

Pantheon Report

Generated at 2017-09-18 22:23:19 (UTC).

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

Repeated the test of 10 congestion control schemes 10 times.

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

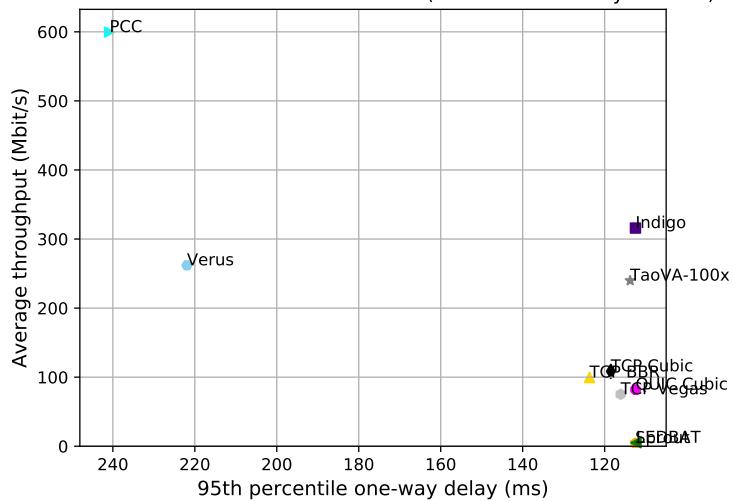
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

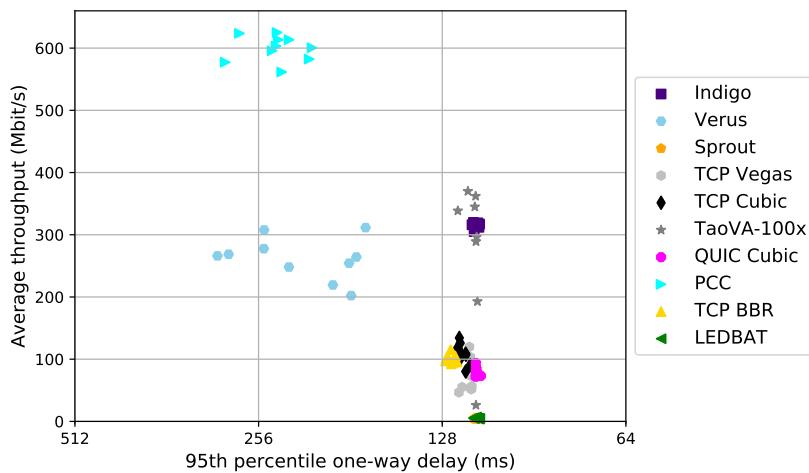
Git summary:

```
branch: master @ 57453dc11f8da93a2e03eea75289fea01b816298
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce6bb7cf3cf
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 @ 6f2efef6e088d91066a9f023df375eee2665089ce
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 London Ethernet to GCE Tokyo Ethernet, 10 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE London Ethernet to GCE Tokyo 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	50.53	50.12	47.95	123.31	123.28	124.40	0.03	0.01	0.22
TCP Cubic	10	50.95	62.01	49.19	116.96	118.67	120.28	0.01	0.00	0.03
Indigo	10	168.07	158.24	134.58	112.05	113.00	113.85	0.00	0.01	0.01
LEDBAT	10	2.68	2.79	1.57	112.30	112.21	112.07	0.45	0.07	0.03
PCC	10	497.49	140.73	30.72	247.82	205.60	202.99	3.32	2.09	1.75
QUIC Cubic	10	47.35	41.40	22.48	111.62	111.59	111.55	0.00	0.00	0.00
Sprout	10	2.36	2.37	1.60	112.52	112.58	112.59	0.38	0.24	0.41
TaoVA-100x	10	132.77	124.27	96.11	113.60	113.94	113.92	0.01	0.01	0.02
TCP Vegas	10	36.75	42.34	31.26	114.26	116.17	116.51	0.03	0.01	0.07
Verus	10	159.14	128.42	55.35	206.59	227.32	183.24	2.02	2.79	1.10

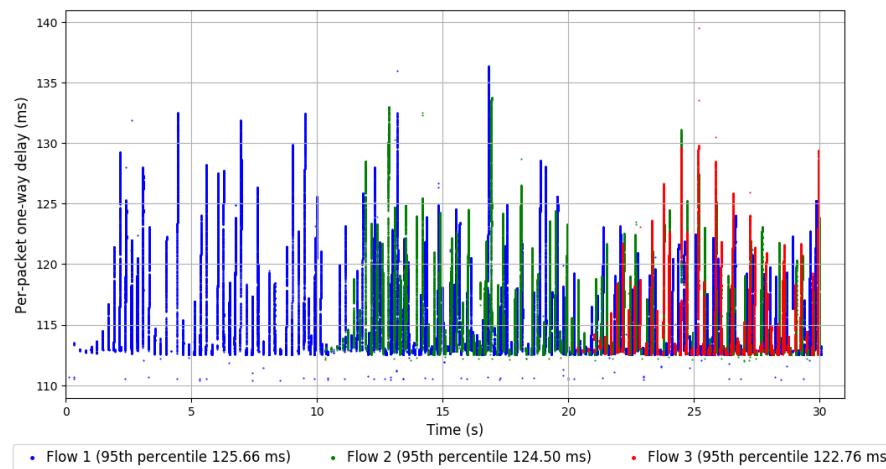
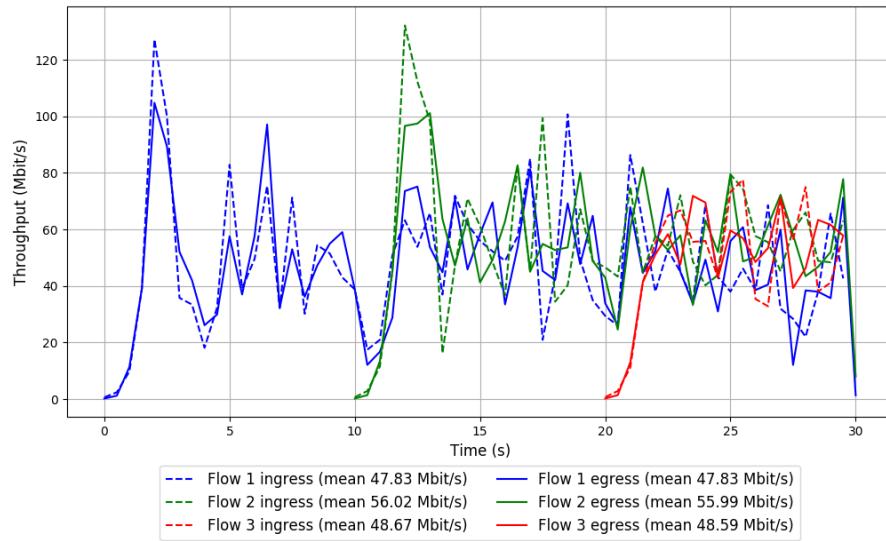
Run 1: Statistics of TCP BBR

Start at: 2017-09-18 19:03:36

End at: 2017-09-18 19:04:06

```
# Below is generated by plot.py at 2017-09-18 21:43:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.94 Mbit/s
95th percentile per-packet one-way delay: 124.992 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.83 Mbit/s
95th percentile per-packet one-way delay: 125.659 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 55.99 Mbit/s
95th percentile per-packet one-way delay: 124.499 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.59 Mbit/s
95th percentile per-packet one-way delay: 122.764 ms
Loss rate: 0.00%
```

Run 1: Report of TCP BBR — Data Link



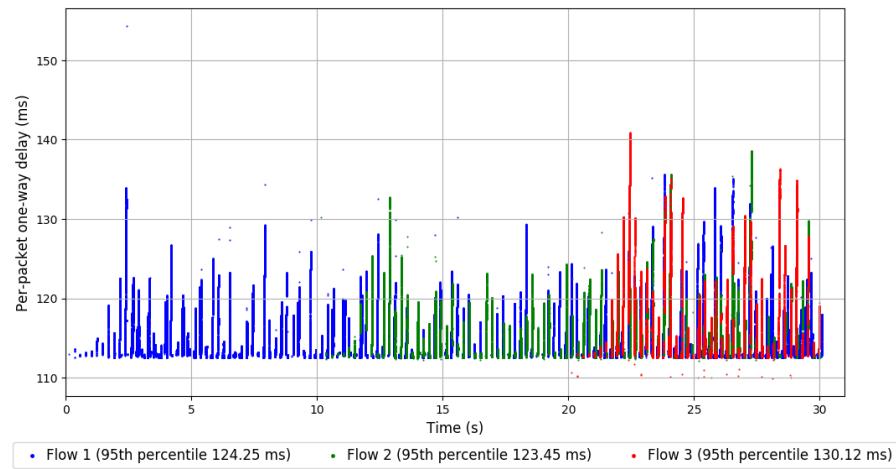
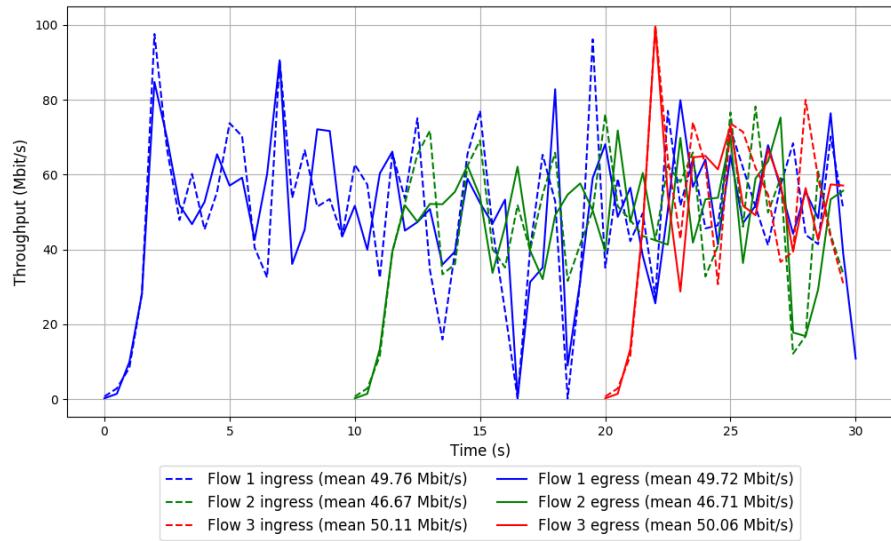
Run 2: Statistics of TCP BBR

Start at: 2017-09-18 19:13:38

End at: 2017-09-18 19:14:08

```
# Below is generated by plot.py at 2017-09-18 21:43:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.13 Mbit/s
95th percentile per-packet one-way delay: 126.389 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 49.72 Mbit/s
95th percentile per-packet one-way delay: 124.248 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 46.71 Mbit/s
95th percentile per-packet one-way delay: 123.447 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 50.06 Mbit/s
95th percentile per-packet one-way delay: 130.117 ms
Loss rate: 0.03%
```

Run 2: Report of TCP BBR — Data Link



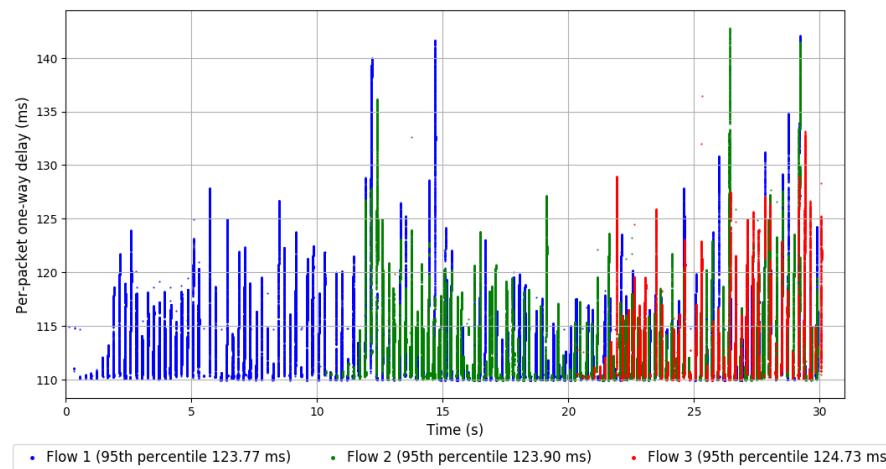
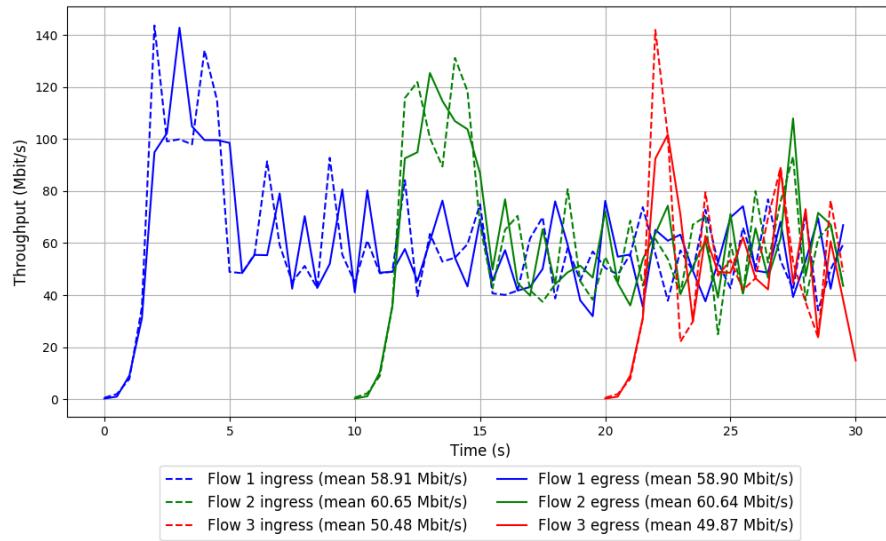
Run 3: Statistics of TCP BBR

Start at: 2017-09-18 19:23:31

End at: 2017-09-18 19:24:01

```
# Below is generated by plot.py at 2017-09-18 21:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.22 Mbit/s
95th percentile per-packet one-way delay: 124.026 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 58.90 Mbit/s
95th percentile per-packet one-way delay: 123.771 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 60.64 Mbit/s
95th percentile per-packet one-way delay: 123.902 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 49.87 Mbit/s
95th percentile per-packet one-way delay: 124.732 ms
Loss rate: 1.16%
```

Run 3: Report of TCP BBR — Data Link



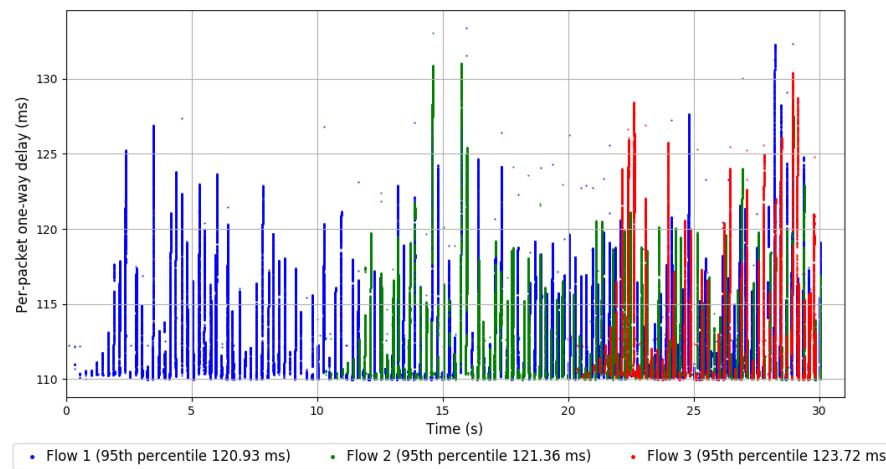
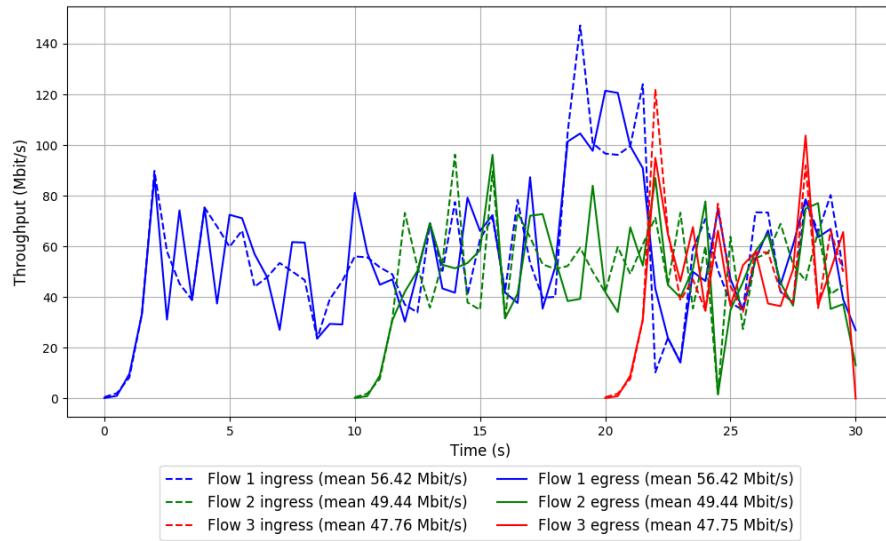
Run 4: Statistics of TCP BBR

Start at: 2017-09-18 19:33:03

End at: 2017-09-18 19:33:33

```
# Below is generated by plot.py at 2017-09-18 21:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.11 Mbit/s
95th percentile per-packet one-way delay: 121.814 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.42 Mbit/s
95th percentile per-packet one-way delay: 120.931 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.44 Mbit/s
95th percentile per-packet one-way delay: 121.361 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 47.75 Mbit/s
95th percentile per-packet one-way delay: 123.721 ms
Loss rate: 0.00%
```

Run 4: Report of TCP BBR — Data Link



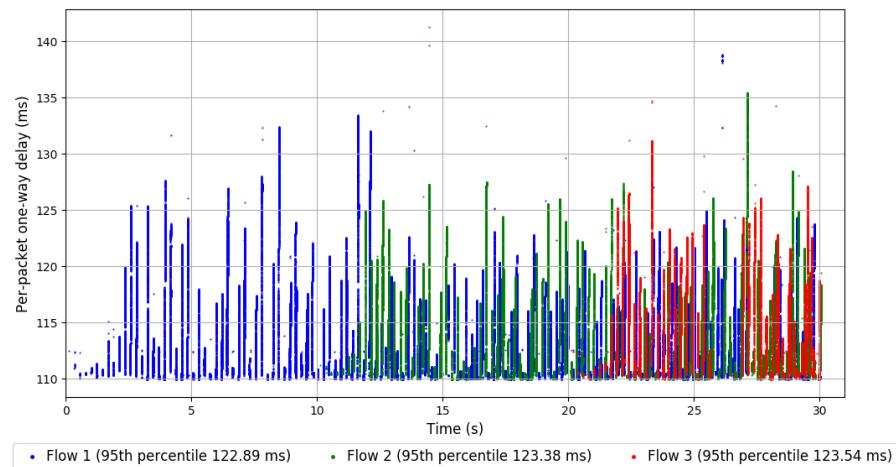
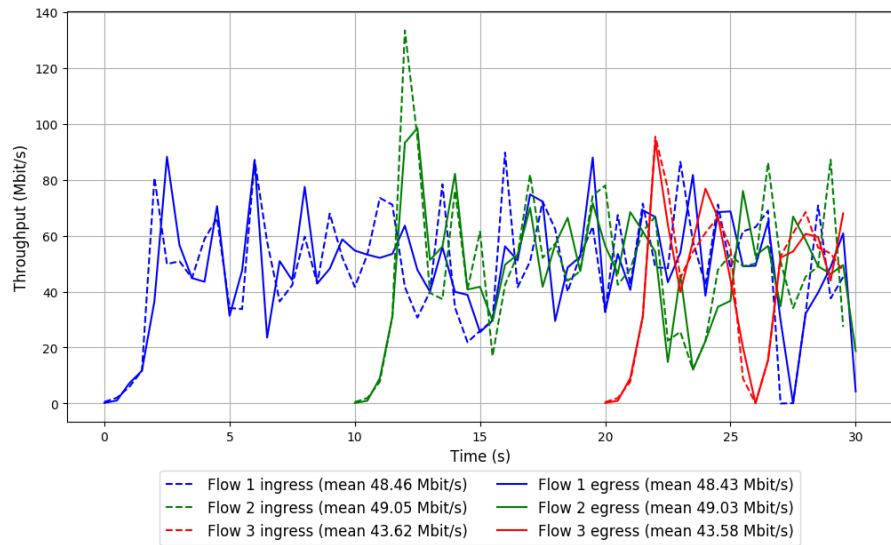
Run 5: Statistics of TCP BBR

Start at: 2017-09-18 19:42:34

End at: 2017-09-18 19:43:04

```
# Below is generated by plot.py at 2017-09-18 21:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.36 Mbit/s
95th percentile per-packet one-way delay: 123.215 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 48.43 Mbit/s
95th percentile per-packet one-way delay: 122.889 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 49.03 Mbit/s
95th percentile per-packet one-way delay: 123.376 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.58 Mbit/s
95th percentile per-packet one-way delay: 123.540 ms
Loss rate: 0.02%
```

Run 5: Report of TCP BBR — Data Link



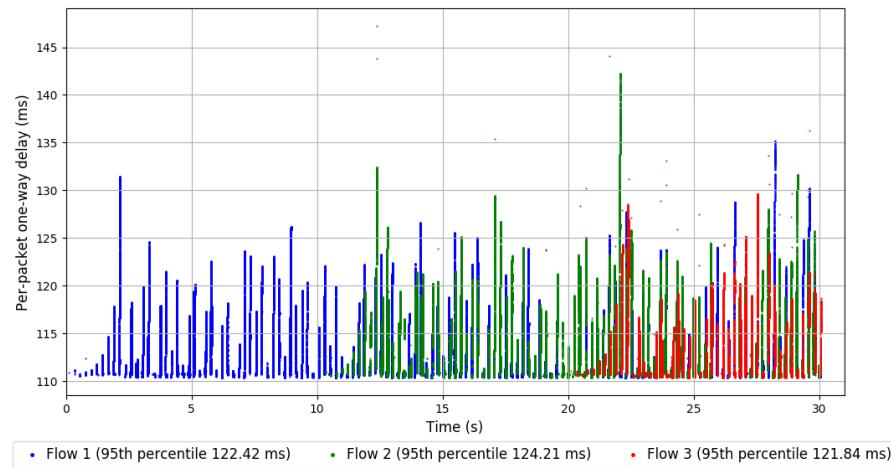
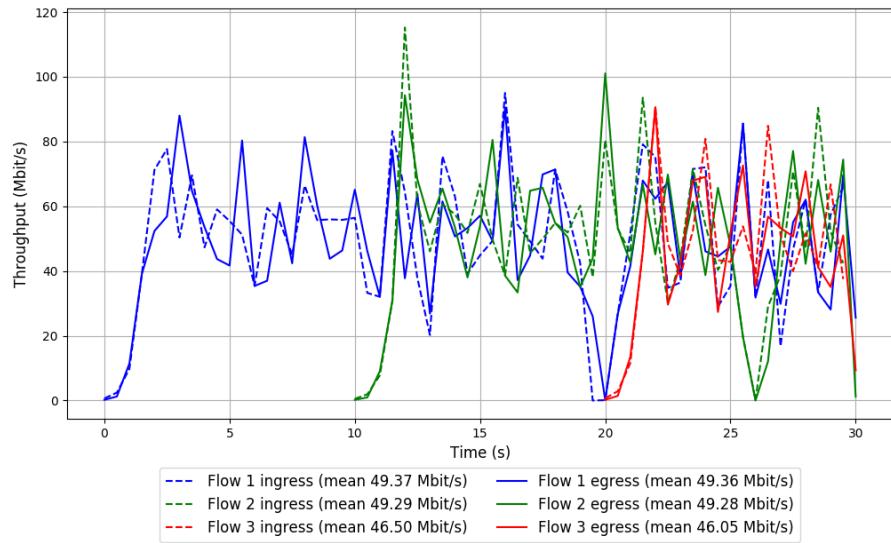
Run 6: Statistics of TCP BBR

Start at: 2017-09-18 19:52:33

End at: 2017-09-18 19:53:03

```
# Below is generated by plot.py at 2017-09-18 21:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 123.061 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 49.36 Mbit/s
95th percentile per-packet one-way delay: 122.415 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 49.28 Mbit/s
95th percentile per-packet one-way delay: 124.214 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 46.05 Mbit/s
95th percentile per-packet one-way delay: 121.836 ms
Loss rate: 0.96%
```

Run 6: Report of TCP BBR — Data Link



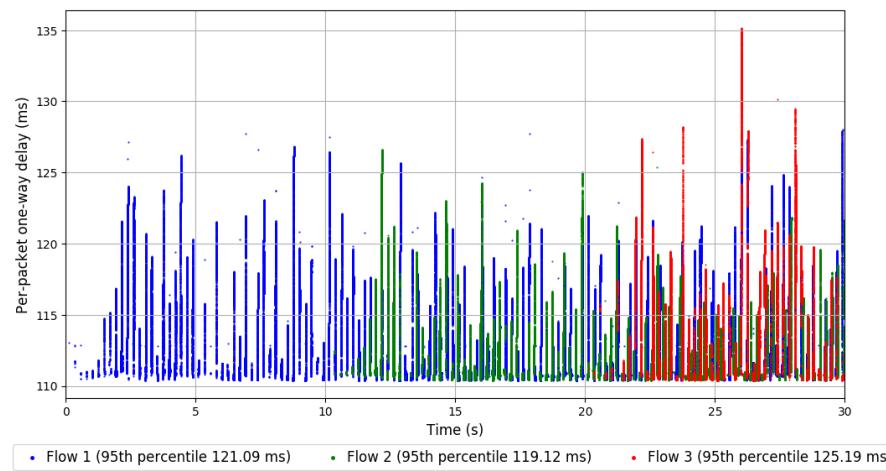
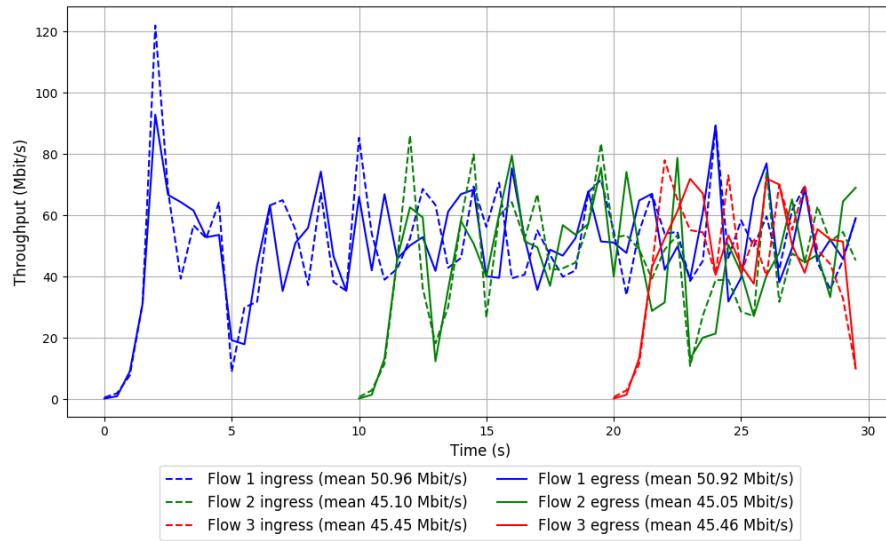
Run 7: Statistics of TCP BBR

Start at: 2017-09-18 20:02:28

End at: 2017-09-18 20:02:58

```
# Below is generated by plot.py at 2017-09-18 21:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 120.952 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 50.92 Mbit/s
95th percentile per-packet one-way delay: 121.089 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 45.05 Mbit/s
95th percentile per-packet one-way delay: 119.121 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 45.46 Mbit/s
95th percentile per-packet one-way delay: 125.192 ms
Loss rate: 0.00%
```

Run 7: Report of TCP BBR — Data Link



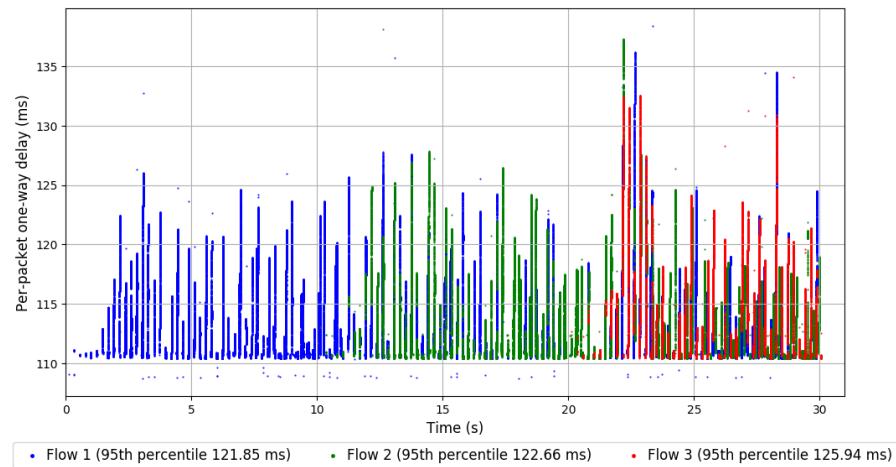
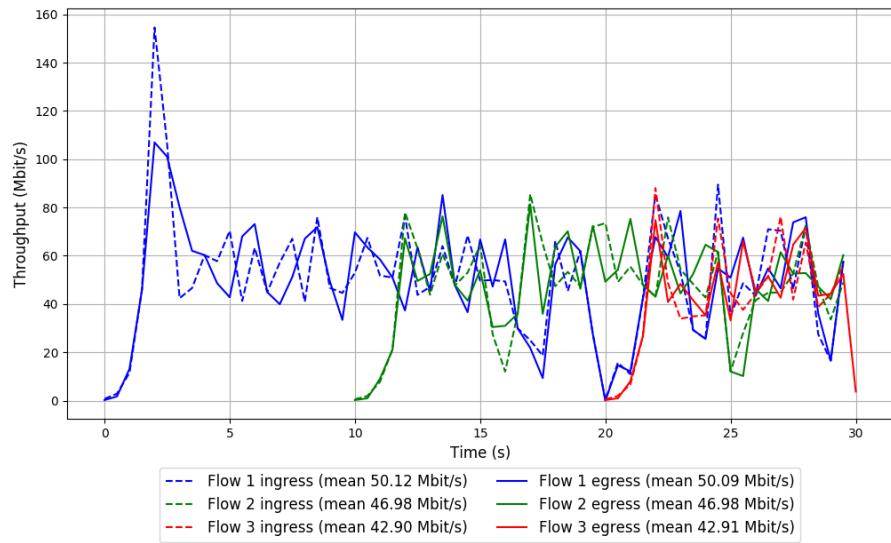
Run 8: Statistics of TCP BBR

Start at: 2017-09-18 20:12:10

End at: 2017-09-18 20:12:40

```
# Below is generated by plot.py at 2017-09-18 21:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.16 Mbit/s
95th percentile per-packet one-way delay: 122.660 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.09 Mbit/s
95th percentile per-packet one-way delay: 121.853 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.98 Mbit/s
95th percentile per-packet one-way delay: 122.664 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 42.91 Mbit/s
95th percentile per-packet one-way delay: 125.938 ms
Loss rate: 0.00%
```

Run 8: Report of TCP BBR — Data Link



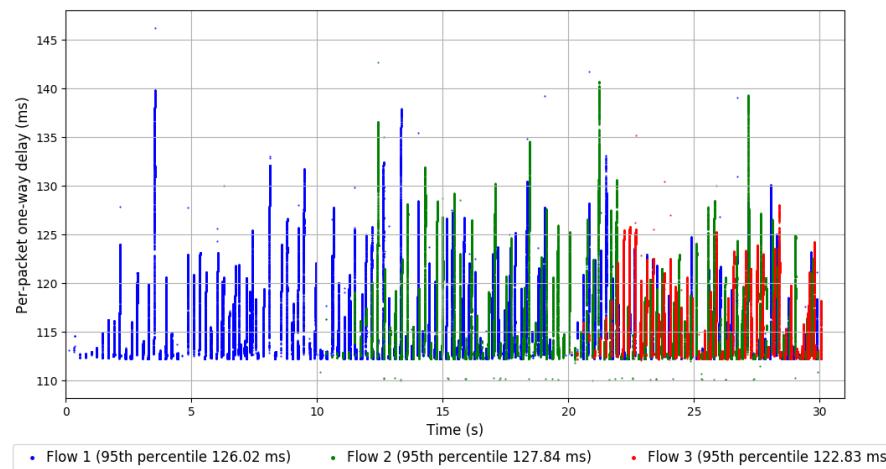
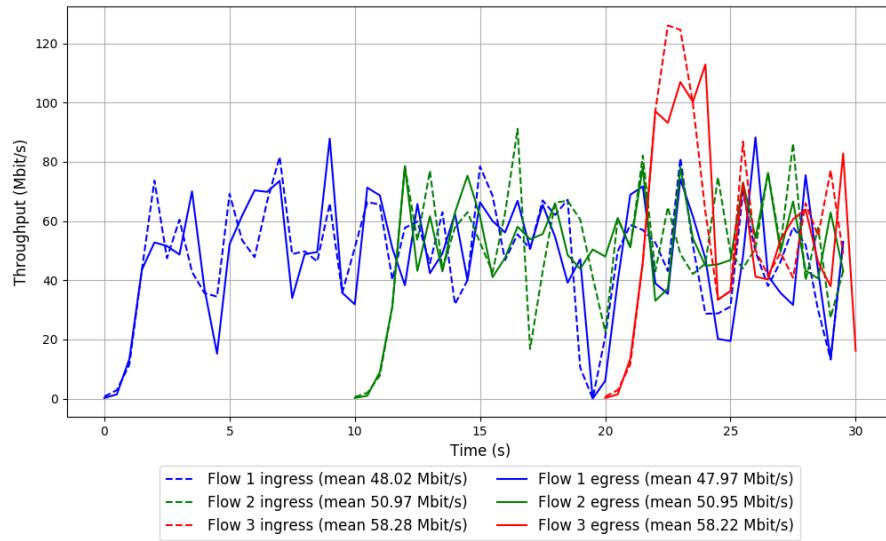
Run 9: Statistics of TCP BBR

Start at: 2017-09-18 20:22:06

End at: 2017-09-18 20:22:36

```
# Below is generated by plot.py at 2017-09-18 21:45:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.73 Mbit/s
95th percentile per-packet one-way delay: 126.206 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 47.97 Mbit/s
95th percentile per-packet one-way delay: 126.018 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 50.95 Mbit/s
95th percentile per-packet one-way delay: 127.843 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 58.22 Mbit/s
95th percentile per-packet one-way delay: 122.825 ms
Loss rate: 0.05%
```

Run 9: Report of TCP BBR — Data Link



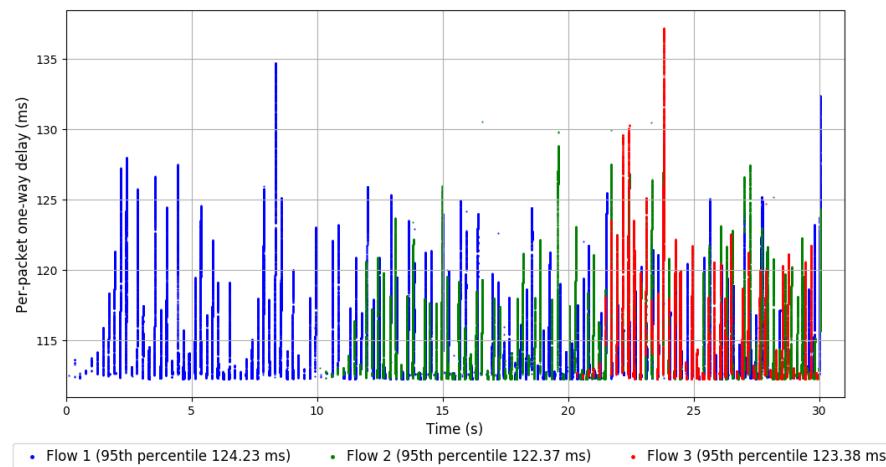
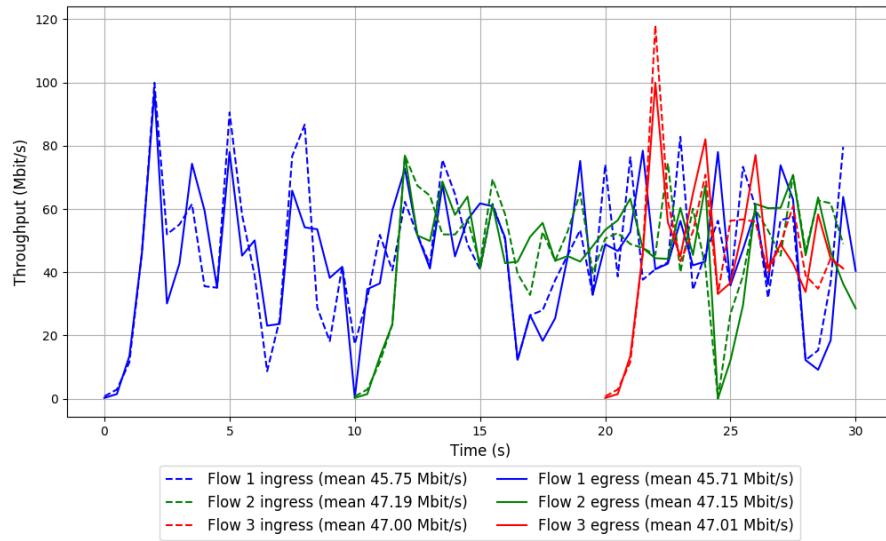
Run 10: Statistics of TCP BBR

Start at: 2017-09-18 20:32:07

End at: 2017-09-18 20:32:37

```
# Below is generated by plot.py at 2017-09-18 21:45:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.44 Mbit/s
95th percentile per-packet one-way delay: 123.686 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 45.71 Mbit/s
95th percentile per-packet one-way delay: 124.234 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 47.15 Mbit/s
95th percentile per-packet one-way delay: 122.374 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 47.01 Mbit/s
95th percentile per-packet one-way delay: 123.379 ms
Loss rate: 0.00%
```

Run 10: Report of TCP BBR — Data Link

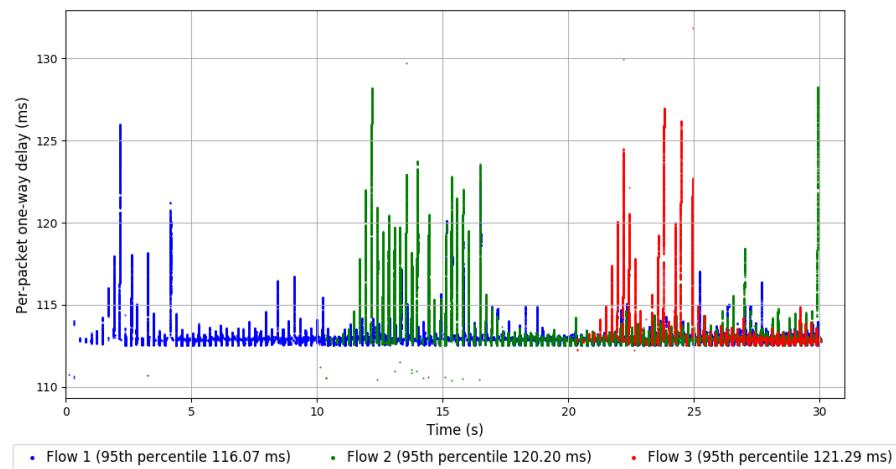
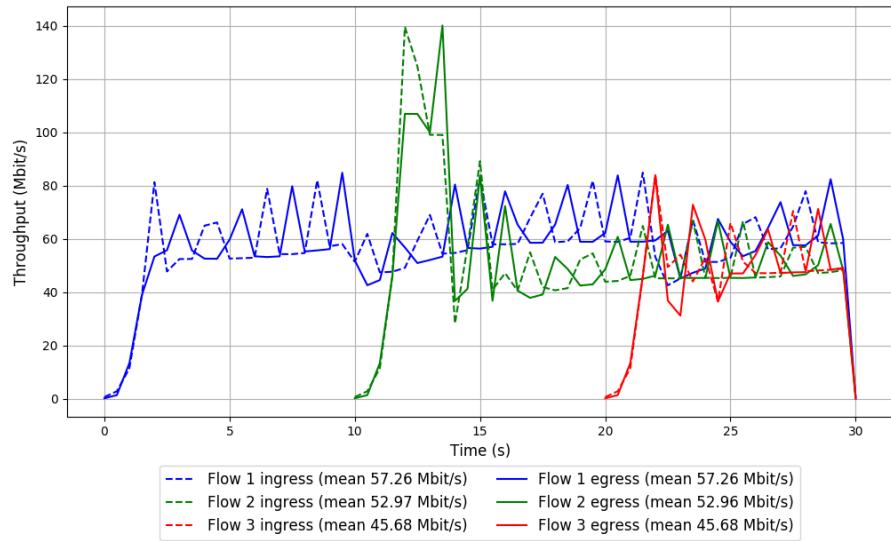


```
Run 1: Statistics of TCP Cubic

Start at: 2017-09-18 19:04:30
End at: 2017-09-18 19:05:00

# Below is generated by plot.py at 2017-09-18 21:45:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.58 Mbit/s
95th percentile per-packet one-way delay: 118.970 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.26 Mbit/s
95th percentile per-packet one-way delay: 116.072 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 52.96 Mbit/s
95th percentile per-packet one-way delay: 120.198 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 45.68 Mbit/s
95th percentile per-packet one-way delay: 121.291 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Cubic — Data Link



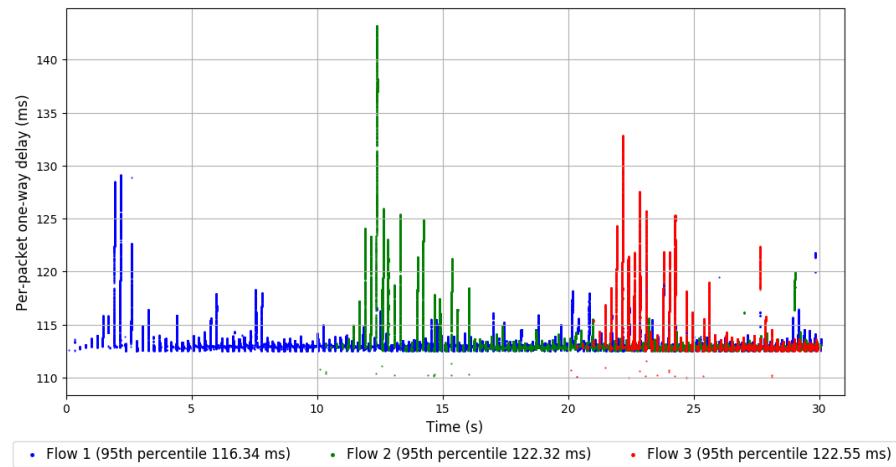
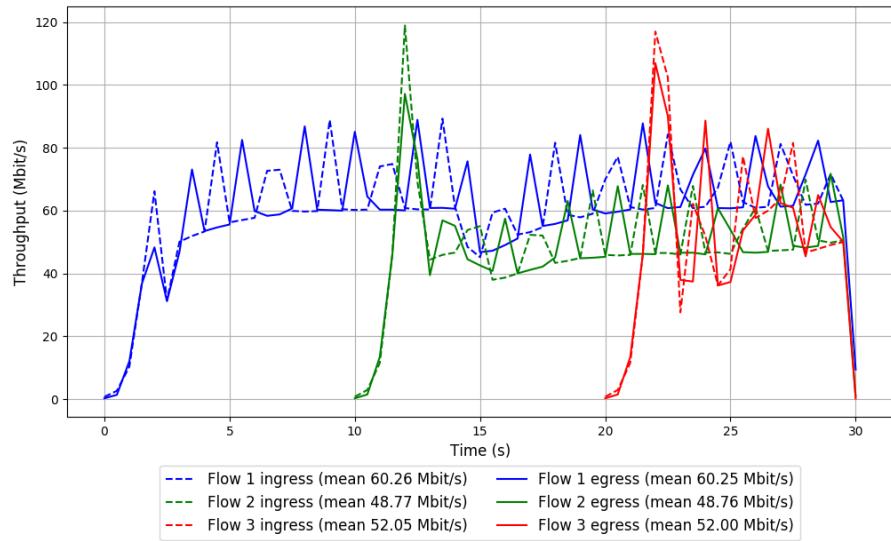
```
Run 2: Statistics of TCP Cubic
```

```
Start at: 2017-09-18 19:14:32
```

```
End at: 2017-09-18 19:15:02
```

```
# Below is generated by plot.py at 2017-09-18 21:45:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 109.93 Mbit/s
95th percentile per-packet one-way delay: 119.765 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 60.25 Mbit/s
95th percentile per-packet one-way delay: 116.340 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 48.76 Mbit/s
95th percentile per-packet one-way delay: 122.320 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 52.00 Mbit/s
95th percentile per-packet one-way delay: 122.546 ms
Loss rate: 0.07%
```

Run 2: Report of TCP Cubic — Data Link



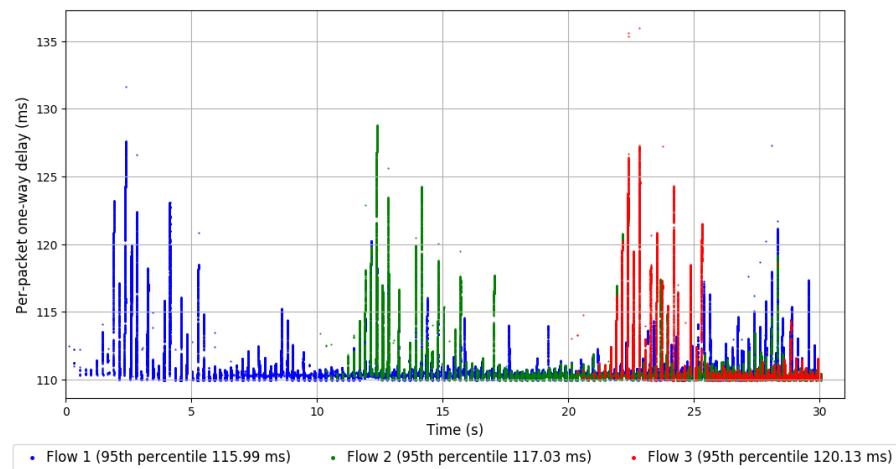
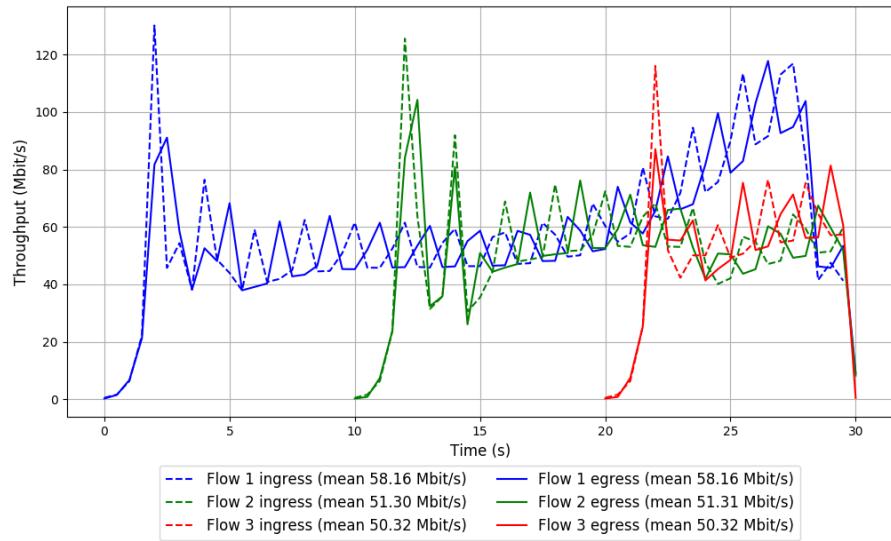
```
Run 3: Statistics of TCP Cubic
```

```
Start at: 2017-09-18 19:24:26
```

```
End at: 2017-09-18 19:24:56
```

```
# Below is generated by plot.py at 2017-09-18 21:45:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 108.90 Mbit/s
95th percentile per-packet one-way delay: 117.184 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 58.16 Mbit/s
95th percentile per-packet one-way delay: 115.994 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.31 Mbit/s
95th percentile per-packet one-way delay: 117.029 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 120.131 ms
Loss rate: 0.02%
```

Run 3: Report of TCP Cubic — Data Link



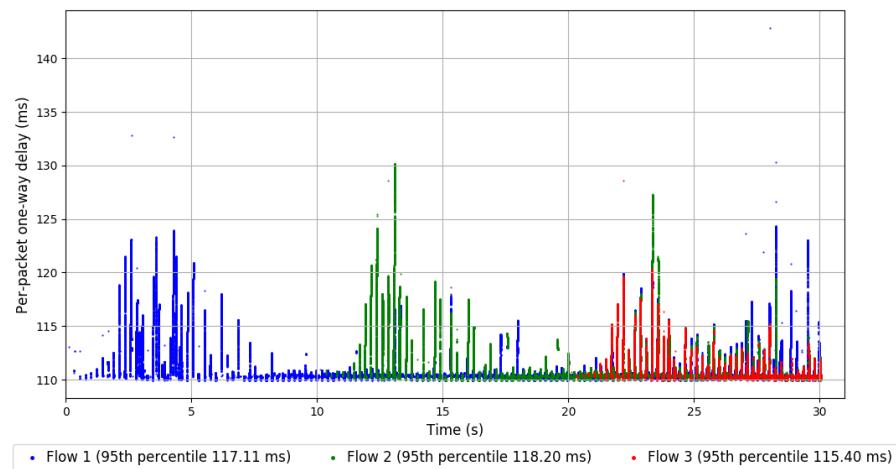
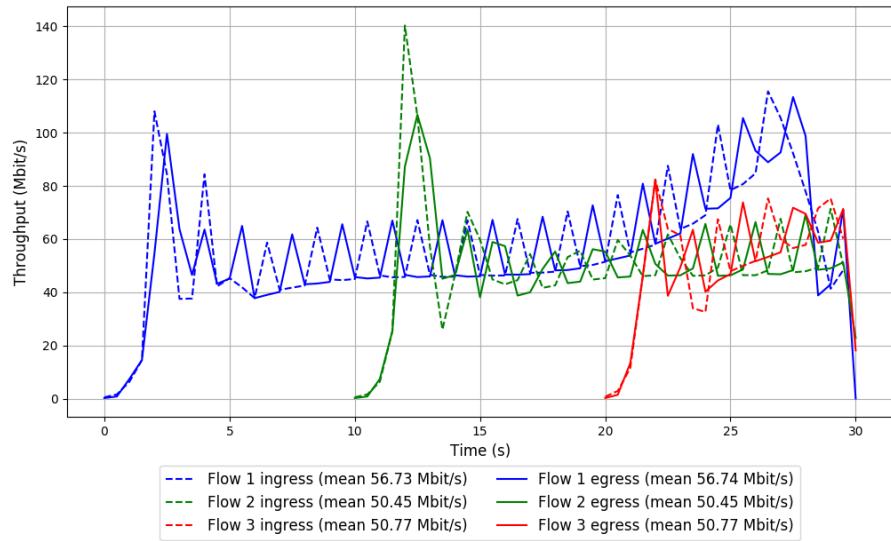
Run 4: Statistics of TCP Cubic

Start at: 2017-09-18 19:33:57

End at: 2017-09-18 19:34:27

```
# Below is generated by plot.py at 2017-09-18 21:45:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.08 Mbit/s
95th percentile per-packet one-way delay: 117.064 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.74 Mbit/s
95th percentile per-packet one-way delay: 117.108 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.45 Mbit/s
95th percentile per-packet one-way delay: 118.196 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 50.77 Mbit/s
95th percentile per-packet one-way delay: 115.397 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Cubic — Data Link



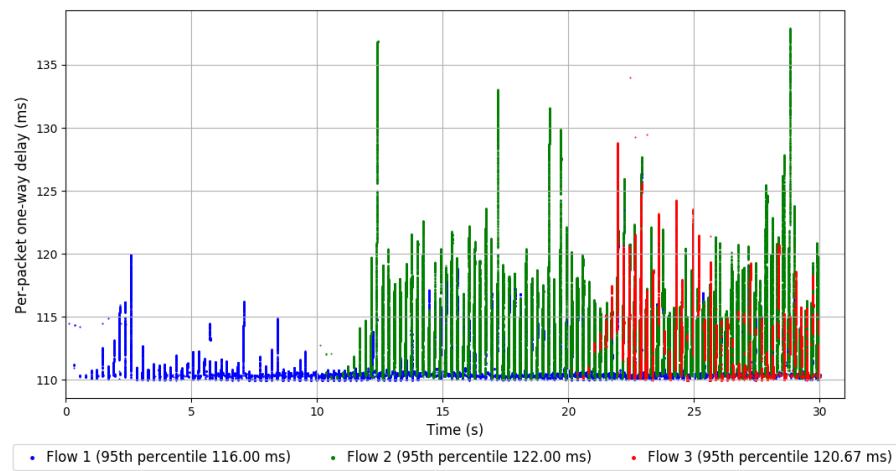
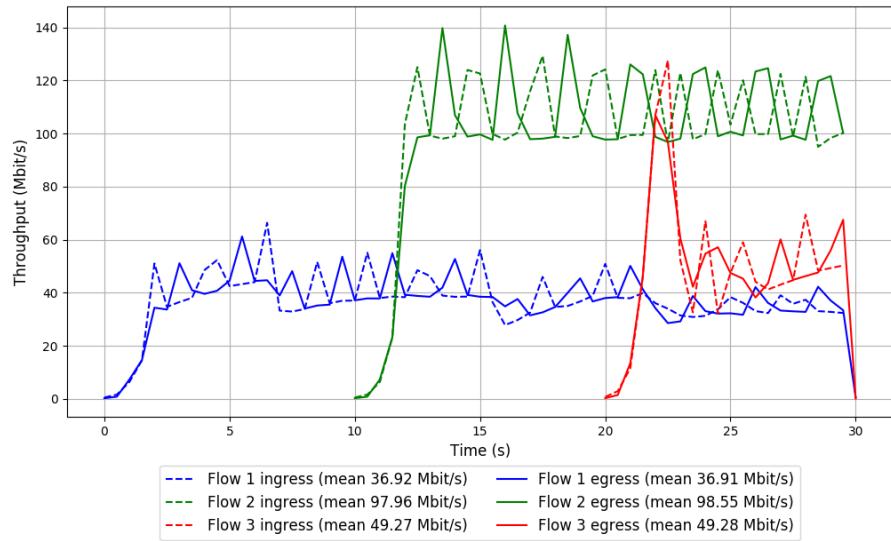
Run 5: Statistics of TCP Cubic

Start at: 2017-09-18 19:43:27

End at: 2017-09-18 19:43:57

```
# Below is generated by plot.py at 2017-09-18 21:45:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.54 Mbit/s
95th percentile per-packet one-way delay: 120.706 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 36.91 Mbit/s
95th percentile per-packet one-way delay: 115.998 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 98.55 Mbit/s
95th percentile per-packet one-way delay: 122.004 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.28 Mbit/s
95th percentile per-packet one-way delay: 120.666 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Cubic — Data Link



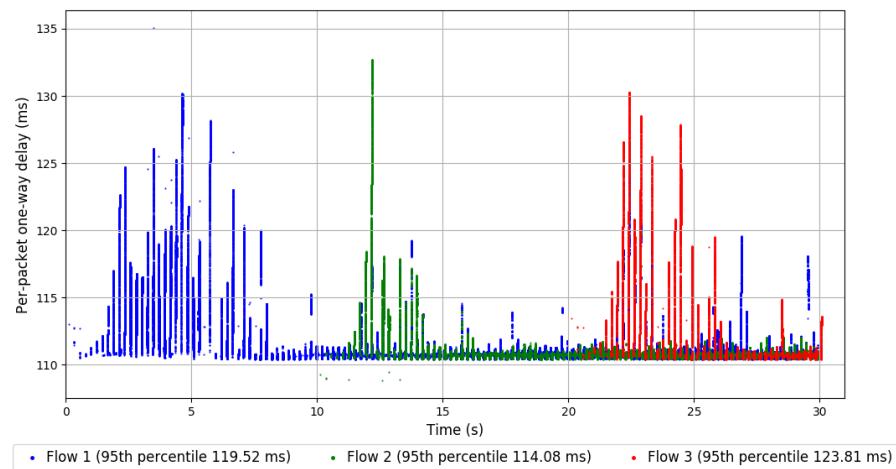
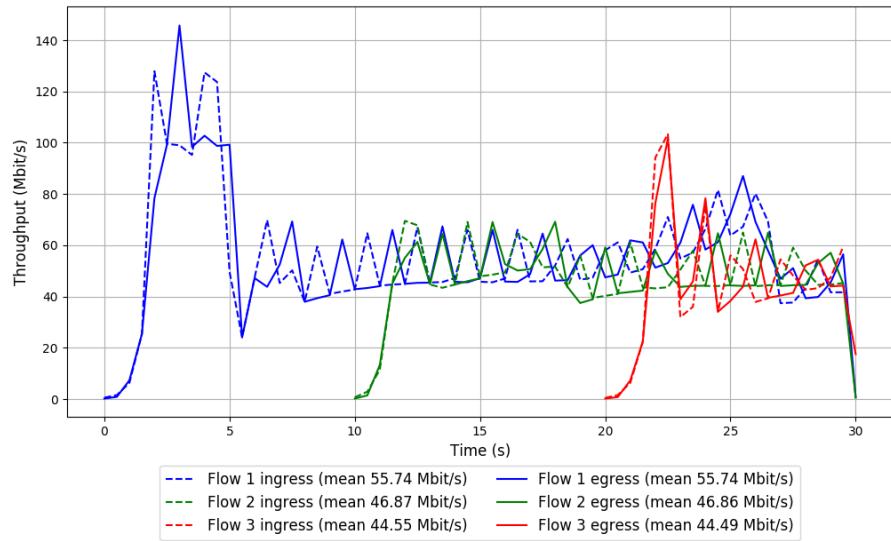
Run 6: Statistics of TCP Cubic

Start at: 2017-09-18 19:53:27

End at: 2017-09-18 19:53:57

```
# Below is generated by plot.py at 2017-09-18 21:45:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 101.64 Mbit/s
95th percentile per-packet one-way delay: 119.458 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 55.74 Mbit/s
95th percentile per-packet one-way delay: 119.522 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.86 Mbit/s
95th percentile per-packet one-way delay: 114.079 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 44.49 Mbit/s
95th percentile per-packet one-way delay: 123.815 ms
Loss rate: 0.15%
```

Run 6: Report of TCP Cubic — Data Link



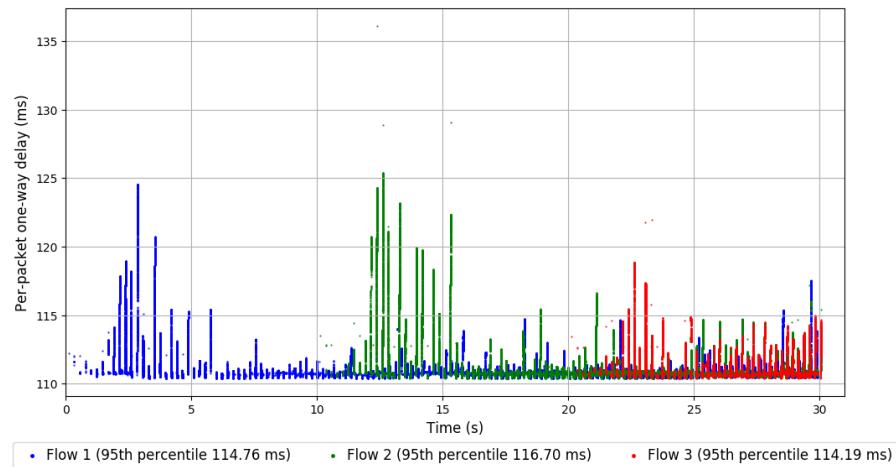
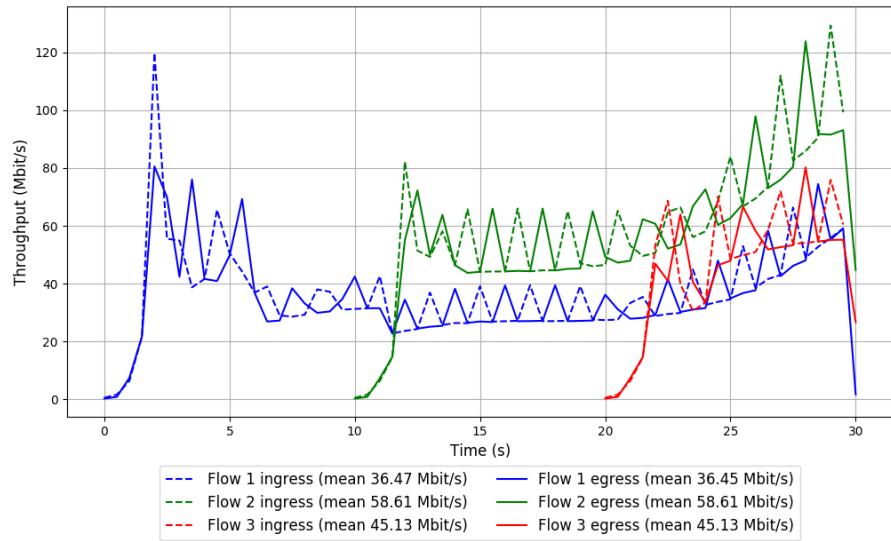
Run 7: Statistics of TCP Cubic

Start at: 2017-09-18 20:03:22

End at: 2017-09-18 20:03:52

```
# Below is generated by plot.py at 2017-09-18 21:46:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.43 Mbit/s
95th percentile per-packet one-way delay: 115.173 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 36.45 Mbit/s
95th percentile per-packet one-way delay: 114.764 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 58.61 Mbit/s
95th percentile per-packet one-way delay: 116.701 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 45.13 Mbit/s
95th percentile per-packet one-way delay: 114.192 ms
Loss rate: 0.00%
```

Run 7: Report of TCP Cubic — Data Link



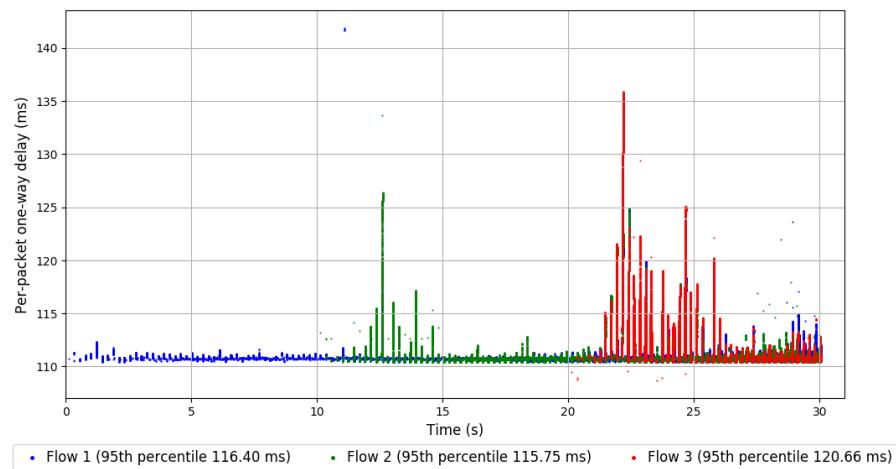
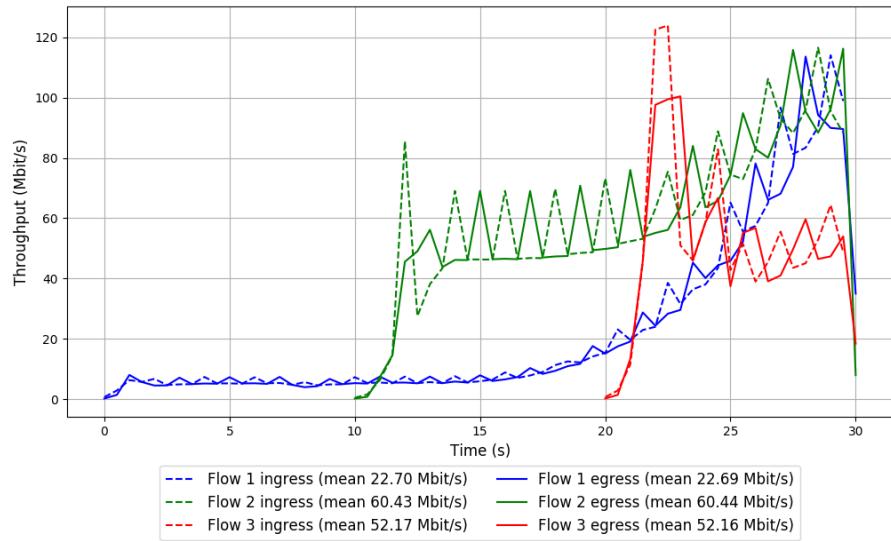
Run 8: Statistics of TCP Cubic

Start at: 2017-09-18 20:13:03

End at: 2017-09-18 20:13:33

```
# Below is generated by plot.py at 2017-09-18 21:46:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.19 Mbit/s
95th percentile per-packet one-way delay: 117.149 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 22.69 Mbit/s
95th percentile per-packet one-way delay: 116.399 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 60.44 Mbit/s
95th percentile per-packet one-way delay: 115.753 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 52.16 Mbit/s
95th percentile per-packet one-way delay: 120.664 ms
Loss rate: 0.00%
```

Run 8: Report of TCP Cubic — Data Link



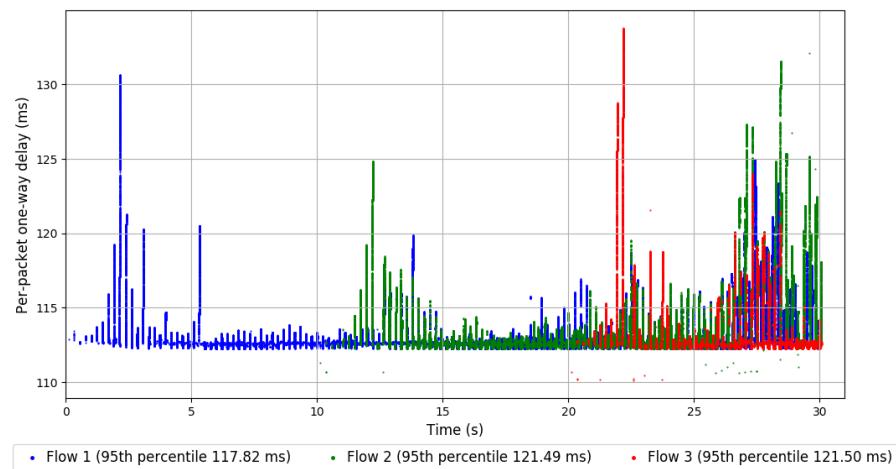
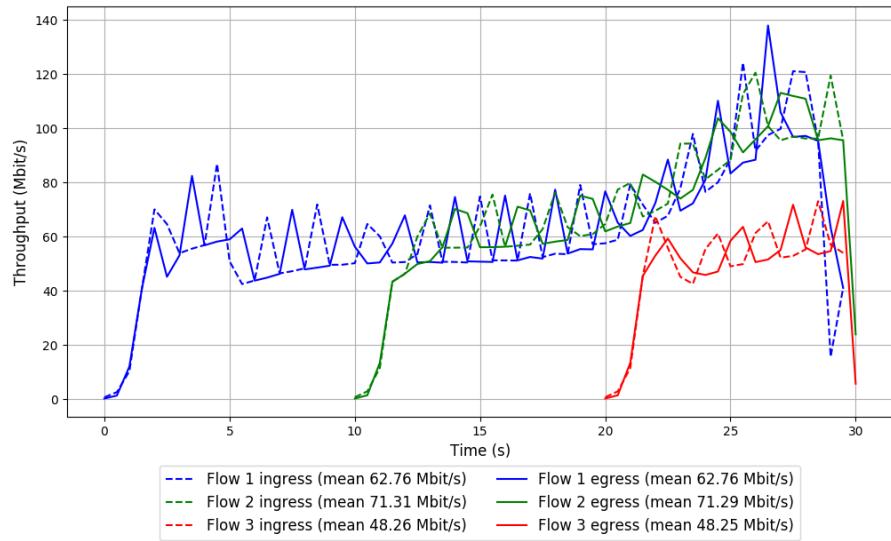
```
Run 9: Statistics of TCP Cubic
```

```
Start at: 2017-09-18 20:23:00
```

```
End at: 2017-09-18 20:23:30
```

```
# Below is generated by plot.py at 2017-09-18 21:47:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.93 Mbit/s
95th percentile per-packet one-way delay: 119.605 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.76 Mbit/s
95th percentile per-packet one-way delay: 117.818 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 71.29 Mbit/s
95th percentile per-packet one-way delay: 121.487 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.25 Mbit/s
95th percentile per-packet one-way delay: 121.502 ms
Loss rate: 0.00%
```

Run 9: Report of TCP Cubic — Data Link



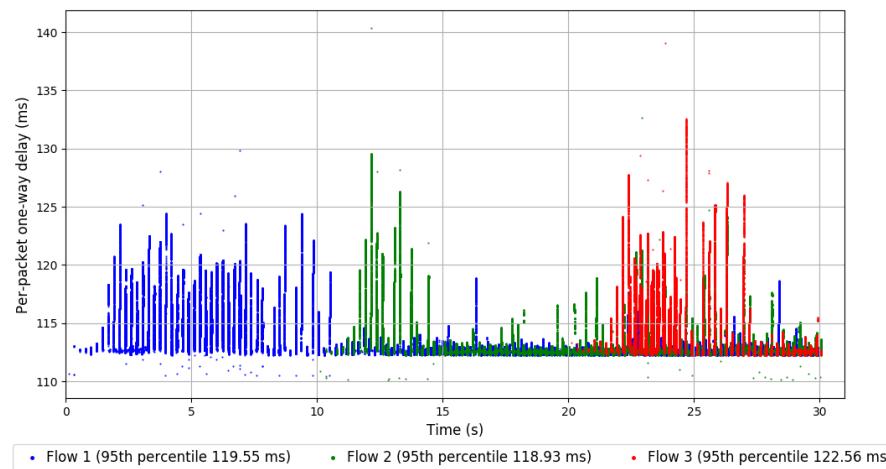
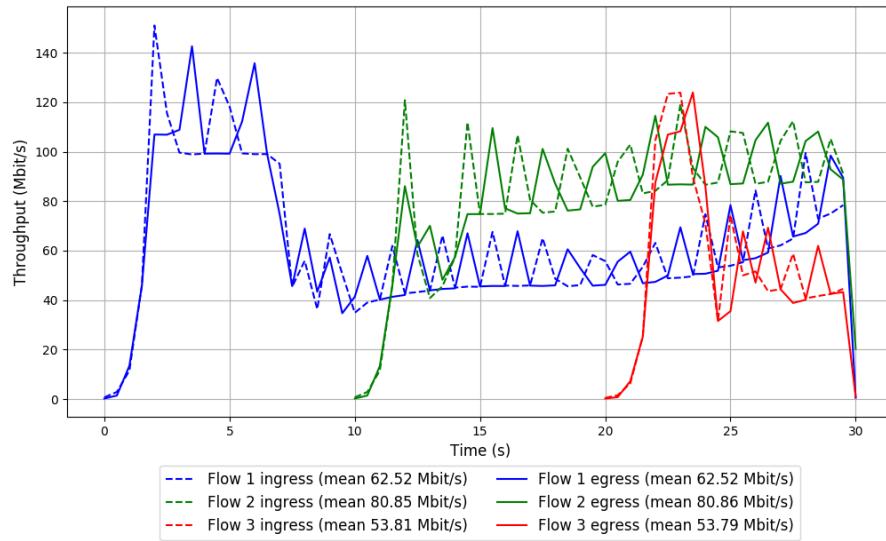
Run 10: Statistics of TCP Cubic

Start at: 2017-09-18 20:33:01

End at: 2017-09-18 20:33:31

```
# Below is generated by plot.py at 2017-09-18 21:47:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.20 Mbit/s
95th percentile per-packet one-way delay: 119.993 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 62.52 Mbit/s
95th percentile per-packet one-way delay: 119.546 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 80.86 Mbit/s
95th percentile per-packet one-way delay: 118.934 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 53.79 Mbit/s
95th percentile per-packet one-way delay: 122.555 ms
Loss rate: 0.05%
```

Run 10: Report of TCP Cubic — Data Link



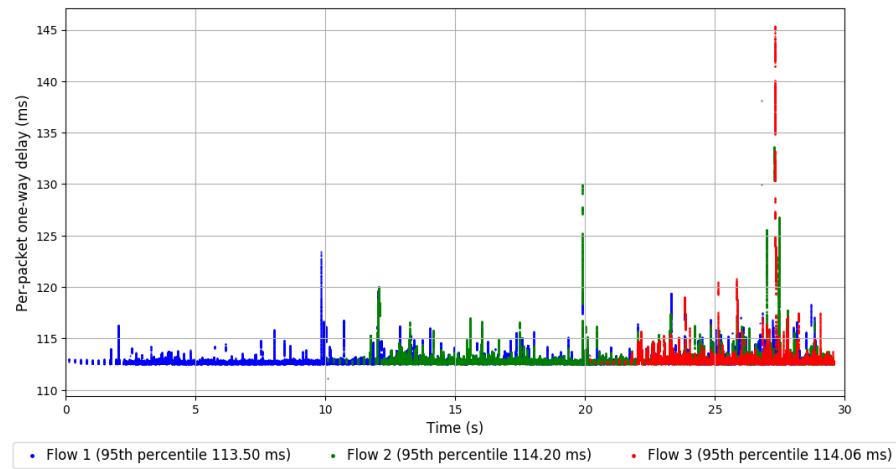
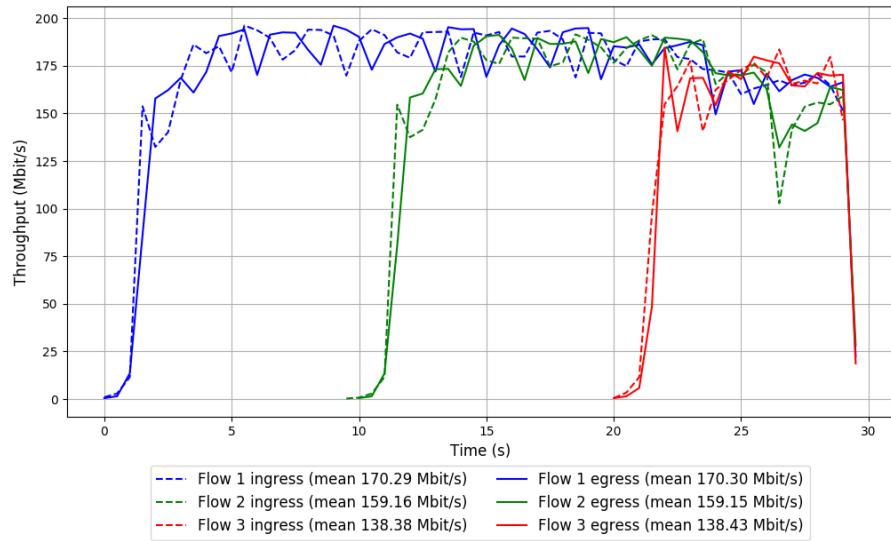
Run 1: Statistics of Indigo

Start at: 2017-09-18 19:08:14

End at: 2017-09-18 19:08:44

```
# Below is generated by plot.py at 2017-09-18 21:50:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 319.75 Mbit/s
95th percentile per-packet one-way delay: 113.793 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 170.30 Mbit/s
95th percentile per-packet one-way delay: 113.503 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 159.15 Mbit/s
95th percentile per-packet one-way delay: 114.201 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 138.43 Mbit/s
95th percentile per-packet one-way delay: 114.063 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link



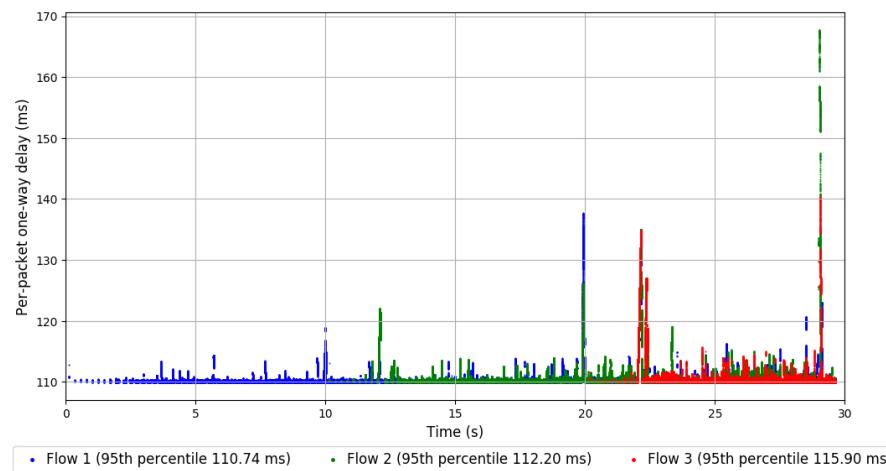
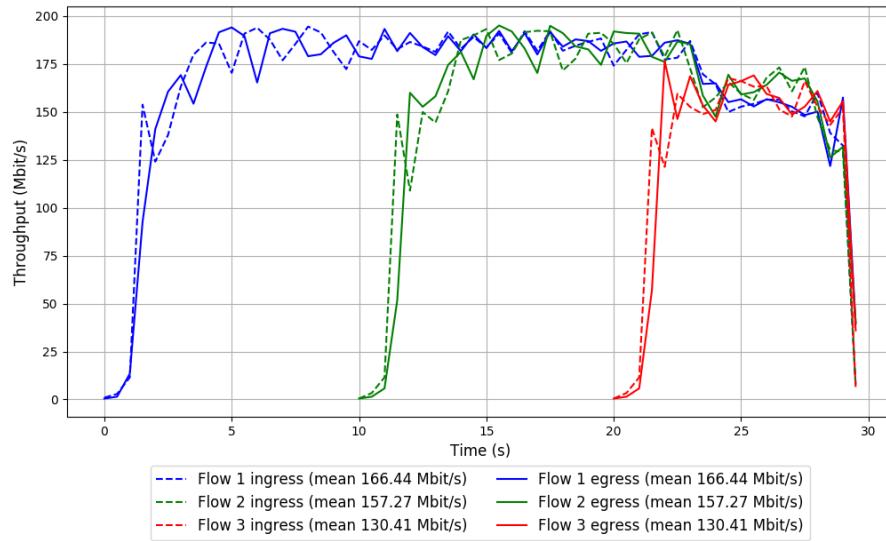
Run 2: Statistics of Indigo

Start at: 2017-09-18 19:18:13

End at: 2017-09-18 19:18:43

```
# Below is generated by plot.py at 2017-09-18 21:50:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.98 Mbit/s
95th percentile per-packet one-way delay: 111.464 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 166.44 Mbit/s
95th percentile per-packet one-way delay: 110.741 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 157.27 Mbit/s
95th percentile per-packet one-way delay: 112.200 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 130.41 Mbit/s
95th percentile per-packet one-way delay: 115.901 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link



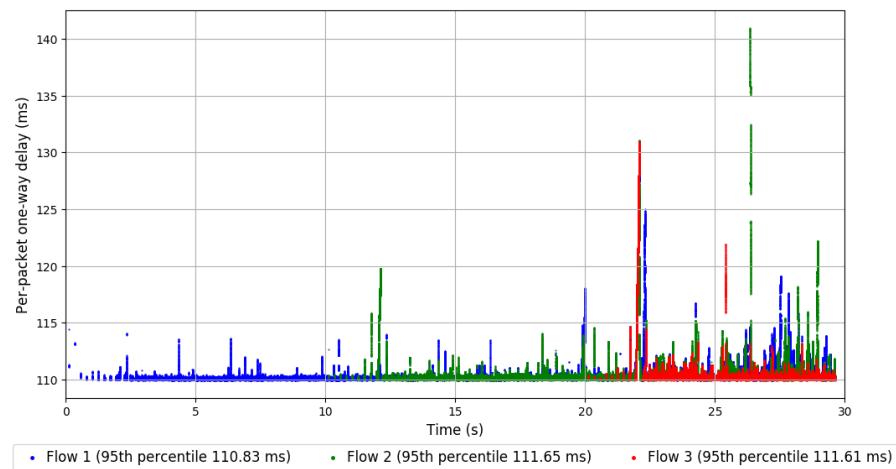
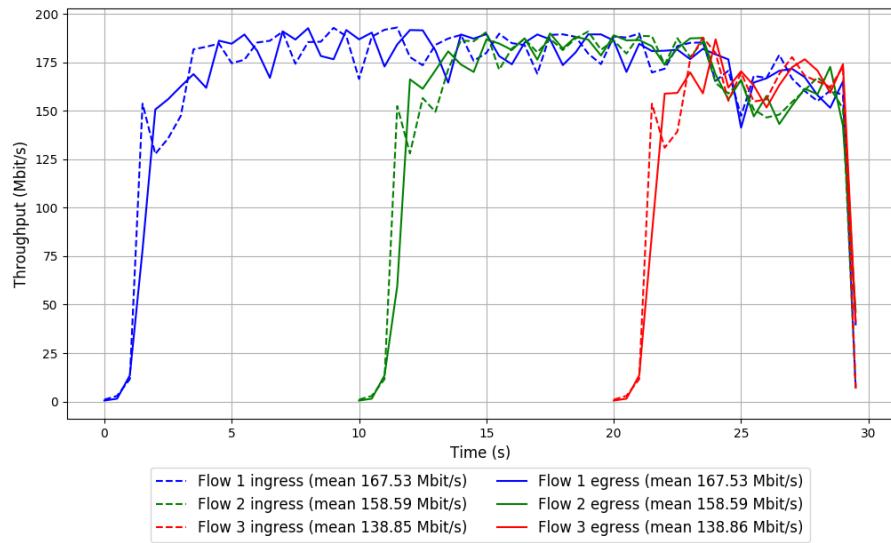
Run 3: Statistics of Indigo

Start at: 2017-09-18 19:28:10

End at: 2017-09-18 19:28:40

```
# Below is generated by plot.py at 2017-09-18 21:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.08 Mbit/s
95th percentile per-packet one-way delay: 111.165 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 167.53 Mbit/s
95th percentile per-packet one-way delay: 110.832 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 158.59 Mbit/s
95th percentile per-packet one-way delay: 111.651 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 138.86 Mbit/s
95th percentile per-packet one-way delay: 111.613 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo — Data Link



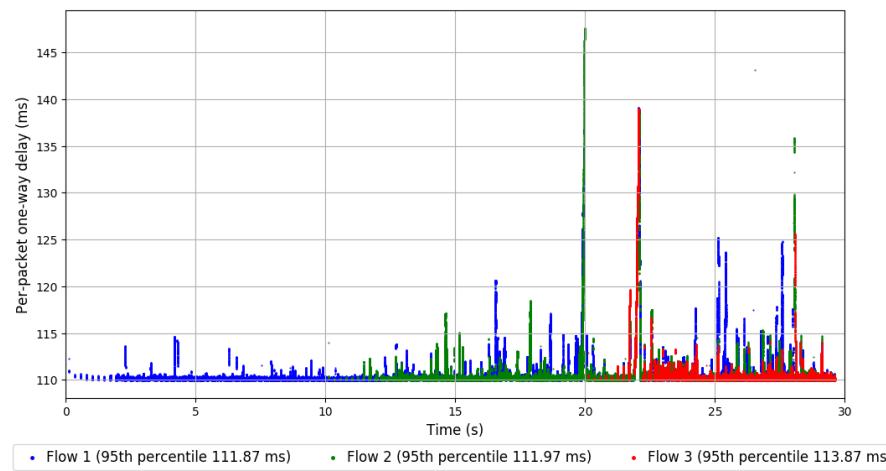
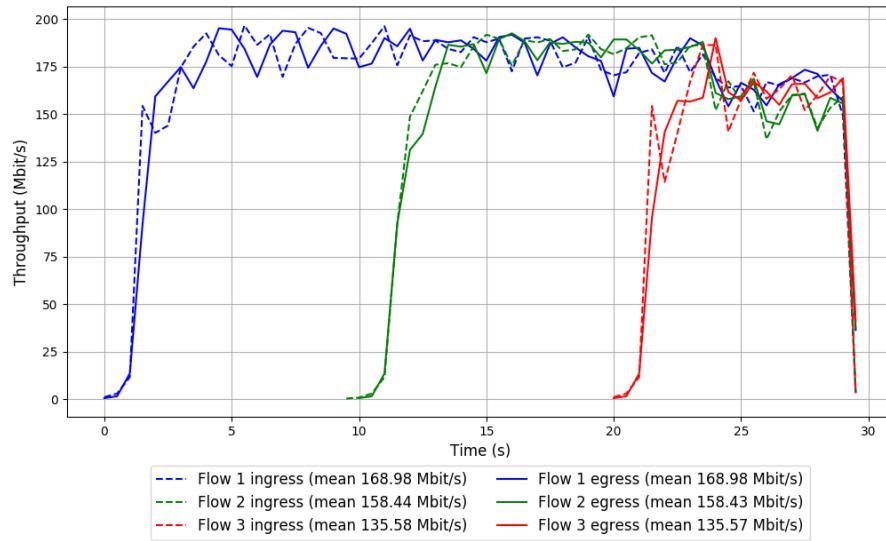
Run 4: Statistics of Indigo

Start at: 2017-09-18 19:37:44

End at: 2017-09-18 19:38:14

```
# Below is generated by plot.py at 2017-09-18 21:50:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.43 Mbit/s
95th percentile per-packet one-way delay: 112.082 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 168.98 Mbit/s
95th percentile per-packet one-way delay: 111.872 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 158.43 Mbit/s
95th percentile per-packet one-way delay: 111.965 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 135.57 Mbit/s
95th percentile per-packet one-way delay: 113.873 ms
Loss rate: 0.01%
```

Run 4: Report of Indigo — Data Link



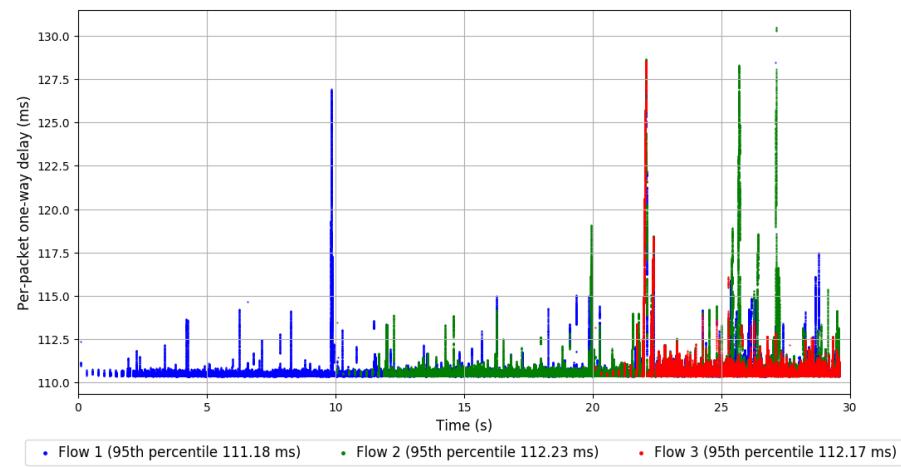
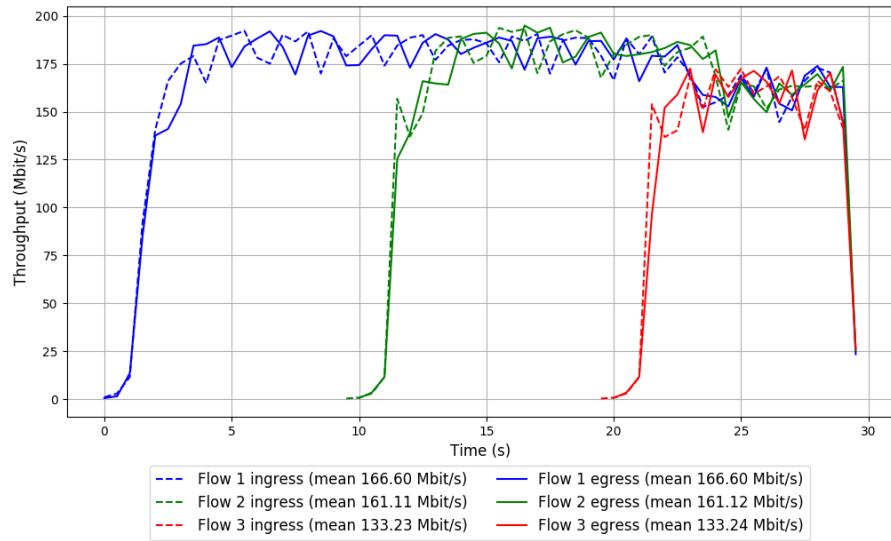
Run 5: Statistics of Indigo

Start at: 2017-09-18 19:47:14

End at: 2017-09-18 19:47:44

```
# Below is generated by plot.py at 2017-09-18 21:51:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.21 Mbit/s
95th percentile per-packet one-way delay: 111.533 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 166.60 Mbit/s
95th percentile per-packet one-way delay: 111.180 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 161.12 Mbit/s
95th percentile per-packet one-way delay: 112.228 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 133.24 Mbit/s
95th percentile per-packet one-way delay: 112.168 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link



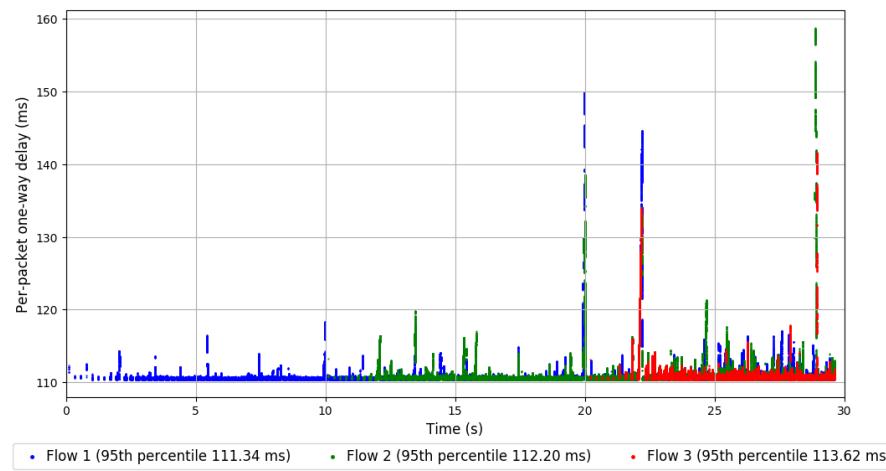
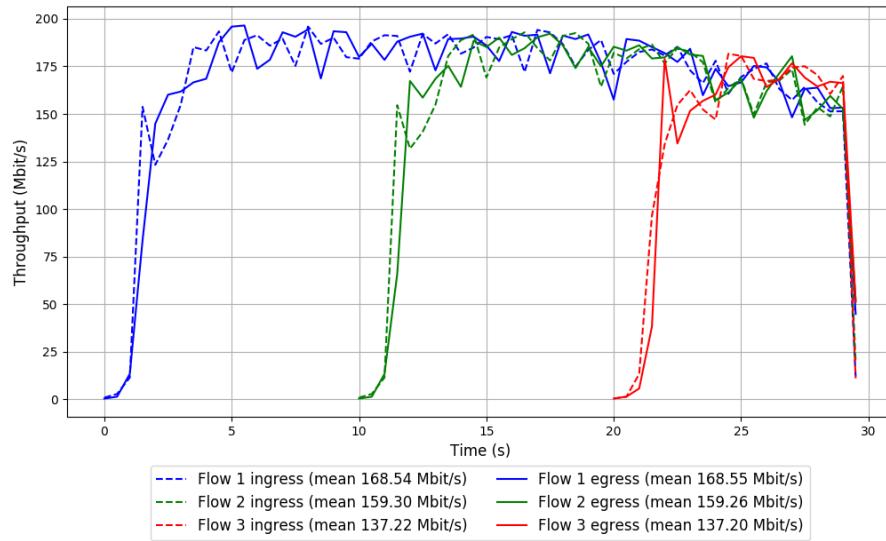
Run 6: Statistics of Indigo

Start at: 2017-09-18 19:57:13

End at: 2017-09-18 19:57:43

```
# Below is generated by plot.py at 2017-09-18 21:51:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.66 Mbit/s
95th percentile per-packet one-way delay: 111.715 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 168.55 Mbit/s
95th percentile per-packet one-way delay: 111.341 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 159.26 Mbit/s
95th percentile per-packet one-way delay: 112.199 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 137.20 Mbit/s
95th percentile per-packet one-way delay: 113.621 ms
Loss rate: 0.02%
```

Run 6: Report of Indigo — Data Link



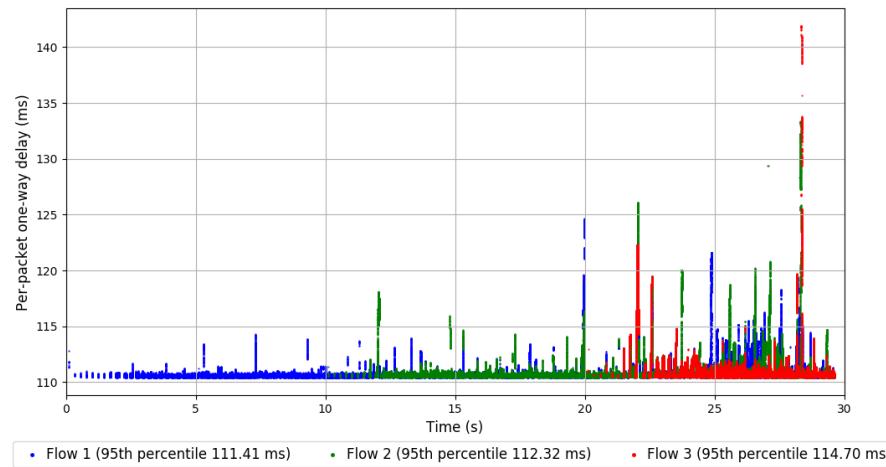
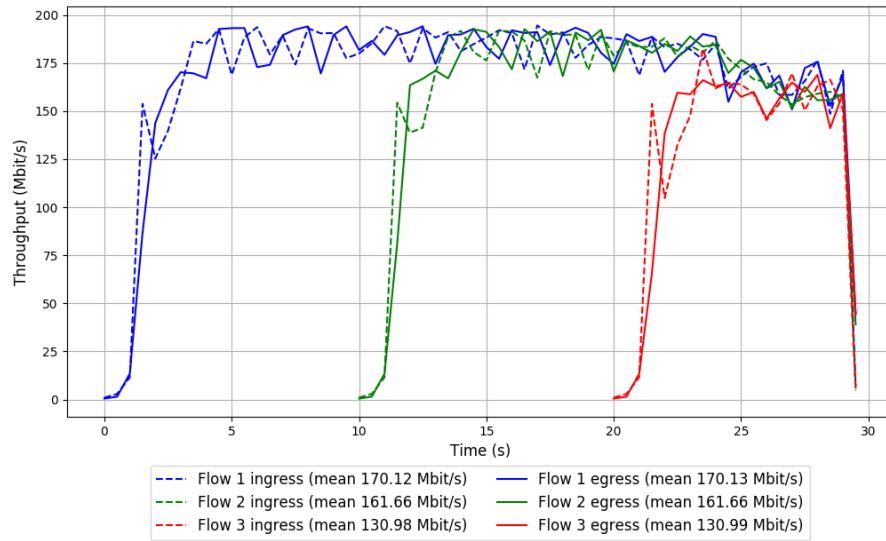
Run 7: Statistics of Indigo

Start at: 2017-09-18 20:07:03

End at: 2017-09-18 20:07:33

```
# Below is generated by plot.py at 2017-09-18 21:52:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 319.11 Mbit/s
95th percentile per-packet one-way delay: 111.929 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 170.13 Mbit/s
95th percentile per-packet one-way delay: 111.407 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 161.66 Mbit/s
95th percentile per-packet one-way delay: 112.323 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 130.99 Mbit/s
95th percentile per-packet one-way delay: 114.699 ms
Loss rate: 0.00%
```

Run 7: Report of Indigo — Data Link



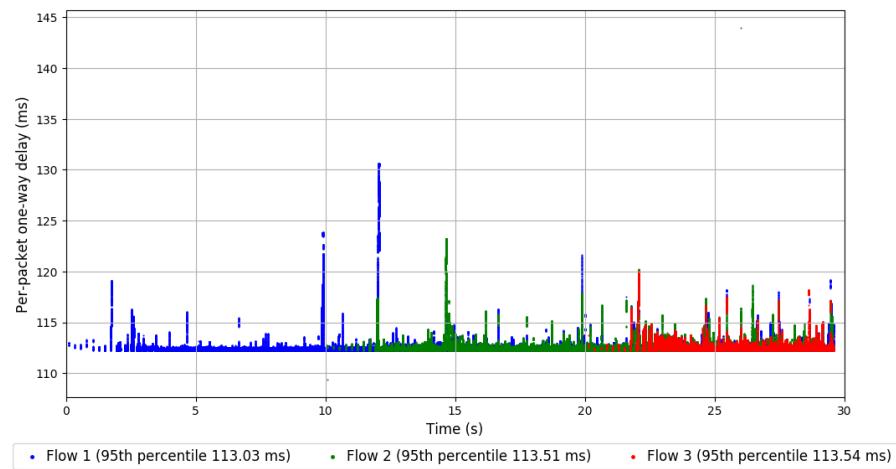
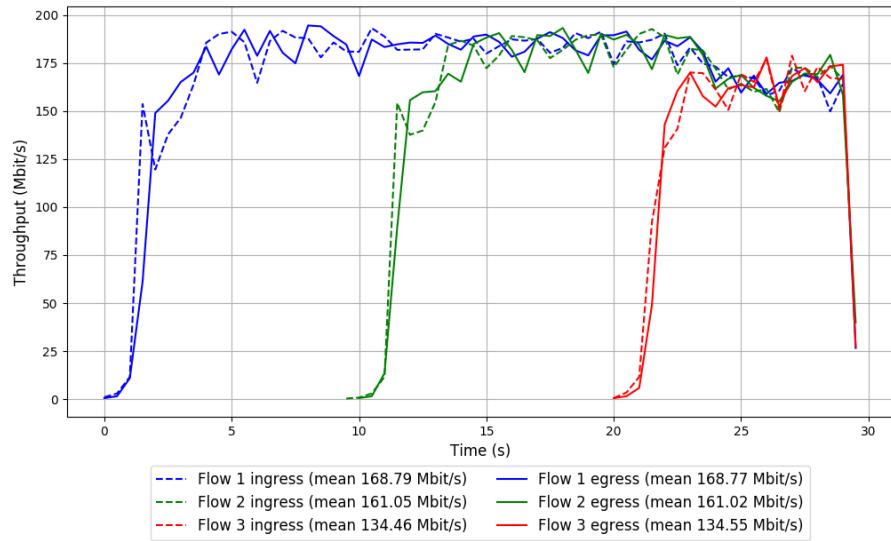
Run 8: Statistics of Indigo

Start at: 2017-09-18 20:16:46

End at: 2017-09-18 20:17:16

```
# Below is generated by plot.py at 2017-09-18 21:52:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.38 Mbit/s
95th percentile per-packet one-way delay: 113.301 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 168.77 Mbit/s
95th percentile per-packet one-way delay: 113.029 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 161.02 Mbit/s
95th percentile per-packet one-way delay: 113.512 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 134.55 Mbit/s
95th percentile per-packet one-way delay: 113.539 ms
Loss rate: 0.02%
```

Run 8: Report of Indigo — Data Link



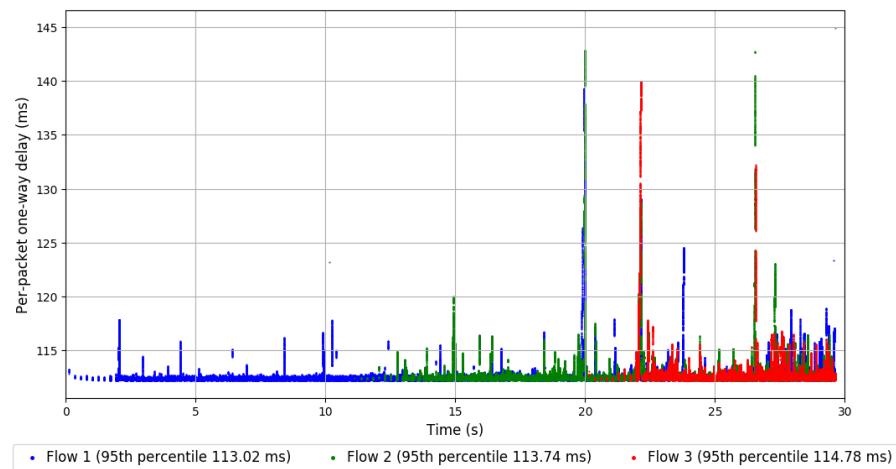
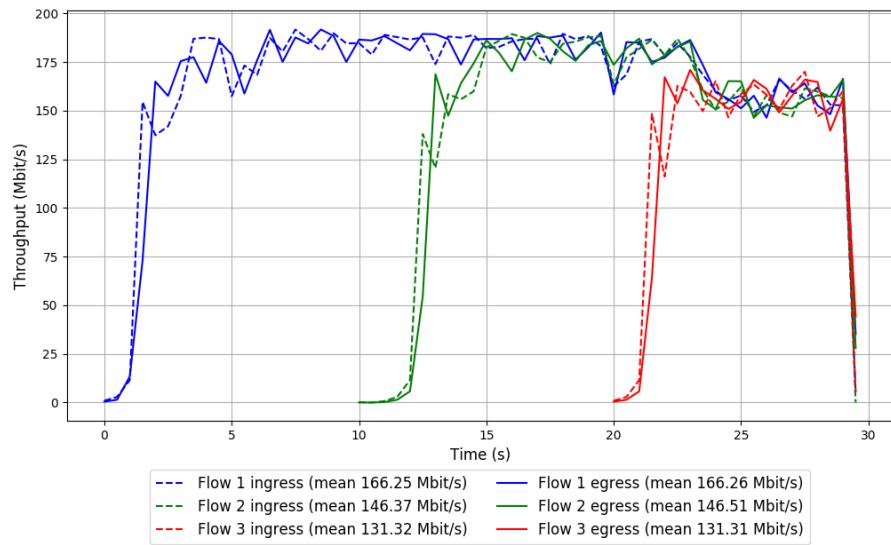
Run 9: Statistics of Indigo

Start at: 2017-09-18 20:26:44

End at: 2017-09-18 20:27:14

```
# Below is generated by plot.py at 2017-09-18 21:55:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 305.17 Mbit/s
95th percentile per-packet one-way delay: 113.479 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 166.26 Mbit/s
95th percentile per-packet one-way delay: 113.021 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 146.51 Mbit/s
95th percentile per-packet one-way delay: 113.737 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 131.31 Mbit/s
95th percentile per-packet one-way delay: 114.779 ms
Loss rate: 0.04%
```

Run 9: Report of Indigo — Data Link



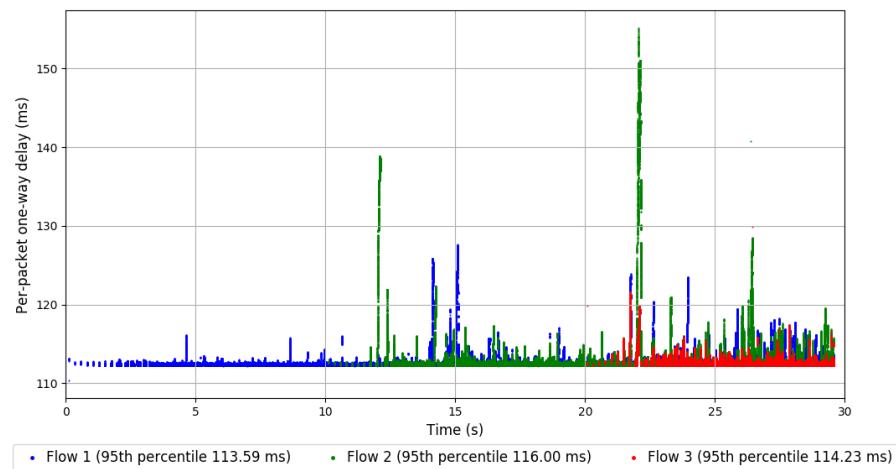
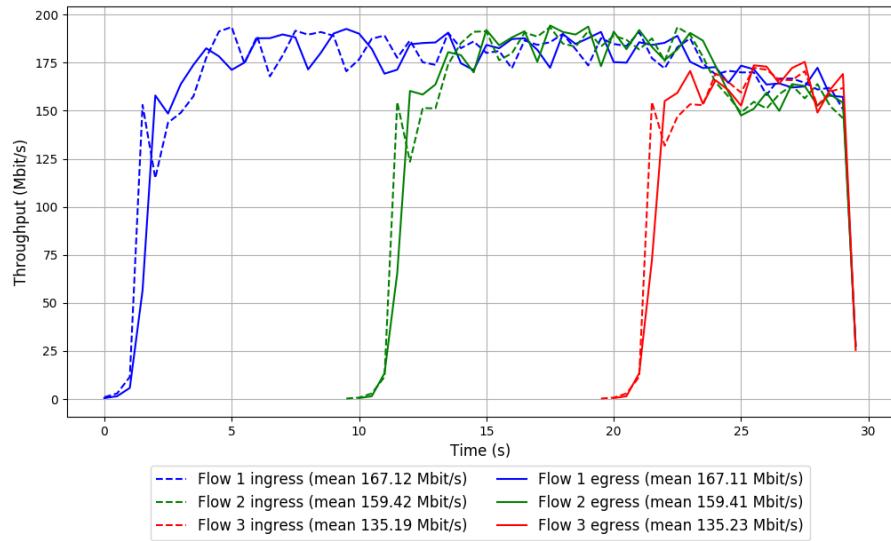
Run 10: Statistics of Indigo

Start at: 2017-09-18 20:36:46

End at: 2017-09-18 20:37:16

```
# Below is generated by plot.py at 2017-09-18 21:55:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.04 Mbit/s
95th percentile per-packet one-way delay: 114.387 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 167.11 Mbit/s
95th percentile per-packet one-way delay: 113.595 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 159.41 Mbit/s
95th percentile per-packet one-way delay: 116.005 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 135.23 Mbit/s
95th percentile per-packet one-way delay: 114.227 ms
Loss rate: 0.03%
```

Run 10: Report of Indigo — Data Link

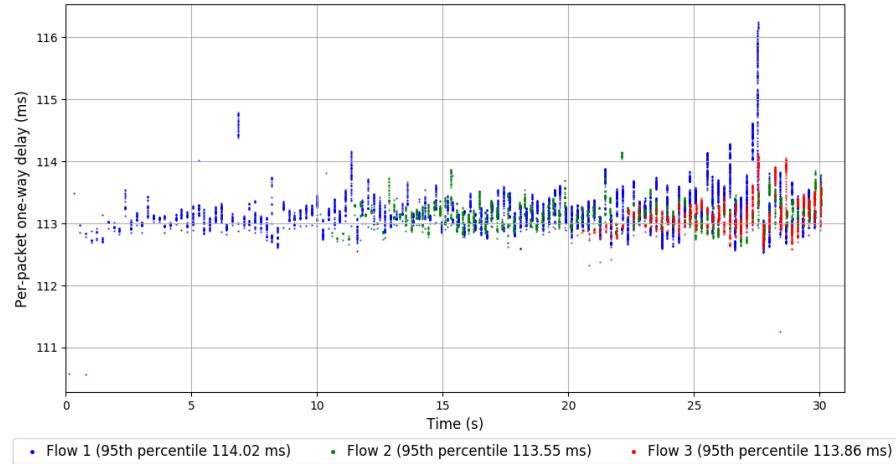
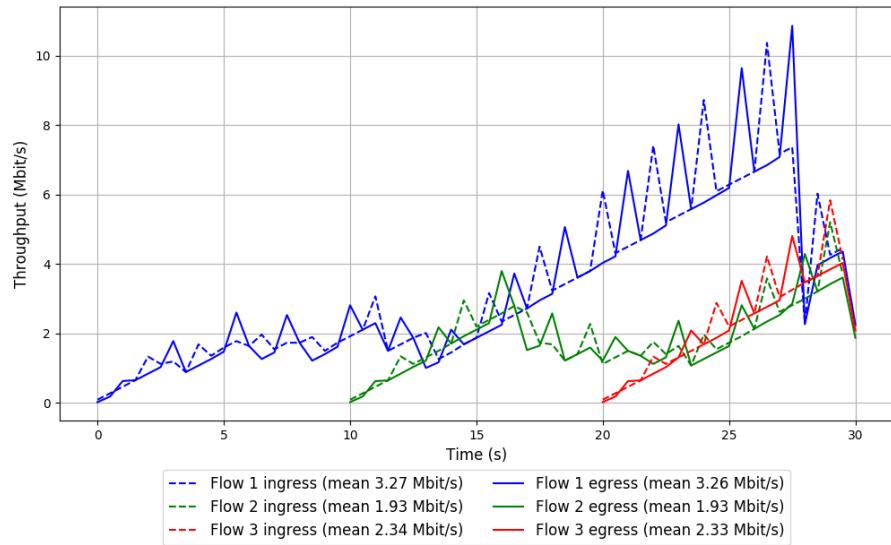


```
Run 1: Statistics of LEDBAT

Start at: 2017-09-18 19:02:49
End at: 2017-09-18 19:03:19

# Below is generated by plot.py at 2017-09-18 21:55:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.31 Mbit/s
95th percentile per-packet one-way delay: 113.825 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 114.016 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 113.553 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 113.857 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link



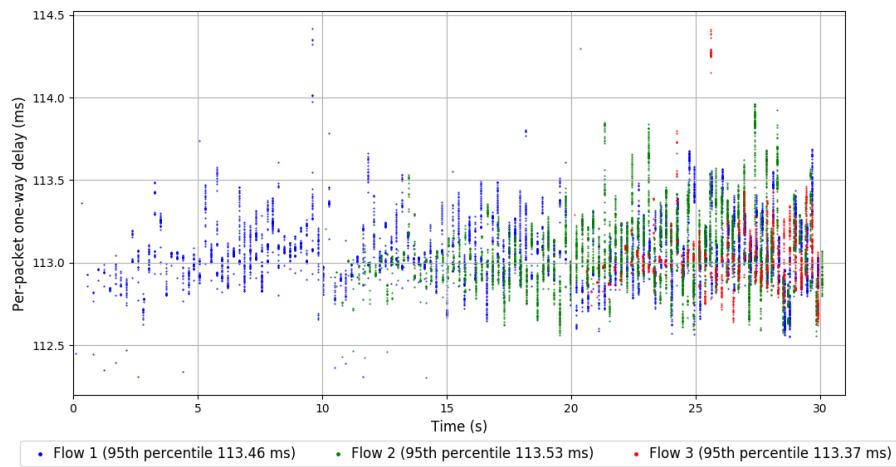
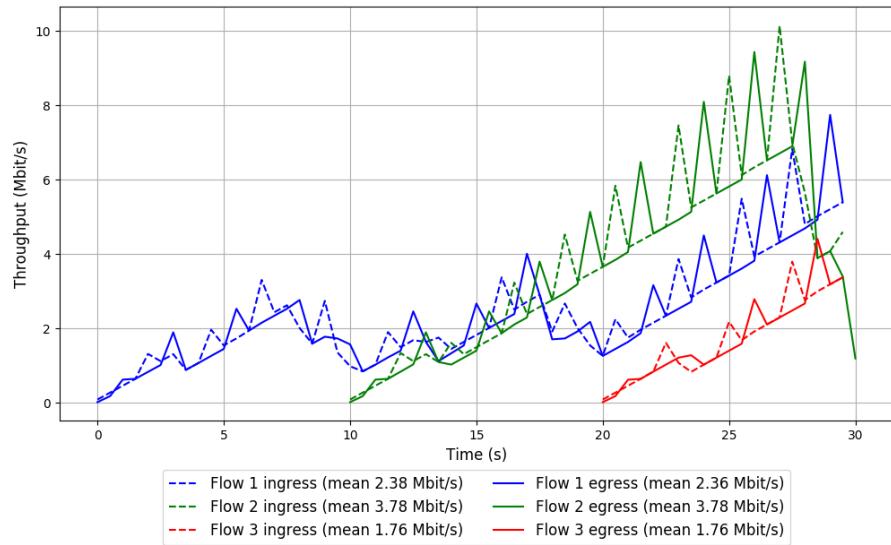
Run 2: Statistics of LEDBAT

Start at: 2017-09-18 19:12:51

End at: 2017-09-18 19:13:21

```
# Below is generated by plot.py at 2017-09-18 21:55:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.44 Mbit/s
95th percentile per-packet one-way delay: 113.482 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 113.456 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 113.535 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 113.373 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link



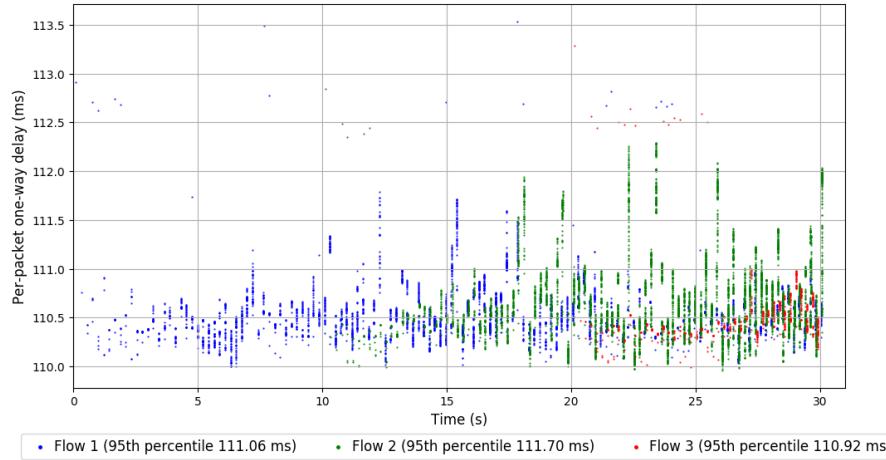
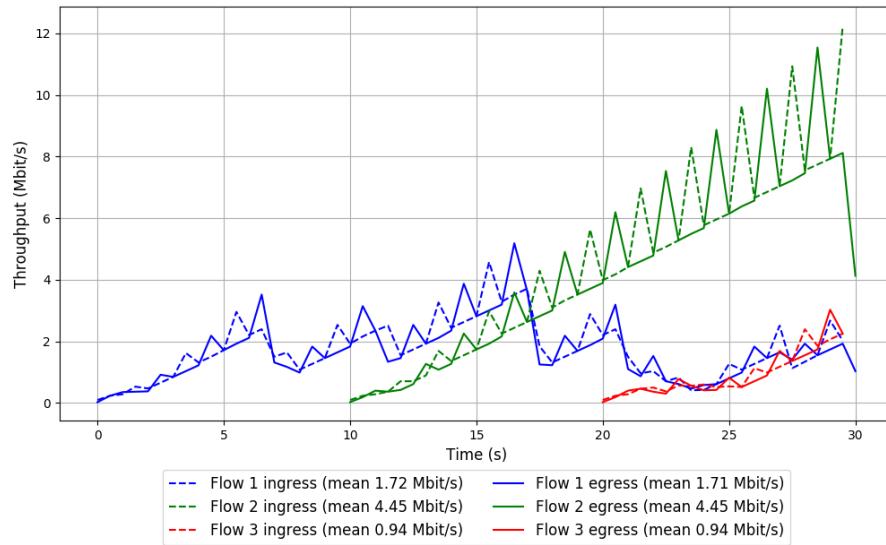
Run 3: Statistics of LEDBAT

Start at: 2017-09-18 19:22:43

End at: 2017-09-18 19:23:13

```
# Below is generated by plot.py at 2017-09-18 21:55:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 111.416 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 111.056 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 111.698 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 110.921 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link



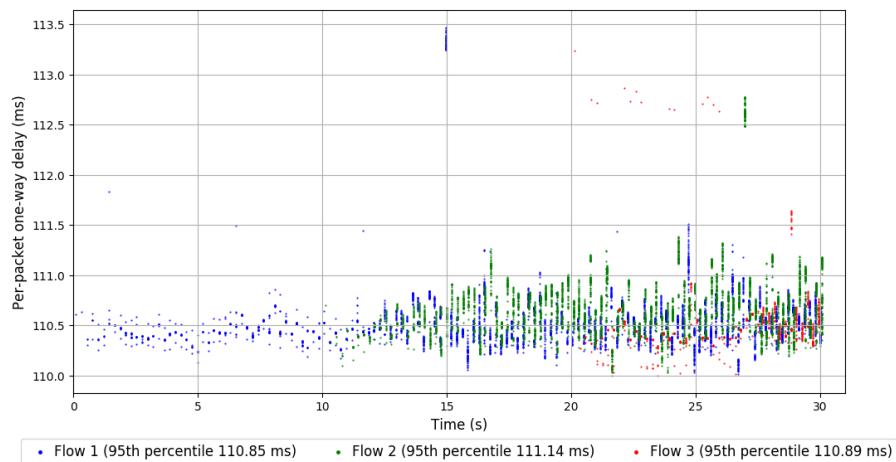
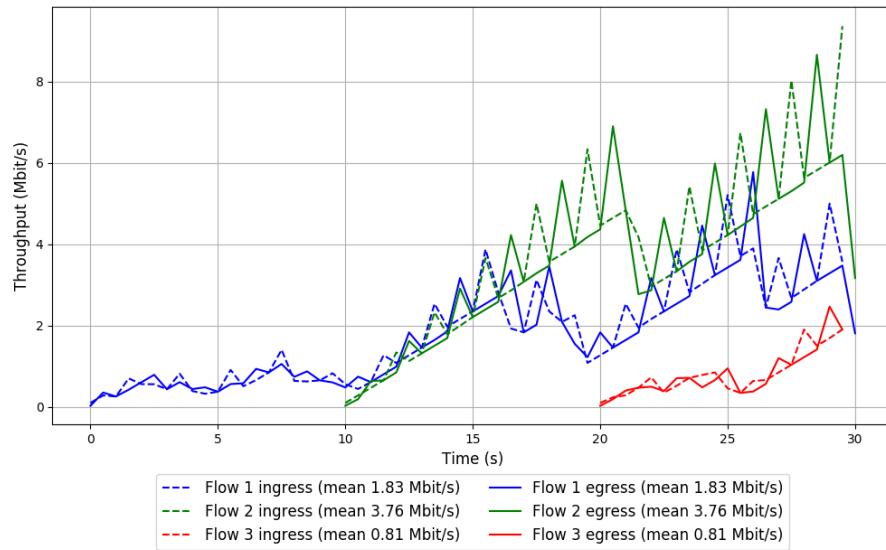
```
Run 4: Statistics of LEDBAT
```

```
Start at: 2017-09-18 19:32:16
```

```
End at: 2017-09-18 19:32:46
```

```
# Below is generated by plot.py at 2017-09-18 21:55:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.60 Mbit/s
95th percentile per-packet one-way delay: 111.069 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 110.854 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.76 Mbit/s
95th percentile per-packet one-way delay: 111.135 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 110.892 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link



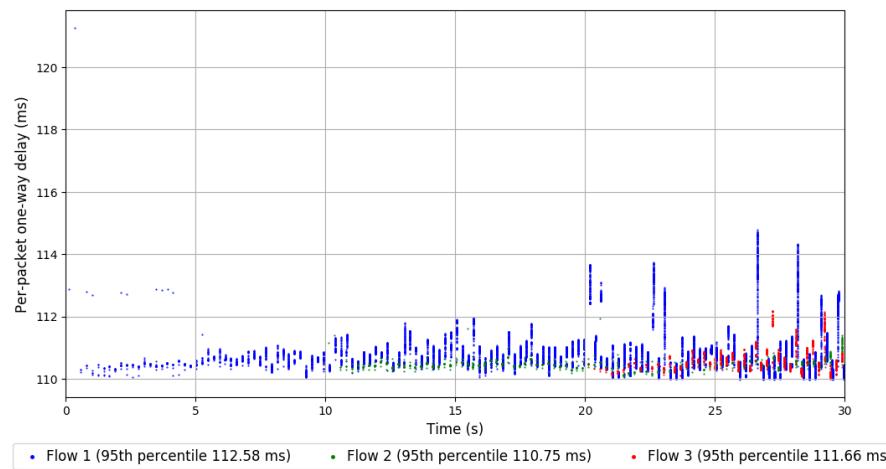
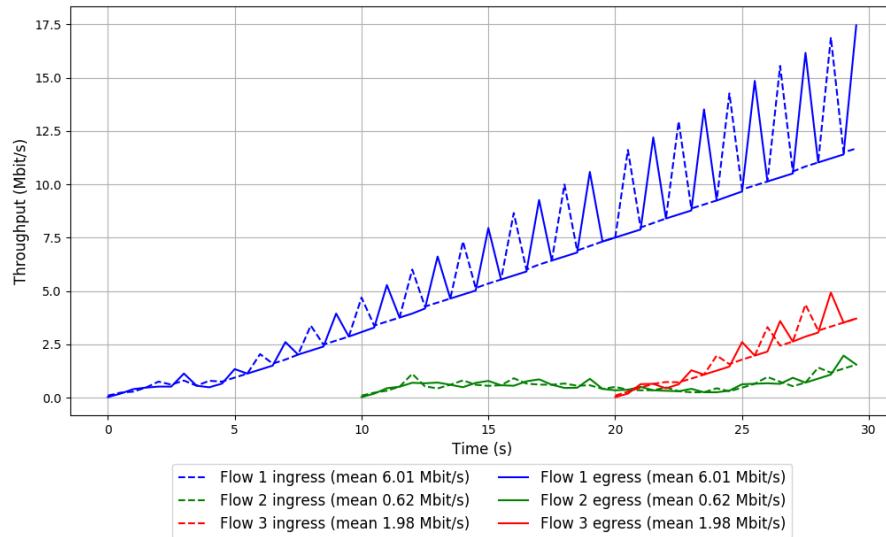
Run 5: Statistics of LEDBAT

Start at: 2017-09-18 19:41:46

End at: 2017-09-18 19:42:16

```
# Below is generated by plot.py at 2017-09-18 21:55:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.07 Mbit/s
95th percentile per-packet one-way delay: 112.472 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.01 Mbit/s
95th percentile per-packet one-way delay: 112.576 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 110.745 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 111.656 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link



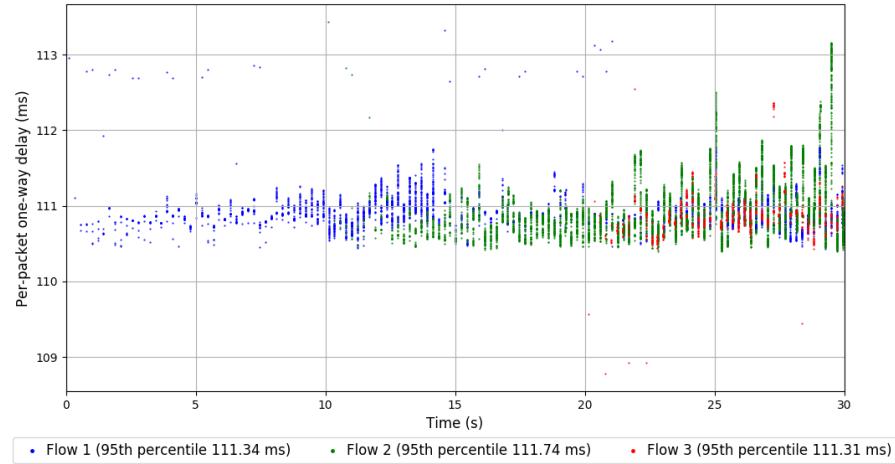
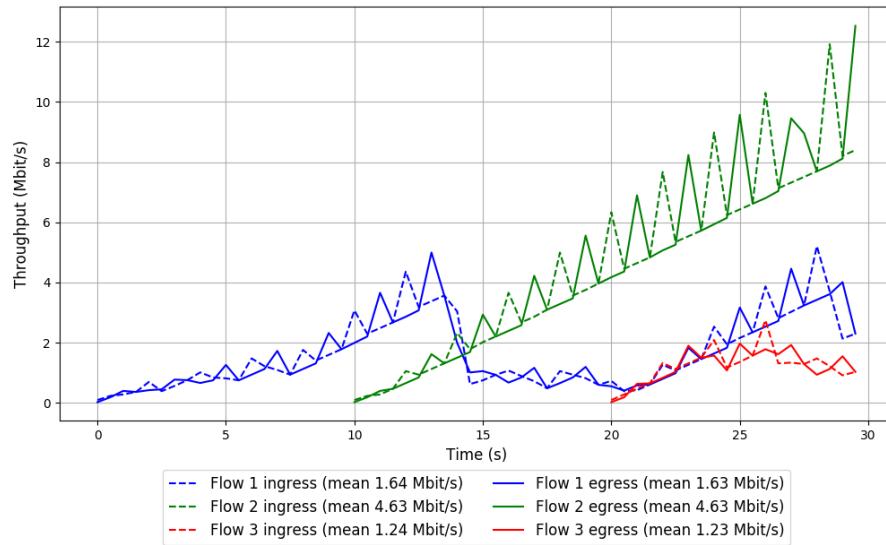
Run 6: Statistics of LEDBAT

Start at: 2017-09-18 19:51:46

End at: 2017-09-18 19:52:16

```
# Below is generated by plot.py at 2017-09-18 21:55:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 111.658 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 111.337 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 111.742 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 111.307 ms
Loss rate: 0.29%
```

Run 6: Report of LEDBAT — Data Link



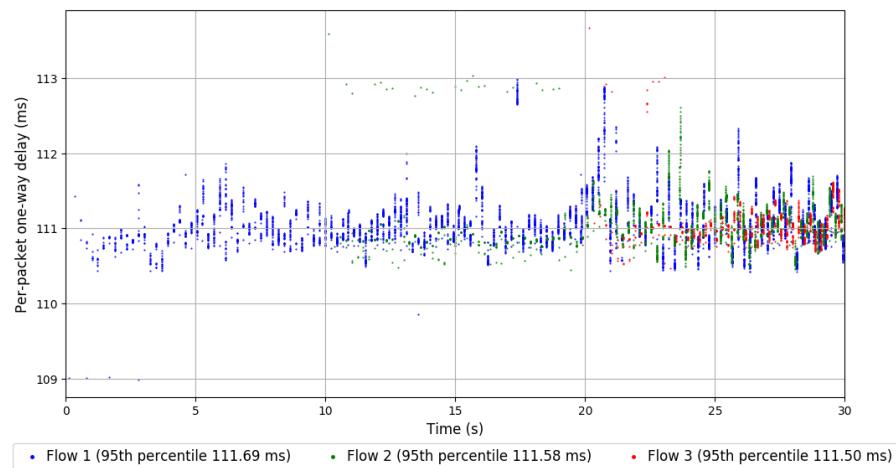
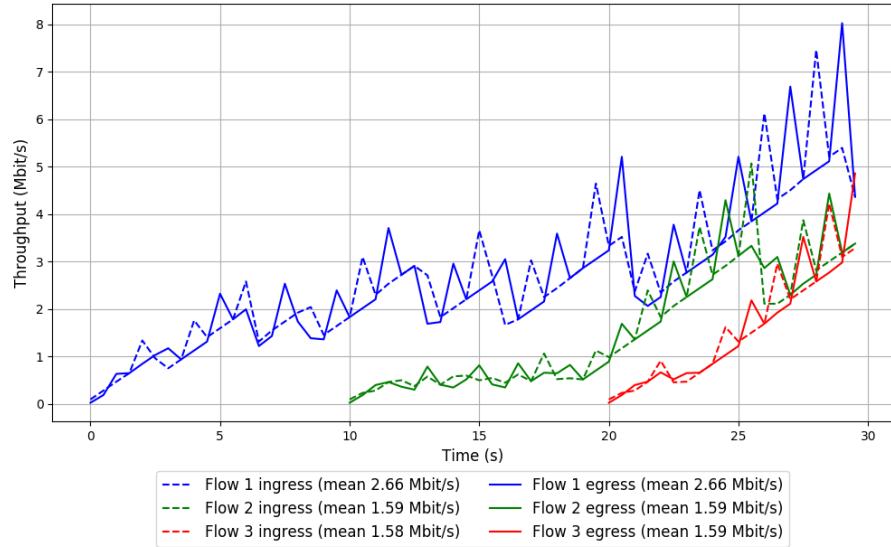
Run 7: Statistics of LEDBAT

Start at: 2017-09-18 20:01:41

End at: 2017-09-18 20:02:11

```
# Below is generated by plot.py at 2017-09-18 21:55:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 111.634 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 111.692 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 111.583 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 111.504 ms
Loss rate: 0.00%
```

Run 7: Report of LEDBAT — Data Link



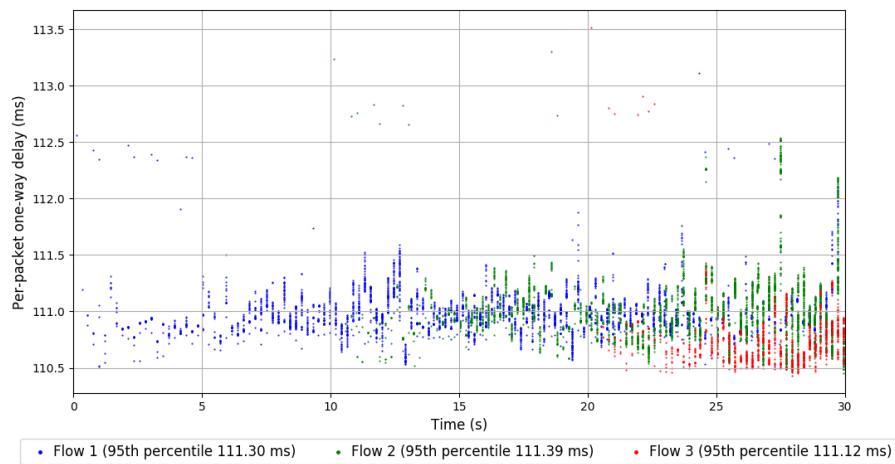
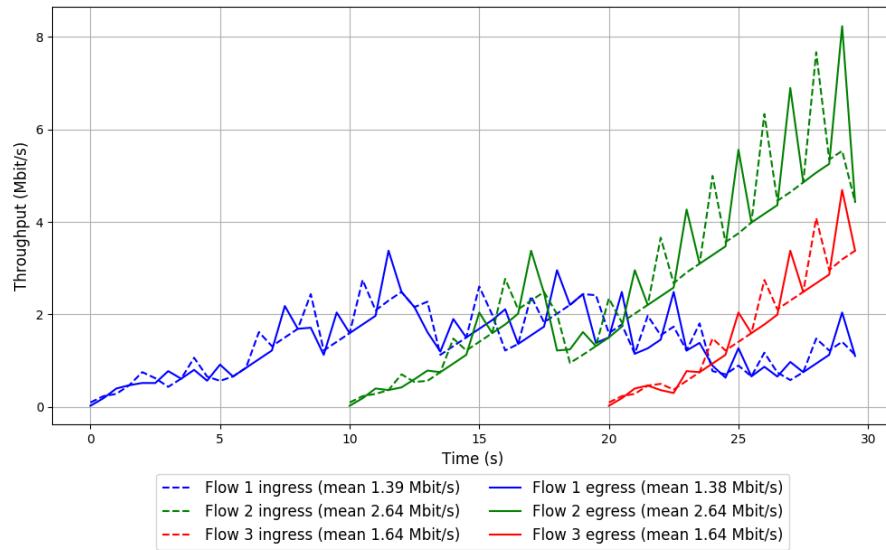
Run 8: Statistics of LEDBAT

Start at: 2017-09-18 20:11:23

End at: 2017-09-18 20:11:53

```
# Below is generated by plot.py at 2017-09-18 21:55:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.67 Mbit/s
95th percentile per-packet one-way delay: 111.328 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 111.299 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 2.64 Mbit/s
95th percentile per-packet one-way delay: 111.392 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 111.125 ms
Loss rate: 0.00%
```

Run 8: Report of LEDBAT — Data Link



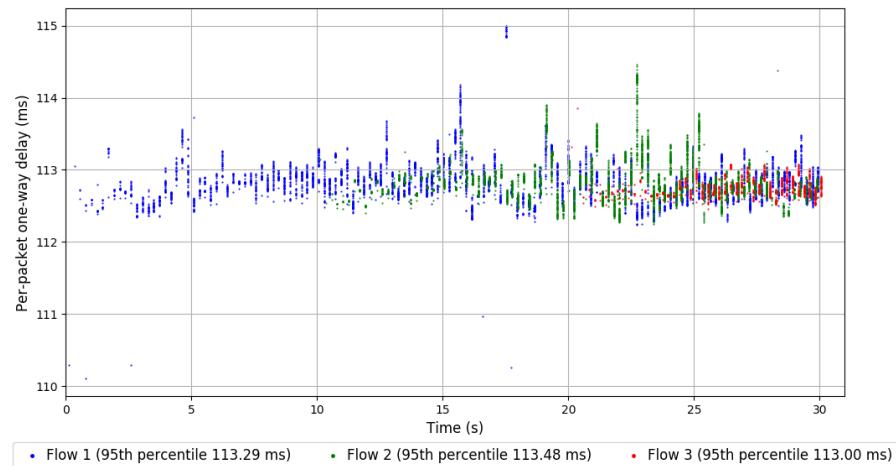
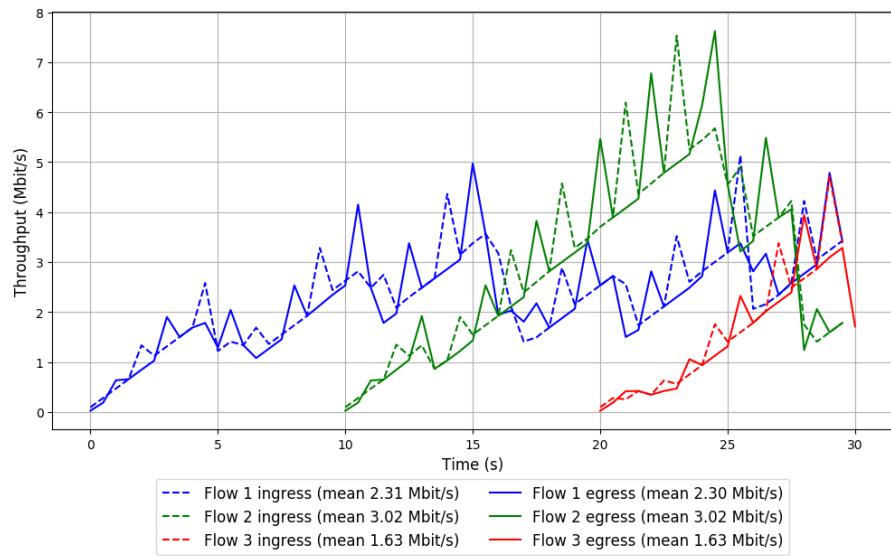
Run 9: Statistics of LEDBAT

Start at: 2017-09-18 20:21:19

End at: 2017-09-18 20:21:49

```
# Below is generated by plot.py at 2017-09-18 21:55:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 113.334 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 113.289 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 113.477 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 113.003 ms
Loss rate: 0.00%
```

Run 9: Report of LEDBAT — Data Link



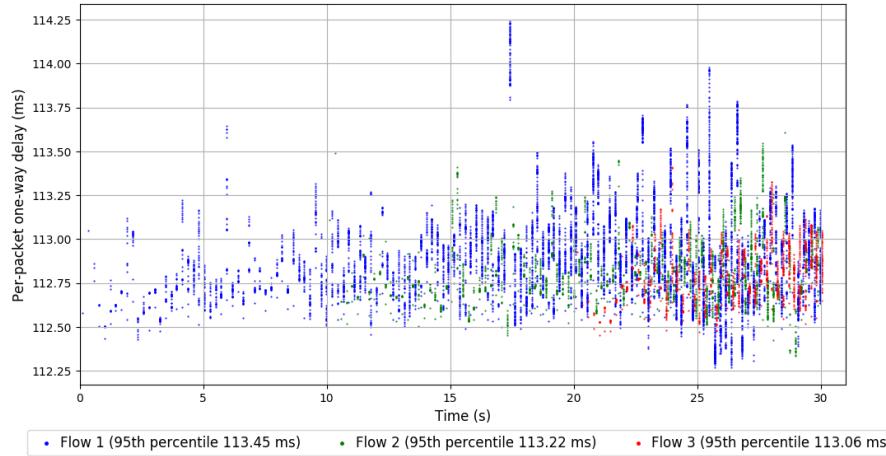
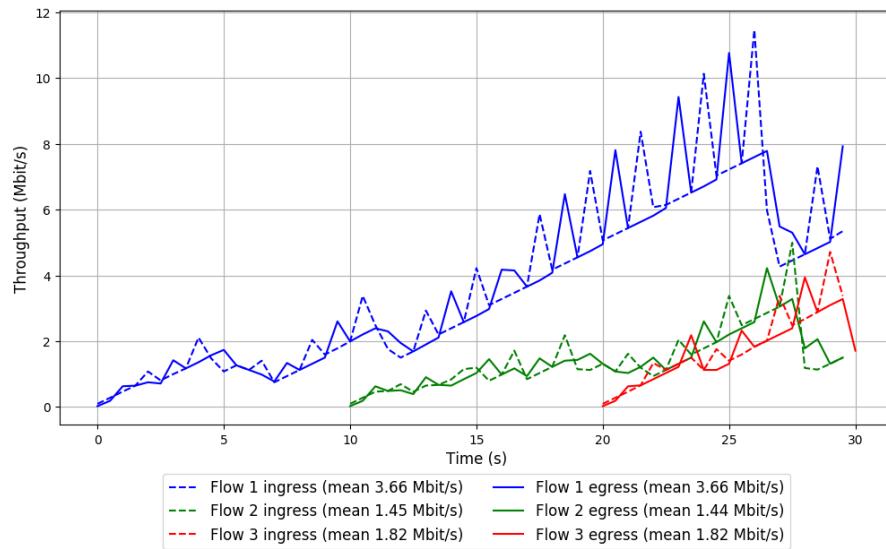
Run 10: Statistics of LEDBAT

Start at: 2017-09-18 20:31:20

End at: 2017-09-18 20:31:50

```
# Below is generated by plot.py at 2017-09-18 21:55:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.20 Mbit/s
95th percentile per-packet one-way delay: 113.377 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 113.450 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 113.219 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 113.060 ms
Loss rate: 0.00%
```

Run 10: Report of LEDBAT — Data Link

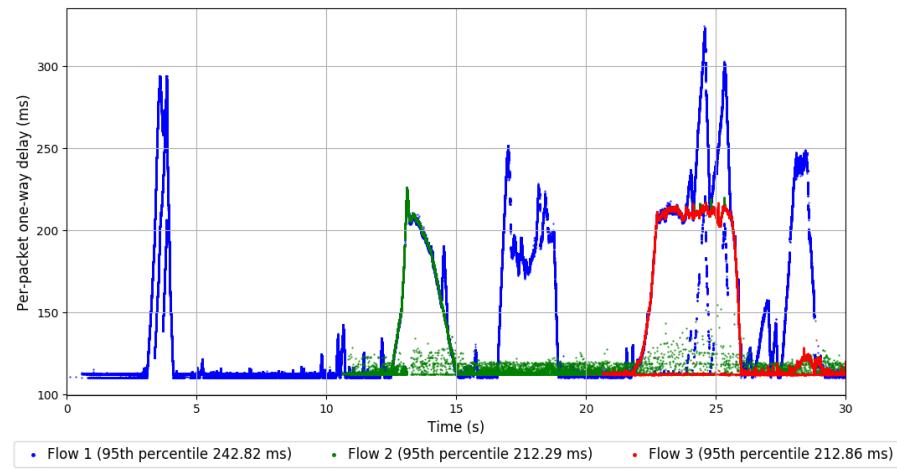
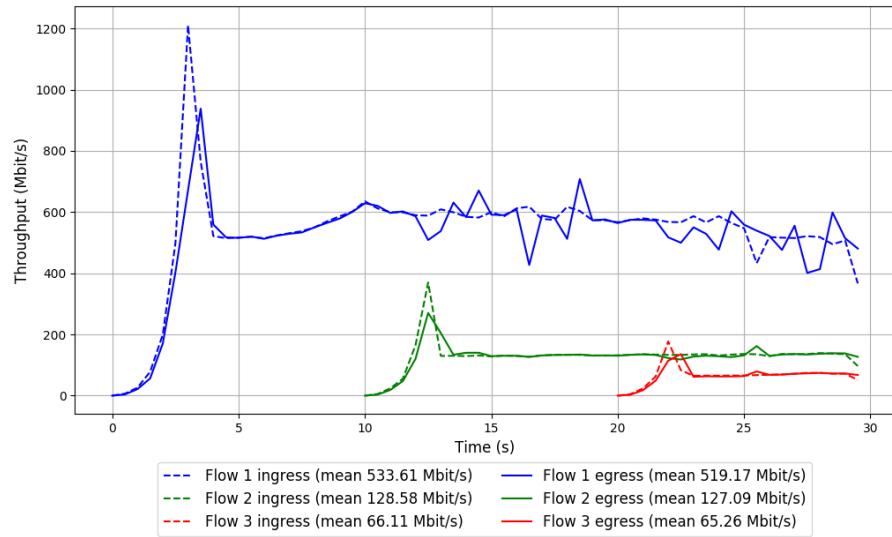


```
Run 1: Statistics of PCC

Start at: 2017-09-18 19:06:14
End at: 2017-09-18 19:06:44

# Below is generated by plot.py at 2017-09-18 22:01:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 625.09 Mbit/s
95th percentile per-packet one-way delay: 238.704 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 519.17 Mbit/s
95th percentile per-packet one-way delay: 242.822 ms
Loss rate: 2.70%
-- Flow 2:
Average throughput: 127.09 Mbit/s
95th percentile per-packet one-way delay: 212.292 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 65.26 Mbit/s
95th percentile per-packet one-way delay: 212.856 ms
Loss rate: 1.29%
```

Run 1: Report of PCC — Data Link



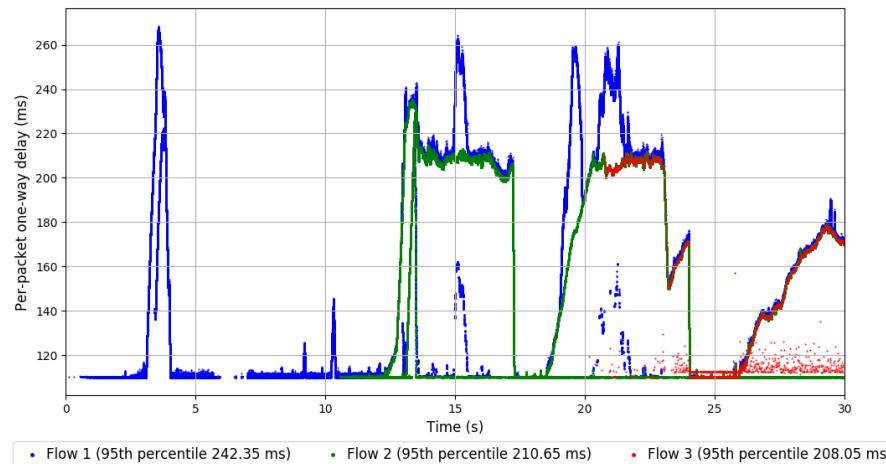
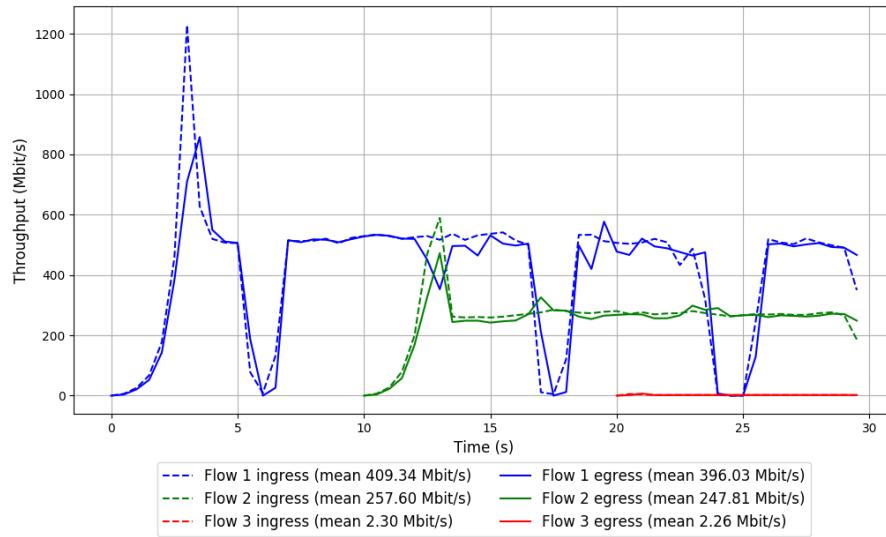
Run 2: Statistics of PCC

Start at: 2017-09-18 19:16:14

End at: 2017-09-18 19:16:44

```
# Below is generated by plot.py at 2017-09-18 22:01:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 561.54 Mbit/s
95th percentile per-packet one-way delay: 234.568 ms
Loss rate: 3.40%
-- Flow 1:
Average throughput: 396.03 Mbit/s
95th percentile per-packet one-way delay: 242.351 ms
Loss rate: 3.24%
-- Flow 2:
Average throughput: 247.81 Mbit/s
95th percentile per-packet one-way delay: 210.651 ms
Loss rate: 3.79%
-- Flow 3:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 208.049 ms
Loss rate: 1.54%
```

Run 2: Report of PCC — Data Link



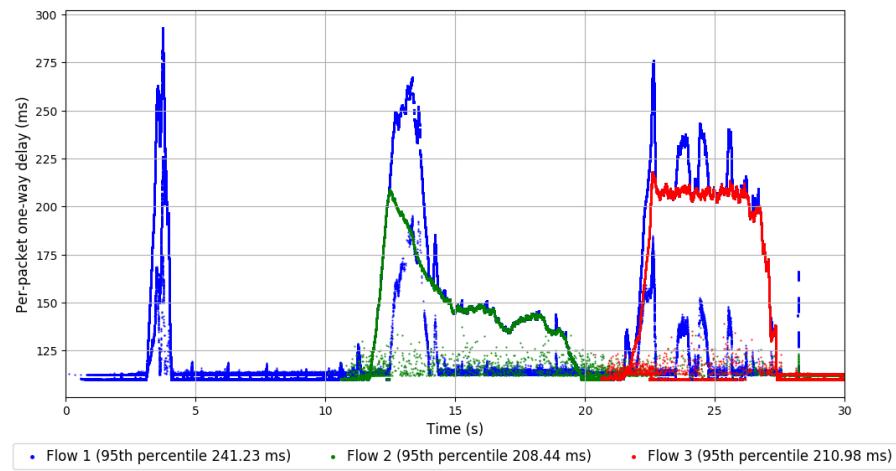
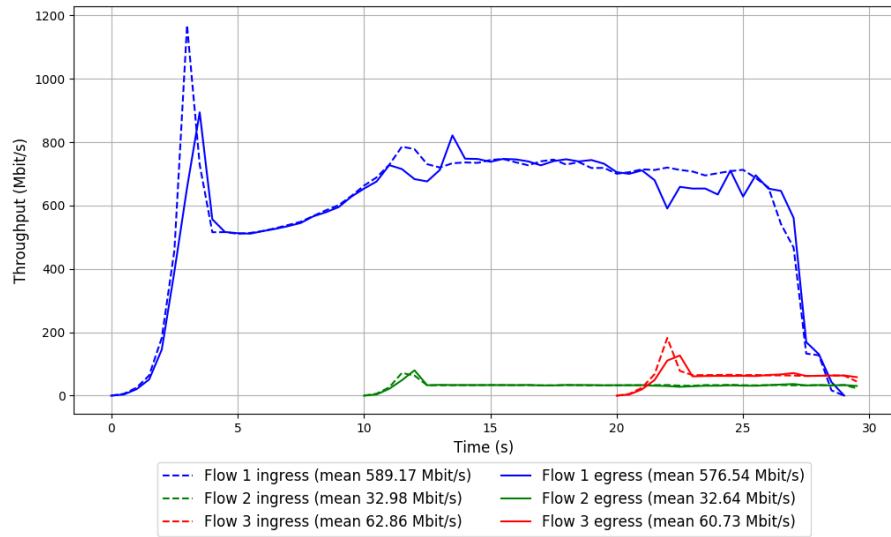
Run 3: Statistics of PCC

Start at: 2017-09-18 19:26:11

End at: 2017-09-18 19:26:41

```
# Below is generated by plot.py at 2017-09-18 22:01:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 603.23 Mbit/s
95th percentile per-packet one-way delay: 239.658 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 576.54 Mbit/s
95th percentile per-packet one-way delay: 241.229 ms
Loss rate: 2.14%
-- Flow 2:
Average throughput: 32.64 Mbit/s
95th percentile per-packet one-way delay: 208.438 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 60.73 Mbit/s
95th percentile per-packet one-way delay: 210.982 ms
Loss rate: 3.40%
```

Run 3: Report of PCC — Data Link



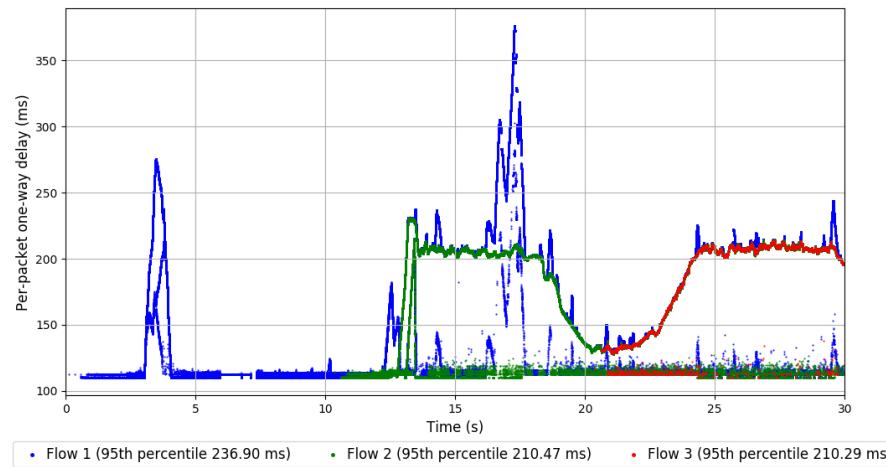
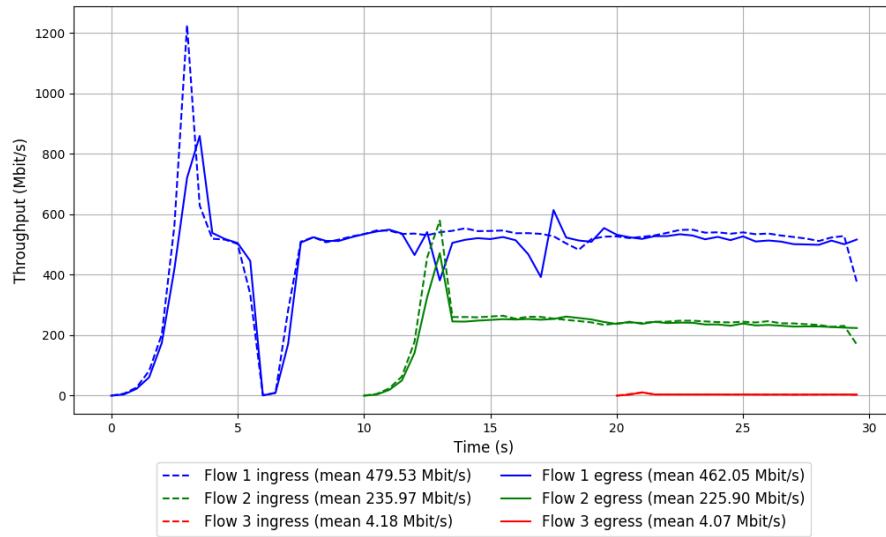
Run 4: Statistics of PCC

Start at: 2017-09-18 19:35:44

End at: 2017-09-18 19:36:14

```
# Below is generated by plot.py at 2017-09-18 22:01:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 613.51 Mbit/s
95th percentile per-packet one-way delay: 228.169 ms
Loss rate: 3.80%
-- Flow 1:
Average throughput: 462.05 Mbit/s
95th percentile per-packet one-way delay: 236.897 ms
Loss rate: 3.65%
-- Flow 2:
Average throughput: 225.90 Mbit/s
95th percentile per-packet one-way delay: 210.469 ms
Loss rate: 4.28%
-- Flow 3:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 210.293 ms
Loss rate: 2.66%
```

Run 4: Report of PCC — Data Link



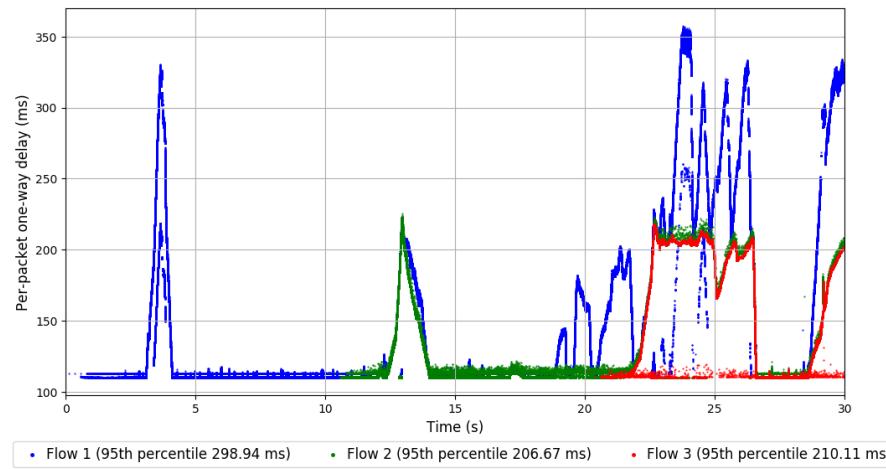
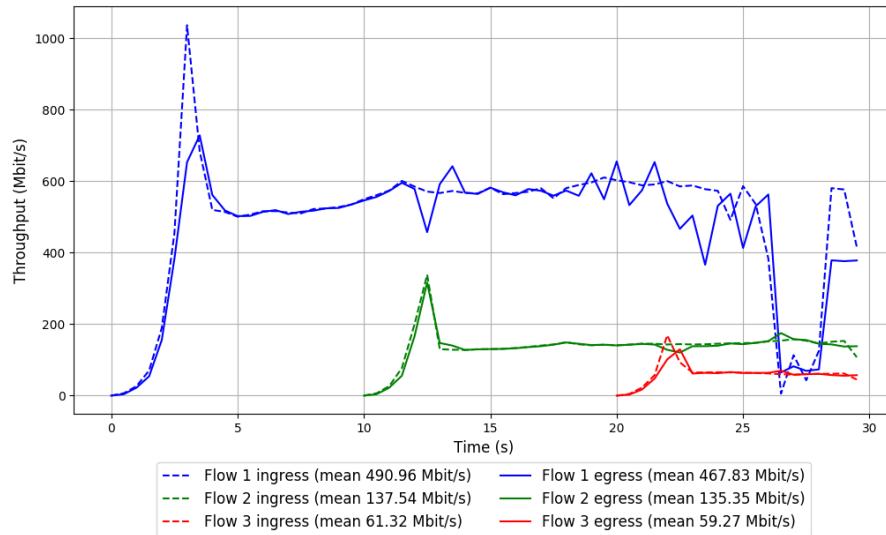
Run 5: Statistics of PCC

Start at: 2017-09-18 19:45:14

End at: 2017-09-18 19:45:44

```
# Below is generated by plot.py at 2017-09-18 22:02:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.28 Mbit/s
95th percentile per-packet one-way delay: 290.394 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 467.83 Mbit/s
95th percentile per-packet one-way delay: 298.944 ms
Loss rate: 4.71%
-- Flow 2:
Average throughput: 135.35 Mbit/s
95th percentile per-packet one-way delay: 206.666 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 59.27 Mbit/s
95th percentile per-packet one-way delay: 210.114 ms
Loss rate: 3.34%
```

Run 5: Report of PCC — Data Link



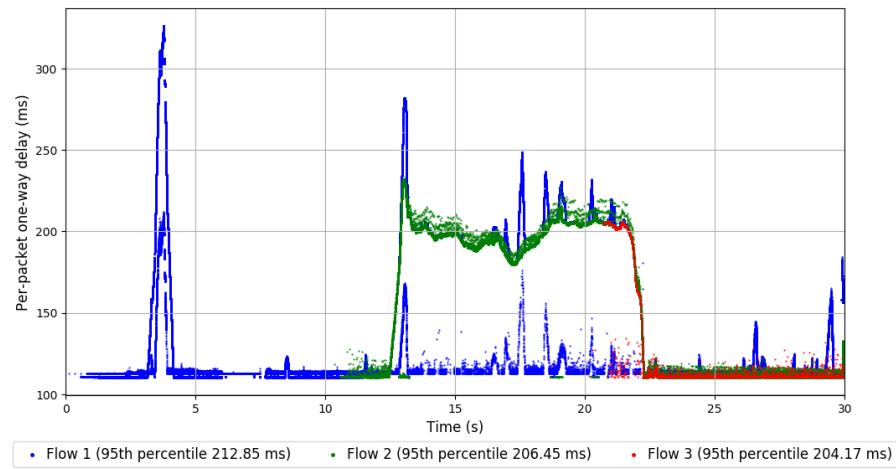
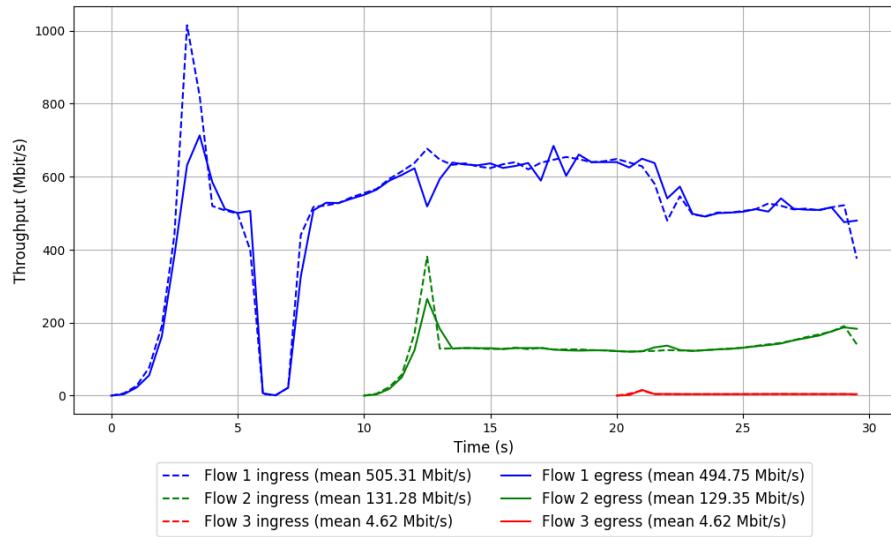
Run 6: Statistics of PCC

Start at: 2017-09-18 19:55:14

End at: 2017-09-18 19:55:44

```
# Below is generated by plot.py at 2017-09-18 22:03:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 582.27 Mbit/s
95th percentile per-packet one-way delay: 211.418 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 494.75 Mbit/s
95th percentile per-packet one-way delay: 212.853 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 129.35 Mbit/s
95th percentile per-packet one-way delay: 206.449 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 204.167 ms
Loss rate: 0.00%
```

Run 6: Report of PCC — Data Link



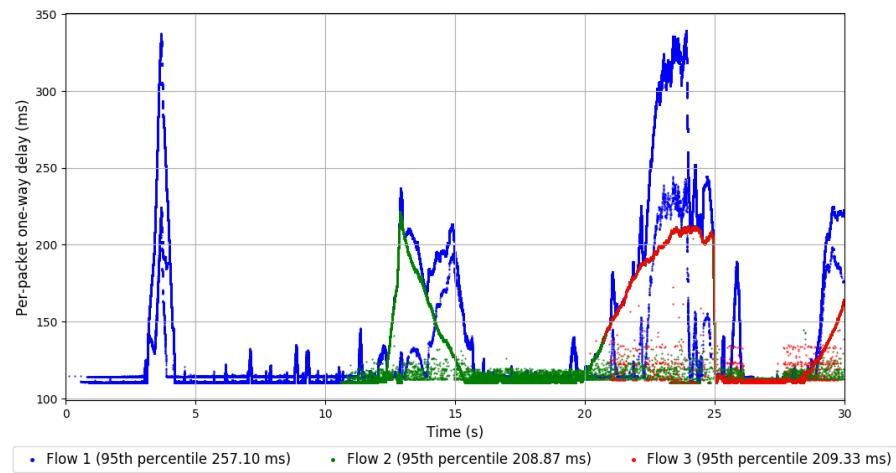
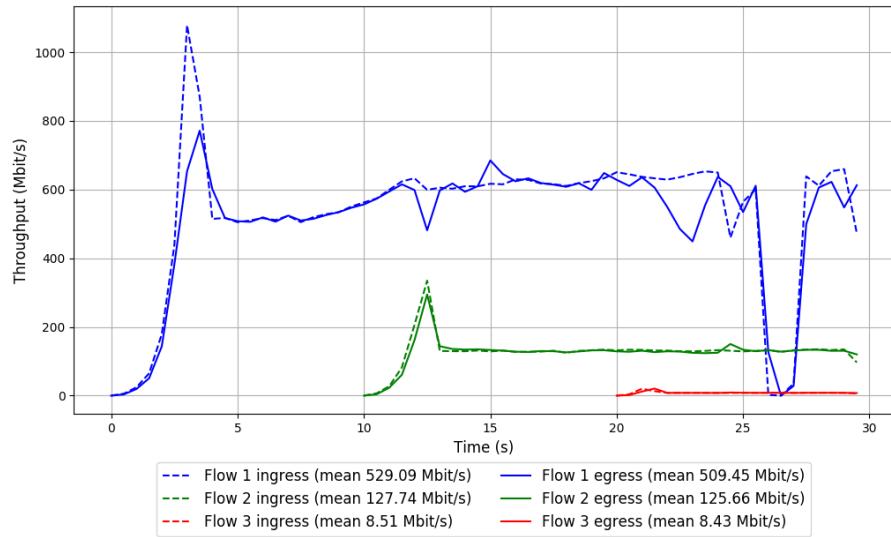
Run 7: Statistics of PCC

Start at: 2017-09-18 20:05:03

End at: 2017-09-18 20:05:33

```
# Below is generated by plot.py at 2017-09-18 22:06:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 595.72 Mbit/s
95th percentile per-packet one-way delay: 243.252 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 509.45 Mbit/s
95th percentile per-packet one-way delay: 257.101 ms
Loss rate: 3.73%
-- Flow 2:
Average throughput: 125.66 Mbit/s
95th percentile per-packet one-way delay: 208.871 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 8.43 Mbit/s
95th percentile per-packet one-way delay: 209.327 ms
Loss rate: 1.09%
```

Run 7: Report of PCC — Data Link



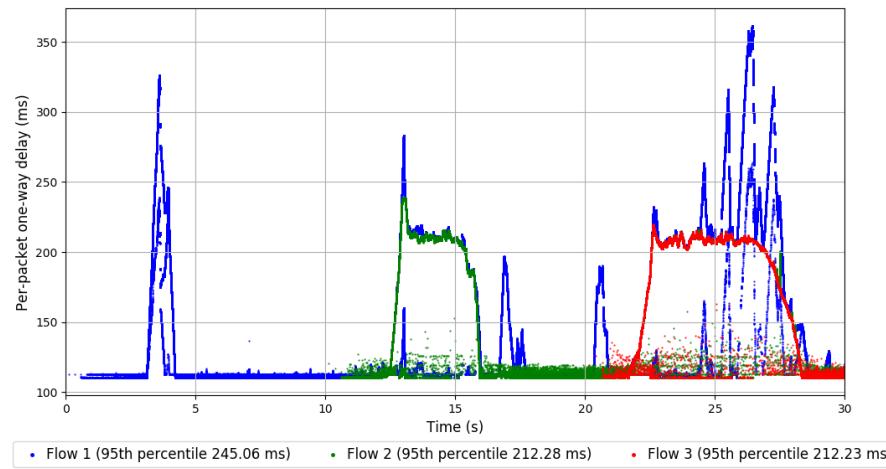
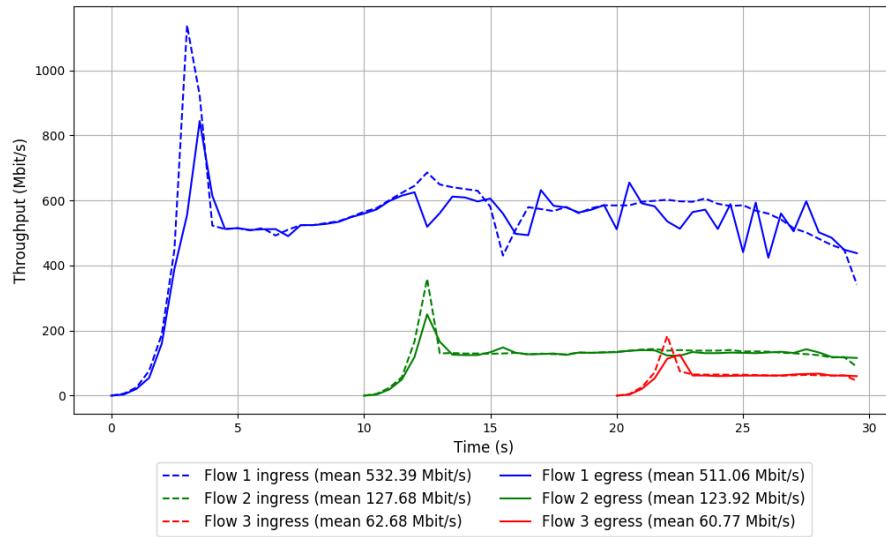
Run 8: Statistics of PCC

Start at: 2017-09-18 20:14:45

End at: 2017-09-18 20:15:15

```
# Below is generated by plot.py at 2017-09-18 22:06:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 613.34 Mbit/s
95th percentile per-packet one-way delay: 237.642 ms
Loss rate: 3.84%
-- Flow 1:
Average throughput: 511.06 Mbit/s
95th percentile per-packet one-way delay: 245.064 ms
Loss rate: 4.01%
-- Flow 2:
Average throughput: 123.92 Mbit/s
95th percentile per-packet one-way delay: 212.285 ms
Loss rate: 2.98%
-- Flow 3:
Average throughput: 60.77 Mbit/s
95th percentile per-packet one-way delay: 212.231 ms
Loss rate: 3.14%
```

Run 8: Report of PCC — Data Link



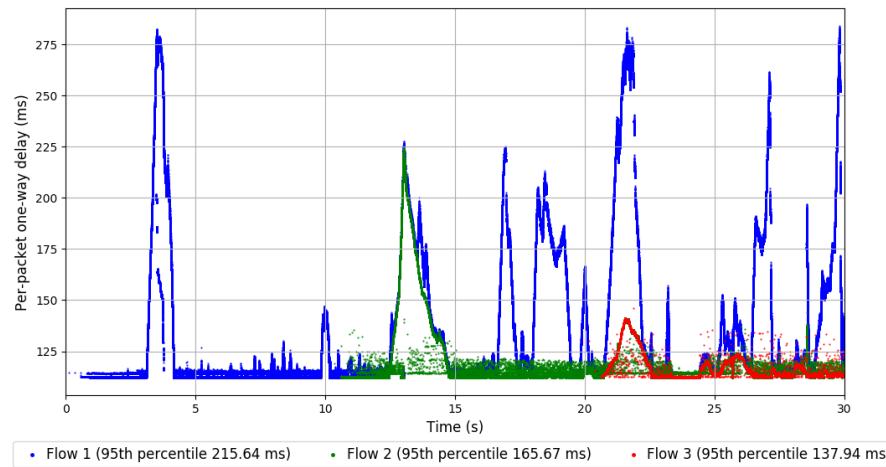
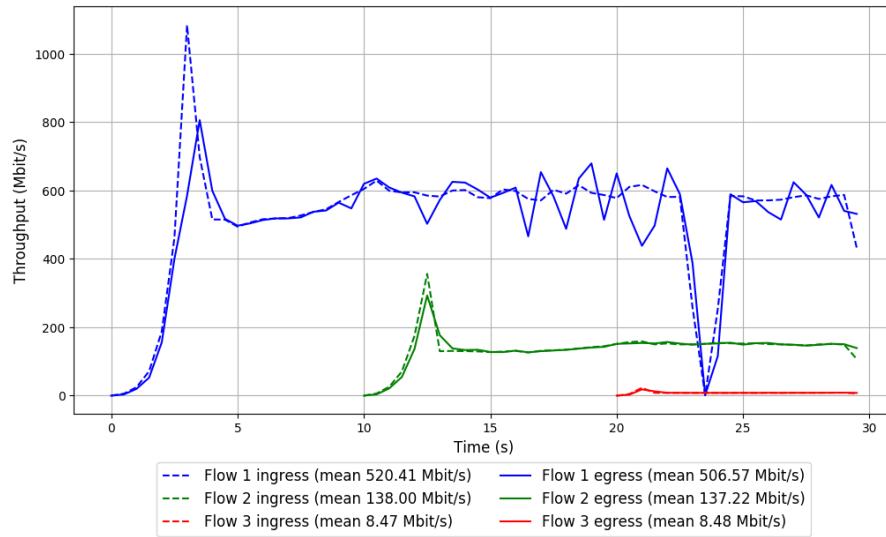
Run 9: Statistics of PCC

Start at: 2017-09-18 20:24:44

End at: 2017-09-18 20:25:14

```
# Below is generated by plot.py at 2017-09-18 22:11:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 600.55 Mbit/s
95th percentile per-packet one-way delay: 209.200 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 506.57 Mbit/s
95th percentile per-packet one-way delay: 215.636 ms
Loss rate: 2.68%
-- Flow 2:
Average throughput: 137.22 Mbit/s
95th percentile per-packet one-way delay: 165.670 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 137.937 ms
Loss rate: 0.06%
```

Run 9: Report of PCC — Data Link



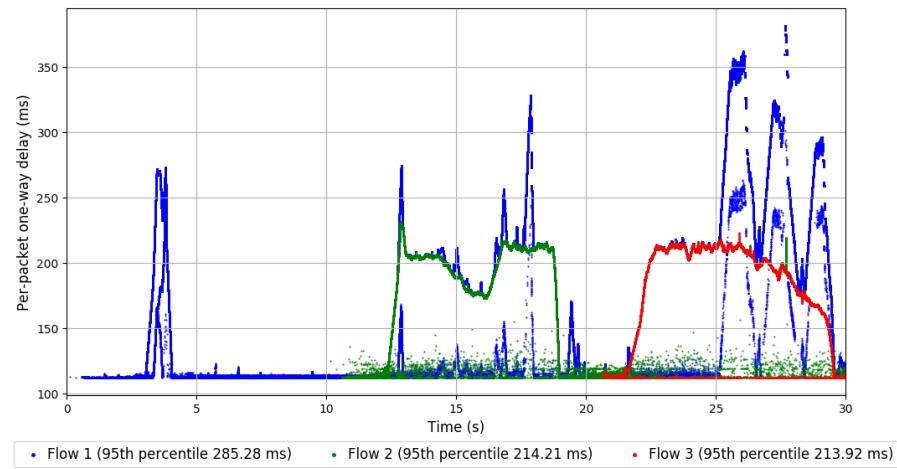
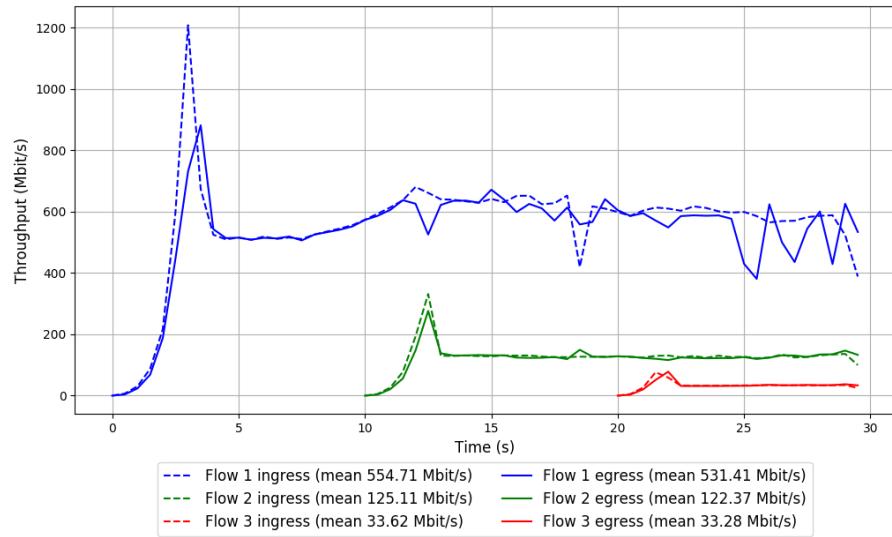
Run 10: Statistics of PCC

Start at: 2017-09-18 20:34:45

End at: 2017-09-18 20:35:15

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 623.63 Mbit/s
95th percentile per-packet one-way delay: 275.132 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 531.41 Mbit/s
95th percentile per-packet one-way delay: 285.283 ms
Loss rate: 4.20%
-- Flow 2:
Average throughput: 122.37 Mbit/s
95th percentile per-packet one-way delay: 214.211 ms
Loss rate: 2.26%
-- Flow 3:
Average throughput: 33.28 Mbit/s
95th percentile per-packet one-way delay: 213.924 ms
Loss rate: 1.00%
```

Run 10: Report of PCC — Data Link

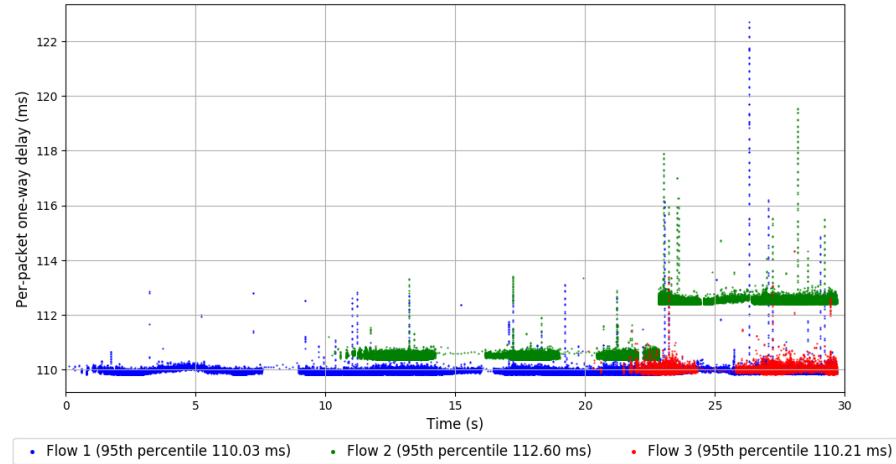
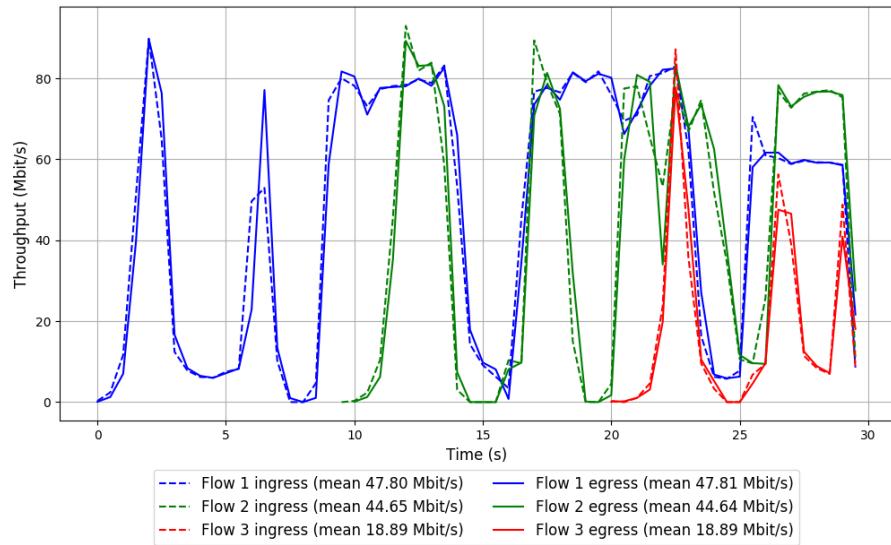


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-09-18 19:09:27
End at: 2017-09-18 19:09:57

# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.48 Mbit/s
95th percentile per-packet one-way delay: 112.512 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.81 Mbit/s
95th percentile per-packet one-way delay: 110.031 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.64 Mbit/s
95th percentile per-packet one-way delay: 112.603 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.89 Mbit/s
95th percentile per-packet one-way delay: 110.207 ms
Loss rate: 0.00%
```

Run 1: Report of QUIC Cubic — Data Link



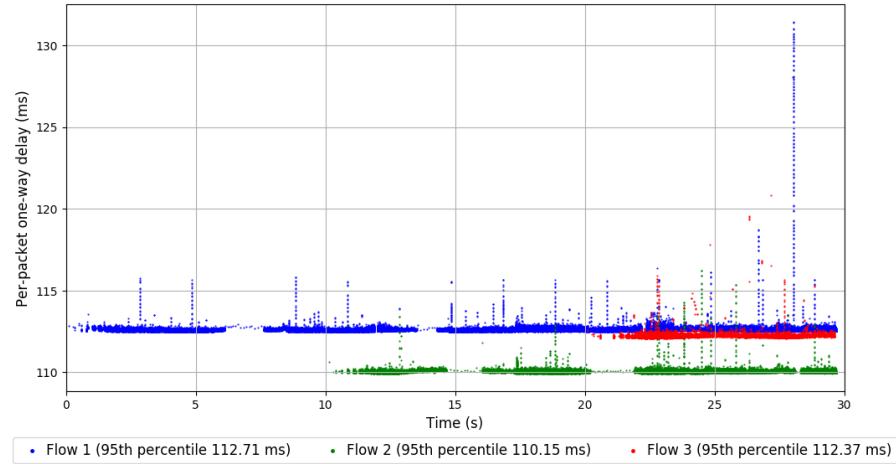
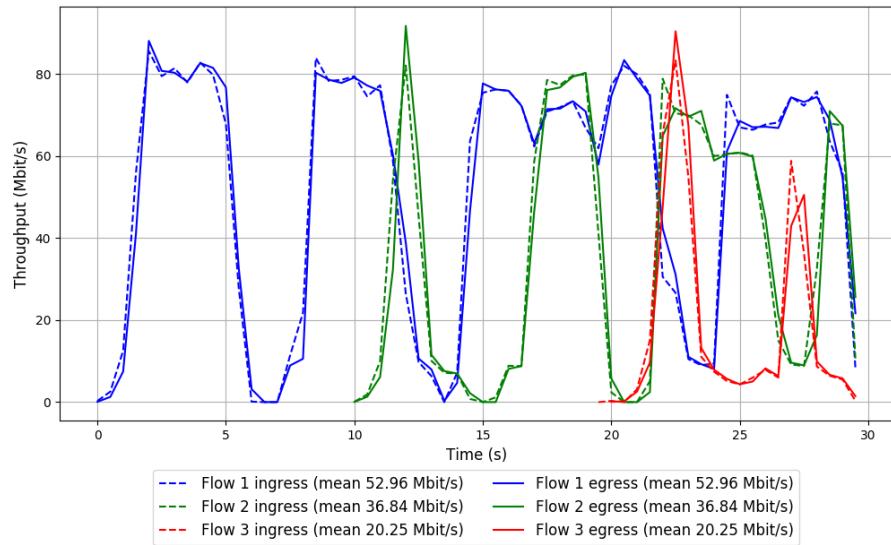
Run 2: Statistics of QUIC Cubic

Start at: 2017-09-18 19:19:26

End at: 2017-09-18 19:19:56

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.81 Mbit/s
95th percentile per-packet one-way delay: 112.676 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 52.96 Mbit/s
95th percentile per-packet one-way delay: 112.710 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.84 Mbit/s
95th percentile per-packet one-way delay: 110.152 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.25 Mbit/s
95th percentile per-packet one-way delay: 112.372 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link



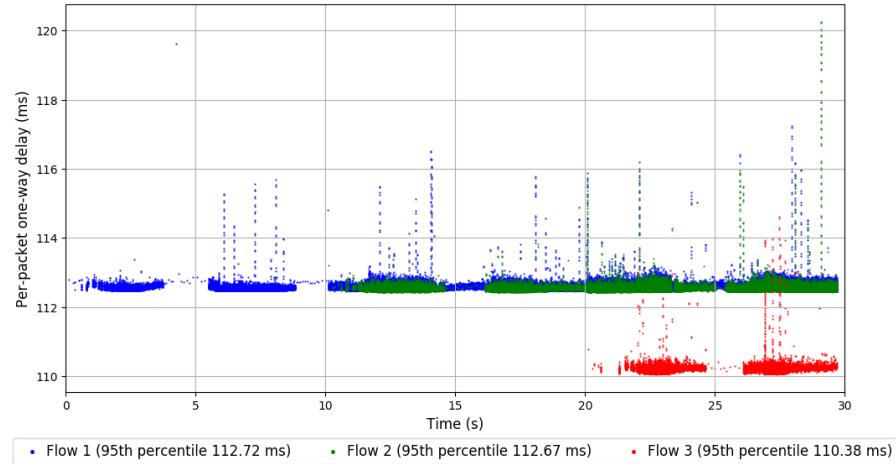
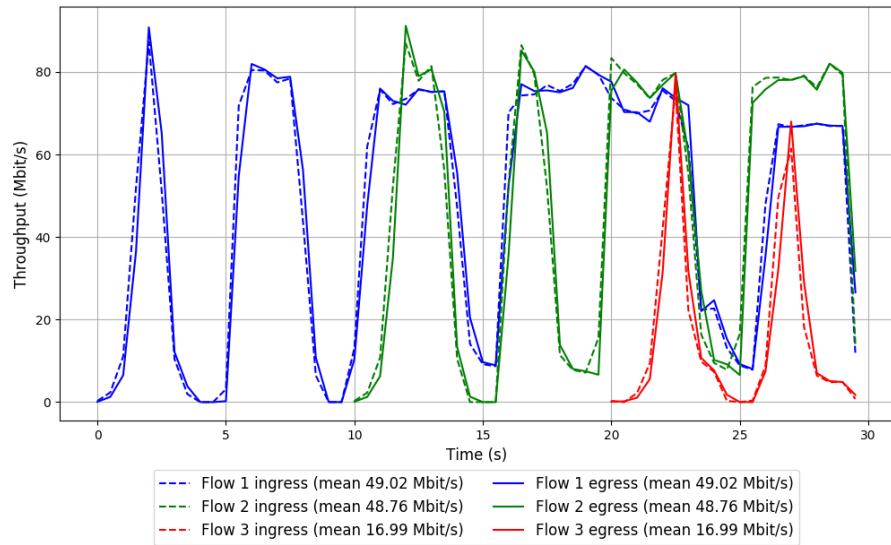
Run 3: Statistics of QUIC Cubic

Start at: 2017-09-18 19:29:22

End at: 2017-09-18 19:29:52

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.79 Mbit/s
95th percentile per-packet one-way delay: 112.700 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.02 Mbit/s
95th percentile per-packet one-way delay: 112.724 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 48.76 Mbit/s
95th percentile per-packet one-way delay: 112.674 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.99 Mbit/s
95th percentile per-packet one-way delay: 110.376 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link



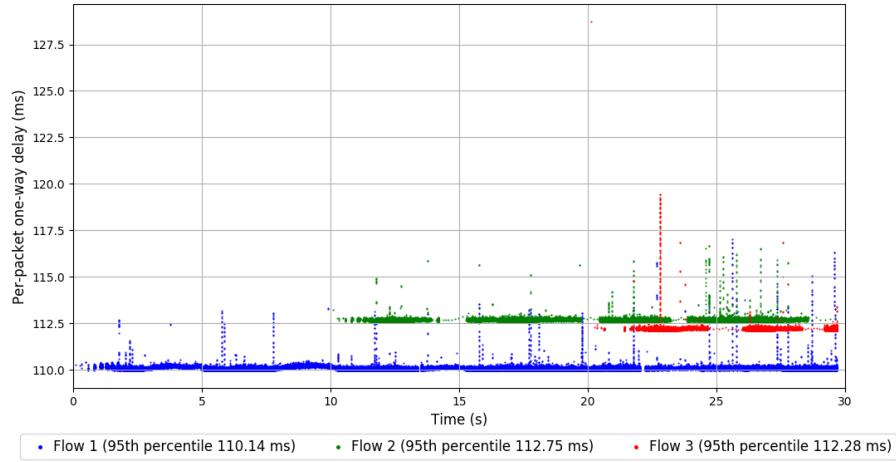
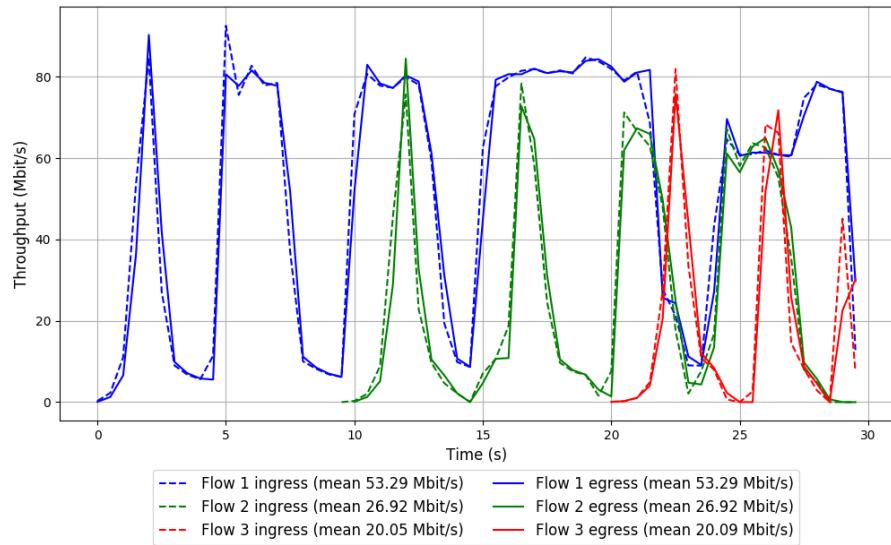
Run 4: Statistics of QUIC Cubic

Start at: 2017-09-18 19:38:57

End at: 2017-09-18 19:39:27

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.53 Mbit/s
95th percentile per-packet one-way delay: 112.682 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.29 Mbit/s
95th percentile per-packet one-way delay: 110.139 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.92 Mbit/s
95th percentile per-packet one-way delay: 112.751 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.09 Mbit/s
95th percentile per-packet one-way delay: 112.280 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link



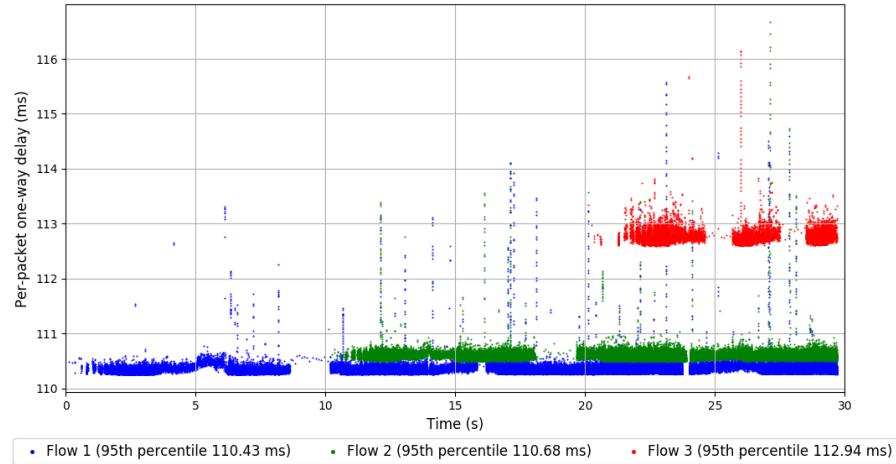
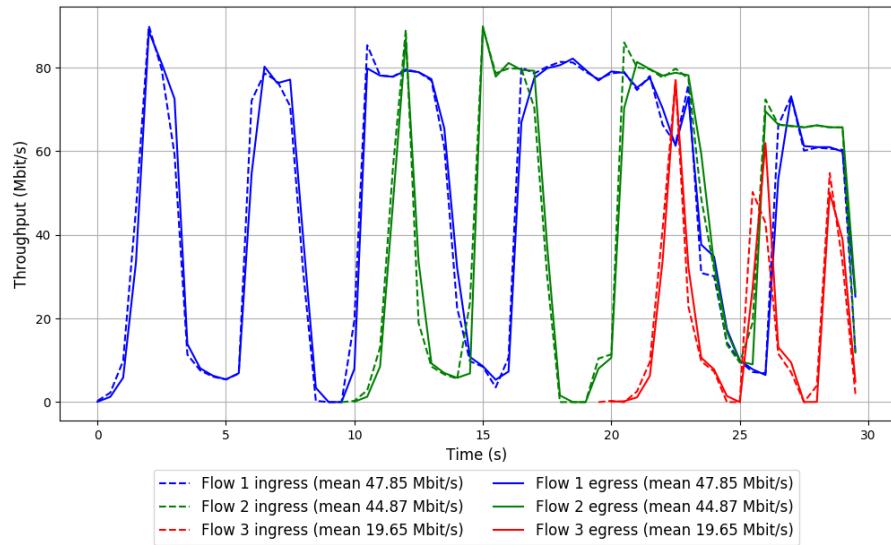
Run 5: Statistics of QUIC Cubic

Start at: 2017-09-18 19:48:26

End at: 2017-09-18 19:48:56

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.93 Mbit/s
95th percentile per-packet one-way delay: 112.685 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.85 Mbit/s
95th percentile per-packet one-way delay: 110.430 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.87 Mbit/s
95th percentile per-packet one-way delay: 110.678 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.65 Mbit/s
95th percentile per-packet one-way delay: 112.944 ms
Loss rate: 0.01%
```

Run 5: Report of QUIC Cubic — Data Link



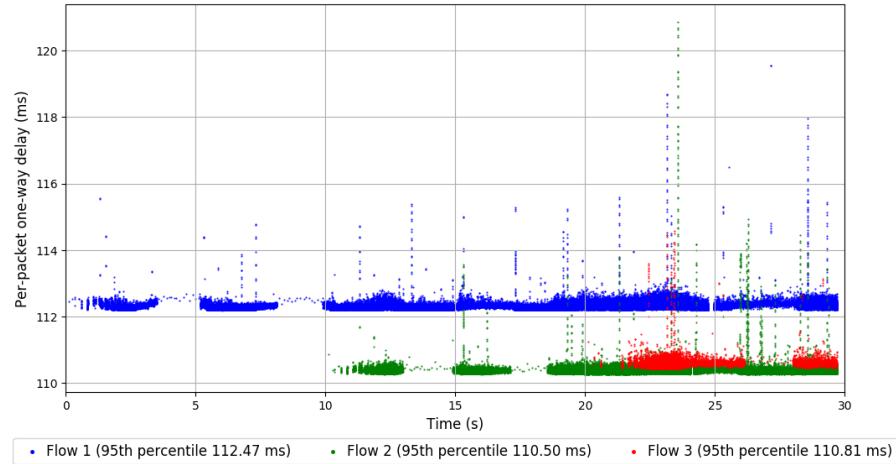
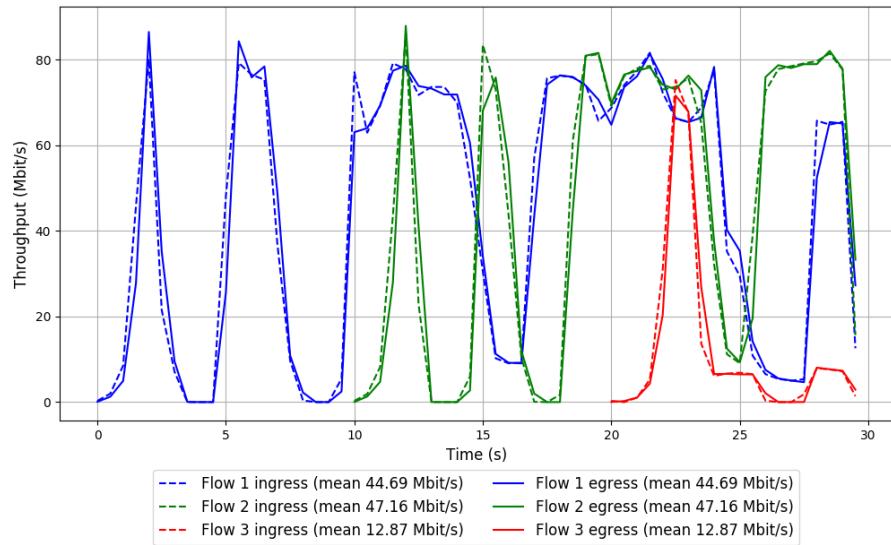
Run 6: Statistics of QUIC Cubic

Start at: 2017-09-18 19:58:25

End at: 2017-09-18 19:58:55

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.06 Mbit/s
95th percentile per-packet one-way delay: 112.414 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.69 Mbit/s
95th percentile per-packet one-way delay: 112.473 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 47.16 Mbit/s
95th percentile per-packet one-way delay: 110.498 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.87 Mbit/s
95th percentile per-packet one-way delay: 110.808 ms
Loss rate: 0.00%
```

Run 6: Report of QUIC Cubic — Data Link



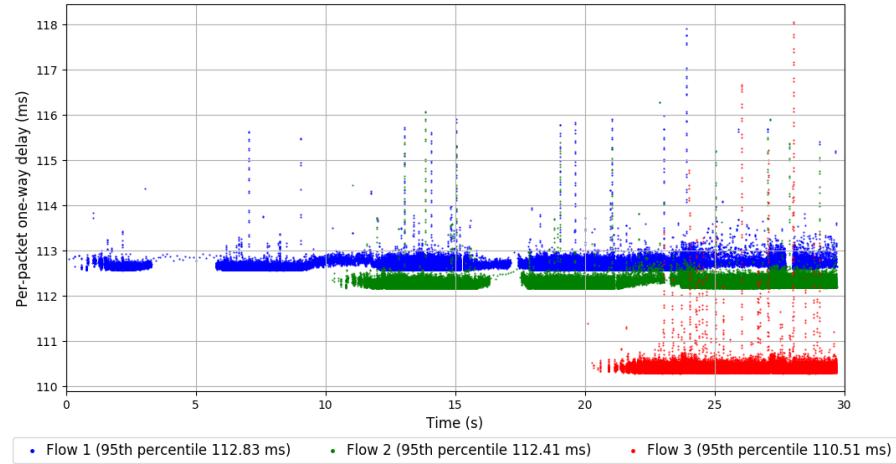
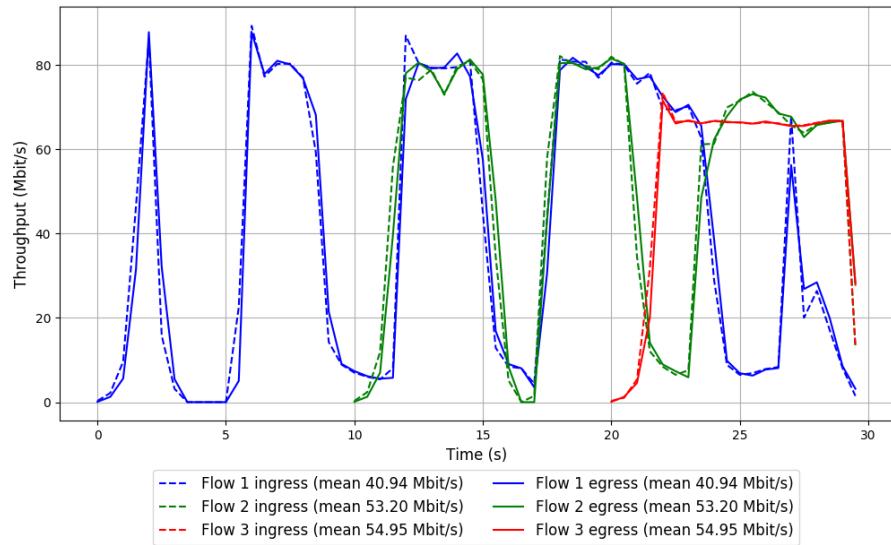
Run 7: Statistics of QUIC Cubic

Start at: 2017-09-18 20:08:15

End at: 2017-09-18 20:08:45

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.96 Mbit/s
95th percentile per-packet one-way delay: 112.767 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.94 Mbit/s
95th percentile per-packet one-way delay: 112.833 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 53.20 Mbit/s
95th percentile per-packet one-way delay: 112.411 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 54.95 Mbit/s
95th percentile per-packet one-way delay: 110.514 ms
Loss rate: 0.00%
```

Run 7: Report of QUIC Cubic — Data Link



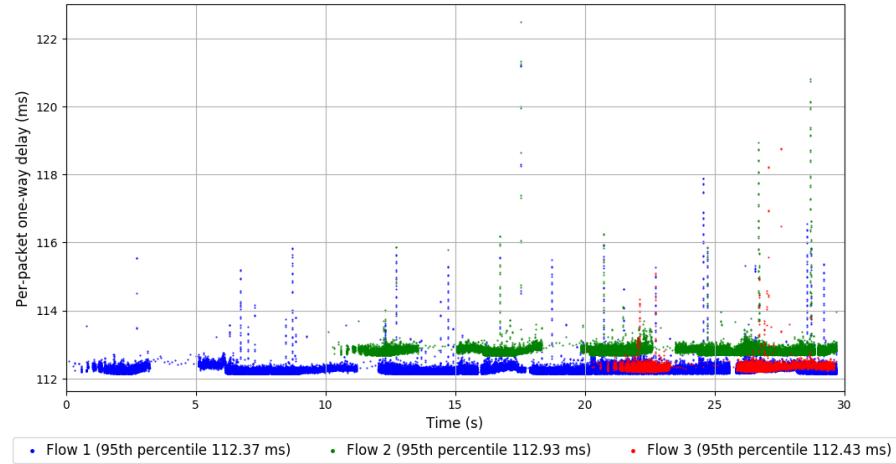
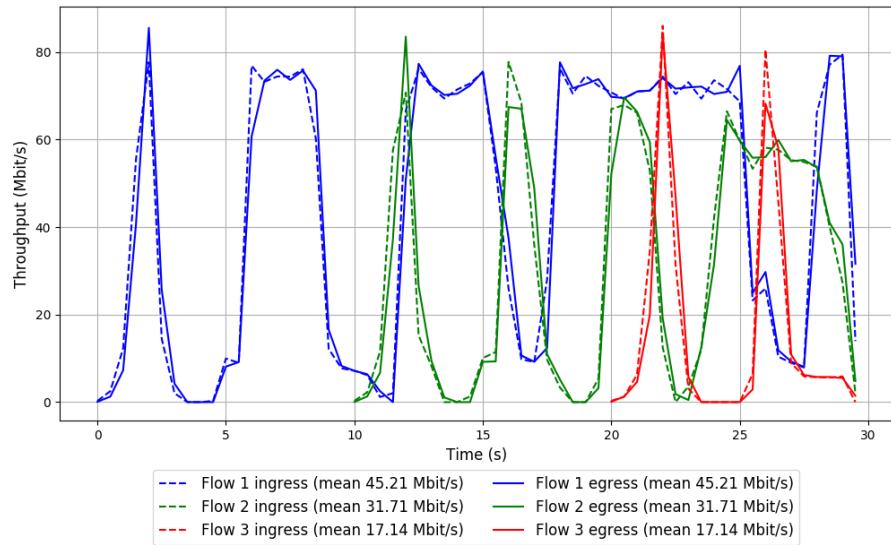
Run 8: Statistics of QUIC Cubic

Start at: 2017-09-18 20:17:58

End at: 2017-09-18 20:18:28

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.74 Mbit/s
95th percentile per-packet one-way delay: 112.848 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.21 Mbit/s
95th percentile per-packet one-way delay: 112.368 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 112.927 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.14 Mbit/s
95th percentile per-packet one-way delay: 112.432 ms
Loss rate: 0.00%
```

Run 8: Report of QUIC Cubic — Data Link



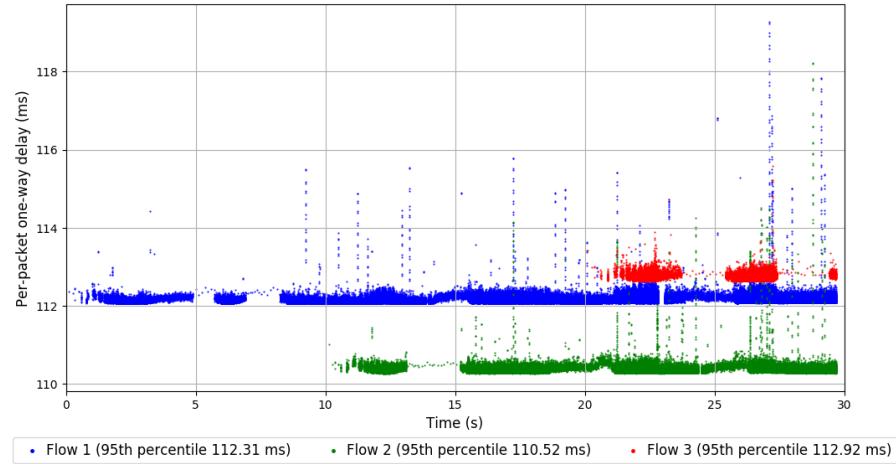
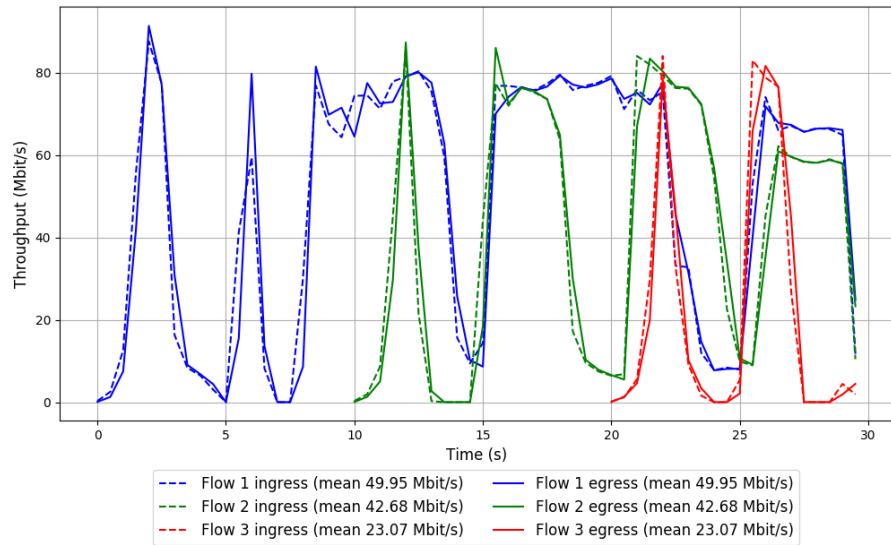
Run 9: Statistics of QUIC Cubic

Start at: 2017-09-18 20:27:55

End at: 2017-09-18 20:28:25

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.65 Mbit/s
95th percentile per-packet one-way delay: 112.721 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 49.95 Mbit/s
95th percentile per-packet one-way delay: 112.313 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 42.68 Mbit/s
95th percentile per-packet one-way delay: 110.515 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.07 Mbit/s
95th percentile per-packet one-way delay: 112.925 ms
Loss rate: 0.00%
```

Run 9: Report of QUIC Cubic — Data Link



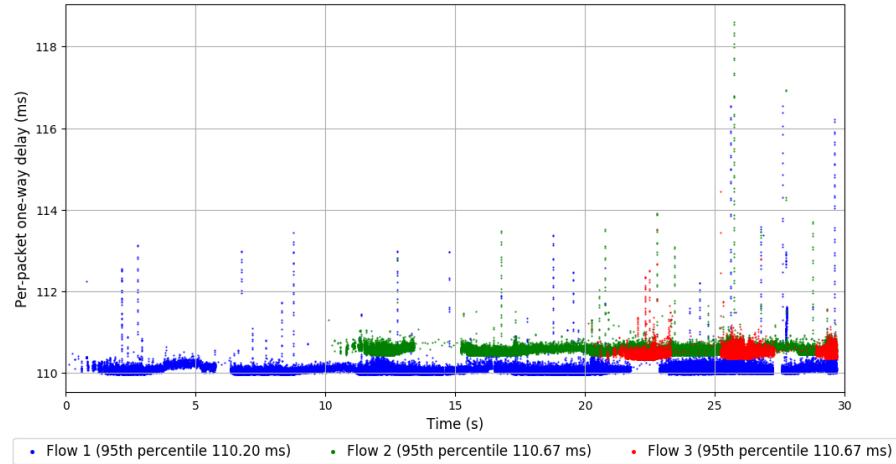
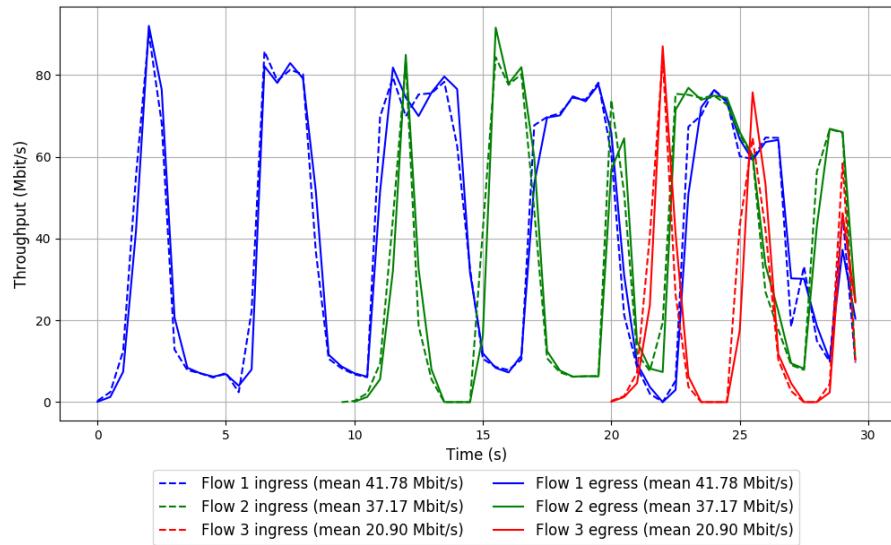
Run 10: Statistics of QUIC Cubic

Start at: 2017-09-18 20:37:58

End at: 2017-09-18 20:38:28

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.15 Mbit/s
95th percentile per-packet one-way delay: 110.619 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.78 Mbit/s
95th percentile per-packet one-way delay: 110.199 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.17 Mbit/s
95th percentile per-packet one-way delay: 110.674 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.90 Mbit/s
95th percentile per-packet one-way delay: 110.669 ms
Loss rate: 0.00%
```

Run 10: Report of QUIC Cubic — Data Link



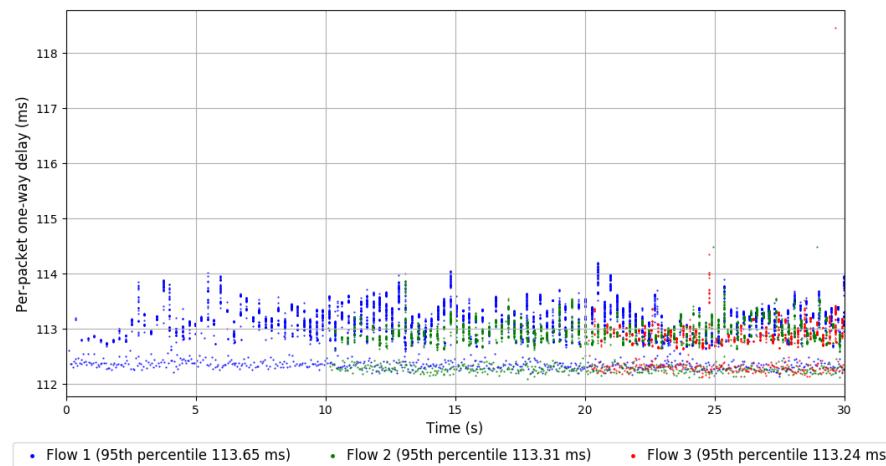
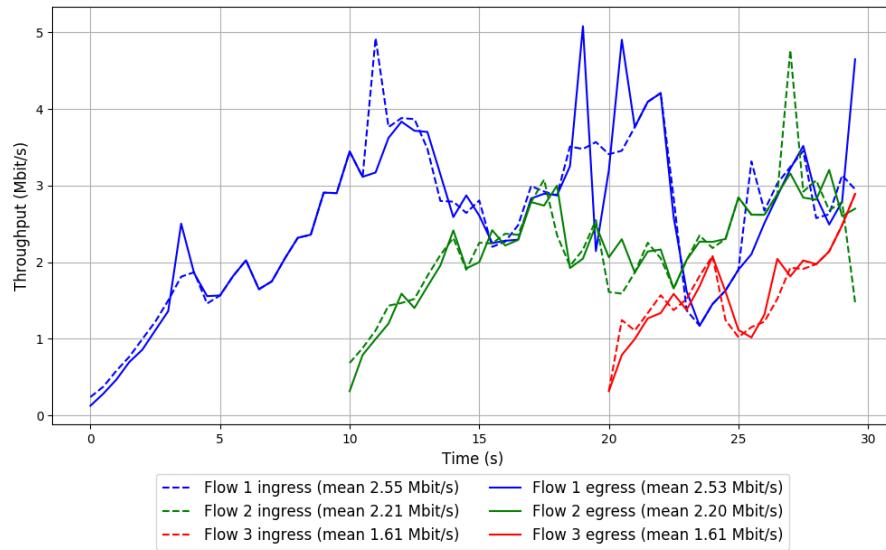
Run 1: Statistics of Sprout

Start at: 2017-09-18 19:07:28

End at: 2017-09-18 19:07:58

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.53 Mbit/s
95th percentile per-packet one-way delay: 113.560 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 113.646 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 113.312 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 113.242 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link



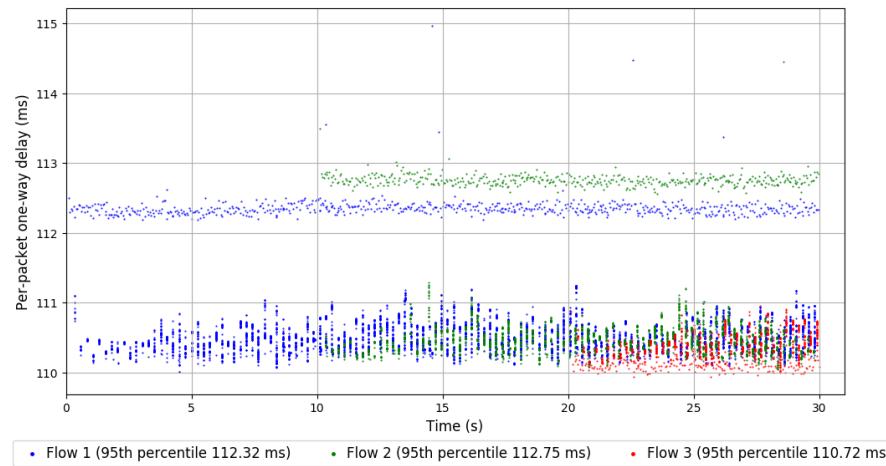
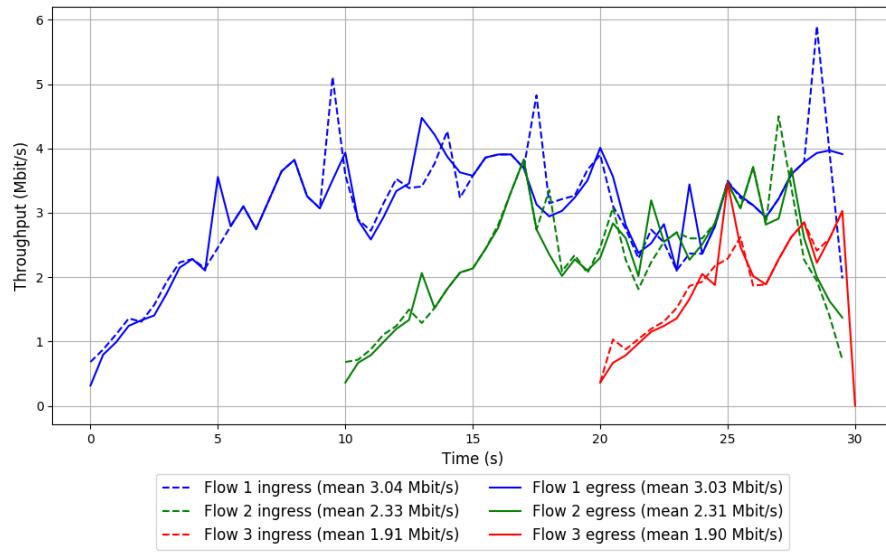
Run 2: Statistics of Sprout

Start at: 2017-09-18 19:17:26

End at: 2017-09-18 19:17:56

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.20 Mbit/s
95th percentile per-packet one-way delay: 112.361 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 3.03 Mbit/s
95th percentile per-packet one-way delay: 112.321 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 112.754 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 110.718 ms
Loss rate: 0.50%
```

Run 2: Report of Sprout — Data Link



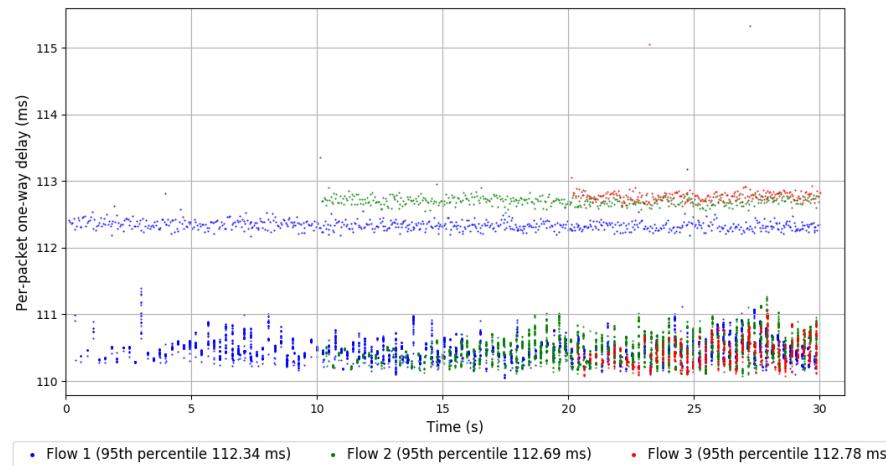
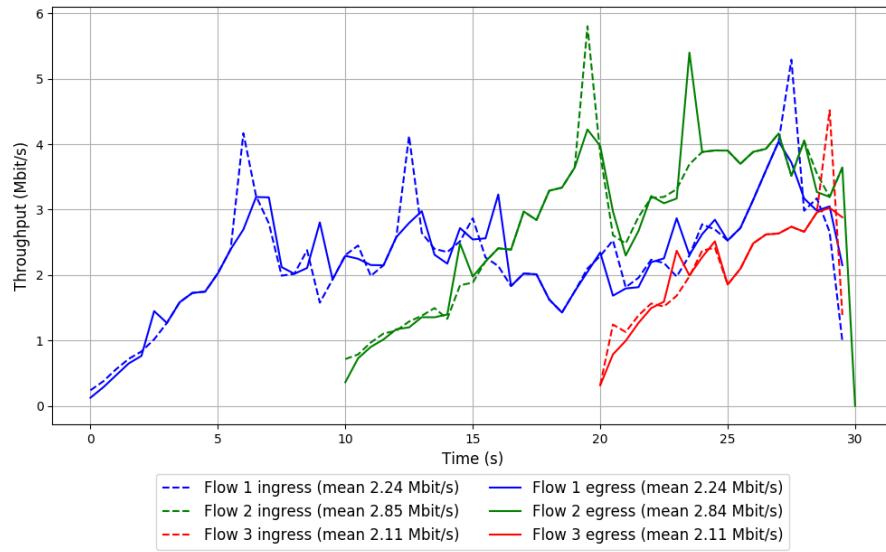
Run 3: Statistics of Sprout

Start at: 2017-09-18 19:27:23

End at: 2017-09-18 19:27:53

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 112.510 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 112.339 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 112.689 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 112.779 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link



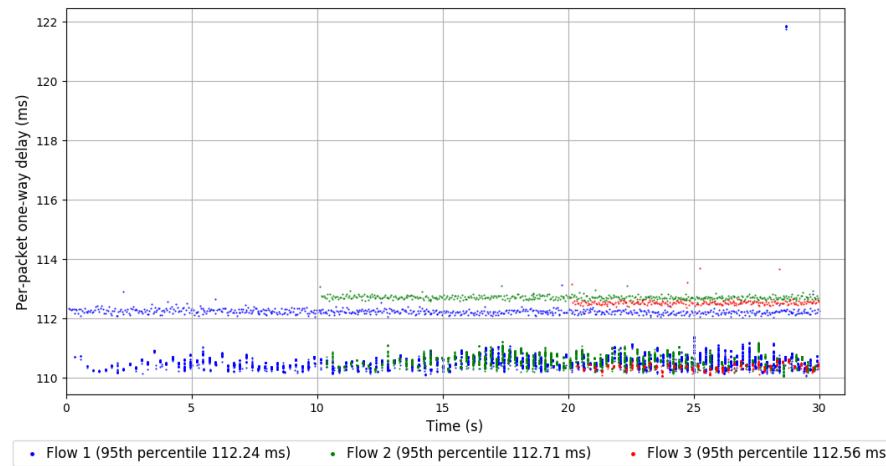
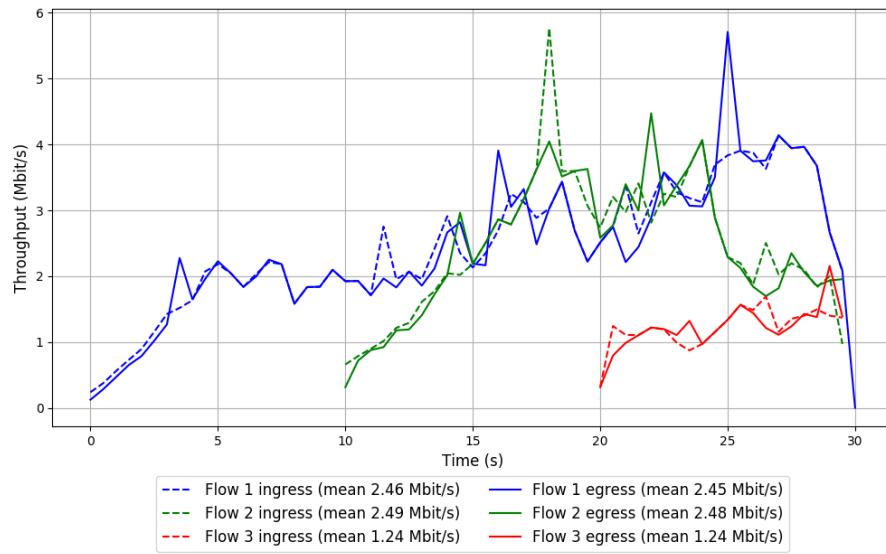
Run 4: Statistics of Sprout

Start at: 2017-09-18 19:36:57

End at: 2017-09-18 19:37:27

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 112.498 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 112.236 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 112.710 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 112.564 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link



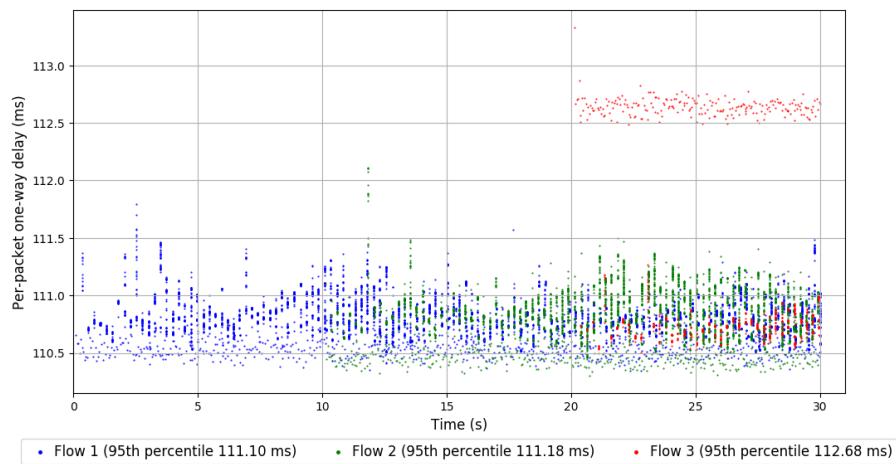
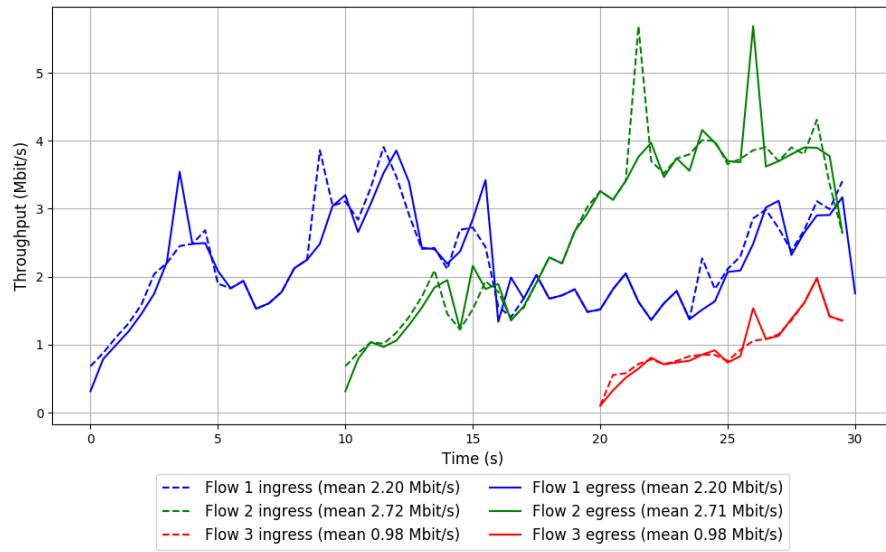
Run 5: Statistics of Sprout

Start at: 2017-09-18 19:46:28

End at: 2017-09-18 19:46:58

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 111.199 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 111.103 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 111.179 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 112.684 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link



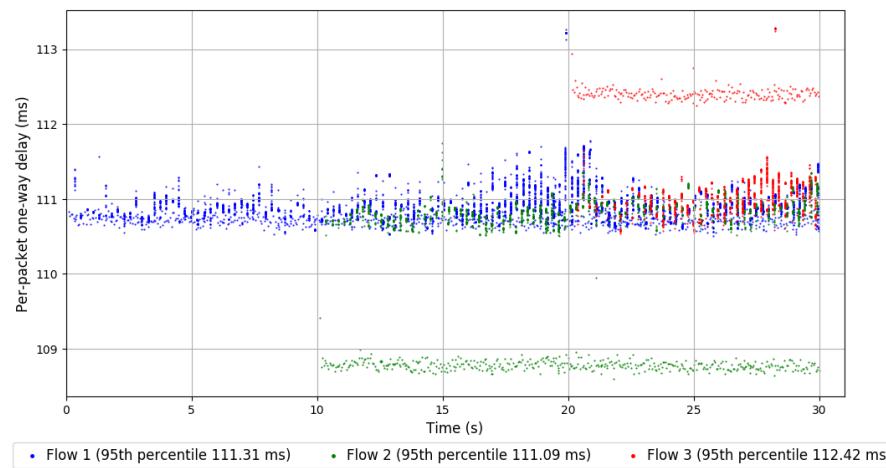
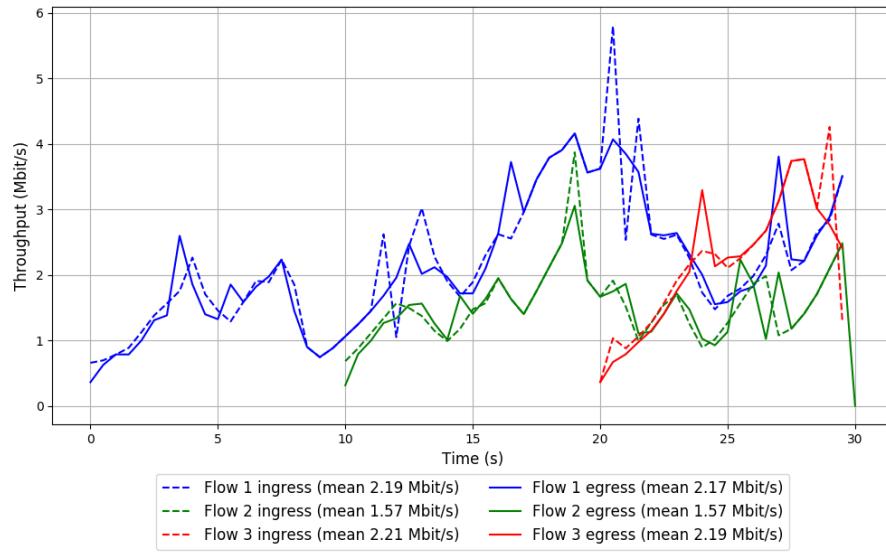
Run 6: Statistics of Sprout

Start at: 2017-09-18 19:56:26

End at: 2017-09-18 19:56:56

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 111.340 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 111.309 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 111.093 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 112.415 ms
Loss rate: 1.25%
```

Run 6: Report of Sprout — Data Link



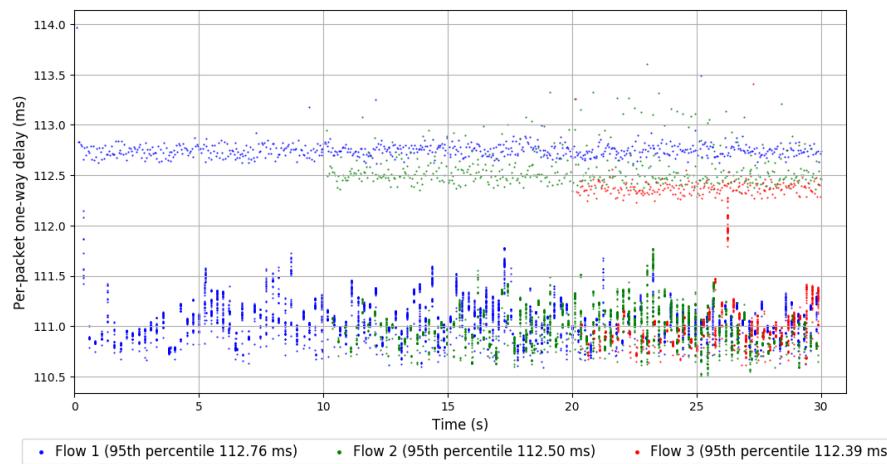
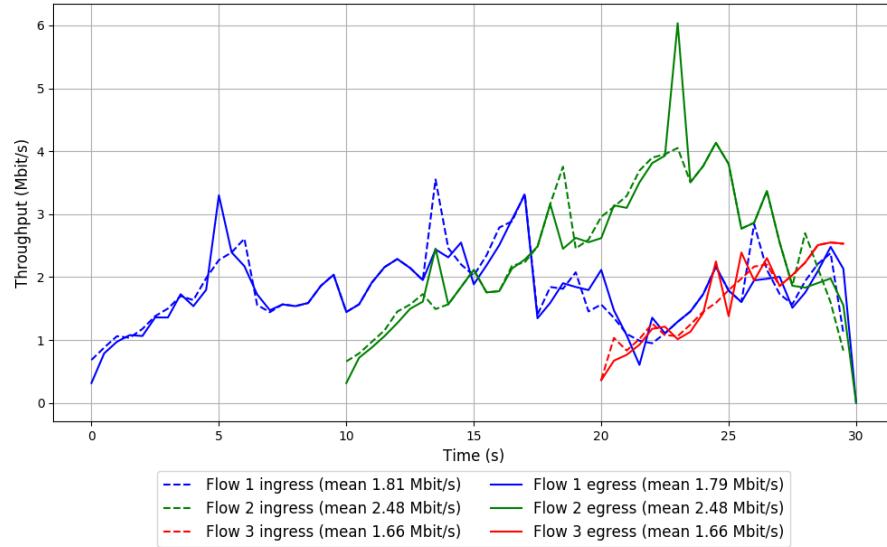
Run 7: Statistics of Sprout

Start at: 2017-09-18 20:06:17

End at: 2017-09-18 20:06:47

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 112.708 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 112.764 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 112.503 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 112.391 ms
Loss rate: 0.36%
```

Run 7: Report of Sprout — Data Link



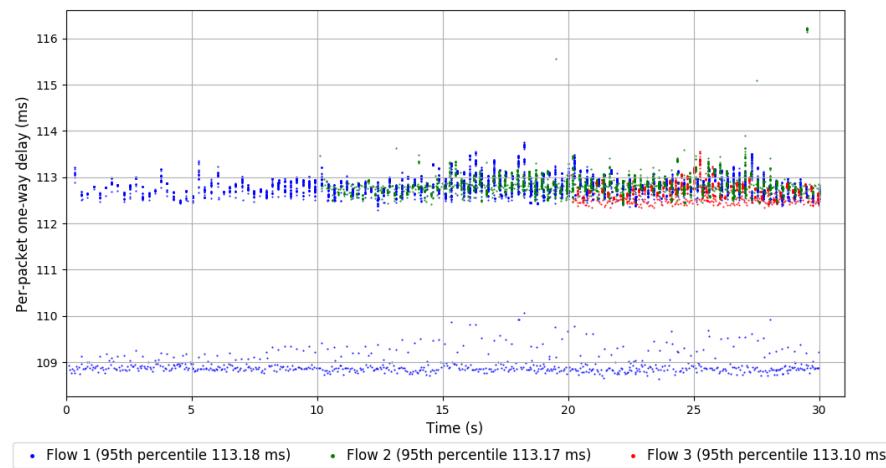
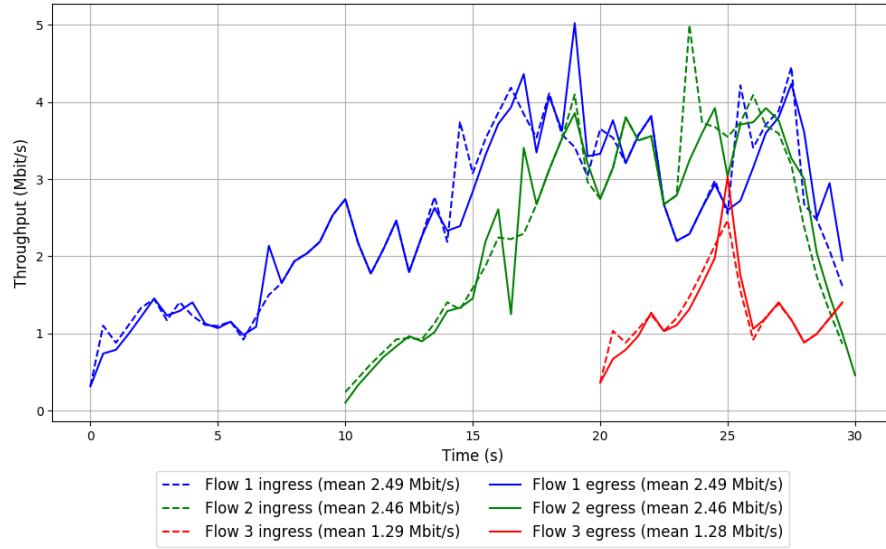
Run 8: Statistics of Sprout

Start at: 2017-09-18 20:15:59

End at: 2017-09-18 20:16:29

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.55 Mbit/s
95th percentile per-packet one-way delay: 113.172 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 113.179 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 2.46 Mbit/s
95th percentile per-packet one-way delay: 113.175 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 113.104 ms
Loss rate: 0.75%
```

Run 8: Report of Sprout — Data Link



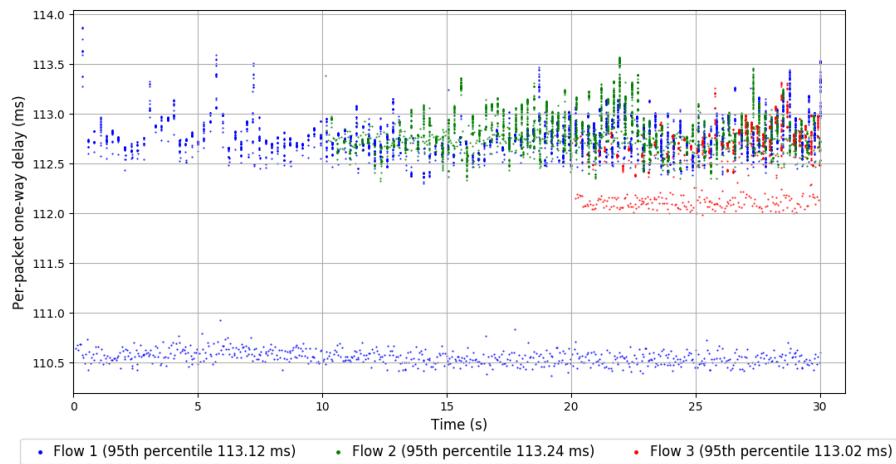
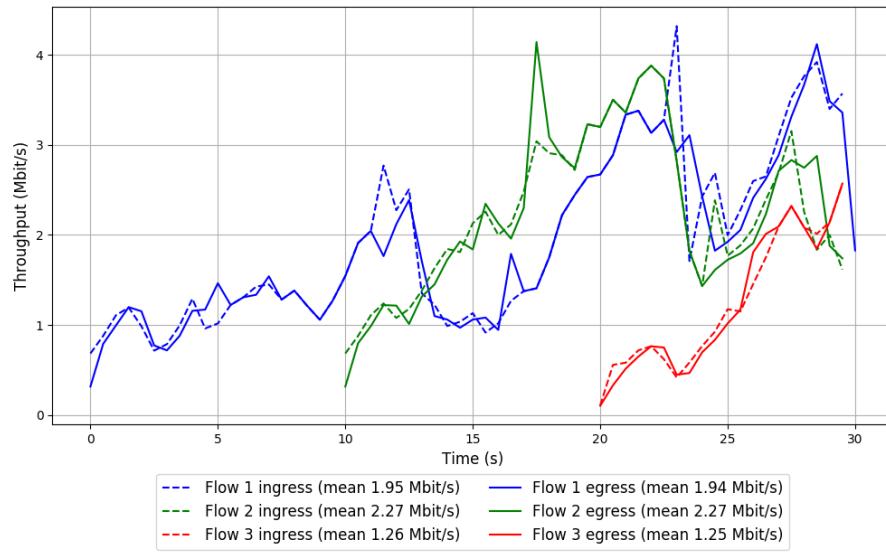
Run 9: Statistics of Sprout

Start at: 2017-09-18 20:25:57

End at: 2017-09-18 20:26:27

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 113.168 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 113.116 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 113.238 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 113.020 ms
Loss rate: 0.67%
```

Run 9: Report of Sprout — Data Link



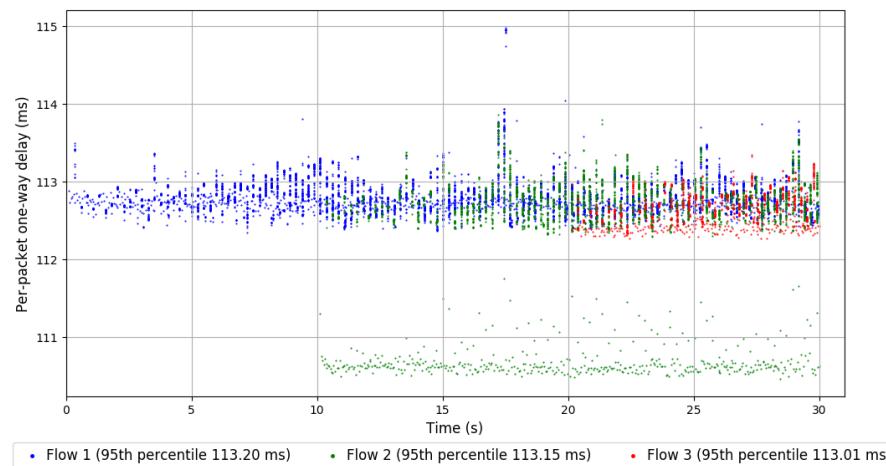
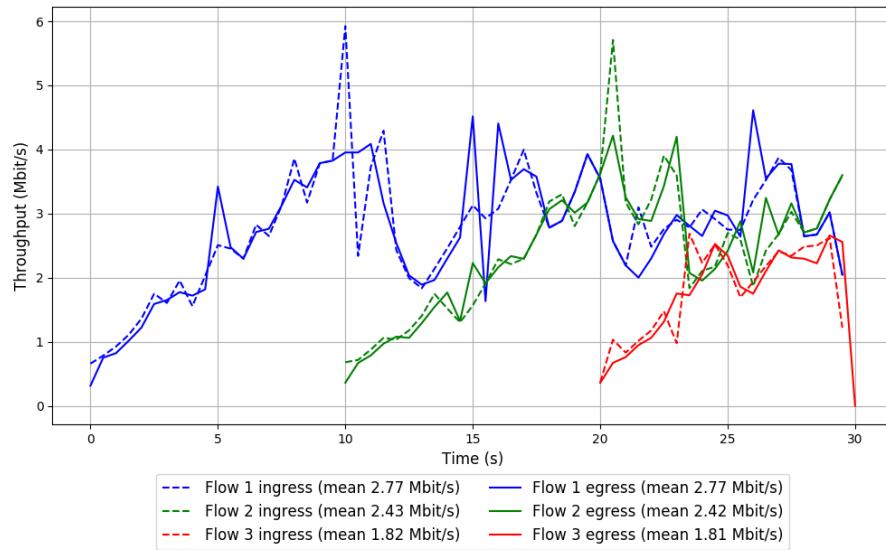
Run 10: Statistics of Sprout

Start at: 2017-09-18 20:35:59

End at: 2017-09-18 20:36:29

```
# Below is generated by plot.py at 2017-09-18 22:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 113.163 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 2.77 Mbit/s
95th percentile per-packet one-way delay: 113.196 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 113.153 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 113.011 ms
Loss rate: 0.53%
```

Run 10: Report of Sprout — Data Link



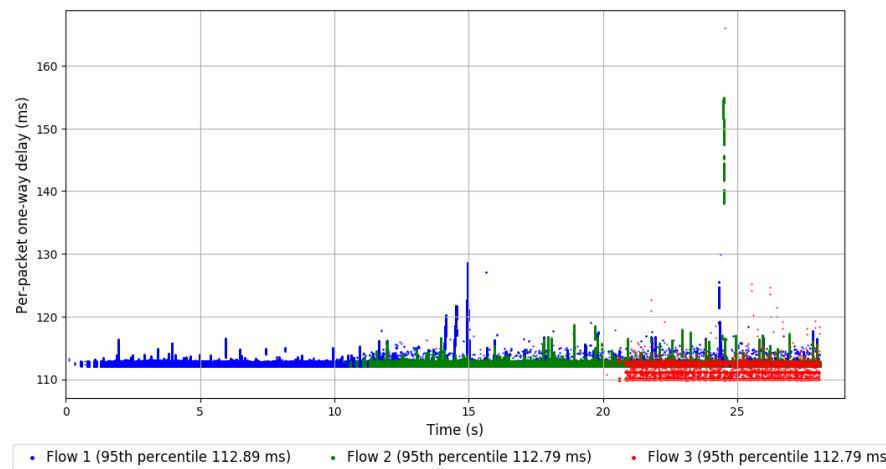
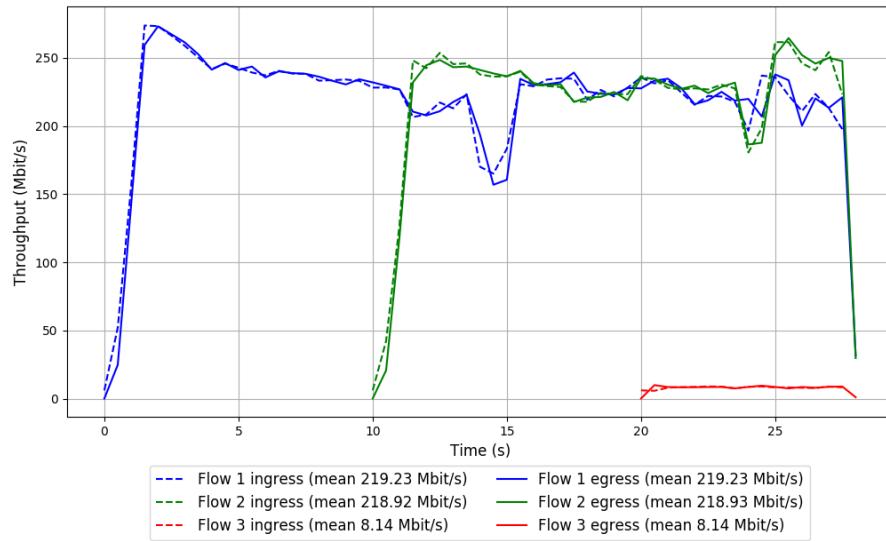
Run 1: Statistics of TaoVA-100x

Start at: 2017-09-18 19:10:19

End at: 2017-09-18 19:10:49

```
# Below is generated by plot.py at 2017-09-18 22:16:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 362.08 Mbit/s
95th percentile per-packet one-way delay: 112.845 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 219.23 Mbit/s
95th percentile per-packet one-way delay: 112.891 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 218.93 Mbit/s
95th percentile per-packet one-way delay: 112.793 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 112.791 ms
Loss rate: 0.00%
```

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



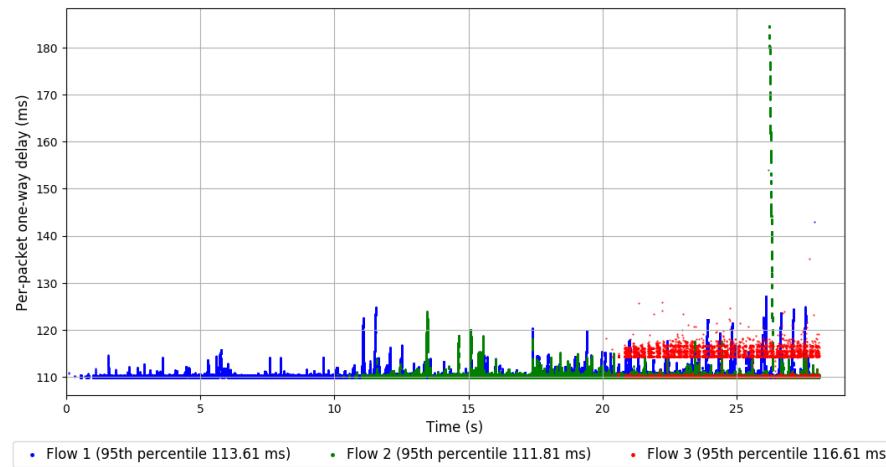
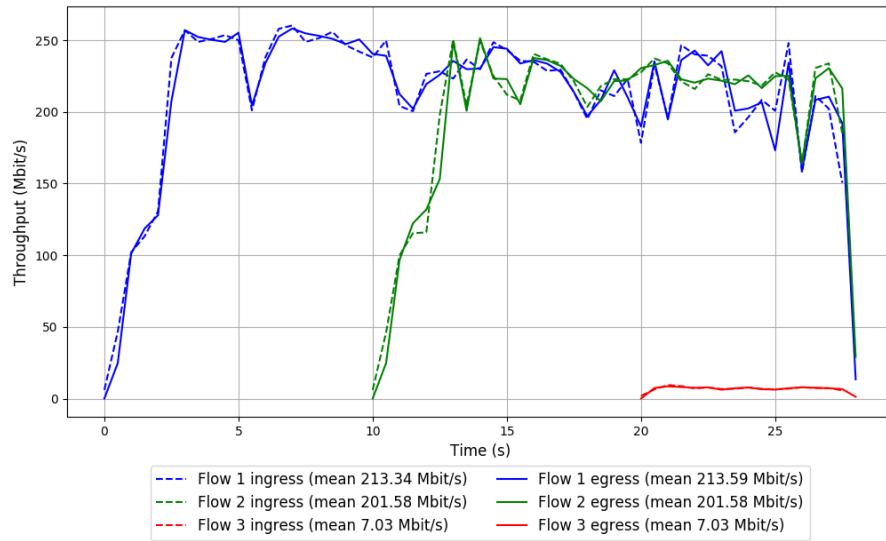
Run 2: Statistics of TaoVA-100x

Start at: 2017-09-18 19:20:17

End at: 2017-09-18 19:20:47

```
# Below is generated by plot.py at 2017-09-18 22:16:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.94 Mbit/s
95th percentile per-packet one-way delay: 113.190 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 213.59 Mbit/s
95th percentile per-packet one-way delay: 113.608 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 201.58 Mbit/s
95th percentile per-packet one-way delay: 111.810 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 116.614 ms
Loss rate: 0.00%
```

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



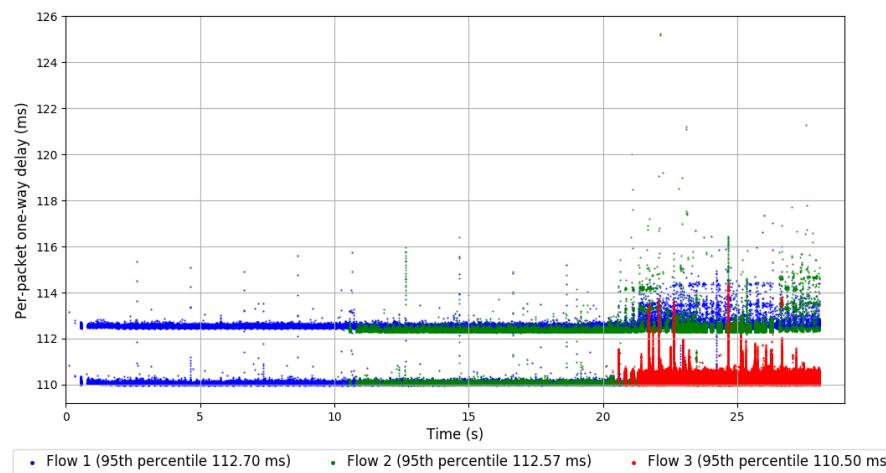
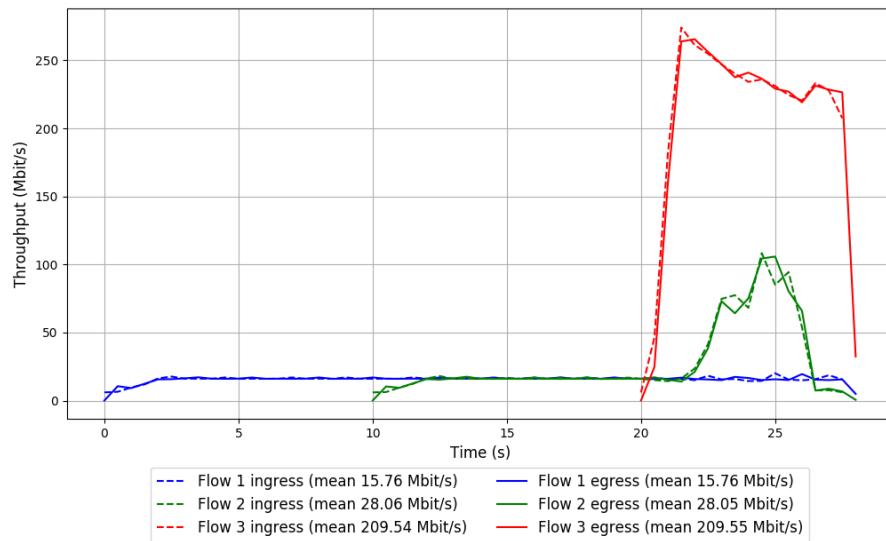
Run 3: Statistics of TaoVA-100x

Start at: 2017-09-18 19:30:14

End at: 2017-09-18 19:30:44

```
# Below is generated by plot.py at 2017-09-18 22:16:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.27 Mbit/s
95th percentile per-packet one-way delay: 112.551 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.76 Mbit/s
95th percentile per-packet one-way delay: 112.696 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.05 Mbit/s
95th percentile per-packet one-way delay: 112.569 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 209.55 Mbit/s
95th percentile per-packet one-way delay: 110.499 ms
Loss rate: 0.00%
```

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



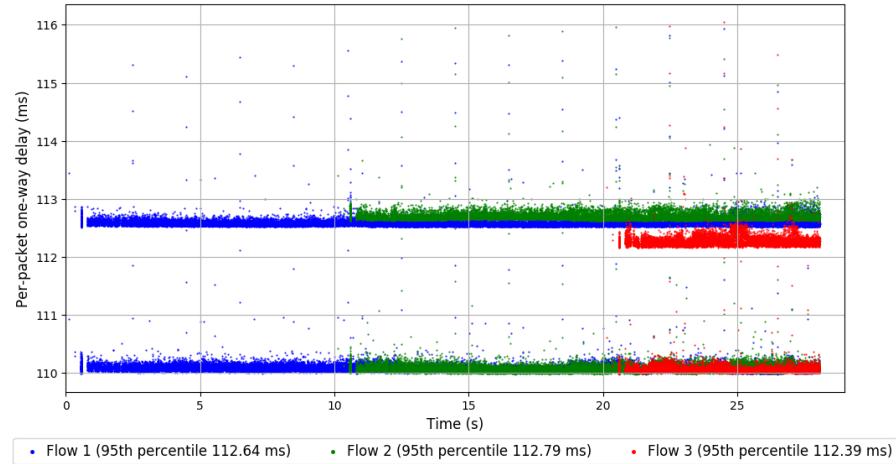
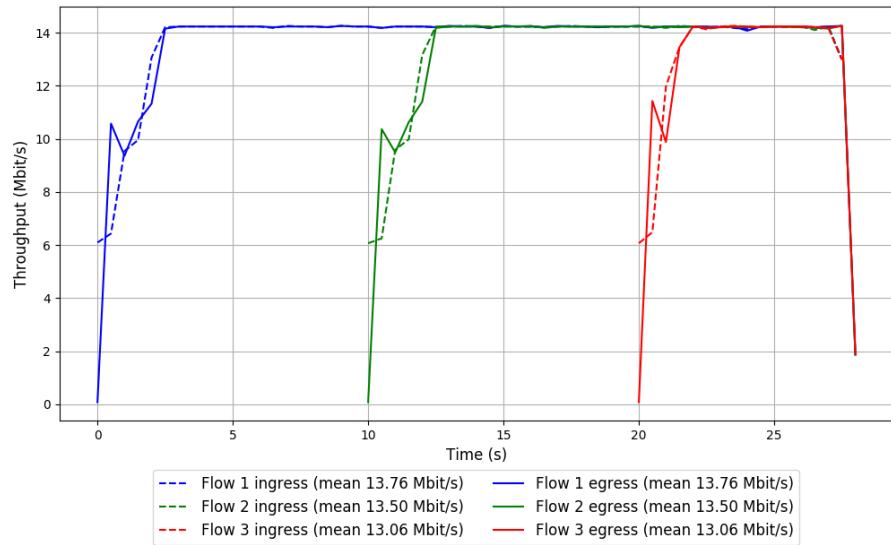
Run 4: Statistics of TaoVA-100x

Start at: 2017-09-18 19:39:48

End at: 2017-09-18 19:40:18

```
# Below is generated by plot.py at 2017-09-18 22:16:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.13 Mbit/s
95th percentile per-packet one-way delay: 112.718 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.76 Mbit/s
95th percentile per-packet one-way delay: 112.642 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.50 Mbit/s
95th percentile per-packet one-way delay: 112.787 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 112.393 ms
Loss rate: 0.00%
```

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



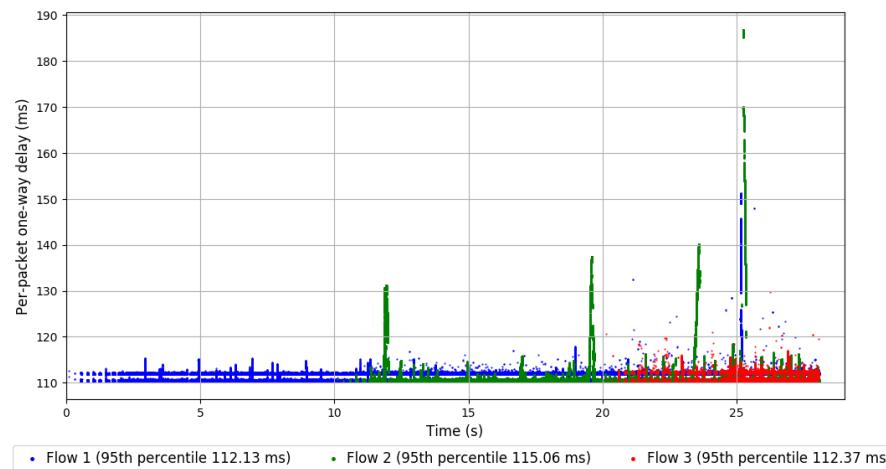
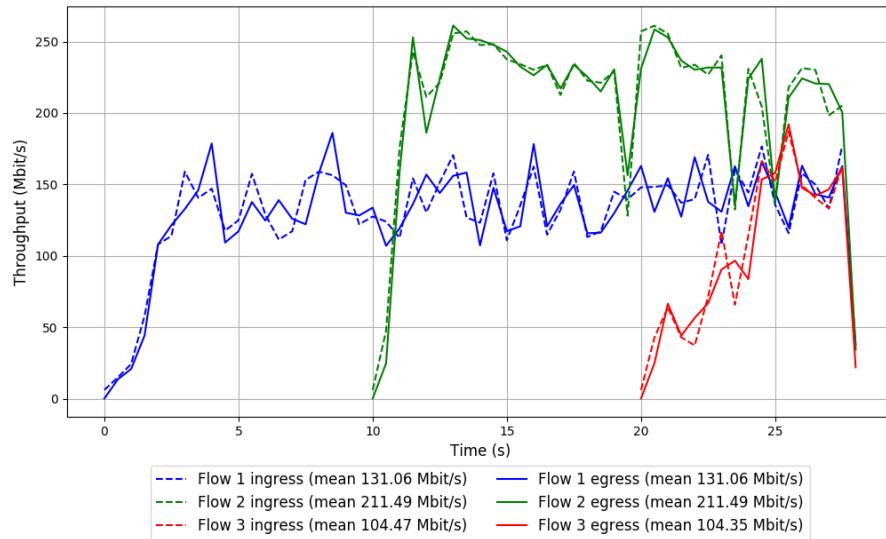
Run 5: Statistics of TaoVA-100x

Start at: 2017-09-18 19:49:18

End at: 2017-09-18 19:49:48

```
# Below is generated by plot.py at 2017-09-18 22:16:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.38 Mbit/s
95th percentile per-packet one-way delay: 112.438 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 131.06 Mbit/s
95th percentile per-packet one-way delay: 112.133 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 211.49 Mbit/s
95th percentile per-packet one-way delay: 115.060 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 104.35 Mbit/s
95th percentile per-packet one-way delay: 112.369 ms
Loss rate: 0.00%
```

Run 5: Report of TaoVA-100x — Data Link



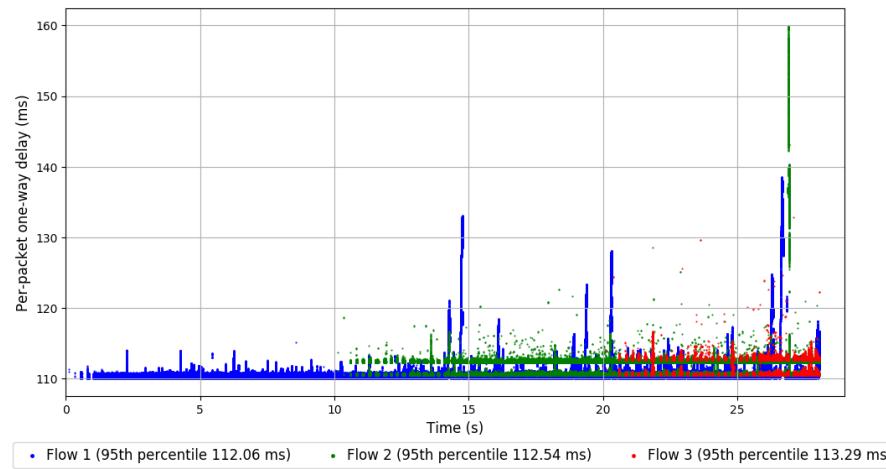
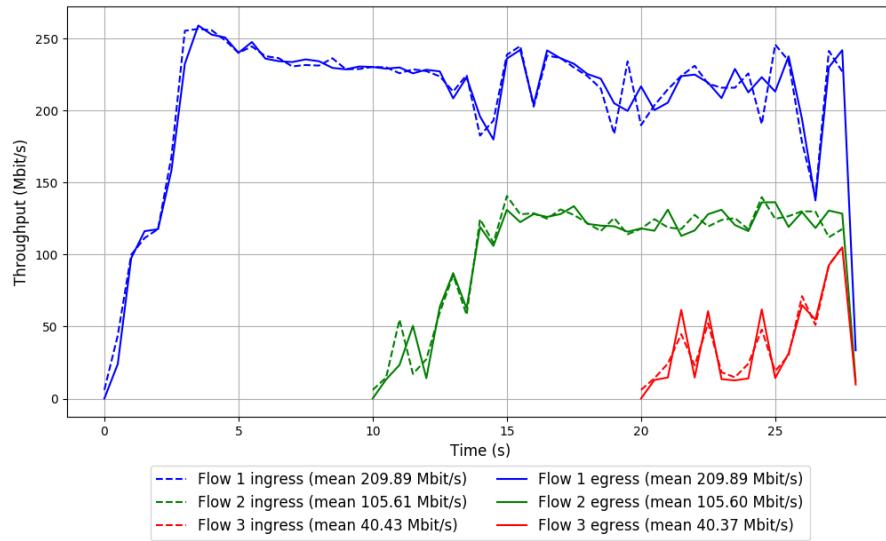
Run 6: Statistics of TaoVA-100x

Start at: 2017-09-18 19:59:17

End at: 2017-09-18 19:59:47

```
# Below is generated by plot.py at 2017-09-18 22:16:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.12 Mbit/s
95th percentile per-packet one-way delay: 112.689 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 209.89 Mbit/s
95th percentile per-packet one-way delay: 112.058 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 105.60 Mbit/s
95th percentile per-packet one-way delay: 112.541 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 40.37 Mbit/s
95th percentile per-packet one-way delay: 113.290 ms
Loss rate: 0.00%
```

Run 6: Report of TaoVA-100x — Data Link



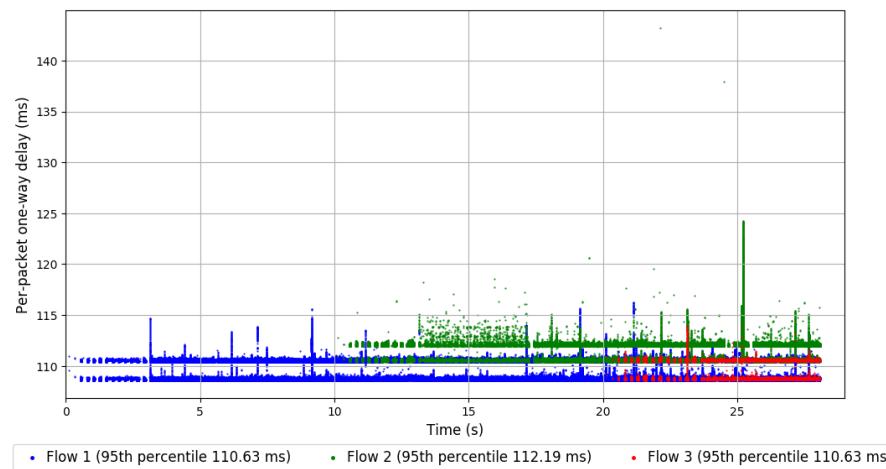
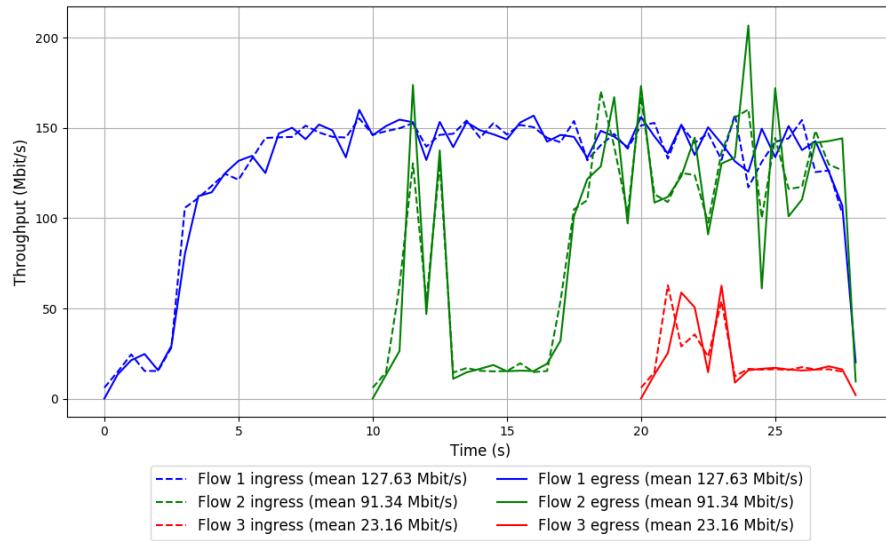
Run 7: Statistics of TaoVA-100x

Start at: 2017-09-18 20:09:08

End at: 2017-09-18 20:09:38

```
# Below is generated by plot.py at 2017-09-18 22:16:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 192.84 Mbit/s
95th percentile per-packet one-way delay: 112.093 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 127.63 Mbit/s
95th percentile per-packet one-way delay: 110.630 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 91.34 Mbit/s
95th percentile per-packet one-way delay: 112.186 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.16 Mbit/s
95th percentile per-packet one-way delay: 110.633 ms
Loss rate: 0.00%
```

Run 7: Report of TaoVA-100x — Data Link



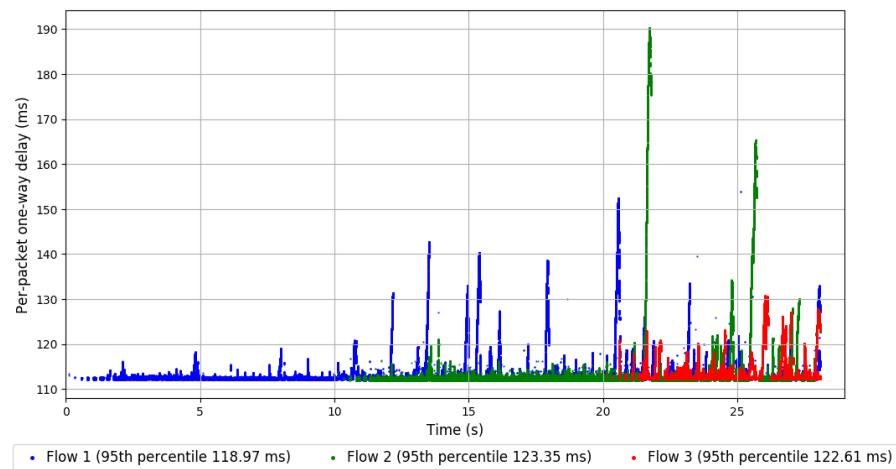
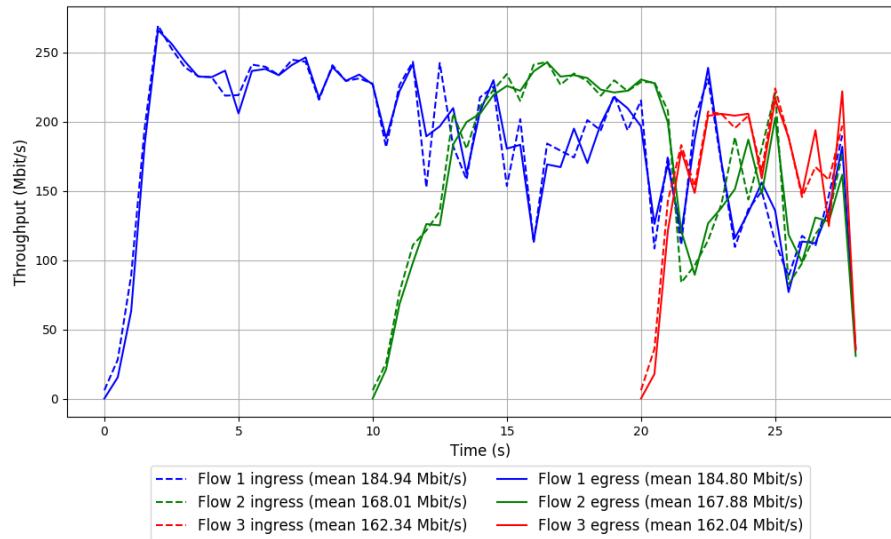
Run 8: Statistics of TaoVA-100x

Start at: 2017-09-18 20:18:49

End at: 2017-09-18 20:19:19

```
# Below is generated by plot.py at 2017-09-18 22:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.58 Mbit/s
95th percentile per-packet one-way delay: 120.678 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 184.80 Mbit/s
95th percentile per-packet one-way delay: 118.969 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 167.88 Mbit/s
95th percentile per-packet one-way delay: 123.350 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 162.04 Mbit/s
95th percentile per-packet one-way delay: 122.611 ms
Loss rate: 0.19%
```

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



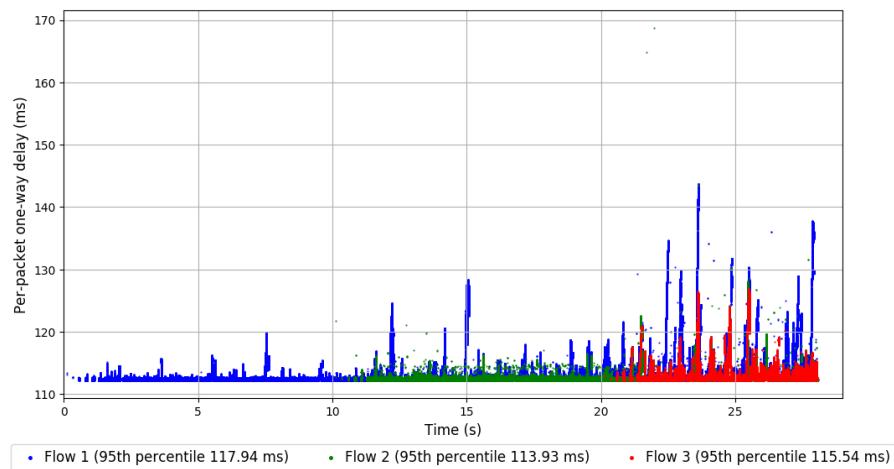
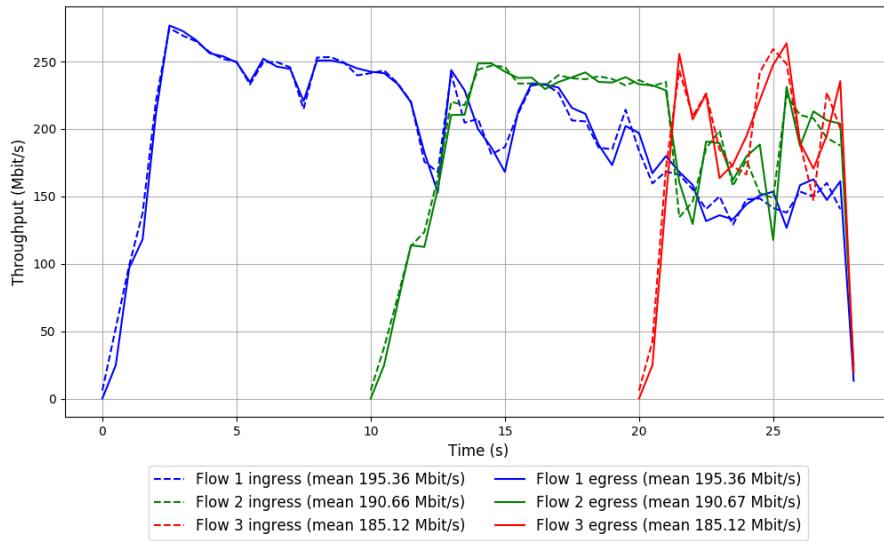
Run 9: Statistics of TaoVA-100x

Start at: 2017-09-18 20:28:47

End at: 2017-09-18 20:29:17

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.99 Mbit/s
95th percentile per-packet one-way delay: 116.181 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 195.36 Mbit/s
95th percentile per-packet one-way delay: 117.945 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 190.67 Mbit/s
95th percentile per-packet one-way delay: 113.931 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 185.12 Mbit/s
95th percentile per-packet one-way delay: 115.542 ms
Loss rate: 0.00%
```

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



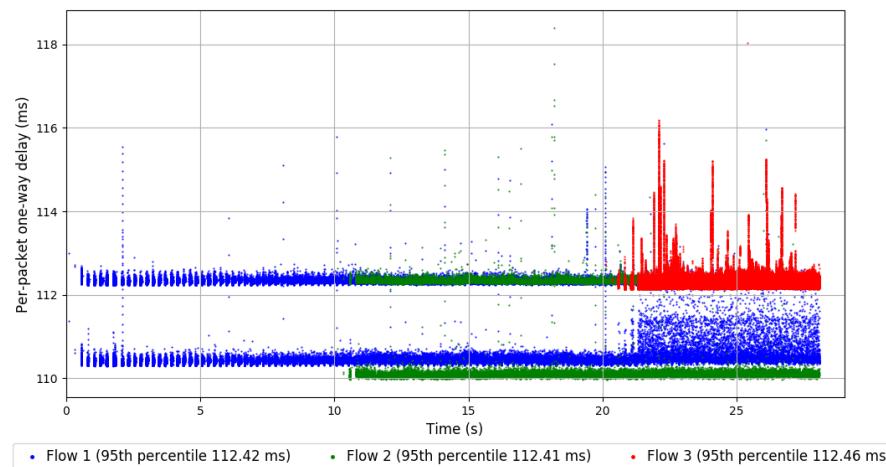
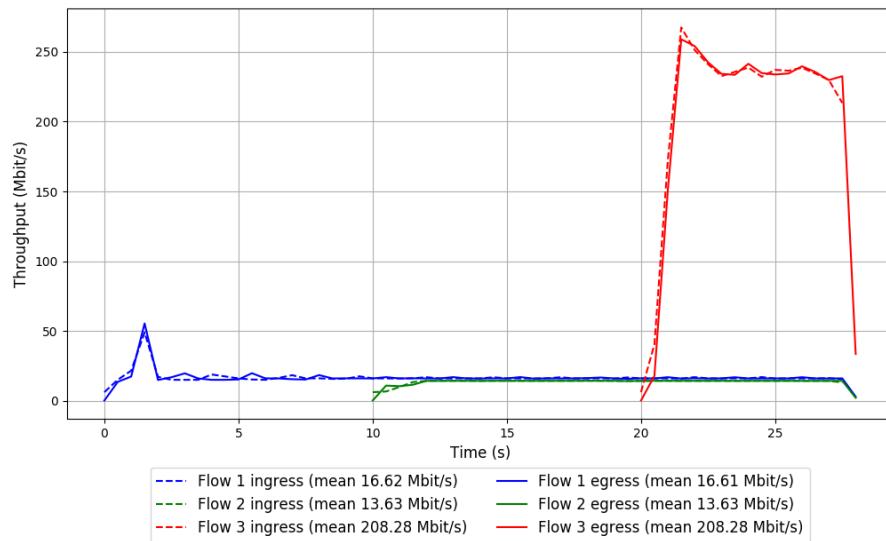
Run 10: Statistics of TaoVA-100x

Start at: 2017-09-18 20:38:49

End at: 2017-09-18 20:39:19

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.52 Mbit/s
95th percentile per-packet one-way delay: 112.443 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 112.415 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.63 Mbit/s
95th percentile per-packet one-way delay: 112.408 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 208.28 Mbit/s
95th percentile per-packet one-way delay: 112.460 ms
Loss rate: 0.00%
```

Run 10: Report of TaoVA-100x — Data Link



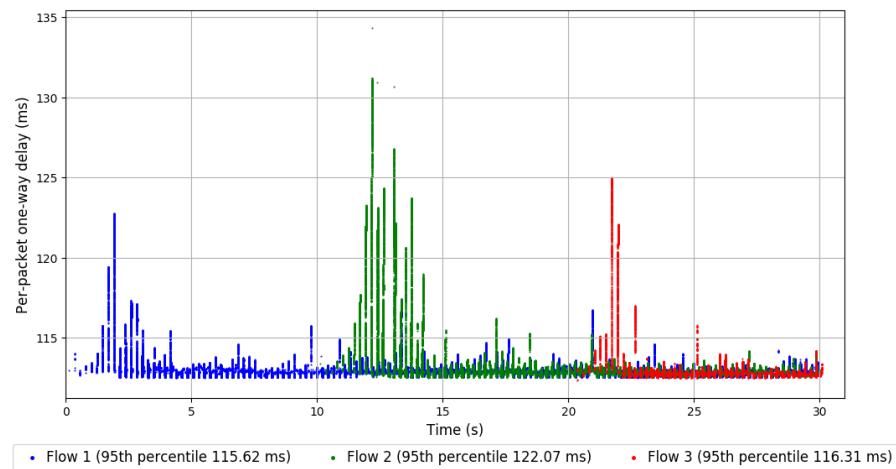
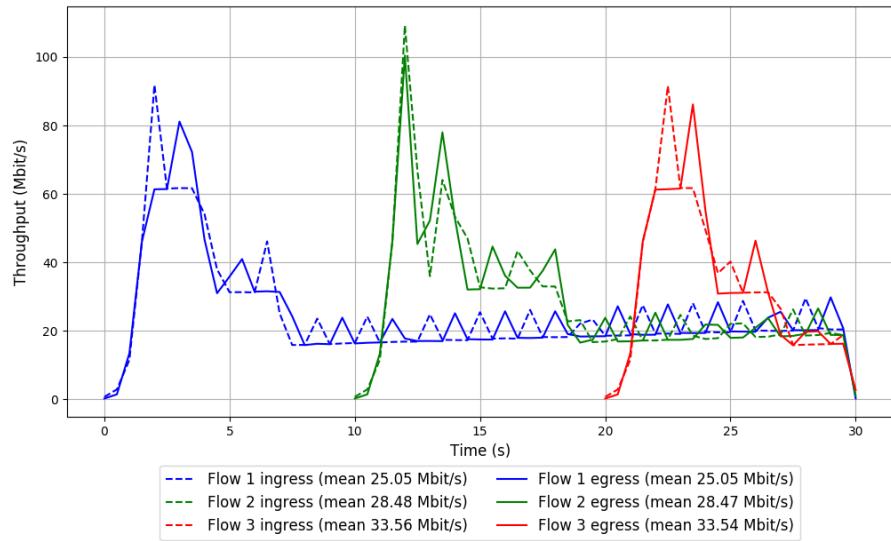
Run 1: Statistics of TCP Vegas

Start at: 2017-09-18 19:05:24

End at: 2017-09-18 19:05:54

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.10 Mbit/s
95th percentile per-packet one-way delay: 118.746 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 25.05 Mbit/s
95th percentile per-packet one-way delay: 115.621 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 28.47 Mbit/s
95th percentile per-packet one-way delay: 122.066 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 33.54 Mbit/s
95th percentile per-packet one-way delay: 116.309 ms
Loss rate: 0.04%
```

Run 1: Report of TCP Vegas — Data Link



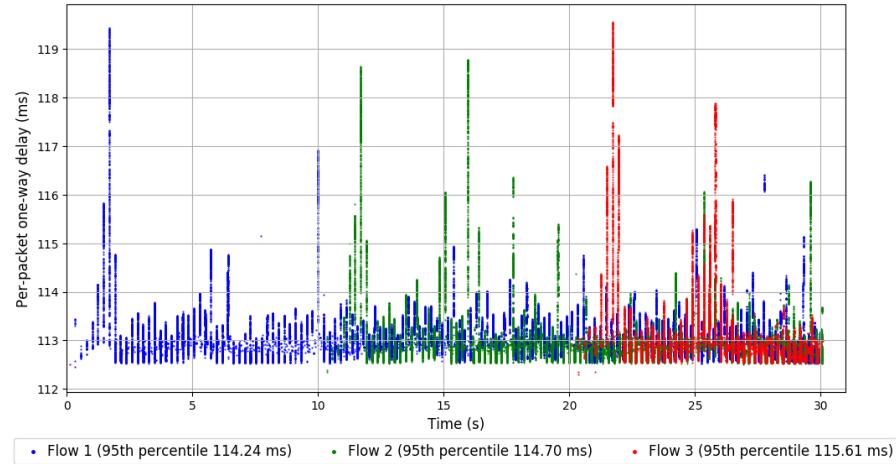
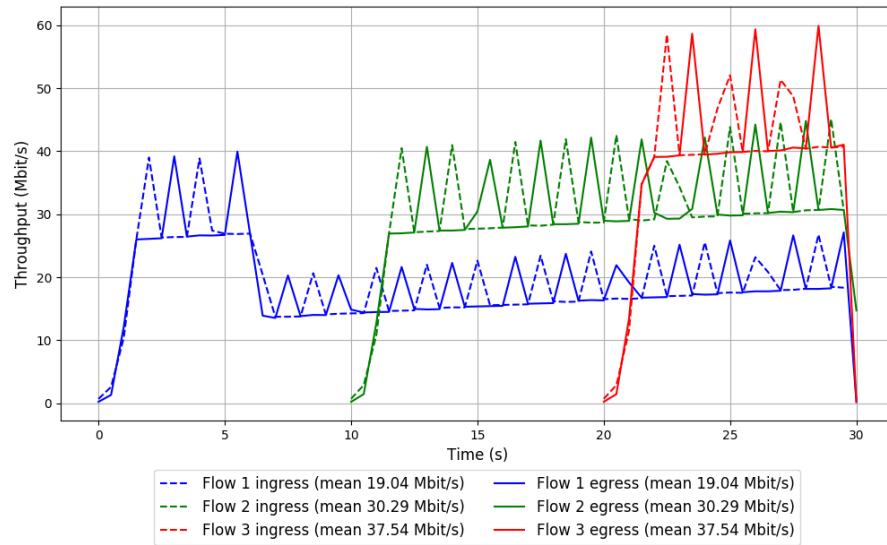
Run 2: Statistics of TCP Vegas

Start at: 2017-09-18 19:15:25

End at: 2017-09-18 19:15:55

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.64 Mbit/s
95th percentile per-packet one-way delay: 114.716 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 19.04 Mbit/s
95th percentile per-packet one-way delay: 114.238 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 30.29 Mbit/s
95th percentile per-packet one-way delay: 114.704 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.54 Mbit/s
95th percentile per-packet one-way delay: 115.615 ms
Loss rate: 0.00%
```

Run 2: Report of TCP Vegas — Data Link



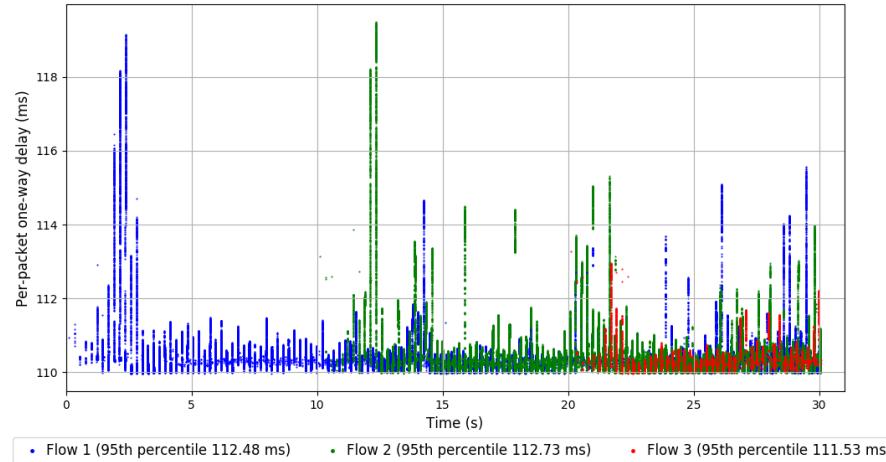
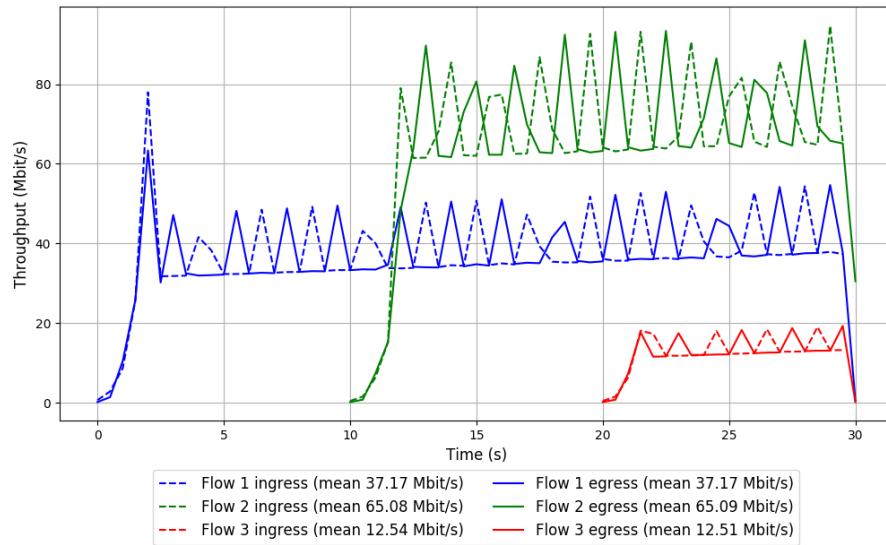
Run 3: Statistics of TCP Vegas

Start at: 2017-09-18 19:25:19

End at: 2017-09-18 19:25:49

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.57 Mbit/s
95th percentile per-packet one-way delay: 112.527 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 37.17 Mbit/s
95th percentile per-packet one-way delay: 112.478 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 65.09 Mbit/s
95th percentile per-packet one-way delay: 112.728 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 111.530 ms
Loss rate: 0.22%
```

Run 3: Report of TCP Vegas — Data Link



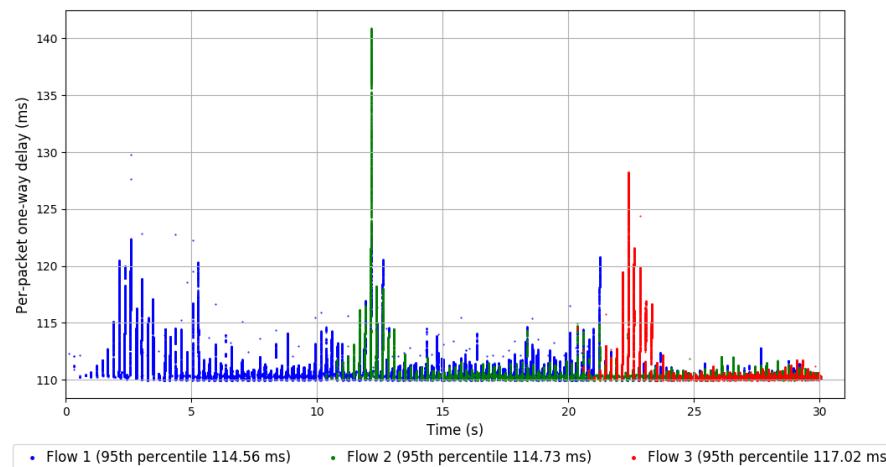
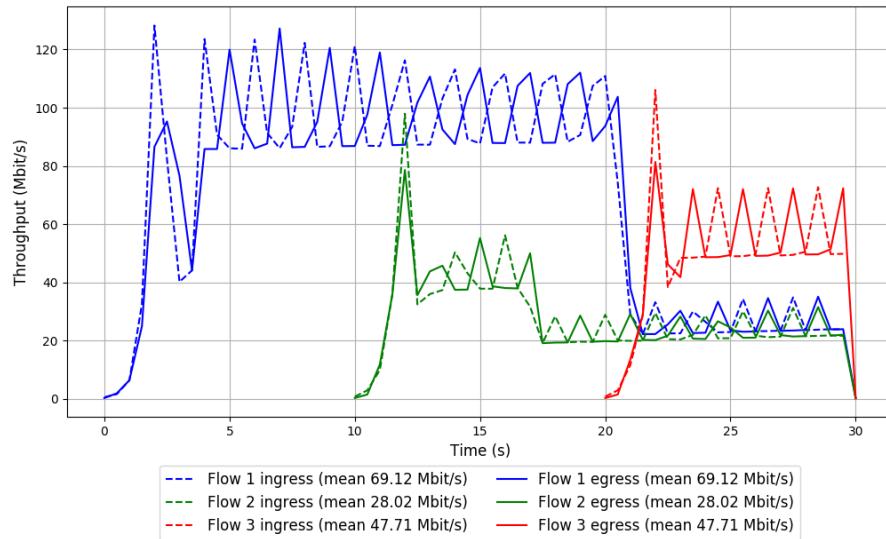
Run 4: Statistics of TCP Vegas

Start at: 2017-09-18 19:34:50

End at: 2017-09-18 19:35:20

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.53 Mbit/s
95th percentile per-packet one-way delay: 115.167 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 69.12 Mbit/s
95th percentile per-packet one-way delay: 114.559 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 28.02 Mbit/s
95th percentile per-packet one-way delay: 114.734 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 47.71 Mbit/s
95th percentile per-packet one-way delay: 117.019 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link



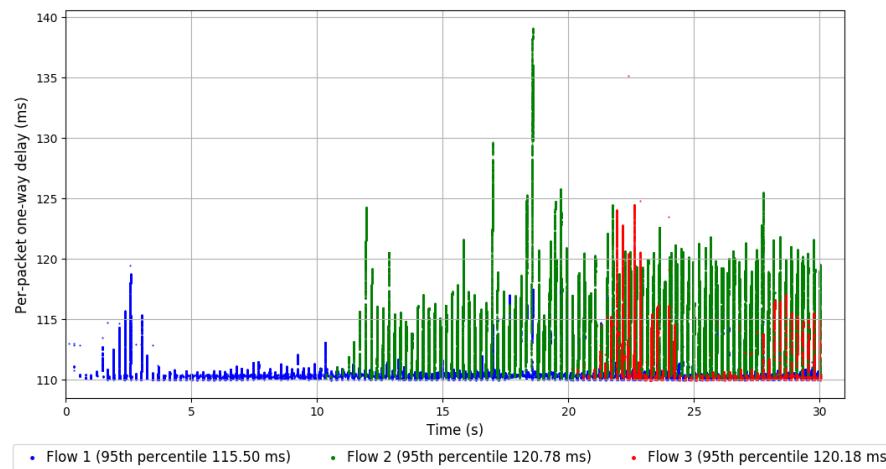
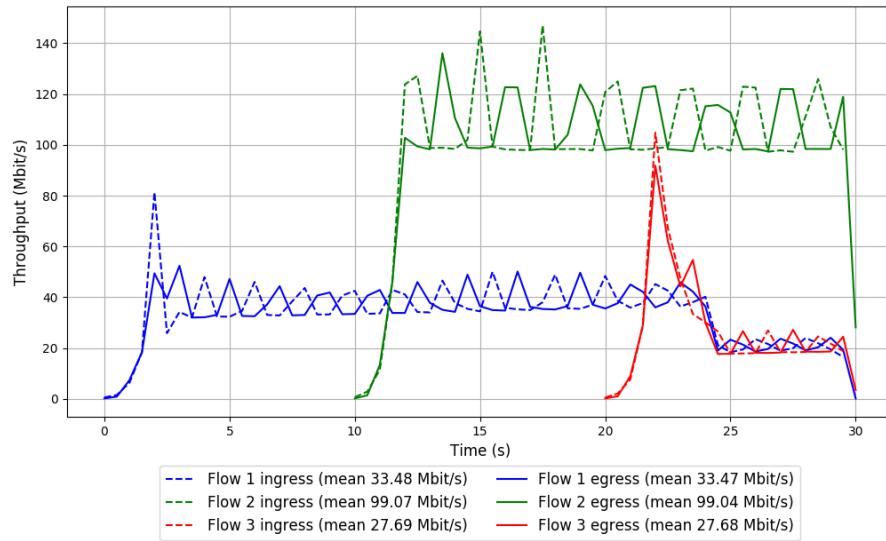
Run 5: Statistics of TCP Vegas

Start at: 2017-09-18 19:44:21

End at: 2017-09-18 19:44:51

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 108.49 Mbit/s
95th percentile per-packet one-way delay: 120.130 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 33.47 Mbit/s
95th percentile per-packet one-way delay: 115.496 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 99.04 Mbit/s
95th percentile per-packet one-way delay: 120.779 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.68 Mbit/s
95th percentile per-packet one-way delay: 120.178 ms
Loss rate: 0.03%
```

Run 5: Report of TCP Vegas — Data Link



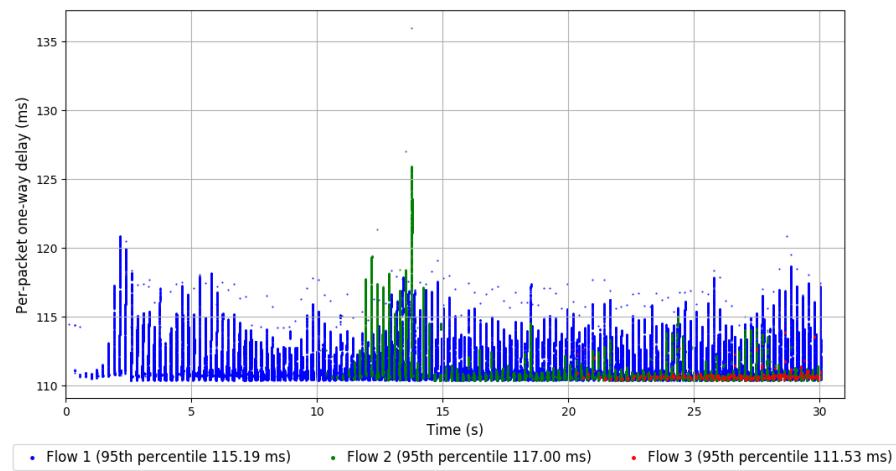
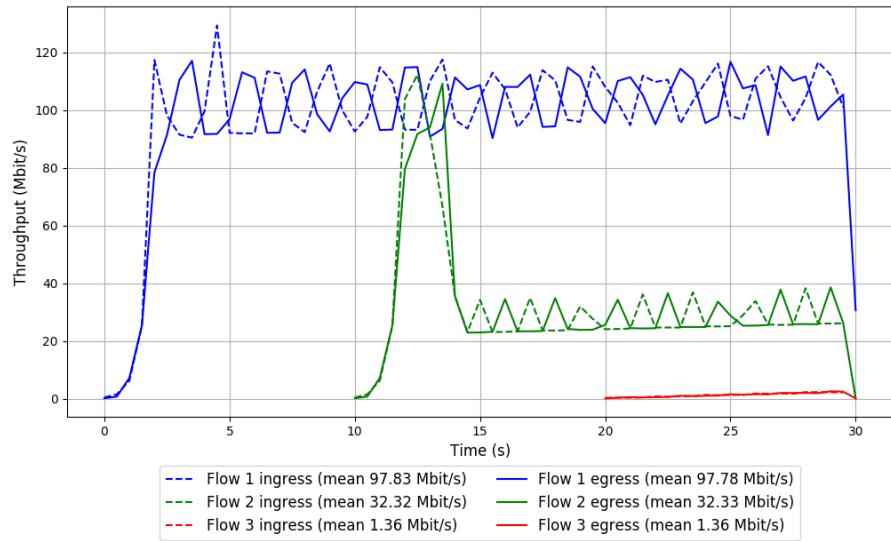
Run 6: Statistics of TCP Vegas

Start at: 2017-09-18 19:54:20

End at: 2017-09-18 19:54:50

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 119.75 Mbit/s
95th percentile per-packet one-way delay: 115.541 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 97.78 Mbit/s
95th percentile per-packet one-way delay: 115.188 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 32.33 Mbit/s
95th percentile per-packet one-way delay: 117.000 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 111.525 ms
Loss rate: 0.36%
```

Run 6: Report of TCP Vegas — Data Link



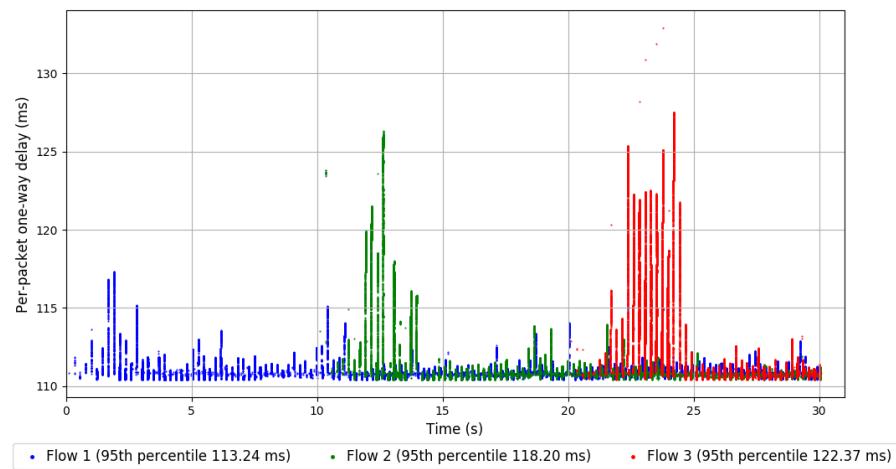
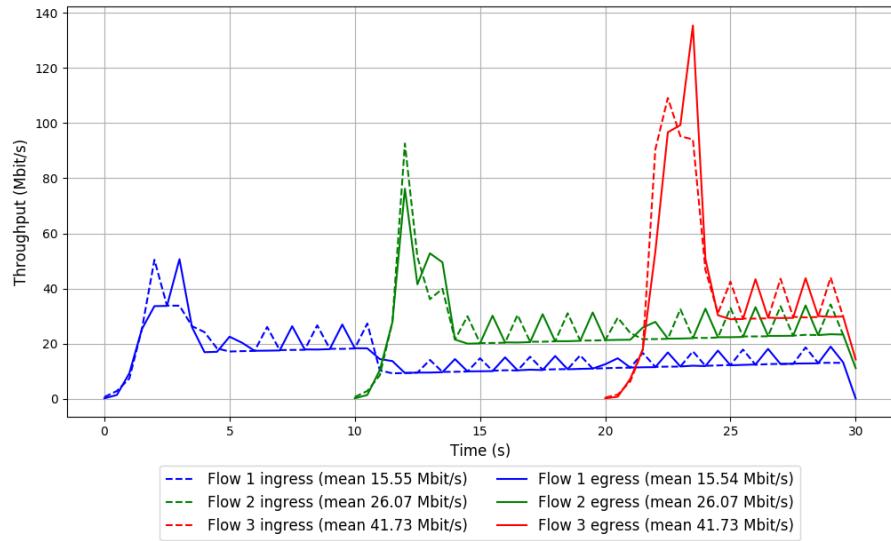
Run 7: Statistics of TCP Vegas

Start at: 2017-09-18 20:04:13

End at: 2017-09-18 20:04:43

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.70 Mbit/s
95th percentile per-packet one-way delay: 120.185 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 15.54 Mbit/s
95th percentile per-packet one-way delay: 113.244 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 26.07 Mbit/s
95th percentile per-packet one-way delay: 118.198 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 41.73 Mbit/s
95th percentile per-packet one-way delay: 122.374 ms
Loss rate: 0.03%
```

Run 7: Report of TCP Vegas — Data Link



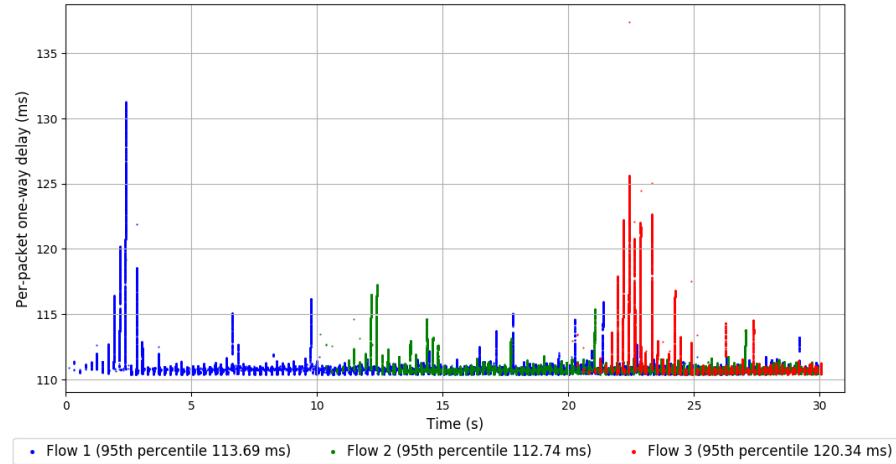
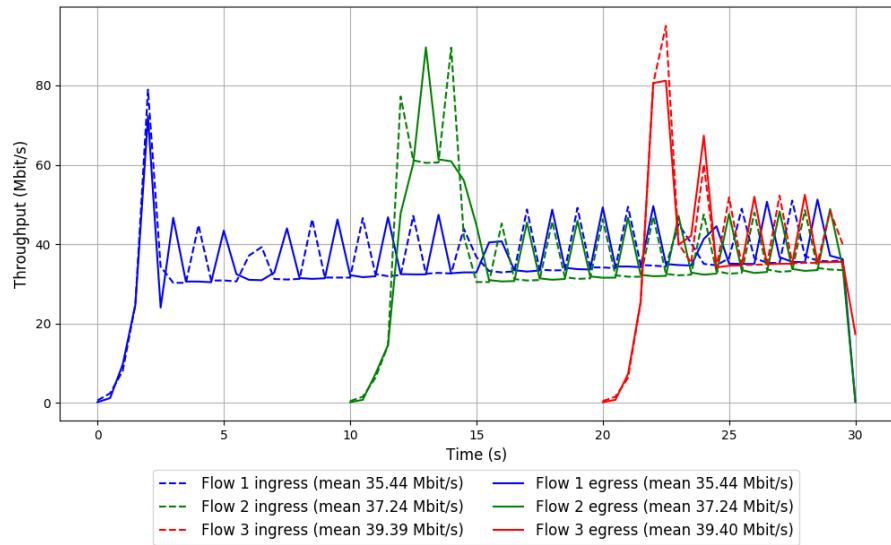
Run 8: Statistics of TCP Vegas

Start at: 2017-09-18 20:13:55

End at: 2017-09-18 20:14:25

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.23 Mbit/s
95th percentile per-packet one-way delay: 114.905 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.44 Mbit/s
95th percentile per-packet one-way delay: 113.690 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.24 Mbit/s
95th percentile per-packet one-way delay: 112.736 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 39.40 Mbit/s
95th percentile per-packet one-way delay: 120.340 ms
Loss rate: 0.00%
```

Run 8: Report of TCP Vegas — Data Link



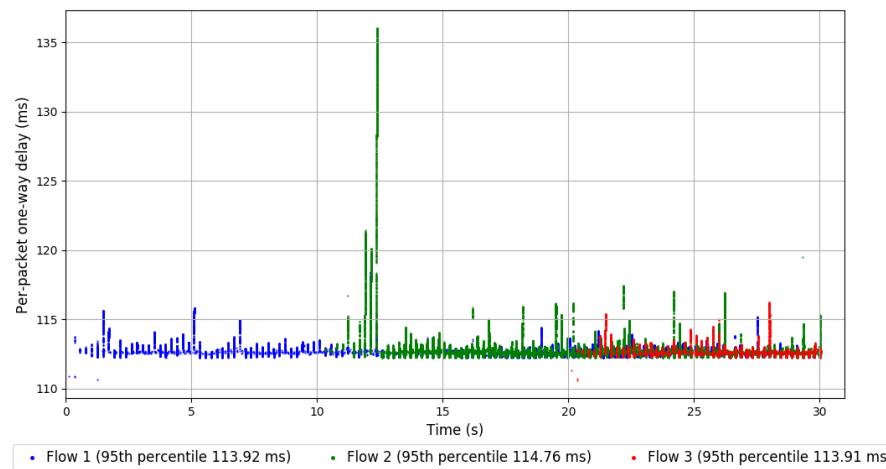
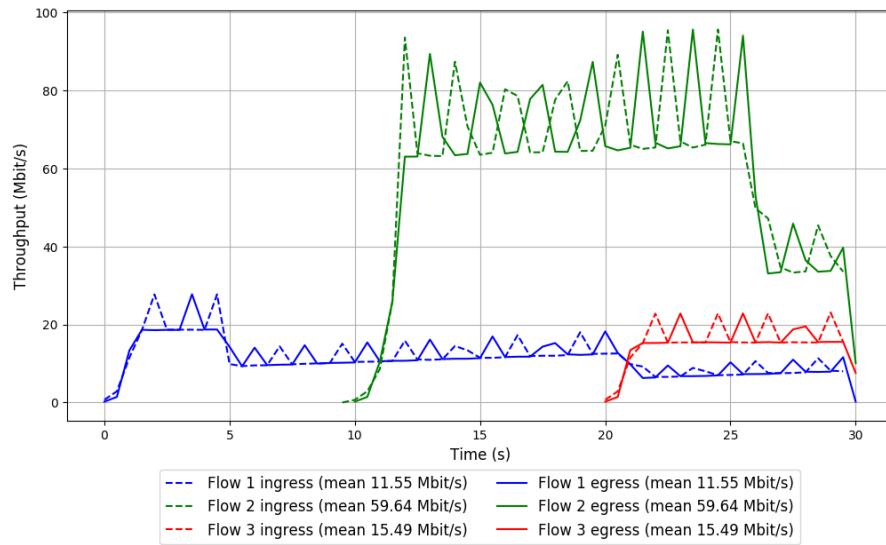
Run 9: Statistics of TCP Vegas

Start at: 2017-09-18 20:23:55

End at: 2017-09-18 20:24:25

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.39 Mbit/s
95th percentile per-packet one-way delay: 114.504 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 113.923 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 59.64 Mbit/s
95th percentile per-packet one-way delay: 114.763 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 15.49 Mbit/s
95th percentile per-packet one-way delay: 113.908 ms
Loss rate: 0.00%
```

Run 9: Report of TCP Vegas — Data Link



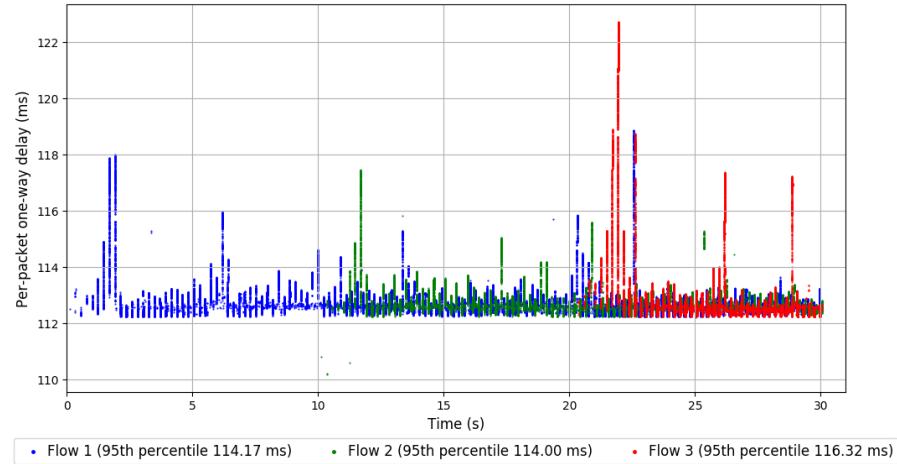
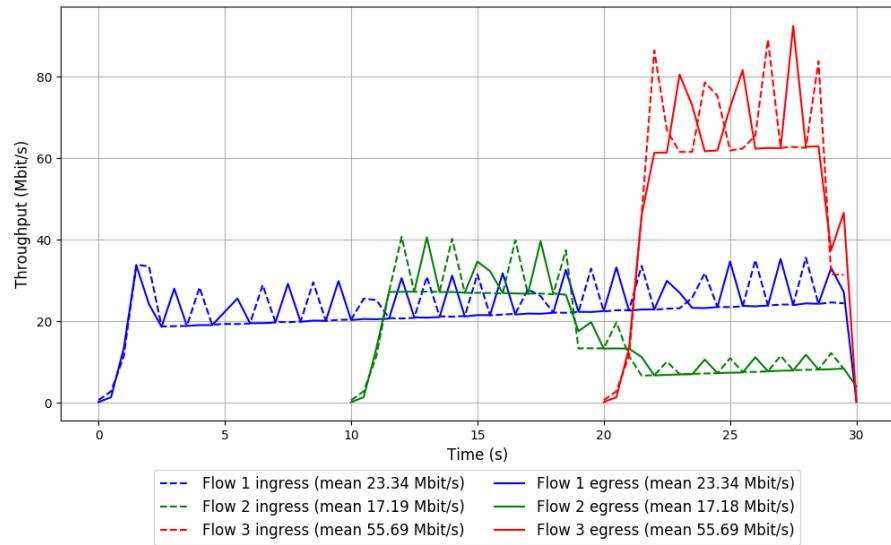
Run 10: Statistics of TCP Vegas

Start at: 2017-09-18 20:33:55

End at: 2017-09-18 20:34:25

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.22 Mbit/s
95th percentile per-packet one-way delay: 114.646 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 23.34 Mbit/s
95th percentile per-packet one-way delay: 114.172 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 17.18 Mbit/s
95th percentile per-packet one-way delay: 114.001 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 55.69 Mbit/s
95th percentile per-packet one-way delay: 116.318 ms
Loss rate: 0.00%
```

Run 10: Report of TCP Vegas — Data Link



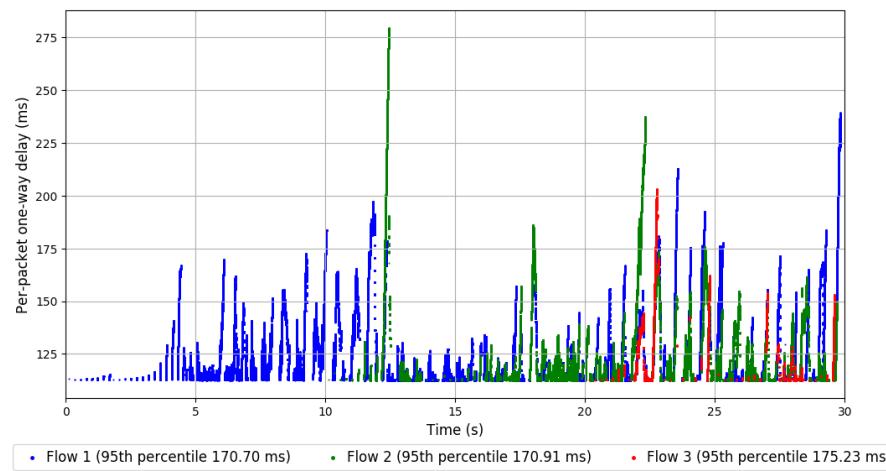
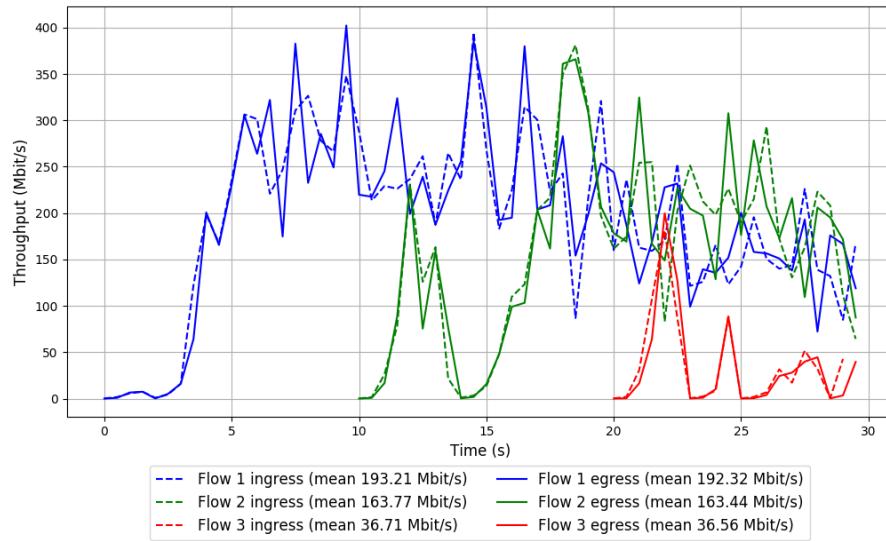
Run 1: Statistics of Verus

Start at: 2017-09-18 19:01:37

End at: 2017-09-18 19:02:07

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.55 Mbit/s
95th percentile per-packet one-way delay: 170.925 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 192.32 Mbit/s
95th percentile per-packet one-way delay: 170.700 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 163.44 Mbit/s
95th percentile per-packet one-way delay: 170.907 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 36.56 Mbit/s
95th percentile per-packet one-way delay: 175.228 ms
Loss rate: 0.00%
```

Run 1: Report of Verus — Data Link



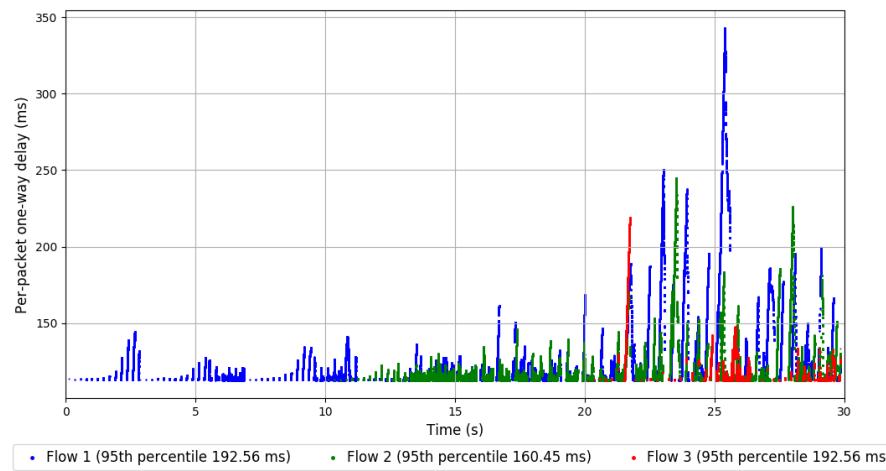
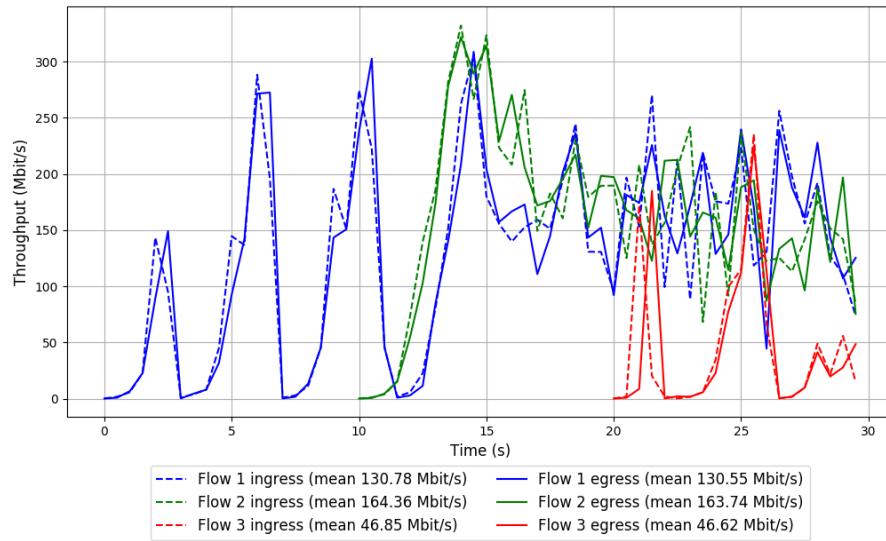
Run 2: Statistics of Verus

Start at: 2017-09-18 19:11:43

End at: 2017-09-18 19:12:13

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.33 Mbit/s
95th percentile per-packet one-way delay: 181.951 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 130.55 Mbit/s
95th percentile per-packet one-way delay: 192.563 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 163.74 Mbit/s
95th percentile per-packet one-way delay: 160.446 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 46.62 Mbit/s
95th percentile per-packet one-way delay: 192.559 ms
Loss rate: 0.46%
```

Run 2: Report of Verus — Data Link



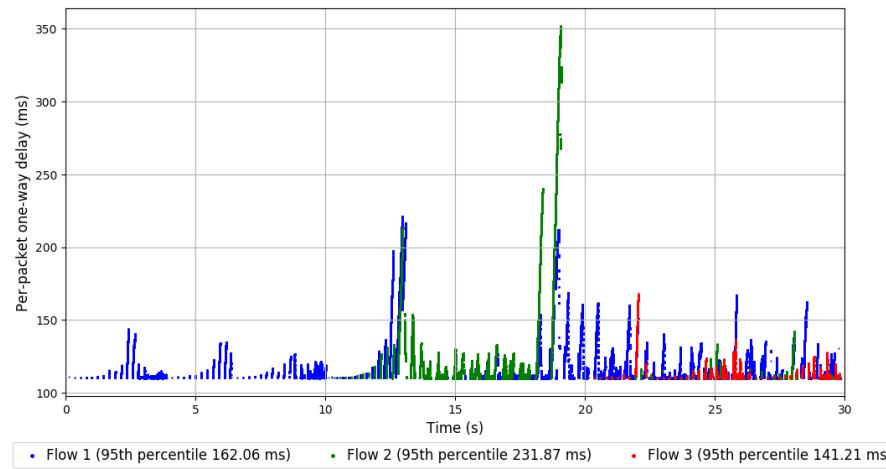
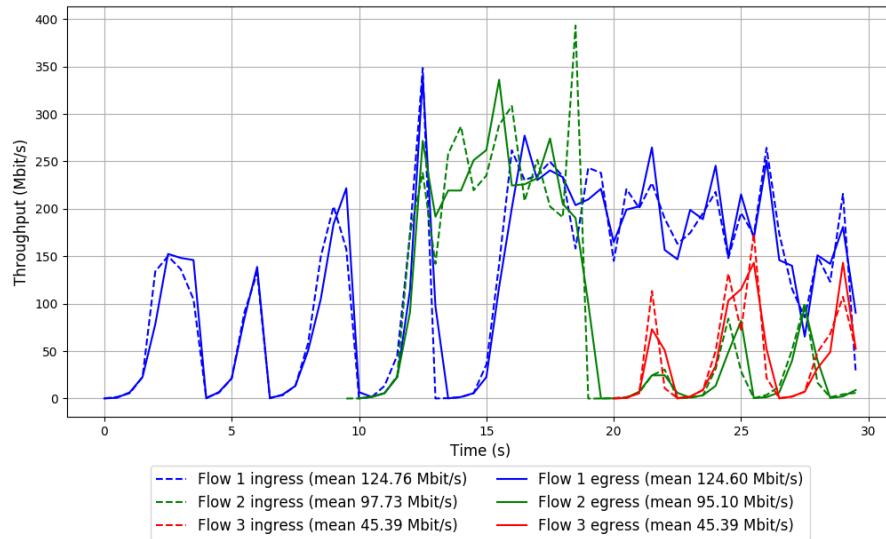
Run 3: Statistics of Verus

Start at: 2017-09-18 19:21:40

End at: 2017-09-18 19:22:10

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 202.16 Mbit/s
95th percentile per-packet one-way delay: 180.494 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 124.60 Mbit/s
95th percentile per-packet one-way delay: 162.060 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 95.10 Mbit/s
95th percentile per-packet one-way delay: 231.865 ms
Loss rate: 2.68%
-- Flow 3:
Average throughput: 45.39 Mbit/s
95th percentile per-packet one-way delay: 141.213 ms
Loss rate: 0.01%
```

Run 3: Report of Verus — Data Link



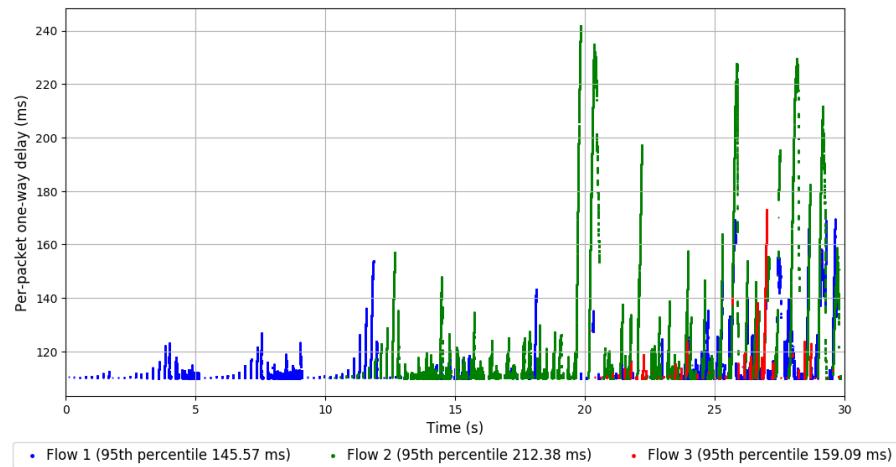
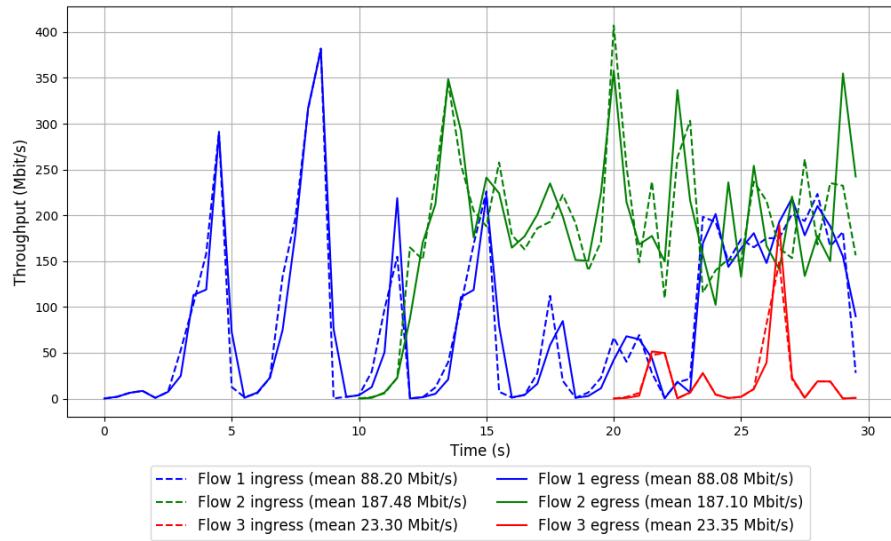
Run 4: Statistics of Verus

Start at: 2017-09-18 19:31:11

End at: 2017-09-18 19:31:41

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 219.26 Mbit/s
95th percentile per-packet one-way delay: 193.362 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 88.08 Mbit/s
95th percentile per-packet one-way delay: 145.572 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 187.10 Mbit/s
95th percentile per-packet one-way delay: 212.381 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 23.35 Mbit/s
95th percentile per-packet one-way delay: 159.093 ms
Loss rate: 0.00%
```

Run 4: Report of Verus — Data Link



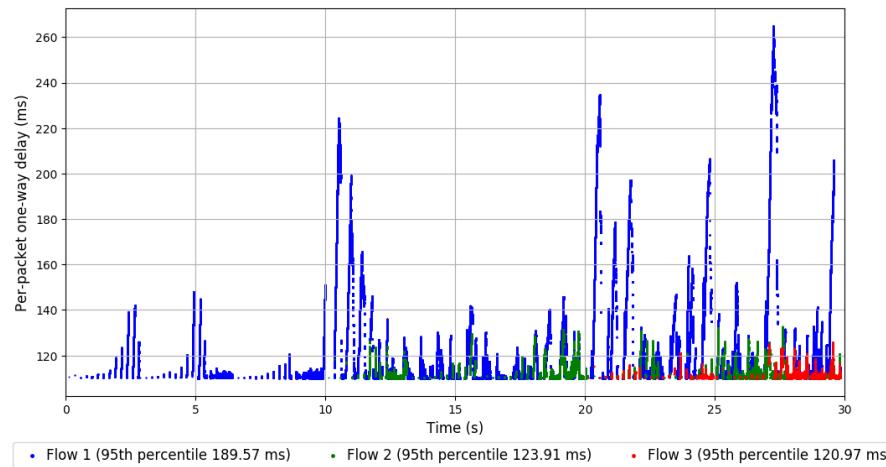
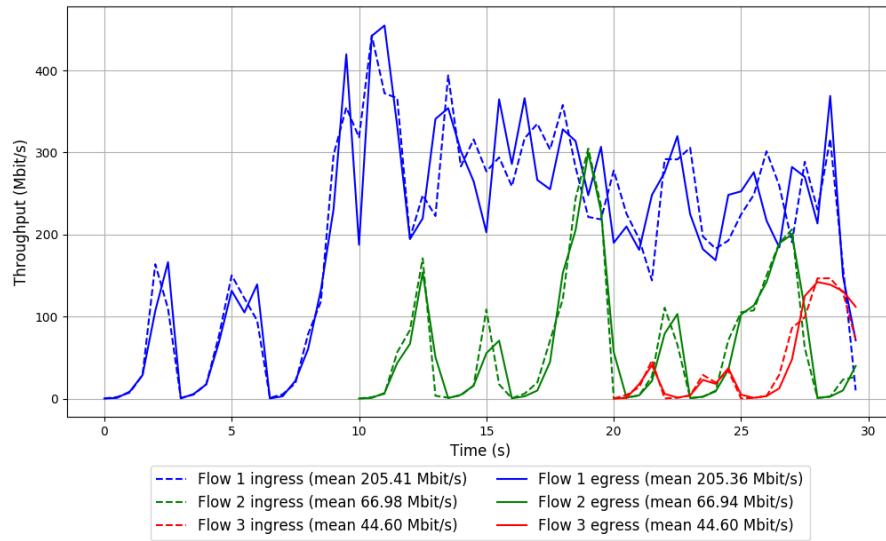
Run 5: Statistics of Verus

Start at: 2017-09-18 19:40:38

End at: 2017-09-18 19:41:08

```
# Below is generated by plot.py at 2017-09-18 22:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 264.26 Mbit/s
95th percentile per-packet one-way delay: 176.996 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 205.36 Mbit/s
95th percentile per-packet one-way delay: 189.572 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 66.94 Mbit/s
95th percentile per-packet one-way delay: 123.911 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 44.60 Mbit/s
95th percentile per-packet one-way delay: 120.968 ms
Loss rate: 0.00%
```

Run 5: Report of Verus — Data Link



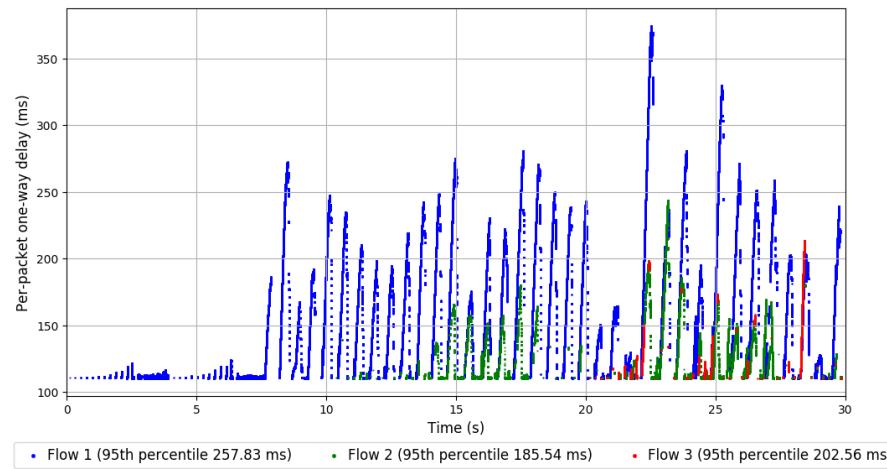
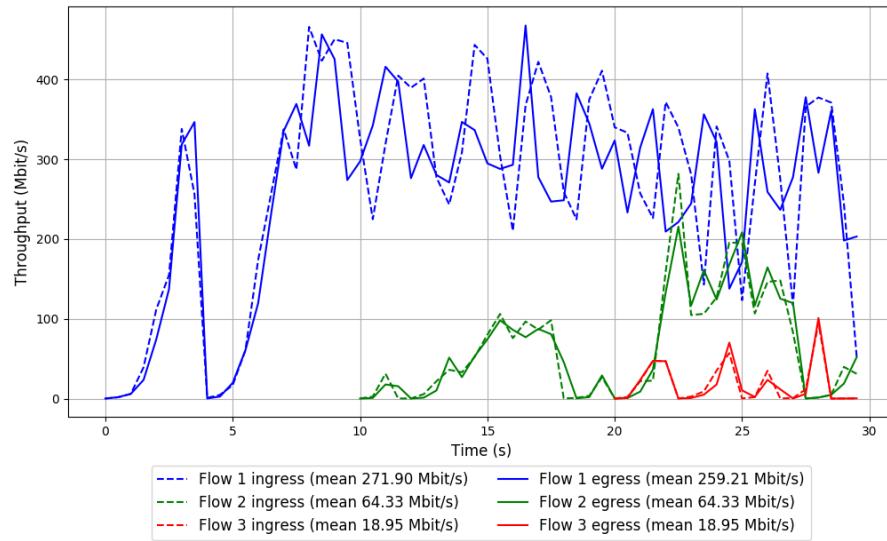
Run 6: Statistics of Verus

Start at: 2017-09-18 19:50:35

End at: 2017-09-18 19:51:05

```
# Below is generated by plot.py at 2017-09-18 22:22:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 307.66 Mbit/s
95th percentile per-packet one-way delay: 250.659 ms
Loss rate: 3.66%
-- Flow 1:
Average throughput: 259.21 Mbit/s
95th percentile per-packet one-way delay: 257.829 ms
Loss rate: 4.32%
-- Flow 2:
Average throughput: 64.33 Mbit/s
95th percentile per-packet one-way delay: 185.537 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.95 Mbit/s
95th percentile per-packet one-way delay: 202.564 ms
Loss rate: 0.00%
```

Run 6: Report of Verus — Data Link



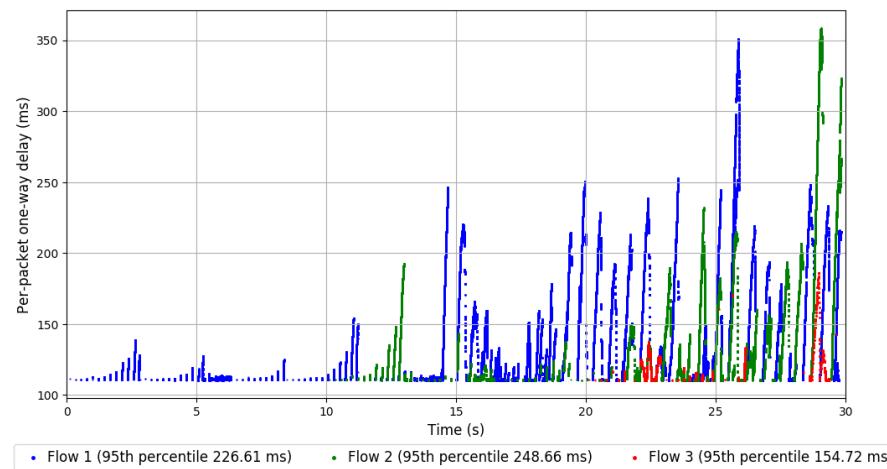
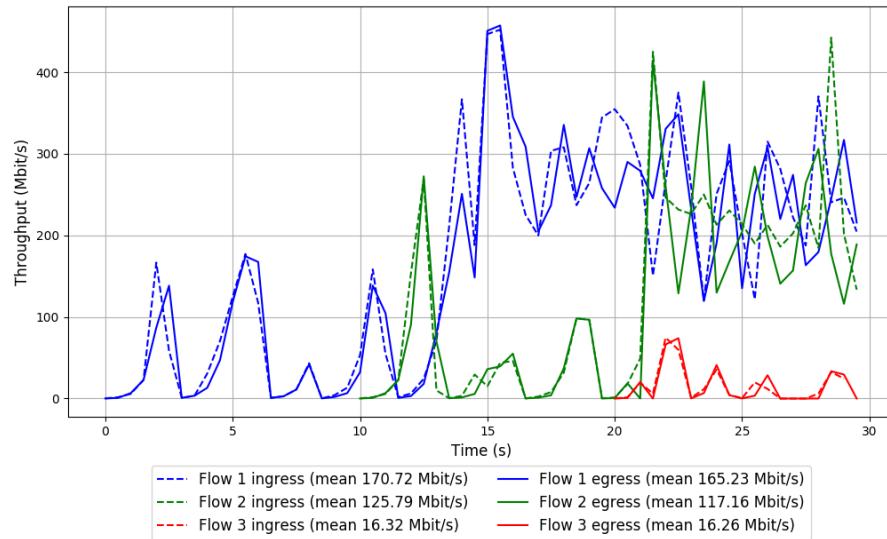
Run 7: Statistics of Verus

Start at: 2017-09-18 20:00:34

End at: 2017-09-18 20:01:04

```
# Below is generated by plot.py at 2017-09-18 22:22:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 248.15 Mbit/s
95th percentile per-packet one-way delay: 228.302 ms
Loss rate: 4.12%
-- Flow 1:
Average throughput: 165.23 Mbit/s
95th percentile per-packet one-way delay: 226.610 ms
Loss rate: 3.14%
-- Flow 2:
Average throughput: 117.16 Mbit/s
95th percentile per-packet one-way delay: 248.656 ms
Loss rate: 6.38%
-- Flow 3:
Average throughput: 16.26 Mbit/s
95th percentile per-packet one-way delay: 154.719 ms
Loss rate: 0.00%
```

Run 7: Report of Verus — Data Link



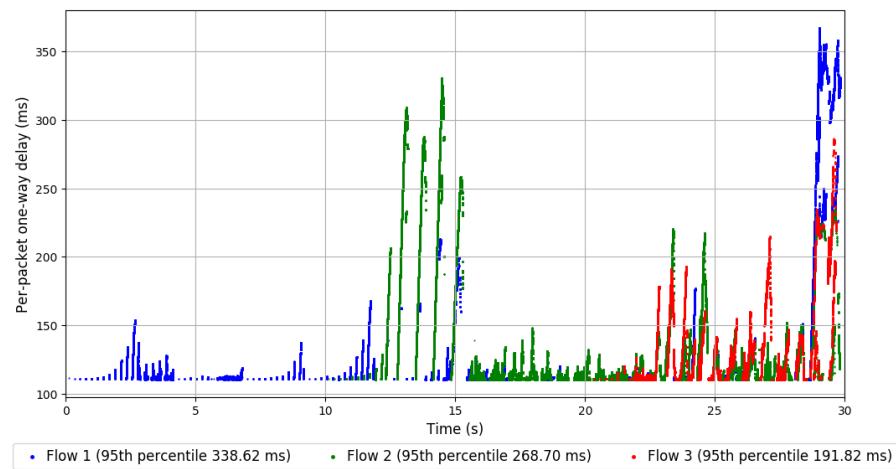
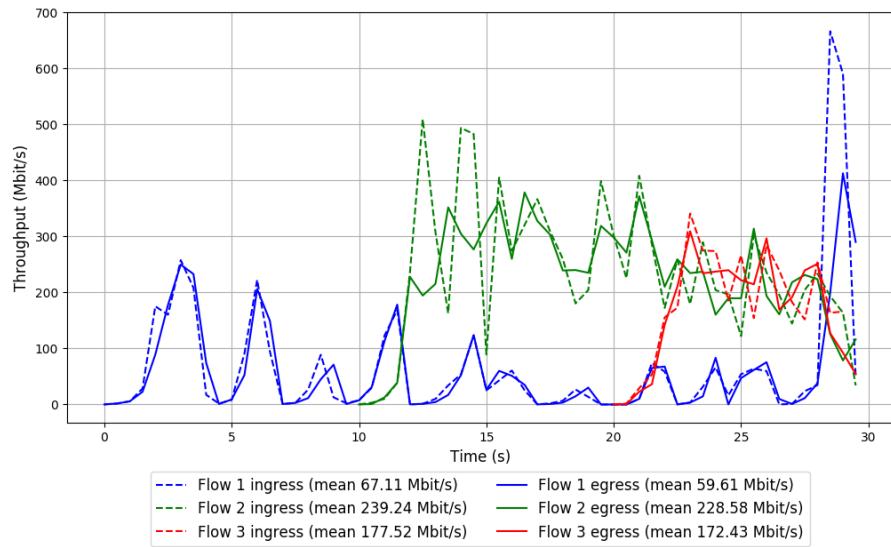
Run 8: Statistics of Verus

Start at: 2017-09-18 20:10:14

End at: 2017-09-18 20:10:44

```
# Below is generated by plot.py at 2017-09-18 22:23:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 266.09 Mbit/s
95th percentile per-packet one-way delay: 298.966 ms
Loss rate: 5.34%
-- Flow 1:
Average throughput: 59.61 Mbit/s
95th percentile per-packet one-way delay: 338.619 ms
Loss rate: 10.57%
-- Flow 2:
Average throughput: 228.58 Mbit/s
95th percentile per-packet one-way delay: 268.701 ms
Loss rate: 4.42%
-- Flow 3:
Average throughput: 172.43 Mbit/s
95th percentile per-packet one-way delay: 191.820 ms
Loss rate: 1.75%
```

Run 8: Report of Verus — Data Link



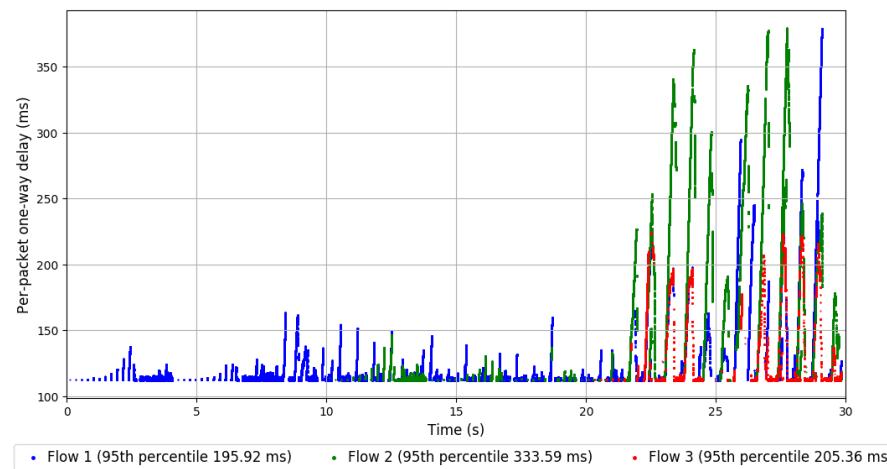
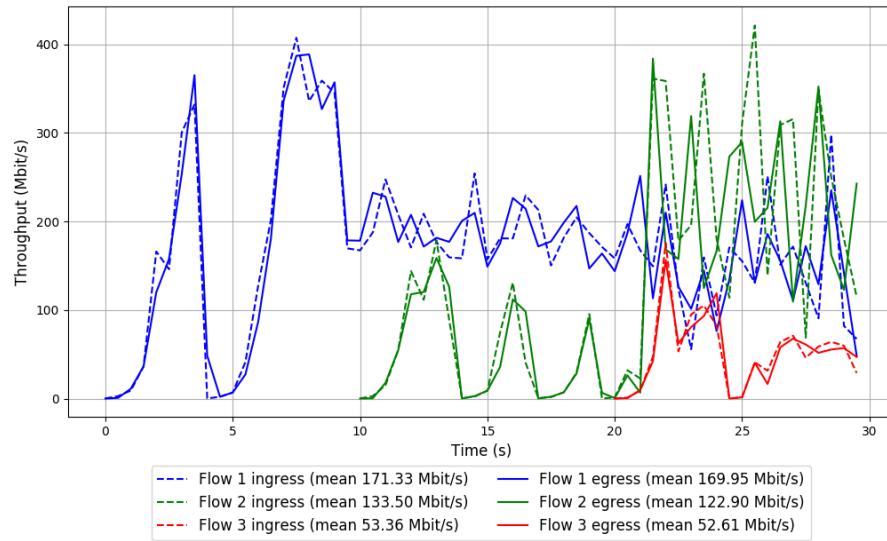
Run 9: Statistics of Verus

Start at: 2017-09-18 20:20:10

End at: 2017-09-18 20:20:40

```
# Below is generated by plot.py at 2017-09-18 22:23:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 268.61 Mbit/s
95th percentile per-packet one-way delay: 286.637 ms
Loss rate: 3.13%
-- Flow 1:
Average throughput: 169.95 Mbit/s
95th percentile per-packet one-way delay: 195.917 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 122.90 Mbit/s
95th percentile per-packet one-way delay: 333.591 ms
Loss rate: 7.94%
-- Flow 3:
Average throughput: 52.61 Mbit/s
95th percentile per-packet one-way delay: 205.362 ms
Loss rate: 1.42%
```

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-09-18 20:30:11

End at: 2017-09-18 20:30:41

```
# Below is generated by plot.py at 2017-09-18 22:23:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.61 Mbit/s
95th percentile per-packet one-way delay: 250.989 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 196.48 Mbit/s
95th percentile per-packet one-way delay: 186.506 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 74.94 Mbit/s
95th percentile per-packet one-way delay: 337.210 ms
Loss rate: 5.99%
-- Flow 3:
Average throughput: 96.74 Mbit/s
95th percentile per-packet one-way delay: 288.909 ms
Loss rate: 7.36%
```

Run 10: Report of Verus — Data Link

