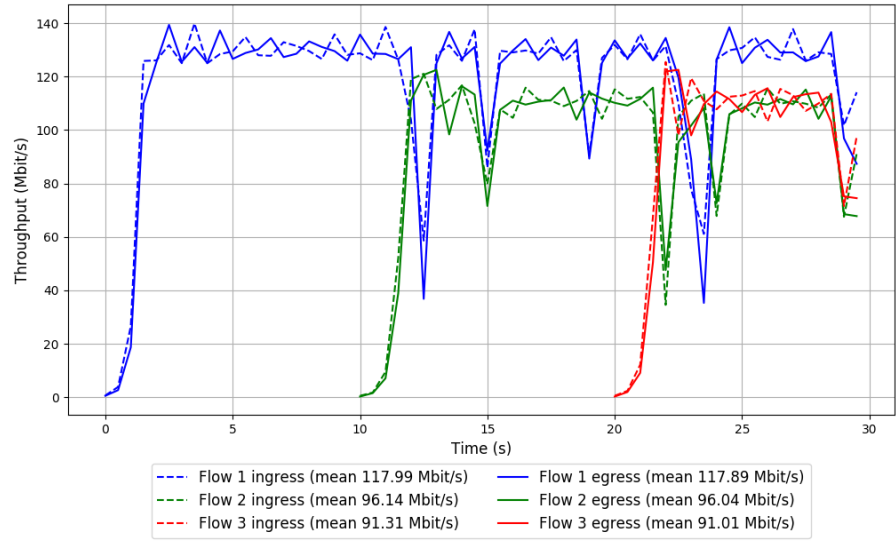
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 102.20 Mbit/s) --- Flow 1 egress (mean 102.17 Mbit/s)
Flow 2 ingress (mean 98.93 Mbit/s) --- Flow 2 egress (mean 98.80 Mbit/s)
Flow 3 ingress (mean 111.92 Mbit/s) --- Flow 3 egress (mean 111.93 Mbit/s)

Flow 1 (95th percentile 87.02 ms)   Flow 2 (95th percentile 86.98 ms)   Flow 3 (95th percentile 87.08 ms)

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Run 4: Statistics of TCP BBR

Start at: 2017-12-05 21:54:43
End at: 2017-12-05 21:55:13

# Below is generated by plot.py at 2017-12-06 01:42:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 224.59 Mbit/s
95th percentile per-packet one-way delay: 87.029 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 121.42 Mbit/s
95th percentile per-packet one-way delay: 86.999 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 100.93 Mbit/s
95th percentile per-packet one-way delay: 87.012 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 111.13 Mbit/s
95th percentile per-packet one-way delay: 87.163 ms
Loss rate: 2.17%
```

Run 4: Report of TCP BBR — Data Link

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Run 5: Statistics of TCP BBR

Start at: 2017-12-05 22:08:41
End at: 2017-12-05 22:09:11

# Below is generated by plot.py at 2017-12-06 01:42:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.39 Mbit/s
95th percentile per-packet one-way delay: 87.265 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 117.89 Mbit/s
95th percentile per-packet one-way delay: 87.284 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 96.04 Mbit/s
95th percentile per-packet one-way delay: 87.199 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 91.01 Mbit/s
95th percentile per-packet one-way delay: 87.289 ms
Loss rate: 2.37%
```
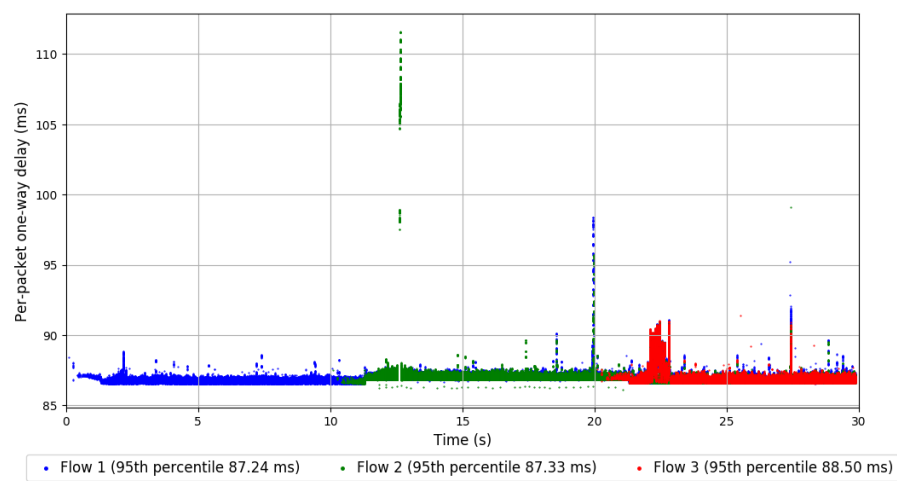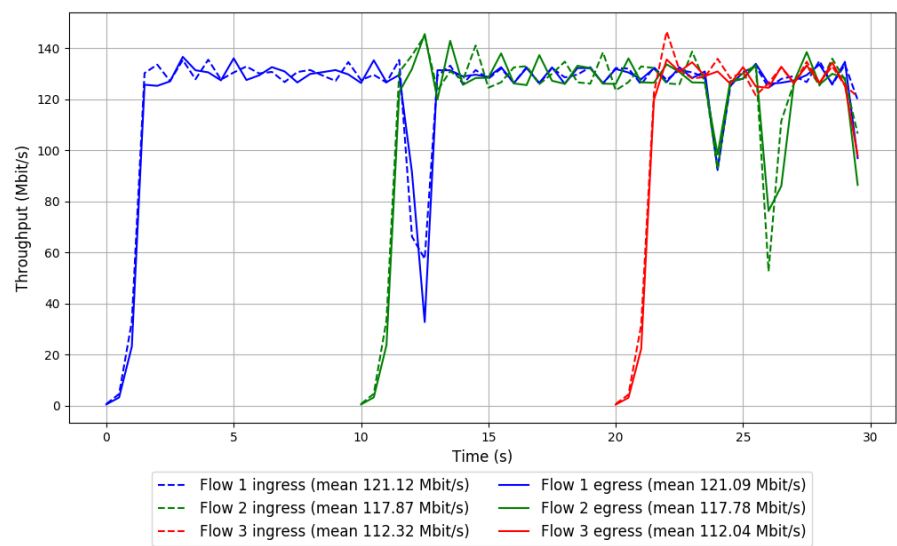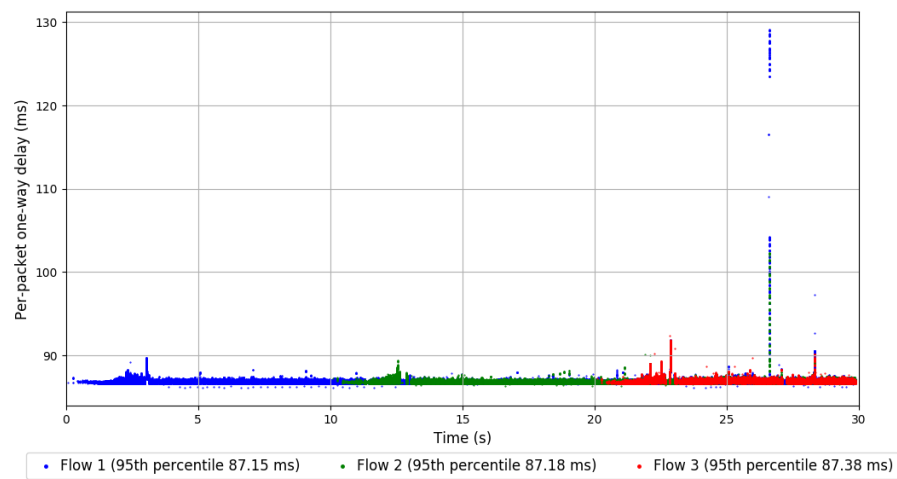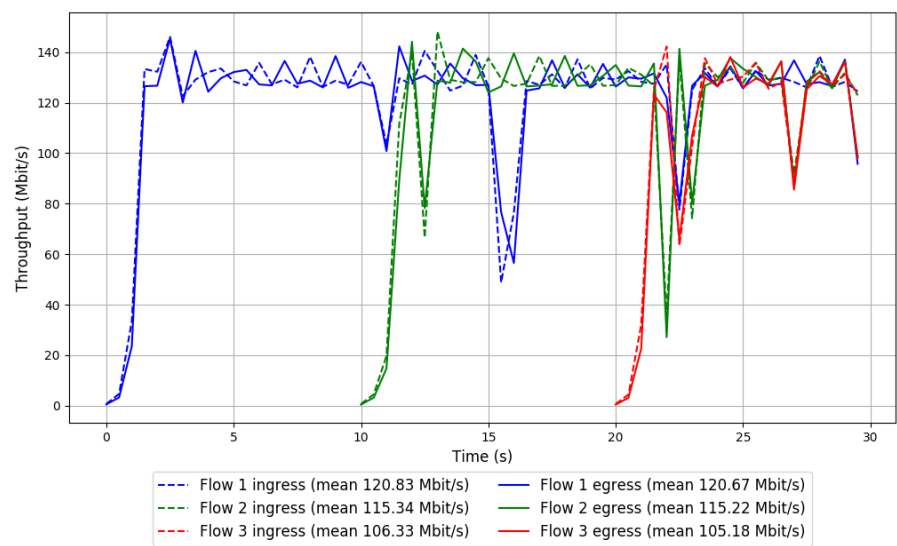
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 117.99 Mbit/s) --- Flow 1 egress (mean 117.89 Mbit/s)
Flow 2 ingress (mean 96.14 Mbit/s) --- Flow 2 egress (mean 96.04 Mbit/s)
Flow 3 ingress (mean 91.31 Mbit/s) --- Flow 3 egress (mean 91.01 Mbit/s)

Flow 1 (95th percentile 87.28 ms)   Flow 2 (95th percentile 87.20 ms)   Flow 3 (95th percentile 87.29 ms)

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```
Run 6: Statistics of TCP BBR

Start at: 2017-12-05 22:22:05
End at: 2017-12-05 22:22:35


# Below is generated by plot.py at 2017-12-06 01:42:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 236.07 Mbit/s
95th percentile per-packet one-way delay: 87.313 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 121.09 Mbit/s
95th percentile per-packet one-way delay: 87.243 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 117.78 Mbit/s
95th percentile per-packet one-way delay: 87.331 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 112.04 Mbit/s
95th percentile per-packet one-way delay: 88.495 ms
Loss rate: 2.00%
```
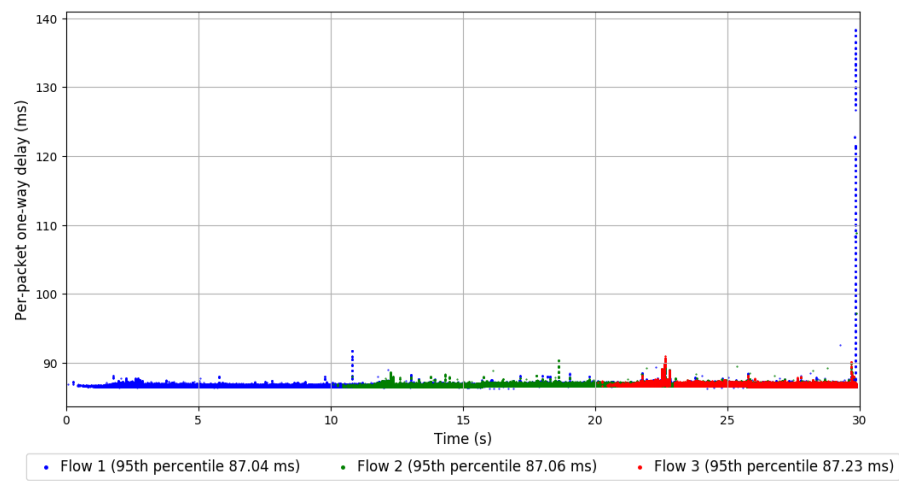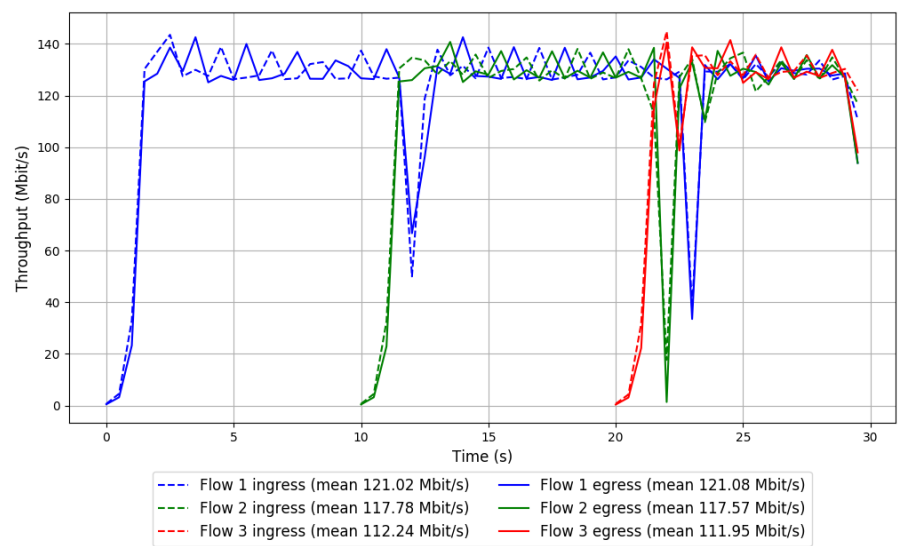
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 121.12 Mbit/s)   Flow 1 egress (mean 121.09 Mbit/s)
Flow 2 ingress (mean 117.87 Mbit/s)   Flow 2 egress (mean 117.78 Mbit/s)
Flow 3 ingress (mean 112.32 Mbit/s)   Flow 3 egress (mean 112.04 Mbit/s)

Flow 1 (95th percentile 87.24 ms)   Flow 2 (95th percentile 87.33 ms)   Flow 3 (95th percentile 88.50 ms)

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```
Run 7: Statistics of TCP BBR

Start at: 2017-12-05 22:35:23
End at: 2017-12-05 22:35:53

# Below is generated by plot.py at 2017-12-06 01:42:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 231.64 Mbit/s
95th percentile per-packet one-way delay: 87.190 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 120.67 Mbit/s
95th percentile per-packet one-way delay: 87.151 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 115.22 Mbit/s
95th percentile per-packet one-way delay: 87.176 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 105.18 Mbit/s
95th percentile per-packet one-way delay: 87.379 ms
Loss rate: 2.81%
```
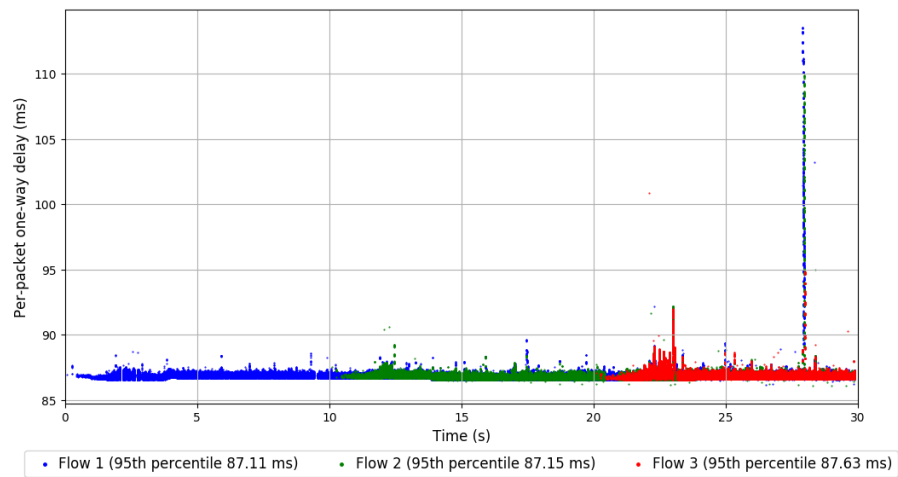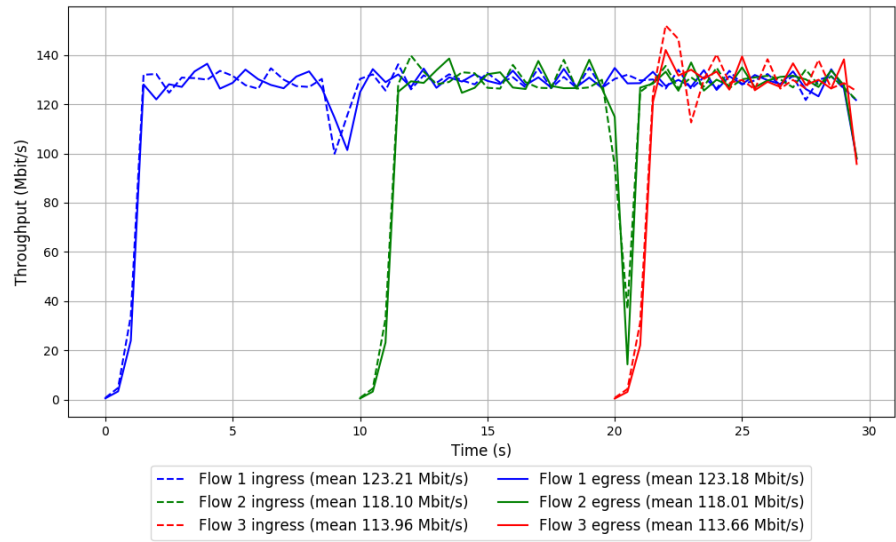
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 120.83 Mbit/s) — Flow 1 egress (mean 120.67 Mbit/s)
Flow 2 ingress (mean 115.34 Mbit/s) — Flow 2 egress (mean 115.22 Mbit/s)
Flow 3 ingress (mean 106.33 Mbit/s) — Flow 3 egress (mean 105.18 Mbit/s)

Flow 1 (95th percentile 87.15 ms)   Flow 2 (95th percentile 87.18 ms)   Flow 3 (95th percentile 87.38 ms)

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```
Run 8: Statistics of TCP BBR

Start at: 2017-12-05 22:48:41
End at: 2017-12-05 22:49:11

# Below is generated by plot.py at 2017-12-06 01:42:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 235.80 Mbit/s
95th percentile per-packet one-way delay: 87.075 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 121.08 Mbit/s
95th percentile per-packet one-way delay: 87.040 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 117.57 Mbit/s
95th percentile per-packet one-way delay: 87.059 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 111.95 Mbit/s
95th percentile per-packet one-way delay: 87.229 ms
Loss rate: 2.00%
```
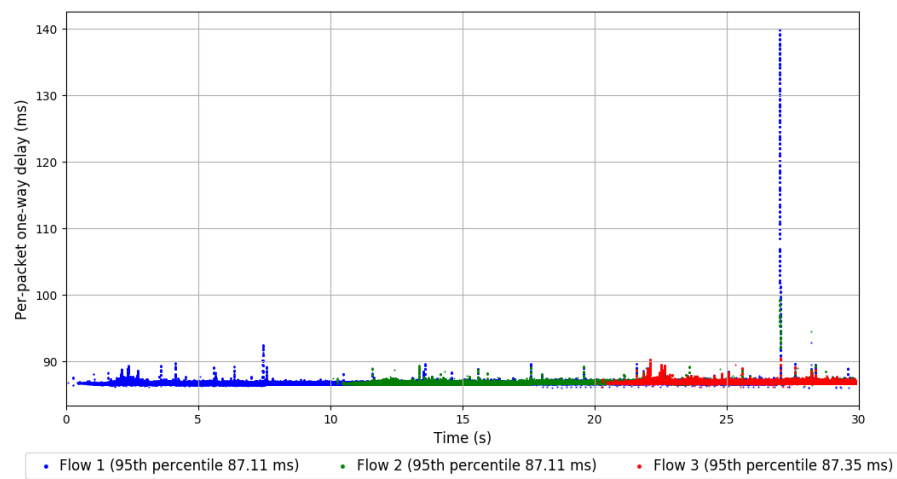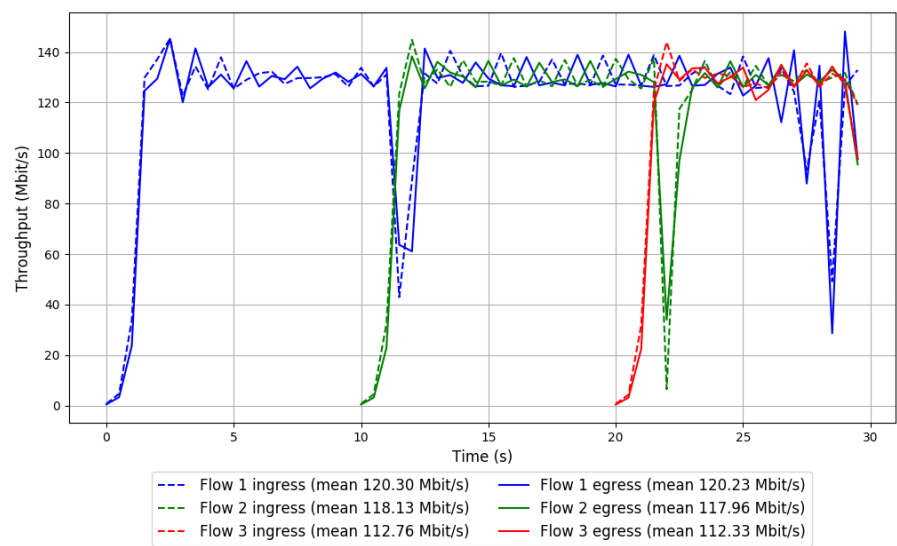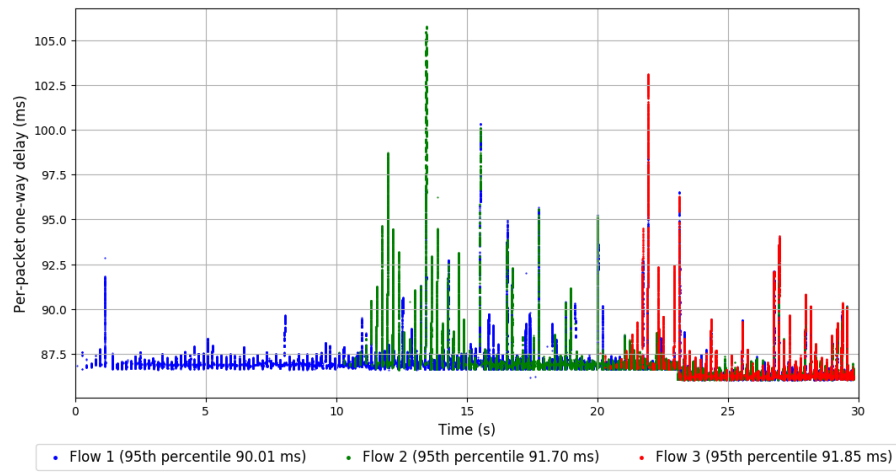
Run 8: Report of TCP BBR — Data Link

Flow 1 ingress (mean 121.02 Mbit/s) --- Flow 1 egress (mean 121.08 Mbit/s)
Flow 2 ingress (mean 117.78 Mbit/s) --- Flow 2 egress (mean 117.57 Mbit/s)
Flow 3 ingress (mean 112.24 Mbit/s) --- Flow 3 egress (mean 111.95 Mbit/s)

Flow 1 (95th percentile 87.04 ms)   Flow 2 (95th percentile 87.06 ms)   Flow 3 (95th percentile 87.23 ms)

```
Run 9: Statistics of TCP BBR

Start at: 2017-12-05 23:02:02
End at: 2017-12-05 23:02:32

# Below is generated by plot.py at 2017-12-06 01:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 238.79 Mbit/s
95th percentile per-packet one-way delay: 87.164 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 123.18 Mbit/s
95th percentile per-packet one-way delay: 87.114 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 118.01 Mbit/s
95th percentile per-packet one-way delay: 87.150 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 113.66 Mbit/s
95th percentile per-packet one-way delay: 87.629 ms
Loss rate: 2.04%
```
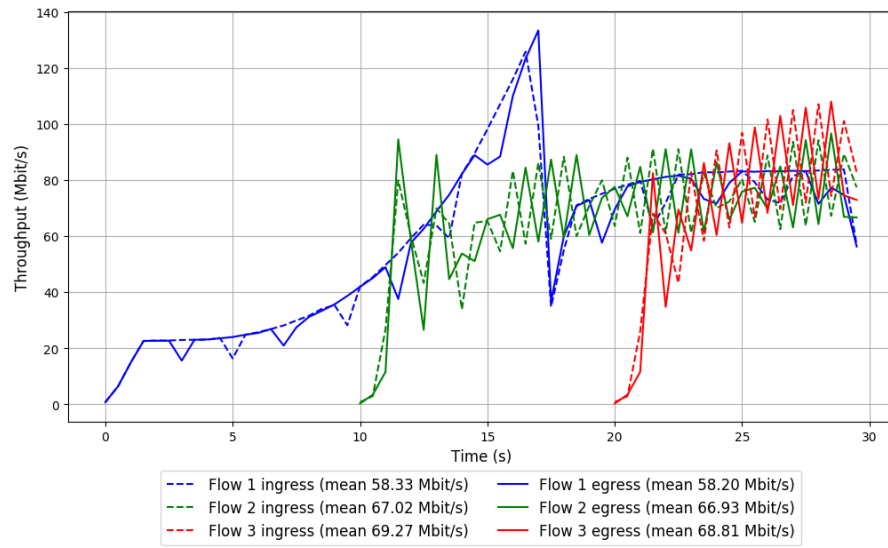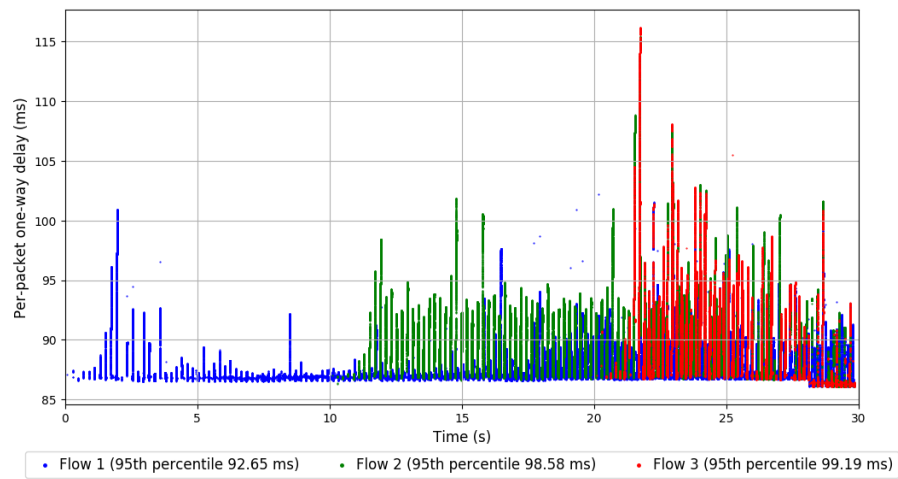
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 123.21 Mbit/s)   Flow 1 egress (mean 123.18 Mbit/s)
Flow 2 ingress (mean 118.10 Mbit/s)   Flow 2 egress (mean 118.01 Mbit/s)
Flow 3 ingress (mean 113.96 Mbit/s)   Flow 3 egress (mean 113.66 Mbit/s)

Flow 1 (95th percentile 87.11 ms)   Flow 2 (95th percentile 87.15 ms)   Flow 3 (95th percentile 87.63 ms)

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```
Run 10: Statistics of TCP BBR

Start at: 2017-12-05 23:15:39
End at: 2017-12-05 23:16:09

# Below is generated by plot.py at 2017-12-06 01:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 235.34 Mbit/s
95th percentile per-packet one-way delay: 87.144 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 120.23 Mbit/s
95th percentile per-packet one-way delay: 87.112 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 117.96 Mbit/s
95th percentile per-packet one-way delay: 87.106 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 112.33 Mbit/s
95th percentile per-packet one-way delay: 87.351 ms
Loss rate: 1.97%
```
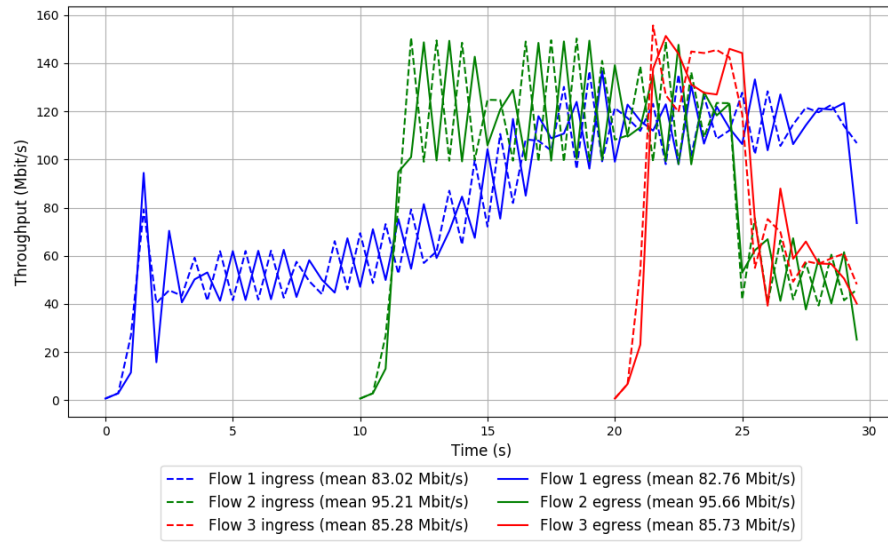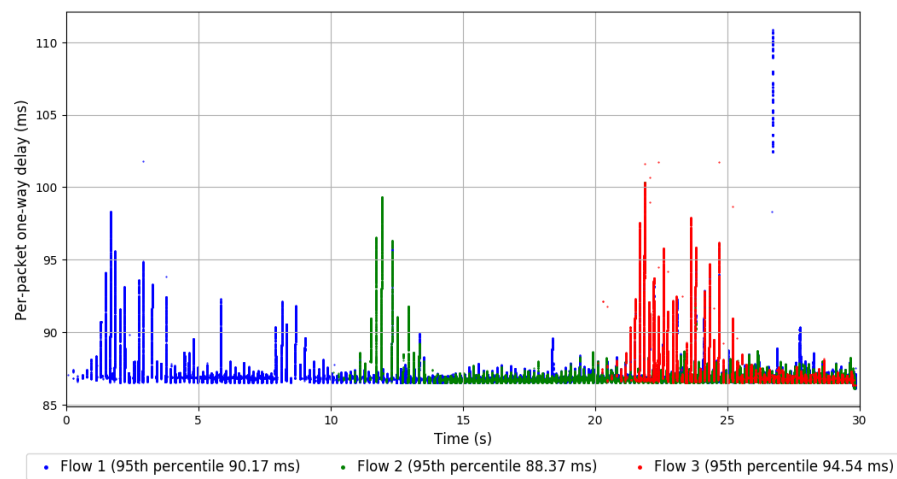
Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-05 21:17:03
End at: 2017-12-05 21:17:33

# Below is generated by plot.py at 2017-12-06 01:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.05 Mbit/s
95th percentile per-packet one-way delay: 90.825 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 58.20 Mbit/s
95th percentile per-packet one-way delay: 90.009 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 66.93 Mbit/s
95th percentile per-packet one-way delay: 91.698 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 68.81 Mbit/s
95th percentile per-packet one-way delay: 91.847 ms
Loss rate: 2.69%
```
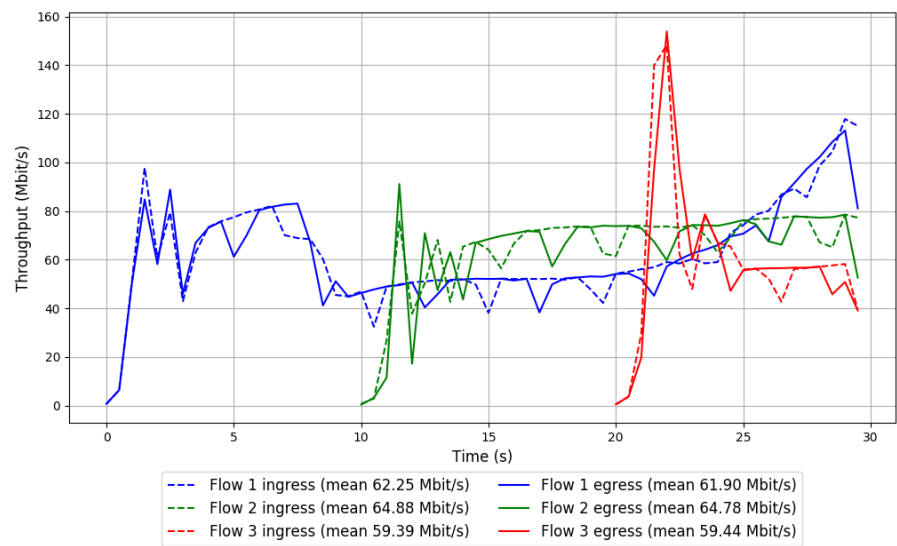
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2017-12-05 21:30:38
End at: 2017-12-05 21:31:08

# Below is generated by plot.py at 2017-12-06 01:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 174.28 Mbit/s
95th percentile per-packet one-way delay: 96.472 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 82.76 Mbit/s
95th percentile per-packet one-way delay: 92.650 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 95.66 Mbit/s
95th percentile per-packet one-way delay: 98.580 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 85.73 Mbit/s
95th percentile per-packet one-way delay: 99.192 ms
Loss rate: 1.24%
```
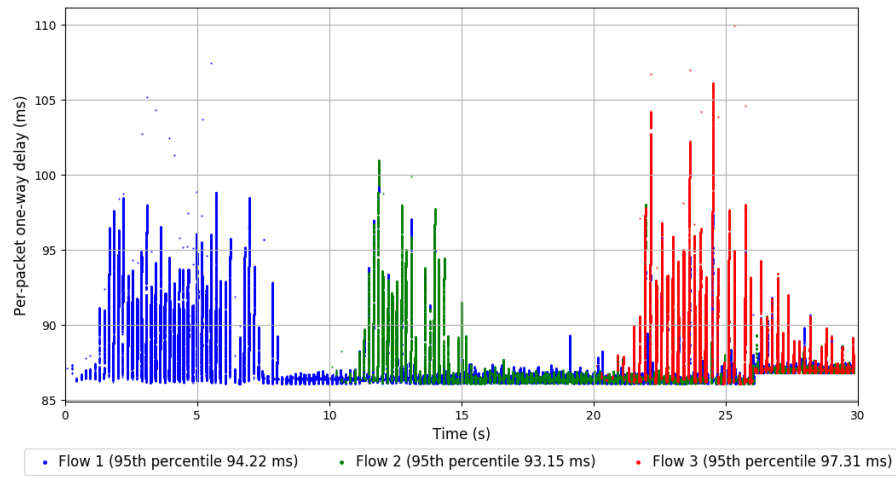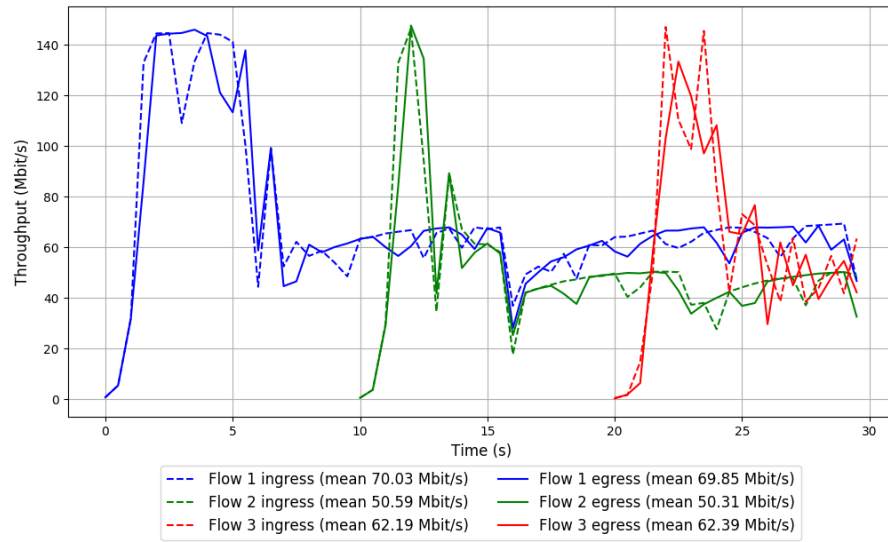
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2017-12-05 21:44:26
End at: 2017-12-05 21:44:56

# Below is generated by plot.py at 2017-12-06 01:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 124.26 Mbit/s
95th percentile per-packet one-way delay: 91.011 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 61.90 Mbit/s
95th percentile per-packet one-way delay: 90.174 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 64.78 Mbit/s
95th percentile per-packet one-way delay: 88.372 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 59.44 Mbit/s
95th percentile per-packet one-way delay: 94.537 ms
Loss rate: 1.68%
```
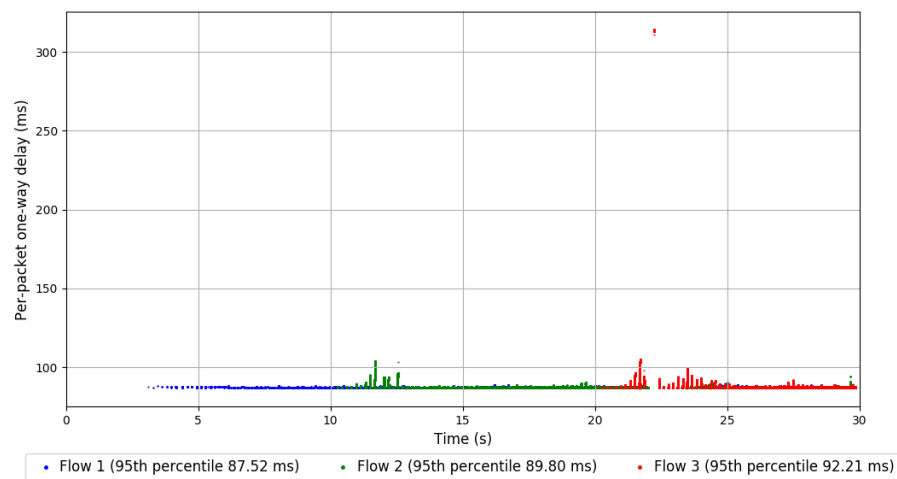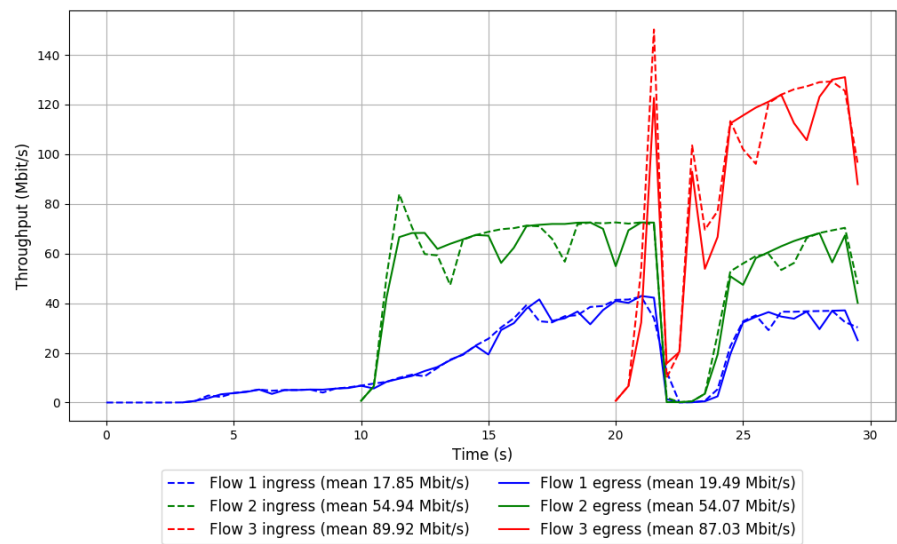
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2017-12-05 21:58:10
End at: 2017-12-05 21:58:40


# Below is generated by plot.py at 2017-12-06 01:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 123.57 Mbit/s
95th percentile per-packet one-way delay: 94.593 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 69.85 Mbit/s
95th percentile per-packet one-way delay: 94.221 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 93.150 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 62.39 Mbit/s
95th percentile per-packet one-way delay: 97.310 ms
Loss rate: 1.74%
```
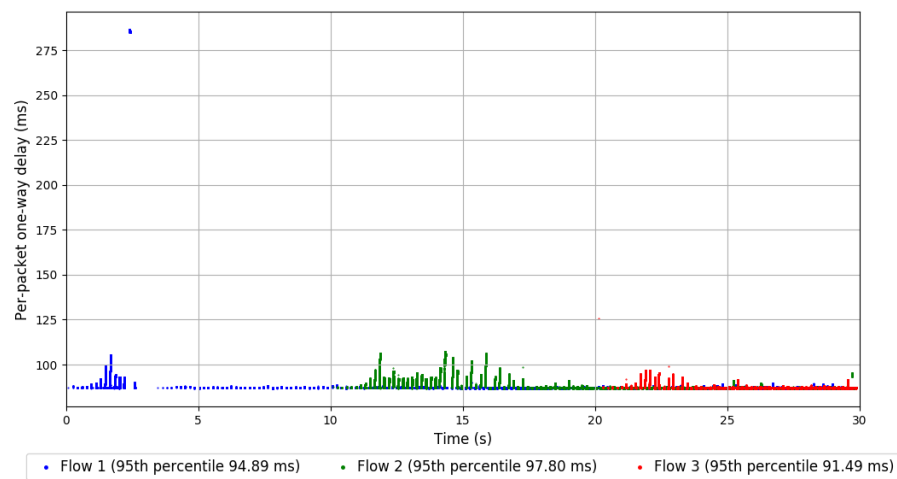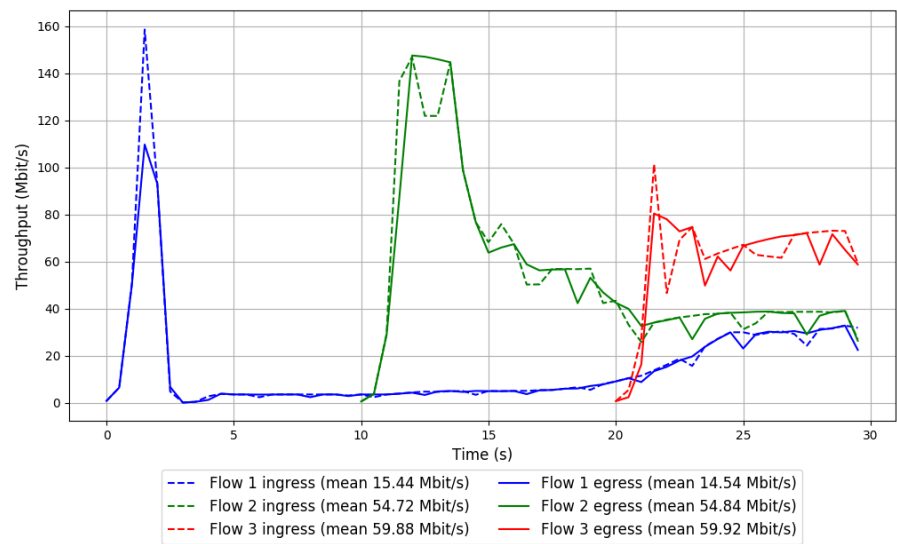
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 70.03 Mbit/s) — Flow 1 egress (mean 69.85 Mbit/s)
Flow 2 ingress (mean 50.59 Mbit/s) — Flow 2 egress (mean 50.31 Mbit/s)
Flow 3 ingress (mean 62.19 Mbit/s) — Flow 3 egress (mean 62.39 Mbit/s)

Flow 1 (95th percentile 94.22 ms) · Flow 2 (95th percentile 93.15 ms) · Flow 3 (95th percentile 97.31 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2017-12-05 22:12:00
End at: 2017-12-05 22:12:30


# Below is generated by plot.py at 2017-12-06 01:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.10 Mbit/s
95th percentile per-packet one-way delay: 90.390 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 19.49 Mbit/s
95th percentile per-packet one-way delay: 87.521 ms
Loss rate: 2.57%
-- Flow 2:
Average throughput: 54.07 Mbit/s
95th percentile per-packet one-way delay: 89.796 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 87.03 Mbit/s
95th percentile per-packet one-way delay: 92.213 ms
Loss rate: 4.91%
```
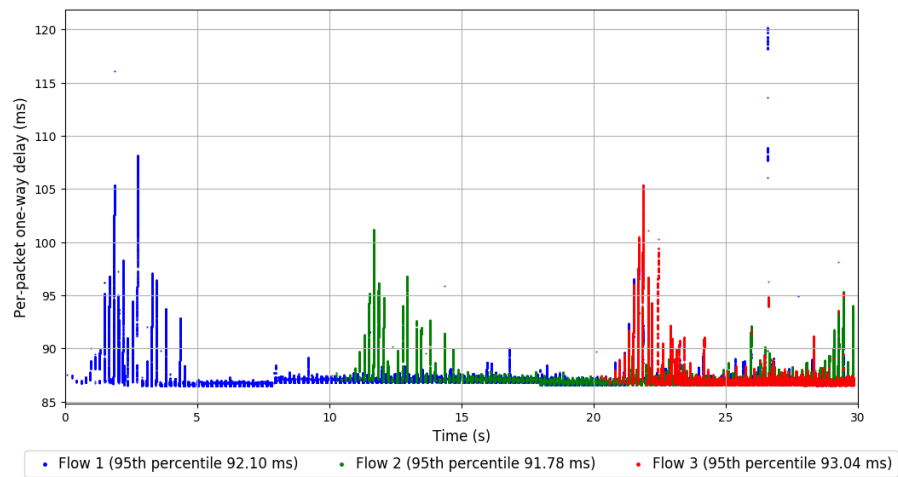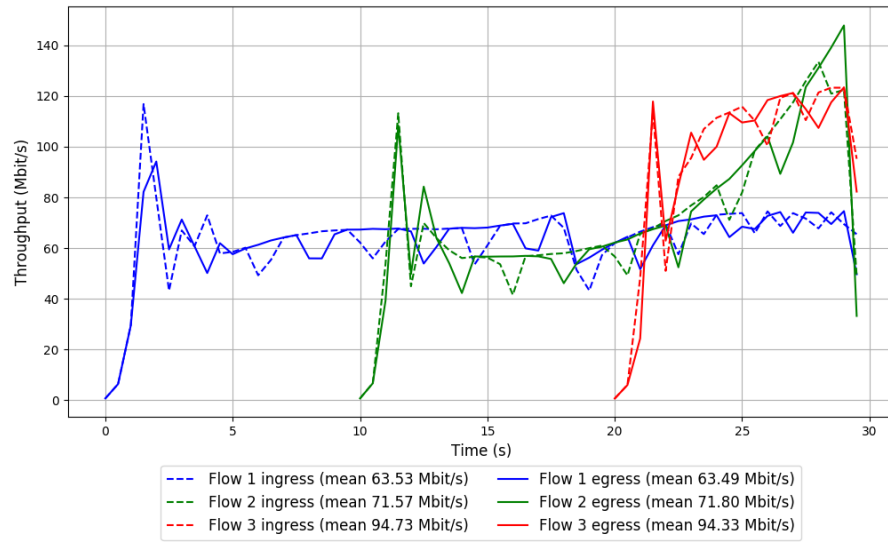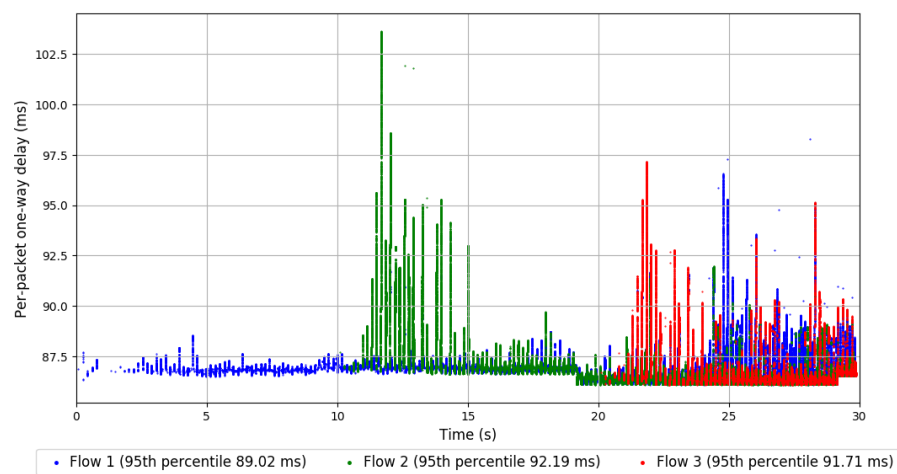
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 17.85 Mbit/s)   Flow 1 egress (mean 19.49 Mbit/s)
Flow 2 ingress (mean 54.94 Mbit/s)   Flow 2 egress (mean 54.07 Mbit/s)
Flow 3 ingress (mean 89.92 Mbit/s)   Flow 3 egress (mean 87.03 Mbit/s)

Flow 1 (95th percentile 87.52 ms)   Flow 2 (95th percentile 89.80 ms)   Flow 3 (95th percentile 92.21 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2017-12-05 22:25:20
End at: 2017-12-05 22:25:50

# Below is generated by plot.py at 2017-12-06 01:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.50 Mbit/s
95th percentile per-packet one-way delay: 96.119 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 14.54 Mbit/s
95th percentile per-packet one-way delay: 94.895 ms
Loss rate: 6.36%
-- Flow 2:
Average throughput: 54.84 Mbit/s
95th percentile per-packet one-way delay: 97.802 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 59.92 Mbit/s
95th percentile per-packet one-way delay: 91.486 ms
Loss rate: 2.07%
```
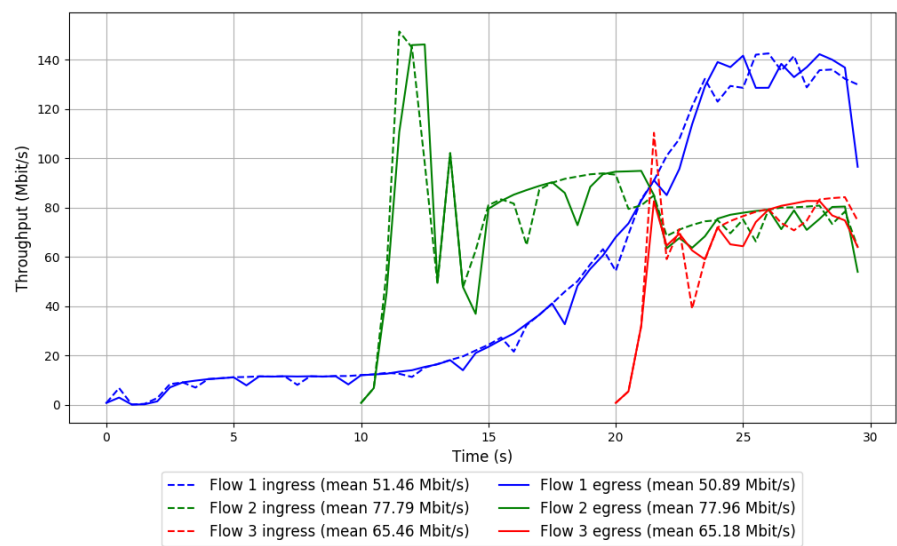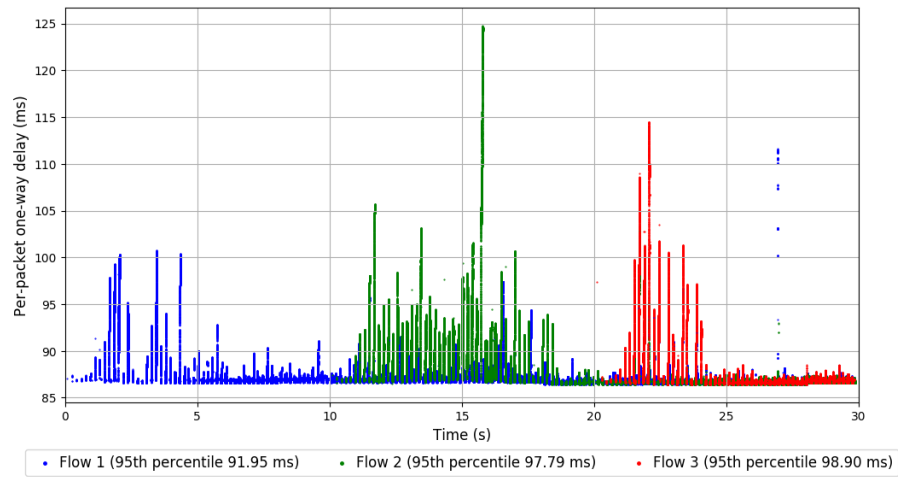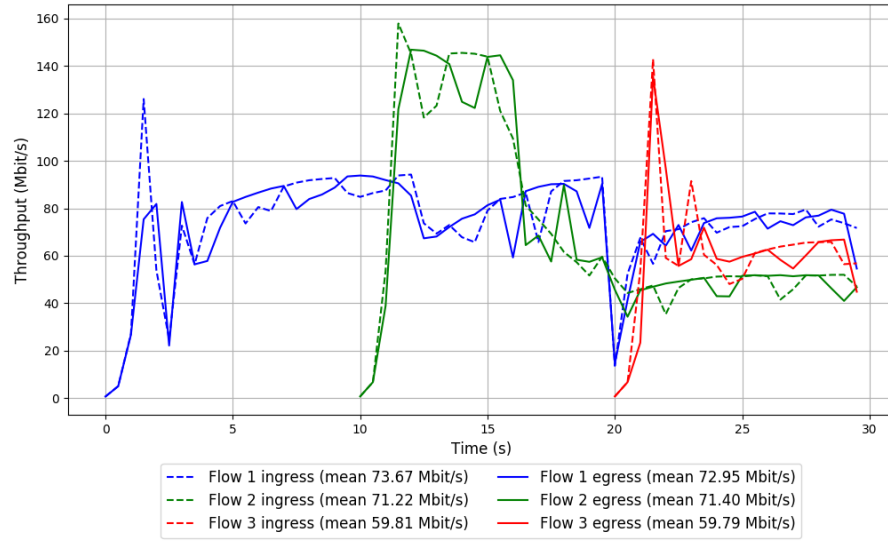
Run 6: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 15.44 Mbit/s)   Flow 1 egress (mean 14.54 Mbit/s)
Flow 2 ingress (mean 54.72 Mbit/s)   Flow 2 egress (mean 54.84 Mbit/s)
Flow 3 ingress (mean 59.88 Mbit/s)   Flow 3 egress (mean 59.92 Mbit/s)

Flow 1 (95th percentile 94.89 ms)   Flow 2 (95th percentile 97.80 ms)   Flow 3 (95th percentile 91.49 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2017-12-05 22:38:38
End at: 2017-12-05 22:39:08

# Below is generated by plot.py at 2017-12-06 01:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.89 Mbit/s
95th percentile per-packet one-way delay: 92.115 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 63.49 Mbit/s
95th percentile per-packet one-way delay: 92.101 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 71.80 Mbit/s
95th percentile per-packet one-way delay: 91.778 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 94.33 Mbit/s
95th percentile per-packet one-way delay: 93.037 ms
Loss rate: 2.19%
```
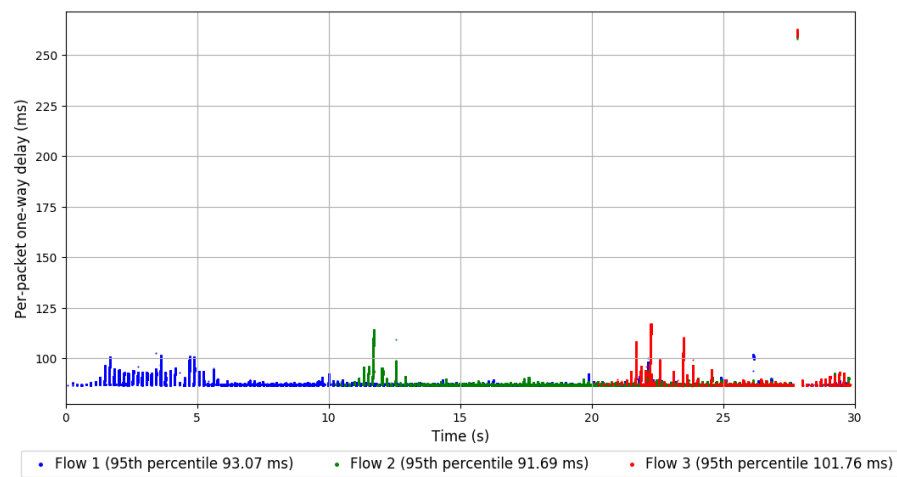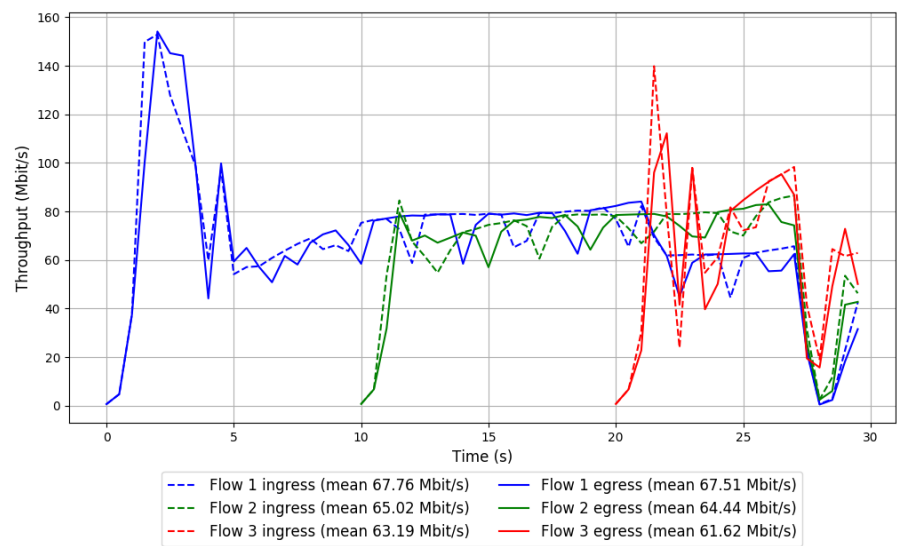
Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2017-12-05 22:51:57
End at: 2017-12-05 22:52:27

# Below is generated by plot.py at 2017-12-06 01:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 123.91 Mbit/s
95th percentile per-packet one-way delay: 91.175 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 50.89 Mbit/s
95th percentile per-packet one-way delay: 89.024 ms
Loss rate: 1.67%
-- Flow 2:
Average throughput: 77.96 Mbit/s
95th percentile per-packet one-way delay: 92.186 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 65.18 Mbit/s
95th percentile per-packet one-way delay: 91.711 ms
Loss rate: 2.16%
```
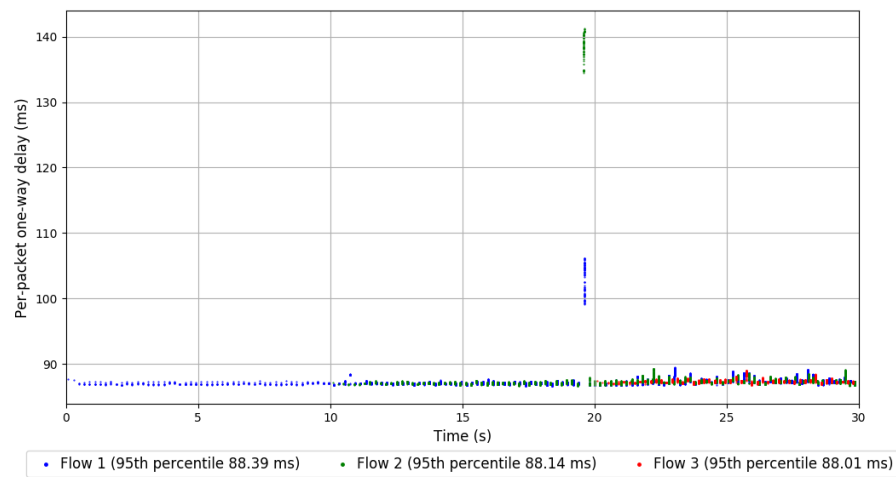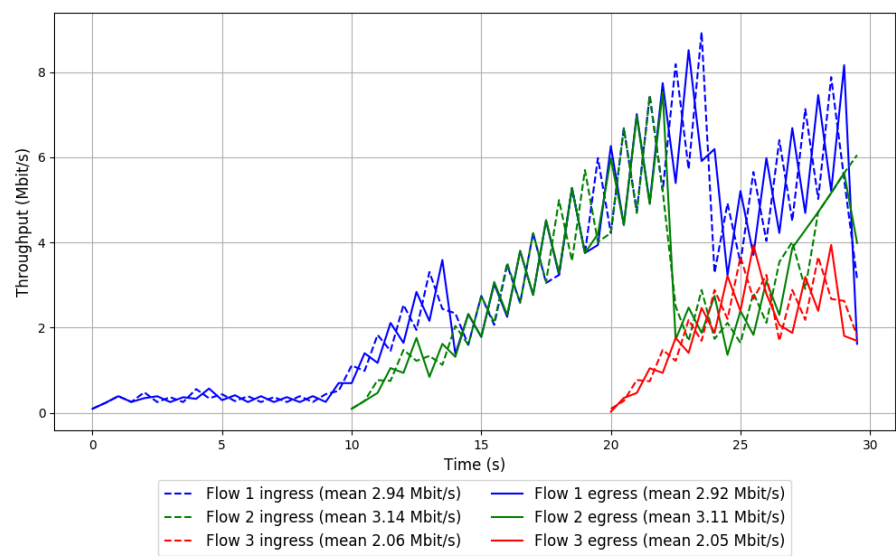
Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2017-12-05 23:05:18
End at: 2017-12-05 23:05:48


# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.90 Mbit/s
95th percentile per-packet one-way delay: 95.969 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 72.95 Mbit/s
95th percentile per-packet one-way delay: 91.947 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 71.40 Mbit/s
95th percentile per-packet one-way delay: 97.791 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 59.79 Mbit/s
95th percentile per-packet one-way delay: 98.896 ms
Loss rate: 1.88%
```

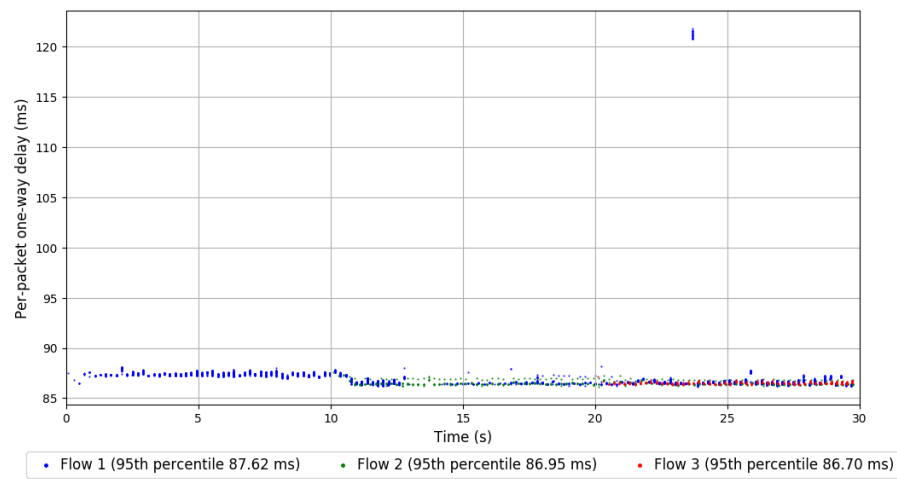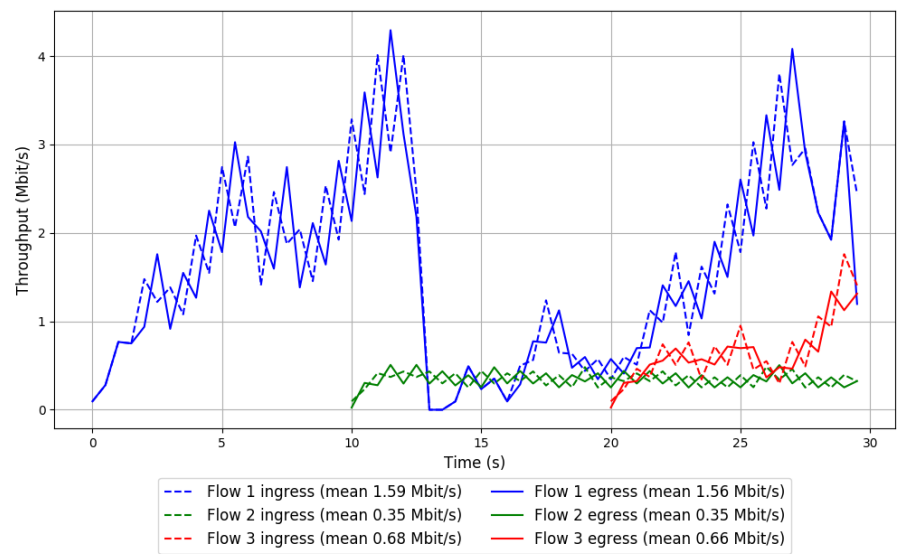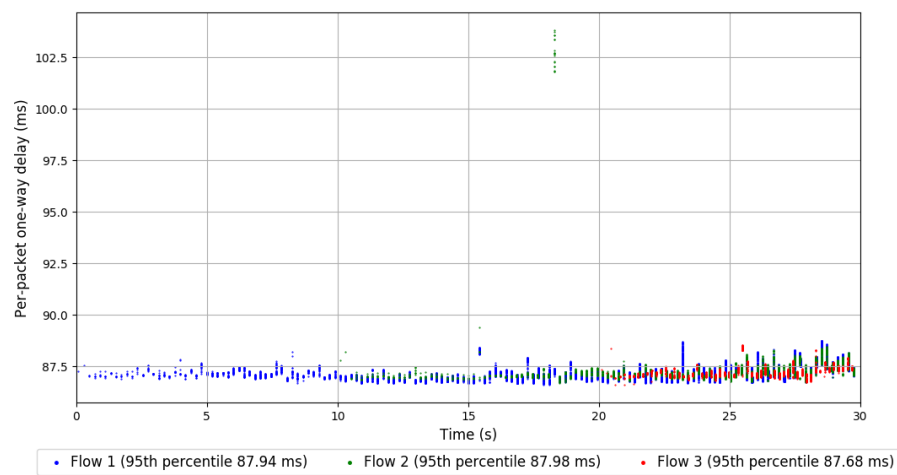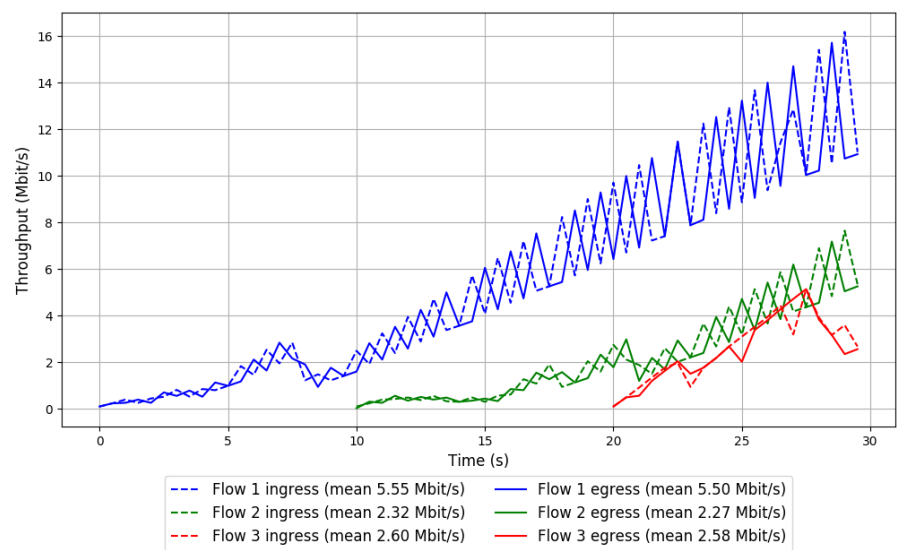Run 9: Report of TCP Cubic — Data Link

```
Run 10: Statistics of TCP Cubic

Start at: 2017-12-05 23:18:55
End at: 2017-12-05 23:19:25


# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.24 Mbit/s
95th percentile per-packet one-way delay: 93.357 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 67.51 Mbit/s
95th percentile per-packet one-way delay: 93.068 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 64.44 Mbit/s
95th percentile per-packet one-way delay: 91.692 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 61.62 Mbit/s
95th percentile per-packet one-way delay: 101.761 ms
Loss rate: 4.29%
```

Run 10: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 67.76 Mbit/s)   Flow 1 egress (mean 67.51 Mbit/s)
Flow 2 ingress (mean 65.02 Mbit/s)   Flow 2 egress (mean 64.44 Mbit/s)
Flow 3 ingress (mean 63.19 Mbit/s)   Flow 3 egress (mean 61.62 Mbit/s)

Flow 1 (95th percentile 93.07 ms)   Flow 2 (95th percentile 91.69 ms)   Flow 3 (95th percentile 101.76 ms)

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```
Run 1: Statistics of LEDBAT

Start at: 2017-12-05 21:18:47
End at: 2017-12-05 21:19:17

# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.64 Mbit/s
95th percentile per-packet one-way delay: 88.283 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 88.387 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 88.139 ms
Loss rate: 1.82%
-- Flow 3:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 88.010 ms
Loss rate: 2.48%
```

Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2017-12-05 21:32:26
End at: 2017-12-05 21:32:56

# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 87.588 ms
Loss rate: 2.78%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 87.618 ms
Loss rate: 2.67%
-- Flow 2:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 86.946 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 86.704 ms
Loss rate: 5.42%
```
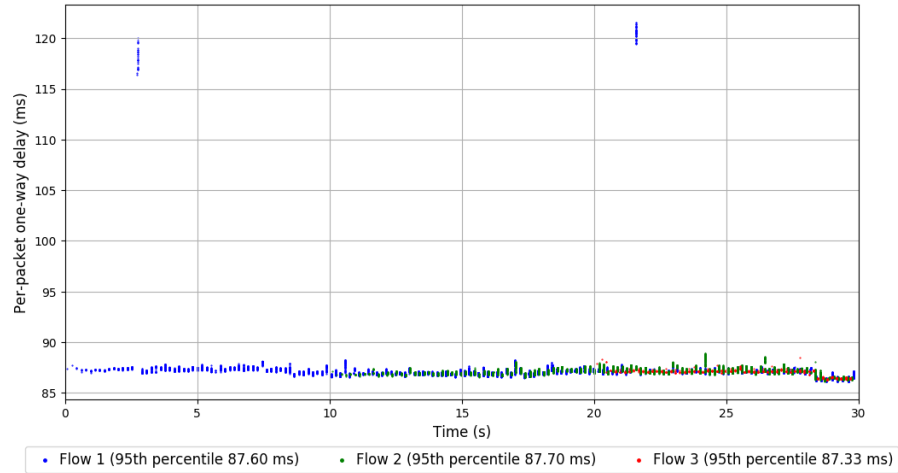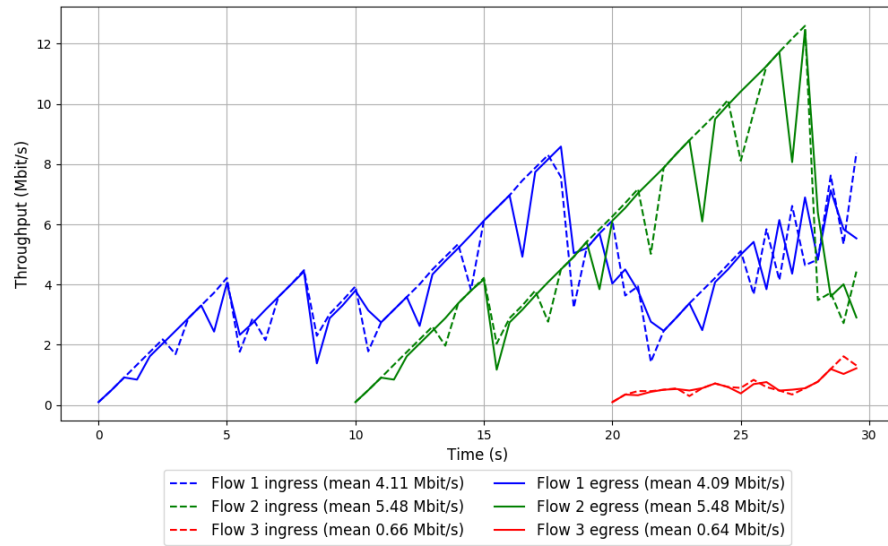
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2017-12-05 21:46:18
End at: 2017-12-05 21:46:48

# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.83 Mbit/s
95th percentile per-packet one-way delay: 87.932 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 5.50 Mbit/s
95th percentile per-packet one-way delay: 87.939 ms
Loss rate: 1.67%
-- Flow 2:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 87.978 ms
Loss rate: 3.04%
-- Flow 3:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 87.684 ms
Loss rate: 2.86%
```
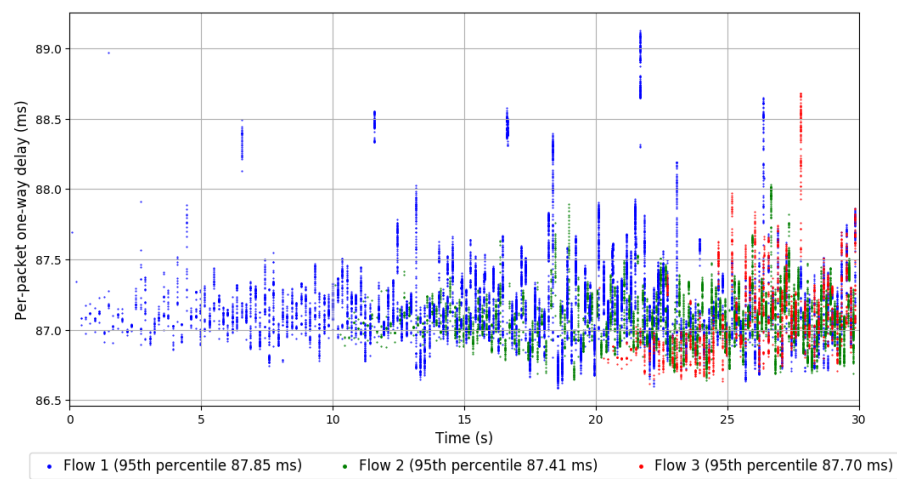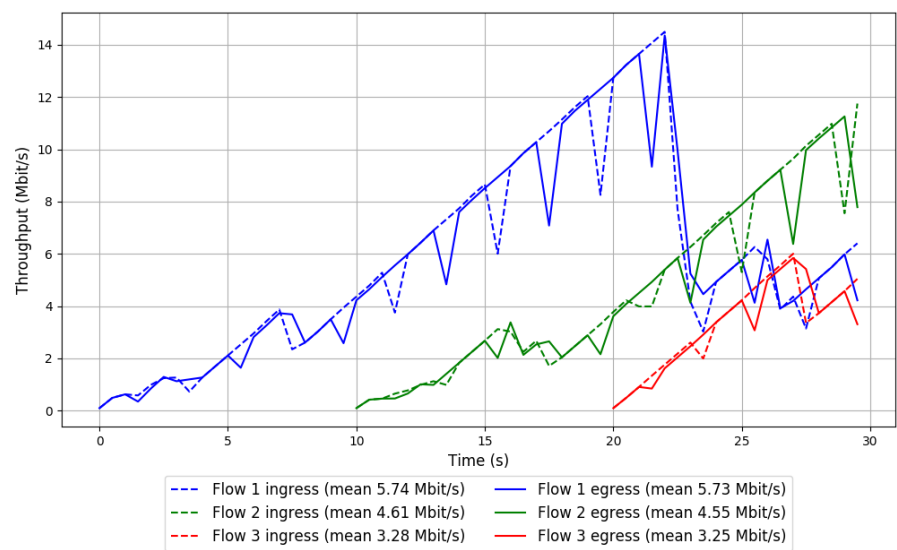
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2017-12-05 21:59:58
End at: 2017-12-05 22:00:28

# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 87.651 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 87.604 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 5.48 Mbit/s
95th percentile per-packet one-way delay: 87.702 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 87.332 ms
Loss rate: 5.28%
```
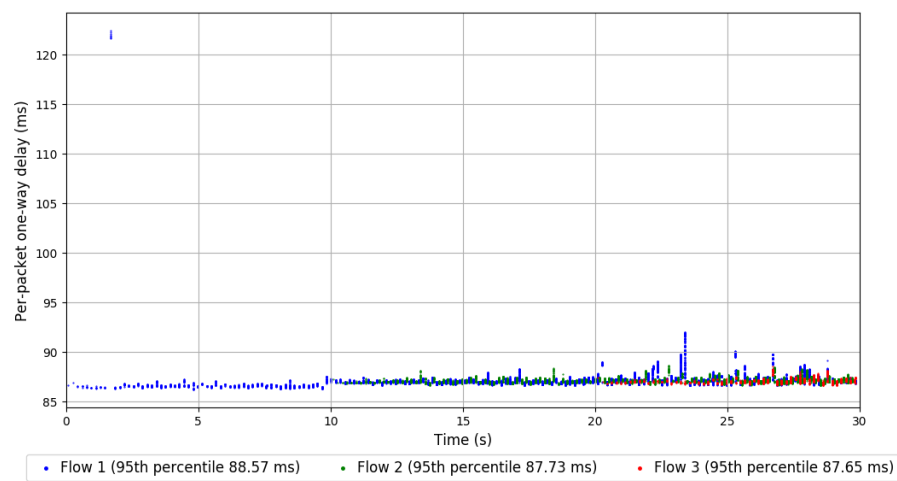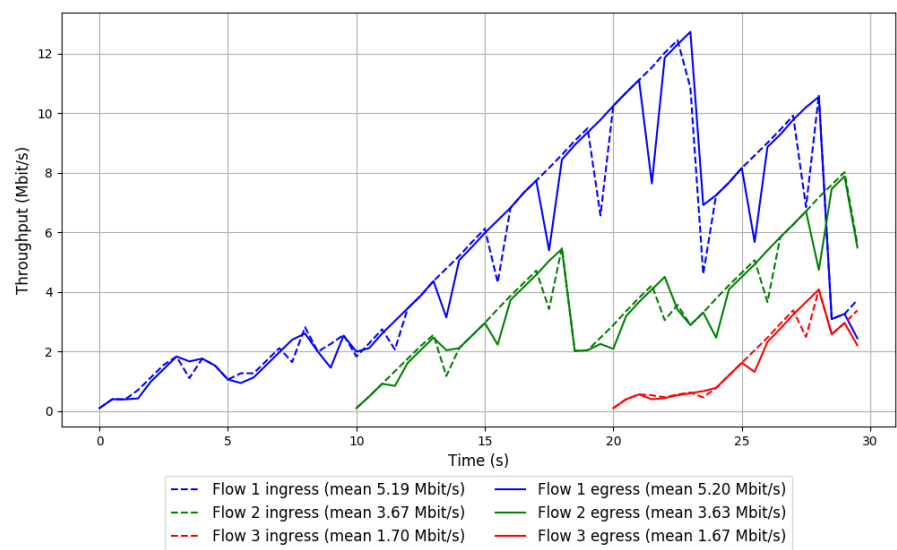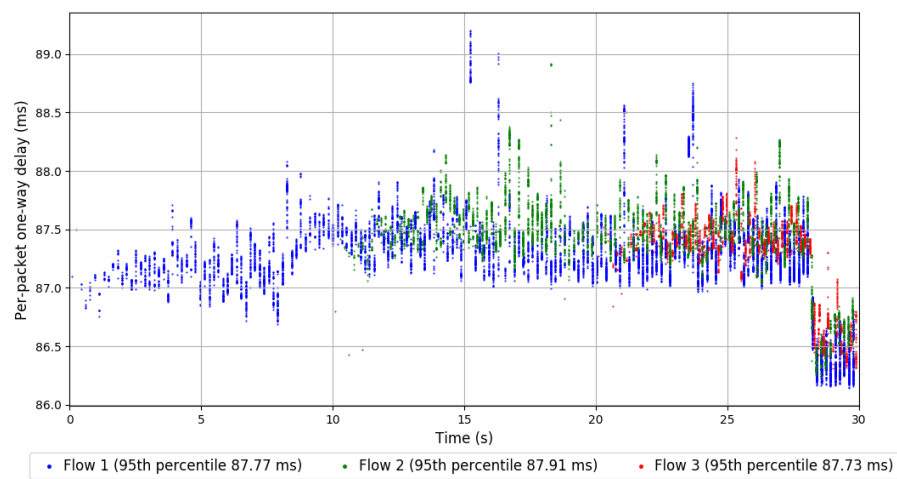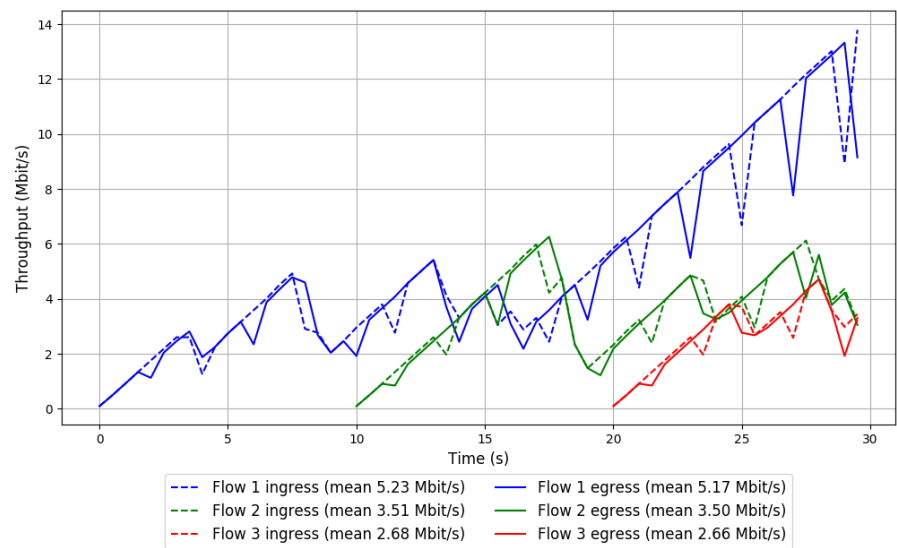
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2017-12-05 22:13:40
End at: 2017-12-05 22:14:10

# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.80 Mbit/s
95th percentile per-packet one-way delay: 87.717 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 5.73 Mbit/s
95th percentile per-packet one-way delay: 87.849 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 4.55 Mbit/s
95th percentile per-packet one-way delay: 87.413 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 87.697 ms
Loss rate: 2.67%
```

Run 5: Report of LEDBAT — Data Link

- - - - Flow 1 ingress (mean 5.74 Mbit/s) ——— Flow 1 egress (mean 5.73 Mbit/s)
- - - - Flow 2 ingress (mean 4.61 Mbit/s) ——— Flow 2 egress (mean 4.55 Mbit/s)
- - - - Flow 3 ingress (mean 3.28 Mbit/s) ——— Flow 3 egress (mean 3.25 Mbit/s)

• Flow 1 (95th percentile 87.85 ms)   • Flow 2 (95th percentile 87.41 ms)   • Flow 3 (95th percentile 87.70 ms)

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```
Run 6: Statistics of LEDBAT

Start at: 2017-12-05 22:26:56
End at: 2017-12-05 22:27:26


# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 88.186 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 5.20 Mbit/s
95th percentile per-packet one-way delay: 88.573 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 3.63 Mbit/s
95th percentile per-packet one-way delay: 87.734 ms
Loss rate: 2.10%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 87.653 ms
Loss rate: 3.50%
```
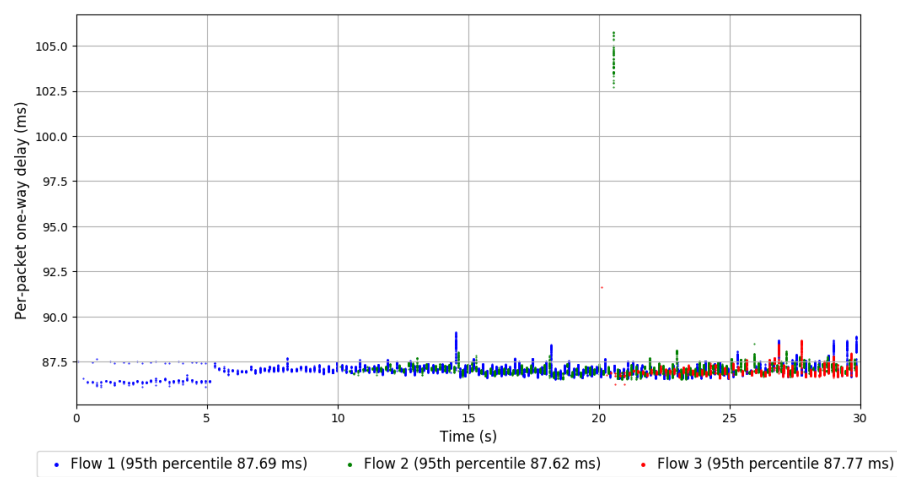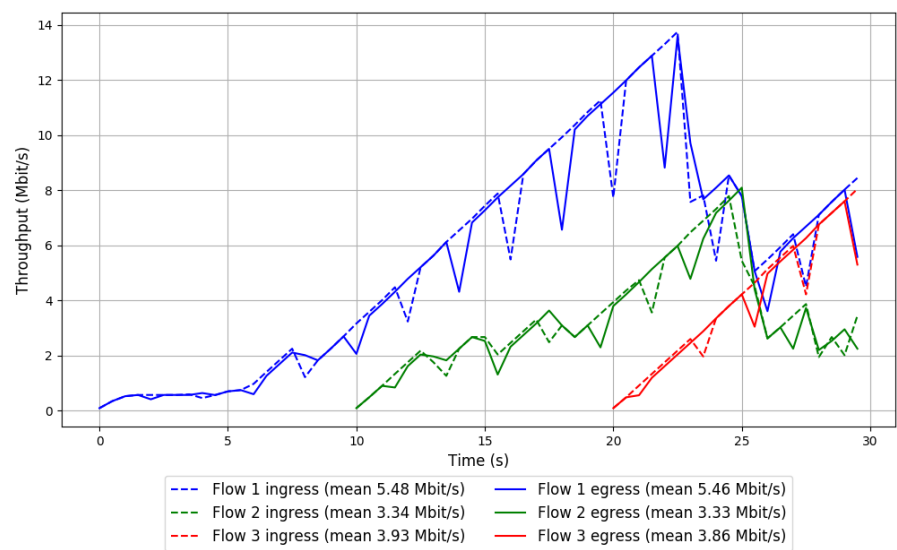
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2017-12-05 22:40:18
End at: 2017-12-05 22:40:48

# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.34 Mbit/s
95th percentile per-packet one-way delay: 87.842 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 5.17 Mbit/s
95th percentile per-packet one-way delay: 87.765 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 87.913 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 87.729 ms
Loss rate: 2.30%
```
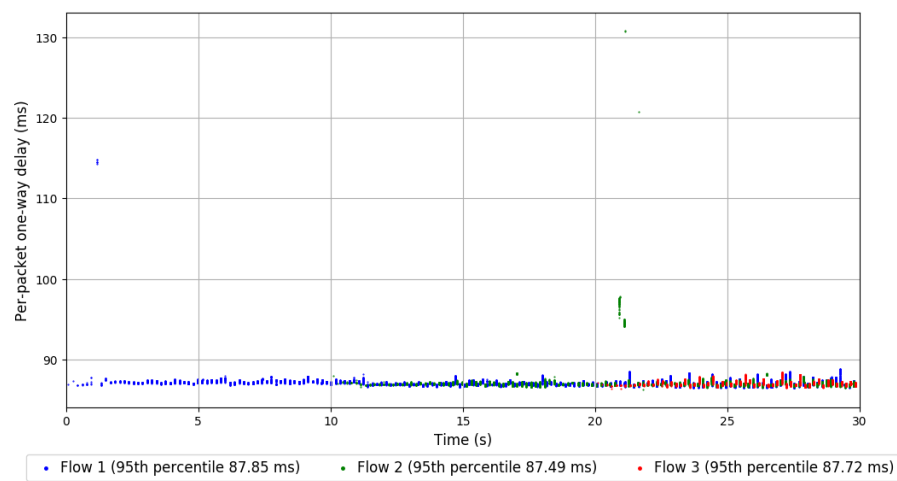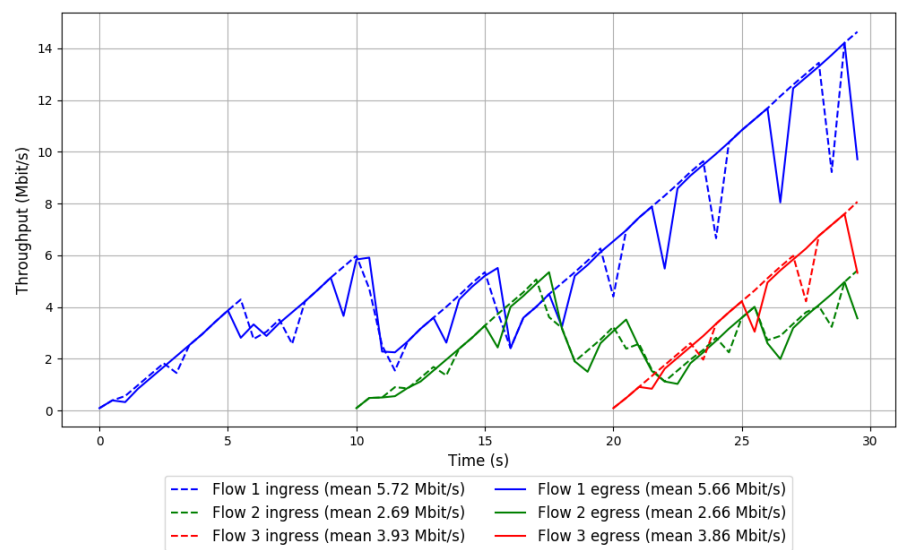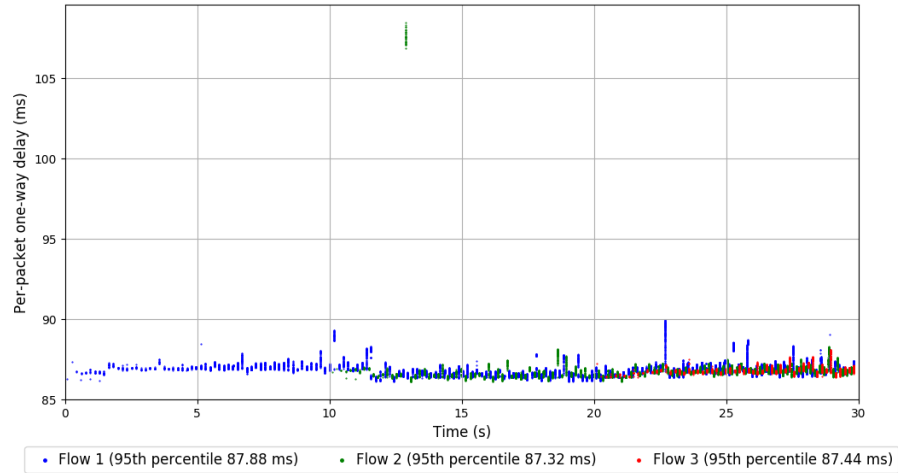
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2017-12-05 22:53:41
End at: 2017-12-05 22:54:11

# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.93 Mbit/s
95th percentile per-packet one-way delay: 87.690 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 5.46 Mbit/s
95th percentile per-packet one-way delay: 87.695 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 3.33 Mbit/s
95th percentile per-packet one-way delay: 87.623 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 87.769 ms
Loss rate: 3.53%
```
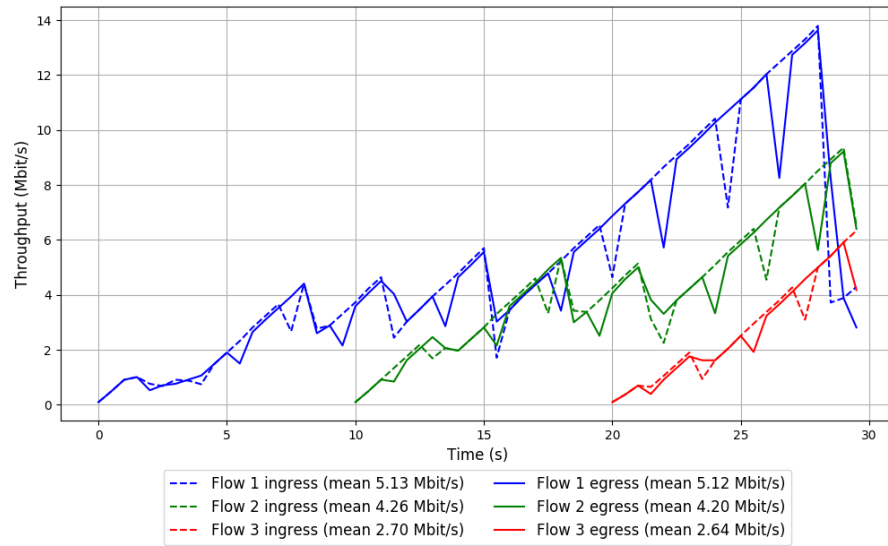
Run 8: Report of LEDBAT — Data Link

```
Run 9: Statistics of LEDBAT

Start at: 2017-12-05 23:07:15
End at: 2017-12-05 23:07:45

# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.67 Mbit/s
95th percentile per-packet one-way delay: 87.798 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 5.66 Mbit/s
95th percentile per-packet one-way delay: 87.847 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 87.490 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 87.723 ms
Loss rate: 3.53%
```
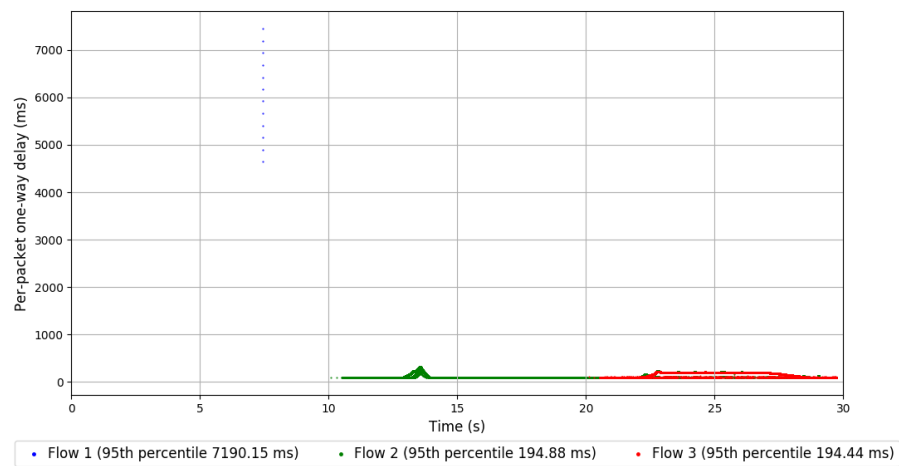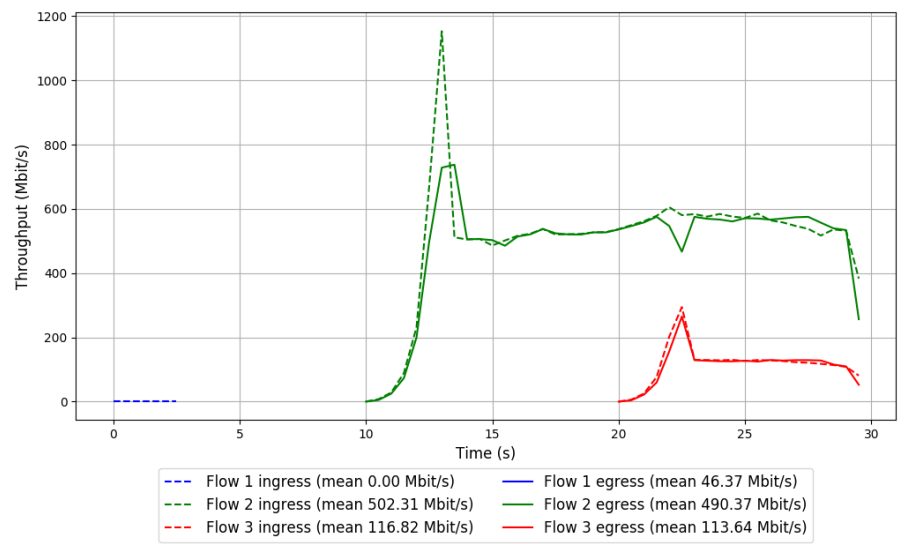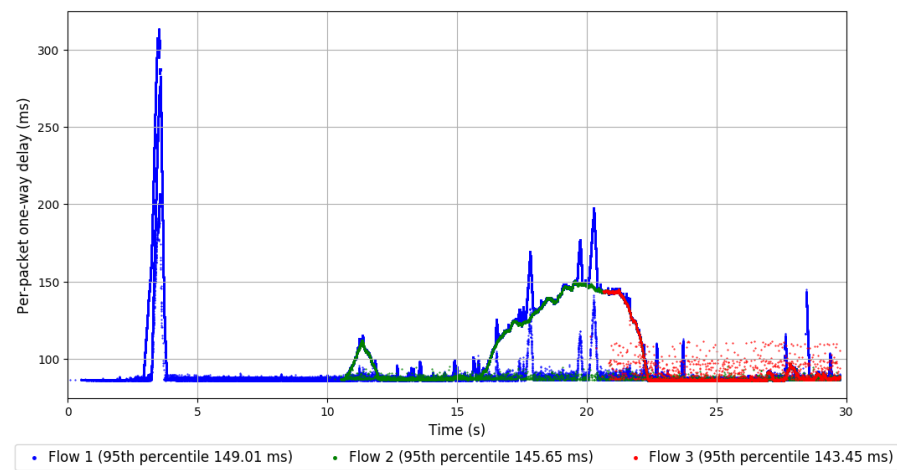
Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 5.72 Mbit/s) —— Flow 1 egress (mean 5.66 Mbit/s)
Flow 2 ingress (mean 2.69 Mbit/s) —— Flow 2 egress (mean 2.66 Mbit/s)
Flow 3 ingress (mean 3.93 Mbit/s) —— Flow 3 egress (mean 3.86 Mbit/s)

• Flow 1 (95th percentile 87.85 ms)   • Flow 2 (95th percentile 87.49 ms)   • Flow 3 (95th percentile 87.72 ms)
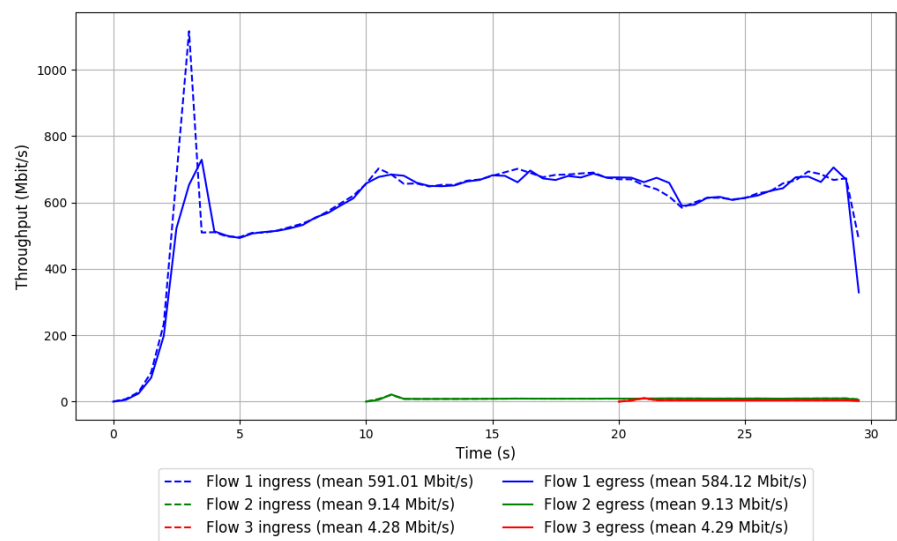
```
Run 10: Statistics of LEDBAT

Start at: 2017-12-05 23:20:35
End at: 2017-12-05 23:21:05

# Below is generated by plot.py at 2017-12-06 01:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.76 Mbit/s
95th percentile per-packet one-way delay: 87.585 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 5.12 Mbit/s
95th percentile per-packet one-way delay: 87.883 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 87.323 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 2.64 Mbit/s
95th percentile per-packet one-way delay: 87.442 ms
Loss rate: 4.03%
```
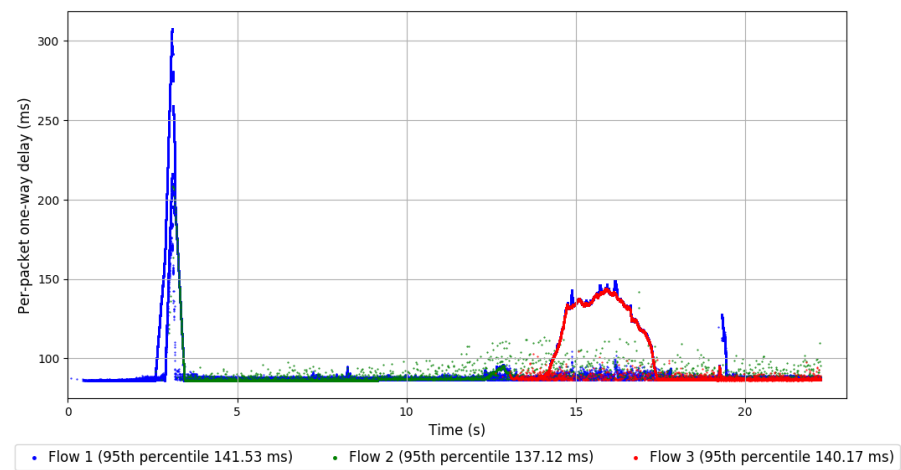
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-12-05 21:21:58
End at: 2017-12-05 21:22:28
```
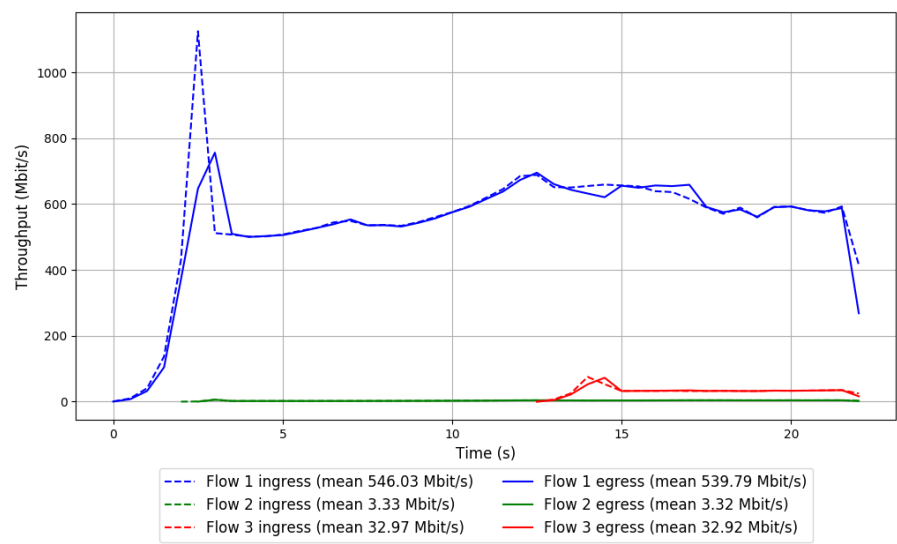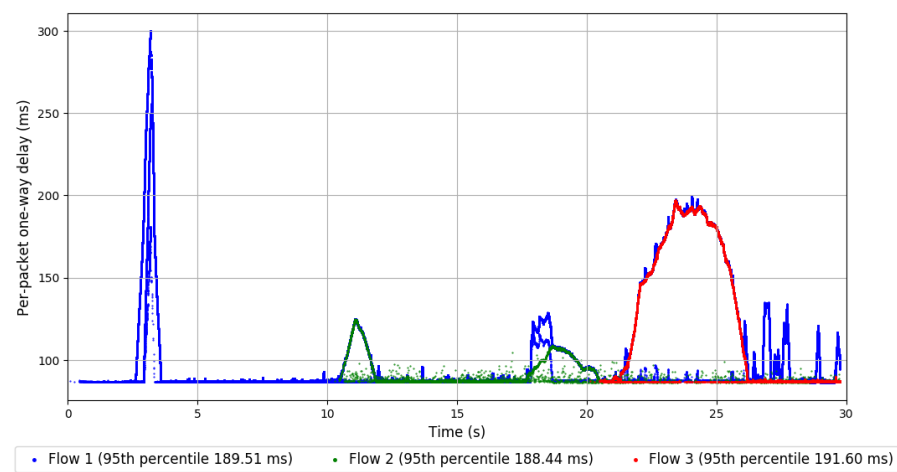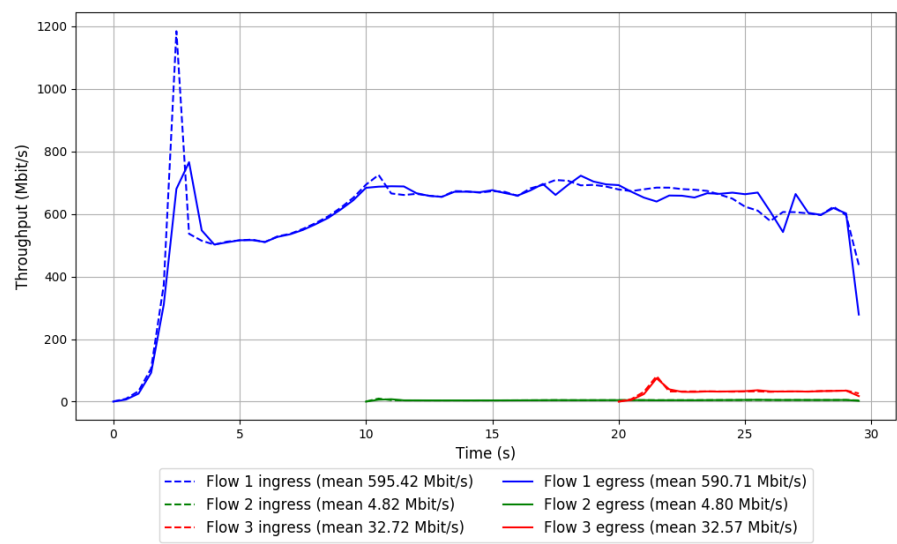
Run 1: Report of PCC — Data Link

```
Run 2: Statistics of PCC

Start at: 2017-12-05 21:35:38
End at: 2017-12-05 21:36:08

# Below is generated by plot.py at 2017-12-06 01:55:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 591.56 Mbit/s
95th percentile per-packet one-way delay: 148.905 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 584.12 Mbit/s
95th percentile per-packet one-way delay: 149.008 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 9.13 Mbit/s
95th percentile per-packet one-way delay: 145.652 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 143.452 ms
Loss rate: 2.08%
```

Run 2: Report of PCC — Data Link

- - - Flow 1 ingress (mean 591.01 Mbit/s) ——— Flow 1 egress (mean 584.12 Mbit/s)
- - - Flow 2 ingress (mean 9.14 Mbit/s) ——— Flow 2 egress (mean 9.13 Mbit/s)
- - - Flow 3 ingress (mean 4.28 Mbit/s) ——— Flow 3 egress (mean 4.29 Mbit/s)

- Flow 1 (95th percentile 149.01 ms)   - Flow 2 (95th percentile 145.65 ms)   - Flow 3 (95th percentile 143.45 ms)

```
Run 3: Statistics of PCC

Start at: 2017-12-05 21:49:19
End at: 2017-12-05 21:49:49
```

Run 3: Report of PCC — Data Link

- Flow 1 ingress (mean 546.03 Mbit/s)
- Flow 1 egress (mean 539.79 Mbit/s)
- Flow 2 ingress (mean 3.33 Mbit/s)
- Flow 2 egress (mean 3.32 Mbit/s)
- Flow 3 ingress (mean 32.97 Mbit/s)
- Flow 3 egress (mean 32.92 Mbit/s)

- Flow 1 (95th percentile 141.53 ms)
- Flow 2 (95th percentile 137.12 ms)
- Flow 3 (95th percentile 140.17 ms)

```
Run 4: Statistics of PCC

Start at: 2017-12-05 22:03:08
End at: 2017-12-05 22:03:38

# Below is generated by plot.py at 2017-12-06 01:56:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 604.45 Mbit/s
95th percentile per-packet one-way delay: 189.624 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 590.71 Mbit/s
95th percentile per-packet one-way delay: 189.513 ms
Loss rate: 1.47%
-- Flow 2:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 188.439 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 32.57 Mbit/s
95th percentile per-packet one-way delay: 191.601 ms
Loss rate: 2.53%
```
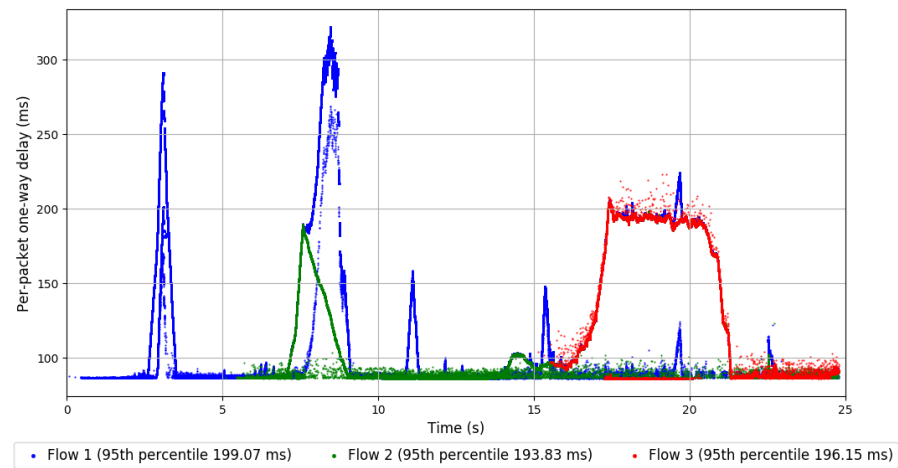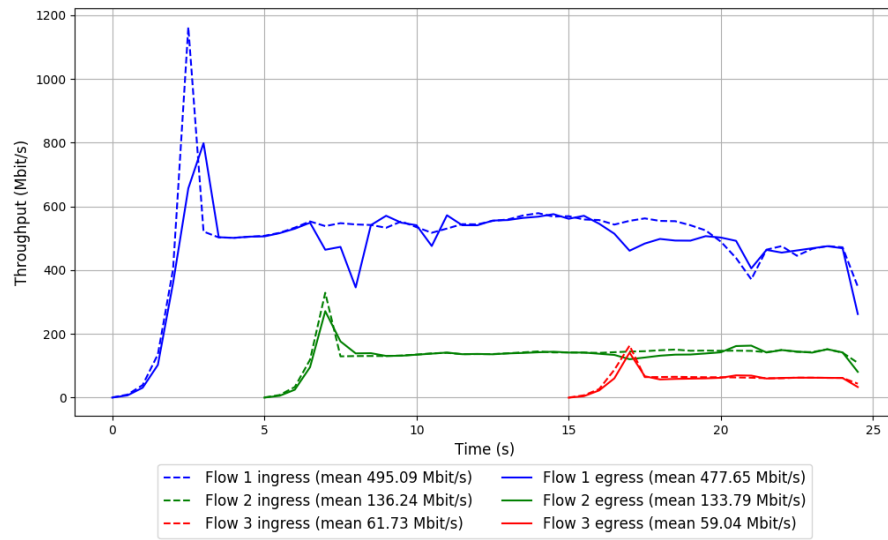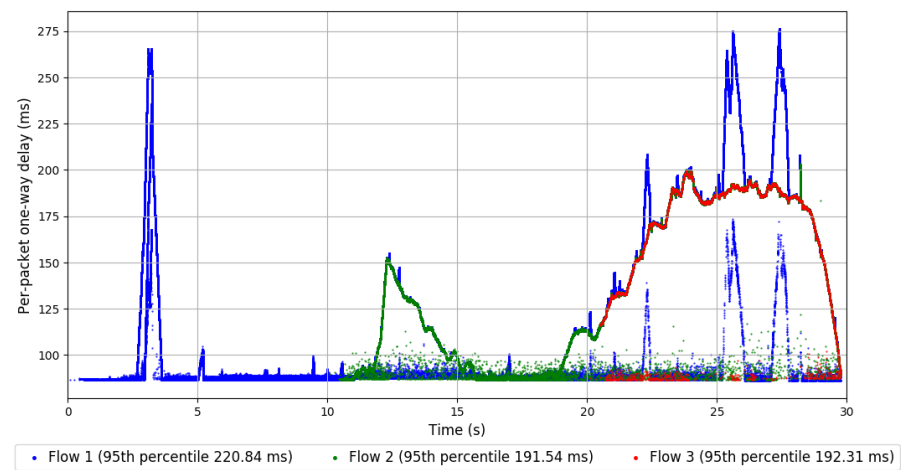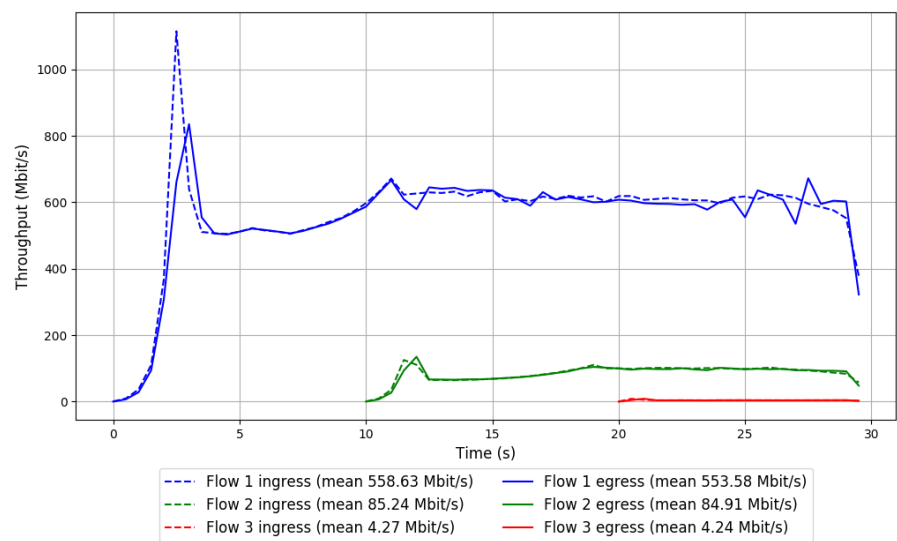
Run 4: Report of PCC — Data Link

- - - Flow 1 ingress (mean 595.42 Mbit/s) —— Flow 1 egress (mean 590.71 Mbit/s)
- - - Flow 2 ingress (mean 4.82 Mbit/s) —— Flow 2 egress (mean 4.80 Mbit/s)
- - - Flow 3 ingress (mean 32.72 Mbit/s) —— Flow 3 egress (mean 32.57 Mbit/s)

• Flow 1 (95th percentile 189.51 ms)   • Flow 2 (95th percentile 188.44 ms)   • Flow 3 (95th percentile 191.60 ms)

71

```
Run 5: Statistics of PCC

Start at: 2017-12-05 22:16:41
End at: 2017-12-05 22:17:11


# Below is generated by plot.py at 2017-12-06 01:56:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 607.32 Mbit/s
95th percentile per-packet one-way delay: 196.321 ms
Loss rate: 4.01%
-- Flow 1:
Average throughput: 477.65 Mbit/s
95th percentile per-packet one-way delay: 199.071 ms
Loss rate: 4.20%
-- Flow 2:
Average throughput: 133.79 Mbit/s
95th percentile per-packet one-way delay: 193.828 ms
Loss rate: 2.66%
-- Flow 3:
Average throughput: 59.04 Mbit/s
95th percentile per-packet one-way delay: 196.145 ms
Loss rate: 6.20%
```
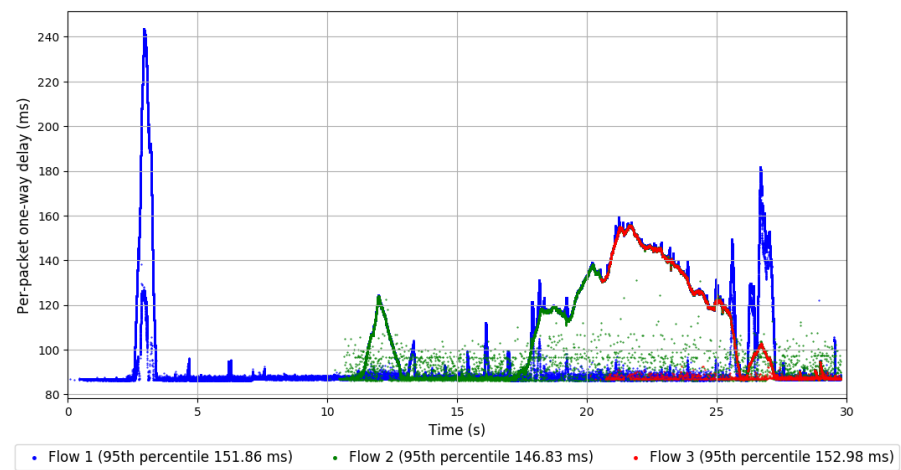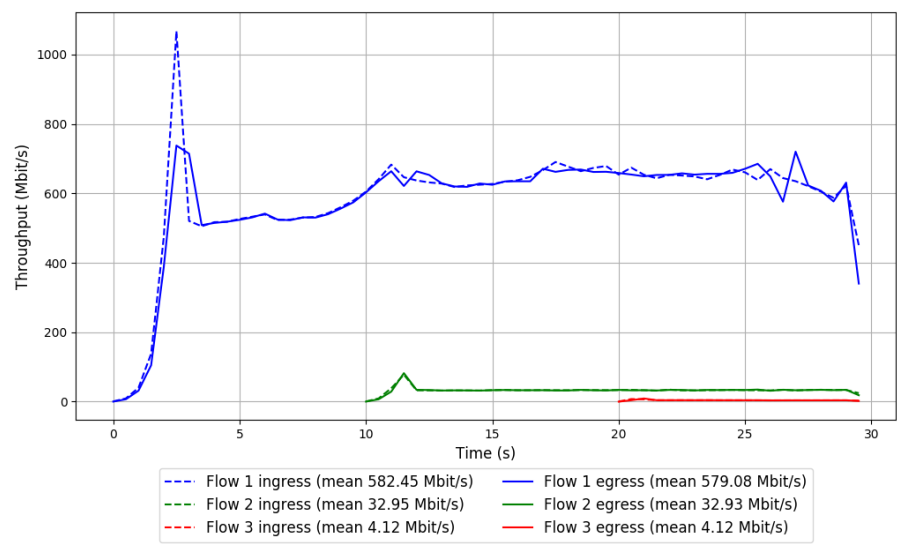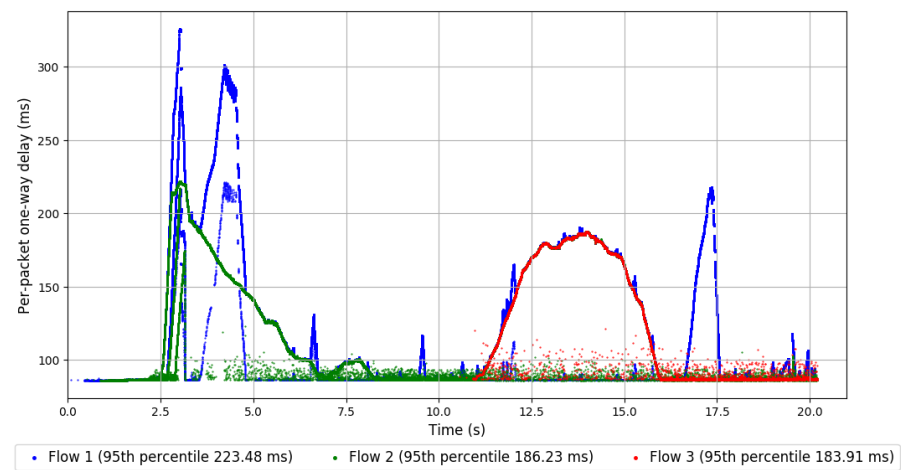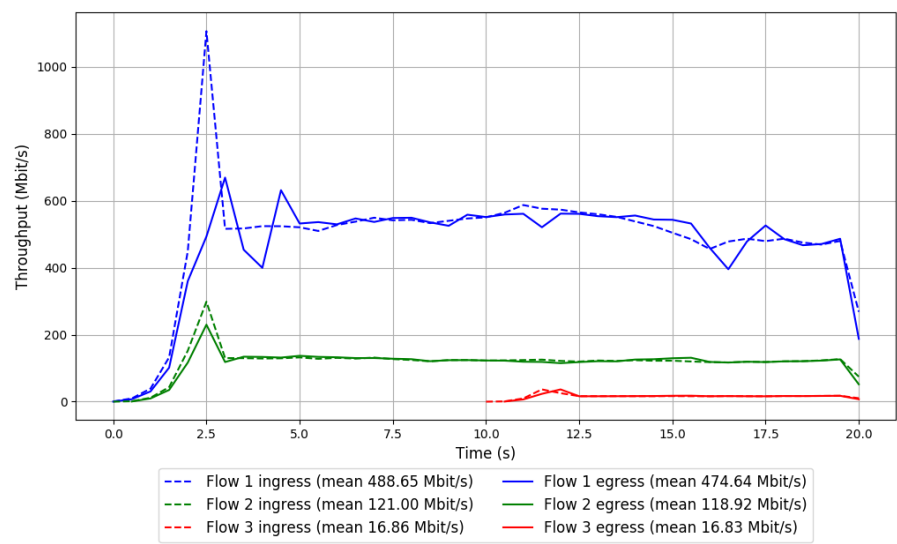
Run 5: Report of PCC — Data Link

```
Run 6: Statistics of PCC

Start at: 2017-12-05 22:30:00
End at: 2017-12-05 22:30:30


# Below is generated by plot.py at 2017-12-06 01:56:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 611.25 Mbit/s
95th percentile per-packet one-way delay: 211.560 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 553.58 Mbit/s
95th percentile per-packet one-way delay: 220.843 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 84.91 Mbit/s
95th percentile per-packet one-way delay: 191.540 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 192.309 ms
Loss rate: 2.41%
```
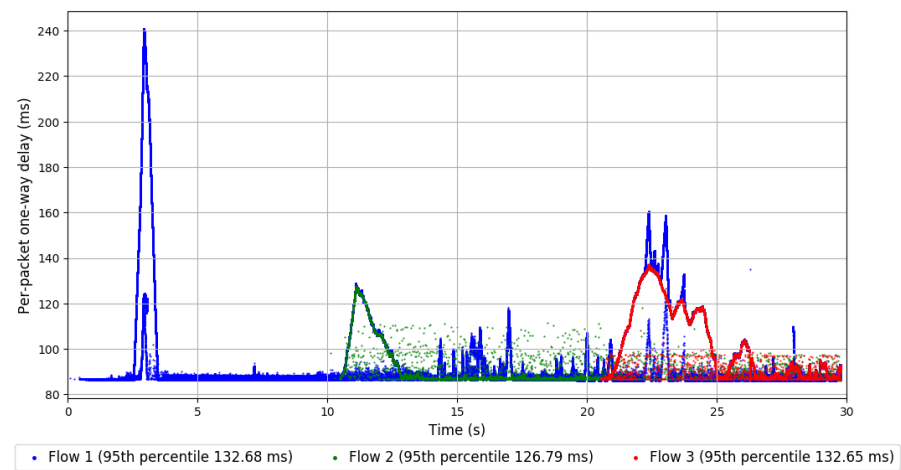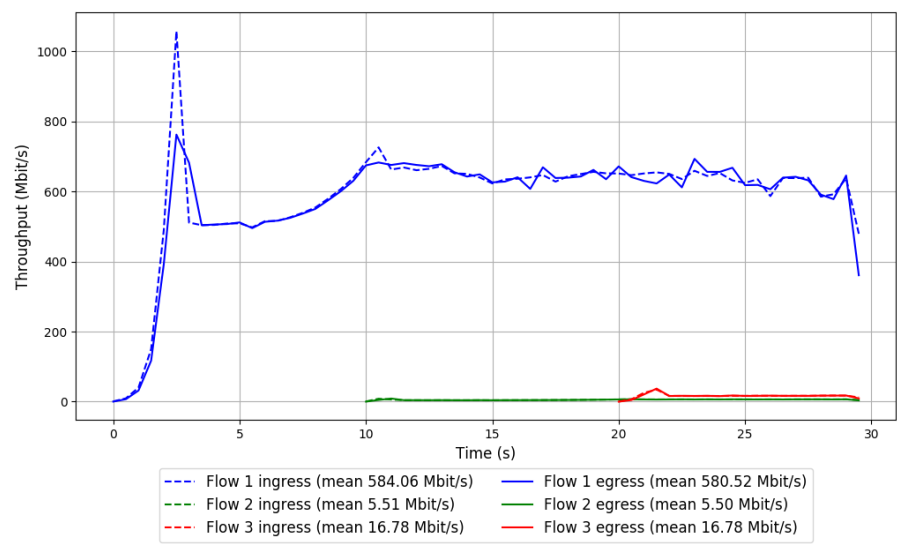
Run 6: Report of PCC — Data Link

```
Run 7: Statistics of PCC

Start at: 2017-12-05 22:43:19
End at: 2017-12-05 22:43:49

# Below is generated by plot.py at 2017-12-06 01:56:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 602.23 Mbit/s
95th percentile per-packet one-way delay: 151.712 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 579.08 Mbit/s
95th percentile per-packet one-way delay: 151.860 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 32.93 Mbit/s
95th percentile per-packet one-way delay: 146.831 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 152.978 ms
Loss rate: 1.67%
```

Run 7: Report of PCC — Data Link

Run 8: Statistics of PCC

Start at: 2017-12-05 22:56:45
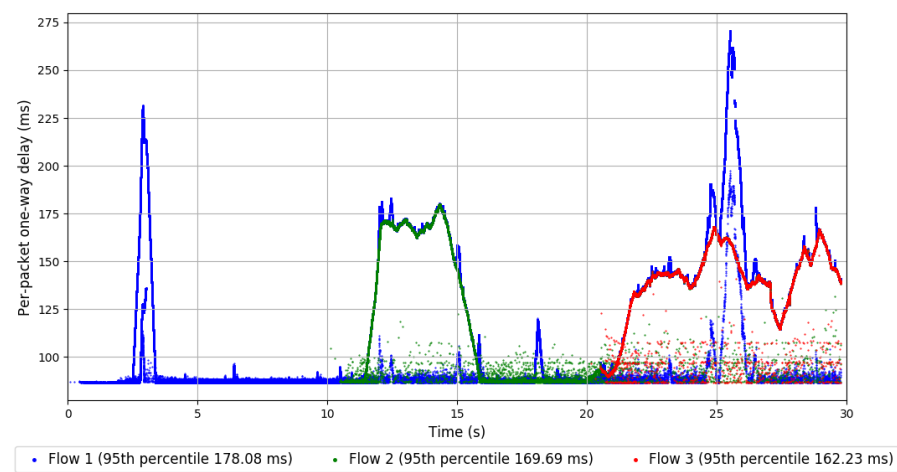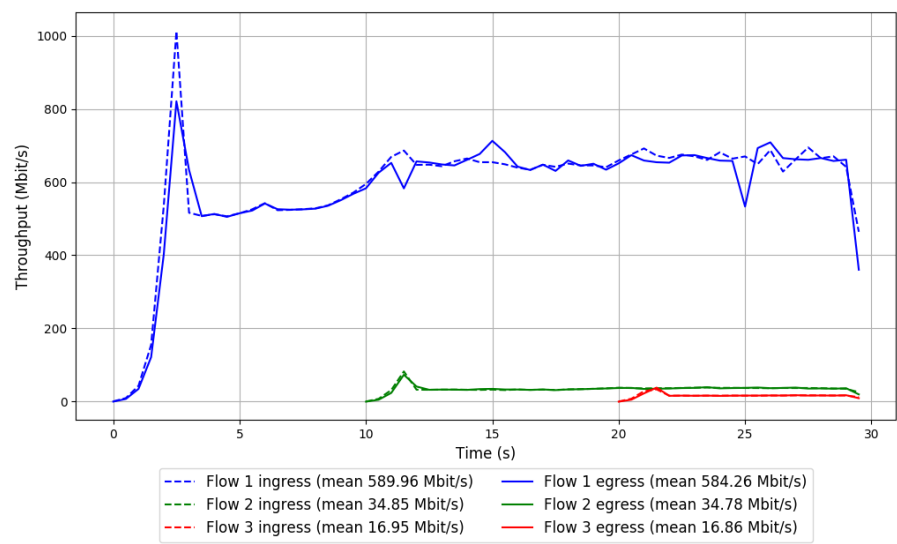End at: 2017-12-05 22:57:15

Run 8: Report of PCC — Data Link

```
Run 9: Statistics of PCC

Start at: 2017-12-05 23:10:17
End at: 2017-12-05 23:10:47

# Below is generated by plot.py at 2017-12-06 02:02:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 589.56 Mbit/s
95th percentile per-packet one-way delay: 132.643 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 580.52 Mbit/s
95th percentile per-packet one-way delay: 132.677 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 5.50 Mbit/s
95th percentile per-packet one-way delay: 126.790 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 16.78 Mbit/s
95th percentile per-packet one-way delay: 132.651 ms
Loss rate: 1.83%
```
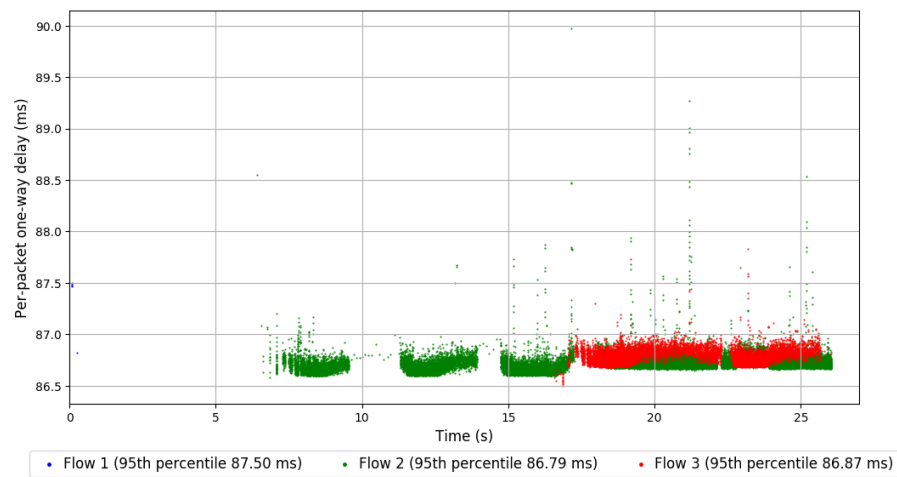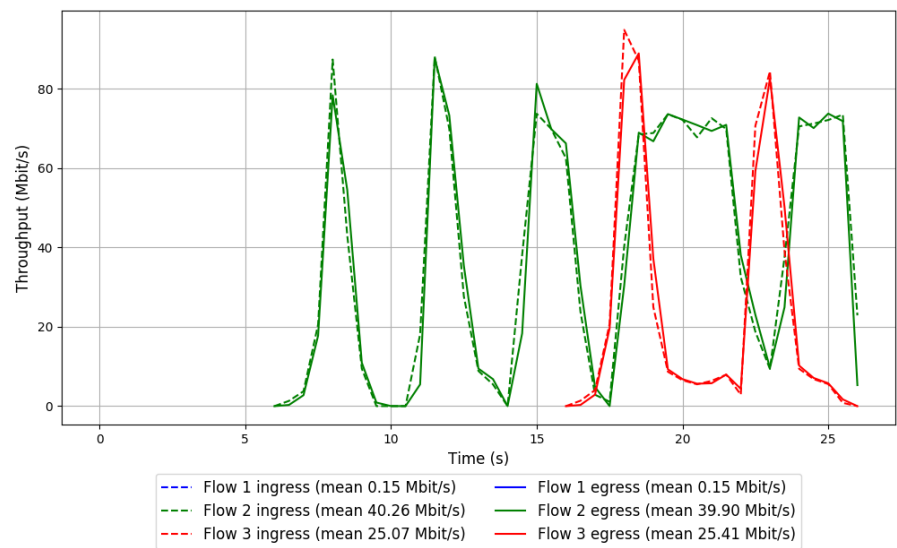
Run 9: Report of PCC — Data Link

- Flow 1 ingress (mean 584.06 Mbit/s) --- Flow 1 egress (mean 580.52 Mbit/s)
- Flow 2 ingress (mean 5.51 Mbit/s) --- Flow 2 egress (mean 5.50 Mbit/s)
- Flow 3 ingress (mean 16.78 Mbit/s) --- Flow 3 egress (mean 16.78 Mbit/s)

- Flow 1 (95th percentile 132.68 ms) • Flow 2 (95th percentile 126.79 ms) • Flow 3 (95th percentile 132.65 ms)

81

```
Run 10: Statistics of PCC

Start at: 2017-12-05 23:23:36
End at: 2017-12-05 23:24:06

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 612.76 Mbit/s
95th percentile per-packet one-way delay: 177.509 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 584.26 Mbit/s
95th percentile per-packet one-way delay: 178.077 ms
Loss rate: 1.54%
-- Flow 2:
Average throughput: 34.78 Mbit/s
95th percentile per-packet one-way delay: 169.694 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 16.86 Mbit/s
95th percentile per-packet one-way delay: 162.227 ms
Loss rate: 2.37%
```
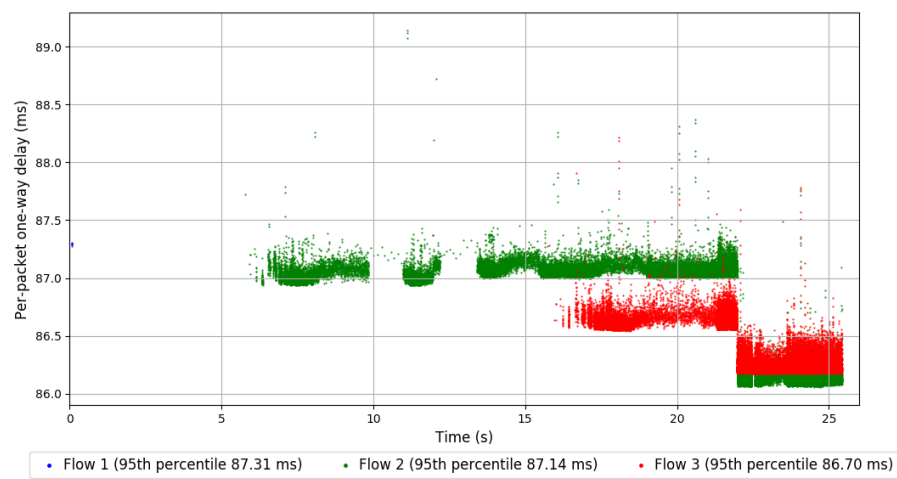
Run 10: Report of PCC — Data Link

Flow 1 ingress (mean 589.96 Mbit/s)   Flow 1 egress (mean 584.26 Mbit/s)
Flow 2 ingress (mean 34.85 Mbit/s)   Flow 2 egress (mean 34.78 Mbit/s)
Flow 3 ingress (mean 16.95 Mbit/s)   Flow 3 egress (mean 16.86 Mbit/s)

Flow 1 (95th percentile 178.08 ms)   Flow 2 (95th percentile 169.69 ms)   Flow 3 (95th percentile 162.23 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-05 21:16:15
End at: 2017-12-05 21:16:45


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.58 Mbit/s
95th percentile per-packet one-way delay: 86.823 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 87.501 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.90 Mbit/s
95th percentile per-packet one-way delay: 86.790 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 25.41 Mbit/s
95th percentile per-packet one-way delay: 86.871 ms
Loss rate: 0.00%
```
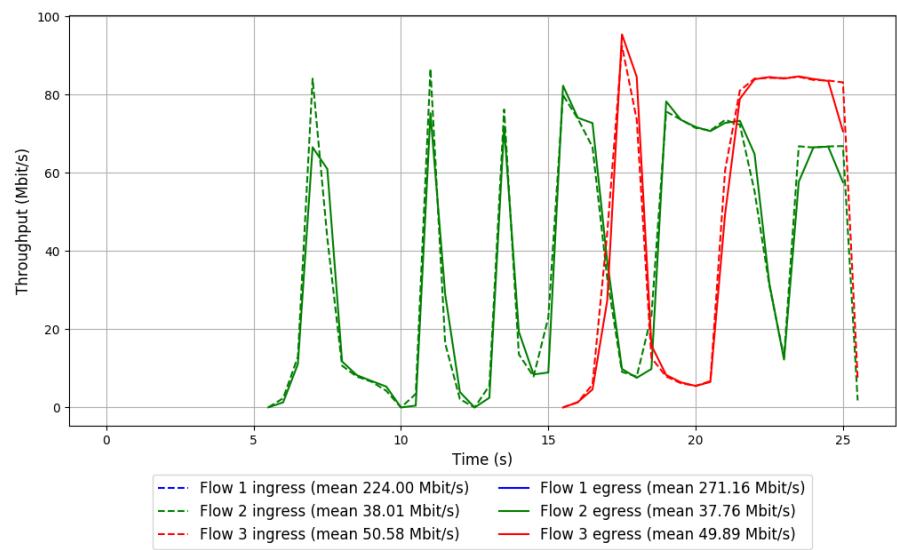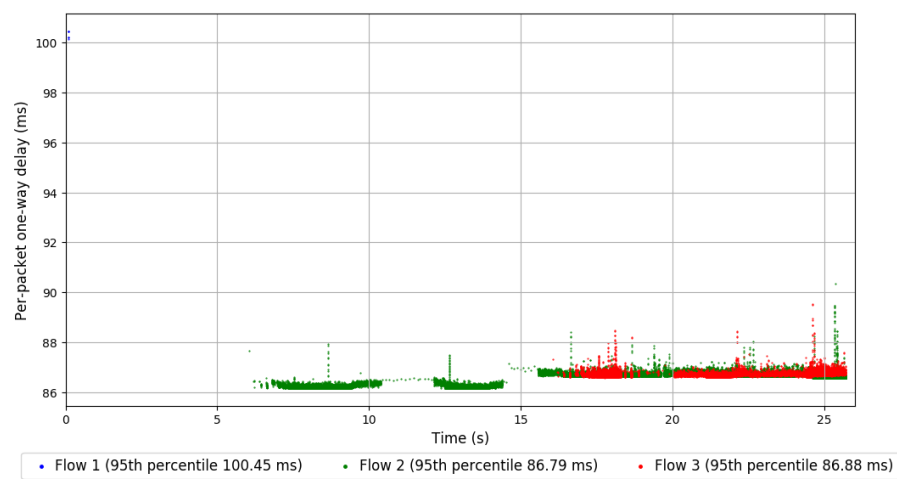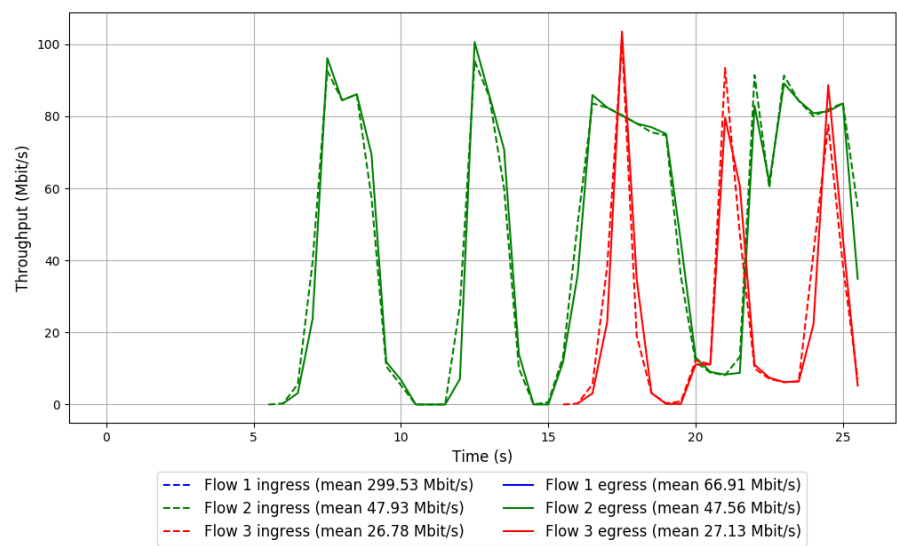
Run 1: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 0.15 Mbit/s)   Flow 1 egress (mean 0.15 Mbit/s)
Flow 2 ingress (mean 40.26 Mbit/s)   Flow 2 egress (mean 39.90 Mbit/s)
Flow 3 ingress (mean 25.07 Mbit/s)   Flow 3 egress (mean 25.41 Mbit/s)

Flow 1 (95th percentile 87.50 ms)   Flow 2 (95th percentile 86.79 ms)   Flow 3 (95th percentile 86.87 ms)

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-05 21:29:50
End at: 2017-12-05 21:30:20


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.23 Mbit/s
95th percentile per-packet one-way delay: 87.110 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 271.16 Mbit/s
95th percentile per-packet one-way delay: 87.307 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.76 Mbit/s
95th percentile per-packet one-way delay: 87.135 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 49.89 Mbit/s
95th percentile per-packet one-way delay: 86.704 ms
Loss rate: 3.43%
```
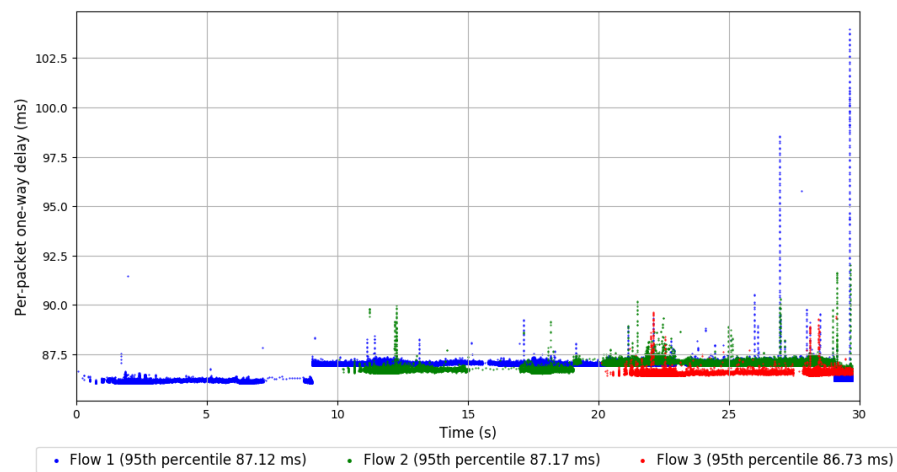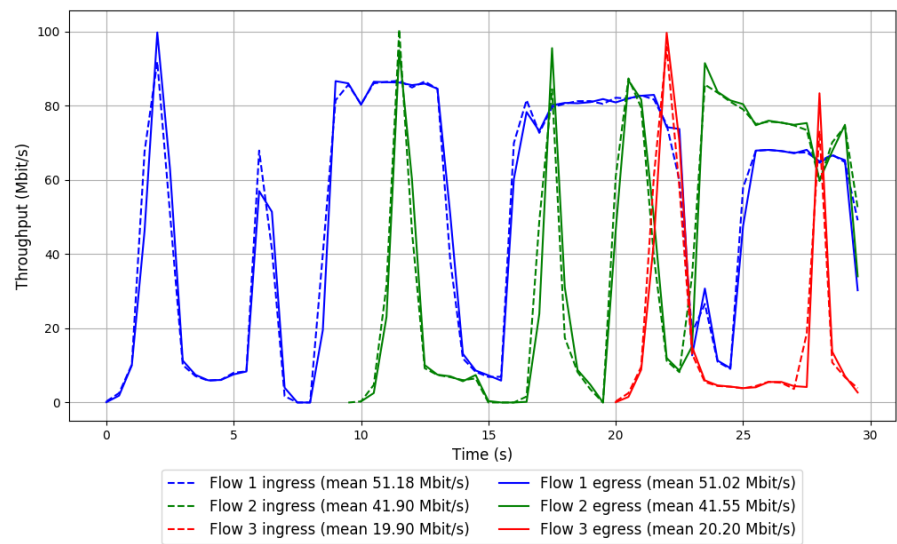
Run 2: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 224.00 Mbit/s) —— Flow 1 egress (mean 271.16 Mbit/s)
- - - Flow 2 ingress (mean 38.01 Mbit/s) —— Flow 2 egress (mean 37.76 Mbit/s)
- - - Flow 3 ingress (mean 50.58 Mbit/s) —— Flow 3 egress (mean 49.89 Mbit/s)

- Flow 1 (95th percentile 87.31 ms)   · Flow 2 (95th percentile 87.14 ms)   · Flow 3 (95th percentile 86.70 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-12-05 21:43:38
End at: 2017-12-05 21:44:08

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.74 Mbit/s
95th percentile per-packet one-way delay: 86.815 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 66.91 Mbit/s
95th percentile per-packet one-way delay: 100.451 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.56 Mbit/s
95th percentile per-packet one-way delay: 86.790 ms
Loss rate: 1.81%
-- Flow 3:
Average throughput: 27.13 Mbit/s
95th percentile per-packet one-way delay: 86.880 ms
Loss rate: 0.77%
```
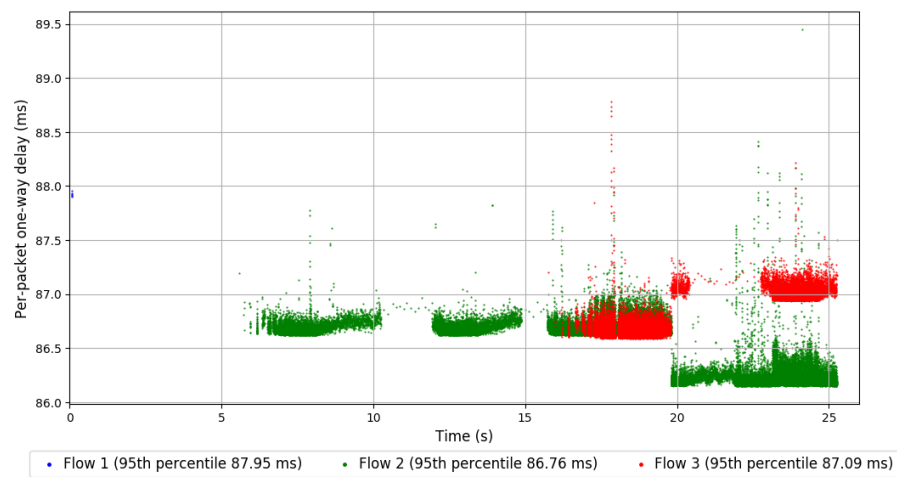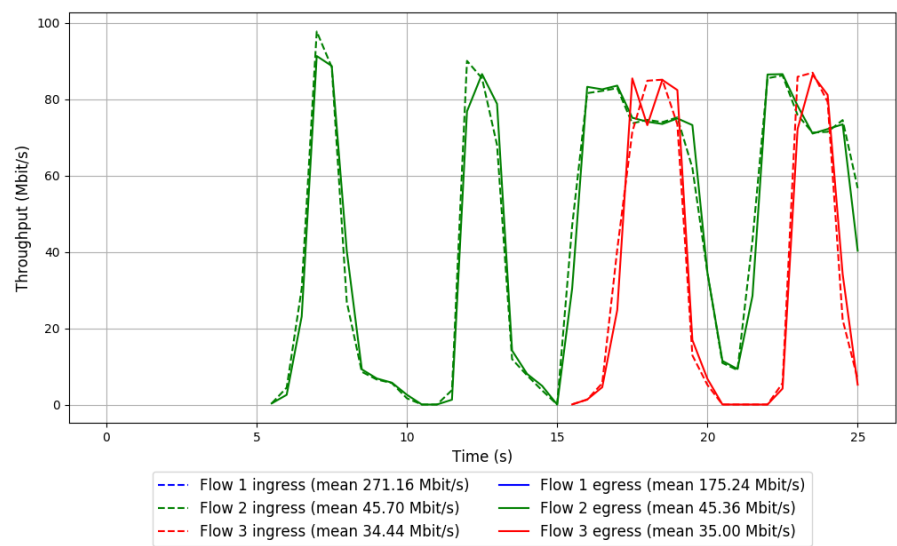
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 299.53 Mbit/s)   Flow 1 egress (mean 66.91 Mbit/s)
Flow 2 ingress (mean 47.93 Mbit/s)   Flow 2 egress (mean 47.56 Mbit/s)
Flow 3 ingress (mean 26.78 Mbit/s)   Flow 3 egress (mean 27.13 Mbit/s)

Flow 1 (95th percentile 100.45 ms)   Flow 2 (95th percentile 86.79 ms)   Flow 3 (95th percentile 86.88 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2017-12-05 21:57:17
End at: 2017-12-05 21:57:47

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.15 Mbit/s
95th percentile per-packet one-way delay: 87.130 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 51.02 Mbit/s
95th percentile per-packet one-way delay: 87.121 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 41.55 Mbit/s
95th percentile per-packet one-way delay: 87.170 ms
Loss rate: 1.86%
-- Flow 3:
Average throughput: 20.20 Mbit/s
95th percentile per-packet one-way delay: 86.726 ms
Loss rate: 0.58%
```
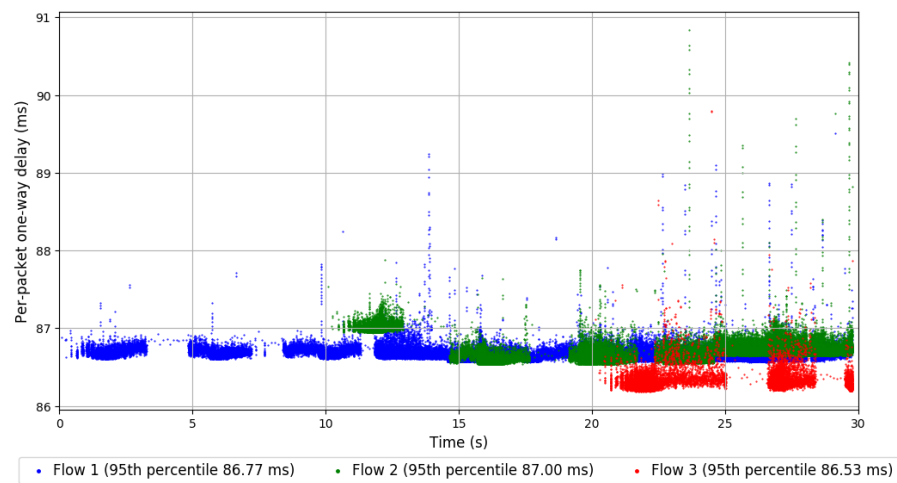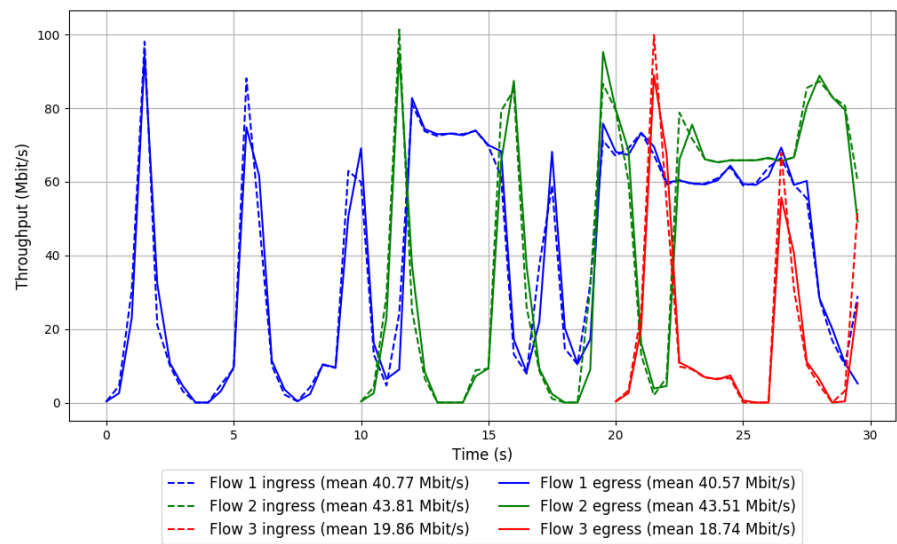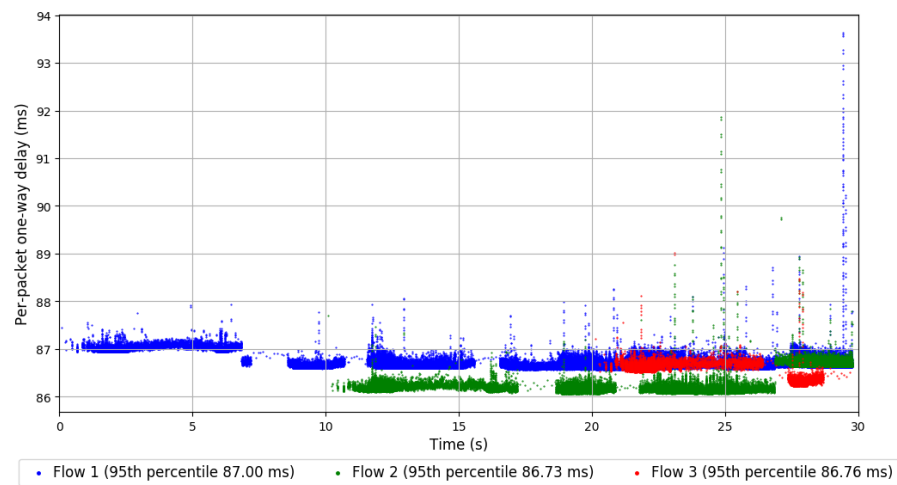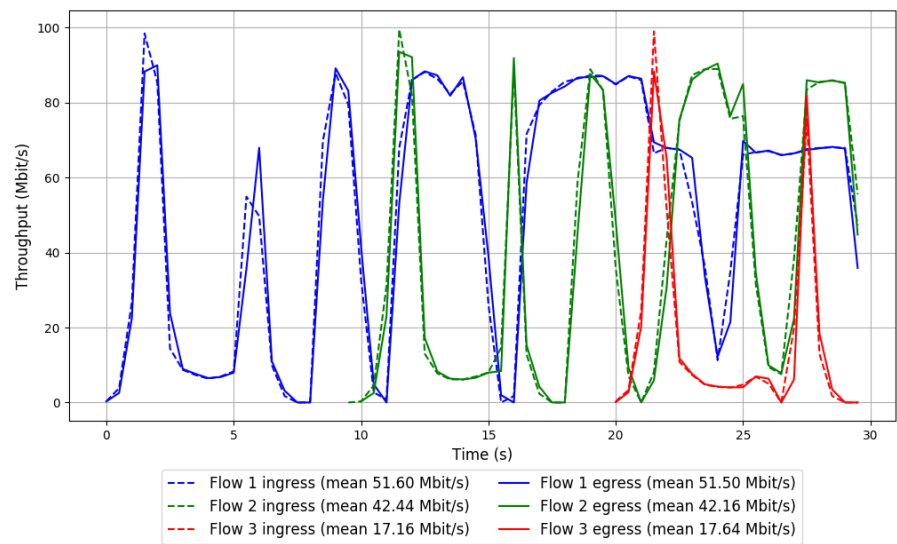
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 51.18 Mbit/s) — Flow 1 egress (mean 51.02 Mbit/s)
Flow 2 ingress (mean 41.90 Mbit/s) — Flow 2 egress (mean 41.55 Mbit/s)
Flow 3 ingress (mean 19.90 Mbit/s) — Flow 3 egress (mean 20.20 Mbit/s)

Flow 1 (95th percentile 87.12 ms) • Flow 2 (95th percentile 87.17 ms) • Flow 3 (95th percentile 86.73 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-12-05 22:11:12
End at: 2017-12-05 22:11:42

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.63 Mbit/s
95th percentile per-packet one-way delay: 87.018 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 175.24 Mbit/s
95th percentile per-packet one-way delay: 87.953 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.36 Mbit/s
95th percentile per-packet one-way delay: 86.761 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 35.00 Mbit/s
95th percentile per-packet one-way delay: 87.089 ms
Loss rate: 0.51%
```
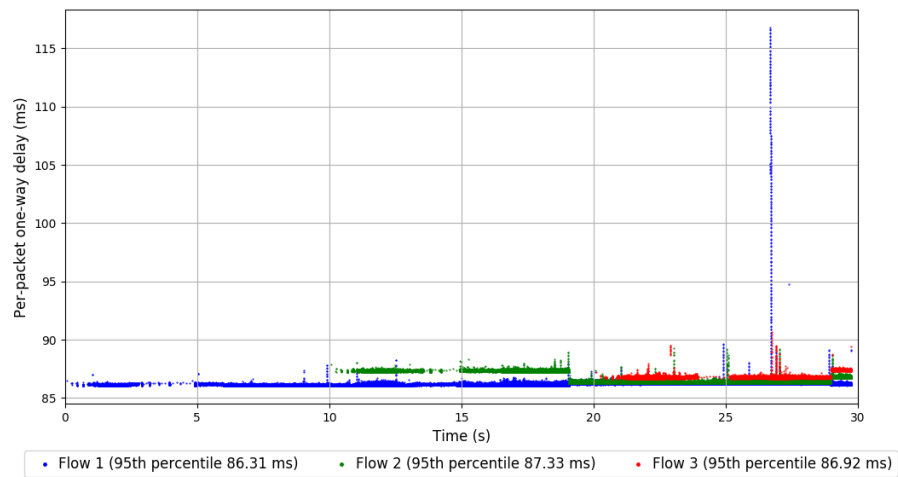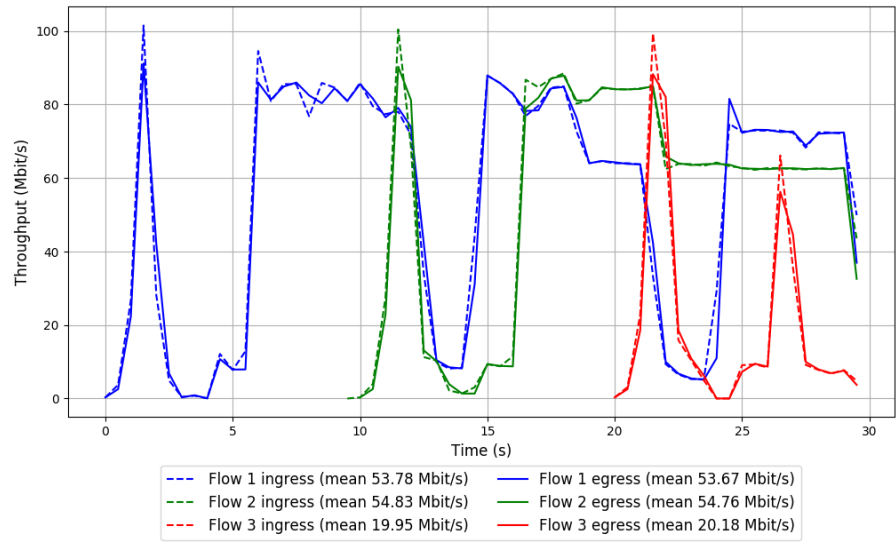
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 271.16 Mbit/s) --- Flow 1 egress (mean 175.24 Mbit/s)
Flow 2 ingress (mean 45.70 Mbit/s) --- Flow 2 egress (mean 45.36 Mbit/s)
Flow 3 ingress (mean 34.44 Mbit/s) --- Flow 3 egress (mean 35.00 Mbit/s)

Flow 1 (95th percentile 87.95 ms) Flow 2 (95th percentile 86.76 ms) Flow 3 (95th percentile 87.09 ms)

```
Run 6: Statistics of QUIC Cubic

Start at: 2017-12-05 22:24:32
End at: 2017-12-05 22:25:02

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.51 Mbit/s
95th percentile per-packet one-way delay: 86.897 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 40.57 Mbit/s
95th percentile per-packet one-way delay: 86.766 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 43.51 Mbit/s
95th percentile per-packet one-way delay: 87.002 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 18.74 Mbit/s
95th percentile per-packet one-way delay: 86.533 ms
Loss rate: 7.27%
```
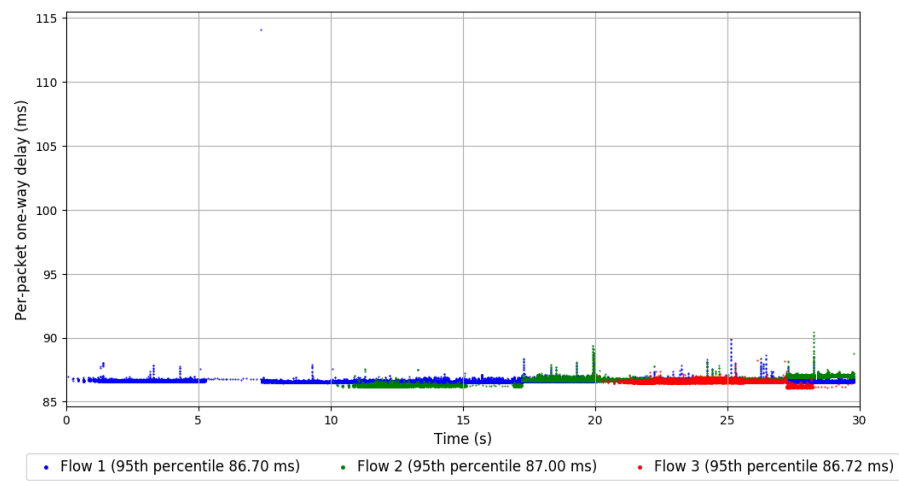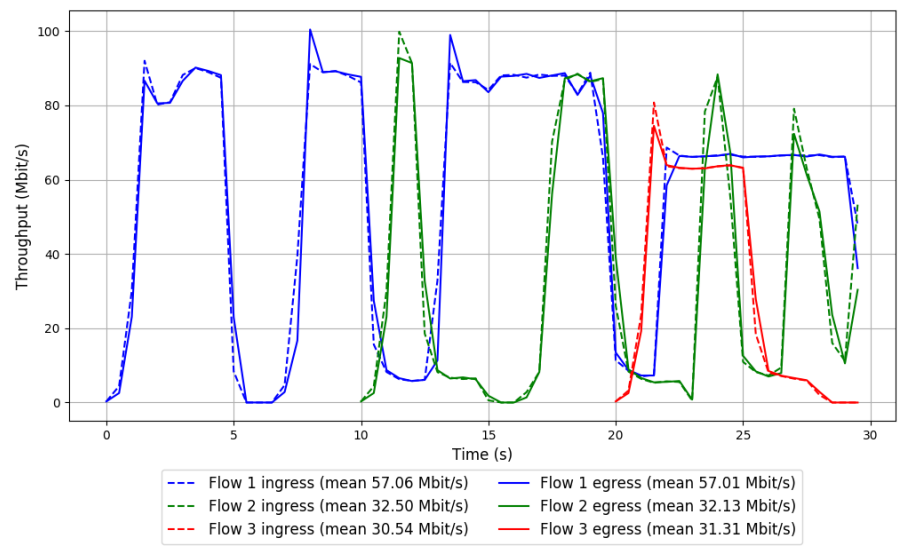
Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 40.77 Mbit/s) — — — Flow 1 egress (mean 40.57 Mbit/s)
Flow 2 ingress (mean 43.81 Mbit/s) — — — Flow 2 egress (mean 43.51 Mbit/s)
Flow 3 ingress (mean 19.86 Mbit/s) — — — Flow 3 egress (mean 18.74 Mbit/s)

Flow 1 (95th percentile 86.77 ms)   Flow 2 (95th percentile 87.00 ms)   Flow 3 (95th percentile 86.53 ms)
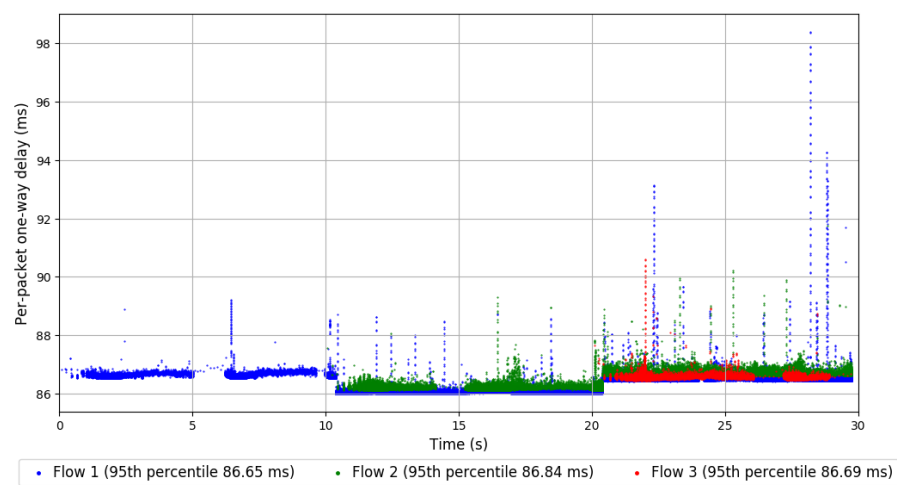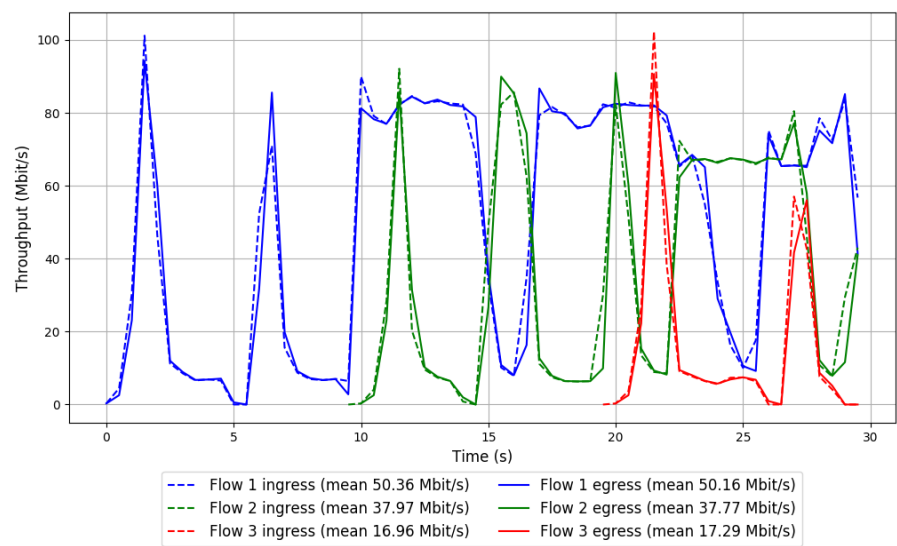
95

```
Run 7: Statistics of QUIC Cubic

Start at: 2017-12-05 22:37:49
End at: 2017-12-05 22:38:19


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.13 Mbit/s
95th percentile per-packet one-way delay: 86.974 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 51.50 Mbit/s
95th percentile per-packet one-way delay: 87.001 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 42.16 Mbit/s
95th percentile per-packet one-way delay: 86.728 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 17.64 Mbit/s
95th percentile per-packet one-way delay: 86.757 ms
Loss rate: 0.00%
```

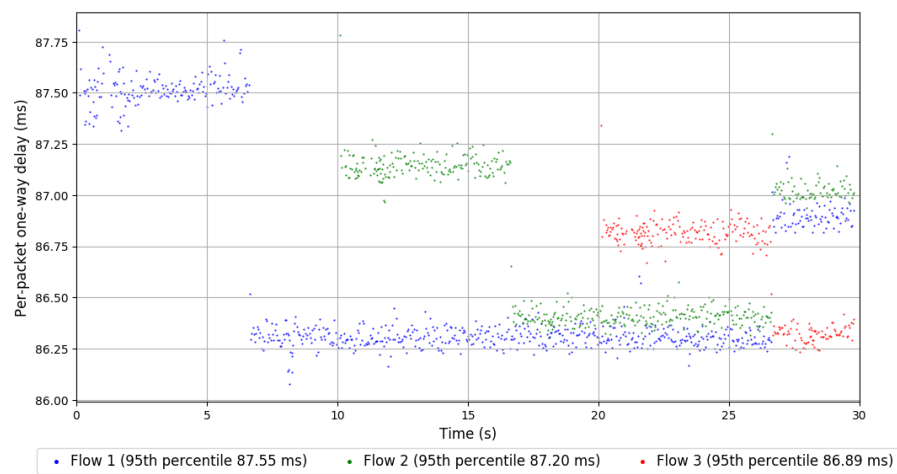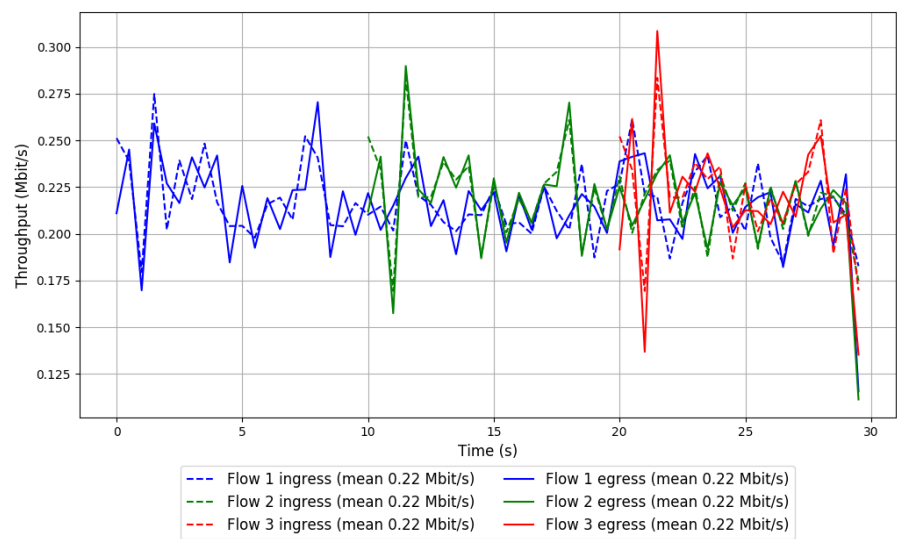# Run 7: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 51.60 Mbit/s) --- Flow 1 egress (mean 51.50 Mbit/s)
Flow 2 ingress (mean 42.44 Mbit/s) --- Flow 2 egress (mean 42.16 Mbit/s)
Flow 3 ingress (mean 17.16 Mbit/s) --- Flow 3 egress (mean 17.64 Mbit/s)

Flow 1 (95th percentile 87.00 ms) · Flow 2 (95th percentile 86.73 ms) · Flow 3 (95th percentile 86.76 ms)
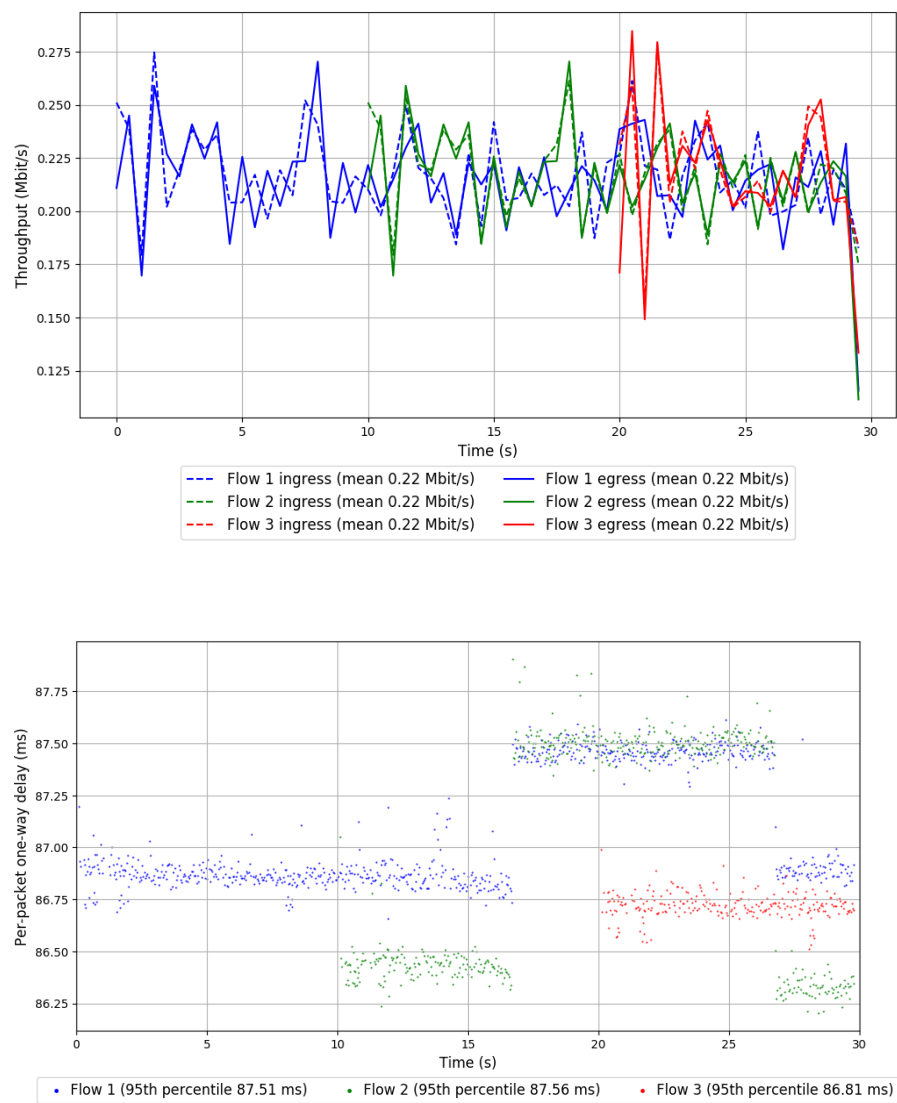
```
Run 8: Statistics of QUIC Cubic

Start at: 2017-12-05 22:51:07
End at: 2017-12-05 22:51:37

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.54 Mbit/s
95th percentile per-packet one-way delay: 87.274 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 53.67 Mbit/s
95th percentile per-packet one-way delay: 86.311 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 54.76 Mbit/s
95th percentile per-packet one-way delay: 87.328 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 20.18 Mbit/s
95th percentile per-packet one-way delay: 86.919 ms
Loss rate: 0.59%
```
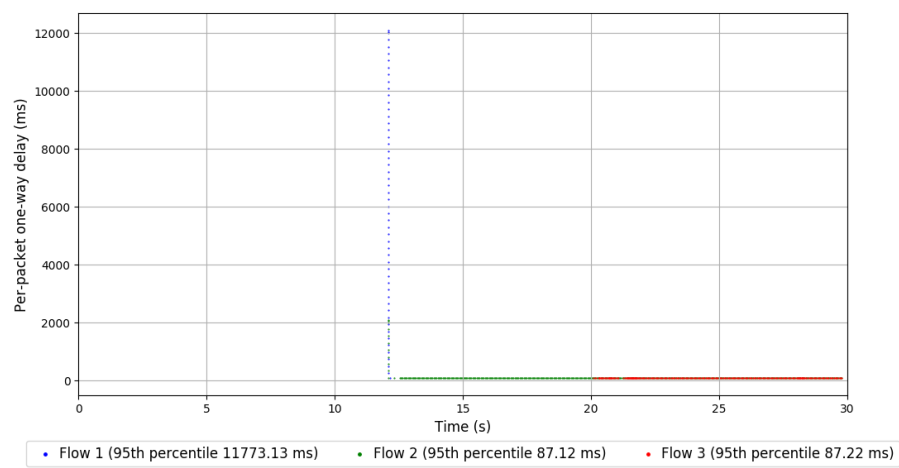
Run 8: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 53.78 Mbit/s)   —— Flow 1 egress (mean 53.67 Mbit/s)
- - - Flow 2 ingress (mean 54.83 Mbit/s)   —— Flow 2 egress (mean 54.76 Mbit/s)
- - - Flow 3 ingress (mean 19.95 Mbit/s)   —— Flow 3 egress (mean 20.18 Mbit/s)

- Flow 1 (95th percentile 86.31 ms)   • Flow 2 (95th percentile 87.33 ms)   • Flow 3 (95th percentile 86.92 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2017-12-05 23:04:29
End at: 2017-12-05 23:04:59

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.40 Mbit/s
95th percentile per-packet one-way delay: 86.845 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 57.01 Mbit/s
95th percentile per-packet one-way delay: 86.701 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 32.13 Mbit/s
95th percentile per-packet one-way delay: 87.004 ms
Loss rate: 1.99%
-- Flow 3:
Average throughput: 31.31 Mbit/s
95th percentile per-packet one-way delay: 86.725 ms
Loss rate: 0.00%
```
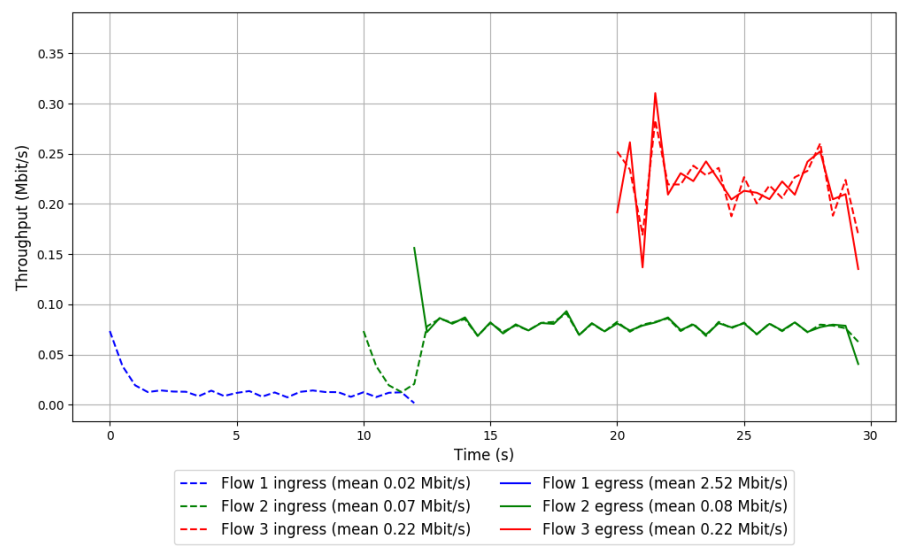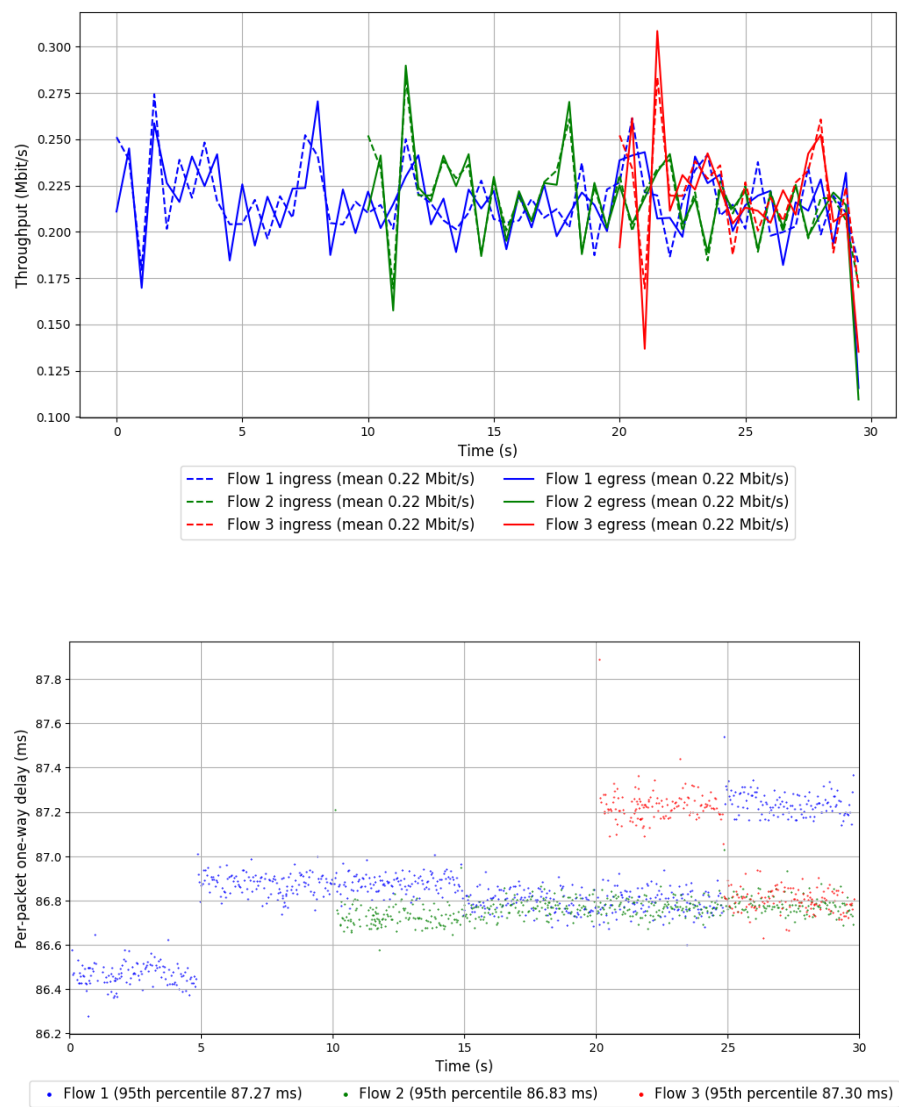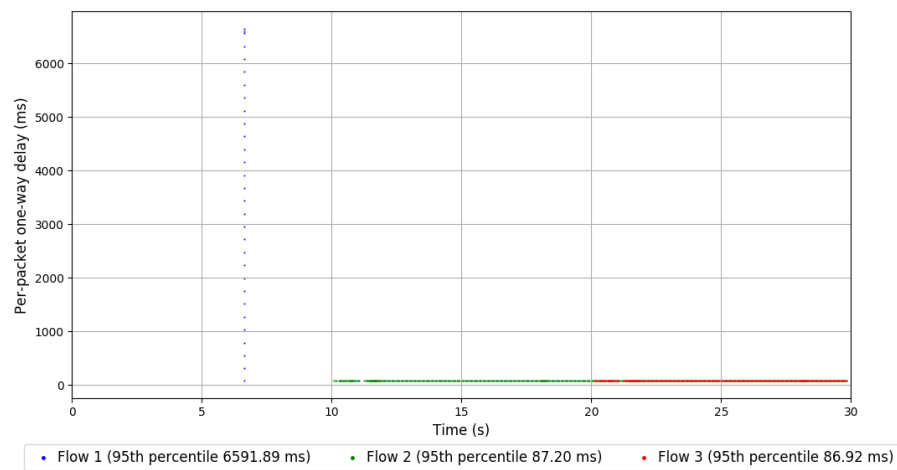
Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 57.06 Mbit/s)   Flow 1 egress (mean 57.01 Mbit/s)
Flow 2 ingress (mean 32.50 Mbit/s)   Flow 2 egress (mean 32.13 Mbit/s)
Flow 3 ingress (mean 30.54 Mbit/s)   Flow 3 egress (mean 31.31 Mbit/s)

Flow 1 (95th percentile 86.70 ms)   Flow 2 (95th percentile 87.00 ms)   Flow 3 (95th percentile 86.72 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2017-12-05 23:18:06
End at: 2017-12-05 23:18:36


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.82 Mbit/s
95th percentile per-packet one-way delay: 86.750 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 50.16 Mbit/s
95th percentile per-packet one-way delay: 86.653 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 37.77 Mbit/s
95th percentile per-packet one-way delay: 86.837 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 17.29 Mbit/s
95th percentile per-packet one-way delay: 86.692 ms
Loss rate: 0.00%
```
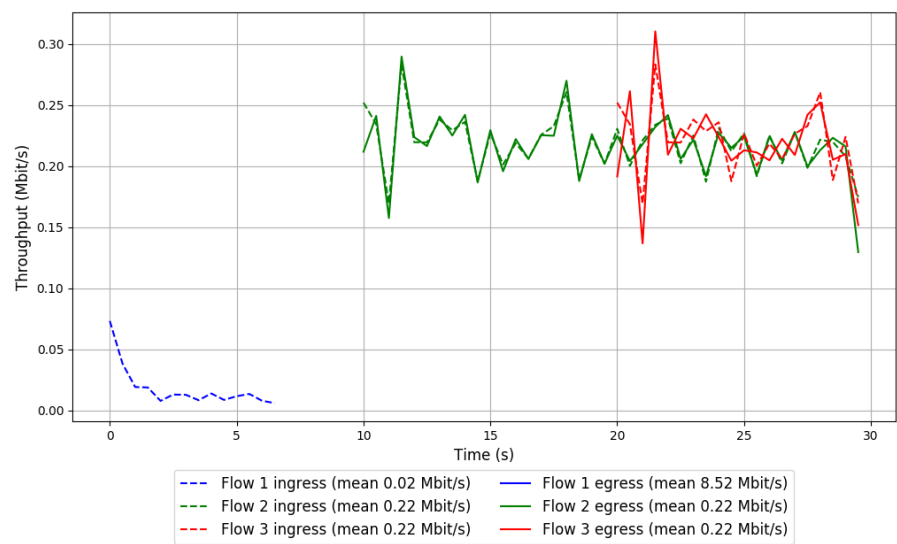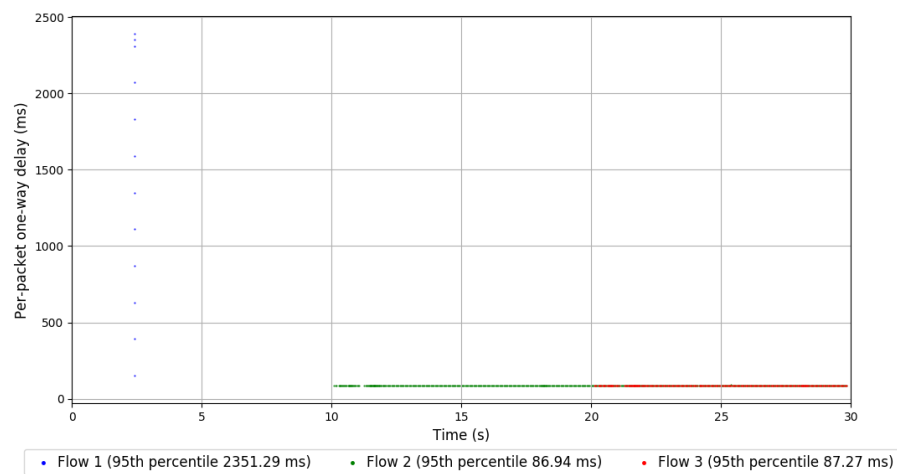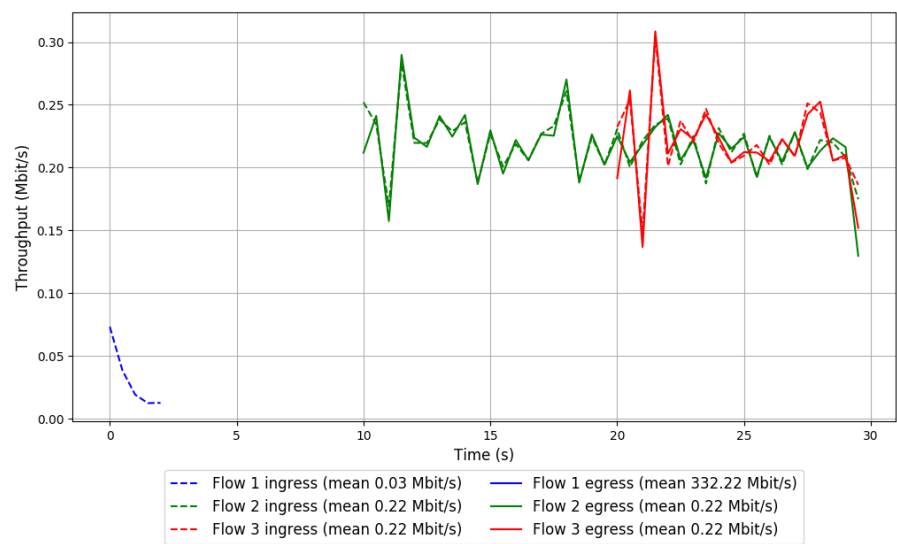
Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 50.36 Mbit/s) --- Flow 1 egress (mean 50.16 Mbit/s)
Flow 2 ingress (mean 37.97 Mbit/s) --- Flow 2 egress (mean 37.77 Mbit/s)
Flow 3 ingress (mean 16.96 Mbit/s) --- Flow 3 egress (mean 17.29 Mbit/s)

Flow 1 (95th percentile 86.65 ms) · Flow 2 (95th percentile 86.84 ms) · Flow 3 (95th percentile 86.69 ms)
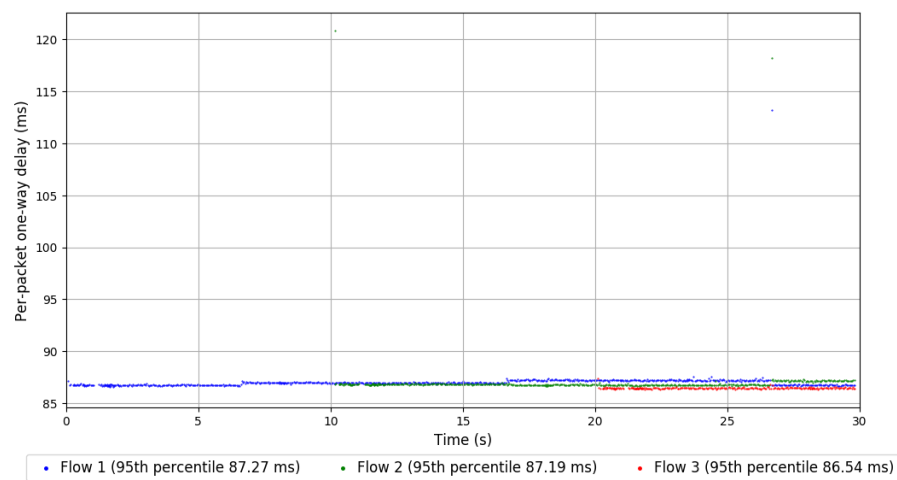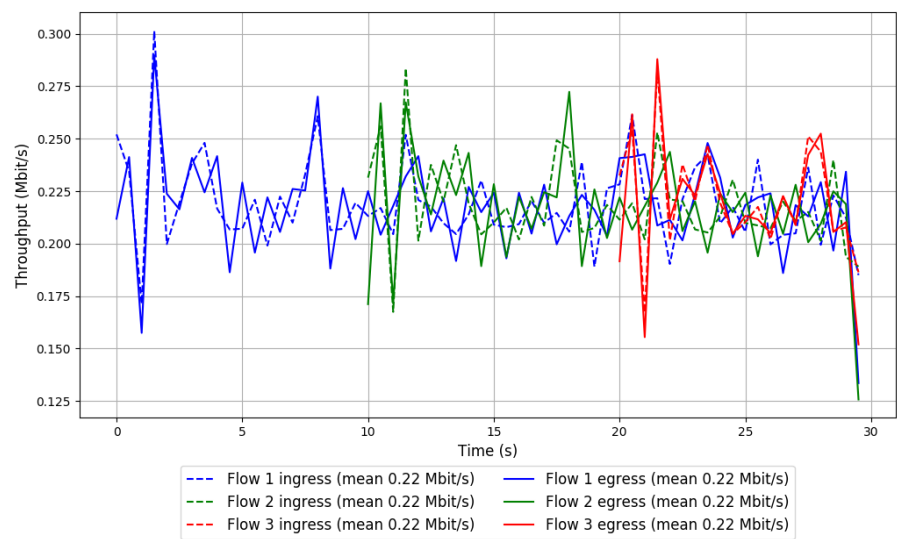
```
Run 1: Statistics of SCReAM

Start at: 2017-12-05 21:23:00
End at: 2017-12-05 21:23:30

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 87.518 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.551 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.197 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.885 ms
Loss rate: 1.88%
```

Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2017-12-05 21:36:49
End at: 2017-12-05 21:37:19


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 87.536 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.508 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.559 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.812 ms
Loss rate: 1.87%
```
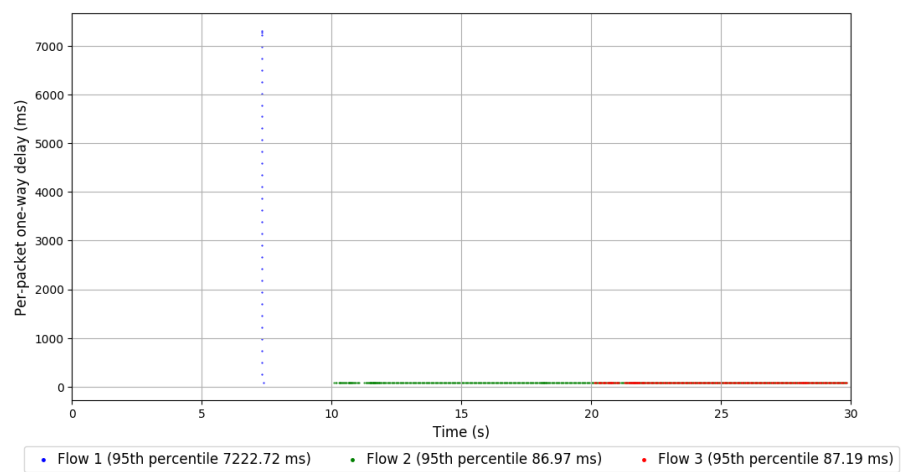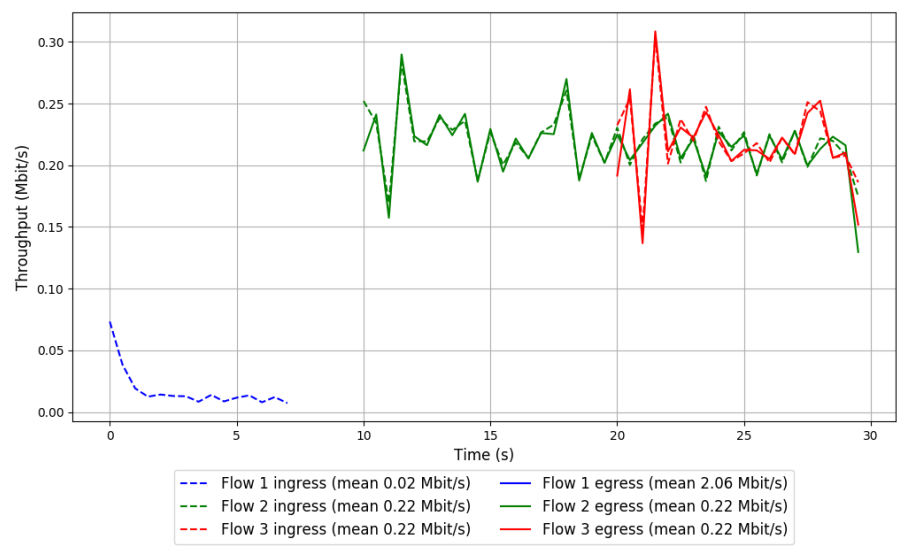
Run 2: Report of SCReAM — Data Link

Run 3: Statistics of SCReAM

Start at: 2017-12-05 21:50:24
End at: 2017-12-05 21:50:54
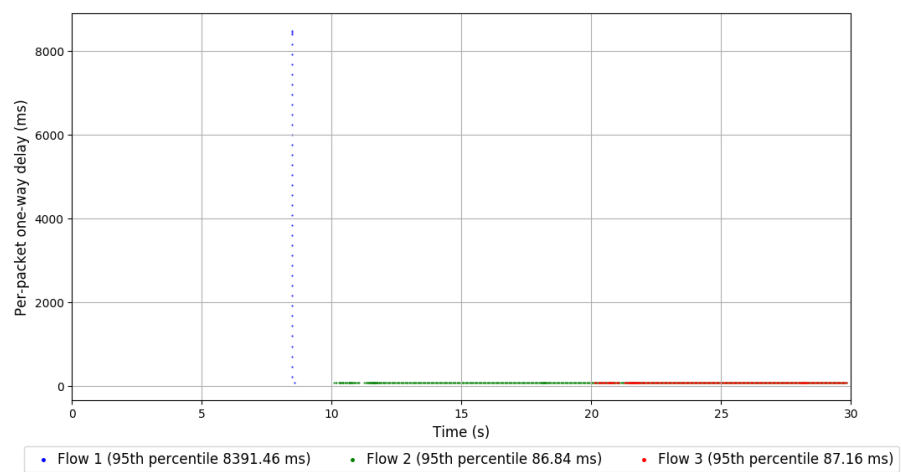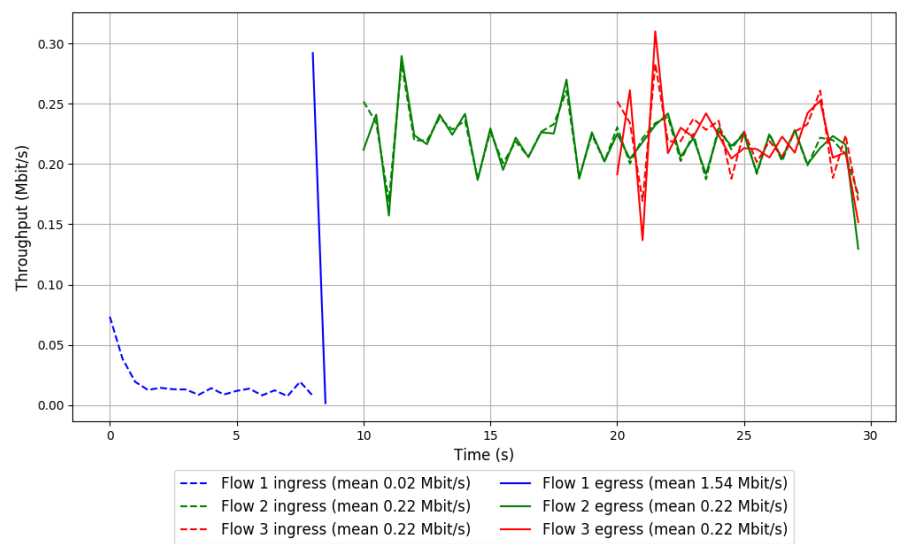
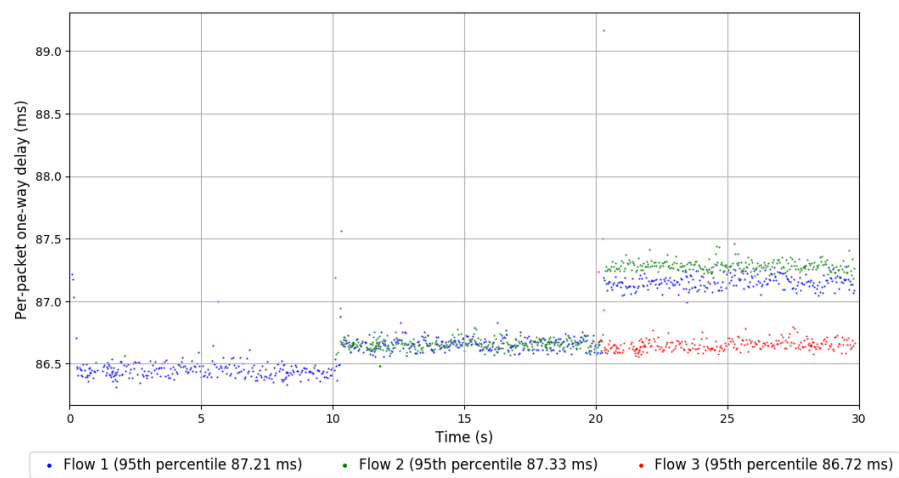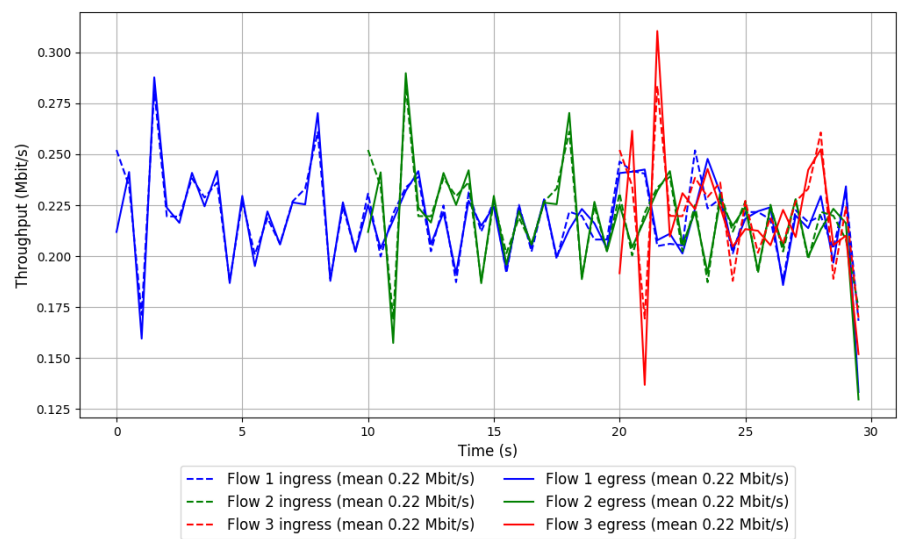# Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2017-12-05 22:04:21
End at: 2017-12-05 22:04:51

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 87.256 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.269 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.834 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.300 ms
Loss rate: 1.88%
```

Run 4: Report of SCReAM — Data Link

Run 5: Statistics of SCReAM

Start at: 2017-12-05 22:17:47
End at: 2017-12-05 22:18:18

Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2017-12-05 22:31:10
End at: 2017-12-05 22:31:40

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 87.251 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 332.22 Mbit/s
95th percentile per-packet one-way delay: 2351.289 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.941 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.270 ms
Loss rate: 1.50%
```
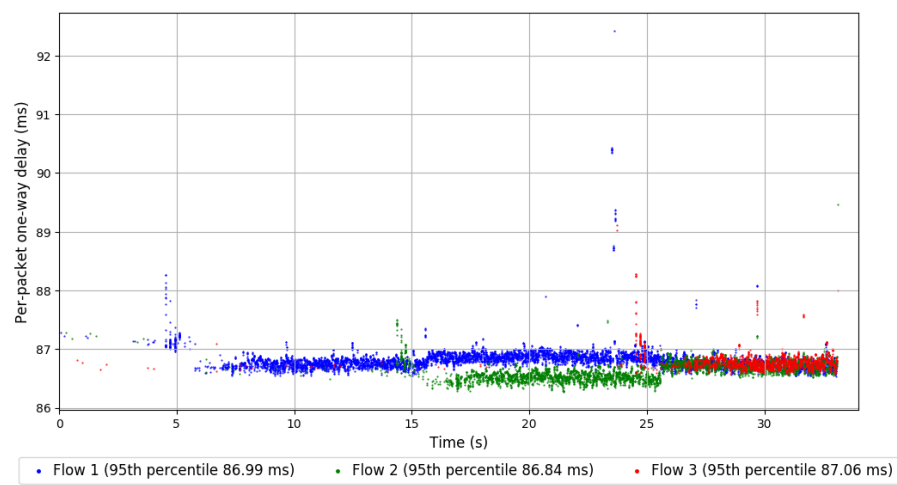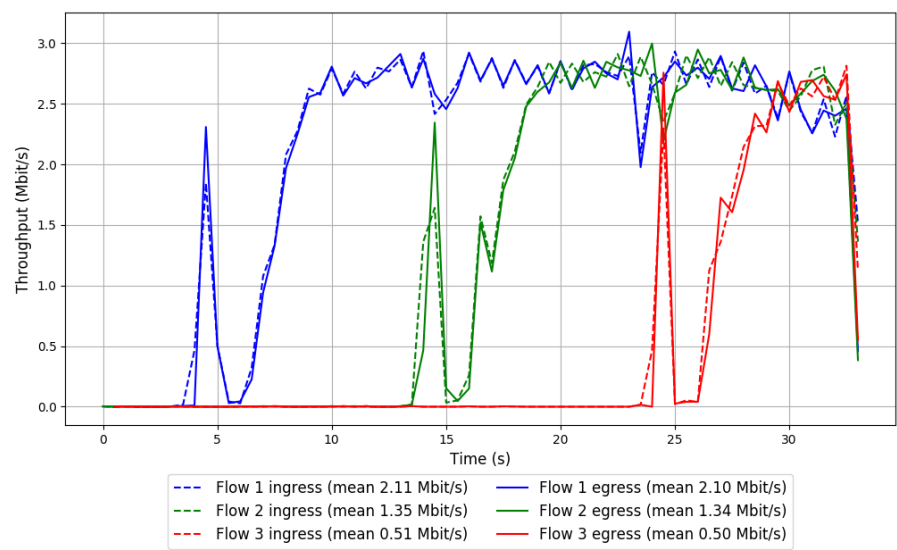
Run 6: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.03 Mbit/s) --- Flow 1 egress (mean 332.22 Mbit/s)
Flow 2 ingress (mean 0.22 Mbit/s) --- Flow 2 egress (mean 0.22 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s) --- Flow 3 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 2351.29 ms) • Flow 2 (95th percentile 86.94 ms) • Flow 3 (95th percentile 87.27 ms)

115

```
Run 7: Statistics of SCReAM

Start at: 2017-12-05 22:44:30
End at: 2017-12-05 22:45:00

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 87.245 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.270 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.192 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.540 ms
Loss rate: 1.50%
```
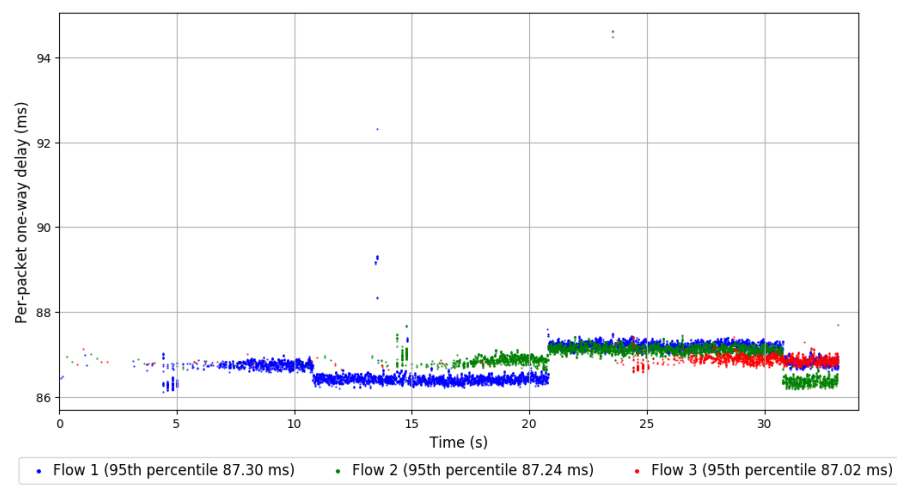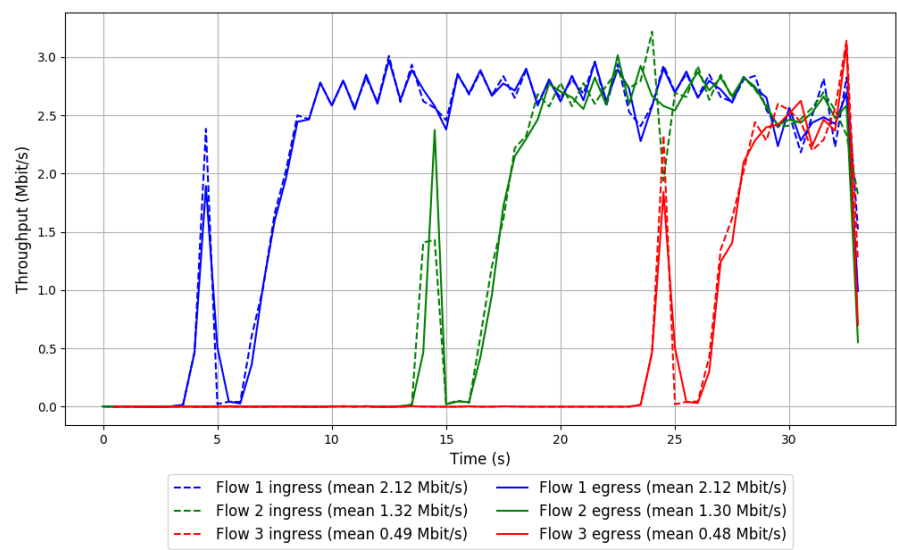
Run 7: Report of SCReAM — Data Link

117

```
Run 8: Statistics of SCReAM

Start at: 2017-12-05 22:57:47
End at: 2017-12-05 22:58:17
```

Run 8: Report of SCReAM — Data Link

119

```
Run 9: Statistics of SCReAM

Start at: 2017-12-05 23:11:25
End at: 2017-12-05 23:11:55
```

Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2017-12-05 23:24:46
End at: 2017-12-05 23:25:16

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 87.301 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.211 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.331 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.719 ms
Loss rate: 1.50%
```
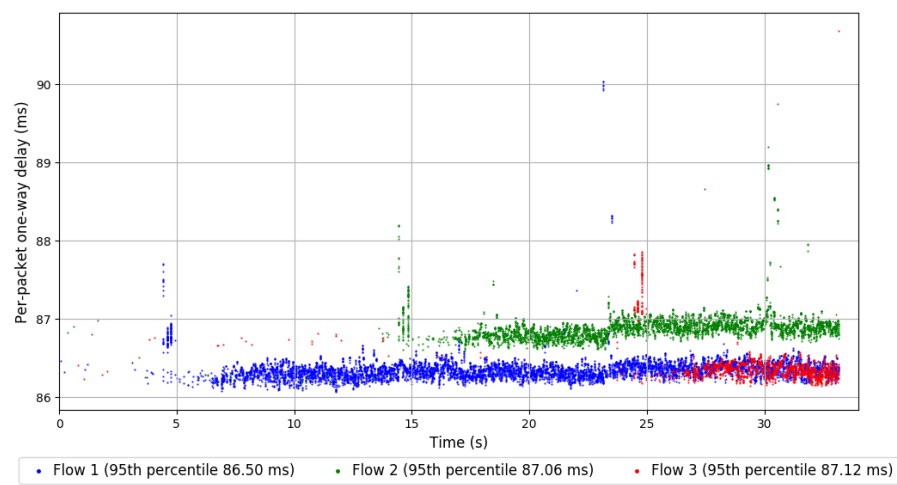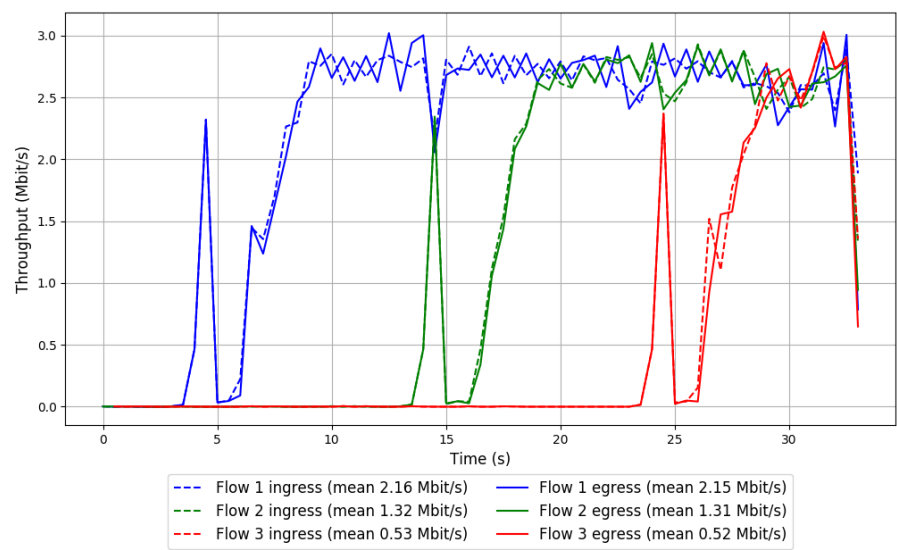
Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2017-12-05 21:14:44
End at: 2017-12-05 21:15:14

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 86.966 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 86.990 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 86.844 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 87.055 ms
Loss rate: 3.30%
```
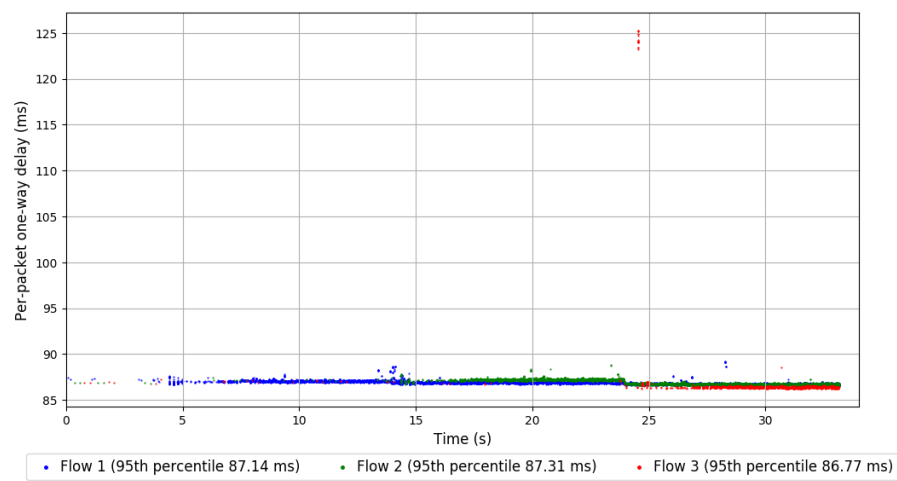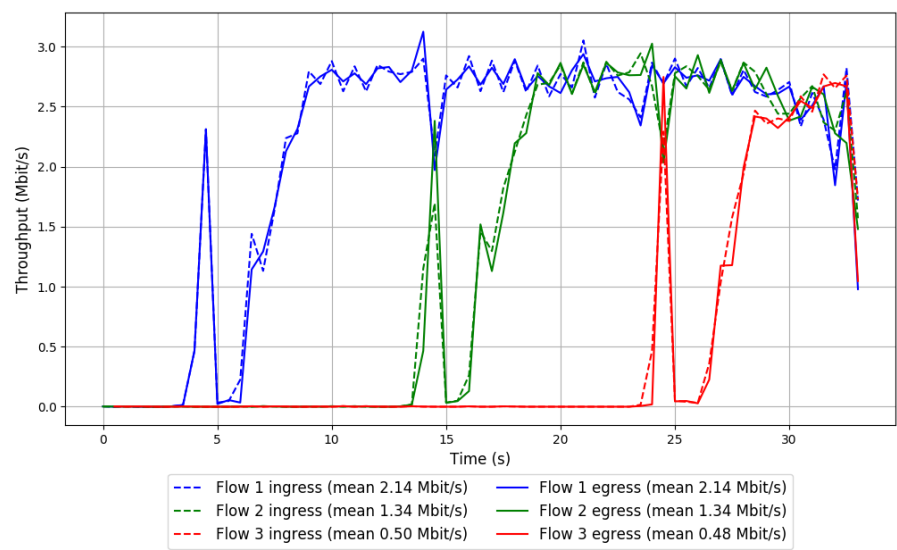
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-12-05 21:28:19
End at: 2017-12-05 21:28:49


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 87.279 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 87.302 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 87.241 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 87.016 ms
Loss rate: 3.11%
```
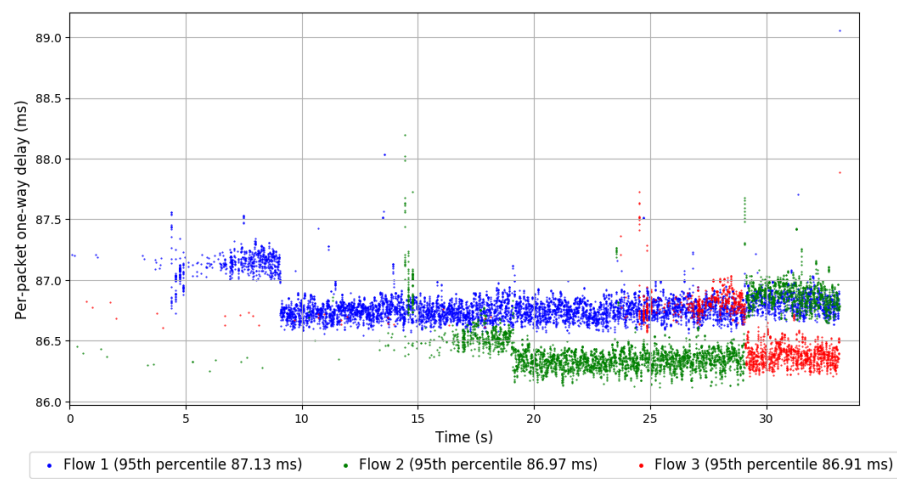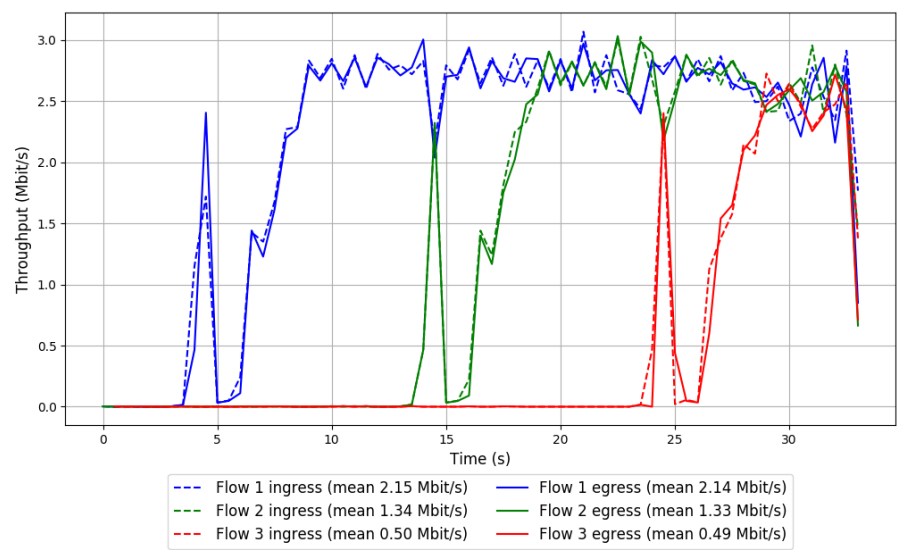
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2017-12-05 21:42:06
End at: 2017-12-05 21:42:36

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.96 Mbit/s
95th percentile per-packet one-way delay: 86.997 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 86.497 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 87.064 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 87.119 ms
Loss rate: 3.22%
```
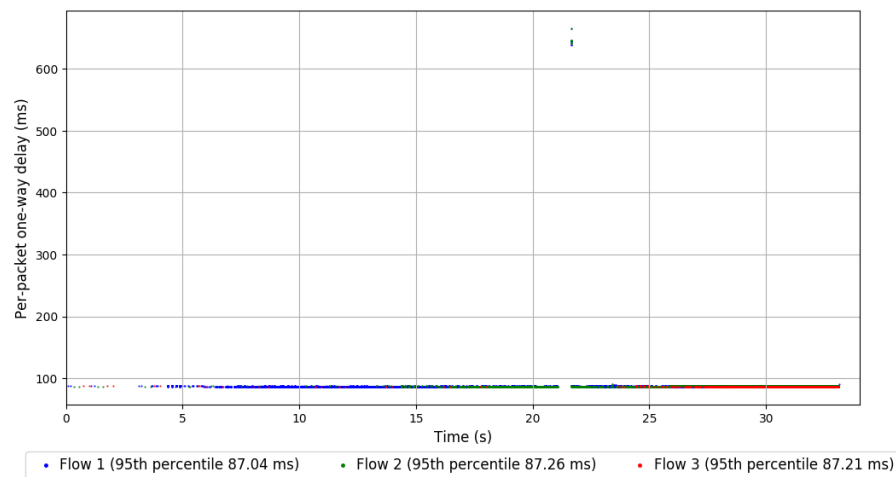
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2017-12-05 21:55:46
End at: 2017-12-05 21:56:16

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 87.261 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 87.143 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 87.307 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 86.768 ms
Loss rate: 3.82%
```
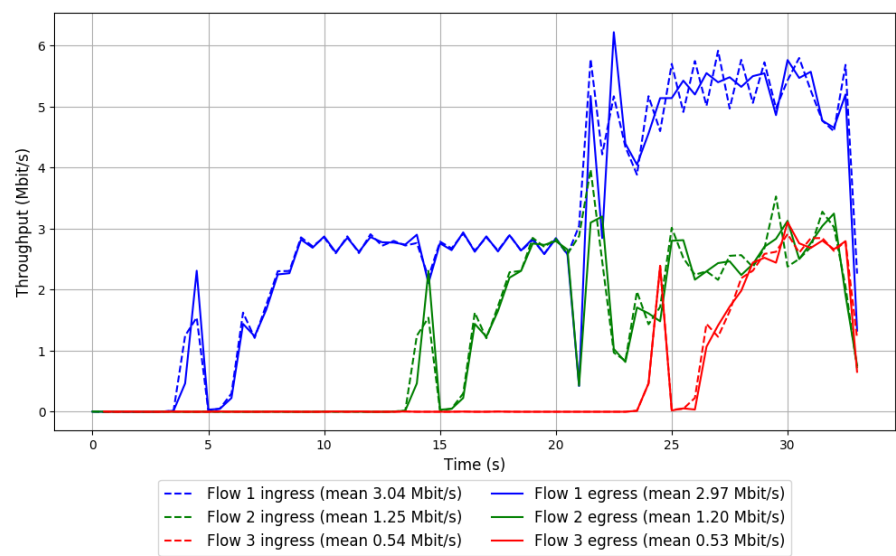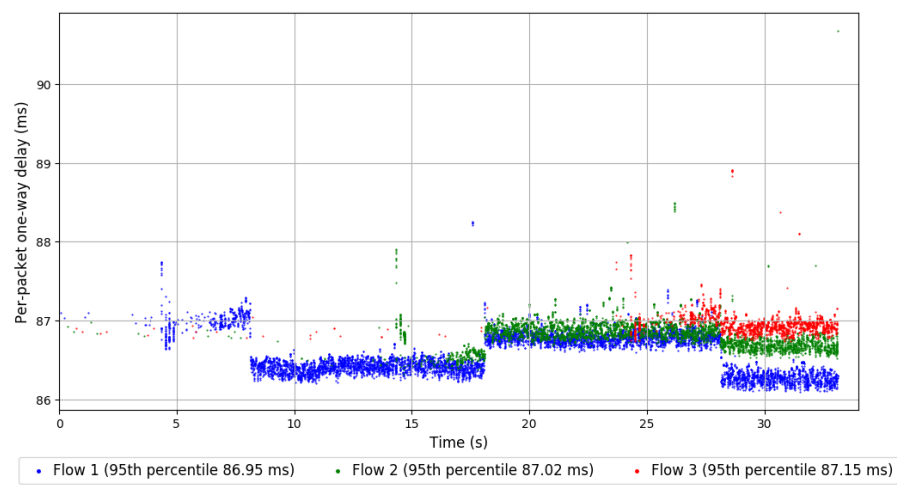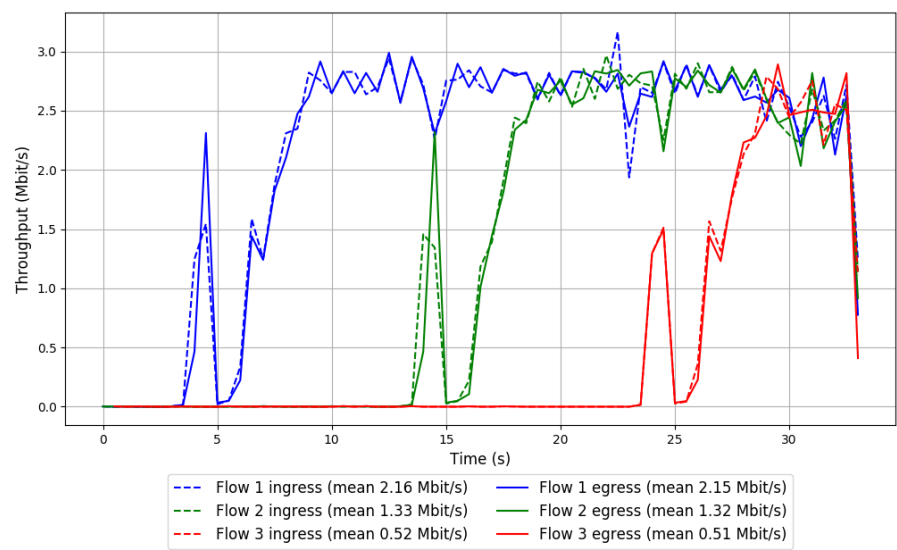
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2017-12-05 22:09:40
End at: 2017-12-05 22:10:10


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 87.045 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 87.132 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 86.969 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 86.910 ms
Loss rate: 3.39%
```

Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2017-12-05 22:23:04
End at: 2017-12-05 22:23:34


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.68 Mbit/s
95th percentile per-packet one-way delay: 87.190 ms
Loss rate: 3.00%
-- Flow 1:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 87.040 ms
Loss rate: 2.60%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 87.262 ms
Loss rate: 4.07%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 87.209 ms
Loss rate: 2.85%
```
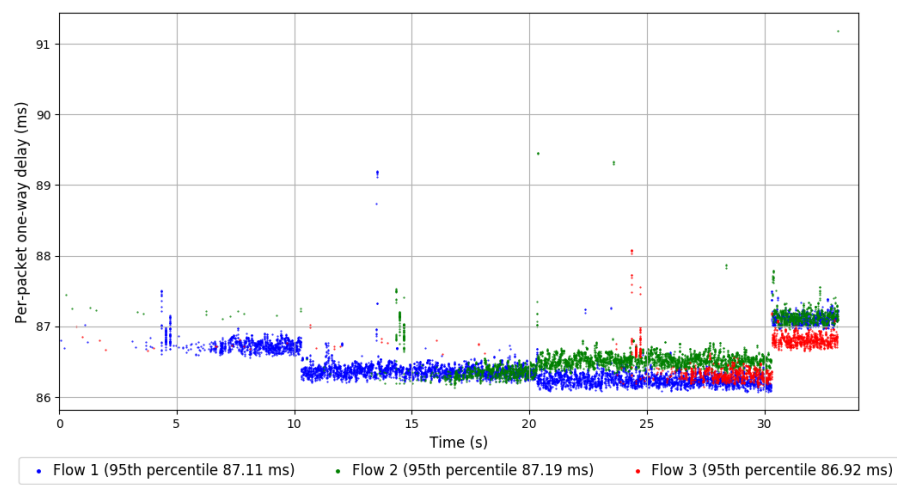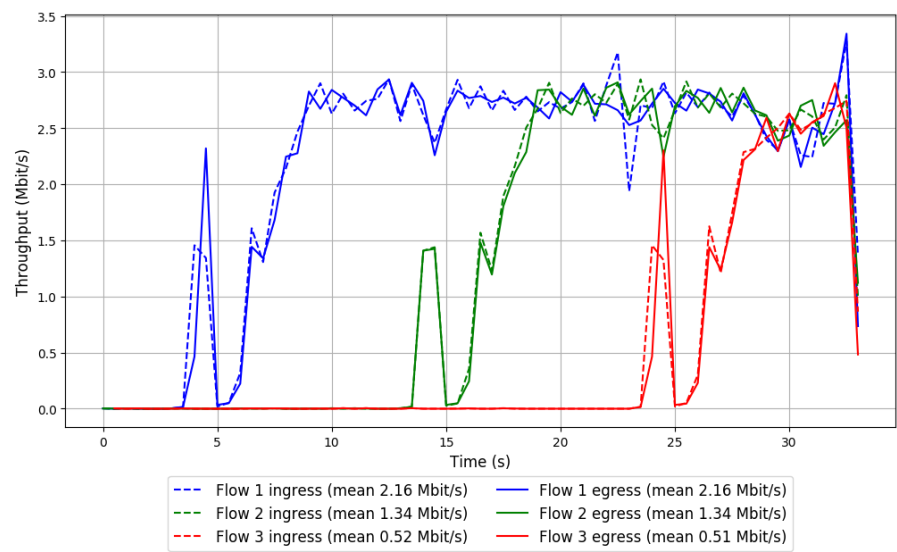
Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-12-05 22:36:21
End at: 2017-12-05 22:36:51

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.96 Mbit/s
95th percentile per-packet one-way delay: 87.036 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 86.954 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 87.020 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 87.153 ms
Loss rate: 2.62%
```
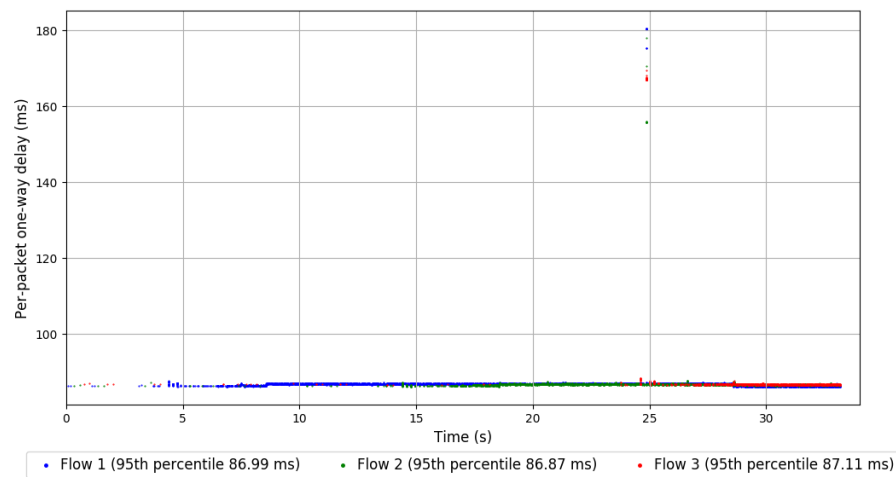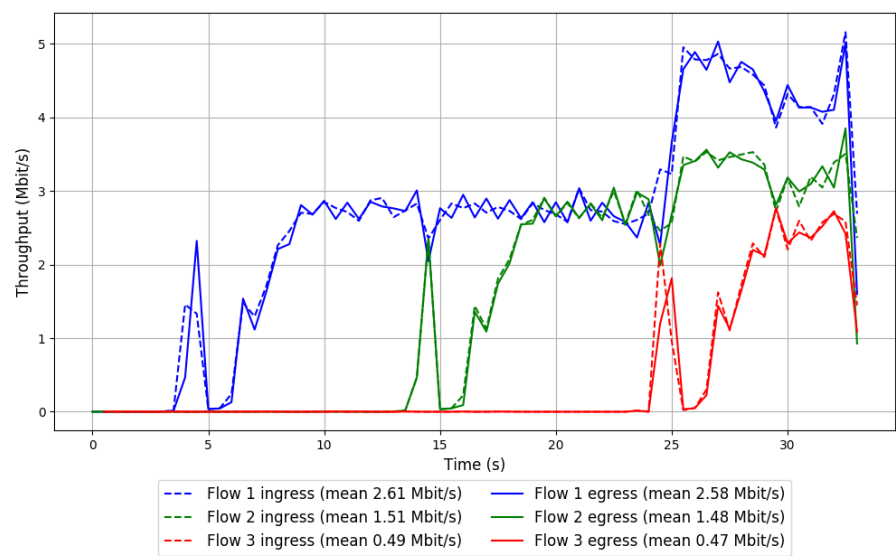
Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2017-12-05 22:49:39
End at: 2017-12-05 22:50:09

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 87.143 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 87.115 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 87.190 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 86.920 ms
Loss rate: 2.55%
```
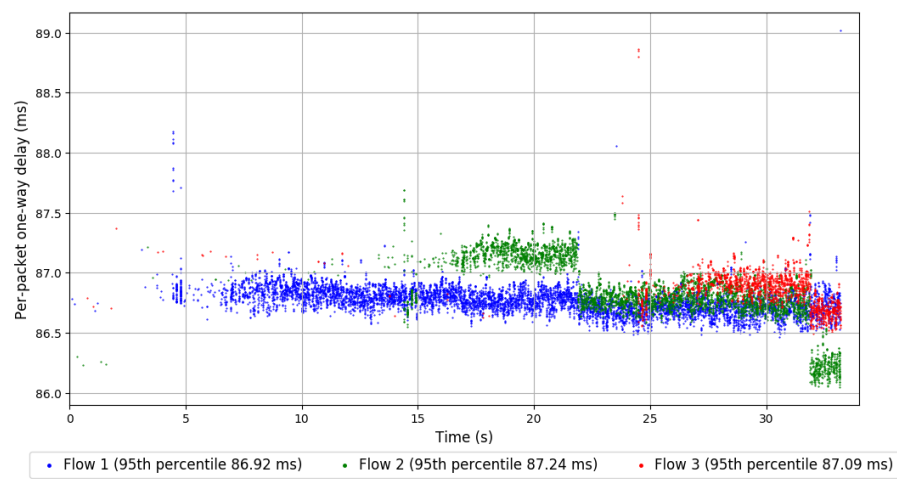
Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2017-12-05 23:03:01
End at: 2017-12-05 23:03:31


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.52 Mbit/s
95th percentile per-packet one-way delay: 86.972 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 86.987 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 86.869 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 87.114 ms
Loss rate: 3.68%
```
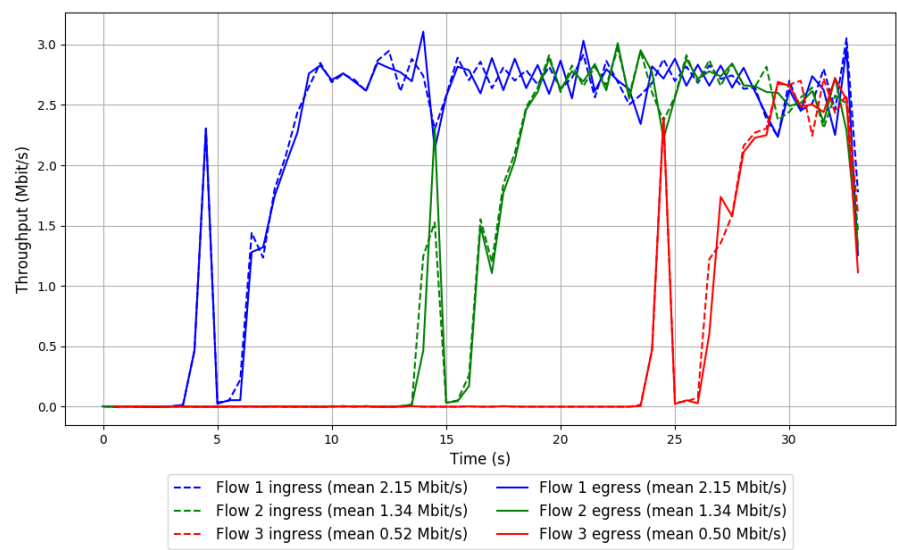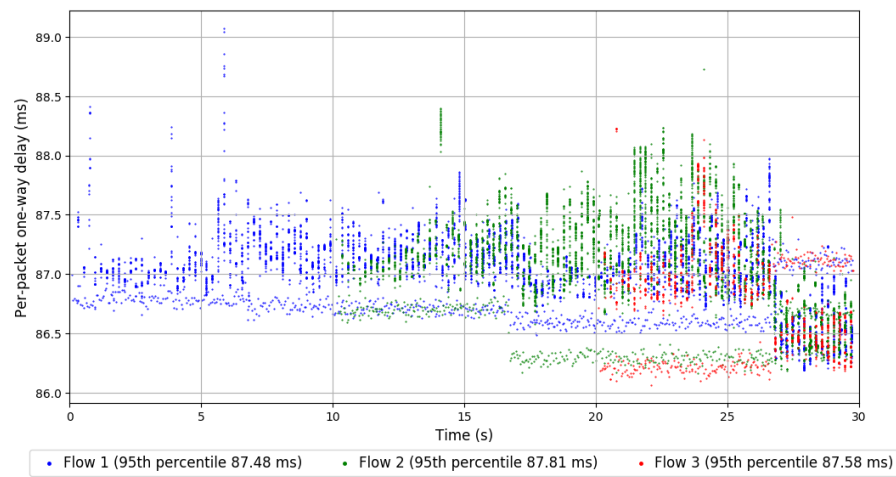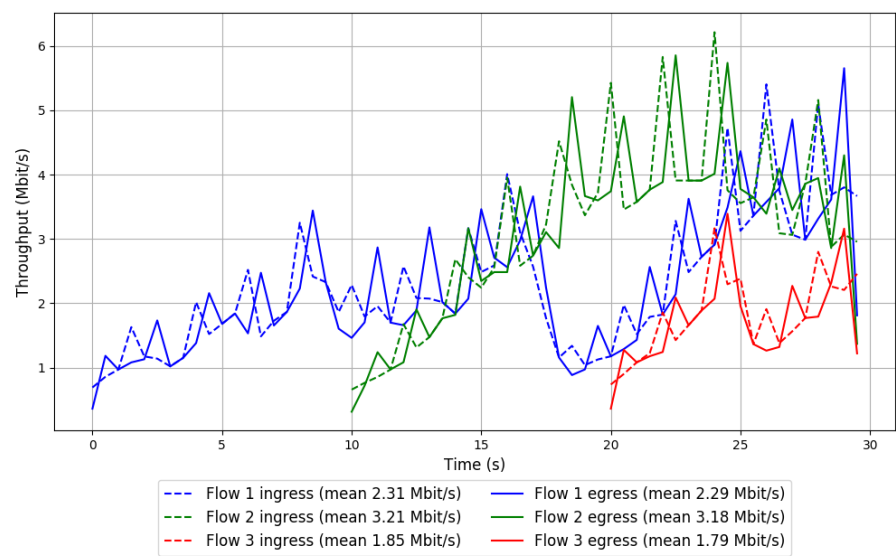
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-12-05 23:16:38
End at: 2017-12-05 23:17:08


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 87.171 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 86.923 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 87.236 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 87.087 ms
Loss rate: 2.72%
```

Run 10: Report of WebRTC media — Data Link

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```
Run 1: Statistics of Sprout

Start at: 2017-12-05 21:15:29
End at: 2017-12-05 21:15:59

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 87.658 ms
Loss rate: 2.09%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 87.480 ms
Loss rate: 1.58%
-- Flow 2:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 87.805 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 87.581 ms
Loss rate: 4.59%
```
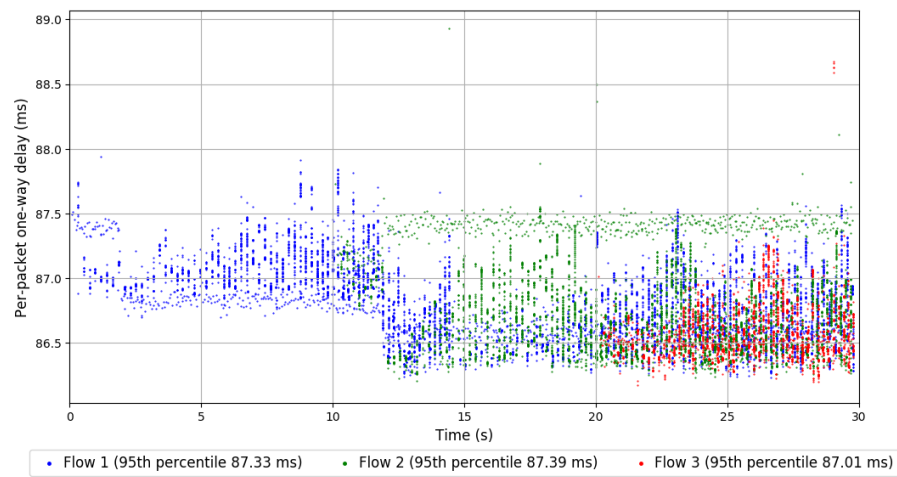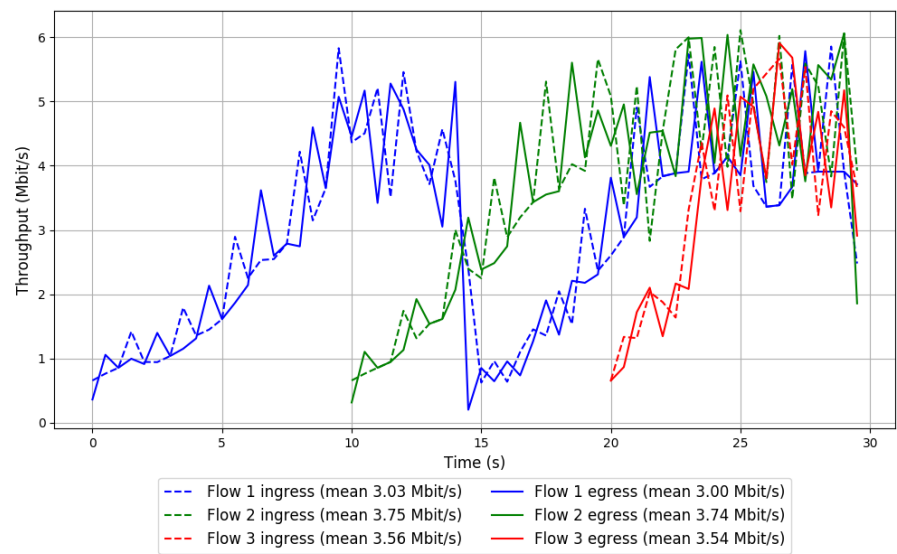
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-12-05 21:29:04
End at: 2017-12-05 21:29:34


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.62 Mbit/s
95th percentile per-packet one-way delay: 87.342 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 87.335 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 87.392 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 87.008 ms
Loss rate: 2.71%
```
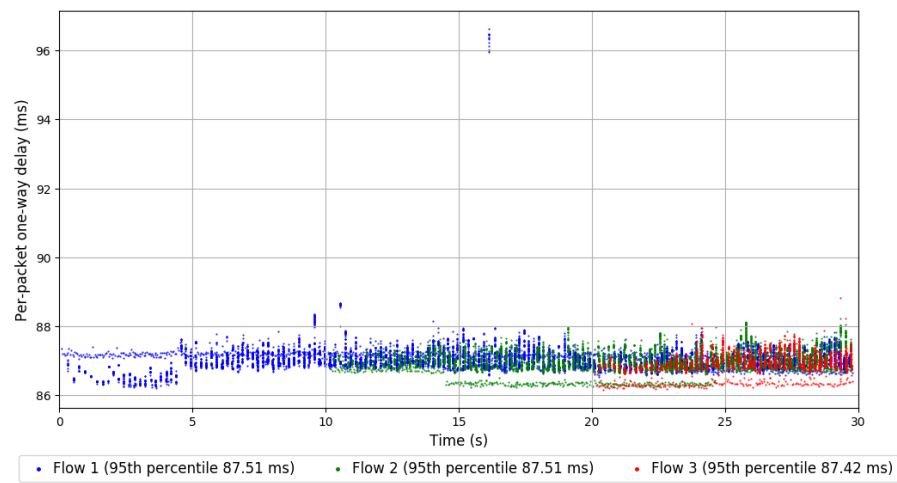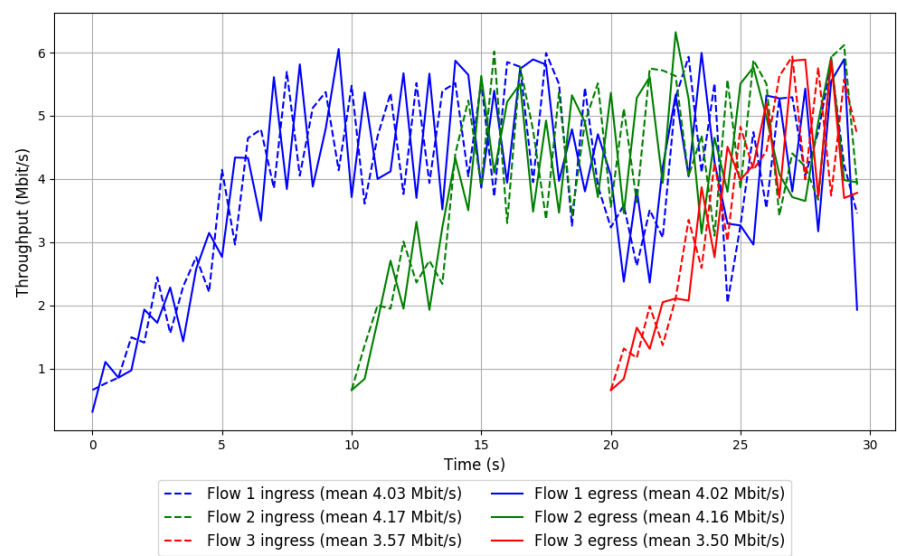
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-12-05 21:42:52
End at: 2017-12-05 21:43:22

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 87.500 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 87.514 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 87.512 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 87.425 ms
Loss rate: 3.97%
```
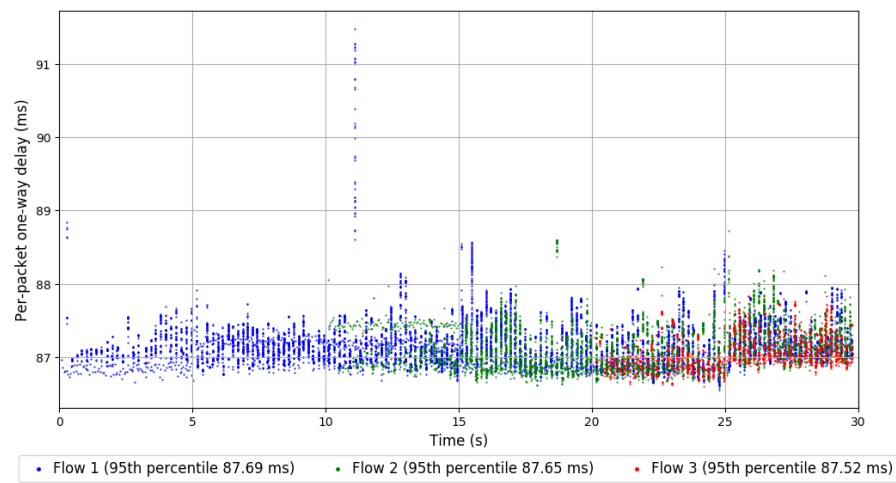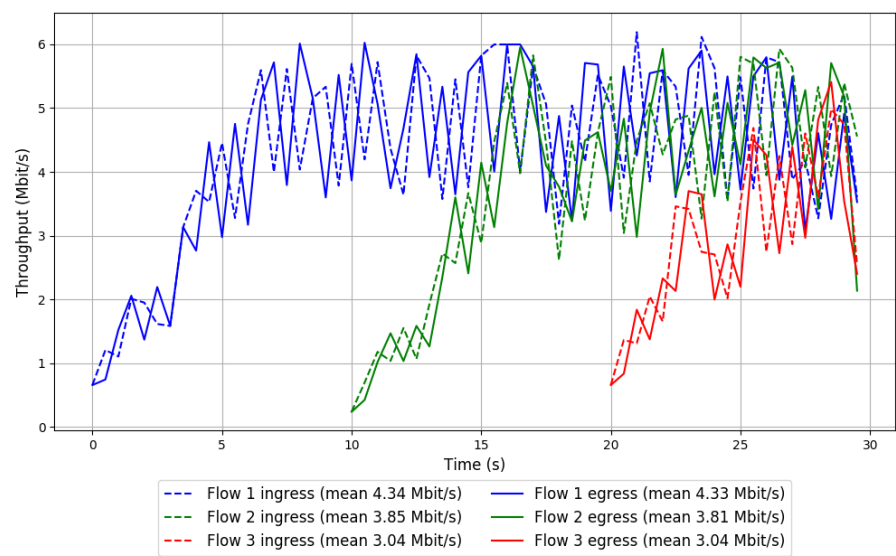
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2017-12-05 21:56:31
End at: 2017-12-05 21:57:01


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 87.649 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 87.688 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 87.649 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 3.04 Mbit/s
95th percentile per-packet one-way delay: 87.524 ms
Loss rate: 2.24%
```
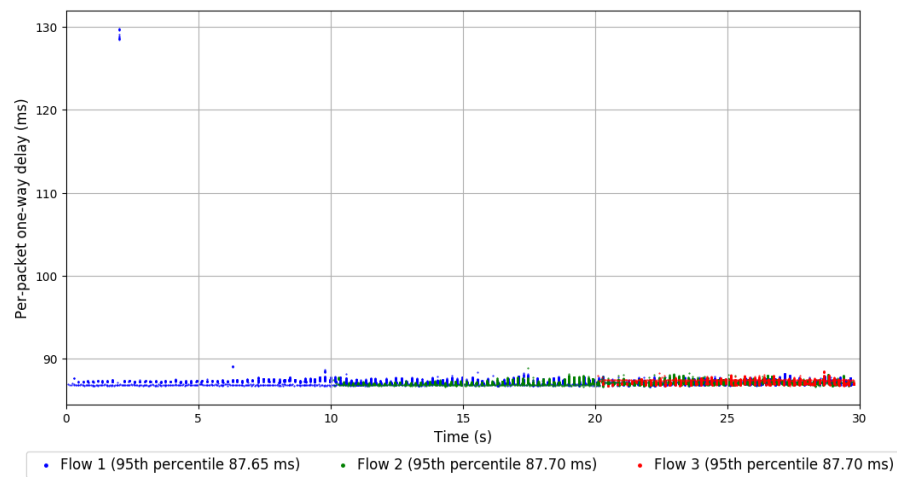
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2017-12-05 22:10:26
End at: 2017-12-05 22:10:56

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.55 Mbit/s
95th percentile per-packet one-way delay: 87.682 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 87.651 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 3.75 Mbit/s
95th percentile per-packet one-way delay: 87.701 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 87.703 ms
Loss rate: 0.90%
```
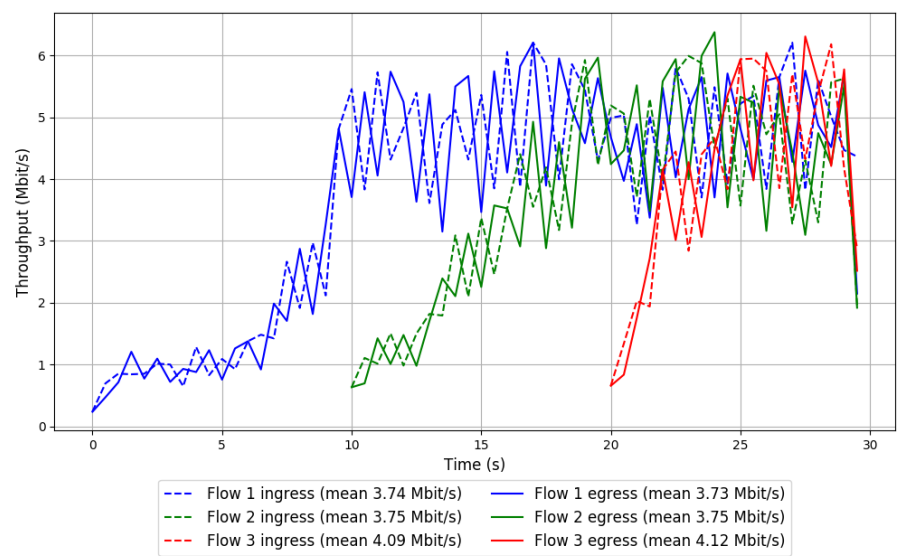
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2017-12-05 22:23:48
End at: 2017-12-05 22:24:18


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 87.764 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 87.780 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 87.702 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 87.788 ms
Loss rate: 2.40%
```
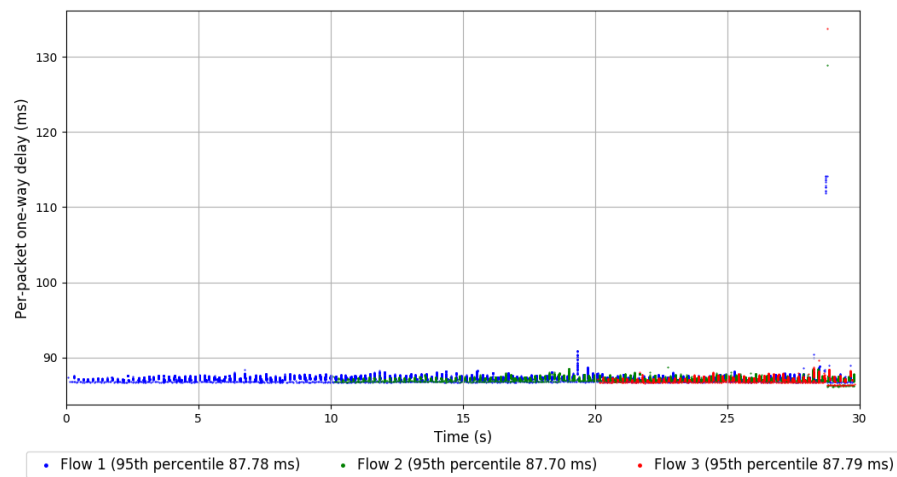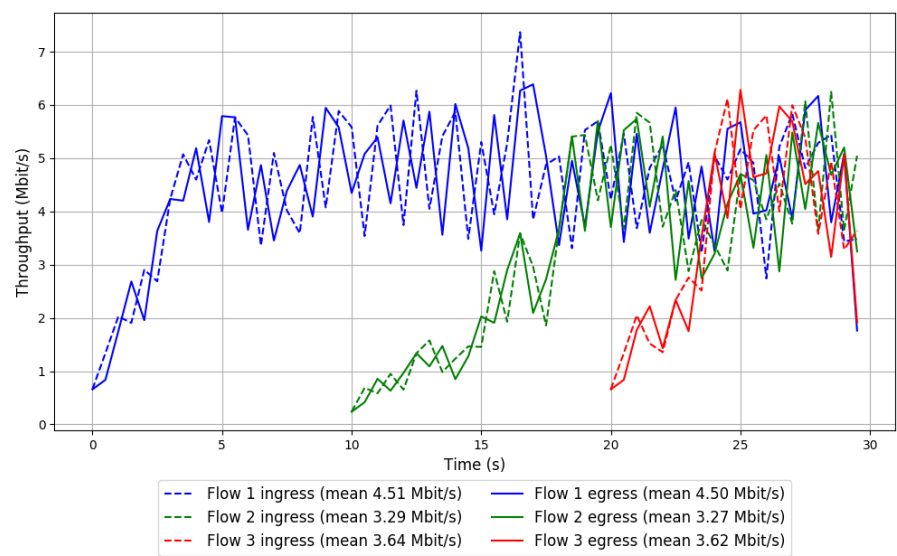
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2017-12-05 22:37:05
End at: 2017-12-05 22:37:35


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 87.605 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 87.570 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 87.655 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 87.626 ms
Loss rate: 3.47%
```
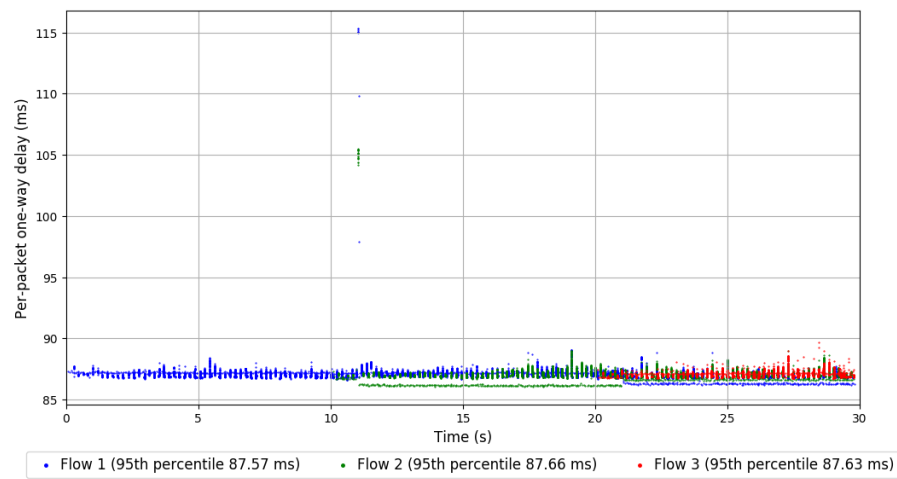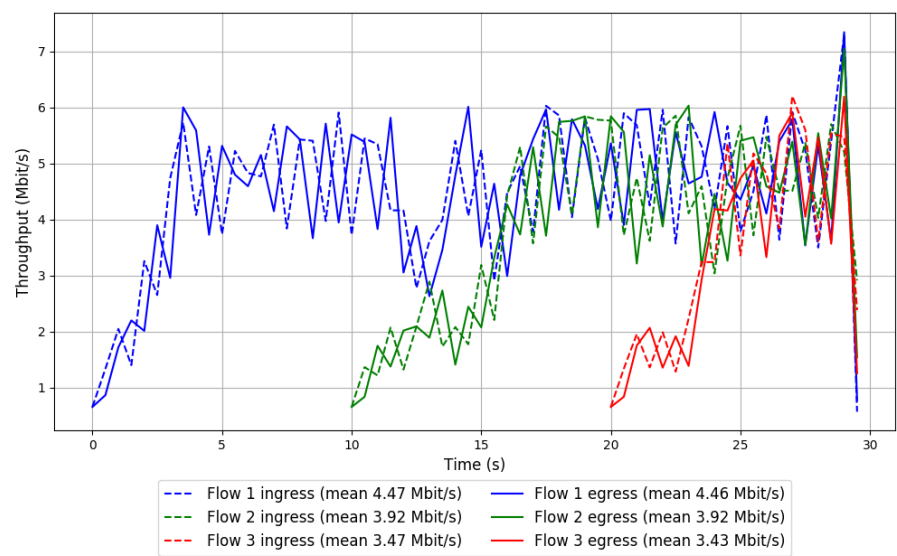
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2017-12-05 22:50:23
End at: 2017-12-05 22:50:53


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 87.646 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 87.638 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 87.604 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 3.14 Mbit/s
95th percentile per-packet one-way delay: 87.700 ms
Loss rate: 3.04%
```
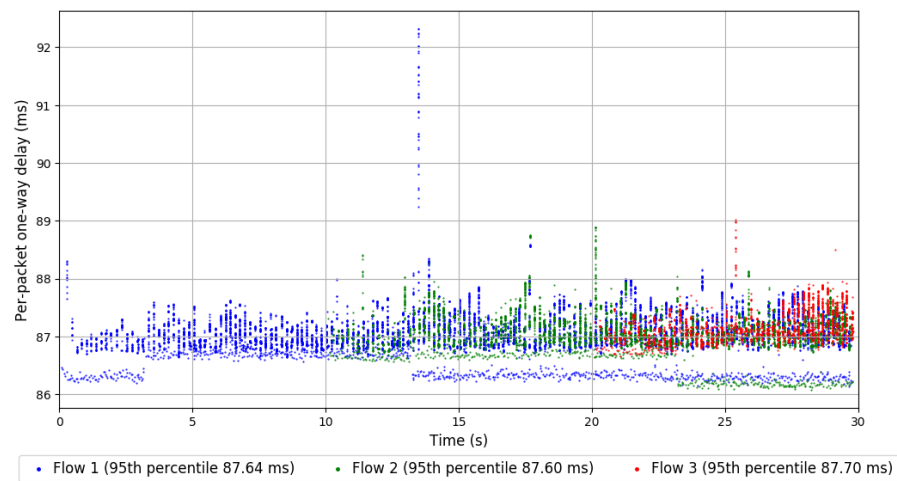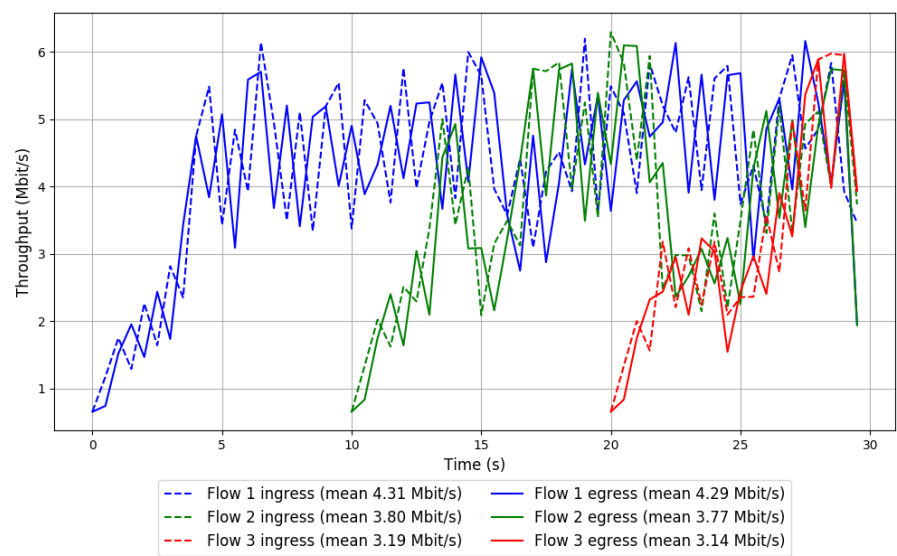
Run 8: Report of Sprout — Data Link

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```
Run 9: Statistics of Sprout

Start at: 2017-12-05 23:03:45
End at: 2017-12-05 23:04:15


# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 87.492 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 87.472 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 87.516 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 87.434 ms
Loss rate: 4.13%
```
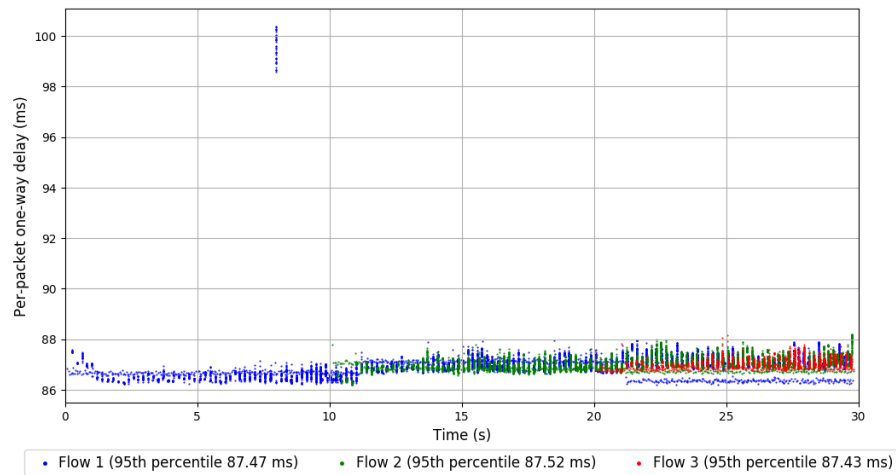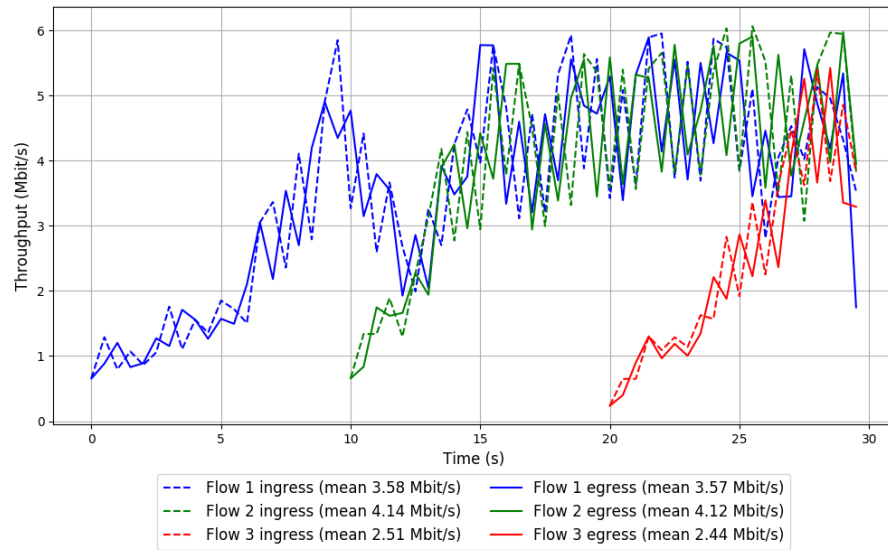
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-12-05 23:17:22
End at: 2017-12-05 23:17:52

# Below is generated by plot.py at 2017-12-06 02:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.83 Mbit/s
95th percentile per-packet one-way delay: 87.539 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 87.604 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 87.476 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 3.39 Mbit/s
95th percentile per-packet one-way delay: 87.505 ms
Loss rate: 2.26%
```
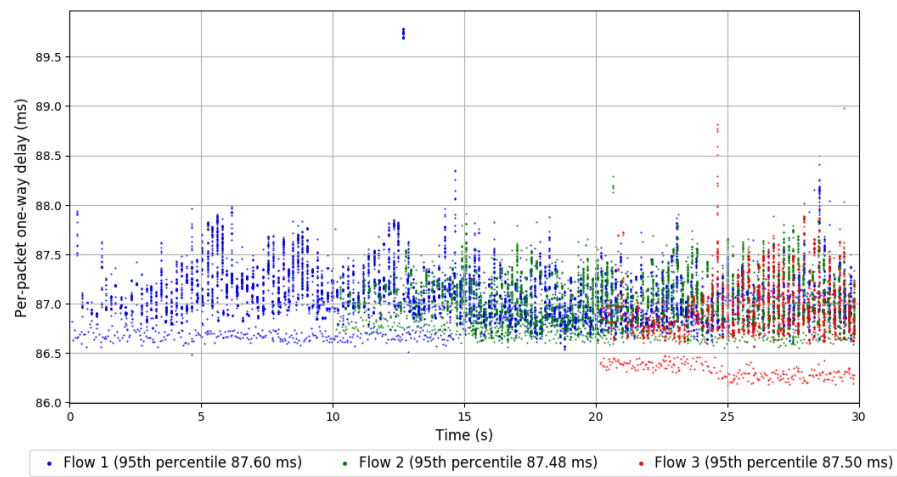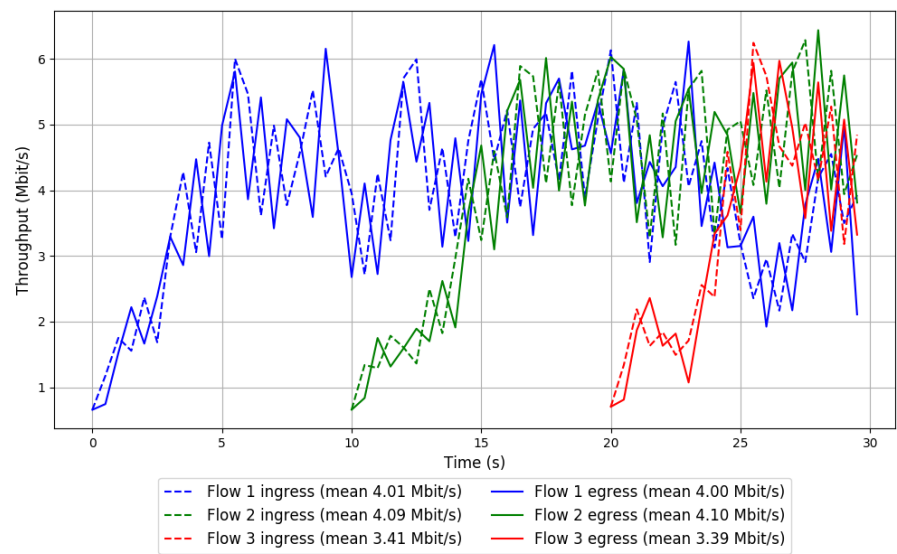
Run 10: Report of Sprout — Data Link

- - - - Flow 1 ingress (mean 4.01 Mbit/s)   —— Flow 1 egress (mean 4.00 Mbit/s)
- - - - Flow 2 ingress (mean 4.09 Mbit/s)   —— Flow 2 egress (mean 4.10 Mbit/s)
- - - - Flow 3 ingress (mean 3.41 Mbit/s)   —— Flow 3 egress (mean 3.39 Mbit/s)

• Flow 1 (95th percentile 87.60 ms)   • Flow 2 (95th percentile 87.48 ms)   • Flow 3 (95th percentile 87.50 ms)
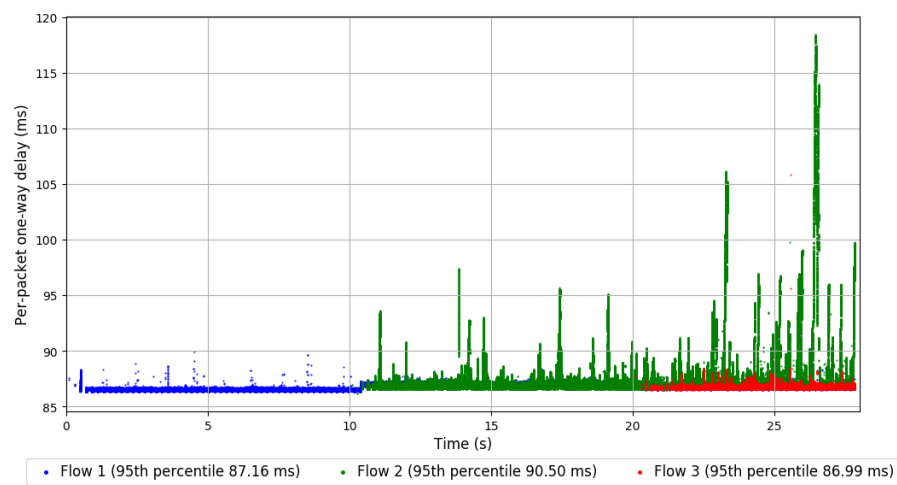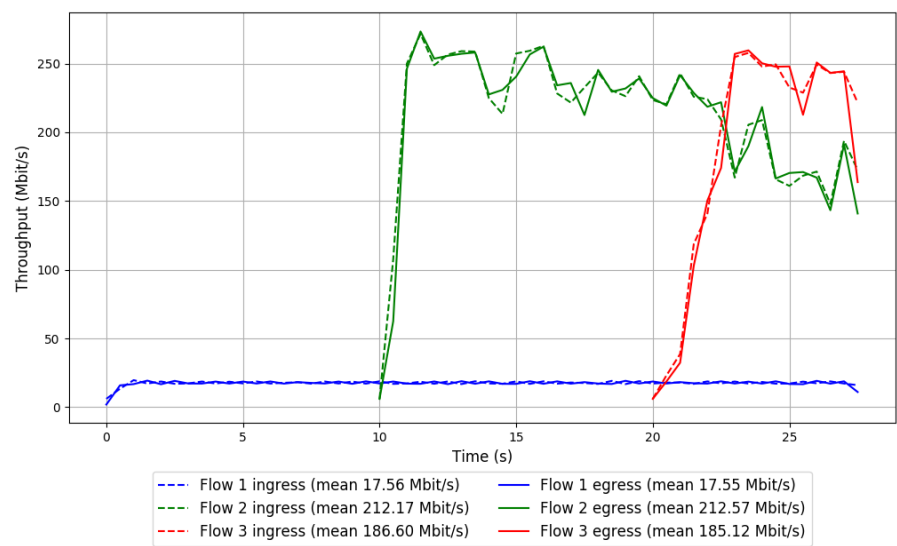
```
Run 1: Statistics of TaoVA-100x

Start at: 2017-12-05 21:12:34
End at: 2017-12-05 21:13:04

# Below is generated by plot.py at 2017-12-06 02:03:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 205.00 Mbit/s
95th percentile per-packet one-way delay: 89.194 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 17.55 Mbit/s
95th percentile per-packet one-way delay: 87.159 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 212.57 Mbit/s
95th percentile per-packet one-way delay: 90.497 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 185.12 Mbit/s
95th percentile per-packet one-way delay: 86.994 ms
Loss rate: 3.36%
```

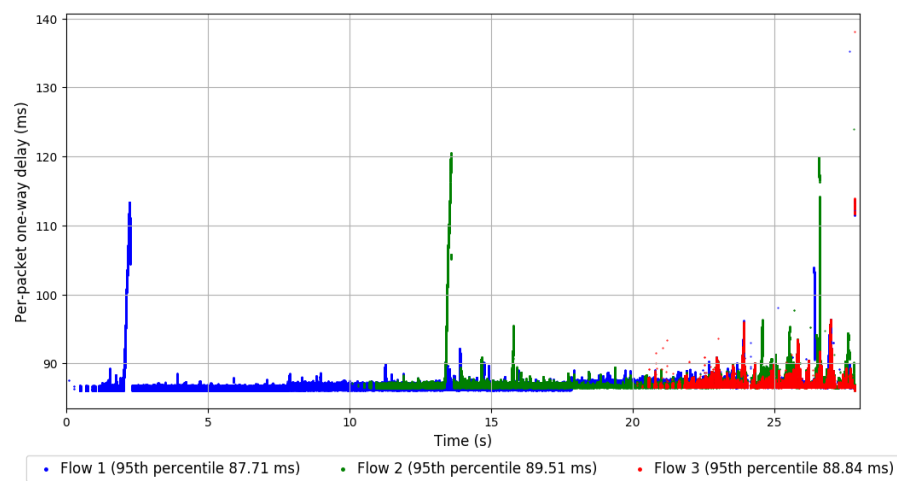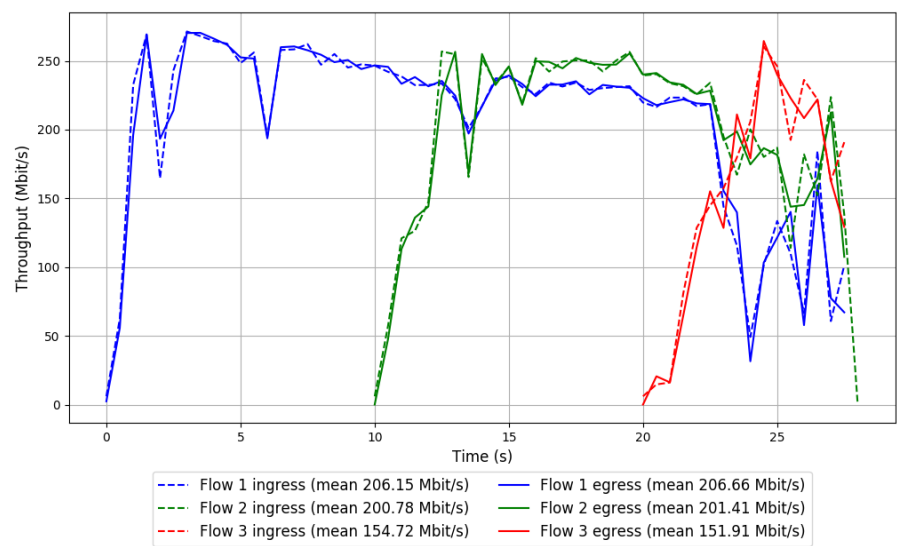Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2017-12-05 21:25:56
End at: 2017-12-05 21:26:26

# Below is generated by plot.py at 2017-12-06 02:09:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.57 Mbit/s
95th percentile per-packet one-way delay: 88.467 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 206.66 Mbit/s
95th percentile per-packet one-way delay: 87.713 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 201.41 Mbit/s
95th percentile per-packet one-way delay: 89.512 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 151.91 Mbit/s
95th percentile per-packet one-way delay: 88.840 ms
Loss rate: 4.29%
```

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

Flow 1 ingress (mean 206.15 Mbit/s)   Flow 1 egress (mean 206.66 Mbit/s)
Flow 2 ingress (mean 200.78 Mbit/s)   Flow 2 egress (mean 201.41 Mbit/s)
Flow 3 ingress (mean 154.72 Mbit/s)   Flow 3 egress (mean 151.91 Mbit/s)

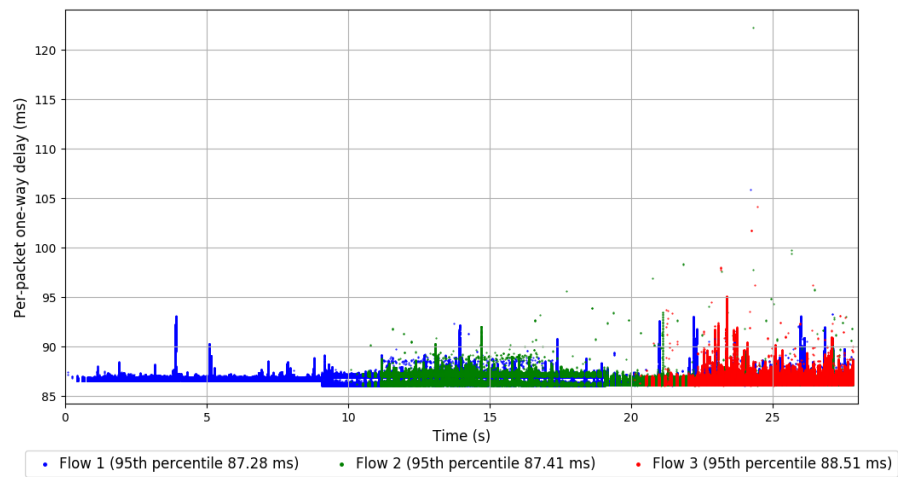Flow 1 (95th percentile 87.71 ms)   Flow 2 (95th percentile 89.51 ms)   Flow 3 (95th percentile 88.84 ms)
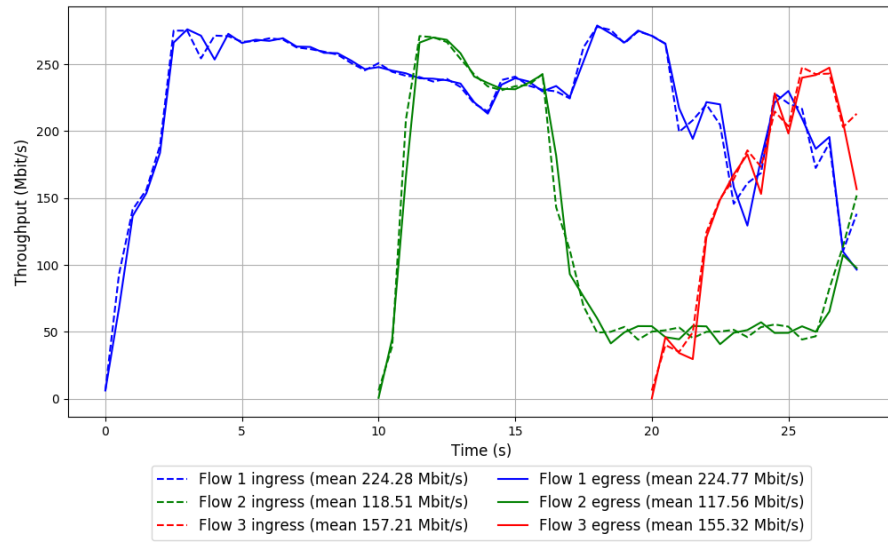
```
Run 3: Statistics of TaoVA-100x

Start at: 2017-12-05 21:39:45
End at: 2017-12-05 21:40:15


# Below is generated by plot.py at 2017-12-06 02:09:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 343.20 Mbit/s
95th percentile per-packet one-way delay: 87.505 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 224.77 Mbit/s
95th percentile per-packet one-way delay: 87.280 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 117.56 Mbit/s
95th percentile per-packet one-way delay: 87.411 ms
Loss rate: 1.88%
-- Flow 3:
Average throughput: 155.32 Mbit/s
95th percentile per-packet one-way delay: 88.509 ms
Loss rate: 3.75%
```

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

Flow 1 ingress (mean 224.28 Mbit/s) --- Flow 1 egress (mean 224.77 Mbit/s)
Flow 2 ingress (mean 118.51 Mbit/s) --- Flow 2 egress (mean 117.56 Mbit/s)
Flow 3 ingress (mean 157.21 Mbit/s) --- Flow 3 egress (mean 155.32 Mbit/s)

Flow 1 (95th percentile 87.28 ms)   Flow 2 (95th percentile 87.41 ms)   Flow 3 (95th percentile 88.51 ms)
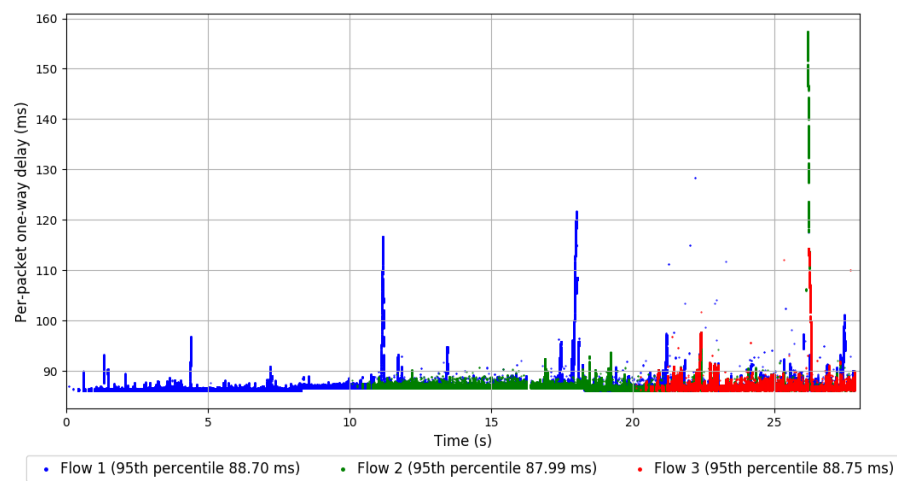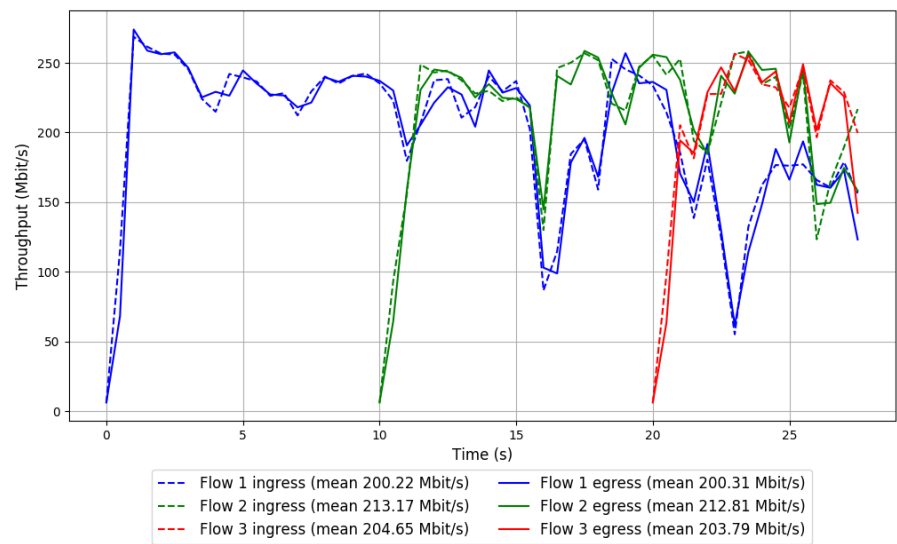
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```
Run 4: Statistics of TaoVA-100x

Start at: 2017-12-05 21:53:16
End at: 2017-12-05 21:53:46

# Below is generated by plot.py at 2017-12-06 02:09:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 393.12 Mbit/s
95th percentile per-packet one-way delay: 88.441 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 200.31 Mbit/s
95th percentile per-packet one-way delay: 88.705 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 212.81 Mbit/s
95th percentile per-packet one-way delay: 87.992 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 203.79 Mbit/s
95th percentile per-packet one-way delay: 88.751 ms
Loss rate: 2.98%
```

Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 200.22 Mbit/s) — Flow 1 egress (mean 200.31 Mbit/s)
Flow 2 ingress (mean 213.17 Mbit/s) — Flow 2 egress (mean 212.81 Mbit/s)
Flow 3 ingress (mean 204.65 Mbit/s) — Flow 3 egress (mean 203.79 Mbit/s)

Flow 1 (95th percentile 88.70 ms) · Flow 2 (95th percentile 87.99 ms) · Flow 3 (95th percentile 88.75 ms)

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

Start at: 2017-12-05 22:07:18
End at: 2017-12-05 22:07:48

# Below is generated by plot.py at 2017-12-06 02:09:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 366.56 Mbit/s
95th percentile per-packet one-way delay: 89.741 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 199.86 Mbit/s
95th percentile per-packet one-way delay: 90.075 ms
Loss rate: 2.56%
-- Flow 2:
Average throughput: 184.51 Mbit/s
95th percentile per-packet one-way delay: 89.146 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 175.72 Mbit/s
95th percentile per-packet one-way delay: 90.084 ms
Loss rate: 1.95%
```
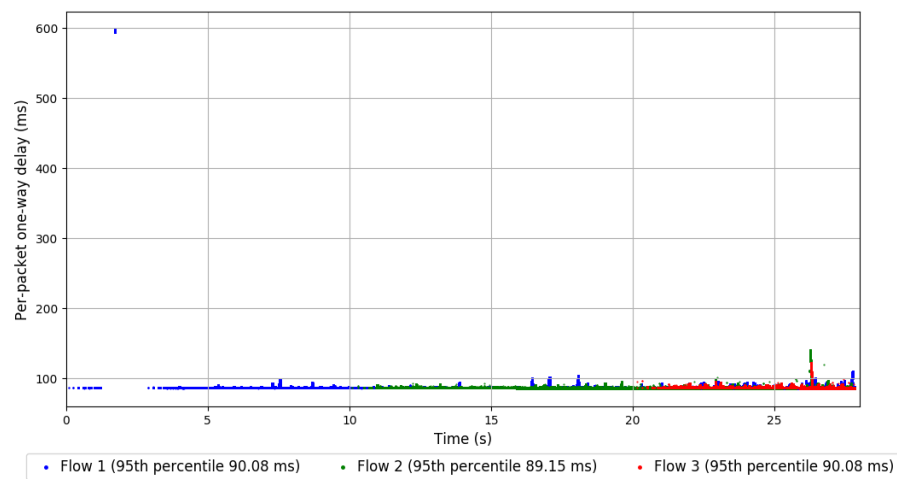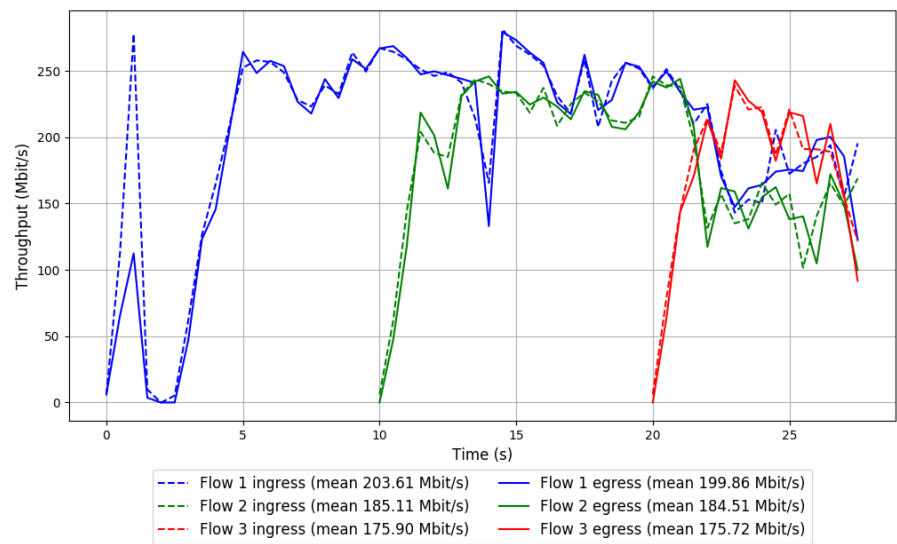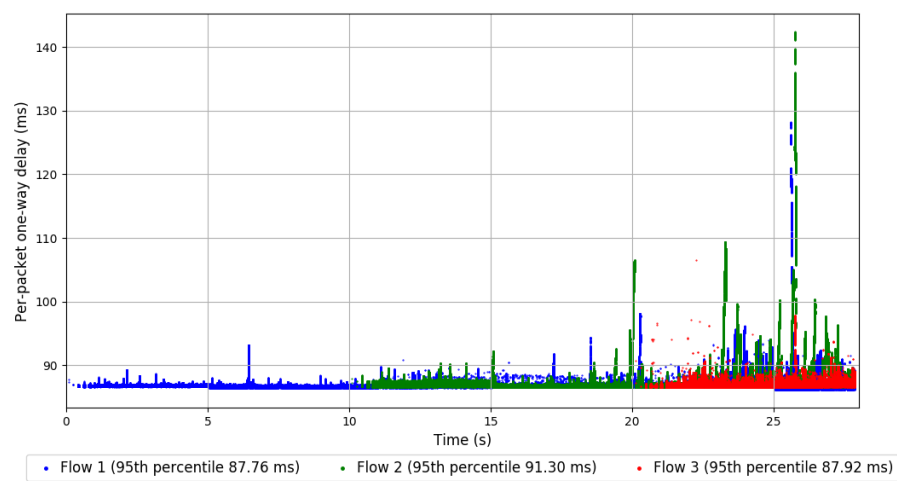
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 203.61 Mbit/s) --- Flow 1 egress (mean 199.86 Mbit/s)
Flow 2 ingress (mean 185.11 Mbit/s) --- Flow 2 egress (mean 184.51 Mbit/s)
Flow 3 ingress (mean 175.90 Mbit/s) --- Flow 3 egress (mean 175.72 Mbit/s)

Flow 1 (95th percentile 90.08 ms) • Flow 2 (95th percentile 89.15 ms) • Flow 3 (95th percentile 90.08 ms)

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

Start at: 2017-12-05 22:20:39
End at: 2017-12-05 22:21:09

# Below is generated by plot.py at 2017-12-06 02:10:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.29 Mbit/s
95th percentile per-packet one-way delay: 88.527 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 229.20 Mbit/s
95th percentile per-packet one-way delay: 87.757 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 205.59 Mbit/s
95th percentile per-packet one-way delay: 91.299 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 181.28 Mbit/s
95th percentile per-packet one-way delay: 87.923 ms
Loss rate: 2.32%
```
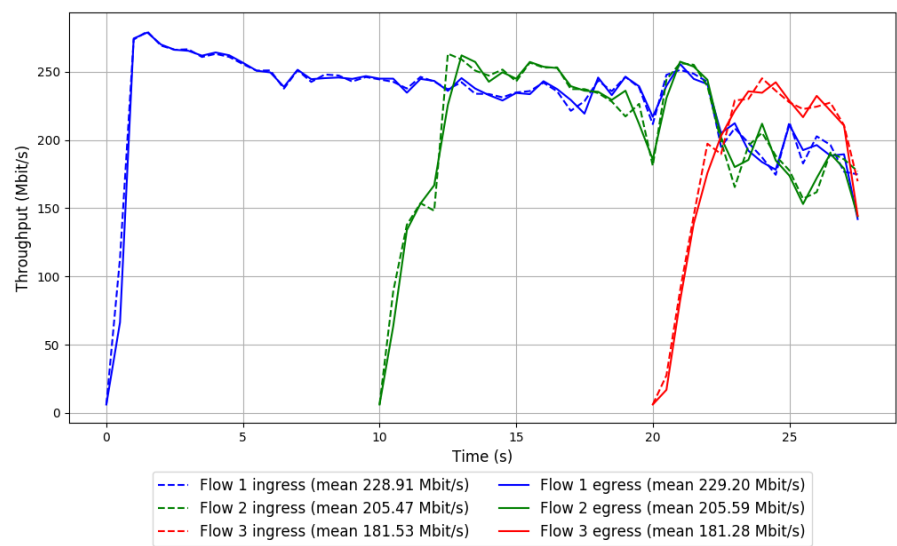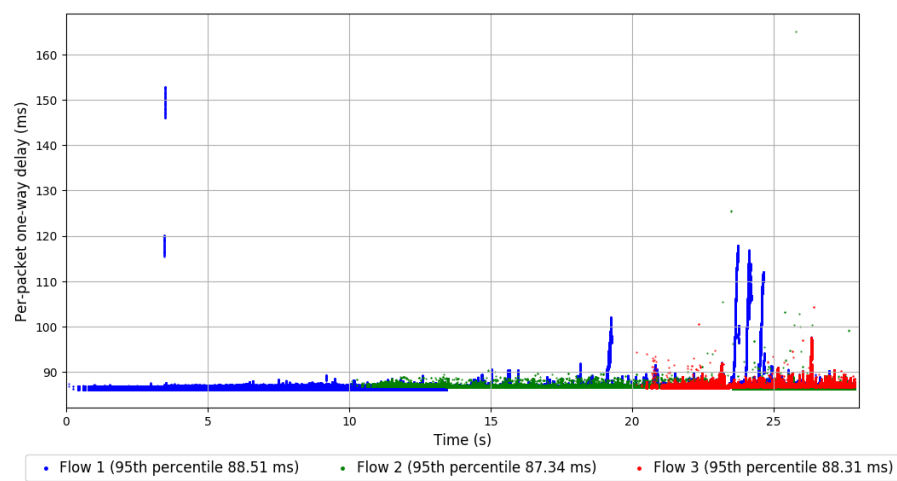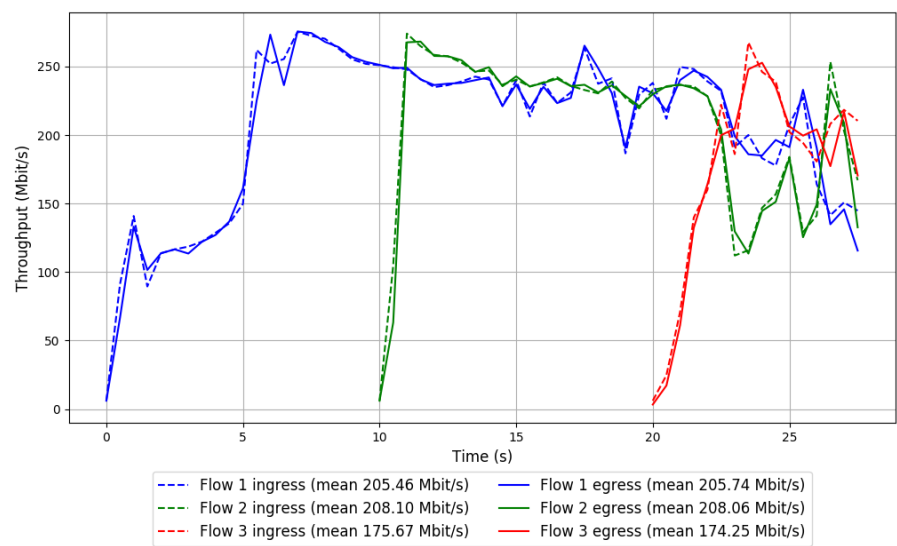
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 228.91 Mbit/s) --- Flow 1 egress (mean 229.20 Mbit/s)
Flow 2 ingress (mean 205.47 Mbit/s) --- Flow 2 egress (mean 205.59 Mbit/s)
Flow 3 ingress (mean 181.53 Mbit/s) --- Flow 3 egress (mean 181.28 Mbit/s)

Flow 1 (95th percentile 87.76 ms) Flow 2 (95th percentile 91.30 ms) Flow 3 (95th percentile 87.92 ms)

175

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

Start at: 2017-12-05 22:34:01
End at: 2017-12-05 22:34:31

# Below is generated by plot.py at 2017-12-06 02:14:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.28 Mbit/s
95th percentile per-packet one-way delay: 88.004 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 205.74 Mbit/s
95th percentile per-packet one-way delay: 88.510 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 208.06 Mbit/s
95th percentile per-packet one-way delay: 87.337 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 174.25 Mbit/s
95th percentile per-packet one-way delay: 88.309 ms
Loss rate: 3.00%
```
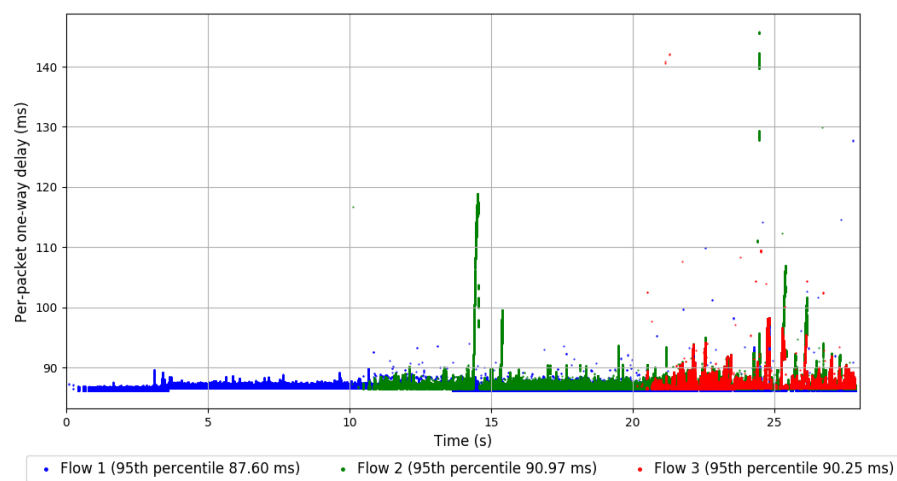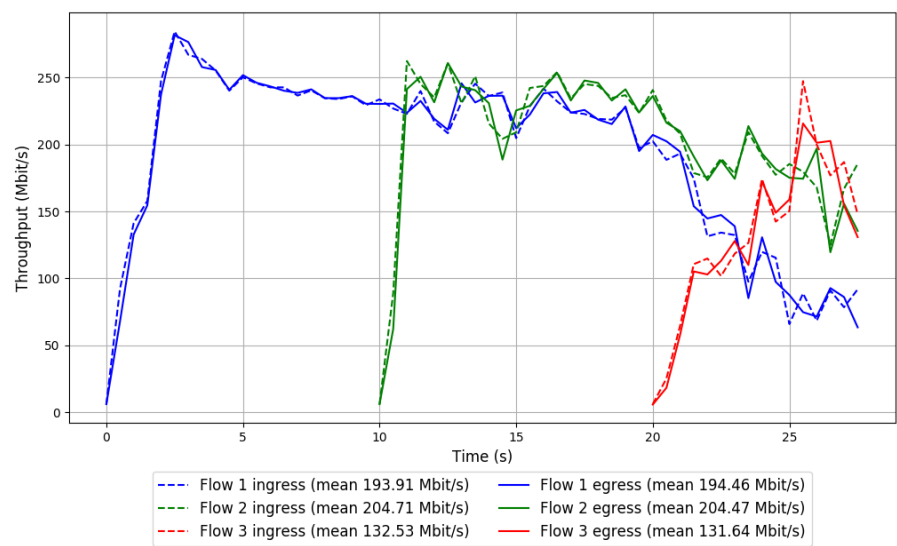
Run 7: Report of TaoVA-100x — Data Link

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

Start at: 2017-12-05 22:47:21
End at: 2017-12-05 22:47:51


# Below is generated by plot.py at 2017-12-06 02:15:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.72 Mbit/s
95th percentile per-packet one-way delay: 88.833 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 194.46 Mbit/s
95th percentile per-packet one-way delay: 87.600 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 204.47 Mbit/s
95th percentile per-packet one-way delay: 90.967 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 131.64 Mbit/s
95th percentile per-packet one-way delay: 90.255 ms
Loss rate: 3.22%
```

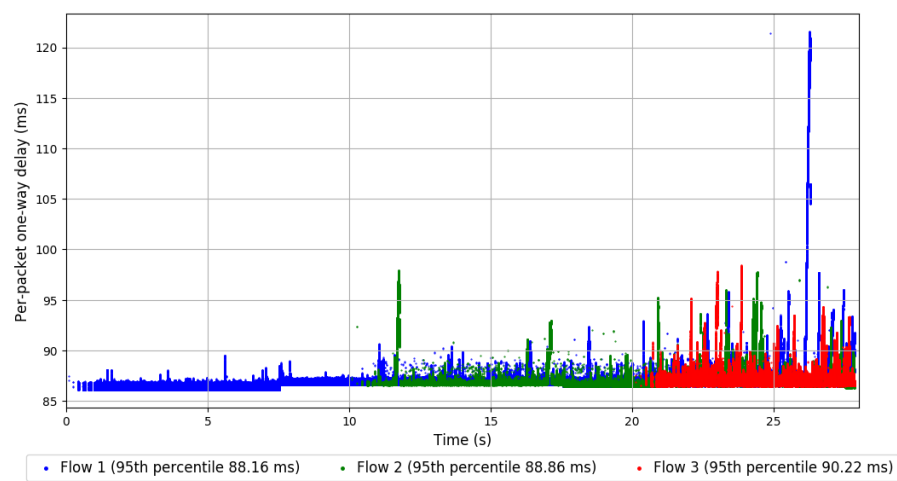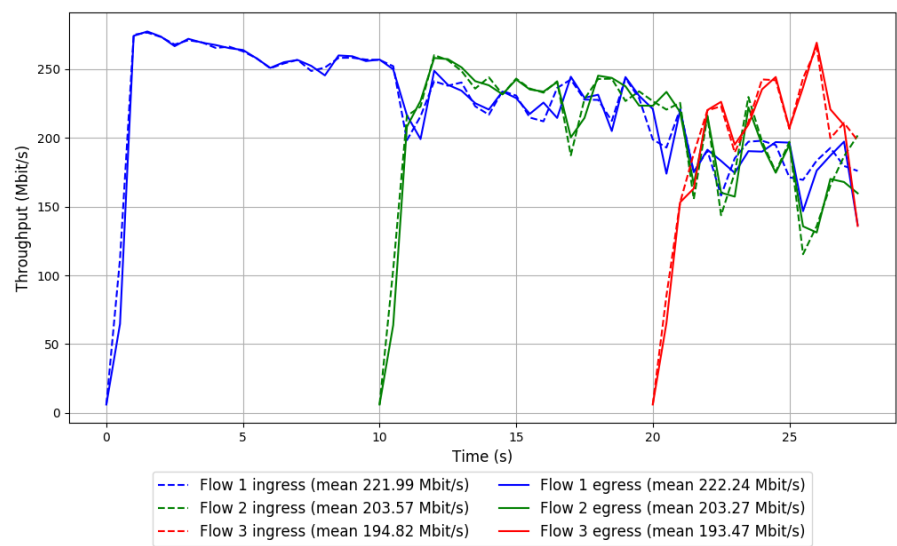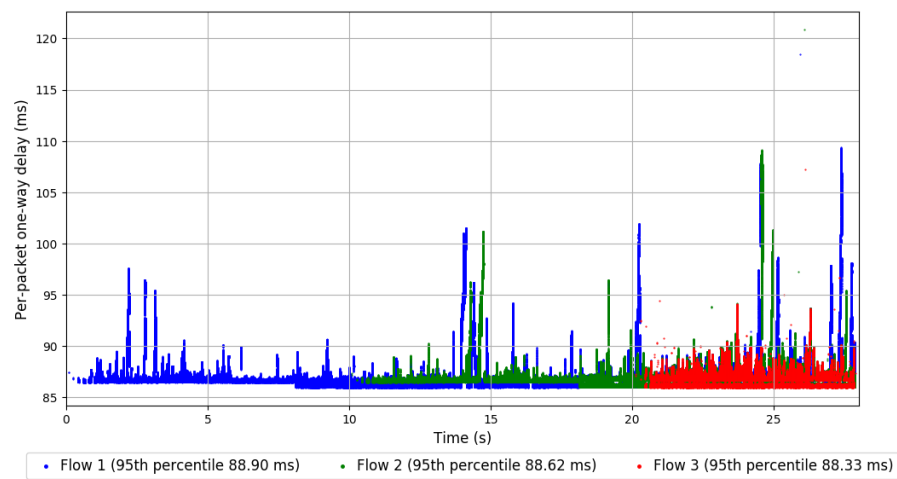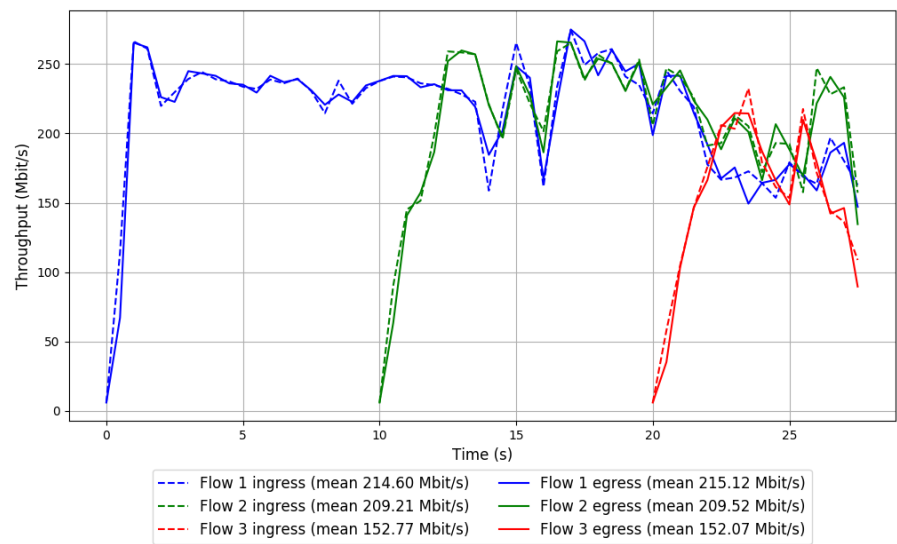Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 193.91 Mbit/s) — Flow 1 egress (mean 194.46 Mbit/s)
Flow 2 ingress (mean 204.71 Mbit/s) — Flow 2 egress (mean 204.47 Mbit/s)
Flow 3 ingress (mean 132.53 Mbit/s) — Flow 3 egress (mean 131.64 Mbit/s)

Flow 1 (95th percentile 87.60 ms) Flow 2 (95th percentile 90.97 ms) Flow 3 (95th percentile 90.25 ms)

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

Start at: 2017-12-05 23:00:37
End at: 2017-12-05 23:01:07

# Below is generated by plot.py at 2017-12-06 02:16:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.09 Mbit/s
95th percentile per-packet one-way delay: 88.730 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 222.24 Mbit/s
95th percentile per-packet one-way delay: 88.162 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 203.27 Mbit/s
95th percentile per-packet one-way delay: 88.860 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 193.47 Mbit/s
95th percentile per-packet one-way delay: 90.225 ms
Loss rate: 2.85%
```

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

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

Start at: 2017-12-05 23:14:16
End at: 2017-12-05 23:14:46

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 391.60 Mbit/s
95th percentile per-packet one-way delay: 88.677 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 215.12 Mbit/s
95th percentile per-packet one-way delay: 88.901 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 209.52 Mbit/s
95th percentile per-packet one-way delay: 88.622 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 152.07 Mbit/s
95th percentile per-packet one-way delay: 88.331 ms
Loss rate: 1.83%
```
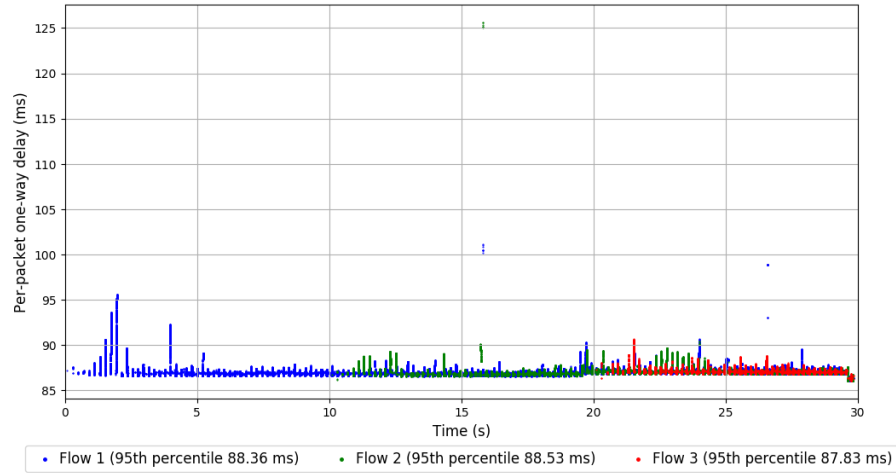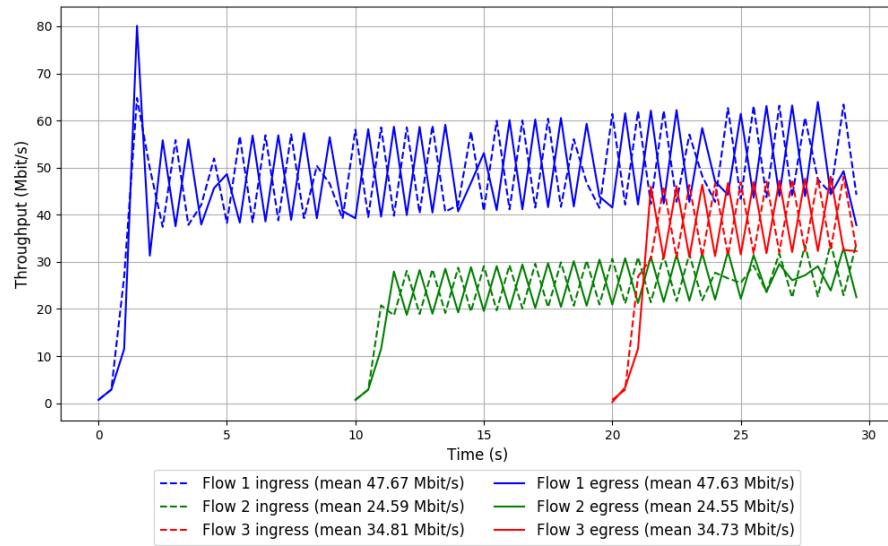
Run 10: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2017-12-05 21:17:57
End at: 2017-12-05 21:18:27

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.26 Mbit/s
95th percentile per-packet one-way delay: 88.337 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 47.63 Mbit/s
95th percentile per-packet one-way delay: 88.363 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 24.55 Mbit/s
95th percentile per-packet one-way delay: 88.532 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 34.73 Mbit/s
95th percentile per-packet one-way delay: 87.830 ms
Loss rate: 2.35%
```
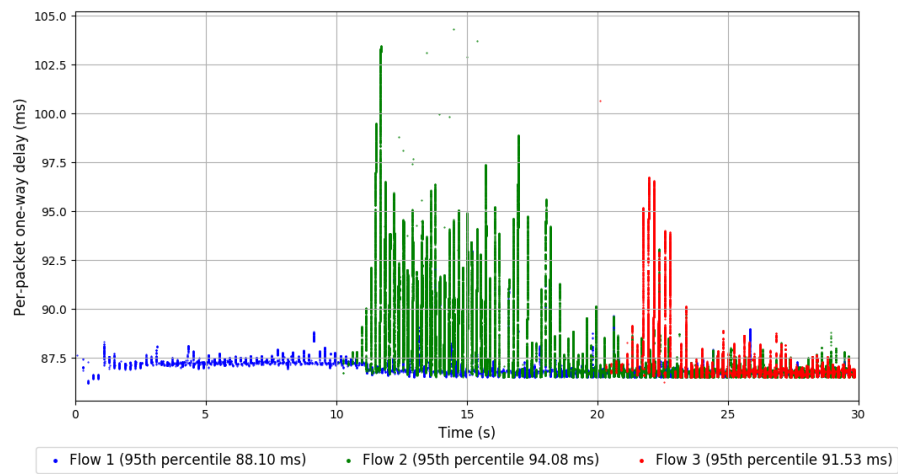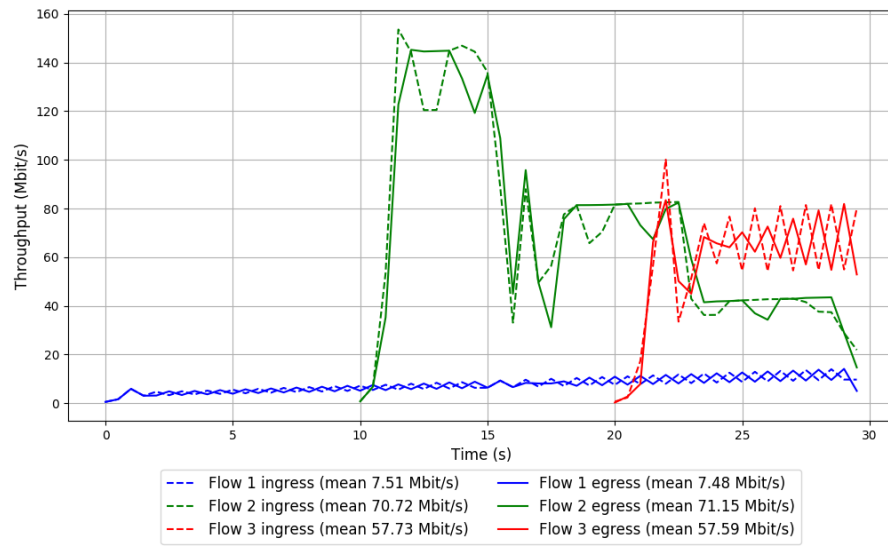
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2017-12-05 21:31:35
End at: 2017-12-05 21:32:05

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.45 Mbit/s
95th percentile per-packet one-way delay: 93.580 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 88.099 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 71.15 Mbit/s
95th percentile per-packet one-way delay: 94.083 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 57.59 Mbit/s
95th percentile per-packet one-way delay: 91.532 ms
Loss rate: 2.39%
```
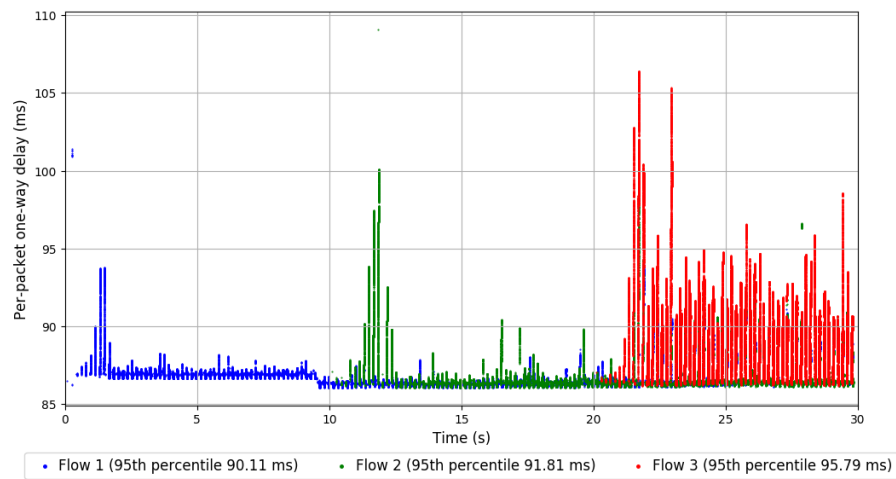
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-12-05 21:45:27
End at: 2017-12-05 21:45:57

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 93.772 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 20.28 Mbit/s
95th percentile per-packet one-way delay: 90.112 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 40.22 Mbit/s
95th percentile per-packet one-way delay: 91.806 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 121.90 Mbit/s
95th percentile per-packet one-way delay: 95.791 ms
Loss rate: 2.01%
```
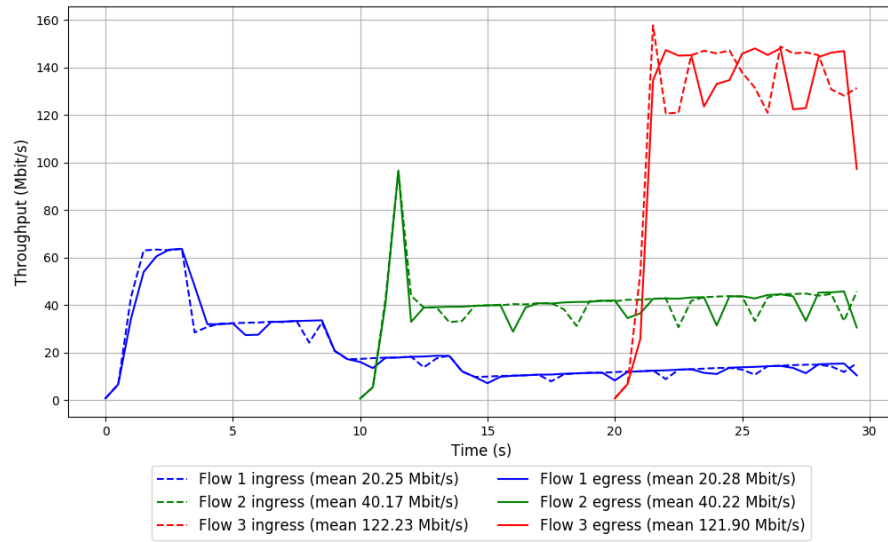
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2017-12-05 21:59:05
End at: 2017-12-05 21:59:35

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.29 Mbit/s
95th percentile per-packet one-way delay: 95.783 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 52.27 Mbit/s
95th percentile per-packet one-way delay: 94.011 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 41.01 Mbit/s
95th percentile per-packet one-way delay: 92.790 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 100.51 Mbit/s
95th percentile per-packet one-way delay: 99.491 ms
Loss rate: 0.90%
```
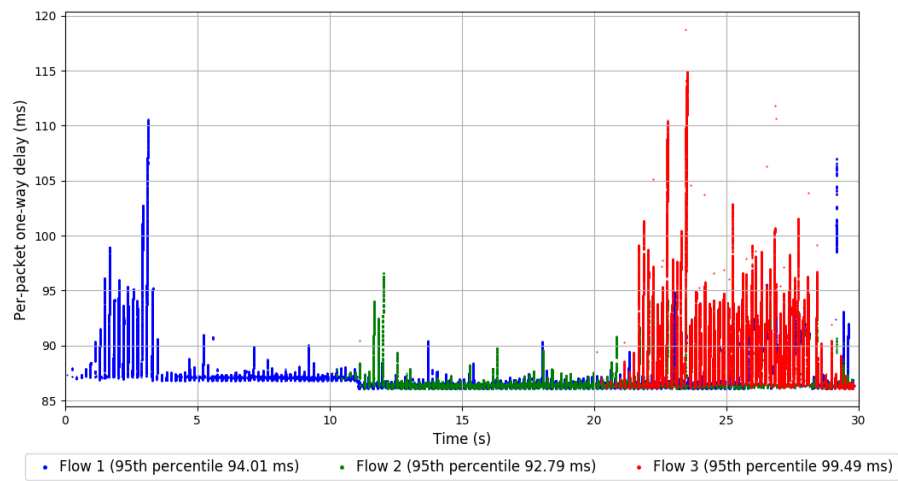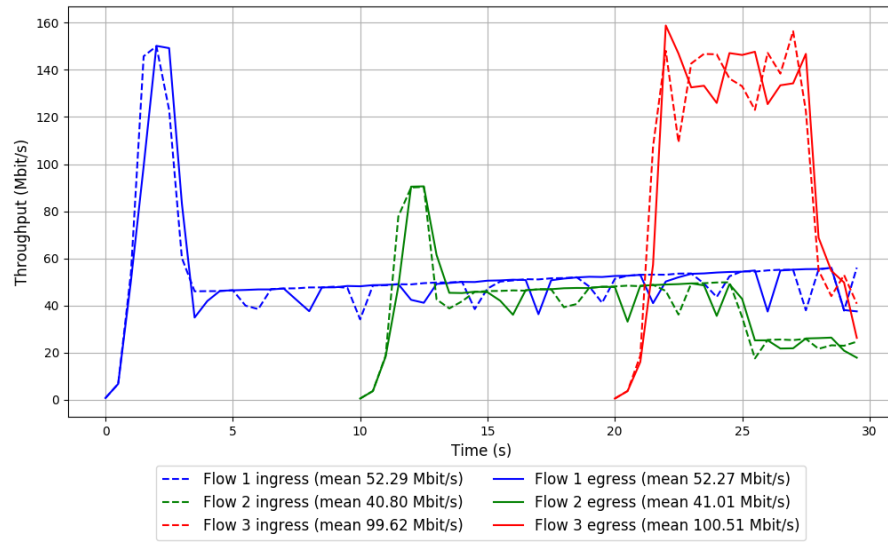
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2017-12-05 22:12:50
End at: 2017-12-05 22:13:20

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.43 Mbit/s
95th percentile per-packet one-way delay: 88.485 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 47.09 Mbit/s
95th percentile per-packet one-way delay: 88.130 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 54.01 Mbit/s
95th percentile per-packet one-way delay: 88.630 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 68.68 Mbit/s
95th percentile per-packet one-way delay: 88.930 ms
Loss rate: 1.20%
```
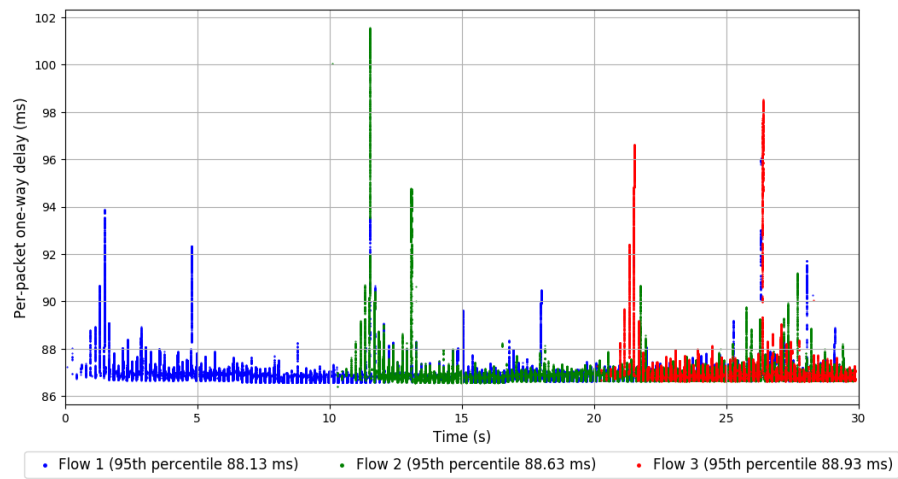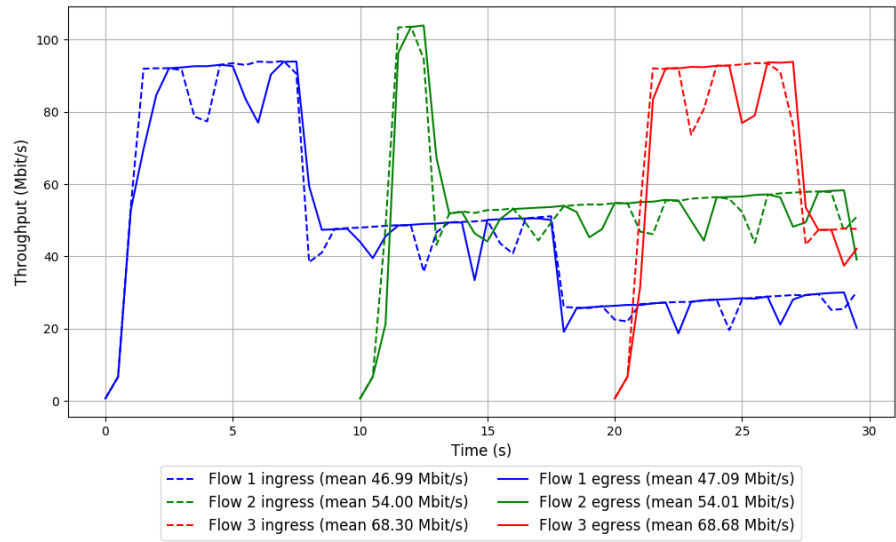
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 46.99 Mbit/s)   Flow 1 egress (mean 47.09 Mbit/s)
Flow 2 ingress (mean 54.00 Mbit/s)   Flow 2 egress (mean 54.01 Mbit/s)
Flow 3 ingress (mean 68.30 Mbit/s)   Flow 3 egress (mean 68.68 Mbit/s)

Flow 1 (95th percentile 88.13 ms)   Flow 2 (95th percentile 88.63 ms)   Flow 3 (95th percentile 88.93 ms)

```
Run 6: Statistics of TCP Vegas

Start at: 2017-12-05 22:26:08
End at: 2017-12-05 22:26:38

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.37 Mbit/s
95th percentile per-packet one-way delay: 88.482 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 27.70 Mbit/s
95th percentile per-packet one-way delay: 88.017 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 25.84 Mbit/s
95th percentile per-packet one-way delay: 87.854 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 87.21 Mbit/s
95th percentile per-packet one-way delay: 89.491 ms
Loss rate: 1.17%
```
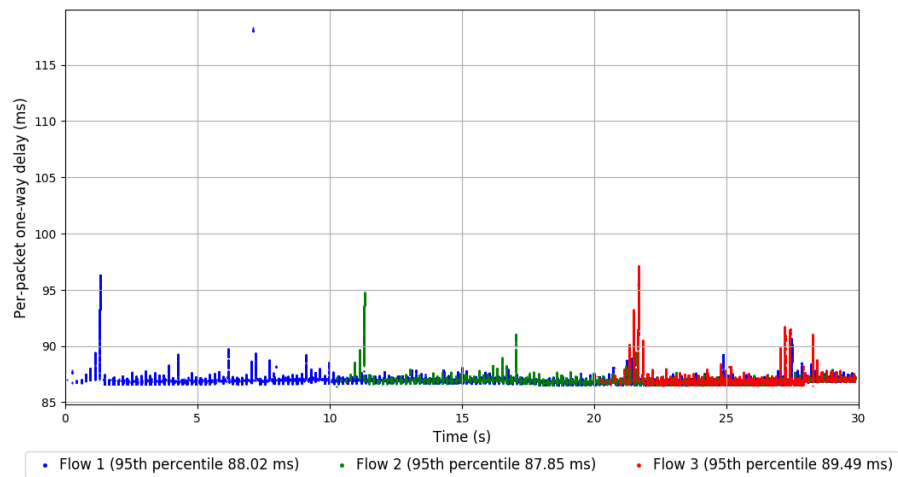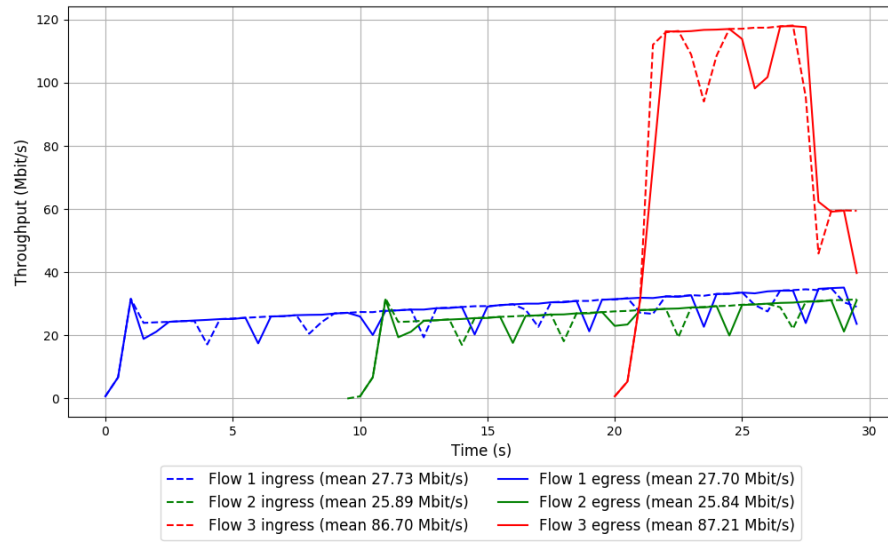
Run 6: Report of TCP Vegas — Data Link

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```
Run 7: Statistics of TCP Vegas

Start at: 2017-12-05 22:39:31
End at: 2017-12-05 22:40:01

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.82 Mbit/s
95th percentile per-packet one-way delay: 91.452 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 87.606 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 45.92 Mbit/s
95th percentile per-packet one-way delay: 88.355 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 51.12 Mbit/s
95th percentile per-packet one-way delay: 93.145 ms
Loss rate: 1.55%
```
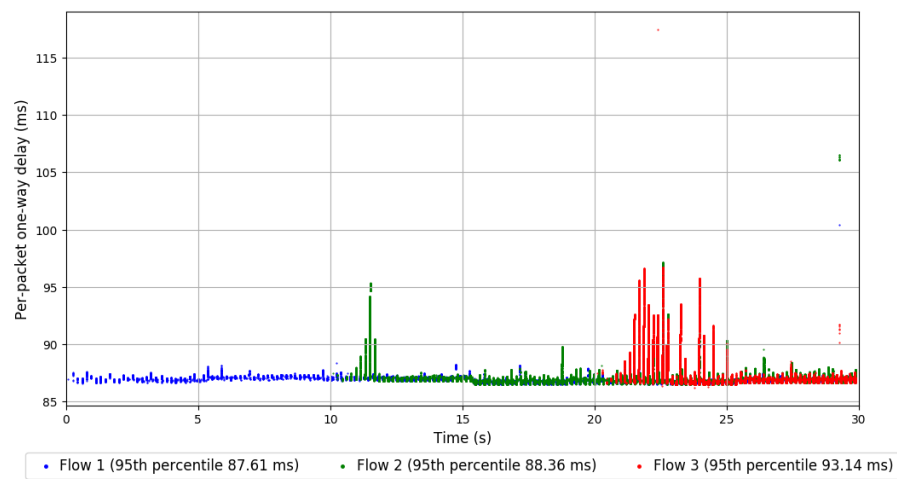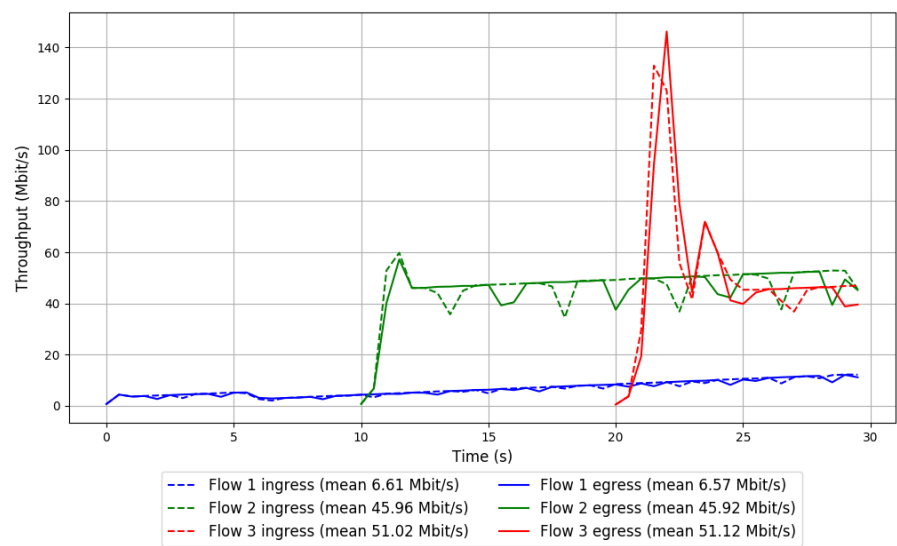
Run 7: Report of TCP Vegas — Data Link

```
Run 8: Statistics of TCP Vegas

Start at: 2017-12-05 22:52:49
End at: 2017-12-05 22:53:19


# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.96 Mbit/s
95th percentile per-packet one-way delay: 92.876 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 74.20 Mbit/s
95th percentile per-packet one-way delay: 91.641 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 62.67 Mbit/s
95th percentile per-packet one-way delay: 94.133 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 58.64 Mbit/s
95th percentile per-packet one-way delay: 93.511 ms
Loss rate: 1.94%
```
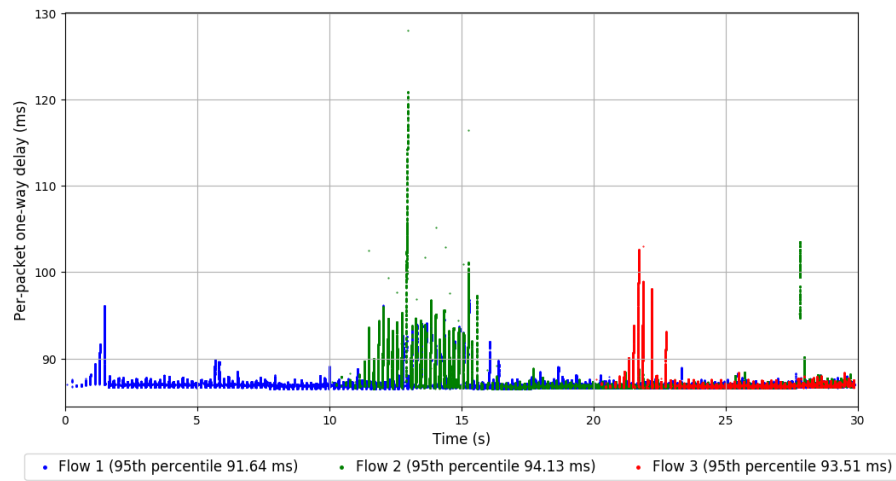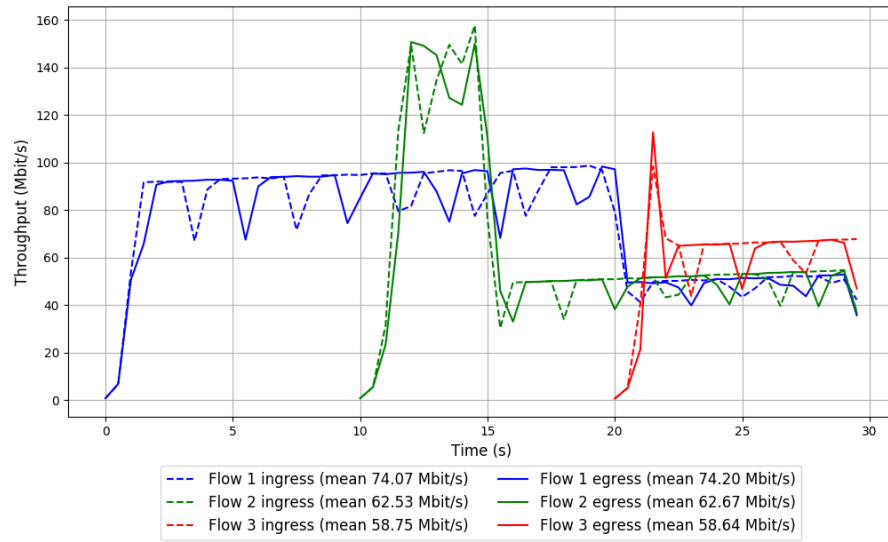
Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2017-12-05 23:06:26
End at: 2017-12-05 23:06:56


# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.62 Mbit/s
95th percentile per-packet one-way delay: 90.884 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 32.44 Mbit/s
95th percentile per-packet one-way delay: 88.007 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 52.53 Mbit/s
95th percentile per-packet one-way delay: 94.032 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 68.15 Mbit/s
95th percentile per-packet one-way delay: 90.467 ms
Loss rate: 1.95%
```
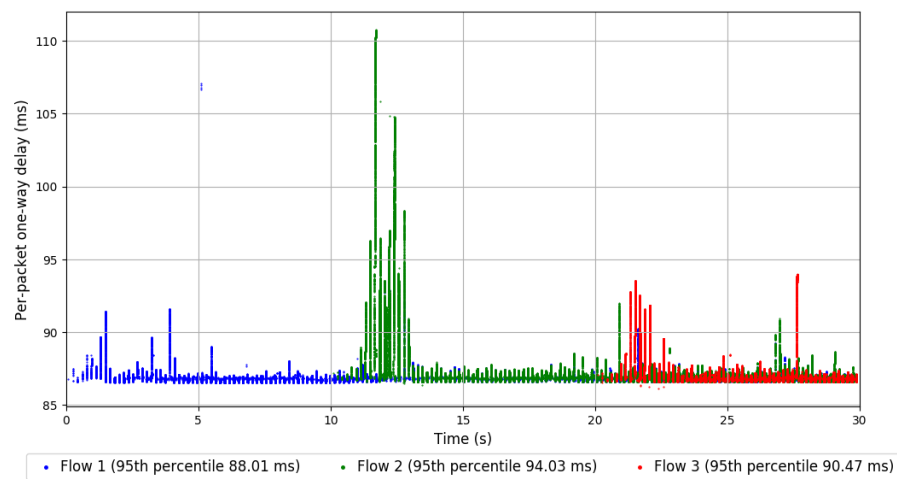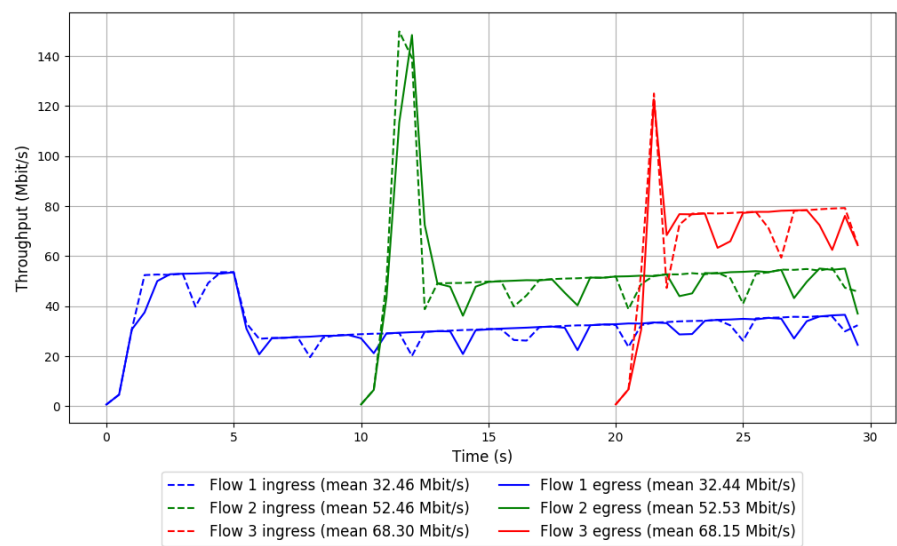
Run 9: Report of TCP Vegas — Data Link

```
Run 10: Statistics of TCP Vegas

Start at: 2017-12-05 23:19:47
End at: 2017-12-05 23:20:17

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.02 Mbit/s
95th percentile per-packet one-way delay: 92.034 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 13.93 Mbit/s
95th percentile per-packet one-way delay: 87.542 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 35.19 Mbit/s
95th percentile per-packet one-way delay: 87.972 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 81.73 Mbit/s
95th percentile per-packet one-way delay: 94.295 ms
Loss rate: 2.03%
```
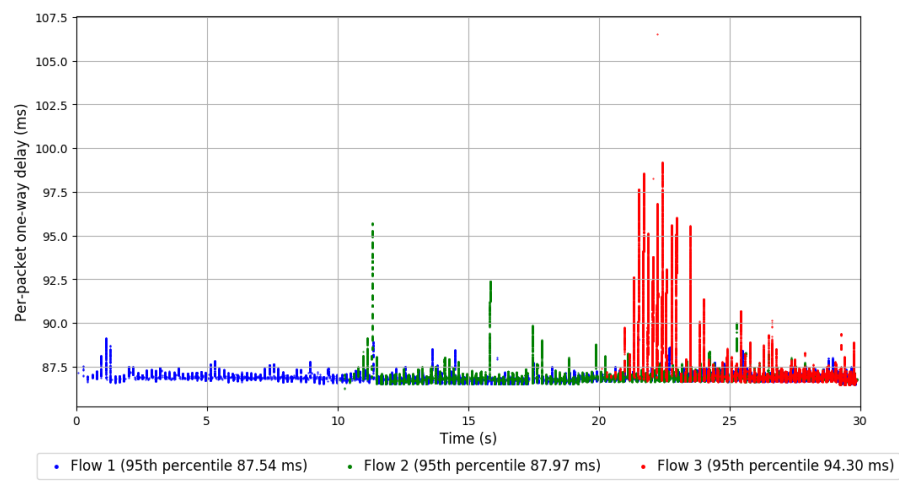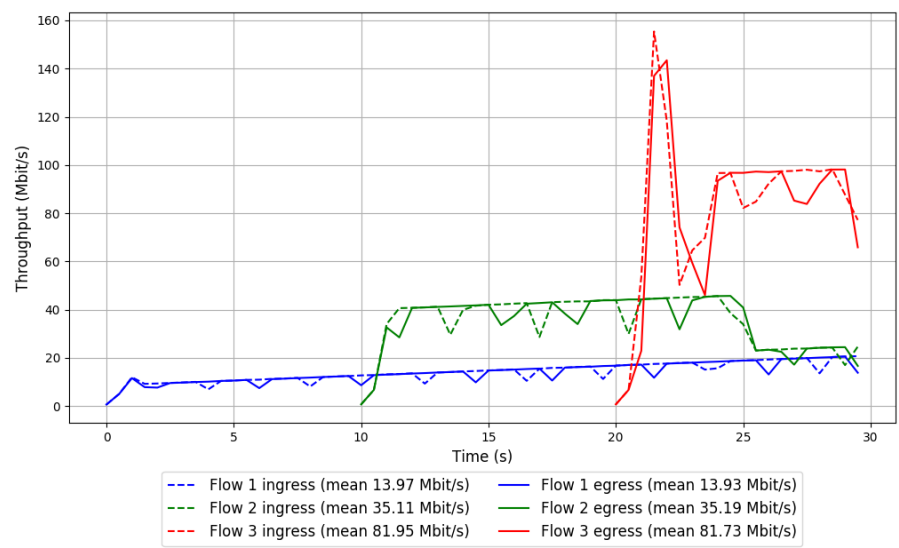
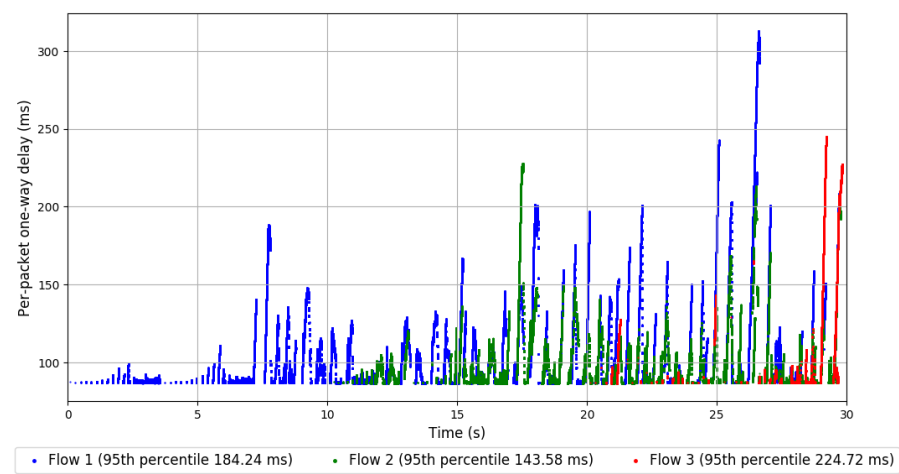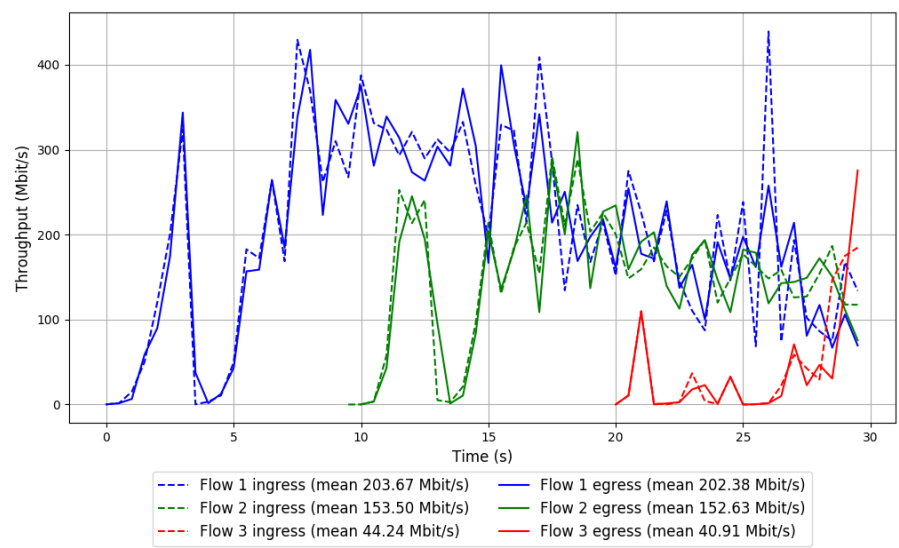Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2017-12-05 21:20:44
End at: 2017-12-05 21:21:14

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 315.78 Mbit/s
95th percentile per-packet one-way delay: 182.378 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 202.38 Mbit/s
95th percentile per-packet one-way delay: 184.244 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 152.63 Mbit/s
95th percentile per-packet one-way delay: 143.576 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 40.91 Mbit/s
95th percentile per-packet one-way delay: 224.719 ms
Loss rate: 7.63%
```

Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2017-12-05 21:34:21
End at: 2017-12-05 21:34:51


# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.71 Mbit/s
95th percentile per-packet one-way delay: 209.415 ms
Loss rate: 4.61%
-- Flow 1:
Average throughput: 223.00 Mbit/s
95th percentile per-packet one-way delay: 176.359 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 147.38 Mbit/s
95th percentile per-packet one-way delay: 229.117 ms
Loss rate: 5.38%
-- Flow 3:
Average throughput: 173.93 Mbit/s
95th percentile per-packet one-way delay: 256.720 ms
Loss rate: 14.01%
```
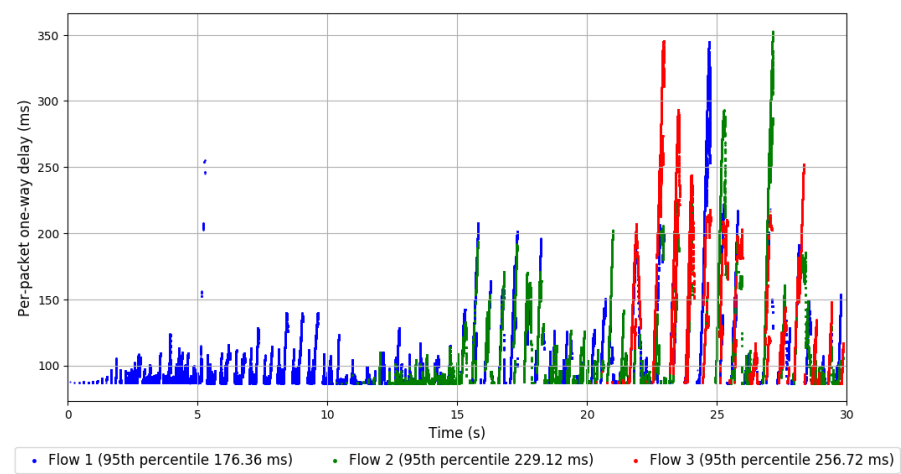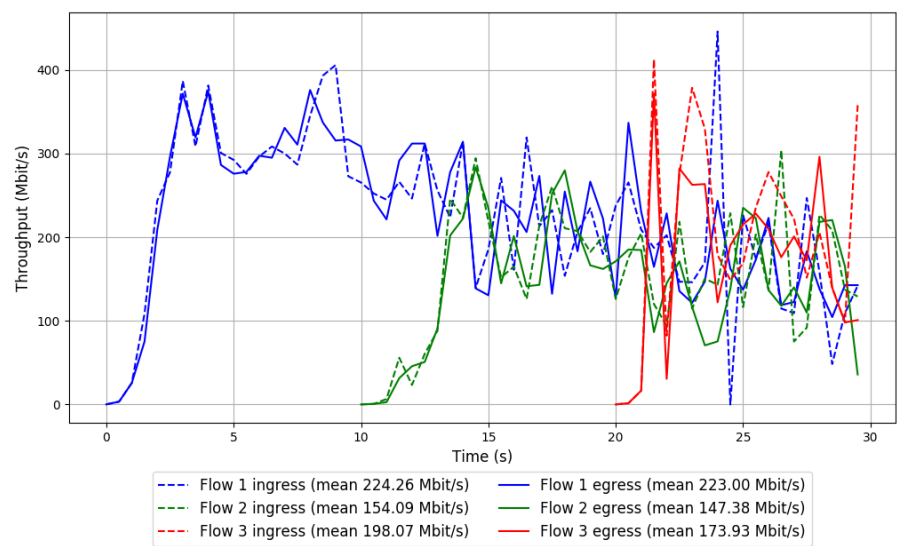
Run 2: Report of Verus — Data Link

Run 3: Statistics of Verus

Start at: 2017-12-05 21:48:18
End at: 2017-12-05 21:48:48

Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 121.16 Mbit/s)   Flow 1 egress (mean 118.94 Mbit/s)
Flow 2 ingress (mean 126.96 Mbit/s)   Flow 2 egress (mean 124.85 Mbit/s)
Flow 3 ingress (mean 97.10 Mbit/s)   Flow 3 egress (mean 98.29 Mbit/s)

Flow 1 (95th percentile 132.11 ms)   Flow 2 (95th percentile 164.77 ms)   Flow 3 (95th percentile 144.85 ms)

209

```
Run 4: Statistics of Verus

Start at: 2017-12-05 22:01:56
End at: 2017-12-05 22:02:26

# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.32 Mbit/s
95th percentile per-packet one-way delay: 139.084 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 239.18 Mbit/s
95th percentile per-packet one-way delay: 128.658 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 119.25 Mbit/s
95th percentile per-packet one-way delay: 203.625 ms
Loss rate: 2.77%
-- Flow 3:
Average throughput: 44.21 Mbit/s
95th percentile per-packet one-way delay: 113.809 ms
Loss rate: 0.14%
```
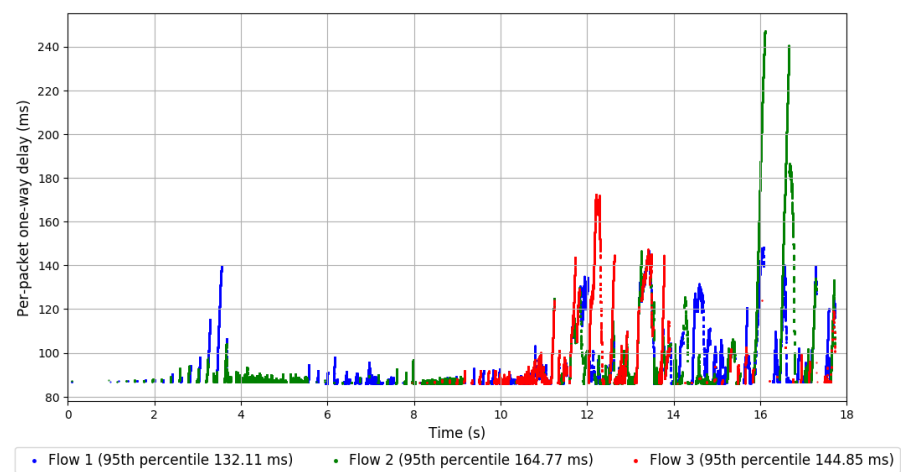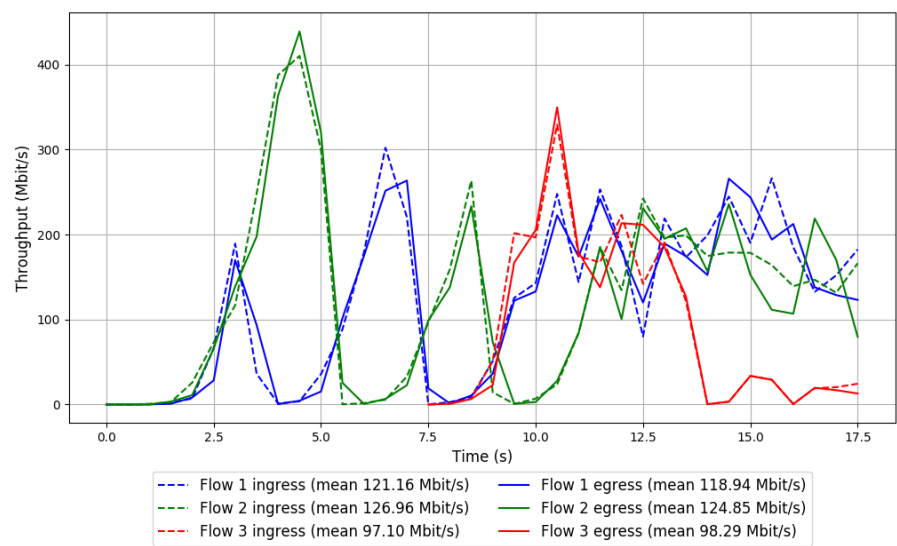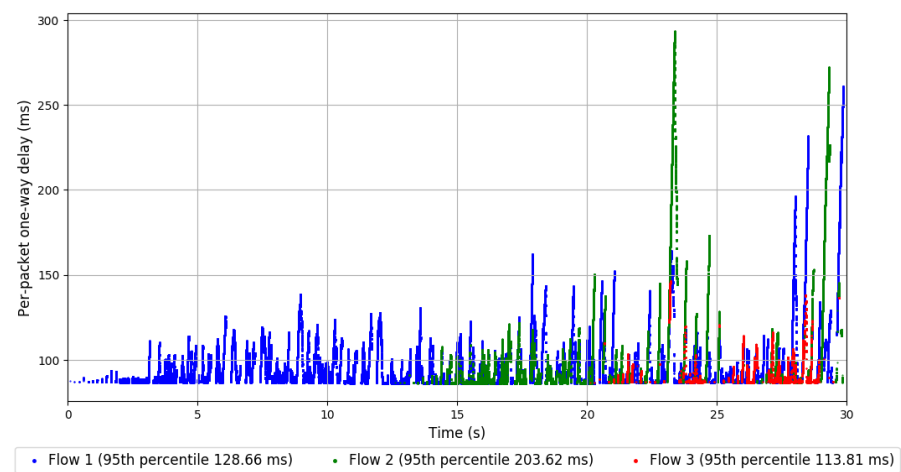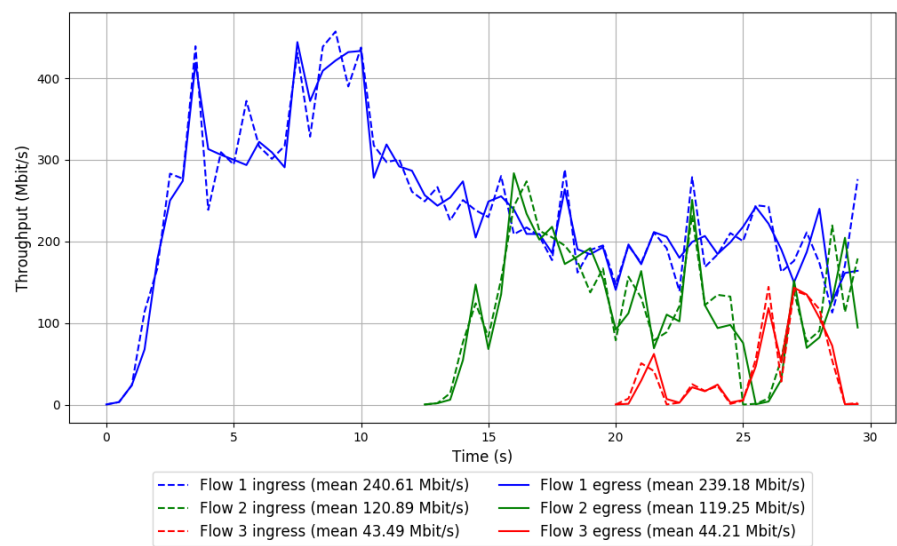
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2017-12-05 22:15:32
End at: 2017-12-05 22:16:02


# Below is generated by plot.py at 2017-12-06 02:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.15 Mbit/s
95th percentile per-packet one-way delay: 262.513 ms
Loss rate: 3.76%
-- Flow 1:
Average throughput: 233.08 Mbit/s
95th percentile per-packet one-way delay: 271.746 ms
Loss rate: 4.28%
-- Flow 2:
Average throughput: 70.01 Mbit/s
95th percentile per-packet one-way delay: 158.501 ms
Loss rate: 2.02%
-- Flow 3:
Average throughput: 39.13 Mbit/s
95th percentile per-packet one-way delay: 210.661 ms
Loss rate: 0.17%
```
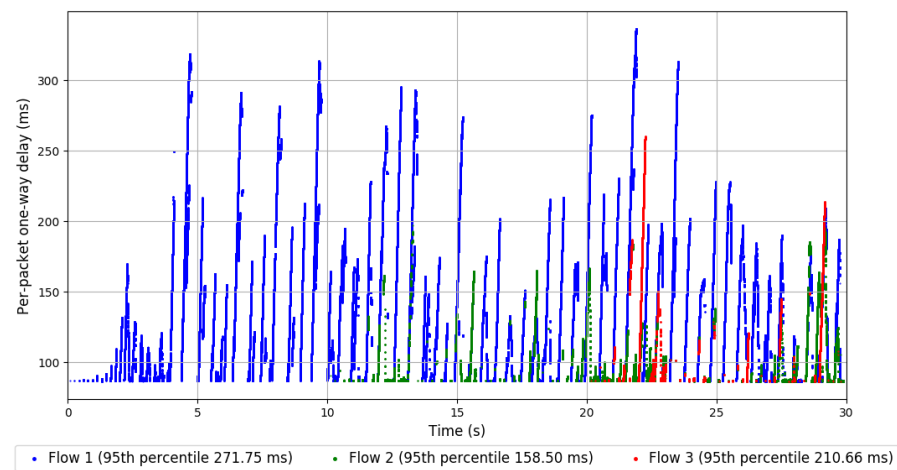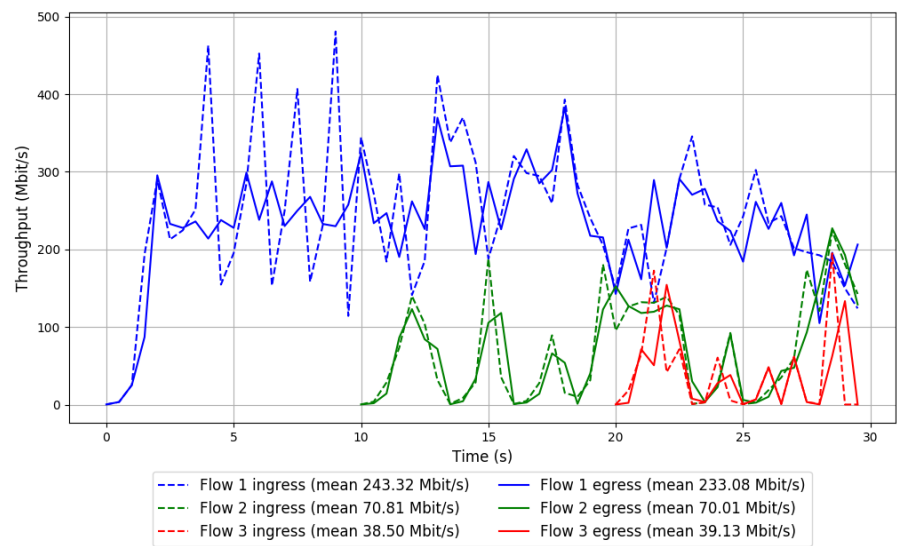
Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2017-12-05 22:28:50
End at: 2017-12-05 22:29:20

# Below is generated by plot.py at 2017-12-06 02:20:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.59 Mbit/s
95th percentile per-packet one-way delay: 180.668 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 194.24 Mbit/s
95th percentile per-packet one-way delay: 209.881 ms
Loss rate: 1.77%
-- Flow 2:
Average throughput: 161.43 Mbit/s
95th percentile per-packet one-way delay: 158.141 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 72.34 Mbit/s
95th percentile per-packet one-way delay: 156.003 ms
Loss rate: 6.09%
```
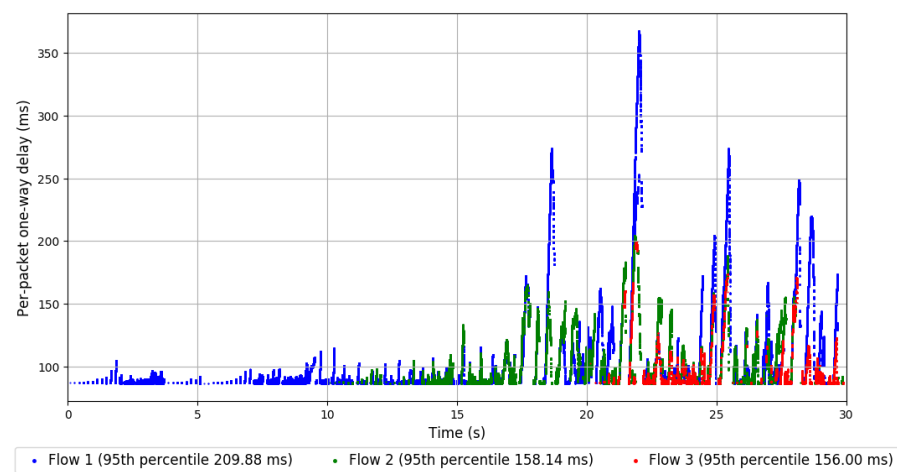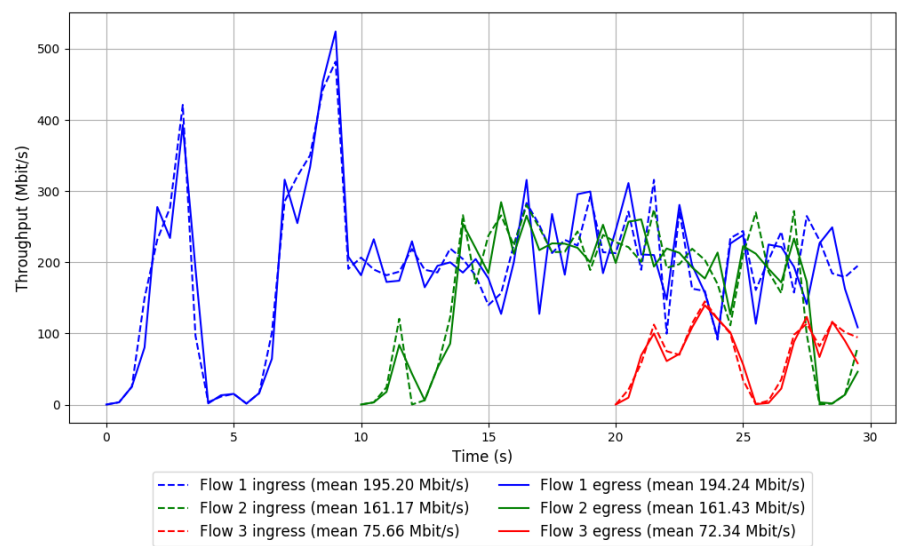
Run 6: Report of Verus — Data Link

215

```
Run 7: Statistics of Verus

Start at: 2017-12-05 22:42:14
End at: 2017-12-05 22:42:44


# Below is generated by plot.py at 2017-12-06 02:21:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 259.62 Mbit/s
95th percentile per-packet one-way delay: 241.285 ms
Loss rate: 3.51%
-- Flow 1:
Average throughput: 107.76 Mbit/s
95th percentile per-packet one-way delay: 283.273 ms
Loss rate: 6.17%
-- Flow 2:
Average throughput: 208.11 Mbit/s
95th percentile per-packet one-way delay: 179.170 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 45.48 Mbit/s
95th percentile per-packet one-way delay: 235.134 ms
Loss rate: 3.58%
```
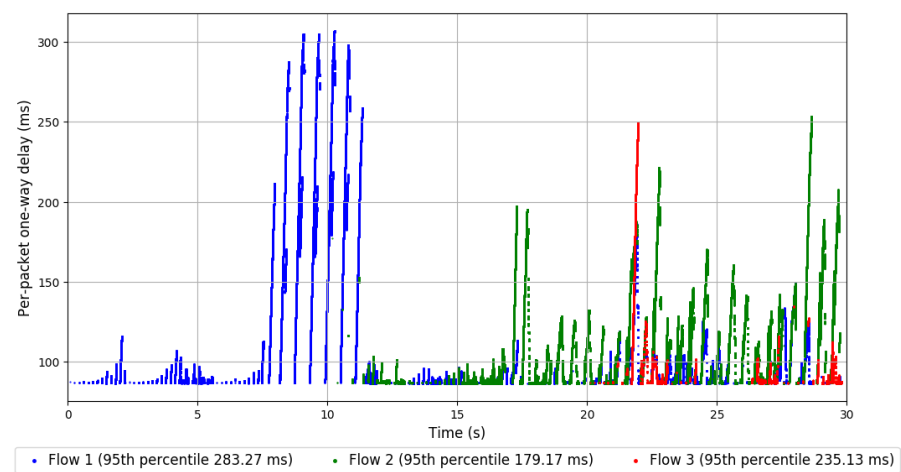
Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2017-12-05 22:55:35
End at: 2017-12-05 22:56:05

# Below is generated by plot.py at 2017-12-06 02:22:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.34 Mbit/s
95th percentile per-packet one-way delay: 214.325 ms
Loss rate: 2.32%
-- Flow 1:
Average throughput: 230.31 Mbit/s
95th percentile per-packet one-way delay: 226.442 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 77.91 Mbit/s
95th percentile per-packet one-way delay: 186.209 ms
Loss rate: 3.20%
-- Flow 3:
Average throughput: 136.72 Mbit/s
95th percentile per-packet one-way delay: 184.938 ms
Loss rate: 2.15%
```

Run 8: Report of Verus — Data Link

```
Run 9: Statistics of Verus

Start at: 2017-12-05 23:09:08
End at: 2017-12-05 23:09:38


# Below is generated by plot.py at 2017-12-06 02:23:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.95 Mbit/s
95th percentile per-packet one-way delay: 174.522 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 193.87 Mbit/s
95th percentile per-packet one-way delay: 138.103 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 152.60 Mbit/s
95th percentile per-packet one-way delay: 231.574 ms
Loss rate: 3.12%
-- Flow 3:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 181.524 ms
Loss rate: 5.13%
```
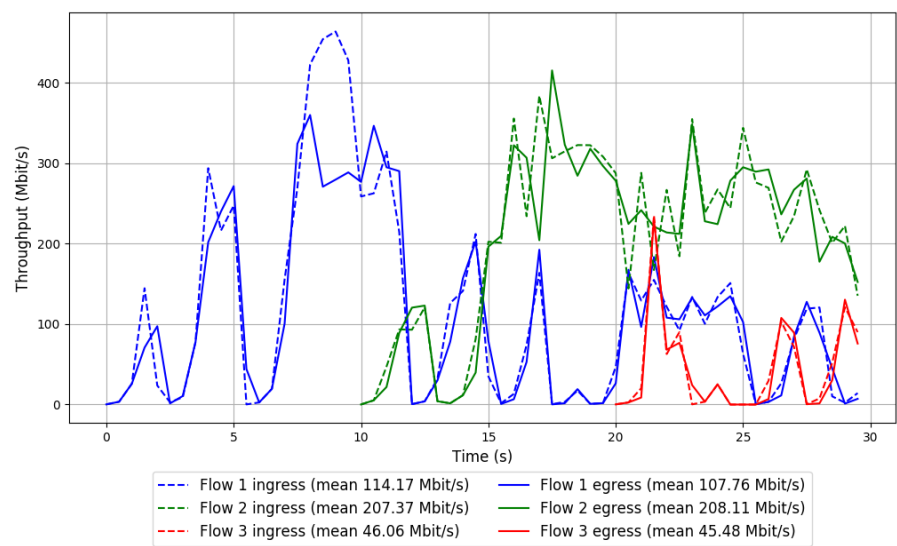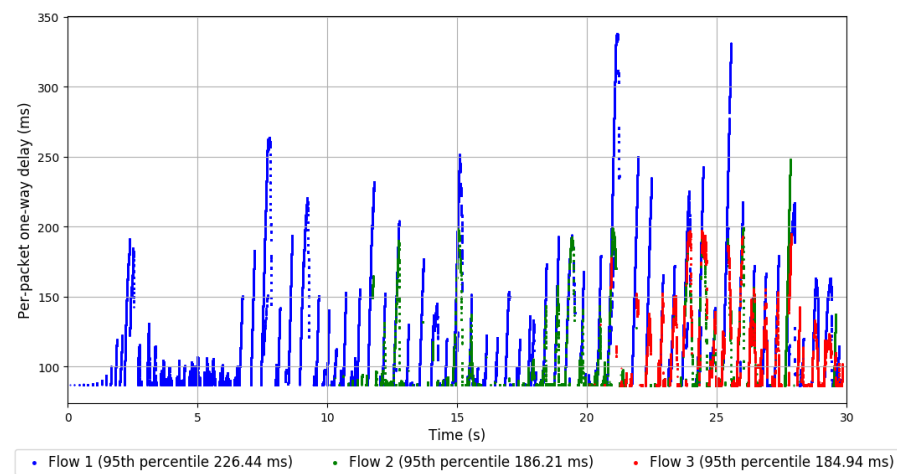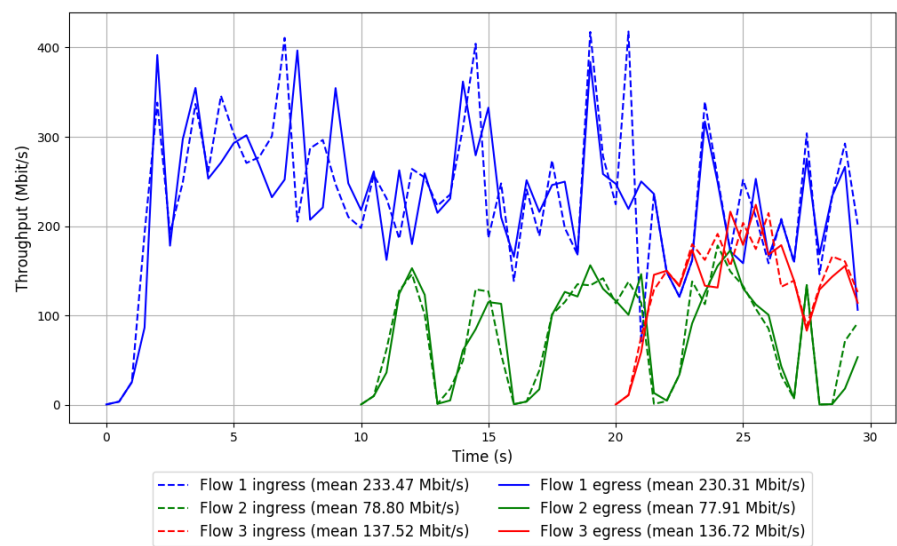
Run 9: Report of Verus — Data Link

Flow 1 ingress (mean 193.29 Mbit/s)   Flow 1 egress (mean 193.87 Mbit/s)
Flow 2 ingress (mean 157.27 Mbit/s)   Flow 2 egress (mean 152.60 Mbit/s)
Flow 3 ingress (mean 43.88 Mbit/s)   Flow 3 egress (mean 42.26 Mbit/s)

Flow 1 (95th percentile 138.10 ms)   Flow 2 (95th percentile 231.57 ms)   Flow 3 (95th percentile 181.52 ms)

221

```
Run 10: Statistics of Verus

Start at: 2017-12-05 23:22:28
End at: 2017-12-05 23:22:58

# Below is generated by plot.py at 2017-12-06 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.51 Mbit/s
95th percentile per-packet one-way delay: 130.902 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 183.00 Mbit/s
95th percentile per-packet one-way delay: 140.700 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 117.77 Mbit/s
95th percentile per-packet one-way delay: 121.511 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 84.23 Mbit/s
95th percentile per-packet one-way delay: 117.752 ms
Loss rate: 0.00%
```
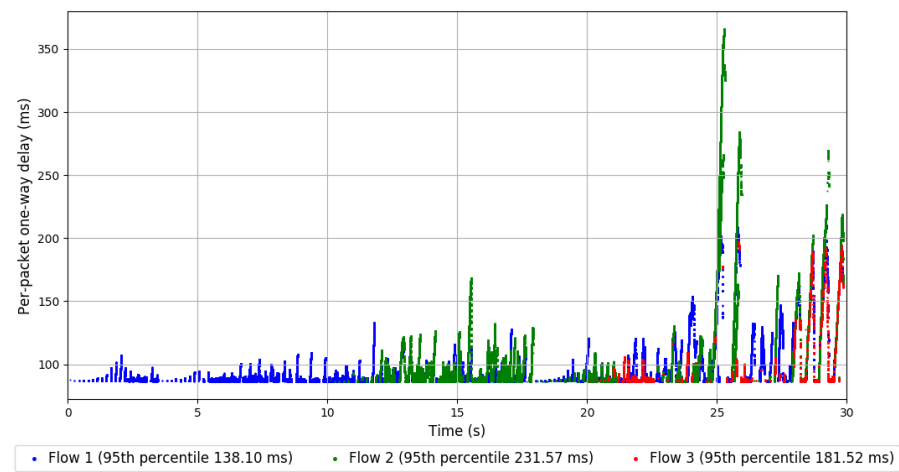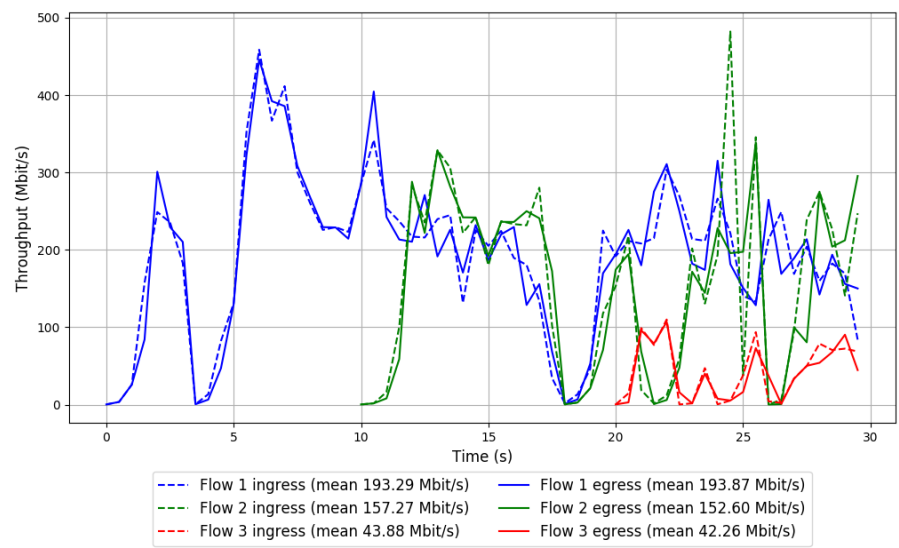
Run 10: Report of Verus — Data Link

Flow 1 ingress (mean 182.55 Mbit/s) --- Flow 1 egress (mean 183.00 Mbit/s) ---
Flow 2 ingress (mean 117.36 Mbit/s) --- Flow 2 egress (mean 117.77 Mbit/s) ---
Flow 3 ingress (mean 82.75 Mbit/s) --- Flow 3 egress (mean 84.23 Mbit/s) ---

Flow 1 (95th percentile 140.70 ms)   Flow 2 (95th percentile 121.51 ms)   Flow 3 (95th percentile 117.75 ms)

223

```
Run 1: Statistics of Copa

Start at: 2017-12-05 21:10:20
End at: 2017-12-05 21:10:50

# Below is generated by plot.py at 2017-12-06 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.63 Mbit/s
95th percentile per-packet one-way delay: 87.116 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 73.30 Mbit/s
95th percentile per-packet one-way delay: 86.836 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 69.18 Mbit/s
95th percentile per-packet one-way delay: 87.254 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 47.07 Mbit/s
95th percentile per-packet one-way delay: 86.822 ms
Loss rate: 3.95%
```
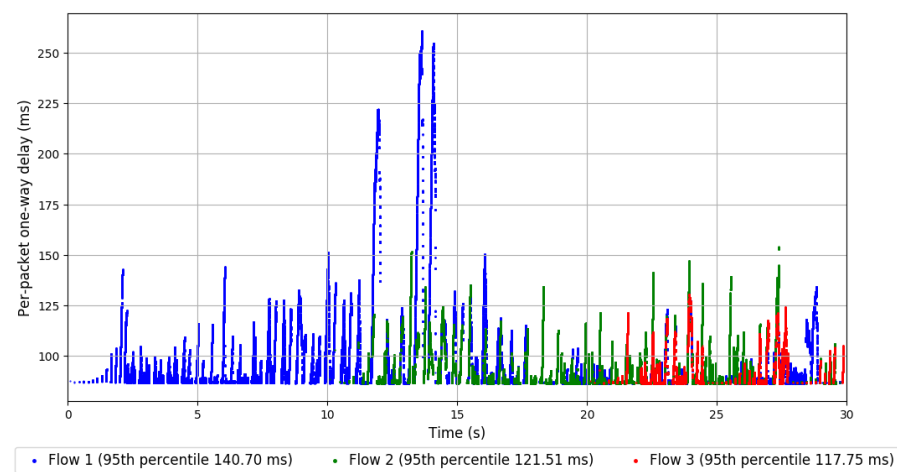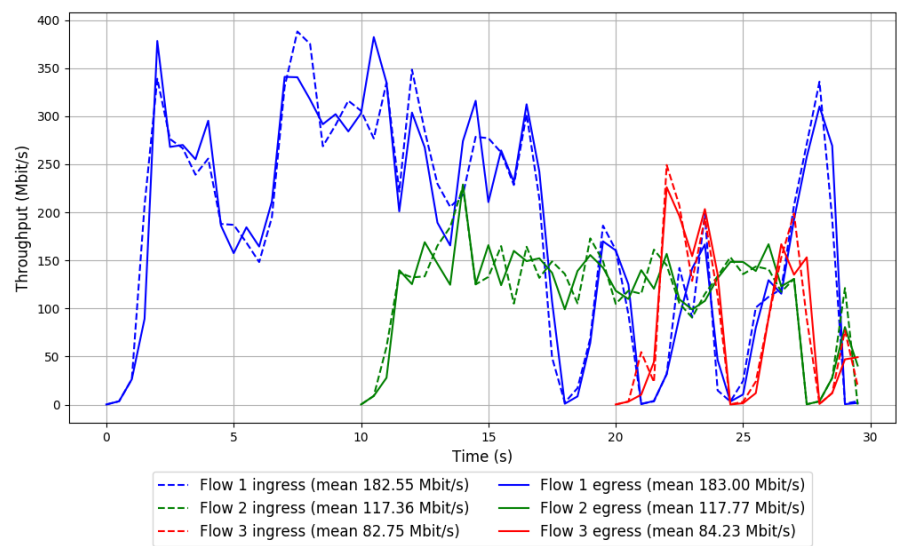
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 73.20 Mbit/s)   Flow 1 egress (mean 73.30 Mbit/s)
Flow 2 ingress (mean 69.30 Mbit/s)   Flow 2 egress (mean 69.18 Mbit/s)
Flow 3 ingress (mean 47.76 Mbit/s)   Flow 3 egress (mean 47.07 Mbit/s)

Flow 1 (95th percentile 86.84 ms)   Flow 2 (95th percentile 87.25 ms)   Flow 3 (95th percentile 86.82 ms)
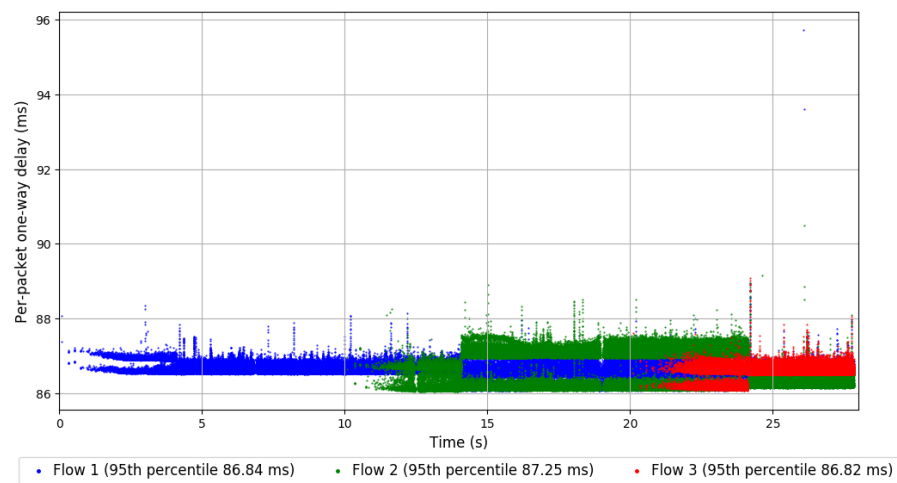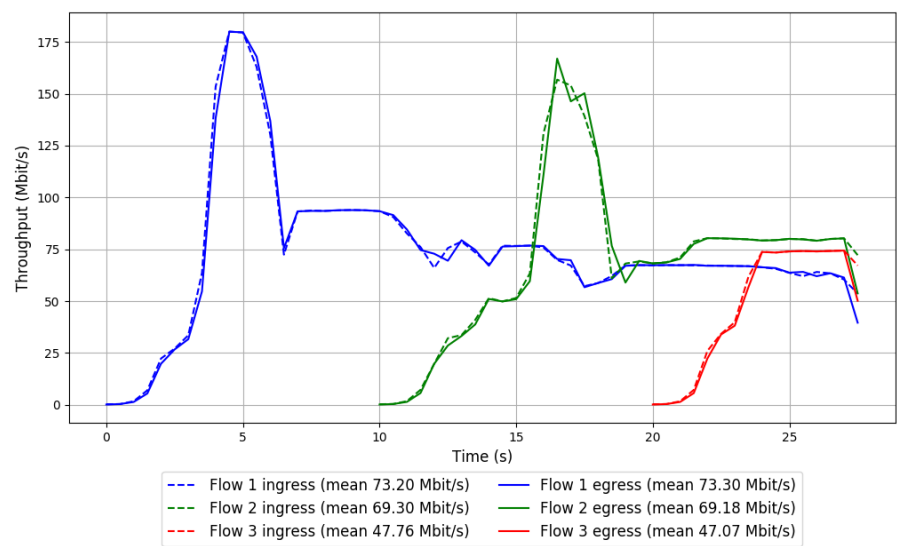
```
Run 2: Statistics of Copa

Start at: 2017-12-05 21:23:45
End at: 2017-12-05 21:24:15


# Below is generated by plot.py at 2017-12-06 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 121.22 Mbit/s
95th percentile per-packet one-way delay: 87.390 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 82.39 Mbit/s
95th percentile per-packet one-way delay: 86.969 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 51.76 Mbit/s
95th percentile per-packet one-way delay: 87.604 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 20.60 Mbit/s
95th percentile per-packet one-way delay: 87.713 ms
Loss rate: 4.98%
```
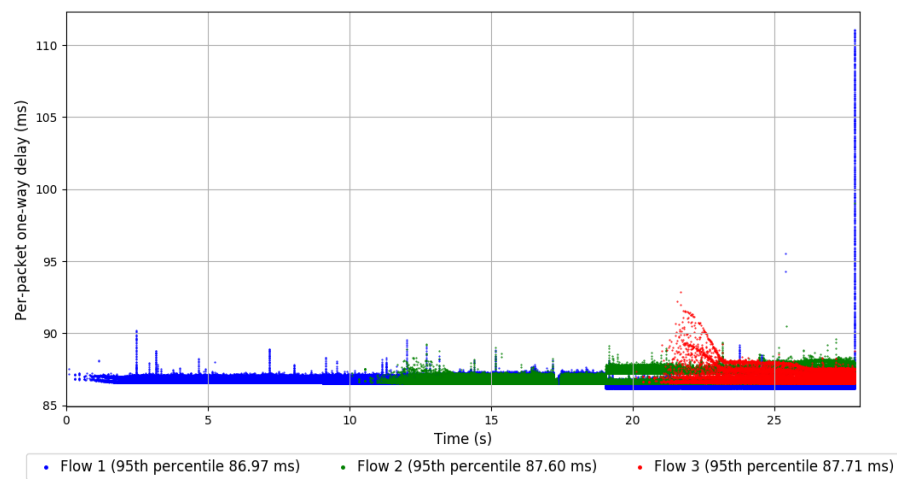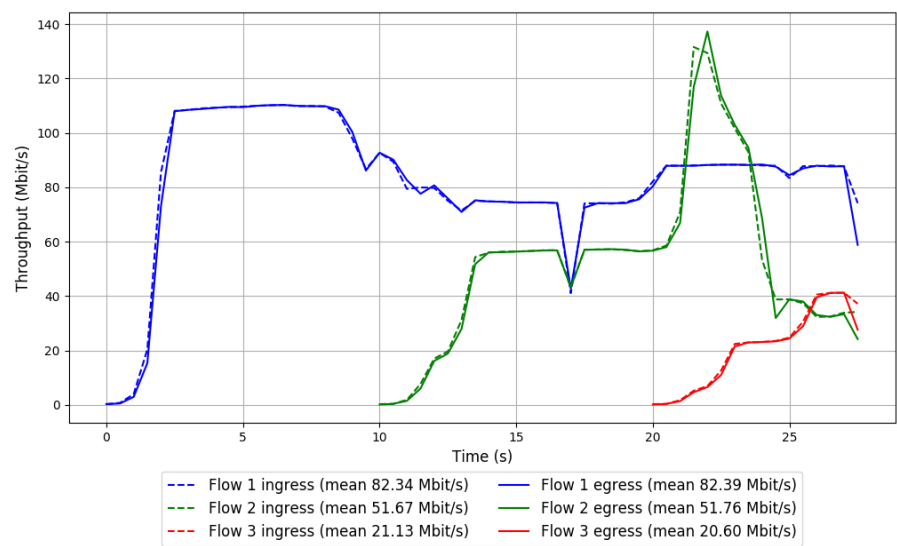
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2017-12-05 21:37:35
End at: 2017-12-05 21:38:05

# Below is generated by plot.py at 2017-12-06 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.45 Mbit/s
95th percentile per-packet one-way delay: 87.188 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 72.06 Mbit/s
95th percentile per-packet one-way delay: 87.209 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 61.14 Mbit/s
95th percentile per-packet one-way delay: 86.929 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 22.63 Mbit/s
95th percentile per-packet one-way delay: 87.622 ms
Loss rate: 3.94%
```

Run 3: Report of Copa — Data Link

- - - Flow 1 ingress (mean 71.77 Mbit/s) —— Flow 1 egress (mean 72.06 Mbit/s)
- - - Flow 2 ingress (mean 61.11 Mbit/s) —— Flow 2 egress (mean 61.14 Mbit/s)
- - - Flow 3 ingress (mean 22.96 Mbit/s) —— Flow 3 egress (mean 22.63 Mbit/s)

• Flow 1 (95th percentile 87.21 ms) • Flow 2 (95th percentile 86.93 ms) • Flow 3 (95th percentile 87.62 ms)

229

```
Run 4: Statistics of Copa

Start at: 2017-12-05 21:51:09
End at: 2017-12-05 21:51:39


# Below is generated by plot.py at 2017-12-06 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 128.77 Mbit/s
95th percentile per-packet one-way delay: 87.019 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 83.18 Mbit/s
95th percentile per-packet one-way delay: 86.813 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 56.78 Mbit/s
95th percentile per-packet one-way delay: 87.172 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 33.35 Mbit/s
95th percentile per-packet one-way delay: 87.008 ms
Loss rate: 10.88%
```
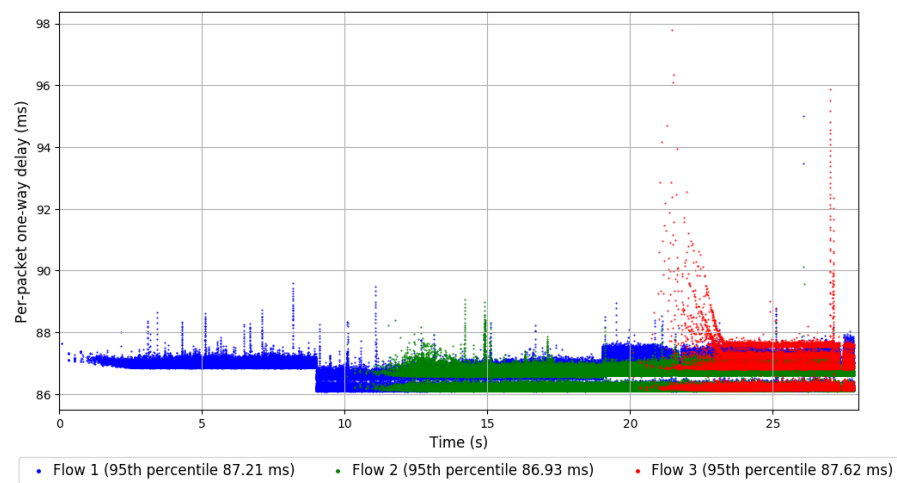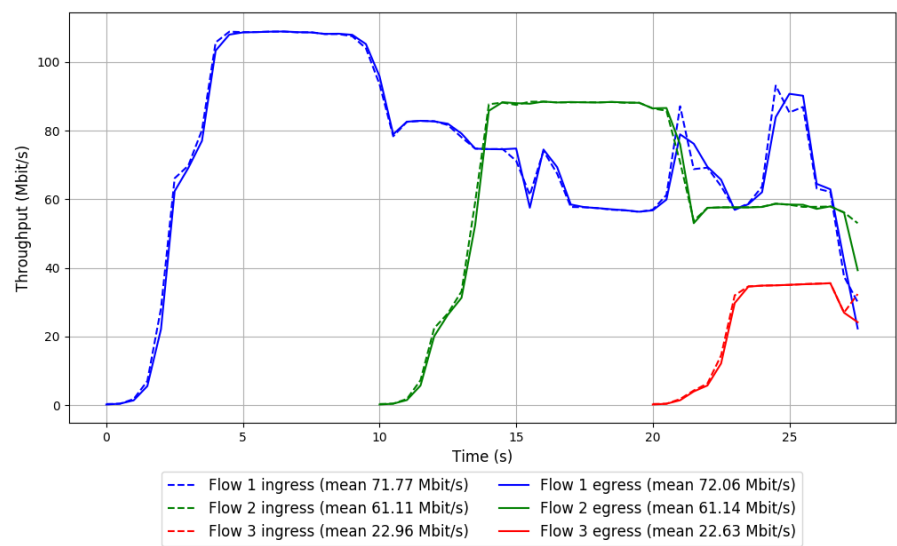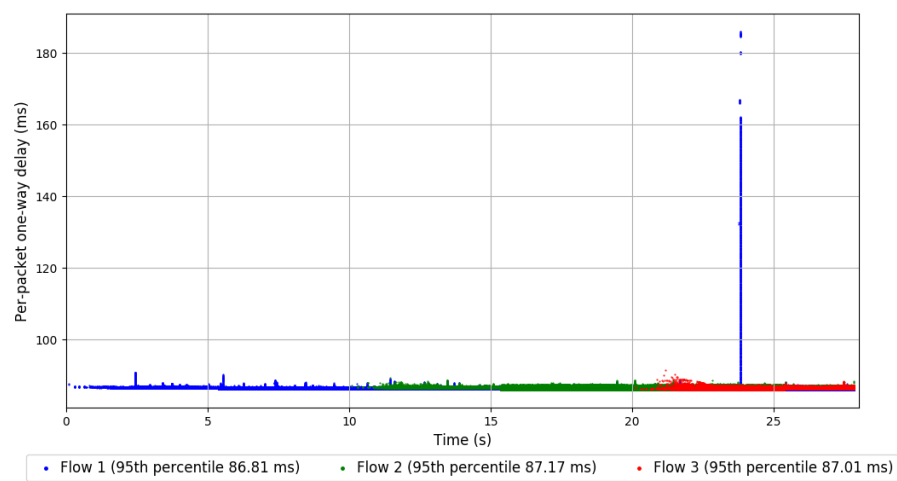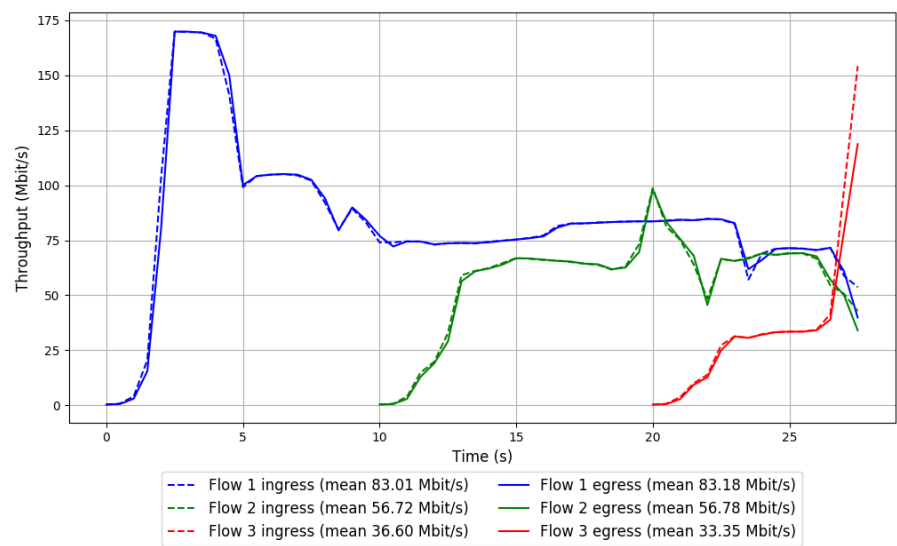
Run 4: Report of Copa — Data Link

- - - Flow 1 ingress (mean 83.01 Mbit/s) —— Flow 1 egress (mean 83.18 Mbit/s)
- - - Flow 2 ingress (mean 56.72 Mbit/s) —— Flow 2 egress (mean 56.78 Mbit/s)
- - - Flow 3 ingress (mean 36.60 Mbit/s) —— Flow 3 egress (mean 33.35 Mbit/s)

• Flow 1 (95th percentile 86.81 ms)   • Flow 2 (95th percentile 87.17 ms)   • Flow 3 (95th percentile 87.01 ms)

231

```
Run 5: Statistics of Copa

Start at: 2017-12-05 22:05:07
End at: 2017-12-05 22:05:37

# Below is generated by plot.py at 2017-12-06 02:24:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 122.66 Mbit/s
95th percentile per-packet one-way delay: 86.852 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 73.95 Mbit/s
95th percentile per-packet one-way delay: 86.801 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 56.18 Mbit/s
95th percentile per-packet one-way delay: 86.853 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 46.09 Mbit/s
95th percentile per-packet one-way delay: 87.247 ms
Loss rate: 3.06%
```
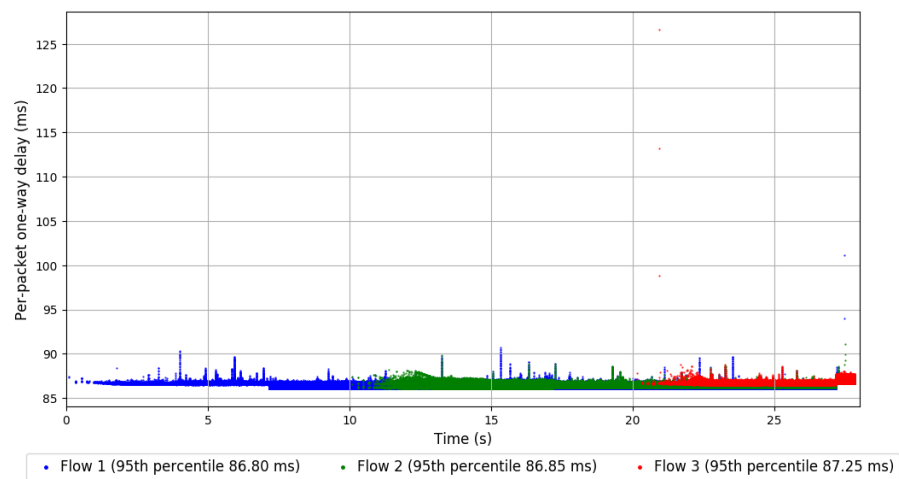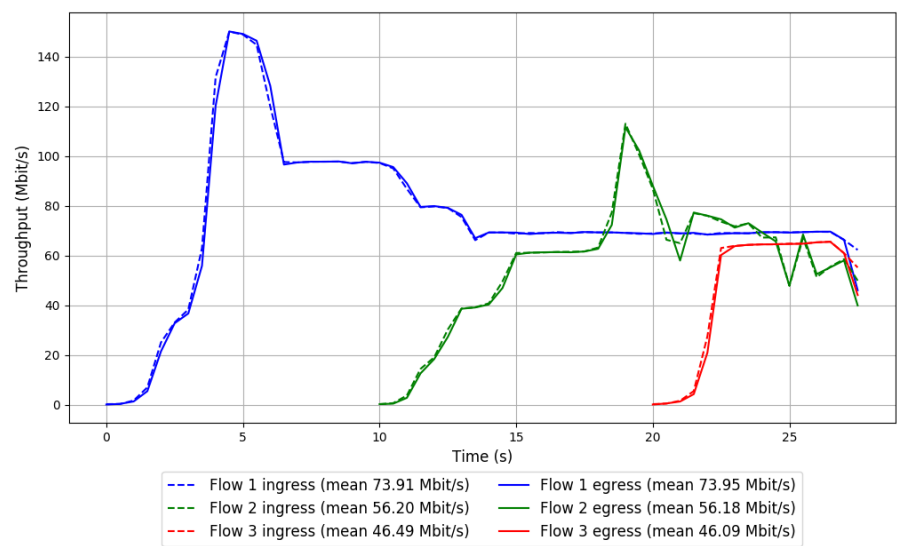
Run 5: Report of Copa — Data Link

- - - Flow 1 ingress (mean 73.91 Mbit/s)   —— Flow 1 egress (mean 73.95 Mbit/s)
- - - Flow 2 ingress (mean 56.20 Mbit/s)   —— Flow 2 egress (mean 56.18 Mbit/s)
- - - Flow 3 ingress (mean 46.49 Mbit/s)   —— Flow 3 egress (mean 46.09 Mbit/s)

- Flow 1 (95th percentile 86.80 ms)   • Flow 2 (95th percentile 86.85 ms)   • Flow 3 (95th percentile 87.25 ms)

```
Run 6: Statistics of Copa

Start at: 2017-12-05 22:18:31
End at: 2017-12-05 22:19:01


# Below is generated by plot.py at 2017-12-06 02:27:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 145.41 Mbit/s
95th percentile per-packet one-way delay: 86.857 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 76.17 Mbit/s
95th percentile per-packet one-way delay: 86.805 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 77.31 Mbit/s
95th percentile per-packet one-way delay: 86.798 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 71.16 Mbit/s
95th percentile per-packet one-way delay: 87.004 ms
Loss rate: 2.55%
```
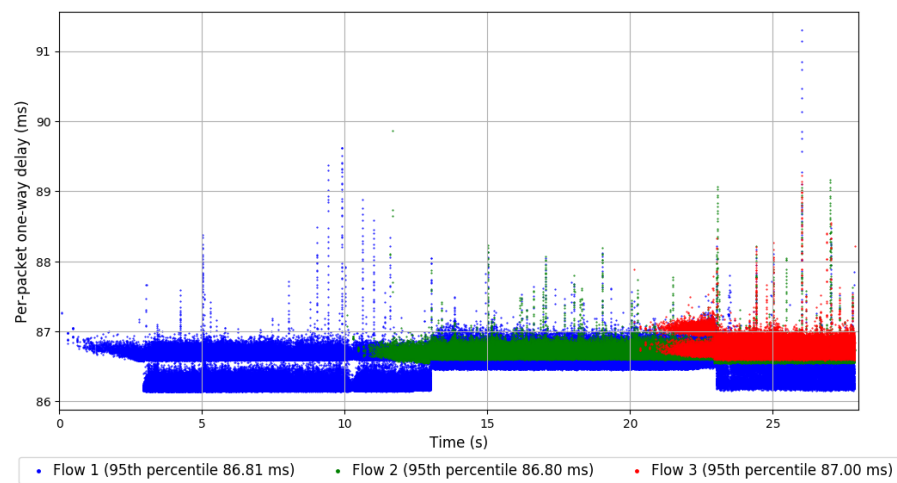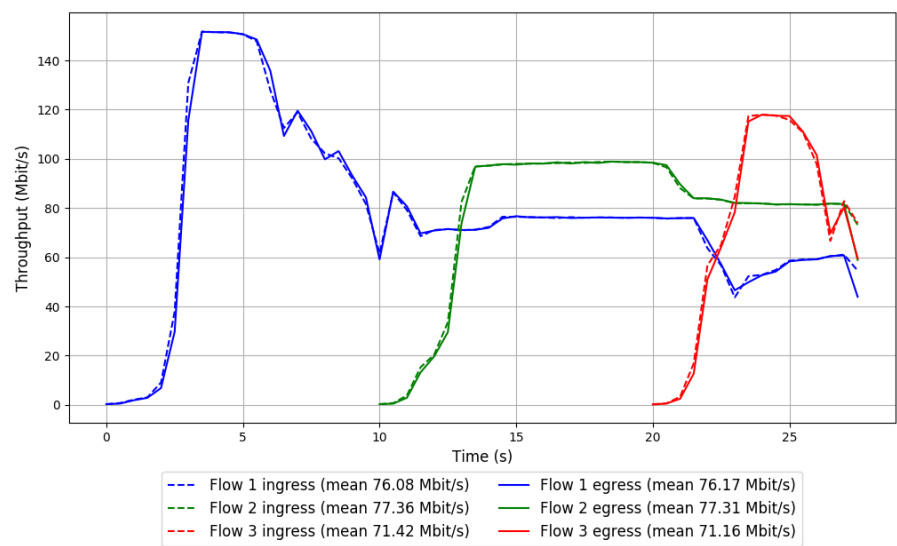
Run 6: Report of Copa — Data Link

Flow 1 ingress (mean 76.08 Mbit/s) — Flow 1 egress (mean 76.17 Mbit/s)
Flow 2 ingress (mean 77.36 Mbit/s) — Flow 2 egress (mean 77.31 Mbit/s)
Flow 3 ingress (mean 71.42 Mbit/s) — Flow 3 egress (mean 71.16 Mbit/s)

Flow 1 (95th percentile 86.81 ms) · Flow 2 (95th percentile 86.80 ms) · Flow 3 (95th percentile 87.00 ms)

```
Run 7: Statistics of Copa

Start at: 2017-12-05 22:31:54
End at: 2017-12-05 22:32:24

# Below is generated by plot.py at 2017-12-06 02:27:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.57 Mbit/s
95th percentile per-packet one-way delay: 86.976 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 80.86 Mbit/s
95th percentile per-packet one-way delay: 86.936 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 61.16 Mbit/s
95th percentile per-packet one-way delay: 86.932 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 56.02 Mbit/s
95th percentile per-packet one-way delay: 87.105 ms
Loss rate: 3.19%
```
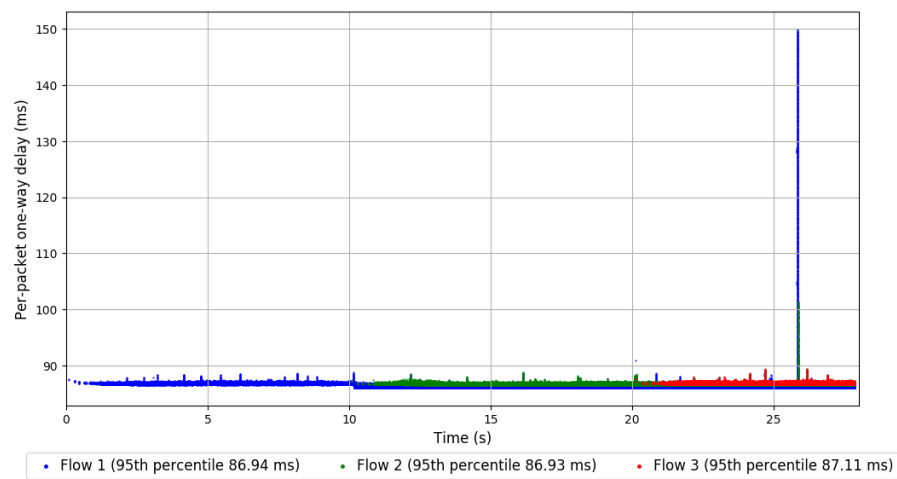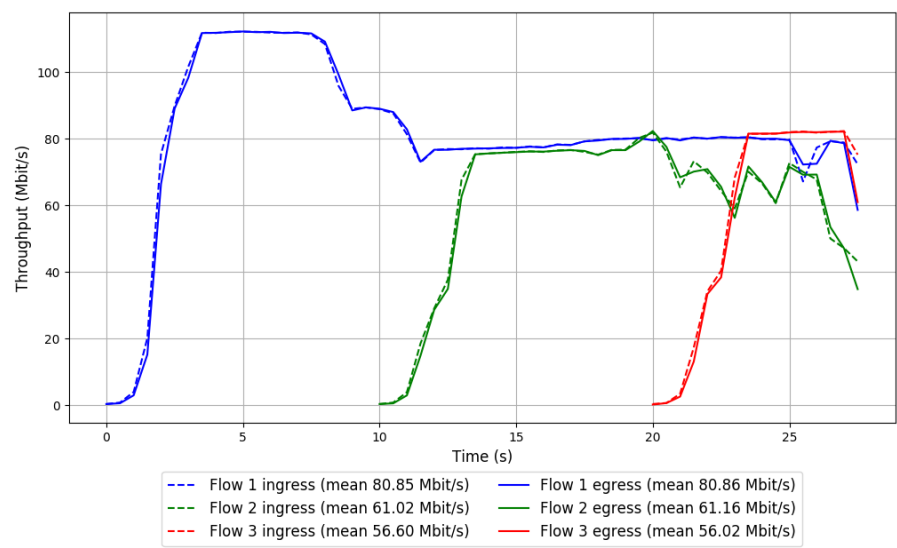
Run 7: Report of Copa — Data Link

```
Run 8: Statistics of Copa

Start at: 2017-12-05 22:45:14
End at: 2017-12-05 22:45:44


# Below is generated by plot.py at 2017-12-06 02:27:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.45 Mbit/s
95th percentile per-packet one-way delay: 87.205 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 71.49 Mbit/s
95th percentile per-packet one-way delay: 87.311 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 61.95 Mbit/s
95th percentile per-packet one-way delay: 86.967 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 69.17 Mbit/s
95th percentile per-packet one-way delay: 86.759 ms
Loss rate: 2.51%
```
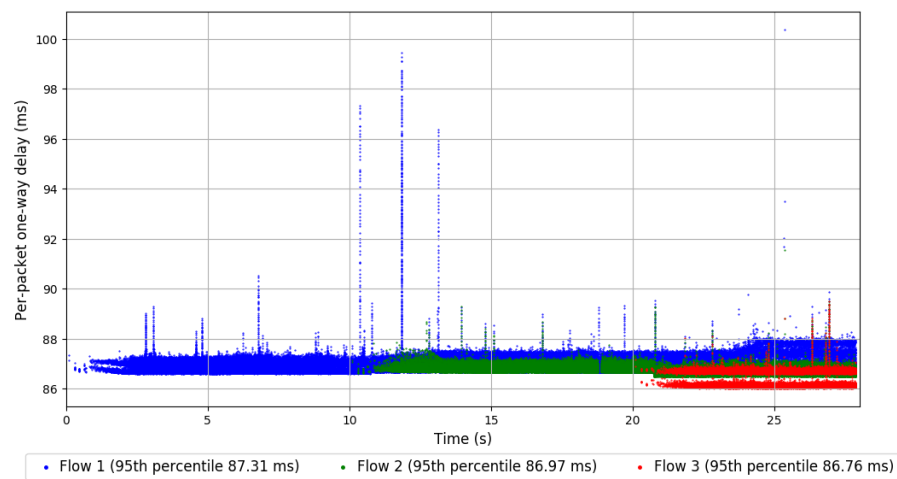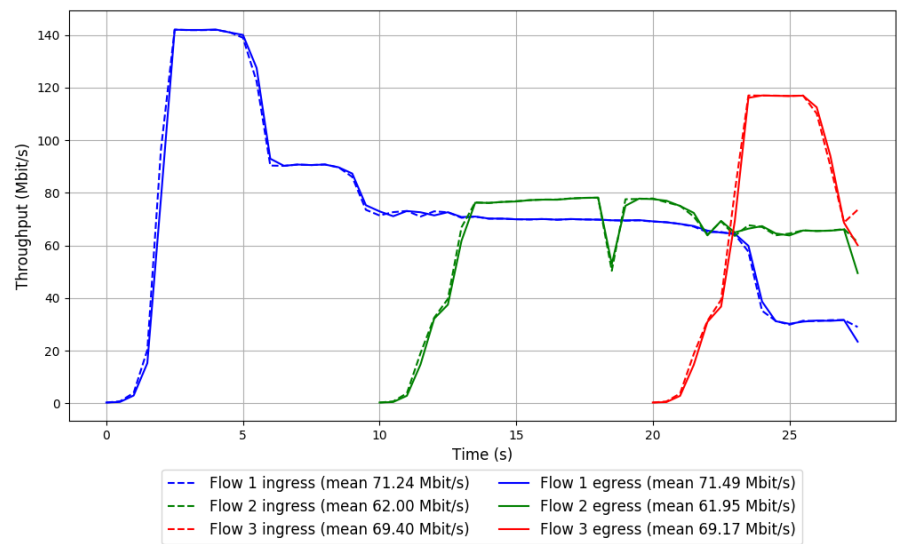
Run 8: Report of Copa — Data Link

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```
Run 9: Statistics of Copa

Start at: 2017-12-05 22:58:31
End at: 2017-12-05 22:59:01


# Below is generated by plot.py at 2017-12-06 02:27:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.58 Mbit/s
95th percentile per-packet one-way delay: 87.136 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 65.12 Mbit/s
95th percentile per-packet one-way delay: 87.088 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 75.04 Mbit/s
95th percentile per-packet one-way delay: 87.185 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 26.68 Mbit/s
95th percentile per-packet one-way delay: 87.326 ms
Loss rate: 3.12%
```
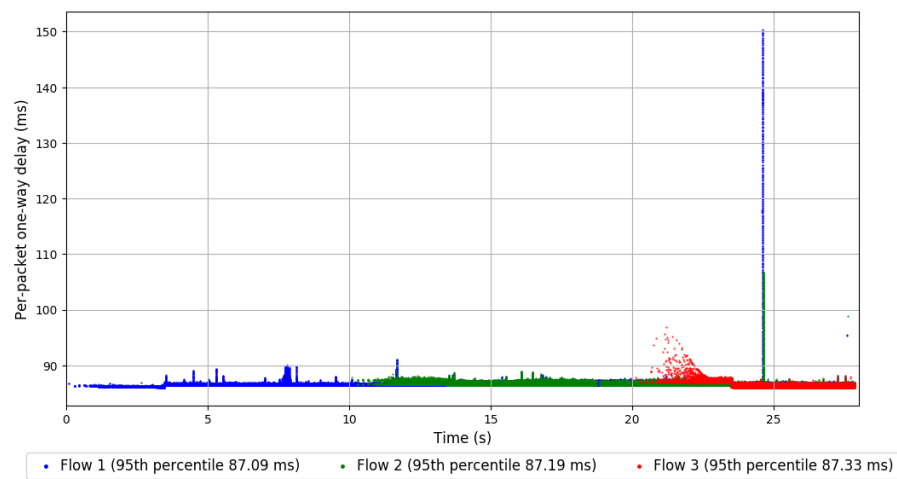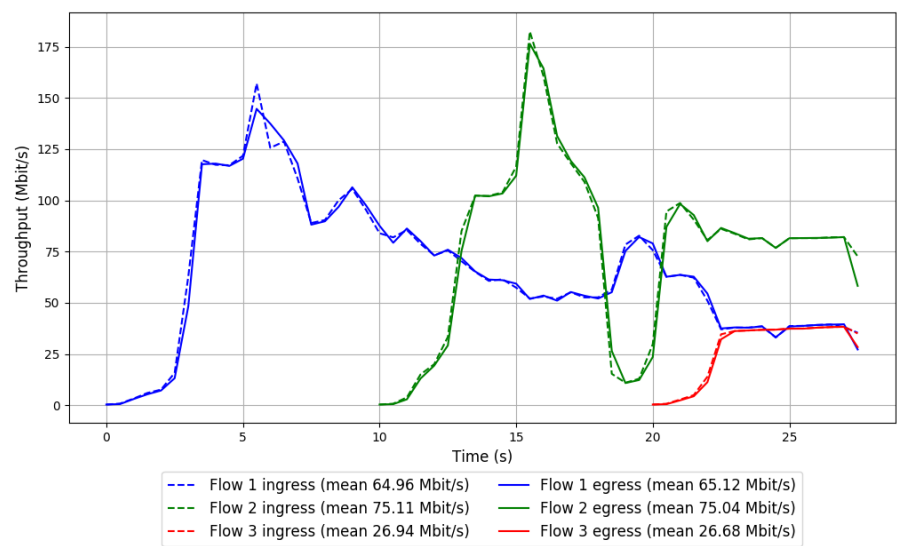
Run 9: Report of Copa — Data Link

Flow 1 ingress (mean 64.96 Mbit/s)   Flow 1 egress (mean 65.12 Mbit/s)
Flow 2 ingress (mean 75.11 Mbit/s)   Flow 2 egress (mean 75.04 Mbit/s)
Flow 3 ingress (mean 26.94 Mbit/s)   Flow 3 egress (mean 26.68 Mbit/s)

Flow 1 (95th percentile 87.09 ms)   Flow 2 (95th percentile 87.19 ms)   Flow 3 (95th percentile 87.33 ms)

```
Run 10: Statistics of Copa

Start at: 2017-12-05 23:12:09
End at: 2017-12-05 23:12:39

# Below is generated by plot.py at 2017-12-06 02:27:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.98 Mbit/s
95th percentile per-packet one-way delay: 86.861 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 75.60 Mbit/s
95th percentile per-packet one-way delay: 86.868 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 69.60 Mbit/s
95th percentile per-packet one-way delay: 86.751 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 38.91 Mbit/s
95th percentile per-packet one-way delay: 87.104 ms
Loss rate: 3.26%
```
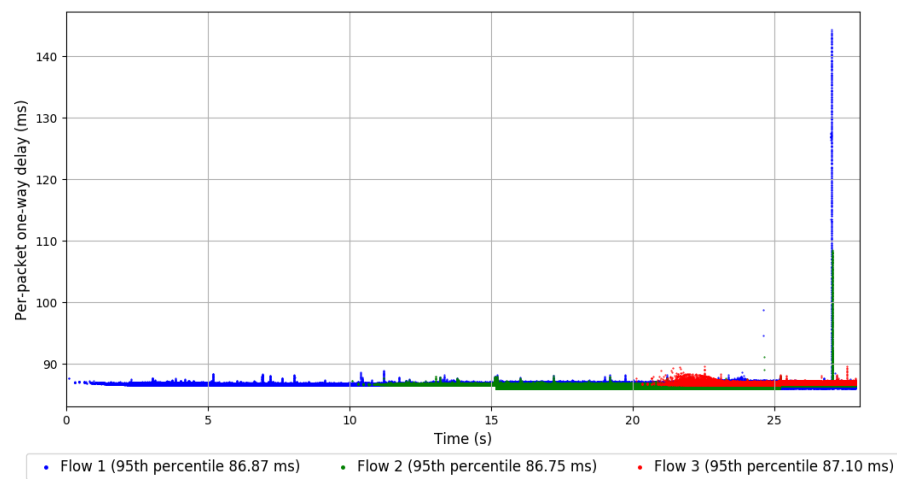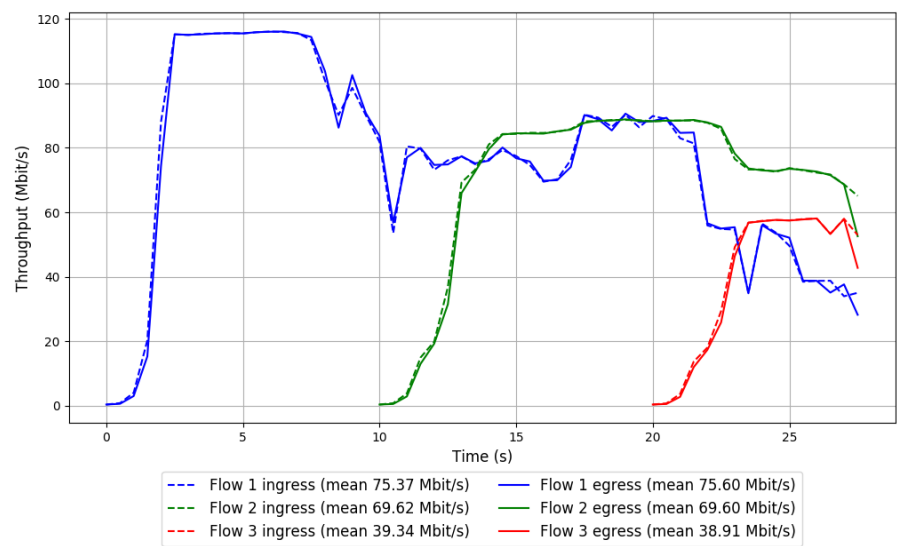
Run 10: Report of Copa — Data Link

Flow 1 ingress (mean 75.37 Mbit/s)   Flow 1 egress (mean 75.60 Mbit/s)
Flow 2 ingress (mean 69.62 Mbit/s)   Flow 2 egress (mean 69.60 Mbit/s)
Flow 3 ingress (mean 39.34 Mbit/s)   Flow 3 egress (mean 38.91 Mbit/s)

Flow 1 (95th percentile 86.87 ms)   Flow 2 (95th percentile 86.75 ms)   Flow 3 (95th percentile 87.10 ms)
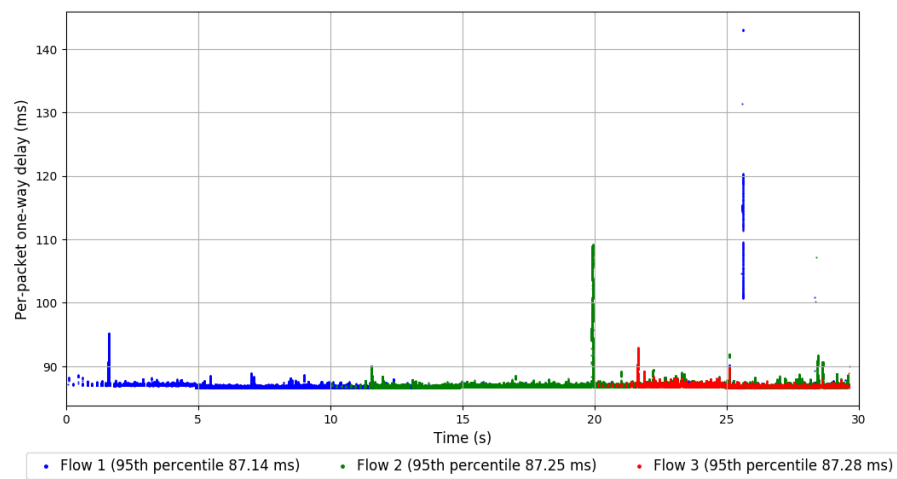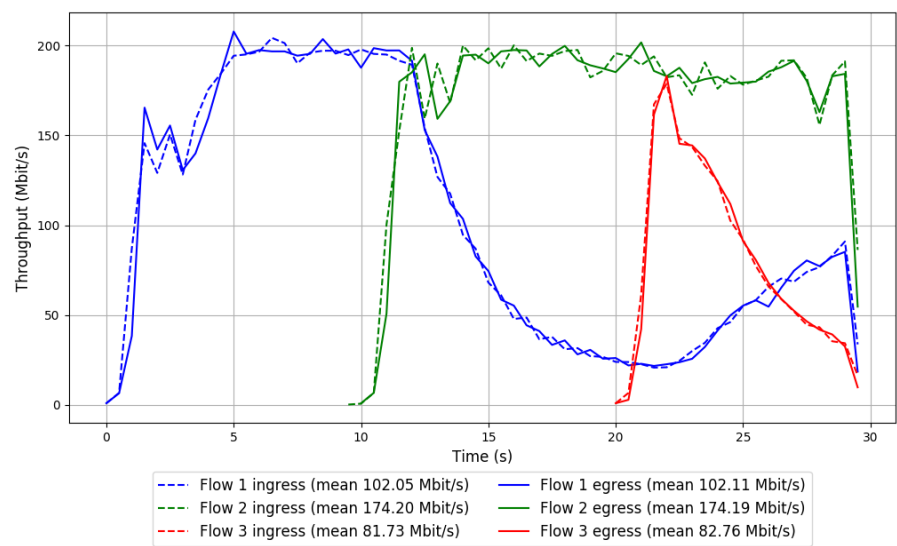
```
Run 1: Statistics of Indigo

Start at: 2017-12-05 21:11:21
End at: 2017-12-05 21:11:51


# Below is generated by plot.py at 2017-12-06 02:28:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 244.07 Mbit/s
95th percentile per-packet one-way delay: 87.204 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 102.11 Mbit/s
95th percentile per-packet one-way delay: 87.135 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 174.19 Mbit/s
95th percentile per-packet one-way delay: 87.246 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 82.76 Mbit/s
95th percentile per-packet one-way delay: 87.277 ms
Loss rate: 0.83%
```

Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2017-12-05 21:24:44
End at: 2017-12-05 21:25:14

# Below is generated by plot.py at 2017-12-06 02:30:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.99 Mbit/s
95th percentile per-packet one-way delay: 87.309 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 170.88 Mbit/s
95th percentile per-packet one-way delay: 86.940 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 163.36 Mbit/s
95th percentile per-packet one-way delay: 87.639 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 133.81 Mbit/s
95th percentile per-packet one-way delay: 87.992 ms
Loss rate: 1.94%
```
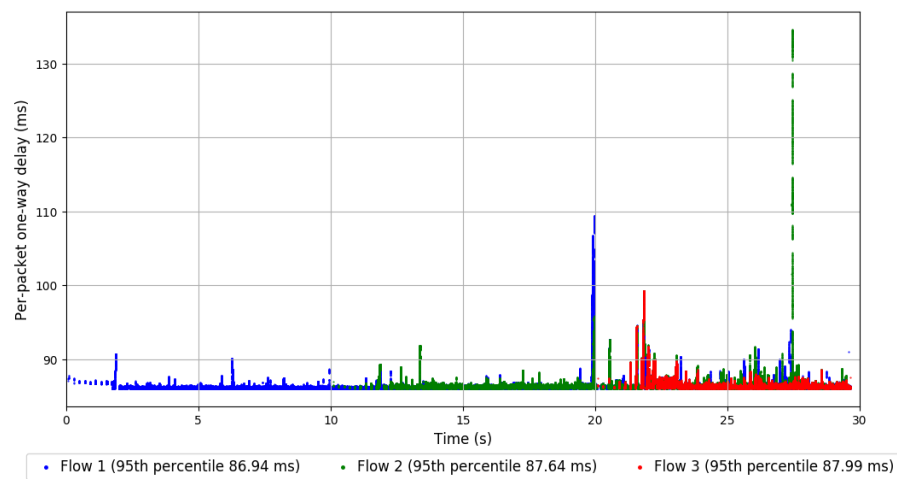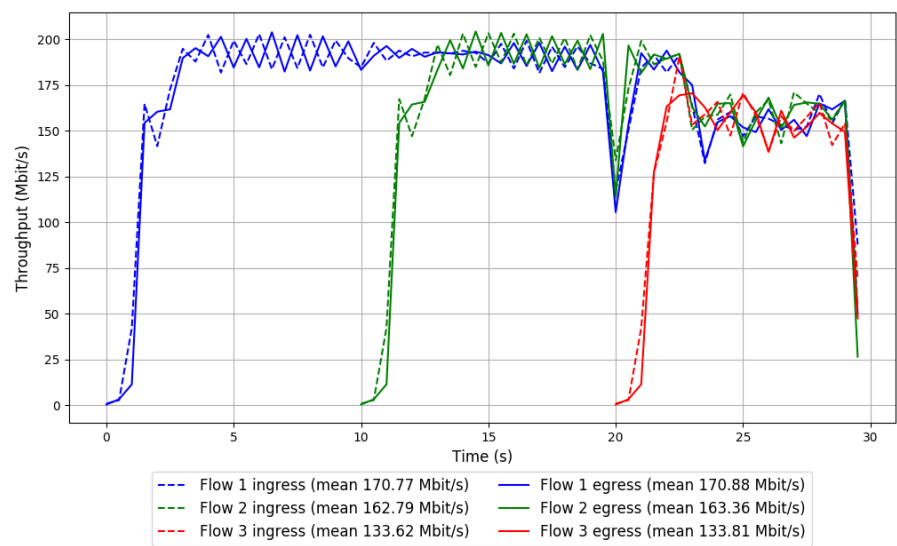
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2017-12-05 21:38:34
End at: 2017-12-05 21:39:04

# Below is generated by plot.py at 2017-12-06 02:30:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 319.31 Mbit/s
95th percentile per-packet one-way delay: 87.431 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 170.16 Mbit/s
95th percentile per-packet one-way delay: 87.292 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 155.36 Mbit/s
95th percentile per-packet one-way delay: 87.509 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 144.38 Mbit/s
95th percentile per-packet one-way delay: 87.613 ms
Loss rate: 2.25%
```
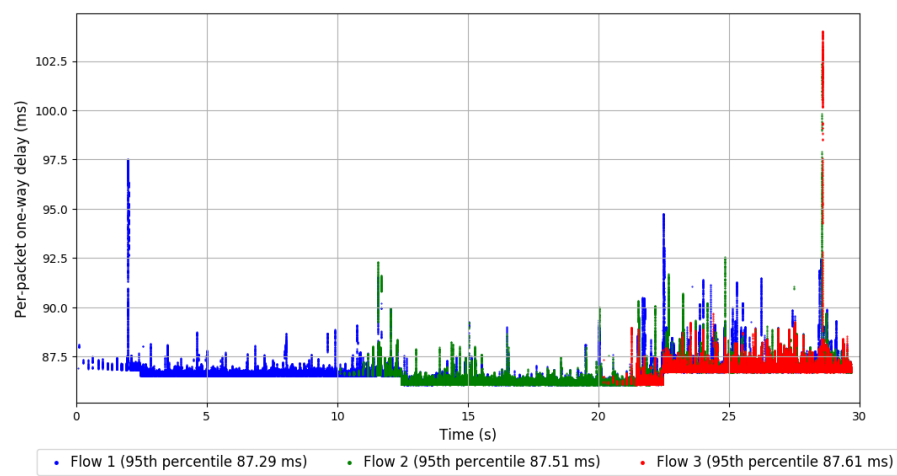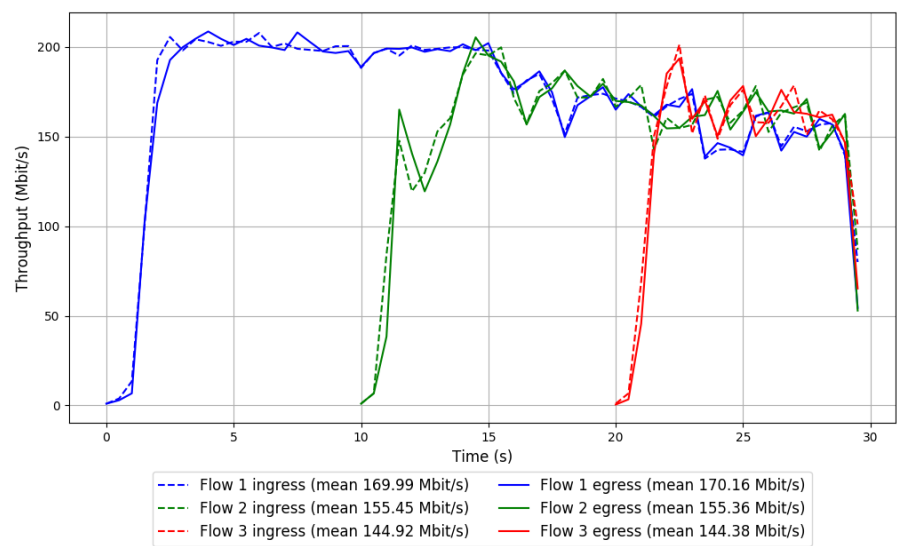
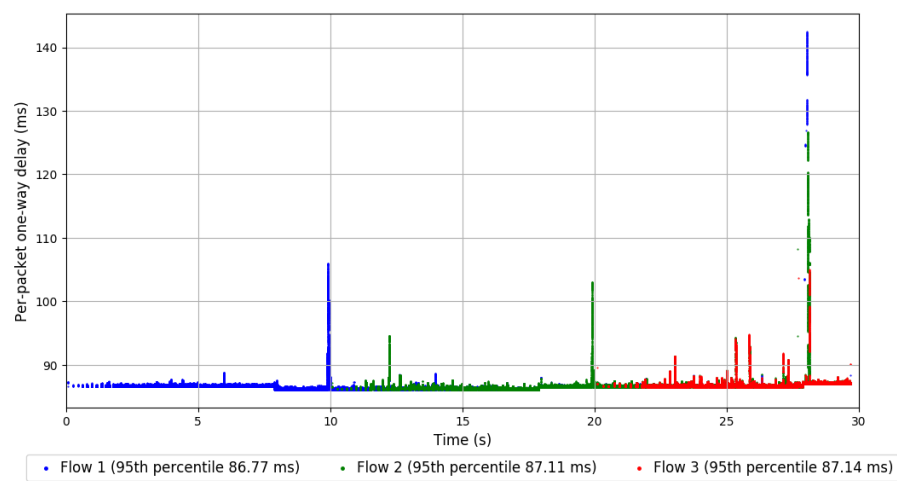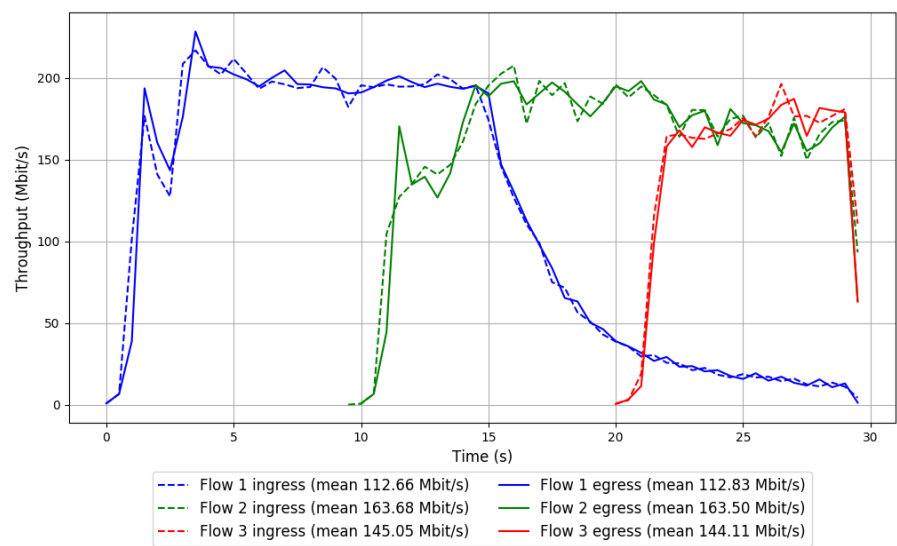# Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2017-12-05 21:52:08
End at: 2017-12-05 21:52:38

# Below is generated by plot.py at 2017-12-06 02:31:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 267.69 Mbit/s
95th percentile per-packet one-way delay: 87.079 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 112.83 Mbit/s
95th percentile per-packet one-way delay: 86.768 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 163.50 Mbit/s
95th percentile per-packet one-way delay: 87.105 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 144.11 Mbit/s
95th percentile per-packet one-way delay: 87.140 ms
Loss rate: 2.70%
```

Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2017-12-05 22:06:06
End at: 2017-12-05 22:06:36

# Below is generated by plot.py at 2017-12-06 02:32:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.96 Mbit/s
95th percentile per-packet one-way delay: 88.153 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 173.62 Mbit/s
95th percentile per-packet one-way delay: 87.557 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 157.31 Mbit/s
95th percentile per-packet one-way delay: 89.101 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 139.86 Mbit/s
95th percentile per-packet one-way delay: 88.624 ms
Loss rate: 2.35%
```
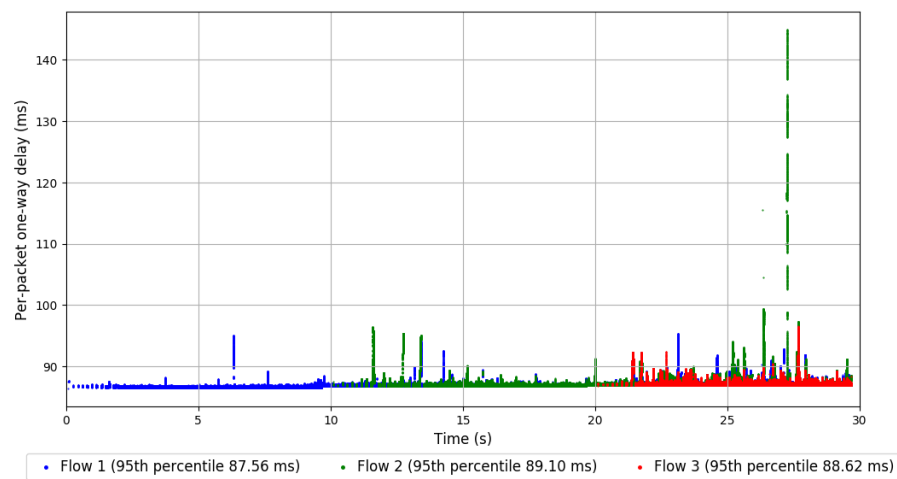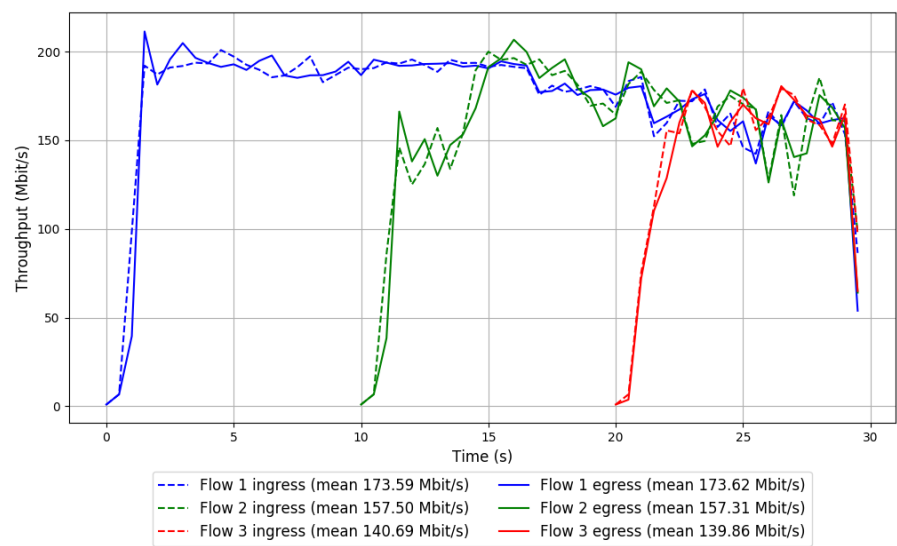
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2017-12-05 22:19:30
End at: 2017-12-05 22:20:00

# Below is generated by plot.py at 2017-12-06 02:32:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 312.93 Mbit/s
95th percentile per-packet one-way delay: 87.420 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 170.76 Mbit/s
95th percentile per-packet one-way delay: 87.204 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 152.51 Mbit/s
95th percentile per-packet one-way delay: 87.709 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 129.44 Mbit/s
95th percentile per-packet one-way delay: 87.618 ms
Loss rate: 2.13%
```
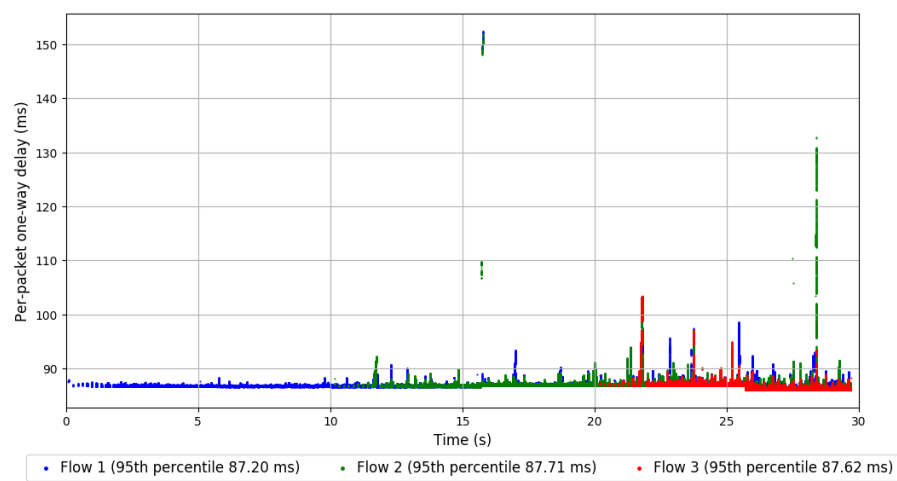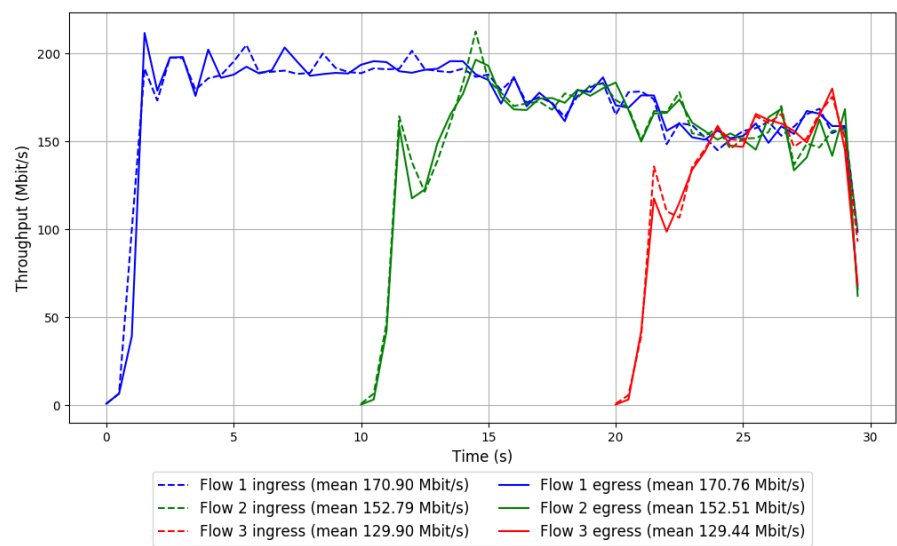
Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2017-12-05 22:32:52
End at: 2017-12-05 22:33:22

# Below is generated by plot.py at 2017-12-06 02:32:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.62 Mbit/s
95th percentile per-packet one-way delay: 87.167 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 170.66 Mbit/s
95th percentile per-packet one-way delay: 87.030 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 154.29 Mbit/s
95th percentile per-packet one-way delay: 87.424 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 138.54 Mbit/s
95th percentile per-packet one-way delay: 87.218 ms
Loss rate: 2.05%
```
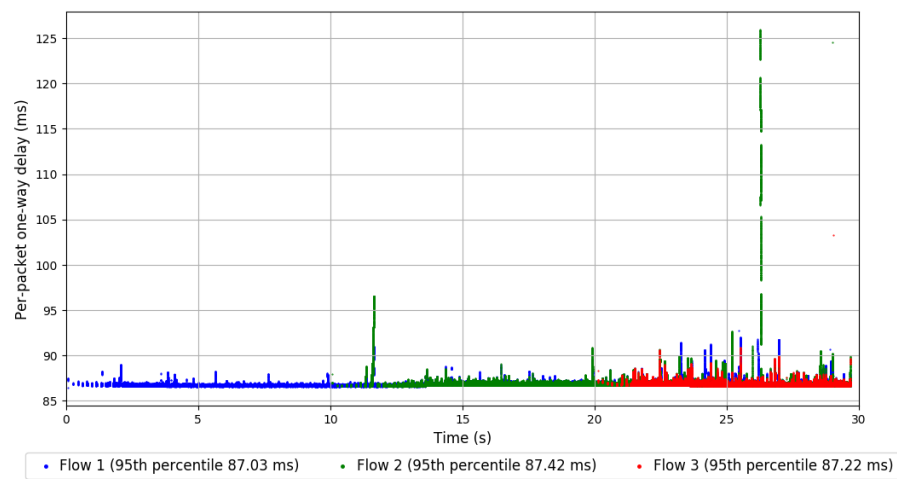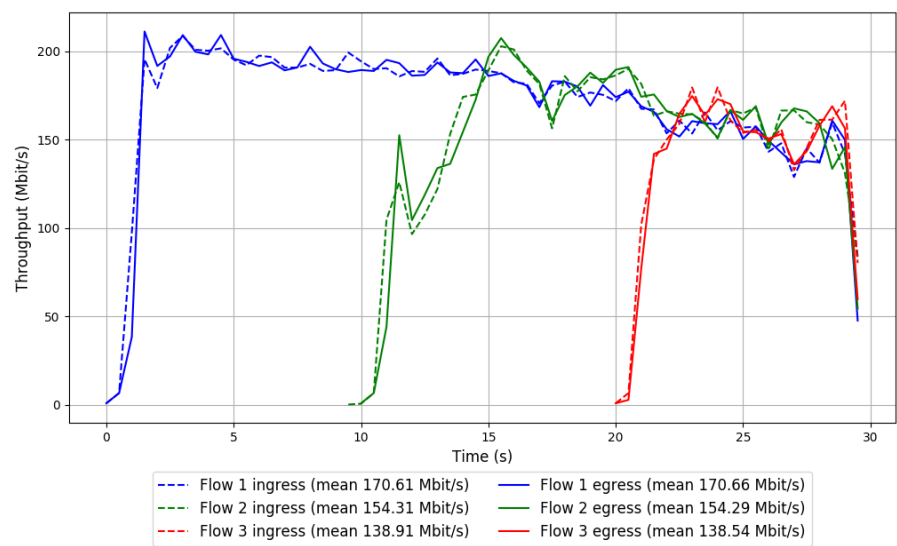
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2017-12-05 22:46:12
End at: 2017-12-05 22:46:42

# Below is generated by plot.py at 2017-12-06 02:33:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.69 Mbit/s
95th percentile per-packet one-way delay: 87.769 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 168.32 Mbit/s
95th percentile per-packet one-way delay: 87.422 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 163.25 Mbit/s
95th percentile per-packet one-way delay: 88.026 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 144.01 Mbit/s
95th percentile per-packet one-way delay: 88.356 ms
Loss rate: 1.56%
```
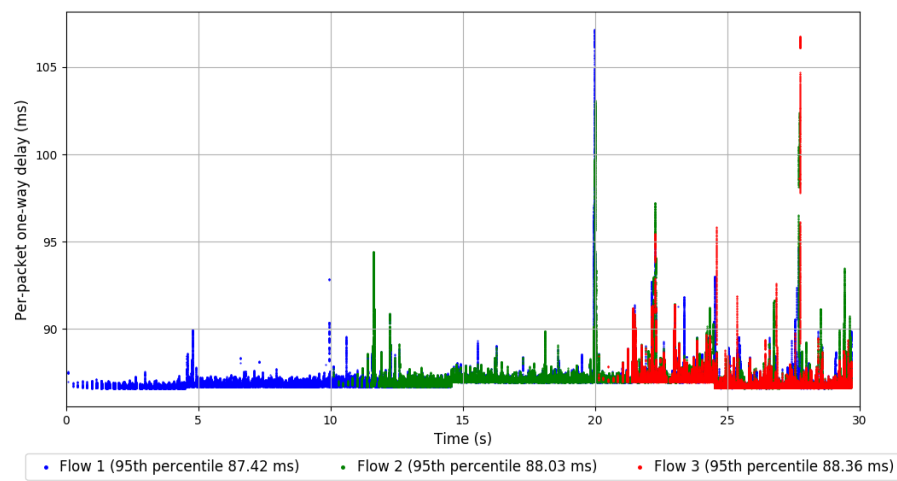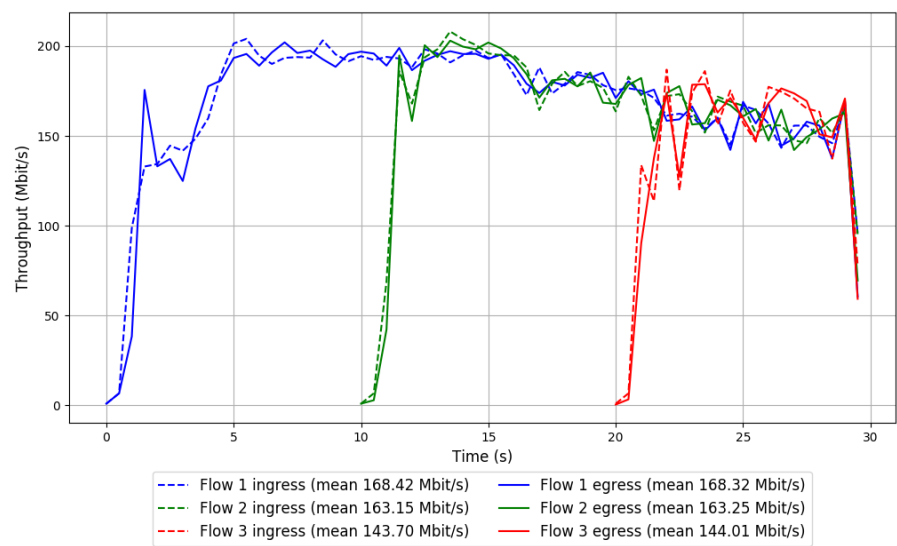
Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2017-12-05 22:59:28
End at: 2017-12-05 22:59:58

# Below is generated by plot.py at 2017-12-06 02:34:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 319.27 Mbit/s
95th percentile per-packet one-way delay: 87.217 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 168.95 Mbit/s
95th percentile per-packet one-way delay: 87.040 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 156.82 Mbit/s
95th percentile per-packet one-way delay: 87.567 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 143.71 Mbit/s
95th percentile per-packet one-way delay: 87.300 ms
Loss rate: 2.14%
```
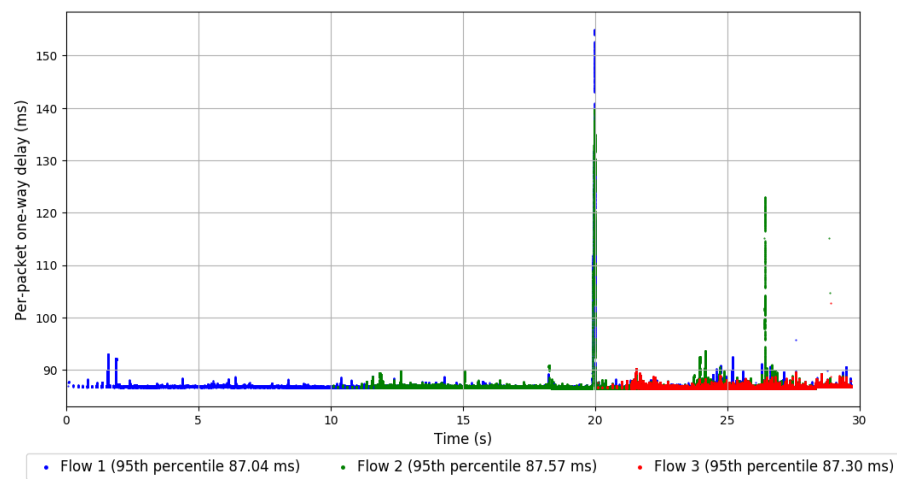
Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2017-12-05 23:13:07
End at: 2017-12-05 23:13:37

# Below is generated by plot.py at 2017-12-06 02:35:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.69 Mbit/s
95th percentile per-packet one-way delay: 87.659 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 169.65 Mbit/s
95th percentile per-packet one-way delay: 87.215 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 160.85 Mbit/s
95th percentile per-packet one-way delay: 88.226 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 150.02 Mbit/s
95th percentile per-packet one-way delay: 87.739 ms
Loss rate: 1.39%
```
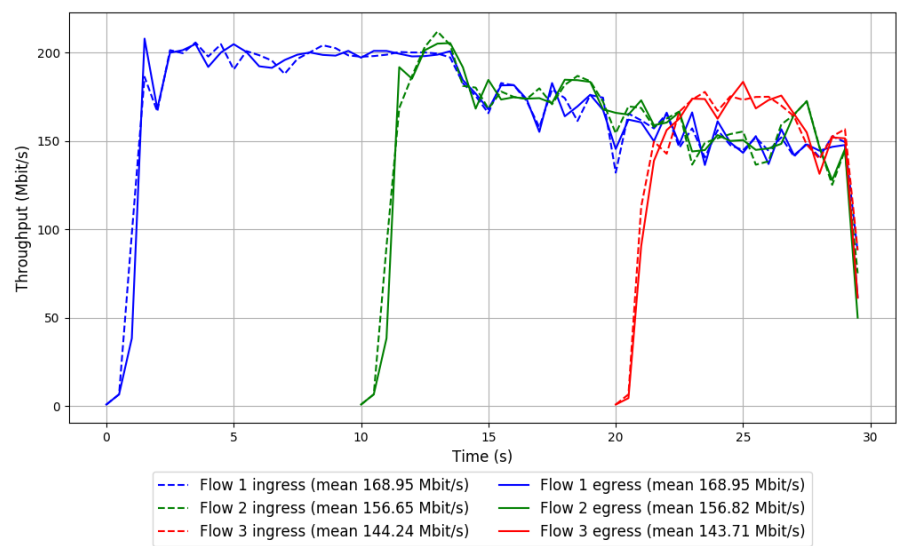
Run 10: Report of Indigo — Data Link

- Flow 1 ingress (mean 169.75 Mbit/s)
- Flow 1 egress (mean 169.65 Mbit/s)
- Flow 2 ingress (mean 161.07 Mbit/s)
- Flow 2 egress (mean 160.85 Mbit/s)
- Flow 3 ingress (mean 149.43 Mbit/s)
- Flow 3 egress (mean 150.02 Mbit/s)

- Flow 1 (95th percentile 87.22 ms)
- Flow 2 (95th percentile 88.23 ms)
- Flow 3 (95th percentile 87.74 ms)

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```
Run 1: Statistics of Indigo-calib

Start at: 2017-12-05 21:19:32
End at: 2017-12-05 21:20:02

# Below is generated by plot.py at 2017-12-06 02:35:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.07 Mbit/s
95th percentile per-packet one-way delay: 87.635 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 171.09 Mbit/s
95th percentile per-packet one-way delay: 87.574 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 159.62 Mbit/s
95th percentile per-packet one-way delay: 87.782 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 127.74 Mbit/s
95th percentile per-packet one-way delay: 87.518 ms
Loss rate: 2.49%
```
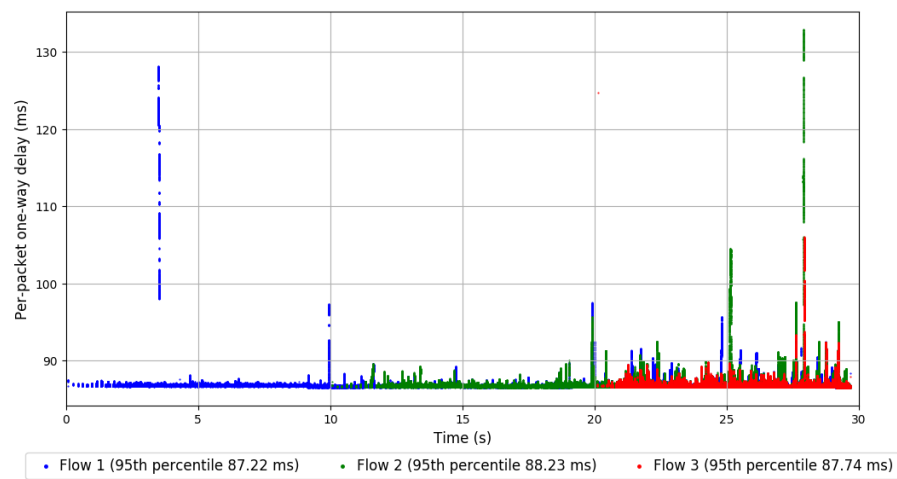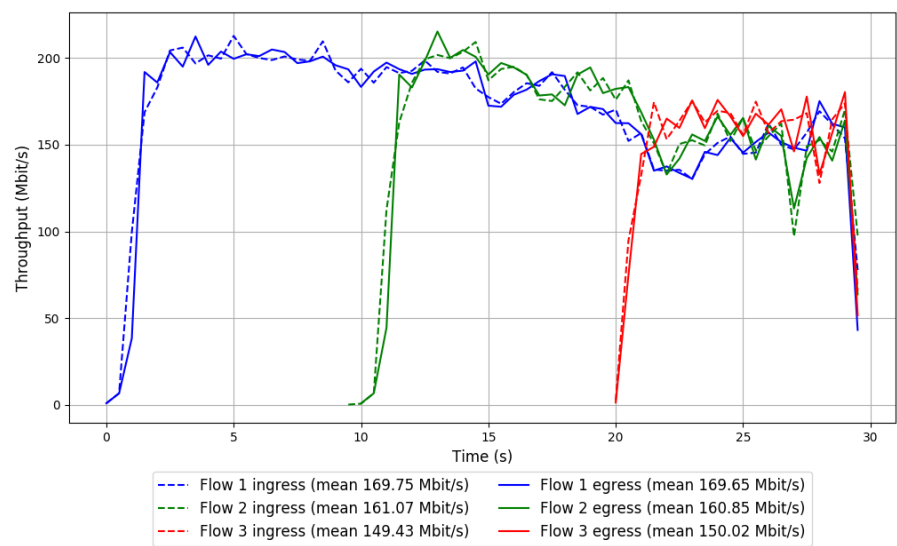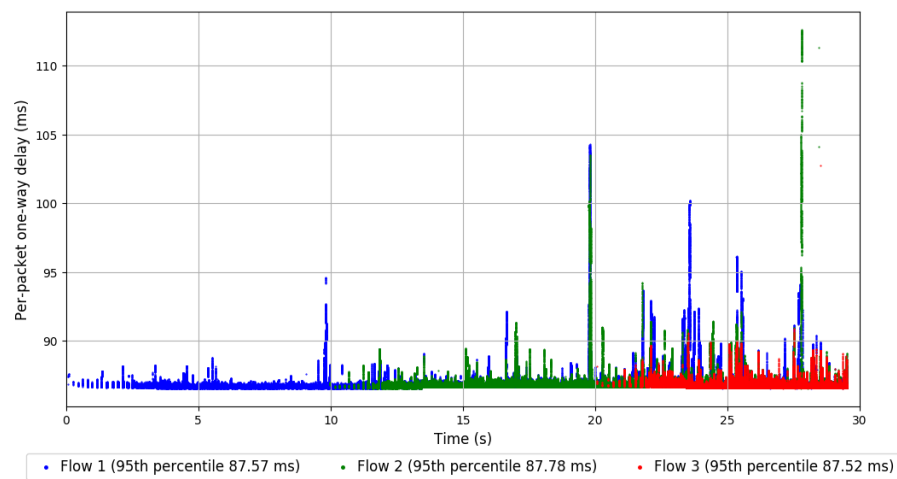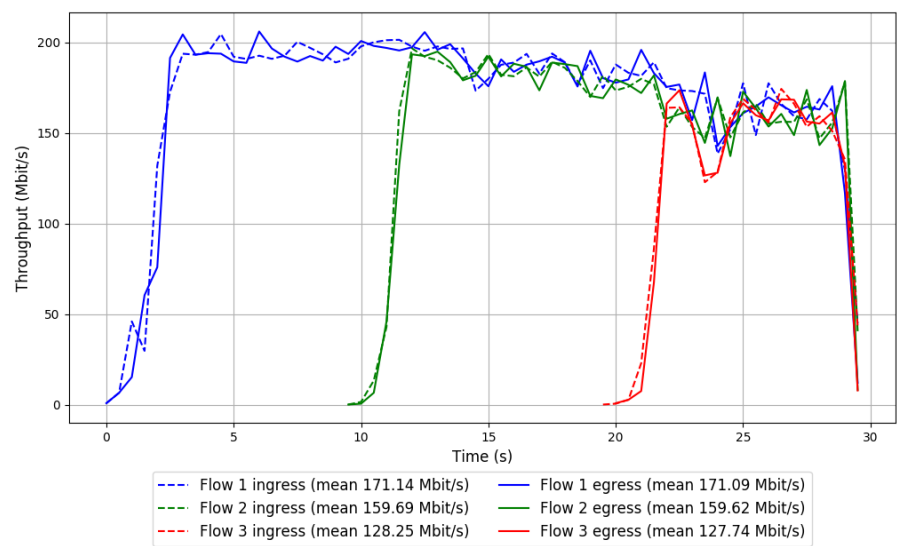
Run 1: Report of Indigo-calib — Data Link

```
Run 2: Statistics of Indigo-calib

Start at: 2017-12-05 21:33:11
End at: 2017-12-05 21:33:41


# Below is generated by plot.py at 2017-12-06 02:36:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 298.70 Mbit/s
95th percentile per-packet one-way delay: 87.277 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 159.60 Mbit/s
95th percentile per-packet one-way delay: 87.154 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 147.57 Mbit/s
95th percentile per-packet one-way delay: 87.505 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 128.30 Mbit/s
95th percentile per-packet one-way delay: 87.252 ms
Loss rate: 2.10%
```

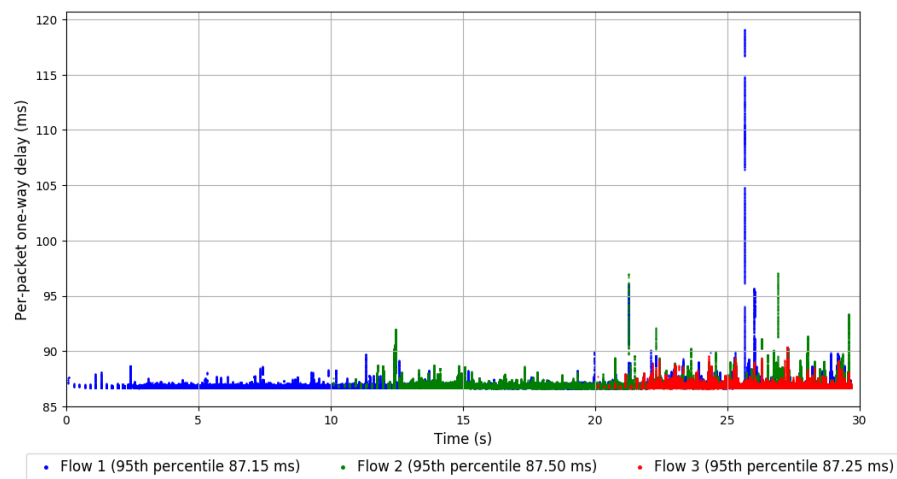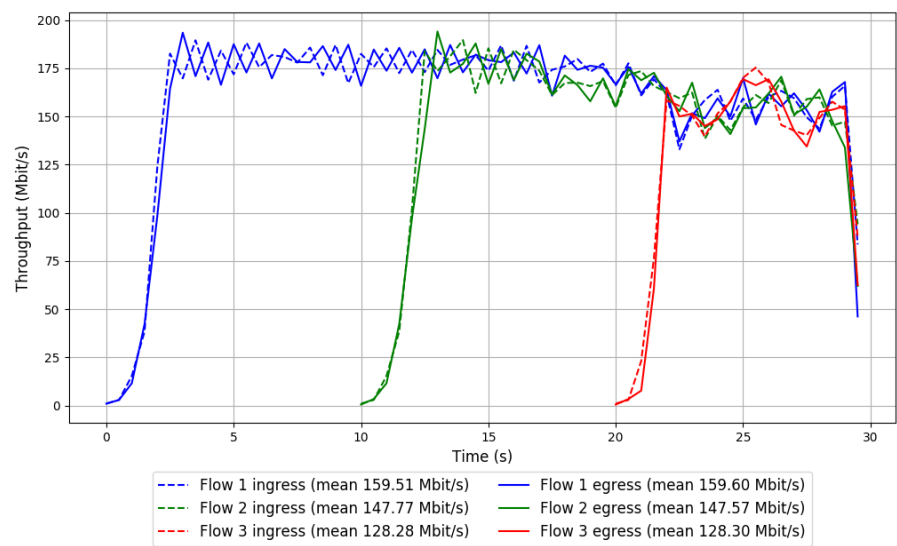Run 2: Report of Indigo-calib — Data Link

```
Run 3: Statistics of Indigo-calib

Start at: 2017-12-05 21:47:04
End at: 2017-12-05 21:47:34

# Below is generated by plot.py at 2017-12-06 02:37:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.51 Mbit/s
95th percentile per-packet one-way delay: 87.848 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 175.42 Mbit/s
95th percentile per-packet one-way delay: 87.656 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 163.83 Mbit/s
95th percentile per-packet one-way delay: 87.877 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 138.05 Mbit/s
95th percentile per-packet one-way delay: 88.503 ms
Loss rate: 2.35%
```

Run 3: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 175.72 Mbit/s) --- Flow 1 egress (mean 175.42 Mbit/s)
Flow 2 ingress (mean 164.65 Mbit/s) --- Flow 2 egress (mean 163.83 Mbit/s)
Flow 3 ingress (mean 138.81 Mbit/s) --- Flow 3 egress (mean 138.05 Mbit/s)

Flow 1 (95th percentile 87.66 ms)   Flow 2 (95th percentile 87.88 ms)   Flow 3 (95th percentile 88.50 ms)
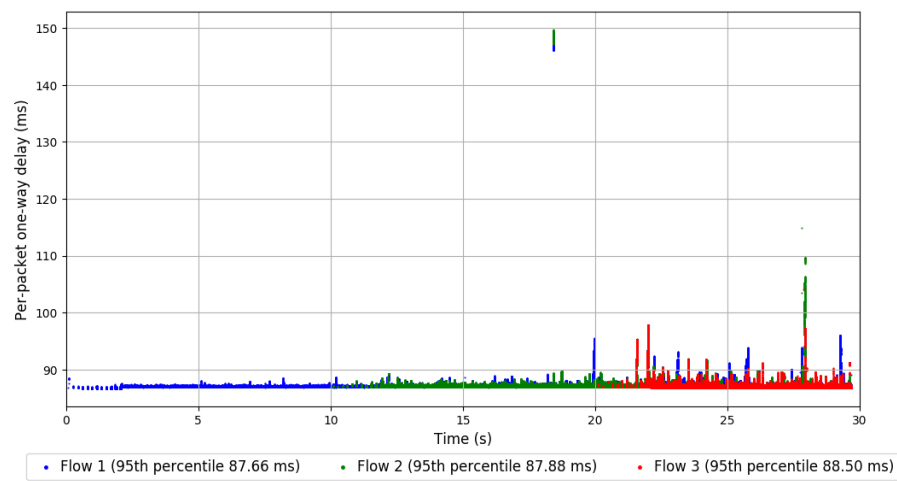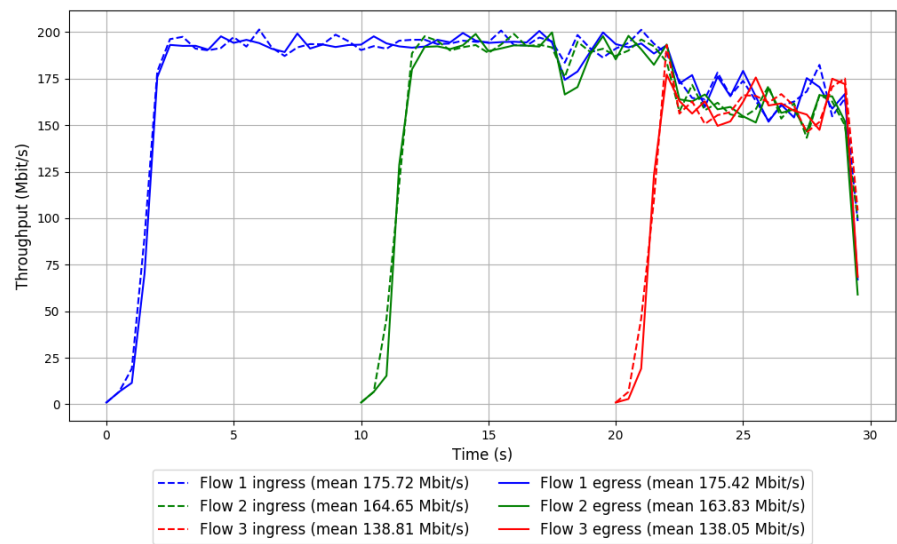
269

```
Run 4: Statistics of Indigo-calib

Start at: 2017-12-05 22:00:44
End at: 2017-12-05 22:01:14


# Below is generated by plot.py at 2017-12-06 02:37:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.04 Mbit/s
95th percentile per-packet one-way delay: 87.310 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 171.41 Mbit/s
95th percentile per-packet one-way delay: 87.080 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 161.30 Mbit/s
95th percentile per-packet one-way delay: 87.680 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 138.55 Mbit/s
95th percentile per-packet one-way delay: 87.418 ms
Loss rate: 2.36%
```

Run 4: Report of Indigo-calib — Data Link

- - - Flow 1 ingress (mean 171.34 Mbit/s) —— Flow 1 egress (mean 171.41 Mbit/s)
- - - Flow 2 ingress (mean 161.54 Mbit/s) —— Flow 2 egress (mean 161.30 Mbit/s)
- - - Flow 3 ingress (mean 139.34 Mbit/s) —— Flow 3 egress (mean 138.55 Mbit/s)

• Flow 1 (95th percentile 87.08 ms)   • Flow 2 (95th percentile 87.68 ms)   • Flow 3 (95th percentile 87.42 ms)
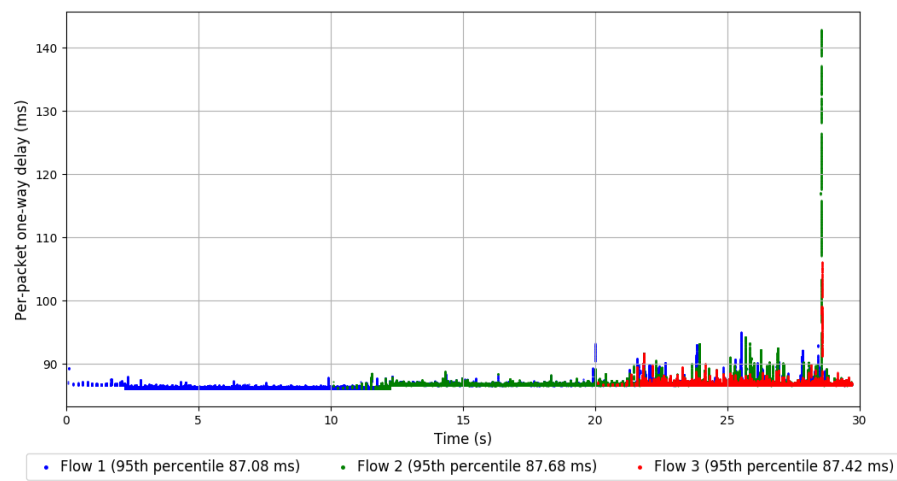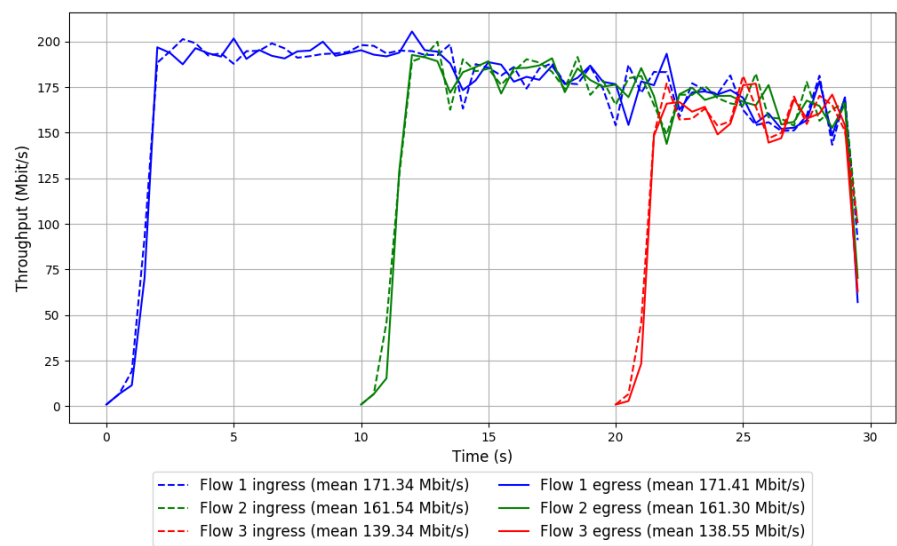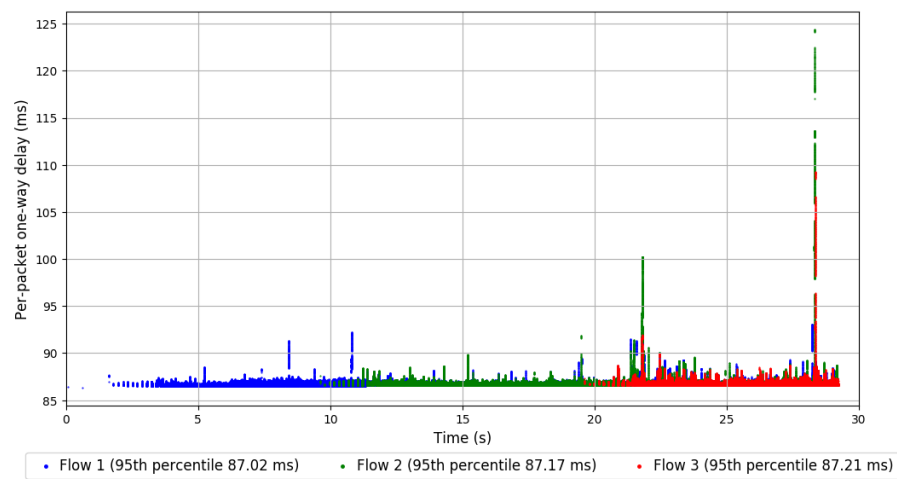
271

```
Run 5: Statistics of Indigo-calib

Start at: 2017-12-05 22:14:24
End at: 2017-12-05 22:14:54


# Below is generated by plot.py at 2017-12-06 02:37:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 307.46 Mbit/s
95th percentile per-packet one-way delay: 87.087 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 160.79 Mbit/s
95th percentile per-packet one-way delay: 87.017 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 154.70 Mbit/s
95th percentile per-packet one-way delay: 87.167 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 129.36 Mbit/s
95th percentile per-packet one-way delay: 87.208 ms
Loss rate: 2.04%
```

Run 5: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 160.92 Mbit/s) ---- Flow 1 egress (mean 160.79 Mbit/s)
Flow 2 ingress (mean 154.56 Mbit/s) ---- Flow 2 egress (mean 154.70 Mbit/s)
Flow 3 ingress (mean 129.71 Mbit/s) ---- Flow 3 egress (mean 129.36 Mbit/s)

Flow 1 (95th percentile 87.02 ms)   Flow 2 (95th percentile 87.17 ms)   Flow 3 (95th percentile 87.21 ms)
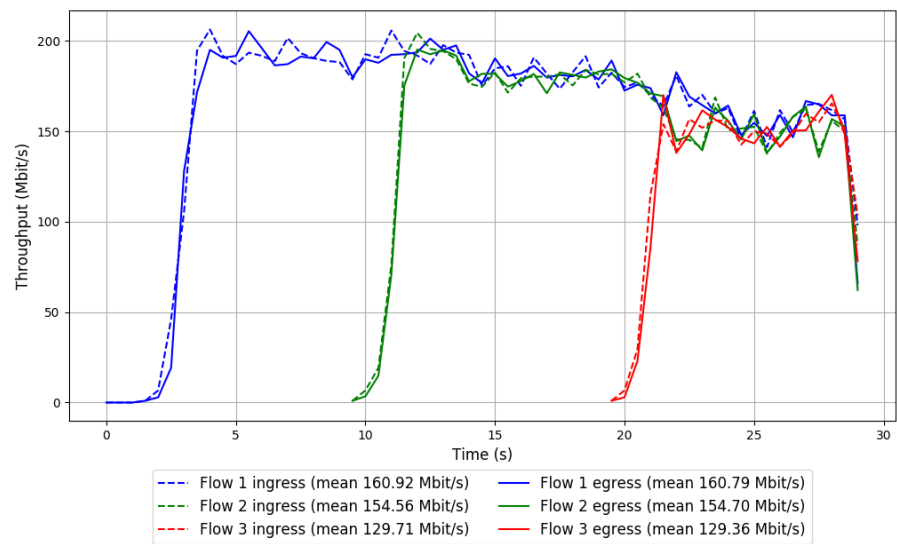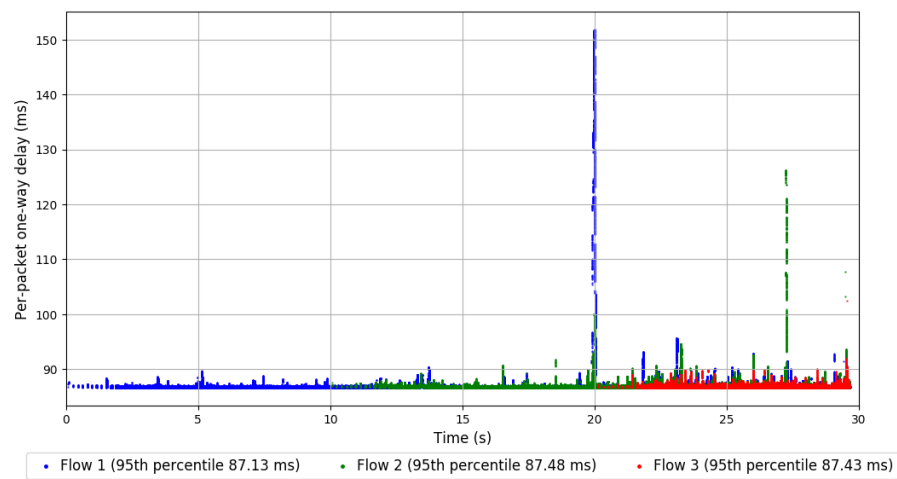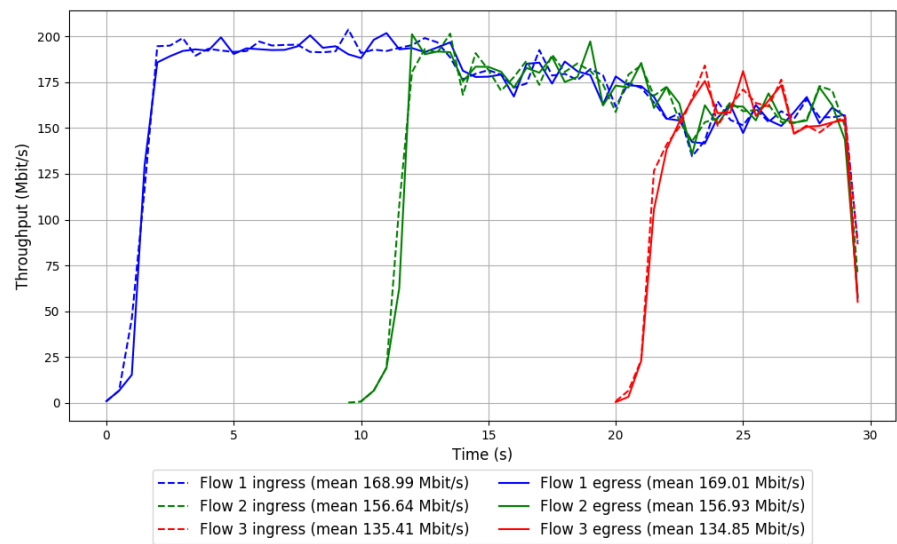
273

```
Run 6: Statistics of Indigo-calib

Start at: 2017-12-05 22:27:41
End at: 2017-12-05 22:28:11

# Below is generated by plot.py at 2017-12-06 02:38:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.25 Mbit/s
95th percentile per-packet one-way delay: 87.289 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 169.01 Mbit/s
95th percentile per-packet one-way delay: 87.128 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 156.93 Mbit/s
95th percentile per-packet one-way delay: 87.480 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 134.85 Mbit/s
95th percentile per-packet one-way delay: 87.426 ms
Loss rate: 2.20%
```

Run 6: Report of Indigo-calib — Data Link

```
Run 7: Statistics of Indigo-calib

Start at: 2017-12-05 22:41:02
End at: 2017-12-05 22:41:32


# Below is generated by plot.py at 2017-12-06 02:38:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.22 Mbit/s
95th percentile per-packet one-way delay: 87.699 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 176.35 Mbit/s
95th percentile per-packet one-way delay: 87.377 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 168.01 Mbit/s
95th percentile per-packet one-way delay: 87.792 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 141.21 Mbit/s
95th percentile per-packet one-way delay: 88.260 ms
Loss rate: 1.76%
```
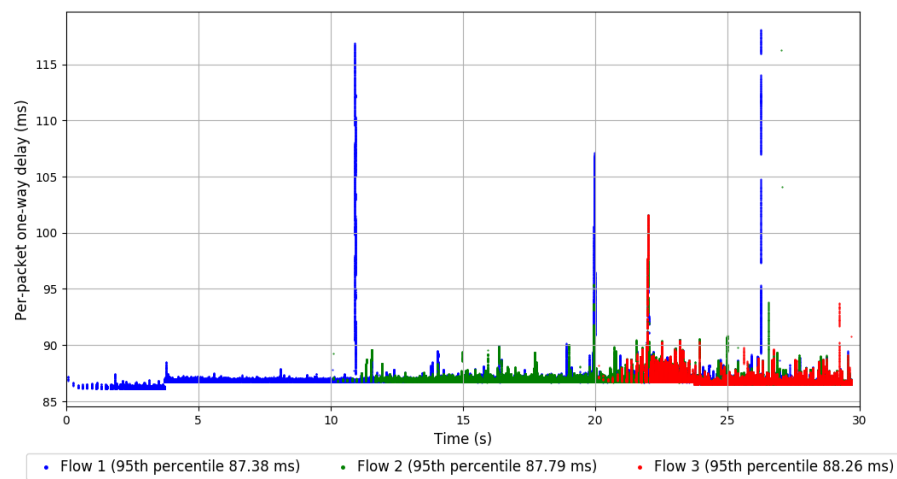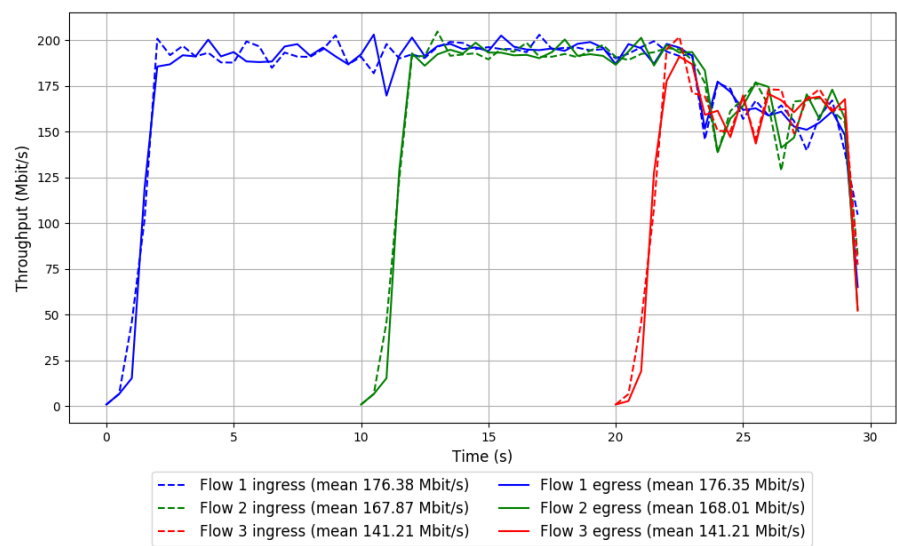
Run 7: Report of Indigo-calib — Data Link

```
Run 8: Statistics of Indigo-calib

Start at: 2017-12-05 22:54:25
End at: 2017-12-05 22:54:55

# Below is generated by plot.py at 2017-12-06 02:39:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.11 Mbit/s
95th percentile per-packet one-way delay: 87.107 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 172.65 Mbit/s
95th percentile per-packet one-way delay: 86.999 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 164.92 Mbit/s
95th percentile per-packet one-way delay: 87.211 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 135.75 Mbit/s
95th percentile per-packet one-way delay: 87.280 ms
Loss rate: 1.69%
```
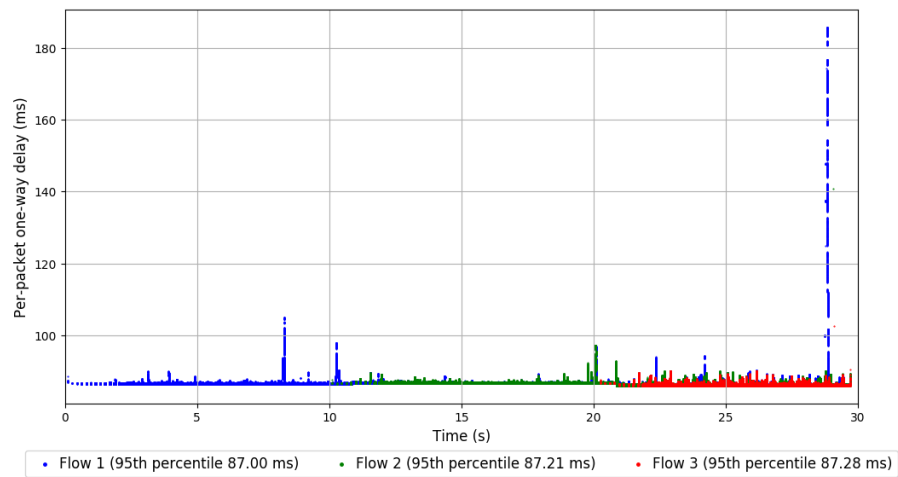
Run 8: Report of Indigo-calib — Data Link

- - - - Flow 1 ingress (mean 172.68 Mbit/s) ——— Flow 1 egress (mean 172.65 Mbit/s)
- - - - Flow 2 ingress (mean 165.04 Mbit/s) ——— Flow 2 egress (mean 164.92 Mbit/s)
- - - - Flow 3 ingress (mean 135.58 Mbit/s) ——— Flow 3 egress (mean 135.75 Mbit/s)

• Flow 1 (95th percentile 87.00 ms)   • Flow 2 (95th percentile 87.21 ms)   • Flow 3 (95th percentile 87.28 ms)

```
Run 9: Statistics of Indigo-calib

Start at: 2017-12-05 23:08:00
End at: 2017-12-05 23:08:30

# Below is generated by plot.py at 2017-12-06 02:39:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.15 Mbit/s
95th percentile per-packet one-way delay: 87.298 ms
Loss rate: 2.07%
-- Flow 1:
Average throughput: 167.03 Mbit/s
95th percentile per-packet one-way delay: 87.055 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 156.18 Mbit/s
95th percentile per-packet one-way delay: 87.467 ms
Loss rate: 2.16%
-- Flow 3:
Average throughput: 126.11 Mbit/s
95th percentile per-packet one-way delay: 88.038 ms
Loss rate: 5.02%
```
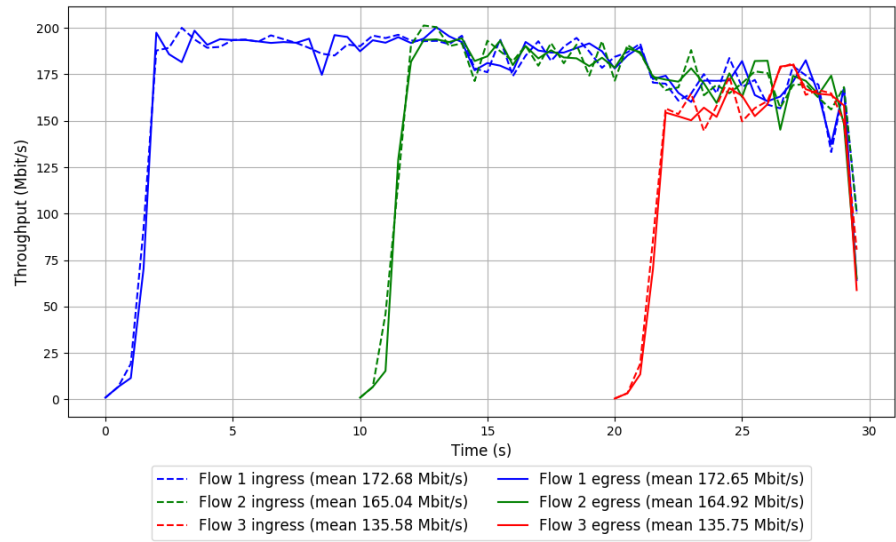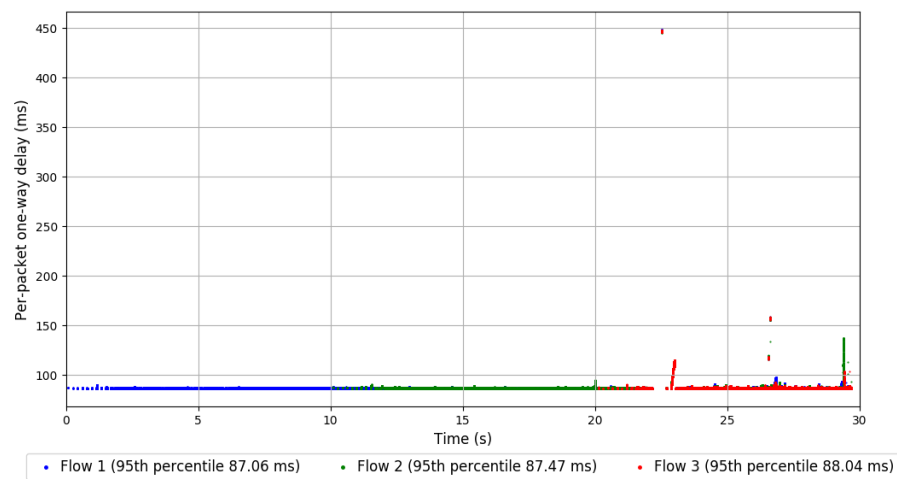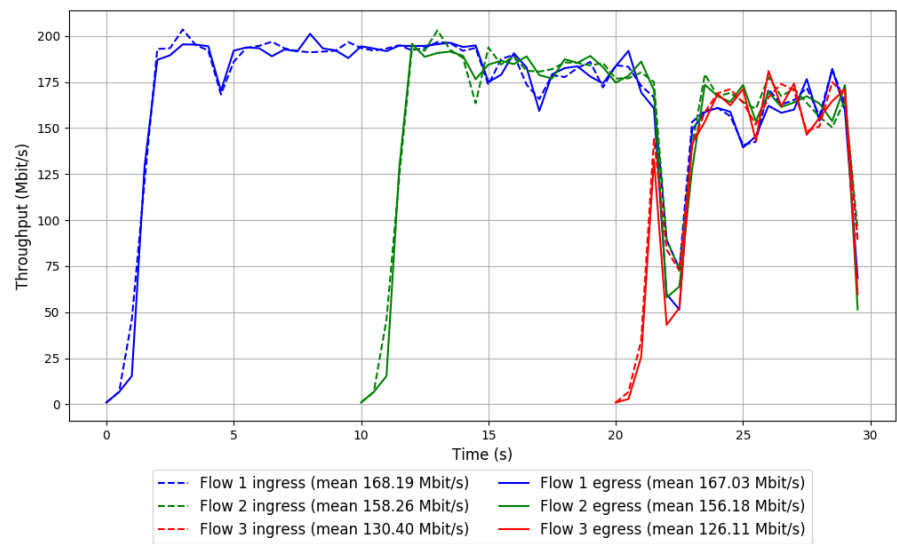
Run 9: Report of Indigo-calib — Data Link

```
Run 10: Statistics of Indigo-calib

Start at: 2017-12-05 23:21:19
End at: 2017-12-05 23:21:49

# Below is generated by plot.py at 2017-12-06 02:39:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.09 Mbit/s
95th percentile per-packet one-way delay: 88.132 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 165.28 Mbit/s
95th percentile per-packet one-way delay: 87.725 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 165.98 Mbit/s
95th percentile per-packet one-way delay: 88.950 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 143.82 Mbit/s
95th percentile per-packet one-way delay: 87.843 ms
Loss rate: 1.84%
```

Run 10: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 165.26 Mbit/s)   Flow 1 egress (mean 165.28 Mbit/s)
Flow 2 ingress (mean 165.96 Mbit/s)   Flow 2 egress (mean 165.98 Mbit/s)
Flow 3 ingress (mean 143.92 Mbit/s)   Flow 3 egress (mean 143.82 Mbit/s)

Flow 1 (95th percentile 87.72 ms)   Flow 2 (95th percentile 88.95 ms)   Flow 3 (95th percentile 87.84 ms)