Pantheon Report

Generated at 2017-12-11 10:35:45 (UTC).

Data path: India ppp0 (*remote*) →AWS India 1 Ethernet (*local*).

Repeated the test of 14 congestion control schemes 3 times.

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

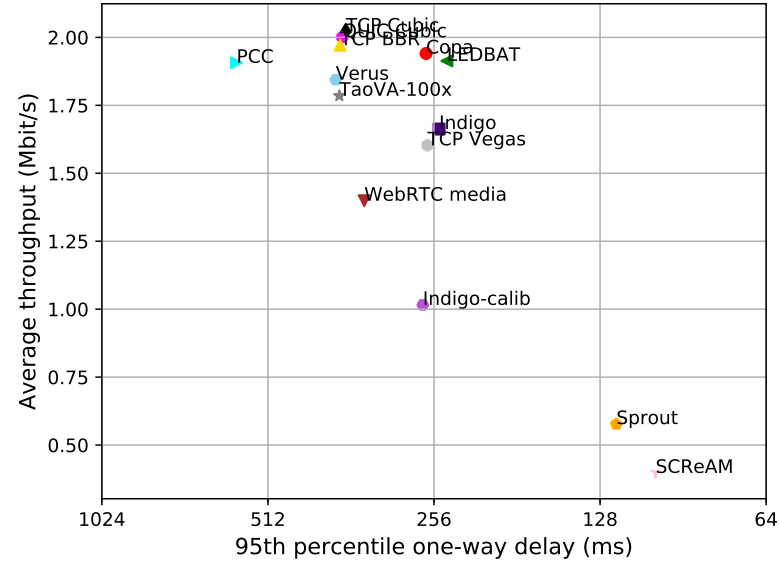Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

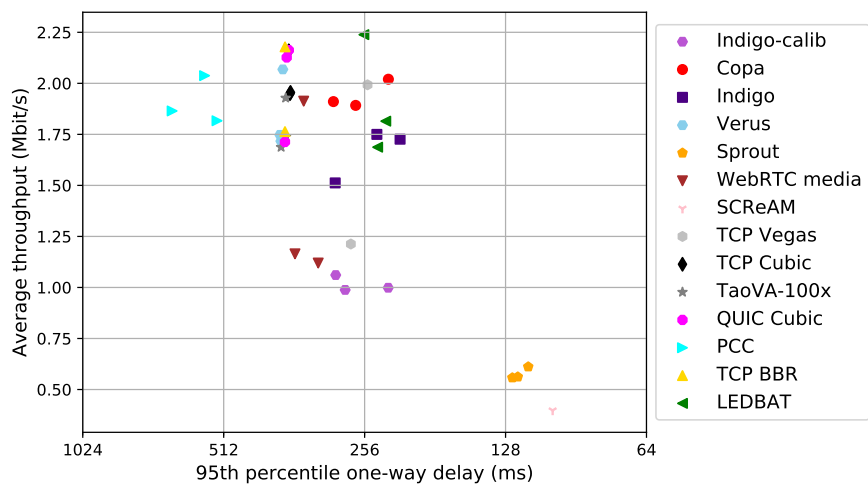NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: indigos @ e3a57ad5ac5cfcaca0e3f983c8dd4cc3509e0262
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ b5b7c38e8391001927dc41c6cfa2627d03dde737
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-cellular @ aee99e8eb842cb053f8c9a80e28cd256a930bbc2
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/indigo-no-cwnd @ 3e58442c04028a11d7b02456e137604633ba2d6c
third_party/indigo-no-delivery-rate @ 57caa40858b964906edff4876d5a7e5bfff666c5
third_party/indigo-no-queuing-delay @ 03455460fd1a8ffbdad86fabb936fdca204b80db
third_party/indigo-no-send-rate @ b39dfa6b2c5f19cb7cd89626cb4f5bb81f9fecda
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from India ppp0 to AWS India 1 Ethernet, 3 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from India ppp0 to AWS India 1 Ethernet, 3 runs of 30s each per scheme
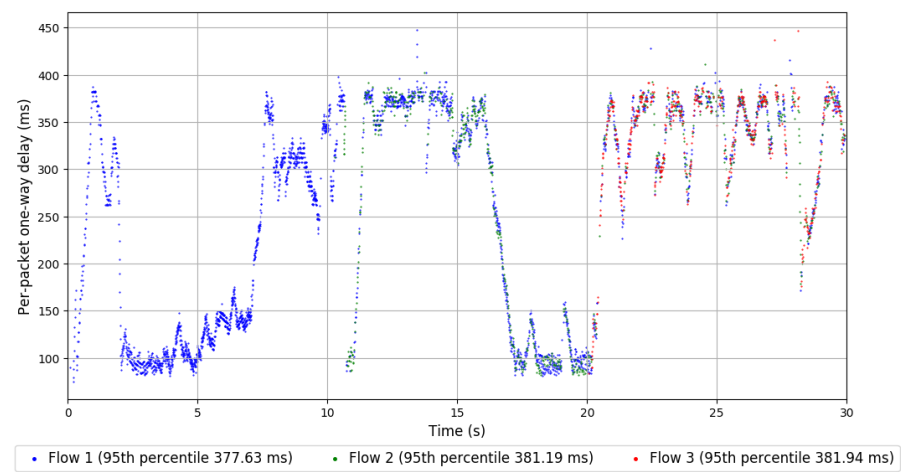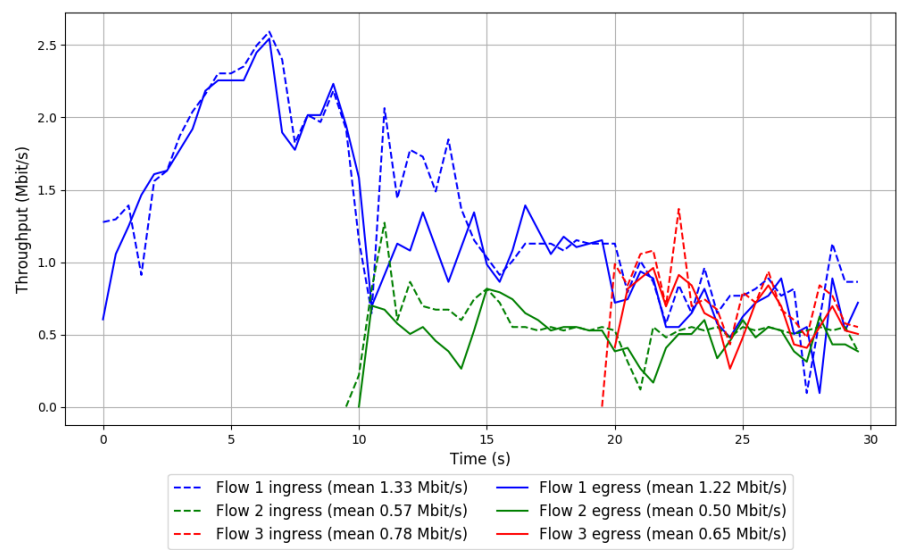3 flows with 10s interval between flows

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	2	1.25	0.72	0.75	377.88	380.20	381.44	8.71	15.55	14.81
TCP Cubic	3	1.18	1.04	0.47	366.27	370.34	373.50	1.59	2.93	6.44
LEDBAT	3	1.06	0.90	0.79	235.06	246.35	254.31	0.63	1.06	3.03
PCC	3	1.16	0.82	0.73	387.87	718.17	781.66	54.77	80.15	91.49
QUIC Cubic	3	1.22	0.75	0.89	372.44	376.69	379.23	3.58	7.83	12.01
SCReAM	1	0.19	0.21	0.22	101.74	97.33	102.72	0.23	0.50	0.72
WebRTC media	3	0.81	0.42	0.19	332.93	354.73	346.69	0.96	2.45	7.27
Sprout	3	0.29	0.29	0.29	118.76	120.06	122.96	0.94	0.97	2.73
TaoVA-100x	3	1.11	0.86	0.48	376.94	381.59	405.48	16.66	27.05	57.69
TCP Vegas	2	0.86	0.74	0.77	236.05	256.00	285.76	0.34	0.49	1.47
Verus	3	1.64	0.17	0.33	384.70	386.41	395.96	20.53	49.37	72.16
Copa	3	1.19	0.88	0.66	243.43	276.94	301.00	0.87	1.29	3.25
Indigo	3	0.59	0.95	1.36	258.64	236.05	254.97	1.62	2.07	2.94
Indigo-calib	3	0.56	0.38	0.64	278.48	255.28	271.49	15.89	12.59	13.60

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-11 09:16:47
End at: 2017-12-11 09:17:17
Local clock offset: -5.163 ms
Remote clock offset: -13.515 ms


# Below is generated by plot.py at 2017-12-11 10:35:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 378.776 ms
Loss rate: 10.98%
-- Flow 1:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 377.626 ms
Loss rate: 8.99%
-- Flow 2:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 381.187 ms
Loss rate: 13.95%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 381.939 ms
Loss rate: 16.87%
```
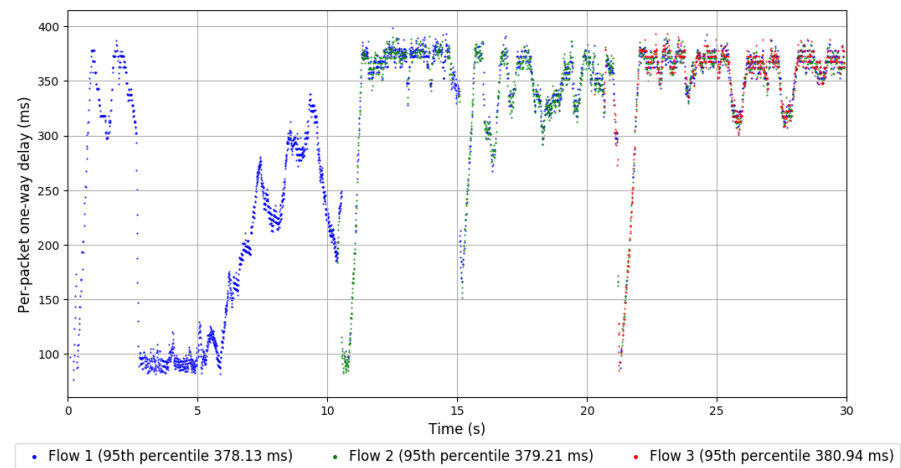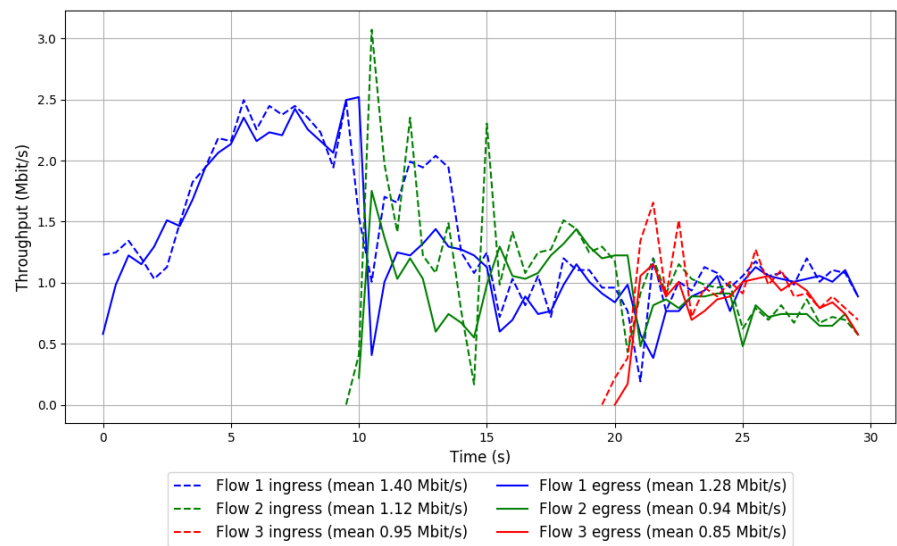
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 1.33 Mbit/s)   Flow 1 egress (mean 1.22 Mbit/s)
Flow 2 ingress (mean 0.57 Mbit/s)   Flow 2 egress (mean 0.50 Mbit/s)
Flow 3 ingress (mean 0.78 Mbit/s)   Flow 3 egress (mean 0.65 Mbit/s)

Flow 1 (95th percentile 377.63 ms)   Flow 2 (95th percentile 381.19 ms)   Flow 3 (95th percentile 381.94 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2017-12-11 09:32:16
End at: 2017-12-11 09:32:46
Local clock offset: -4.382 ms
Remote clock offset: -13.958 ms


# Below is generated by plot.py at 2017-12-11 10:35:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 378.614 ms
Loss rate: 11.64%
-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 378.131 ms
Loss rate: 8.44%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 379.212 ms
Loss rate: 17.16%
-- Flow 3:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 380.939 ms
Loss rate: 12.75%
```

Run 2: Report of TCP BBR — Data Link

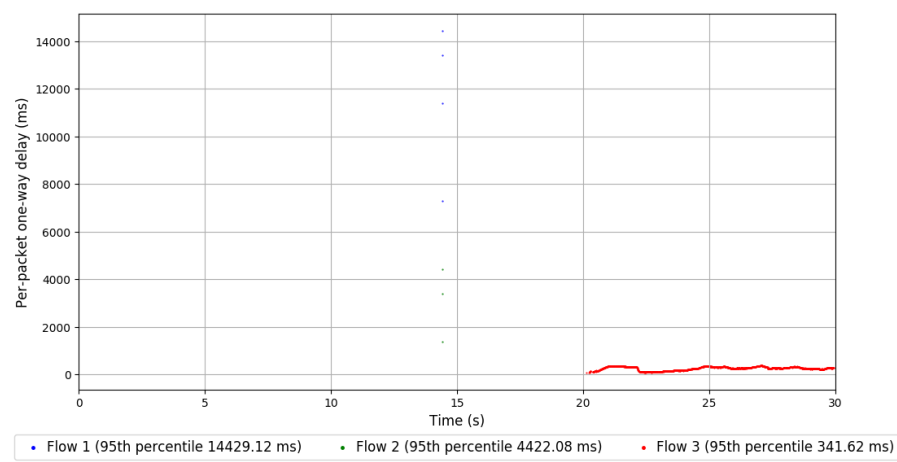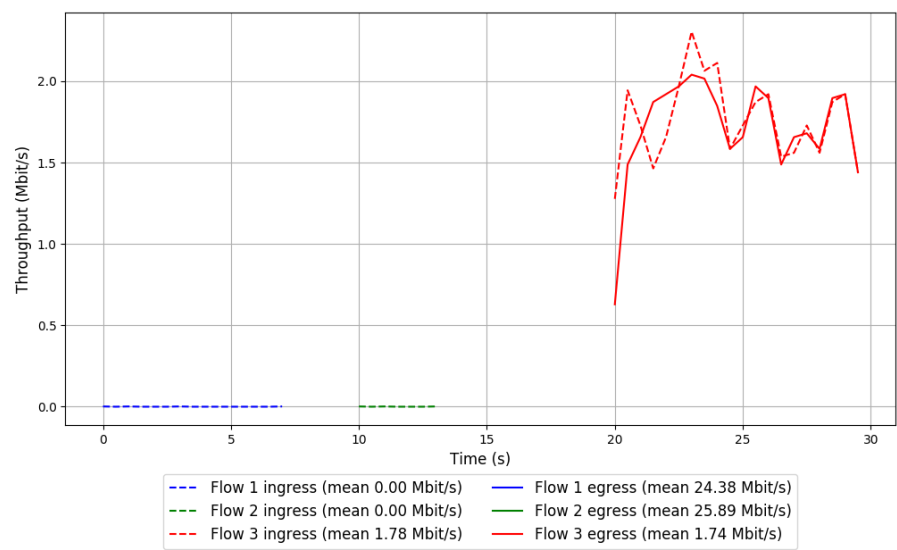```
Run 3: Statistics of TCP BBR

Start at: 2017-12-11 09:47:42
End at: 2017-12-11 09:48:12
Local clock offset: 1.566 ms
Remote clock offset: -12.999 ms
```
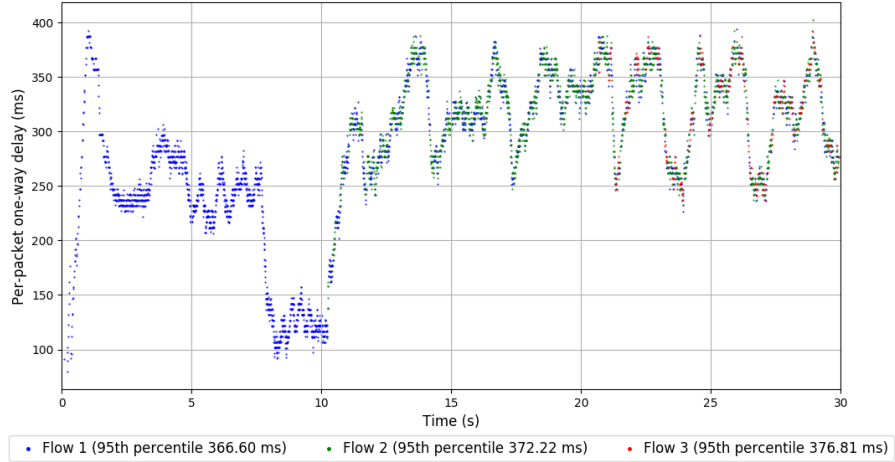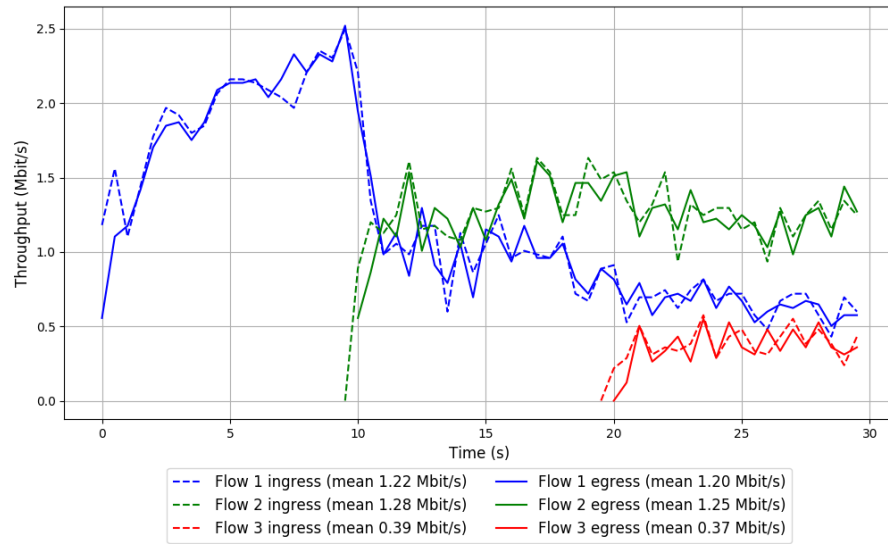
Run 3: Report of TCP BBR — Data Link



Flow 1 ingress (mean 0.00 Mbit/s) --- Flow 1 egress (mean 24.38 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s) --- Flow 2 egress (mean 25.89 Mbit/s)
Flow 3 ingress (mean 1.78 Mbit/s) --- Flow 3 egress (mean 1.74 Mbit/s)



• Flow 1 (95th percentile 14429.12 ms)   • Flow 2 (95th percentile 4422.08 ms)   • Flow 3 (95th percentile 341.62 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-11 09:11:16
End at: 2017-12-11 09:11:46
Local clock offset: -5.442 ms
Remote clock offset: -15.212 ms

Below is generated by plot.py at 2017-12-11 10:35:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 371.746 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 366.602 ms
Loss rate: 1.71%
-- Flow 2:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 372.218 ms
Loss rate: 2.49%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 376.813 ms
Loss rate: 7.14%
```
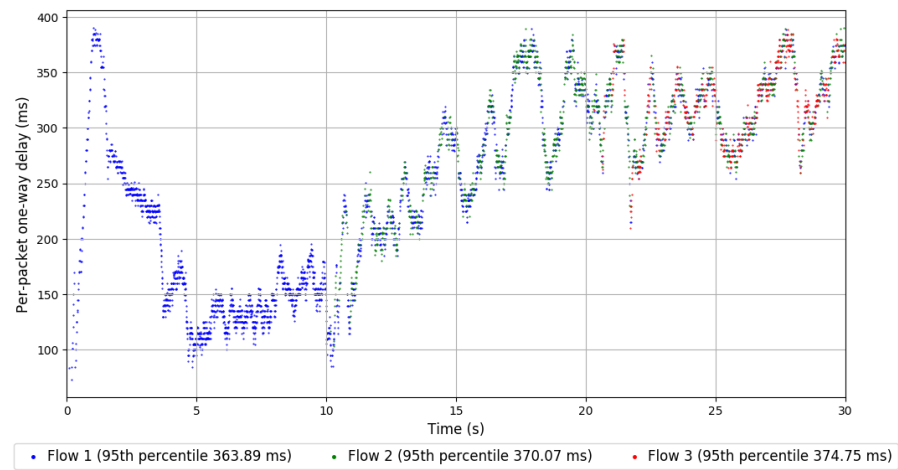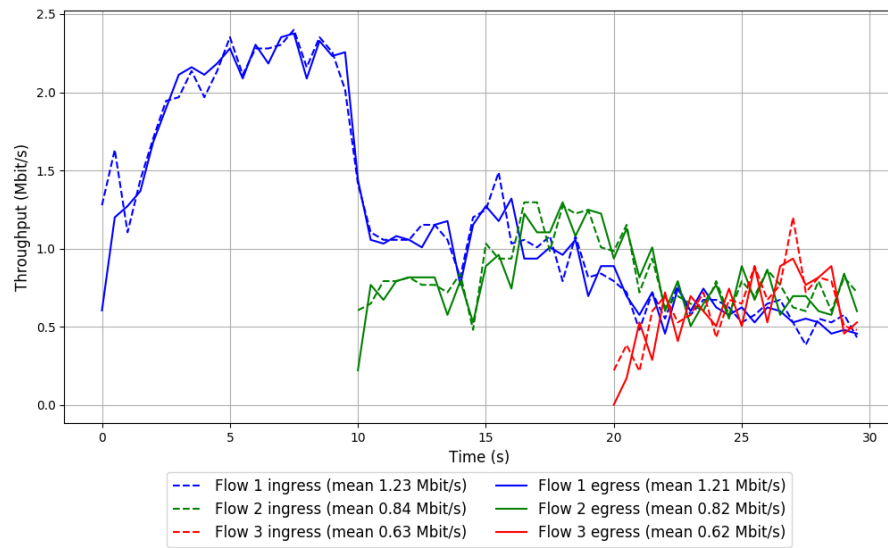
Run 1: Report of TCP Cubic — Data Link



Flow 1 ingress (mean 1.22 Mbit/s)    Flow 1 egress (mean 1.20 Mbit/s)
Flow 2 ingress (mean 1.28 Mbit/s)    Flow 2 egress (mean 1.25 Mbit/s)
Flow 3 ingress (mean 0.39 Mbit/s)    Flow 3 egress (mean 0.37 Mbit/s)



Flow 1 (95th percentile 366.60 ms)    Flow 2 (95th percentile 372.22 ms)    Flow 3 (95th percentile 376.81 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2017-12-11 09:26:44
End at: 2017-12-11 09:27:14
Local clock offset: -4.555 ms
Remote clock offset: -13.664 ms

Below is generated by plot.py at 2017-12-11 10:35:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 369.467 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 363.893 ms
Loss rate: 1.47%
-- Flow 2:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 370.075 ms
Loss rate: 3.08%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 374.749 ms
Loss rate: 5.36%
```
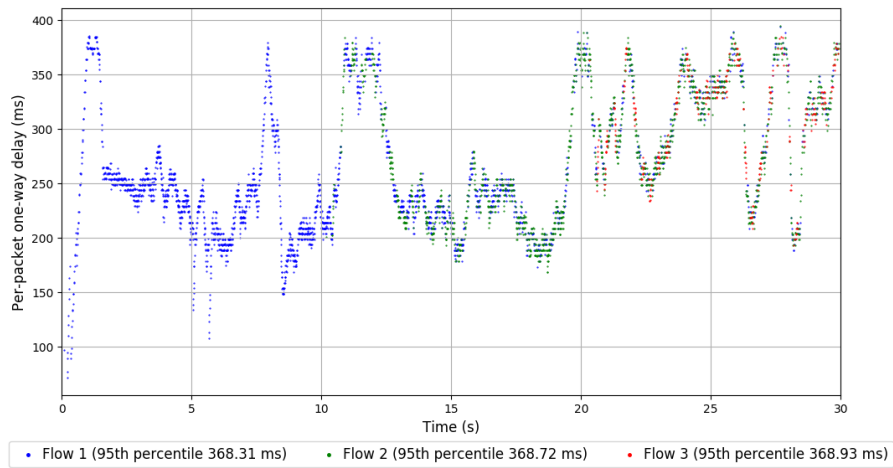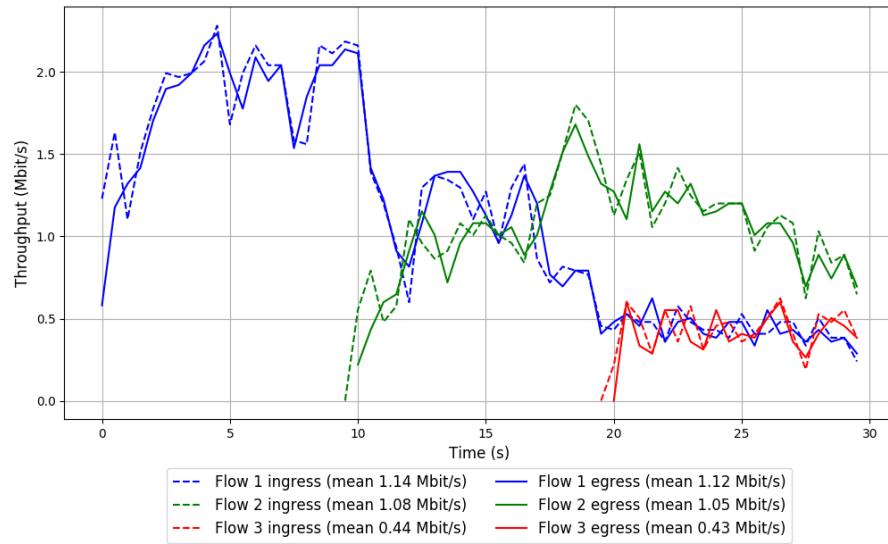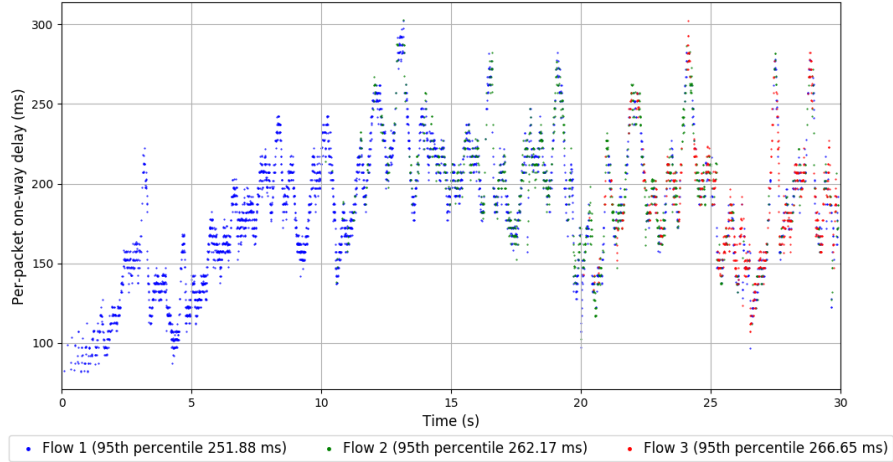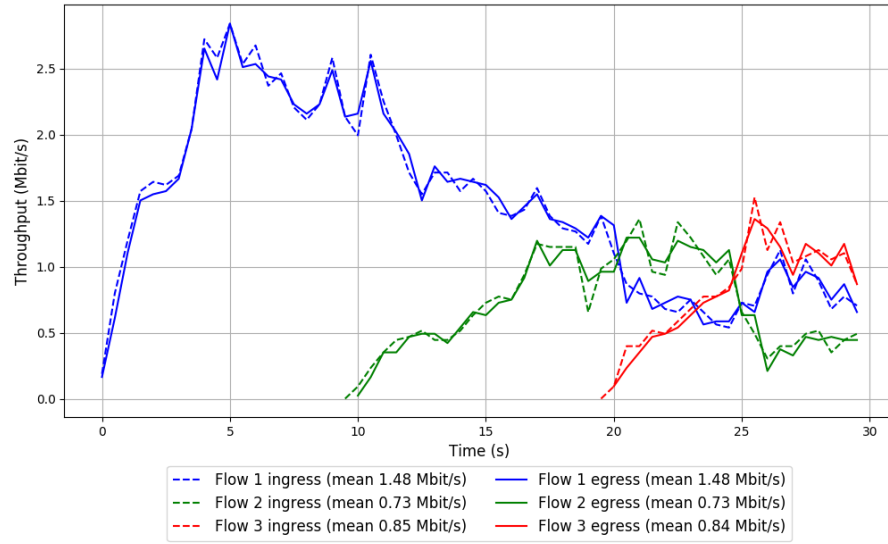
Run 2: Report of TCP Cubic — Data Link



- - - Flow 1 ingress (mean 1.23 Mbit/s) —— Flow 1 egress (mean 1.21 Mbit/s)
- - - Flow 2 ingress (mean 0.84 Mbit/s) —— Flow 2 egress (mean 0.82 Mbit/s)
- - - Flow 3 ingress (mean 0.63 Mbit/s) —— Flow 3 egress (mean 0.62 Mbit/s)



• Flow 1 (95th percentile 363.89 ms)   • Flow 2 (95th percentile 370.07 ms)   • Flow 3 (95th percentile 374.75 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2017-12-11 09:42:11
End at: 2017-12-11 09:42:41
Local clock offset: -2.026 ms
Remote clock offset: -13.525 ms


# Below is generated by plot.py at 2017-12-11 10:35:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 368.618 ms
Loss rate: 2.57%
-- Flow 1:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 368.311 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 368.718 ms
Loss rate: 3.23%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 368.927 ms
Loss rate: 6.83%
```

Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 1.14 Mbit/s) --- Flow 1 egress (mean 1.12 Mbit/s)
Flow 2 ingress (mean 1.08 Mbit/s) --- Flow 2 egress (mean 1.05 Mbit/s)
Flow 3 ingress (mean 0.44 Mbit/s) --- Flow 3 egress (mean 0.43 Mbit/s)

Flow 1 (95th percentile 368.31 ms)   Flow 2 (95th percentile 368.72 ms)   Flow 3 (95th percentile 368.93 ms)
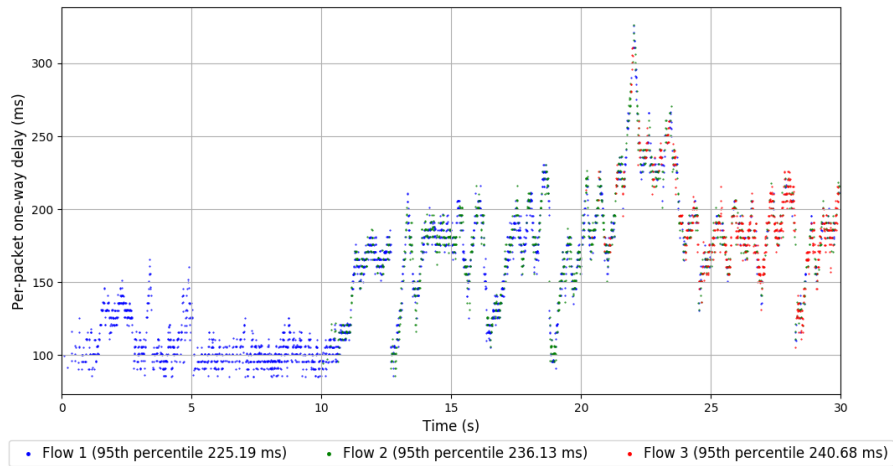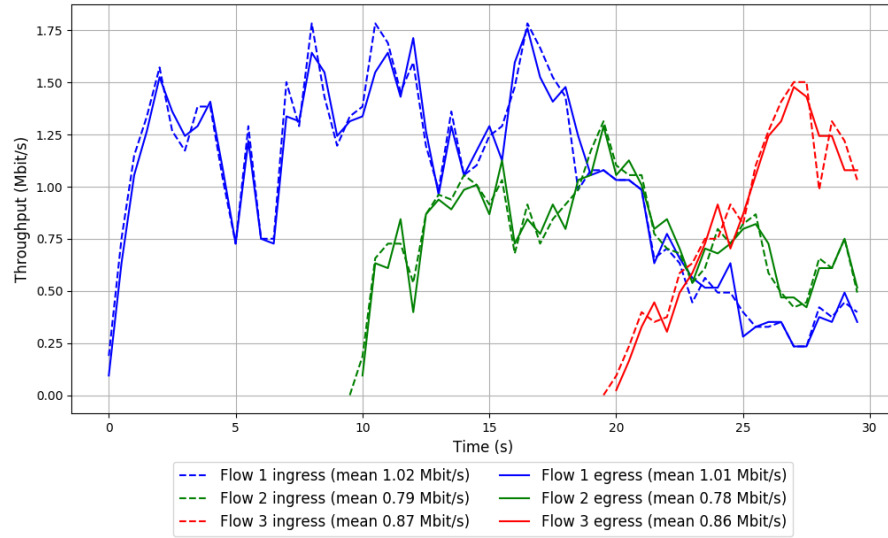
15

```
Run 1: Statistics of LEDBAT

Start at: 2017-12-11 09:12:23
End at: 2017-12-11 09:12:53
Local clock offset: -7.586 ms
Remote clock offset: -13.859 ms

# Below is generated by plot.py at 2017-12-11 10:35:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 256.969 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 251.881 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 262.168 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 266.650 ms
Loss rate: 2.93%
```
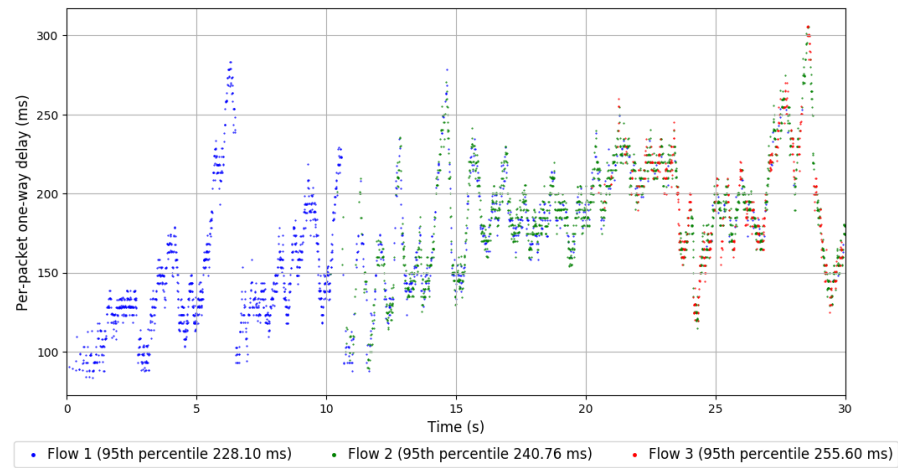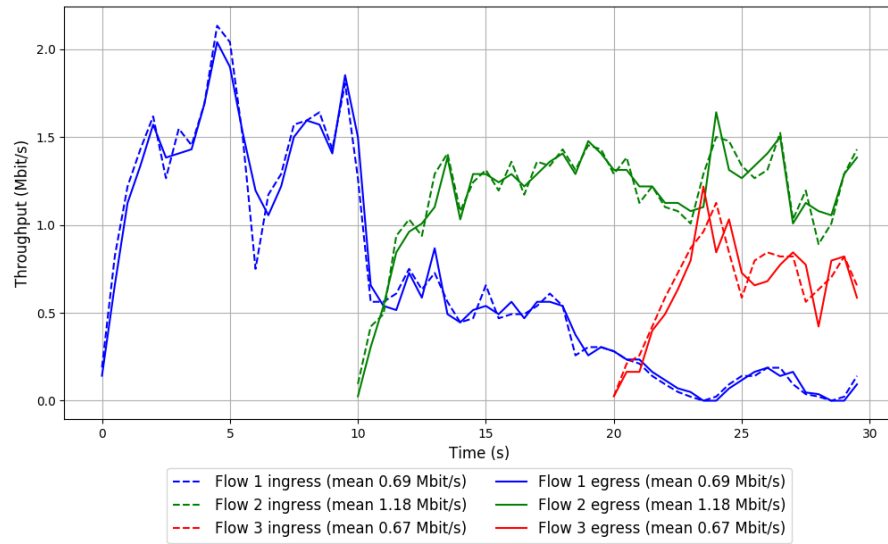
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2017-12-11 09:27:51
End at: 2017-12-11 09:28:21
Local clock offset: -2.593 ms
Remote clock offset: -13.661 ms

# Below is generated by plot.py at 2017-12-11 10:35:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 230.742 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 225.186 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 236.135 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 240.681 ms
Loss rate: 2.99%
```

Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2017-12-11 09:43:18
End at: 2017-12-11 09:43:48
Local clock offset: 0.324 ms
Remote clock offset: -11.454 ms

# Below is generated by plot.py at 2017-12-11 10:35:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 240.143 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 228.103 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 240.760 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 255.605 ms
Loss rate: 3.18%
```

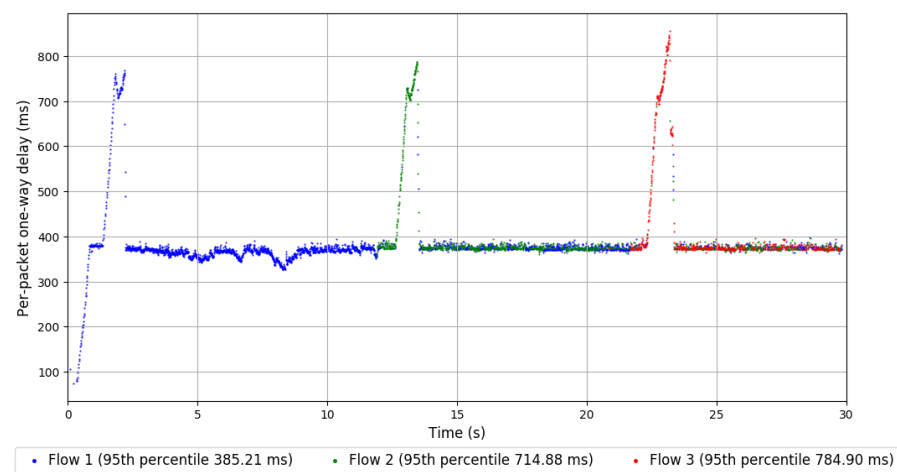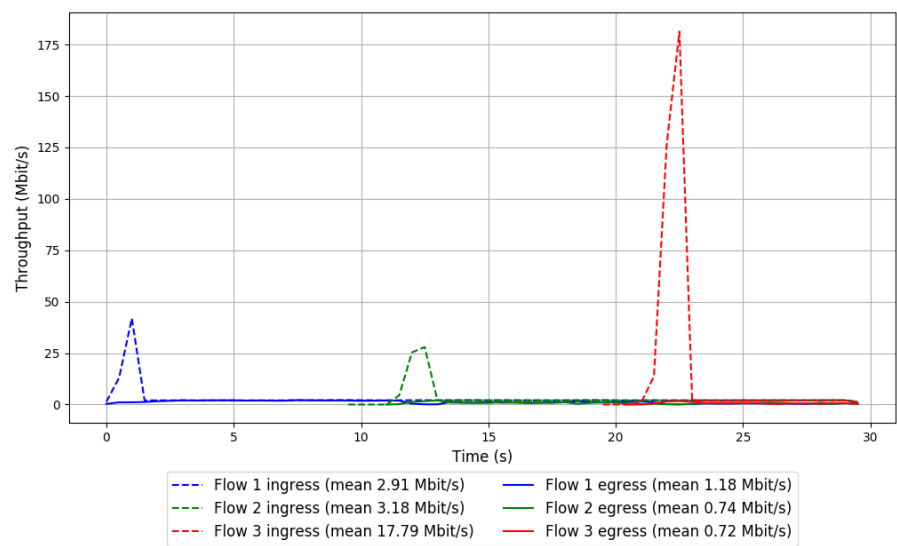Run 3: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-12-11 09:09:03
End at: 2017-12-11 09:09:33
Local clock offset: -11.198 ms
Remote clock offset: -13.136 ms


# Below is generated by plot.py at 2017-12-11 10:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 659.750 ms
Loss rate: 82.94%
-- Flow 1:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 385.211 ms
Loss rate: 59.71%
-- Flow 2:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 714.882 ms
Loss rate: 77.96%
-- Flow 3:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 784.901 ms
Loss rate: 96.24%
```
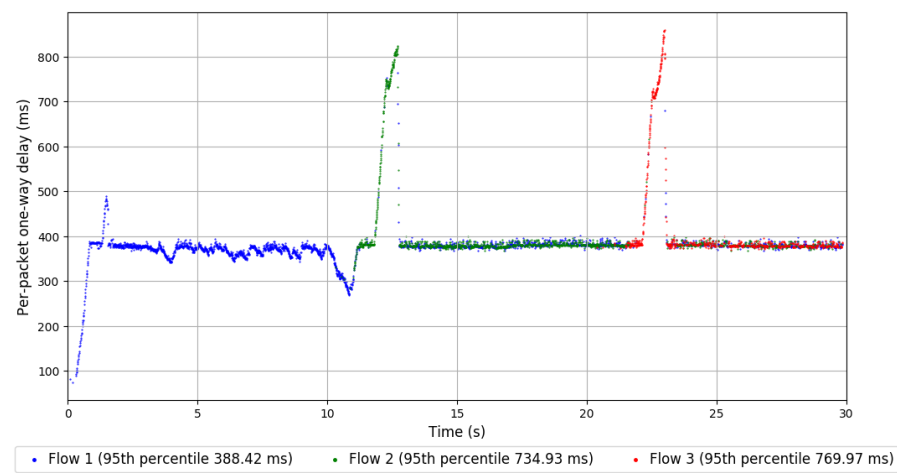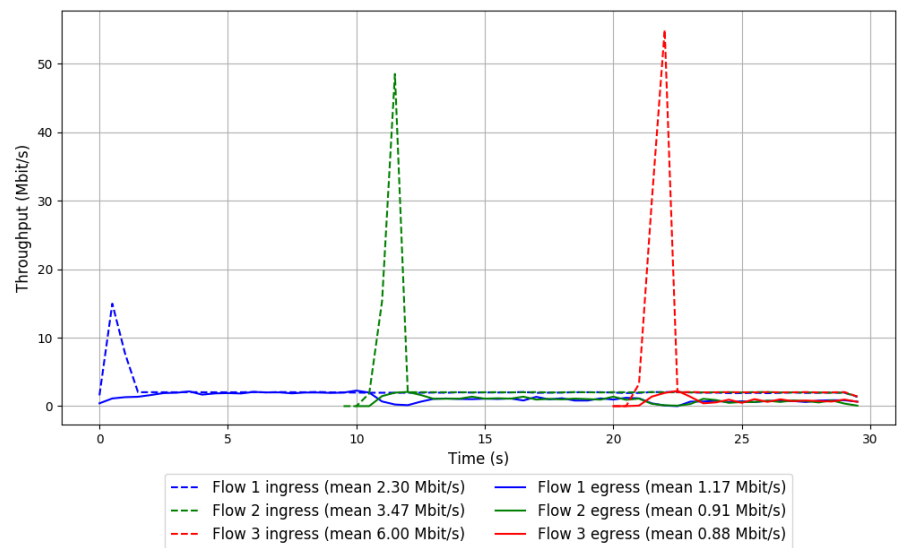
Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 2.91 Mbit/s)   Flow 1 egress (mean 1.18 Mbit/s)
Flow 2 ingress (mean 3.18 Mbit/s)   Flow 2 egress (mean 0.74 Mbit/s)
Flow 3 ingress (mean 17.79 Mbit/s)   Flow 3 egress (mean 0.72 Mbit/s)

Flow 1 (95th percentile 385.21 ms)   Flow 2 (95th percentile 714.88 ms)   Flow 3 (95th percentile 784.90 ms)

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```
Run 2: Statistics of PCC

Start at: 2017-12-11 09:24:32
End at: 2017-12-11 09:25:02
Local clock offset: -4.083 ms
Remote clock offset: -14.099 ms

# Below is generated by plot.py at 2017-12-11 10:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 562.364 ms
Loss rate: 69.14%
-- Flow 1:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 388.417 ms
Loss rate: 49.41%
-- Flow 2:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 734.926 ms
Loss rate: 74.39%
-- Flow 3:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 769.972 ms
Loss rate: 85.96%
```
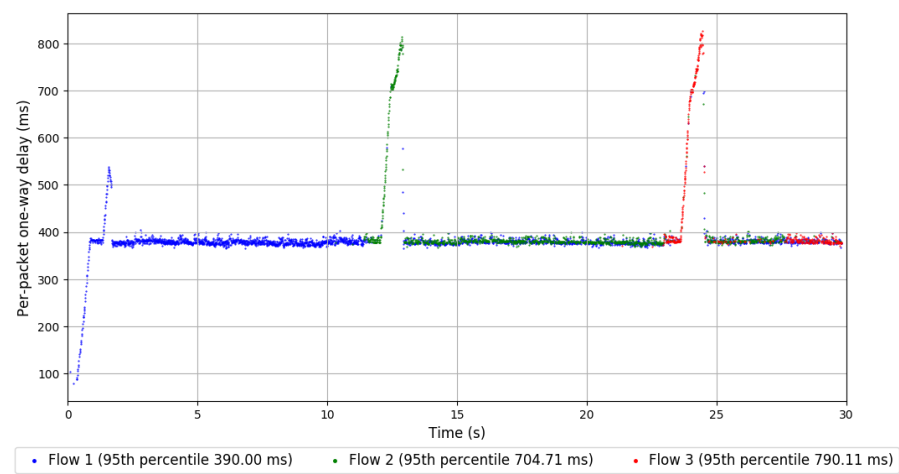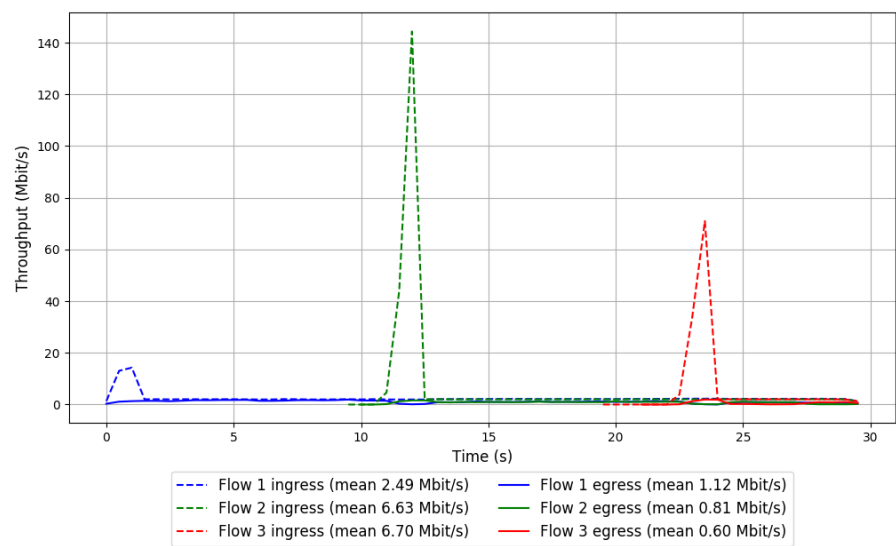
Run 2: Report of PCC — Data Link

Flow 1 ingress (mean 2.30 Mbit/s)   Flow 1 egress (mean 1.17 Mbit/s)
Flow 2 ingress (mean 3.47 Mbit/s)   Flow 2 egress (mean 0.91 Mbit/s)
Flow 3 ingress (mean 6.00 Mbit/s)   Flow 3 egress (mean 0.88 Mbit/s)

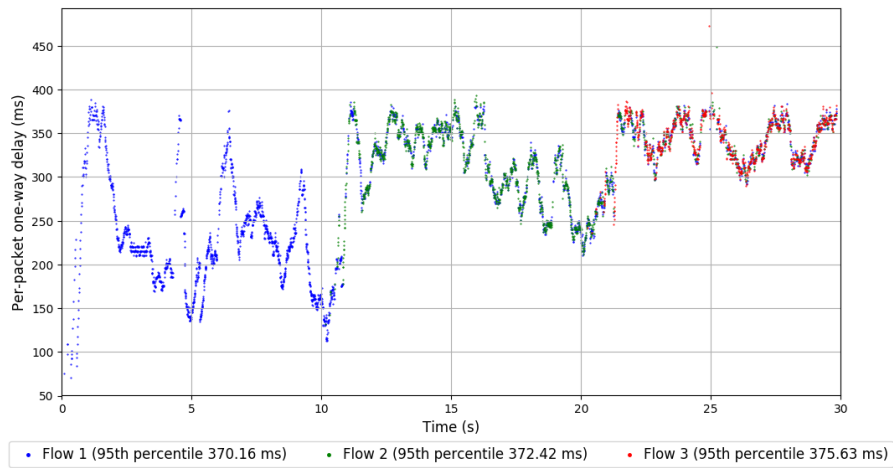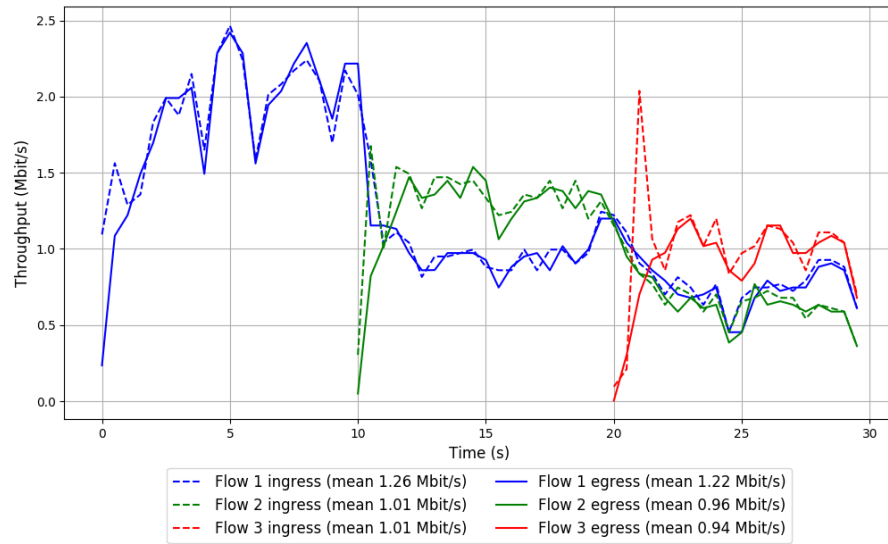Flow 1 (95th percentile 388.42 ms)   Flow 2 (95th percentile 734.93 ms)   Flow 3 (95th percentile 769.97 ms)

25

```
Run 3: Statistics of PCC

Start at: 2017-12-11 09:39:59
End at: 2017-12-11 09:40:29
Local clock offset: -0.991 ms
Remote clock offset: -13.383 ms


# Below is generated by plot.py at 2017-12-11 10:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 529.096 ms
Loss rate: 80.14%
-- Flow 1:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 389.995 ms
Loss rate: 55.20%
-- Flow 2:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 704.705 ms
Loss rate: 88.09%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 790.110 ms
Loss rate: 92.28%
```

Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 2.49 Mbit/s) --- Flow 1 egress (mean 1.12 Mbit/s)
Flow 2 ingress (mean 6.63 Mbit/s) --- Flow 2 egress (mean 0.81 Mbit/s)
Flow 3 ingress (mean 6.70 Mbit/s) --- Flow 3 egress (mean 0.60 Mbit/s)

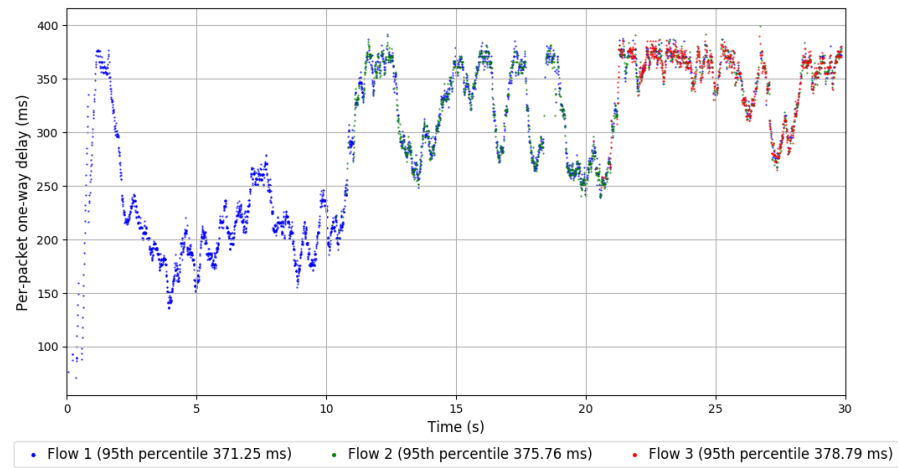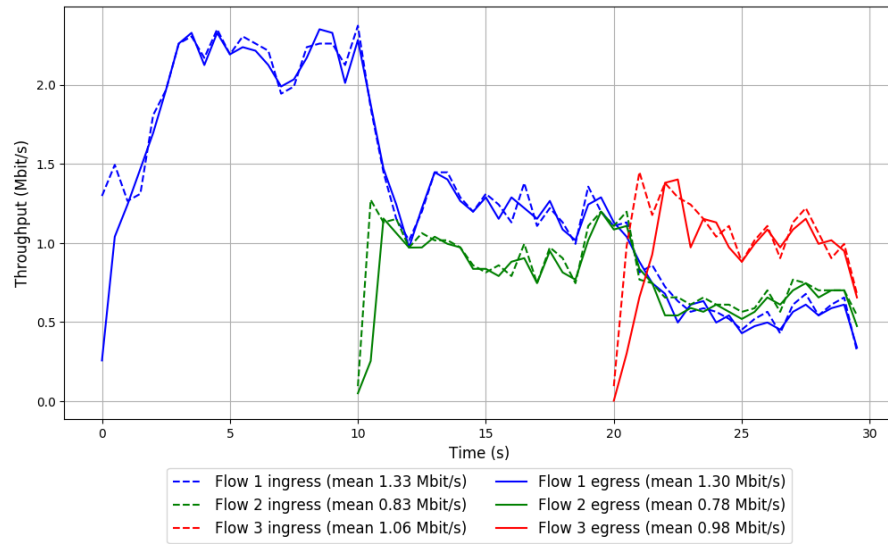Flow 1 (95th percentile 390.00 ms)   Flow 2 (95th percentile 704.71 ms)   Flow 3 (95th percentile 790.11 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-11 09:13:29
End at: 2017-12-11 09:13:59
Local clock offset: -6.152 ms
Remote clock offset: -13.966 ms

# Below is generated by plot.py at 2017-12-11 10:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 371.758 ms
Loss rate: 4.43%
-- Flow 1:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 370.159 ms
Loss rate: 2.81%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 372.419 ms
Loss rate: 4.92%
-- Flow 3:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 375.627 ms
Loss rate: 9.57%
```
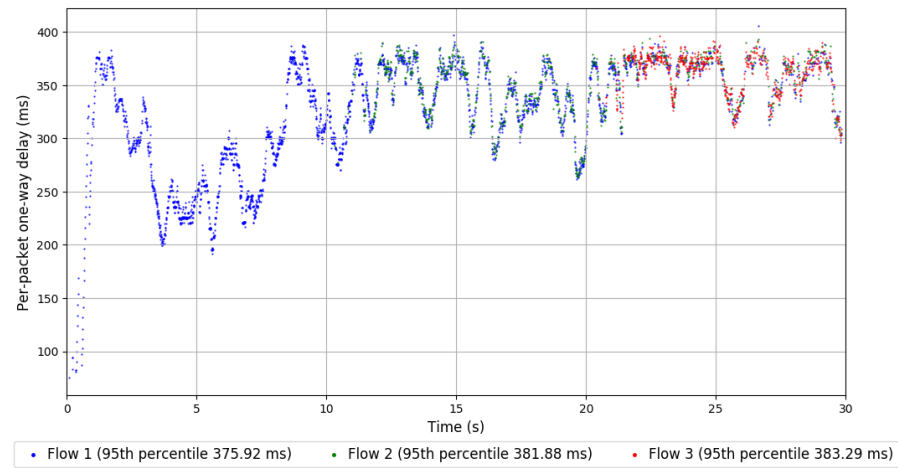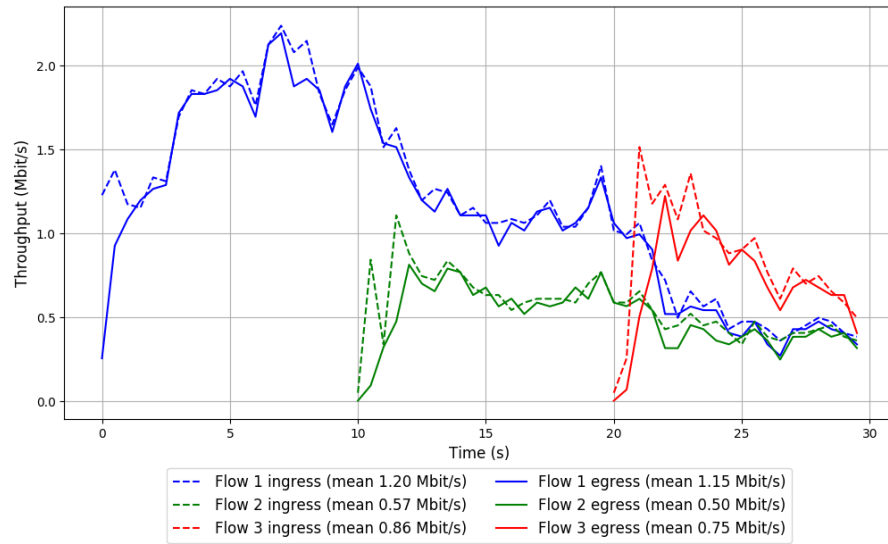
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-11 09:28:57
End at: 2017-12-11 09:29:27
Local clock offset: -3.758 ms
Remote clock offset: -13.115 ms


# Below is generated by plot.py at 2017-12-11 10:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 375.546 ms
Loss rate: 4.93%
-- Flow 1:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 371.245 ms
Loss rate: 2.88%
-- Flow 2:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 375.764 ms
Loss rate: 6.53%
-- Flow 3:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 378.789 ms
Loss rate: 10.22%
```
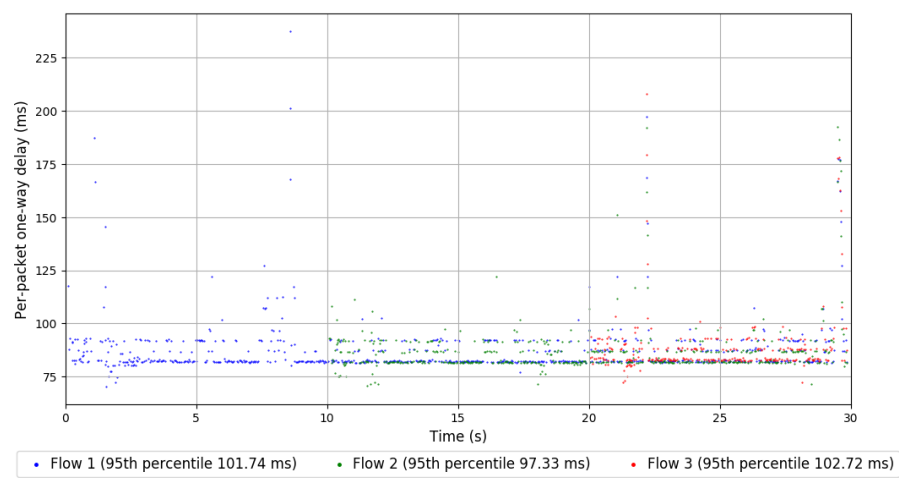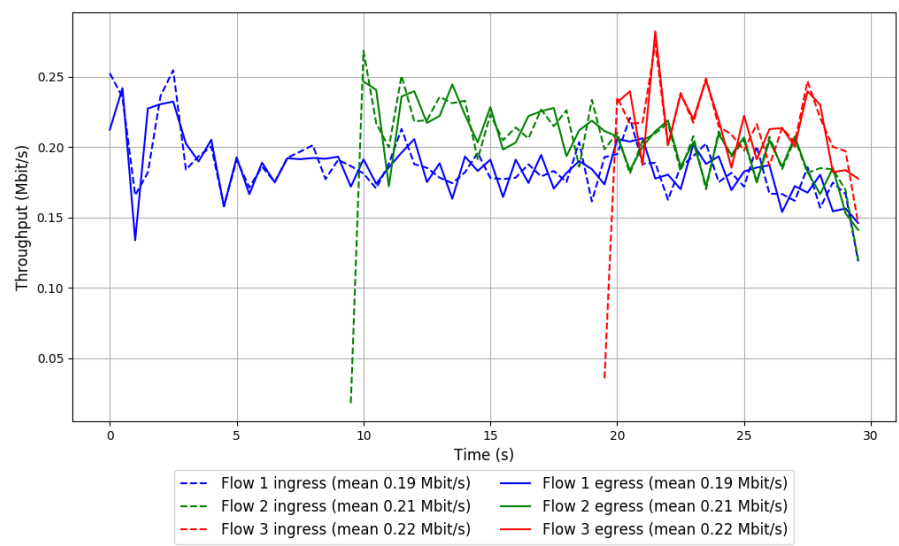
Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 1.33 Mbit/s)   Flow 1 egress (mean 1.30 Mbit/s)
Flow 2 ingress (mean 0.83 Mbit/s)   Flow 2 egress (mean 0.78 Mbit/s)
Flow 3 ingress (mean 1.06 Mbit/s)   Flow 3 egress (mean 0.98 Mbit/s)

Flow 1 (95th percentile 371.25 ms)   Flow 2 (95th percentile 375.76 ms)   Flow 3 (95th percentile 378.79 ms)

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```
Run 3: Statistics of QUIC Cubic

Start at: 2017-12-11 09:44:24
End at: 2017-12-11 09:44:54
Local clock offset: 1.116 ms
Remote clock offset: -11.136 ms


# Below is generated by plot.py at 2017-12-11 10:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 378.807 ms
Loss rate: 8.15%
-- Flow 1:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 375.917 ms
Loss rate: 5.04%
-- Flow 2:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 381.878 ms
Loss rate: 12.03%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 383.285 ms
Loss rate: 16.25%
```

Run 3: Report of QUIC Cubic — Data Link
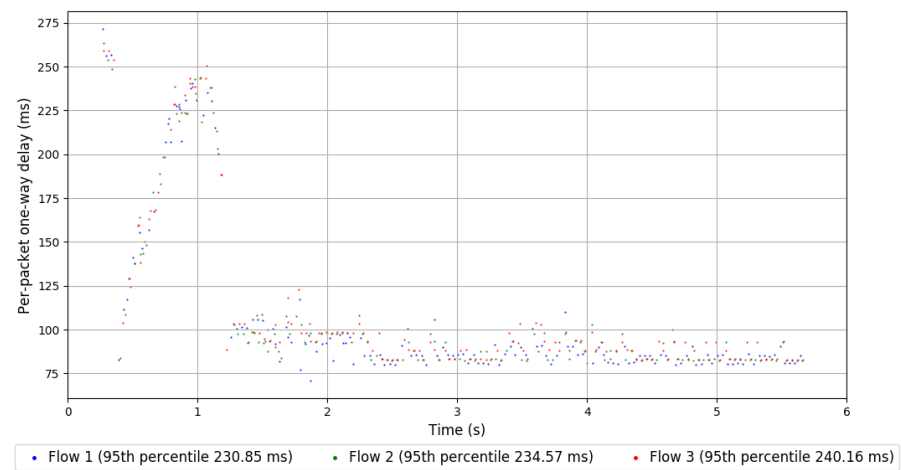
```
Run 1: Statistics of SCReAM

Start at: 2017-12-11 09:14:35
End at: 2017-12-11 09:15:05
Local clock offset: -6.699 ms
Remote clock offset: -15.337 ms

# Below is generated by plot.py at 2017-12-11 10:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 101.533 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 101.739 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 97.335 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 102.725 ms
Loss rate: 0.72%
```

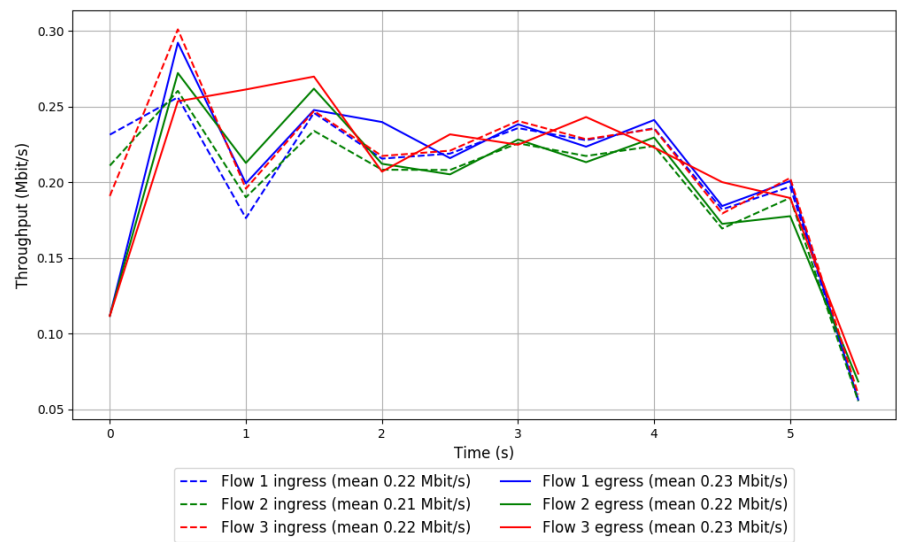# Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2017-12-11 09:30:03
End at: 2017-12-11 09:30:33
Local clock offset: -1.317 ms
Remote clock offset: -12.957 ms
```

Run 2: Report of SCReAM — Data Link
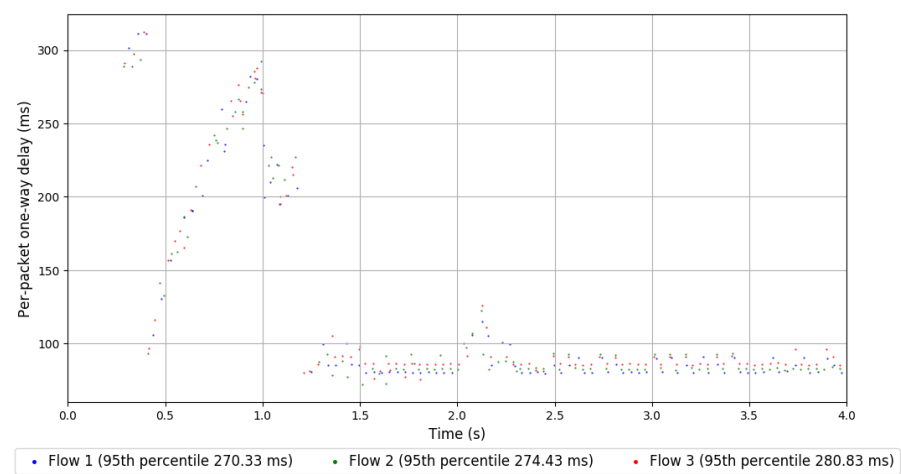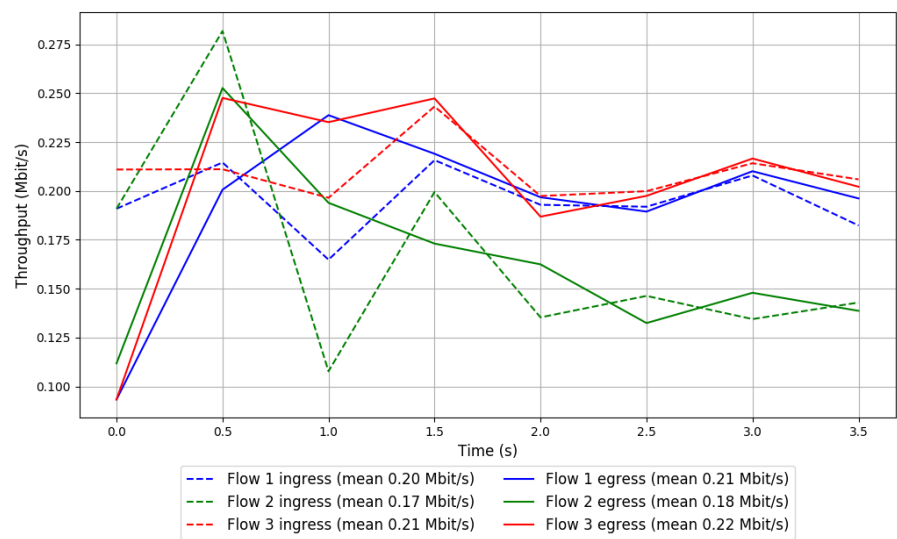
```
Run 3: Statistics of SCReAM

Start at: 2017-12-11 09:45:30
End at: 2017-12-11 09:46:00
Local clock offset: -1.257 ms
Remote clock offset: -13.948 ms
```
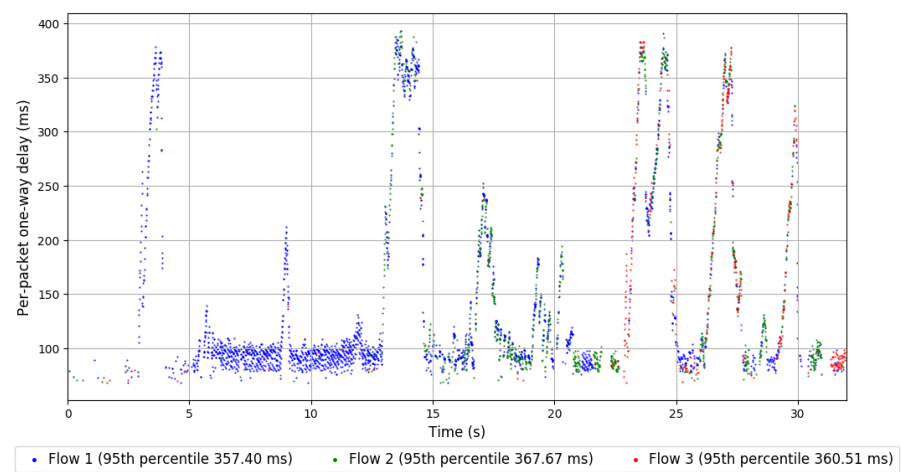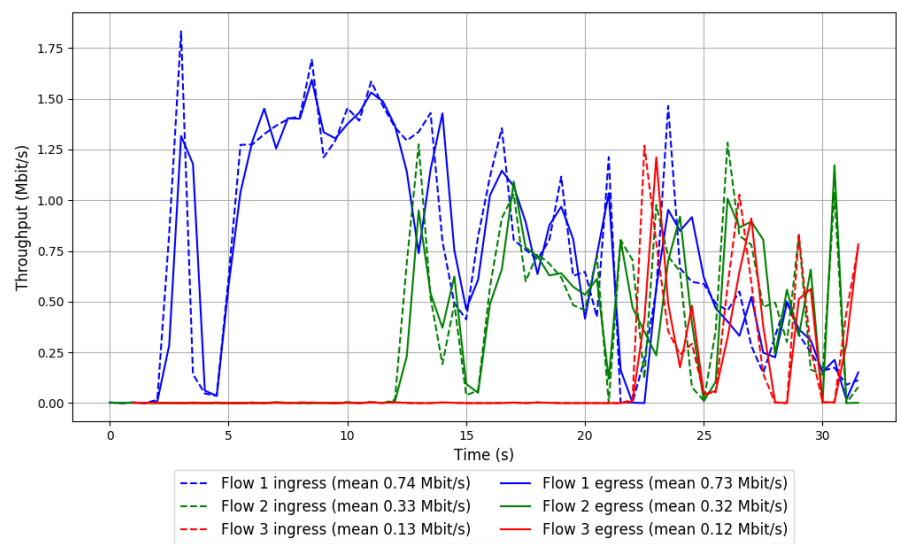
Run 3: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.20 Mbit/s) — Flow 1 egress (mean 0.21 Mbit/s)
Flow 2 ingress (mean 0.17 Mbit/s) — Flow 2 egress (mean 0.18 Mbit/s)
Flow 3 ingress (mean 0.21 Mbit/s) — Flow 3 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 270.33 ms) • Flow 2 (95th percentile 274.43 ms) • Flow 3 (95th percentile 280.83 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2017-12-11 09:03:32
End at: 2017-12-11 09:04:02
Local clock offset: -10.047 ms
Remote clock offset: -13.284 ms

# Below is generated by plot.py at 2017-12-11 10:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 360.552 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 357.396 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 367.671 ms
Loss rate: 3.33%
-- Flow 3:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 360.511 ms
Loss rate: 5.41%
```

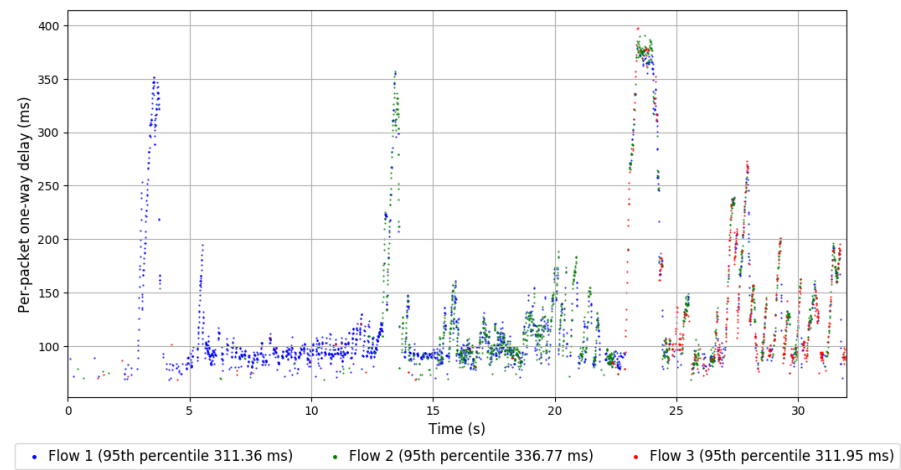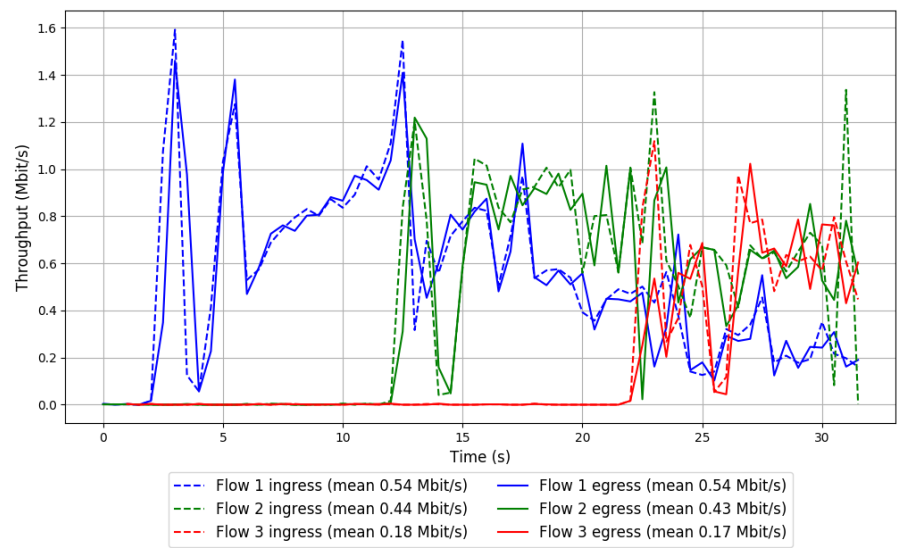Run 1: Report of WebRTC media — Data Link

- - Flow 1 ingress (mean 0.74 Mbit/s) — Flow 1 egress (mean 0.73 Mbit/s)
- - Flow 2 ingress (mean 0.33 Mbit/s) — Flow 2 egress (mean 0.32 Mbit/s)
- - Flow 3 ingress (mean 0.13 Mbit/s) — Flow 3 egress (mean 0.12 Mbit/s)

- Flow 1 (95th percentile 357.40 ms) • Flow 2 (95th percentile 367.67 ms) • Flow 3 (95th percentile 360.51 ms)

```
Run 2: Statistics of WebRTC media

Start at: 2017-12-11 09:19:00
End at: 2017-12-11 09:19:30
Local clock offset: -4.025 ms
Remote clock offset: -13.177 ms


# Below is generated by plot.py at 2017-12-11 10:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 321.625 ms
Loss rate: 2.74%
-- Flow 1:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 311.363 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 336.770 ms
Loss rate: 2.40%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 311.946 ms
Loss rate: 9.28%
```

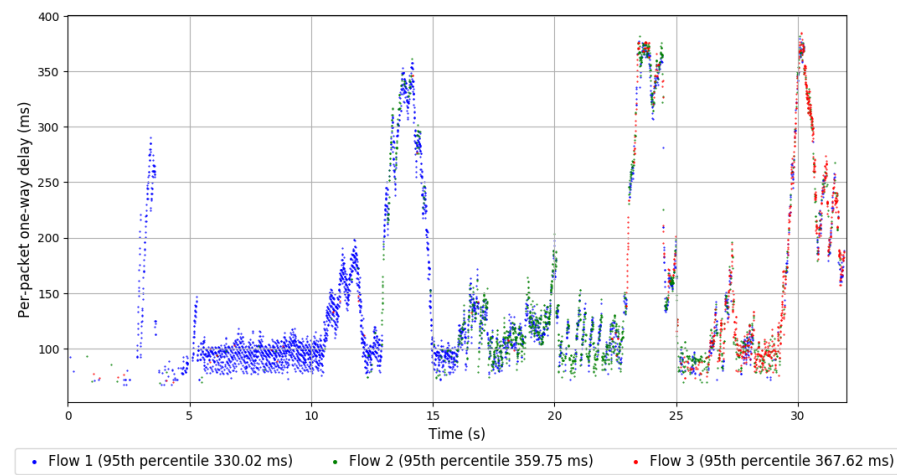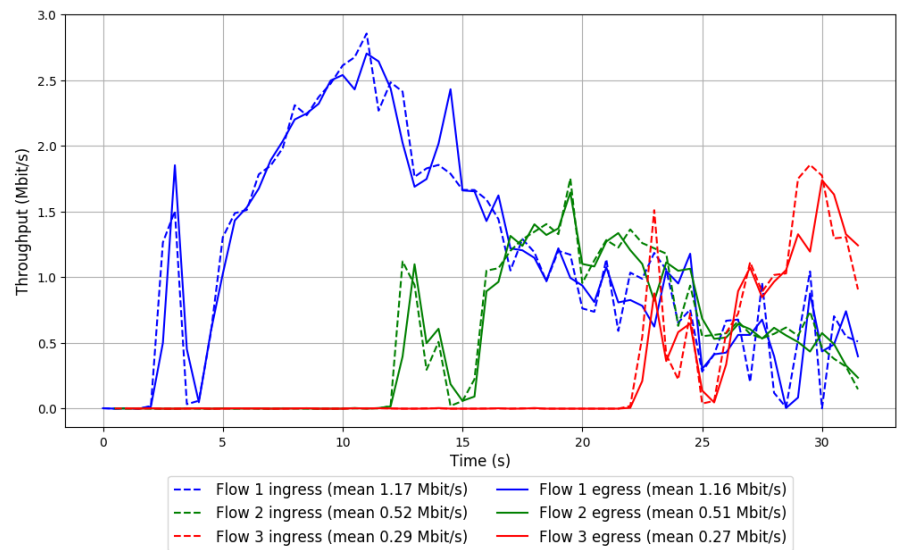Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2017-12-11 09:34:28
End at: 2017-12-11 09:34:58
Local clock offset: -2.9 ms
Remote clock offset: -12.416 ms


# Below is generated by plot.py at 2017-12-11 10:35:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 345.481 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 330.020 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 359.749 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 367.622 ms
Loss rate: 7.11%
```

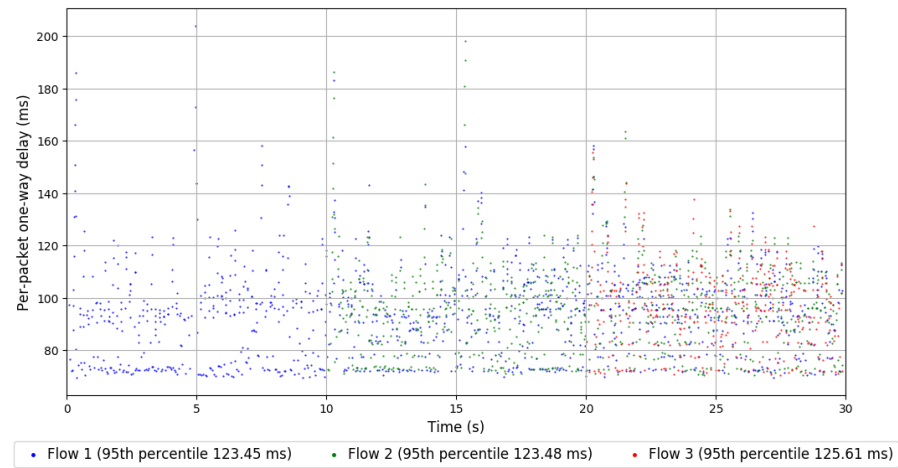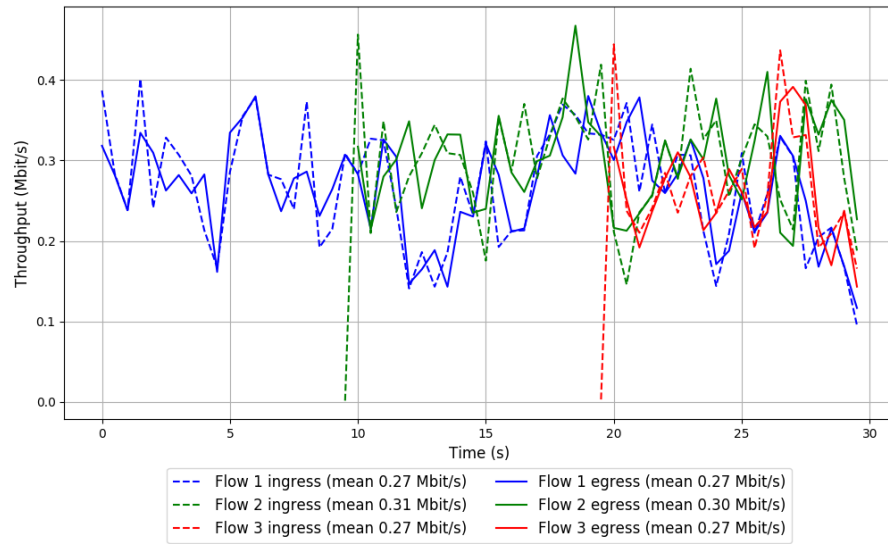Run 3: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2017-12-11 09:07:57
End at: 2017-12-11 09:08:27
Local clock offset: -10.174 ms
Remote clock offset: -16.031 ms


# Below is generated by plot.py at 2017-12-11 10:35:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 123.794 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 123.448 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 123.477 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 125.613 ms
Loss rate: 2.97%
```

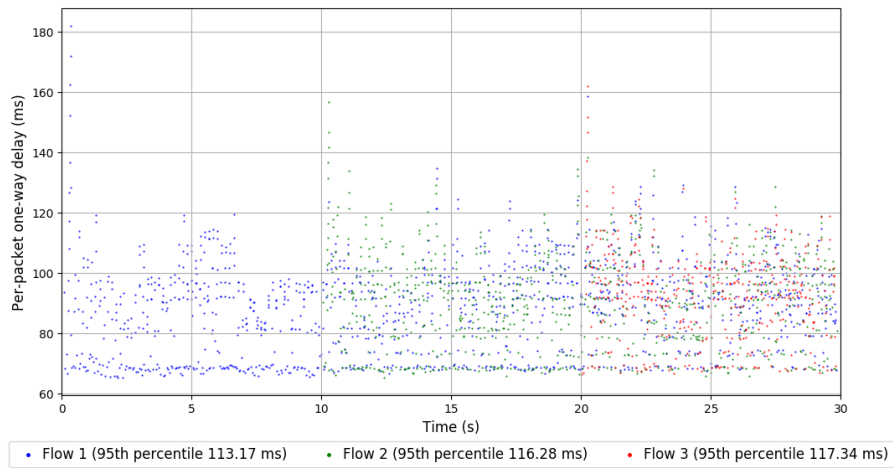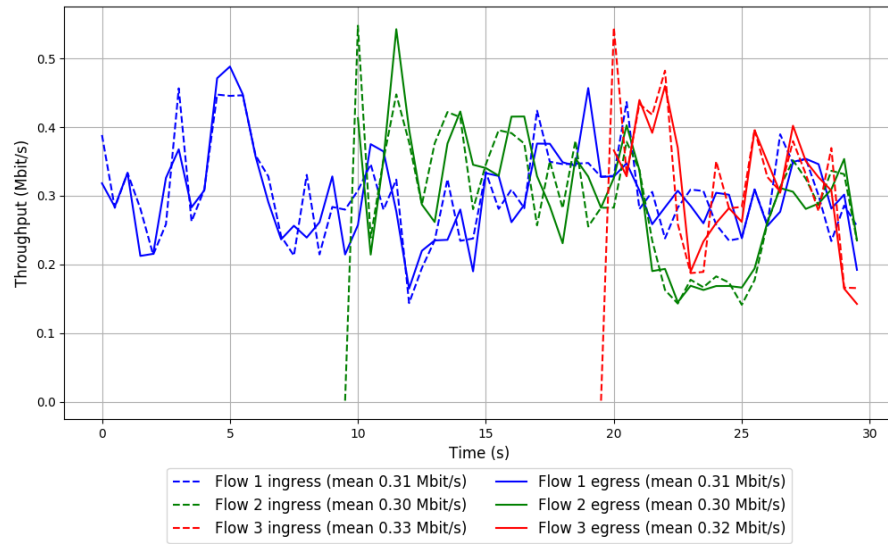## Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-12-11 09:23:26
End at: 2017-12-11 09:23:56
Local clock offset: -6.29 ms
Remote clock offset: -11.868 ms


# Below is generated by plot.py at 2017-12-11 10:35:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 114.489 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 113.166 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 116.285 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 117.337 ms
Loss rate: 2.43%
```
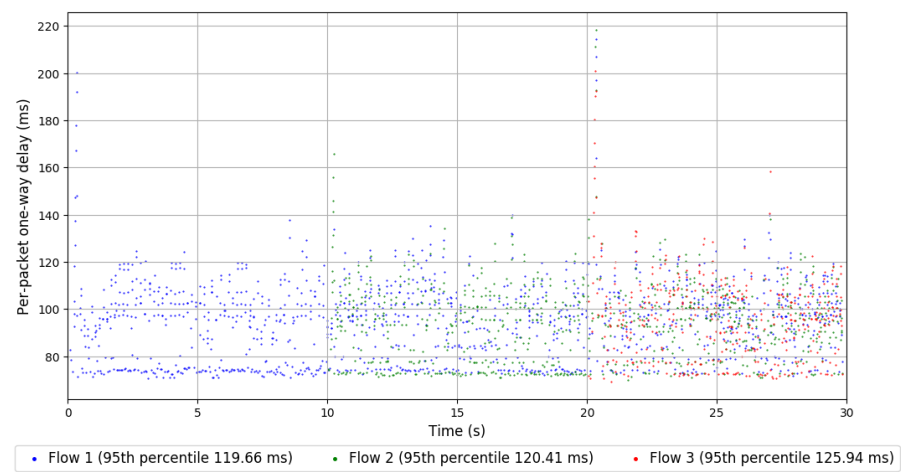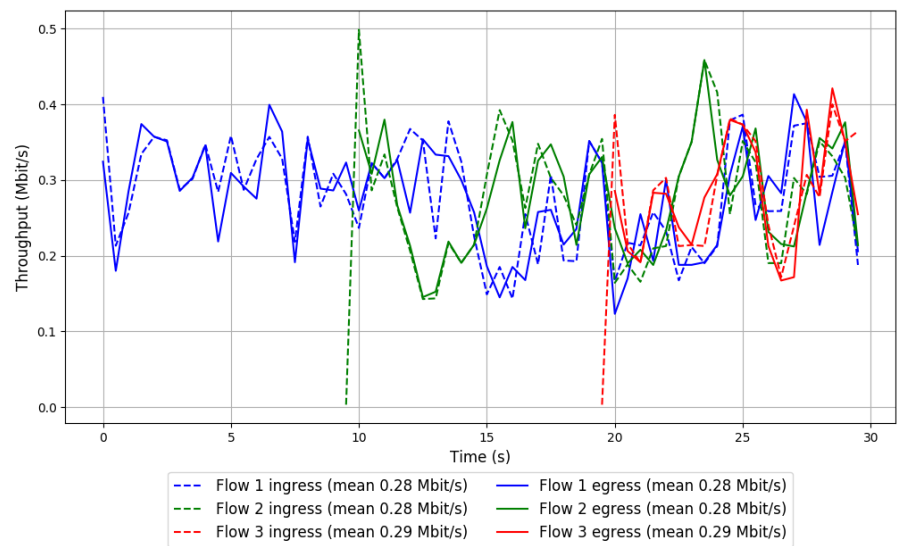
Run 2: Report of Sprout — Data Link

Flow 1 ingress (mean 0.31 Mbit/s)   Flow 1 egress (mean 0.31 Mbit/s)
Flow 2 ingress (mean 0.30 Mbit/s)   Flow 2 egress (mean 0.30 Mbit/s)
Flow 3 ingress (mean 0.33 Mbit/s)   Flow 3 egress (mean 0.32 Mbit/s)

• Flow 1 (95th percentile 113.17 ms)   • Flow 2 (95th percentile 116.28 ms)   • Flow 3 (95th percentile 117.34 ms)

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```
Run 3: Statistics of Sprout

Start at: 2017-12-11 09:38:53
End at: 2017-12-11 09:39:23
Local clock offset: 0.253 ms
Remote clock offset: -12.385 ms

# Below is generated by plot.py at 2017-12-11 10:35:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 120.532 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 119.655 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 120.412 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 125.940 ms
Loss rate: 2.79%
```

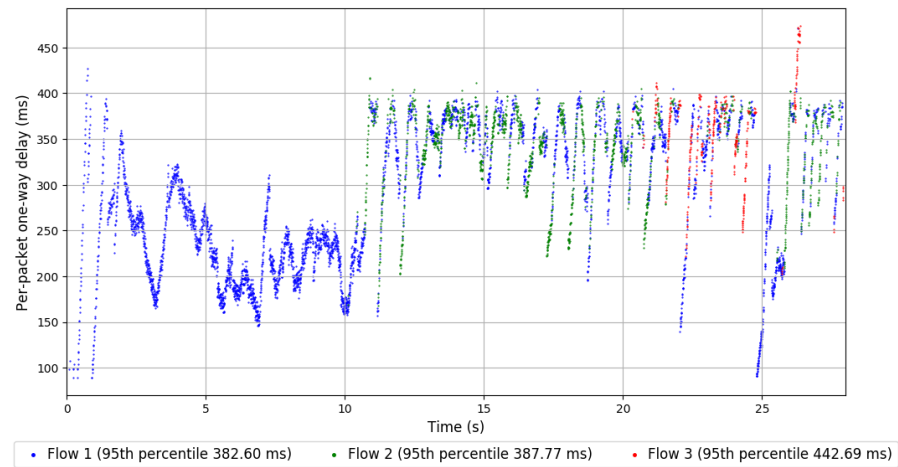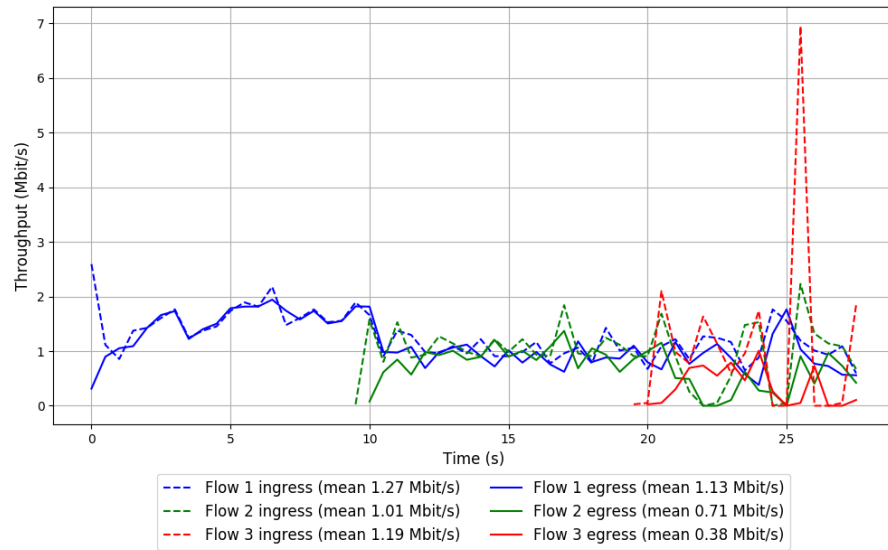# Run 3: Report of Sprout — Data Link

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

Start at: 2017-12-11 09:06:51
End at: 2017-12-11 09:07:21
Local clock offset: -9.434 ms
Remote clock offset: -14.656 ms


# Below is generated by plot.py at 2017-12-11 10:35:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 386.052 ms
Loss rate: 25.46%
-- Flow 1:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 382.599 ms
Loss rate: 11.21%
-- Flow 2:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 387.770 ms
Loss rate: 30.48%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 442.689 ms
Loss rate: 69.42%
```

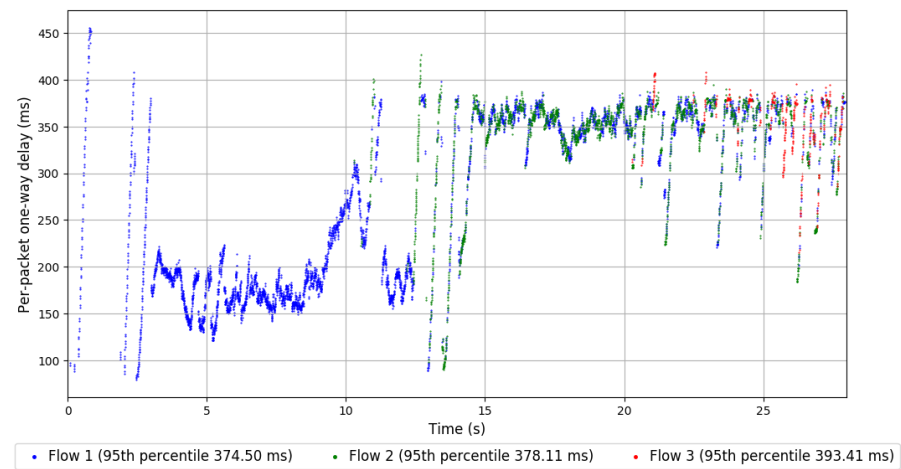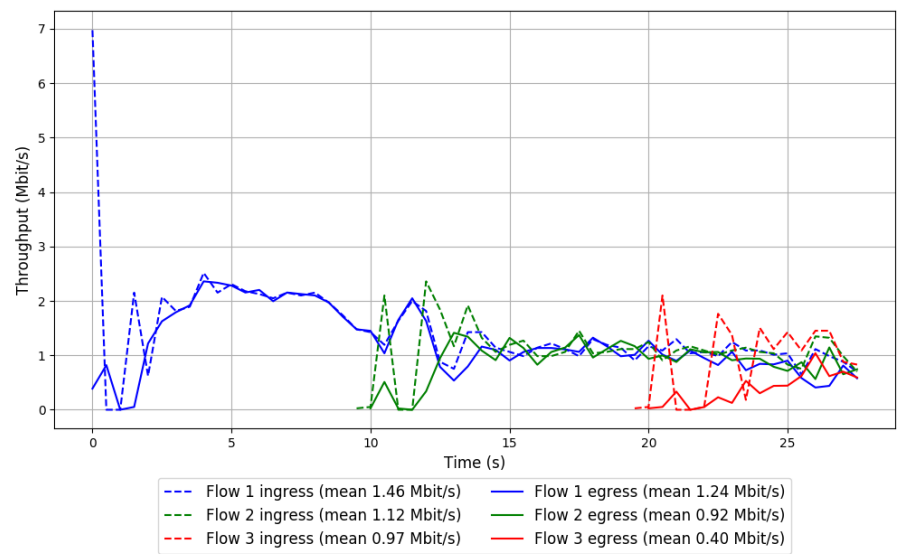Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 1.27 Mbit/s)   Flow 1 egress (mean 1.13 Mbit/s)
Flow 2 ingress (mean 1.01 Mbit/s)   Flow 2 egress (mean 0.71 Mbit/s)
Flow 3 ingress (mean 1.19 Mbit/s)   Flow 3 egress (mean 0.38 Mbit/s)

Flow 1 (95th percentile 382.60 ms)   Flow 2 (95th percentile 387.77 ms)   Flow 3 (95th percentile 442.69 ms)

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

Start at: 2017-12-11 09:22:19
End at: 2017-12-11 09:22:49
Local clock offset: -4.854 ms
Remote clock offset: -13.202 ms

# Below is generated by plot.py at 2017-12-11 10:35:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 377.469 ms
Loss rate: 21.52%
-- Flow 1:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 374.505 ms
Loss rate: 15.46%
-- Flow 2:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 378.109 ms
Loss rate: 19.10%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 393.411 ms
Loss rate: 60.11%
```

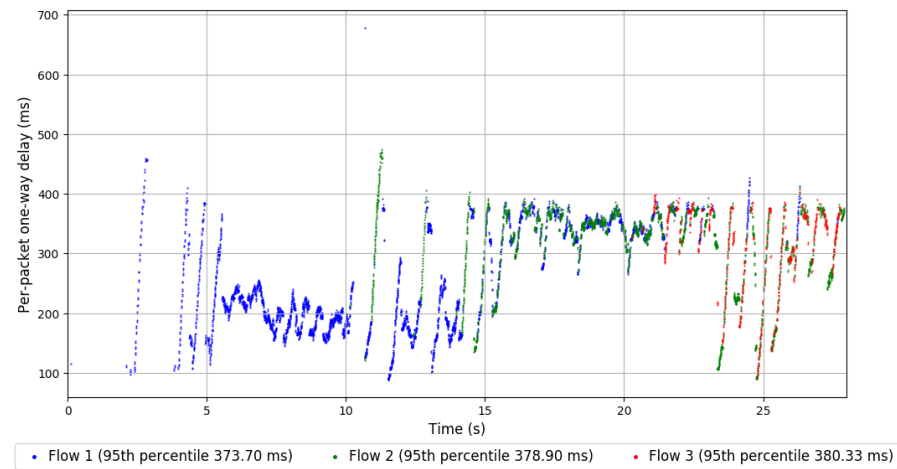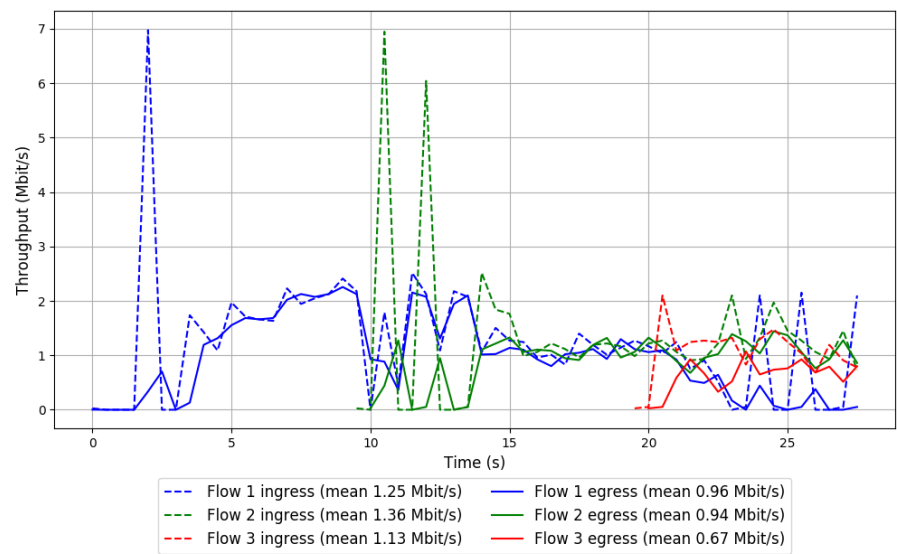Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 1.46 Mbit/s)   Flow 1 egress (mean 1.24 Mbit/s)
Flow 2 ingress (mean 1.12 Mbit/s)   Flow 2 egress (mean 0.92 Mbit/s)
Flow 3 ingress (mean 0.97 Mbit/s)   Flow 3 egress (mean 0.40 Mbit/s)

Flow 1 (95th percentile 374.50 ms)   Flow 2 (95th percentile 378.11 ms)   Flow 3 (95th percentile 393.41 ms)

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

Start at: 2017-12-11 09:37:46
End at: 2017-12-11 09:38:16
Local clock offset: -2.331 ms
Remote clock offset: -11.918 ms


# Below is generated by plot.py at 2017-12-11 10:35:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 376.725 ms
Loss rate: 28.92%
-- Flow 1:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 373.703 ms
Loss rate: 23.31%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 378.903 ms
Loss rate: 31.57%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 380.331 ms
Loss rate: 43.54%
```

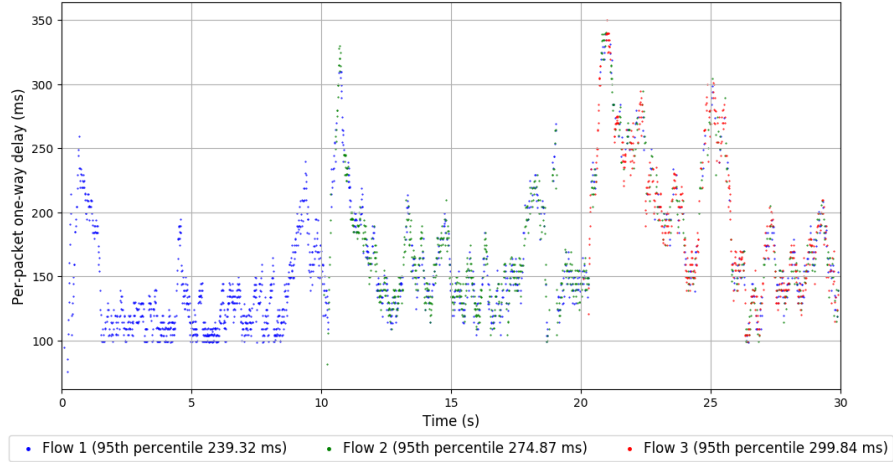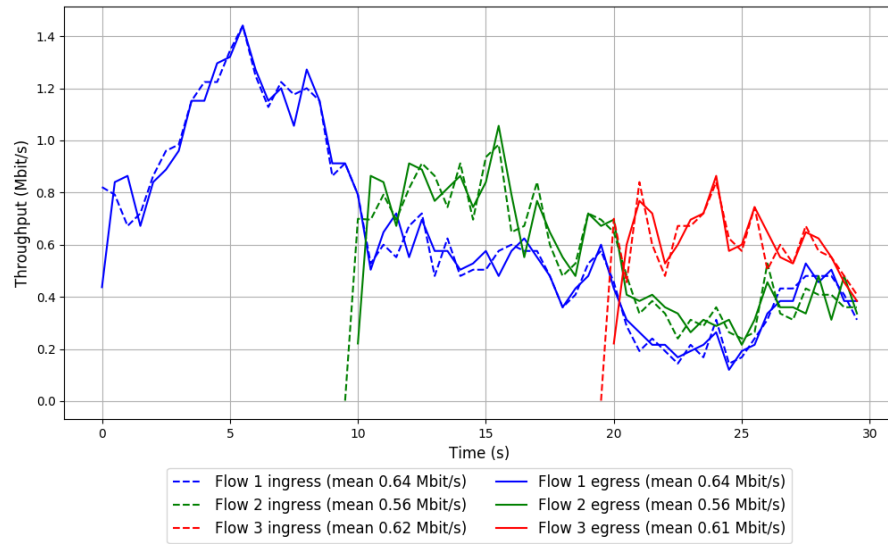Run 3: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2017-12-11 09:04:38
End at: 2017-12-11 09:05:08
Local clock offset: -9.186 ms
Remote clock offset: -14.636 ms

# Below is generated by plot.py at 2017-12-11 10:35:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 273.917 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 239.316 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 274.867 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 299.837 ms
Loss rate: 1.76%
```

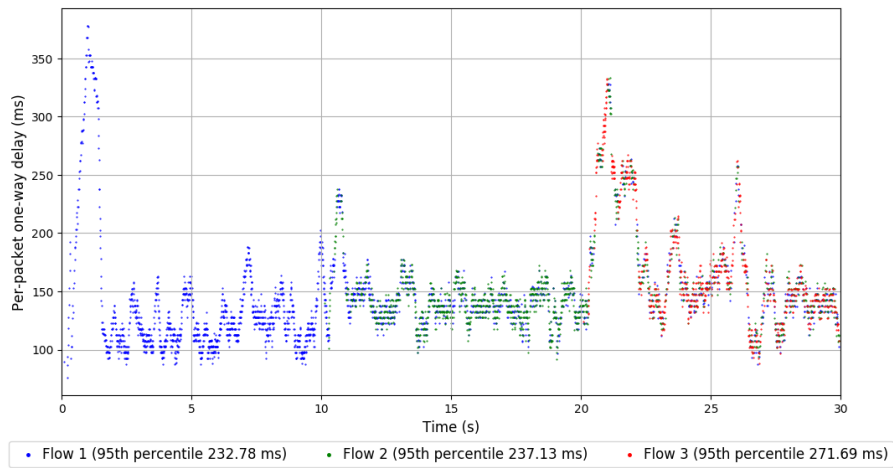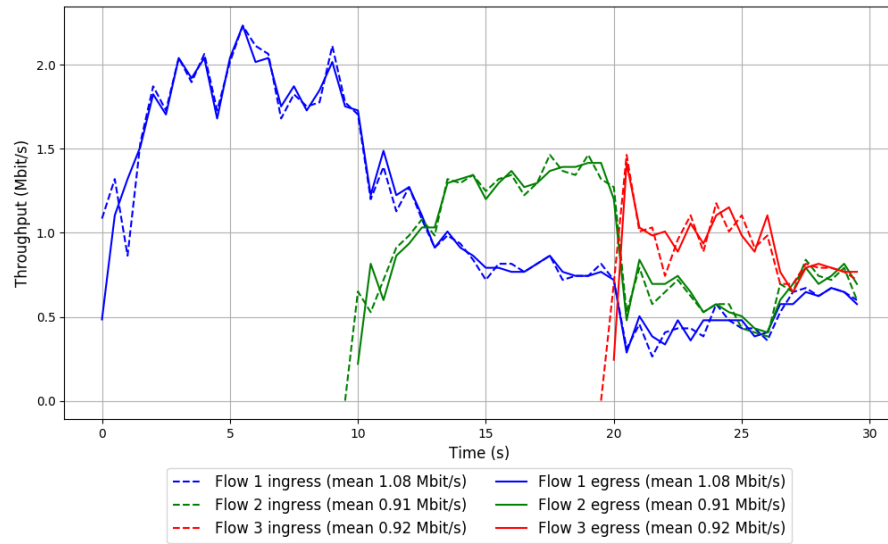Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2017-12-11 09:20:06
End at: 2017-12-11 09:20:36
Local clock offset: -3.892 ms
Remote clock offset: -14.044 ms


# Below is generated by plot.py at 2017-12-11 10:35:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 252.356 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 232.780 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 237.132 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 271.688 ms
Loss rate: 1.18%
```

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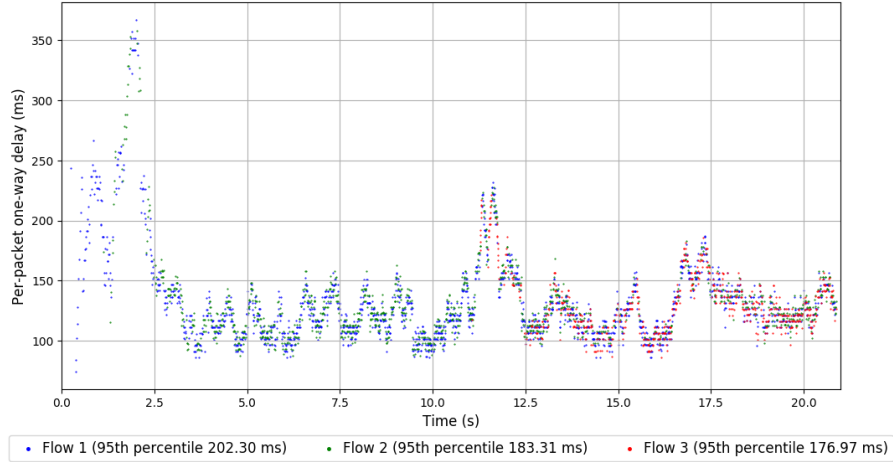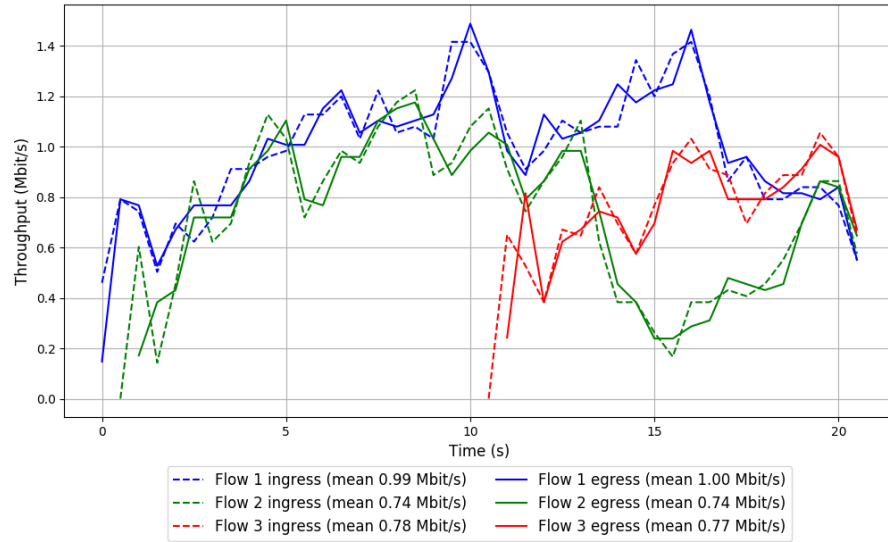
```
Run 3: Statistics of TCP Vegas

Start at: 2017-12-11 09:35:34
End at: 2017-12-11 09:36:04
Local clock offset: -1.276 ms
Remote clock offset: -13.273 ms
```

Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 0.99 Mbit/s)   Flow 1 egress (mean 1.00 Mbit/s)
Flow 2 ingress (mean 0.74 Mbit/s)   Flow 2 egress (mean 0.74 Mbit/s)
Flow 3 ingress (mean 0.78 Mbit/s)   Flow 3 egress (mean 0.77 Mbit/s)

• Flow 1 (95th percentile 202.30 ms)   • Flow 2 (95th percentile 183.31 ms)   • Flow 3 (95th percentile 176.97 ms)
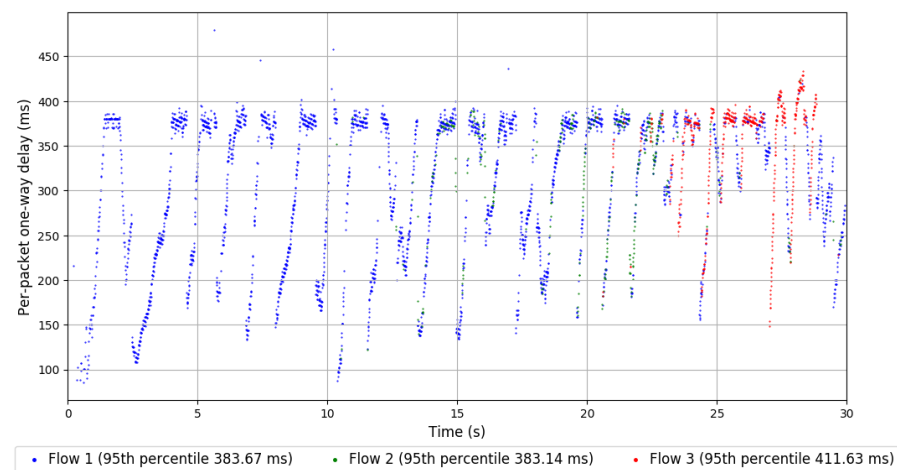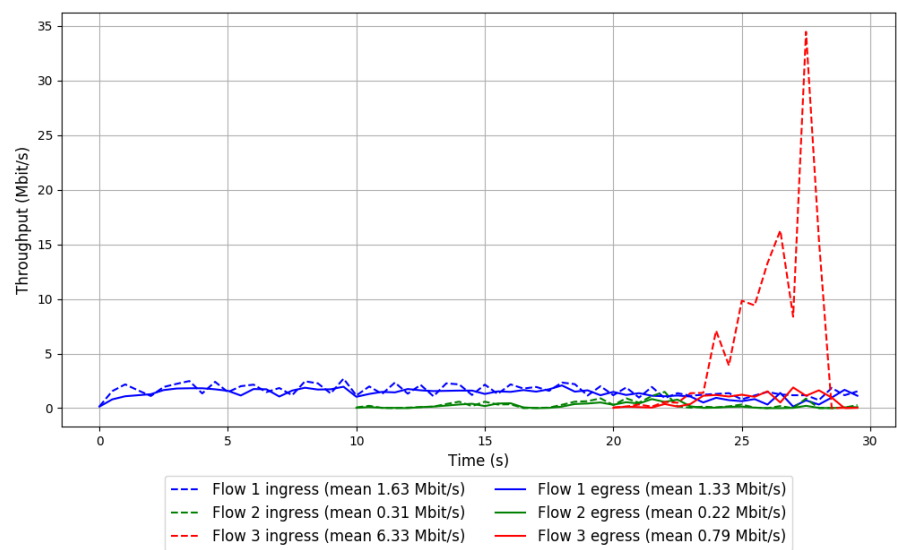
```
Run 1: Statistics of Verus

Start at: 2017-12-11 09:10:09
End at: 2017-12-11 09:10:39
Local clock offset: -7.803 ms
Remote clock offset: -14.636 ms


# Below is generated by plot.py at 2017-12-11 10:35:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 386.511 ms
Loss rate: 56.07%
-- Flow 1:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 383.672 ms
Loss rate: 18.79%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 383.138 ms
Loss rate: 31.01%
-- Flow 3:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 411.635 ms
Loss rate: 88.11%
```
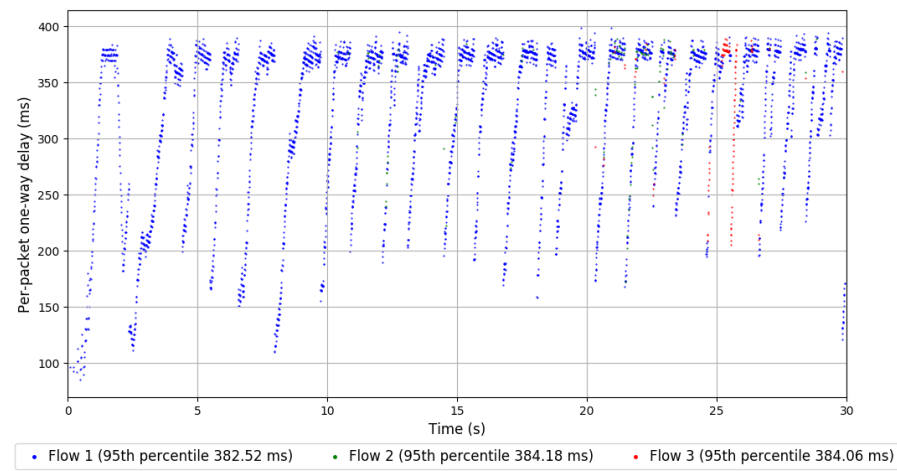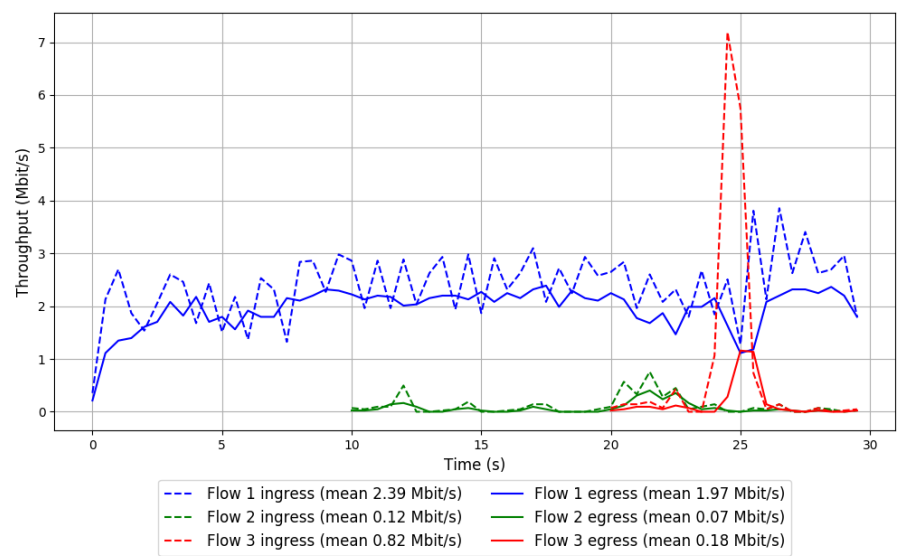
Run 1: Report of Verus — Data Link

- - - - Flow 1 ingress (mean 1.63 Mbit/s)   —— Flow 1 egress (mean 1.33 Mbit/s)
- - - - Flow 2 ingress (mean 0.31 Mbit/s)   —— Flow 2 egress (mean 0.22 Mbit/s)
- - - - Flow 3 ingress (mean 6.33 Mbit/s)   —— Flow 3 egress (mean 0.79 Mbit/s)

- Flow 1 (95th percentile 383.67 ms)   • Flow 2 (95th percentile 383.14 ms)   • Flow 3 (95th percentile 411.63 ms)

65

```
Run 2: Statistics of Verus

Start at: 2017-12-11 09:25:38
End at: 2017-12-11 09:26:08
Local clock offset: -5.175 ms
Remote clock offset: -13.111 ms


# Below is generated by plot.py at 2017-12-11 10:35:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 382.757 ms
Loss rate: 24.60%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 382.524 ms
Loss rate: 17.91%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 384.184 ms
Loss rate: 40.82%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 384.062 ms
Loss rate: 79.30%
```

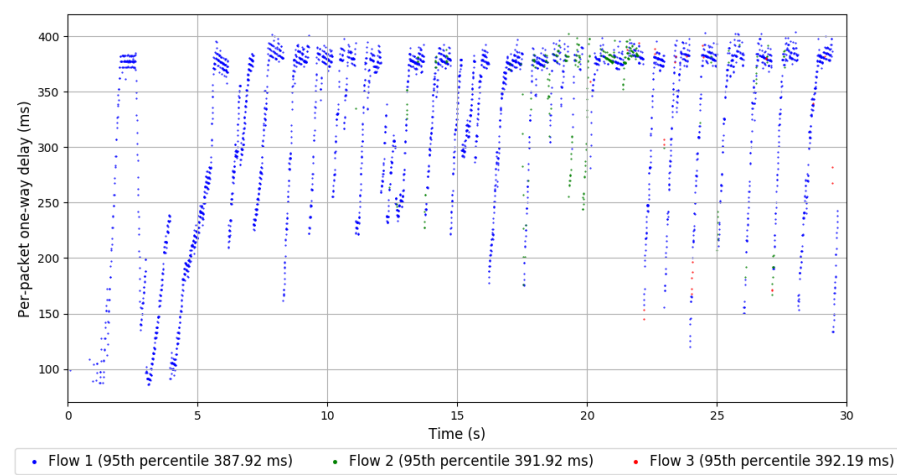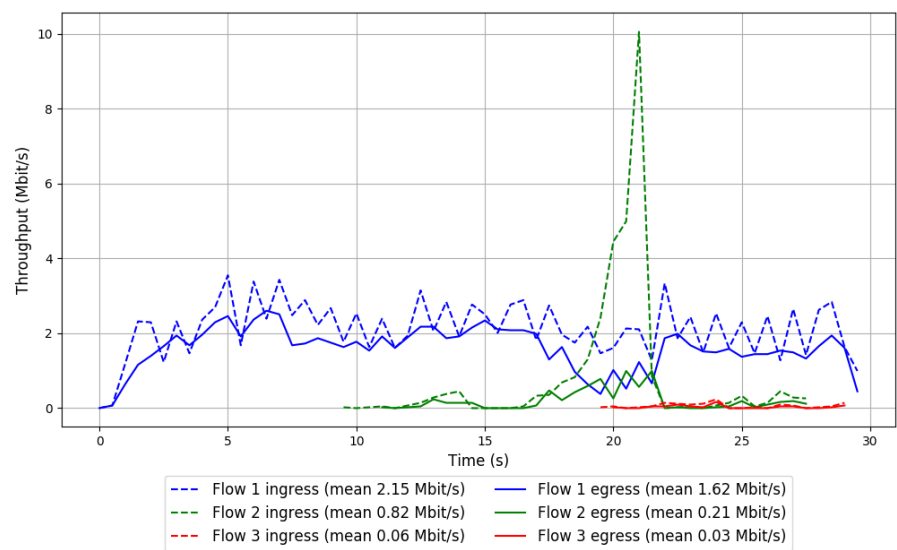Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2017-12-11 09:41:05
End at: 2017-12-11 09:41:35
Local clock offset: 0.184 ms
Remote clock offset: -12.77 ms


# Below is generated by plot.py at 2017-12-11 10:35:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 388.348 ms
Loss rate: 34.68%
-- Flow 1:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 387.915 ms
Loss rate: 24.90%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 391.919 ms
Loss rate: 76.28%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 392.191 ms
Loss rate: 49.06%
```

Run 3: Report of Verus — Data Link

```
Run 1: Statistics of Copa

Start at: 2017-12-11 09:05:44
End at: 2017-12-11 09:06:14
Local clock offset: -11.615 ms
Remote clock offset: -15.153 ms

# Below is generated by plot.py at 2017-12-11 10:35:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 227.772 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 210.795 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 231.222 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 268.725 ms
Loss rate: 1.97%
```
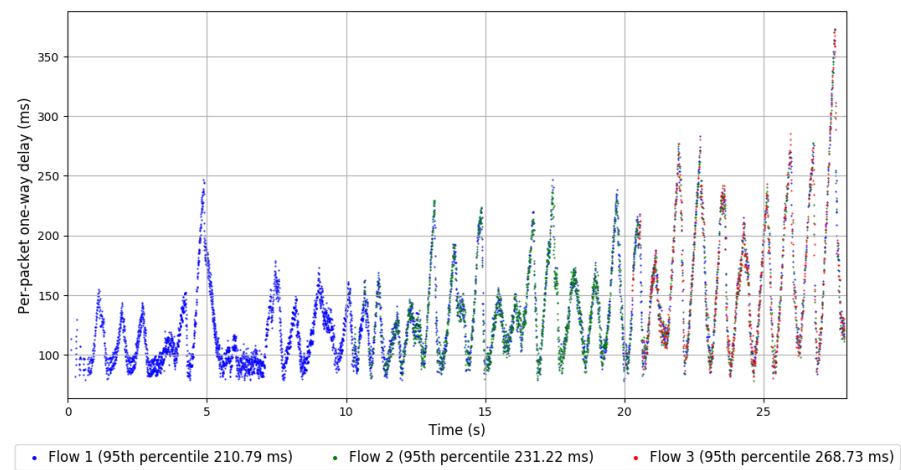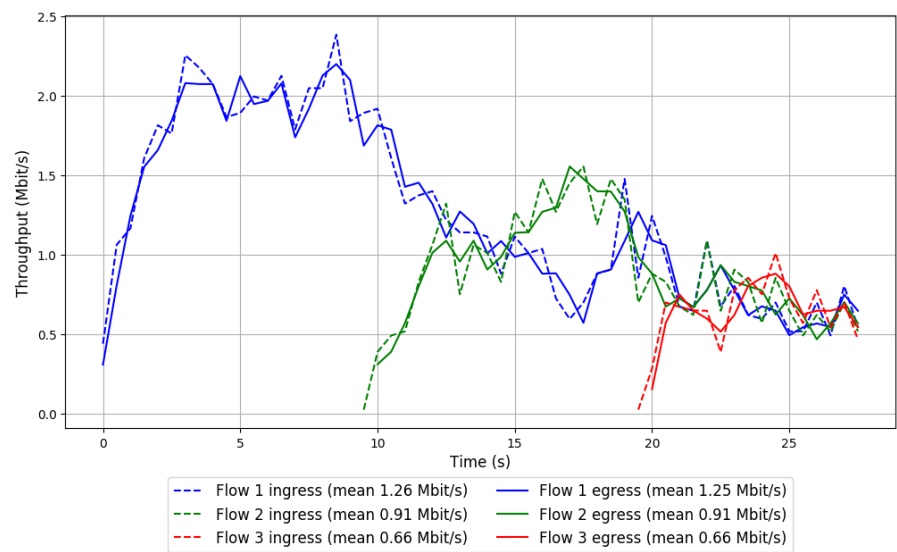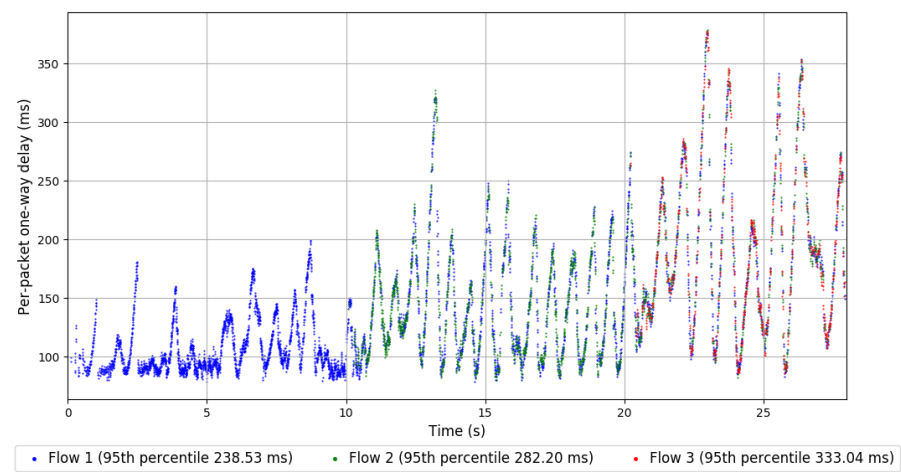
Run 1: Report of Copa — Data Link

- Flow 1 ingress (mean 1.26 Mbit/s)
- Flow 1 egress (mean 1.25 Mbit/s)
- Flow 2 ingress (mean 0.91 Mbit/s)
- Flow 2 egress (mean 0.91 Mbit/s)
- Flow 3 ingress (mean 0.66 Mbit/s)
- Flow 3 egress (mean 0.66 Mbit/s)

- Flow 1 (95th percentile 210.79 ms)
- Flow 2 (95th percentile 231.22 ms)
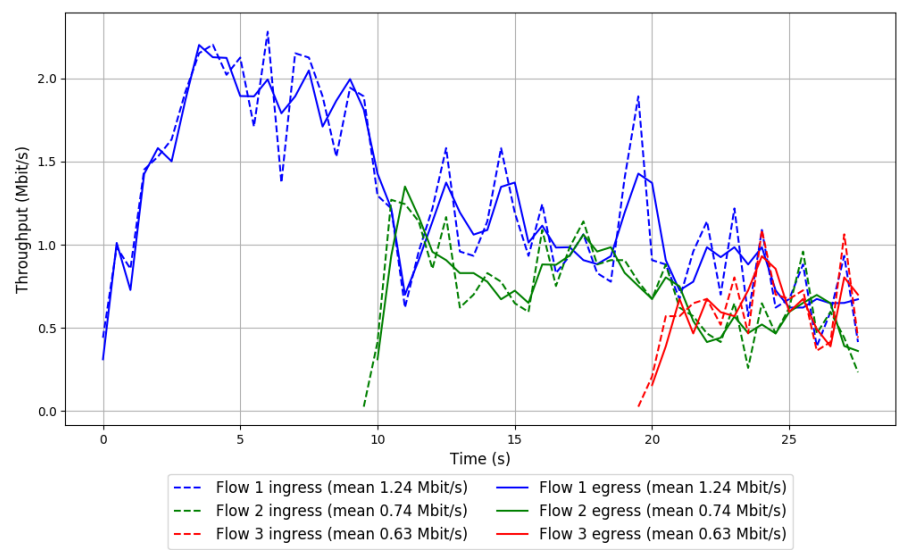- Flow 3 (95th percentile 268.73 ms)

71

```
Run 2: Statistics of Copa

Start at: 2017-12-11 09:21:13
End at: 2017-12-11 09:21:43
Local clock offset: -5.861 ms
Remote clock offset: -14.695 ms

# Below is generated by plot.py at 2017-12-11 10:35:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 267.536 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 238.527 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 282.201 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 333.039 ms
Loss rate: 2.64%
```
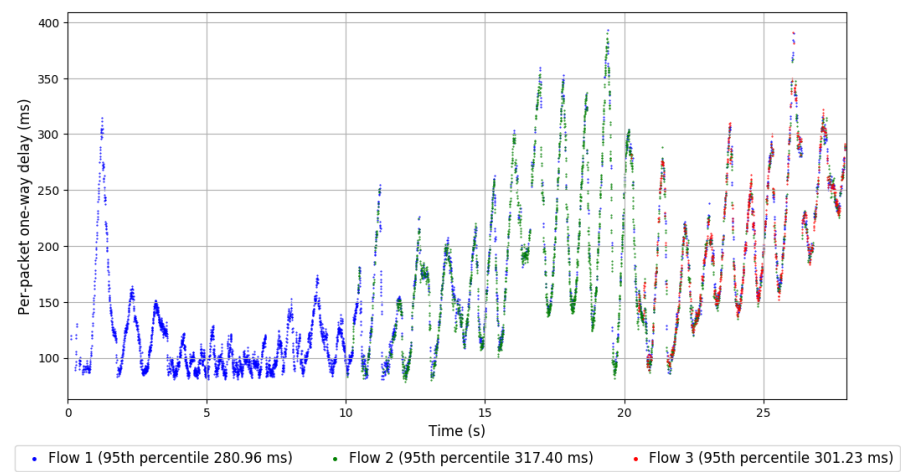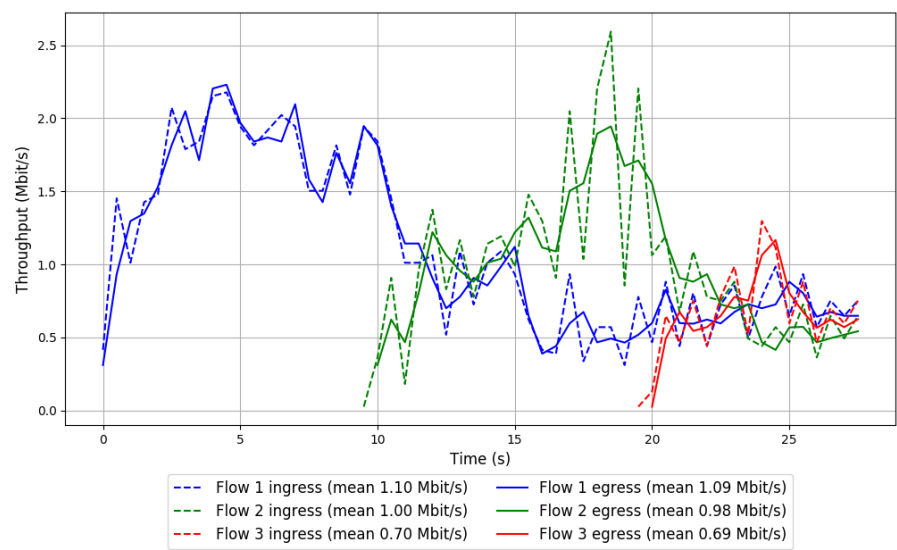
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 1.24 Mbit/s)   Flow 1 egress (mean 1.24 Mbit/s)
Flow 2 ingress (mean 0.74 Mbit/s)   Flow 2 egress (mean 0.74 Mbit/s)
Flow 3 ingress (mean 0.63 Mbit/s)   Flow 3 egress (mean 0.63 Mbit/s)

Flow 1 (95th percentile 238.53 ms)   Flow 2 (95th percentile 282.20 ms)   Flow 3 (95th percentile 333.04 ms)

```
Run 3: Statistics of Copa

Start at: 2017-12-11 09:36:40
End at: 2017-12-11 09:37:10
Local clock offset: -2.981 ms
Remote clock offset: -14.55 ms


# Below is generated by plot.py at 2017-12-11 10:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 298.473 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 280.959 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 317.399 ms
Loss rate: 2.13%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 301.225 ms
Loss rate: 5.13%
```
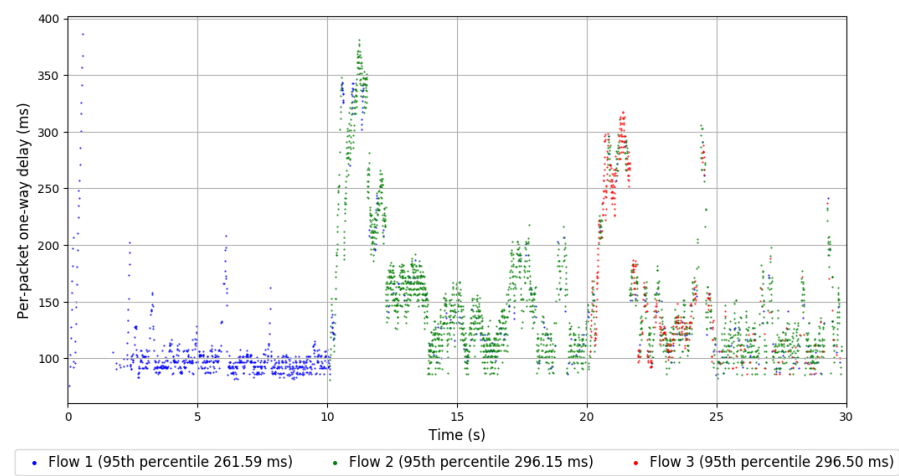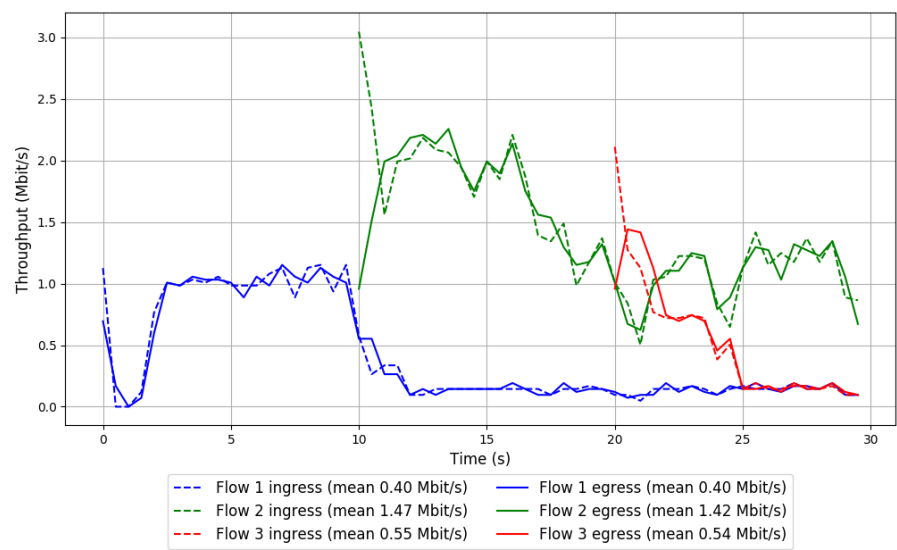
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 1.10 Mbit/s) --- Flow 1 egress (mean 1.09 Mbit/s)
Flow 2 ingress (mean 1.00 Mbit/s) --- Flow 2 egress (mean 0.98 Mbit/s)
Flow 3 ingress (mean 0.70 Mbit/s) --- Flow 3 egress (mean 0.69 Mbit/s)

Flow 1 (95th percentile 280.96 ms)   Flow 2 (95th percentile 317.40 ms)   Flow 3 (95th percentile 301.23 ms)

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```
Run 1: Statistics of Indigo

Start at: 2017-12-11 09:15:41
End at: 2017-12-11 09:16:11
Local clock offset: -5.443 ms
Remote clock offset: -14.224 ms

# Below is generated by plot.py at 2017-12-11 10:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 295.871 ms
Loss rate: 2.80%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 261.592 ms
Loss rate: 1.61%
-- Flow 2:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 296.154 ms
Loss rate: 3.39%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 296.505 ms
Loss rate: 2.28%
```
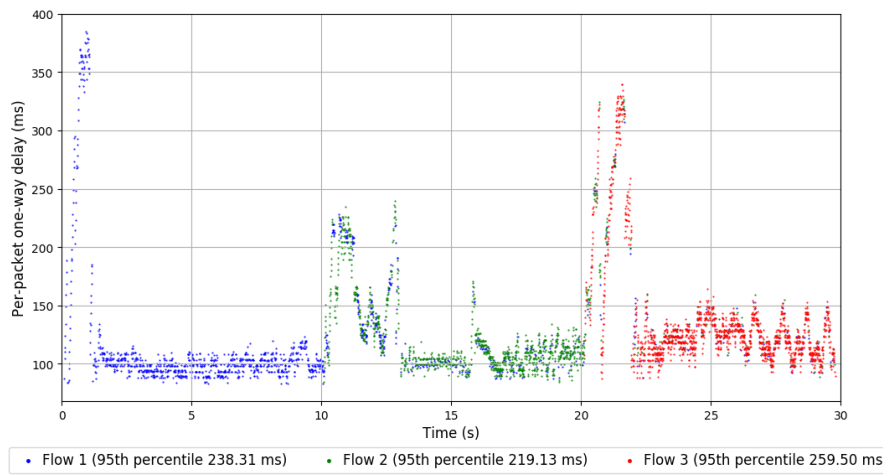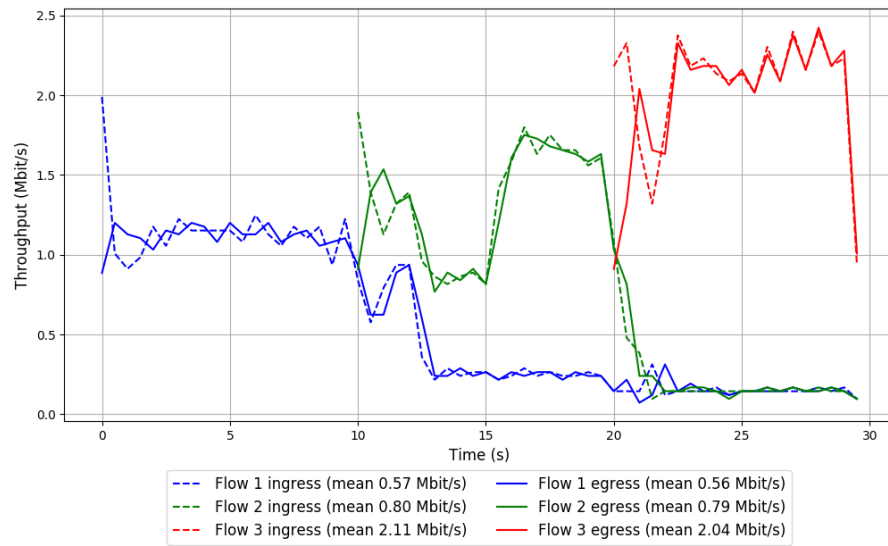
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2017-12-11 09:31:09
End at: 2017-12-11 09:31:39
Local clock offset: -0.972 ms
Remote clock offset: -13.148 ms

# Below is generated by plot.py at 2017-12-11 10:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 241.040 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 238.305 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 219.135 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 259.498 ms
Loss rate: 4.20%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2017-12-11 09:46:35
End at: 2017-12-11 09:47:05
Local clock offset: 1.861 ms
Remote clock offset: -13.124 ms


# Below is generated by plot.py at 2017-12-11 10:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 215.037 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 276.016 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 192.870 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 208.918 ms
Loss rate: 2.35%
```
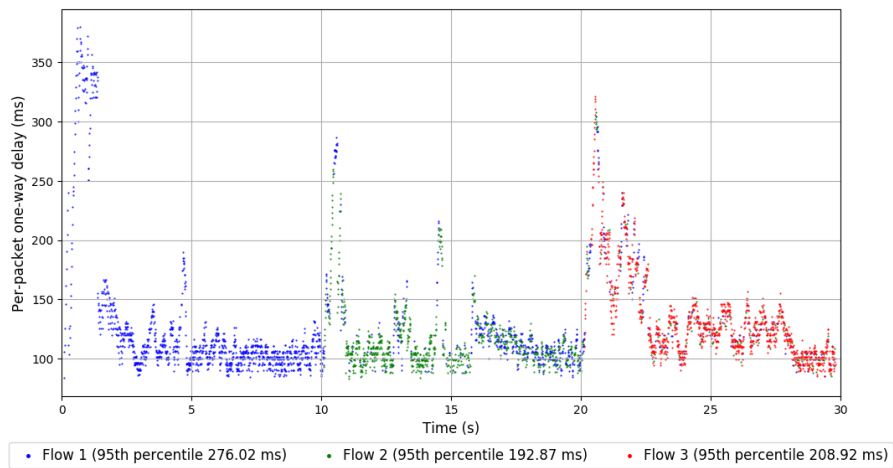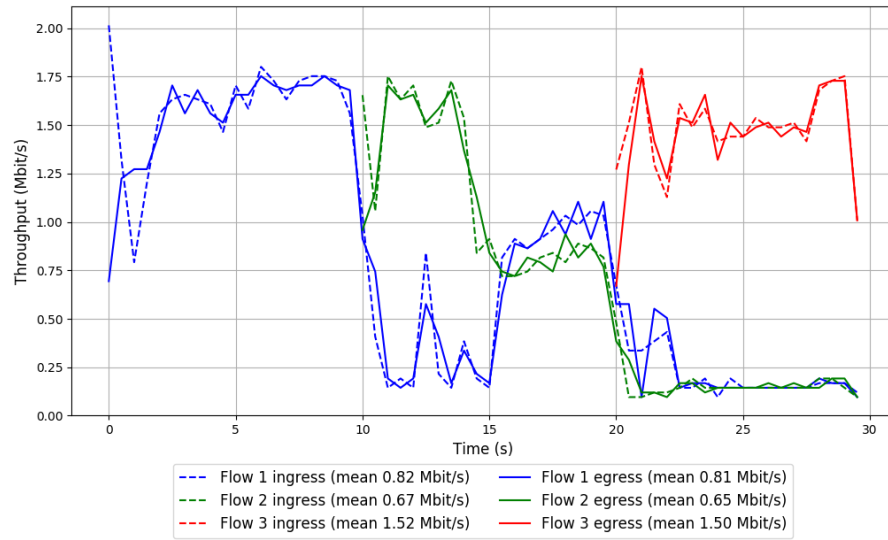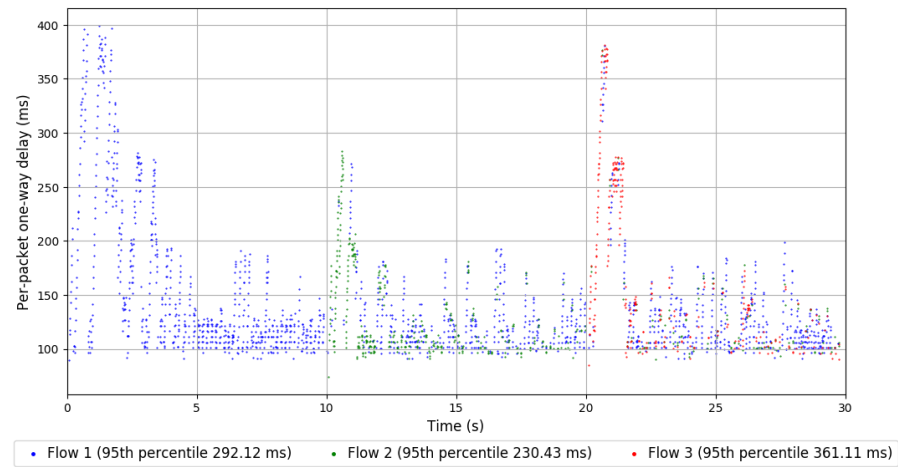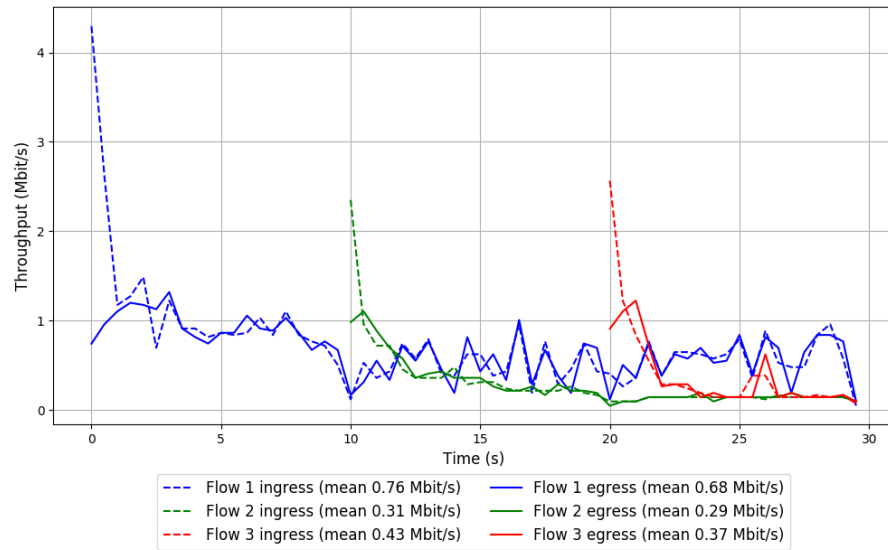
Run 3: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-calib

Start at: 2017-12-11 09:02:26
End at: 2017-12-11 09:02:56
Local clock offset: -11.69 ms
Remote clock offset: -14.146 ms


# Below is generated by plot.py at 2017-12-11 10:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 281.702 ms
Loss rate: 10.80%
-- Flow 1:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 292.116 ms
Loss rate: 11.29%
-- Flow 2:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 230.425 ms
Loss rate: 6.95%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 361.111 ms
Loss rate: 13.76%
```

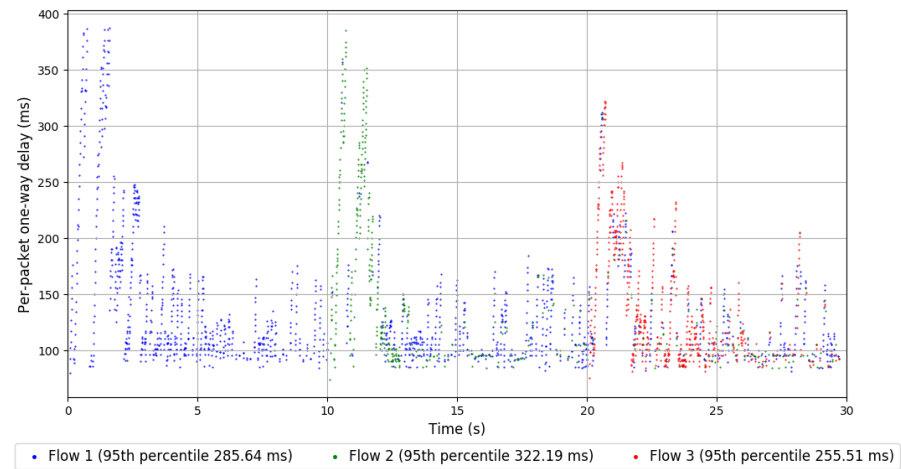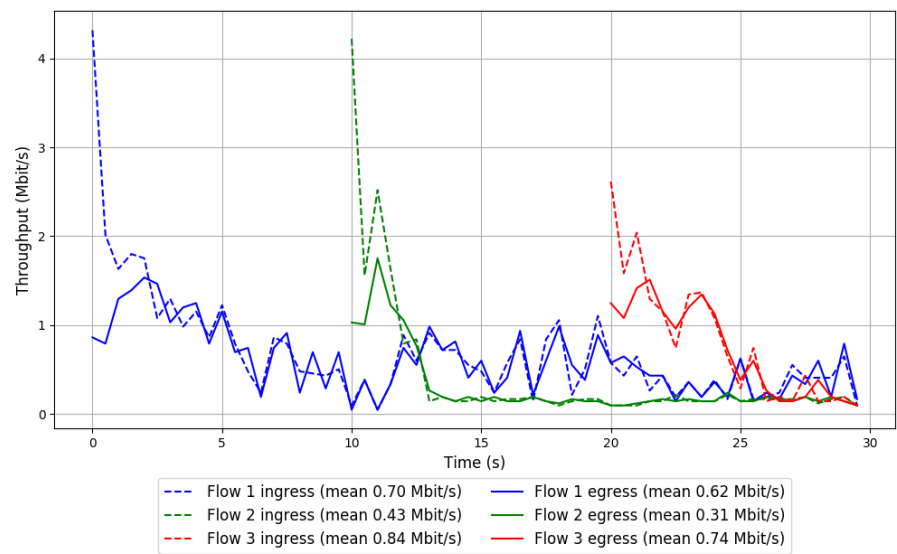Run 1: Report of Indigo-calib — Data Link

```
Run 2: Statistics of Indigo-calib

Start at: 2017-12-11 09:17:53
End at: 2017-12-11 09:18:23
Local clock offset: -4.267 ms
Remote clock offset: -13.455 ms


# Below is generated by plot.py at 2017-12-11 10:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 295.095 ms
Loss rate: 16.16%
-- Flow 1:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 285.637 ms
Loss rate: 12.97%
-- Flow 2:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 322.186 ms
Loss rate: 27.43%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 255.509 ms
Loss rate: 12.74%
```

Run 2: Report of Indigo-calib — Data Link

```
Run 3: Statistics of Indigo-calib

Start at: 2017-12-11 09:33:22
End at: 2017-12-11 09:33:52
Local clock offset: -1.651 ms
Remote clock offset: -13.8 ms

# Below is generated by plot.py at 2017-12-11 10:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 227.944 ms
Loss rate: 14.47%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 257.676 ms
Loss rate: 23.41%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 213.244 ms
Loss rate: 3.40%
-- Flow 3:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 197.836 ms
Loss rate: 14.31%
```

Run 3: Report of Indigo-calib — Data Link