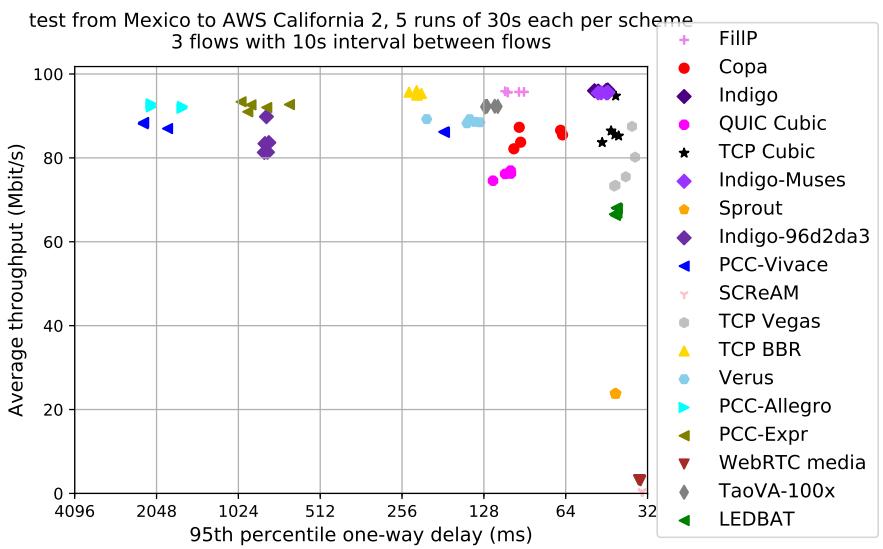
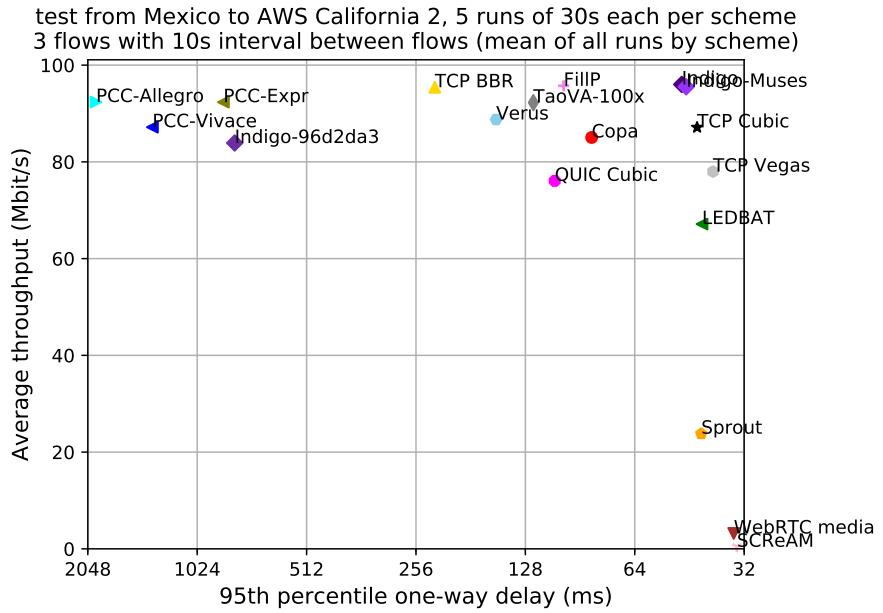


Pantheon Report

Generated at 2018-10-26 11:55:34 (UTC).
Data path: Mexico on `em1` (*remote*) → AWS California 2 on `ens5` (*local*).
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

```
System info:  
Linux 4.15.0-1023-aws  
net.core.default_qdisc = fq  
net.core.rmem_default = 16777216  
net.core.rmem_max = 536870912  
net.core.wmem_default = 16777216  
net.core.wmem_max = 536870912  
net.ipv4.tcp_rmem = 4096 16777216 536870912  
net.ipv4.tcp_wmem = 4096 16777216 536870912  
  
Git summary:  
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be  
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6  
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95  
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf  
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a  
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd  
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/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab  
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42  
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2  
M src/ScreamClient  
M src/ScreamServer  
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26  
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/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851



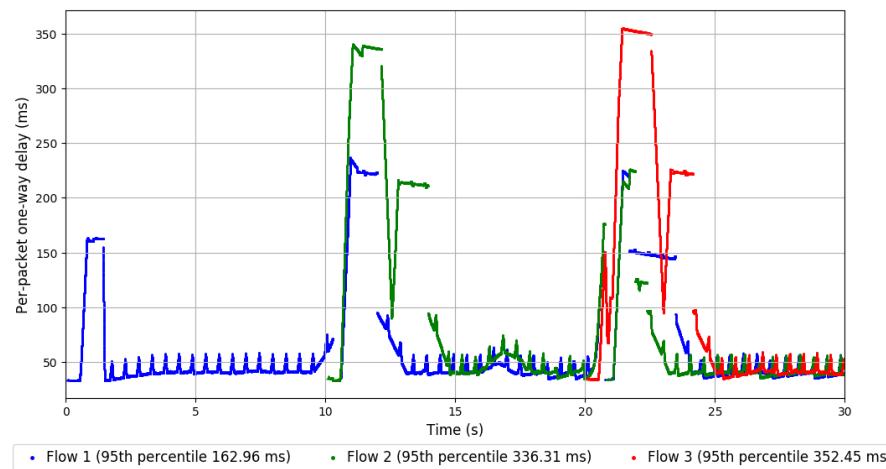
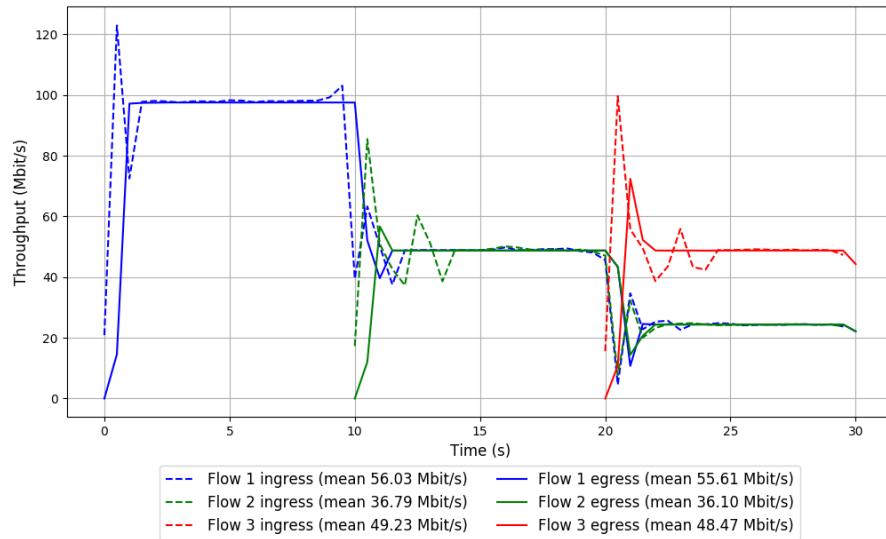
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	58.65	38.34	33.99	167.30	253.12	453.11	0.93	1.51	3.39
Copa	5	54.50	30.93	30.04	102.08	66.11	56.64	0.17	0.41	0.77
TCP Cubic	5	50.07	41.59	28.32	42.73	43.30	45.52	0.17	0.31	0.66
FillP	5	58.10	39.17	35.05	96.94	106.02	102.09	0.93	0.79	0.91
Indigo	5	60.00	37.13	34.71	45.48	51.90	47.27	0.20	0.36	0.75
Indigo-96d2da3	5	49.48	35.48	32.88	705.57	848.30	897.82	3.10	5.14	8.81
LEDBAT	5	40.74	28.92	21.58	41.46	42.36	41.02	0.20	0.35	1.05
Indigo-Muses	5	57.51	41.91	30.77	47.27	43.25	47.83	0.13	0.32	0.73
PCC-Allegro	5	58.65	36.55	28.67	1955.30	2102.98	747.07	13.73	14.32	7.59
PCC-Expr	5	56.34	39.75	29.11	839.84	666.78	145.53	35.58	5.68	1.06
QUIC Cubic	5	41.98	36.75	29.36	98.40	114.55	132.19	0.20	0.52	1.02
SCReAM	5	0.21	0.21	0.22	33.49	33.45	33.47	0.23	0.40	0.71
Sprout	5	12.01	11.95	11.71	41.71	42.38	42.10	0.22	0.30	0.58
TaoVA-100x	5	55.74	39.20	31.43	113.55	128.45	148.72	0.55	1.46	2.82
TCP Vegas	5	45.38	35.22	27.67	45.05	36.08	40.83	0.22	0.28	0.72
Verus	5	52.57	41.82	25.40	151.07	95.72	300.80	0.36	0.78	1.45
PCC-Vivace	5	54.16	38.77	22.00	1413.62	152.54	123.09	5.10	0.78	1.24
WebRTC media	5	1.76	1.02	0.41	34.12	34.19	34.27	0.15	0.16	0.43

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-26 09:38:25
End at: 2018-10-26 09:38:55
Local clock offset: 0.582 ms
Remote clock offset: -3.59 ms

# Below is generated by plot.py at 2018-10-26 11:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 241.300 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 55.61 Mbit/s
95th percentile per-packet one-way delay: 162.958 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 36.10 Mbit/s
95th percentile per-packet one-way delay: 336.315 ms
Loss rate: 2.19%
-- Flow 3:
Average throughput: 48.47 Mbit/s
95th percentile per-packet one-way delay: 352.447 ms
Loss rate: 2.19%
```

Run 1: Report of TCP BBR — Data Link

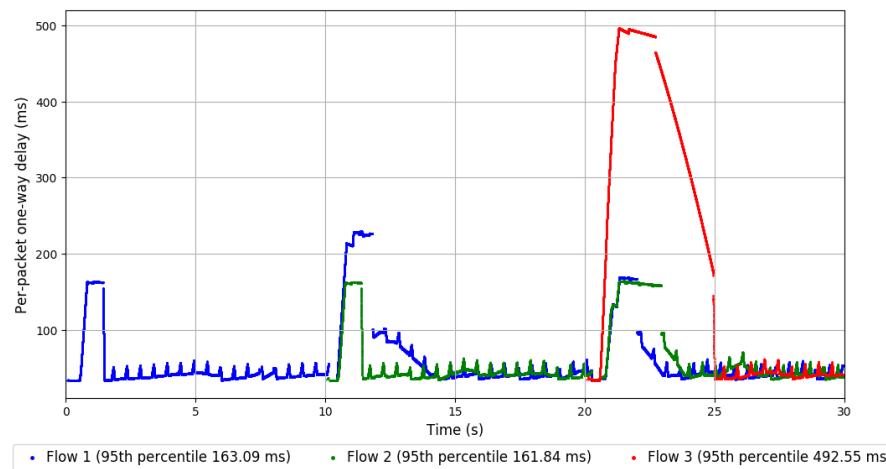
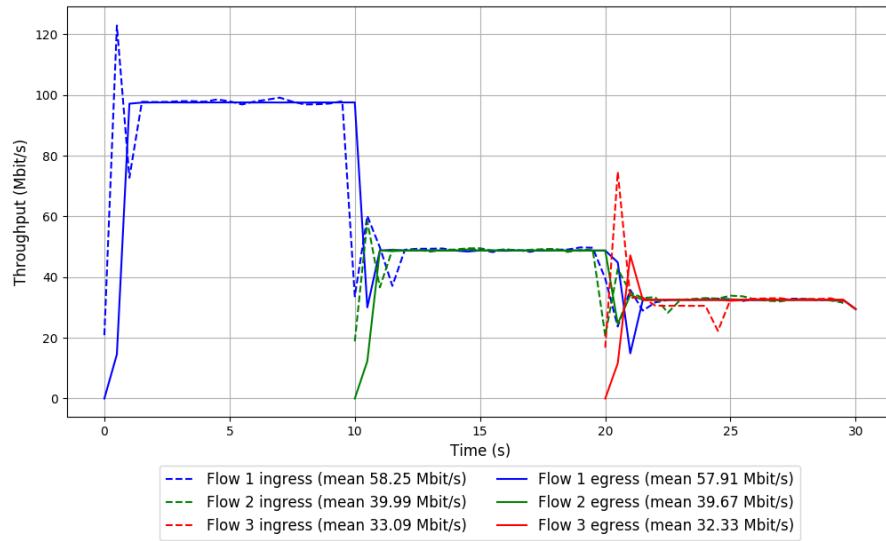


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-26 10:03:18
End at: 2018-10-26 10:03:48
Local clock offset: 0.06 ms
Remote clock offset: -2.885 ms

# Below is generated by plot.py at 2018-10-26 11:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.02 Mbit/s
95th percentile per-packet one-way delay: 226.468 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 57.91 Mbit/s
95th percentile per-packet one-way delay: 163.091 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 39.67 Mbit/s
95th percentile per-packet one-way delay: 161.842 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 32.33 Mbit/s
95th percentile per-packet one-way delay: 492.551 ms
Loss rate: 2.94%
```

Run 2: Report of TCP BBR — Data Link

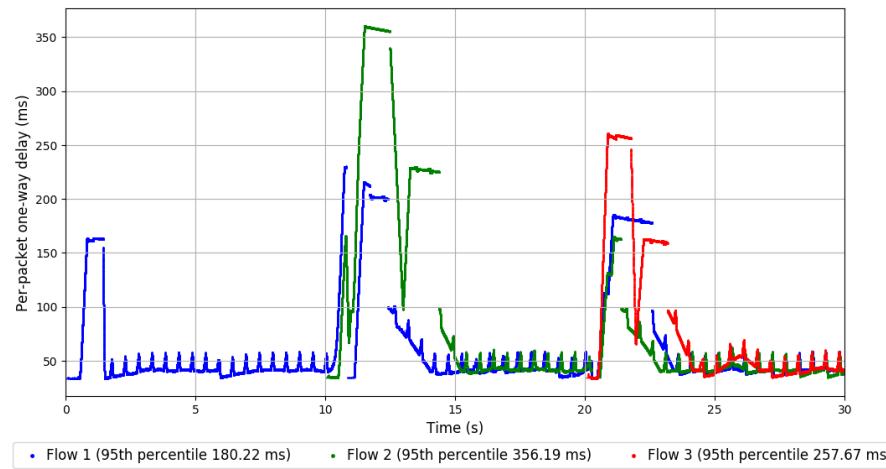
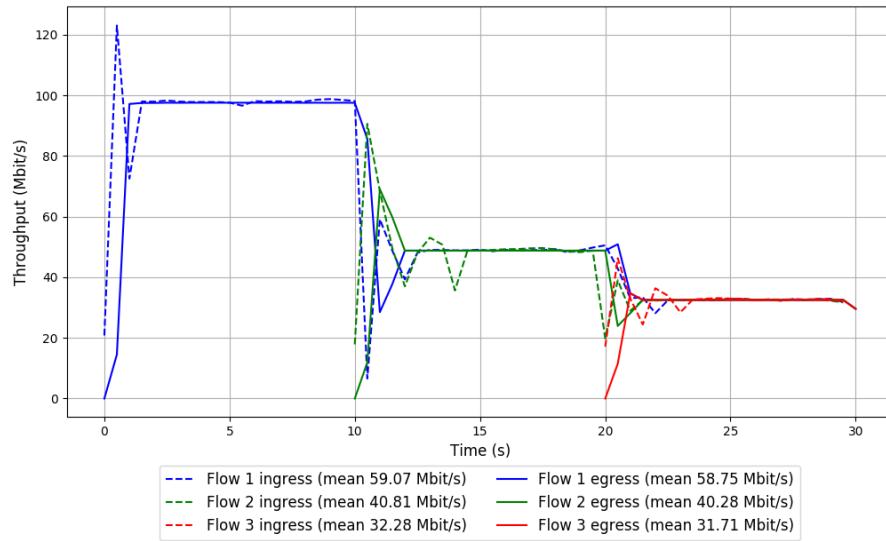


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-26 10:28:15
End at: 2018-10-26 10:28:45
Local clock offset: -3.506 ms
Remote clock offset: -2.244 ms

# Below is generated by plot.py at 2018-10-26 11:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 226.231 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 58.75 Mbit/s
95th percentile per-packet one-way delay: 180.215 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 40.28 Mbit/s
95th percentile per-packet one-way delay: 356.189 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 257.666 ms
Loss rate: 2.42%
```

Run 3: Report of TCP BBR — Data Link

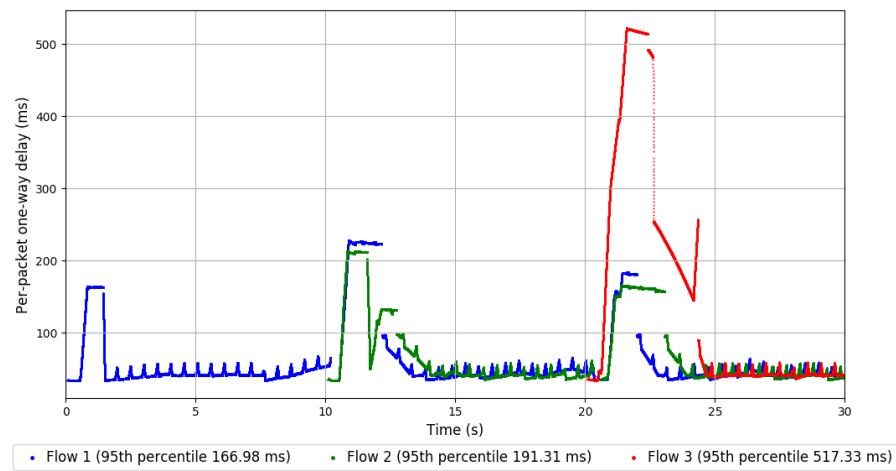
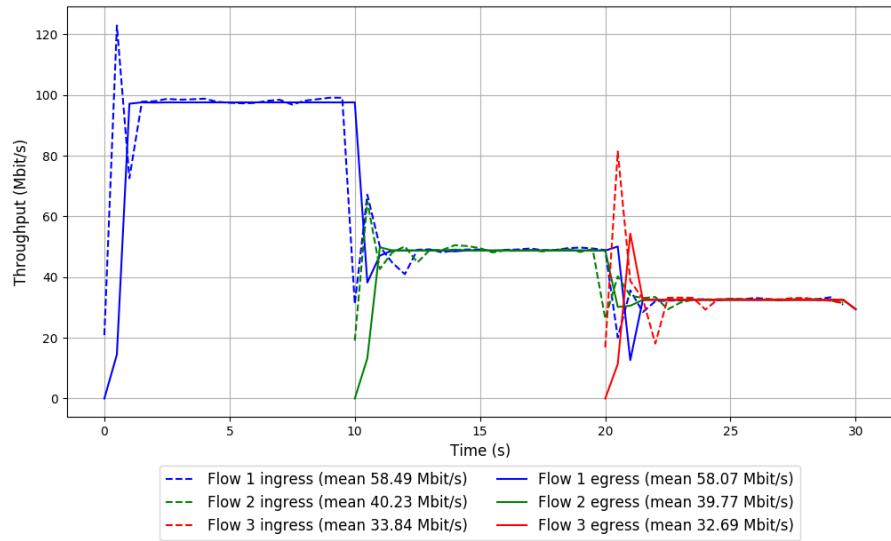


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-26 10:53:14
End at: 2018-10-26 10:53:44
Local clock offset: 0.337 ms
Remote clock offset: -1.998 ms

# Below is generated by plot.py at 2018-10-26 11:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.36 Mbit/s
95th percentile per-packet one-way delay: 217.258 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 58.07 Mbit/s
95th percentile per-packet one-way delay: 166.983 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 39.77 Mbit/s
95th percentile per-packet one-way delay: 191.305 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 32.69 Mbit/s
95th percentile per-packet one-way delay: 517.327 ms
Loss rate: 4.03%
```

Run 4: Report of TCP BBR — Data Link

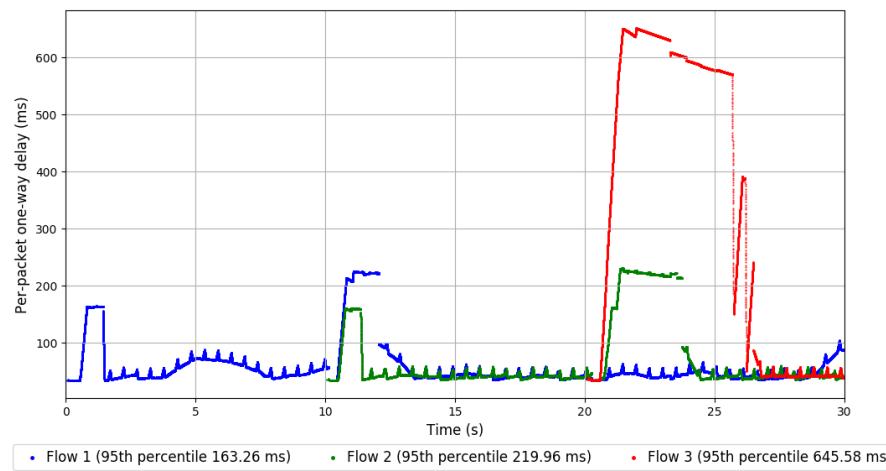
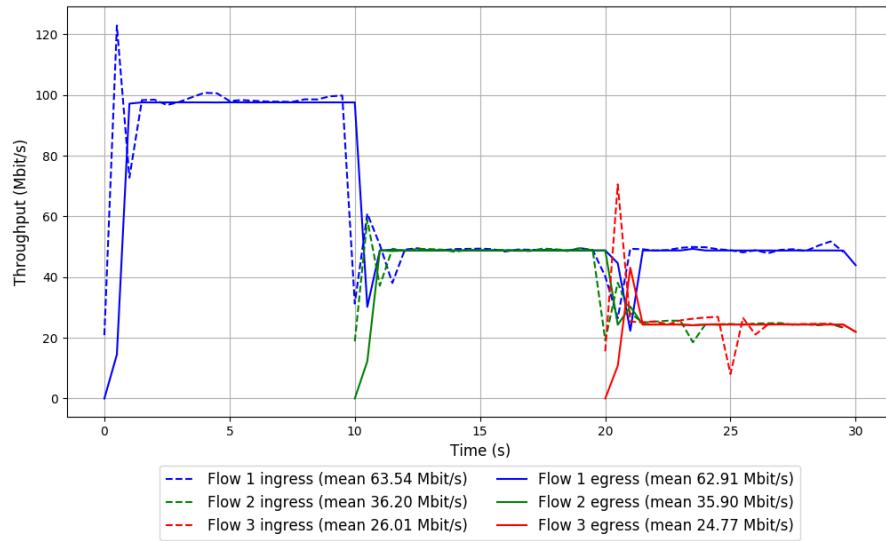


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-26 11:18:12
End at: 2018-10-26 11:18:42
Local clock offset: 0.506 ms
Remote clock offset: -1.325 ms

# Below is generated by plot.py at 2018-10-26 11:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.99 Mbit/s
95th percentile per-packet one-way delay: 224.709 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 62.91 Mbit/s
95th percentile per-packet one-way delay: 163.257 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 35.90 Mbit/s
95th percentile per-packet one-way delay: 219.957 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 24.77 Mbit/s
95th percentile per-packet one-way delay: 645.578 ms
Loss rate: 5.39%
```

Run 5: Report of TCP BBR — Data Link

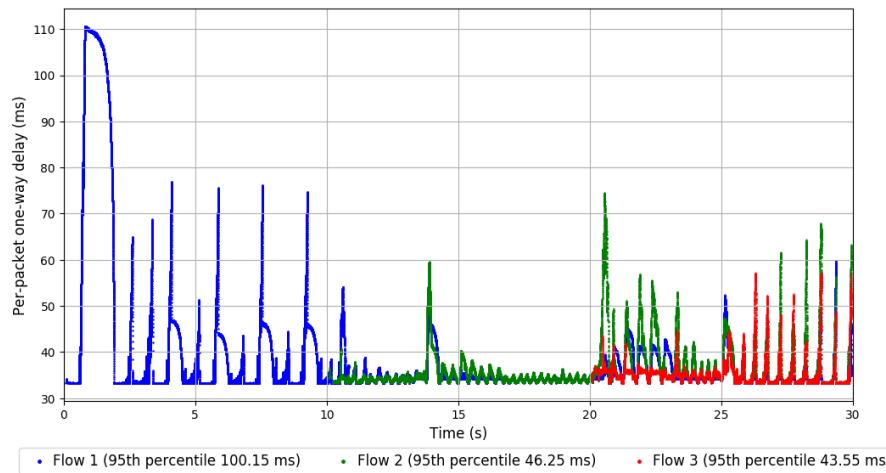
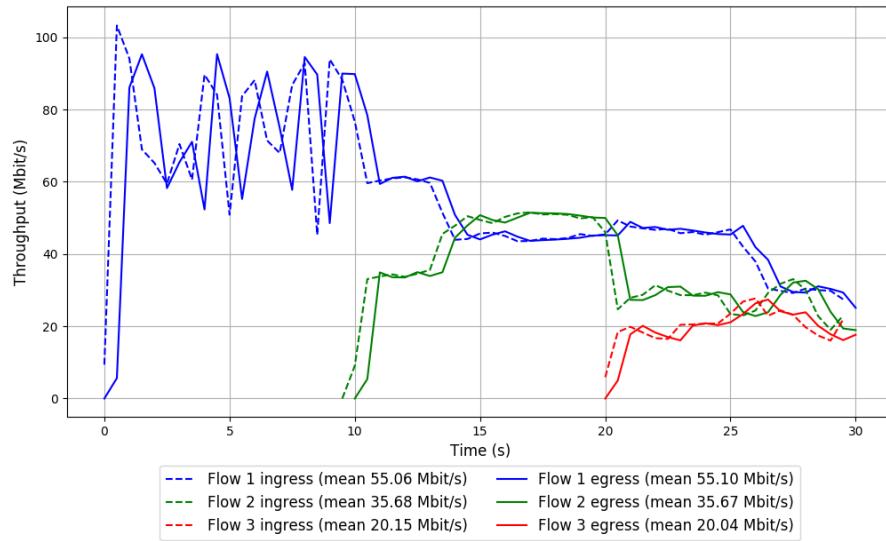


Run 1: Statistics of Copa

```
Start at: 2018-10-26 09:48:00
End at: 2018-10-26 09:48:30
Local clock offset: 0.608 ms
Remote clock offset: -3.441 ms

# Below is generated by plot.py at 2018-10-26 11:44:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.48 Mbit/s
95th percentile per-packet one-way delay: 65.742 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 55.10 Mbit/s
95th percentile per-packet one-way delay: 100.152 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 35.67 Mbit/s
95th percentile per-packet one-way delay: 46.249 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 20.04 Mbit/s
95th percentile per-packet one-way delay: 43.555 ms
Loss rate: 1.20%
```

Run 1: Report of Copa — Data Link

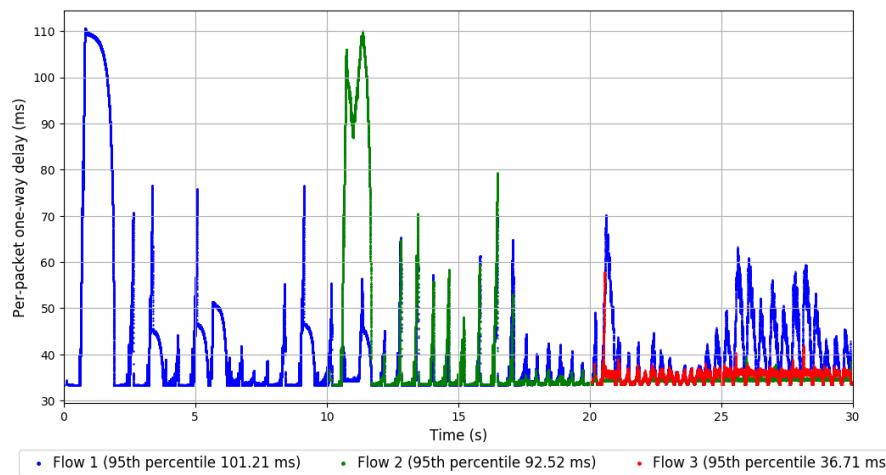
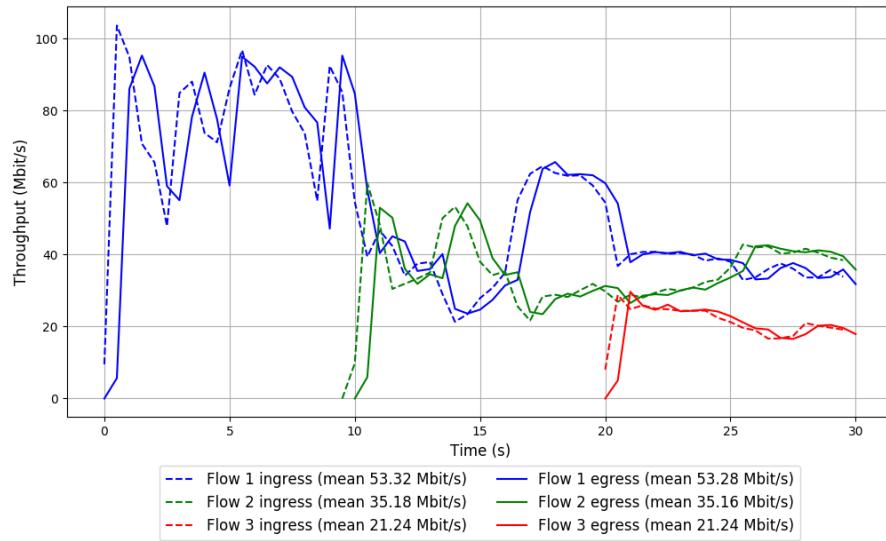


Run 2: Statistics of Copa

```
Start at: 2018-10-26 10:12:52
End at: 2018-10-26 10:13:22
Local clock offset: -2.189 ms
Remote clock offset: -2.538 ms

# Below is generated by plot.py at 2018-10-26 11:44:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.73 Mbit/s
95th percentile per-packet one-way delay: 93.758 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 53.28 Mbit/s
95th percentile per-packet one-way delay: 101.214 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 35.16 Mbit/s
95th percentile per-packet one-way delay: 92.515 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 21.24 Mbit/s
95th percentile per-packet one-way delay: 36.711 ms
Loss rate: 0.62%
```

Run 2: Report of Copa — Data Link

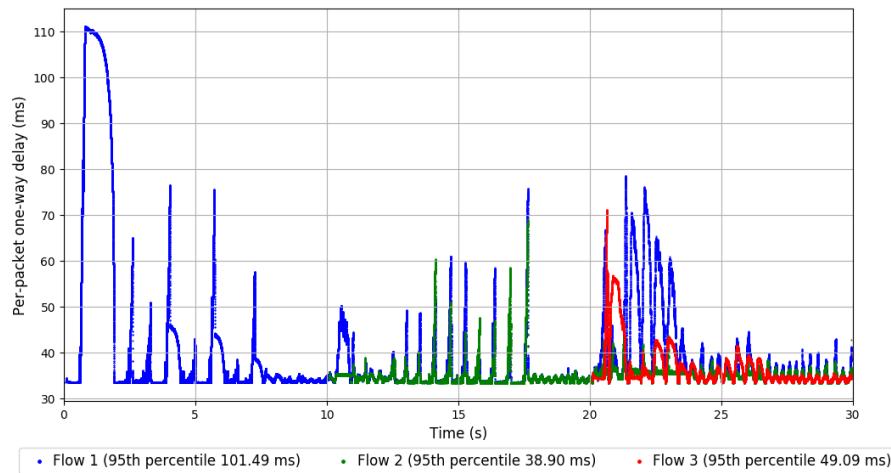
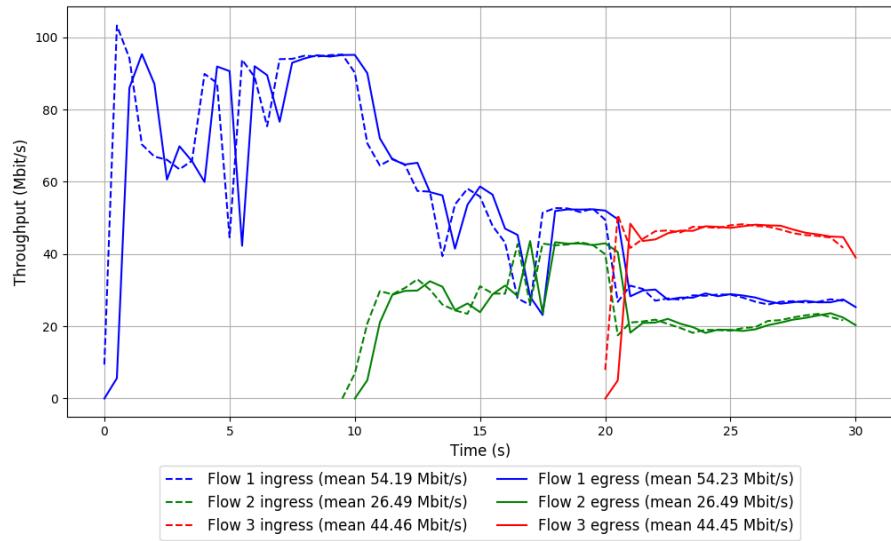


Run 3: Statistics of Copa

```
Start at: 2018-10-26 10:37:57
End at: 2018-10-26 10:38:27
Local clock offset: -1.496 ms
Remote clock offset: -2.161 ms

# Below is generated by plot.py at 2018-10-26 11:44:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.57 Mbit/s
95th percentile per-packet one-way delay: 66.827 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 54.23 Mbit/s
95th percentile per-packet one-way delay: 101.489 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 26.49 Mbit/s
95th percentile per-packet one-way delay: 38.901 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 44.45 Mbit/s
95th percentile per-packet one-way delay: 49.095 ms
Loss rate: 0.66%
```

Run 3: Report of Copa — Data Link

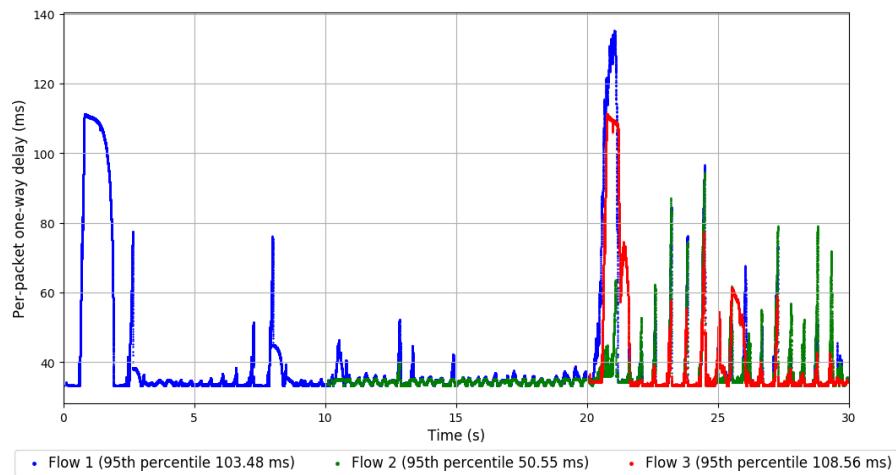
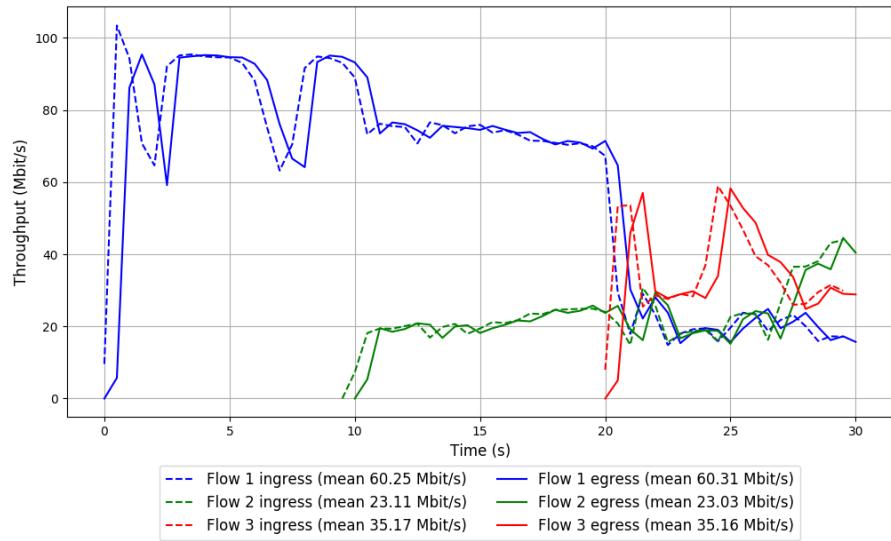


Run 4: Statistics of Copa

```
Start at: 2018-10-26 11:02:46
End at: 2018-10-26 11:03:16
Local clock offset: 0.652 ms
Remote clock offset: -1.416 ms

# Below is generated by plot.py at 2018-10-26 11:45:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.29 Mbit/s
95th percentile per-packet one-way delay: 94.866 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 60.31 Mbit/s
95th percentile per-packet one-way delay: 103.484 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 23.03 Mbit/s
95th percentile per-packet one-way delay: 50.551 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 35.16 Mbit/s
95th percentile per-packet one-way delay: 108.558 ms
Loss rate: 0.69%
```

Run 4: Report of Copa — Data Link

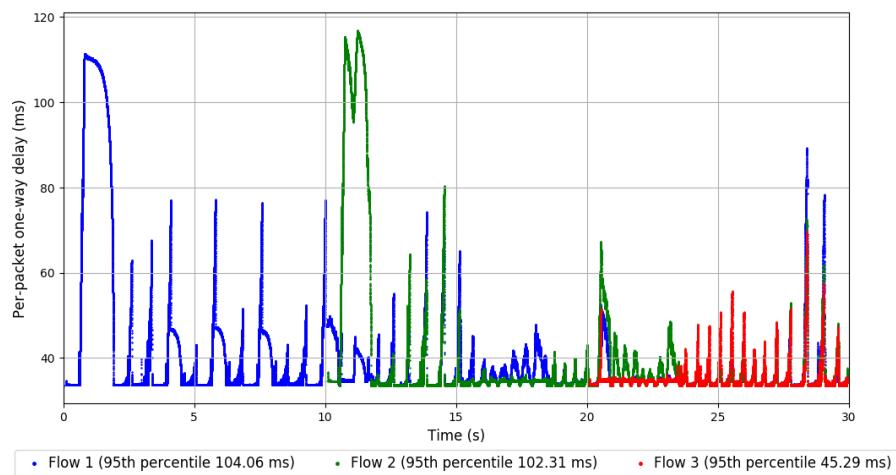
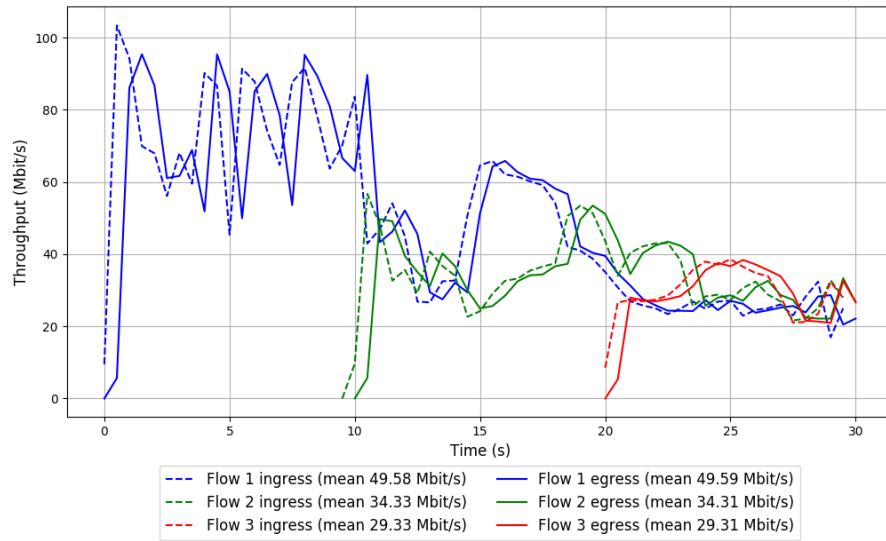


Run 5: Statistics of Copa

```
Start at: 2018-10-26 11:27:51
End at: 2018-10-26 11:28:21
Local clock offset: 0.597 ms
Remote clock offset: -1.412 ms

# Below is generated by plot.py at 2018-10-26 11:45:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.16 Mbit/s
95th percentile per-packet one-way delay: 99.286 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 49.59 Mbit/s
95th percentile per-packet one-way delay: 104.065 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 34.31 Mbit/s
95th percentile per-packet one-way delay: 102.315 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 29.31 Mbit/s
95th percentile per-packet one-way delay: 45.292 ms
Loss rate: 0.70%
```

Run 5: Report of Copa — Data Link

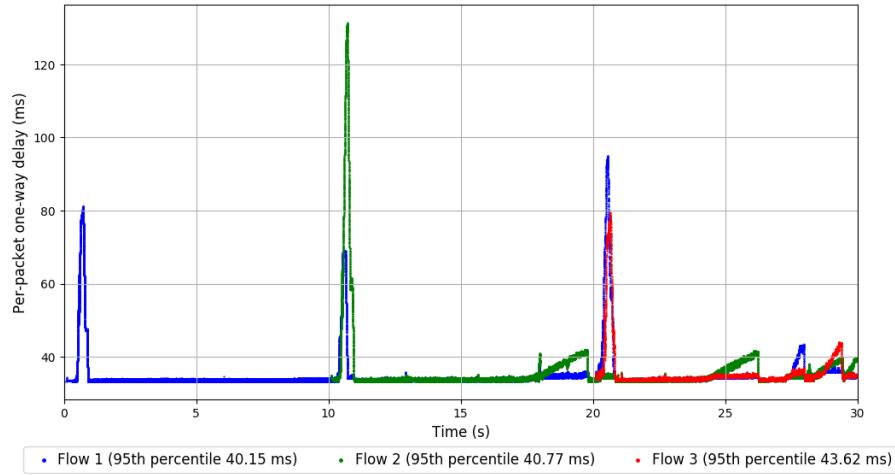
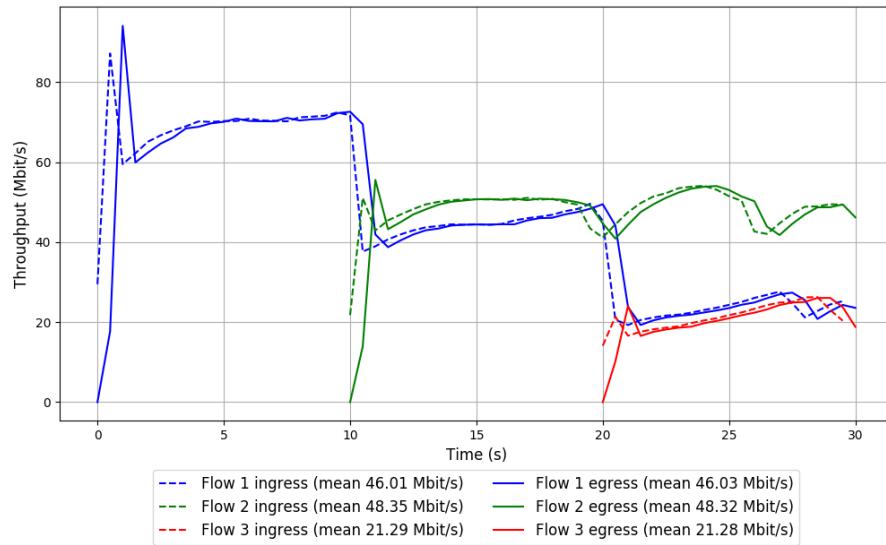


```
Run 1: Statistics of TCP Cubic

Start at: 2018-10-26 09:49:26
End at: 2018-10-26 09:49:56
Local clock offset: 0.612 ms
Remote clock offset: -3.469 ms

# Below is generated by plot.py at 2018-10-26 11:45:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.23 Mbit/s
95th percentile per-packet one-way delay: 40.887 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 46.03 Mbit/s
95th percentile per-packet one-way delay: 40.154 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 48.32 Mbit/s
95th percentile per-packet one-way delay: 40.774 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 21.28 Mbit/s
95th percentile per-packet one-way delay: 43.624 ms
Loss rate: 0.71%
```

Run 1: Report of TCP Cubic — Data Link

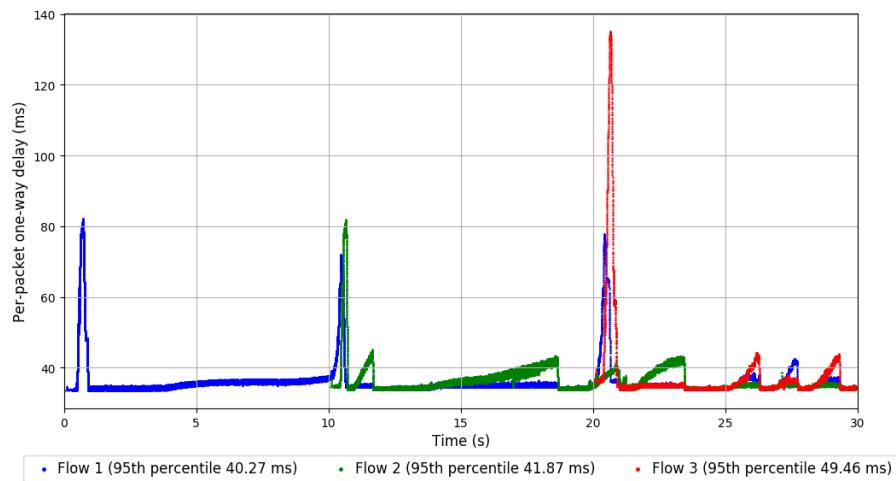
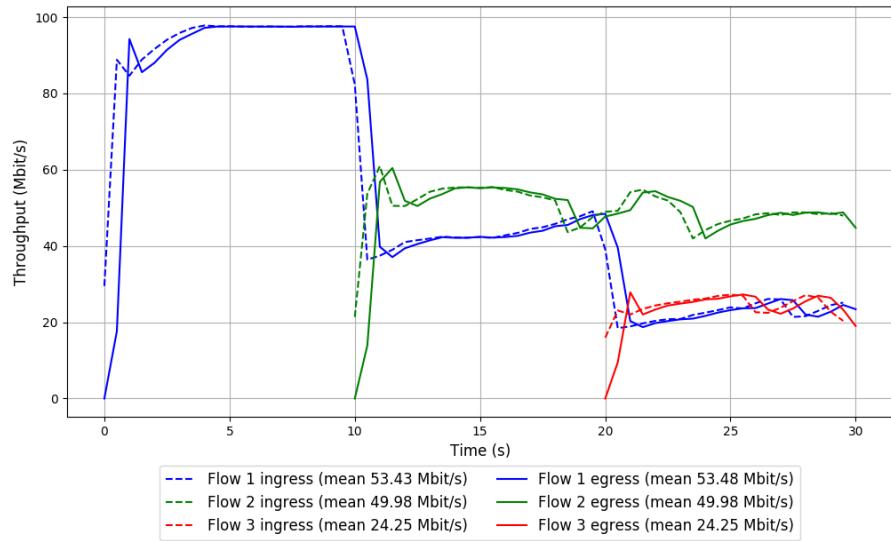


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-26 10:14:18
End at: 2018-10-26 10:14:48
Local clock offset: -2.367 ms
Remote clock offset: -2.72 ms

# Below is generated by plot.py at 2018-10-26 11:45:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 41.909 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 53.48 Mbit/s
95th percentile per-packet one-way delay: 40.273 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 49.98 Mbit/s
95th percentile per-packet one-way delay: 41.872 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 24.25 Mbit/s
95th percentile per-packet one-way delay: 49.460 ms
Loss rate: 0.64%
```

Run 2: Report of TCP Cubic — Data Link

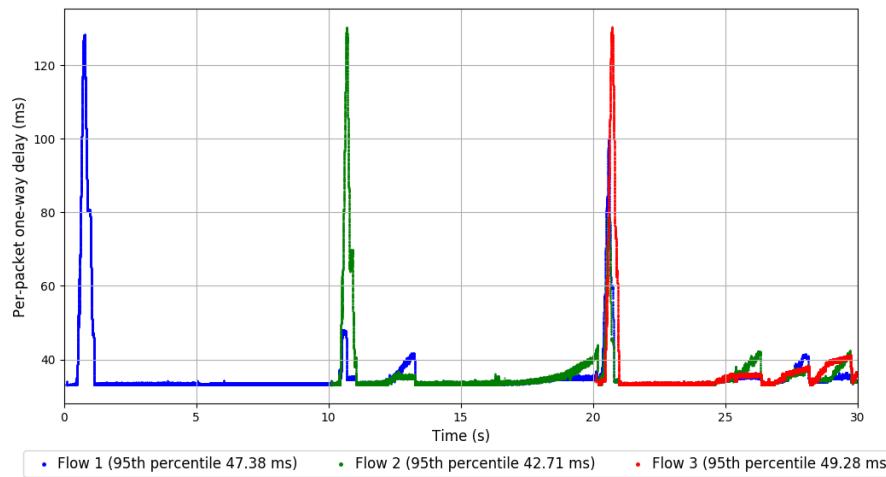
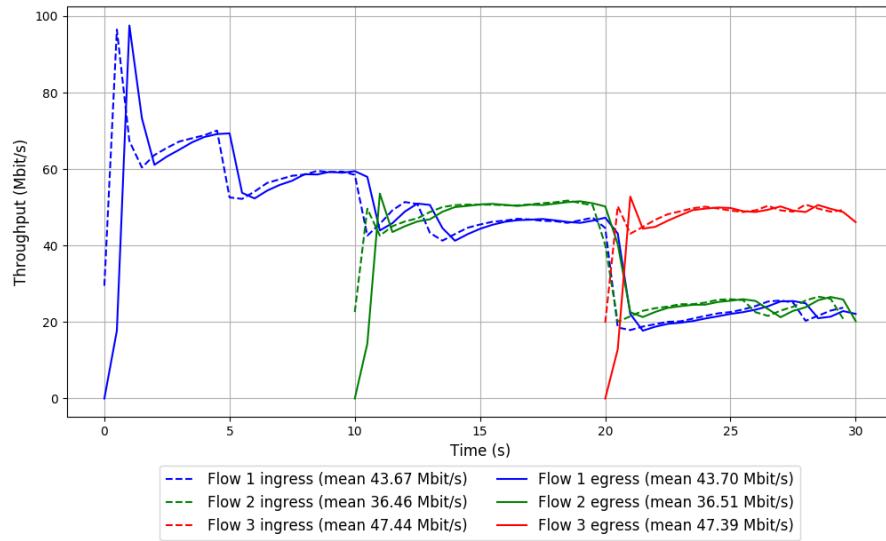


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-26 10:39:25
End at: 2018-10-26 10:39:55
Local clock offset: -1.219 ms
Remote clock offset: -1.872 ms

# Below is generated by plot.py at 2018-10-26 11:45:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.68 Mbit/s
95th percentile per-packet one-way delay: 46.999 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 43.70 Mbit/s
95th percentile per-packet one-way delay: 47.382 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 36.51 Mbit/s
95th percentile per-packet one-way delay: 42.711 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 47.39 Mbit/s
95th percentile per-packet one-way delay: 49.279 ms
Loss rate: 0.77%
```

Run 3: Report of TCP Cubic — Data Link

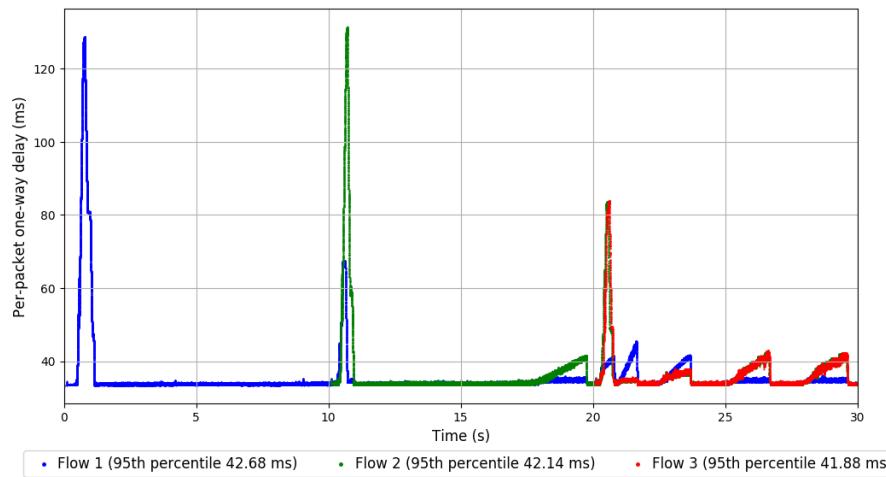
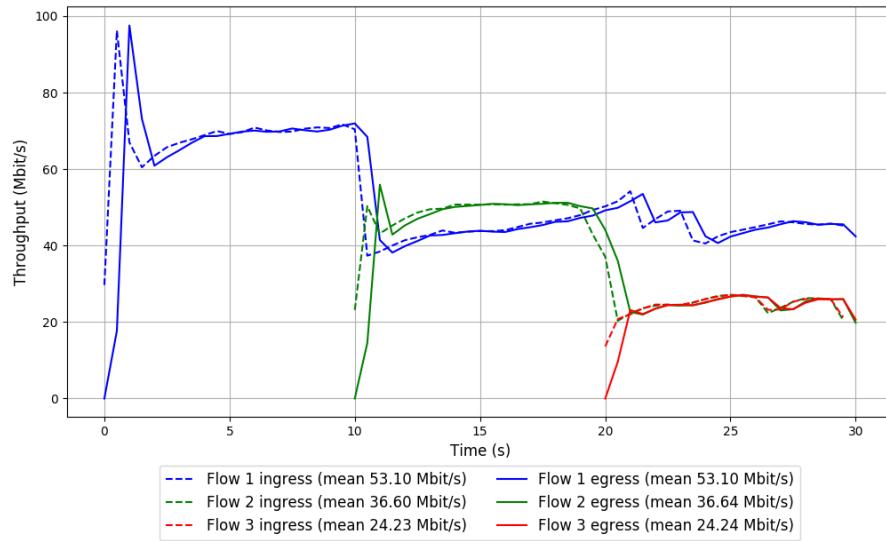


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-26 11:04:11
End at: 2018-10-26 11:04:41
Local clock offset: 0.597 ms
Remote clock offset: -1.564 ms

# Below is generated by plot.py at 2018-10-26 11:45:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.52 Mbit/s
95th percentile per-packet one-way delay: 42.199 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 53.10 Mbit/s
95th percentile per-packet one-way delay: 42.683 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 36.64 Mbit/s
95th percentile per-packet one-way delay: 42.137 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 24.24 Mbit/s
95th percentile per-packet one-way delay: 41.876 ms
Loss rate: 0.60%
```

Run 4: Report of TCP Cubic — Data Link

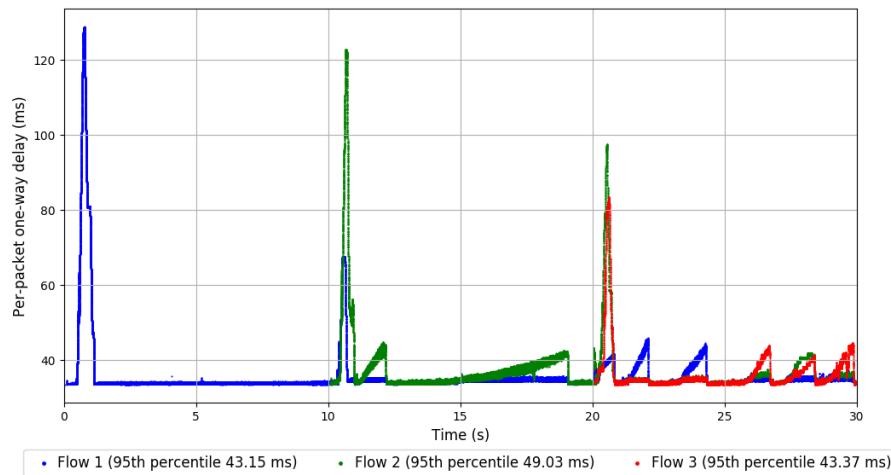
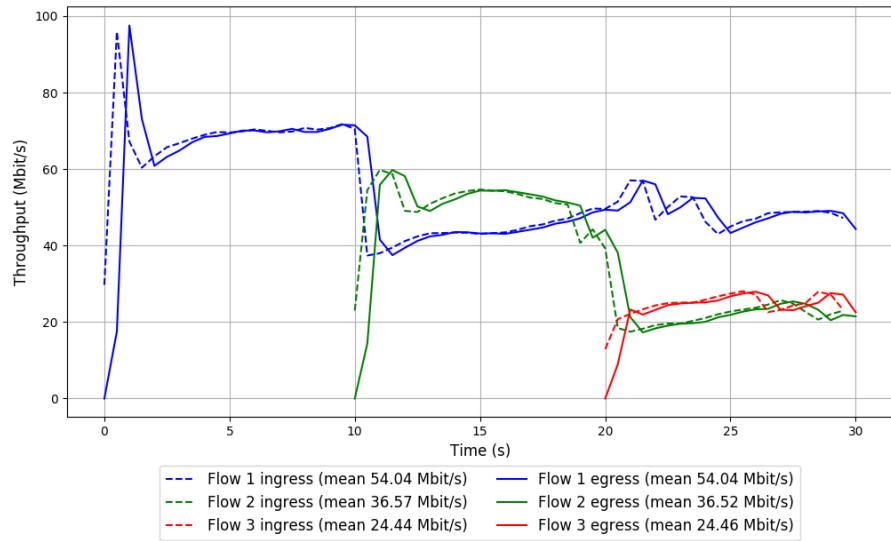


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-26 11:29:16
End at: 2018-10-26 11:29:46
Local clock offset: 0.618 ms
Remote clock offset: -1.459 ms

# Below is generated by plot.py at 2018-10-26 11:45:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.45 Mbit/s
95th percentile per-packet one-way delay: 43.576 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 54.04 Mbit/s
95th percentile per-packet one-way delay: 43.146 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 49.031 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 24.46 Mbit/s
95th percentile per-packet one-way delay: 43.371 ms
Loss rate: 0.59%
```

Run 5: Report of TCP Cubic — Data Link

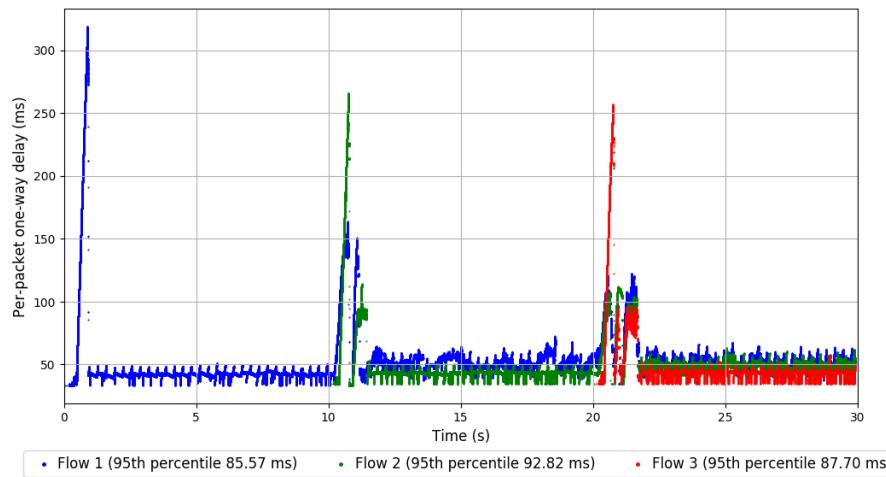
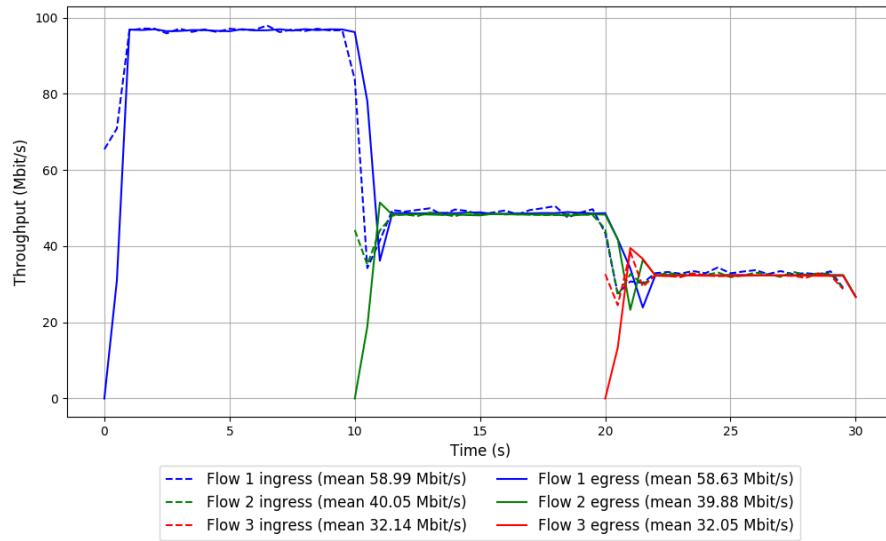


```
Run 1: Statistics of FillP

Start at: 2018-10-26 09:50:48
End at: 2018-10-26 09:51:18
Local clock offset: 0.62 ms
Remote clock offset: -3.411 ms

# Below is generated by plot.py at 2018-10-26 11:46:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 91.118 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 58.63 Mbit/s
95th percentile per-packet one-way delay: 85.573 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 39.88 Mbit/s
95th percentile per-packet one-way delay: 92.824 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 87.704 ms
Loss rate: 0.90%
```

Run 1: Report of FillP — Data Link

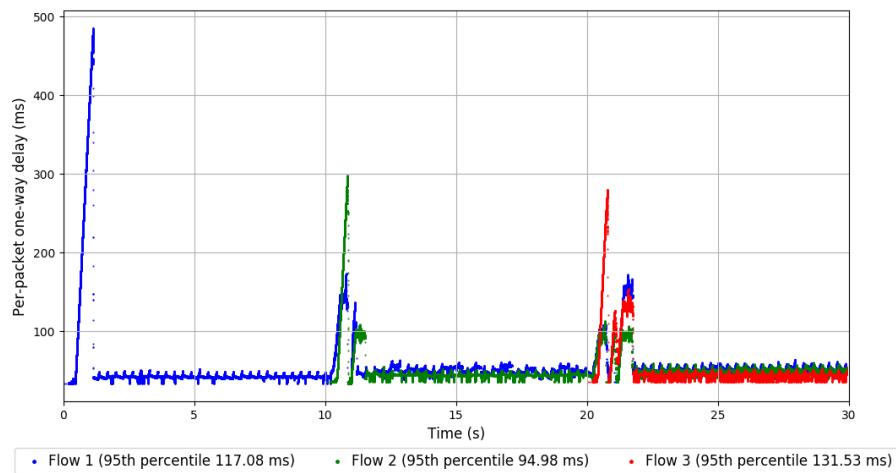
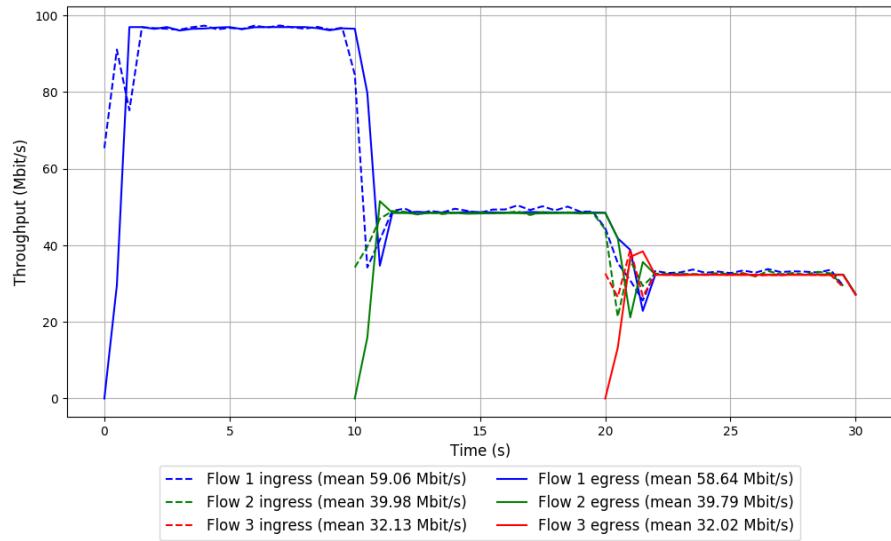


Run 2: Statistics of FillP

```
Start at: 2018-10-26 10:15:41
End at: 2018-10-26 10:16:11
Local clock offset: -2.527 ms
Remote clock offset: -2.38 ms

# Below is generated by plot.py at 2018-10-26 11:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.66 Mbit/s
95th percentile per-packet one-way delay: 104.546 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 58.64 Mbit/s
95th percentile per-packet one-way delay: 117.076 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 39.79 Mbit/s
95th percentile per-packet one-way delay: 94.982 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 32.02 Mbit/s
95th percentile per-packet one-way delay: 131.529 ms
Loss rate: 0.96%
```

Run 2: Report of FillP — Data Link

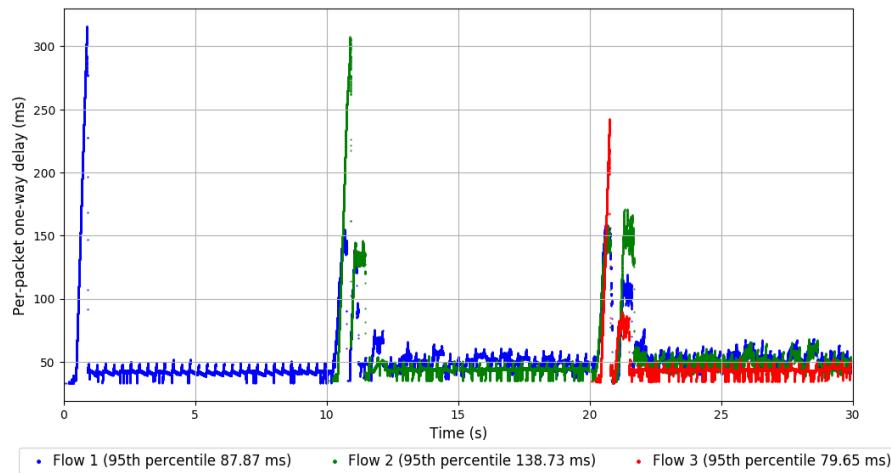
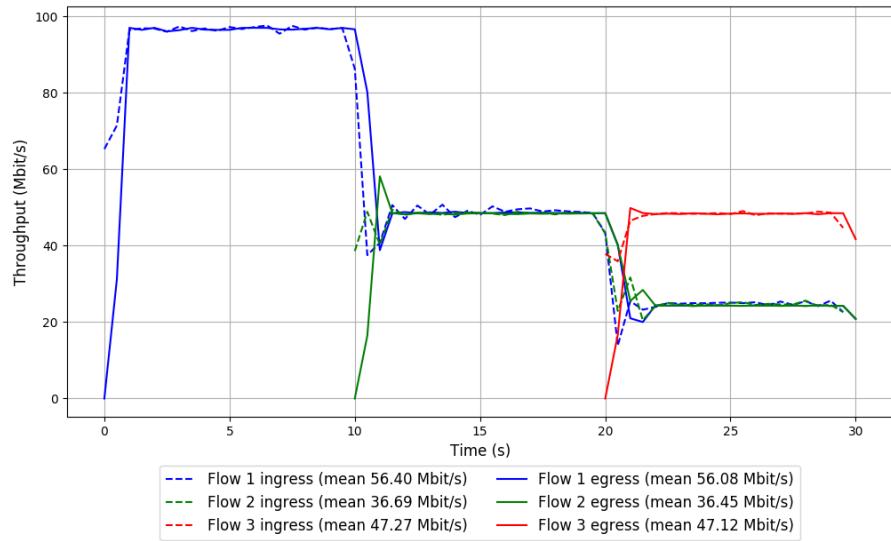


Run 3: Statistics of FillP

```
Start at: 2018-10-26 10:40:47
End at: 2018-10-26 10:41:17
Local clock offset: -0.94 ms
Remote clock offset: -1.938 ms

# Below is generated by plot.py at 2018-10-26 11:46:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.88 Mbit/s
95th percentile per-packet one-way delay: 106.906 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 56.08 Mbit/s
95th percentile per-packet one-way delay: 87.873 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 36.45 Mbit/s
95th percentile per-packet one-way delay: 138.727 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 47.12 Mbit/s
95th percentile per-packet one-way delay: 79.649 ms
Loss rate: 0.97%
```

Run 3: Report of FillP — Data Link

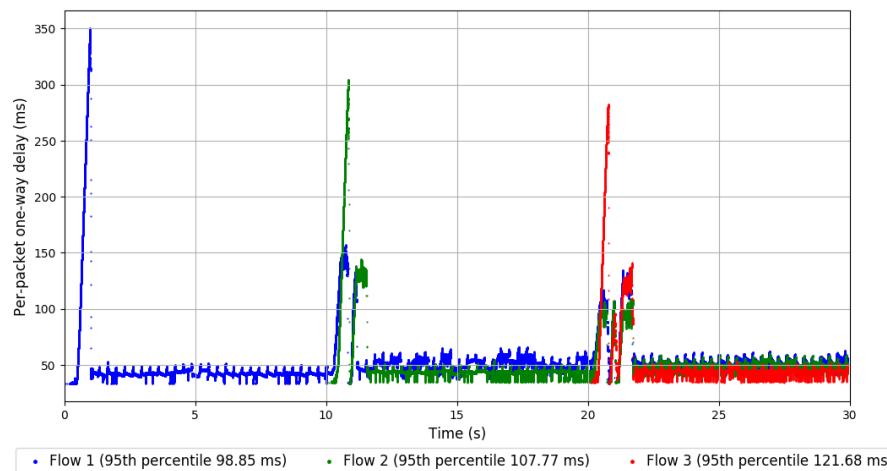
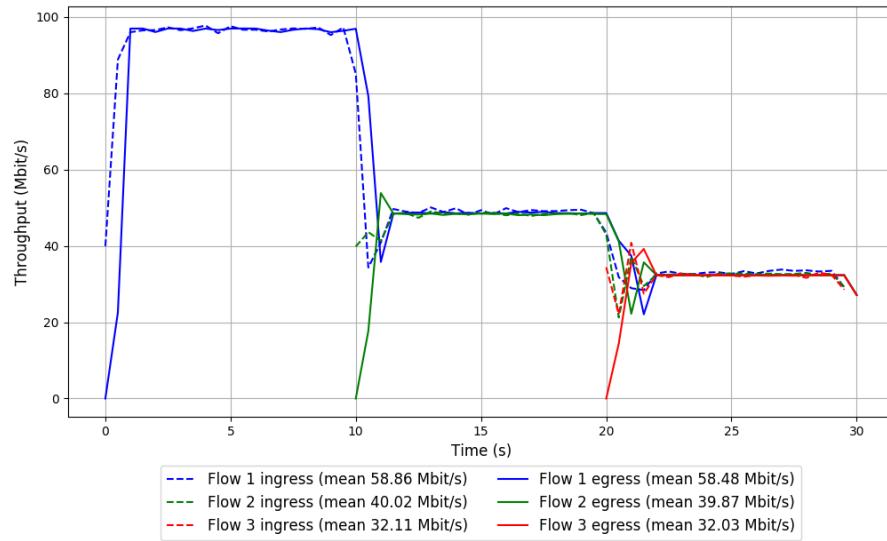


Run 4: Statistics of FillP

```
Start at: 2018-10-26 11:05:34
End at: 2018-10-26 11:06:04
Local clock offset: 0.562 ms
Remote clock offset: -1.513 ms

# Below is generated by plot.py at 2018-10-26 11:46:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.59 Mbit/s
95th percentile per-packet one-way delay: 104.567 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 58.48 Mbit/s
95th percentile per-packet one-way delay: 98.853 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 39.87 Mbit/s
95th percentile per-packet one-way delay: 107.770 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 32.03 Mbit/s
95th percentile per-packet one-way delay: 121.681 ms
Loss rate: 0.81%
```

Run 4: Report of FillP — Data Link

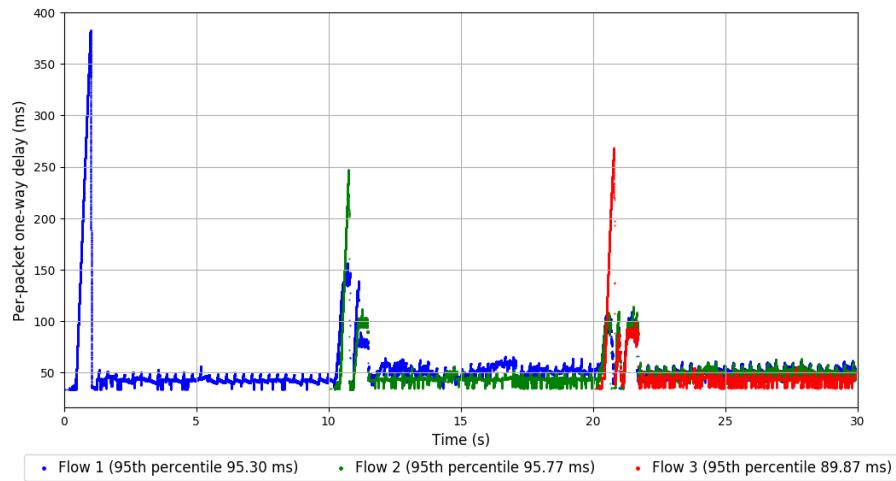
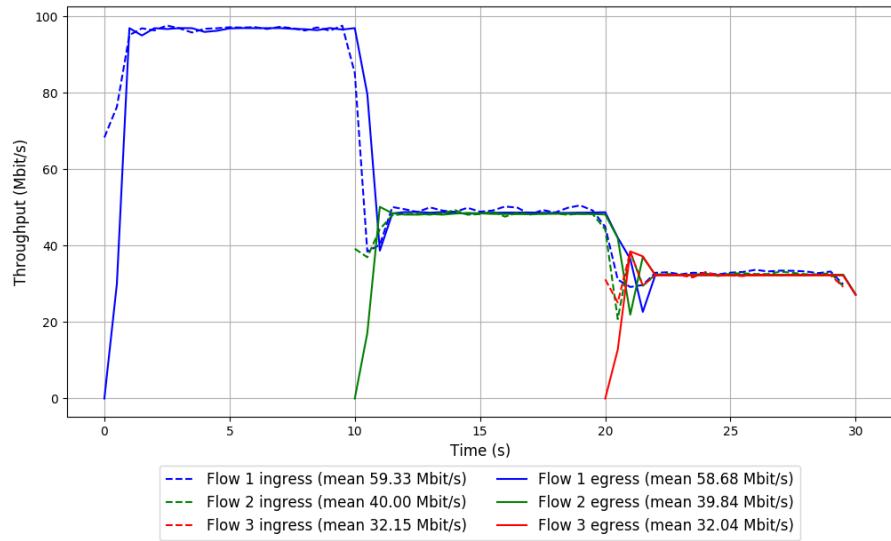


Run 5: Statistics of FillP

```
Start at: 2018-10-26 11:30:38
End at: 2018-10-26 11:31:08
Local clock offset: 0.638 ms
Remote clock offset: -1.45 ms

# Below is generated by plot.py at 2018-10-26 11:47:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.72 Mbit/s
95th percentile per-packet one-way delay: 95.114 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 58.68 Mbit/s
95th percentile per-packet one-way delay: 95.304 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 39.84 Mbit/s
95th percentile per-packet one-way delay: 95.772 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 32.04 Mbit/s
95th percentile per-packet one-way delay: 89.866 ms
Loss rate: 0.93%
```

Run 5: Report of FillP — Data Link

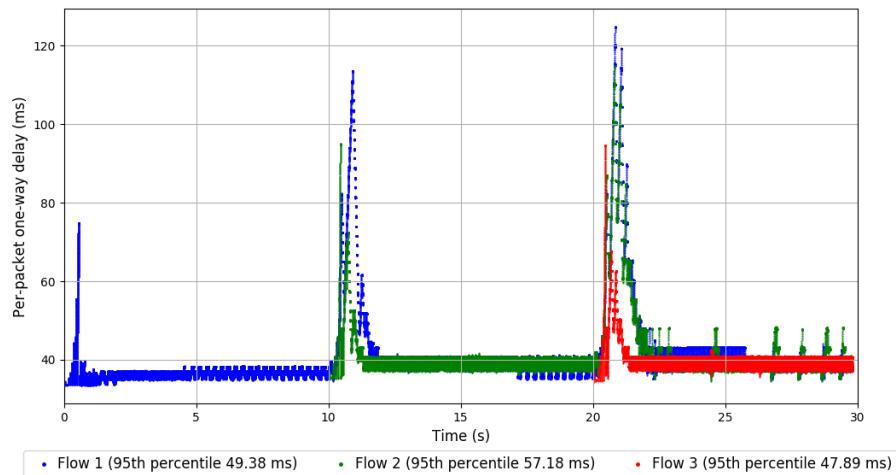
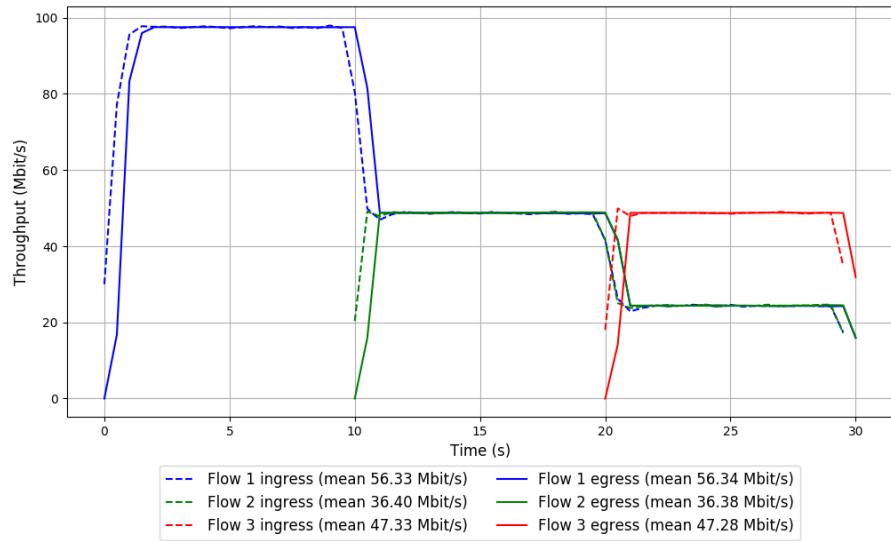


Run 1: Statistics of Indigo

```
Start at: 2018-10-26 09:57:47
End at: 2018-10-26 09:58:17
Local clock offset: 0.655 ms
Remote clock offset: -3.244 ms

# Below is generated by plot.py at 2018-10-26 11:47:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.01 Mbit/s
95th percentile per-packet one-way delay: 50.160 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 56.34 Mbit/s
95th percentile per-packet one-way delay: 49.376 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 36.38 Mbit/s
95th percentile per-packet one-way delay: 57.184 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 47.28 Mbit/s
95th percentile per-packet one-way delay: 47.886 ms
Loss rate: 0.77%
```

Run 1: Report of Indigo — Data Link

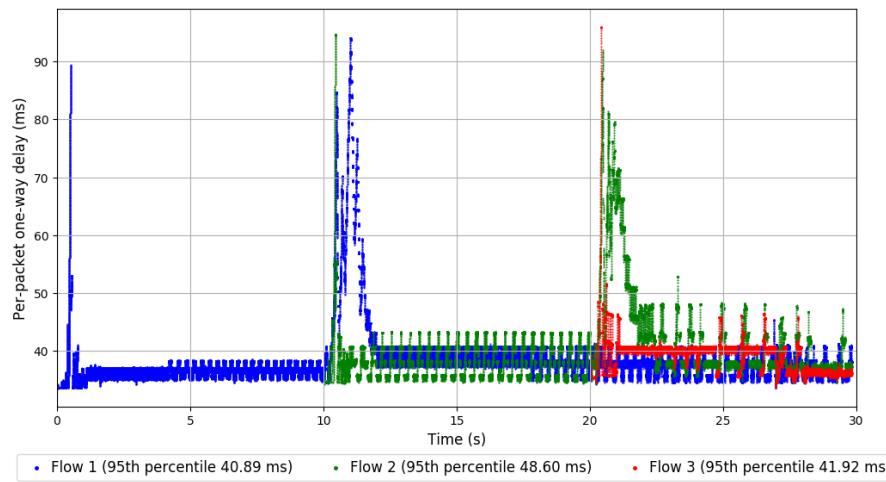
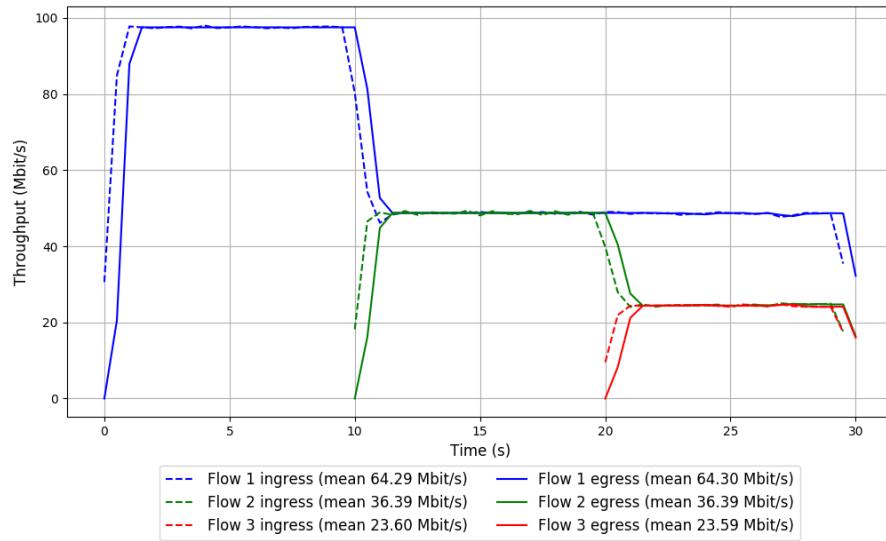


Run 2: Statistics of Indigo

```
Start at: 2018-10-26 10:22:42
End at: 2018-10-26 10:23:12
Local clock offset: -3.17 ms
Remote clock offset: -2.37 ms

# Below is generated by plot.py at 2018-10-26 11:47:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.19 Mbit/s
95th percentile per-packet one-way delay: 44.832 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 64.30 Mbit/s
95th percentile per-packet one-way delay: 40.886 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 36.39 Mbit/s
95th percentile per-packet one-way delay: 48.597 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 23.59 Mbit/s
95th percentile per-packet one-way delay: 41.922 ms
Loss rate: 0.69%
```

Run 2: Report of Indigo — Data Link

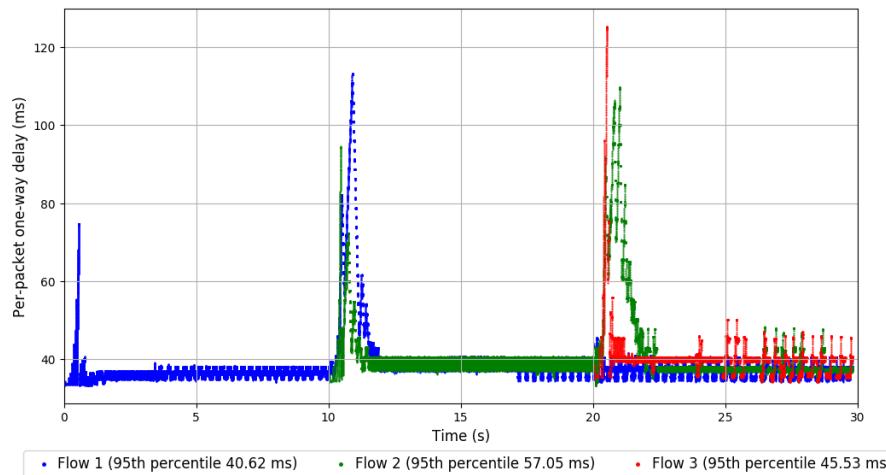
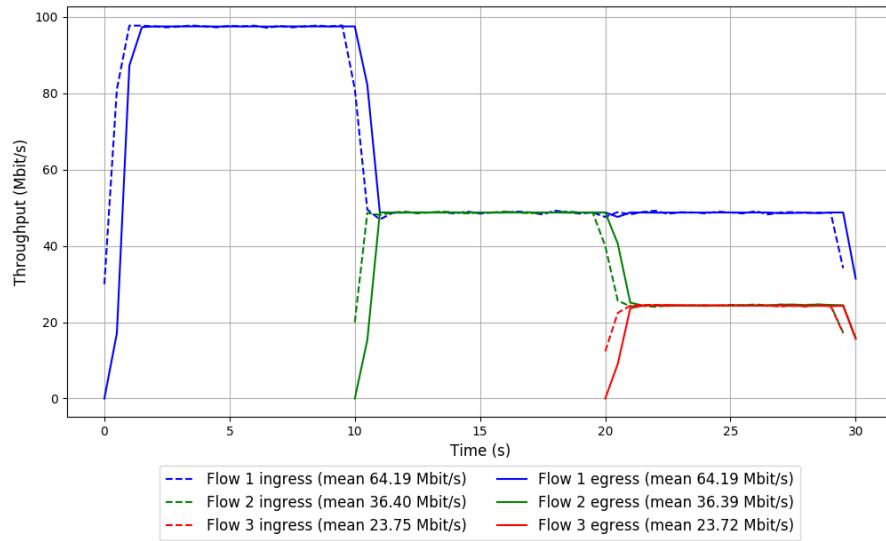


Run 3: Statistics of Indigo

```
Start at: 2018-10-26 10:47:44
End at: 2018-10-26 10:48:14
Local clock offset: -0.048 ms
Remote clock offset: -1.857 ms

# Below is generated by plot.py at 2018-10-26 11:47:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 45.351 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 64.19 Mbit/s
95th percentile per-packet one-way delay: 40.617 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 36.39 Mbit/s
95th percentile per-packet one-way delay: 57.051 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 23.72 Mbit/s
95th percentile per-packet one-way delay: 45.531 ms
Loss rate: 0.78%
```

Run 3: Report of Indigo — Data Link

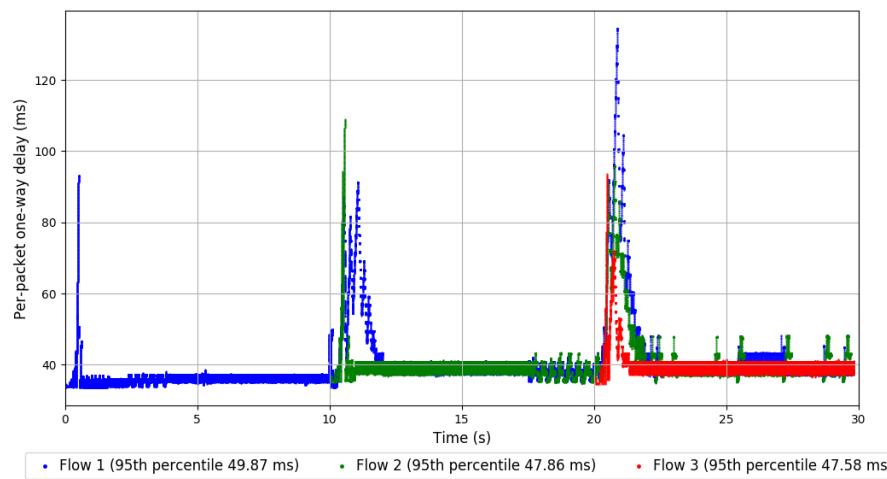
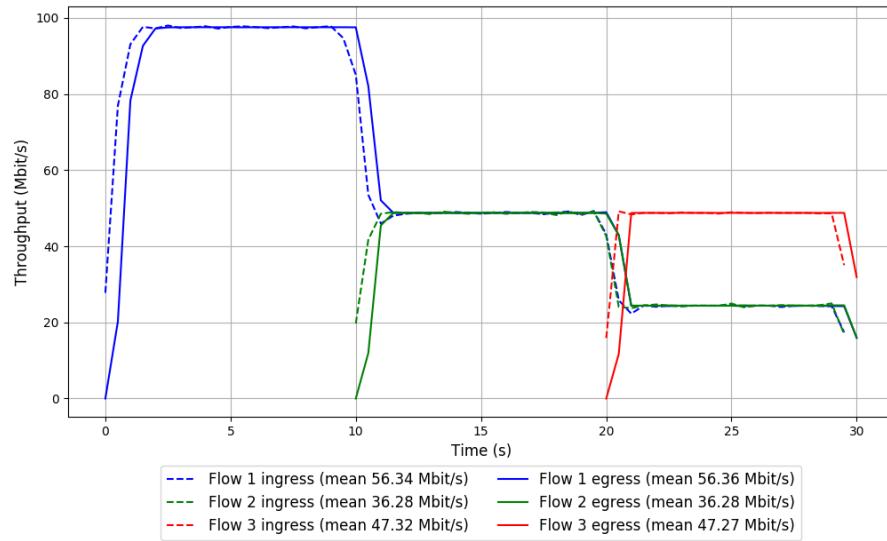


Run 4: Statistics of Indigo

```
Start at: 2018-10-26 11:12:34
End at: 2018-10-26 11:13:04
Local clock offset: 0.494 ms
Remote clock offset: -1.29 ms

# Below is generated by plot.py at 2018-10-26 11:47:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.87 Mbit/s
95th percentile per-packet one-way delay: 48.744 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 56.36 Mbit/s
95th percentile per-packet one-way delay: 49.874 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 36.28 Mbit/s
95th percentile per-packet one-way delay: 47.862 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 47.27 Mbit/s
95th percentile per-packet one-way delay: 47.577 ms
Loss rate: 0.77%
```

Run 4: Report of Indigo — Data Link

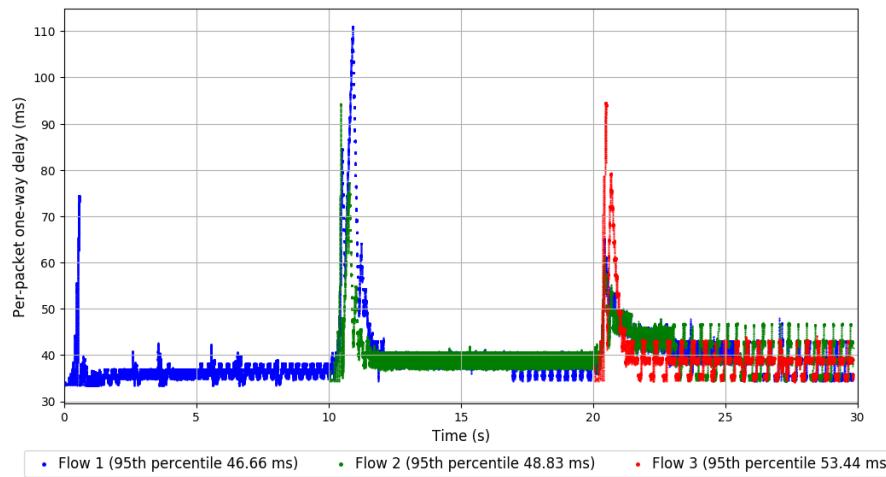
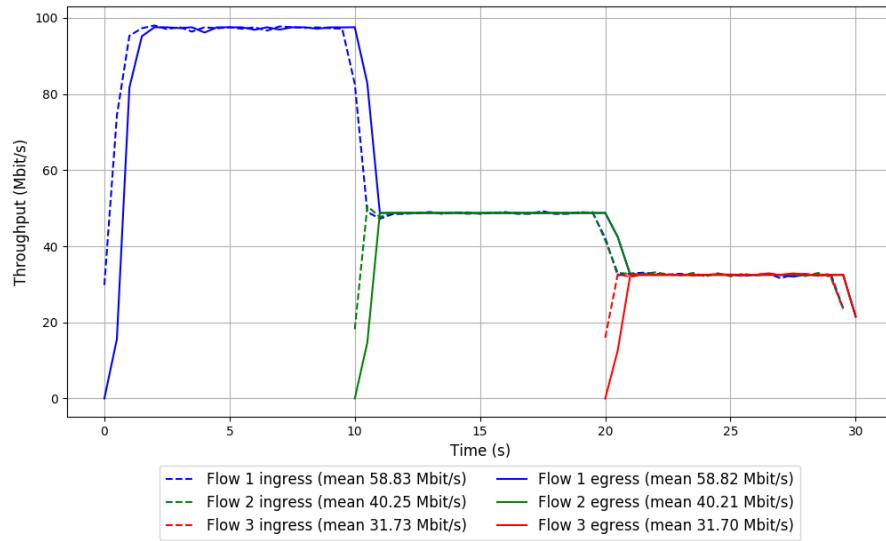


Run 5: Statistics of Indigo

```
Start at: 2018-10-26 11:37:36
End at: 2018-10-26 11:38:06
Local clock offset: 0.543 ms
Remote clock offset: -1.304 ms

# Below is generated by plot.py at 2018-10-26 11:47:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 48.560 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 58.82 Mbit/s
95th percentile per-packet one-way delay: 46.656 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 40.21 Mbit/s
95th percentile per-packet one-way delay: 48.827 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 31.70 Mbit/s
95th percentile per-packet one-way delay: 53.438 ms
Loss rate: 0.76%
```

Run 5: Report of Indigo — Data Link

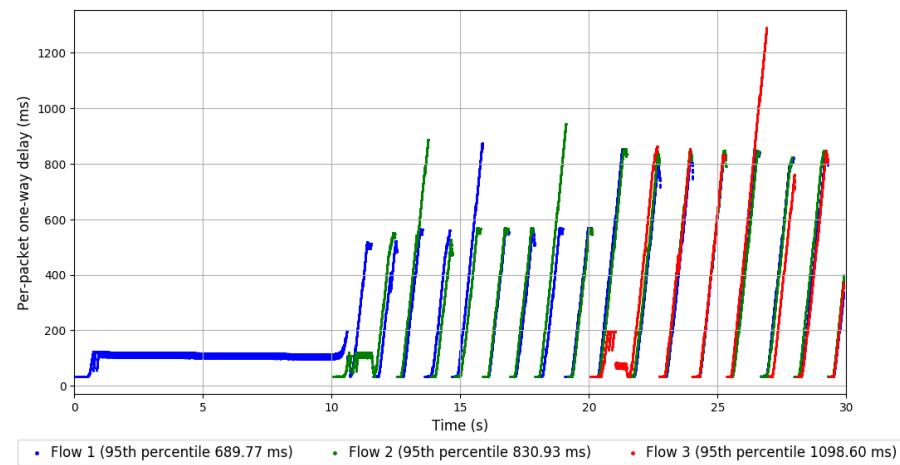
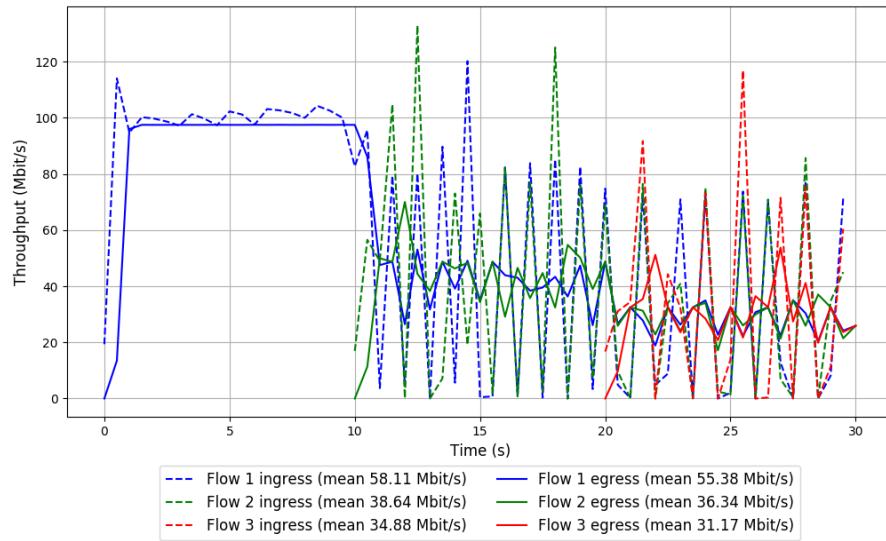


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-26 09:59:11
End at: 2018-10-26 09:59:41
Local clock offset: 0.677 ms
Remote clock offset: -3.097 ms

# Below is generated by plot.py at 2018-10-26 11:47:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.82 Mbit/s
95th percentile per-packet one-way delay: 807.454 ms
Loss rate: 5.18%
-- Flow 1:
Average throughput: 55.38 Mbit/s
95th percentile per-packet one-way delay: 689.767 ms
Loss rate: 4.45%
-- Flow 2:
Average throughput: 36.34 Mbit/s
95th percentile per-packet one-way delay: 830.926 ms
Loss rate: 5.23%
-- Flow 3:
Average throughput: 31.17 Mbit/s
95th percentile per-packet one-way delay: 1098.598 ms
Loss rate: 8.83%
```

Run 1: Report of Indigo-96d2da3 — Data Link

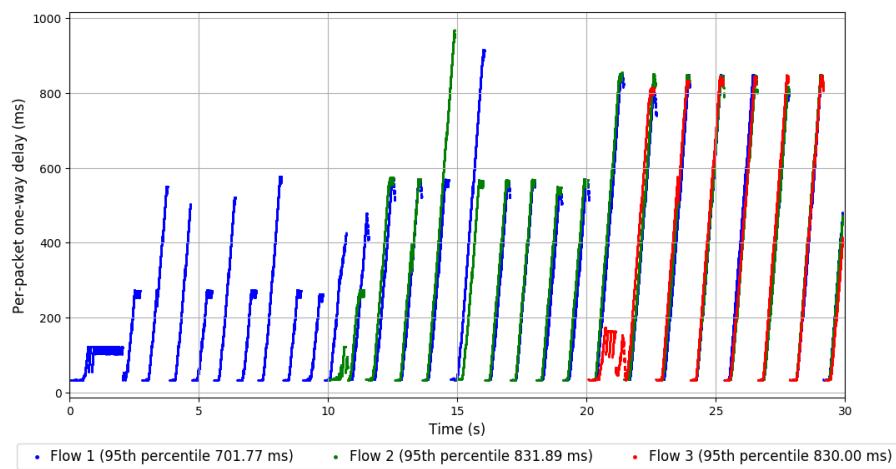
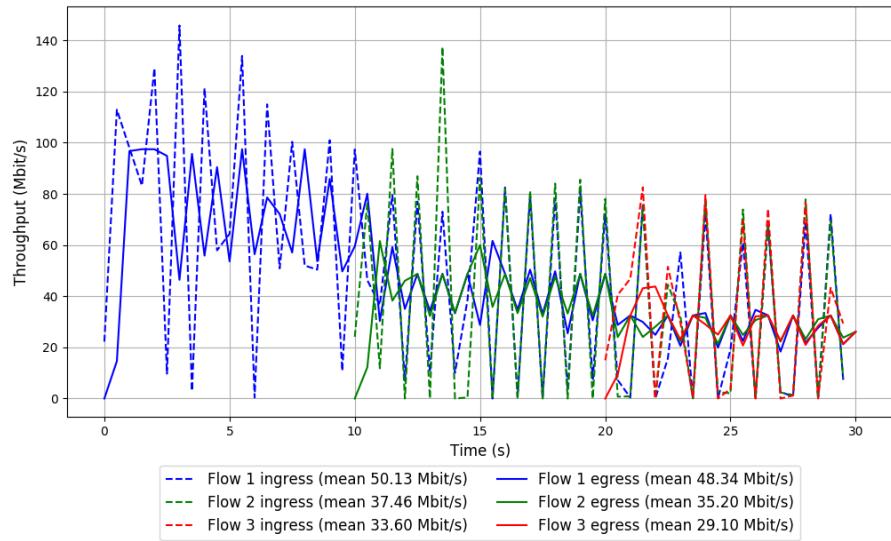


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 10:24:07
End at: 2018-10-26 10:24:37
Local clock offset: -3.272 ms
Remote clock offset: -2.37 ms

# Below is generated by plot.py at 2018-10-26 11:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.34 Mbit/s
95th percentile per-packet one-way delay: 800.317 ms
Loss rate: 4.39%
-- Flow 1:
Average throughput: 48.34 Mbit/s
95th percentile per-packet one-way delay: 701.771 ms
Loss rate: 2.72%
-- Flow 2:
Average throughput: 35.20 Mbit/s
95th percentile per-packet one-way delay: 831.893 ms
Loss rate: 4.84%
-- Flow 3:
Average throughput: 29.10 Mbit/s
95th percentile per-packet one-way delay: 830.004 ms
Loss rate: 11.02%
```

Run 2: Report of Indigo-96d2da3 — Data Link

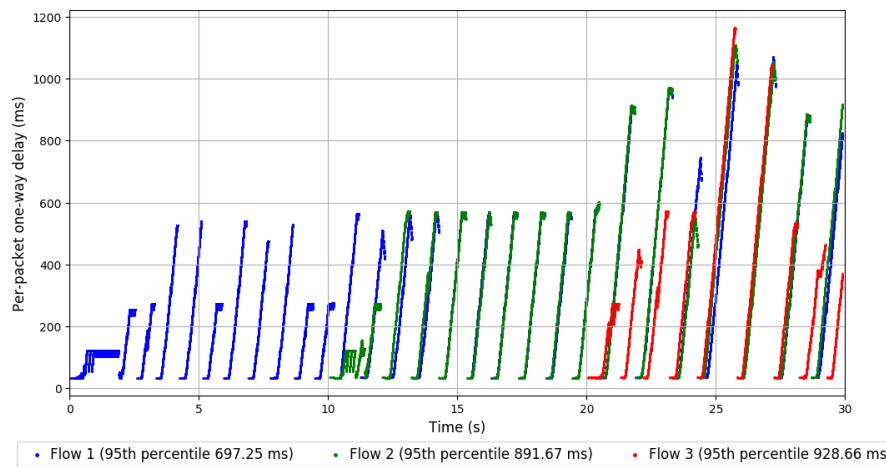
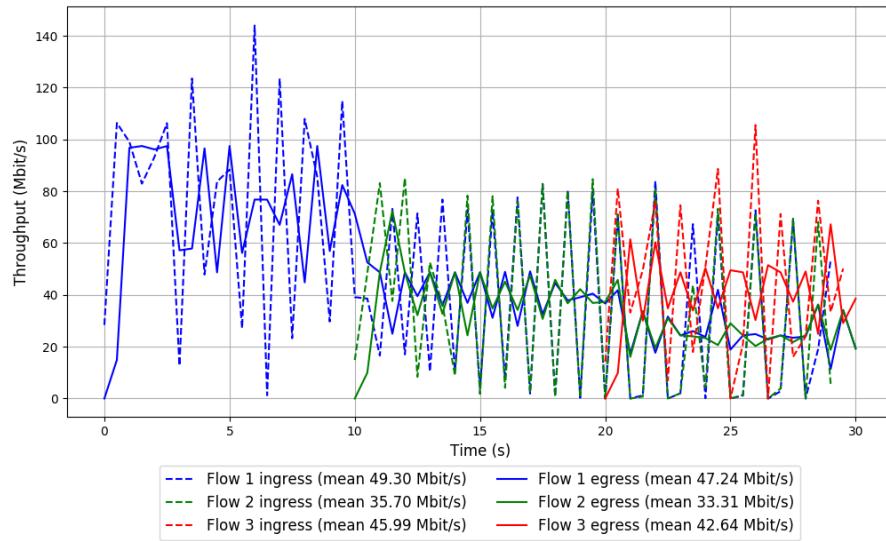


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 10:49:08
End at: 2018-10-26 10:49:38
Local clock offset: 0.064 ms
Remote clock offset: -1.828 ms

# Below is generated by plot.py at 2018-10-26 11:48:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.40 Mbit/s
95th percentile per-packet one-way delay: 817.542 ms
Loss rate: 2.89%
-- Flow 1:
Average throughput: 47.24 Mbit/s
95th percentile per-packet one-way delay: 697.249 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 33.31 Mbit/s
95th percentile per-packet one-way delay: 891.666 ms
Loss rate: 2.93%
-- Flow 3:
Average throughput: 42.64 Mbit/s
95th percentile per-packet one-way delay: 928.661 ms
Loss rate: 5.79%
```

Run 3: Report of Indigo-96d2da3 — Data Link

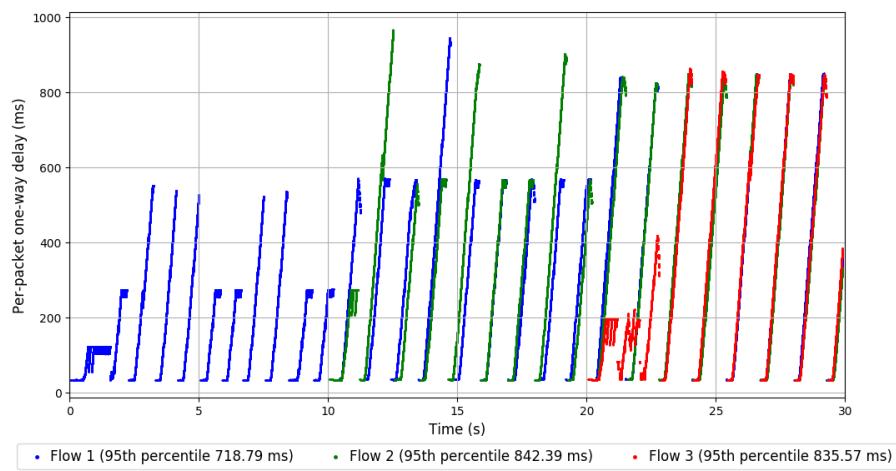
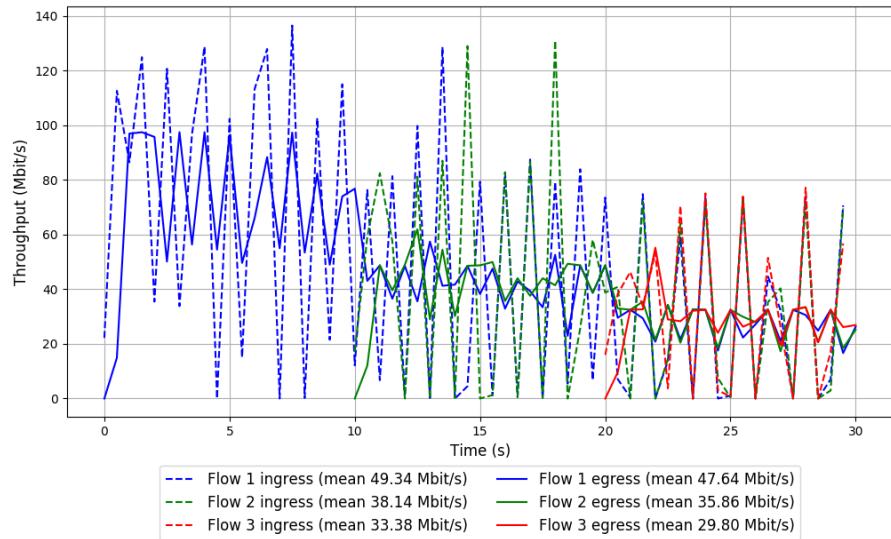


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 11:13:59
End at: 2018-10-26 11:14:29
Local clock offset: 0.482 ms
Remote clock offset: -1.256 ms

# Below is generated by plot.py at 2018-10-26 11:48:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.30 Mbit/s
95th percentile per-packet one-way delay: 822.001 ms
Loss rate: 4.46%
-- Flow 1:
Average throughput: 47.64 Mbit/s
95th percentile per-packet one-way delay: 718.791 ms
Loss rate: 3.09%
-- Flow 2:
Average throughput: 35.86 Mbit/s
95th percentile per-packet one-way delay: 842.391 ms
Loss rate: 5.27%
-- Flow 3:
Average throughput: 29.80 Mbit/s
95th percentile per-packet one-way delay: 835.567 ms
Loss rate: 8.80%
```

Run 4: Report of Indigo-96d2da3 — Data Link

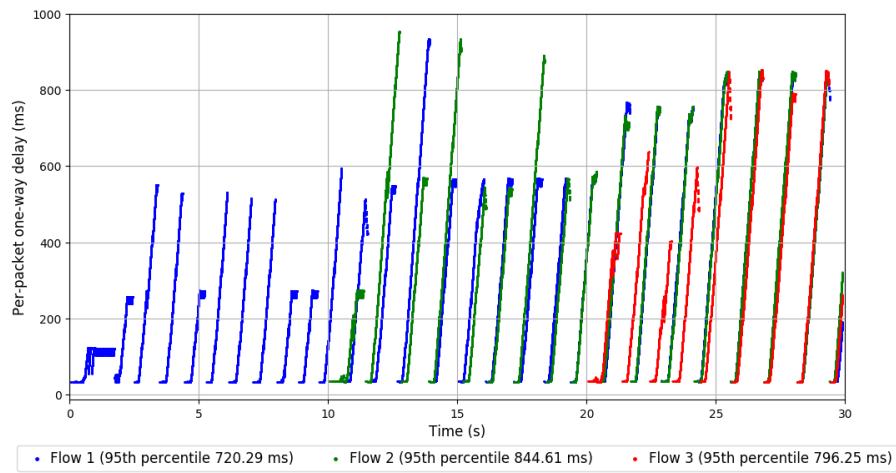
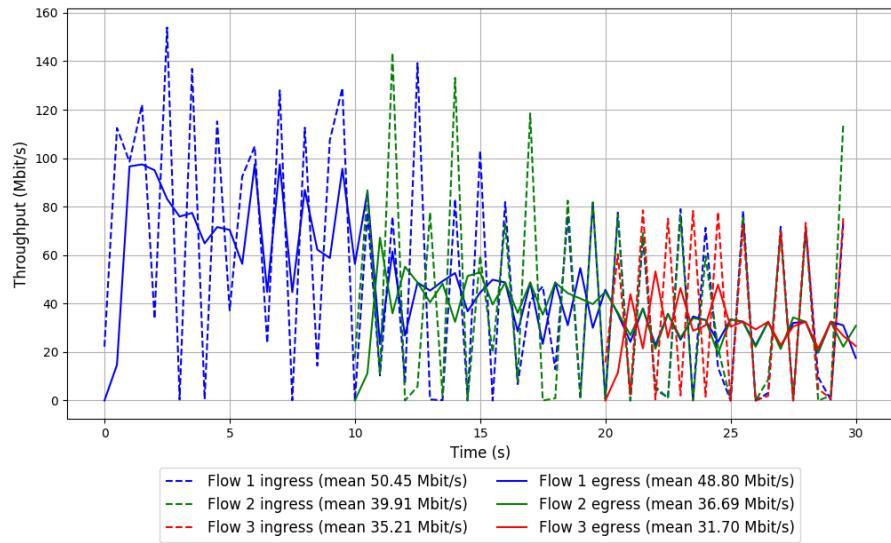


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 11:39:00
End at: 2018-10-26 11:39:30
Local clock offset: 0.524 ms
Remote clock offset: -1.323 ms

# Below is generated by plot.py at 2018-10-26 11:48:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.64 Mbit/s
95th percentile per-packet one-way delay: 791.041 ms
Loss rate: 5.35%
-- Flow 1:
Average throughput: 48.80 Mbit/s
95th percentile per-packet one-way delay: 720.295 ms
Loss rate: 3.27%
-- Flow 2:
Average throughput: 36.69 Mbit/s
95th percentile per-packet one-way delay: 844.608 ms
Loss rate: 7.45%
-- Flow 3:
Average throughput: 31.70 Mbit/s
95th percentile per-packet one-way delay: 796.250 ms
Loss rate: 9.60%
```

Run 5: Report of Indigo-96d2da3 — Data Link

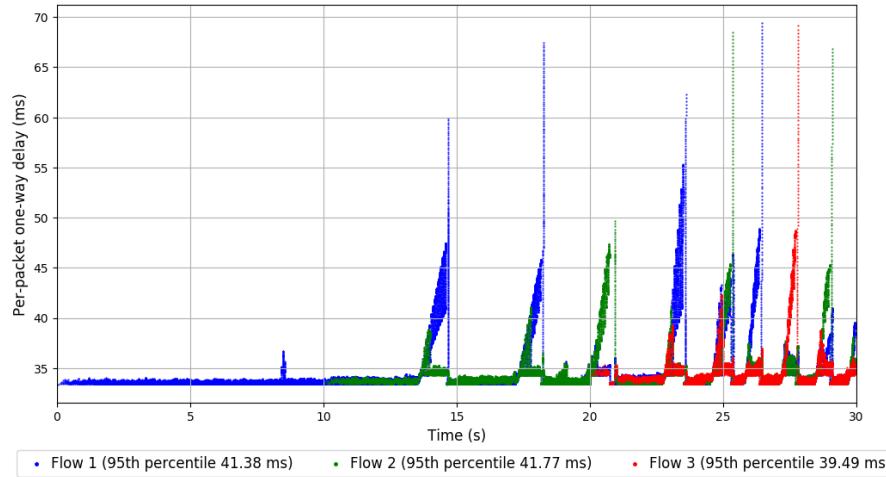
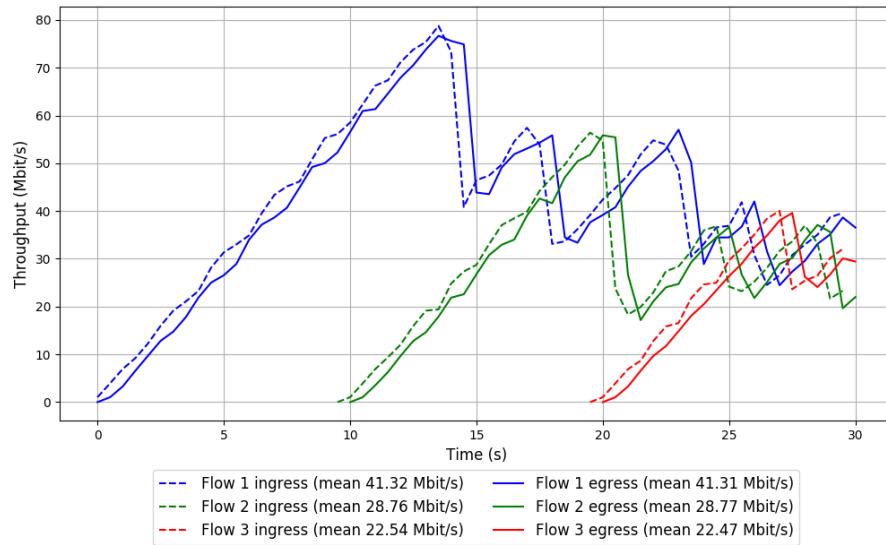


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-10-26 09:42:27
End at: 2018-10-26 09:42:57
Local clock offset: 0.567 ms
Remote clock offset: -3.614 ms

# Below is generated by plot.py at 2018-10-26 11:48:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.91 Mbit/s
95th percentile per-packet one-way delay: 41.348 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 41.31 Mbit/s
95th percentile per-packet one-way delay: 41.383 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 28.77 Mbit/s
95th percentile per-packet one-way delay: 41.769 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 22.47 Mbit/s
95th percentile per-packet one-way delay: 39.493 ms
Loss rate: 0.98%
```

Run 1: Report of LEDBAT — Data Link

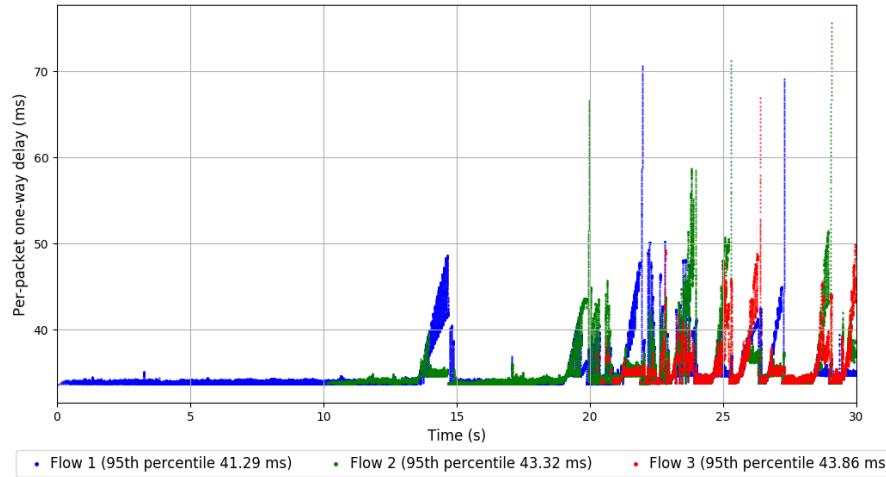
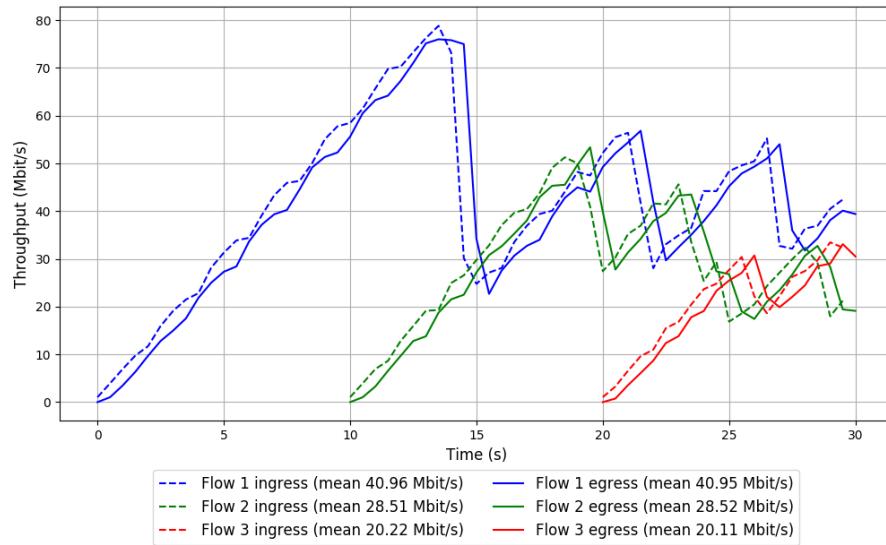


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-26 10:07:20
End at: 2018-10-26 10:07:50
Local clock offset: -1.155 ms
Remote clock offset: -2.887 ms

# Below is generated by plot.py at 2018-10-26 11:48:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.59 Mbit/s
95th percentile per-packet one-way delay: 42.383 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 40.95 Mbit/s
95th percentile per-packet one-way delay: 41.289 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 28.52 Mbit/s
95th percentile per-packet one-way delay: 43.317 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 20.11 Mbit/s
95th percentile per-packet one-way delay: 43.860 ms
Loss rate: 1.19%
```

Run 2: Report of LEDBAT — Data Link

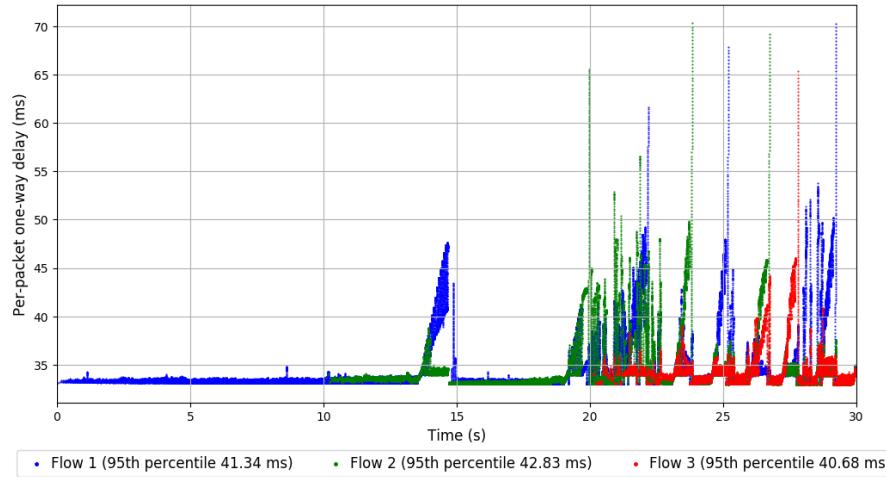
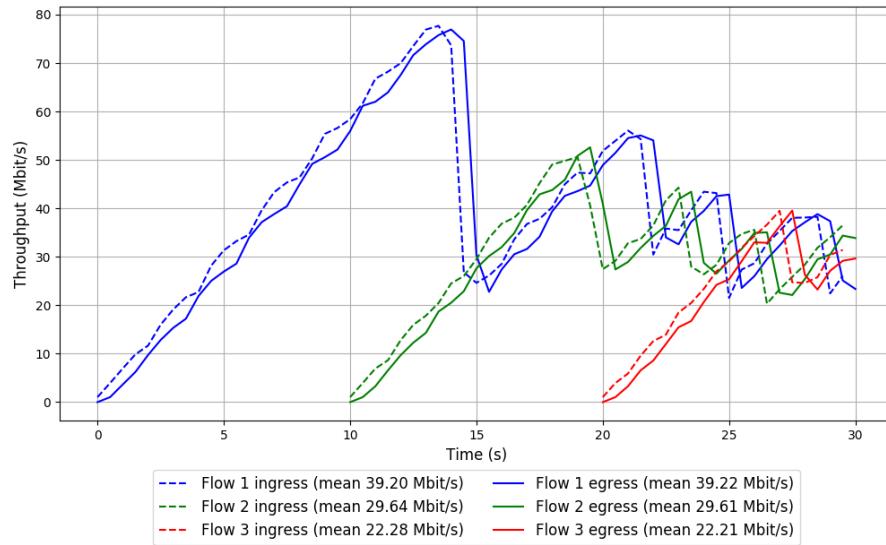


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-26 10:32:18
End at: 2018-10-26 10:32:48
Local clock offset: -3.369 ms
Remote clock offset: -2.01 ms

# Below is generated by plot.py at 2018-10-26 11:48:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.29 Mbit/s
95th percentile per-packet one-way delay: 42.041 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 39.22 Mbit/s
95th percentile per-packet one-way delay: 41.345 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 29.61 Mbit/s
95th percentile per-packet one-way delay: 42.834 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 22.21 Mbit/s
95th percentile per-packet one-way delay: 40.684 ms
Loss rate: 0.99%
```

Run 3: Report of LEDBAT — Data Link

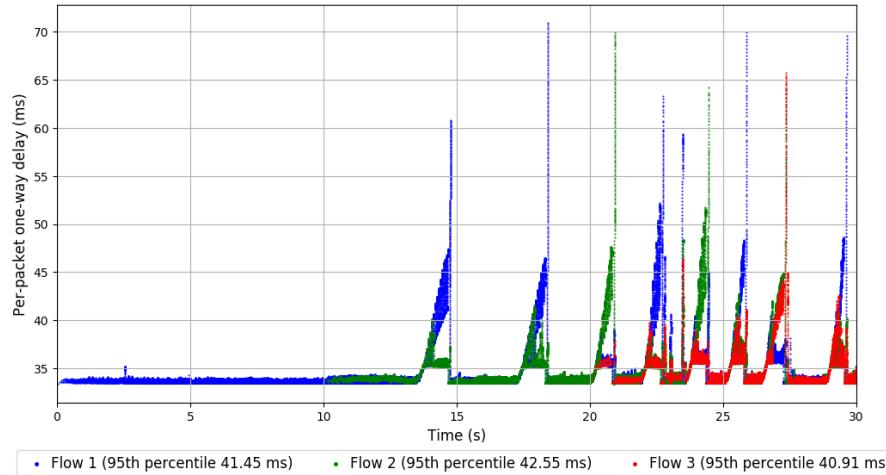
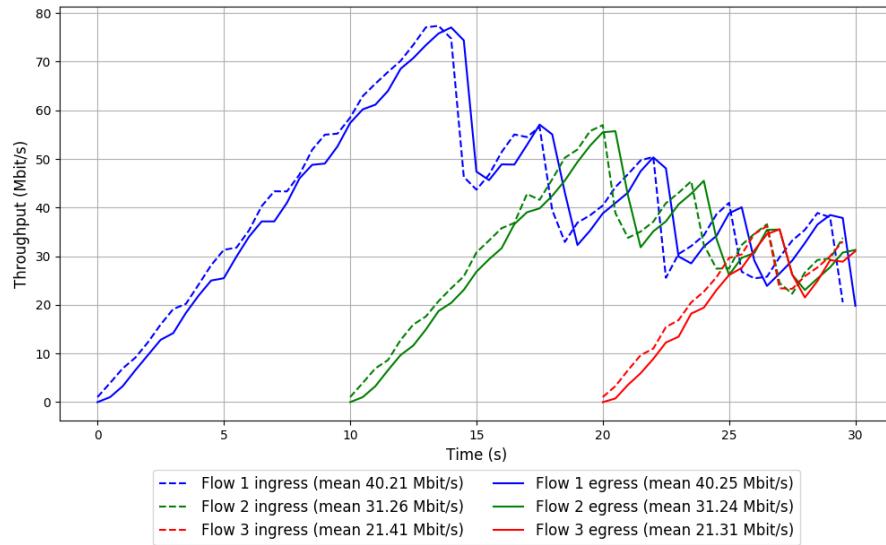


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-26 10:57:15
End at: 2018-10-26 10:57:45
Local clock offset: 0.516 ms
Remote clock offset: -1.756 ms

# Below is generated by plot.py at 2018-10-26 11:48:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.09 Mbit/s
95th percentile per-packet one-way delay: 41.724 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 40.25 Mbit/s
95th percentile per-packet one-way delay: 41.452 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 31.24 Mbit/s
95th percentile per-packet one-way delay: 42.547 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 21.31 Mbit/s
95th percentile per-packet one-way delay: 40.906 ms
Loss rate: 1.07%
```

Run 4: Report of LEDBAT — Data Link

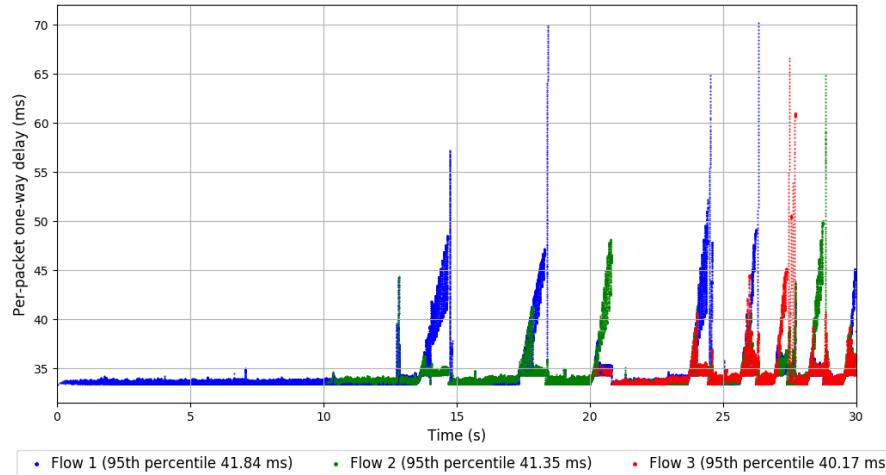
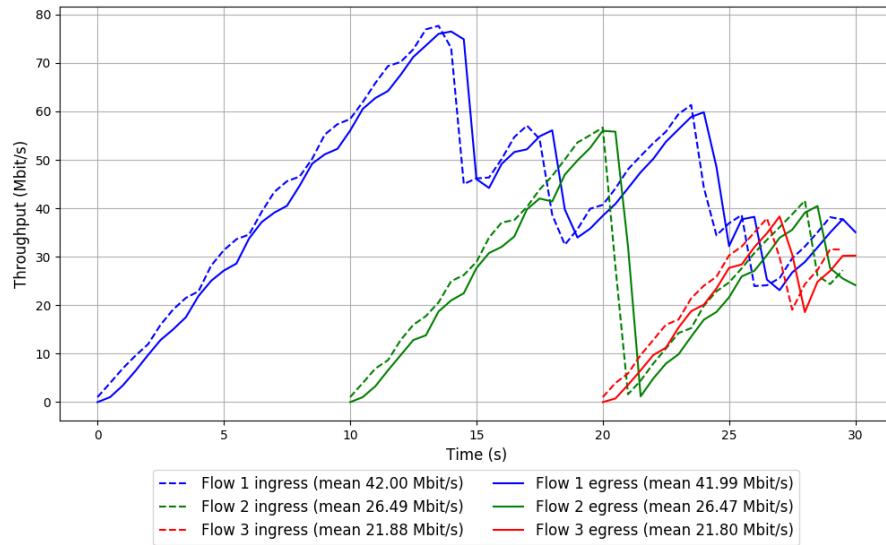


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-26 11:22:17
End at: 2018-10-26 11:22:47
Local clock offset: 0.544 ms
Remote clock offset: -1.118 ms

# Below is generated by plot.py at 2018-10-26 11:48:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.83 Mbit/s
95th percentile per-packet one-way delay: 41.491 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 41.99 Mbit/s
95th percentile per-packet one-way delay: 41.844 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 26.47 Mbit/s
95th percentile per-packet one-way delay: 41.346 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 21.80 Mbit/s
95th percentile per-packet one-way delay: 40.172 ms
Loss rate: 1.03%
```

Run 5: Report of LEDBAT — Data Link

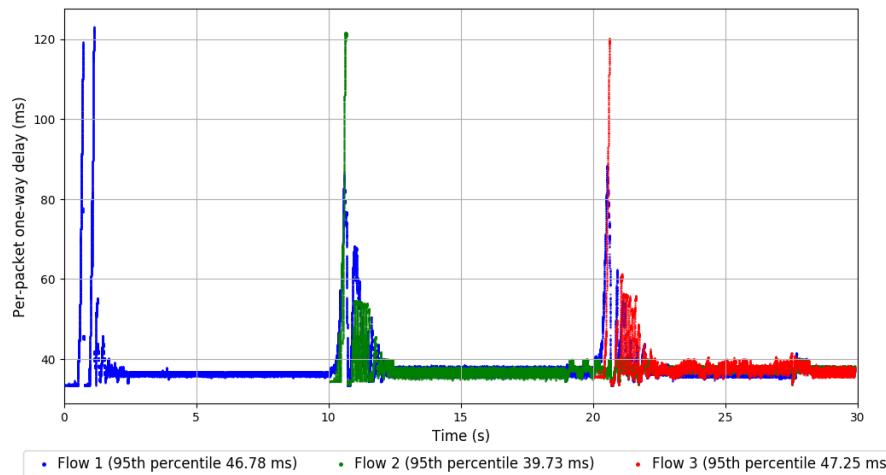
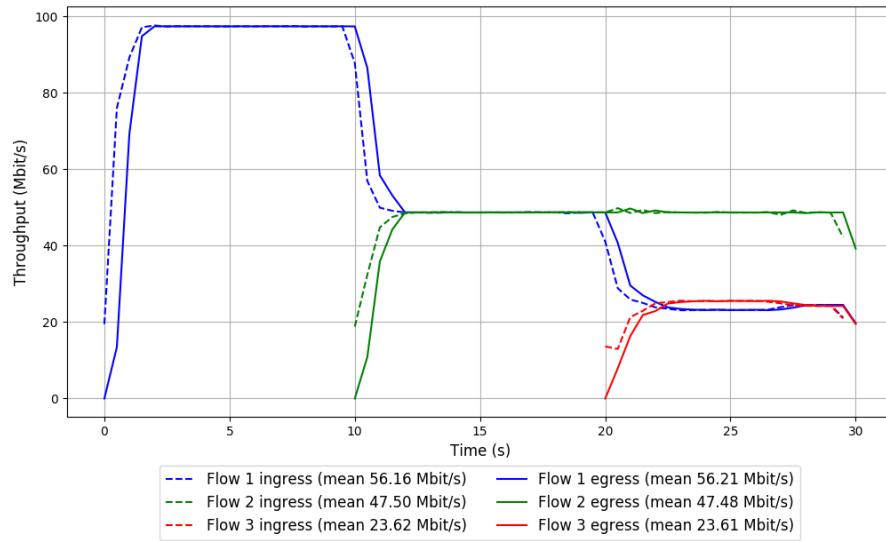


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-26 09:46:37
End at: 2018-10-26 09:47:07
Local clock offset: 0.599 ms
Remote clock offset: -3.638 ms

# Below is generated by plot.py at 2018-10-26 11:49:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.57 Mbit/s
95th percentile per-packet one-way delay: 44.761 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 56.21 Mbit/s
95th percentile per-packet one-way delay: 46.777 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 47.48 Mbit/s
95th percentile per-packet one-way delay: 39.727 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 23.61 Mbit/s
95th percentile per-packet one-way delay: 47.251 ms
Loss rate: 0.73%
```

Run 1: Report of Indigo-Muses — Data Link

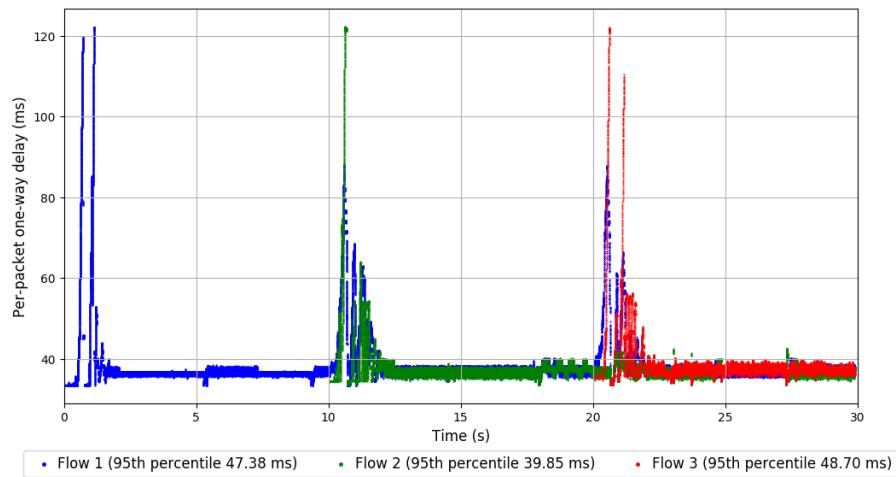
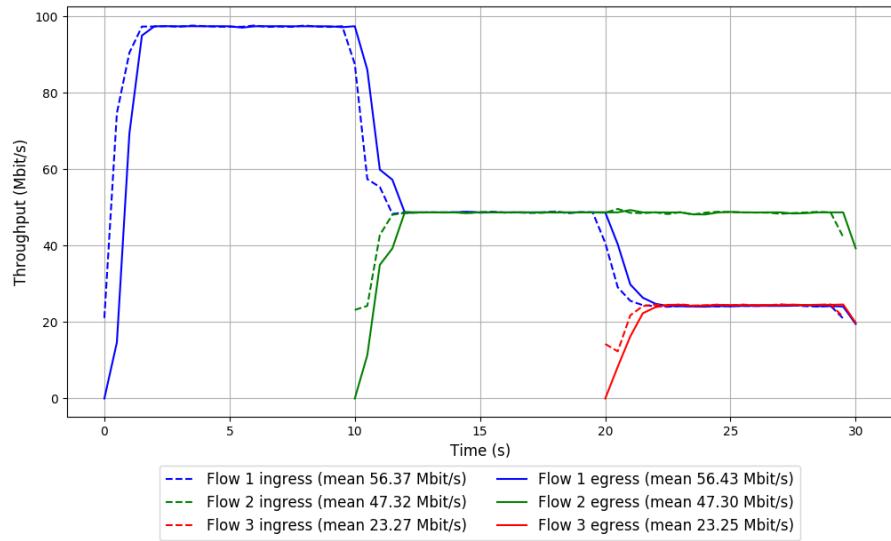


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-26 10:11:29
End at: 2018-10-26 10:11:59
Local clock offset: -1.968 ms
Remote clock offset: -2.631 ms

# Below is generated by plot.py at 2018-10-26 11:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.54 Mbit/s
95th percentile per-packet one-way delay: 44.886 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 56.43 Mbit/s
95th percentile per-packet one-way delay: 47.381 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 47.30 Mbit/s
95th percentile per-packet one-way delay: 39.852 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 23.25 Mbit/s
95th percentile per-packet one-way delay: 48.701 ms
Loss rate: 0.74%
```

Run 2: Report of Indigo-Muses — Data Link

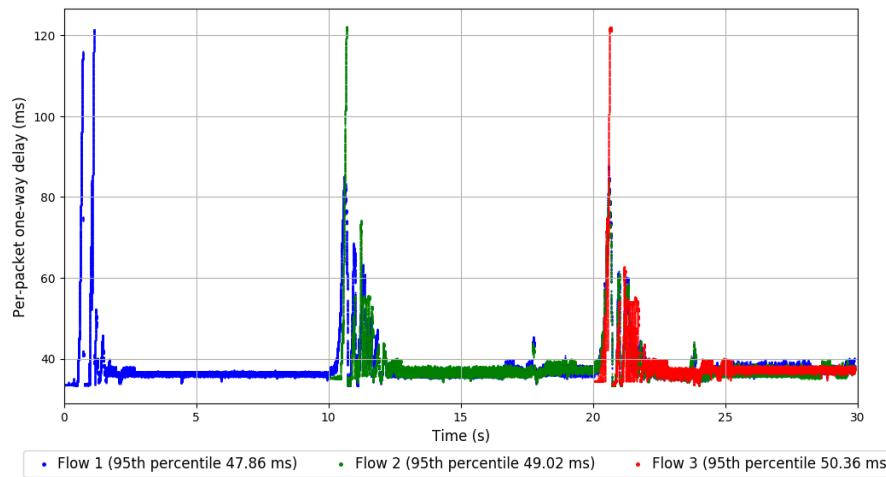
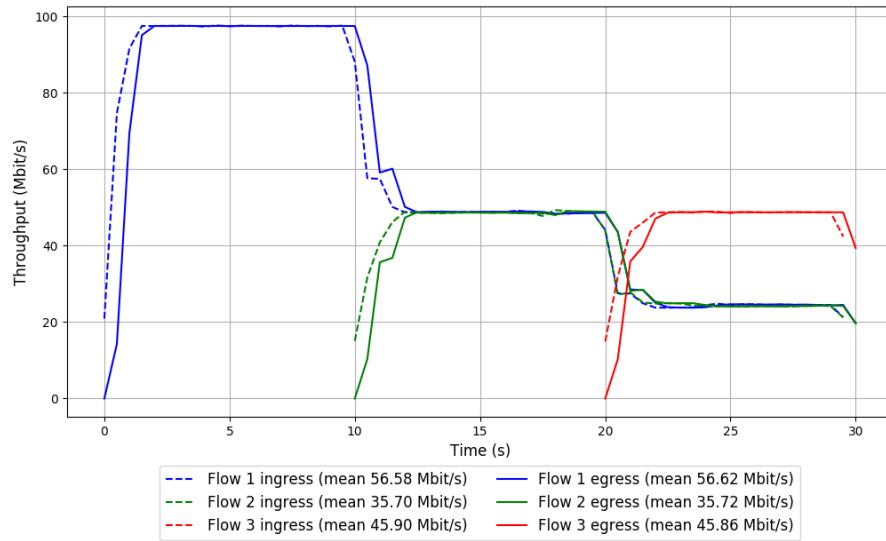


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-26 10:36:29
End at: 2018-10-26 10:36:59
Local clock offset: -1.899 ms
Remote clock offset: -2.252 ms

# Below is generated by plot.py at 2018-10-26 11:49:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.49 Mbit/s
95th percentile per-packet one-way delay: 48.605 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 56.62 Mbit/s
95th percentile per-packet one-way delay: 47.859 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 35.72 Mbit/s
95th percentile per-packet one-way delay: 49.025 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 45.86 Mbit/s
95th percentile per-packet one-way delay: 50.360 ms
Loss rate: 0.73%
```

Run 3: Report of Indigo-Muses — Data Link

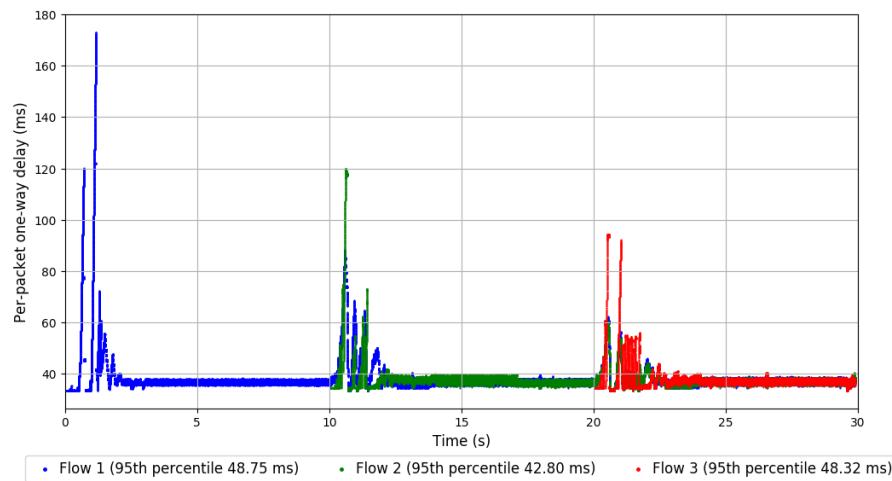
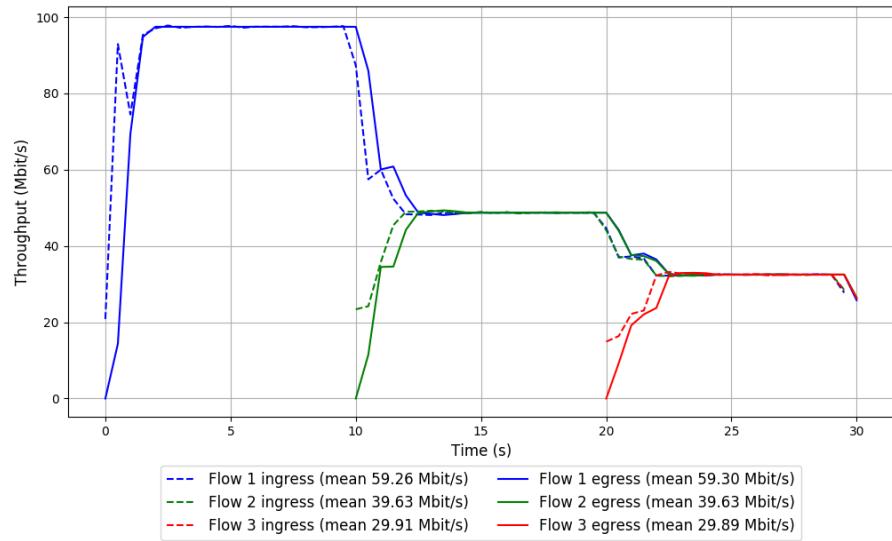


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-26 11:01:23
End at: 2018-10-26 11:01:53
Local clock offset: 0.679 ms
Remote clock offset: -1.678 ms

# Below is generated by plot.py at 2018-10-26 11:49:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.50 Mbit/s
95th percentile per-packet one-way delay: 47.388 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 59.30 Mbit/s
95th percentile per-packet one-way delay: 48.749 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 39.63 Mbit/s
95th percentile per-packet one-way delay: 42.804 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 29.89 Mbit/s
95th percentile per-packet one-way delay: 48.324 ms
Loss rate: 0.74%
```

Run 4: Report of Indigo-Muses — Data Link

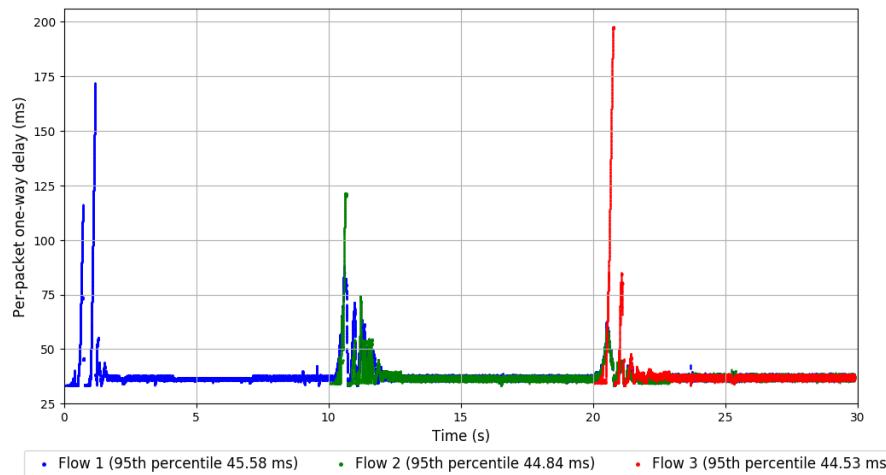
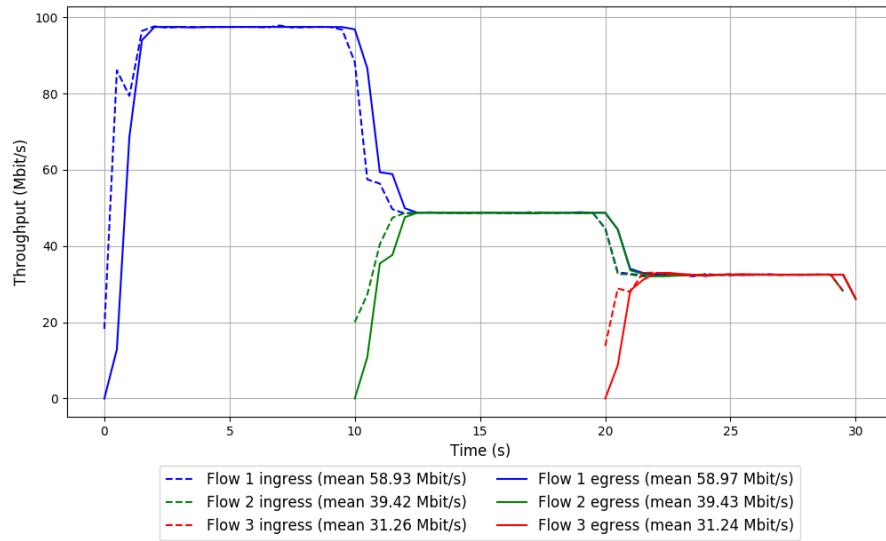


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-26 11:26:28
End at: 2018-10-26 11:26:58
Local clock offset: 0.586 ms
Remote clock offset: -1.253 ms

# Below is generated by plot.py at 2018-10-26 11:49:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.48 Mbit/s
95th percentile per-packet one-way delay: 45.375 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 58.97 Mbit/s
95th percentile per-packet one-way delay: 45.579 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 39.43 Mbit/s
95th percentile per-packet one-way delay: 44.841 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 31.24 Mbit/s
95th percentile per-packet one-way delay: 44.526 ms
Loss rate: 0.73%
```

Run 5: Report of Indigo-Muses — Data Link

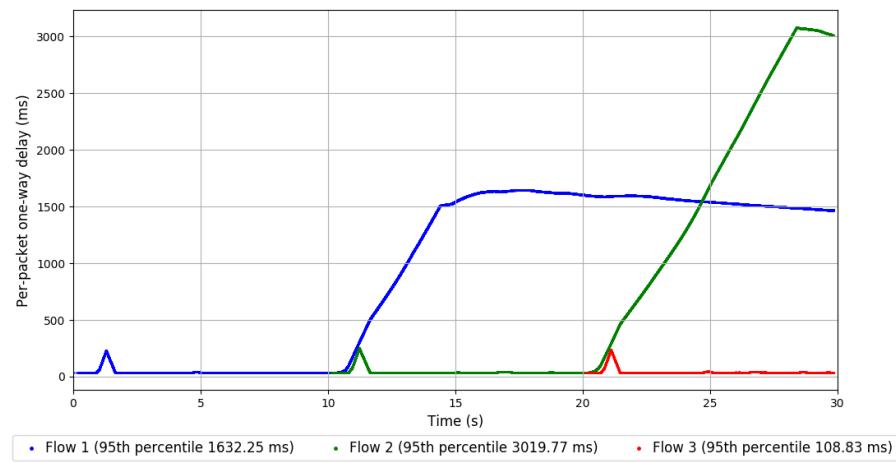
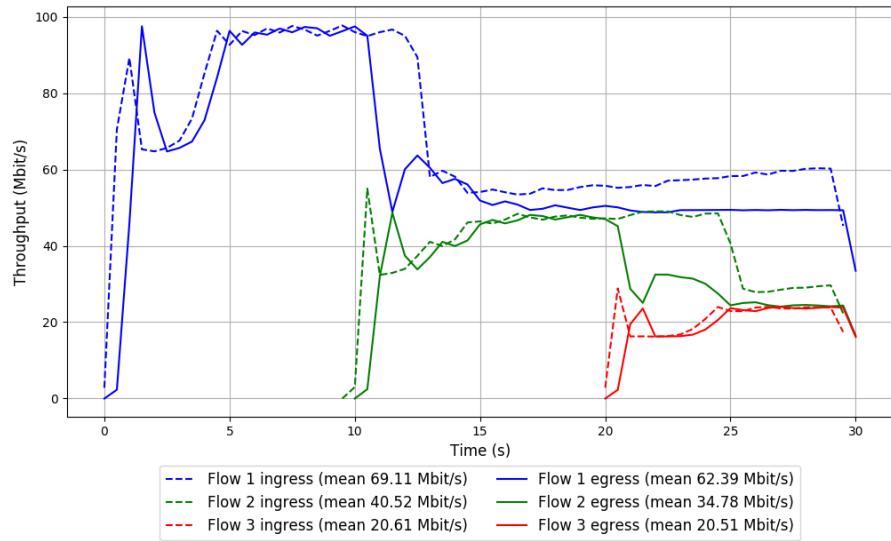


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-10-26 09:45:14
End at: 2018-10-26 09:45:44
Local clock offset: 0.596 ms
Remote clock offset: -3.568 ms

# Below is generated by plot.py at 2018-10-26 11:49:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.25 Mbit/s
95th percentile per-packet one-way delay: 1644.028 ms
Loss rate: 10.51%
-- Flow 1:
Average throughput: 62.39 Mbit/s
95th percentile per-packet one-way delay: 1632.246 ms
Loss rate: 9.90%
-- Flow 2:
Average throughput: 34.78 Mbit/s
95th percentile per-packet one-way delay: 3019.774 ms
Loss rate: 14.44%
-- Flow 3:
Average throughput: 20.51 Mbit/s
95th percentile per-packet one-way delay: 108.829 ms
Loss rate: 1.12%
```

Run 1: Report of PCC-Allegro — Data Link

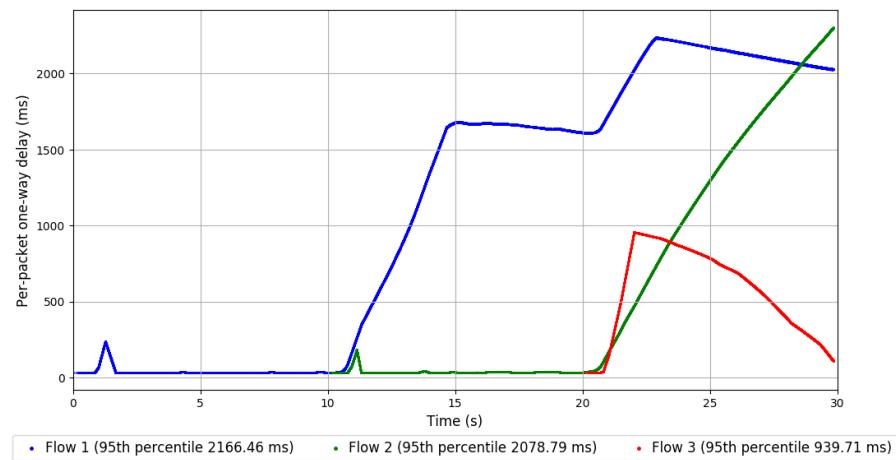
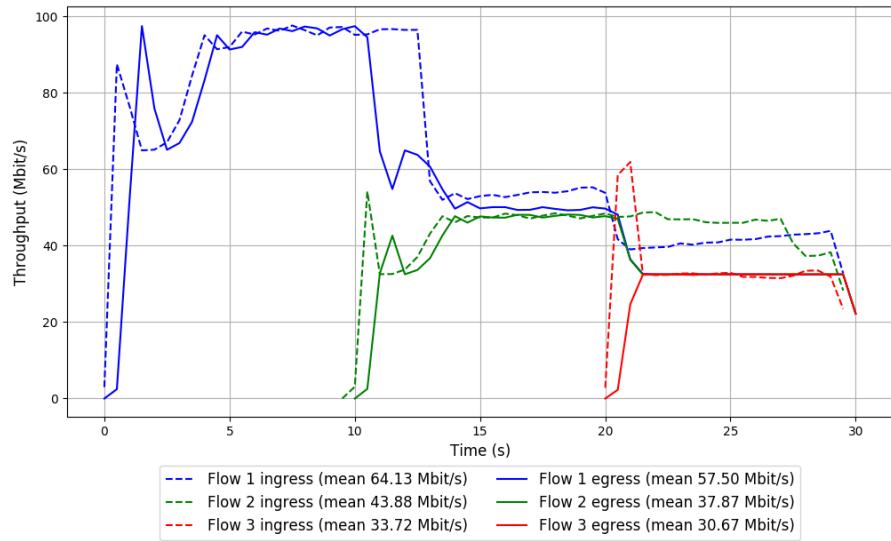


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-26 10:10:06
End at: 2018-10-26 10:10:36
Local clock offset: -1.756 ms
Remote clock offset: -2.651 ms

# Below is generated by plot.py at 2018-10-26 11:49:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.76 Mbit/s
95th percentile per-packet one-way delay: 2144.204 ms
Loss rate: 11.39%
-- Flow 1:
Average throughput: 57.50 Mbit/s
95th percentile per-packet one-way delay: 2166.462 ms
Loss rate: 10.53%
-- Flow 2:
Average throughput: 37.87 Mbit/s
95th percentile per-packet one-way delay: 2078.788 ms
Loss rate: 13.95%
-- Flow 3:
Average throughput: 30.67 Mbit/s
95th percentile per-packet one-way delay: 939.713 ms
Loss rate: 9.64%
```

Run 2: Report of PCC-Allegro — Data Link

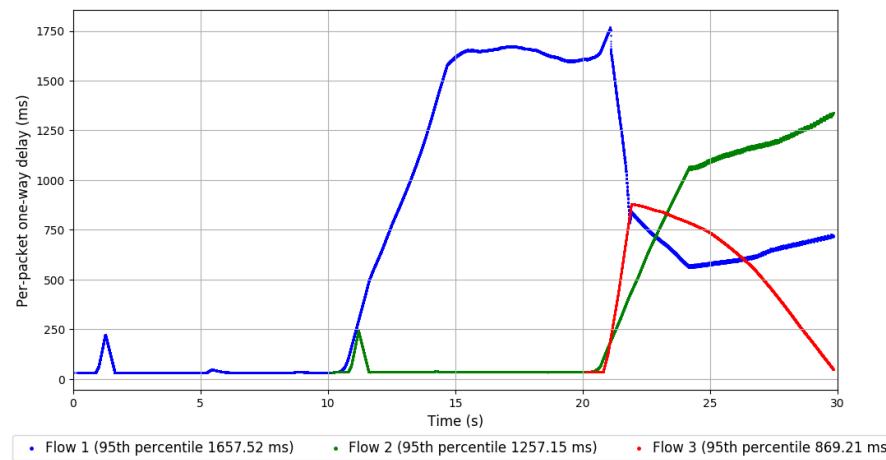
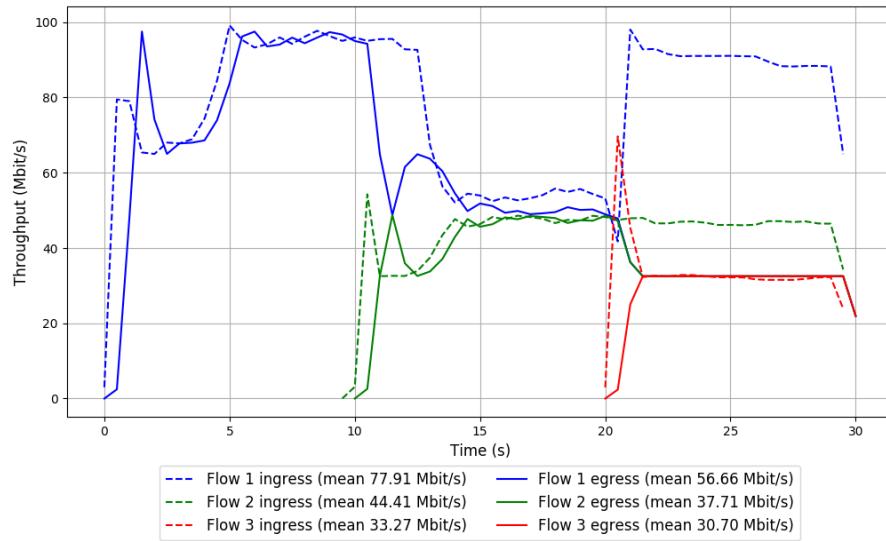


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-26 10:35:05
End at: 2018-10-26 10:35:35
Local clock offset: -2.294 ms
Remote clock offset: -2.029 ms

# Below is generated by plot.py at 2018-10-26 11:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.82 Mbit/s
95th percentile per-packet one-way delay: 1650.622 ms
Loss rate: 22.65%
-- Flow 1:
Average throughput: 56.66 Mbit/s
95th percentile per-packet one-way delay: 1657.518 ms
Loss rate: 27.44%
-- Flow 2:
Average throughput: 37.71 Mbit/s
95th percentile per-packet one-way delay: 1257.150 ms
Loss rate: 15.37%
-- Flow 3:
Average throughput: 30.70 Mbit/s
95th percentile per-packet one-way delay: 869.211 ms
Loss rate: 8.31%
```

Run 3: Report of PCC-Allegro — Data Link

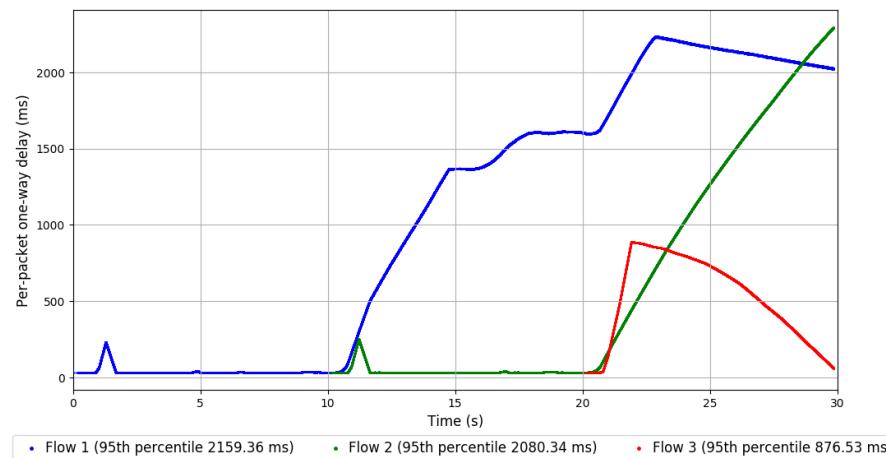
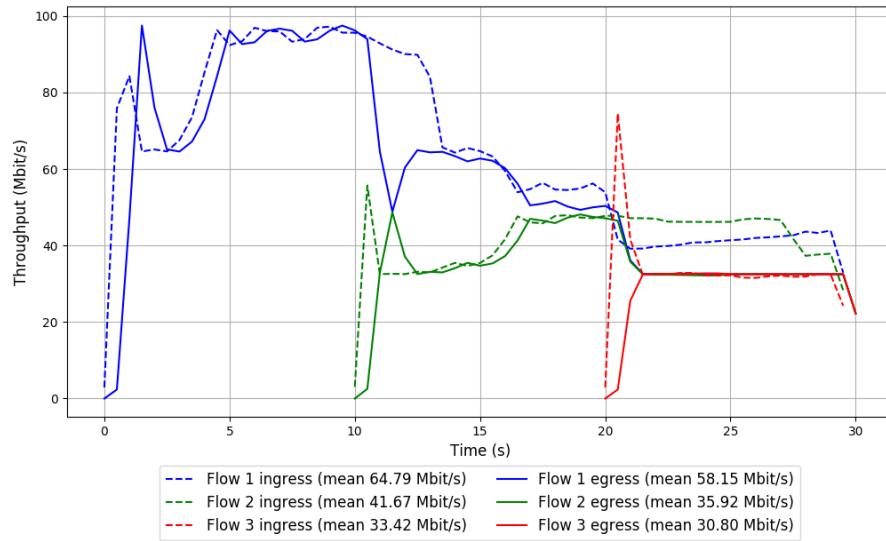


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-26 11:00:01
End at: 2018-10-26 11:00:31
Local clock offset: 0.64 ms
Remote clock offset: -1.662 ms

# Below is generated by plot.py at 2018-10-26 11:50:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.14 Mbit/s
95th percentile per-packet one-way delay: 2140.495 ms
Loss rate: 11.19%
-- Flow 1:
Average throughput: 58.15 Mbit/s
95th percentile per-packet one-way delay: 2159.359 ms
Loss rate: 10.44%
-- Flow 2:
Average throughput: 35.92 Mbit/s
95th percentile per-packet one-way delay: 2080.336 ms
Loss rate: 14.05%
-- Flow 3:
Average throughput: 30.80 Mbit/s
95th percentile per-packet one-way delay: 876.533 ms
Loss rate: 8.44%
```

Run 4: Report of PCC-Allegro — Data Link

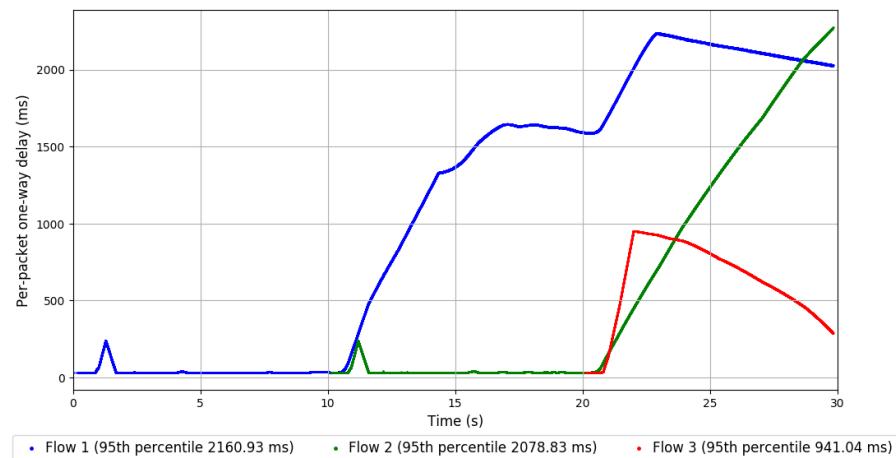
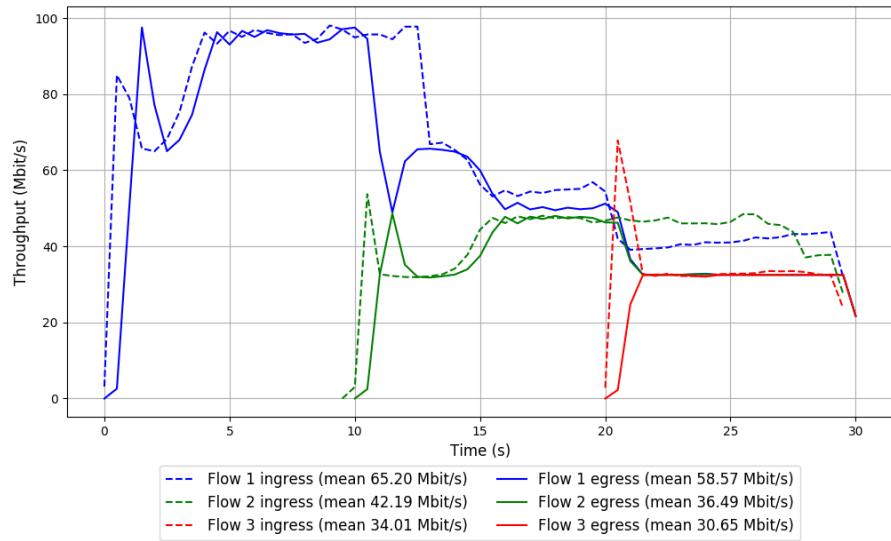


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-26 11:25:05
End at: 2018-10-26 11:25:35
Local clock offset: 0.576 ms
Remote clock offset: -1.45 ms

# Below is generated by plot.py at 2018-10-26 11:50:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.89 Mbit/s
95th percentile per-packet one-way delay: 2141.193 ms
Loss rate: 11.29%
-- Flow 1:
Average throughput: 58.57 Mbit/s
95th percentile per-packet one-way delay: 2160.934 ms
Loss rate: 10.35%
-- Flow 2:
Average throughput: 36.49 Mbit/s
95th percentile per-packet one-way delay: 2078.833 ms
Loss rate: 13.79%
-- Flow 3:
Average throughput: 30.65 Mbit/s
95th percentile per-packet one-way delay: 941.045 ms
Loss rate: 10.45%
```

Run 5: Report of PCC-Allegro — Data Link

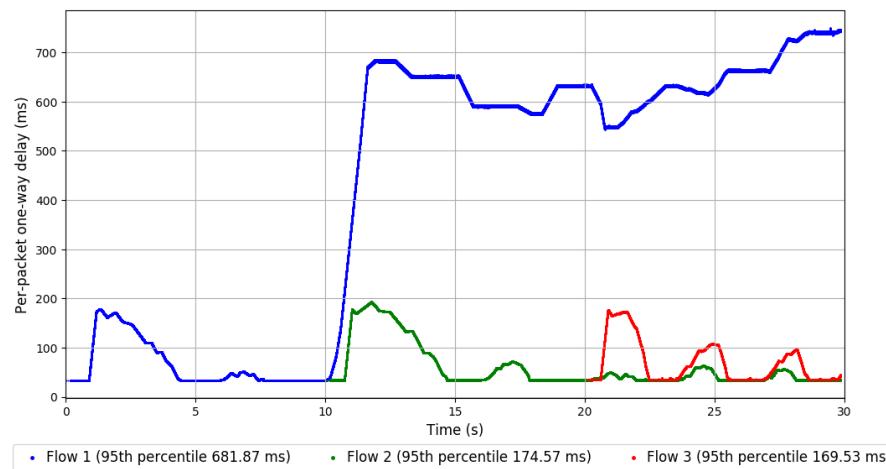
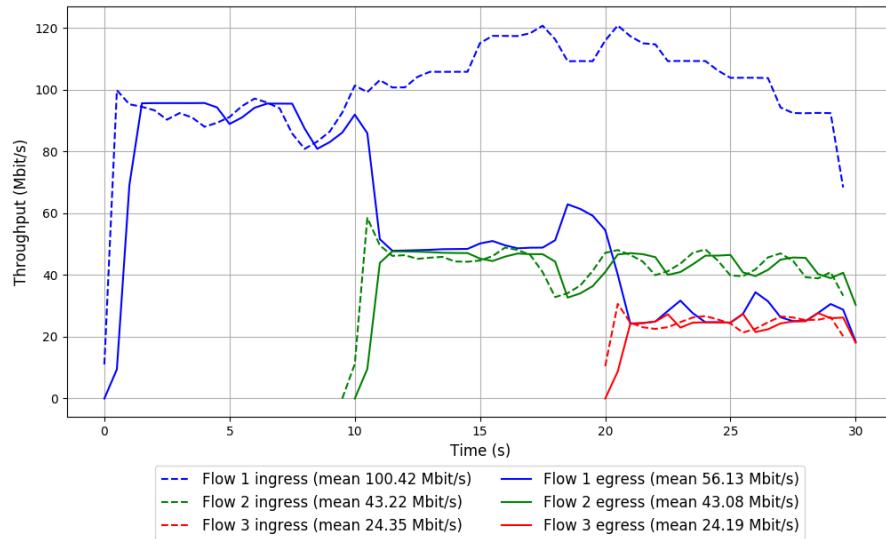


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-10-26 09:56:19
End at: 2018-10-26 09:56:49
Local clock offset: 0.65 ms
Remote clock offset: -3.103 ms

# Below is generated by plot.py at 2018-10-26 11:51:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.71 Mbit/s
95th percentile per-packet one-way delay: 664.597 ms
Loss rate: 32.58%
-- Flow 1:
Average throughput: 56.13 Mbit/s
95th percentile per-packet one-way delay: 681.868 ms
Loss rate: 44.23%
-- Flow 2:
Average throughput: 43.08 Mbit/s
95th percentile per-packet one-way delay: 174.572 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 24.19 Mbit/s
95th percentile per-packet one-way delay: 169.533 ms
Loss rate: 1.30%
```

Run 1: Report of PCC-Expr — Data Link

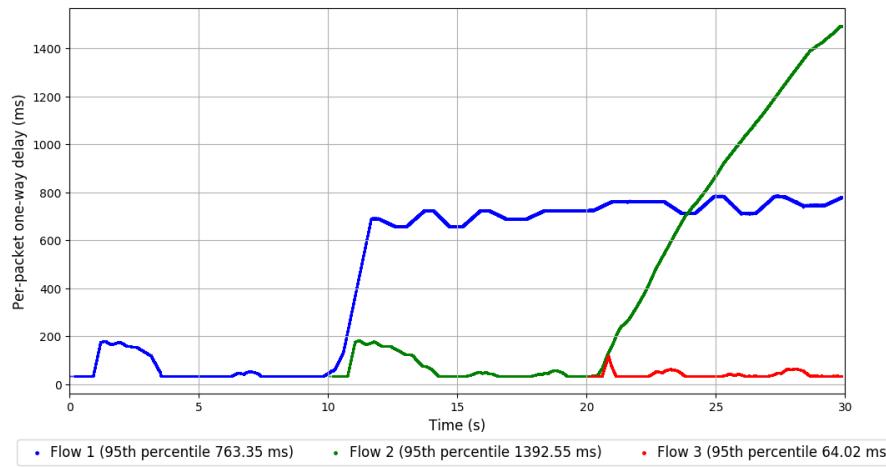
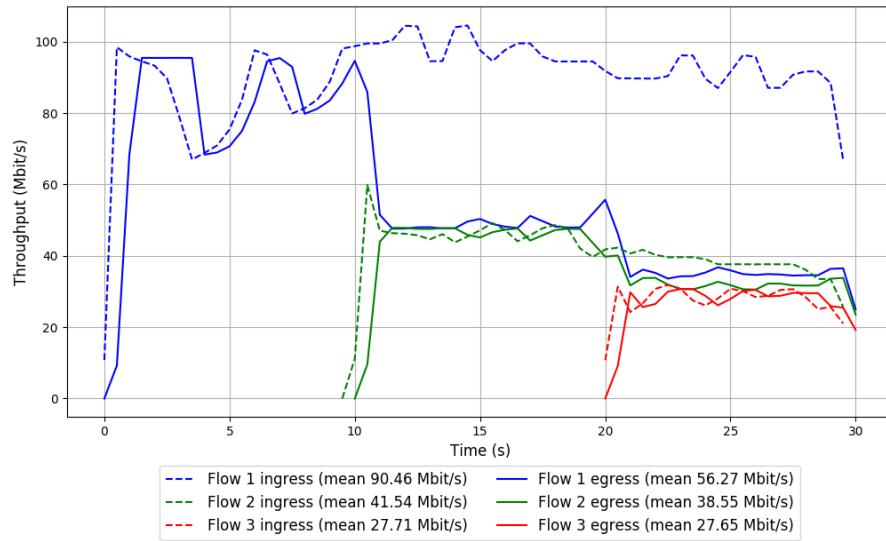


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-26 10:21:13
End at: 2018-10-26 10:21:43
Local clock offset: -3.069 ms
Remote clock offset: -2.244 ms

# Below is generated by plot.py at 2018-10-26 11:51:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.99 Mbit/s
95th percentile per-packet one-way delay: 945.833 ms
Loss rate: 28.65%
-- Flow 1:
Average throughput: 56.27 Mbit/s
95th percentile per-packet one-way delay: 763.347 ms
Loss rate: 37.93%
-- Flow 2:
Average throughput: 38.55 Mbit/s
95th percentile per-packet one-way delay: 1392.545 ms
Loss rate: 7.50%
-- Flow 3:
Average throughput: 27.65 Mbit/s
95th percentile per-packet one-way delay: 64.023 ms
Loss rate: 0.88%
```

Run 2: Report of PCC-Expr — Data Link

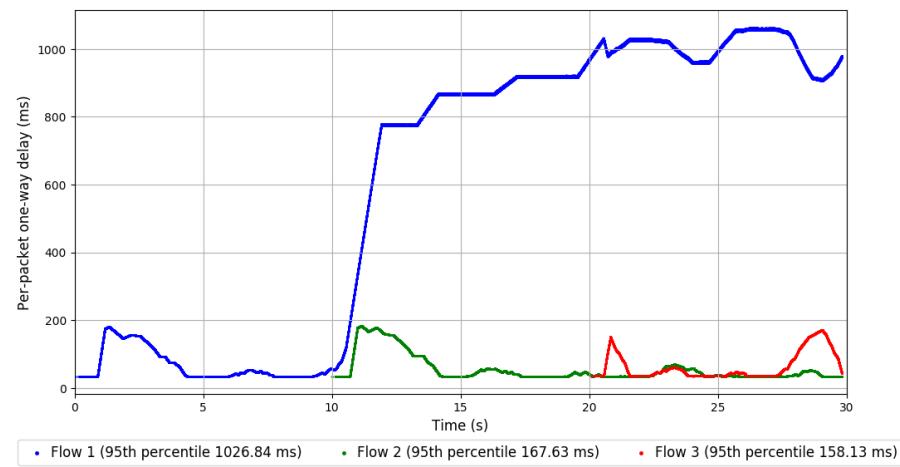
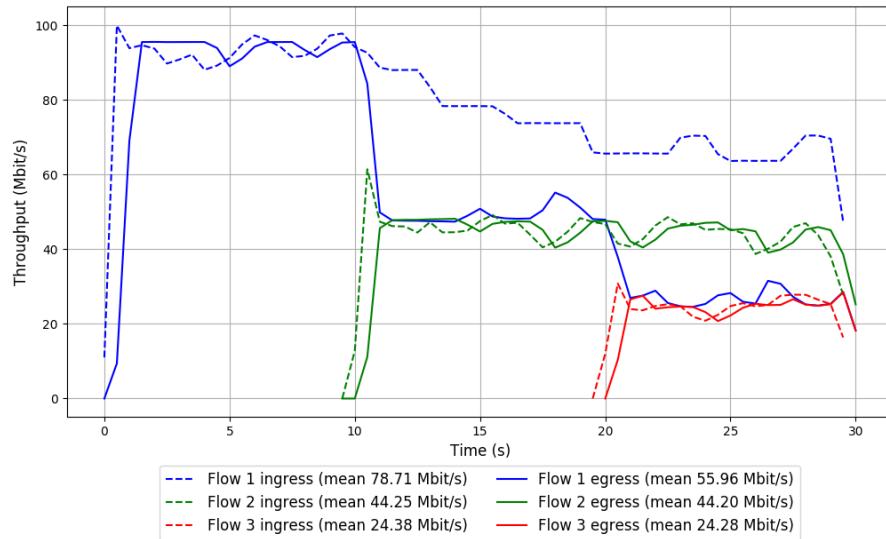


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-26 10:46:17
End at: 2018-10-26 10:46:47
Local clock offset: -0.195 ms
Remote clock offset: -2.022 ms

# Below is generated by plot.py at 2018-10-26 11:51:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.37 Mbit/s
95th percentile per-packet one-way delay: 1001.254 ms
Loss rate: 19.86%
-- Flow 1:
Average throughput: 55.96 Mbit/s
95th percentile per-packet one-way delay: 1026.844 ms
Loss rate: 29.05%
-- Flow 2:
Average throughput: 44.20 Mbit/s
95th percentile per-packet one-way delay: 167.635 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 24.28 Mbit/s
95th percentile per-packet one-way delay: 158.128 ms
Loss rate: 1.07%
```

Run 3: Report of PCC-Expr — Data Link

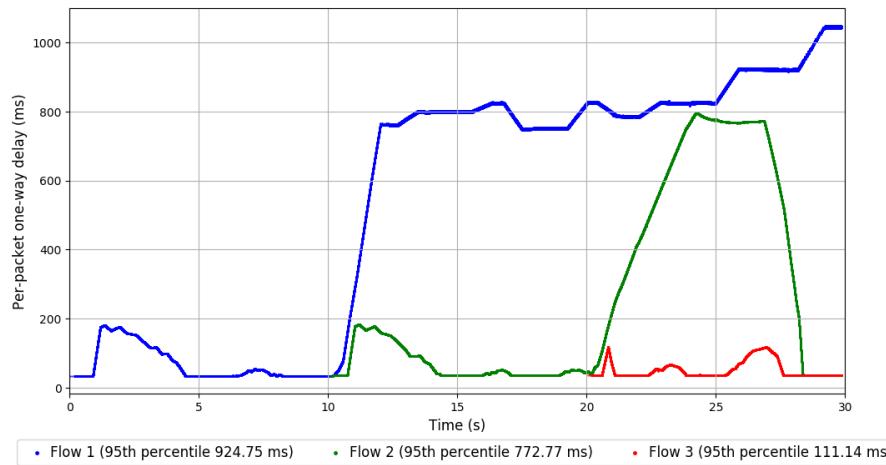
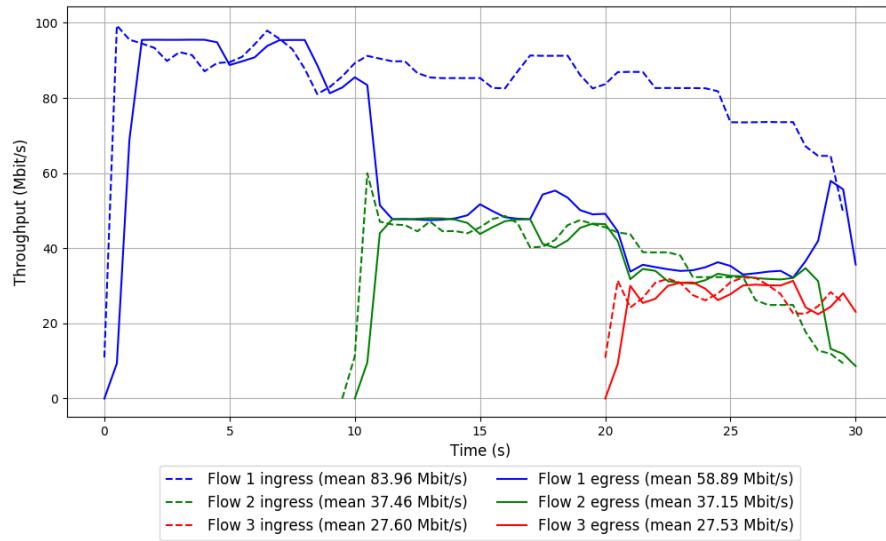


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-26 11:11:06
End at: 2018-10-26 11:11:36
Local clock offset: 0.491 ms
Remote clock offset: -1.497 ms

# Below is generated by plot.py at 2018-10-26 11:51:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.64 Mbit/s
95th percentile per-packet one-way delay: 920.609 ms
Loss rate: 21.66%
-- Flow 1:
Average throughput: 58.89 Mbit/s
95th percentile per-packet one-way delay: 924.752 ms
Loss rate: 30.01%
-- Flow 2:
Average throughput: 37.15 Mbit/s
95th percentile per-packet one-way delay: 772.775 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 27.53 Mbit/s
95th percentile per-packet one-way delay: 111.143 ms
Loss rate: 0.91%
```

Run 4: Report of PCC-Expr — Data Link

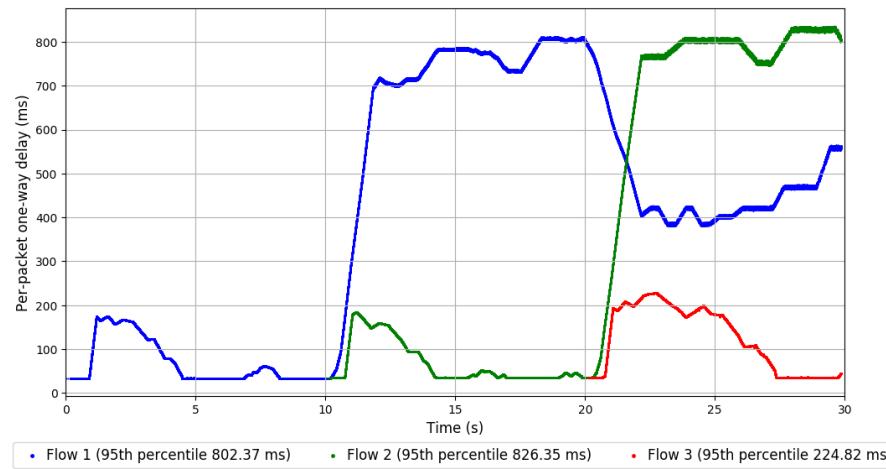
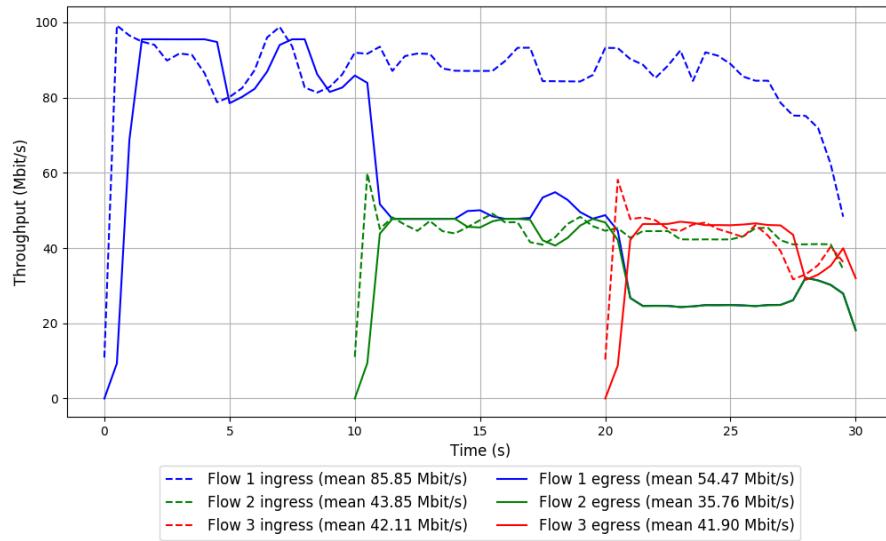


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-26 11:36:09
End at: 2018-10-26 11:36:39
Local clock offset: 0.55 ms
Remote clock offset: -1.319 ms

# Below is generated by plot.py at 2018-10-26 11:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.01 Mbit/s
95th percentile per-packet one-way delay: 805.469 ms
Loss rate: 28.79%
-- Flow 1:
Average throughput: 54.47 Mbit/s
95th percentile per-packet one-way delay: 802.372 ms
Loss rate: 36.69%
-- Flow 2:
Average throughput: 35.76 Mbit/s
95th percentile per-packet one-way delay: 826.352 ms
Loss rate: 18.71%
-- Flow 3:
Average throughput: 41.90 Mbit/s
95th percentile per-packet one-way delay: 224.825 ms
Loss rate: 1.16%
```

Run 5: Report of PCC-Expr — Data Link

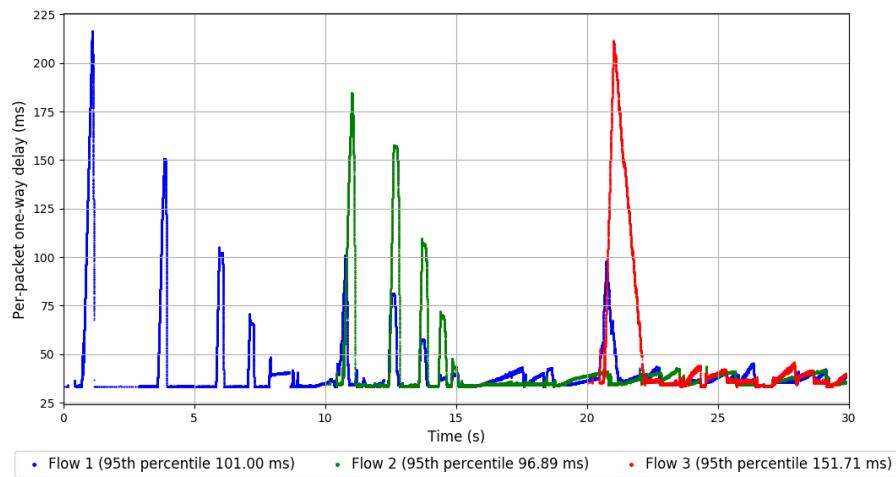
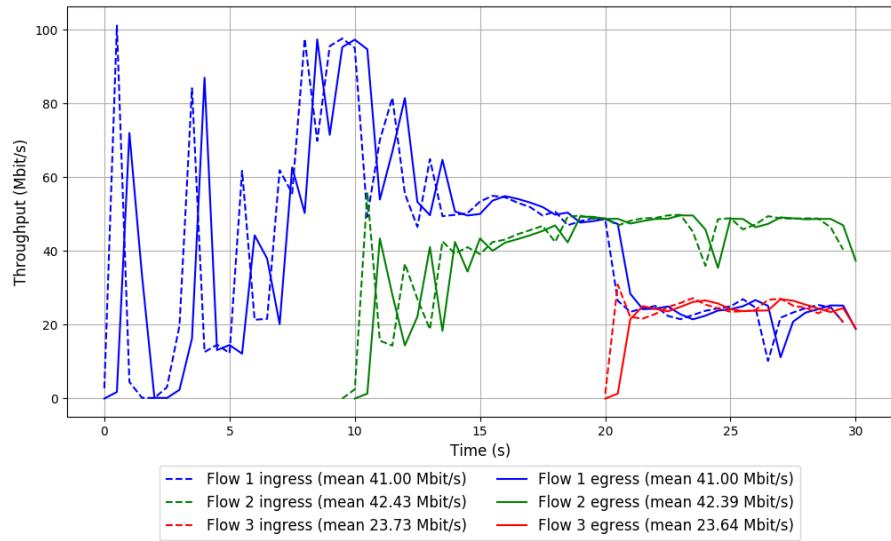


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-10-26 09:54:57
End at: 2018-10-26 09:55:27
Local clock offset: 0.65 ms
Remote clock offset: -3.225 ms

# Below is generated by plot.py at 2018-10-26 11:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.97 Mbit/s
95th percentile per-packet one-way delay: 102.081 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 41.00 Mbit/s
95th percentile per-packet one-way delay: 101.003 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 42.39 Mbit/s
95th percentile per-packet one-way delay: 96.888 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 23.64 Mbit/s
95th percentile per-packet one-way delay: 151.714 ms
Loss rate: 1.03%
```

Run 1: Report of QUIC Cubic — Data Link

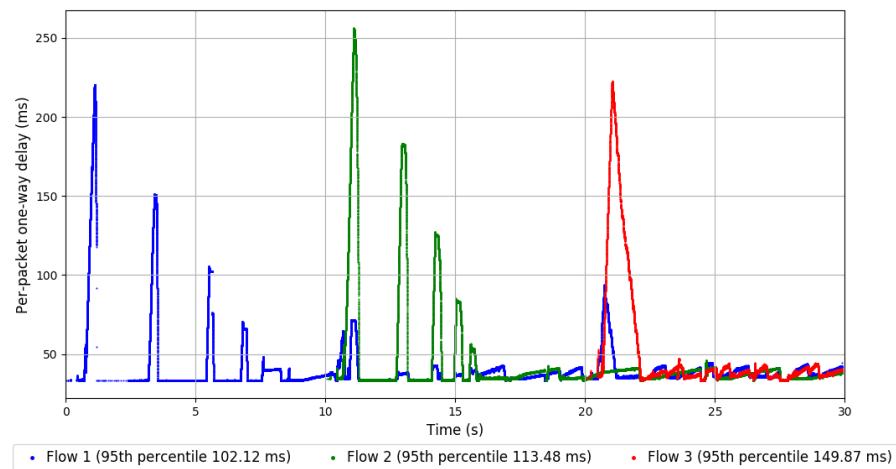
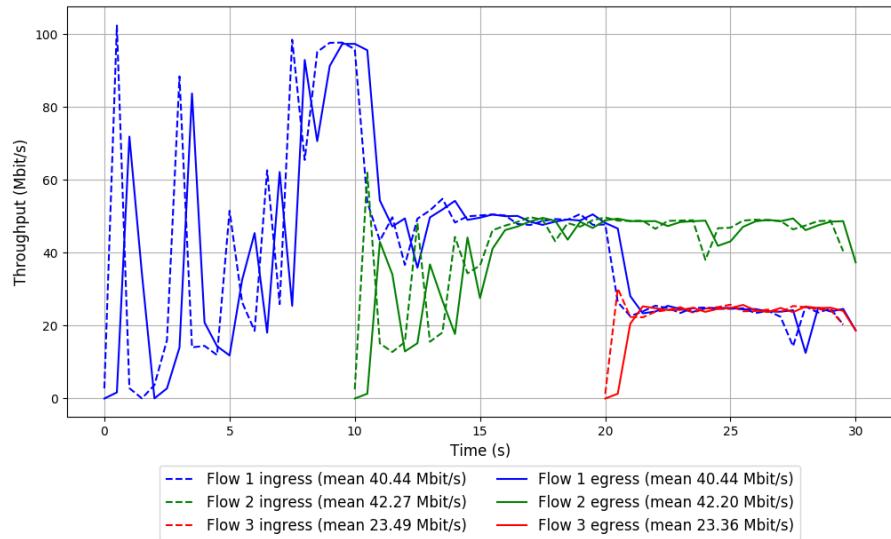


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-26 10:19:50
End at: 2018-10-26 10:20:20
Local clock offset: -2.966 ms
Remote clock offset: -2.312 ms

# Below is generated by plot.py at 2018-10-26 11:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.17 Mbit/s
95th percentile per-packet one-way delay: 106.881 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 40.44 Mbit/s
95th percentile per-packet one-way delay: 102.117 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 42.20 Mbit/s
95th percentile per-packet one-way delay: 113.483 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 23.36 Mbit/s
95th percentile per-packet one-way delay: 149.869 ms
Loss rate: 1.20%
```

Run 2: Report of QUIC Cubic — Data Link

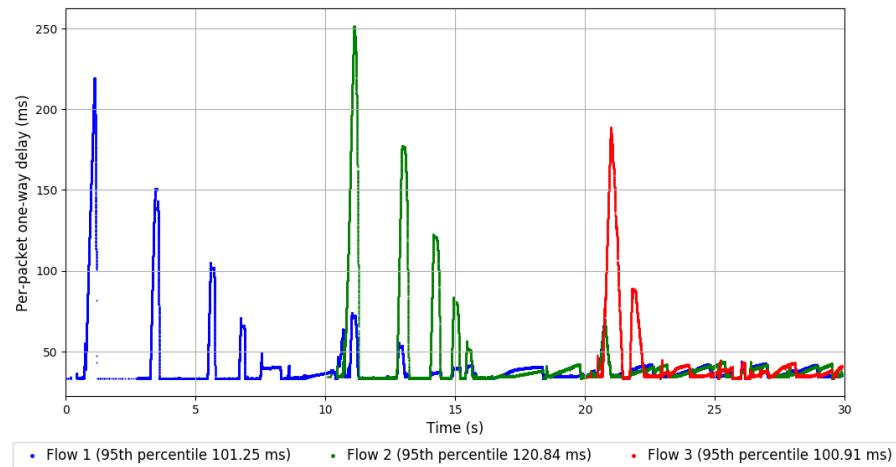
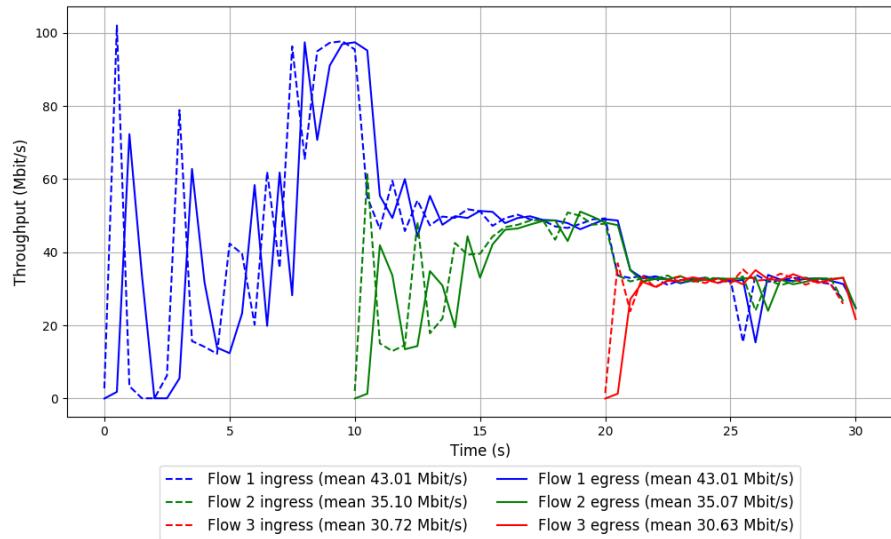


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-26 10:44:55
End at: 2018-10-26 10:45:25
Local clock offset: -0.344 ms
Remote clock offset: -1.895 ms

# Below is generated by plot.py at 2018-10-26 11:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.39 Mbit/s
95th percentile per-packet one-way delay: 102.146 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 43.01 Mbit/s
95th percentile per-packet one-way delay: 101.249 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 35.07 Mbit/s
95th percentile per-packet one-way delay: 120.841 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 30.63 Mbit/s
95th percentile per-packet one-way delay: 100.907 ms
Loss rate: 0.91%
```

Run 3: Report of QUIC Cubic — Data Link

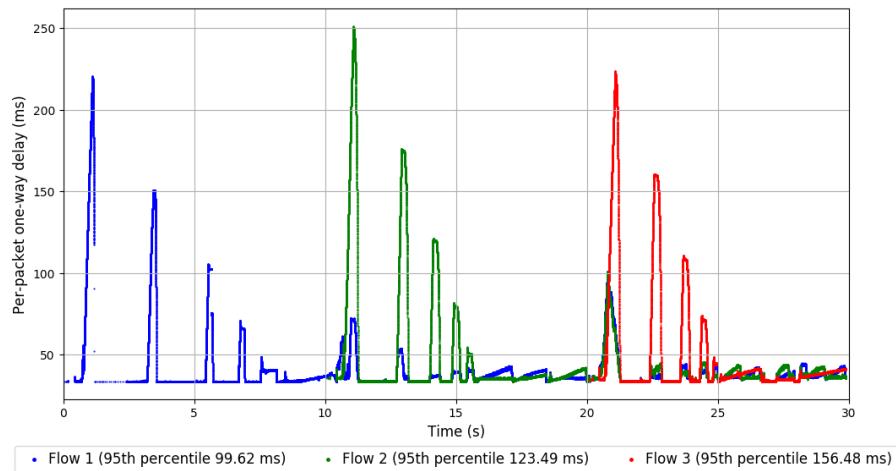
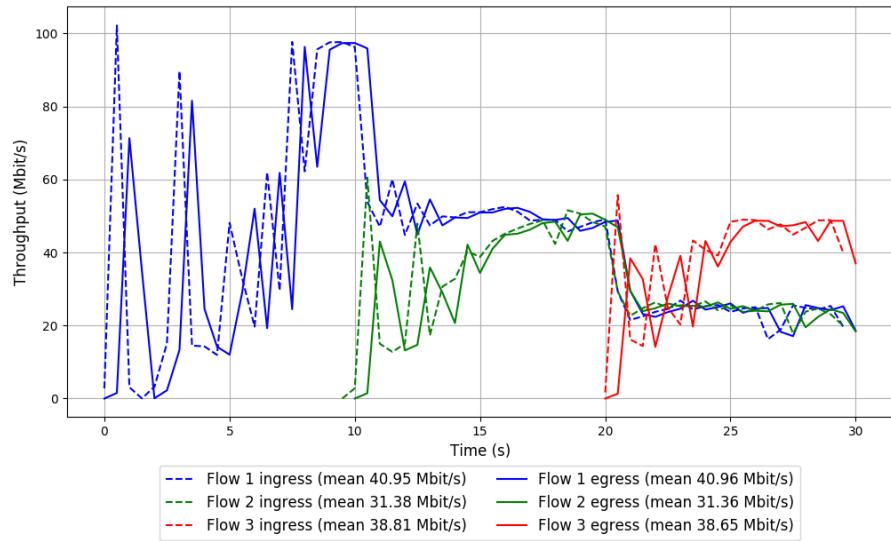


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-26 11:09:43
End at: 2018-10-26 11:10:13
Local clock offset: 0.494 ms
Remote clock offset: -1.553 ms

# Below is generated by plot.py at 2018-10-26 11:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.56 Mbit/s
95th percentile per-packet one-way delay: 118.468 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 40.96 Mbit/s
95th percentile per-packet one-way delay: 99.623 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 31.36 Mbit/s
95th percentile per-packet one-way delay: 123.494 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 38.65 Mbit/s
95th percentile per-packet one-way delay: 156.483 ms
Loss rate: 1.04%
```

Run 4: Report of QUIC Cubic — Data Link

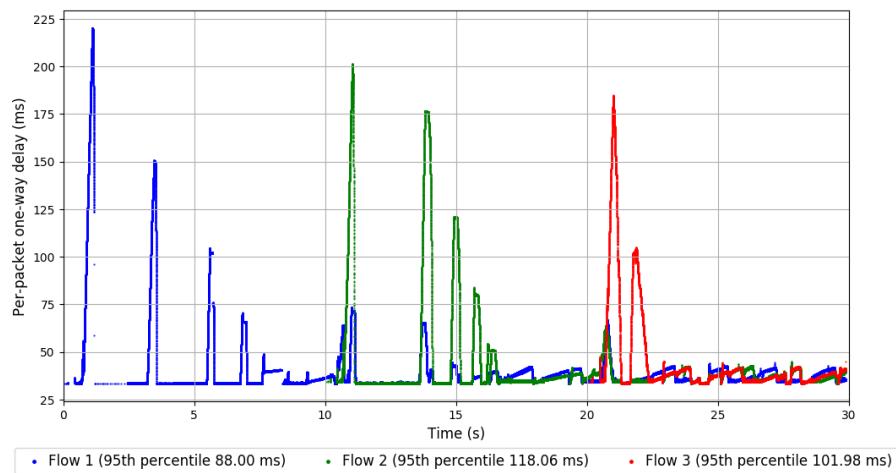
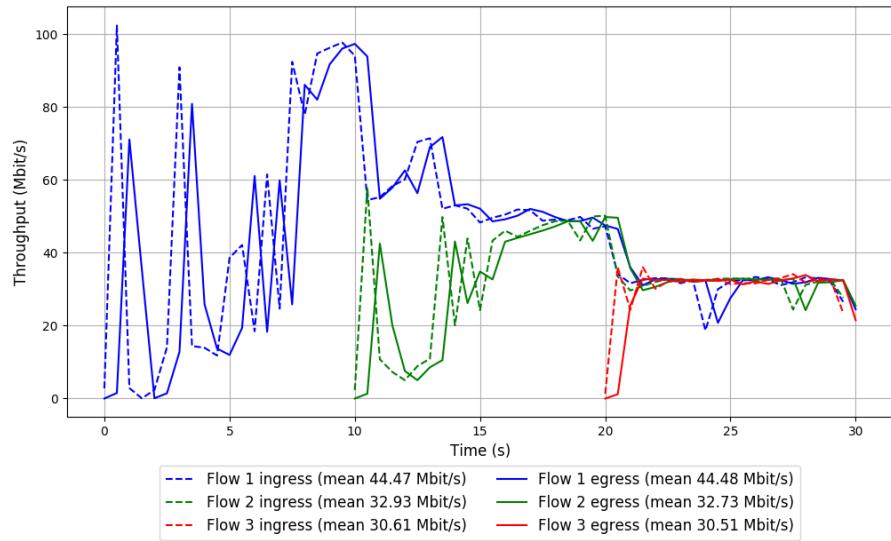


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-26 11:34:47
End at: 2018-10-26 11:35:17
Local clock offset: 0.588 ms
Remote clock offset: -1.26 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.28 Mbit/s
95th percentile per-packet one-way delay: 101.762 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 44.48 Mbit/s
95th percentile per-packet one-way delay: 87.998 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 32.73 Mbit/s
95th percentile per-packet one-way delay: 118.058 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 30.51 Mbit/s
95th percentile per-packet one-way delay: 101.981 ms
Loss rate: 0.92%
```

Run 5: Report of QUIC Cubic — Data Link

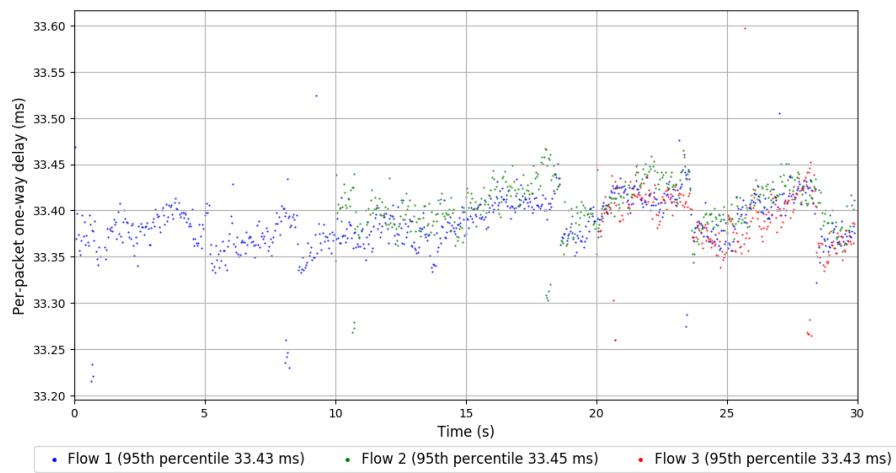
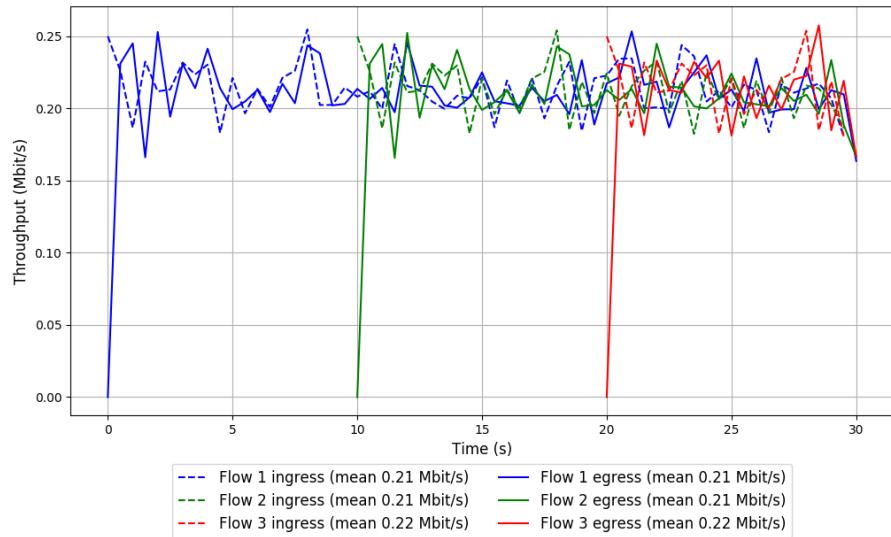


```
Run 1: Statistics of SCReAM
```

```
Start at: 2018-10-26 10:00:34
End at: 2018-10-26 10:01:04
Local clock offset: 0.695 ms
Remote clock offset: -2.95 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.438 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.426 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.448 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.431 ms
Loss rate: 0.71%
```

Run 1: Report of SCReAM — Data Link

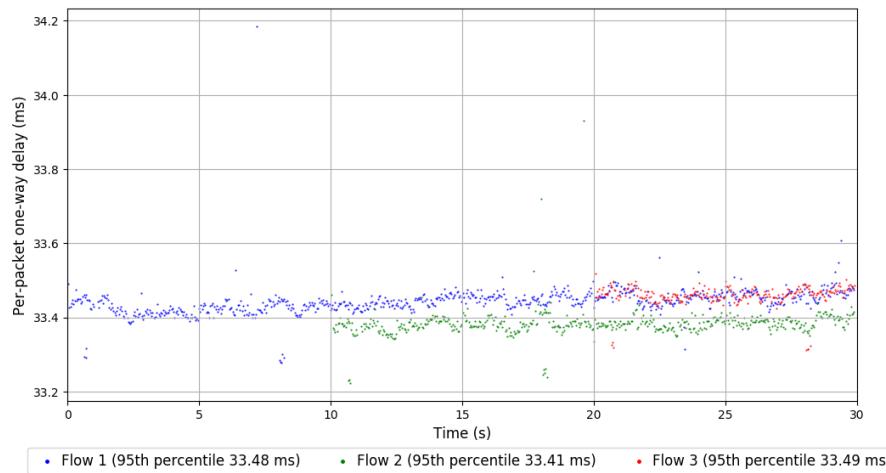
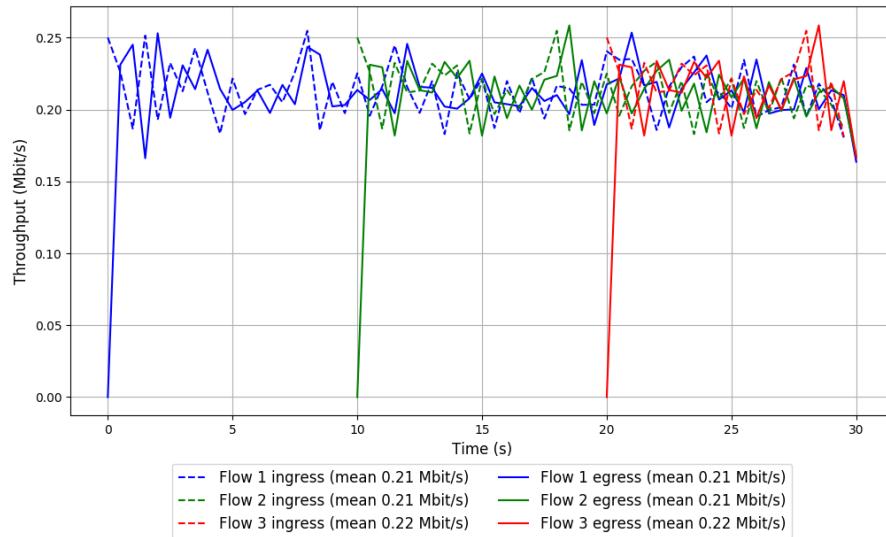


Run 2: Statistics of SCReAM

```
Start at: 2018-10-26 10:25:30
End at: 2018-10-26 10:26:00
Local clock offset: -3.355 ms
Remote clock offset: -2.073 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.480 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.480 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.413 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.488 ms
Loss rate: 0.71%
```

Run 2: Report of SCReAM — Data Link

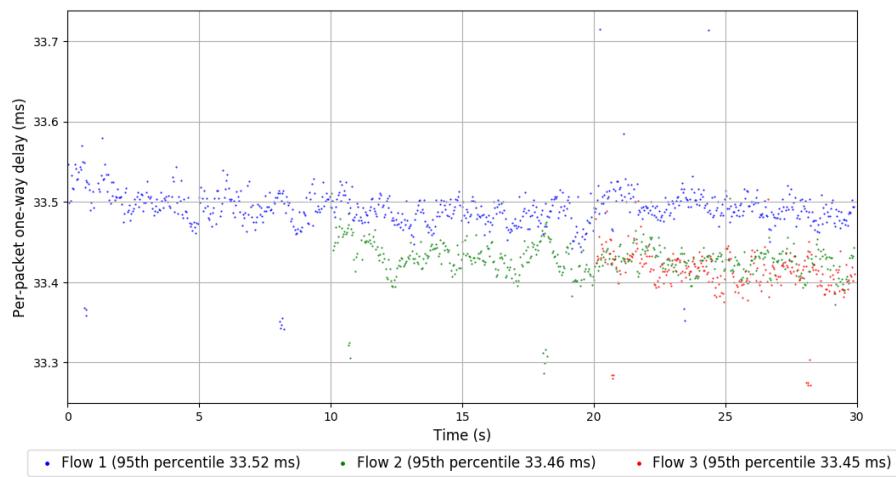
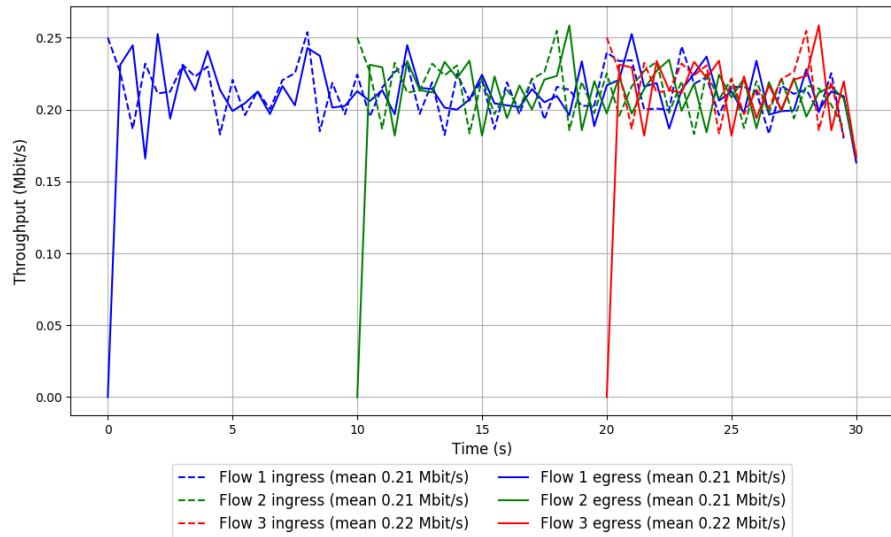


Run 3: Statistics of SCReAM

```
Start at: 2018-10-26 10:50:30
End at: 2018-10-26 10:51:00
Local clock offset: 0.16 ms
Remote clock offset: -1.905 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.515 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.525 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.458 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.447 ms
Loss rate: 0.71%
```

Run 3: Report of SCReAM — Data Link

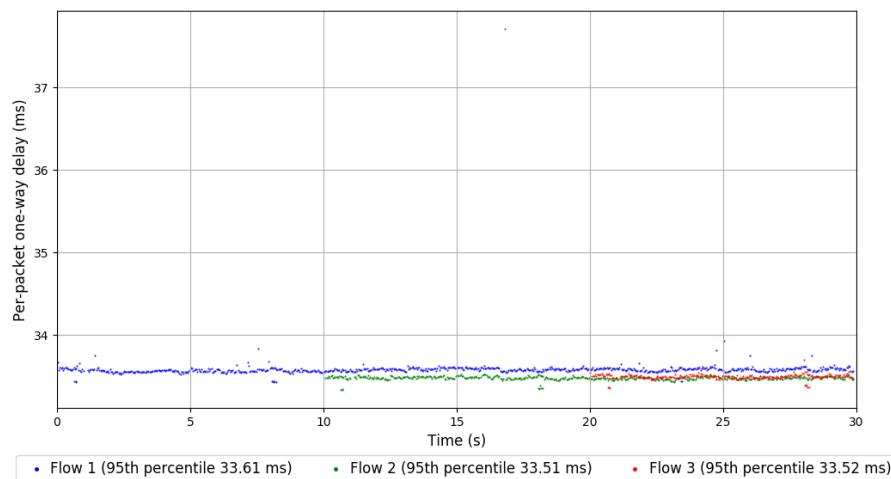
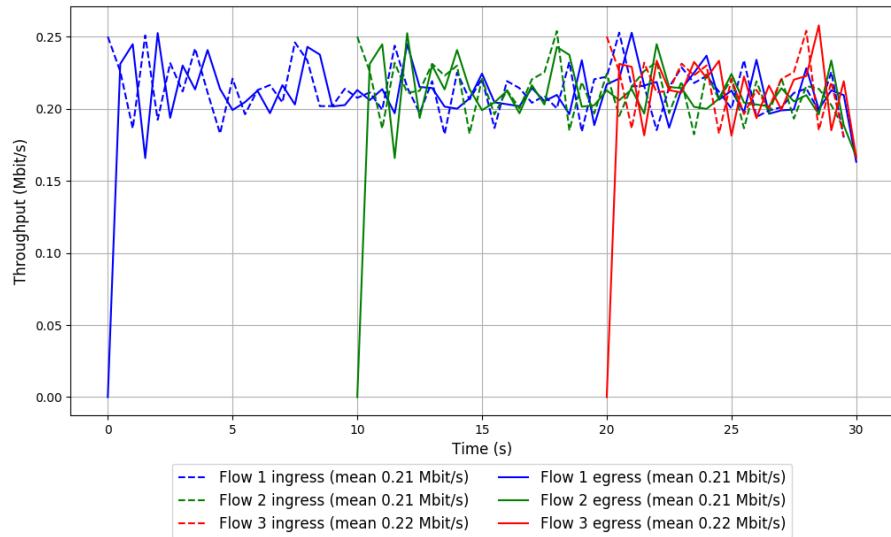


Run 4: Statistics of SCReAM

```
Start at: 2018-10-26 11:15:24
End at: 2018-10-26 11:15:54
Local clock offset: 0.476 ms
Remote clock offset: -1.229 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.601 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.609 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.505 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.525 ms
Loss rate: 0.71%
```

Run 4: Report of SCReAM — Data Link

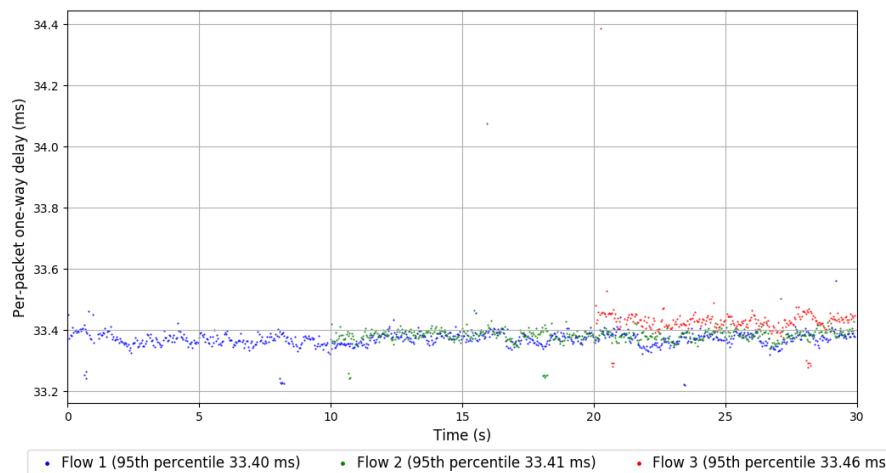
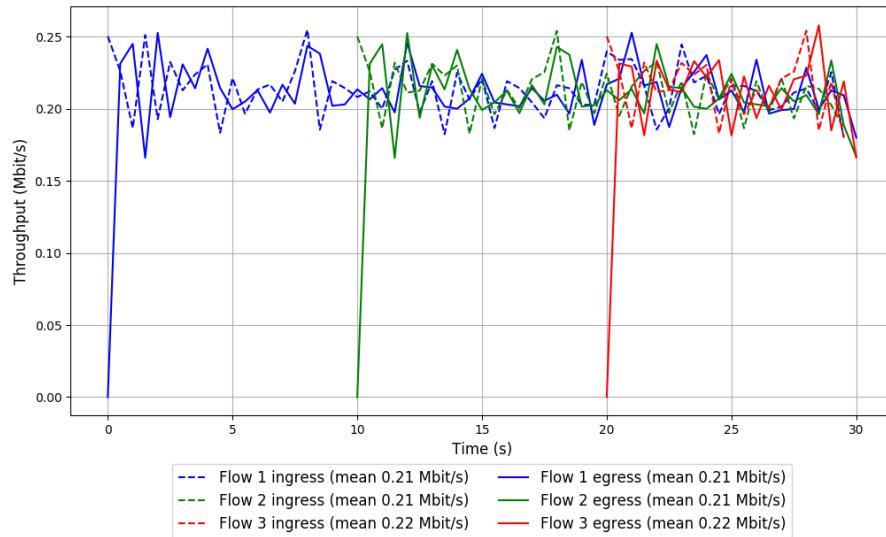


Run 5: Statistics of SCReAM

```
Start at: 2018-10-26 11:40:23
End at: 2018-10-26 11:40:53
Local clock offset: 0.525 ms
Remote clock offset: -1.33 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.440 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.402 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.411 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.461 ms
Loss rate: 0.71%
```

Run 5: Report of SCReAM — Data Link

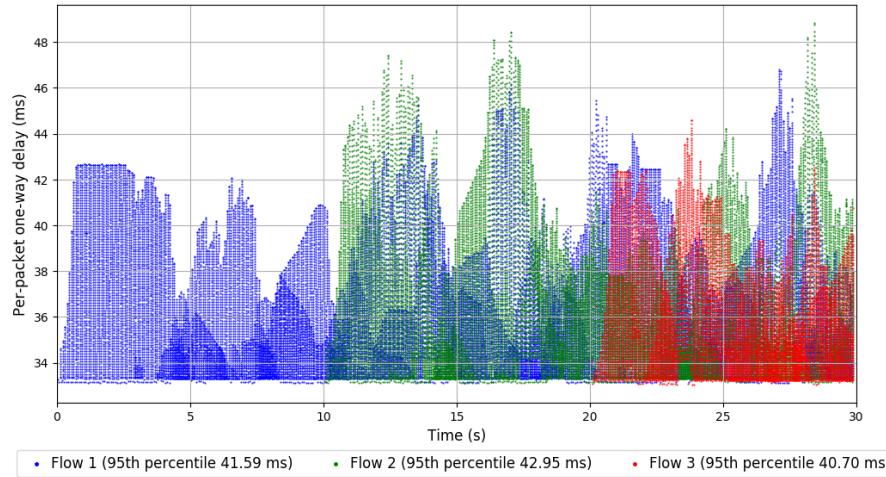
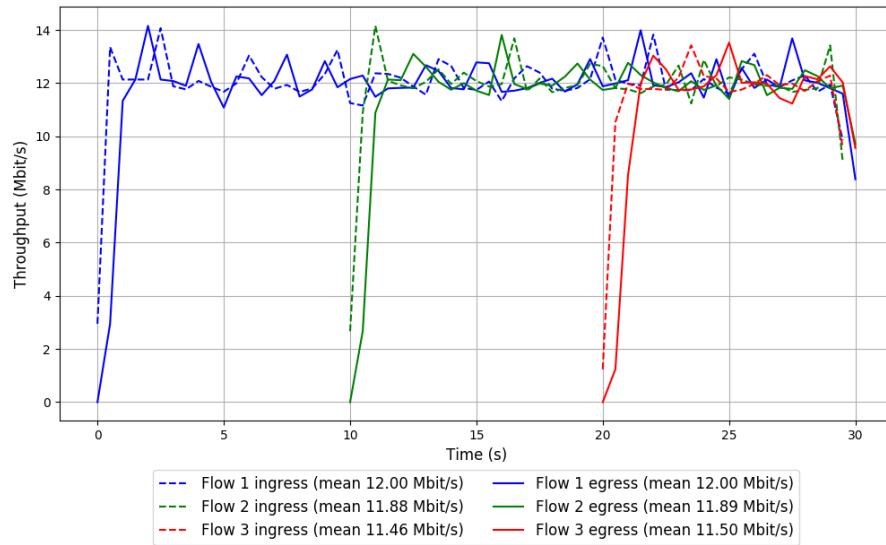


Run 1: Statistics of Sprout

```
Start at: 2018-10-26 09:41:08
End at: 2018-10-26 09:41:38
Local clock offset: 0.576 ms
Remote clock offset: -3.493 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.67 Mbit/s
95th percentile per-packet one-way delay: 41.840 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 12.00 Mbit/s
95th percentile per-packet one-way delay: 41.592 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 42.946 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 11.50 Mbit/s
95th percentile per-packet one-way delay: 40.699 ms
Loss rate: 0.24%
```

Run 1: Report of Sprout — Data Link

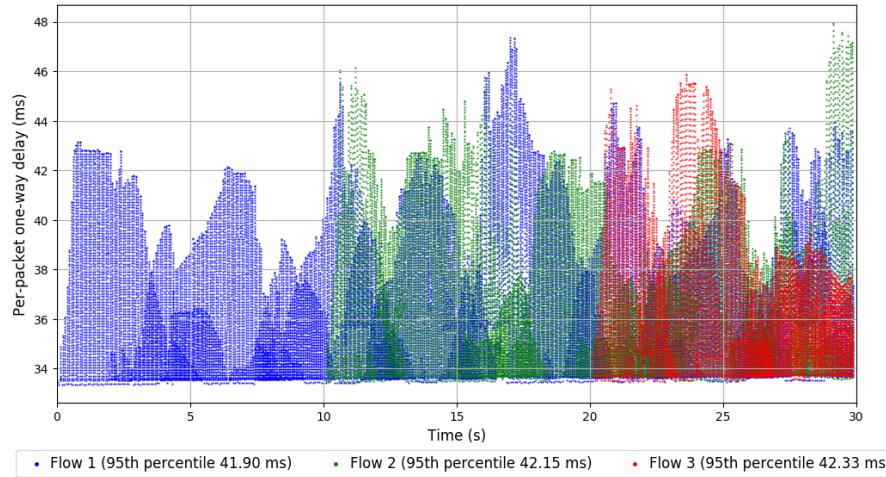
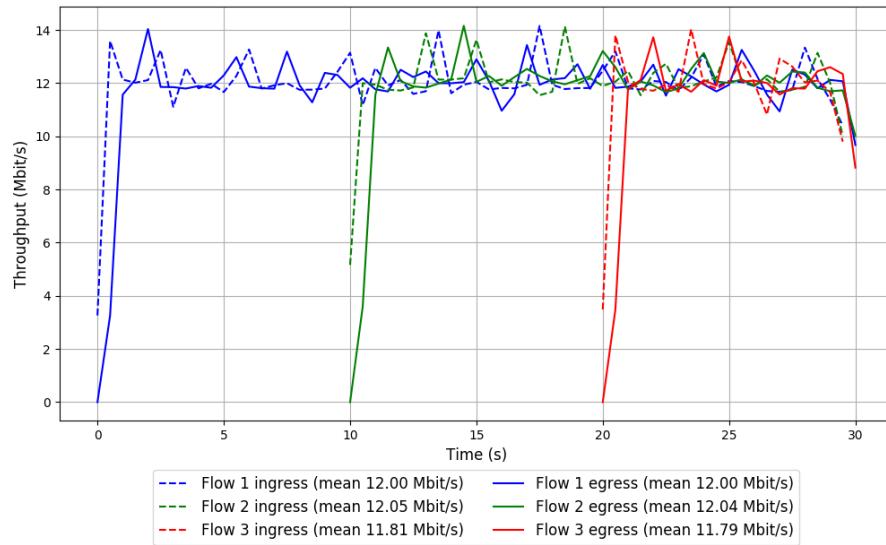


Run 2: Statistics of Sprout

```
Start at: 2018-10-26 10:06:00
End at: 2018-10-26 10:06:30
Local clock offset: -0.836 ms
Remote clock offset: -2.821 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.88 Mbit/s
95th percentile per-packet one-way delay: 42.049 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 12.00 Mbit/s
95th percentile per-packet one-way delay: 41.902 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 12.04 Mbit/s
95th percentile per-packet one-way delay: 42.154 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 42.325 ms
Loss rate: 0.57%
```

Run 2: Report of Sprout — Data Link

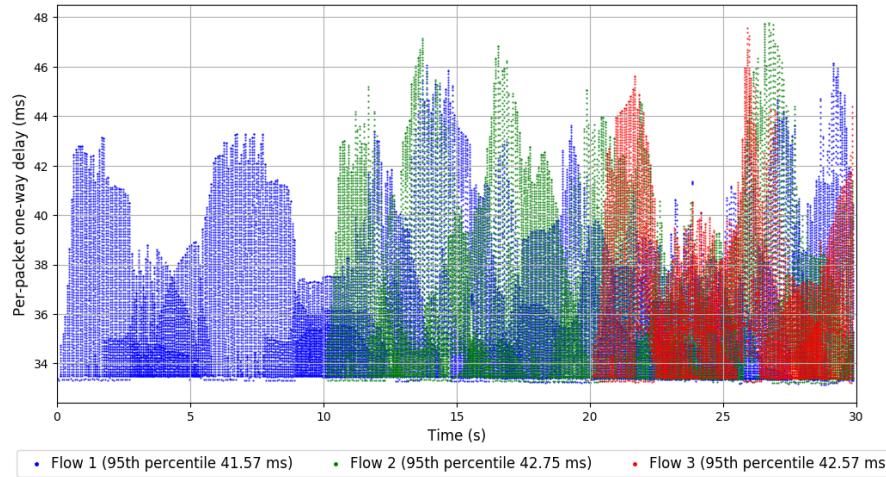
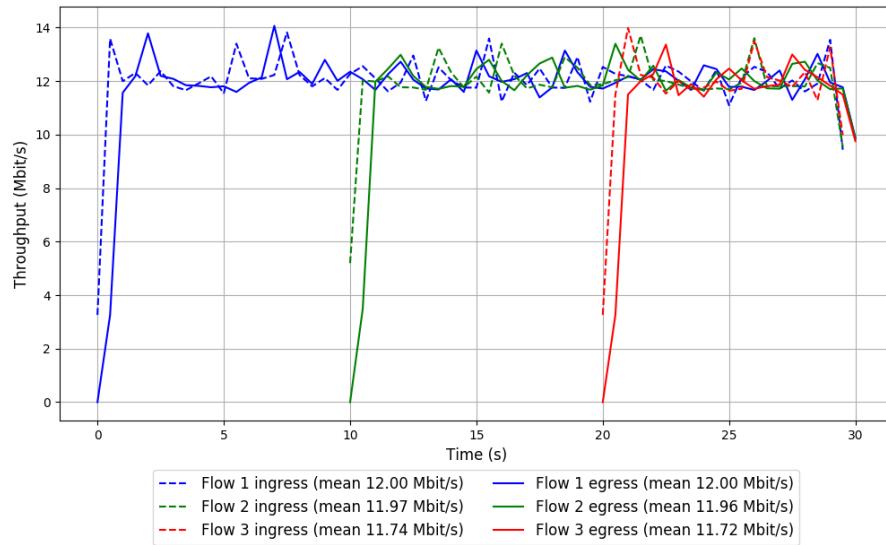


Run 3: Statistics of Sprout

```
Start at: 2018-10-26 10:30:59
End at: 2018-10-26 10:31:29
Local clock offset: -3.666 ms
Remote clock offset: -2.049 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.80 Mbit/s
95th percentile per-packet one-way delay: 42.157 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 12.00 Mbit/s
95th percentile per-packet one-way delay: 41.569 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 11.96 Mbit/s
95th percentile per-packet one-way delay: 42.749 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 42.569 ms
Loss rate: 0.86%
```

Run 3: Report of Sprout — Data Link

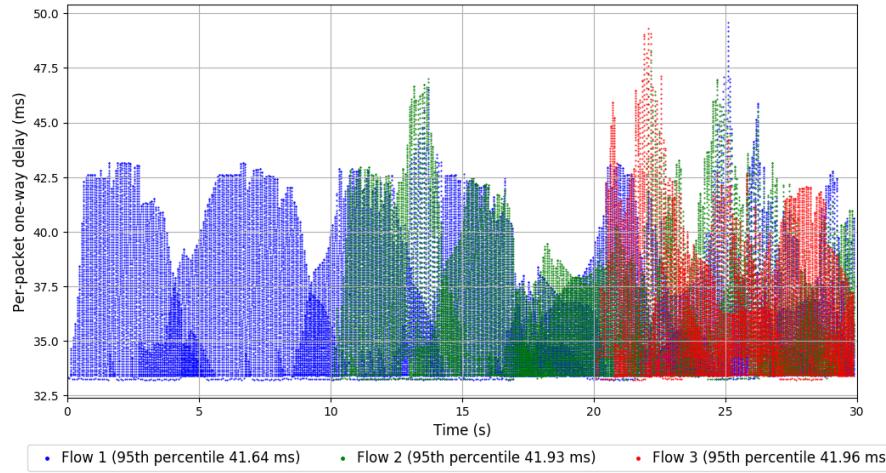
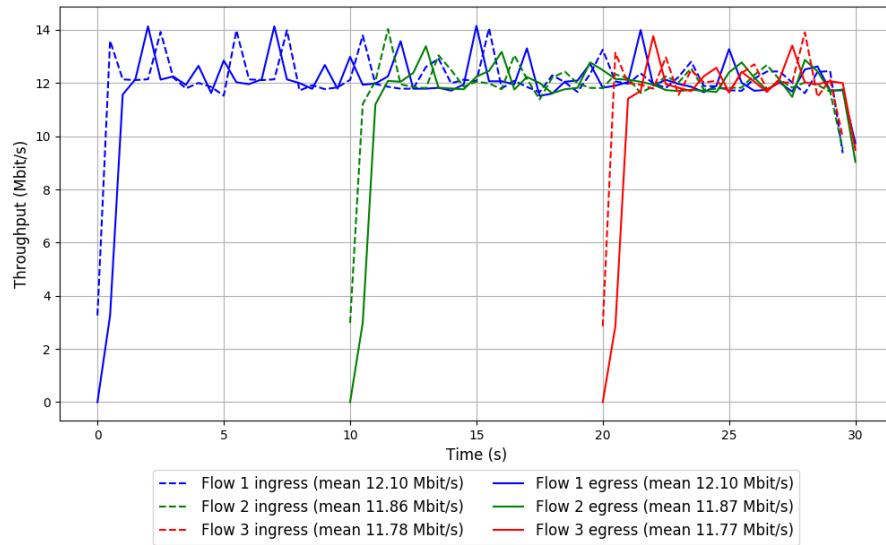


Run 4: Statistics of Sprout

```
Start at: 2018-10-26 10:55:56
End at: 2018-10-26 10:56:26
Local clock offset: 0.467 ms
Remote clock offset: -1.746 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.86 Mbit/s
95th percentile per-packet one-way delay: 41.773 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 12.10 Mbit/s
95th percentile per-packet one-way delay: 41.641 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 41.931 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 41.959 ms
Loss rate: 0.85%
```

Run 4: Report of Sprout — Data Link

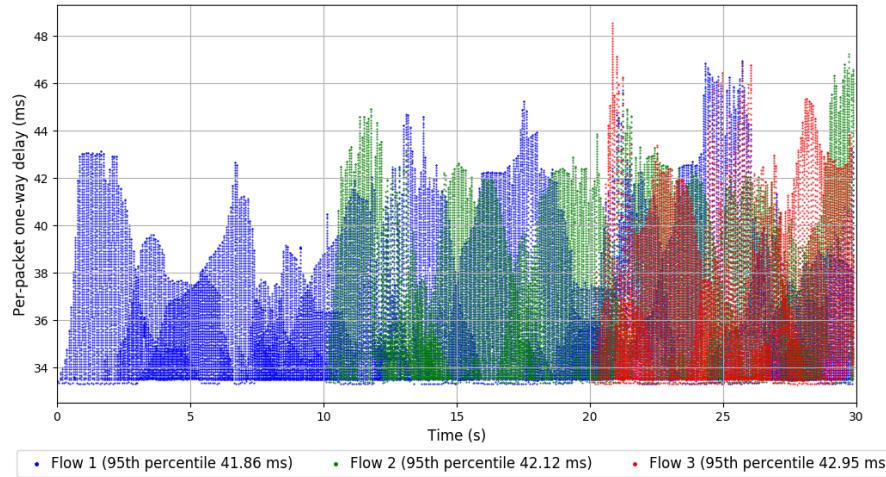
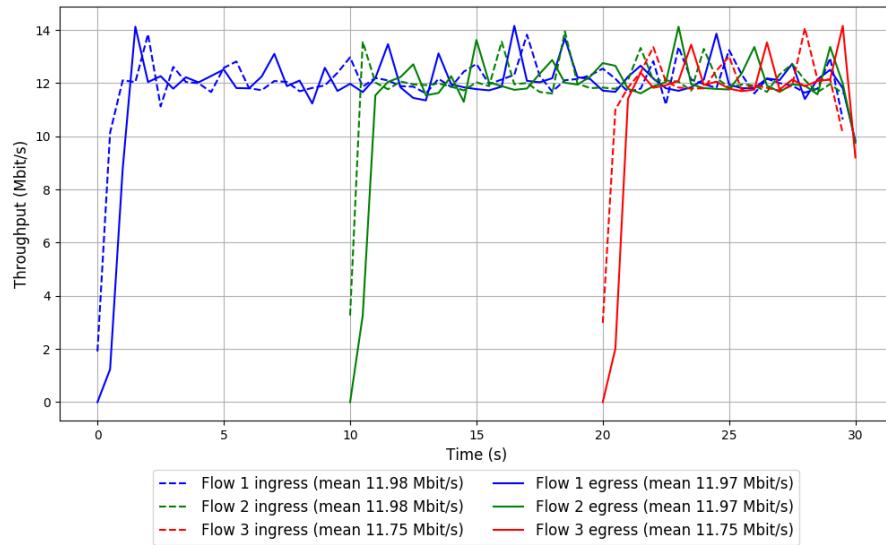


Run 5: Statistics of Sprout

```
Start at: 2018-10-26 11:20:57
End at: 2018-10-26 11:21:27
Local clock offset: 0.521 ms
Remote clock offset: -1.154 ms

# Below is generated by plot.py at 2018-10-26 11:52:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.80 Mbit/s
95th percentile per-packet one-way delay: 42.147 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 41.860 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 42.121 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 42.953 ms
Loss rate: 0.39%
```

Run 5: Report of Sprout — Data Link

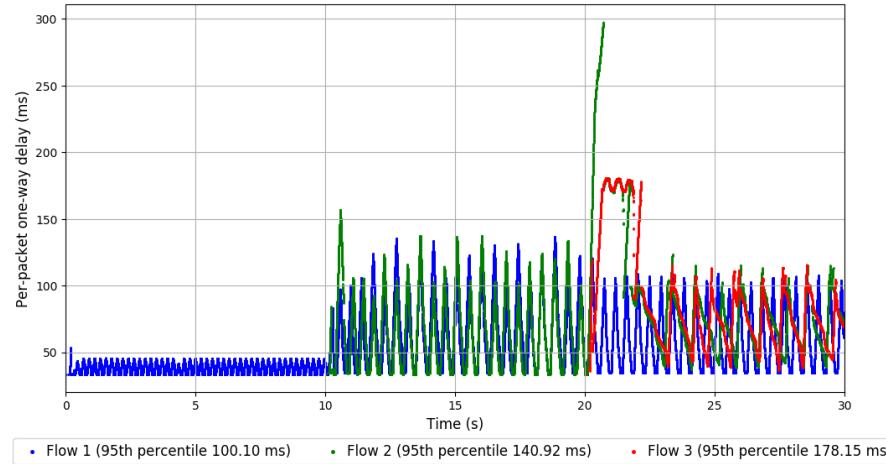
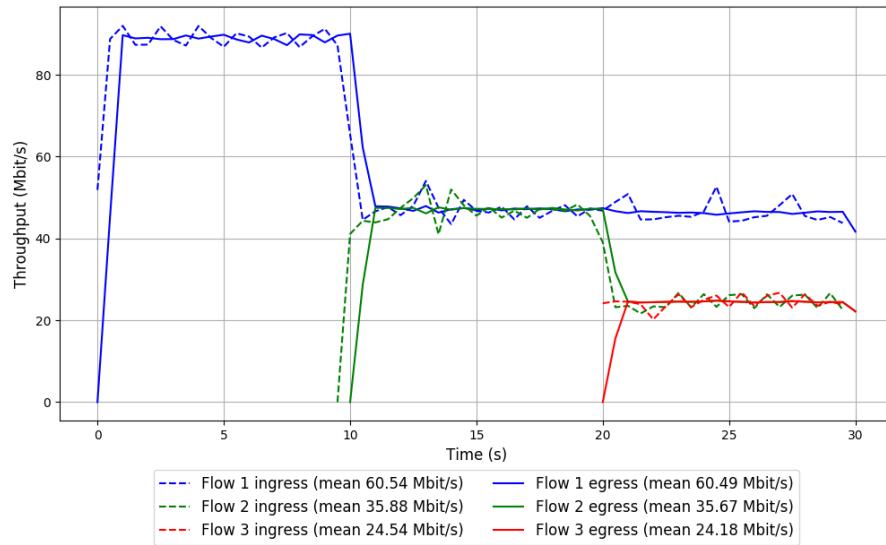


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-26 09:36:59
End at: 2018-10-26 09:37:29
Local clock offset: 0.577 ms
Remote clock offset: -3.722 ms

# Below is generated by plot.py at 2018-10-26 11:54:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.25 Mbit/s
95th percentile per-packet one-way delay: 113.750 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 60.49 Mbit/s
95th percentile per-packet one-way delay: 100.096 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 35.67 Mbit/s
95th percentile per-packet one-way delay: 140.919 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 24.18 Mbit/s
95th percentile per-packet one-way delay: 178.146 ms
Loss rate: 2.07%
```

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

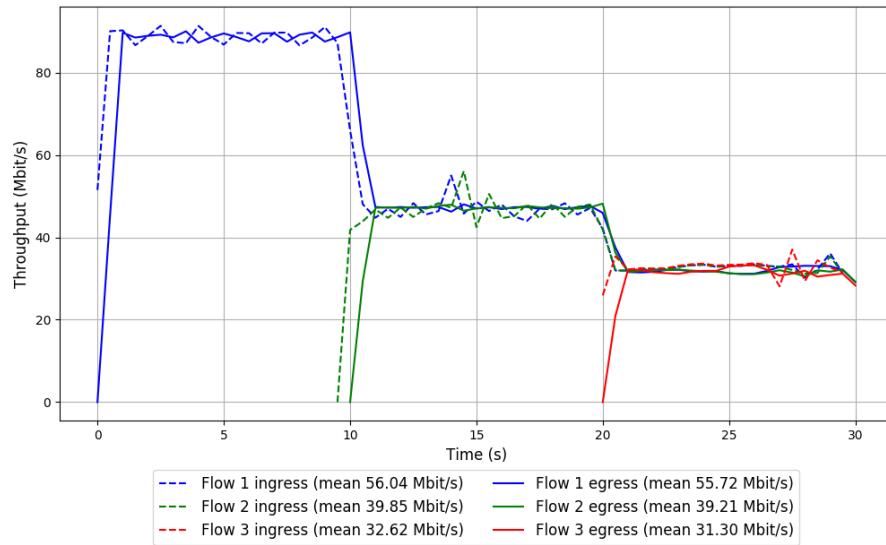


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-26 10:01:52
End at: 2018-10-26 10:02:22
Local clock offset: 0.587 ms
Remote clock offset: -2.924 ms

# Below is generated by plot.py at 2018-10-26 11:54:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.20 Mbit/s
95th percentile per-packet one-way delay: 126.641 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 55.72 Mbit/s
95th percentile per-packet one-way delay: 126.224 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 39.21 Mbit/s
95th percentile per-packet one-way delay: 127.628 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 31.30 Mbit/s
95th percentile per-packet one-way delay: 126.393 ms
Loss rate: 4.69%
```

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

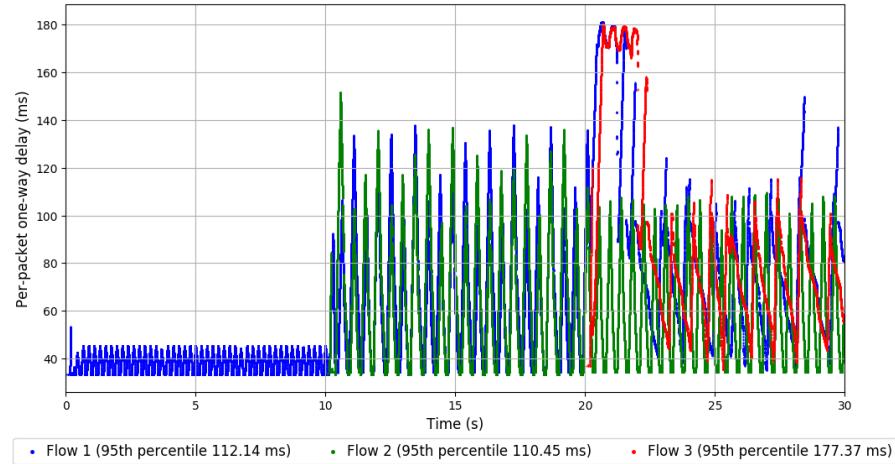
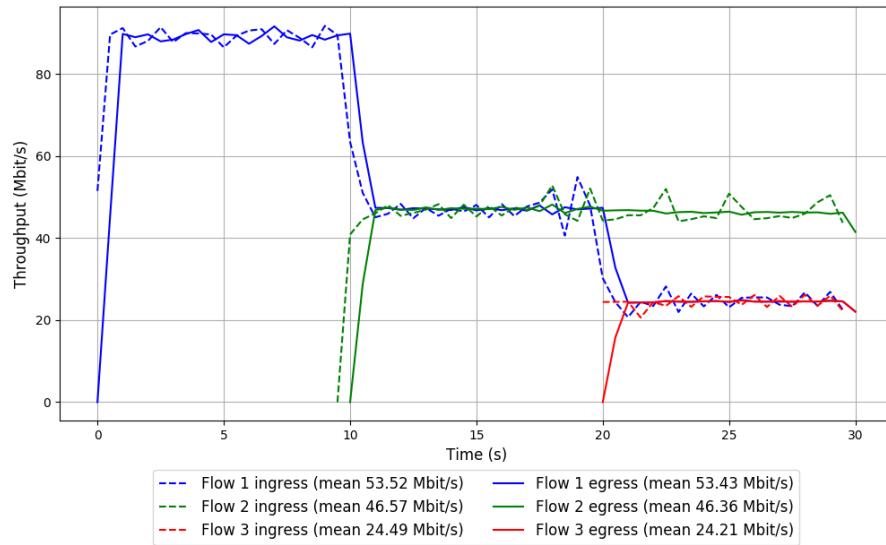


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-26 10:26:49
End at: 2018-10-26 10:27:19
Local clock offset: -3.436 ms
Remote clock offset: -2.049 ms

# Below is generated by plot.py at 2018-10-26 11:54:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.31 Mbit/s
95th percentile per-packet one-way delay: 116.776 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 53.43 Mbit/s
95th percentile per-packet one-way delay: 112.142 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 46.36 Mbit/s
95th percentile per-packet one-way delay: 110.451 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 24.21 Mbit/s
95th percentile per-packet one-way delay: 177.369 ms
Loss rate: 1.78%
```

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

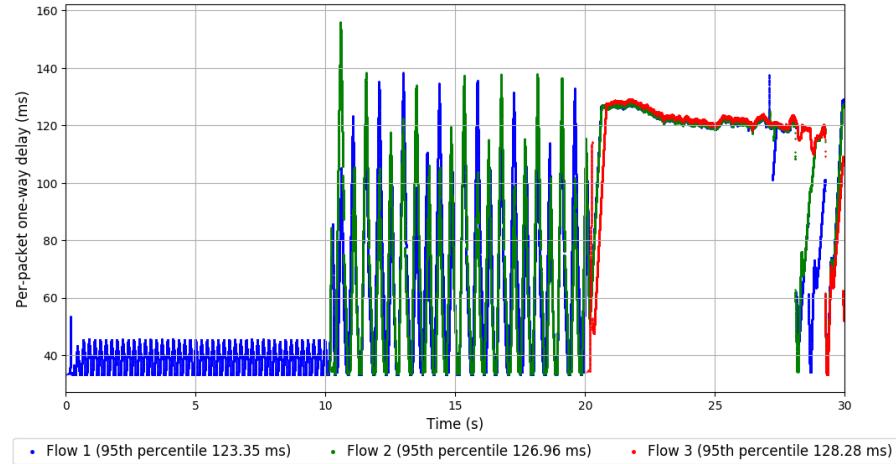
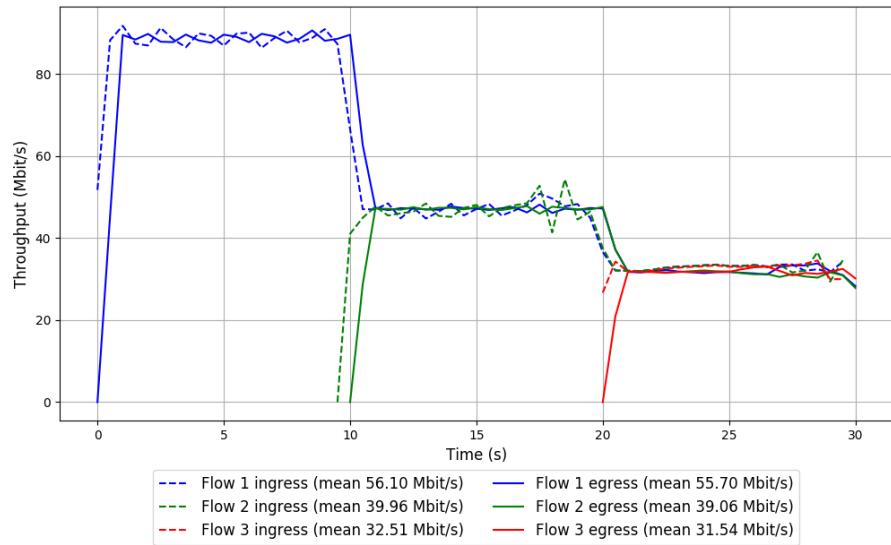


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-26 10:51:48
End at: 2018-10-26 10:52:18
Local clock offset: 0.263 ms
Remote clock offset: -1.835 ms

# Below is generated by plot.py at 2018-10-26 11:54:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.15 Mbit/s
95th percentile per-packet one-way delay: 126.713 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 55.70 Mbit/s
95th percentile per-packet one-way delay: 123.351 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 39.06 Mbit/s
95th percentile per-packet one-way delay: 126.964 ms
Loss rate: 2.58%
-- Flow 3:
Average throughput: 31.54 Mbit/s
95th percentile per-packet one-way delay: 128.279 ms
Loss rate: 3.61%
```

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

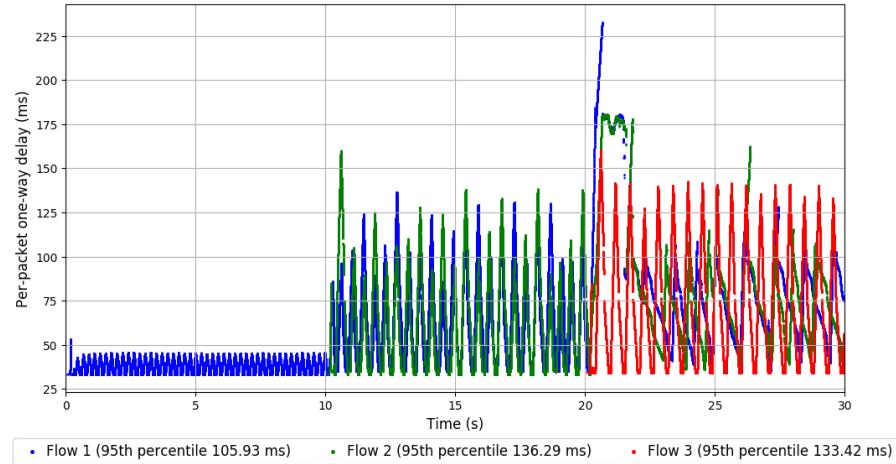
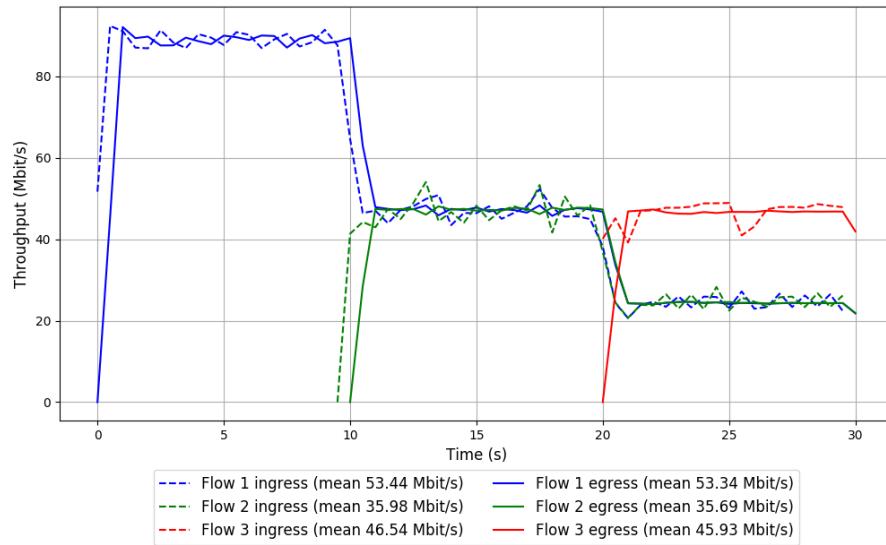


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-26 11:16:42
End at: 2018-10-26 11:17:12
Local clock offset: 0.489 ms
Remote clock offset: -1.119 ms

# Below is generated by plot.py at 2018-10-26 11:54:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.31 Mbit/s
95th percentile per-packet one-way delay: 124.669 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 53.34 Mbit/s
95th percentile per-packet one-way delay: 105.930 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 35.69 Mbit/s
95th percentile per-packet one-way delay: 136.294 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 45.93 Mbit/s
95th percentile per-packet one-way delay: 133.423 ms
Loss rate: 1.95%
```

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

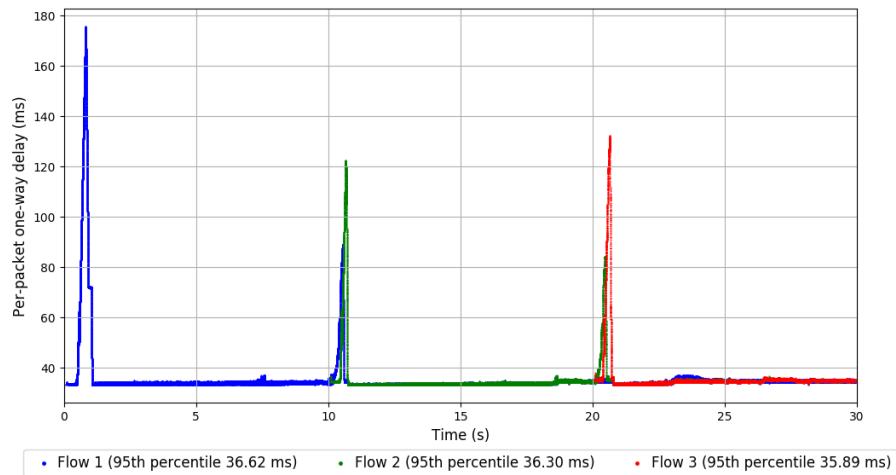
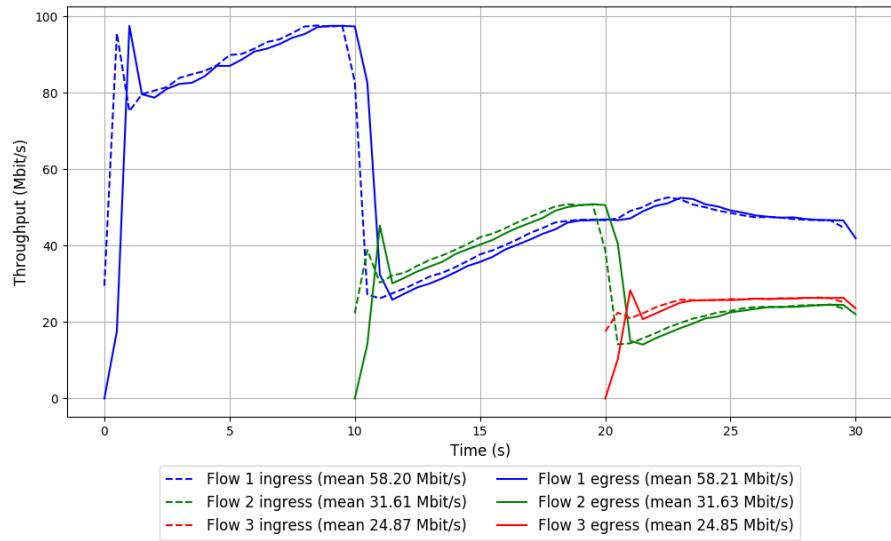


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-26 09:53:35
End at: 2018-10-26 09:54:05
Local clock offset: 0.645 ms
Remote clock offset: -3.277 ms

# Below is generated by plot.py at 2018-10-26 11:54:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.50 Mbit/s
95th percentile per-packet one-way delay: 36.495 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 58.21 Mbit/s
95th percentile per-packet one-way delay: 36.616 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 31.63 Mbit/s
95th percentile per-packet one-way delay: 36.296 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 24.85 Mbit/s
95th percentile per-packet one-way delay: 35.886 ms
Loss rate: 0.71%
```

Run 1: Report of TCP Vegas — Data Link

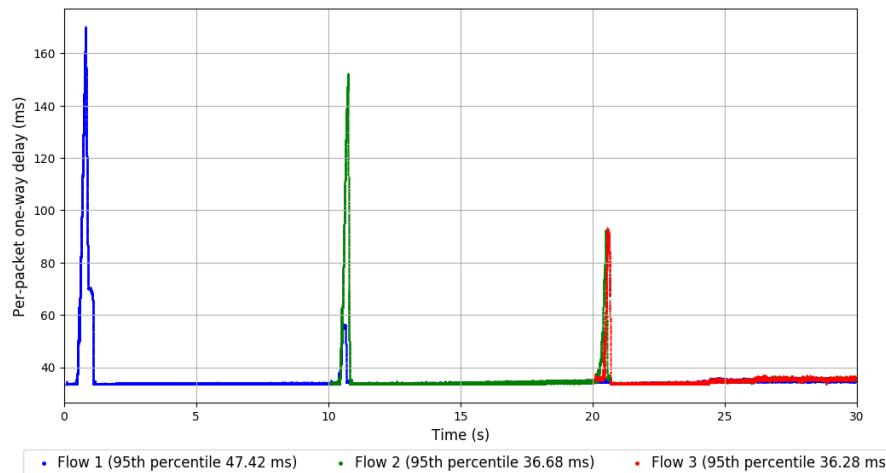
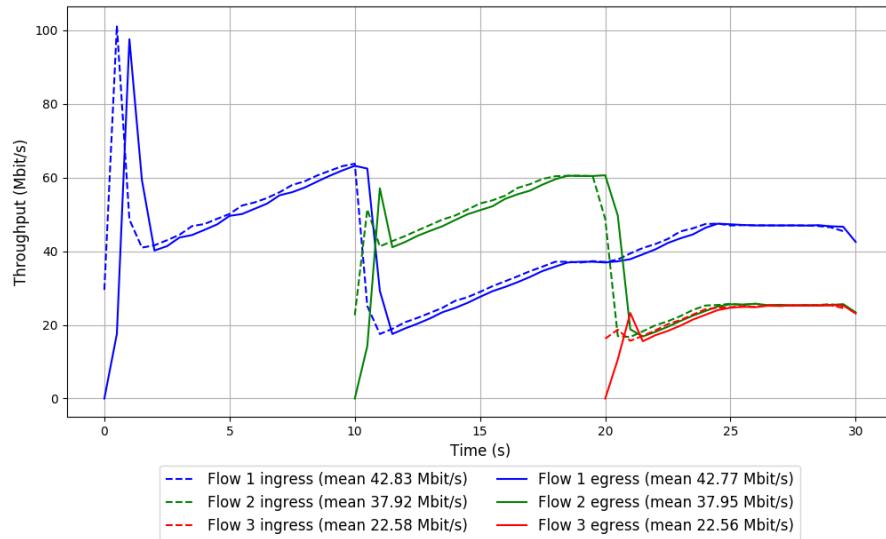


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-26 10:18:28
End at: 2018-10-26 10:18:58
Local clock offset: -2.83 ms
Remote clock offset: -2.393 ms

# Below is generated by plot.py at 2018-10-26 11:54:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.50 Mbit/s
95th percentile per-packet one-way delay: 38.476 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 42.77 Mbit/s
95th percentile per-packet one-way delay: 47.416 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 37.95 Mbit/s
95th percentile per-packet one-way delay: 36.679 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 36.281 ms
Loss rate: 0.75%
```

Run 2: Report of TCP Vegas — Data Link

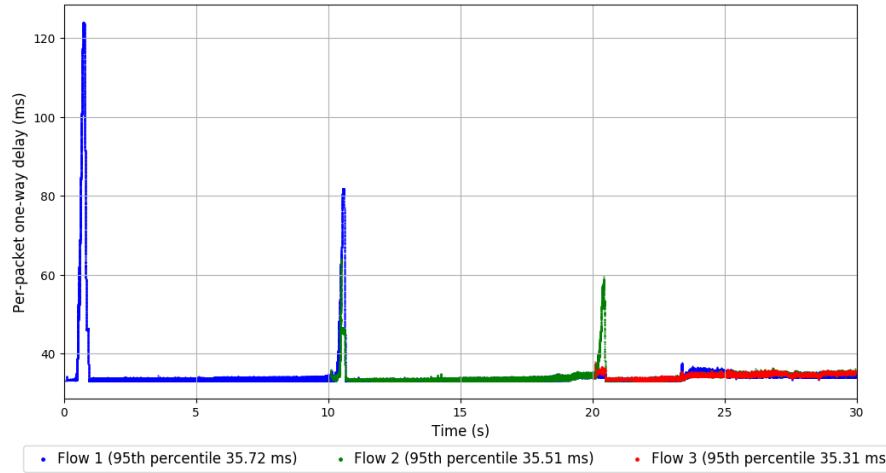
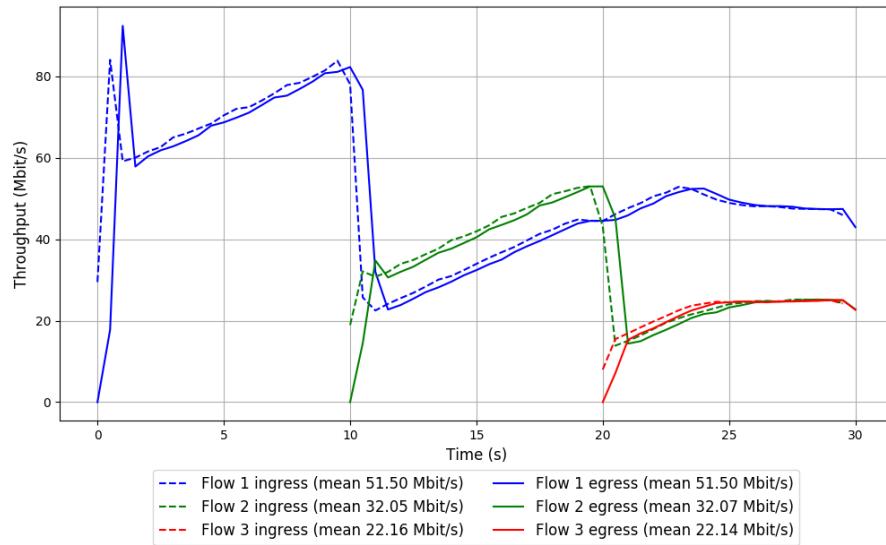


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-26 10:43:34
End at: 2018-10-26 10:44:04
Local clock offset: -0.497 ms
Remote clock offset: -1.858 ms

# Below is generated by plot.py at 2018-10-26 11:54:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.18 Mbit/s
95th percentile per-packet one-way delay: 35.563 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 51.50 Mbit/s
95th percentile per-packet one-way delay: 35.721 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 32.07 Mbit/s
95th percentile per-packet one-way delay: 35.510 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 22.14 Mbit/s
95th percentile per-packet one-way delay: 35.309 ms
Loss rate: 0.74%
```

Run 3: Report of TCP Vegas — Data Link

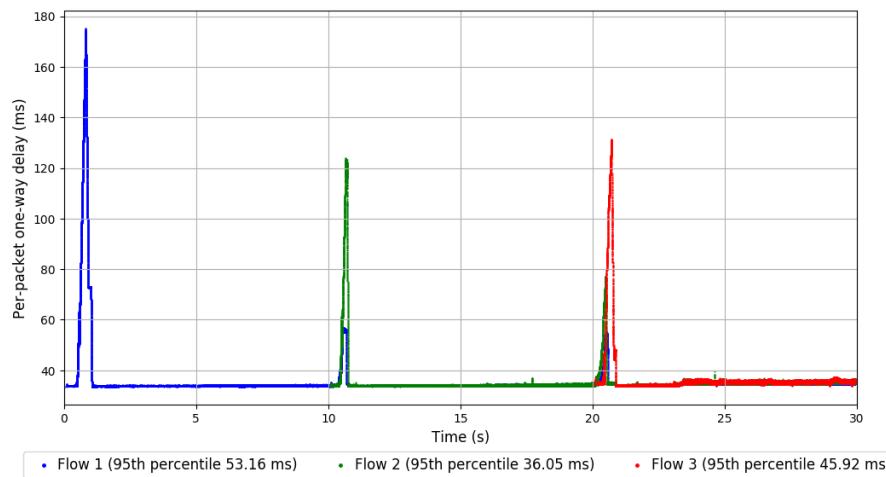
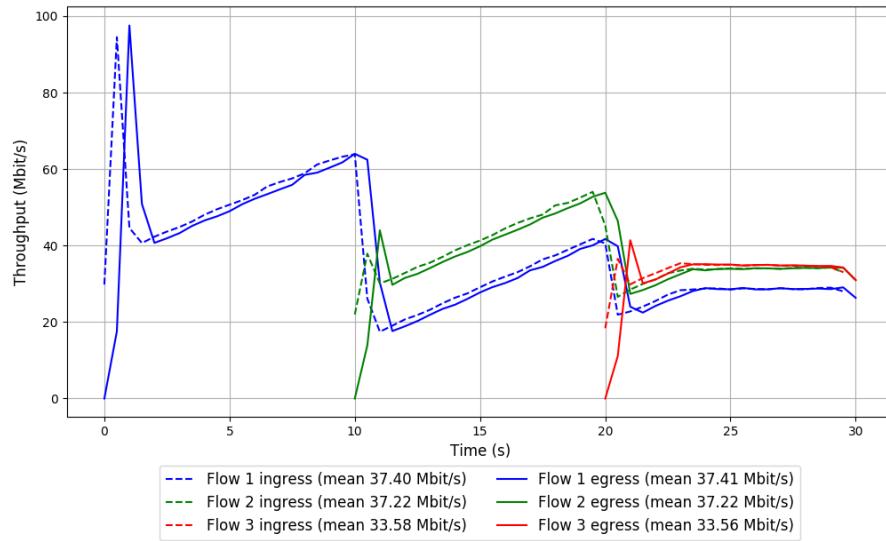


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-26 11:08:20
End at: 2018-10-26 11:08:50
Local clock offset: 0.504 ms
Remote clock offset: -1.56 ms

# Below is generated by plot.py at 2018-10-26 11:54:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.29 Mbit/s
95th percentile per-packet one-way delay: 42.436 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 37.41 Mbit/s
95th percentile per-packet one-way delay: 53.162 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 37.22 Mbit/s
95th percentile per-packet one-way delay: 36.055 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 33.56 Mbit/s
95th percentile per-packet one-way delay: 45.919 ms
Loss rate: 0.69%
```

Run 4: Report of TCP Vegas — Data Link

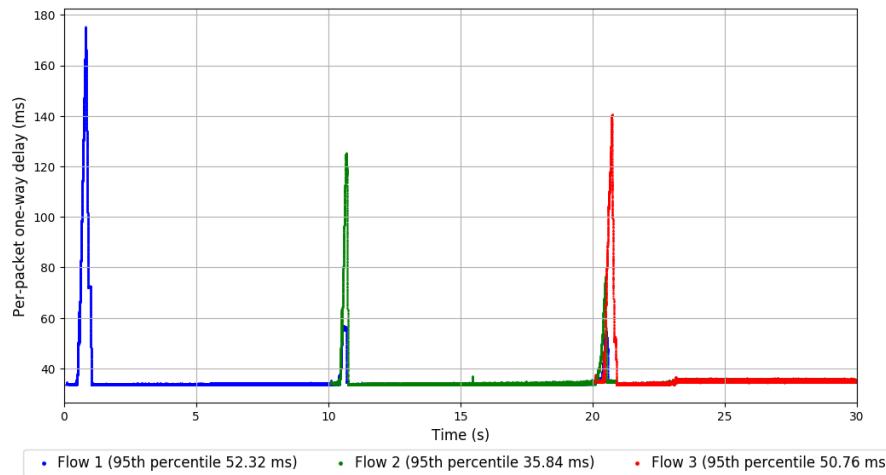
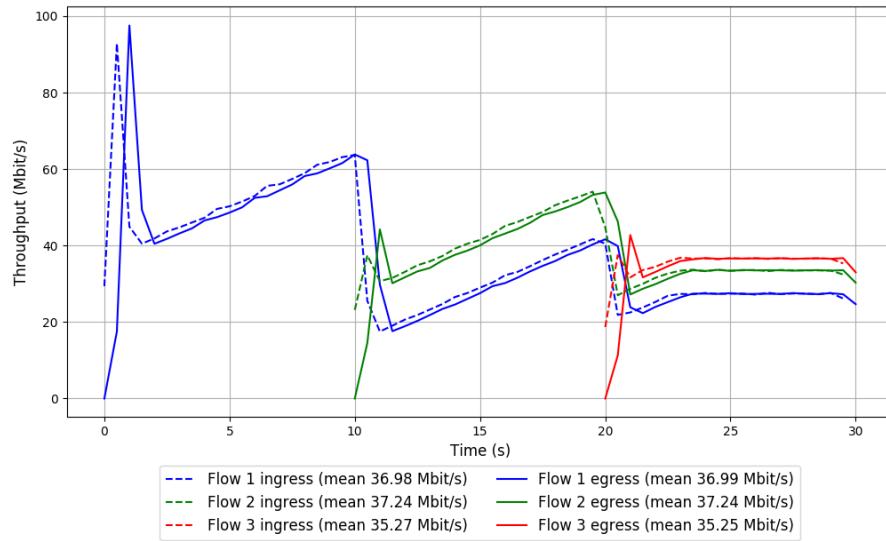


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-26 11:33:25
End at: 2018-10-26 11:33:55
Local clock offset: 0.599 ms
Remote clock offset: -1.434 ms

# Below is generated by plot.py at 2018-10-26 11:54:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.45 Mbit/s
95th percentile per-packet one-way delay: 41.984 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 36.99 Mbit/s
95th percentile per-packet one-way delay: 52.319 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 37.24 Mbit/s
95th percentile per-packet one-way delay: 35.845 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 35.25 Mbit/s
95th percentile per-packet one-way delay: 50.763 ms
Loss rate: 0.71%
```

Run 5: Report of TCP Vegas — Data Link

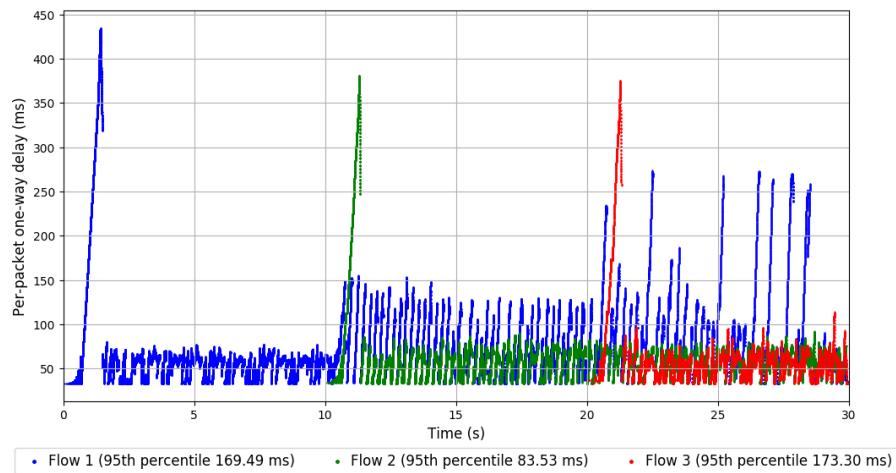
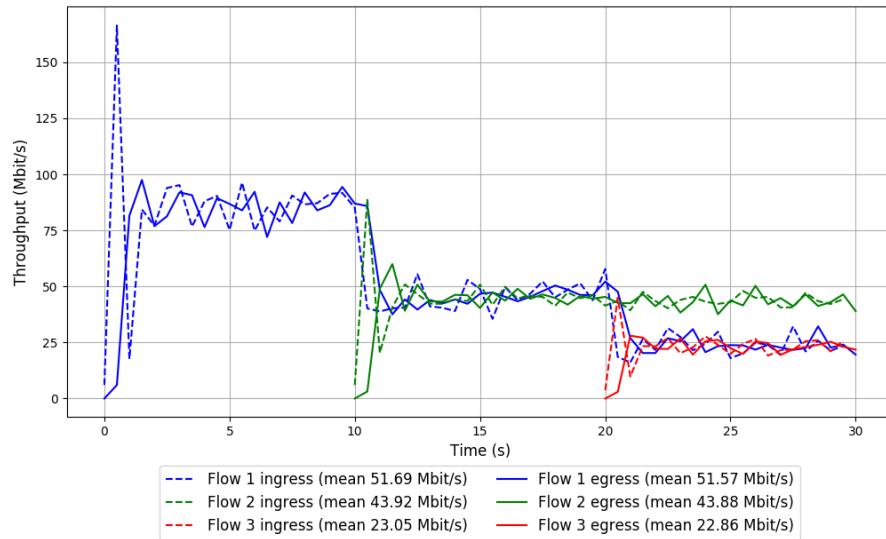


Run 1: Statistics of Verus

```
Start at: 2018-10-26 09:43:50
End at: 2018-10-26 09:44:20
Local clock offset: 0.588 ms
Remote clock offset: -3.518 ms

# Below is generated by plot.py at 2018-10-26 11:54:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.25 Mbit/s
95th percentile per-packet one-way delay: 147.751 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 51.57 Mbit/s
95th percentile per-packet one-way delay: 169.486 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 43.88 Mbit/s
95th percentile per-packet one-way delay: 83.534 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 22.86 Mbit/s
95th percentile per-packet one-way delay: 173.304 ms
Loss rate: 1.48%
```

Run 1: Report of Verus — Data Link

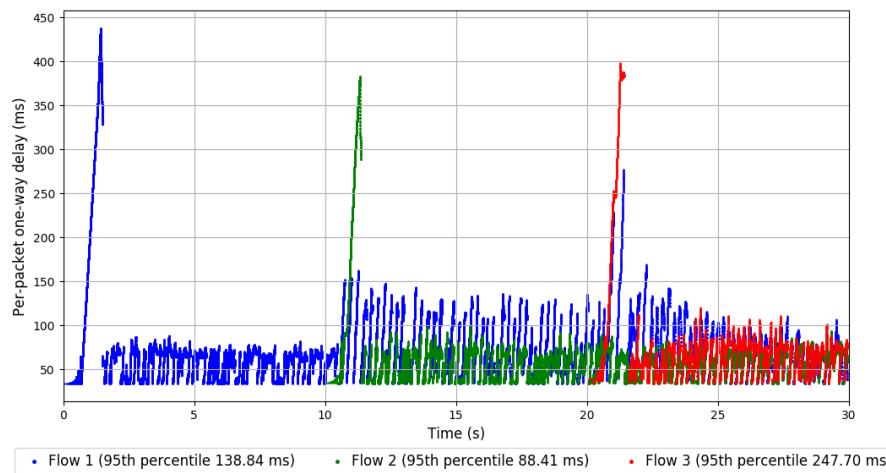
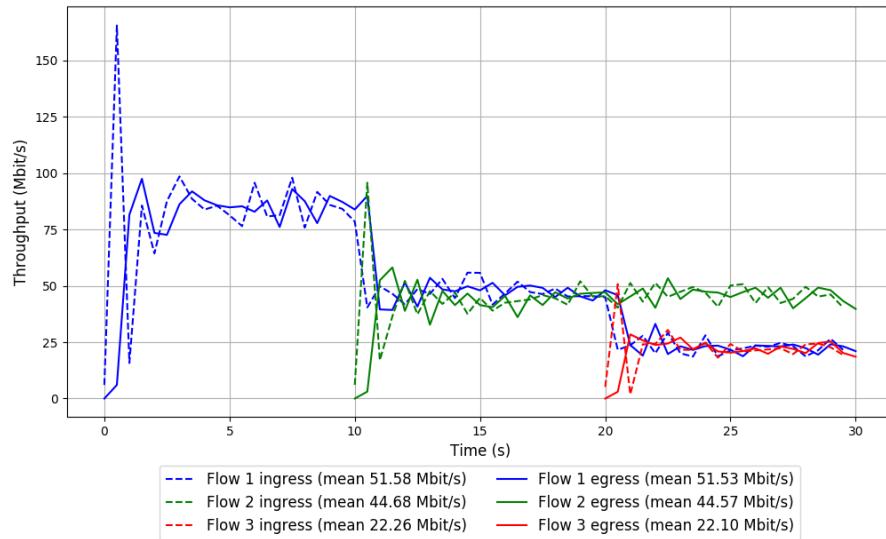


Run 2: Statistics of Verus

```
Start at: 2018-10-26 10:08:42
End at: 2018-10-26 10:09:12
Local clock offset: -1.445 ms
Remote clock offset: -2.716 ms

# Below is generated by plot.py at 2018-10-26 11:55:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.49 Mbit/s
95th percentile per-packet one-way delay: 132.425 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 51.53 Mbit/s
95th percentile per-packet one-way delay: 138.845 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 44.57 Mbit/s
95th percentile per-packet one-way delay: 88.410 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 22.10 Mbit/s
95th percentile per-packet one-way delay: 247.701 ms
Loss rate: 1.36%
```

Run 2: Report of Verus — Data Link

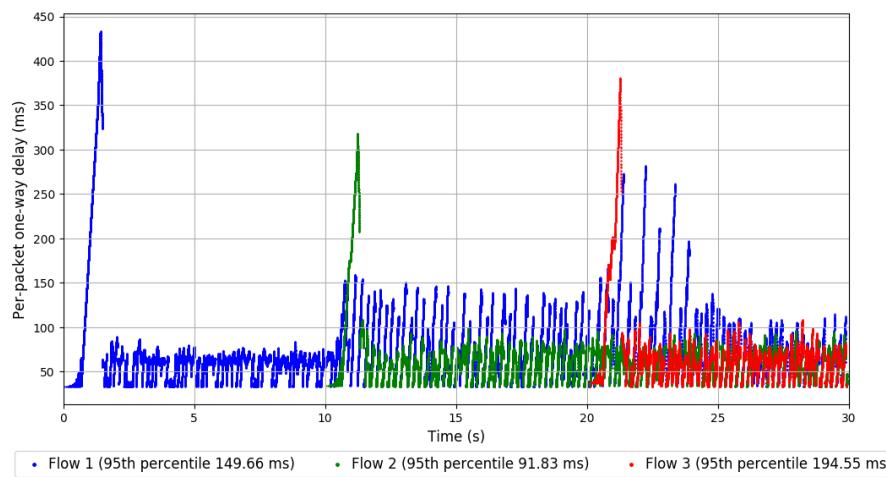
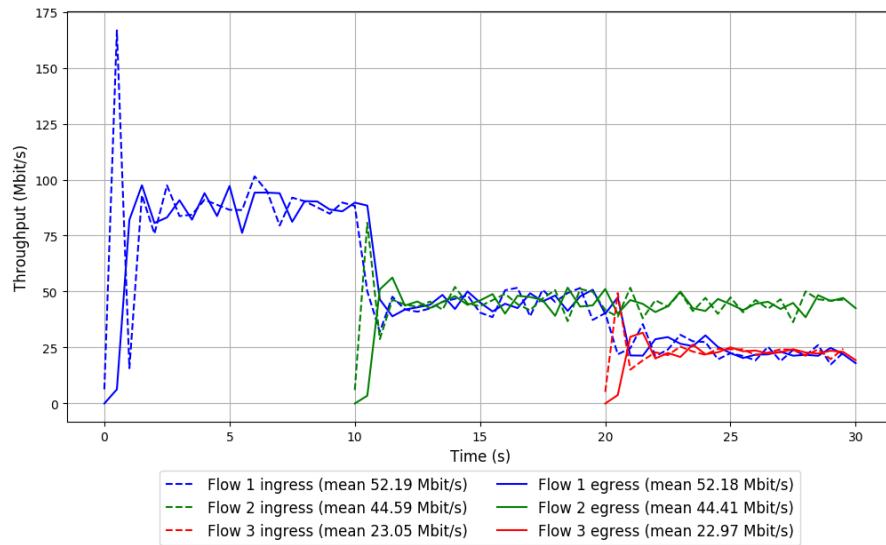


Run 3: Statistics of Verus

```
Start at: 2018-10-26 10:33:41
End at: 2018-10-26 10:34:11
Local clock offset: -2.803 ms
Remote clock offset: -2.012 ms

# Below is generated by plot.py at 2018-10-26 11:55:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.23 Mbit/s
95th percentile per-packet one-way delay: 144.342 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 52.18 Mbit/s
95th percentile per-packet one-way delay: 149.662 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 44.41 Mbit/s
95th percentile per-packet one-way delay: 91.831 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 22.97 Mbit/s
95th percentile per-packet one-way delay: 194.551 ms
Loss rate: 1.42%
```

Run 3: Report of Verus — Data Link

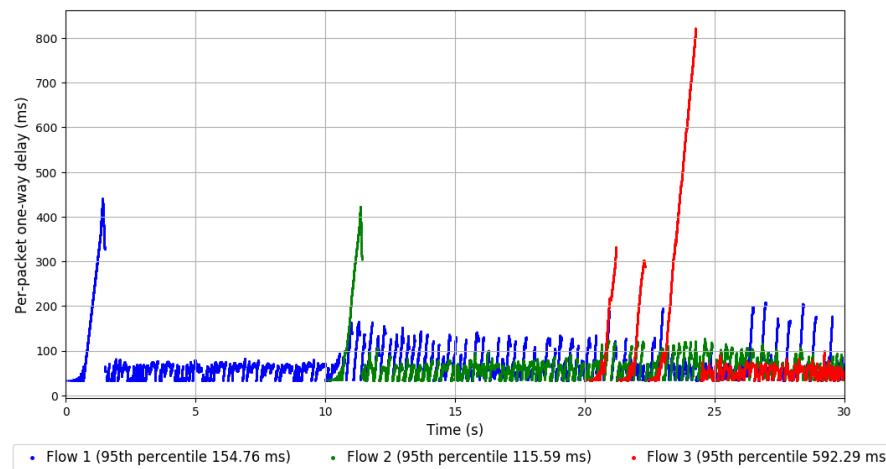
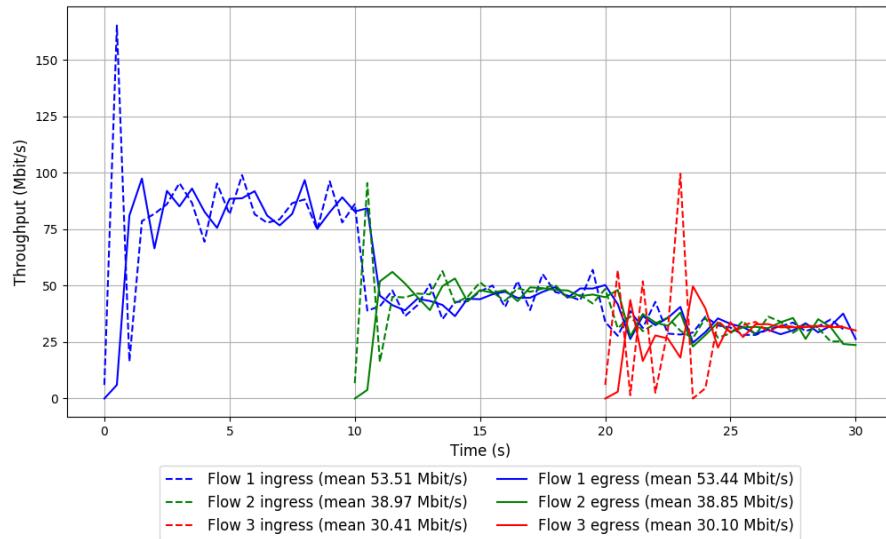


Run 4: Statistics of Verus

```
Start at: 2018-10-26 10:58:38
End at: 2018-10-26 10:59:08
Local clock offset: 0.581 ms
Remote clock offset: -1.668 ms

# Below is generated by plot.py at 2018-10-26 11:55:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.24 Mbit/s
95th percentile per-packet one-way delay: 207.788 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 53.44 Mbit/s
95th percentile per-packet one-way delay: 154.764 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 38.85 Mbit/s
95th percentile per-packet one-way delay: 115.594 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 30.10 Mbit/s
95th percentile per-packet one-way delay: 592.290 ms
Loss rate: 1.67%
```

Run 4: Report of Verus — Data Link

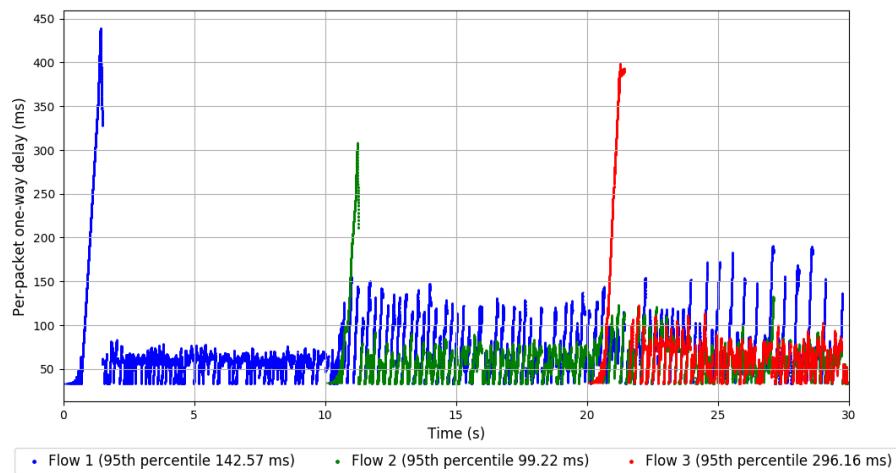
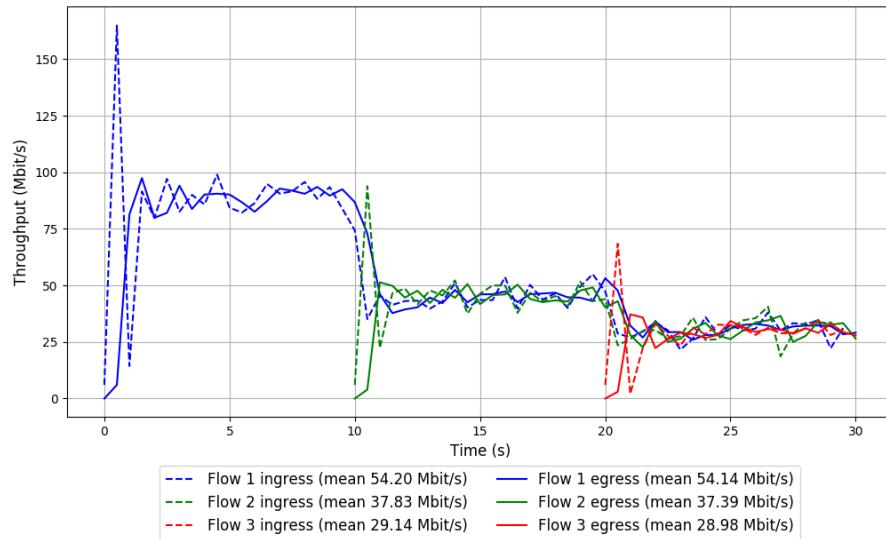


Run 5: Statistics of Verus

```
Start at: 2018-10-26 11:23:40
End at: 2018-10-26 11:24:10
Local clock offset: 0.553 ms
Remote clock offset: -1.166 ms

# Below is generated by plot.py at 2018-10-26 11:55:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.58 Mbit/s
95th percentile per-packet one-way delay: 138.072 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 54.14 Mbit/s
95th percentile per-packet one-way delay: 142.574 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 37.39 Mbit/s
95th percentile per-packet one-way delay: 99.219 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 28.98 Mbit/s
95th percentile per-packet one-way delay: 296.162 ms
Loss rate: 1.33%
```

Run 5: Report of Verus — Data Link

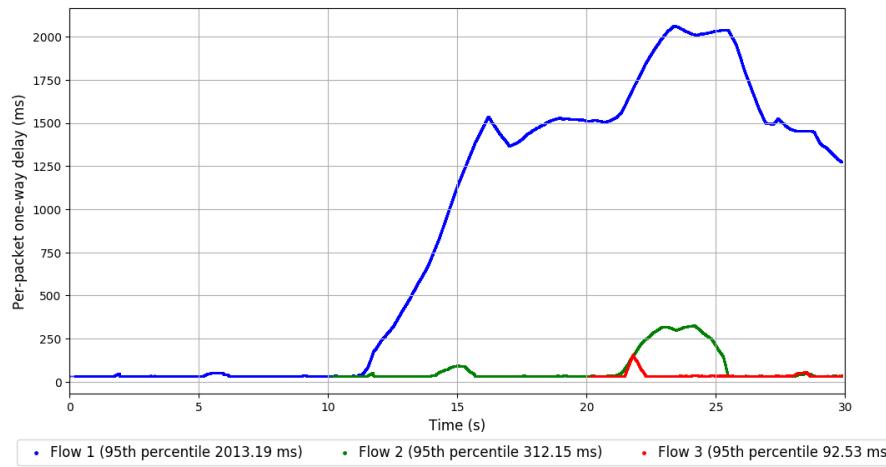
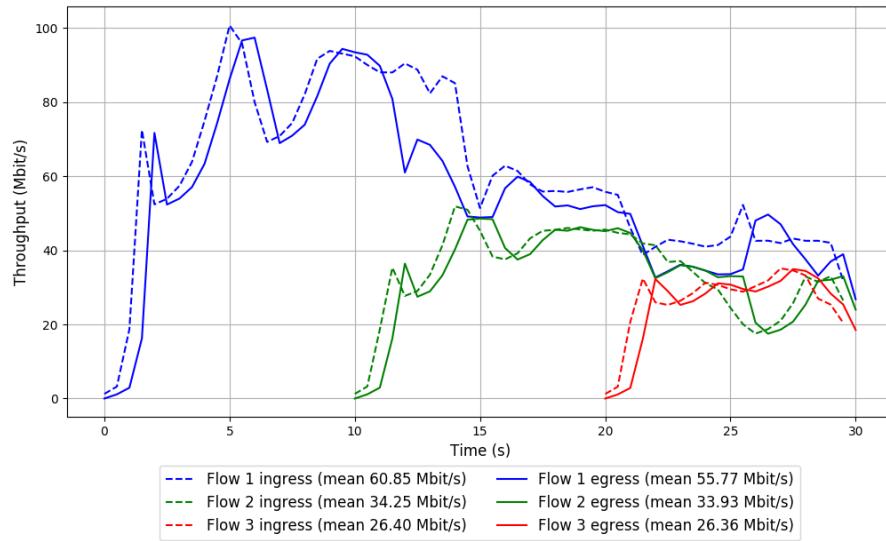


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-10-26 09:52:10
End at: 2018-10-26 09:52:40
Local clock offset: 0.621 ms
Remote clock offset: -3.315 ms

# Below is generated by plot.py at 2018-10-26 11:55:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.99 Mbit/s
95th percentile per-packet one-way delay: 1865.931 ms
Loss rate: 6.02%
-- Flow 1:
Average throughput: 55.77 Mbit/s
95th percentile per-packet one-way delay: 2013.194 ms
Loss rate: 8.55%
-- Flow 2:
Average throughput: 33.93 Mbit/s
95th percentile per-packet one-way delay: 312.146 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 26.36 Mbit/s
95th percentile per-packet one-way delay: 92.534 ms
Loss rate: 0.82%
```

Run 1: Report of PCC-Vivace — Data Link

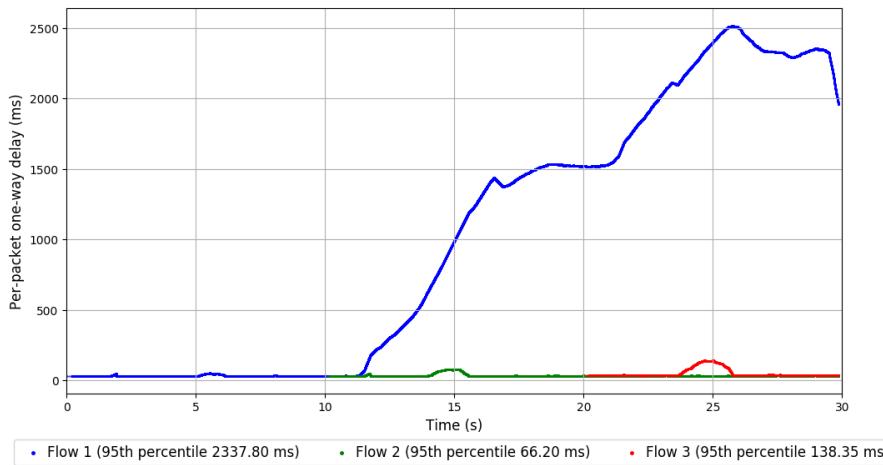
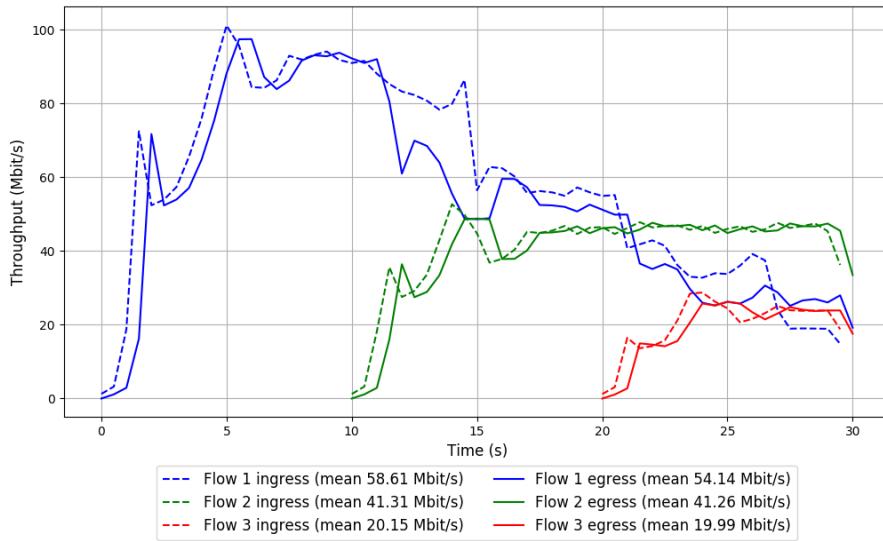


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-26 10:17:03
End at: 2018-10-26 10:17:33
Local clock offset: -2.688 ms
Remote clock offset: -2.359 ms

# Below is generated by plot.py at 2018-10-26 11:55:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.14 Mbit/s
95th percentile per-packet one-way delay: 2293.437 ms
Loss rate: 5.18%
-- Flow 1:
Average throughput: 54.14 Mbit/s
95th percentile per-packet one-way delay: 2337.796 ms
Loss rate: 7.83%
-- Flow 2:
Average throughput: 41.26 Mbit/s
95th percentile per-packet one-way delay: 66.203 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 19.99 Mbit/s
95th percentile per-packet one-way delay: 138.353 ms
Loss rate: 1.44%
```

Run 2: Report of PCC-Vivace — Data Link

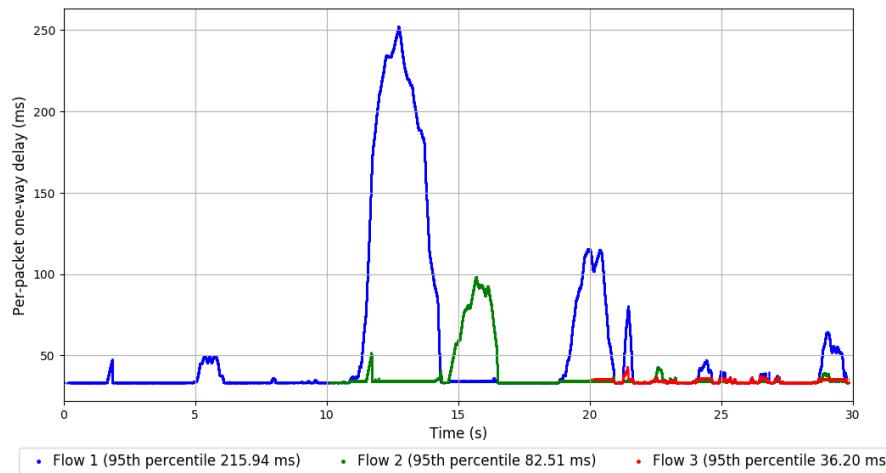
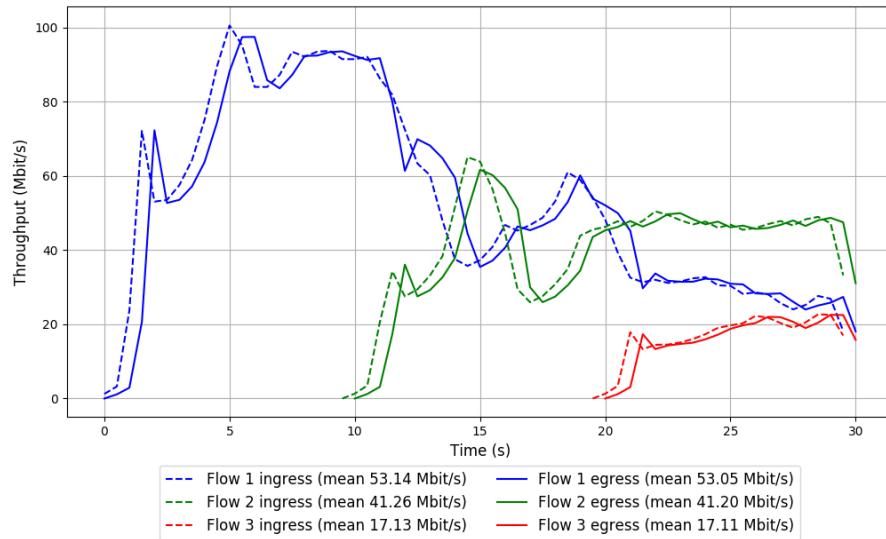


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-26 10:42:09
End at: 2018-10-26 10:42:39
Local clock offset: -0.705 ms
Remote clock offset: -1.945 ms

# Below is generated by plot.py at 2018-10-26 11:55:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.09 Mbit/s
95th percentile per-packet one-way delay: 178.781 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 53.05 Mbit/s
95th percentile per-packet one-way delay: 215.940 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 41.20 Mbit/s
95th percentile per-packet one-way delay: 82.510 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 17.11 Mbit/s
95th percentile per-packet one-way delay: 36.203 ms
Loss rate: 0.81%
```

Run 3: Report of PCC-Vivace — Data Link

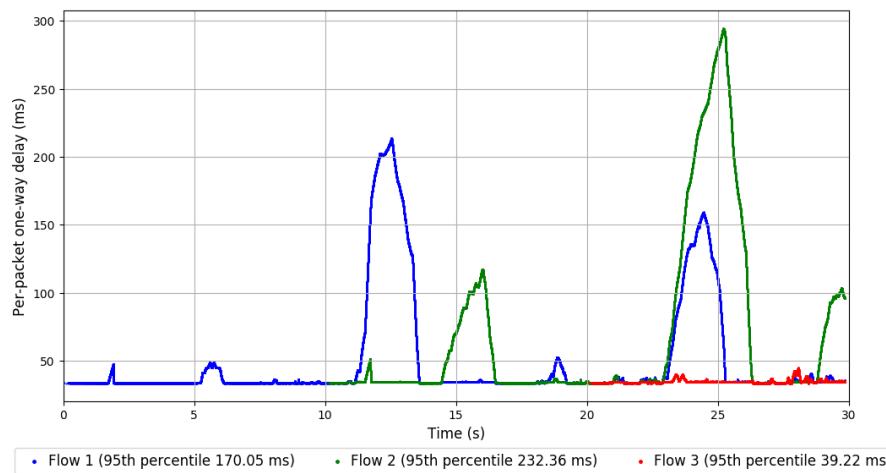
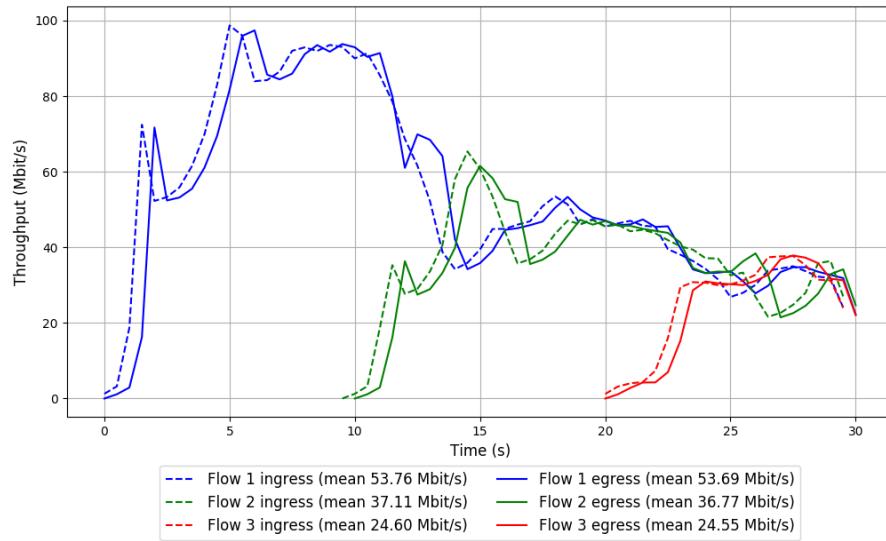


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-26 11:06:56
End at: 2018-10-26 11:07:26
Local clock offset: 0.54 ms
Remote clock offset: -1.5 ms

# Below is generated by plot.py at 2018-10-26 11:55:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.20 Mbit/s
95th percentile per-packet one-way delay: 179.912 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 53.69 Mbit/s
95th percentile per-packet one-way delay: 170.048 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 36.77 Mbit/s
95th percentile per-packet one-way delay: 232.356 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 24.55 Mbit/s
95th percentile per-packet one-way delay: 39.221 ms
Loss rate: 0.84%
```

Run 4: Report of PCC-Vivace — Data Link

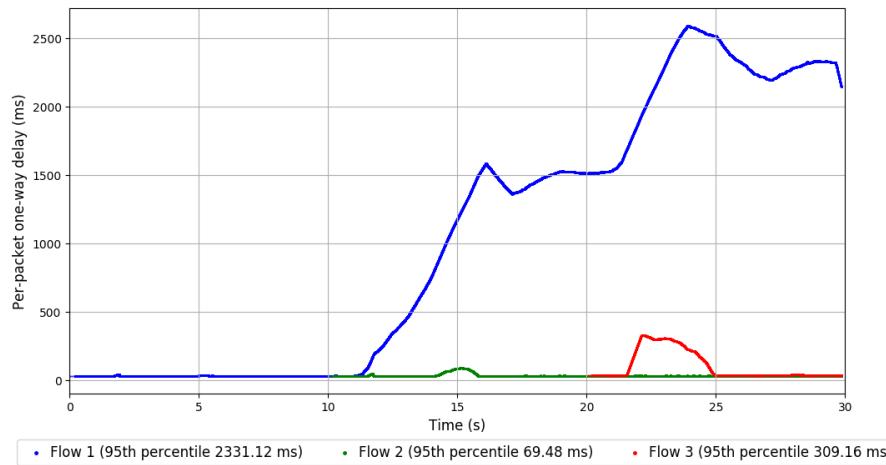
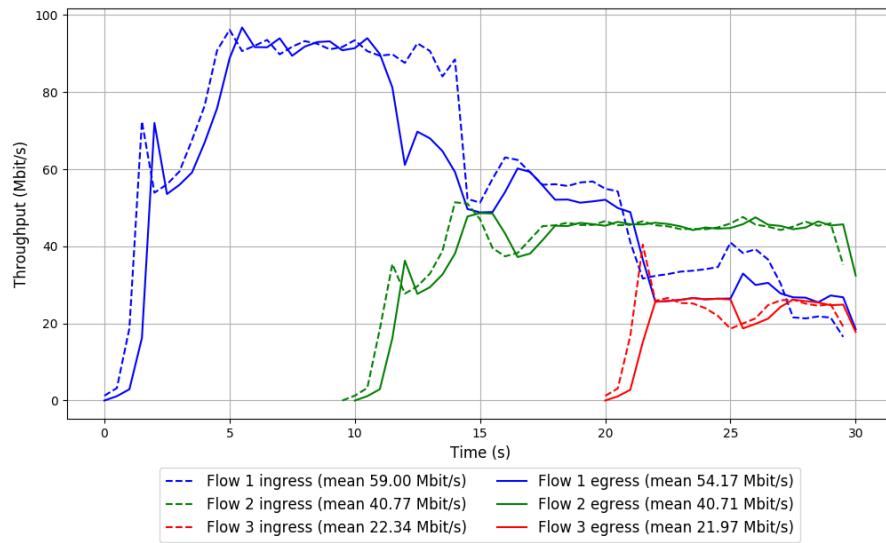


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-26 11:32:00
End at: 2018-10-26 11:32:31
Local clock offset: 0.65 ms
Remote clock offset: -1.239 ms

# Below is generated by plot.py at 2018-10-26 11:55:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.45 Mbit/s
95th percentile per-packet one-way delay: 2284.246 ms
Loss rate: 5.61%
-- Flow 1:
Average throughput: 54.17 Mbit/s
95th percentile per-packet one-way delay: 2331.125 ms
Loss rate: 8.39%
-- Flow 2:
Average throughput: 40.71 Mbit/s
95th percentile per-packet one-way delay: 69.479 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 21.97 Mbit/s
95th percentile per-packet one-way delay: 309.158 ms
Loss rate: 2.31%
```

Run 5: Report of PCC-Vivace — Data Link

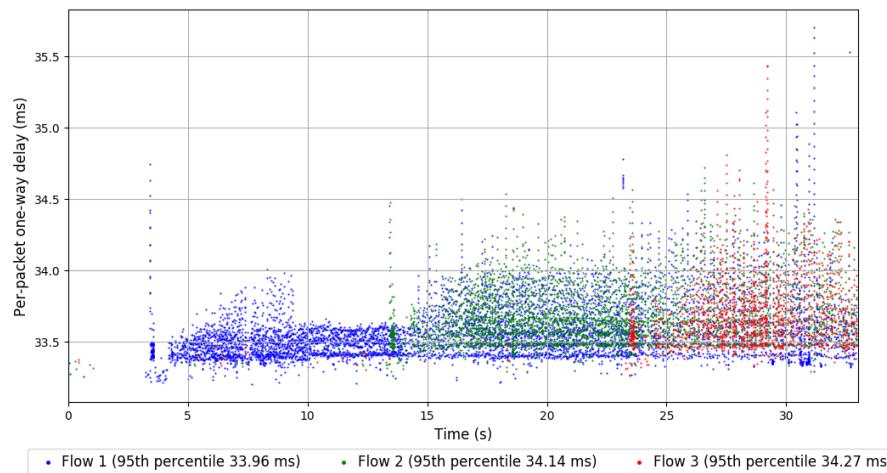
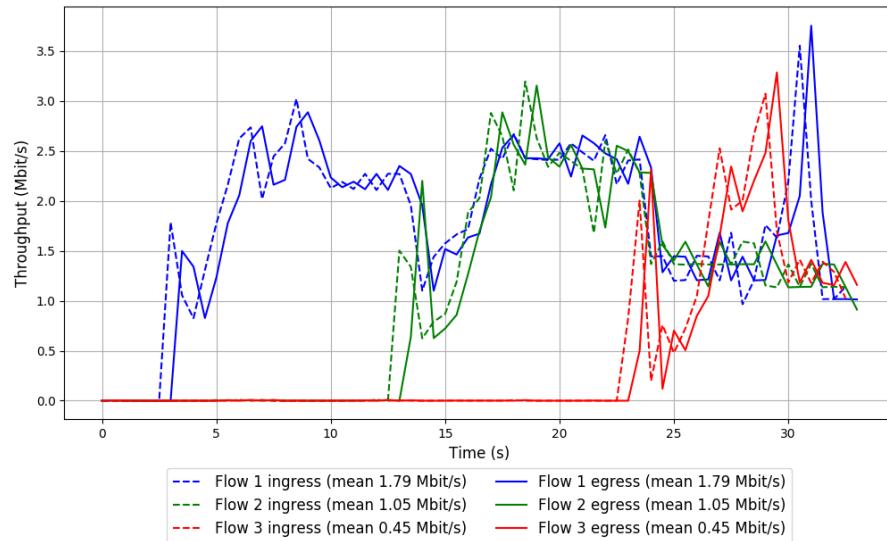


Run 1: Statistics of WebRTC media

```
Start at: 2018-10-26 09:39:49
End at: 2018-10-26 09:40:19
Local clock offset: 0.572 ms
Remote clock offset: -3.632 ms

# Below is generated by plot.py at 2018-10-26 11:55:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 34.082 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 33.960 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 34.140 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 34.273 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

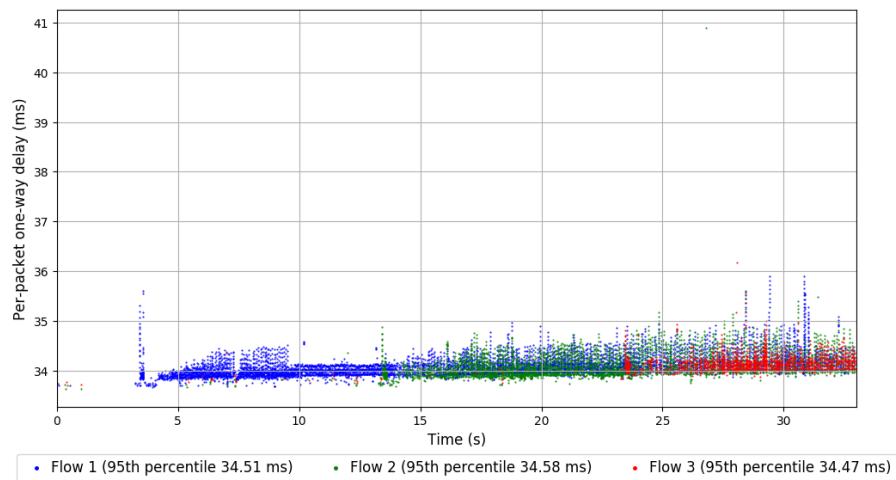
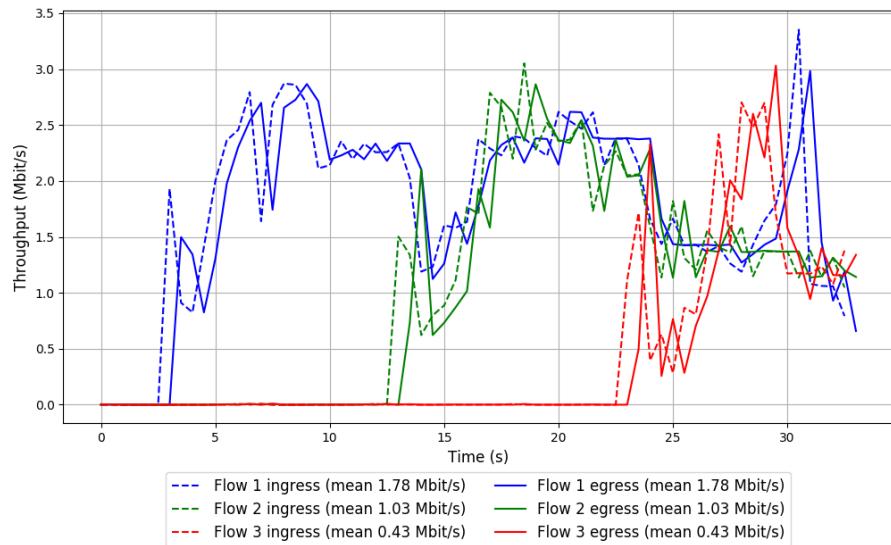


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-26 10:04:42
End at: 2018-10-26 10:05:12
Local clock offset: -0.358 ms
Remote clock offset: -3.037 ms

# Below is generated by plot.py at 2018-10-26 11:55:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 34.535 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 34.513 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 34.583 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 34.474 ms
Loss rate: 0.14%
```

Run 2: Report of WebRTC media — Data Link

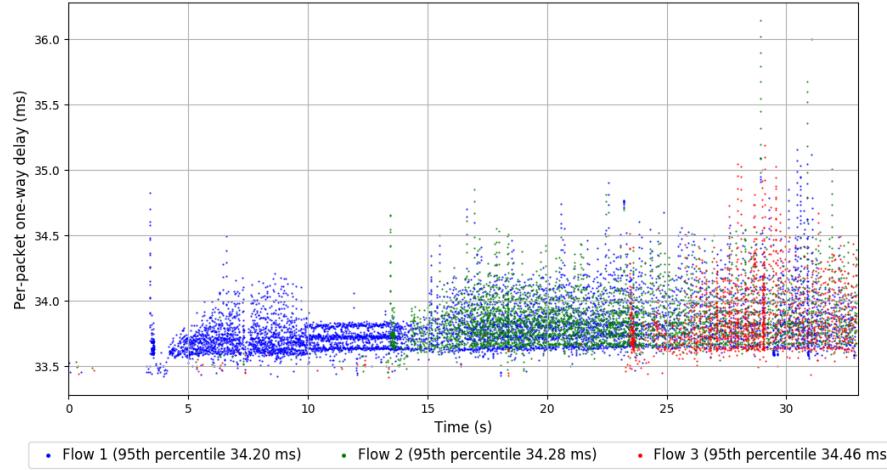
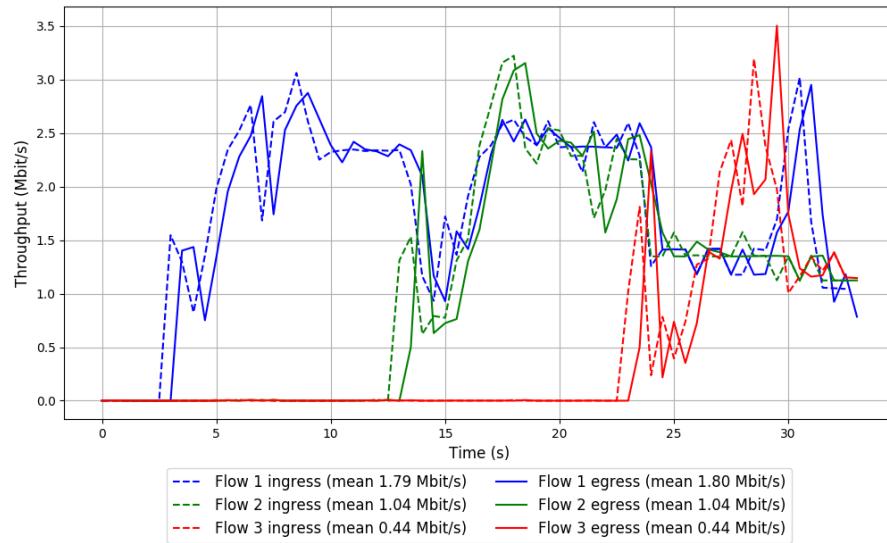


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-26 10:29:39
End at: 2018-10-26 10:30:09
Local clock offset: -3.589 ms
Remote clock offset: -2.194 ms

# Below is generated by plot.py at 2018-10-26 11:55:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 34.278 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 34.197 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 34.277 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 34.461 ms
Loss rate: 0.80%
```

Run 3: Report of WebRTC media — Data Link

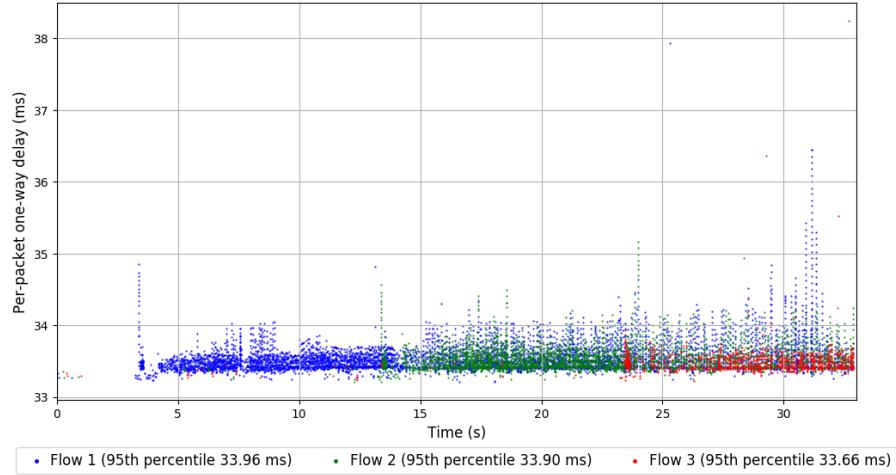
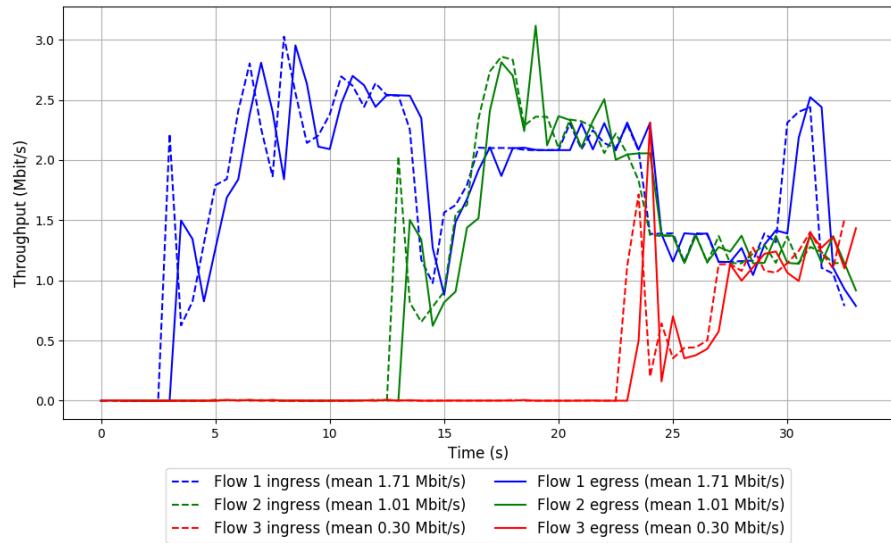


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-26 10:54:38
End at: 2018-10-26 10:55:08
Local clock offset: 0.388 ms
Remote clock offset: -1.83 ms

# Below is generated by plot.py at 2018-10-26 11:55:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 33.929 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 33.957 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 33.902 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 33.664 ms
Loss rate: 0.39%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-26 11:19:38
End at: 2018-10-26 11:20:08
Local clock offset: 0.518 ms
Remote clock offset: -1.086 ms

# Below is generated by plot.py at 2018-10-26 11:55:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 34.107 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 33.976 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 34.059 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 34.501 ms
Loss rate: 0.82%
```

Run 5: Report of WebRTC media — Data Link

