Pantheon Report

Generated at 2017-09-22 14:13:26 (UTC).

Data path: GCE Iowa Ethernet (*local*) →GCE London Ethernet (*remote*).

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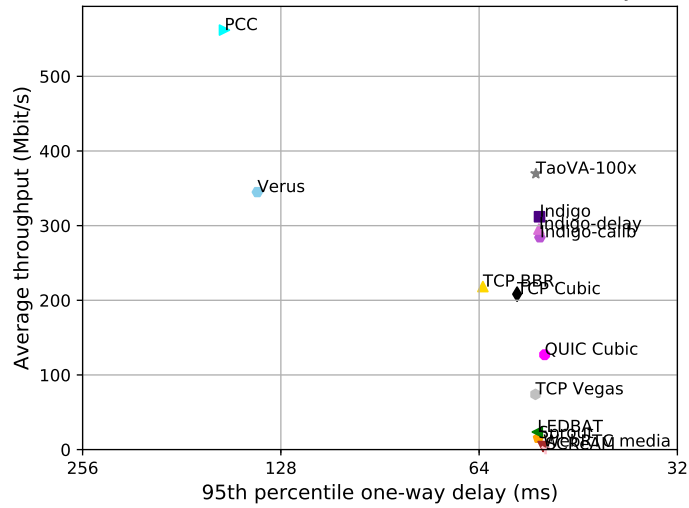
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

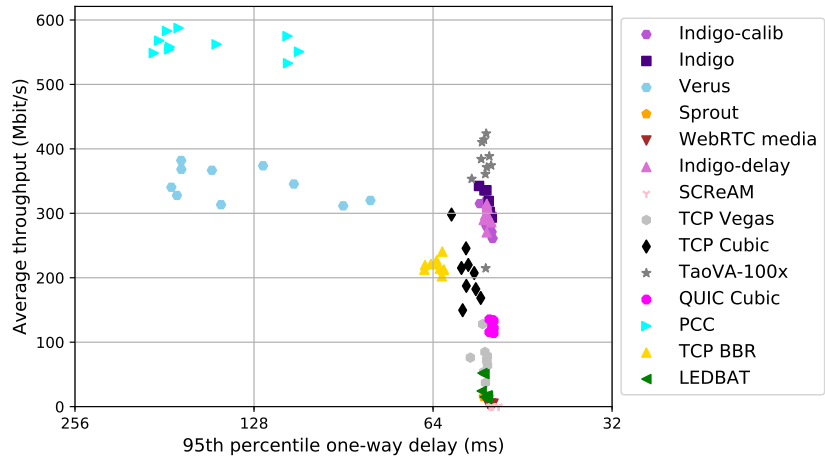Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

```
Git summary:
branch: indigos @ 46c7c812d4acb71eea4f5fb0b03b3657cea3062f
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
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 Iowa Ethernet to GCE London Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from GCE Iowa Ethernet to GCE London 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	104.41	111.33	120.53	62.15	63.28	65.01	0.14	0.24	0.16
TCP Cubic	9	98.95	115.99	96.75	55.05	56.44	55.91	0.24	0.17	0.20
LEDBAT	10	14.34	10.47	6.92	52.25	52.12	52.07	0.59	0.48	0.62
PCC	10	530.13	30.98	34.20	156.19	151.96	151.07	1.75	1.69	2.44
QUIC Cubic	9	67.49	61.81	57.05	50.53	50.37	50.50	0.00	0.00	0.00
SCReAM	10	0.22	0.22	0.22	50.23	50.18	50.81	0.01	0.00	0.00
WebRTC media	10	2.19	1.39	0.50	50.73	50.75	51.16	0.00	0.00	0.00
Sprout	10	7.82	7.72	7.53	52.03	52.02	52.09	0.42	0.40	0.17
TaoVA-100x	10	202.68	191.02	156.52	52.04	52.99	52.75	0.02	0.01	0.01
TCP Vegas	9	32.60	38.45	47.72	52.13	52.10	52.94	0.19	0.21	0.06
Verus	10	223.04	130.12	109.95	136.21	131.03	134.35	0.40	0.41	1.02
Indigo	10	171.90	155.93	113.31	51.57	51.99	52.31	0.02	0.04	0.09
Indigo-calib	10	148.51	144.79	123.53	51.52	51.80	52.24	0.02	0.03	0.09
Indigo-delay	10	156.21	150.62	121.75	51.67	52.09	52.42	0.04	0.03	0.01

```
Run 1: Statistics of TCP BBR

Start at: 2017-09-22 09:26:36
End at: 2017-09-22 09:27:06


# Below is generated by plot.py at 2017-09-22 13:04:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 219.72 Mbit/s
95th percentile per-packet one-way delay: 66.015 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 96.75 Mbit/s
95th percentile per-packet one-way delay: 65.401 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 106.16 Mbit/s
95th percentile per-packet one-way delay: 64.329 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 158.12 Mbit/s
95th percentile per-packet one-way delay: 67.765 ms
Loss rate: 0.14%
```
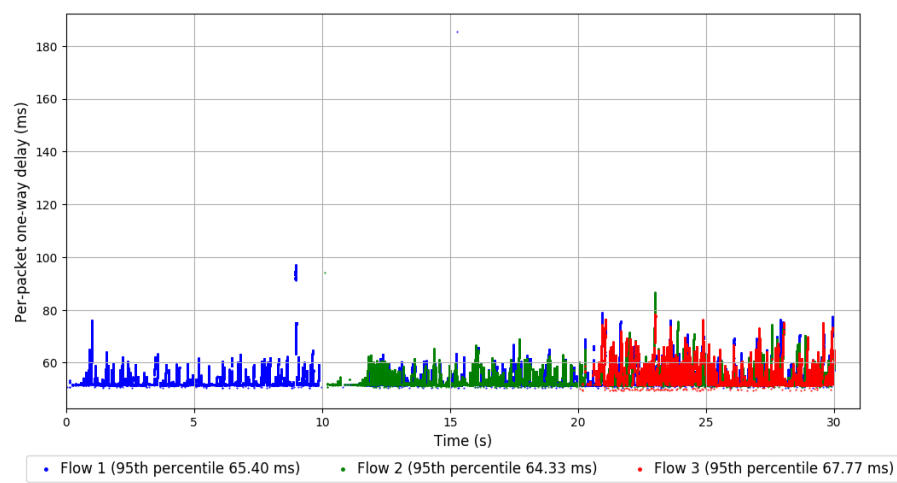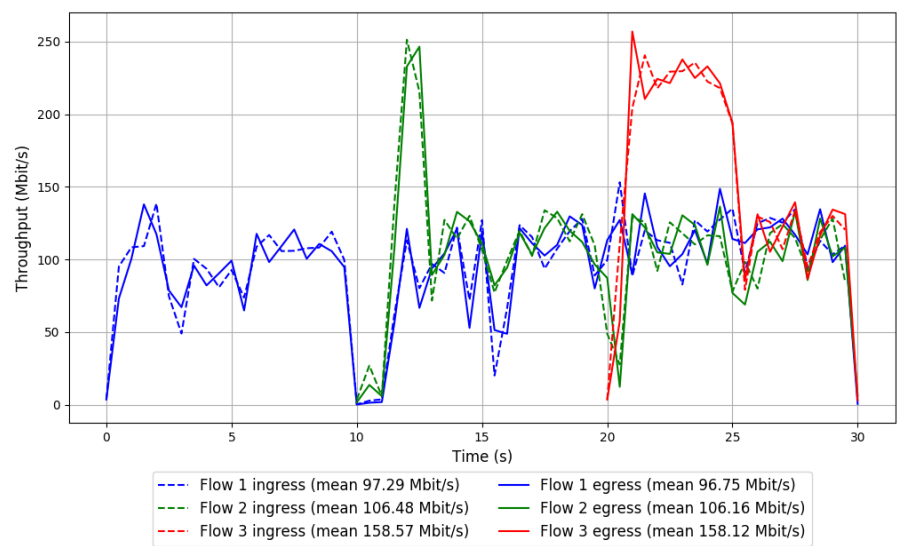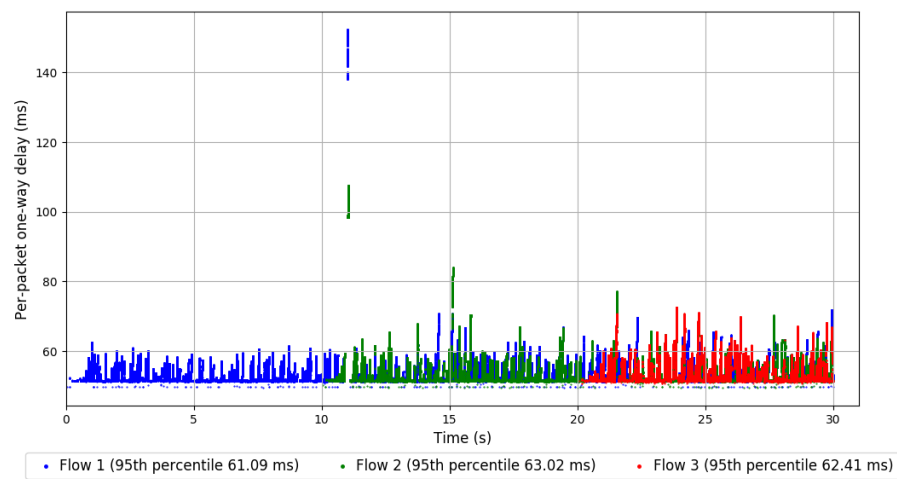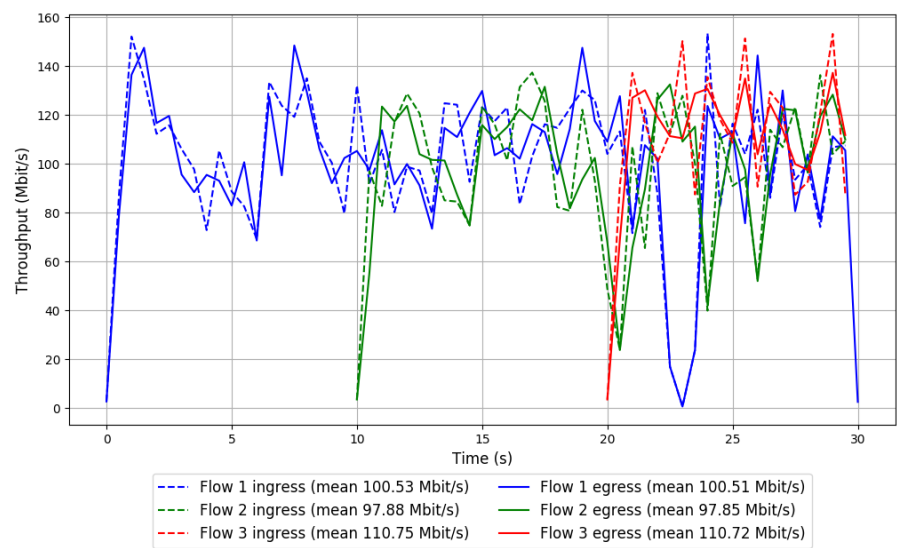
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2017-09-22 09:38:34
End at: 2017-09-22 09:39:04

# Below is generated by plot.py at 2017-09-22 13:04:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 202.31 Mbit/s
95th percentile per-packet one-way delay: 61.838 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 100.51 Mbit/s
95th percentile per-packet one-way delay: 61.092 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 97.85 Mbit/s
95th percentile per-packet one-way delay: 63.019 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 110.72 Mbit/s
95th percentile per-packet one-way delay: 62.415 ms
Loss rate: 0.02%
```
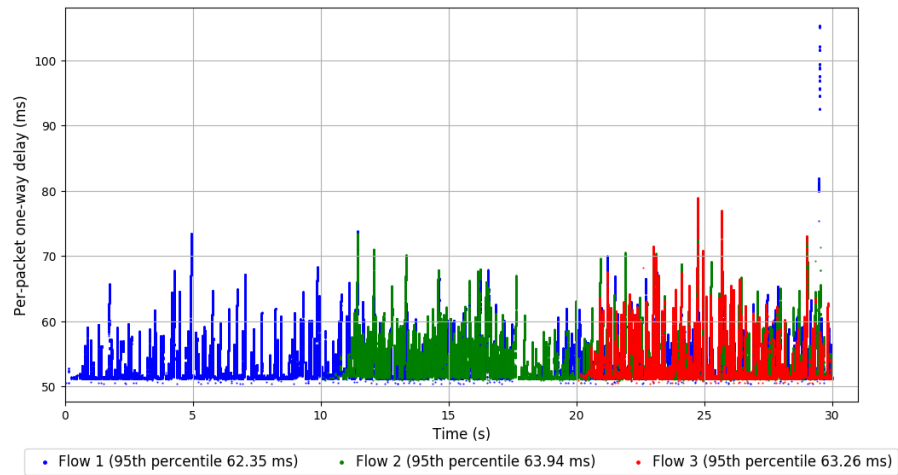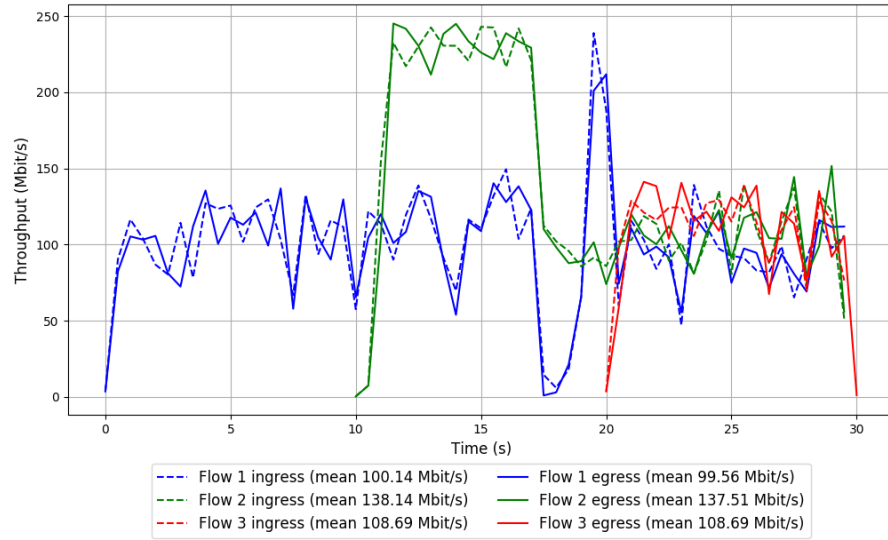
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2017-09-22 09:50:55
End at: 2017-09-22 09:51:25


# Below is generated by plot.py at 2017-09-22 13:04:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 226.96 Mbit/s
95th percentile per-packet one-way delay: 63.128 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 99.56 Mbit/s
95th percentile per-packet one-way delay: 62.349 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 137.51 Mbit/s
95th percentile per-packet one-way delay: 63.935 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 108.69 Mbit/s
95th percentile per-packet one-way delay: 63.258 ms
Loss rate: 0.00%
```
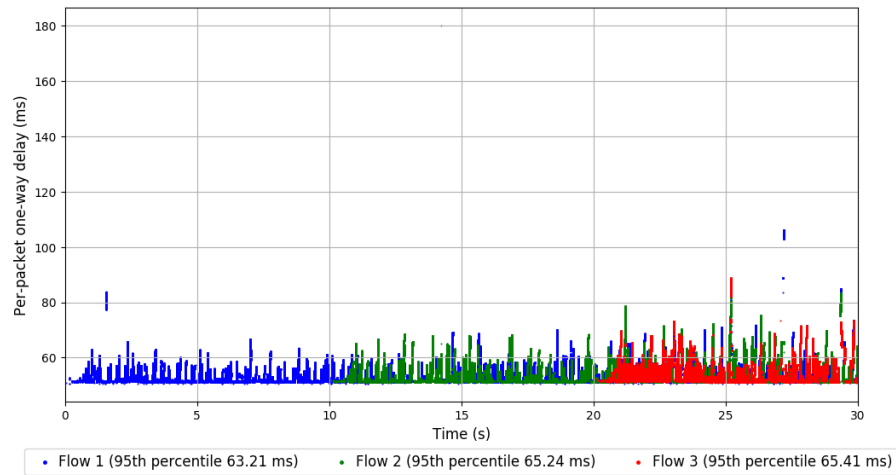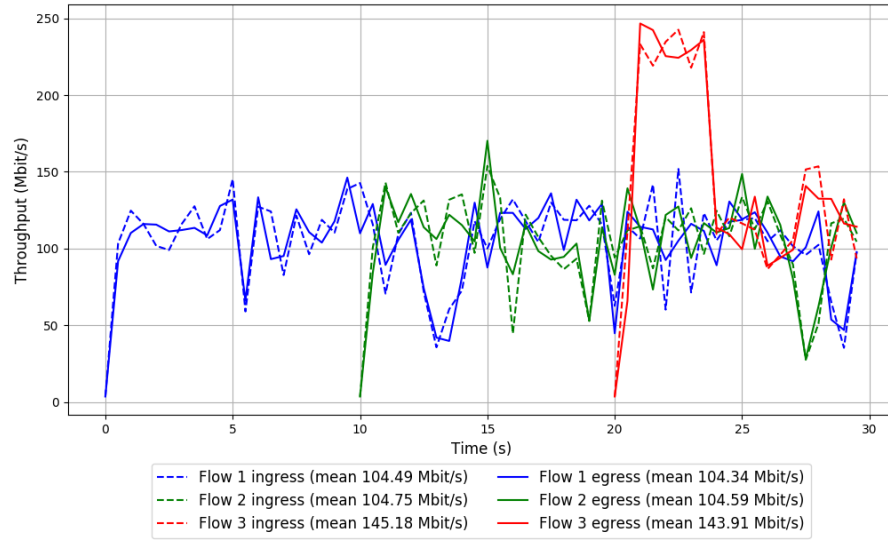
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2017-09-22 10:03:16
End at: 2017-09-22 10:03:46


# Below is generated by plot.py at 2017-09-22 13:04:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 221.36 Mbit/s
95th percentile per-packet one-way delay: 64.542 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 104.34 Mbit/s
95th percentile per-packet one-way delay: 63.210 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 104.59 Mbit/s
95th percentile per-packet one-way delay: 65.237 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 143.91 Mbit/s
95th percentile per-packet one-way delay: 65.411 ms
Loss rate: 0.88%
```
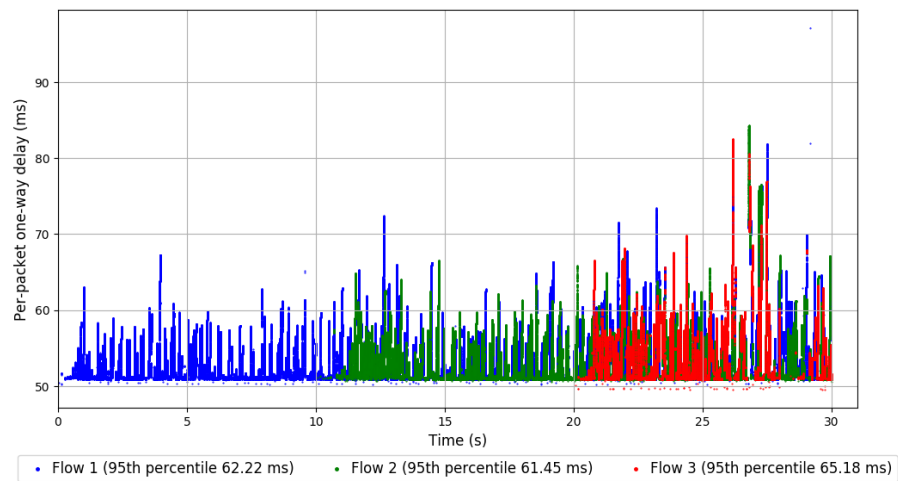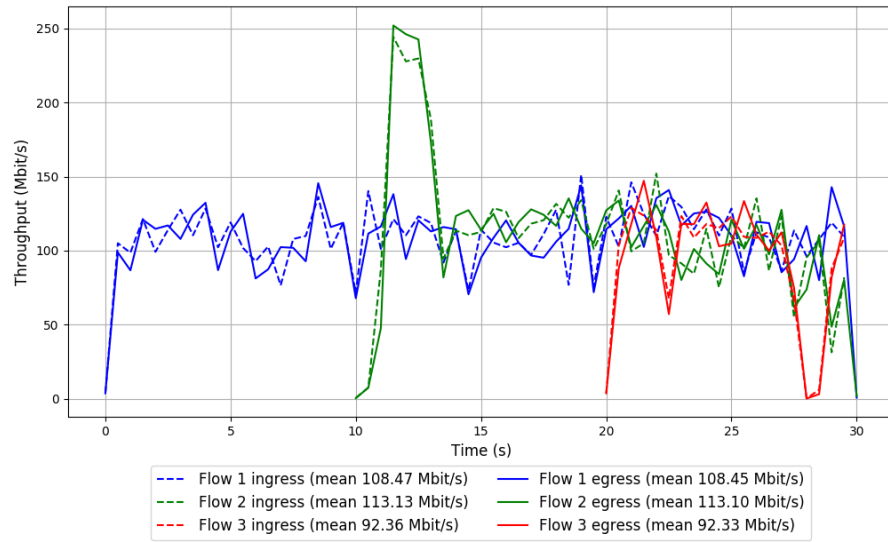
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 104.49 Mbit/s)   Flow 1 egress (mean 104.34 Mbit/s)
Flow 2 ingress (mean 104.75 Mbit/s)   Flow 2 egress (mean 104.59 Mbit/s)
Flow 3 ingress (mean 145.18 Mbit/s)   Flow 3 egress (mean 143.91 Mbit/s)

Flow 1 (95th percentile 63.21 ms)   Flow 2 (95th percentile 65.24 ms)   Flow 3 (95th percentile 65.41 ms)

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Run 5: Statistics of TCP BBR

Start at: 2017-09-22 10:15:49
End at: 2017-09-22 10:16:19


# Below is generated by plot.py at 2017-09-22 13:04:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 214.27 Mbit/s
95th percentile per-packet one-way delay: 62.351 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 108.45 Mbit/s
95th percentile per-packet one-way delay: 62.222 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 113.10 Mbit/s
95th percentile per-packet one-way delay: 61.455 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 92.33 Mbit/s
95th percentile per-packet one-way delay: 65.182 ms
Loss rate: 0.02%
```
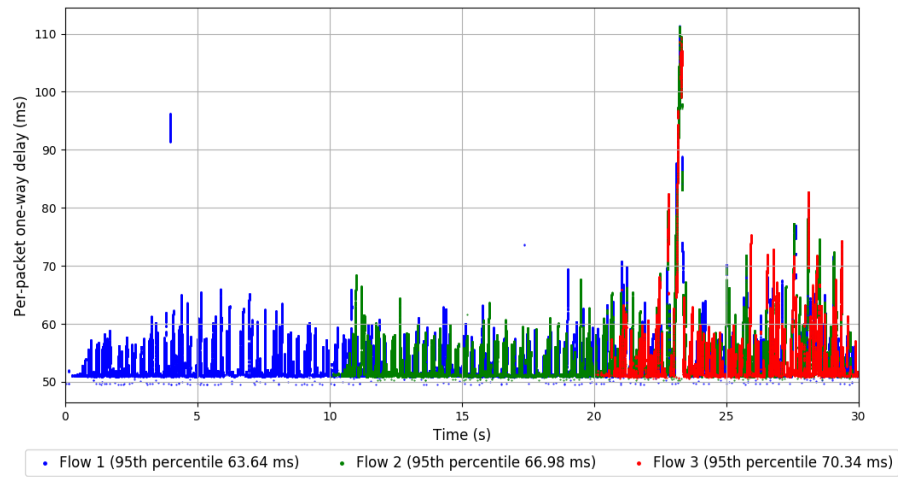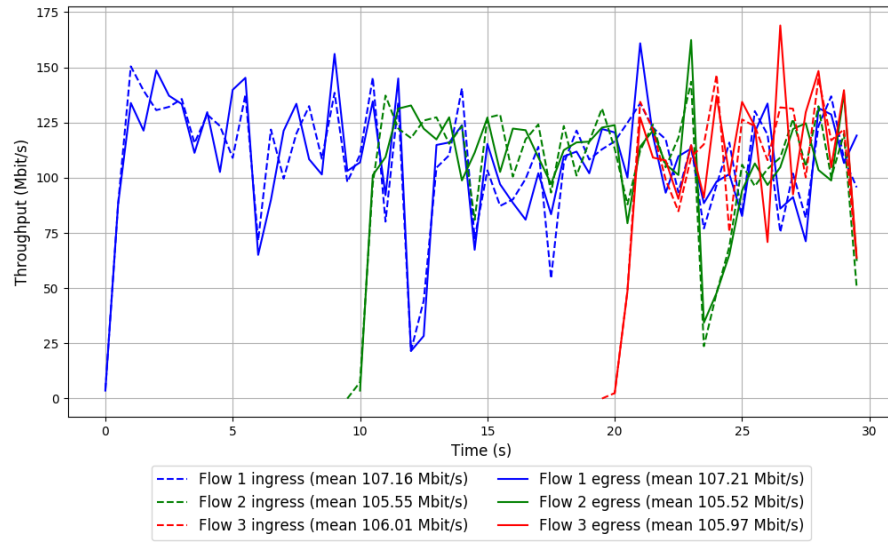
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 108.47 Mbit/s) --- Flow 1 egress (mean 108.45 Mbit/s)
Flow 2 ingress (mean 113.13 Mbit/s) --- Flow 2 egress (mean 113.10 Mbit/s)
Flow 3 ingress (mean 92.36 Mbit/s) --- Flow 3 egress (mean 92.33 Mbit/s)

Flow 1 (95th percentile 62.22 ms)   Flow 2 (95th percentile 61.45 ms)   Flow 3 (95th percentile 65.18 ms)

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```
Run 6: Statistics of TCP BBR

Start at: 2017-09-22 10:28:11
End at: 2017-09-22 10:28:41


# Below is generated by plot.py at 2017-09-22 13:04:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 212.59 Mbit/s
95th percentile per-packet one-way delay: 66.176 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 107.21 Mbit/s
95th percentile per-packet one-way delay: 63.642 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 105.52 Mbit/s
95th percentile per-packet one-way delay: 66.983 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 105.97 Mbit/s
95th percentile per-packet one-way delay: 70.344 ms
Loss rate: 0.05%
```
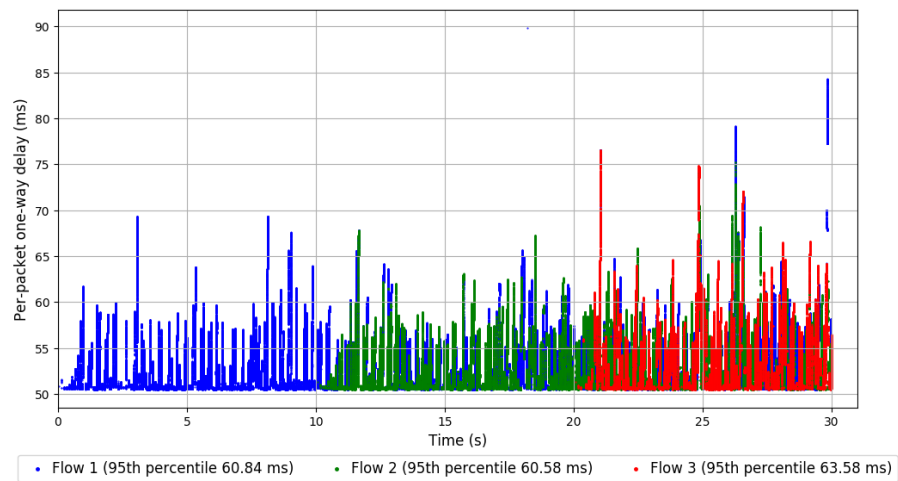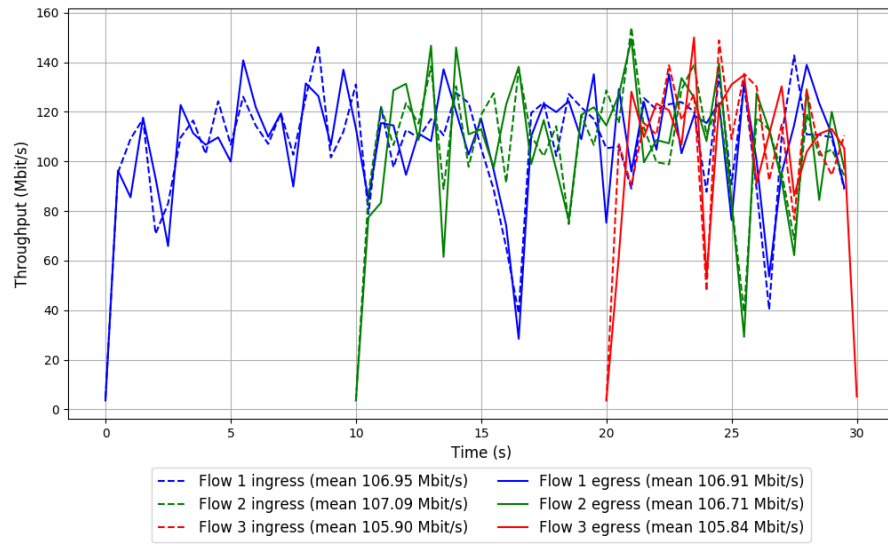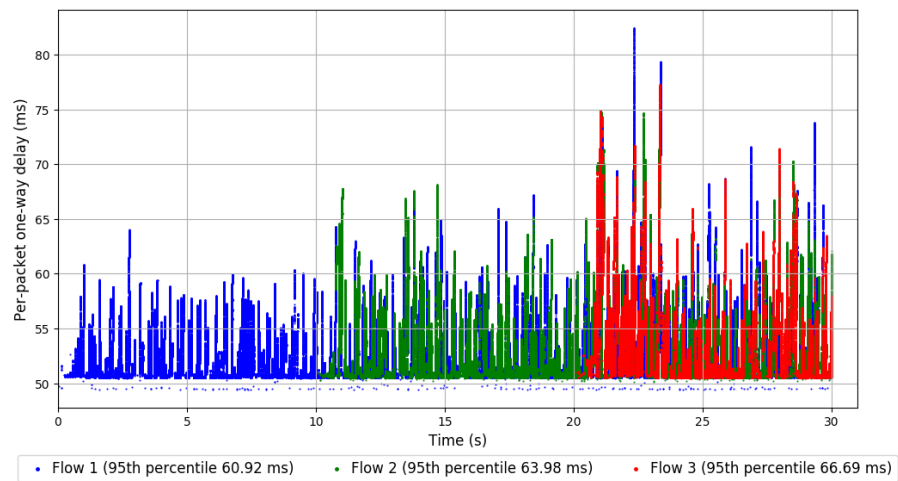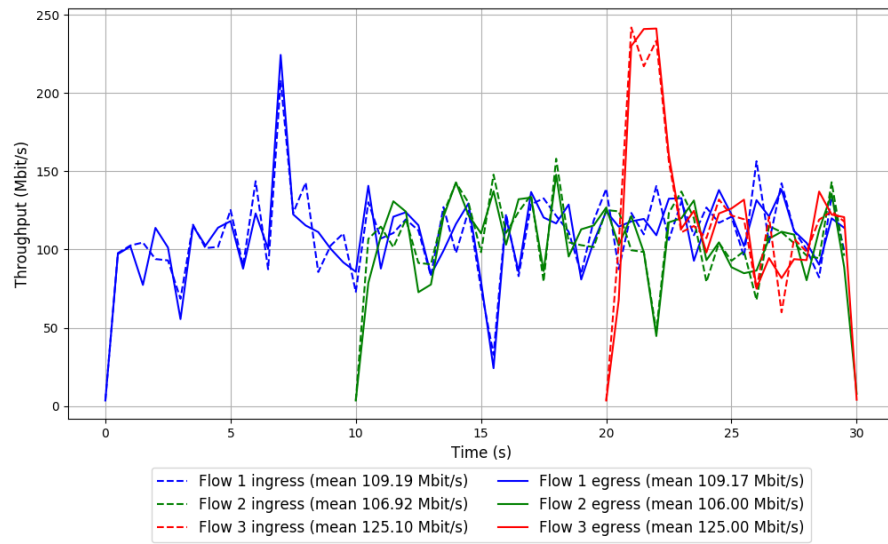
Run 6: Report of TCP BBR — Data Link

```
Run 7: Statistics of TCP BBR

Start at: 2017-09-22 10:40:31
End at: 2017-09-22 10:41:01


# Below is generated by plot.py at 2017-09-22 13:04:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 212.82 Mbit/s
95th percentile per-packet one-way delay: 61.360 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 106.91 Mbit/s
95th percentile per-packet one-way delay: 60.837 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 106.71 Mbit/s
95th percentile per-packet one-way delay: 60.580 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 105.84 Mbit/s
95th percentile per-packet one-way delay: 63.576 ms
Loss rate: 0.00%
```
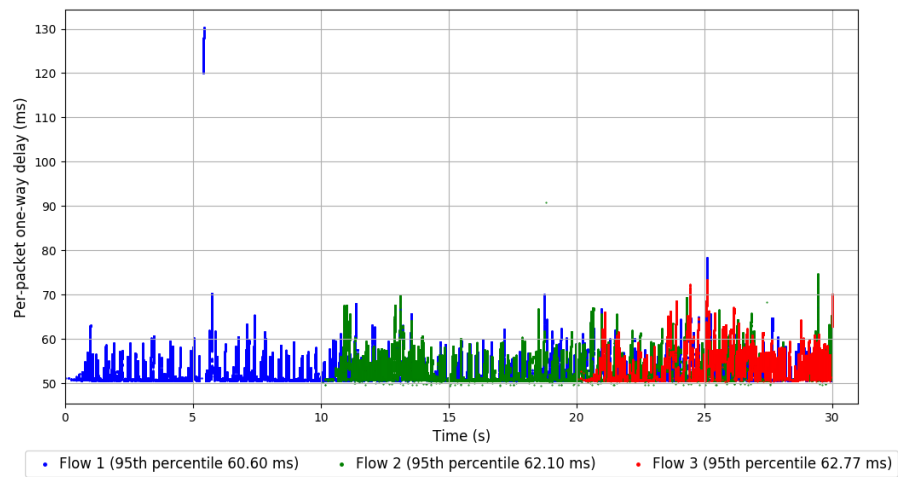
Run 7: Report of TCP BBR — Data Link

```
Run 8: Statistics of TCP BBR

Start at: 2017-09-22 10:52:55
End at: 2017-09-22 10:53:25


# Below is generated by plot.py at 2017-09-22 13:04:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 221.07 Mbit/s
95th percentile per-packet one-way delay: 62.960 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 109.17 Mbit/s
95th percentile per-packet one-way delay: 60.917 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 106.00 Mbit/s
95th percentile per-packet one-way delay: 63.980 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 125.00 Mbit/s
95th percentile per-packet one-way delay: 66.695 ms
Loss rate: 0.00%
```
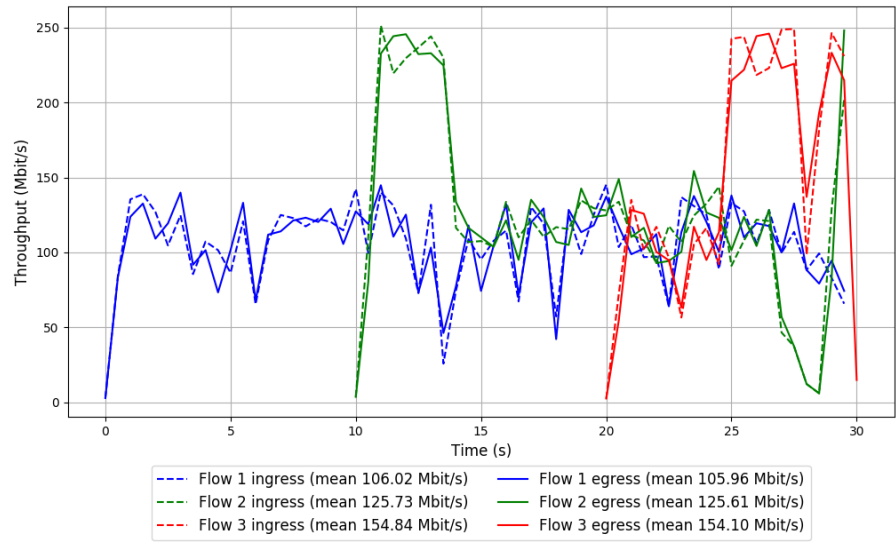
Run 8: Report of TCP BBR — Data Link

```
Run 9: Statistics of TCP BBR

Start at: 2017-09-22 11:05:10
End at: 2017-09-22 11:05:40

# Below is generated by plot.py at 2017-09-22 13:08:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 240.56 Mbit/s
95th percentile per-packet one-way delay: 61.755 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 105.96 Mbit/s
95th percentile per-packet one-way delay: 60.601 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 125.61 Mbit/s
95th percentile per-packet one-way delay: 62.098 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 154.10 Mbit/s
95th percentile per-packet one-way delay: 62.769 ms
Loss rate: 0.48%
```
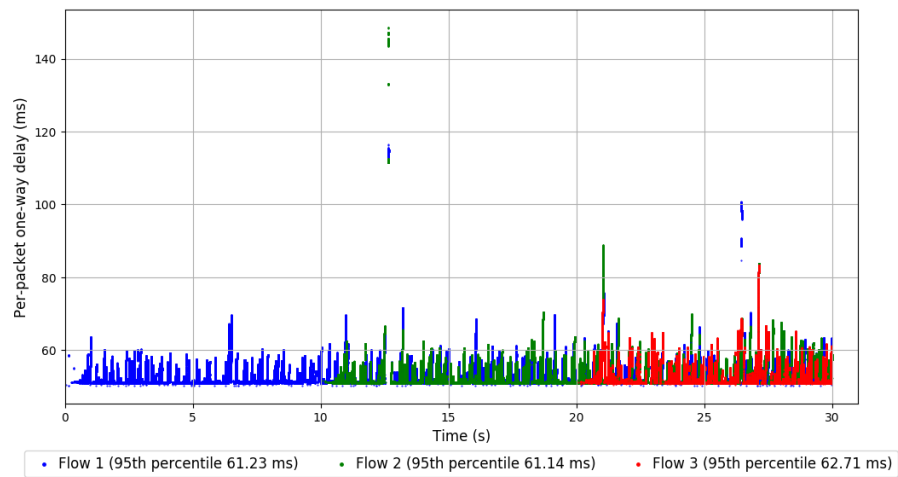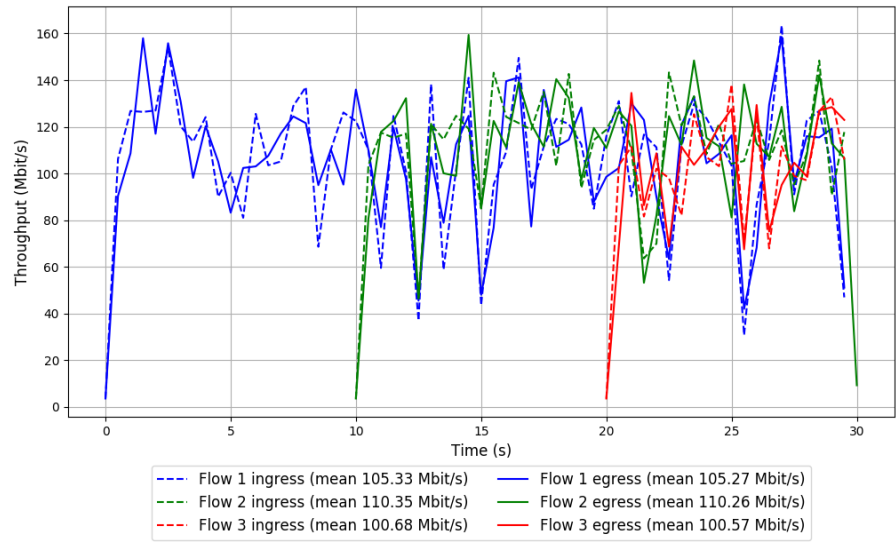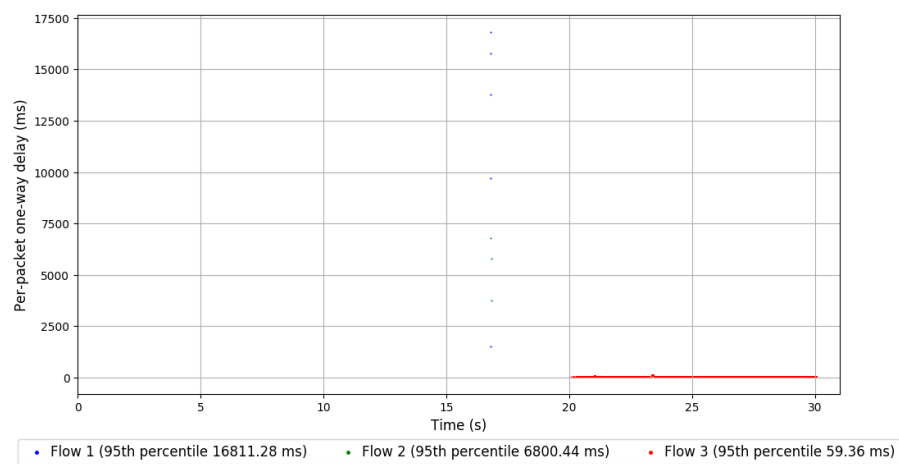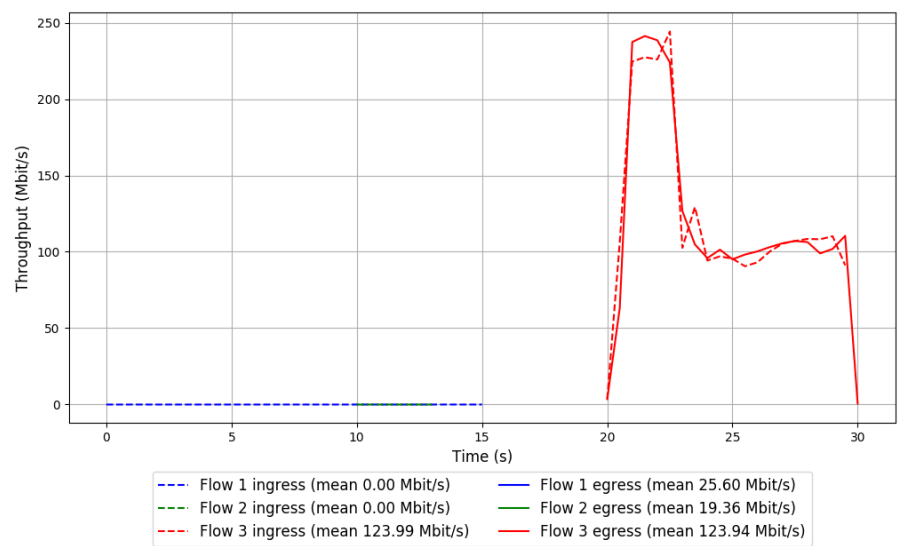
Run 9: Report of TCP BBR — Data Link

```
Run 10: Statistics of TCP BBR

Start at: 2017-09-22 11:17:33
End at: 2017-09-22 11:18:03


# Below is generated by plot.py at 2017-09-22 13:08:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.89 Mbit/s
95th percentile per-packet one-way delay: 61.509 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 105.27 Mbit/s
95th percentile per-packet one-way delay: 61.233 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 110.26 Mbit/s
95th percentile per-packet one-way delay: 61.136 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 100.57 Mbit/s
95th percentile per-packet one-way delay: 62.708 ms
Loss rate: 0.00%
```
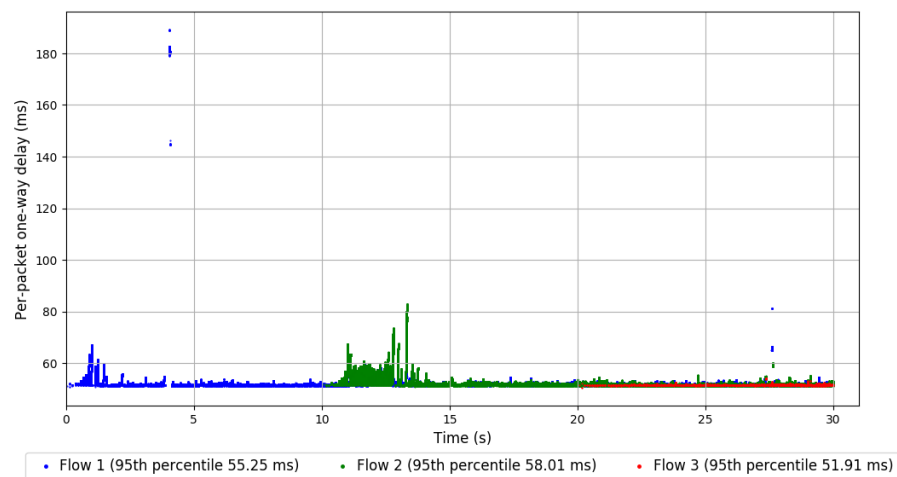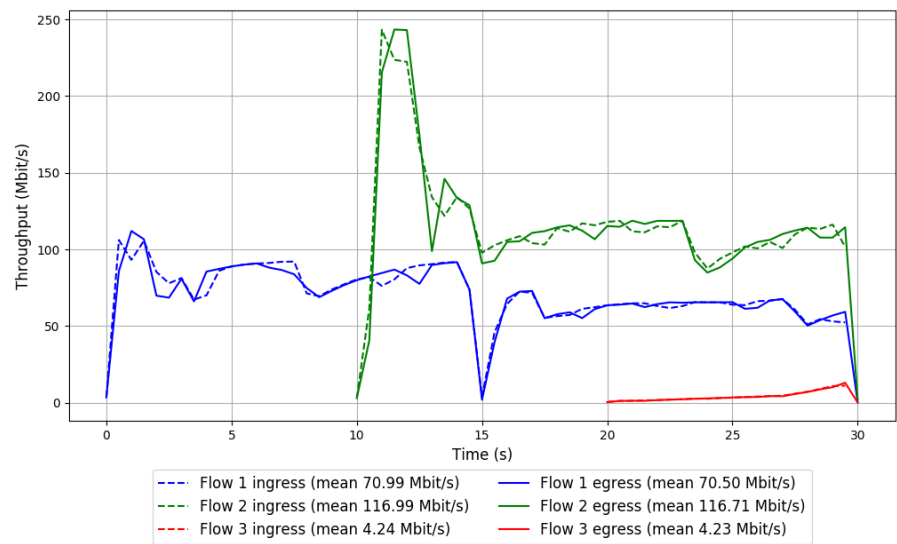
Run 10: Report of TCP BBR — Data Link

Flow 1 ingress (mean 105.33 Mbit/s) --- Flow 1 egress (mean 105.27 Mbit/s)
Flow 2 ingress (mean 110.35 Mbit/s) --- Flow 2 egress (mean 110.26 Mbit/s)
Flow 3 ingress (mean 100.68 Mbit/s) --- Flow 3 egress (mean 100.57 Mbit/s)

Flow 1 (95th percentile 61.23 ms)   Flow 2 (95th percentile 61.14 ms)   Flow 3 (95th percentile 62.71 ms)

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Run 1: Statistics of TCP Cubic

Start at: 2017-09-22 09:31:52
End at: 2017-09-22 09:32:22

Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 0.00 Mbit/s) --- Flow 1 egress (mean 25.60 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s) --- Flow 2 egress (mean 19.36 Mbit/s)
Flow 3 ingress (mean 123.99 Mbit/s) --- Flow 3 egress (mean 123.94 Mbit/s)

Flow 1 (95th percentile 16811.28 ms)   Flow 2 (95th percentile 6800.44 ms)   Flow 3 (95th percentile 59.36 ms)

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```
Run 2: Statistics of TCP Cubic

Start at: 2017-09-22 09:44:11
End at: 2017-09-22 09:44:41

# Below is generated by plot.py at 2017-09-22 13:08:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 149.61 Mbit/s
95th percentile per-packet one-way delay: 57.067 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 70.50 Mbit/s
95th percentile per-packet one-way delay: 55.249 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 116.71 Mbit/s
95th percentile per-packet one-way delay: 58.007 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 51.912 ms
Loss rate: 0.28%
```
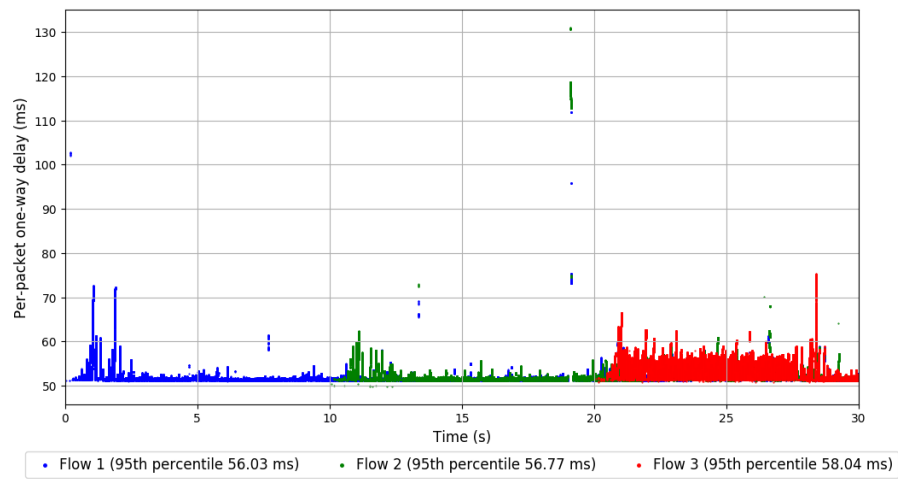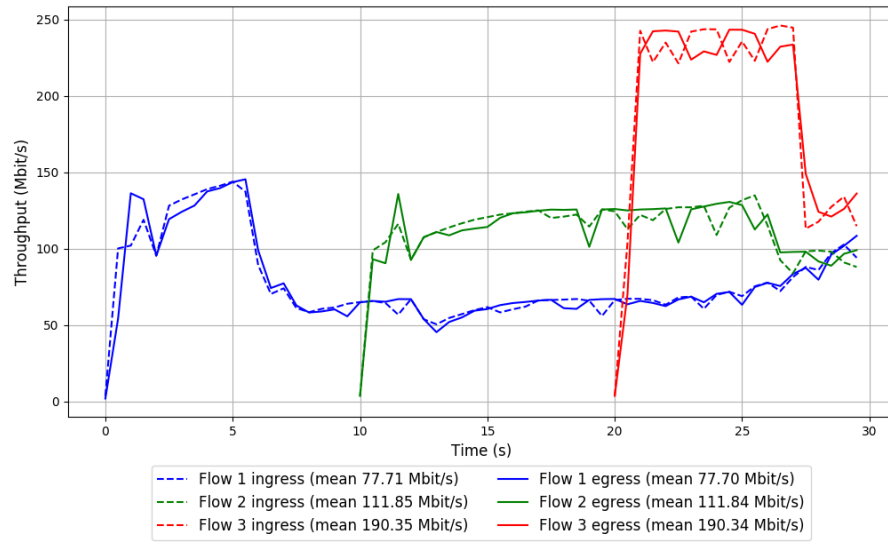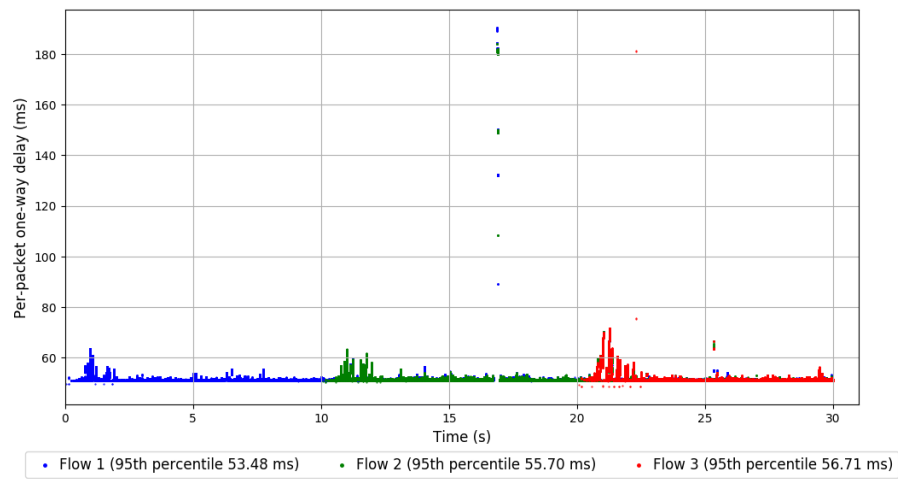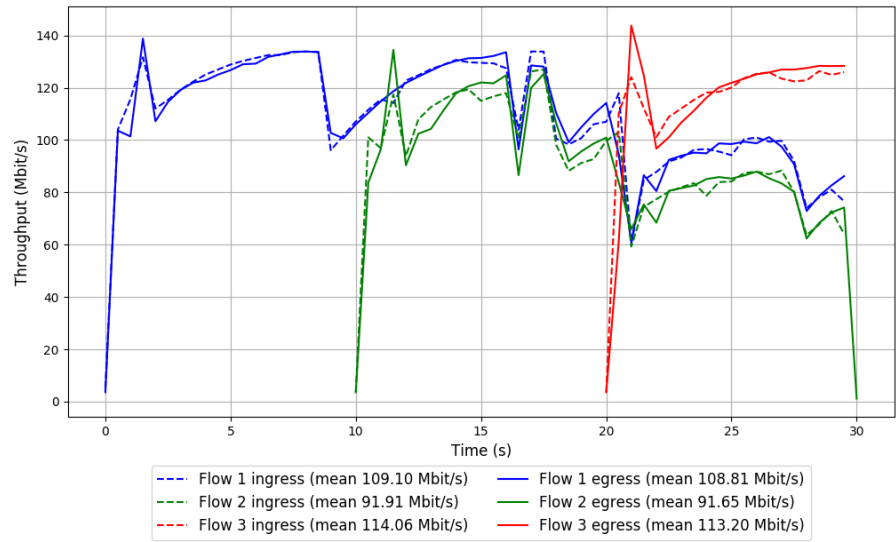
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2017-09-22 09:56:26
End at: 2017-09-22 09:56:56


# Below is generated by plot.py at 2017-09-22 13:08:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 215.16 Mbit/s
95th percentile per-packet one-way delay: 57.333 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 77.70 Mbit/s
95th percentile per-packet one-way delay: 56.026 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 111.84 Mbit/s
95th percentile per-packet one-way delay: 56.770 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 190.34 Mbit/s
95th percentile per-packet one-way delay: 58.038 ms
Loss rate: 0.00%
```
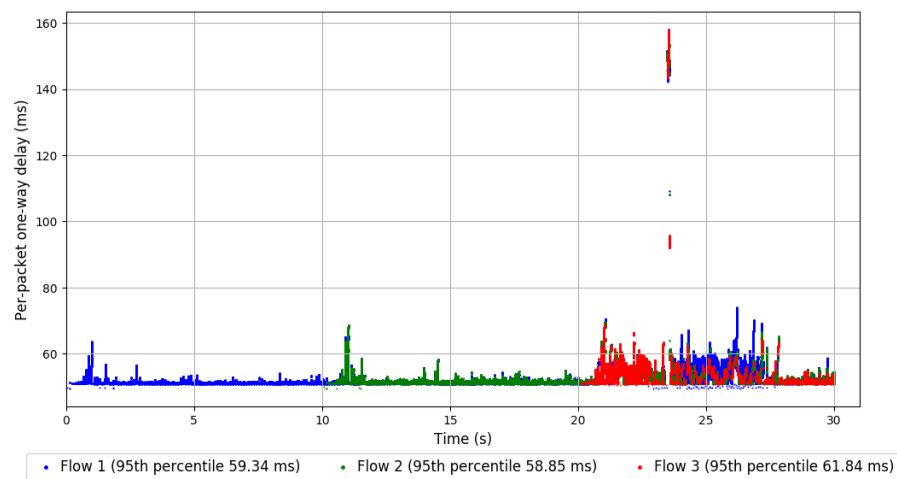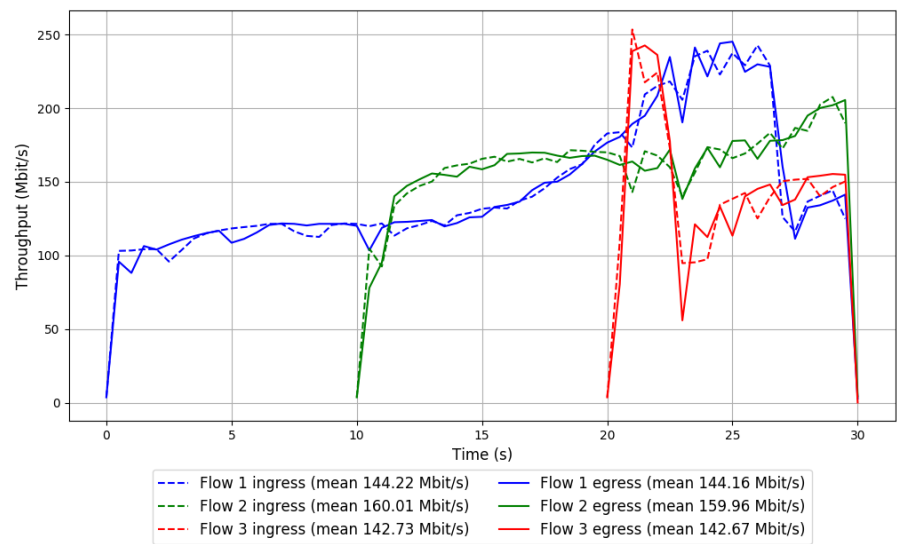
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2017-09-22 10:08:58
End at: 2017-09-22 10:09:29


# Below is generated by plot.py at 2017-09-22 13:08:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 207.35 Mbit/s
95th percentile per-packet one-way delay: 54.567 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 108.81 Mbit/s
95th percentile per-packet one-way delay: 53.483 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 91.65 Mbit/s
95th percentile per-packet one-way delay: 55.700 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 113.20 Mbit/s
95th percentile per-packet one-way delay: 56.714 ms
Loss rate: 0.74%
```
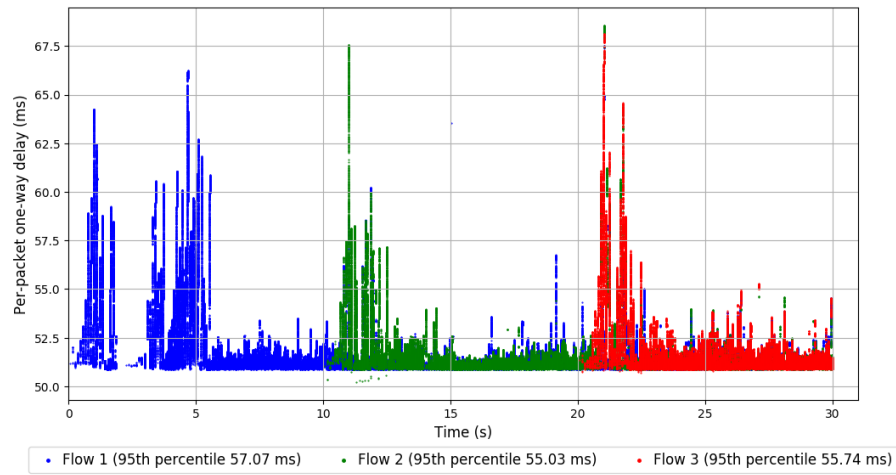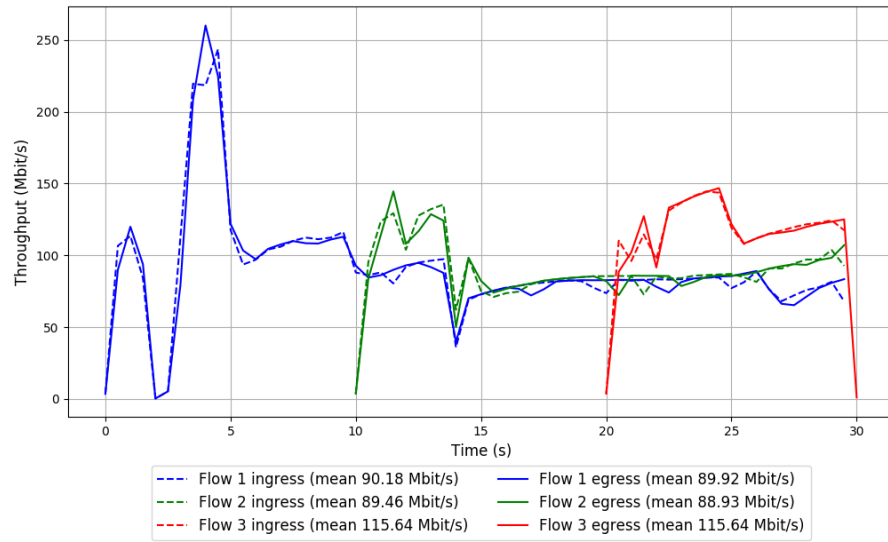
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2017-09-22 10:21:22
End at: 2017-09-22 10:21:52


# Below is generated by plot.py at 2017-09-22 13:10:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 298.03 Mbit/s
95th percentile per-packet one-way delay: 59.584 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 144.16 Mbit/s
95th percentile per-packet one-way delay: 59.337 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 159.96 Mbit/s
95th percentile per-packet one-way delay: 58.849 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 142.67 Mbit/s
95th percentile per-packet one-way delay: 61.841 ms
Loss rate: 0.04%
```
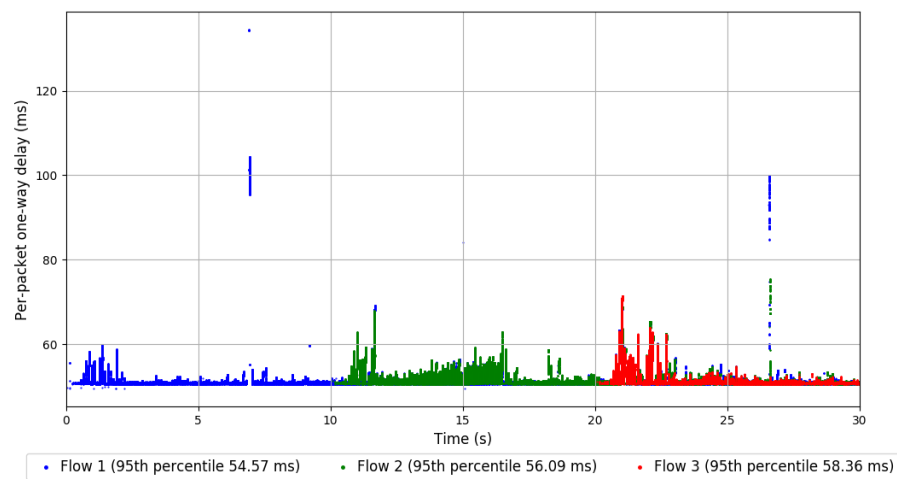
Run 5: Report of TCP Cubic — Data Link

```
Run 6: Statistics of TCP Cubic

Start at: 2017-09-22 10:33:42
End at: 2017-09-22 10:34:12


# Below is generated by plot.py at 2017-09-22 13:10:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 187.36 Mbit/s
95th percentile per-packet one-way delay: 56.258 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 89.92 Mbit/s
95th percentile per-packet one-way delay: 57.066 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 88.93 Mbit/s
95th percentile per-packet one-way delay: 55.030 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 115.64 Mbit/s
95th percentile per-packet one-way delay: 55.739 ms
Loss rate: 0.00%
```
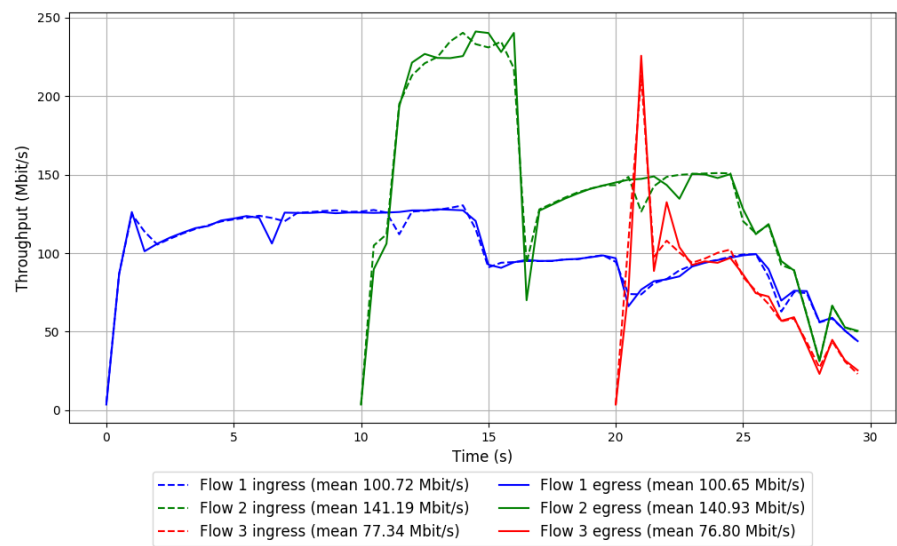
Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2017-09-22 10:46:08
End at: 2017-09-22 10:46:38


# Below is generated by plot.py at 2017-09-22 13:10:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 219.88 Mbit/s
95th percentile per-packet one-way delay: 55.839 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 100.65 Mbit/s
95th percentile per-packet one-way delay: 54.571 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 140.93 Mbit/s
95th percentile per-packet one-way delay: 56.091 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 76.80 Mbit/s
95th percentile per-packet one-way delay: 58.359 ms
Loss rate: 0.69%
```
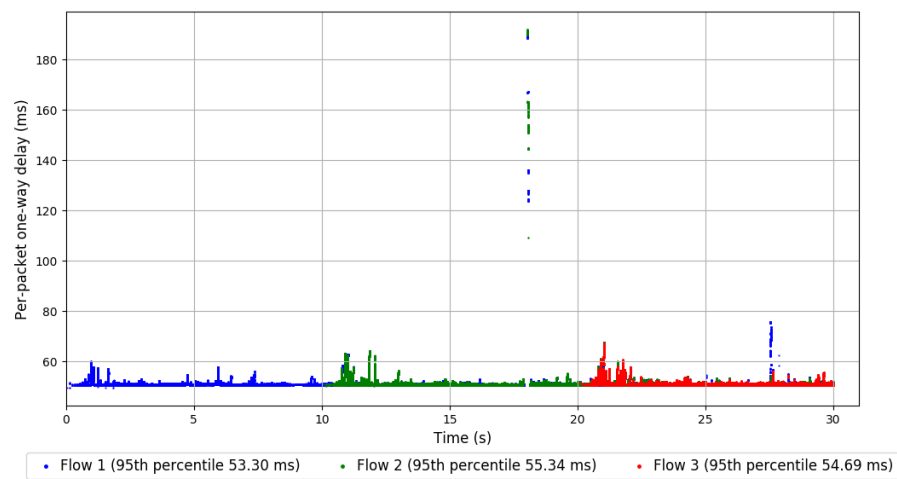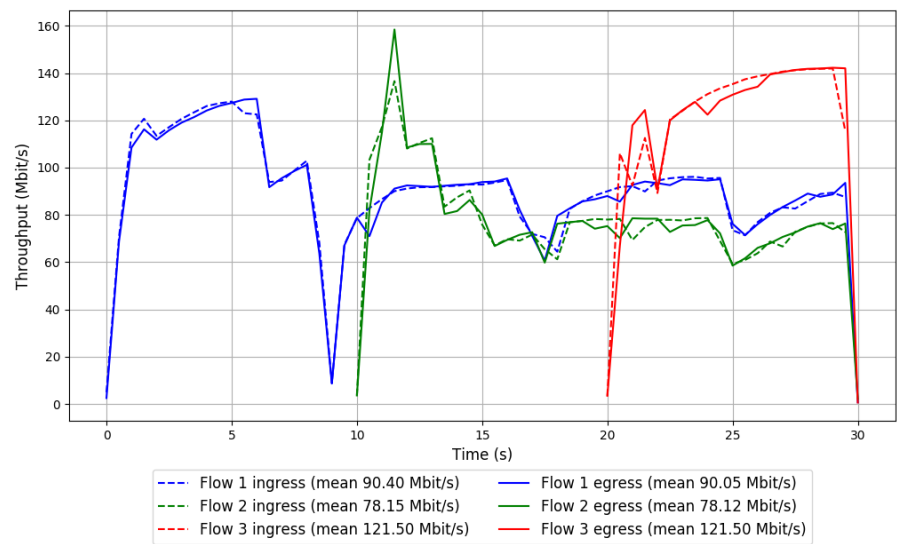
Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2017-09-22 10:58:27
End at: 2017-09-22 10:58:57


# Below is generated by plot.py at 2017-09-22 13:10:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 182.35 Mbit/s
95th percentile per-packet one-way delay: 54.231 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 90.05 Mbit/s
95th percentile per-packet one-way delay: 53.300 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 78.12 Mbit/s
95th percentile per-packet one-way delay: 55.335 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 121.50 Mbit/s
95th percentile per-packet one-way delay: 54.689 ms
Loss rate: 0.01%
```
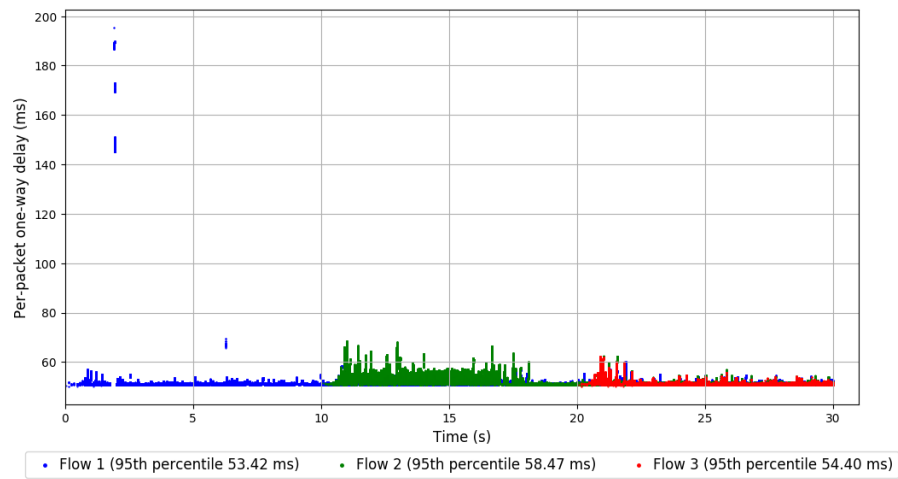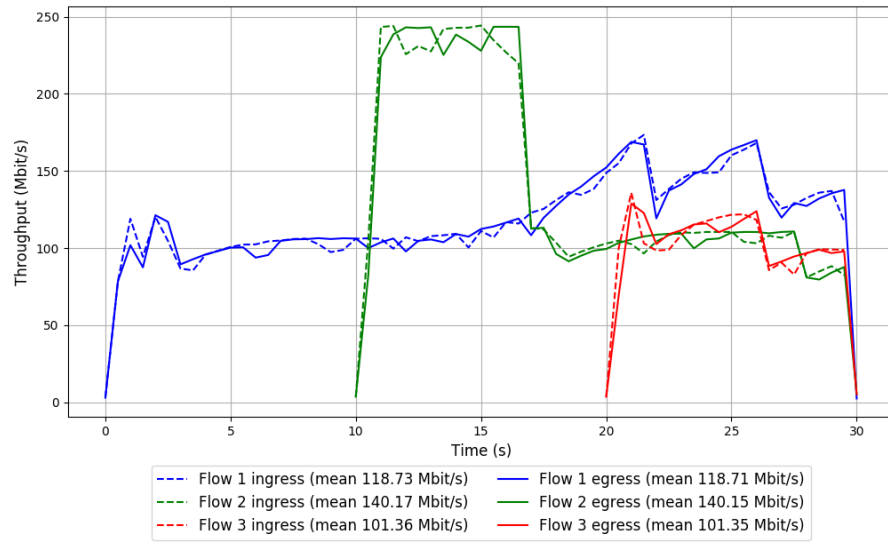
Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2017-09-22 11:10:43
End at: 2017-09-22 11:11:13


# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 245.66 Mbit/s
95th percentile per-packet one-way delay: 56.323 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 118.71 Mbit/s
95th percentile per-packet one-way delay: 53.424 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 140.15 Mbit/s
95th percentile per-packet one-way delay: 58.474 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 101.35 Mbit/s
95th percentile per-packet one-way delay: 54.404 ms
Loss rate: 0.01%
```
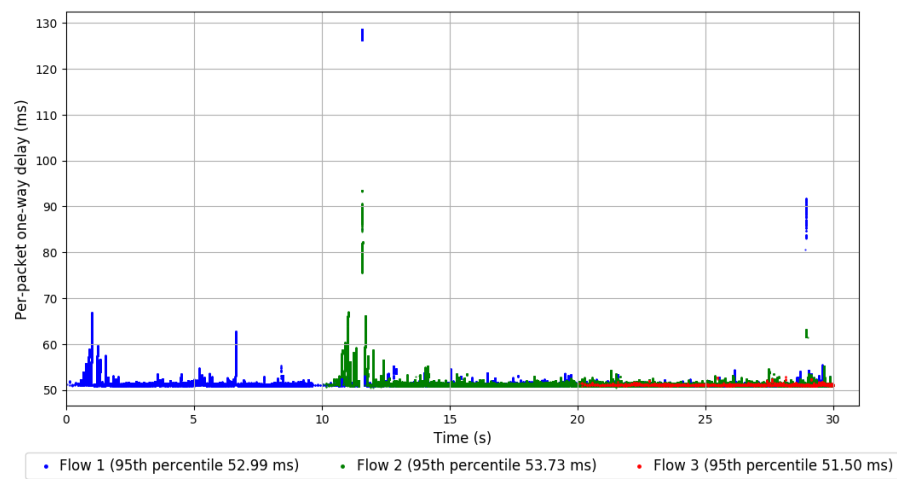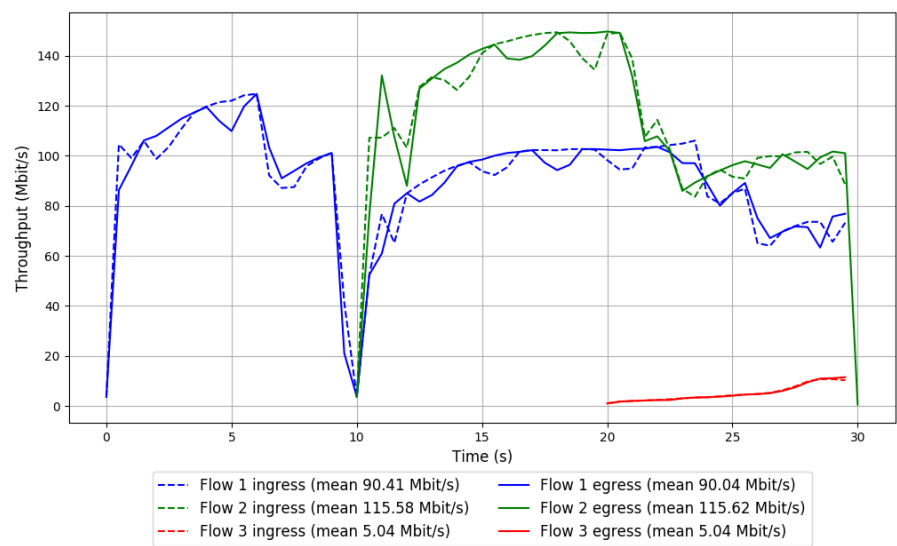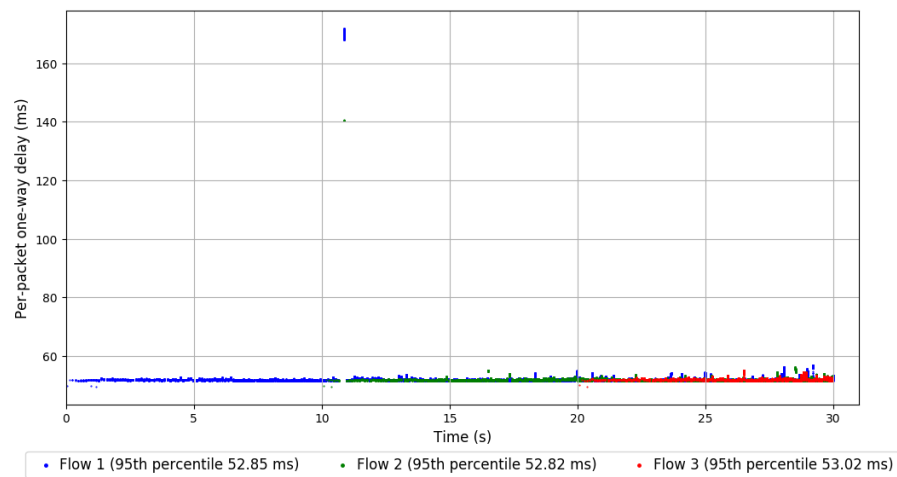
Run 9: Report of TCP Cubic — Data Link

```
Run 10: Statistics of TCP Cubic

Start at: 2017-09-22 11:23:04
End at: 2017-09-22 11:23:34


# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.61 Mbit/s
95th percentile per-packet one-way delay: 53.209 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 90.04 Mbit/s
95th percentile per-packet one-way delay: 52.992 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 115.62 Mbit/s
95th percentile per-packet one-way delay: 53.734 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 5.04 Mbit/s
95th percentile per-packet one-way delay: 51.500 ms
Loss rate: 0.05%
```

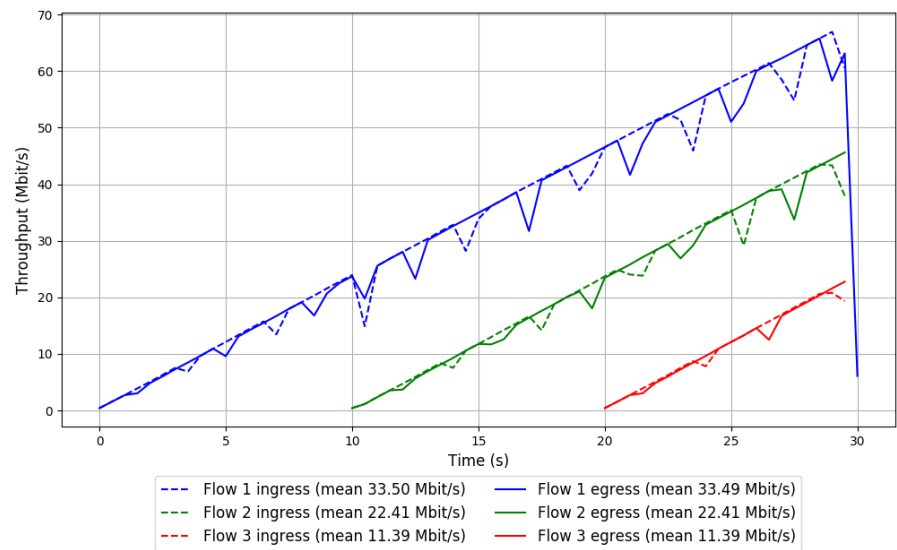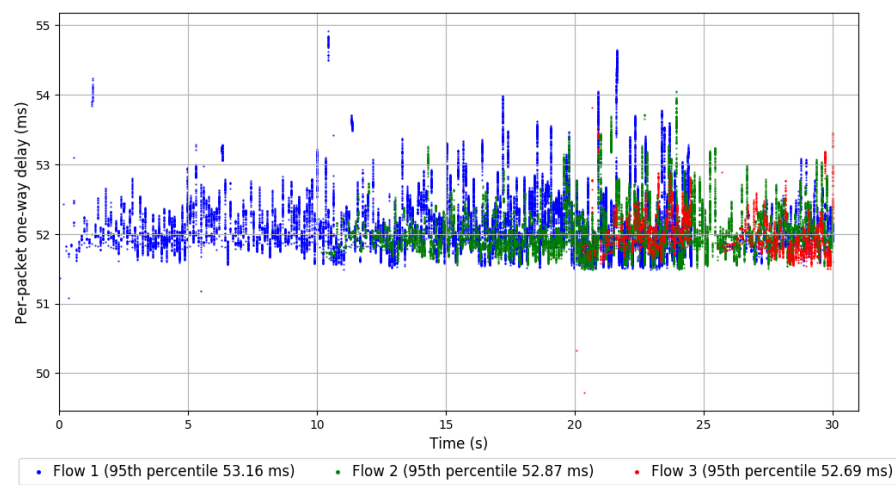Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2017-09-22 09:24:05
End at: 2017-09-22 09:24:35

# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.14 Mbit/s
95th percentile per-packet one-way delay: 52.859 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.49 Mbit/s
95th percentile per-packet one-way delay: 52.855 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.41 Mbit/s
95th percentile per-packet one-way delay: 52.822 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.39 Mbit/s
95th percentile per-packet one-way delay: 53.018 ms
Loss rate: 0.00%
```
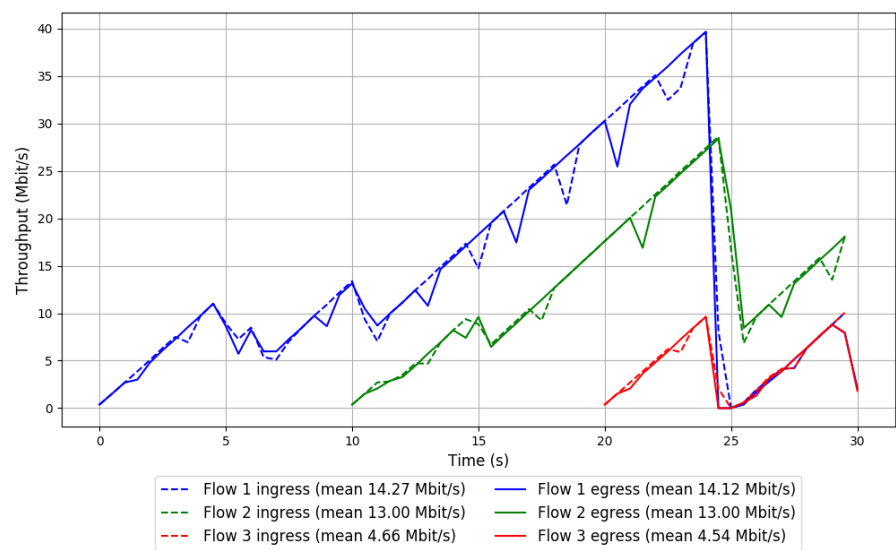
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2017-09-22 09:35:59
End at: 2017-09-22 09:36:29

# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.27 Mbit/s
95th percentile per-packet one-way delay: 53.028 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 14.12 Mbit/s
95th percentile per-packet one-way delay: 53.156 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 13.00 Mbit/s
95th percentile per-packet one-way delay: 52.866 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 52.689 ms
Loss rate: 2.53%
```
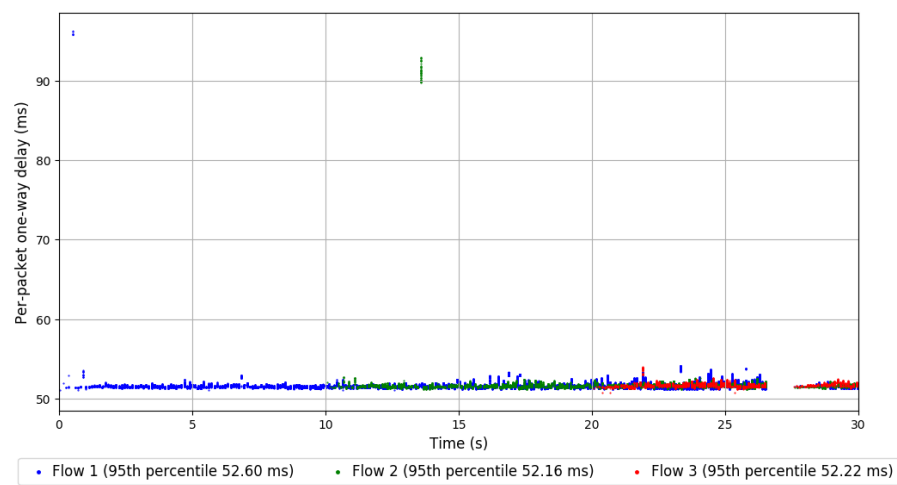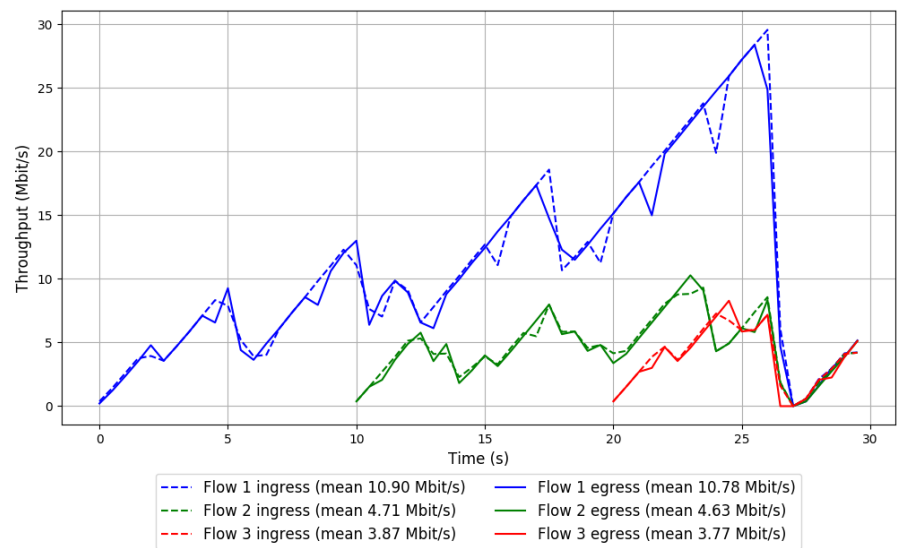
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2017-09-22 09:48:22
End at: 2017-09-22 09:48:52

# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.10 Mbit/s
95th percentile per-packet one-way delay: 52.423 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 10.78 Mbit/s
95th percentile per-packet one-way delay: 52.597 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 52.165 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 52.219 ms
Loss rate: 2.43%
```
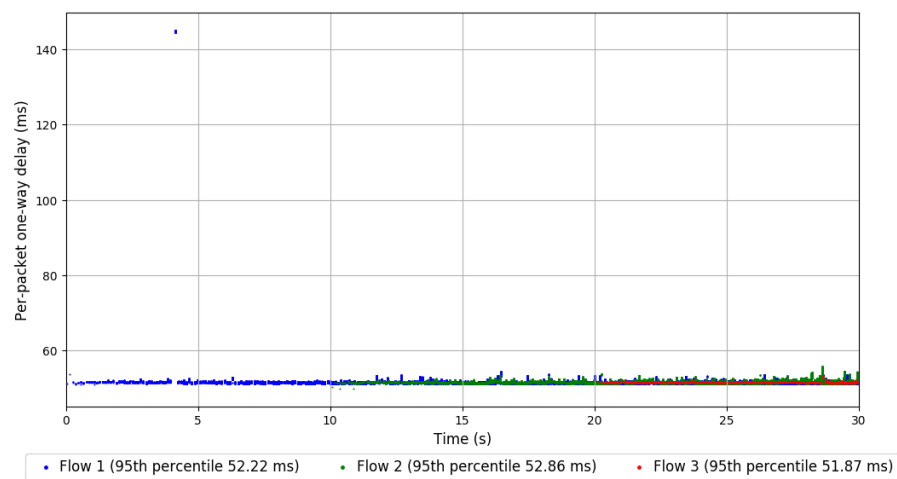
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2017-09-22 10:00:41
End at: 2017-09-22 10:01:11


# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.40 Mbit/s
95th percentile per-packet one-way delay: 52.446 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.38 Mbit/s
95th percentile per-packet one-way delay: 52.216 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.36 Mbit/s
95th percentile per-packet one-way delay: 52.864 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 51.871 ms
Loss rate: 0.00%
```
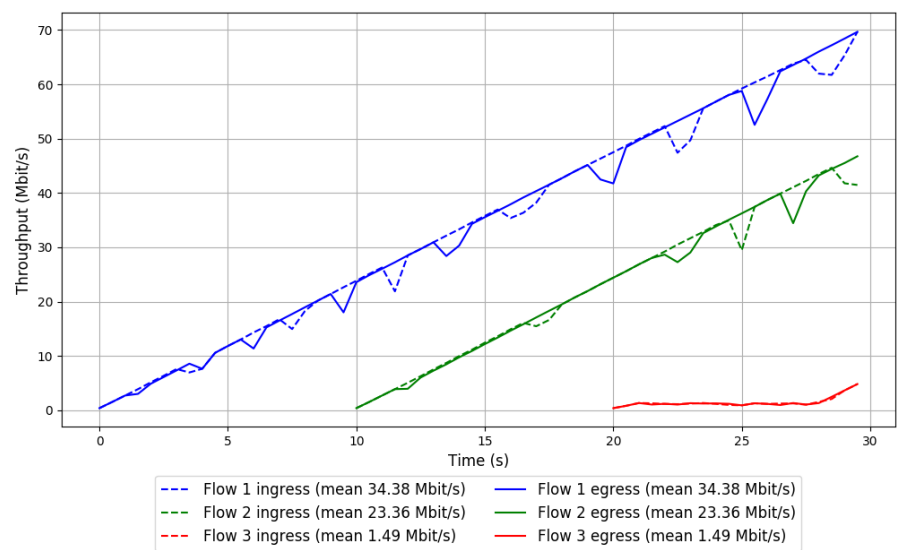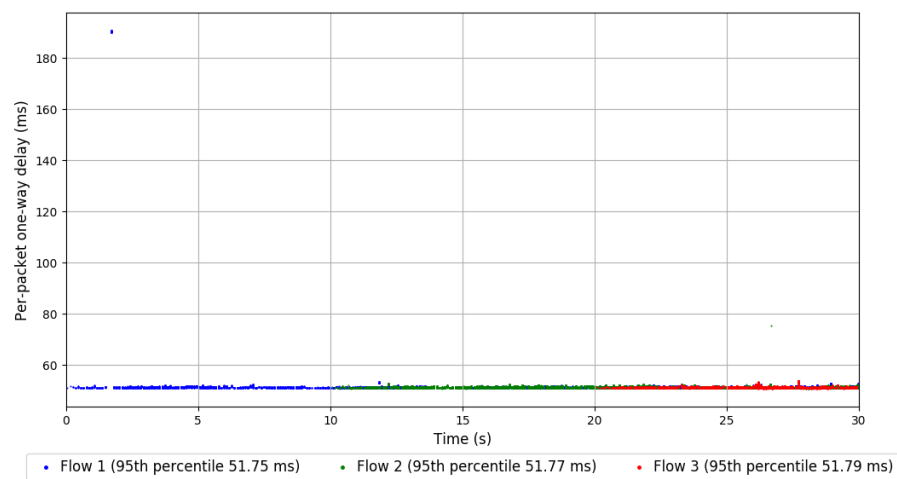
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2017-09-22 10:13:14
End at: 2017-09-22 10:13:44


# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.78 Mbit/s
95th percentile per-packet one-way delay: 51.765 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 5.46 Mbit/s
95th percentile per-packet one-way delay: 51.746 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 51.773 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 10.37 Mbit/s
95th percentile per-packet one-way delay: 51.788 ms
Loss rate: 0.05%
```
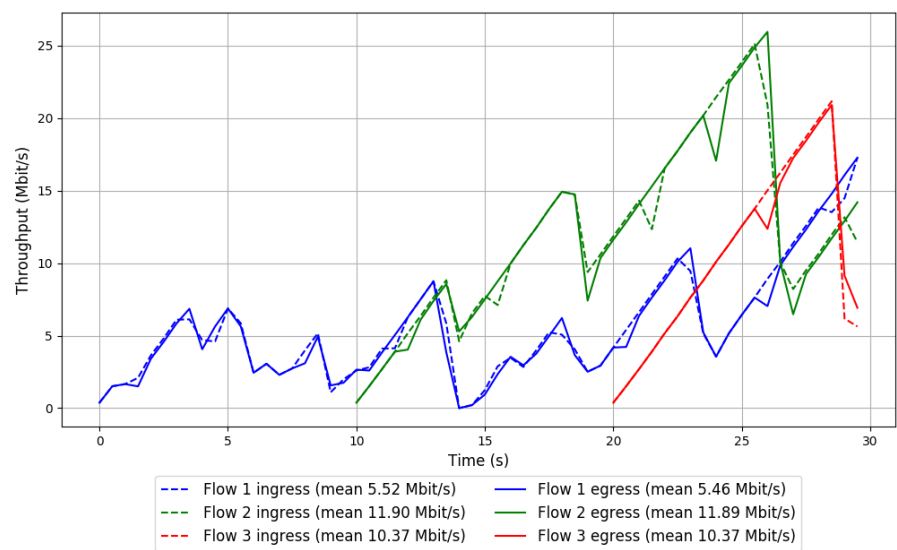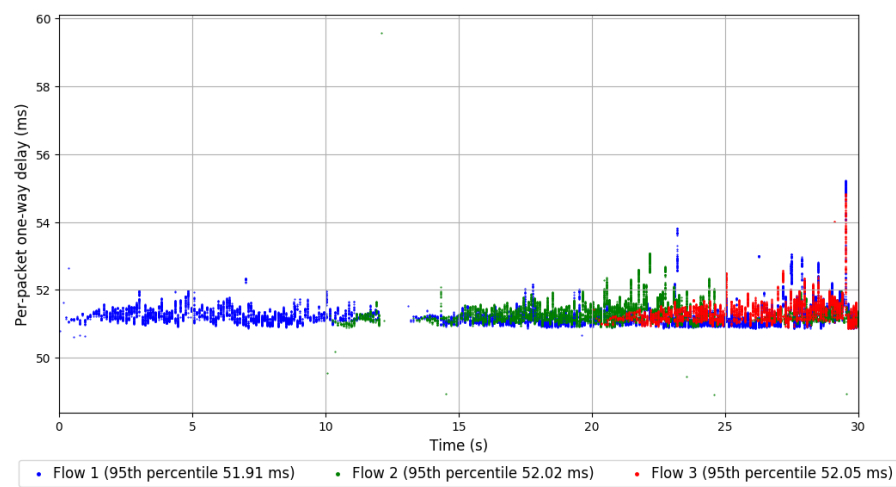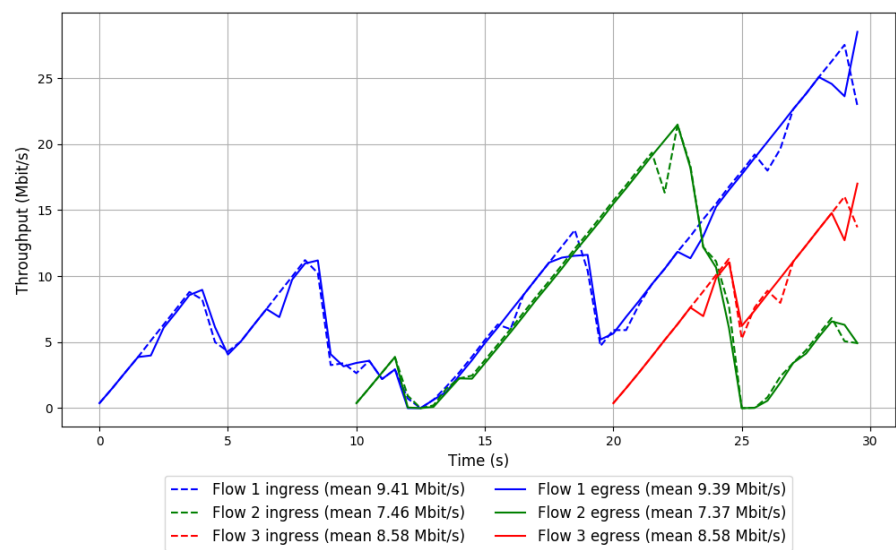
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 5.52 Mbit/s)   Flow 1 egress (mean 5.46 Mbit/s)
Flow 2 ingress (mean 11.90 Mbit/s)   Flow 2 egress (mean 11.89 Mbit/s)
Flow 3 ingress (mean 10.37 Mbit/s)   Flow 3 egress (mean 10.37 Mbit/s)

• Flow 1 (95th percentile 51.75 ms)   • Flow 2 (95th percentile 51.77 ms)   • Flow 3 (95th percentile 51.79 ms)

53

```
Run 6: Statistics of LEDBAT

Start at: 2017-09-22 10:25:41
End at: 2017-09-22 10:26:11


# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.11 Mbit/s
95th percentile per-packet one-way delay: 51.960 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 51.913 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 7.37 Mbit/s
95th percentile per-packet one-way delay: 52.016 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 52.047 ms
Loss rate: 0.01%
```
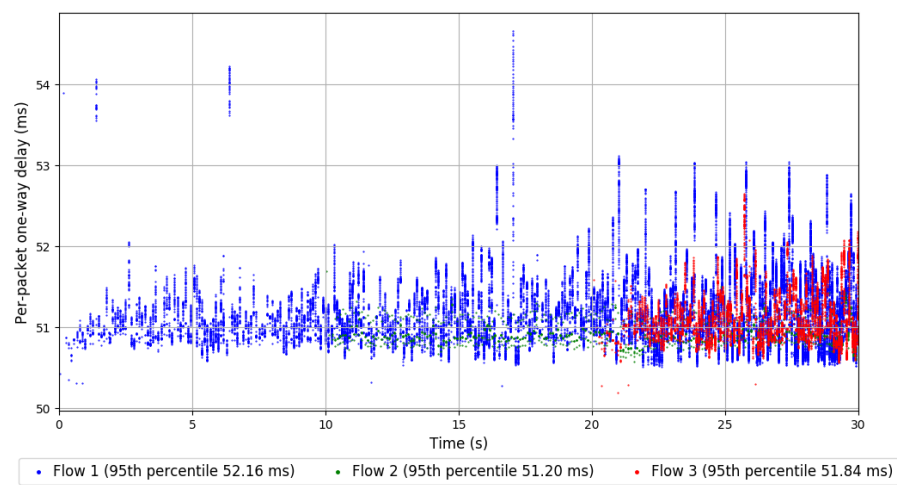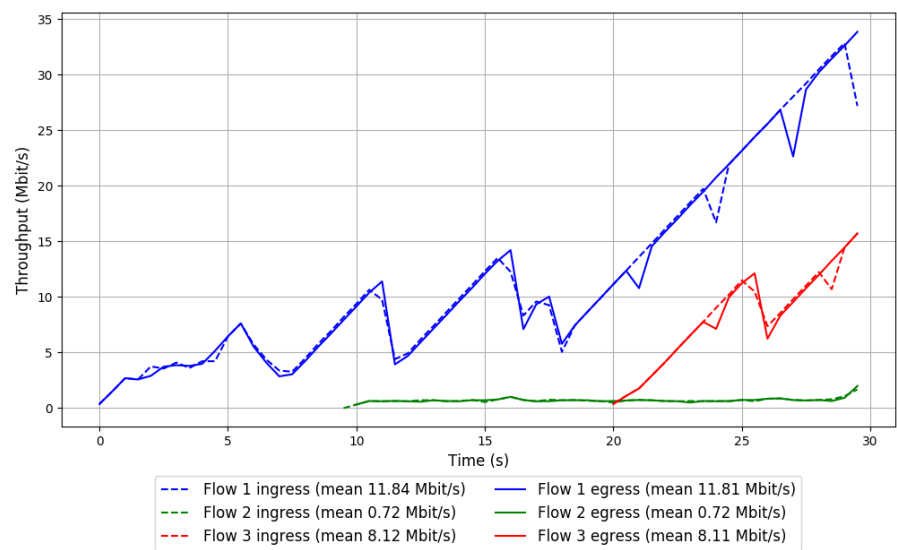
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2017-09-22 10:37:57
End at: 2017-09-22 10:38:27


# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.96 Mbit/s
95th percentile per-packet one-way delay: 52.043 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 52.157 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 51.198 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.11 Mbit/s
95th percentile per-packet one-way delay: 51.843 ms
Loss rate: 0.19%
```
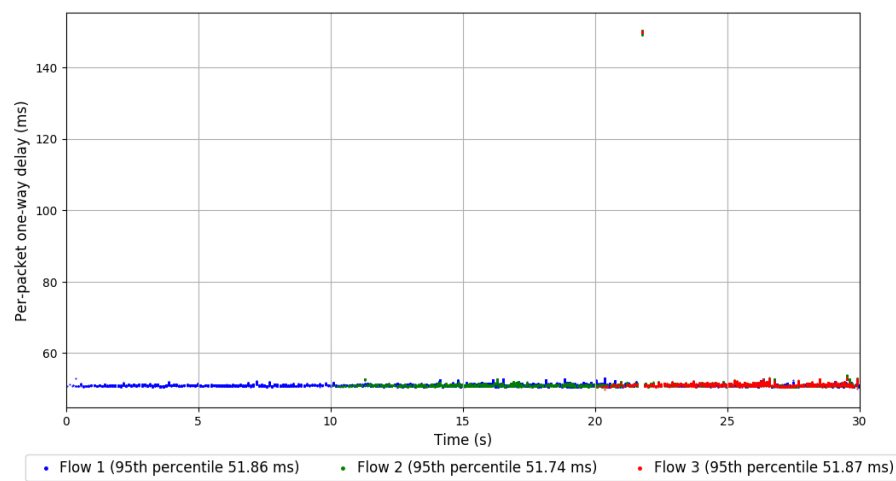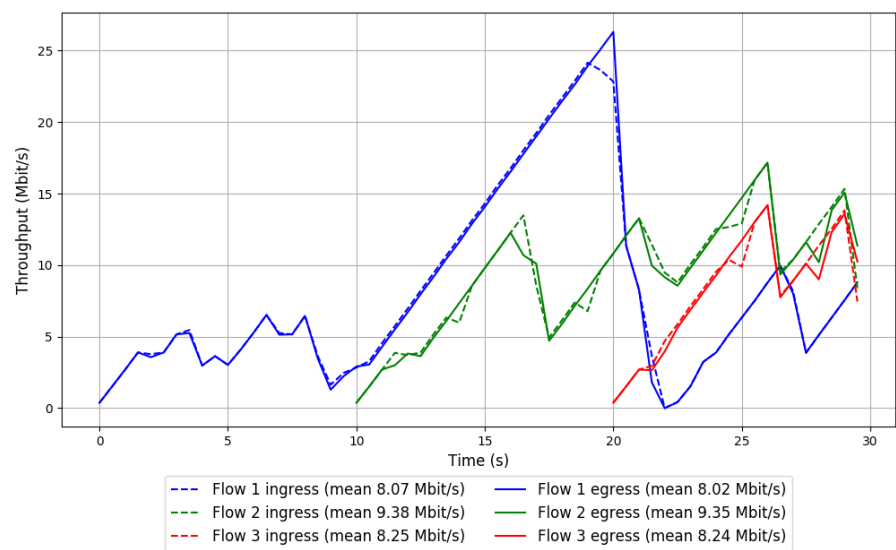
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2017-09-22 10:50:24
End at: 2017-09-22 10:50:54


# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.94 Mbit/s
95th percentile per-packet one-way delay: 51.821 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 51.861 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 9.35 Mbit/s
95th percentile per-packet one-way delay: 51.739 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 51.872 ms
Loss rate: 0.10%
```
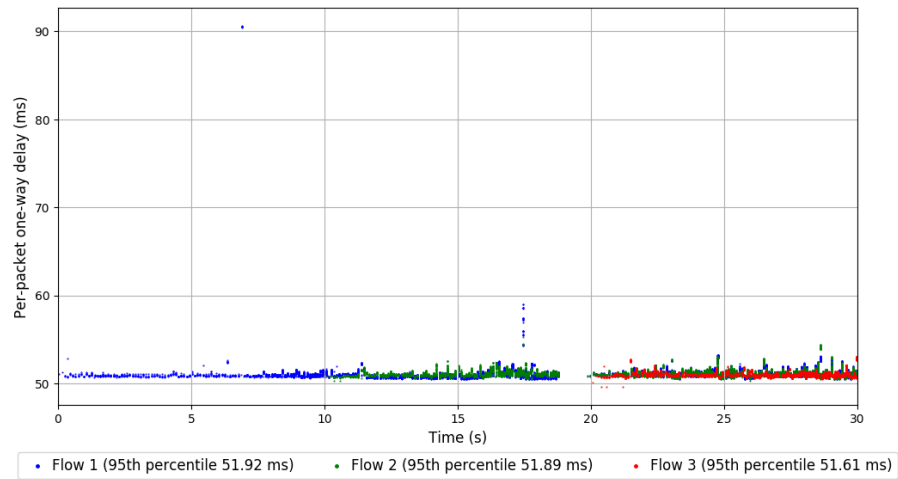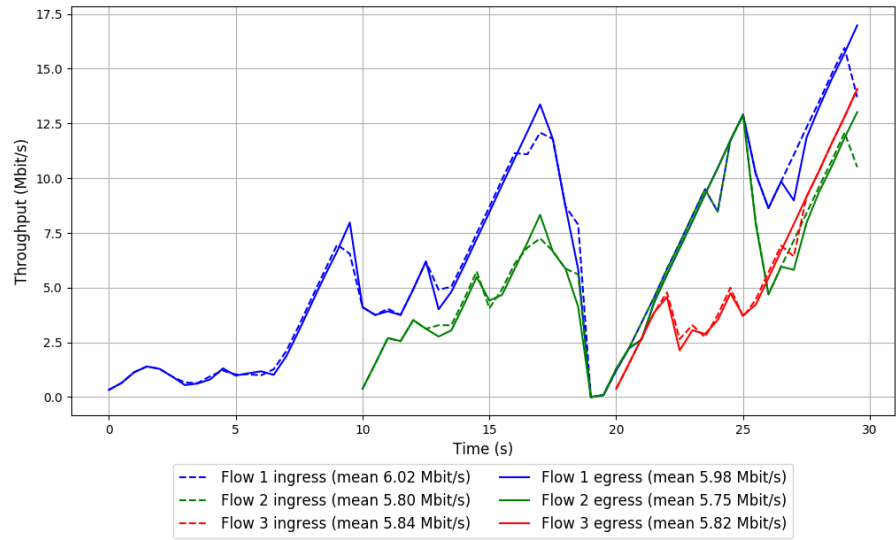
Run 8: Report of LEDBAT — Data Link

Flow 1 ingress (mean 8.07 Mbit/s)   Flow 1 egress (mean 8.02 Mbit/s)
Flow 2 ingress (mean 9.38 Mbit/s)   Flow 2 egress (mean 9.35 Mbit/s)
Flow 3 ingress (mean 8.25 Mbit/s)   Flow 3 egress (mean 8.24 Mbit/s)

Flow 1 (95th percentile 51.86 ms)   Flow 2 (95th percentile 51.74 ms)   Flow 3 (95th percentile 51.87 ms)

```
Run 9: Statistics of LEDBAT

Start at: 2017-09-22 11:02:38
End at: 2017-09-22 11:03:08

# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 51.890 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 5.98 Mbit/s
95th percentile per-packet one-way delay: 51.920 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 51.890 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 5.82 Mbit/s
95th percentile per-packet one-way delay: 51.612 ms
Loss rate: 0.43%
```
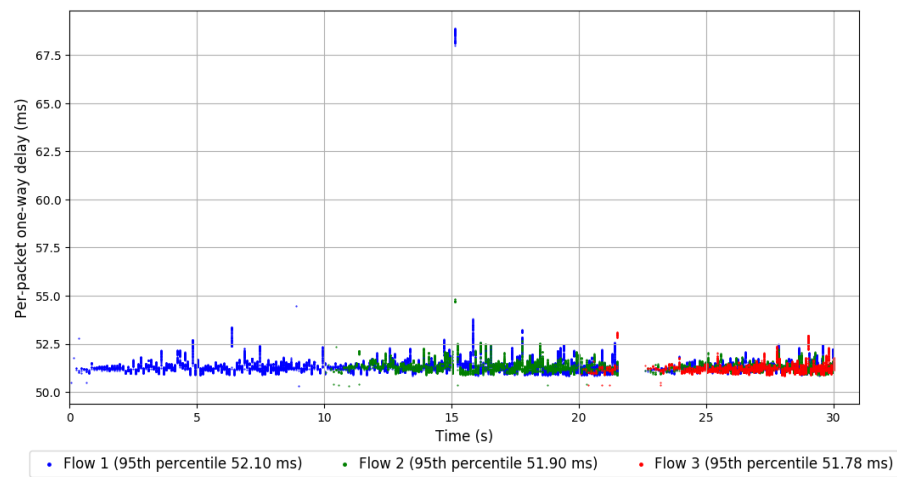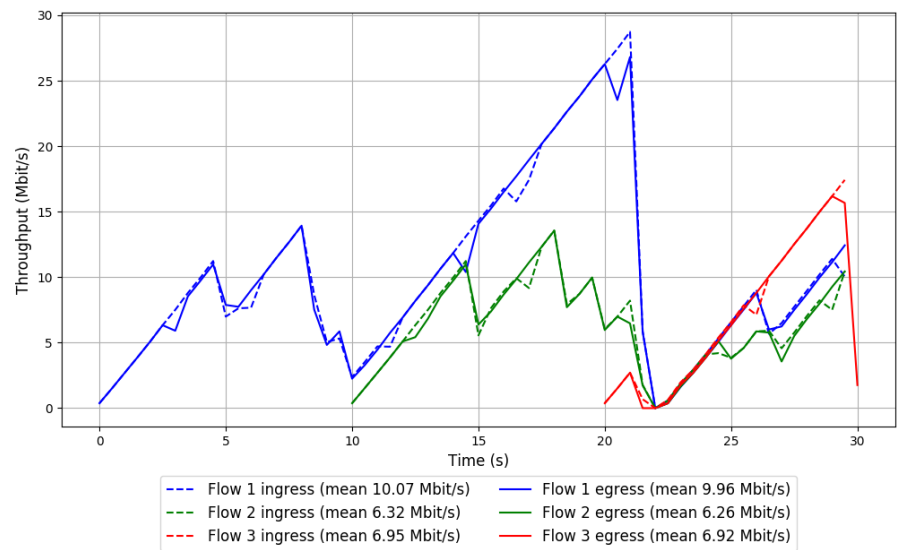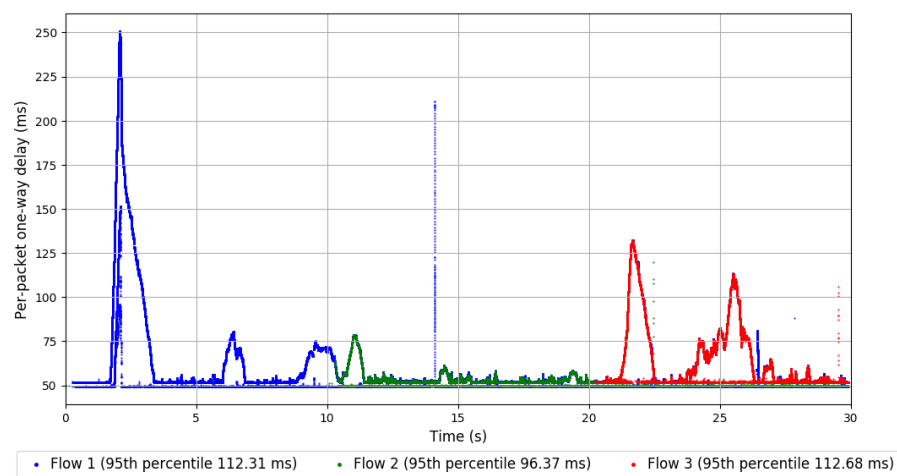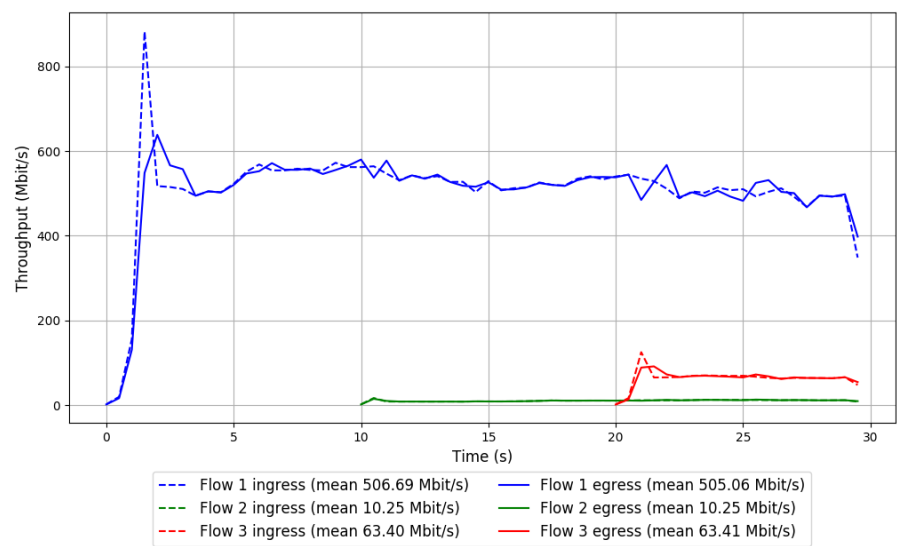
Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 6.02 Mbit/s)   Flow 1 egress (mean 5.98 Mbit/s)
Flow 2 ingress (mean 5.80 Mbit/s)   Flow 2 egress (mean 5.75 Mbit/s)
Flow 3 ingress (mean 5.84 Mbit/s)   Flow 3 egress (mean 5.82 Mbit/s)

Flow 1 (95th percentile 51.92 ms)   Flow 2 (95th percentile 51.89 ms)   Flow 3 (95th percentile 51.61 ms)

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```
Run 10: Statistics of LEDBAT

Start at: 2017-09-22 11:15:01
End at: 2017-09-22 11:15:31


# Below is generated by plot.py at 2017-09-22 13:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.40 Mbit/s
95th percentile per-packet one-way delay: 52.035 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 52.102 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 51.902 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 6.92 Mbit/s
95th percentile per-packet one-way delay: 51.780 ms
Loss rate: 0.49%
```

Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-09-22 09:30:52
End at: 2017-09-22 09:31:22


# Below is generated by plot.py at 2017-09-22 13:20:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.75 Mbit/s
95th percentile per-packet one-way delay: 112.200 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 505.06 Mbit/s
95th percentile per-packet one-way delay: 112.314 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 10.25 Mbit/s
95th percentile per-packet one-way delay: 96.366 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 63.41 Mbit/s
95th percentile per-packet one-way delay: 112.678 ms
Loss rate: 0.01%
```
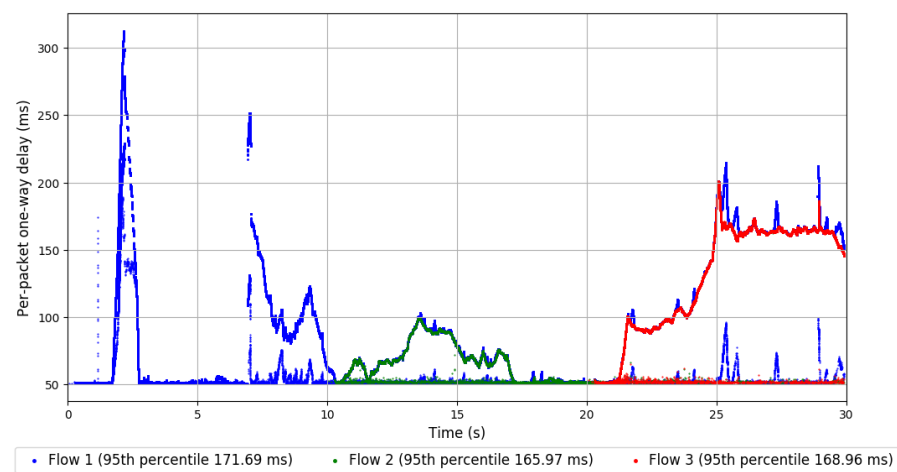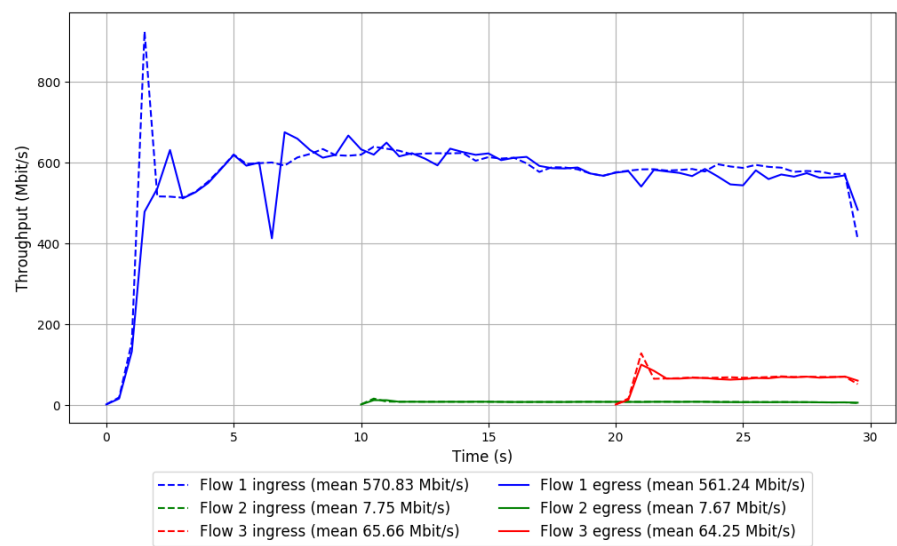
Run 1: Report of PCC — Data Link

```
Run 2: Statistics of PCC

Start at: 2017-09-22 09:43:08
End at: 2017-09-22 09:43:38

# Below is generated by plot.py at 2017-09-22 13:20:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 587.48 Mbit/s
95th percentile per-packet one-way delay: 171.390 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 561.24 Mbit/s
95th percentile per-packet one-way delay: 171.692 ms
Loss rate: 1.67%
-- Flow 2:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 165.974 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 64.25 Mbit/s
95th percentile per-packet one-way delay: 168.961 ms
Loss rate: 2.12%
```
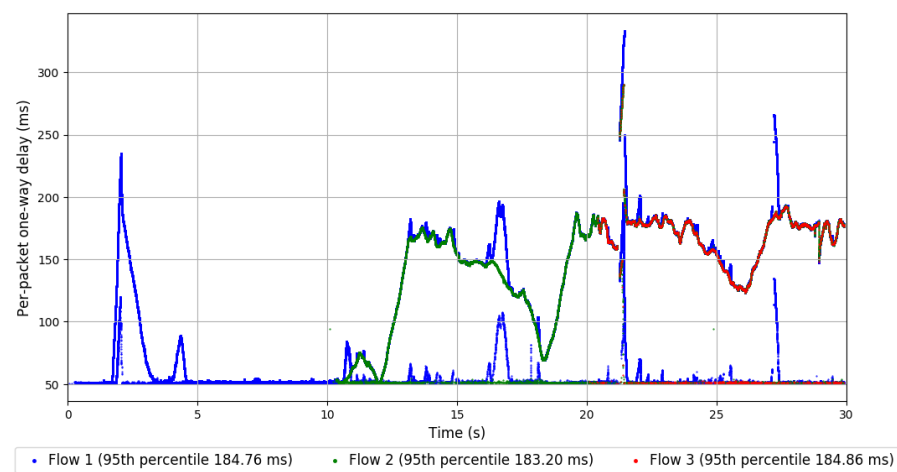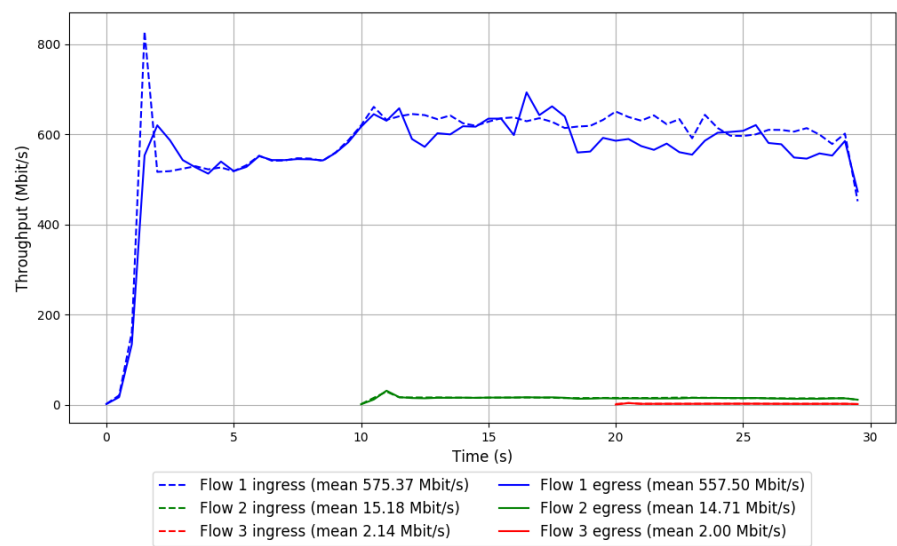
Run 2: Report of PCC — Data Link

```
Run 3: Statistics of PCC

Start at: 2017-09-22 09:55:24
End at: 2017-09-22 09:55:54

# Below is generated by plot.py at 2017-09-22 13:20:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 567.88 Mbit/s
95th percentile per-packet one-way delay: 184.719 ms
Loss rate: 3.11%
-- Flow 1:
Average throughput: 557.50 Mbit/s
95th percentile per-packet one-way delay: 184.756 ms
Loss rate: 3.10%
-- Flow 2:
Average throughput: 14.71 Mbit/s
95th percentile per-packet one-way delay: 183.204 ms
Loss rate: 3.28%
-- Flow 3:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 184.859 ms
Loss rate: 6.72%
```
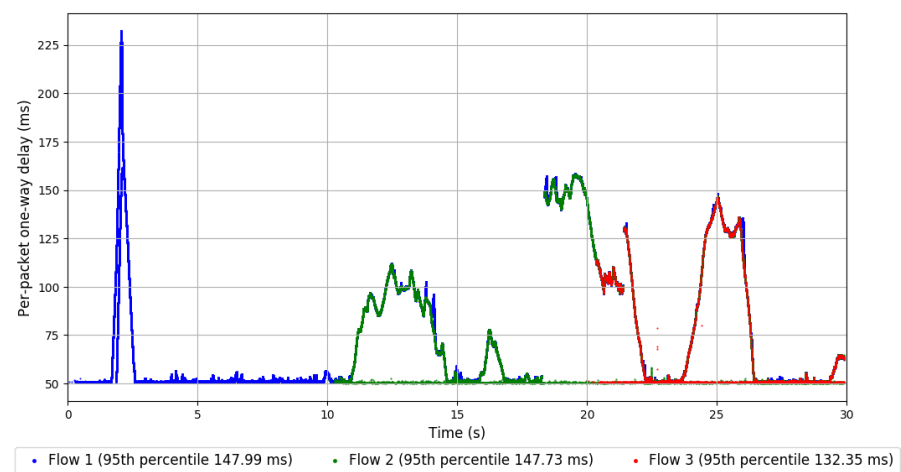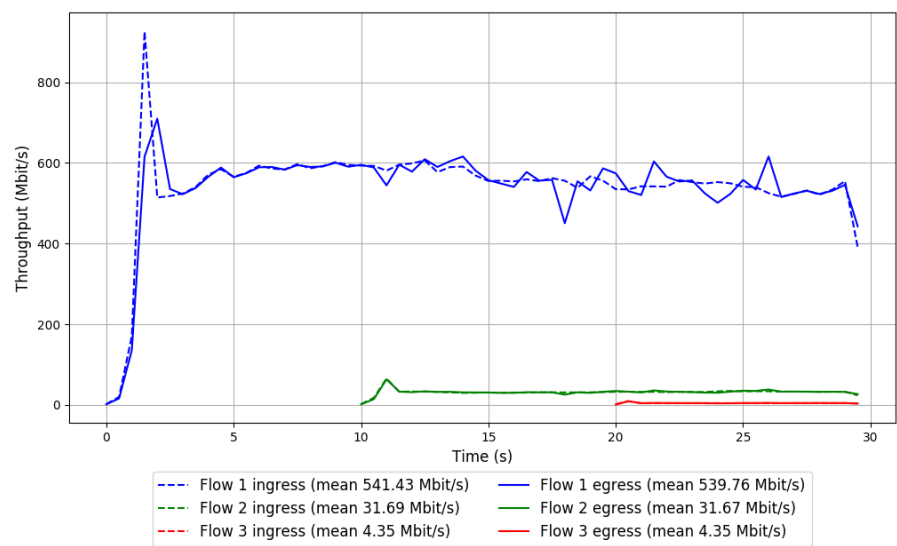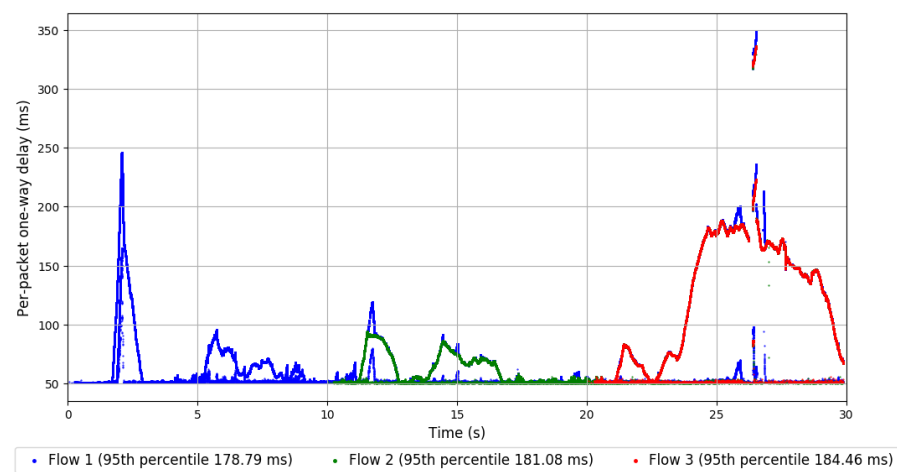
Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 575.37 Mbit/s) — — — Flow 1 egress (mean 557.50 Mbit/s)
Flow 2 ingress (mean 15.18 Mbit/s) — — — Flow 2 egress (mean 14.71 Mbit/s)
Flow 3 ingress (mean 2.14 Mbit/s) — — — Flow 3 egress (mean 2.00 Mbit/s)

Flow 1 (95th percentile 184.76 ms)   Flow 2 (95th percentile 183.20 ms)   Flow 3 (95th percentile 184.86 ms)

69

```
Run 4: Statistics of PCC

Start at: 2017-09-22 10:07:57
End at: 2017-09-22 10:08:27


# Below is generated by plot.py at 2017-09-22 13:20:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 562.21 Mbit/s
95th percentile per-packet one-way delay: 147.936 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 539.76 Mbit/s
95th percentile per-packet one-way delay: 147.993 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 31.67 Mbit/s
95th percentile per-packet one-way delay: 147.731 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 132.348 ms
Loss rate: 0.14%
```
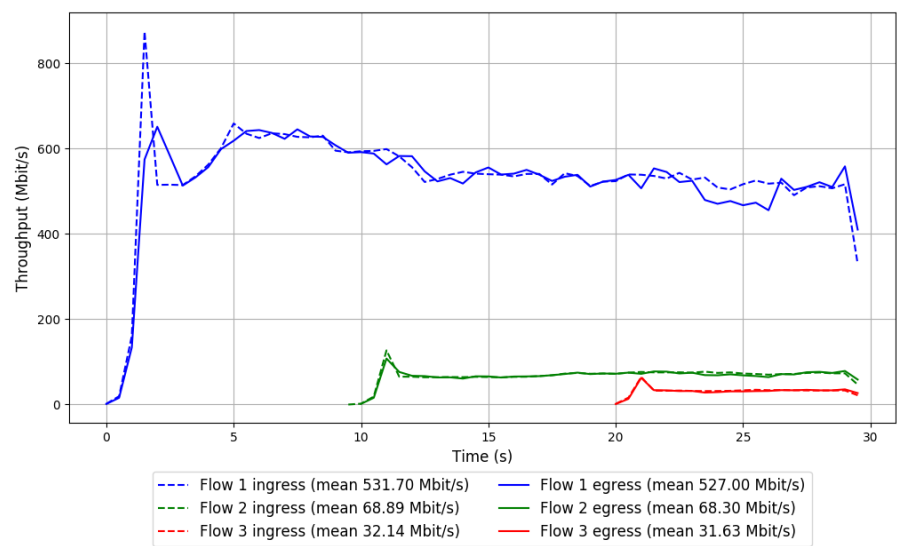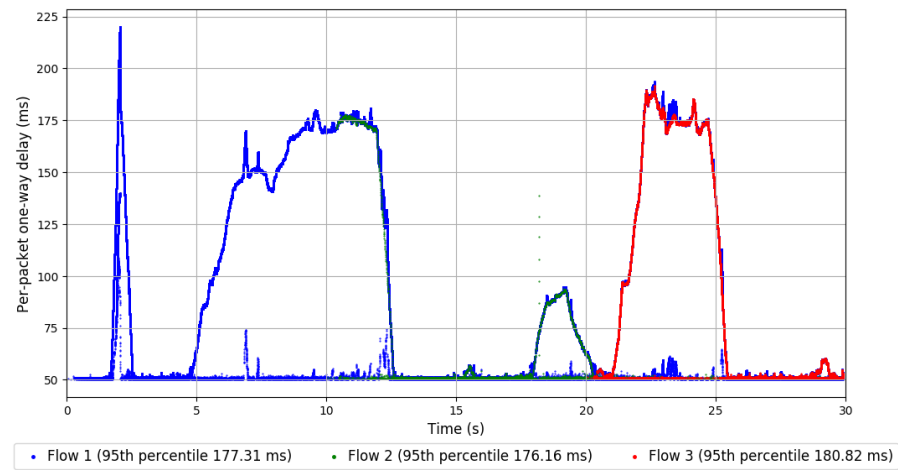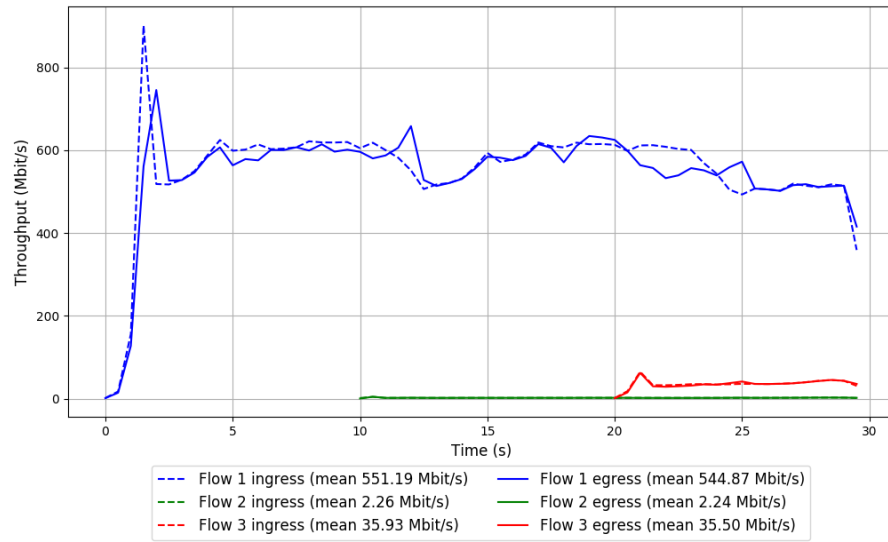
Run 4: Report of PCC — Data Link

- - - Flow 1 ingress (mean 541.43 Mbit/s) —— Flow 1 egress (mean 539.76 Mbit/s)
- - - Flow 2 ingress (mean 31.69 Mbit/s) —— Flow 2 egress (mean 31.67 Mbit/s)
- - - Flow 3 ingress (mean 4.35 Mbit/s) —— Flow 3 egress (mean 4.35 Mbit/s)

- Flow 1 (95th percentile 147.99 ms)   • Flow 2 (95th percentile 147.73 ms)   • Flow 3 (95th percentile 132.35 ms)

```
Run 5: Statistics of PCC

Start at: 2017-09-22 10:20:19
End at: 2017-09-22 10:20:49

# Below is generated by plot.py at 2017-09-22 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 582.83 Mbit/s
95th percentile per-packet one-way delay: 179.133 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 527.00 Mbit/s
95th percentile per-packet one-way delay: 178.787 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 68.30 Mbit/s
95th percentile per-packet one-way delay: 181.080 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 31.63 Mbit/s
95th percentile per-packet one-way delay: 184.464 ms
Loss rate: 1.58%
```
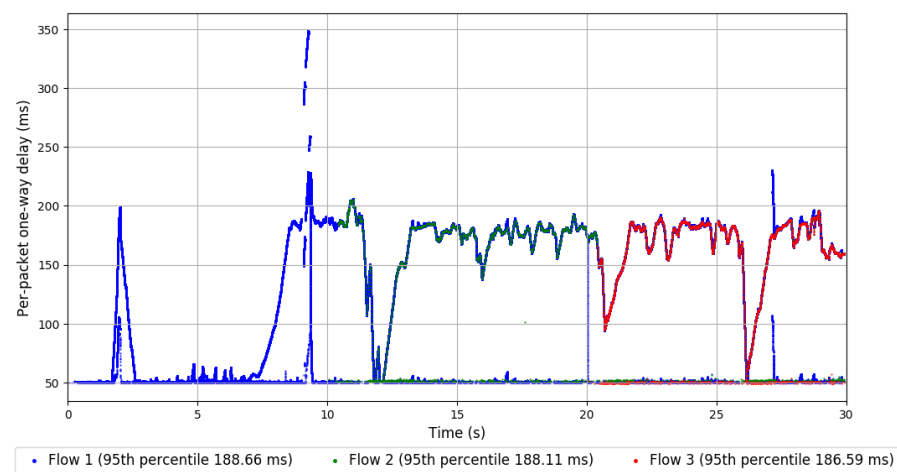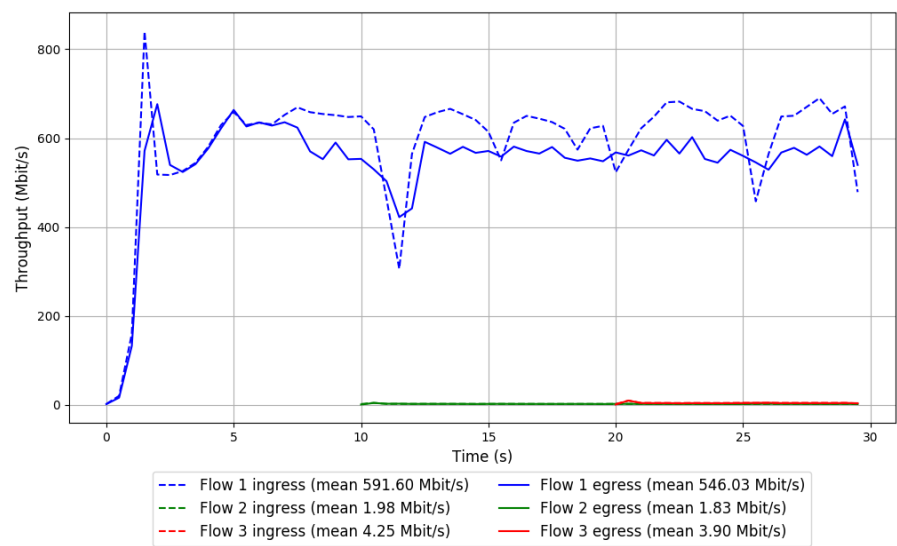
Run 5: Report of PCC — Data Link

```
Run 6: Statistics of PCC

Start at: 2017-09-22 10:32:40
End at: 2017-09-22 10:33:11


# Below is generated by plot.py at 2017-09-22 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 558.05 Mbit/s
95th percentile per-packet one-way delay: 177.350 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 544.87 Mbit/s
95th percentile per-packet one-way delay: 177.305 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 176.160 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 35.50 Mbit/s
95th percentile per-packet one-way delay: 180.817 ms
Loss rate: 1.21%
```
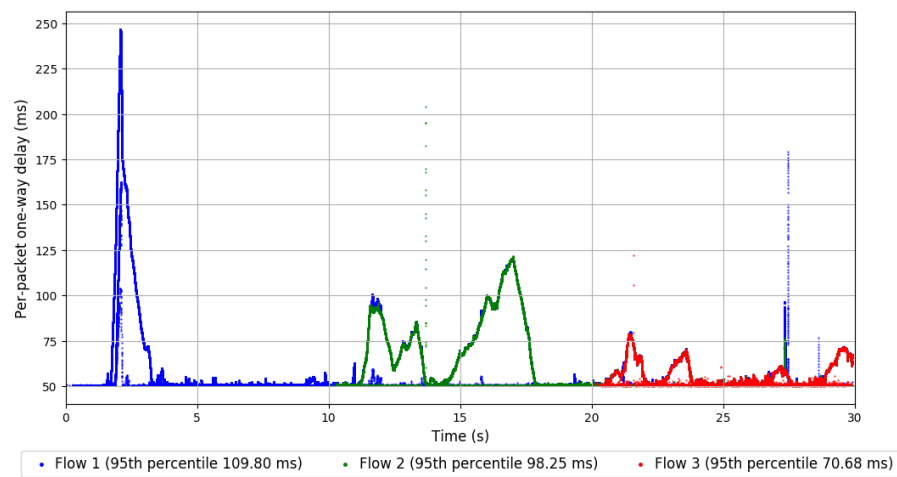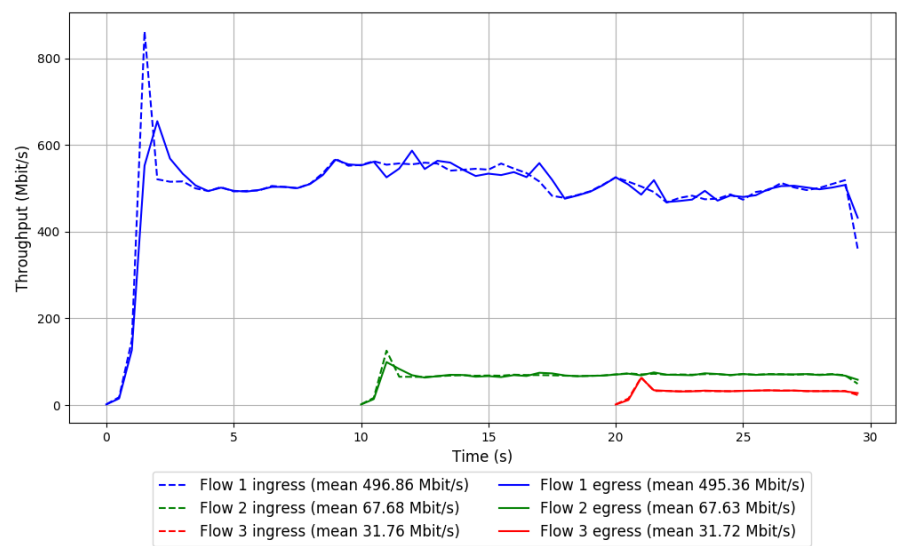
Run 6: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 551.19 Mbit/s) ——— Flow 1 egress (mean 544.87 Mbit/s)
- - - - Flow 2 ingress (mean 2.26 Mbit/s) ——— Flow 2 egress (mean 2.24 Mbit/s)
- - - - Flow 3 ingress (mean 35.93 Mbit/s) ——— Flow 3 egress (mean 35.50 Mbit/s)

• Flow 1 (95th percentile 177.31 ms)　　• Flow 2 (95th percentile 176.16 ms)　　• Flow 3 (95th percentile 180.82 ms)

75

```
Run 7: Statistics of PCC

Start at: 2017-09-22 10:45:06
End at: 2017-09-22 10:45:36


# Below is generated by plot.py at 2017-09-22 13:21:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 548.53 Mbit/s
95th percentile per-packet one-way delay: 188.649 ms
Loss rate: 7.70%
-- Flow 1:
Average throughput: 546.03 Mbit/s
95th percentile per-packet one-way delay: 188.656 ms
Loss rate: 7.70%
-- Flow 2:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 188.114 ms
Loss rate: 7.70%
-- Flow 3:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 186.591 ms
Loss rate: 8.22%
```
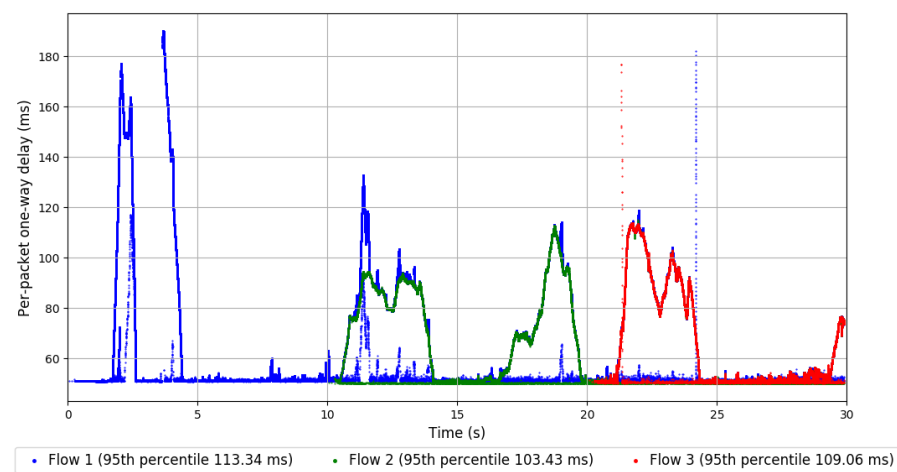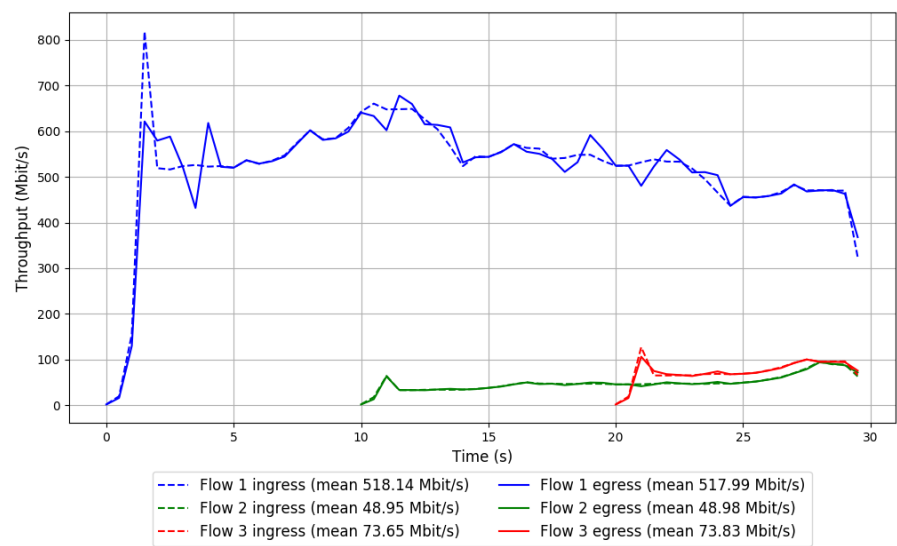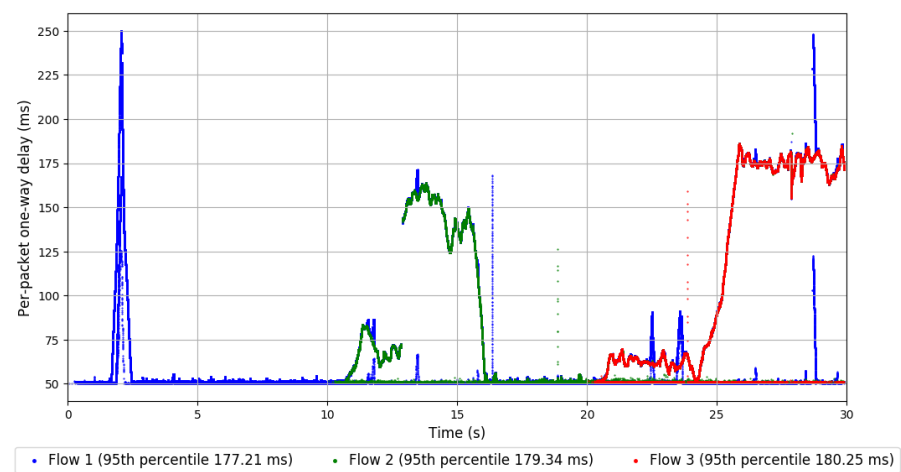
Run 7: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 591.60 Mbit/s) ——— Flow 1 egress (mean 546.03 Mbit/s)
- - - - Flow 2 ingress (mean 1.98 Mbit/s) ——— Flow 2 egress (mean 1.83 Mbit/s)
- - - - Flow 3 ingress (mean 4.25 Mbit/s) ——— Flow 3 egress (mean 3.90 Mbit/s)

- Flow 1 (95th percentile 188.66 ms)   • Flow 2 (95th percentile 188.11 ms)   • Flow 3 (95th percentile 186.59 ms)

```
Run 8: Statistics of PCC

Start at: 2017-09-22 10:57:26
End at: 2017-09-22 10:57:56

# Below is generated by plot.py at 2017-09-22 13:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 550.77 Mbit/s
95th percentile per-packet one-way delay: 107.516 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 495.36 Mbit/s
95th percentile per-packet one-way delay: 109.800 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 67.63 Mbit/s
95th percentile per-packet one-way delay: 98.255 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.72 Mbit/s
95th percentile per-packet one-way delay: 70.677 ms
Loss rate: 0.00%
```
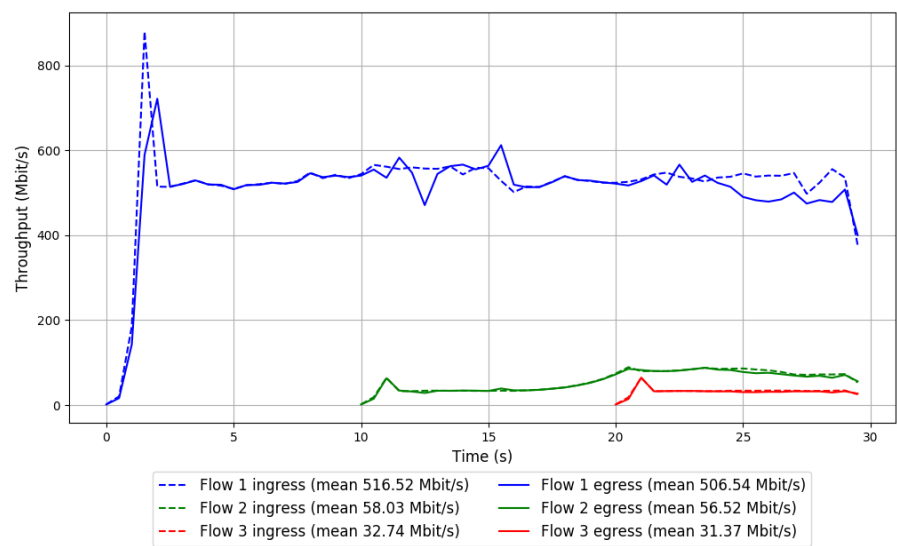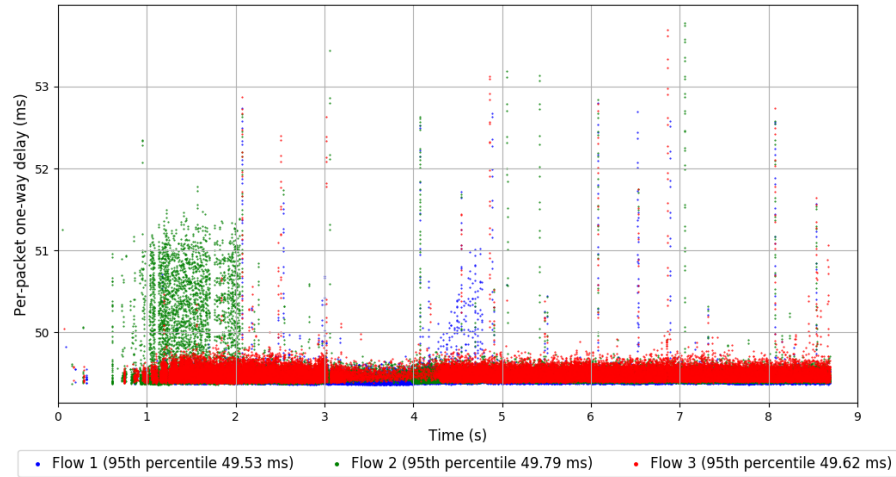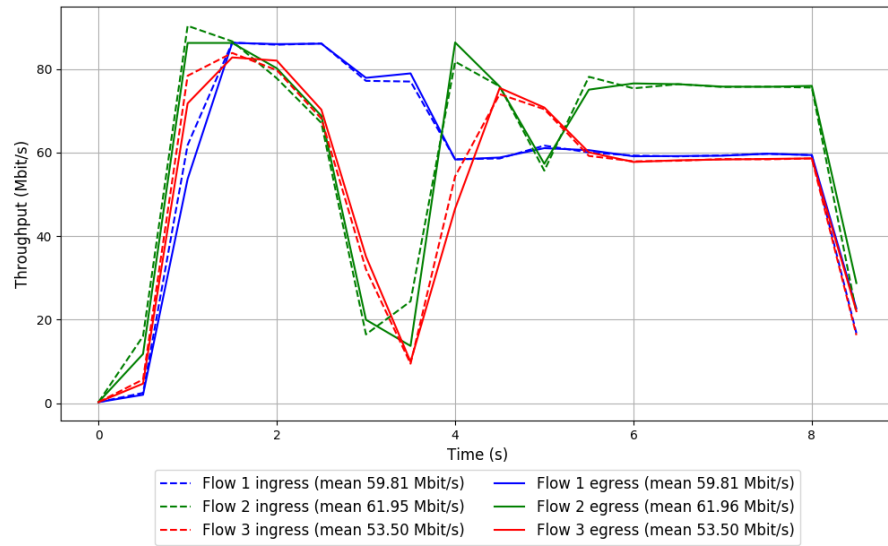
Run 8: Report of PCC — Data Link

- - - Flow 1 ingress (mean 496.86 Mbit/s) —— Flow 1 egress (mean 495.36 Mbit/s)
- - - Flow 2 ingress (mean 67.68 Mbit/s) —— Flow 2 egress (mean 67.63 Mbit/s)
- - - Flow 3 ingress (mean 31.76 Mbit/s) —— Flow 3 egress (mean 31.72 Mbit/s)

• Flow 1 (95th percentile 109.80 ms)   • Flow 2 (95th percentile 98.25 ms)   • Flow 3 (95th percentile 70.68 ms)

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```
Run 9: Statistics of PCC

Start at: 2017-09-22 11:09:42
End at: 2017-09-22 11:10:12


# Below is generated by plot.py at 2017-09-22 13:30:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 574.86 Mbit/s
95th percentile per-packet one-way delay: 112.415 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 517.99 Mbit/s
95th percentile per-packet one-way delay: 113.338 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 48.98 Mbit/s
95th percentile per-packet one-way delay: 103.426 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 73.83 Mbit/s
95th percentile per-packet one-way delay: 109.065 ms
Loss rate: 0.21%
```
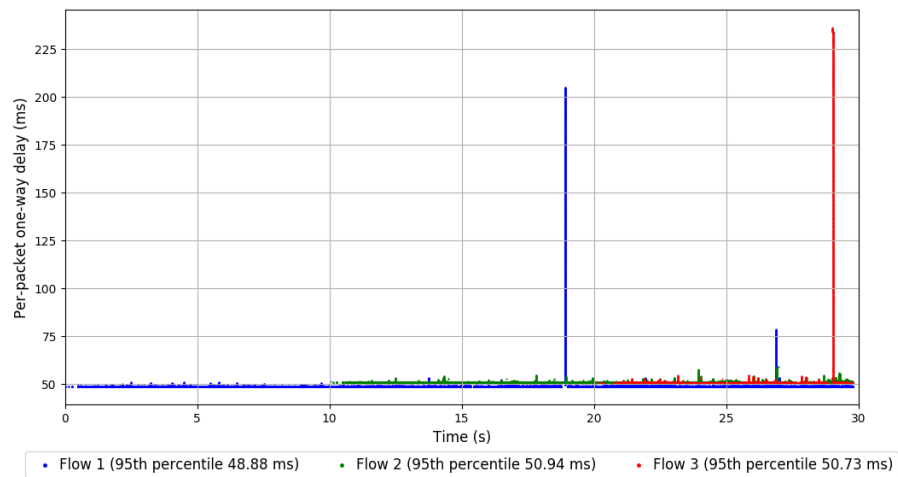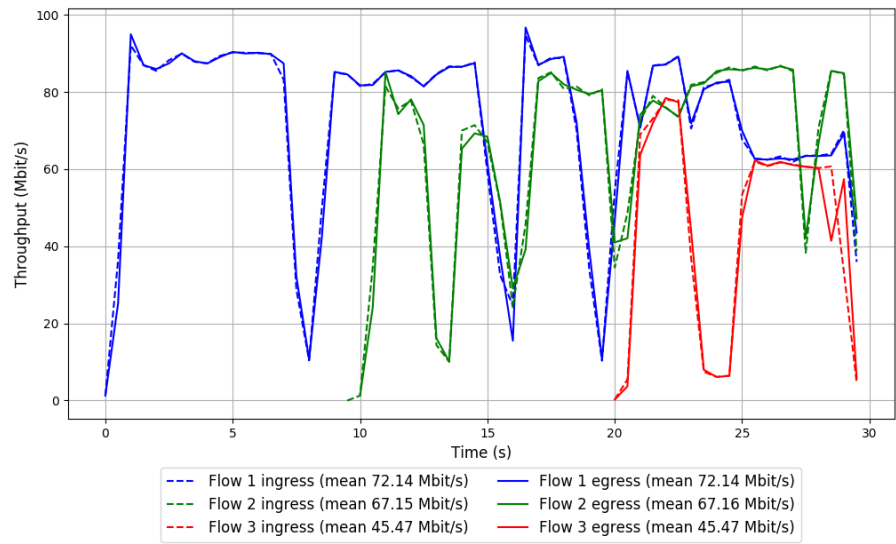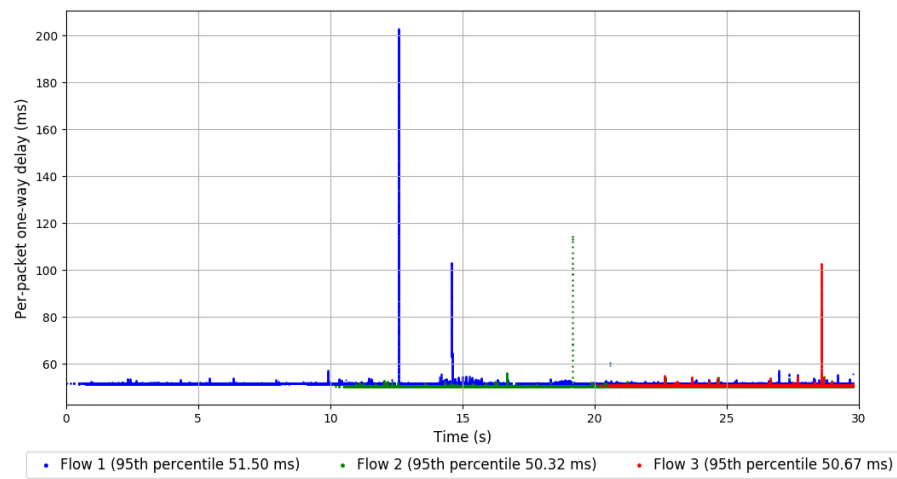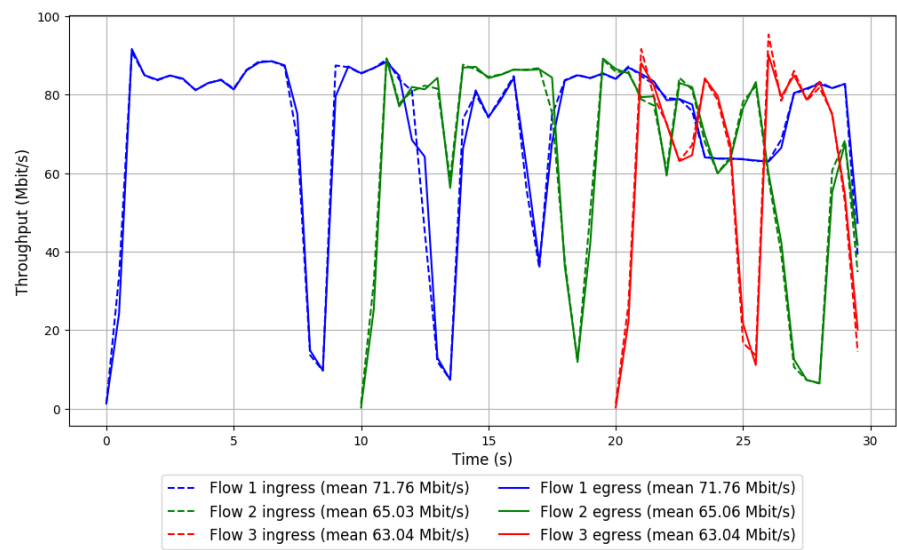
Run 9: Report of PCC — Data Link

Flow 1 ingress (mean 518.14 Mbit/s)   Flow 1 egress (mean 517.99 Mbit/s)
Flow 2 ingress (mean 48.95 Mbit/s)   Flow 2 egress (mean 48.98 Mbit/s)
Flow 3 ingress (mean 73.65 Mbit/s)   Flow 3 egress (mean 73.83 Mbit/s)

Flow 1 (95th percentile 113.34 ms)   Flow 2 (95th percentile 103.43 ms)   Flow 3 (95th percentile 109.06 ms)

```
Run 10: Statistics of PCC

Start at: 2017-09-22 11:22:02
End at: 2017-09-22 11:22:32


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 554.39 Mbit/s
95th percentile per-packet one-way delay: 177.616 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 506.54 Mbit/s
95th percentile per-packet one-way delay: 177.211 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 56.52 Mbit/s
95th percentile per-packet one-way delay: 179.340 ms
Loss rate: 2.61%
-- Flow 3:
Average throughput: 31.37 Mbit/s
95th percentile per-packet one-way delay: 180.245 ms
Loss rate: 4.19%
```
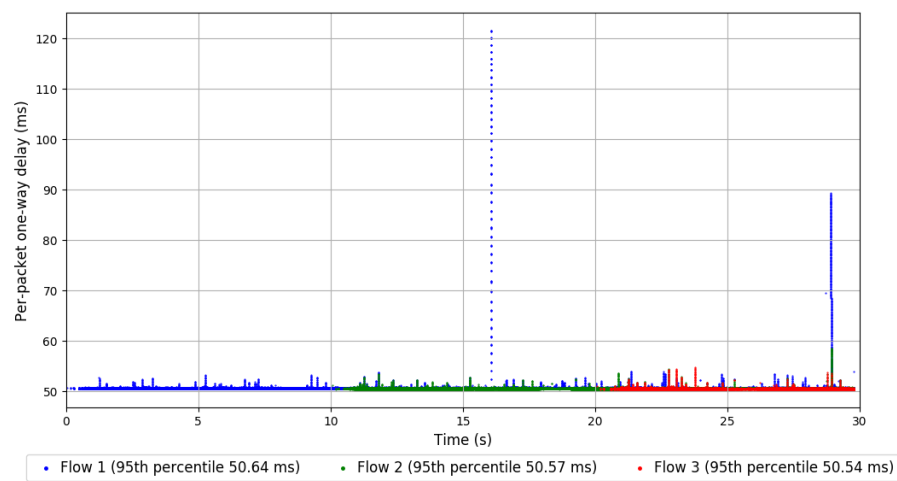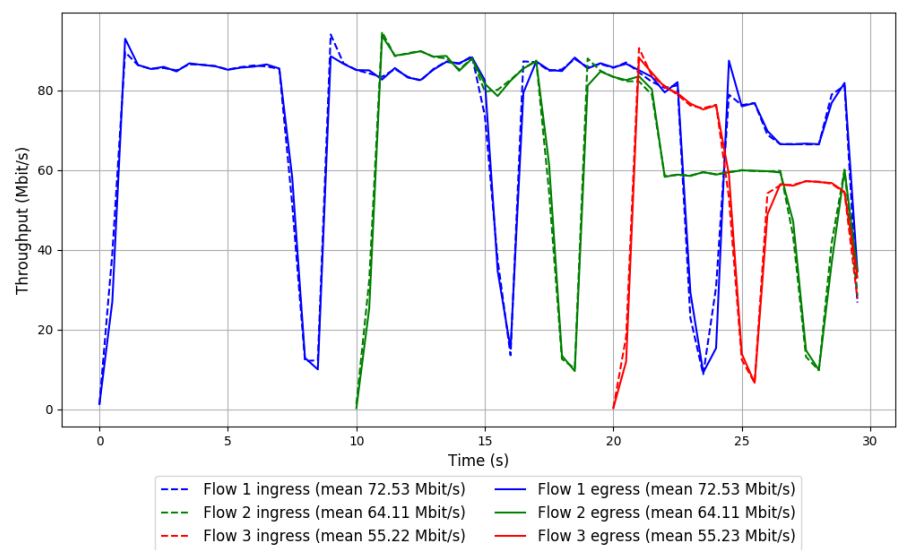
Run 10: Report of PCC — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-09-22 09:25:54
End at: 2017-09-22 09:26:24
```

Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-09-22 09:37:47
End at: 2017-09-22 09:38:17


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 131.48 Mbit/s
95th percentile per-packet one-way delay: 50.866 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.14 Mbit/s
95th percentile per-packet one-way delay: 48.881 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 67.16 Mbit/s
95th percentile per-packet one-way delay: 50.941 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 45.47 Mbit/s
95th percentile per-packet one-way delay: 50.730 ms
Loss rate: 0.00%
```
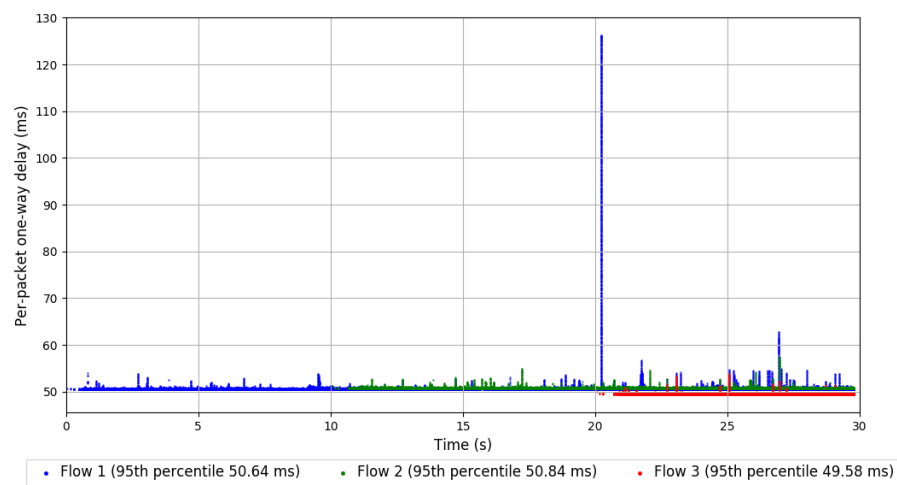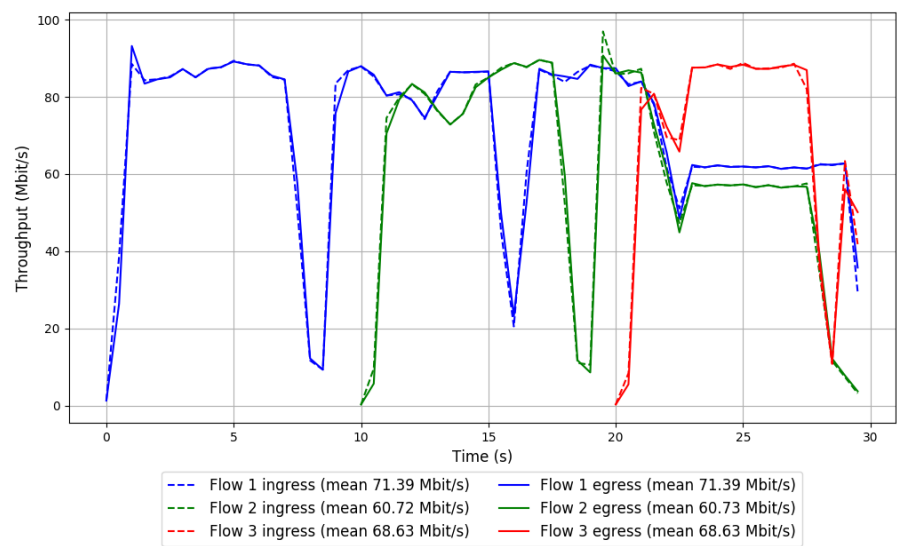
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-09-22 09:50:07
End at: 2017-09-22 09:50:37


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.43 Mbit/s
95th percentile per-packet one-way delay: 51.464 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.76 Mbit/s
95th percentile per-packet one-way delay: 51.498 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 65.06 Mbit/s
95th percentile per-packet one-way delay: 50.324 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 63.04 Mbit/s
95th percentile per-packet one-way delay: 50.667 ms
Loss rate: 0.00%
```
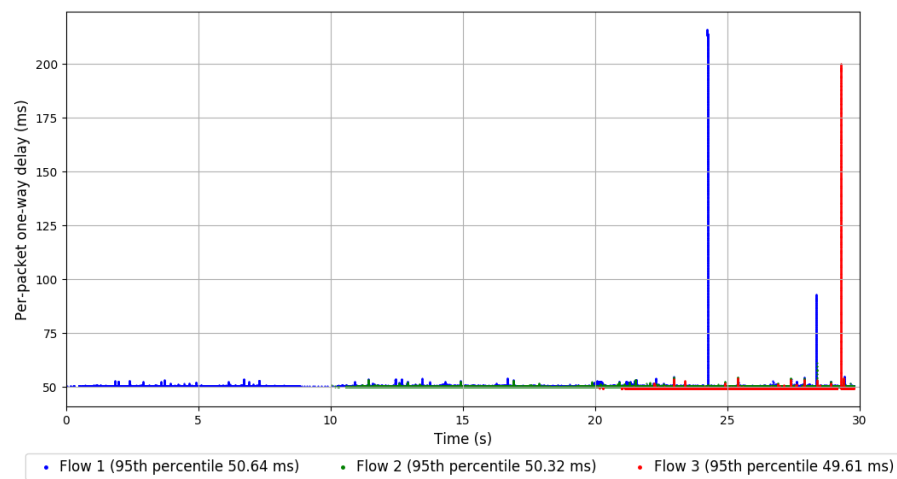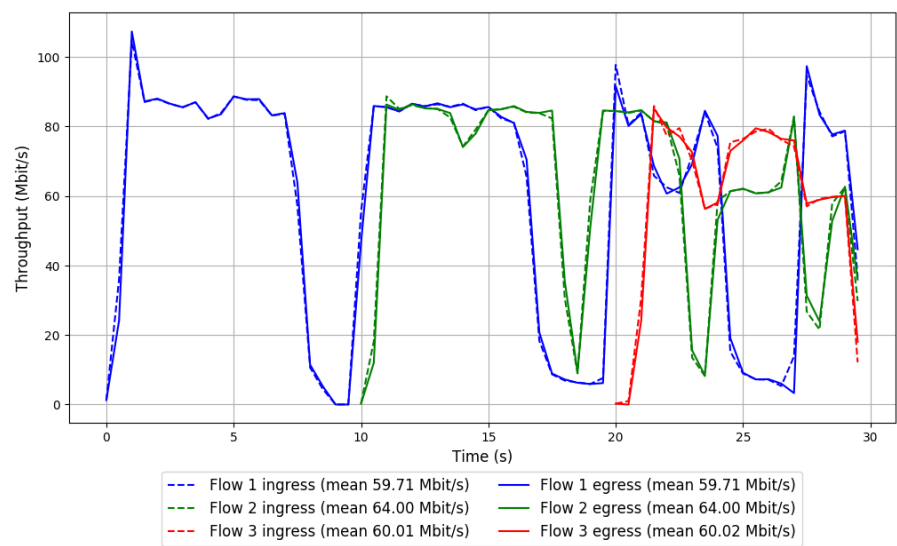
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 71.76 Mbit/s) --- Flow 1 egress (mean 71.76 Mbit/s)
Flow 2 ingress (mean 65.03 Mbit/s) --- Flow 2 egress (mean 65.06 Mbit/s)
Flow 3 ingress (mean 63.04 Mbit/s) --- Flow 3 egress (mean 63.04 Mbit/s)

Flow 1 (95th percentile 51.50 ms)   Flow 2 (95th percentile 50.32 ms)   Flow 3 (95th percentile 50.67 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2017-09-22 10:02:28
End at: 2017-09-22 10:02:58


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.04 Mbit/s
95th percentile per-packet one-way delay: 50.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.53 Mbit/s
95th percentile per-packet one-way delay: 50.640 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 64.11 Mbit/s
95th percentile per-packet one-way delay: 50.572 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 55.23 Mbit/s
95th percentile per-packet one-way delay: 50.542 ms
Loss rate: 0.01%
```
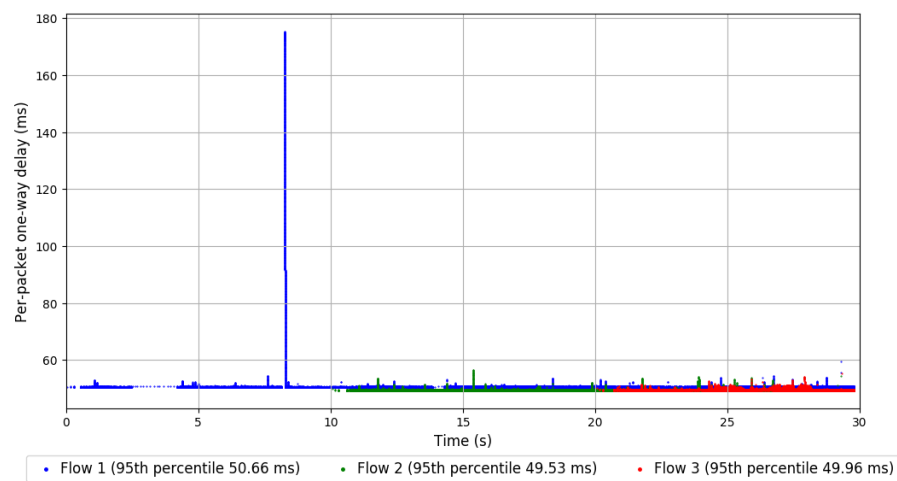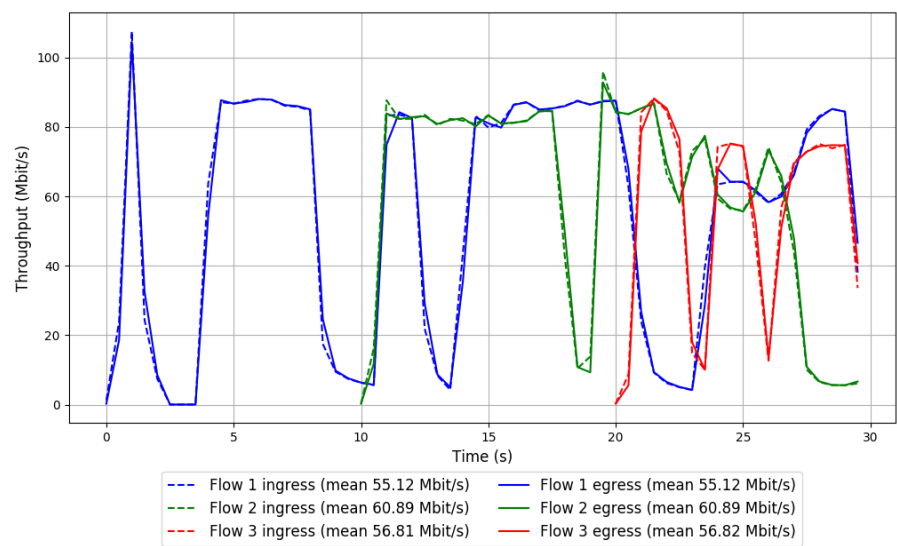
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-09-22 10:15:01
End at: 2017-09-22 10:15:31


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.10 Mbit/s
95th percentile per-packet one-way delay: 50.794 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.39 Mbit/s
95th percentile per-packet one-way delay: 50.639 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 60.73 Mbit/s
95th percentile per-packet one-way delay: 50.842 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 68.63 Mbit/s
95th percentile per-packet one-way delay: 49.584 ms
Loss rate: 0.00%
```
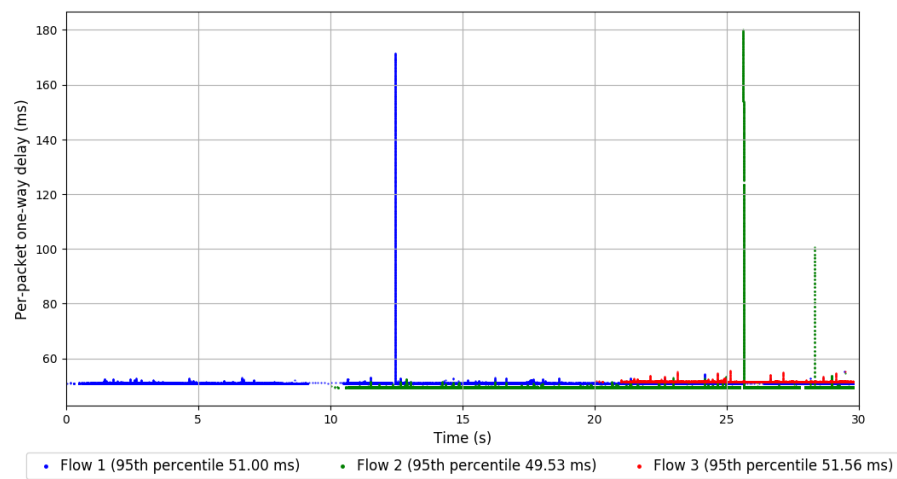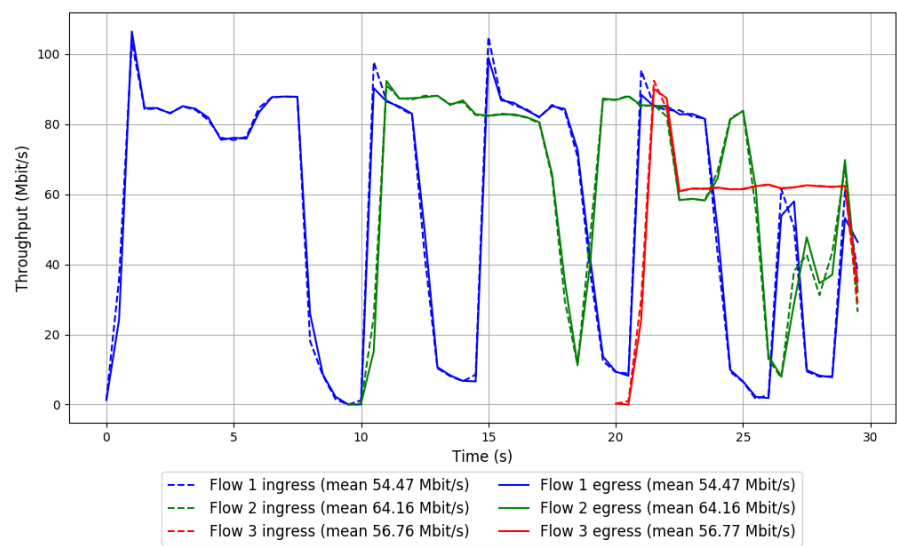
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 71.39 Mbit/s) ---- Flow 1 egress (mean 71.39 Mbit/s)
Flow 2 ingress (mean 60.72 Mbit/s) ---- Flow 2 egress (mean 60.73 Mbit/s)
Flow 3 ingress (mean 68.63 Mbit/s) ---- Flow 3 egress (mean 68.63 Mbit/s)

Flow 1 (95th percentile 50.64 ms)   Flow 2 (95th percentile 50.84 ms)   Flow 3 (95th percentile 49.58 ms)

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```
Run 6: Statistics of QUIC Cubic

Start at: 2017-09-22 10:27:24
End at: 2017-09-22 10:27:54


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 121.80 Mbit/s
95th percentile per-packet one-way delay: 50.591 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.71 Mbit/s
95th percentile per-packet one-way delay: 50.637 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 64.00 Mbit/s
95th percentile per-packet one-way delay: 50.324 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 60.02 Mbit/s
95th percentile per-packet one-way delay: 49.614 ms
Loss rate: 0.00%
```
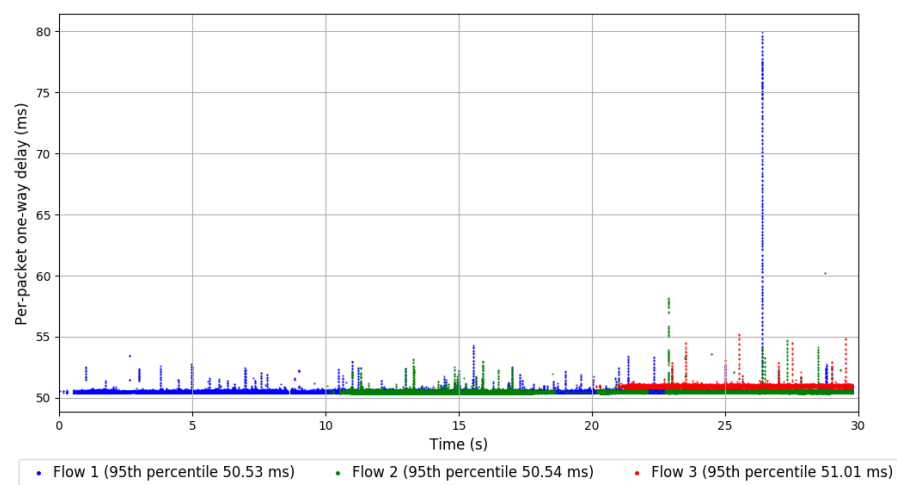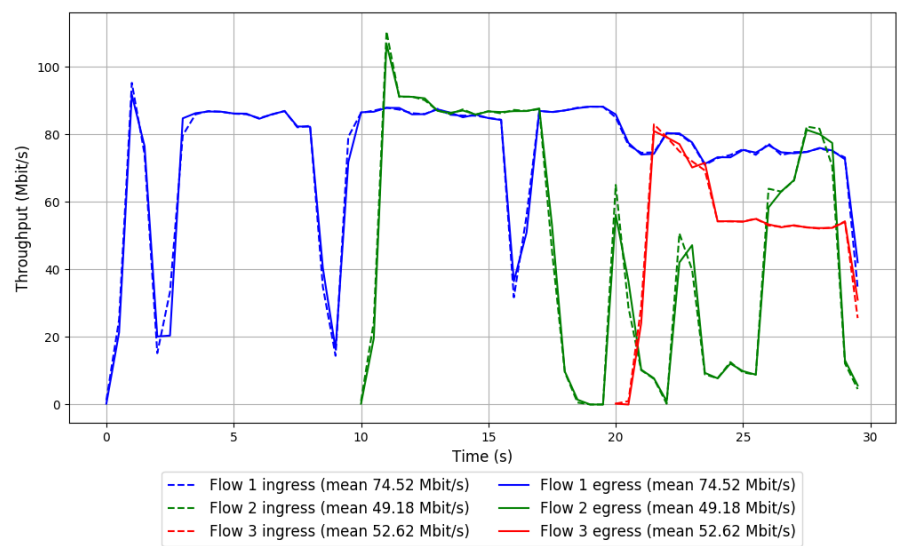
Run 6: Report of QUIC Cubic — Data Link

```
Run 7: Statistics of QUIC Cubic

Start at: 2017-09-22 10:39:45
End at: 2017-09-22 10:40:15


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 114.06 Mbit/s
95th percentile per-packet one-way delay: 50.622 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.12 Mbit/s
95th percentile per-packet one-way delay: 50.658 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 60.89 Mbit/s
95th percentile per-packet one-way delay: 49.532 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 56.82 Mbit/s
95th percentile per-packet one-way delay: 49.963 ms
Loss rate: 0.00%
```
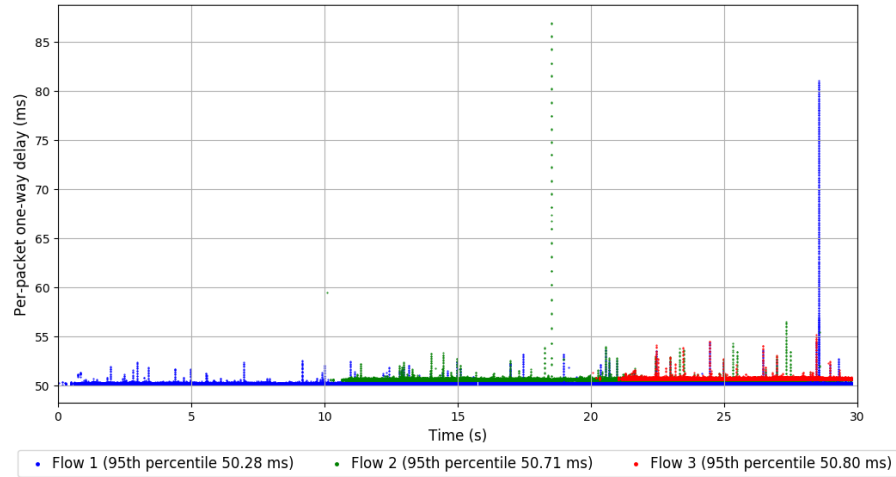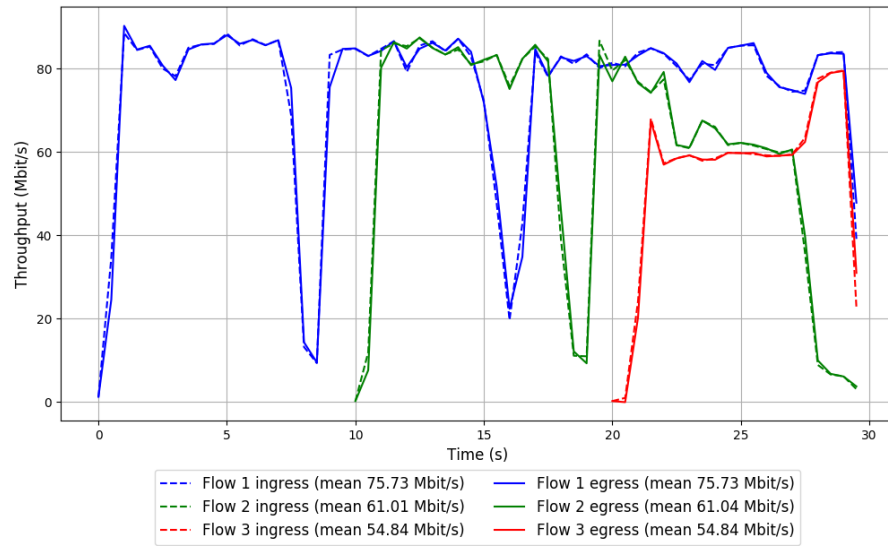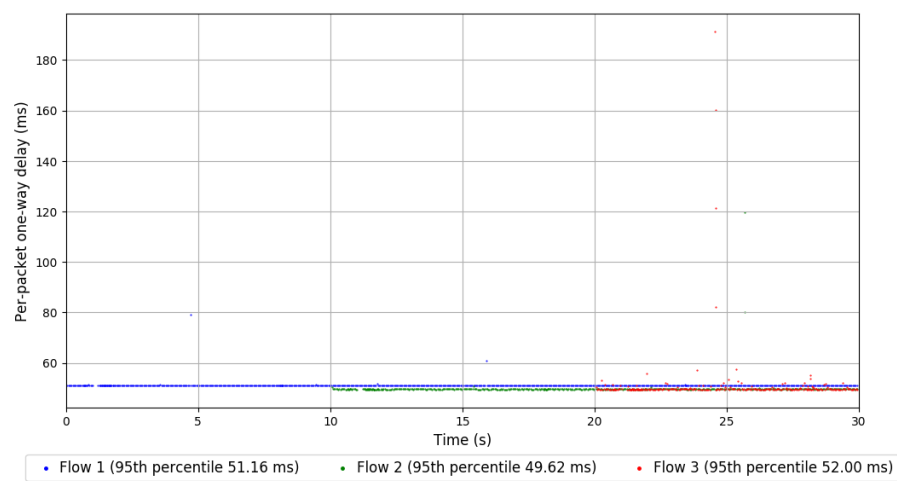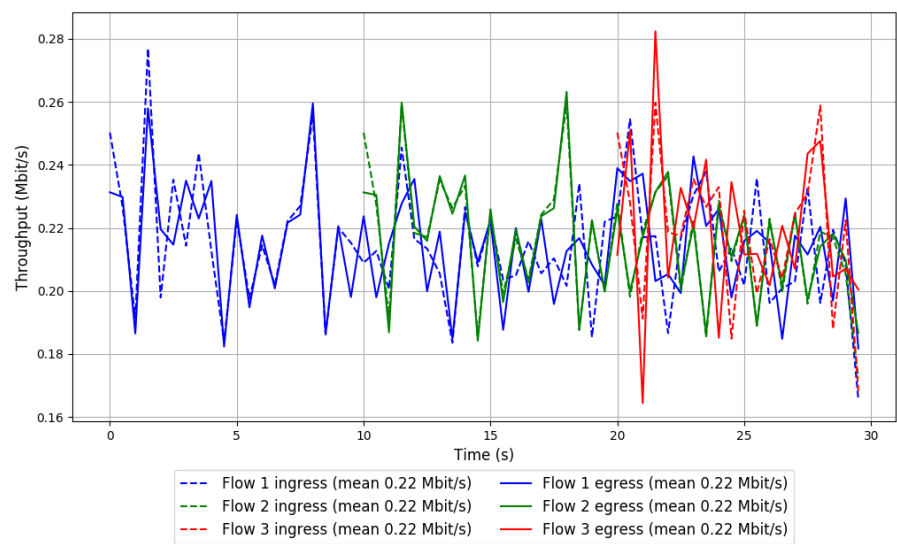
Run 7: Report of QUIC Cubic — Data Link

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```
Run 8: Statistics of QUIC Cubic

Start at: 2017-09-22 10:52:09
End at: 2017-09-22 10:52:39

# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.60 Mbit/s
95th percentile per-packet one-way delay: 51.468 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.47 Mbit/s
95th percentile per-packet one-way delay: 50.999 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 64.16 Mbit/s
95th percentile per-packet one-way delay: 49.528 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 56.77 Mbit/s
95th percentile per-packet one-way delay: 51.558 ms
Loss rate: 0.02%
```
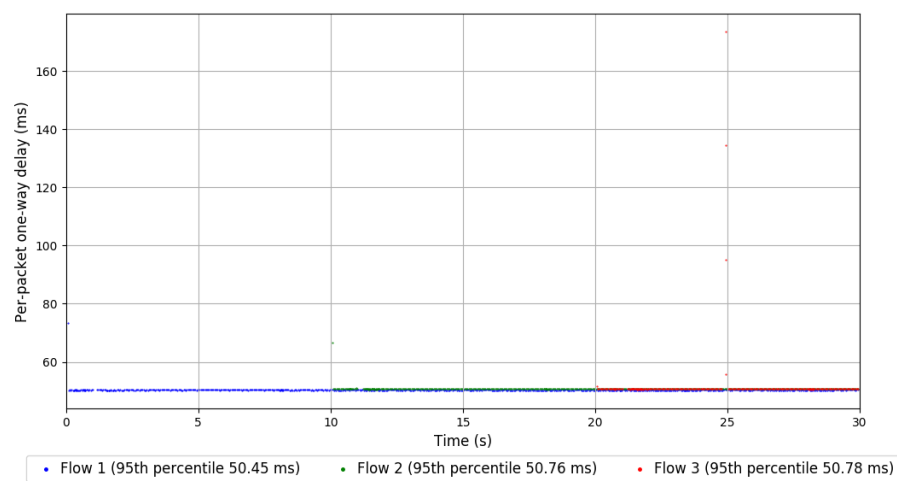
Run 8: Report of QUIC Cubic — Data Link
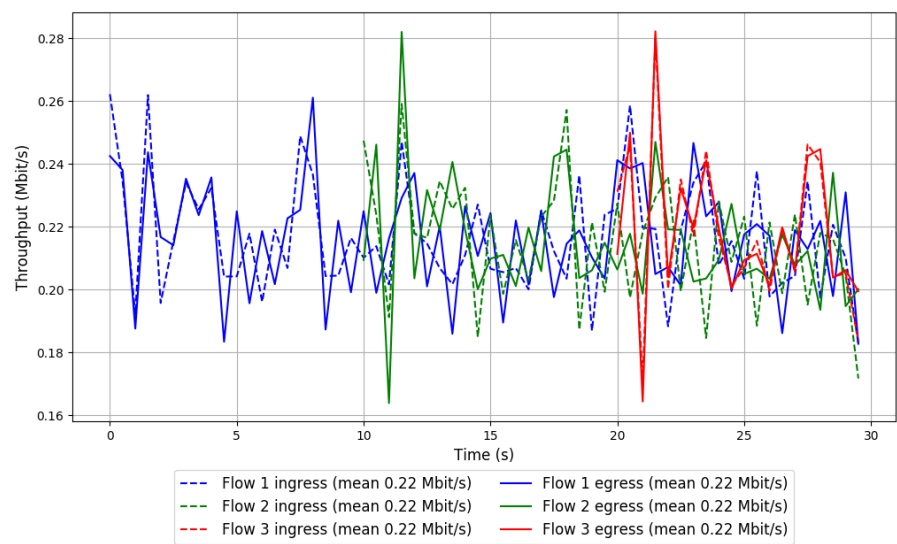
```
Run 9: Statistics of QUIC Cubic

Start at: 2017-09-22 11:04:22
End at: 2017-09-22 11:04:52


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 124.34 Mbit/s
95th percentile per-packet one-way delay: 50.920 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.52 Mbit/s
95th percentile per-packet one-way delay: 50.535 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.18 Mbit/s
95th percentile per-packet one-way delay: 50.537 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 52.62 Mbit/s
95th percentile per-packet one-way delay: 51.006 ms
Loss rate: 0.00%
```

Run 9: Report of QUIC Cubic — Data Link

```
Run 10: Statistics of QUIC Cubic

Start at: 2017-09-22 11:16:44
End at: 2017-09-22 11:17:14


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.03 Mbit/s
95th percentile per-packet one-way delay: 50.718 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 75.73 Mbit/s
95th percentile per-packet one-way delay: 50.276 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.04 Mbit/s
95th percentile per-packet one-way delay: 50.708 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 54.84 Mbit/s
95th percentile per-packet one-way delay: 50.796 ms
Loss rate: 0.00%
```
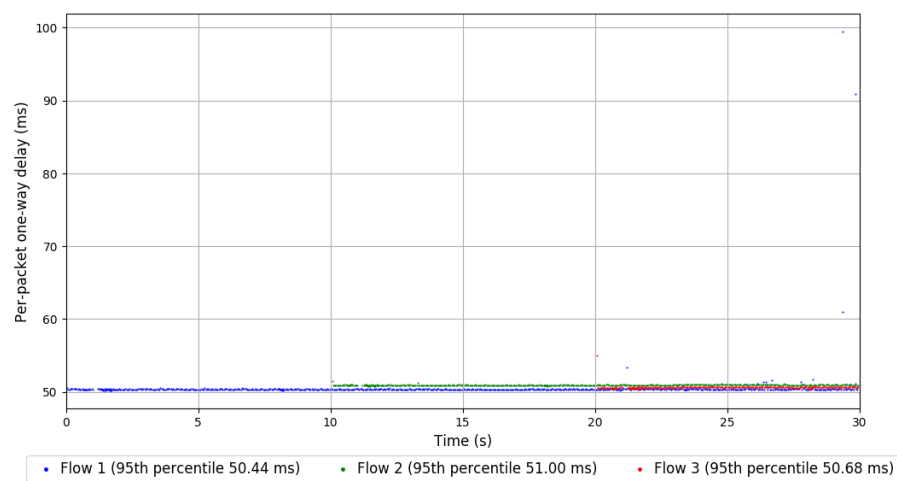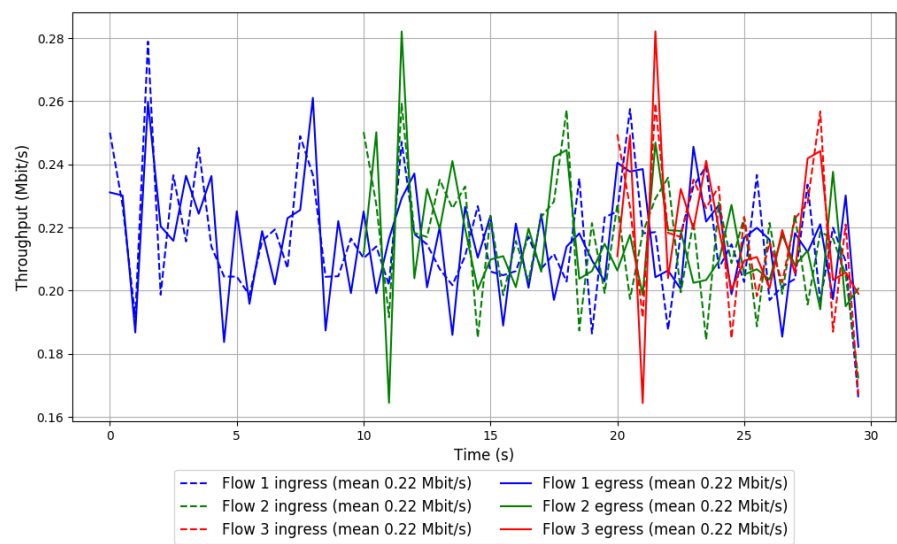
Run 10: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2017-09-22 09:28:31
End at: 2017-09-22 09:29:01

# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.153 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.164 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.615 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.997 ms
Loss rate: 0.00%
```
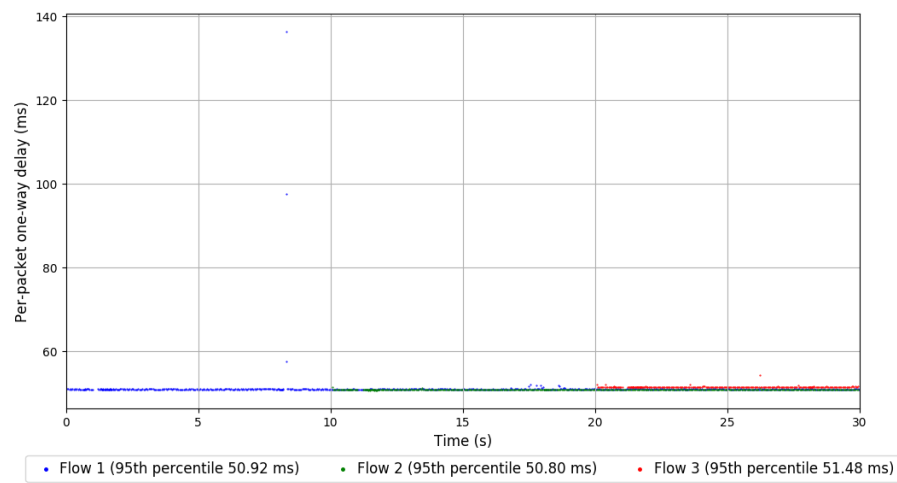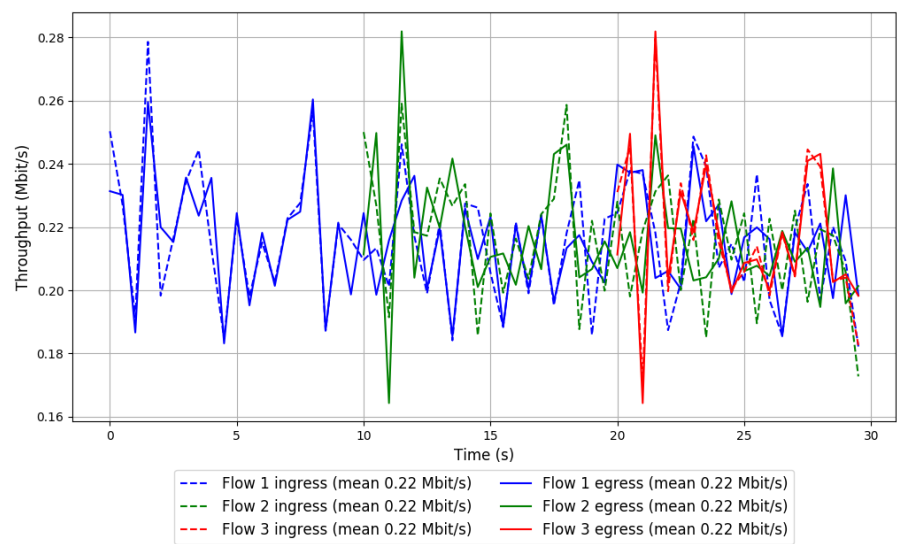
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2017-09-22 09:40:30
End at: 2017-09-22 09:41:00

# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.745 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.447 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.755 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.780 ms
Loss rate: 0.00%
```
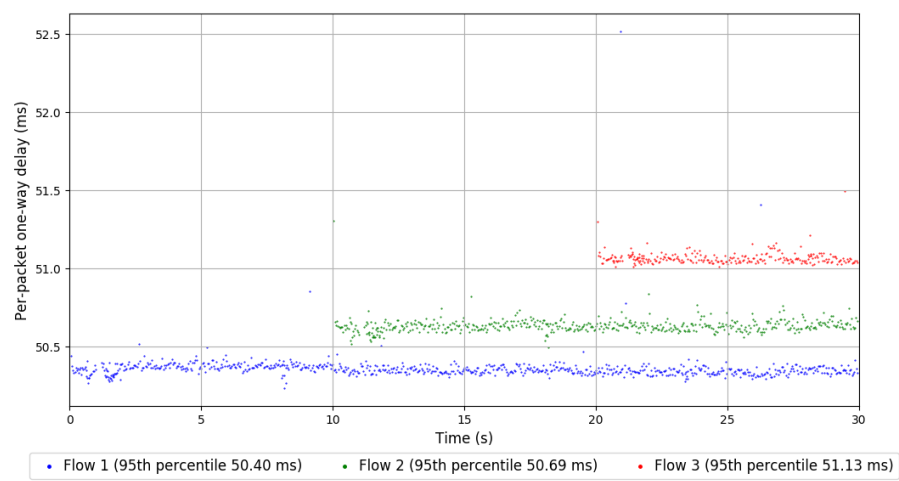
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2017-09-22 09:52:50
End at: 2017-09-22 09:53:20

# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.975 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.437 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.000 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.677 ms
Loss rate: 0.00%
```
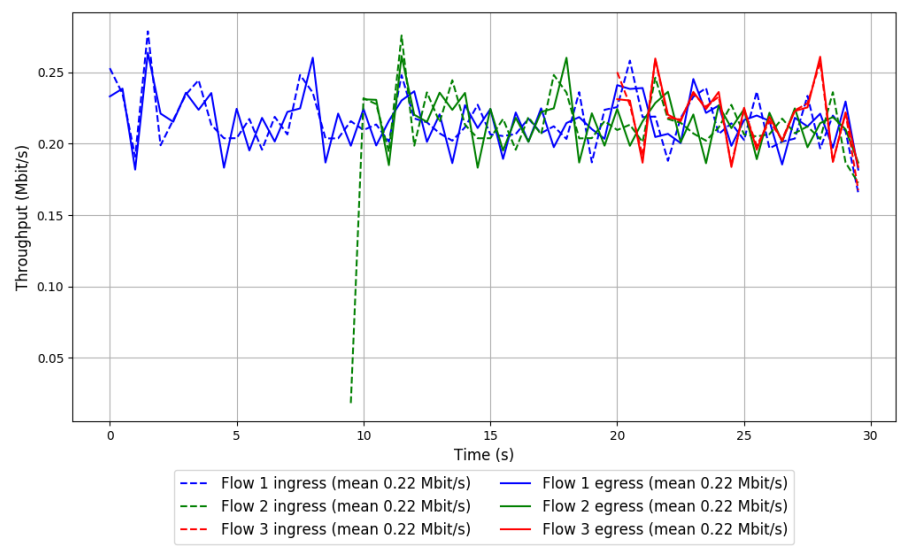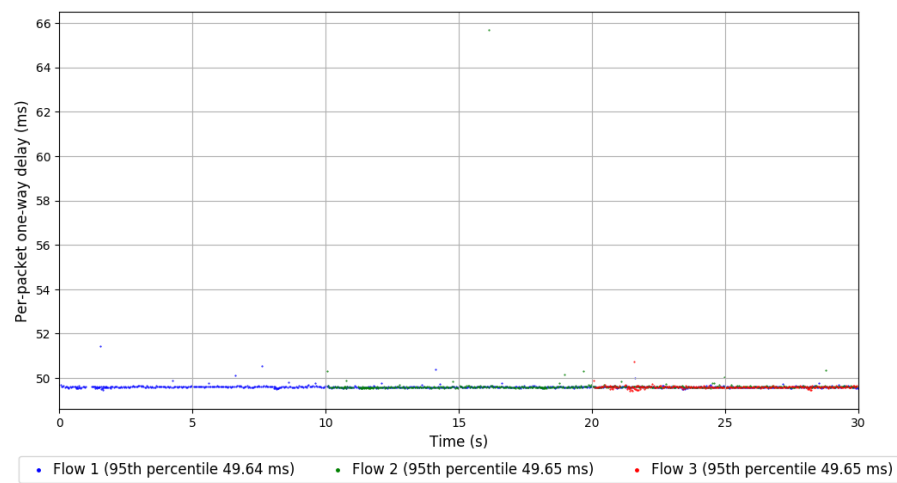
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2017-09-22 10:05:13
End at: 2017-09-22 10:05:43


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.418 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.922 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.795 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.475 ms
Loss rate: 0.00%
```
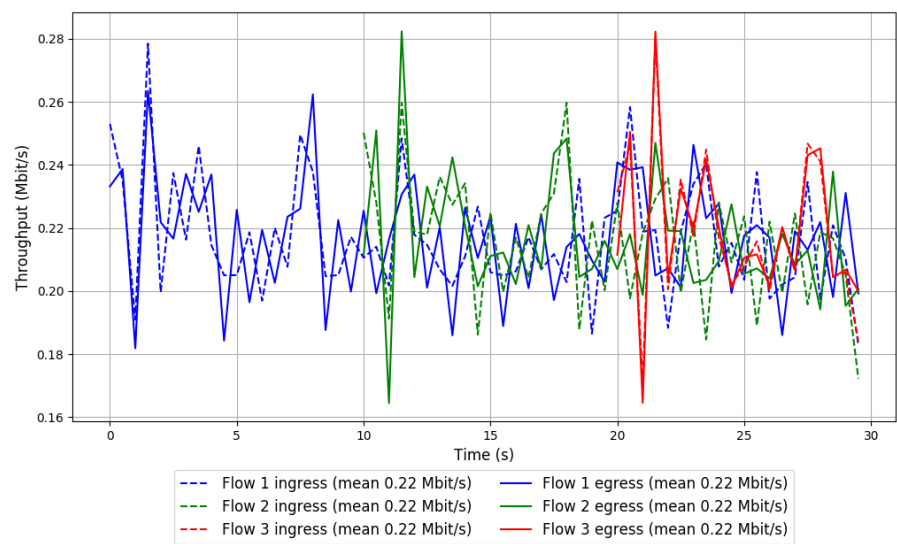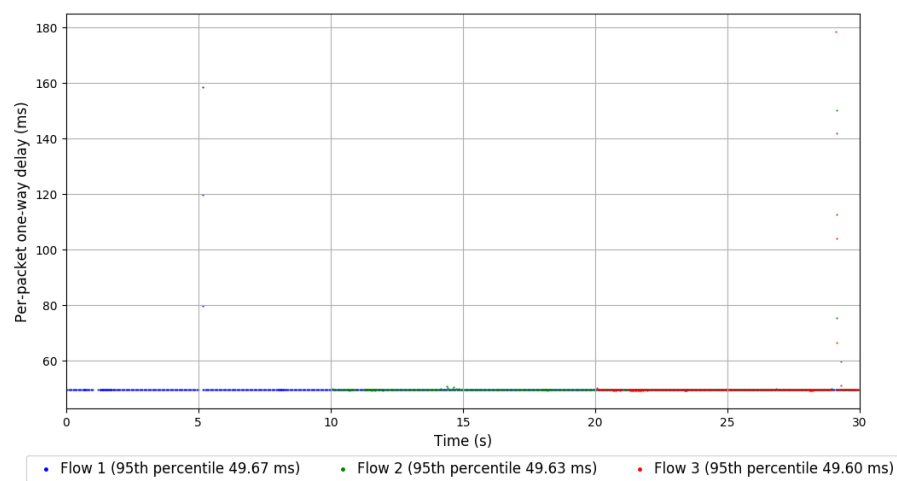
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2017-09-22 10:17:42
End at: 2017-09-22 10:18:12


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.074 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.400 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.693 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.130 ms
Loss rate: 0.00%
```
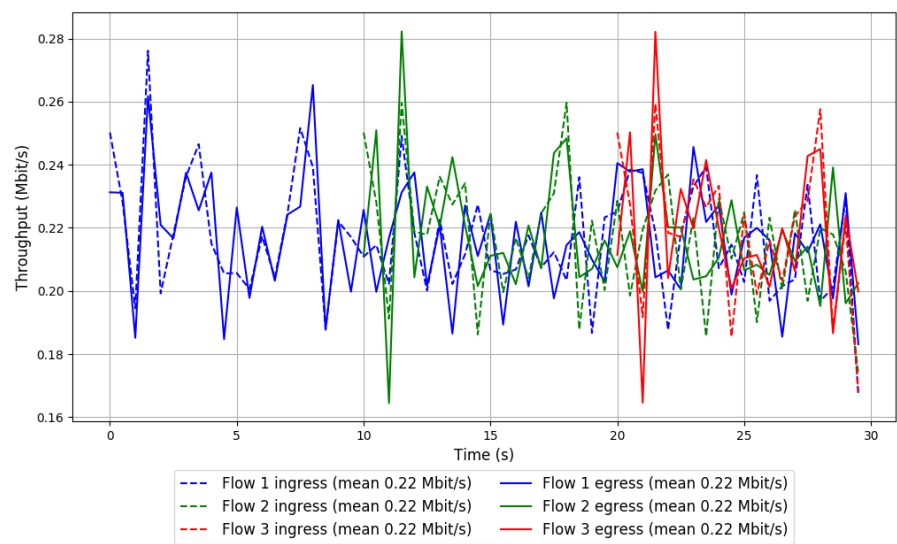
Run 5: Report of SCReAM — Data Link

113

```
Run 6: Statistics of SCReAM

Start at: 2017-09-22 10:30:05
End at: 2017-09-22 10:30:35


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 49.646 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.642 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.649 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.650 ms
Loss rate: 0.00%
```
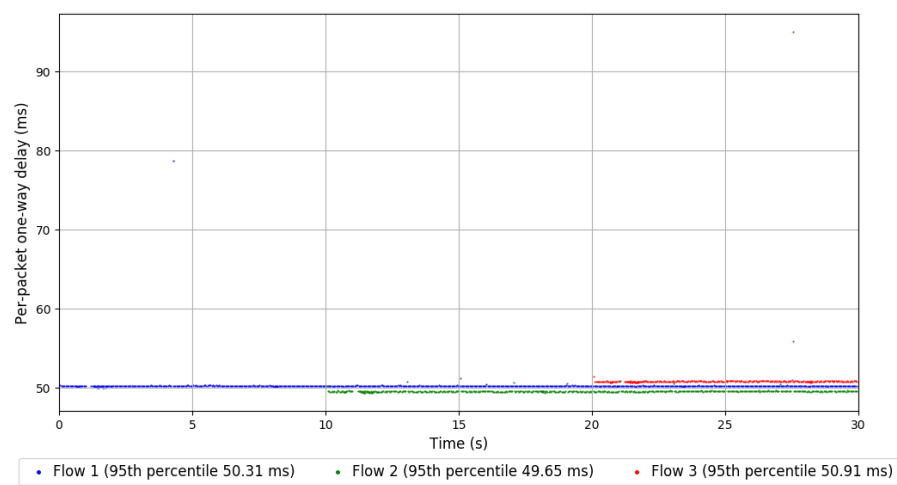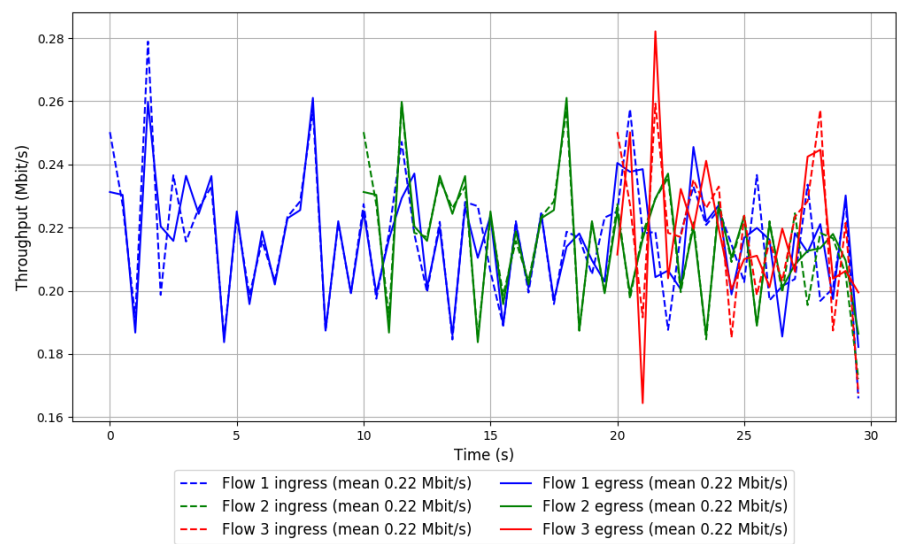
Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2017-09-22 10:42:26
End at: 2017-09-22 10:42:56


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 49.655 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.666 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.633 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.604 ms
Loss rate: 0.00%
```
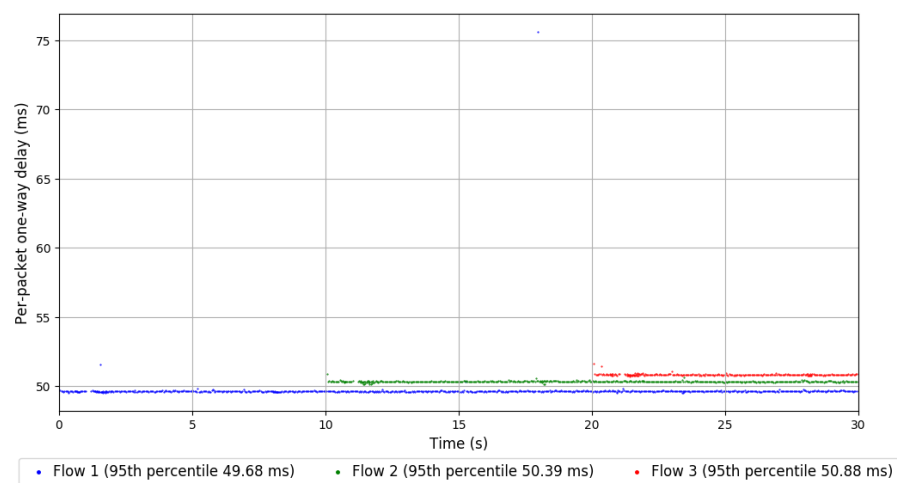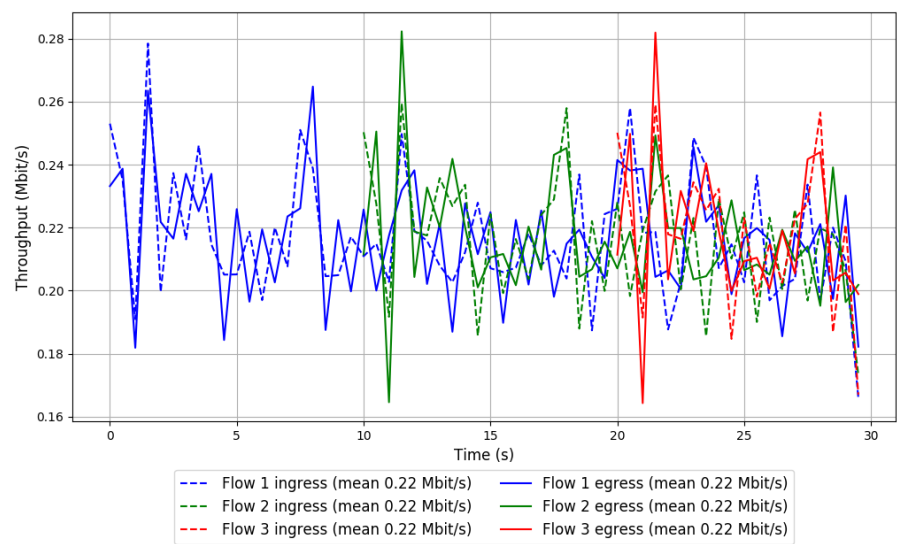
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2017-09-22 10:54:48
End at: 2017-09-22 10:55:18

# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.866 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.315 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.649 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.910 ms
Loss rate: 0.00%
```
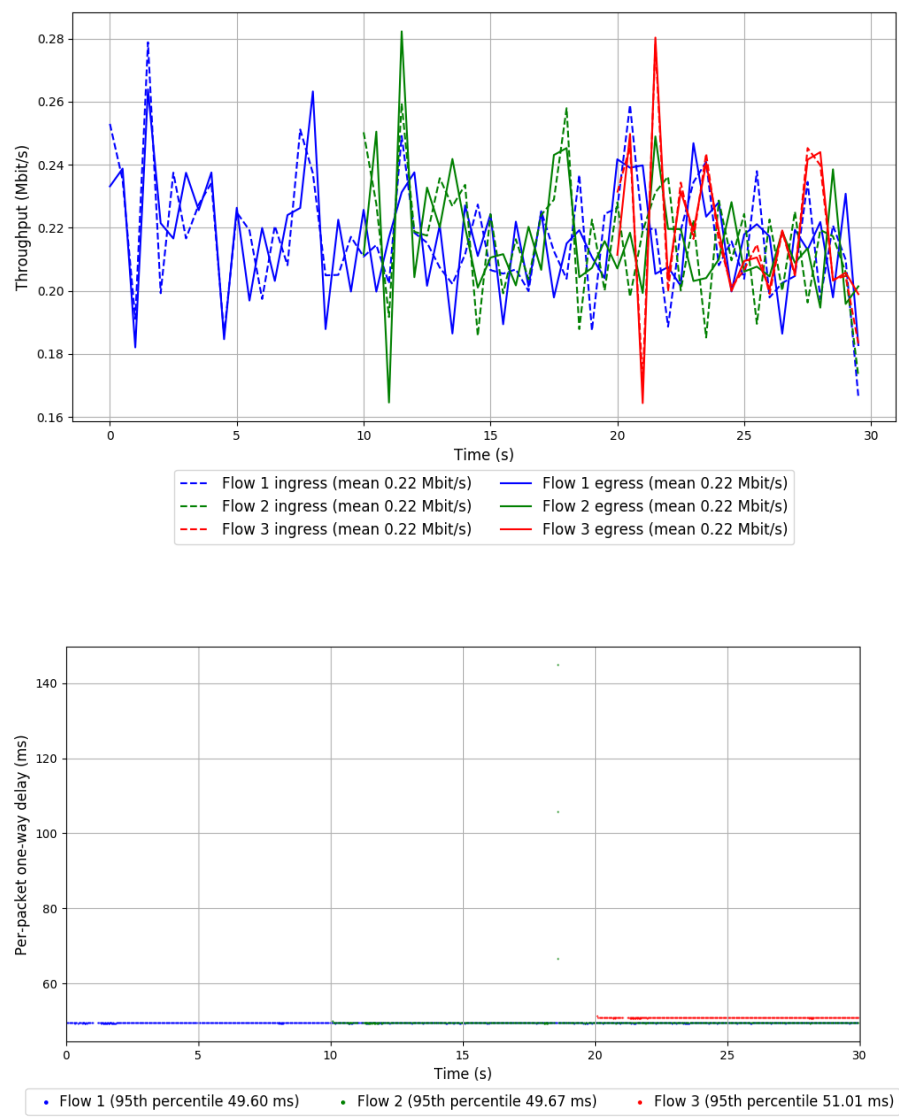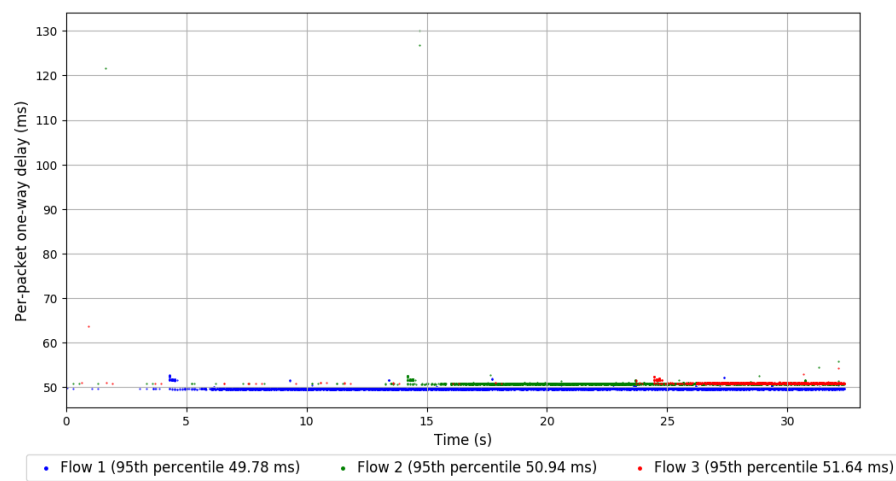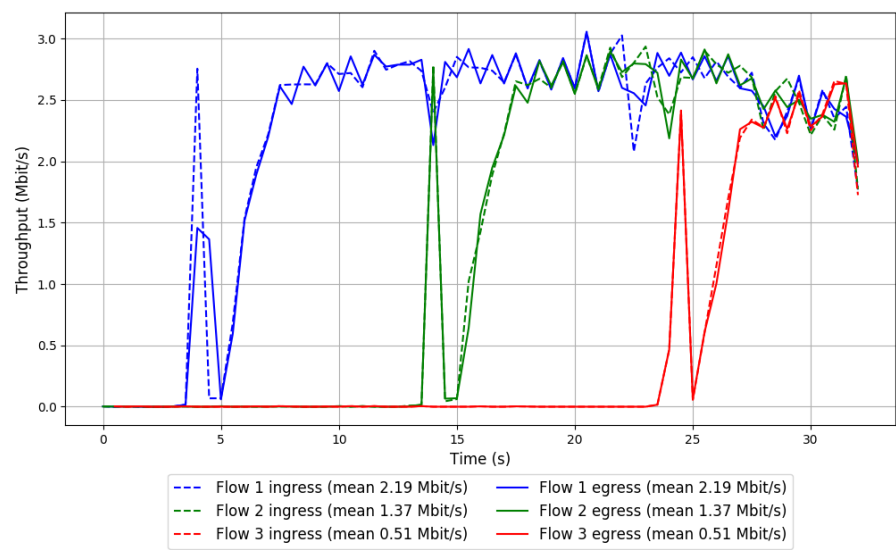
Run 8: Report of SCReAM — Data Link

119

```
Run 9: Statistics of SCReAM

Start at: 2017-09-22 11:07:04
End at: 2017-09-22 11:07:34


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 50.845 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.678 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.387 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.880 ms
Loss rate: 0.00%
```

Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2017-09-22 11:19:27
End at: 2017-09-22 11:19:57


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 50.975 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.602 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.669 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.009 ms
Loss rate: 0.00%
```
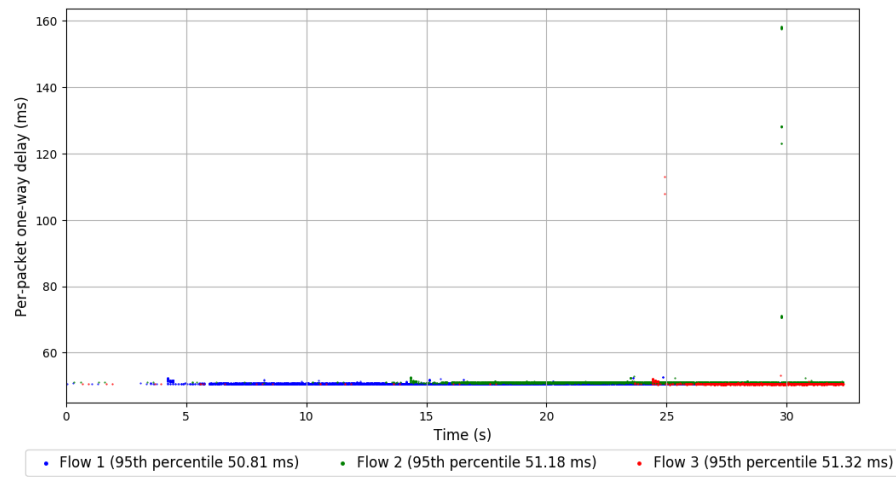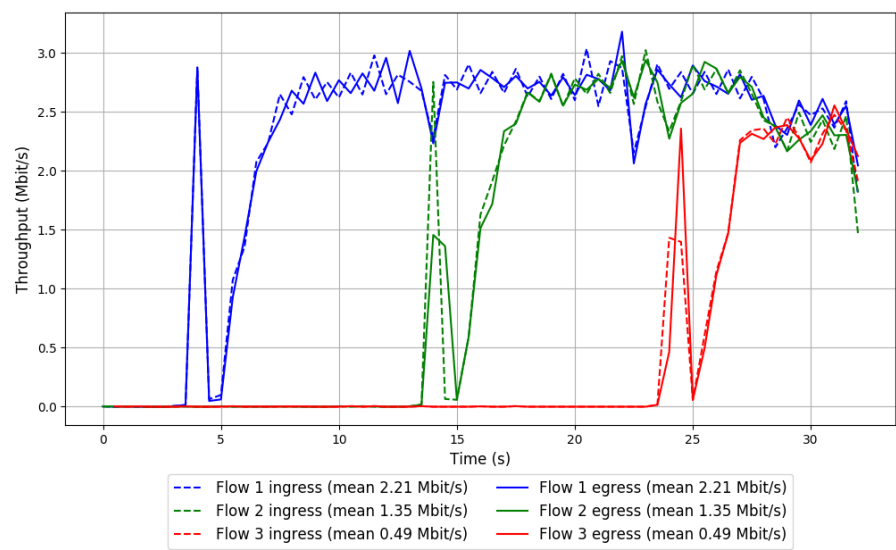
Run 10: Report of SCReAM — Data Link

123

```
Run 1: Statistics of WebRTC media

Start at: 2017-09-22 09:34:39
End at: 2017-09-22 09:35:09

# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 50.981 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 49.785 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 50.940 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 51.639 ms
Loss rate: 0.00%
```
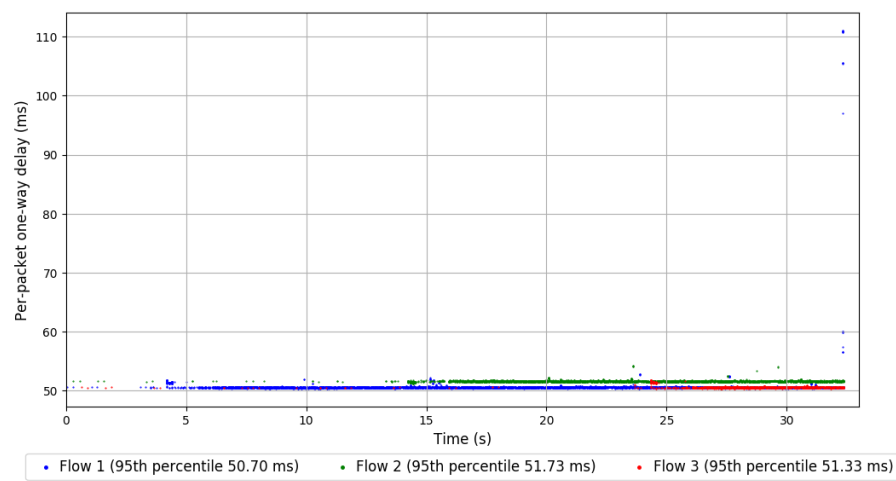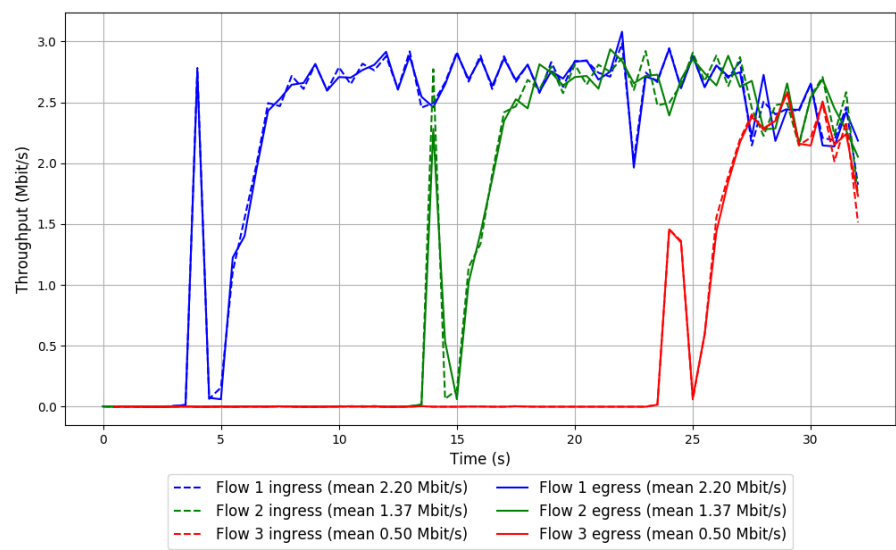
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-09-22 09:47:01
End at: 2017-09-22 09:47:31


# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 51.118 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 50.807 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 51.180 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 51.320 ms
Loss rate: 0.00%
```
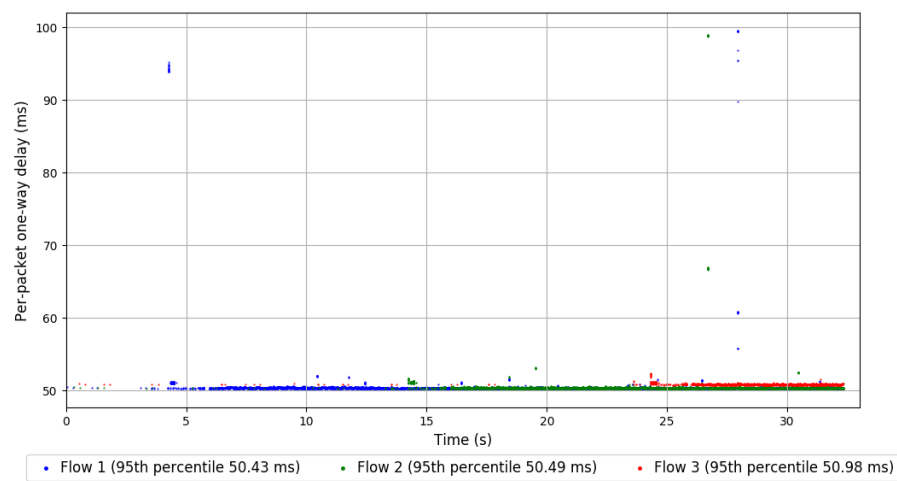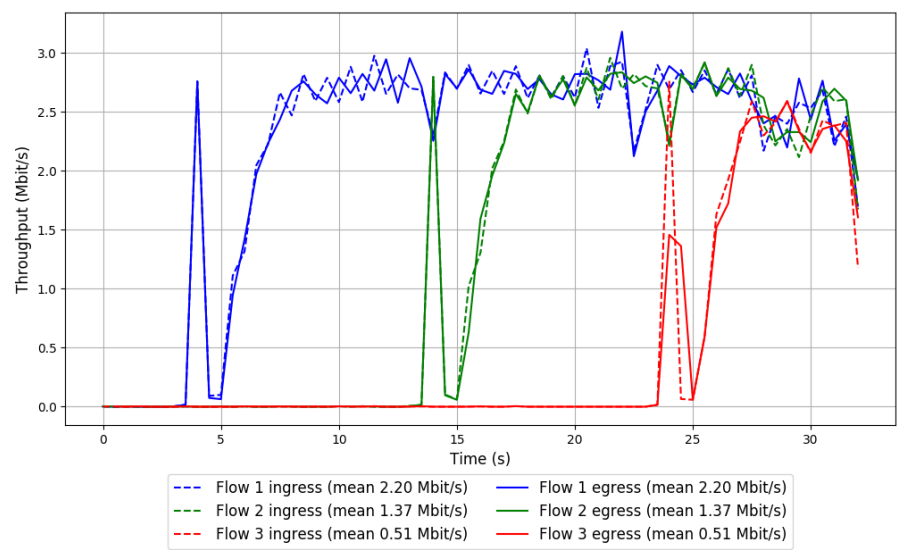
Run 2: Report of WebRTC media — Data Link

127

```
Run 3: Statistics of WebRTC media

Start at: 2017-09-22 09:59:21
End at: 2017-09-22 09:59:51

# Below is generated by plot.py at 2017-09-22 13:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 51.683 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 50.700 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 51.728 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 51.329 ms
Loss rate: 0.00%
```
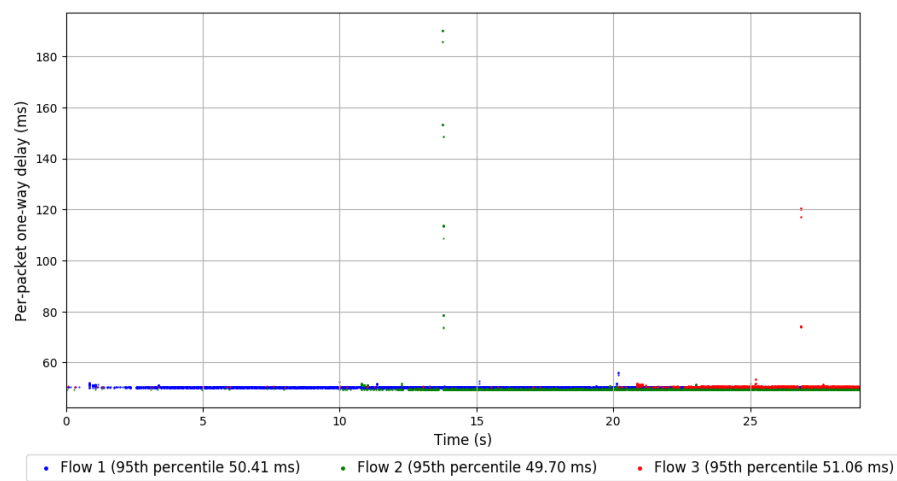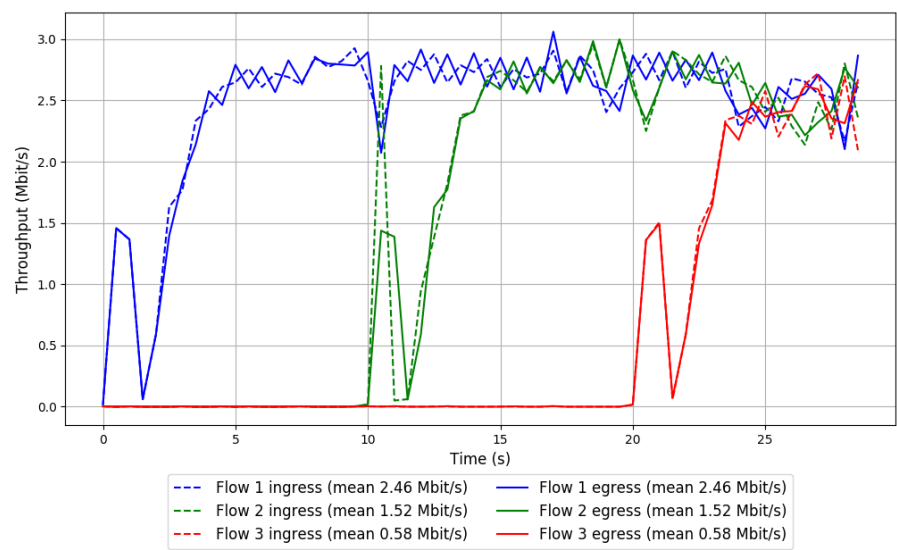
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2017-09-22 10:11:53
End at: 2017-09-22 10:12:23


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 50.856 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 50.427 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 50.492 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 50.976 ms
Loss rate: 0.00%
```
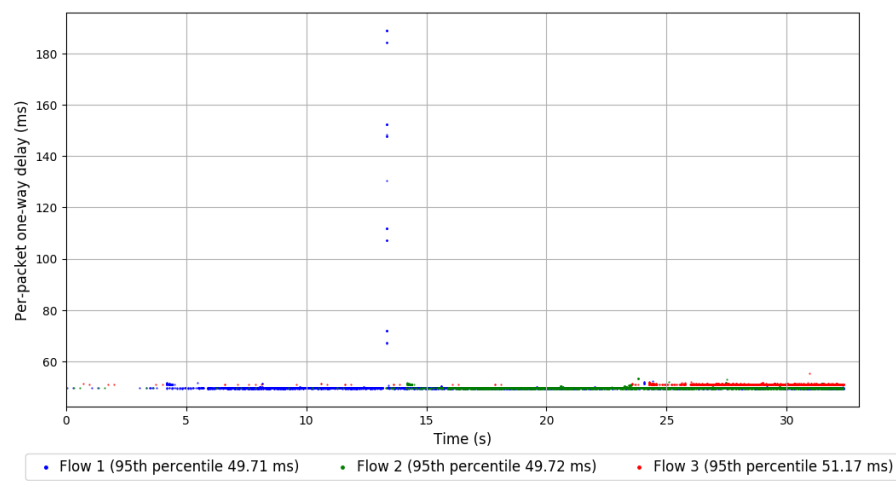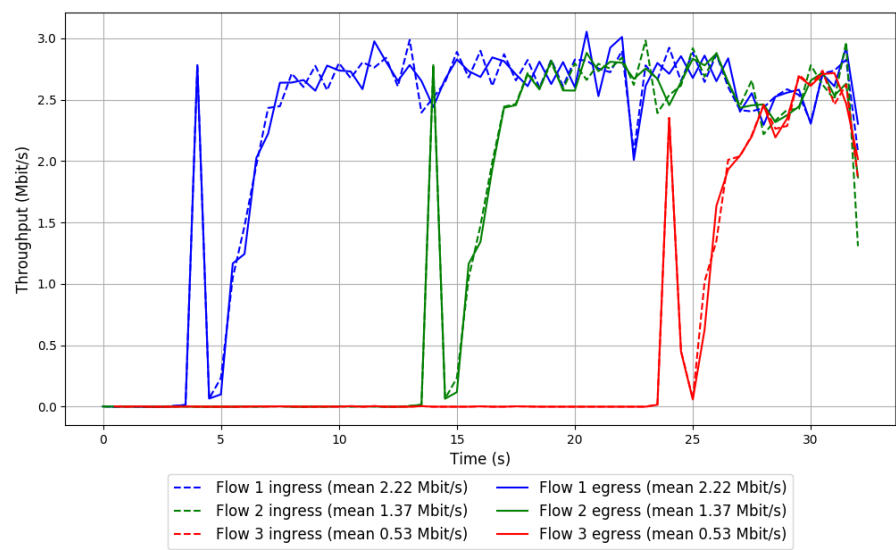
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2017-09-22 10:24:21
End at: 2017-09-22 10:24:51


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.56 Mbit/s
95th percentile per-packet one-way delay: 50.641 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.46 Mbit/s
95th percentile per-packet one-way delay: 50.408 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 49.703 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 51.061 ms
Loss rate: 0.00%
```
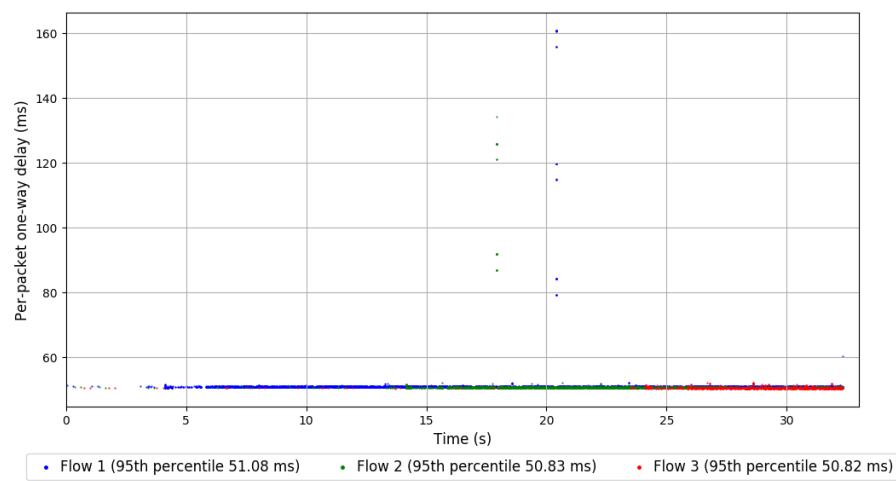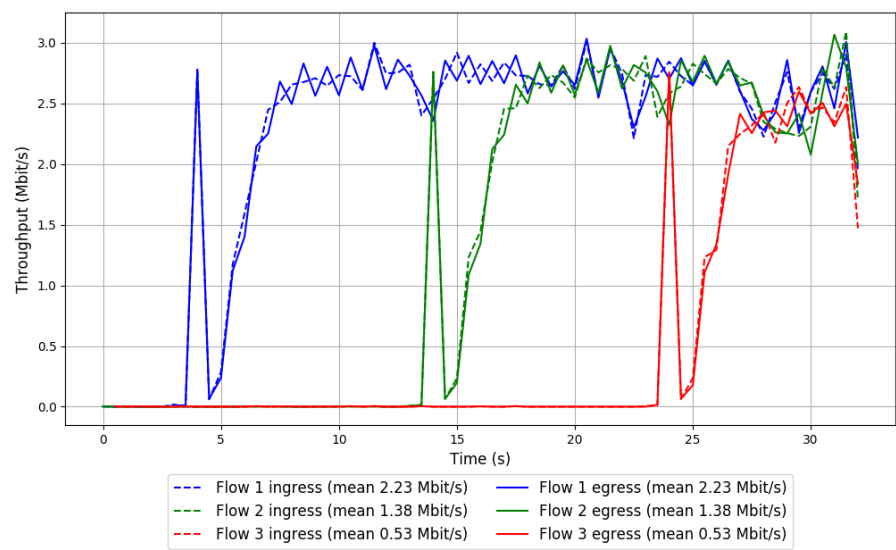
Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2017-09-22 10:36:36
End at: 2017-09-22 10:37:06

# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 51.079 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 49.713 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 49.719 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 51.171 ms
Loss rate: 0.00%
```

Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-09-22 10:49:03
End at: 2017-09-22 10:49:33


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 51.063 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 51.082 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 50.826 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 50.818 ms
Loss rate: 0.00%
```
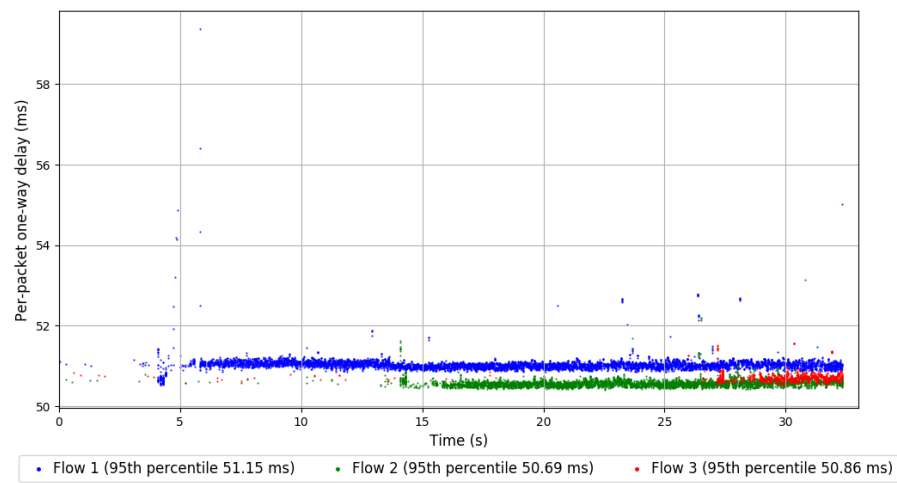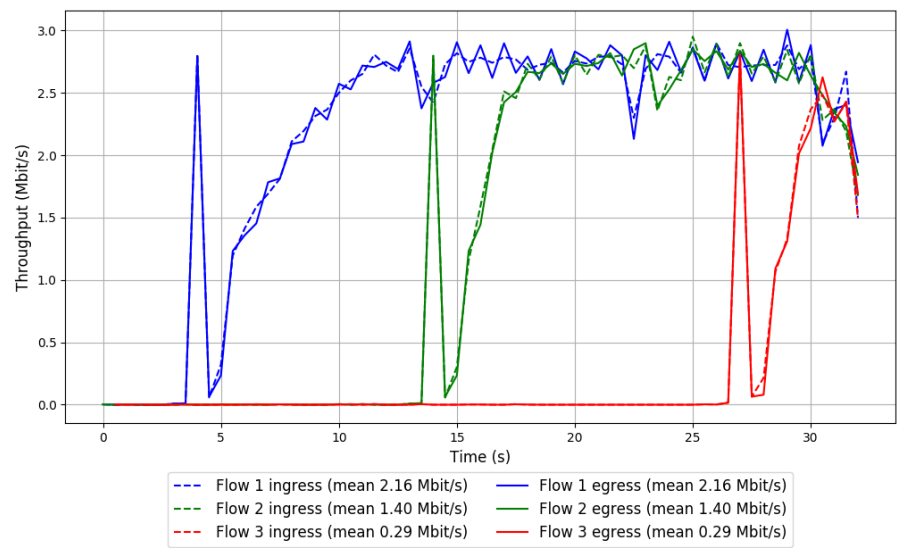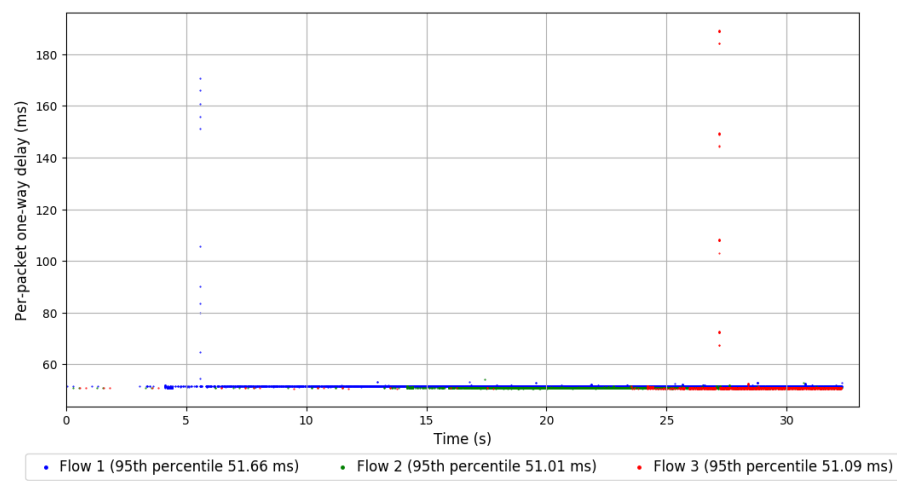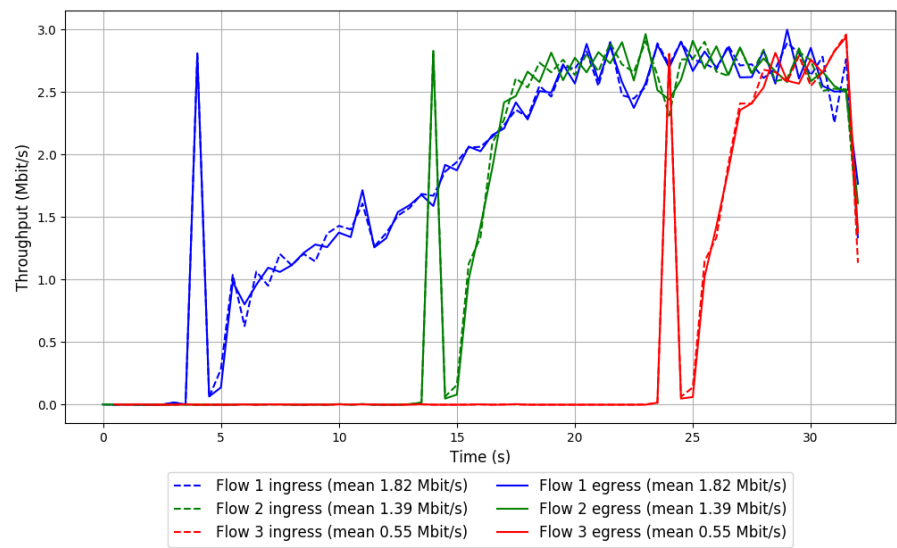
Run 7: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.23 Mbit/s)   Flow 1 egress (mean 2.23 Mbit/s)
Flow 2 ingress (mean 1.38 Mbit/s)   Flow 2 egress (mean 1.38 Mbit/s)
Flow 3 ingress (mean 0.53 Mbit/s)   Flow 3 egress (mean 0.53 Mbit/s)

Flow 1 (95th percentile 51.08 ms)   Flow 2 (95th percentile 50.83 ms)   Flow 3 (95th percentile 50.82 ms)

```
Run 8: Statistics of WebRTC media

Start at: 2017-09-22 11:01:18
End at: 2017-09-22 11:01:48


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 51.130 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 51.151 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 50.693 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 50.860 ms
Loss rate: 0.01%
```
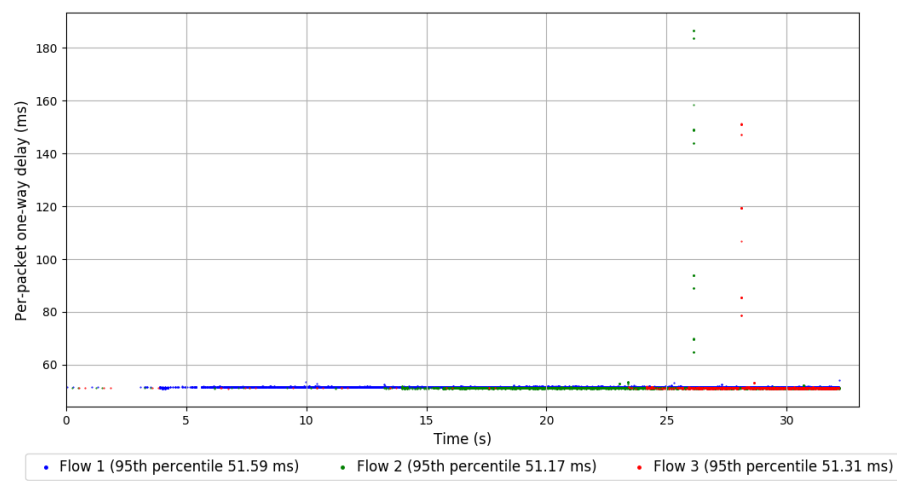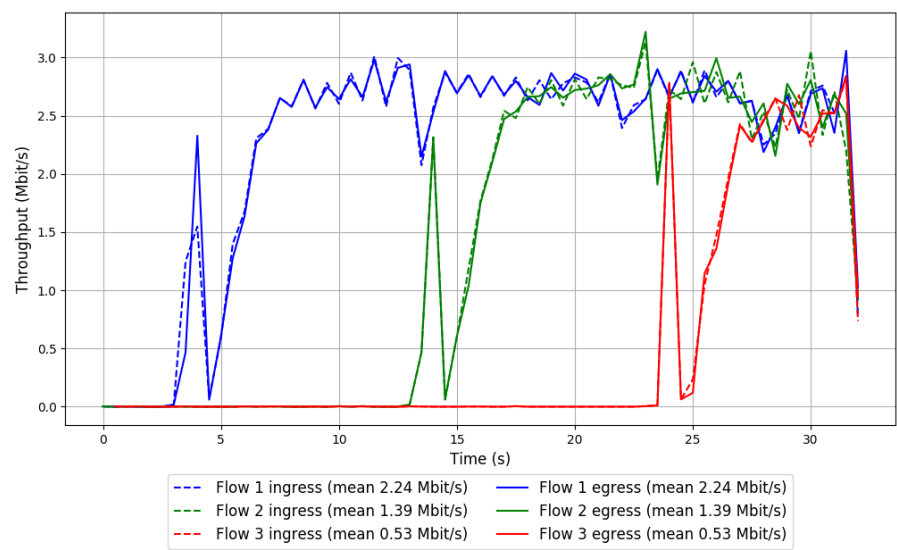
Run 8: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.16 Mbit/s)   Flow 1 egress (mean 2.16 Mbit/s)
Flow 2 ingress (mean 1.40 Mbit/s)   Flow 2 egress (mean 1.40 Mbit/s)
Flow 3 ingress (mean 0.29 Mbit/s)   Flow 3 egress (mean 0.29 Mbit/s)

Flow 1 (95th percentile 51.15 ms)   Flow 2 (95th percentile 50.69 ms)   Flow 3 (95th percentile 50.86 ms)

```
Run 9: Statistics of WebRTC media

Start at: 2017-09-22 11:13:41
End at: 2017-09-22 11:14:11


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.75 Mbit/s
95th percentile per-packet one-way delay: 51.627 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 51.658 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 51.008 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 51.089 ms
Loss rate: 0.00%
```
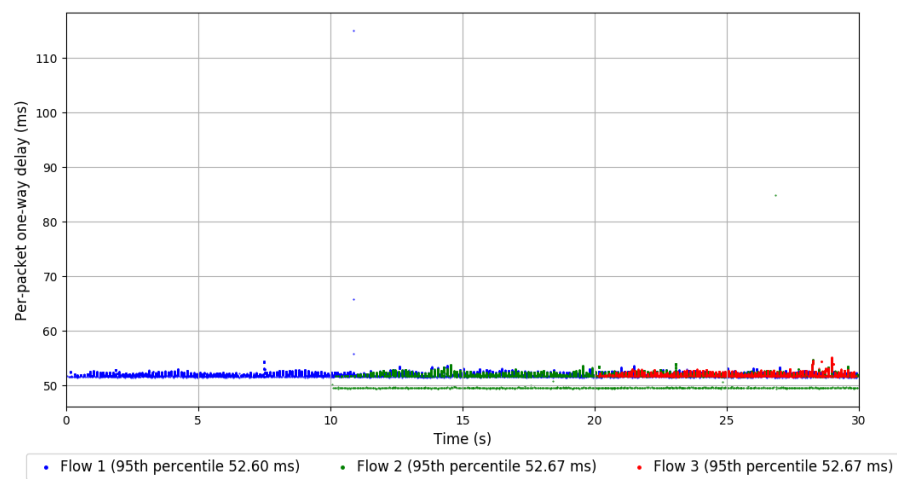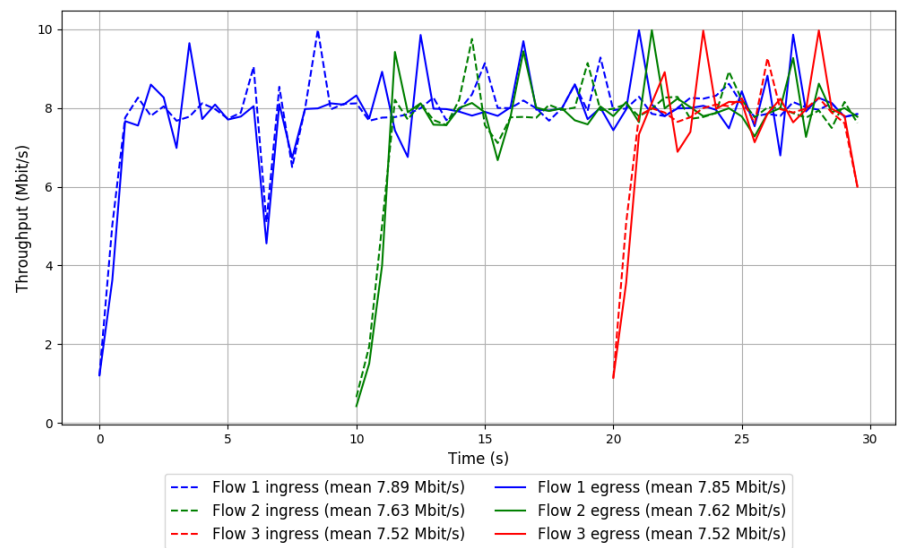
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-09-22 11:25:55
End at: 2017-09-22 11:26:25


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 51.577 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 51.592 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 51.169 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 51.311 ms
Loss rate: 0.00%
```
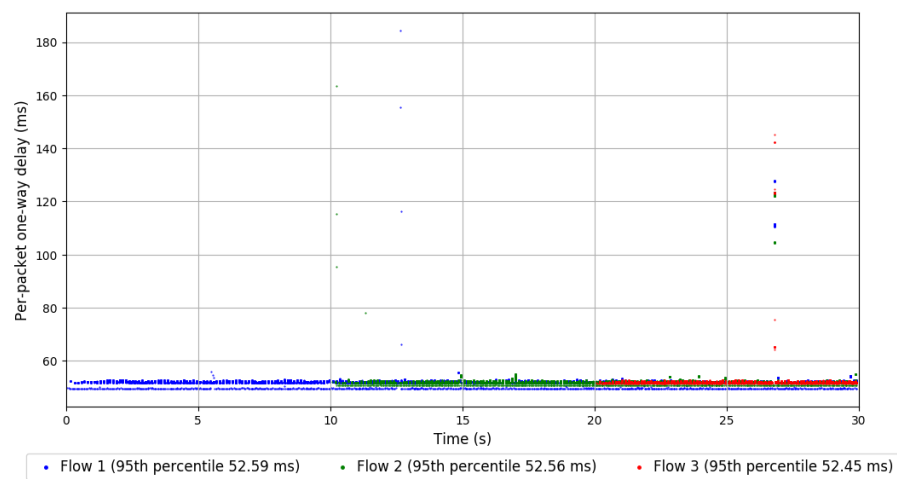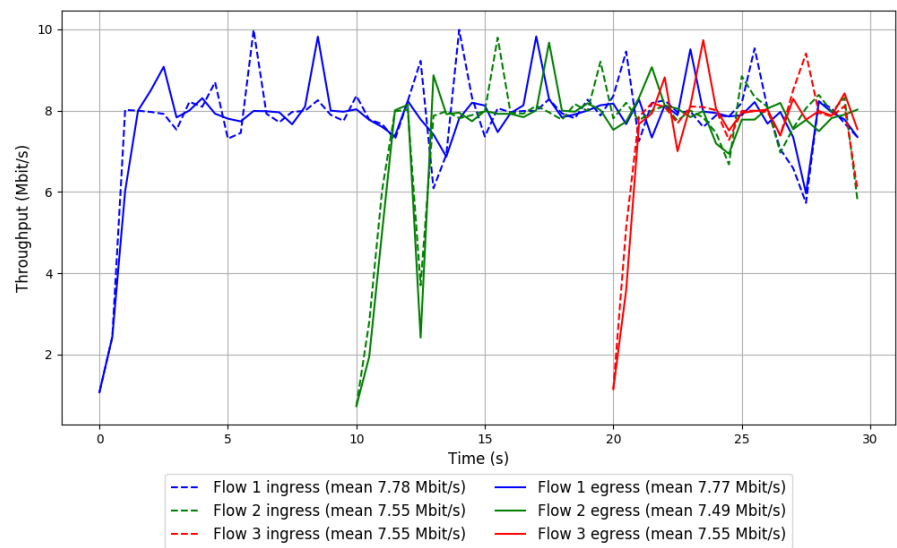
Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2017-09-22 09:23:24
End at: 2017-09-22 09:23:54


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.39 Mbit/s
95th percentile per-packet one-way delay: 52.636 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 52.599 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 52.667 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 52.666 ms
Loss rate: 0.00%
```
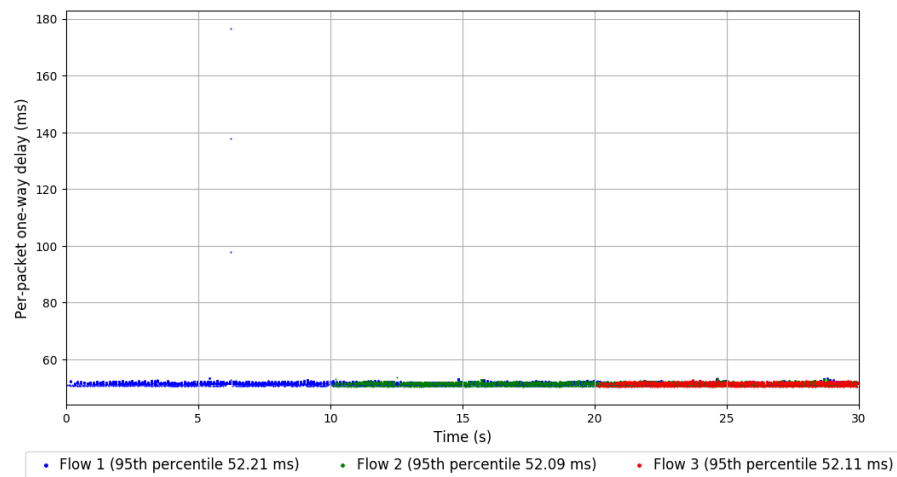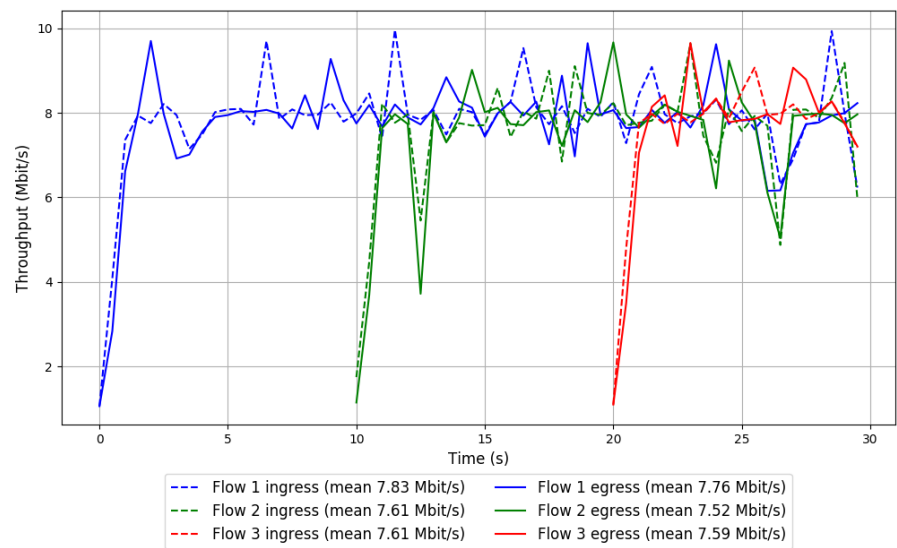
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-09-22 09:35:18
End at: 2017-09-22 09:35:48


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.23 Mbit/s
95th percentile per-packet one-way delay: 52.558 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 52.595 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 7.49 Mbit/s
95th percentile per-packet one-way delay: 52.562 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 7.55 Mbit/s
95th percentile per-packet one-way delay: 52.451 ms
Loss rate: 0.00%
```
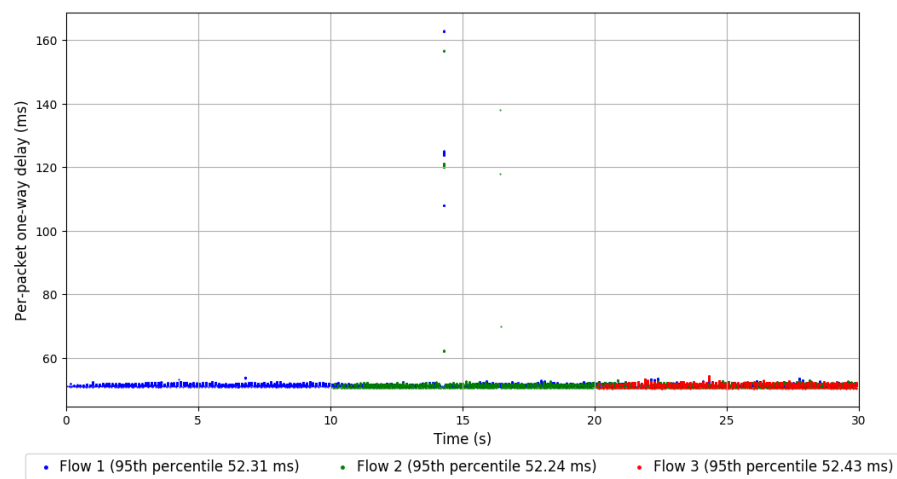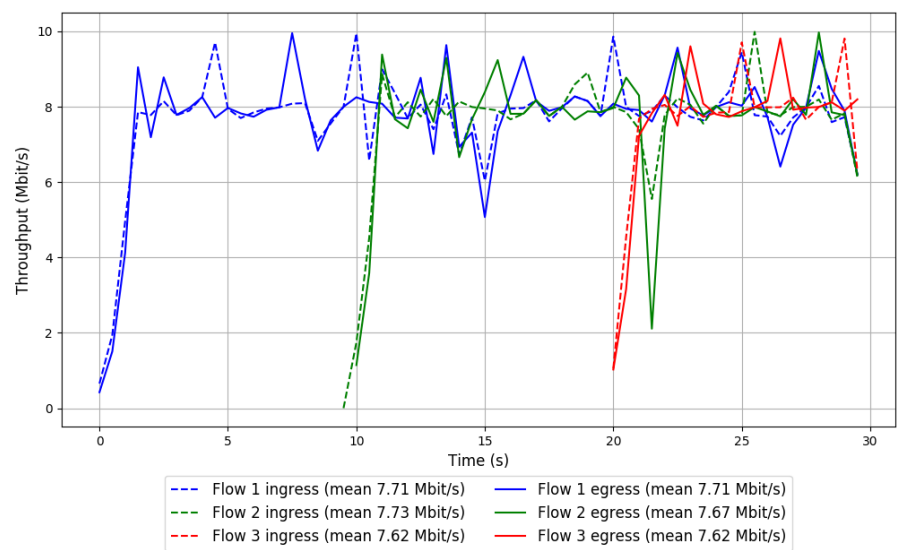
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-09-22 09:47:41
End at: 2017-09-22 09:48:11


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.25 Mbit/s
95th percentile per-packet one-way delay: 52.162 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 52.212 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 52.094 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 7.59 Mbit/s
95th percentile per-packet one-way delay: 52.111 ms
Loss rate: 0.25%
```
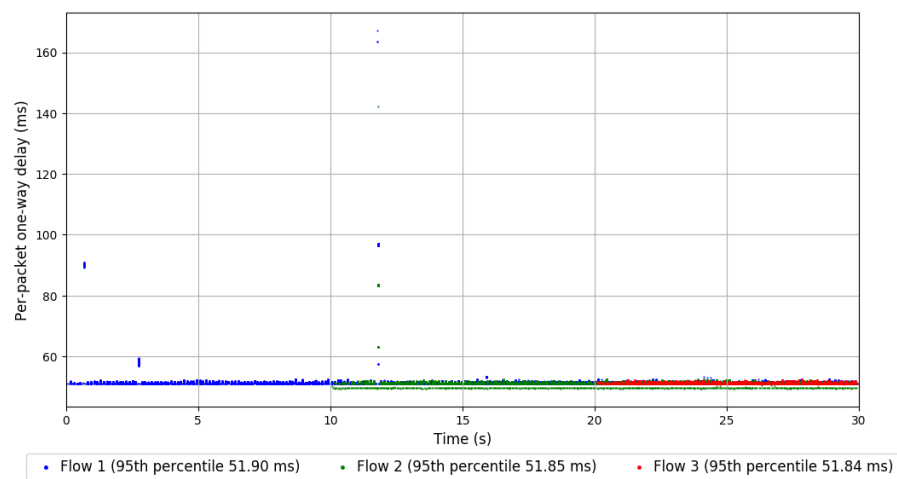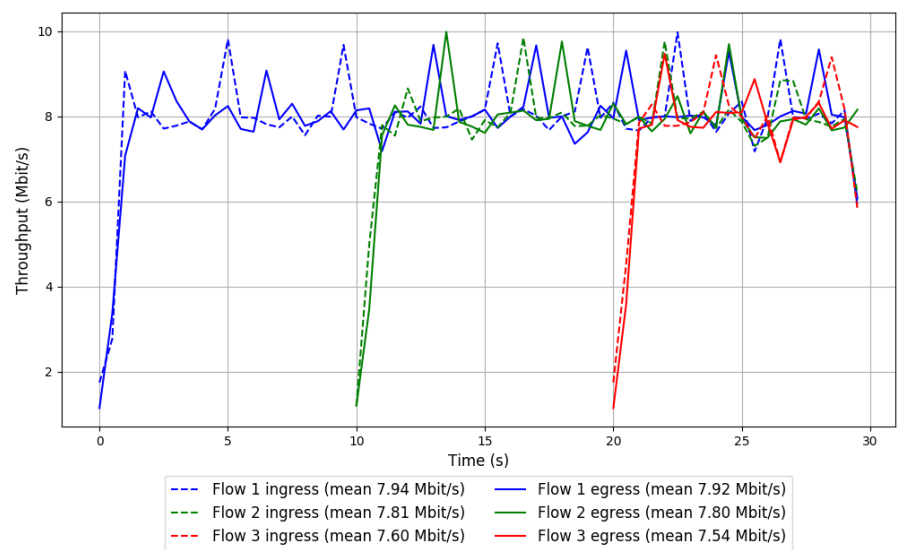
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2017-09-22 10:00:01
End at: 2017-09-22 10:00:31

# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.31 Mbit/s
95th percentile per-packet one-way delay: 52.314 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 7.71 Mbit/s
95th percentile per-packet one-way delay: 52.314 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 52.236 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 52.430 ms
Loss rate: 0.02%
```
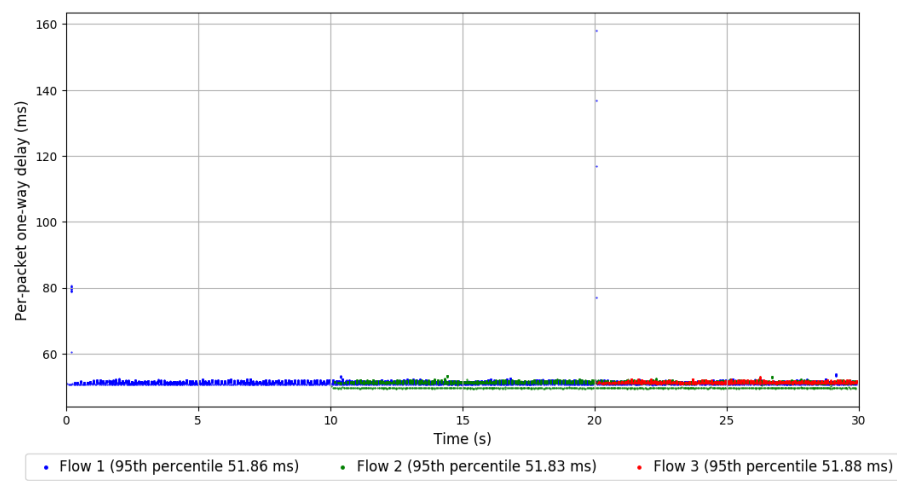
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2017-09-22 10:12:34
End at: 2017-09-22 10:13:04


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.59 Mbit/s
95th percentile per-packet one-way delay: 51.870 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 51.900 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 51.851 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 51.837 ms
Loss rate: 0.70%
```
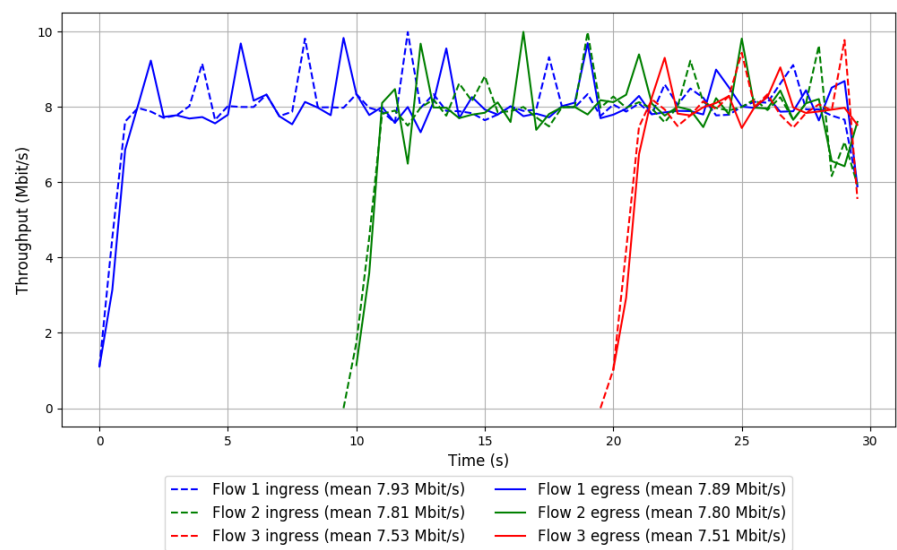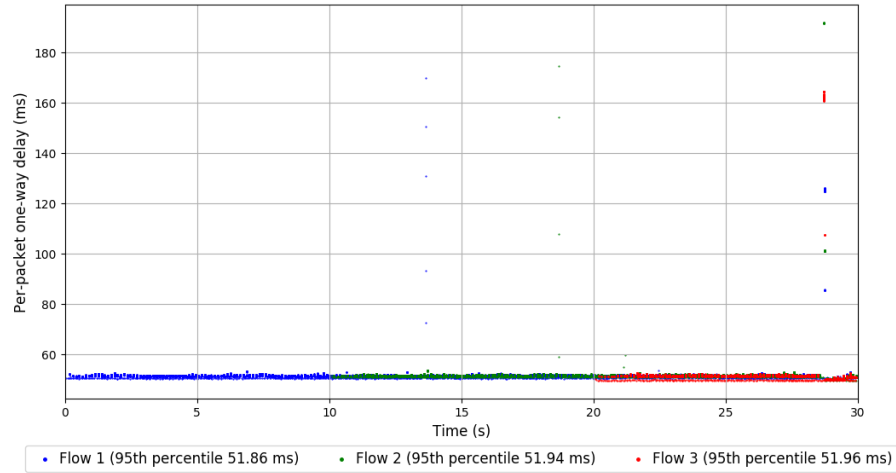
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2017-09-22 10:25:01
End at: 2017-09-22 10:25:31


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.55 Mbit/s
95th percentile per-packet one-way delay: 51.847 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 51.856 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 51.826 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 51.883 ms
Loss rate: 0.34%
```
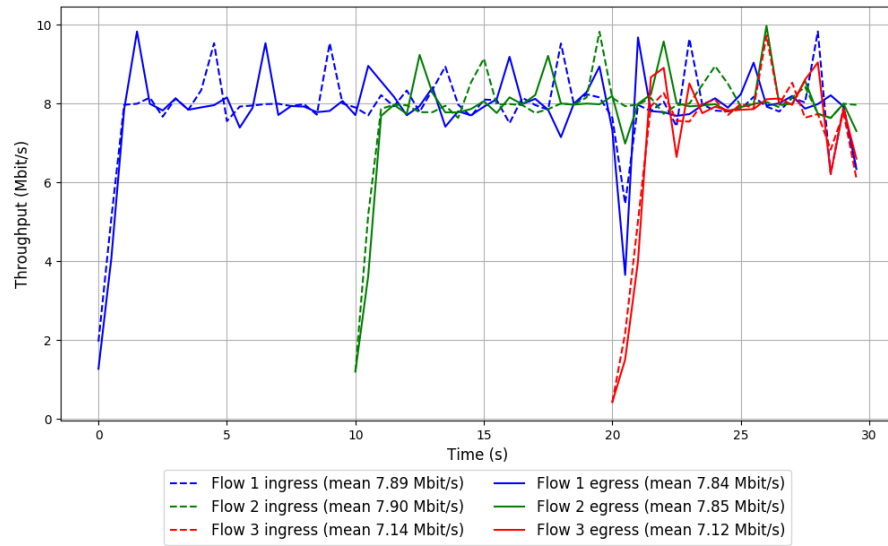
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2017-09-22 10:37:17
End at: 2017-09-22 10:37:47


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.40 Mbit/s
95th percentile per-packet one-way delay: 51.912 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 51.864 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 51.937 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 51.959 ms
Loss rate: 0.35%
```
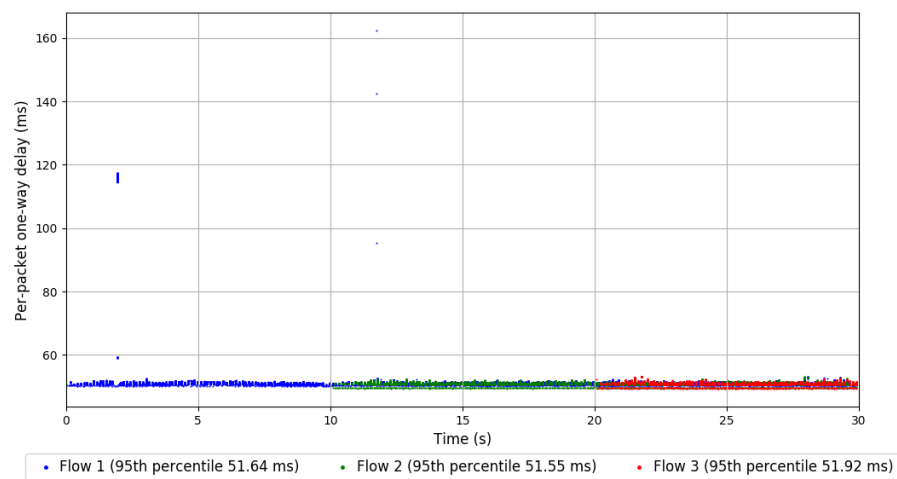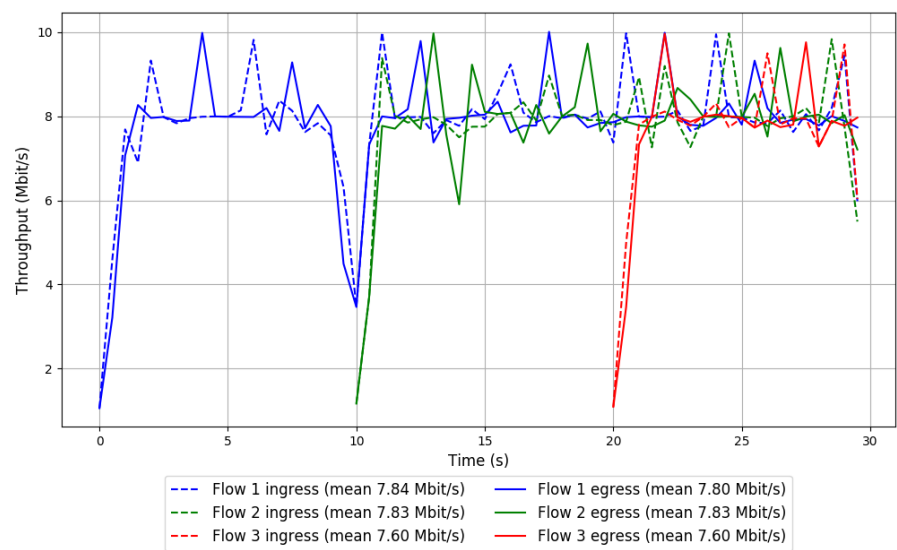
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2017-09-22 10:49:43
End at: 2017-09-22 10:50:13


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.50 Mbit/s
95th percentile per-packet one-way delay: 51.645 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 51.642 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 7.83 Mbit/s
95th percentile per-packet one-way delay: 51.548 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 51.919 ms
Loss rate: 0.00%
```
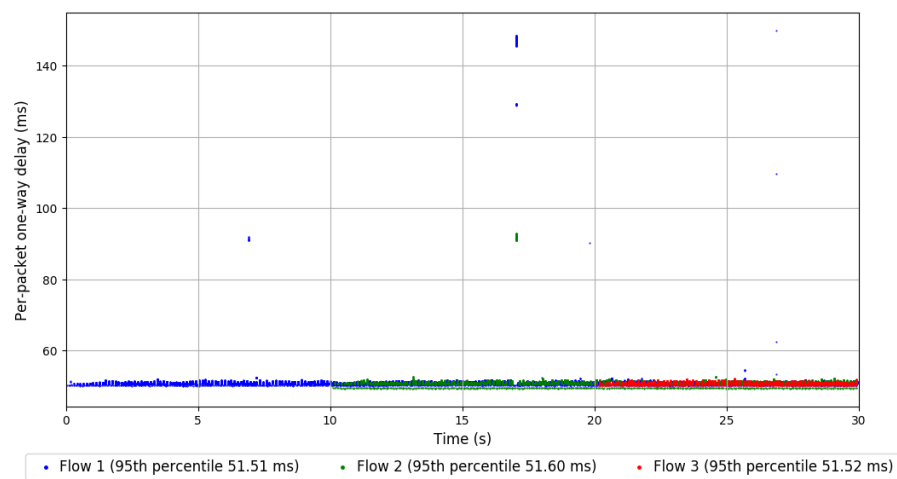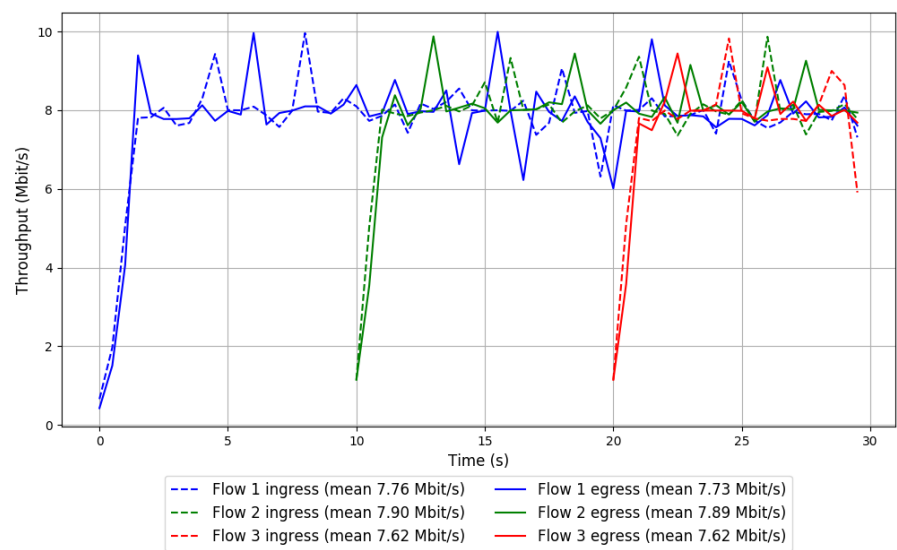
Run 8: Report of Sprout — Data Link

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```
Run 9: Statistics of Sprout

Start at: 2017-09-22 11:01:58
End at: 2017-09-22 11:02:28


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.49 Mbit/s
95th percentile per-packet one-way delay: 51.543 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 7.73 Mbit/s
95th percentile per-packet one-way delay: 51.506 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 51.601 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 51.521 ms
Loss rate: 0.00%
```
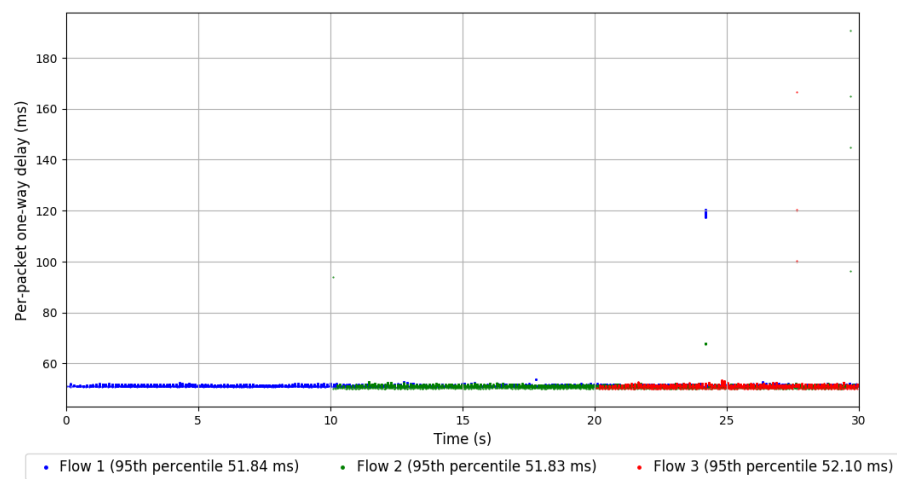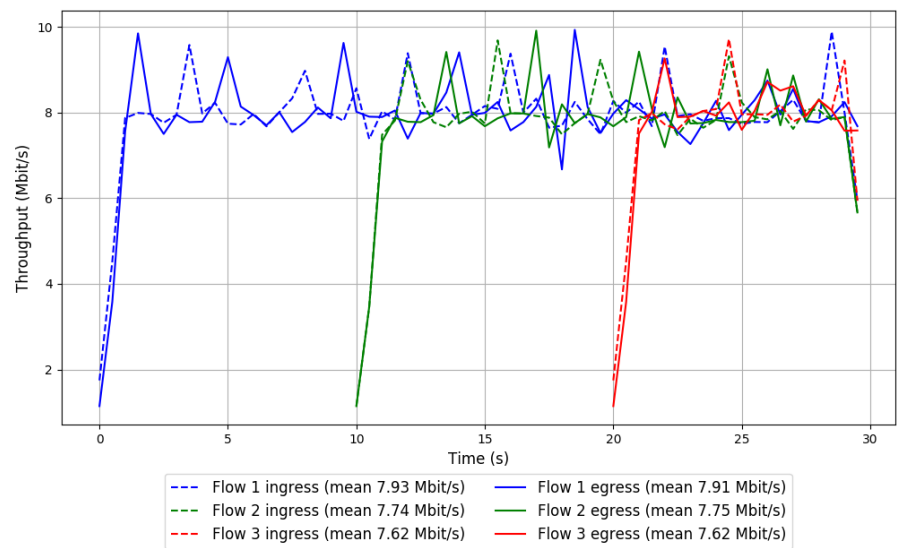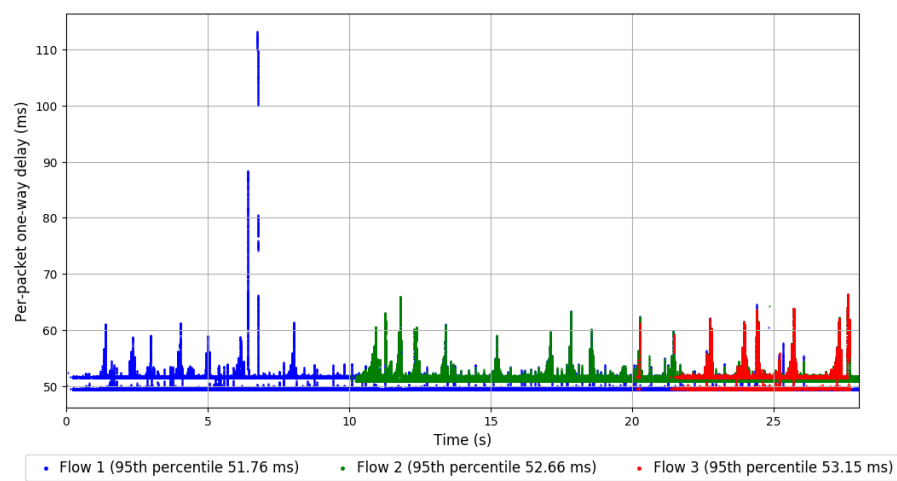
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-09-22 11:14:21
End at: 2017-09-22 11:14:51


# Below is generated by plot.py at 2017-09-22 13:31:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.57 Mbit/s
95th percentile per-packet one-way delay: 51.884 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 51.843 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 51.832 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 52.099 ms
Loss rate: 0.00%
```
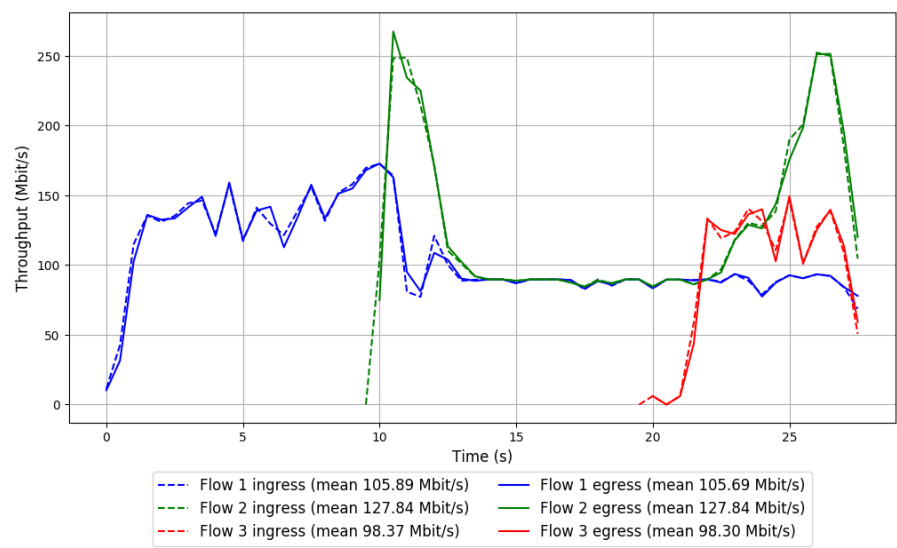
Run 10: Report of Sprout — Data Link

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

Start at: 2017-09-22 09:29:10
End at: 2017-09-22 09:29:40

# Below is generated by plot.py at 2017-09-22 13:32:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 214.76 Mbit/s
95th percentile per-packet one-way delay: 52.196 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 105.69 Mbit/s
95th percentile per-packet one-way delay: 51.764 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 127.84 Mbit/s
95th percentile per-packet one-way delay: 52.664 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 98.30 Mbit/s
95th percentile per-packet one-way delay: 53.150 ms
Loss rate: 0.00%
```
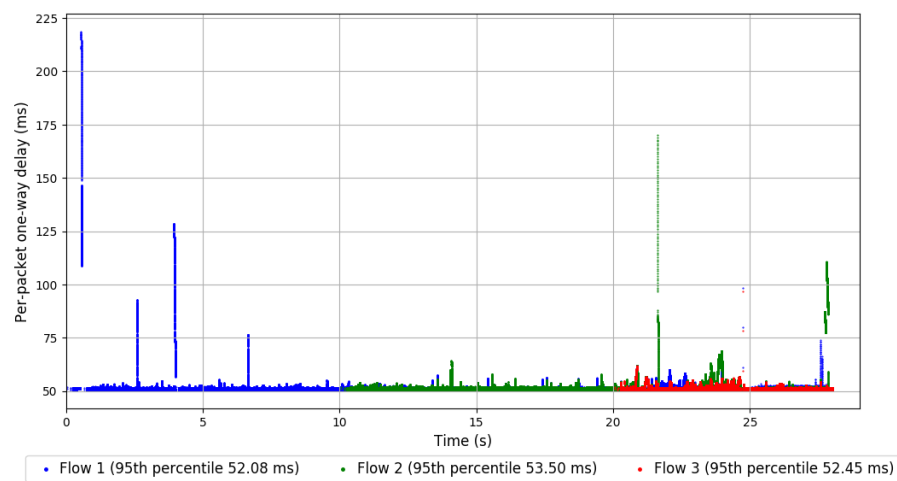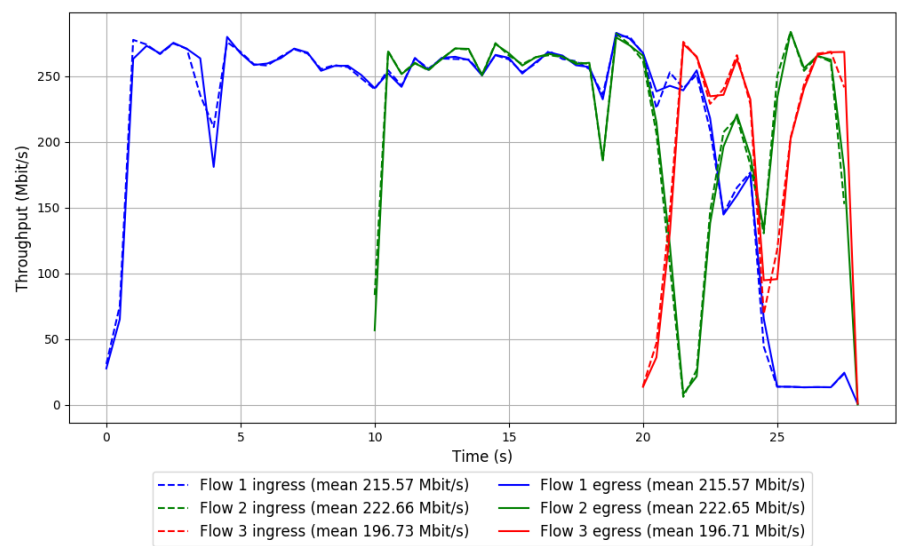
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-22 09:41:09
End at: 2017-09-22 09:41:39

# Below is generated by plot.py at 2017-09-22 13:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 414.30 Mbit/s
95th percentile per-packet one-way delay: 52.556 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 215.57 Mbit/s
95th percentile per-packet one-way delay: 52.079 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 222.65 Mbit/s
95th percentile per-packet one-way delay: 53.500 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 196.71 Mbit/s
95th percentile per-packet one-way delay: 52.452 ms
Loss rate: 0.00%
```
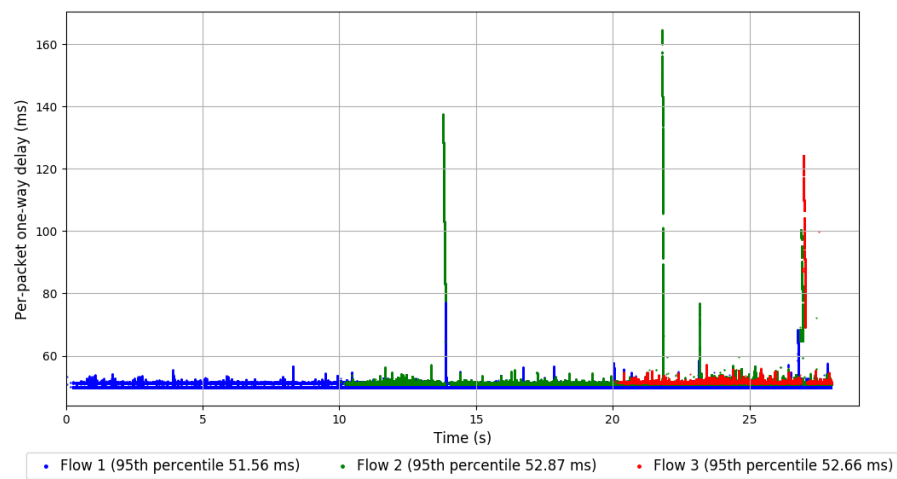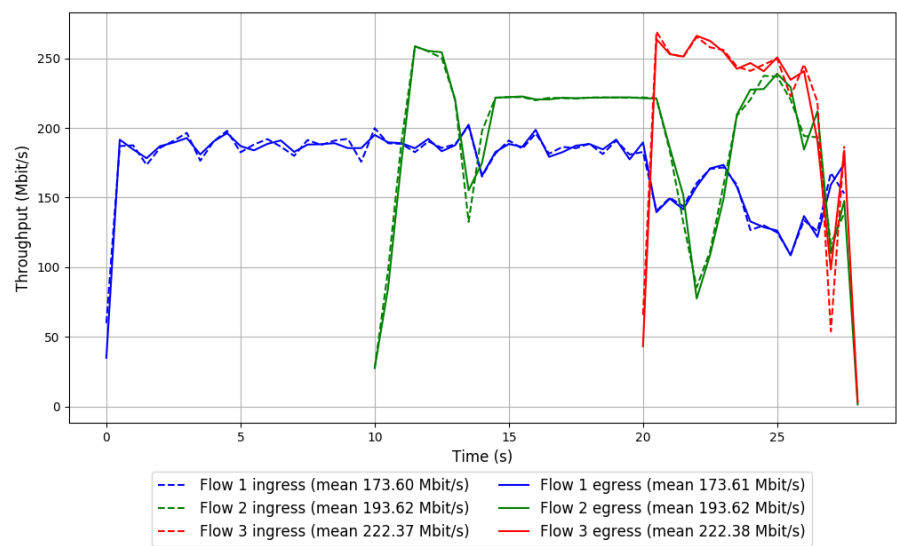
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-22 09:53:30
End at: 2017-09-22 09:54:00

# Below is generated by plot.py at 2017-09-22 13:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.89 Mbit/s
95th percentile per-packet one-way delay: 52.261 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 173.61 Mbit/s
95th percentile per-packet one-way delay: 51.560 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 193.62 Mbit/s
95th percentile per-packet one-way delay: 52.869 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 222.38 Mbit/s
95th percentile per-packet one-way delay: 52.656 ms
Loss rate: 0.00%
```
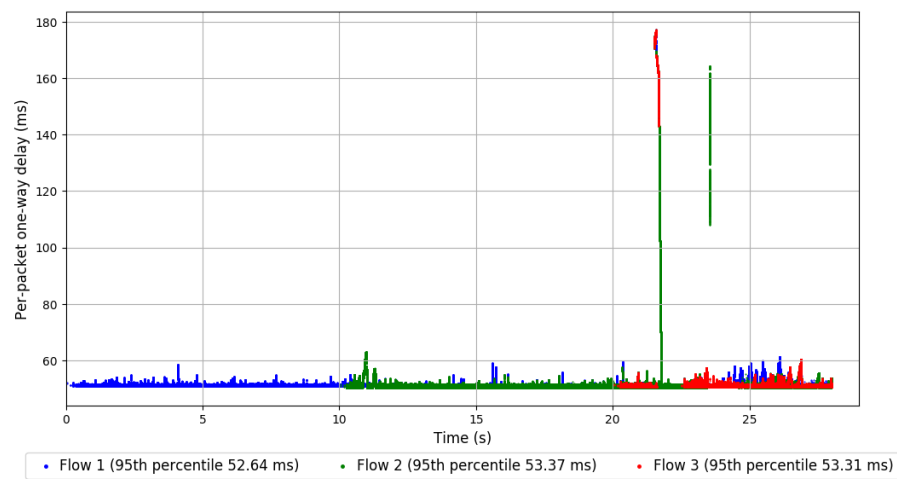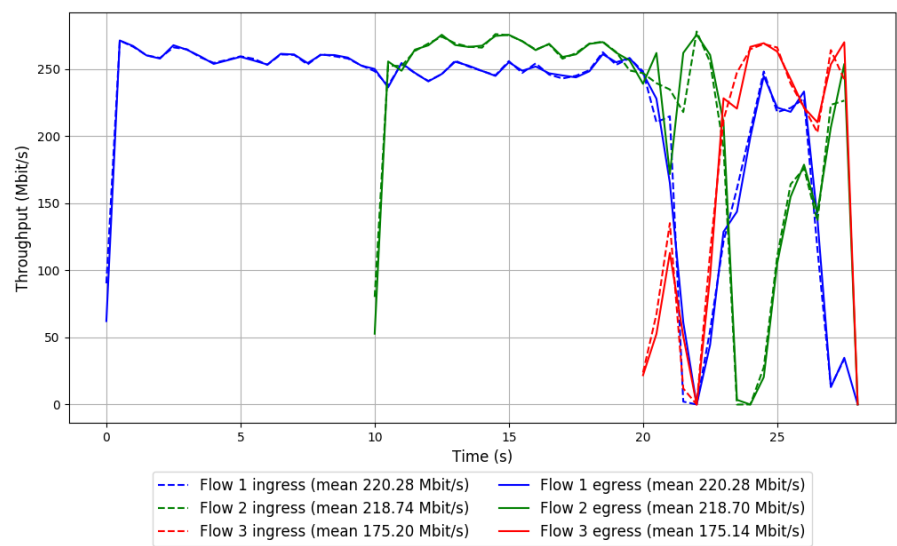
Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-22 10:05:52
End at: 2017-09-22 10:06:22

# Below is generated by plot.py at 2017-09-22 13:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 410.39 Mbit/s
95th percentile per-packet one-way delay: 52.952 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 220.28 Mbit/s
95th percentile per-packet one-way delay: 52.639 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 218.70 Mbit/s
95th percentile per-packet one-way delay: 53.374 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 175.14 Mbit/s
95th percentile per-packet one-way delay: 53.308 ms
Loss rate: 0.04%
```
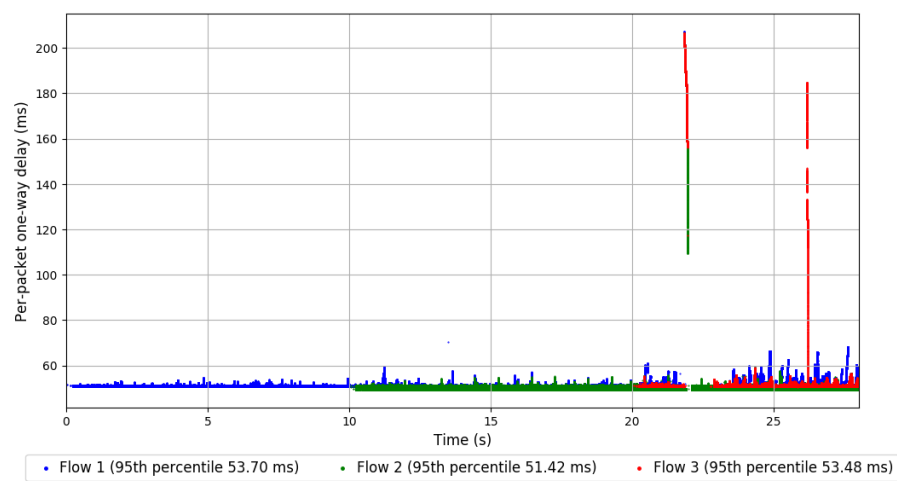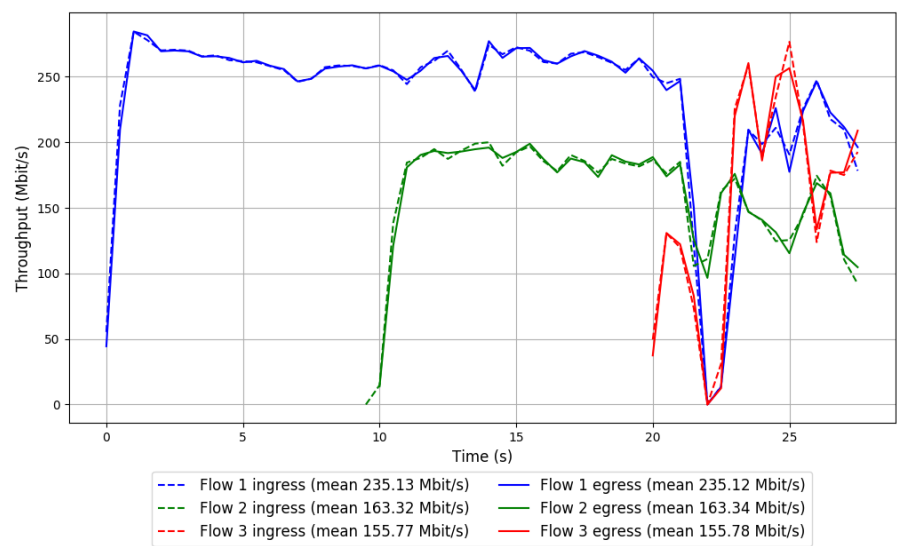
Run 4: Report of TaoVA-100x — Data Link

- --- Flow 1 ingress (mean 220.28 Mbit/s)
- ---- Flow 1 egress (mean 220.28 Mbit/s)
- --- Flow 2 ingress (mean 218.74 Mbit/s)
- ---- Flow 2 egress (mean 218.70 Mbit/s)
- --- Flow 3 ingress (mean 175.20 Mbit/s)
- ---- Flow 3 egress (mean 175.14 Mbit/s)

- Flow 1 (95th percentile 52.64 ms)
- Flow 2 (95th percentile 53.37 ms)
- Flow 3 (95th percentile 53.31 ms)

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

Start at: 2017-09-22 10:18:22
End at: 2017-09-22 10:18:52


# Below is generated by plot.py at 2017-09-22 13:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.23 Mbit/s
95th percentile per-packet one-way delay: 53.112 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 235.12 Mbit/s
95th percentile per-packet one-way delay: 53.696 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 163.34 Mbit/s
95th percentile per-packet one-way delay: 51.424 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 155.78 Mbit/s
95th percentile per-packet one-way delay: 53.484 ms
Loss rate: 0.01%
```
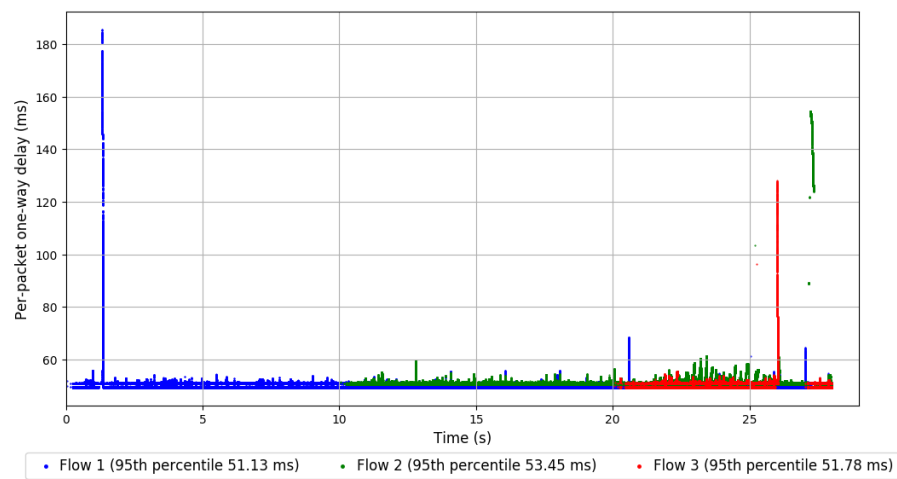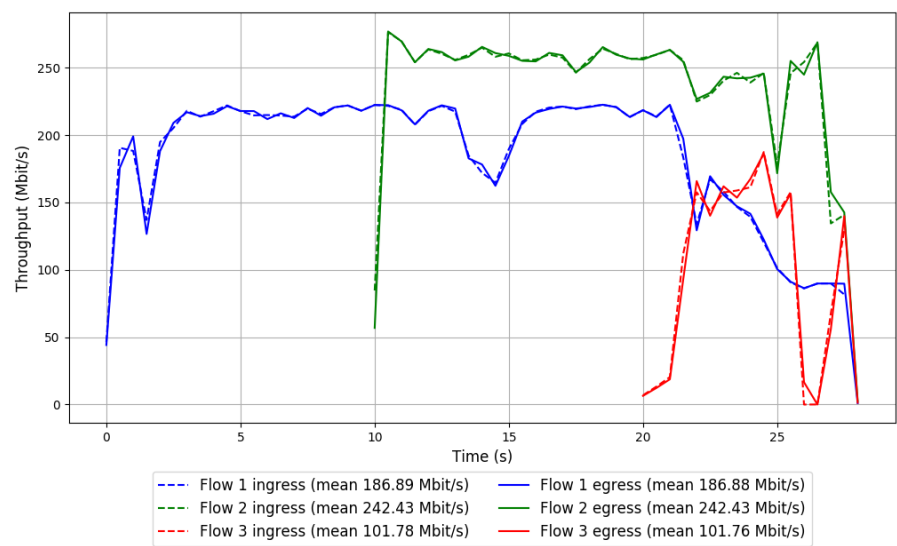
Run 5: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-22 10:30:44
End at: 2017-09-22 10:31:14


# Below is generated by plot.py at 2017-09-22 13:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 371.38 Mbit/s
95th percentile per-packet one-way delay: 51.994 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 186.88 Mbit/s
95th percentile per-packet one-way delay: 51.130 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 242.43 Mbit/s
95th percentile per-packet one-way delay: 53.447 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 101.76 Mbit/s
95th percentile per-packet one-way delay: 51.783 ms
Loss rate: 0.01%
```
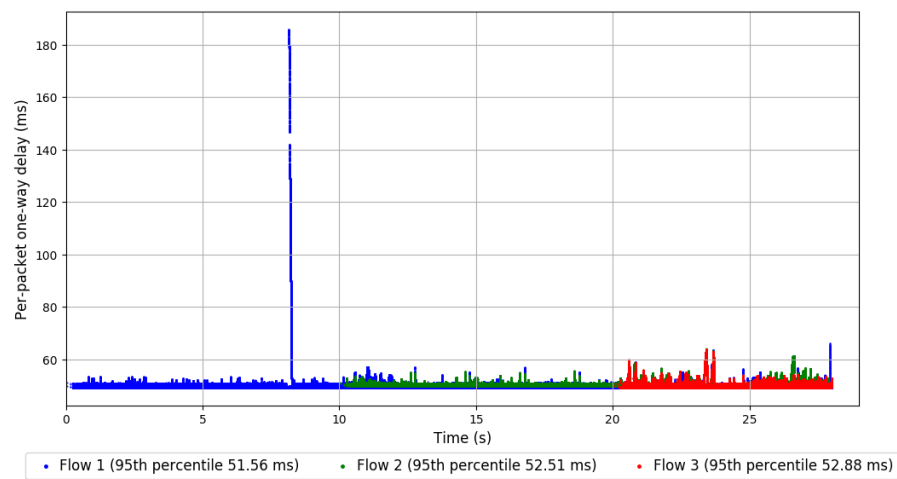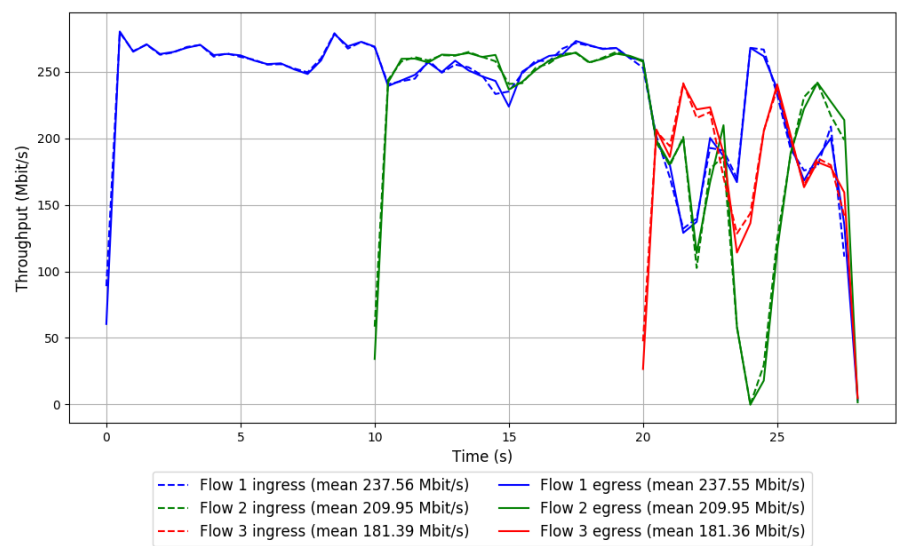
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 186.89 Mbit/s) Flow 1 egress (mean 186.88 Mbit/s)
Flow 2 ingress (mean 242.43 Mbit/s) Flow 2 egress (mean 242.43 Mbit/s)
Flow 3 ingress (mean 101.78 Mbit/s) Flow 3 egress (mean 101.76 Mbit/s)

Flow 1 (95th percentile 51.13 ms)   Flow 2 (95th percentile 53.45 ms)   Flow 3 (95th percentile 51.78 ms)

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

Start at: 2017-09-22 10:43:05
End at: 2017-09-22 10:43:35

# Below is generated by plot.py at 2017-09-22 13:45:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 423.78 Mbit/s
95th percentile per-packet one-way delay: 52.092 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 237.55 Mbit/s
95th percentile per-packet one-way delay: 51.559 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 209.95 Mbit/s
95th percentile per-packet one-way delay: 52.510 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 181.36 Mbit/s
95th percentile per-packet one-way delay: 52.879 ms
Loss rate: 0.00%
```
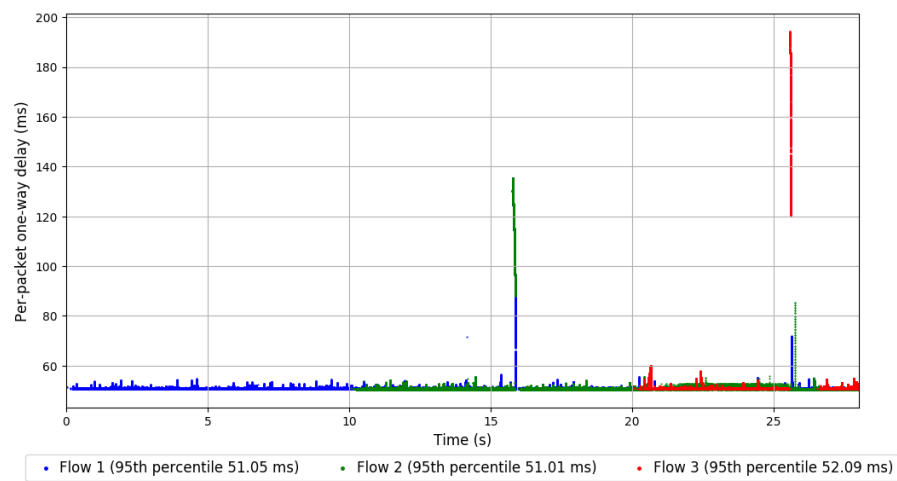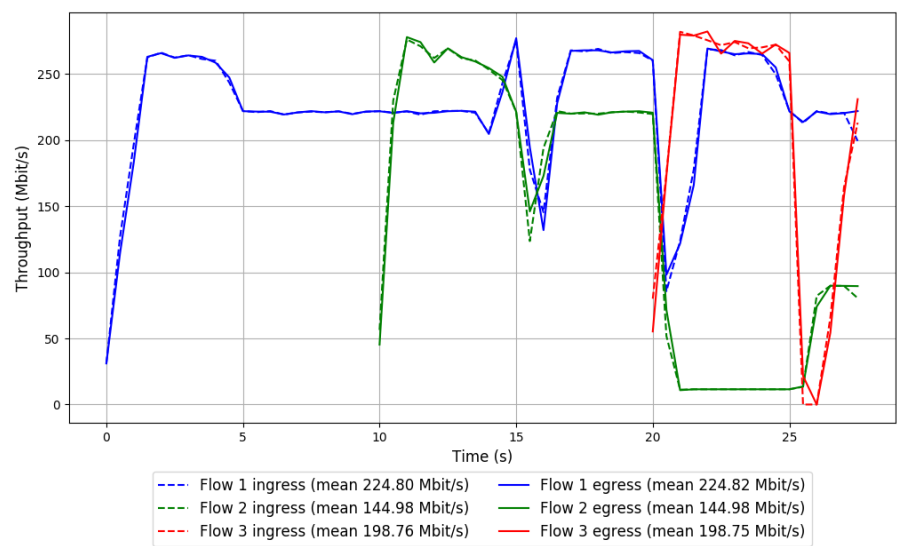
Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 237.56 Mbit/s)   Flow 1 egress (mean 237.55 Mbit/s)
Flow 2 ingress (mean 209.95 Mbit/s)   Flow 2 egress (mean 209.95 Mbit/s)
Flow 3 ingress (mean 181.39 Mbit/s)   Flow 3 egress (mean 181.36 Mbit/s)

Flow 1 (95th percentile 51.56 ms)   Flow 2 (95th percentile 52.51 ms)   Flow 3 (95th percentile 52.88 ms)

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

Start at: 2017-09-22 10:55:28
End at: 2017-09-22 10:55:58


# Below is generated by plot.py at 2017-09-22 13:45:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 374.30 Mbit/s
95th percentile per-packet one-way delay: 51.115 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.82 Mbit/s
95th percentile per-packet one-way delay: 51.050 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 144.98 Mbit/s
95th percentile per-packet one-way delay: 51.008 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 198.75 Mbit/s
95th percentile per-packet one-way delay: 52.089 ms
Loss rate: 0.00%
```
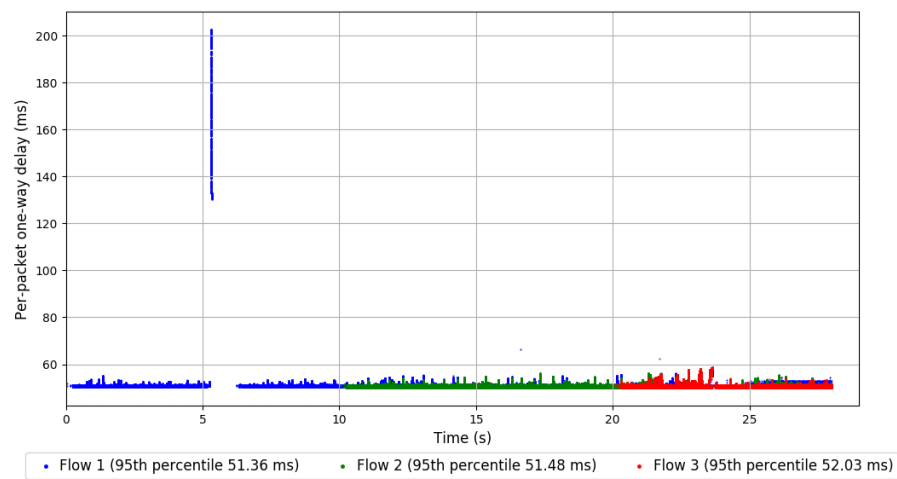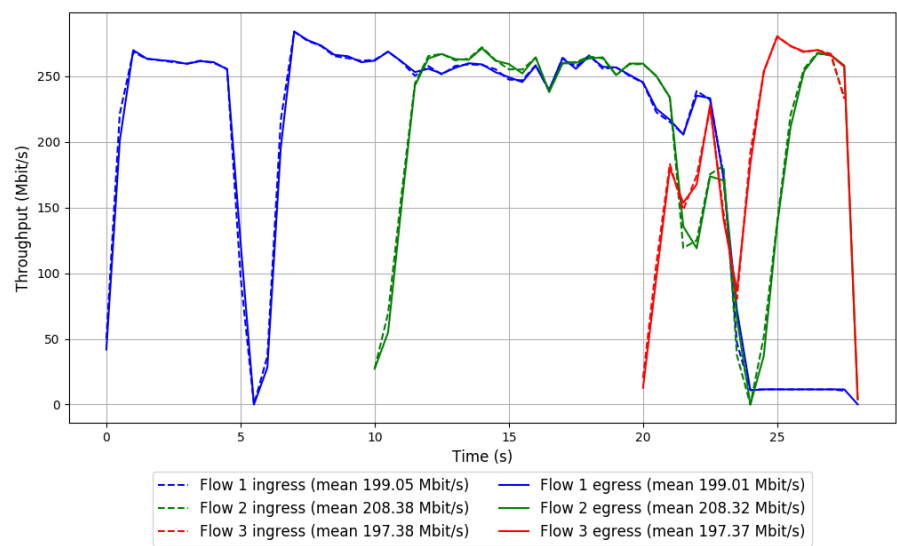
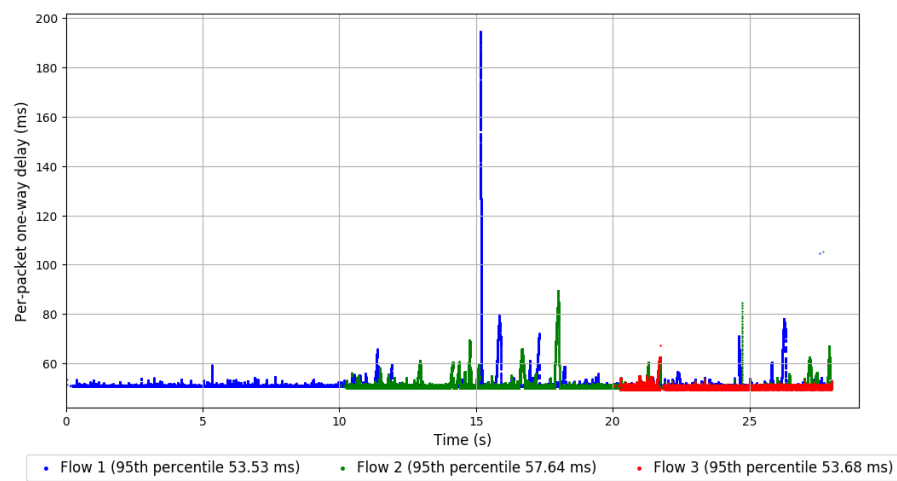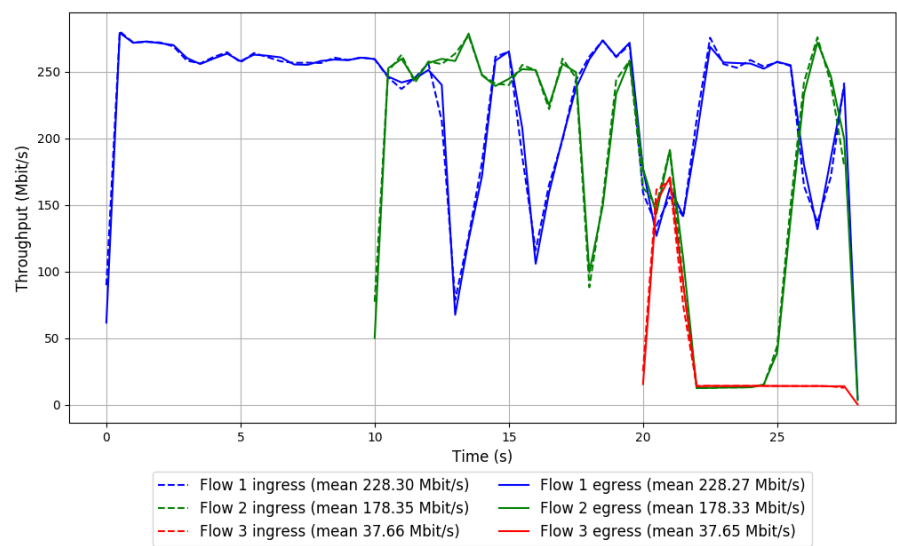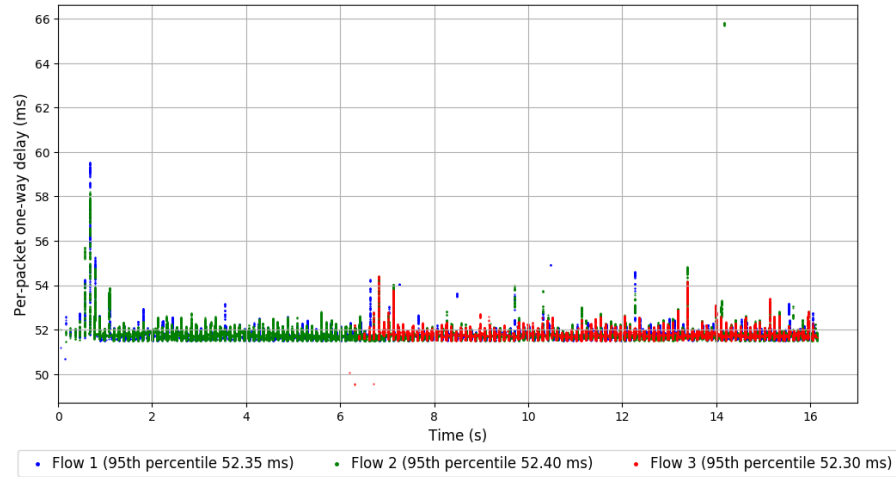Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 224.80 Mbit/s)   Flow 1 egress (mean 224.82 Mbit/s)
Flow 2 ingress (mean 144.98 Mbit/s)   Flow 2 egress (mean 144.98 Mbit/s)
Flow 3 ingress (mean 198.76 Mbit/s)   Flow 3 egress (mean 198.75 Mbit/s)

Flow 1 (95th percentile 51.05 ms)   Flow 2 (95th percentile 51.01 ms)   Flow 3 (95th percentile 52.09 ms)

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

Start at: 2017-09-22 11:07:44
End at: 2017-09-22 11:08:14


# Below is generated by plot.py at 2017-09-22 13:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.56 Mbit/s
95th percentile per-packet one-way delay: 51.479 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 199.01 Mbit/s
95th percentile per-packet one-way delay: 51.356 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 208.32 Mbit/s
95th percentile per-packet one-way delay: 51.485 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 197.37 Mbit/s
95th percentile per-packet one-way delay: 52.035 ms
Loss rate: 0.00%
```

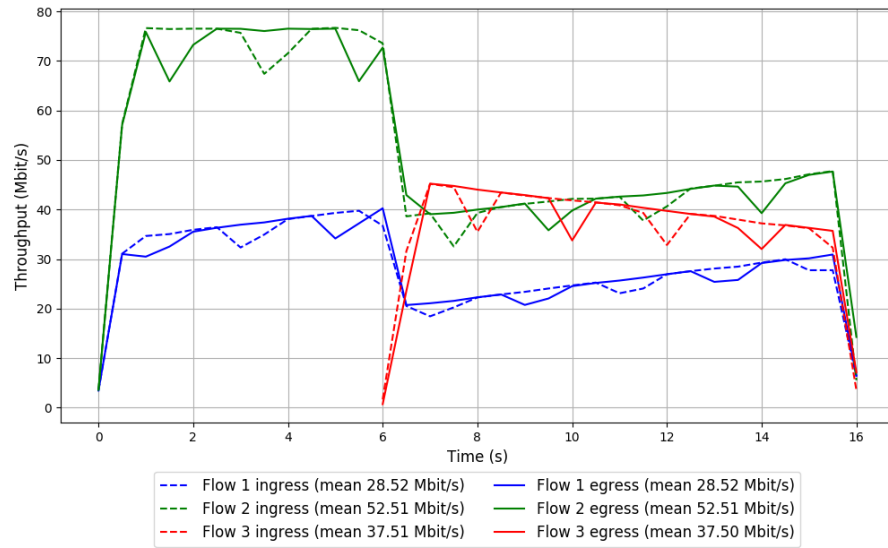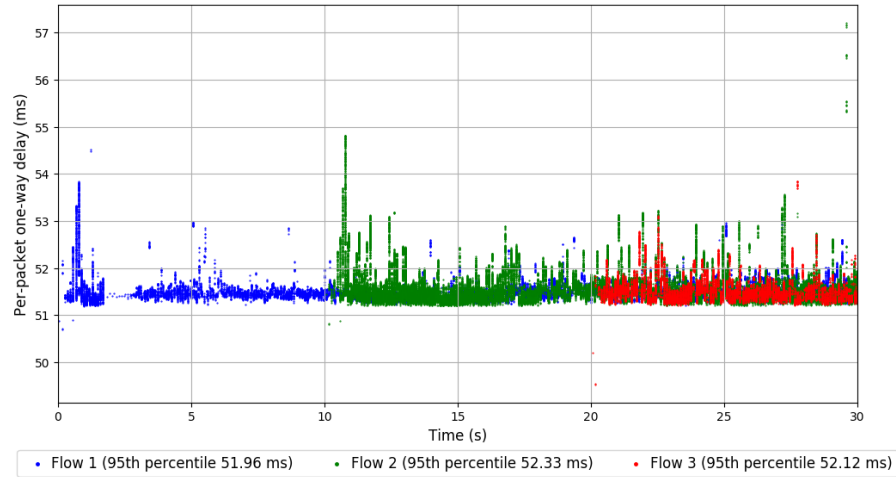Run 9: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 199.05 Mbit/s) --- Flow 1 egress (mean 199.01 Mbit/s)
Flow 2 ingress (mean 208.38 Mbit/s) --- Flow 2 egress (mean 208.32 Mbit/s)
Flow 3 ingress (mean 197.38 Mbit/s) --- Flow 3 egress (mean 197.37 Mbit/s)

Flow 1 (95th percentile 51.36 ms)   Flow 2 (95th percentile 51.48 ms)   Flow 3 (95th percentile 52.03 ms)

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

Start at: 2017-09-22 11:20:06
End at: 2017-09-22 11:20:36

# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 353.45 Mbit/s
95th percentile per-packet one-way delay: 55.102 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 228.27 Mbit/s
95th percentile per-packet one-way delay: 53.529 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 178.33 Mbit/s
95th percentile per-packet one-way delay: 57.640 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.65 Mbit/s
95th percentile per-packet one-way delay: 53.681 ms
Loss rate: 0.00%
```
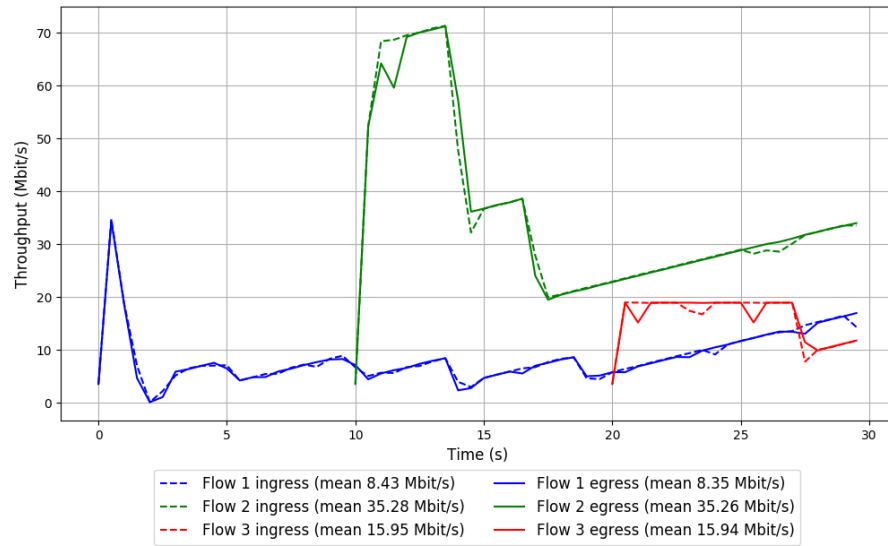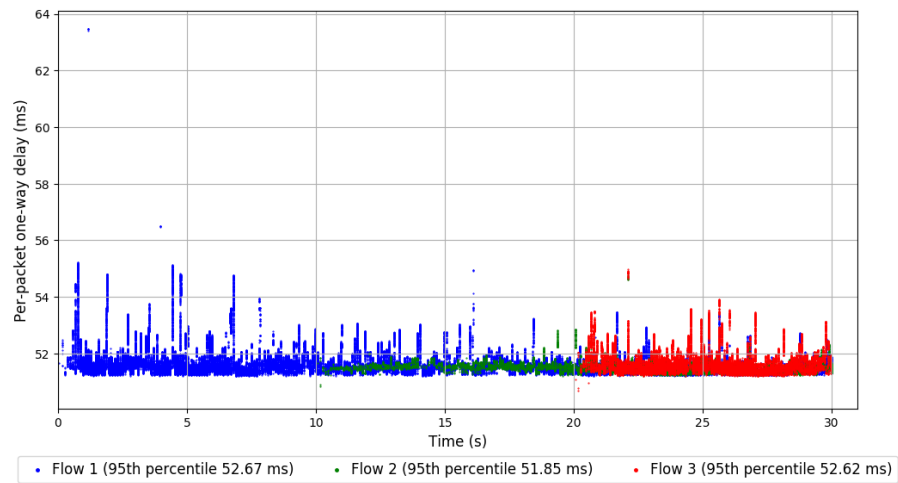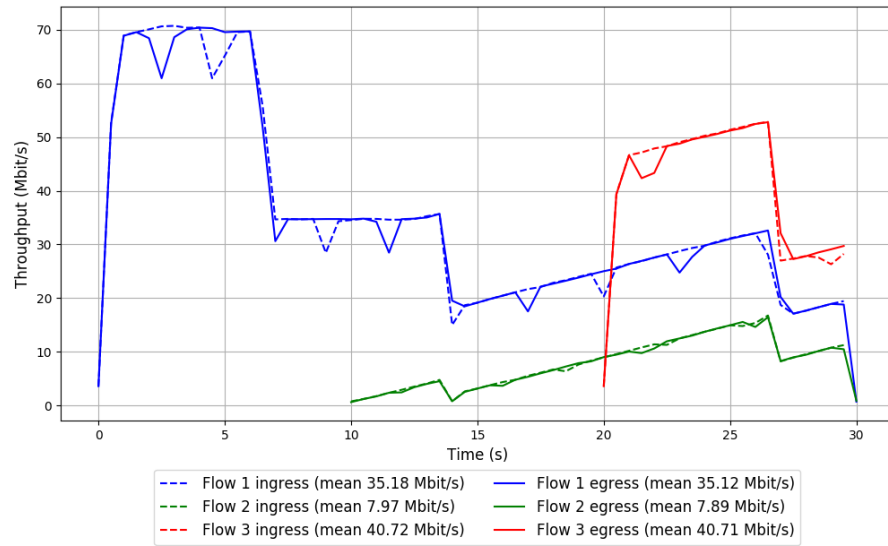
Run 10: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2017-09-22 09:30:09
End at: 2017-09-22 09:30:39
```

Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2017-09-22 09:42:27
End at: 2017-09-22 09:42:57

# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.08 Mbit/s
95th percentile per-packet one-way delay: 52.250 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 8.35 Mbit/s
95th percentile per-packet one-way delay: 51.956 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 35.26 Mbit/s
95th percentile per-packet one-way delay: 52.333 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 15.94 Mbit/s
95th percentile per-packet one-way delay: 52.125 ms
Loss rate: 0.02%
```
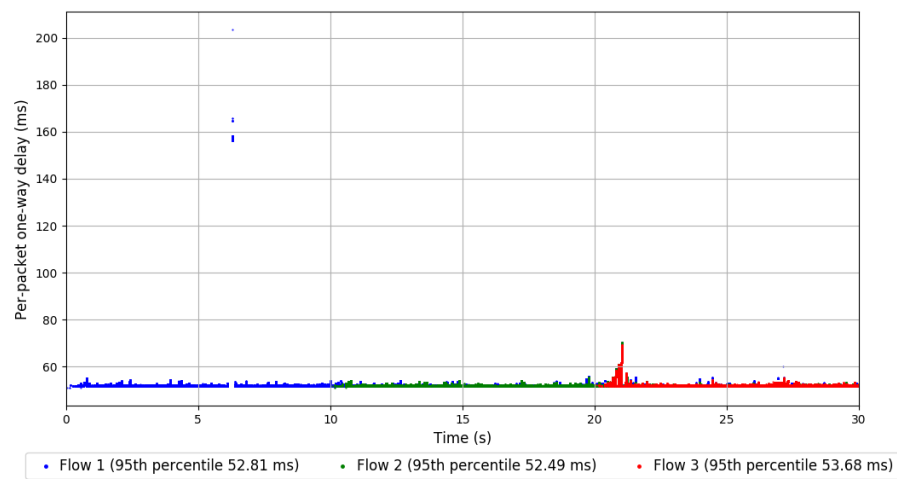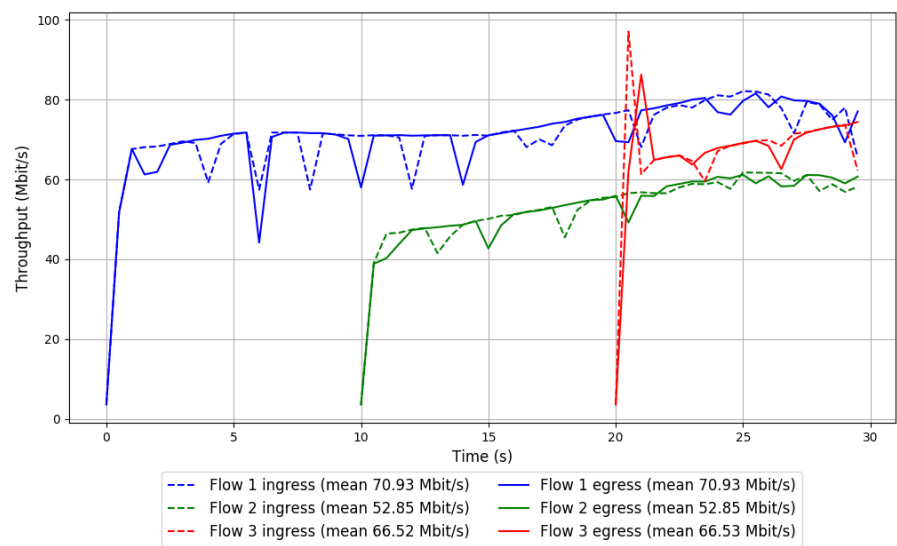
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-09-22 09:54:41
End at: 2017-09-22 09:55:11


# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.82 Mbit/s
95th percentile per-packet one-way delay: 52.599 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 35.12 Mbit/s
95th percentile per-packet one-way delay: 52.667 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 51.851 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 40.71 Mbit/s
95th percentile per-packet one-way delay: 52.620 ms
Loss rate: 0.04%
```
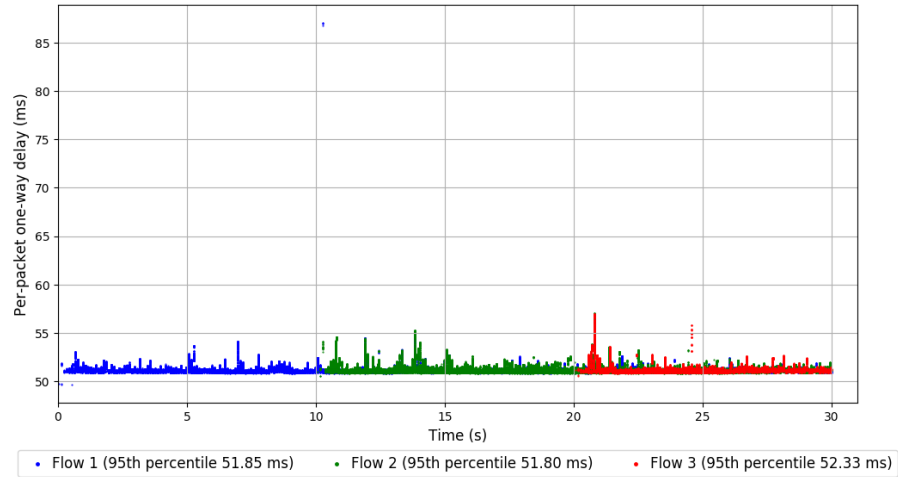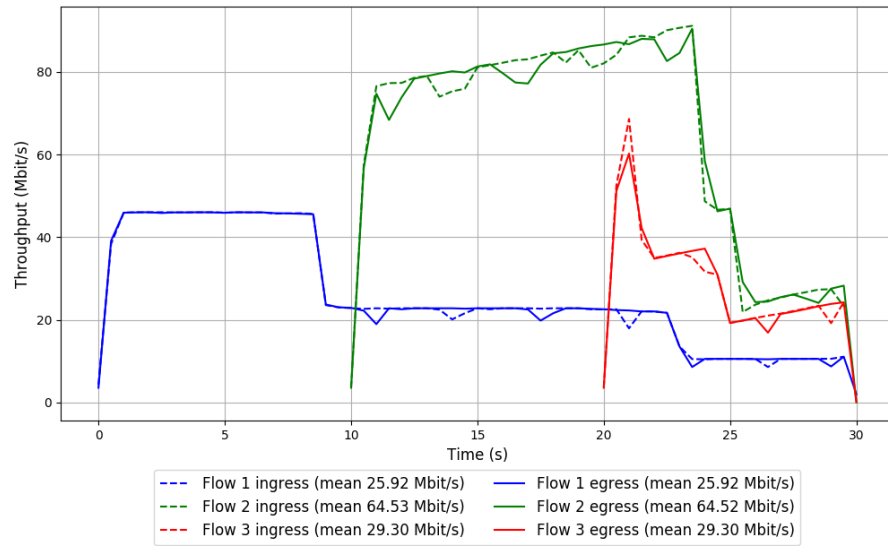
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2017-09-22 10:07:09
End at: 2017-09-22 10:07:39


# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 128.14 Mbit/s
95th percentile per-packet one-way delay: 52.823 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 70.93 Mbit/s
95th percentile per-packet one-way delay: 52.809 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 52.85 Mbit/s
95th percentile per-packet one-way delay: 52.492 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 66.53 Mbit/s
95th percentile per-packet one-way delay: 53.680 ms
Loss rate: 0.00%
```
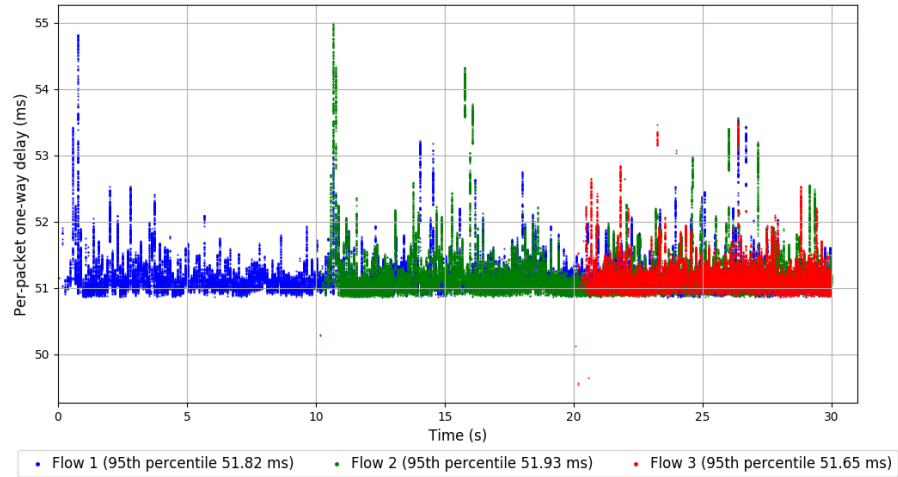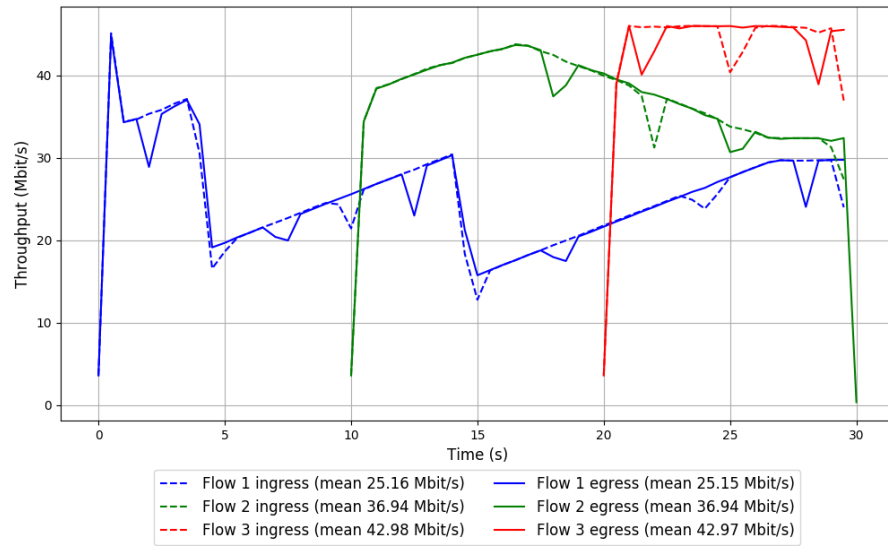
Run 4: Report of TCP Vegas — Data Link

Legend:
- Flow 1 ingress (mean 70.93 Mbit/s) --- Flow 1 egress (mean 70.93 Mbit/s)
- Flow 2 ingress (mean 52.85 Mbit/s) --- Flow 2 egress (mean 52.85 Mbit/s)
- Flow 3 ingress (mean 66.52 Mbit/s) --- Flow 3 egress (mean 66.53 Mbit/s)

Legend:
- Flow 1 (95th percentile 52.81 ms)
- Flow 2 (95th percentile 52.49 ms)
- Flow 3 (95th percentile 53.68 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2017-09-22 10:19:35
End at: 2017-09-22 10:20:05

# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.60 Mbit/s
95th percentile per-packet one-way delay: 51.868 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 25.92 Mbit/s
95th percentile per-packet one-way delay: 51.849 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 64.52 Mbit/s
95th percentile per-packet one-way delay: 51.804 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 29.30 Mbit/s
95th percentile per-packet one-way delay: 52.332 ms
Loss rate: 0.02%
```
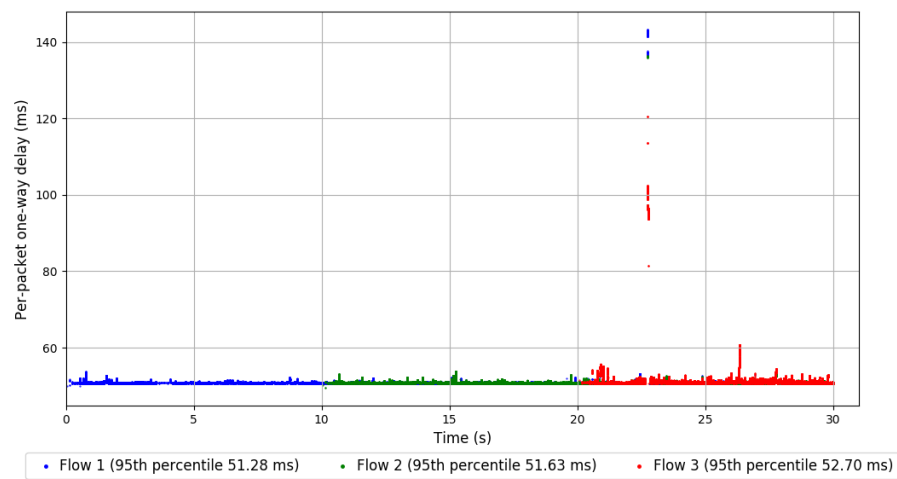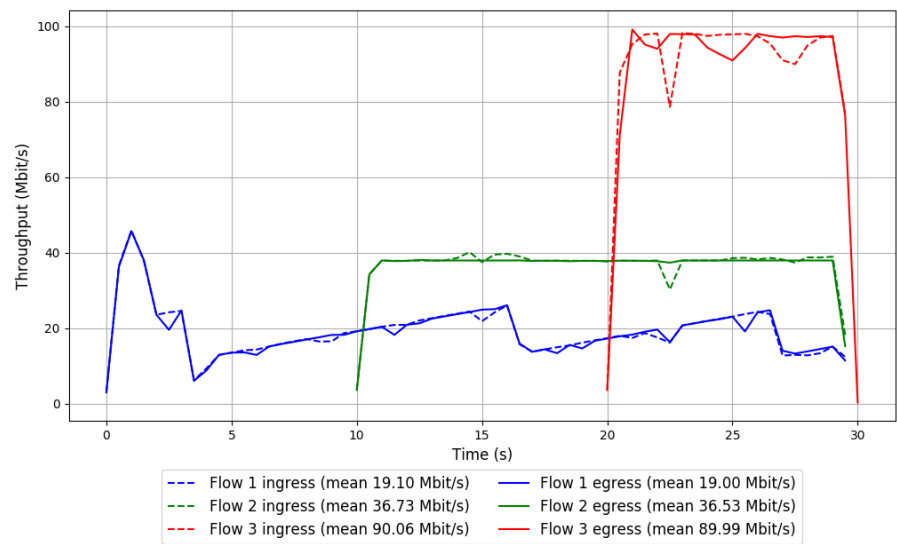
Run 5: Report of TCP Vegas — Data Link

- - - Flow 1 ingress (mean 25.92 Mbit/s)   —— Flow 1 egress (mean 25.92 Mbit/s)
- - - Flow 2 ingress (mean 64.53 Mbit/s)   —— Flow 2 egress (mean 64.52 Mbit/s)
- - - Flow 3 ingress (mean 29.30 Mbit/s)   —— Flow 3 egress (mean 29.30 Mbit/s)

- Flow 1 (95th percentile 51.85 ms)   • Flow 2 (95th percentile 51.80 ms)   • Flow 3 (95th percentile 52.33 ms)

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```
Run 6: Statistics of TCP Vegas

Start at: 2017-09-22 10:31:58
End at: 2017-09-22 10:32:28


# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.93 Mbit/s
95th percentile per-packet one-way delay: 51.820 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 25.15 Mbit/s
95th percentile per-packet one-way delay: 51.823 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 36.94 Mbit/s
95th percentile per-packet one-way delay: 51.926 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 42.97 Mbit/s
95th percentile per-packet one-way delay: 51.653 ms
Loss rate: 0.00%
```
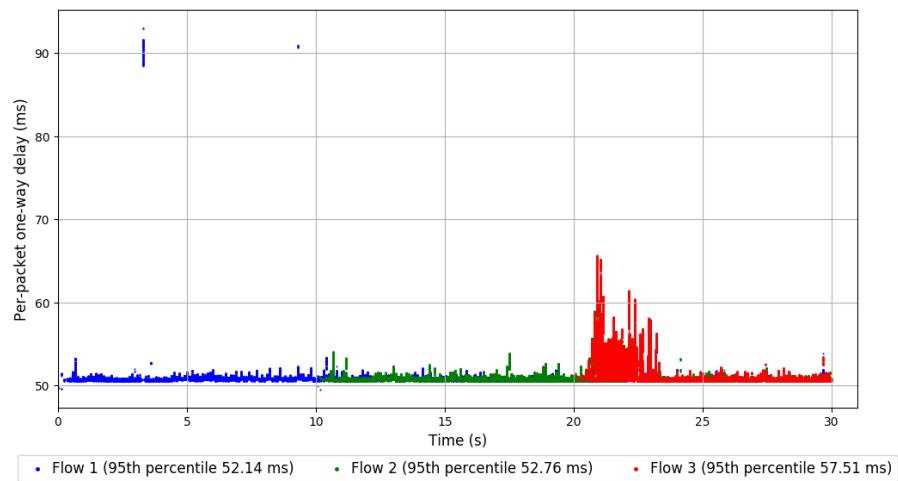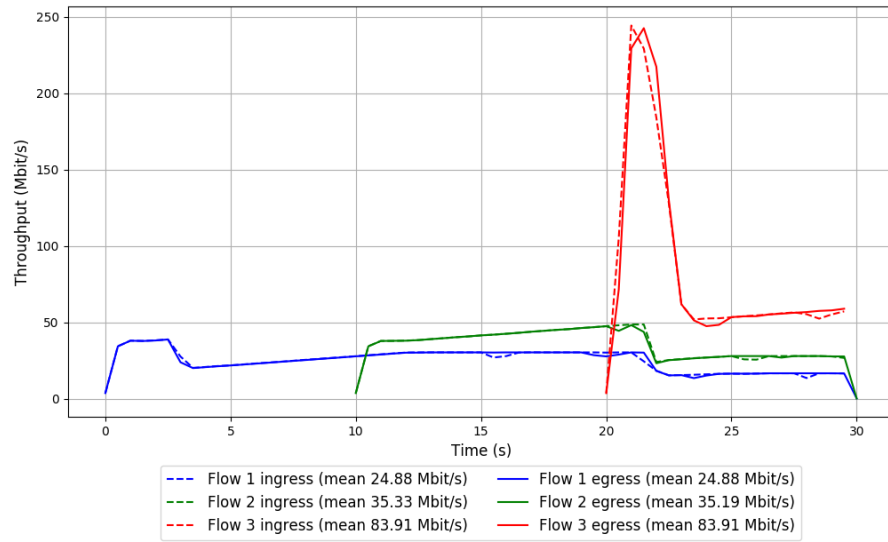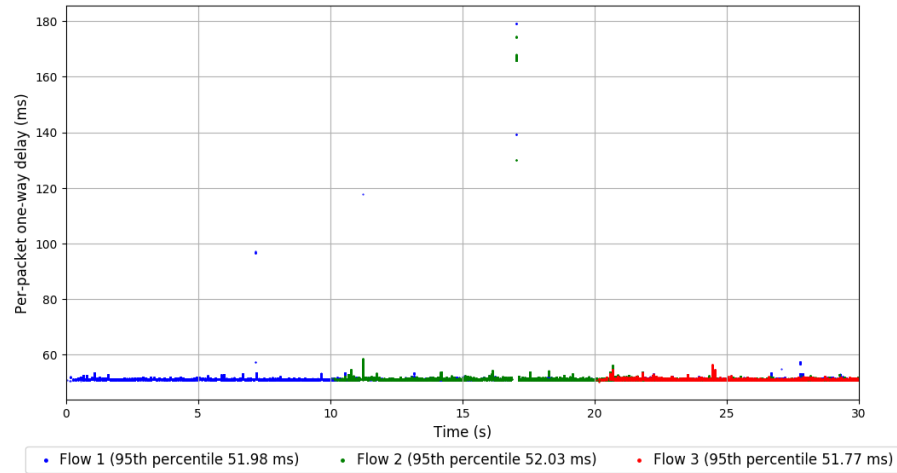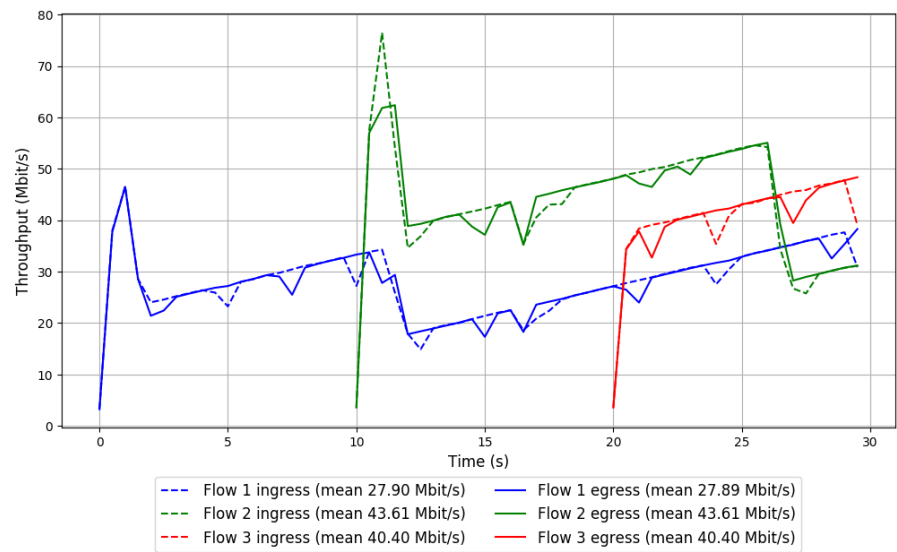
Run 6: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 25.16 Mbit/s)   Flow 1 egress (mean 25.15 Mbit/s)
Flow 2 ingress (mean 36.94 Mbit/s)   Flow 2 egress (mean 36.94 Mbit/s)
Flow 3 ingress (mean 42.98 Mbit/s)   Flow 3 egress (mean 42.97 Mbit/s)

Flow 1 (95th percentile 51.82 ms)   Flow 2 (95th percentile 51.93 ms)   Flow 3 (95th percentile 51.65 ms)

```
Run 7: Statistics of TCP Vegas

Start at: 2017-09-22 10:44:23
End at: 2017-09-22 10:44:53


# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.09 Mbit/s
95th percentile per-packet one-way delay: 51.994 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 19.00 Mbit/s
95th percentile per-packet one-way delay: 51.285 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 36.53 Mbit/s
95th percentile per-packet one-way delay: 51.631 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 89.99 Mbit/s
95th percentile per-packet one-way delay: 52.695 ms
Loss rate: 0.08%
```
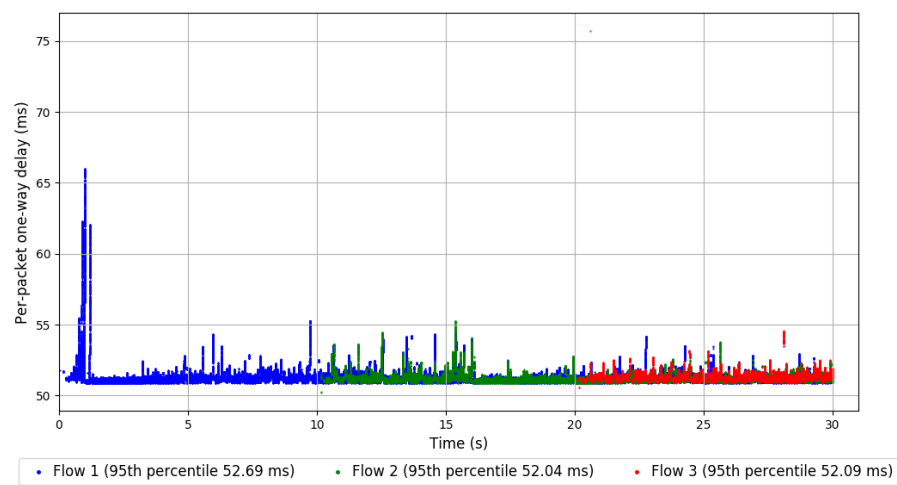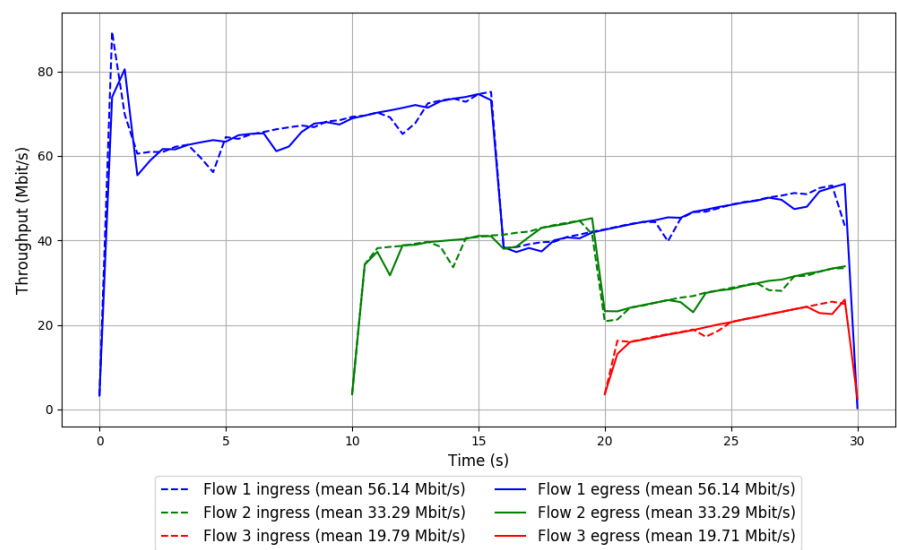
Run 7: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 19.10 Mbit/s) — Flow 1 egress (mean 19.00 Mbit/s)
Flow 2 ingress (mean 36.73 Mbit/s) — Flow 2 egress (mean 36.53 Mbit/s)
Flow 3 ingress (mean 90.06 Mbit/s) — Flow 3 egress (mean 89.99 Mbit/s)

Flow 1 (95th percentile 51.28 ms) • Flow 2 (95th percentile 51.63 ms) • Flow 3 (95th percentile 52.70 ms)

```
Run 8: Statistics of TCP Vegas

Start at: 2017-09-22 10:56:42
End at: 2017-09-22 10:57:12


# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.02 Mbit/s
95th percentile per-packet one-way delay: 55.390 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.88 Mbit/s
95th percentile per-packet one-way delay: 52.136 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 35.19 Mbit/s
95th percentile per-packet one-way delay: 52.762 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 83.91 Mbit/s
95th percentile per-packet one-way delay: 57.505 ms
Loss rate: 0.00%
```
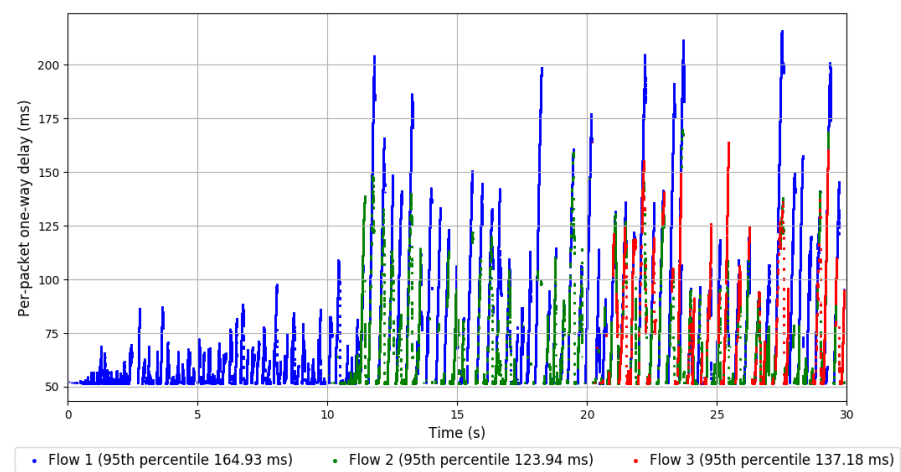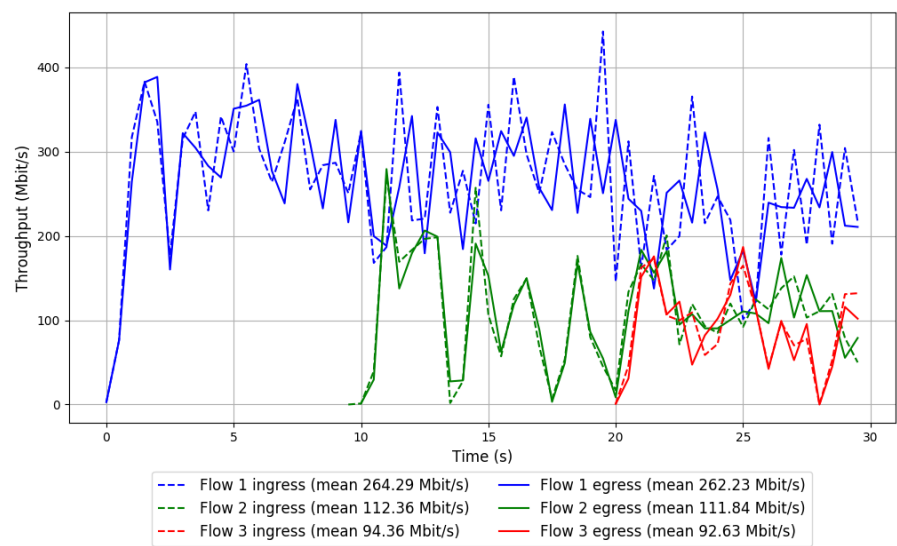
Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2017-09-22 11:08:58
End at: 2017-09-22 11:09:28


# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.30 Mbit/s
95th percentile per-packet one-way delay: 51.954 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 27.89 Mbit/s
95th percentile per-packet one-way delay: 51.979 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 43.61 Mbit/s
95th percentile per-packet one-way delay: 52.031 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 40.40 Mbit/s
95th percentile per-packet one-way delay: 51.767 ms
Loss rate: 0.00%
```
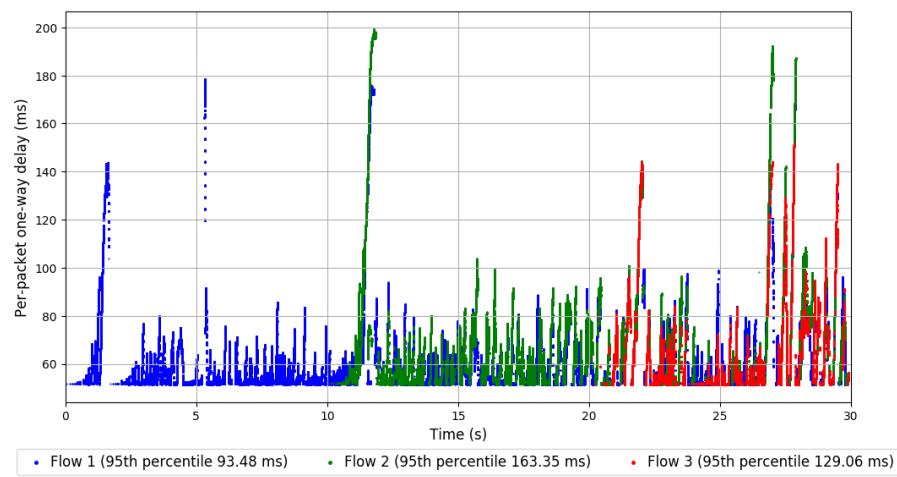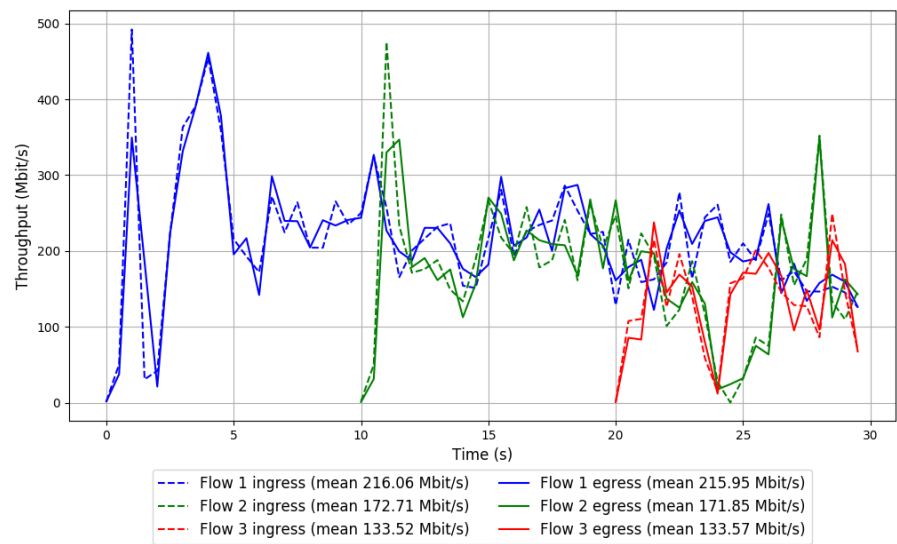
Run 9: Report of TCP Vegas — Data Link

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```
Run 10: Statistics of TCP Vegas

Start at: 2017-09-22 11:21:18
End at: 2017-09-22 11:21:48

# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.82 Mbit/s
95th percentile per-packet one-way delay: 52.361 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 56.14 Mbit/s
95th percentile per-packet one-way delay: 52.685 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 33.29 Mbit/s
95th percentile per-packet one-way delay: 52.042 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 19.71 Mbit/s
95th percentile per-packet one-way delay: 52.094 ms
Loss rate: 0.40%
```
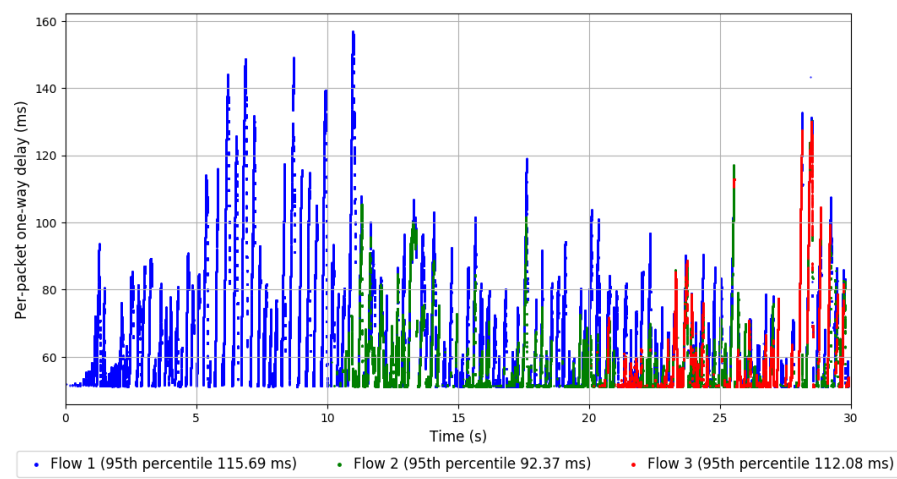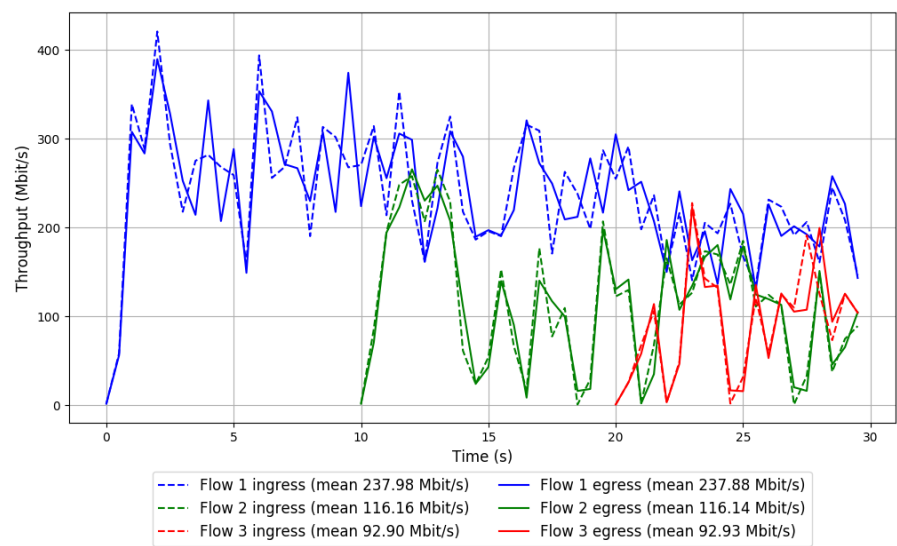
Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2017-09-22 09:24:48
End at: 2017-09-22 09:25:18

# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 366.76 Mbit/s
95th percentile per-packet one-way delay: 150.675 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 262.23 Mbit/s
95th percentile per-packet one-way delay: 164.931 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 111.84 Mbit/s
95th percentile per-packet one-way delay: 123.938 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 92.63 Mbit/s
95th percentile per-packet one-way delay: 137.184 ms
Loss rate: 2.88%
```
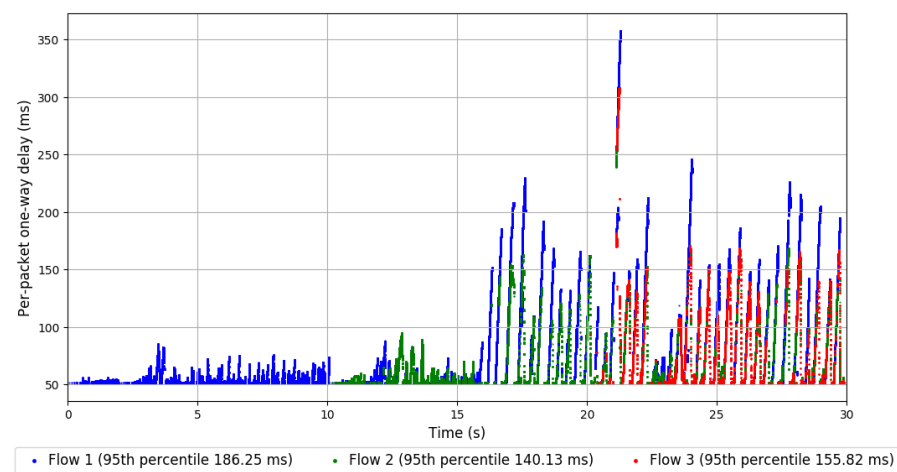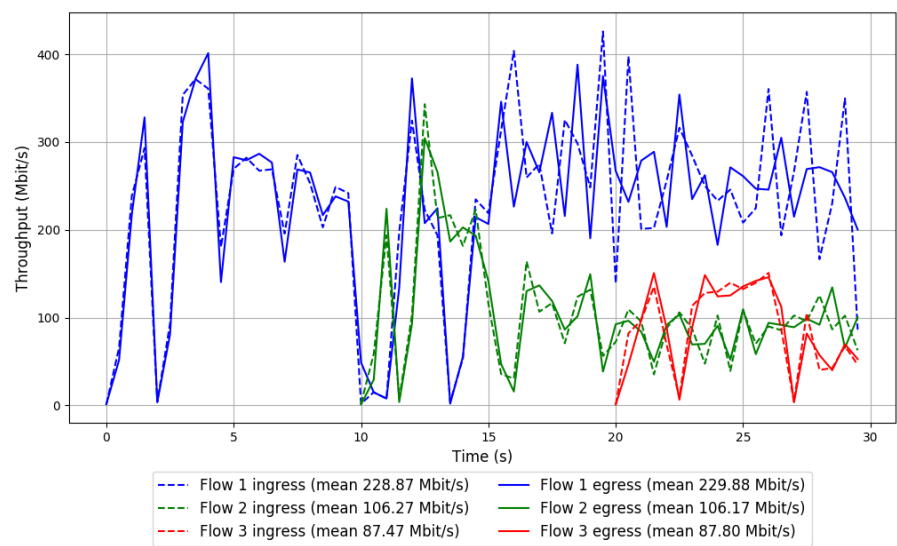
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2017-09-22 09:36:40
End at: 2017-09-22 09:37:10


# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.76 Mbit/s
95th percentile per-packet one-way delay: 123.591 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 215.95 Mbit/s
95th percentile per-packet one-way delay: 93.480 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 171.85 Mbit/s
95th percentile per-packet one-way delay: 163.349 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 133.57 Mbit/s
95th percentile per-packet one-way delay: 129.064 ms
Loss rate: 0.08%
```
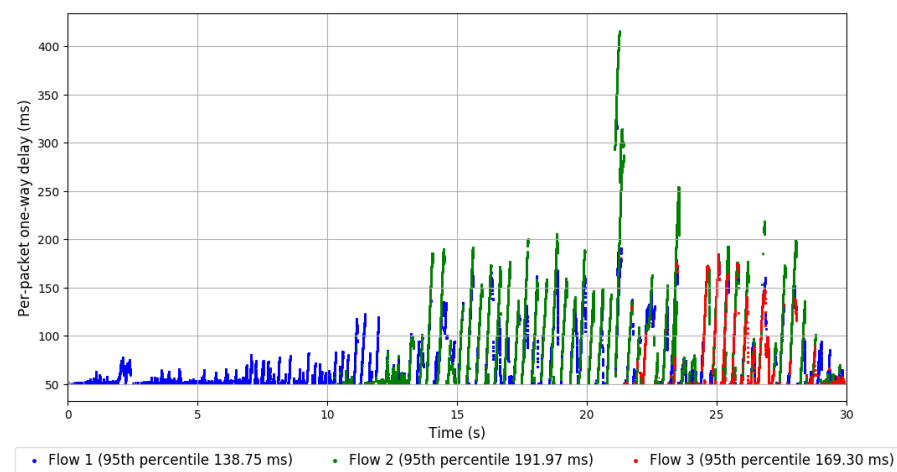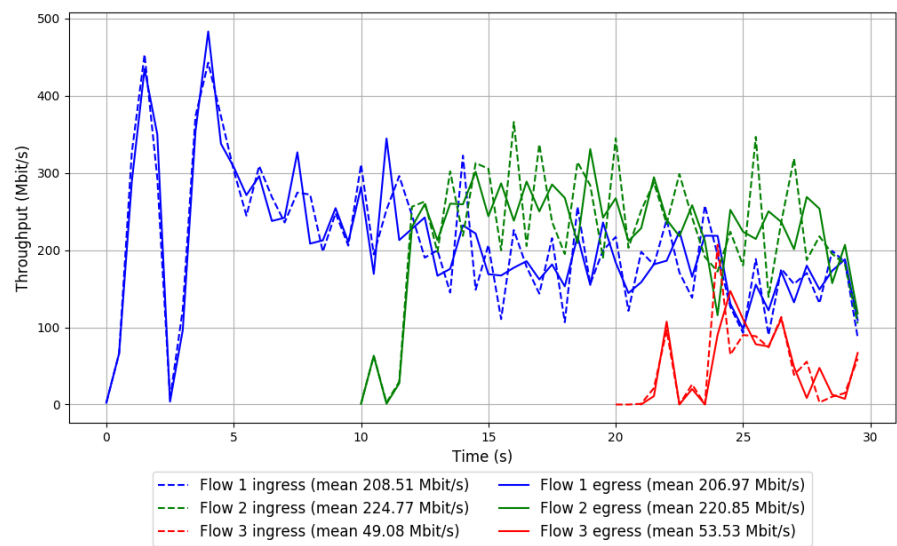
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2017-09-22 09:49:02
End at: 2017-09-22 09:49:32


# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.46 Mbit/s
95th percentile per-packet one-way delay: 109.688 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 237.88 Mbit/s
95th percentile per-packet one-way delay: 115.691 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 116.14 Mbit/s
95th percentile per-packet one-way delay: 92.369 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 112.080 ms
Loss rate: 0.00%
```
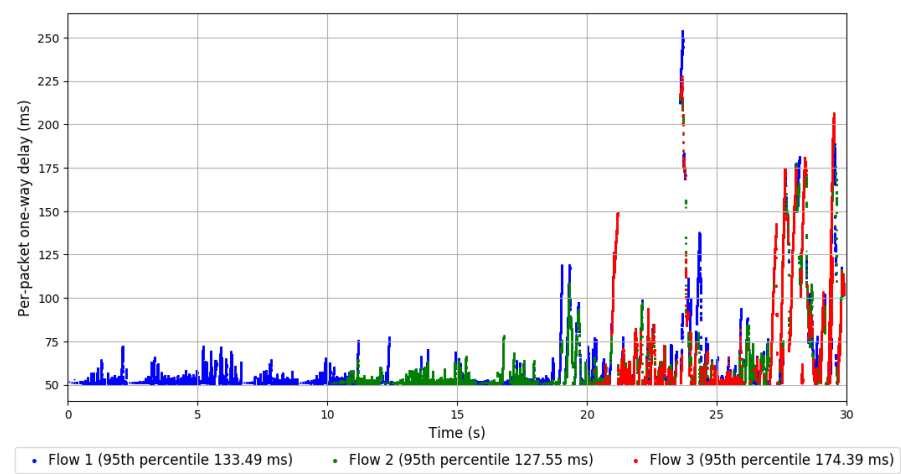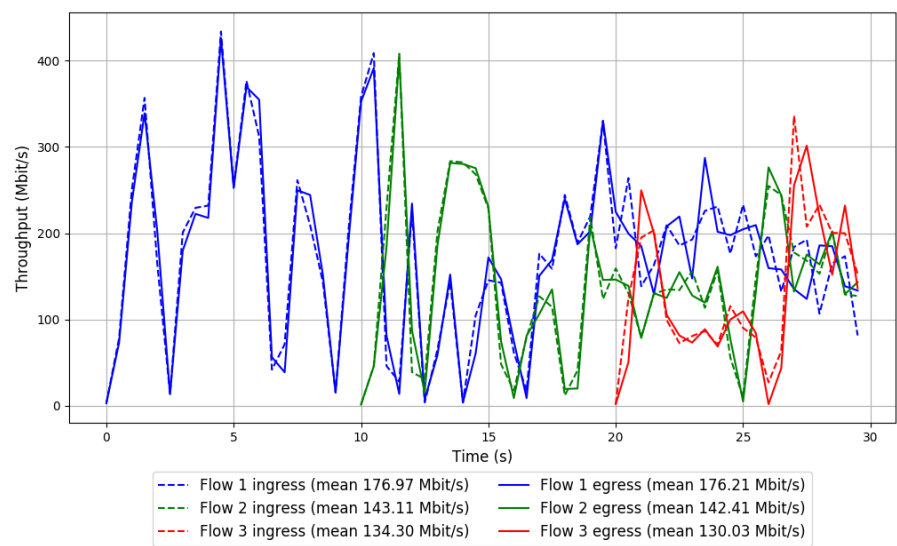
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2017-09-22 10:01:24
End at: 2017-09-22 10:01:54


# Below is generated by plot.py at 2017-09-22 13:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.75 Mbit/s
95th percentile per-packet one-way delay: 172.515 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 229.88 Mbit/s
95th percentile per-packet one-way delay: 186.255 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 106.17 Mbit/s
95th percentile per-packet one-way delay: 140.134 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 87.80 Mbit/s
95th percentile per-packet one-way delay: 155.818 ms
Loss rate: 0.05%
```

Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2017-09-22 10:13:54
End at: 2017-09-22 10:14:24


# Below is generated by plot.py at 2017-09-22 13:50:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 368.27 Mbit/s
95th percentile per-packet one-way delay: 169.587 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 206.97 Mbit/s
95th percentile per-packet one-way delay: 138.746 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 220.85 Mbit/s
95th percentile per-packet one-way delay: 191.966 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 53.53 Mbit/s
95th percentile per-packet one-way delay: 169.296 ms
Loss rate: 2.17%
```
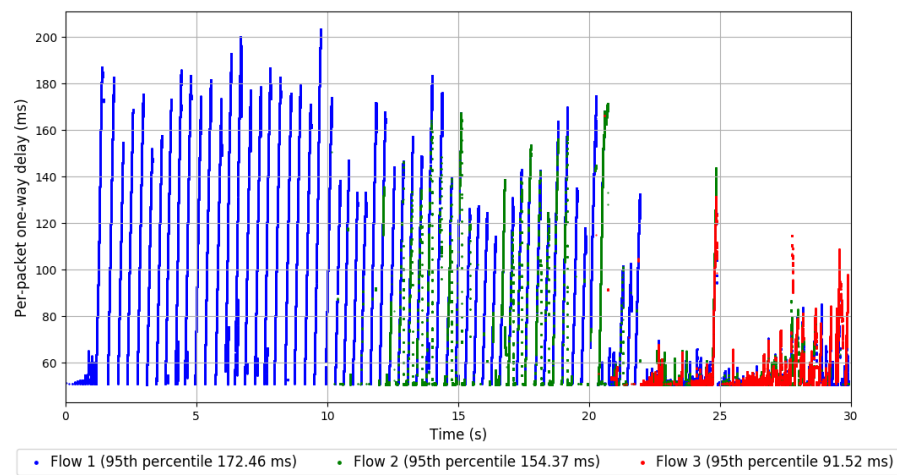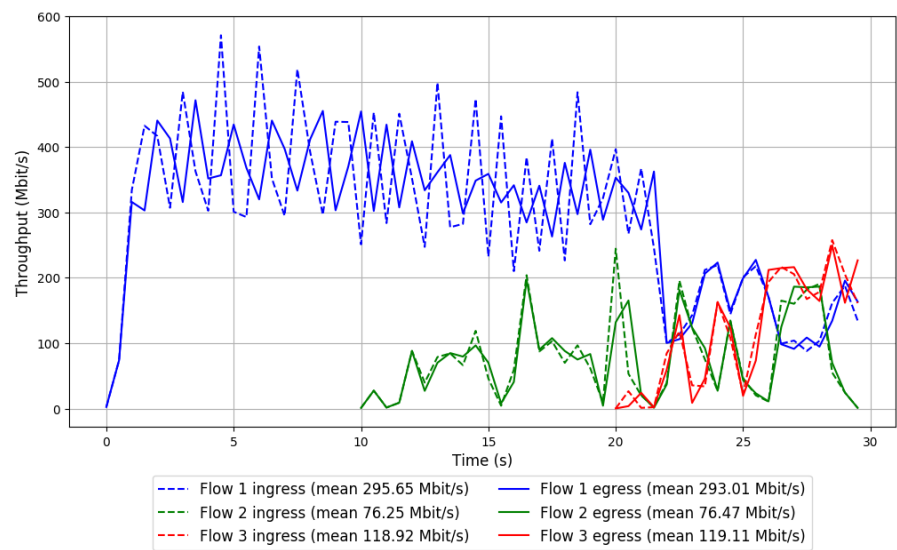
Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2017-09-22 10:26:22
End at: 2017-09-22 10:26:52


# Below is generated by plot.py at 2017-09-22 13:51:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 313.37 Mbit/s
95th percentile per-packet one-way delay: 145.446 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 176.21 Mbit/s
95th percentile per-packet one-way delay: 133.491 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 142.41 Mbit/s
95th percentile per-packet one-way delay: 127.546 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 130.03 Mbit/s
95th percentile per-packet one-way delay: 174.388 ms
Loss rate: 3.18%
```
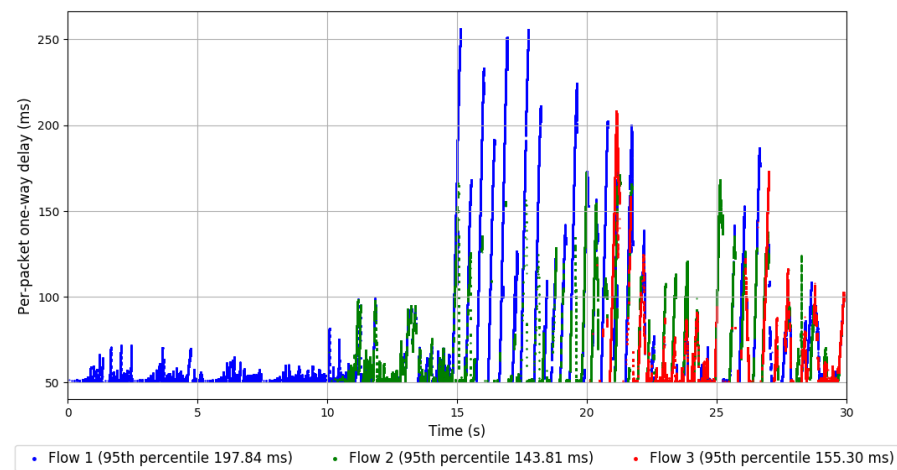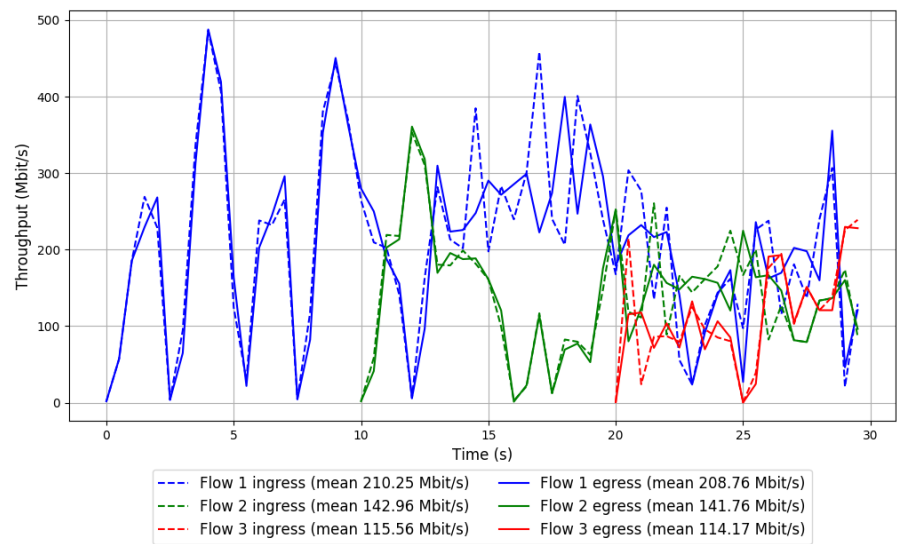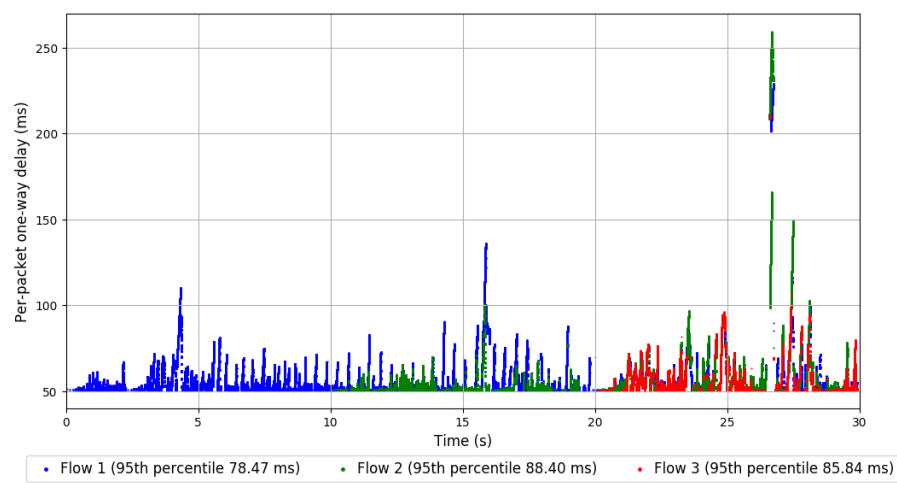
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2017-09-22 10:38:37
End at: 2017-09-22 10:39:07


# Below is generated by plot.py at 2017-09-22 13:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.98 Mbit/s
95th percentile per-packet one-way delay: 169.691 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 293.01 Mbit/s
95th percentile per-packet one-way delay: 172.459 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 76.47 Mbit/s
95th percentile per-packet one-way delay: 154.374 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 119.11 Mbit/s
95th percentile per-packet one-way delay: 91.520 ms
Loss rate: 0.01%
```
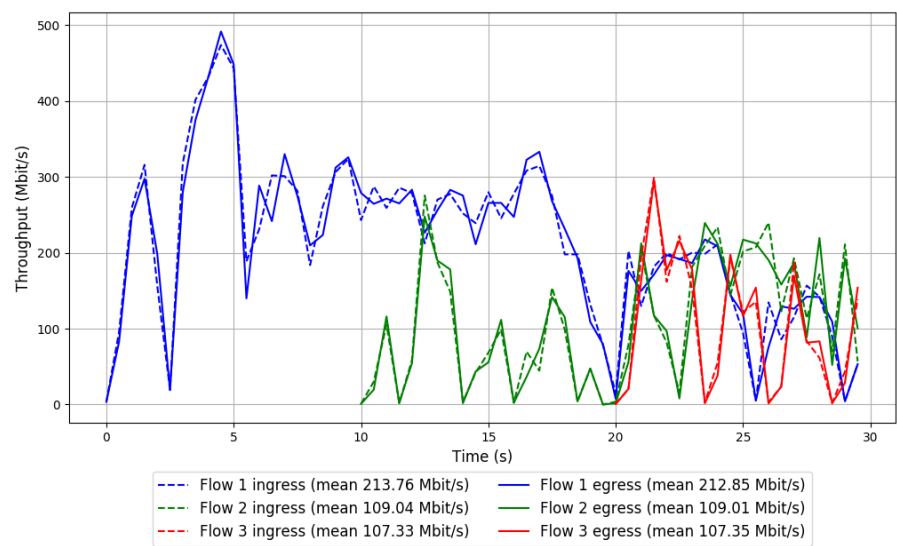
Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2017-09-22 10:51:04
End at: 2017-09-22 10:51:34


# Below is generated by plot.py at 2017-09-22 13:55:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 340.42 Mbit/s
95th percentile per-packet one-way delay: 176.296 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 208.76 Mbit/s
95th percentile per-packet one-way delay: 197.842 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 141.76 Mbit/s
95th percentile per-packet one-way delay: 143.807 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 114.17 Mbit/s
95th percentile per-packet one-way delay: 155.301 ms
Loss rate: 1.21%
```
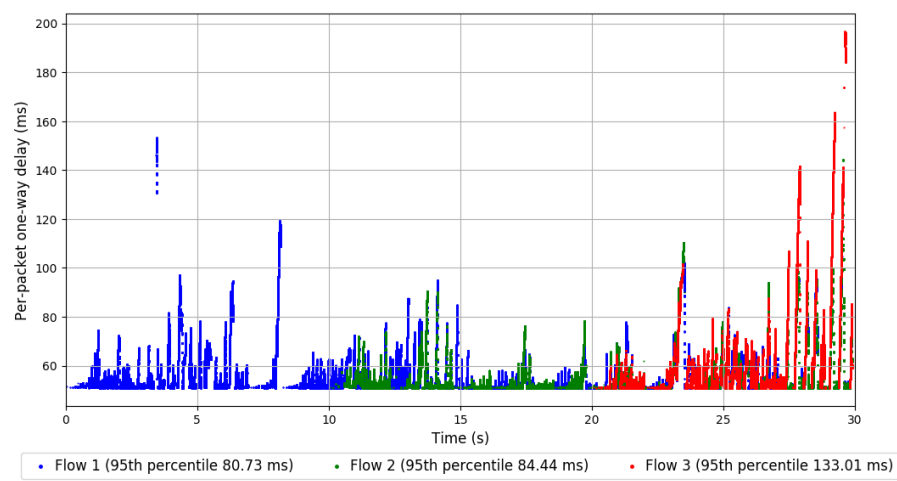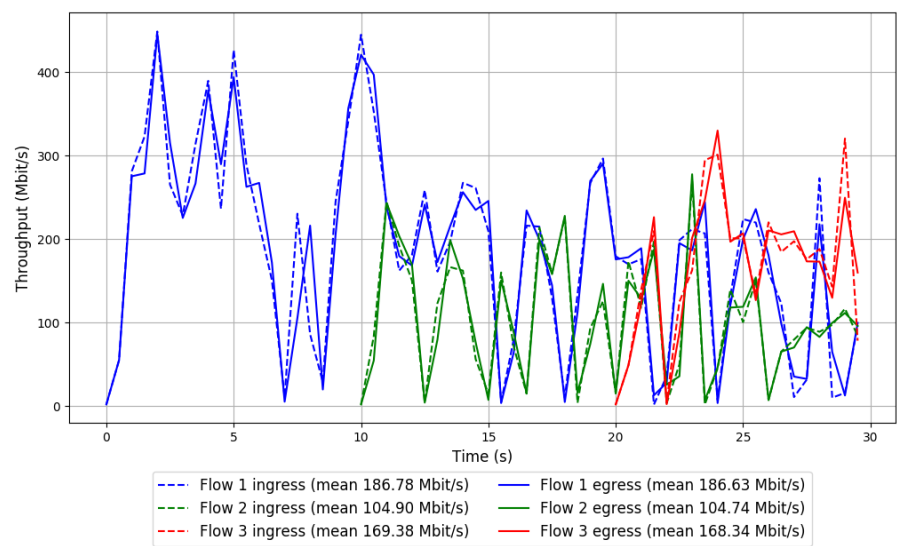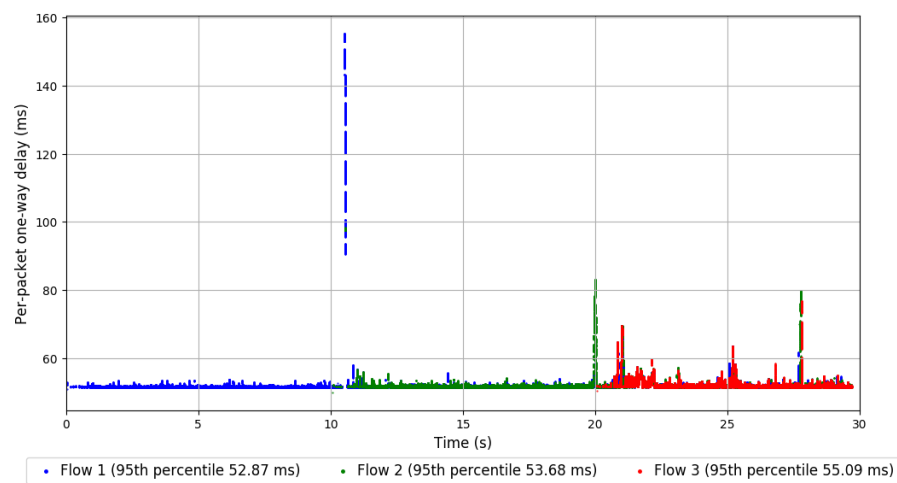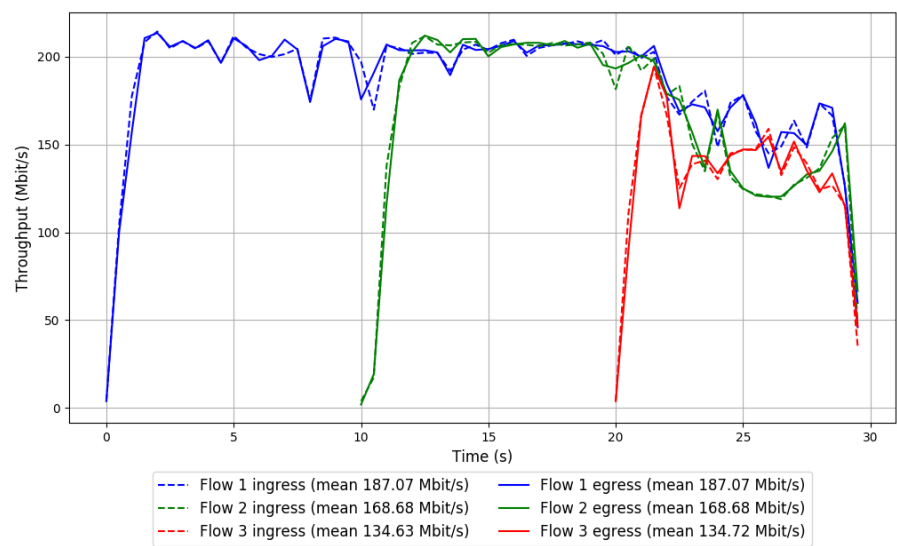
Run 8: Report of Verus — Data Link

```
Run 9: Statistics of Verus

Start at: 2017-09-22 11:03:19
End at: 2017-09-22 11:03:49


# Below is generated by plot.py at 2017-09-22 13:55:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.05 Mbit/s
95th percentile per-packet one-way delay: 81.557 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 212.85 Mbit/s
95th percentile per-packet one-way delay: 78.467 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 109.01 Mbit/s
95th percentile per-packet one-way delay: 88.403 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 107.35 Mbit/s
95th percentile per-packet one-way delay: 85.841 ms
Loss rate: 0.00%
```

Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2017-09-22 11:15:42
End at: 2017-09-22 11:16:12


# Below is generated by plot.py at 2017-09-22 13:55:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.60 Mbit/s
95th percentile per-packet one-way delay: 90.627 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 186.63 Mbit/s
95th percentile per-packet one-way delay: 80.728 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 104.74 Mbit/s
95th percentile per-packet one-way delay: 84.442 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 168.34 Mbit/s
95th percentile per-packet one-way delay: 133.010 ms
Loss rate: 0.61%
```
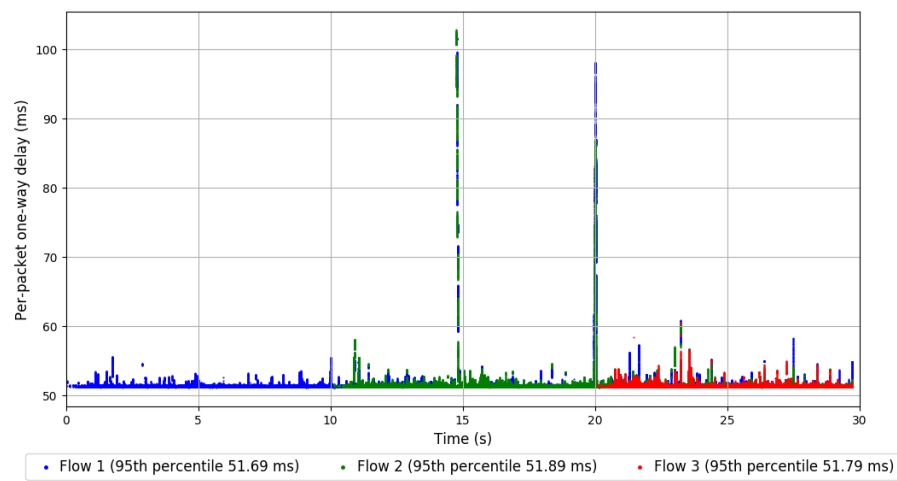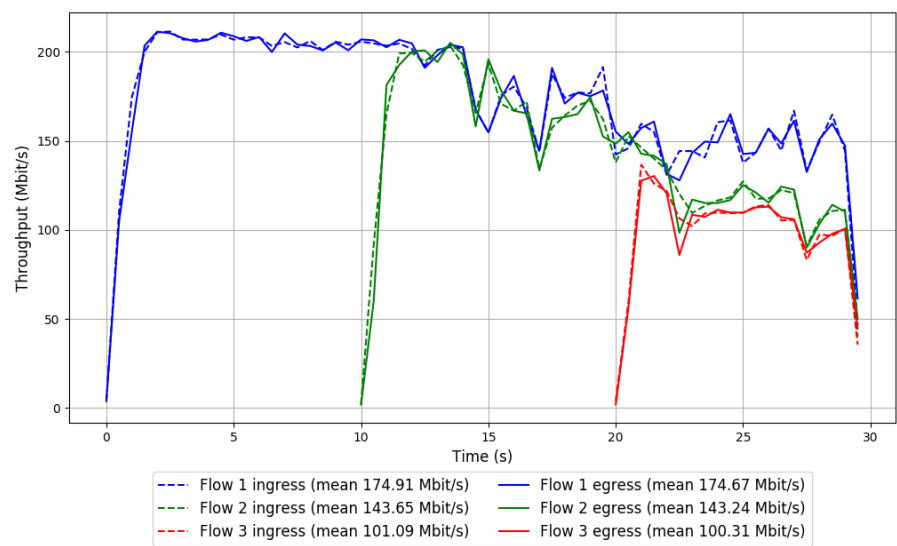
Run 10: Report of Verus — Data Link

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```
Run 1: Statistics of Indigo

Start at: 2017-09-22 09:33:35
End at: 2017-09-22 09:34:05

# Below is generated by plot.py at 2017-09-22 13:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.44 Mbit/s
95th percentile per-packet one-way delay: 53.560 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 187.07 Mbit/s
95th percentile per-packet one-way delay: 52.870 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 168.68 Mbit/s
95th percentile per-packet one-way delay: 53.684 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 134.72 Mbit/s
95th percentile per-packet one-way delay: 55.092 ms
Loss rate: 0.00%
```
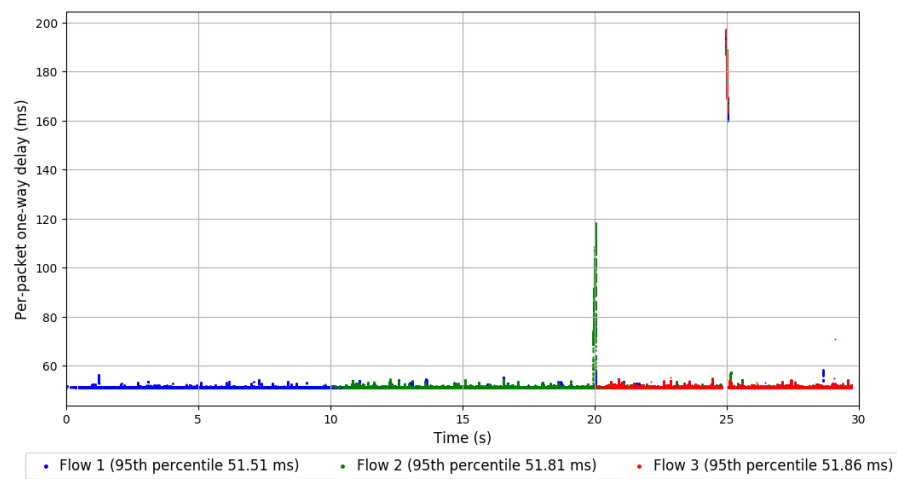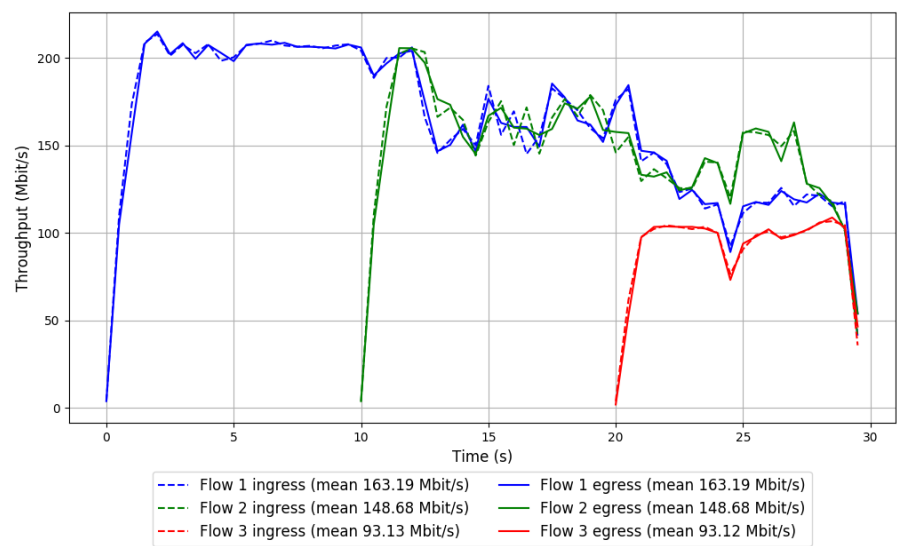
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2017-09-22 09:46:00
End at: 2017-09-22 09:46:30

# Below is generated by plot.py at 2017-09-22 13:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 301.79 Mbit/s
95th percentile per-packet one-way delay: 51.757 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 174.67 Mbit/s
95th percentile per-packet one-way delay: 51.687 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 143.24 Mbit/s
95th percentile per-packet one-way delay: 51.892 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 100.31 Mbit/s
95th percentile per-packet one-way delay: 51.789 ms
Loss rate: 0.78%
```
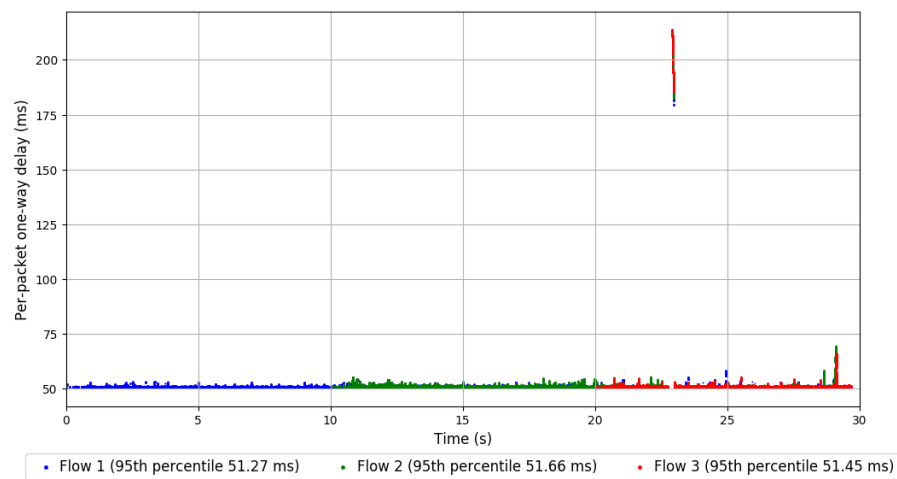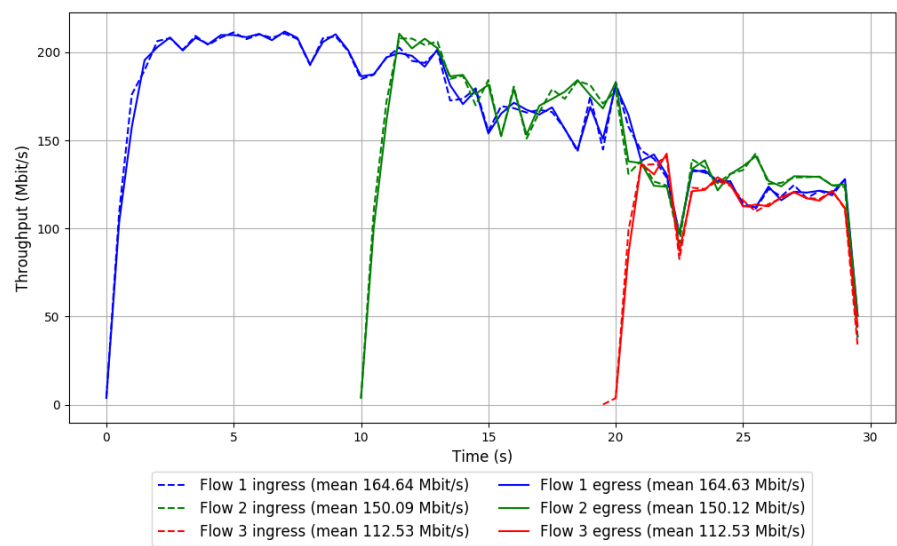
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2017-09-22 09:58:20
End at: 2017-09-22 09:58:50

# Below is generated by plot.py at 2017-09-22 13:56:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.01 Mbit/s
95th percentile per-packet one-way delay: 51.633 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 163.19 Mbit/s
95th percentile per-packet one-way delay: 51.505 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 148.68 Mbit/s
95th percentile per-packet one-way delay: 51.814 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 93.12 Mbit/s
95th percentile per-packet one-way delay: 51.860 ms
Loss rate: 0.01%
```
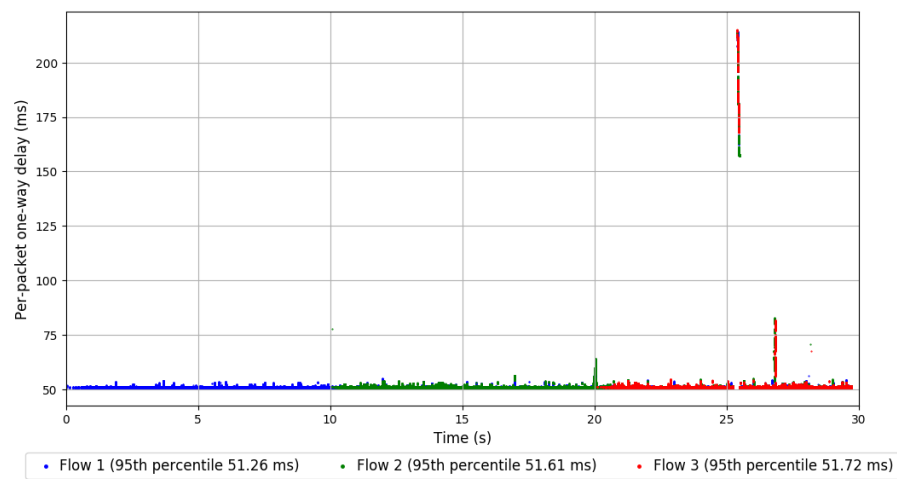
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2017-09-22 10:10:52
End at: 2017-09-22 10:11:22


# Below is generated by plot.py at 2017-09-22 13:57:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.66 Mbit/s
95th percentile per-packet one-way delay: 51.414 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 164.63 Mbit/s
95th percentile per-packet one-way delay: 51.275 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 150.12 Mbit/s
95th percentile per-packet one-way delay: 51.655 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 112.53 Mbit/s
95th percentile per-packet one-way delay: 51.449 ms
Loss rate: 0.00%
```
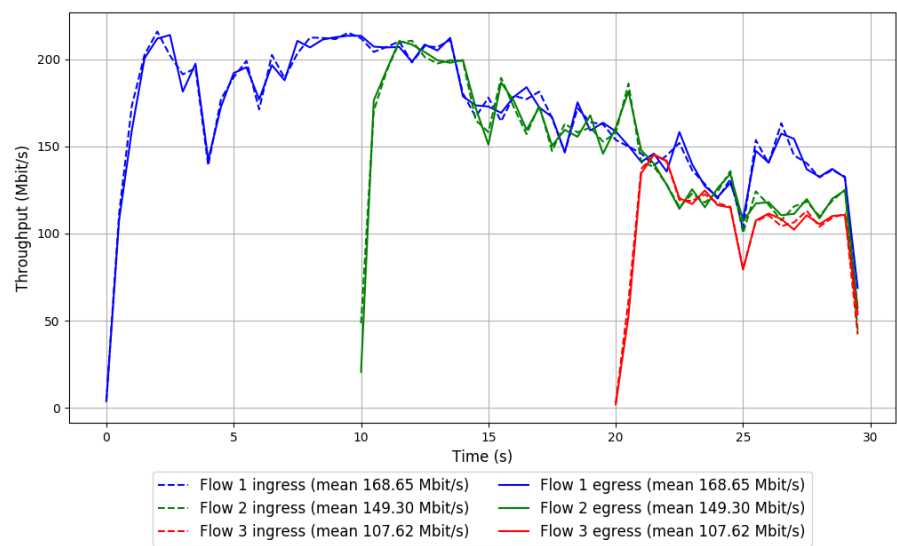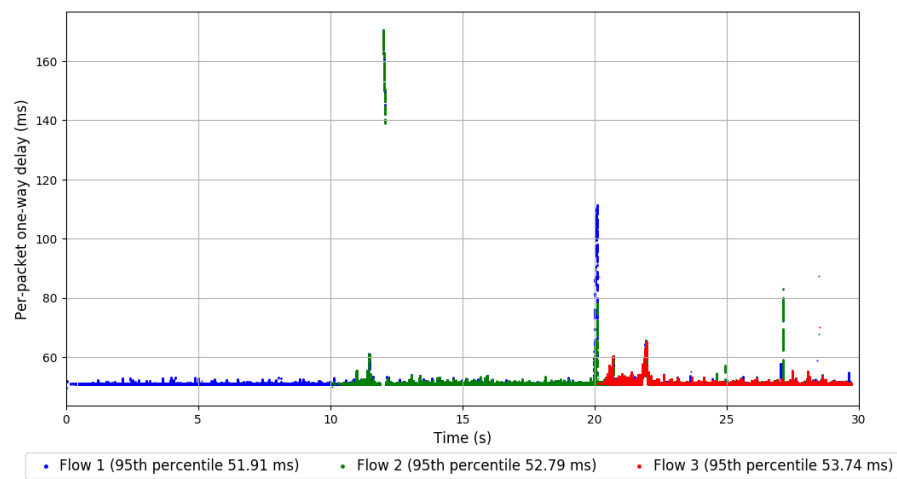
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2017-09-22 10:23:20
End at: 2017-09-22 10:23:50

# Below is generated by plot.py at 2017-09-22 13:59:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 302.41 Mbit/s
95th percentile per-packet one-way delay: 51.410 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 168.65 Mbit/s
95th percentile per-packet one-way delay: 51.259 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 149.30 Mbit/s
95th percentile per-packet one-way delay: 51.607 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 107.62 Mbit/s
95th percentile per-packet one-way delay: 51.721 ms
Loss rate: 0.00%
```
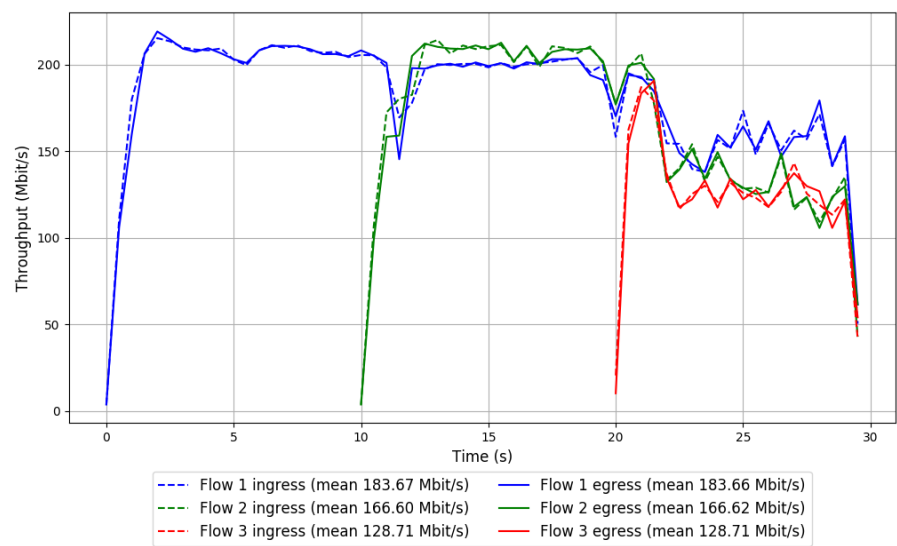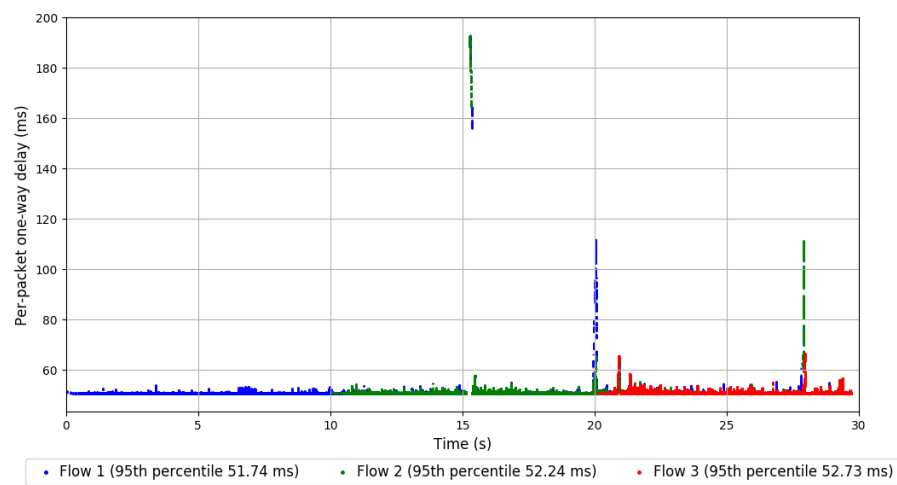
Run 5: Report of Indigo — Data Link

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```
Run 6: Statistics of Indigo

Start at: 2017-09-22 10:35:33
End at: 2017-09-22 10:36:03

# Below is generated by plot.py at 2017-09-22 14:01:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.64 Mbit/s
95th percentile per-packet one-way delay: 52.444 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 183.66 Mbit/s
95th percentile per-packet one-way delay: 51.908 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 166.62 Mbit/s
95th percentile per-packet one-way delay: 52.790 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 128.71 Mbit/s
95th percentile per-packet one-way delay: 53.740 ms
Loss rate: 0.00%
```
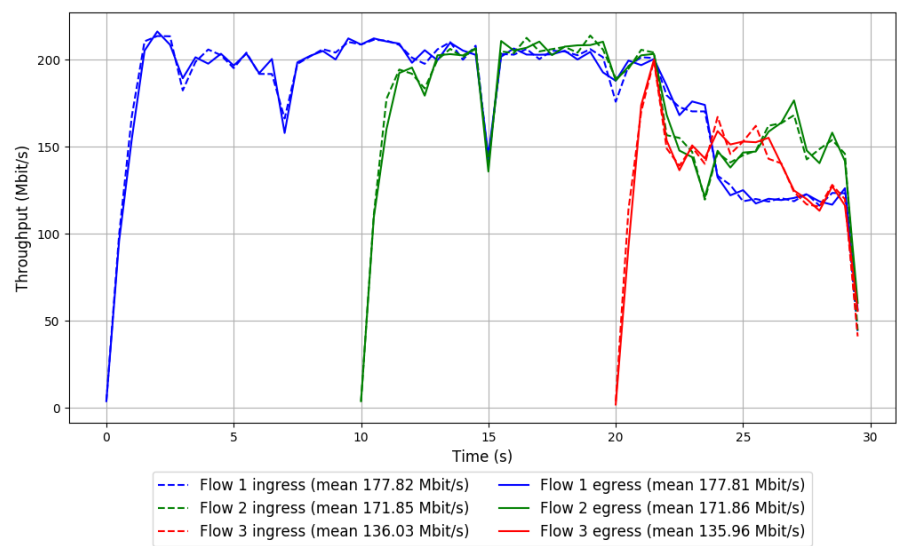
Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2017-09-22 10:48:00
End at: 2017-09-22 10:48:30


# Below is generated by plot.py at 2017-09-22 14:01:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.79 Mbit/s
95th percentile per-packet one-way delay: 52.061 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 177.81 Mbit/s
95th percentile per-packet one-way delay: 51.739 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 171.86 Mbit/s
95th percentile per-packet one-way delay: 52.245 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 135.96 Mbit/s
95th percentile per-packet one-way delay: 52.726 ms
Loss rate: 0.04%
```
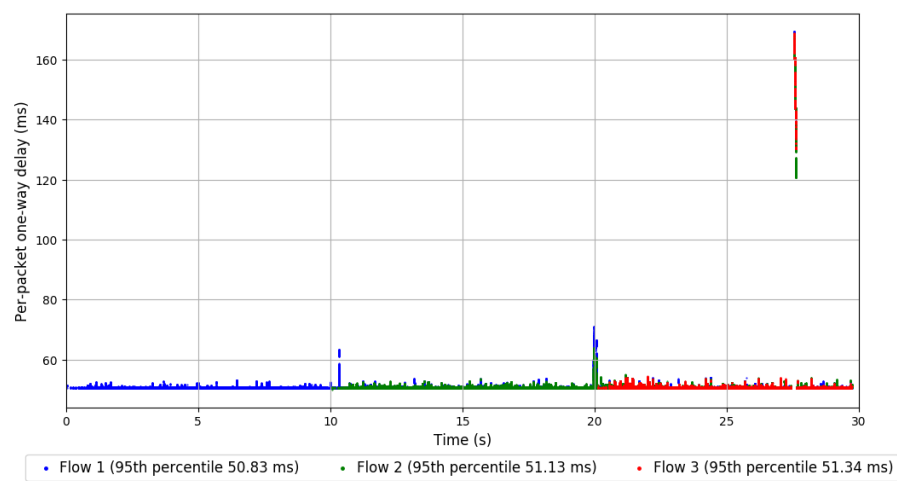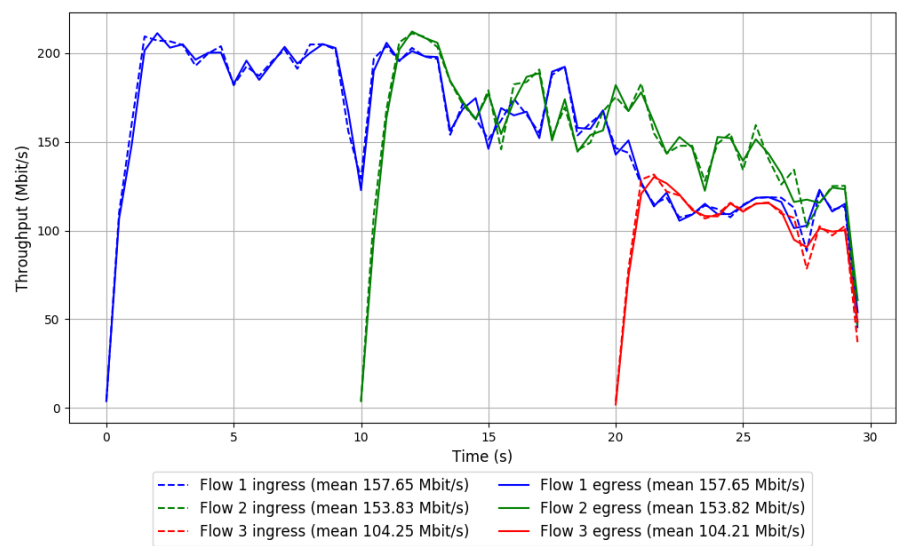
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2017-09-22 11:00:18
End at: 2017-09-22 11:00:48


# Below is generated by plot.py at 2017-09-22 14:01:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.33 Mbit/s
95th percentile per-packet one-way delay: 50.981 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 157.65 Mbit/s
95th percentile per-packet one-way delay: 50.833 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 153.82 Mbit/s
95th percentile per-packet one-way delay: 51.130 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 104.21 Mbit/s
95th percentile per-packet one-way delay: 51.335 ms
Loss rate: 0.04%
```
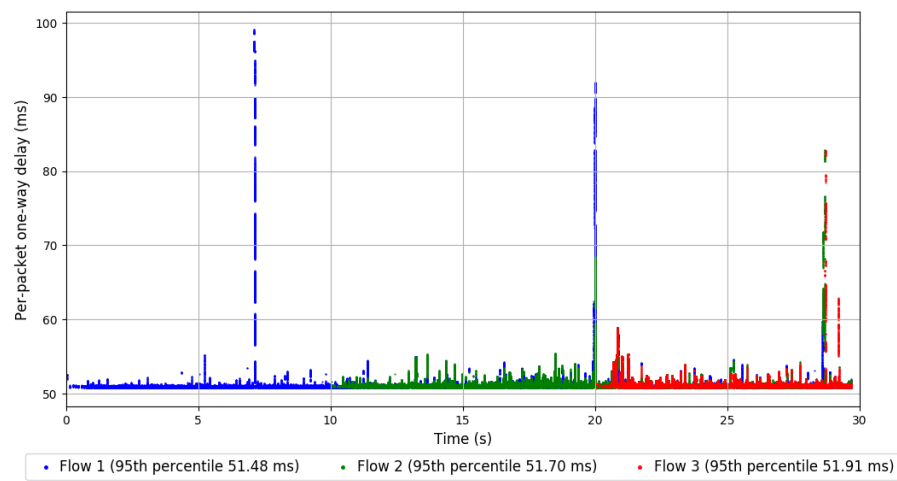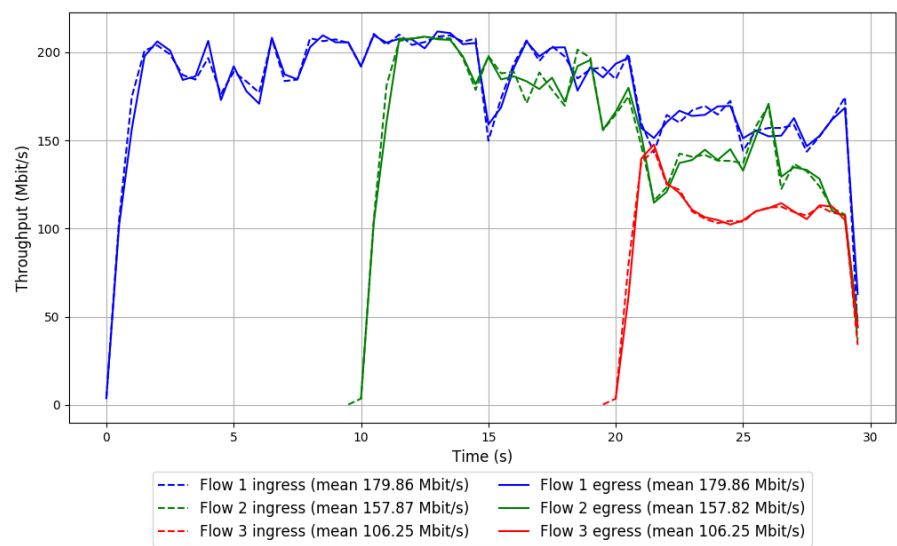
Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2017-09-22 11:12:38
End at: 2017-09-22 11:13:08

# Below is generated by plot.py at 2017-09-22 14:01:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 319.14 Mbit/s
95th percentile per-packet one-way delay: 51.592 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 179.86 Mbit/s
95th percentile per-packet one-way delay: 51.484 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 157.82 Mbit/s
95th percentile per-packet one-way delay: 51.696 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 106.25 Mbit/s
95th percentile per-packet one-way delay: 51.915 ms
Loss rate: 0.01%
```
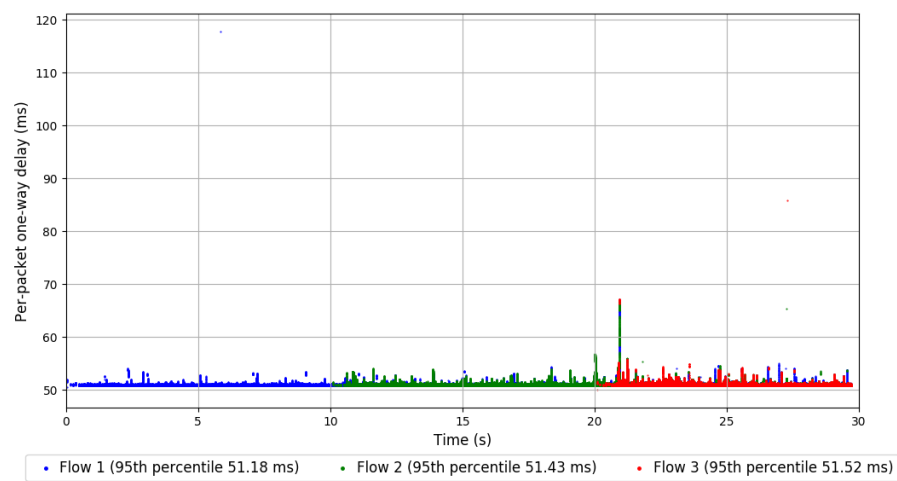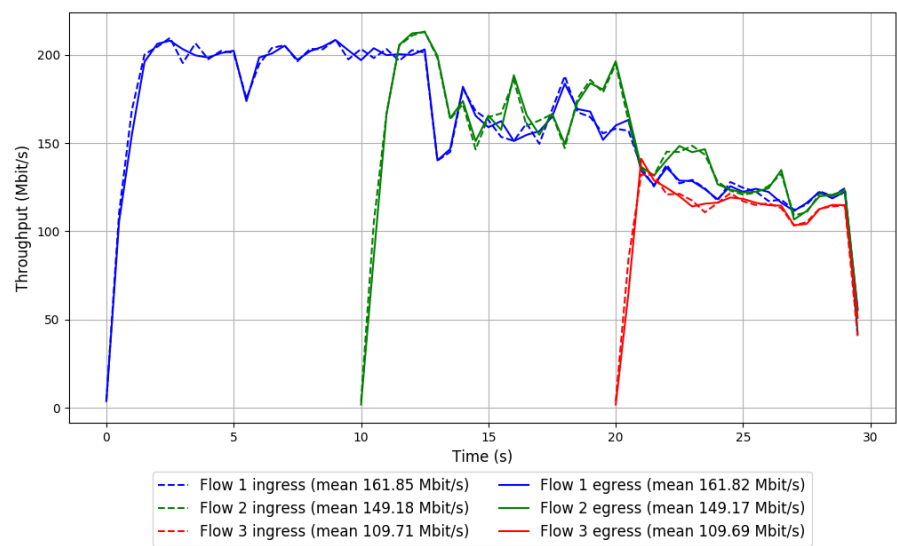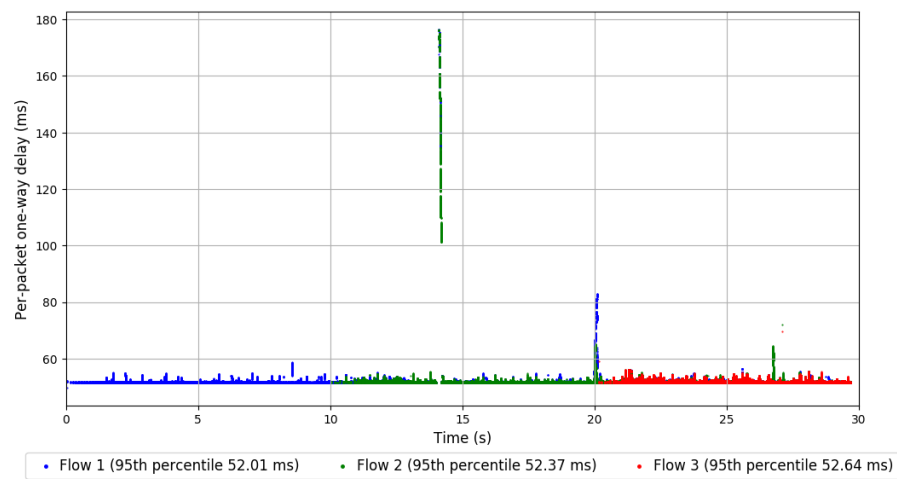
Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2017-09-22 11:24:54
End at: 2017-09-22 11:25:24


# Below is generated by plot.py at 2017-09-22 14:01:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.11 Mbit/s
95th percentile per-packet one-way delay: 51.307 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 161.82 Mbit/s
95th percentile per-packet one-way delay: 51.177 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 149.17 Mbit/s
95th percentile per-packet one-way delay: 51.433 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 109.69 Mbit/s
95th percentile per-packet one-way delay: 51.523 ms
Loss rate: 0.01%
```

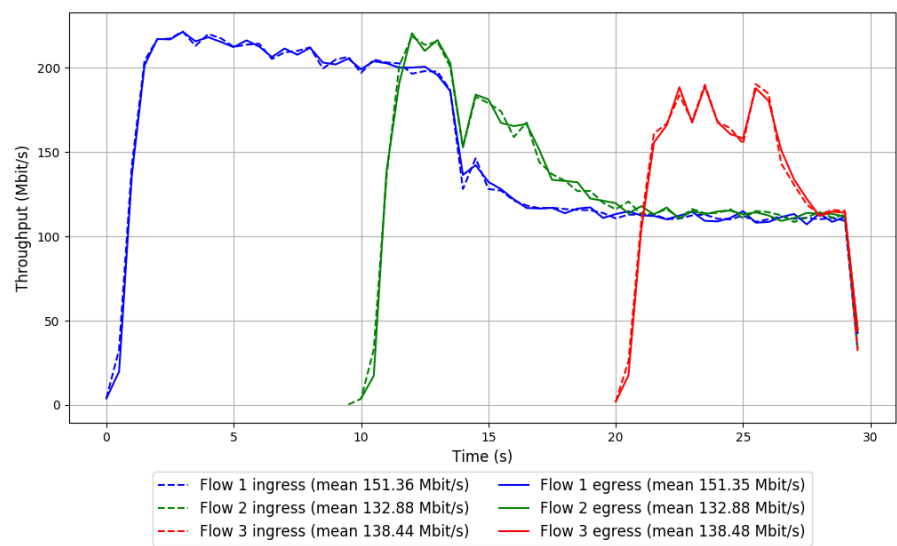# Run 10: Report of Indigo — Data Link

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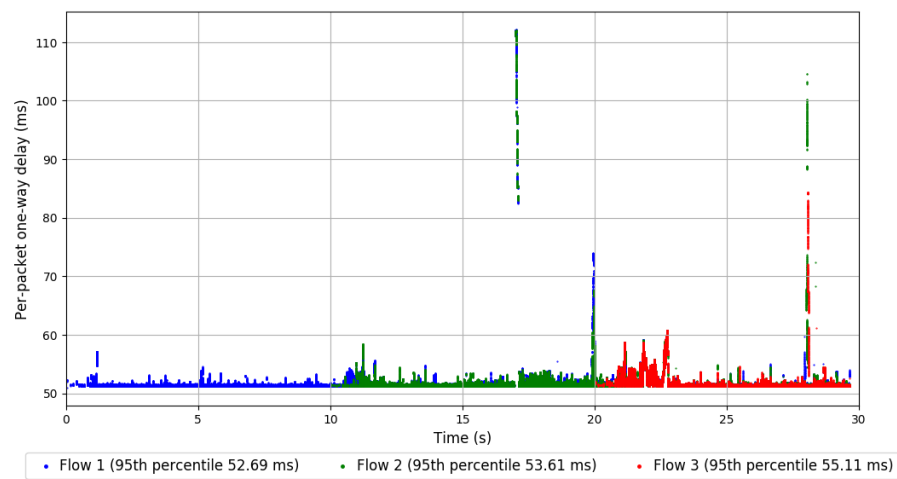
```
Run 1: Statistics of Indigo-calib

Start at: 2017-09-22 09:27:31
End at: 2017-09-22 09:28:01

# Below is generated by plot.py at 2017-09-22 14:01:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 283.88 Mbit/s
95th percentile per-packet one-way delay: 52.238 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 151.35 Mbit/s
95th percentile per-packet one-way delay: 52.008 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 132.88 Mbit/s
95th percentile per-packet one-way delay: 52.369 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 138.48 Mbit/s
95th percentile per-packet one-way delay: 52.638 ms
Loss rate: 0.01%
```

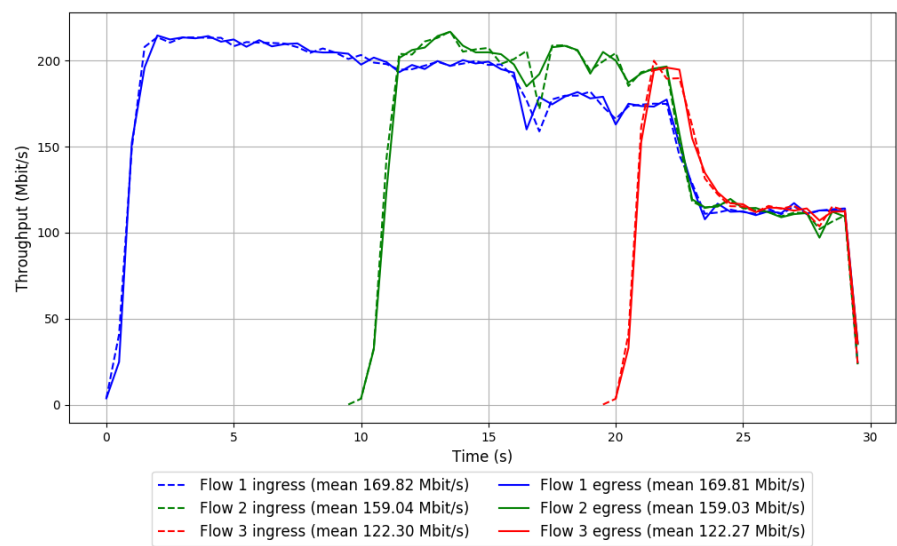Run 1: Report of Indigo-calib — Data Link

```
Run 2: Statistics of Indigo-calib

Start at: 2017-09-22 09:39:28
End at: 2017-09-22 09:39:58

# Below is generated by plot.py at 2017-09-22 14:03:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 315.04 Mbit/s
95th percentile per-packet one-way delay: 53.410 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 169.81 Mbit/s
95th percentile per-packet one-way delay: 52.692 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 159.03 Mbit/s
95th percentile per-packet one-way delay: 53.609 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 122.27 Mbit/s
95th percentile per-packet one-way delay: 55.114 ms
Loss rate: 0.01%
```

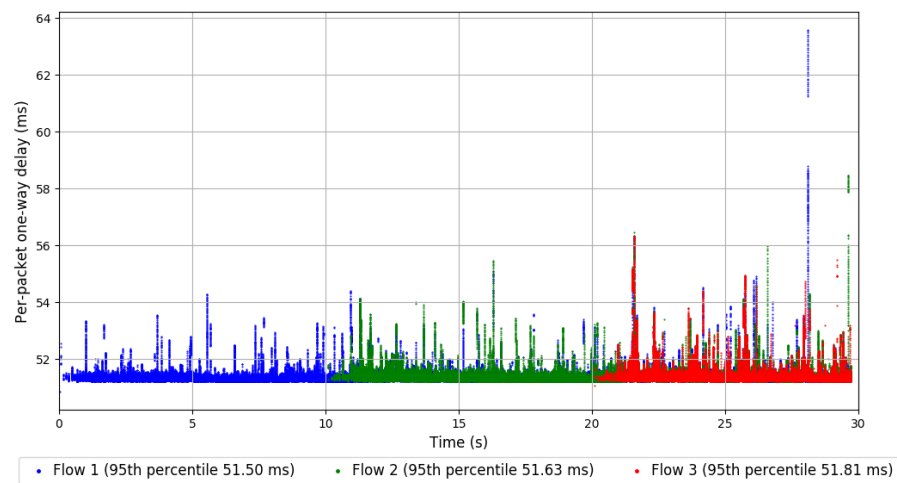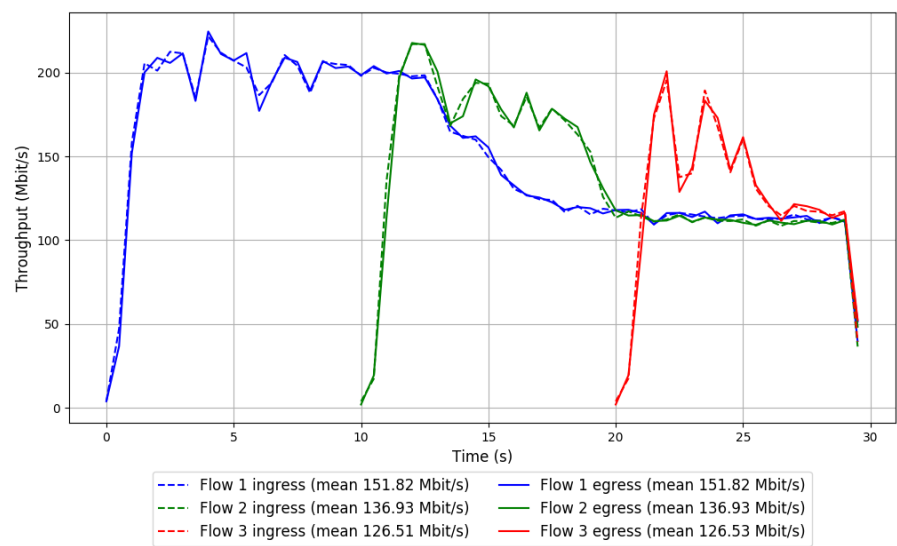Run 2: Report of Indigo-calib — Data Link

```
Run 3: Statistics of Indigo-calib

Start at: 2017-09-22 09:51:50
End at: 2017-09-22 09:52:20

# Below is generated by plot.py at 2017-09-22 14:05:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 283.27 Mbit/s
95th percentile per-packet one-way delay: 51.583 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 151.82 Mbit/s
95th percentile per-packet one-way delay: 51.501 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 136.93 Mbit/s
95th percentile per-packet one-way delay: 51.634 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 126.53 Mbit/s
95th percentile per-packet one-way delay: 51.807 ms
Loss rate: 0.00%
```

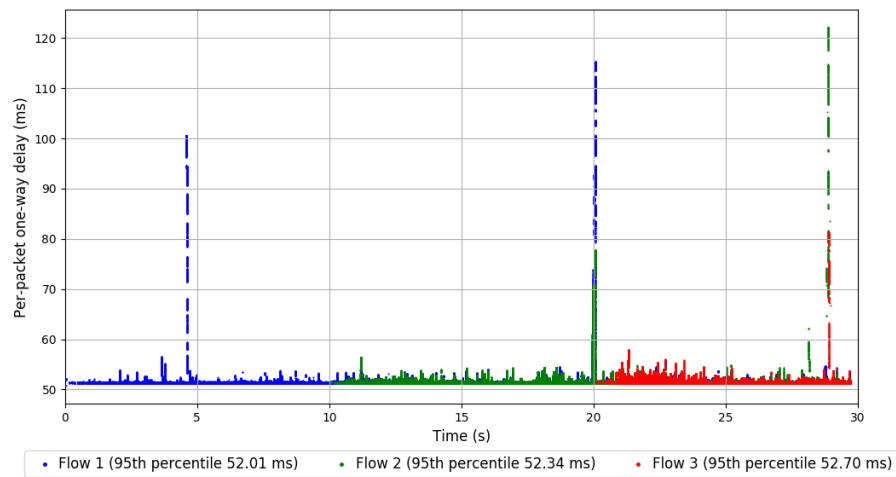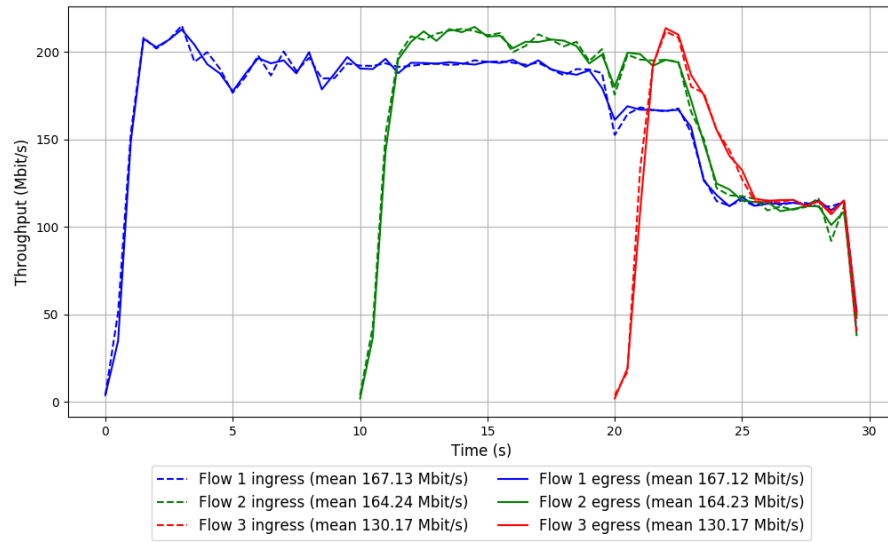Run 3: Report of Indigo-calib — Data Link

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```
Run 4: Statistics of Indigo-calib

Start at: 2017-09-22 10:04:11
End at: 2017-09-22 10:04:41


# Below is generated by plot.py at 2017-09-22 14:07:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.92 Mbit/s
95th percentile per-packet one-way delay: 52.252 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 167.12 Mbit/s
95th percentile per-packet one-way delay: 52.009 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 164.23 Mbit/s
95th percentile per-packet one-way delay: 52.345 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 130.17 Mbit/s
95th percentile per-packet one-way delay: 52.704 ms
Loss rate: 0.00%
```

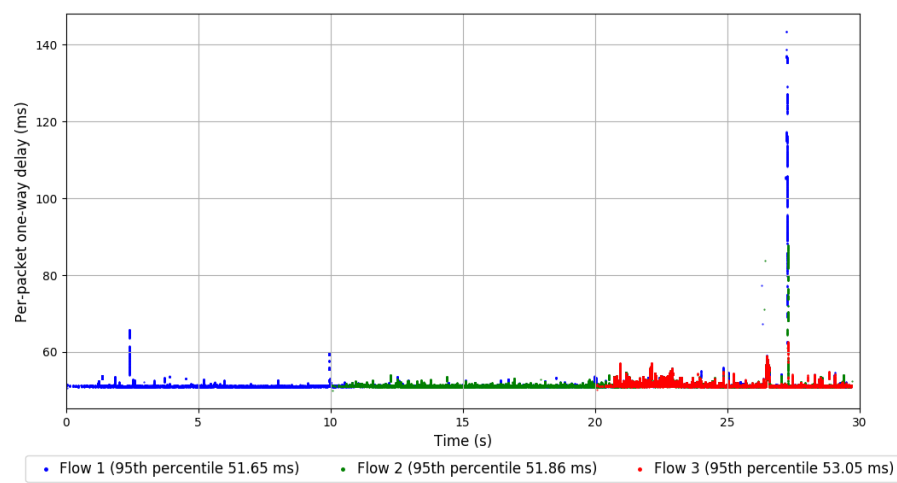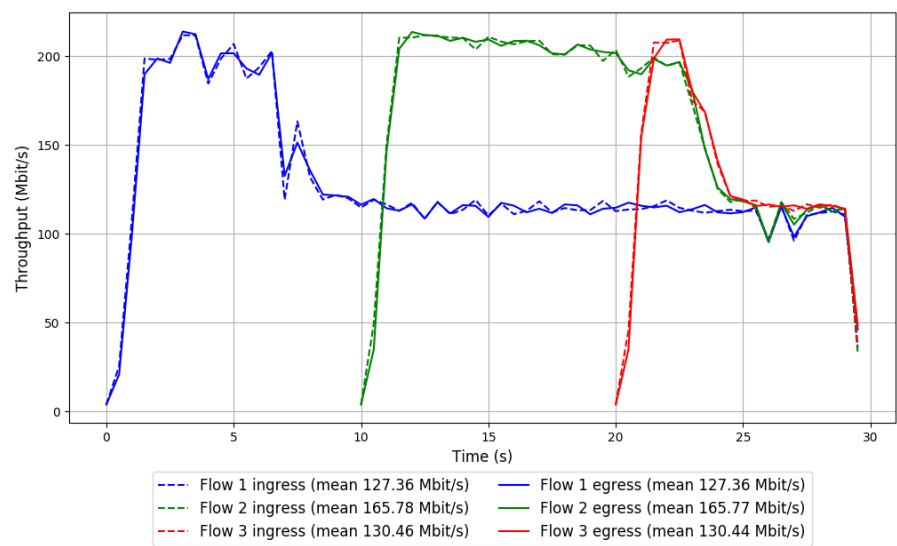Run 4: Report of Indigo-calib — Data Link

```
Run 5: Statistics of Indigo-calib

Start at: 2017-09-22 10:16:43
End at: 2017-09-22 10:17:13


# Below is generated by plot.py at 2017-09-22 14:07:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 279.48 Mbit/s
95th percentile per-packet one-way delay: 51.991 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 127.36 Mbit/s
95th percentile per-packet one-way delay: 51.649 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 165.77 Mbit/s
95th percentile per-packet one-way delay: 51.861 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 130.44 Mbit/s
95th percentile per-packet one-way delay: 53.054 ms
Loss rate: 0.00%
```
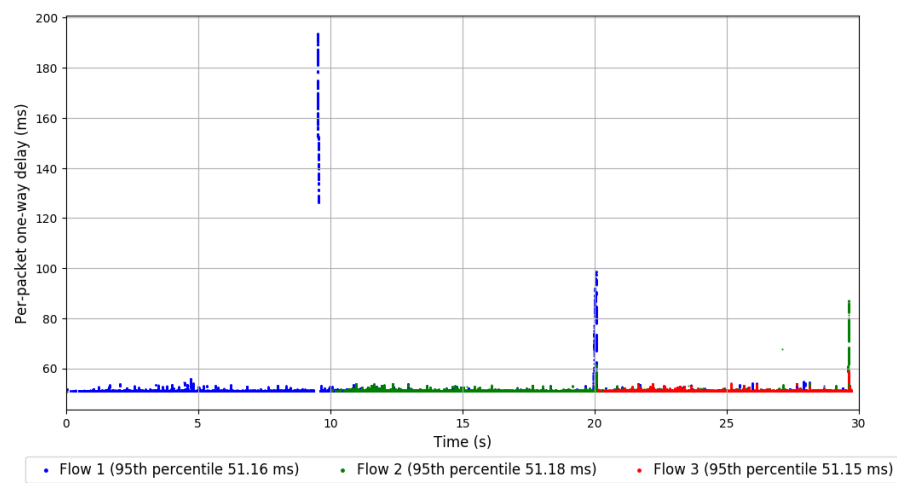
Run 5: Report of Indigo-calib — Data Link

```
Run 6: Statistics of Indigo-calib

Start at: 2017-09-22 10:29:06
End at: 2017-09-22 10:29:36


# Below is generated by plot.py at 2017-09-22 14:07:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.48 Mbit/s
95th percentile per-packet one-way delay: 51.166 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 146.28 Mbit/s
95th percentile per-packet one-way delay: 51.164 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 133.46 Mbit/s
95th percentile per-packet one-way delay: 51.176 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 111.04 Mbit/s
95th percentile per-packet one-way delay: 51.148 ms
Loss rate: 0.00%
```
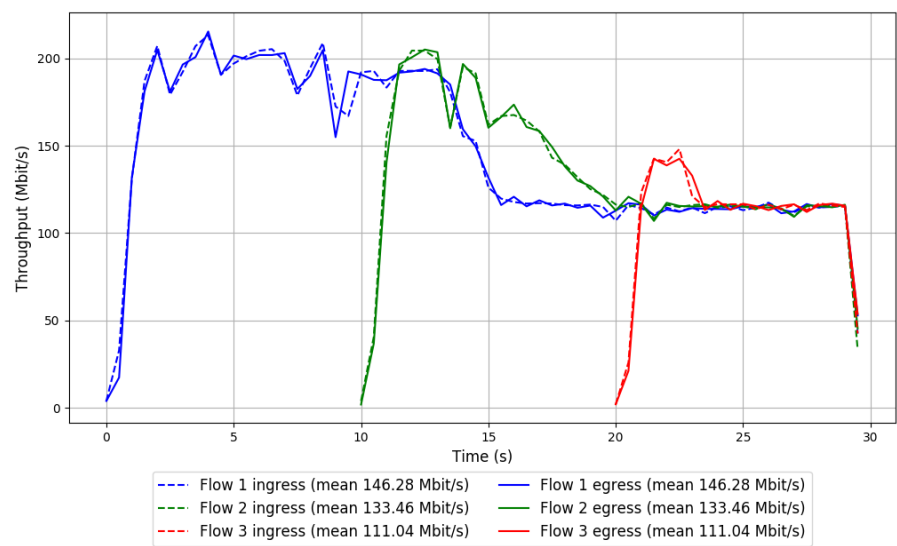
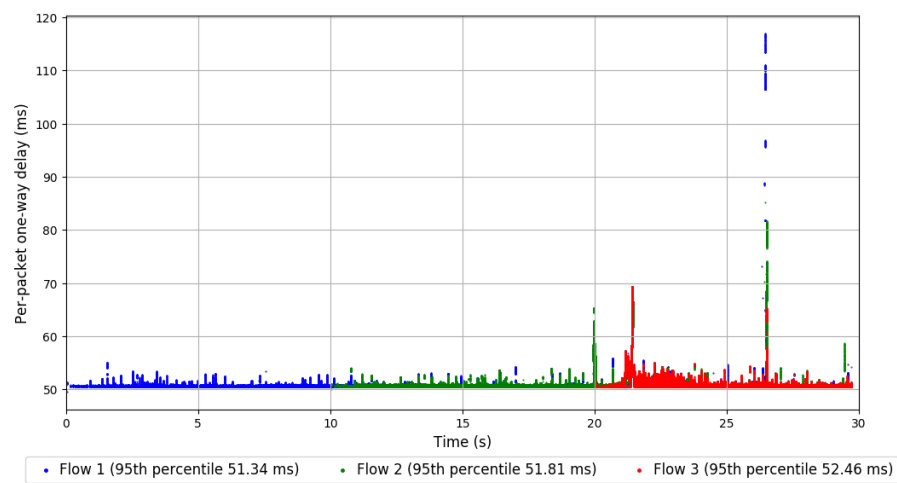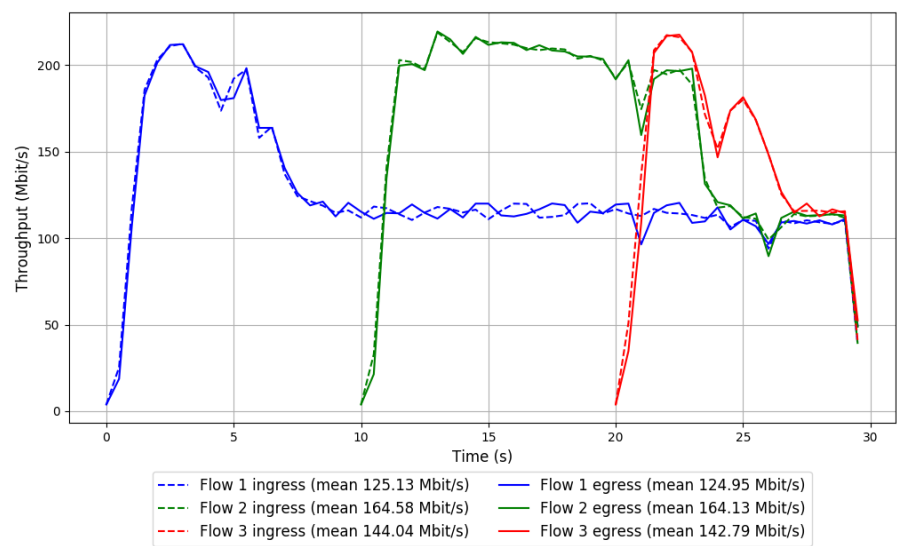Run 6: Report of Indigo-calib — Data Link

255

```
Run 7: Statistics of Indigo-calib

Start at: 2017-09-22 10:41:26
End at: 2017-09-22 10:41:56


# Below is generated by plot.py at 2017-09-22 14:07:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 280.14 Mbit/s
95th percentile per-packet one-way delay: 51.797 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 124.95 Mbit/s
95th percentile per-packet one-way delay: 51.339 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 164.13 Mbit/s
95th percentile per-packet one-way delay: 51.813 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 142.79 Mbit/s
95th percentile per-packet one-way delay: 52.459 ms
Loss rate: 0.84%
```

Run 7: Report of Indigo-calib — Data Link

```
Run 8: Statistics of Indigo-calib

Start at: 2017-09-22 10:53:50
End at: 2017-09-22 10:54:20


# Below is generated by plot.py at 2017-09-22 14:07:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 261.08 Mbit/s
95th percentile per-packet one-way delay: 50.822 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 145.24 Mbit/s
95th percentile per-packet one-way delay: 50.758 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 122.81 Mbit/s
95th percentile per-packet one-way delay: 50.888 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 106.49 Mbit/s
95th percentile per-packet one-way delay: 51.009 ms
Loss rate: 0.00%
```
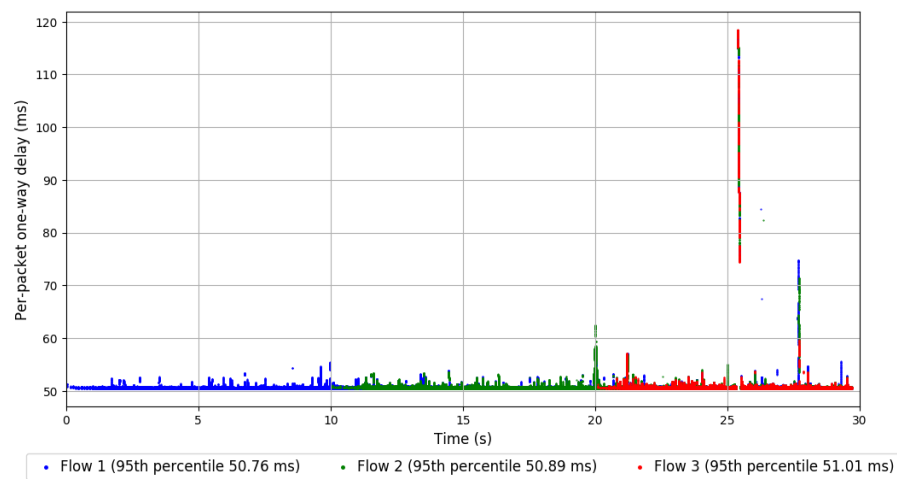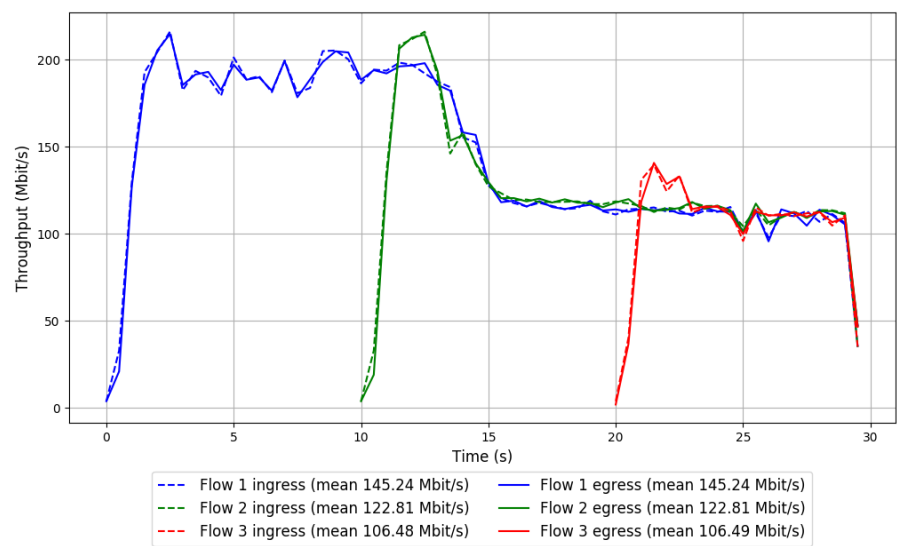
Run 8: Report of Indigo-calib — Data Link

```
Run 9: Statistics of Indigo-calib

Start at: 2017-09-22 11:06:05
End at: 2017-09-22 11:06:35


# Below is generated by plot.py at 2017-09-22 14:07:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 271.34 Mbit/s
95th percentile per-packet one-way delay: 51.019 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 148.48 Mbit/s
95th percentile per-packet one-way delay: 50.981 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 130.85 Mbit/s
95th percentile per-packet one-way delay: 51.042 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 112.50 Mbit/s
95th percentile per-packet one-way delay: 51.115 ms
Loss rate: 0.00%
```
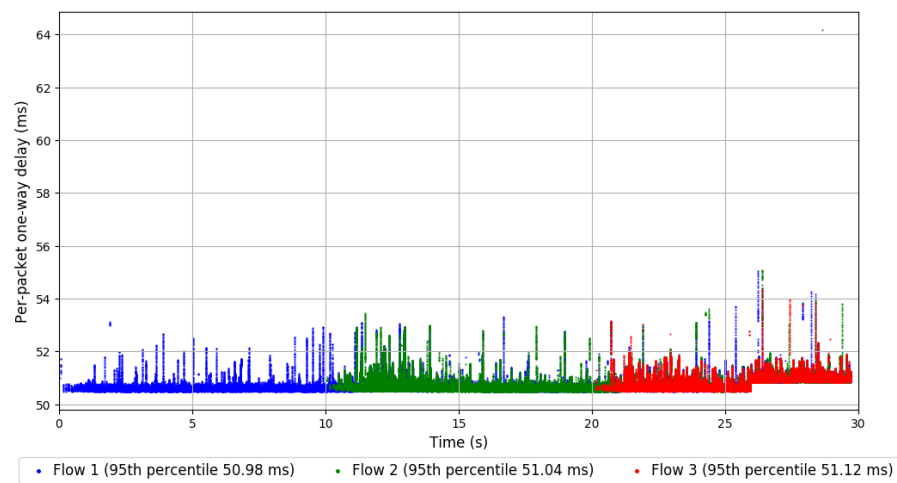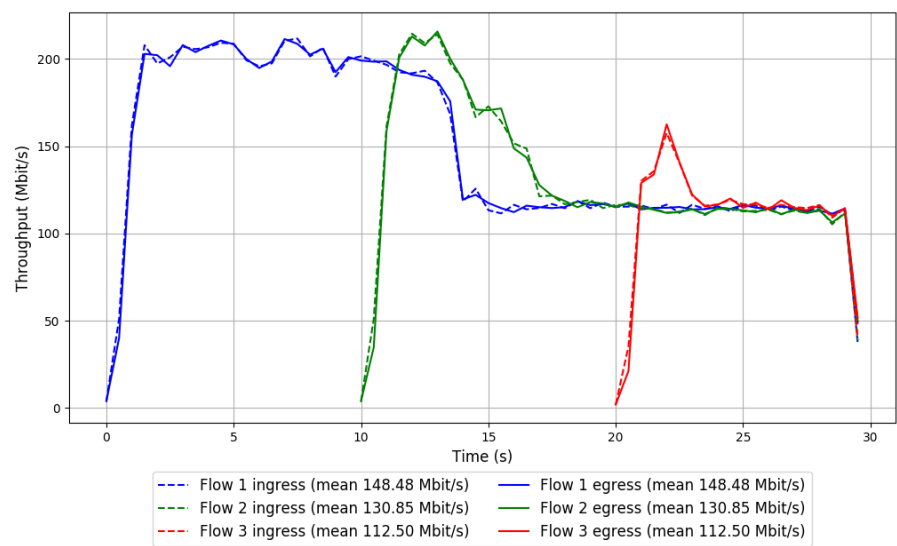
Run 9: Report of Indigo-calib — Data Link

```
Run 10: Statistics of Indigo-calib

Start at: 2017-09-22 11:18:27
End at: 2017-09-22 11:18:57


# Below is generated by plot.py at 2017-09-22 14:08:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 281.05 Mbit/s
95th percentile per-packet one-way delay: 51.207 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 152.69 Mbit/s
95th percentile per-packet one-way delay: 51.133 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 137.81 Mbit/s
95th percentile per-packet one-way delay: 51.296 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 114.54 Mbit/s
95th percentile per-packet one-way delay: 51.315 ms
Loss rate: 0.02%
```
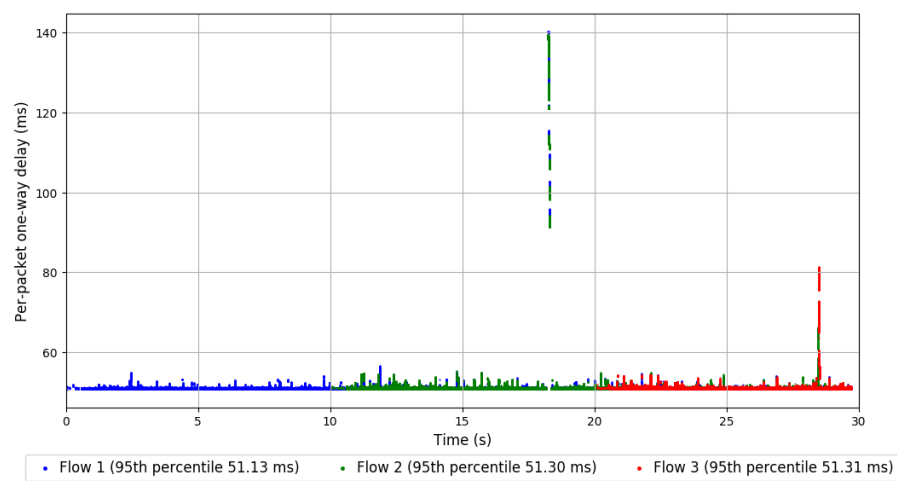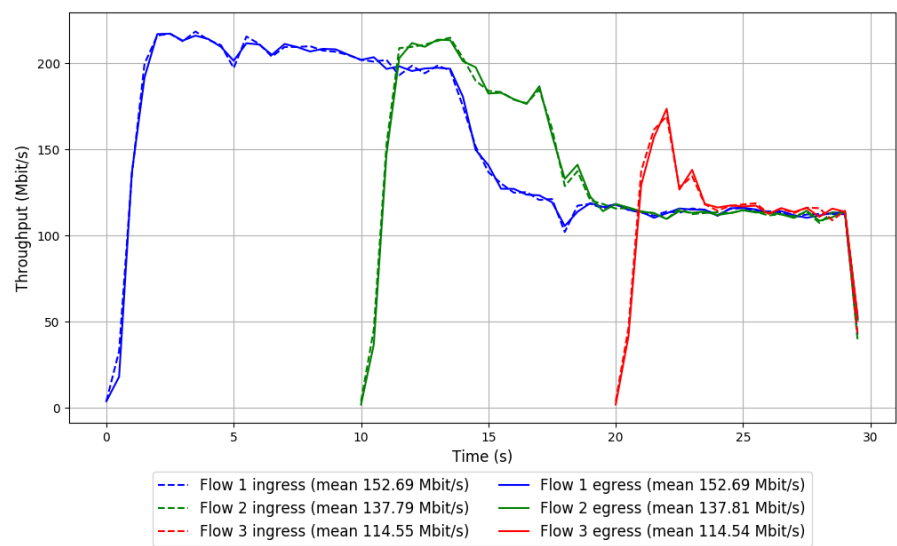
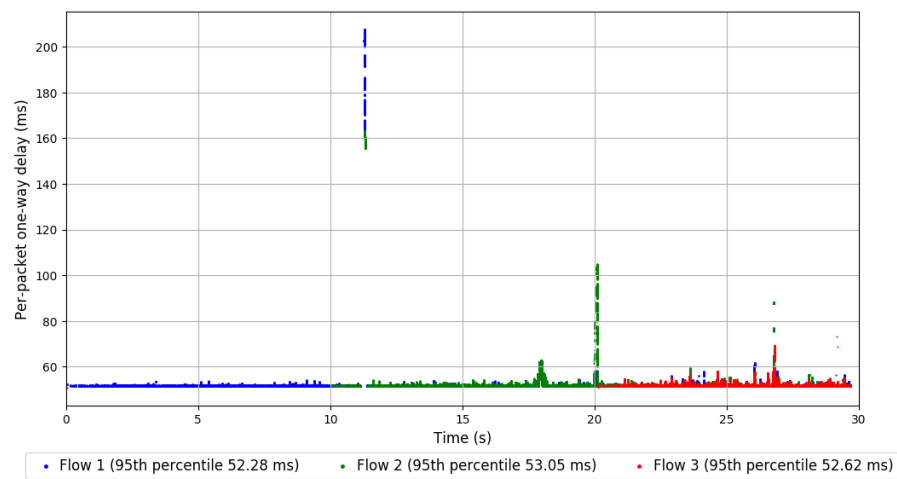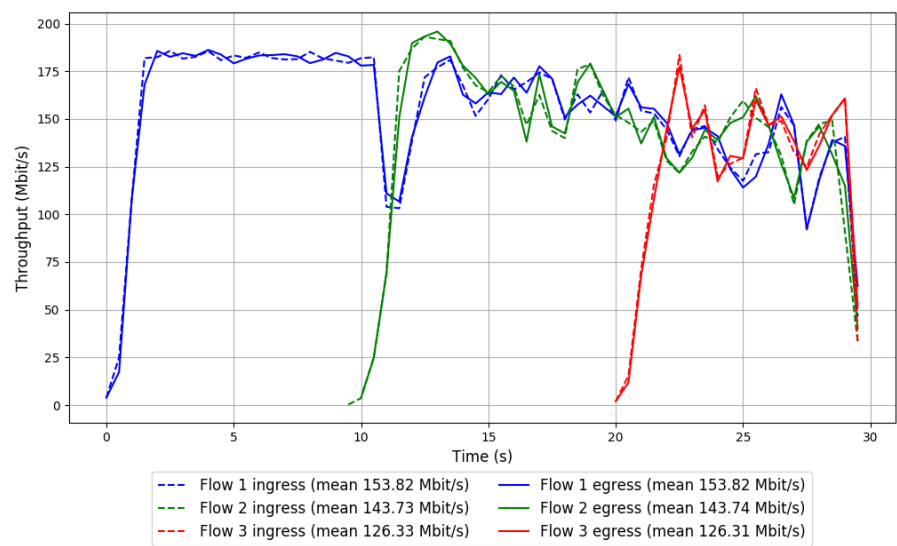Run 10: Report of Indigo-calib — Data Link

```
Run 1: Statistics of Indigo-delay

Start at: 2017-09-22 09:32:34
End at: 2017-09-22 09:33:04


# Below is generated by plot.py at 2017-09-22 14:10:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.79 Mbit/s
95th percentile per-packet one-way delay: 52.595 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 153.82 Mbit/s
95th percentile per-packet one-way delay: 52.282 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 143.74 Mbit/s
95th percentile per-packet one-way delay: 53.052 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 126.31 Mbit/s
95th percentile per-packet one-way delay: 52.618 ms
Loss rate: 0.03%
```
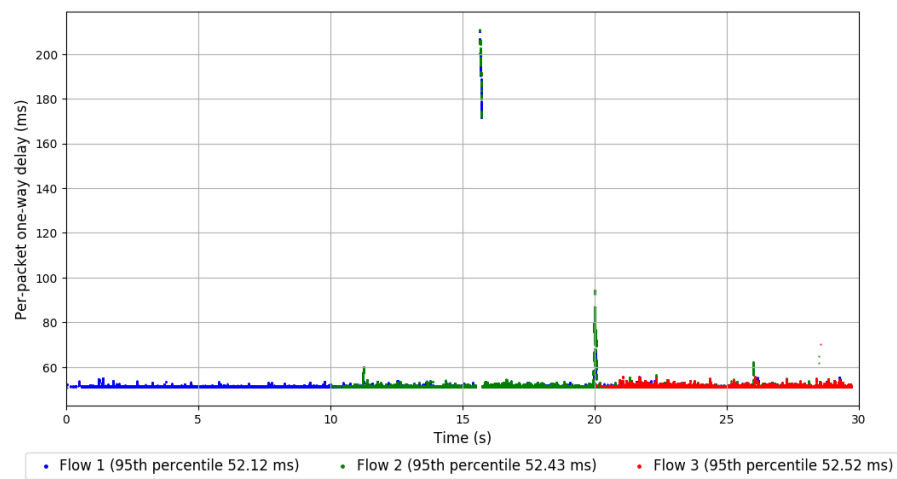
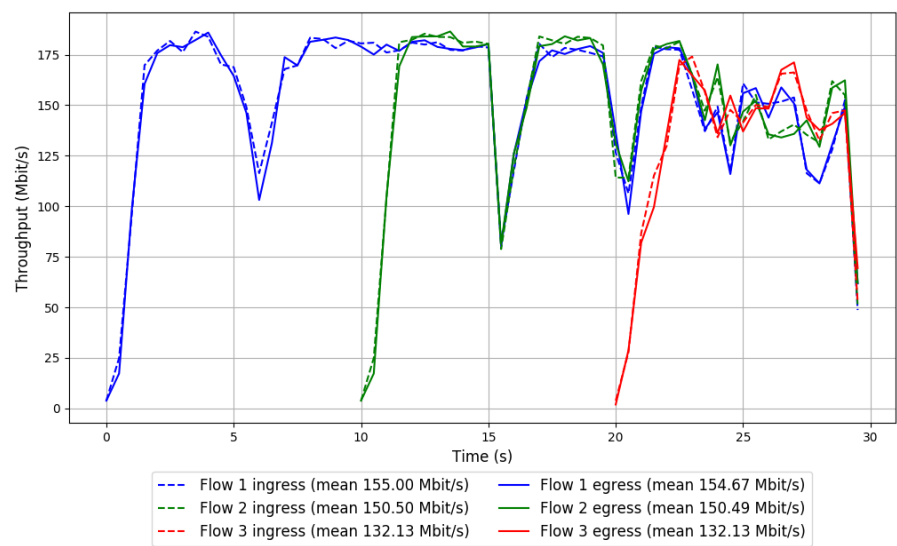# Run 1: Report of Indigo-delay — Data Link

```
Run 2: Statistics of Indigo-delay

Start at: 2017-09-22 09:44:59
End at: 2017-09-22 09:45:29

# Below is generated by plot.py at 2017-09-22 14:12:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 297.27 Mbit/s
95th percentile per-packet one-way delay: 52.287 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 154.67 Mbit/s
95th percentile per-packet one-way delay: 52.121 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 150.49 Mbit/s
95th percentile per-packet one-way delay: 52.433 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 132.13 Mbit/s
95th percentile per-packet one-way delay: 52.523 ms
Loss rate: 0.00%
```

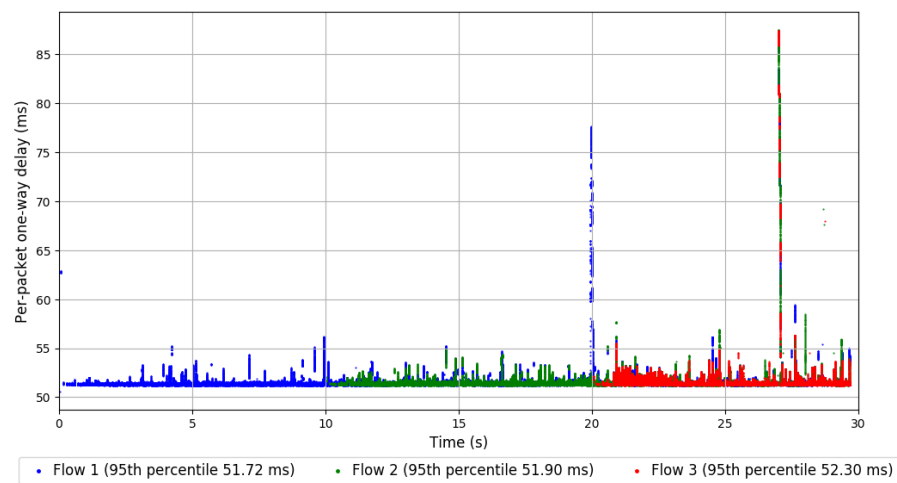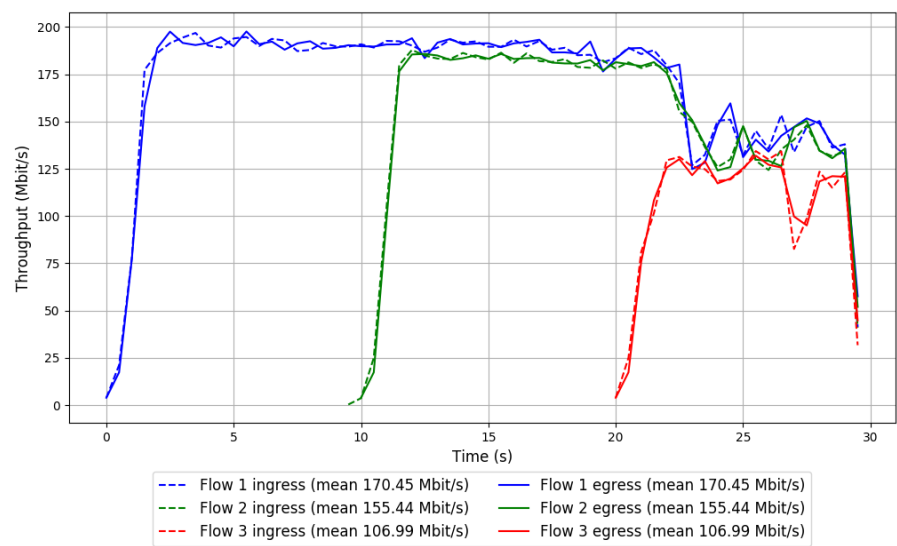# Run 2: Report of Indigo-delay — Data Link

```
Run 3: Statistics of Indigo-delay

Start at: 2017-09-22 09:57:18
End at: 2017-09-22 09:57:48


# Below is generated by plot.py at 2017-09-22 14:12:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.18 Mbit/s
95th percentile per-packet one-way delay: 51.871 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 170.45 Mbit/s
95th percentile per-packet one-way delay: 51.724 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 155.44 Mbit/s
95th percentile per-packet one-way delay: 51.903 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 106.99 Mbit/s
95th percentile per-packet one-way delay: 52.303 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo-delay — Data Link

```
Run 4: Statistics of Indigo-delay

Start at: 2017-09-22 10:09:50
End at: 2017-09-22 10:10:20


# Below is generated by plot.py at 2017-09-22 14:12:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 314.82 Mbit/s
95th percentile per-packet one-way delay: 51.983 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 168.80 Mbit/s
95th percentile per-packet one-way delay: 51.660 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 157.76 Mbit/s
95th percentile per-packet one-way delay: 52.145 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 128.30 Mbit/s
95th percentile per-packet one-way delay: 52.459 ms
Loss rate: 0.01%
```
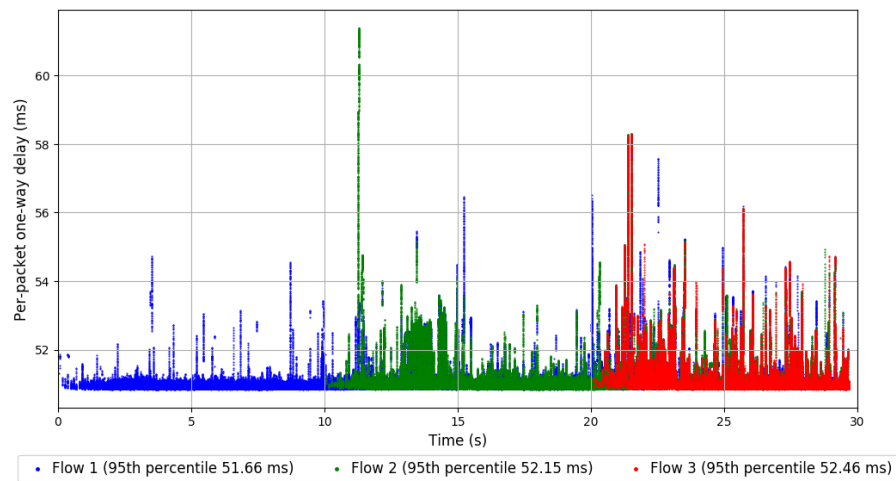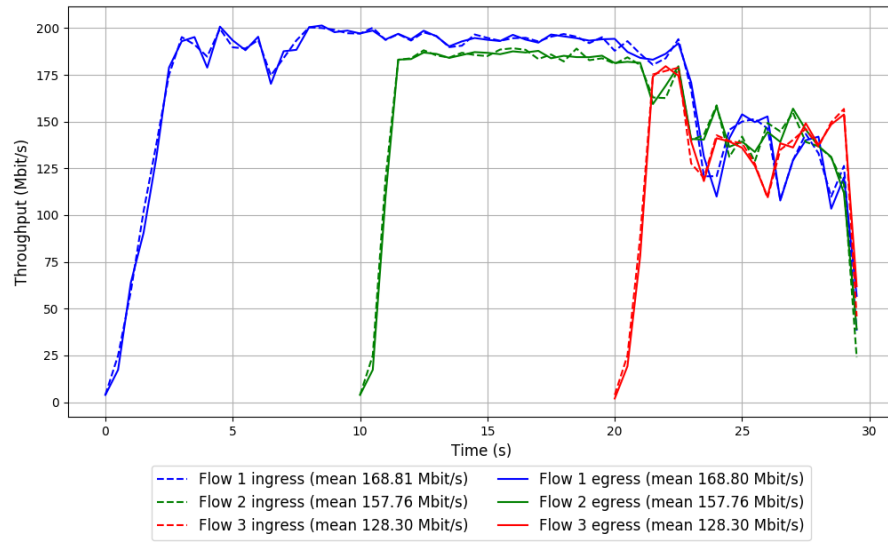
Run 4: Report of Indigo-delay — Data Link

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```
Run 5: Statistics of Indigo-delay

Start at: 2017-09-22 10:22:18
End at: 2017-09-22 10:22:48


# Below is generated by plot.py at 2017-09-22 14:12:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 310.96 Mbit/s
95th percentile per-packet one-way delay: 51.942 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 167.57 Mbit/s
95th percentile per-packet one-way delay: 51.603 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 155.67 Mbit/s
95th percentile per-packet one-way delay: 52.050 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 124.04 Mbit/s
95th percentile per-packet one-way delay: 52.875 ms
Loss rate: 0.00%
```
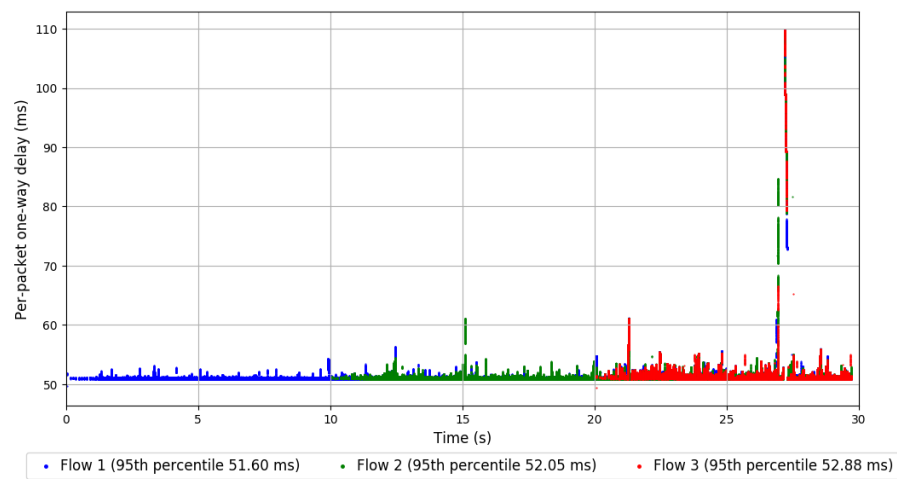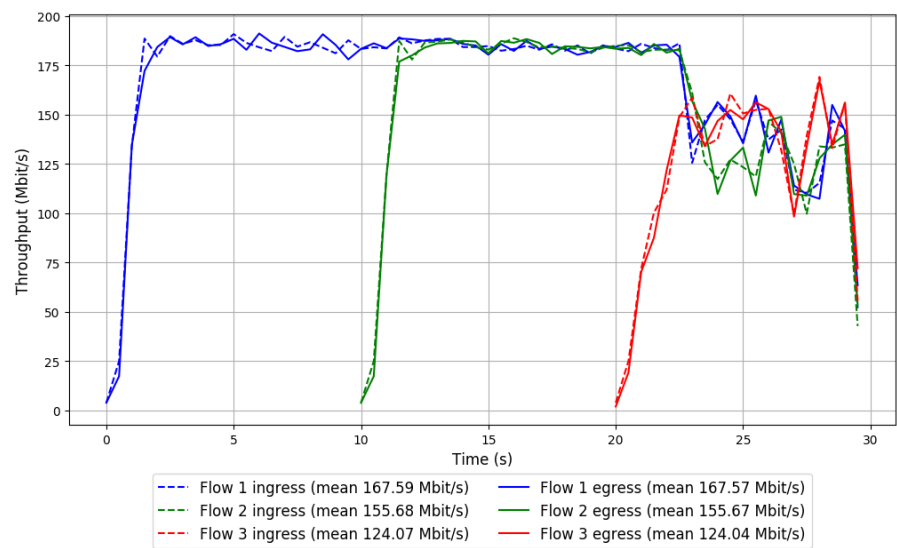
Run 5: Report of Indigo-delay — Data Link

```
Run 6: Statistics of Indigo-delay

Start at: 2017-09-22 10:34:33
End at: 2017-09-22 10:35:03


# Below is generated by plot.py at 2017-09-22 14:12:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.15 Mbit/s
95th percentile per-packet one-way delay: 52.189 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 150.30 Mbit/s
95th percentile per-packet one-way delay: 51.799 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 147.56 Mbit/s
95th percentile per-packet one-way delay: 52.352 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 129.65 Mbit/s
95th percentile per-packet one-way delay: 52.745 ms
Loss rate: 0.00%
```
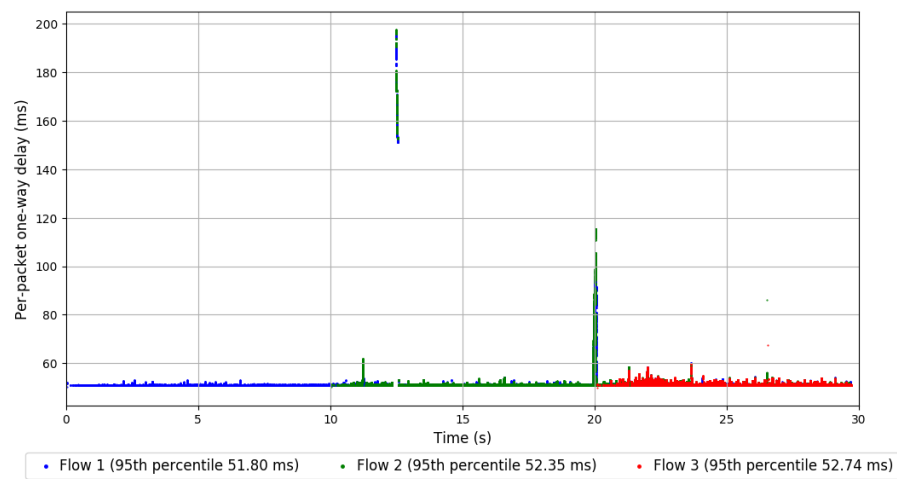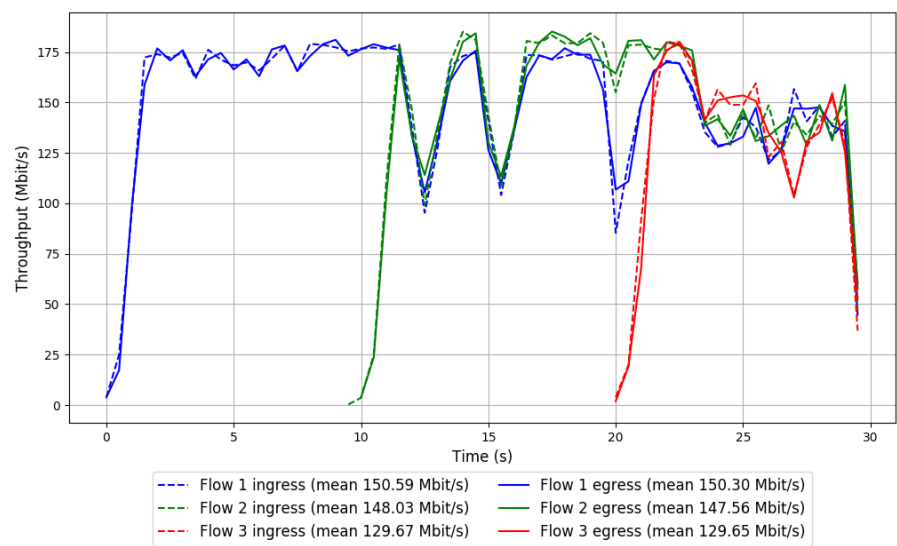
Run 6: Report of Indigo-delay — Data Link

Flow 1 ingress (mean 150.59 Mbit/s) --- Flow 1 egress (mean 150.30 Mbit/s)
Flow 2 ingress (mean 148.03 Mbit/s) --- Flow 2 egress (mean 147.56 Mbit/s)
Flow 3 ingress (mean 129.67 Mbit/s) --- Flow 3 egress (mean 129.65 Mbit/s)

Flow 1 (95th percentile 51.80 ms)   Flow 2 (95th percentile 52.35 ms)   Flow 3 (95th percentile 52.74 ms)

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```
Run 7: Statistics of Indigo-delay

Start at: 2017-09-22 10:47:01
End at: 2017-09-22 10:47:31


# Below is generated by plot.py at 2017-09-22 14:12:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.45 Mbit/s
95th percentile per-packet one-way delay: 51.982 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 128.94 Mbit/s
95th percentile per-packet one-way delay: 51.838 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 155.26 Mbit/s
95th percentile per-packet one-way delay: 51.973 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 119.91 Mbit/s
95th percentile per-packet one-way delay: 52.488 ms
Loss rate: 0.00%
```
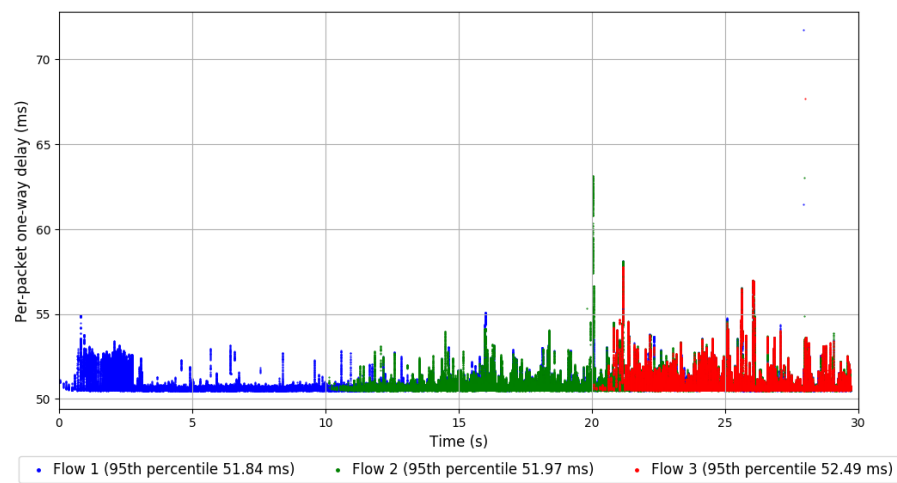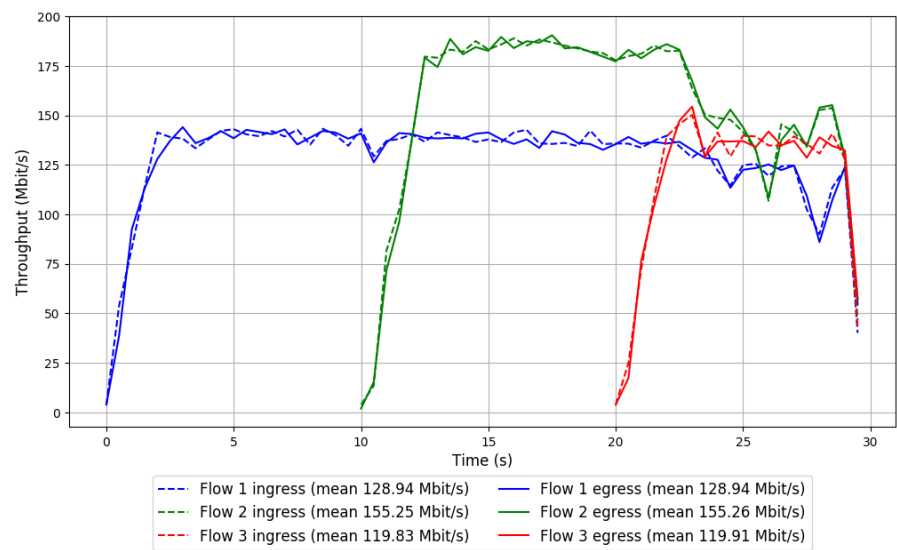
Run 7: Report of Indigo-delay — Data Link

```
Run 8: Statistics of Indigo-delay

Start at: 2017-09-22 10:59:17
End at: 2017-09-22 10:59:47


# Below is generated by plot.py at 2017-09-22 14:12:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 286.04 Mbit/s
95th percentile per-packet one-way delay: 51.058 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 154.45 Mbit/s
95th percentile per-packet one-way delay: 50.834 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 141.13 Mbit/s
95th percentile per-packet one-way delay: 51.318 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 116.68 Mbit/s
95th percentile per-packet one-way delay: 51.649 ms
Loss rate: 0.00%
```
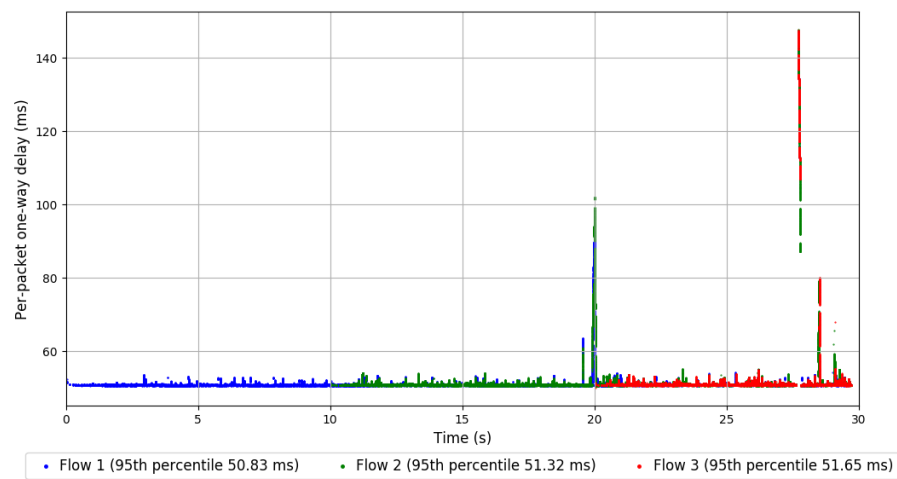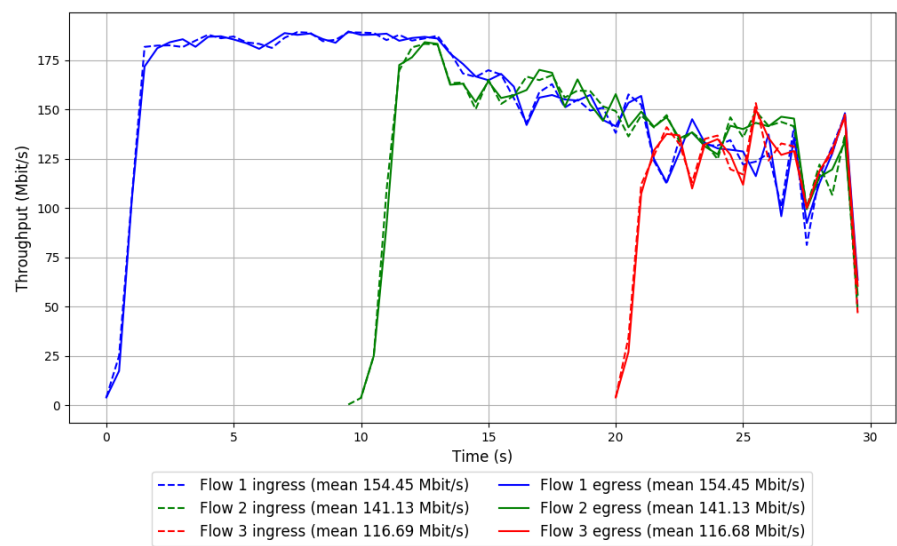
Run 8: Report of Indigo-delay — Data Link

```
Run 9: Statistics of Indigo-delay

Start at: 2017-09-22 11:11:37
End at: 2017-09-22 11:12:07


# Below is generated by plot.py at 2017-09-22 14:13:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.02 Mbit/s
95th percentile per-packet one-way delay: 51.623 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 154.56 Mbit/s
95th percentile per-packet one-way delay: 51.396 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 146.49 Mbit/s
95th percentile per-packet one-way delay: 51.751 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 118.04 Mbit/s
95th percentile per-packet one-way delay: 52.007 ms
Loss rate: 0.00%
```
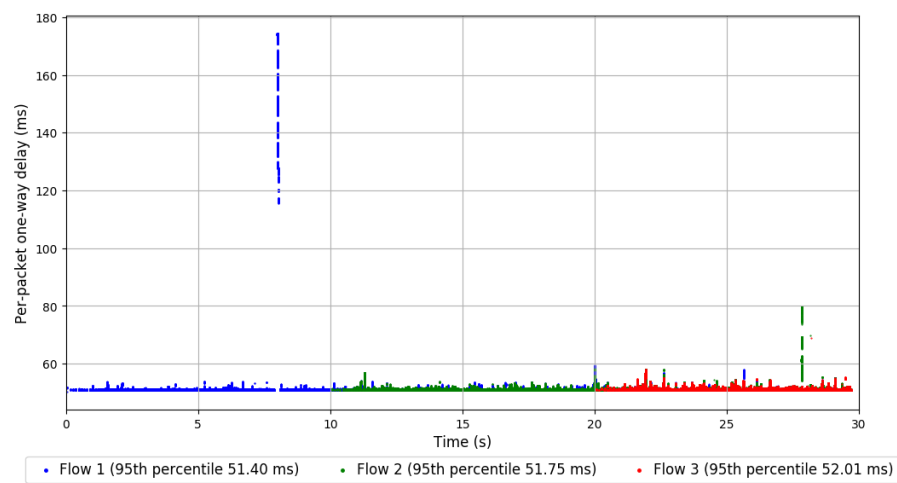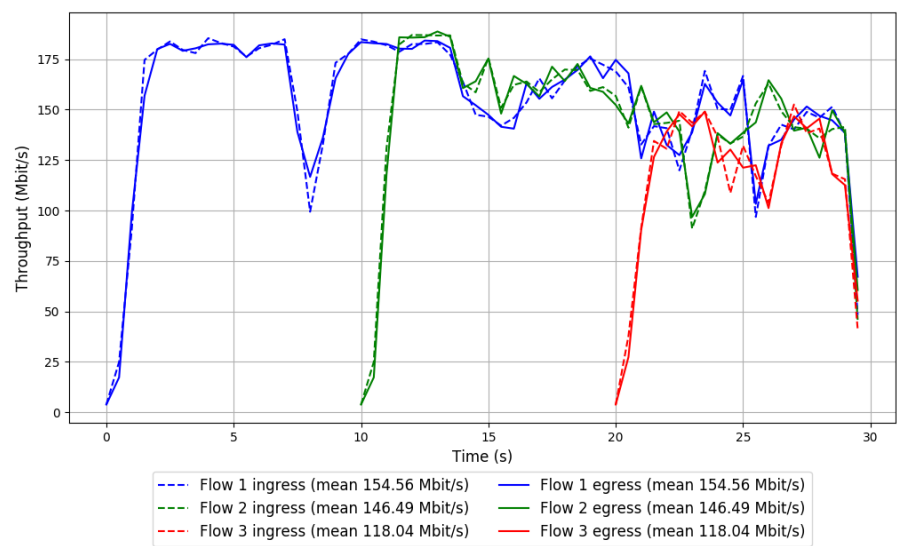
Run 9: Report of Indigo-delay — Data Link

```
Run 10: Statistics of Indigo-delay

Start at: 2017-09-22 11:23:53
End at: 2017-09-22 11:24:23

# Below is generated by plot.py at 2017-09-22 14:13:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.89 Mbit/s
95th percentile per-packet one-way delay: 51.777 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 158.52 Mbit/s
95th percentile per-packet one-way delay: 51.460 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 152.63 Mbit/s
95th percentile per-packet one-way delay: 51.923 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 115.43 Mbit/s
95th percentile per-packet one-way delay: 52.515 ms
Loss rate: 0.01%
```

Run 10: Report of Indigo-delay — Data Link