

Pantheon Report

Generated at 2019-03-09 15:31:19 (UTC).
Data path: India on `em1` (*remote*) → AWS India 1 on `ens5` (*local*).
Repeated the test of 21 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 `nets.org.sg` and have been applied to correct the timestamps in logs.

System info:

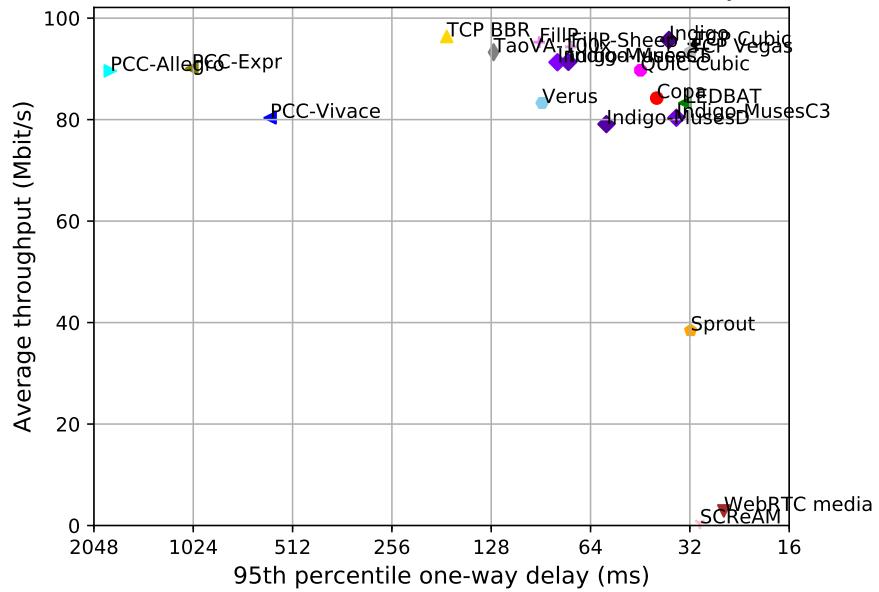
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

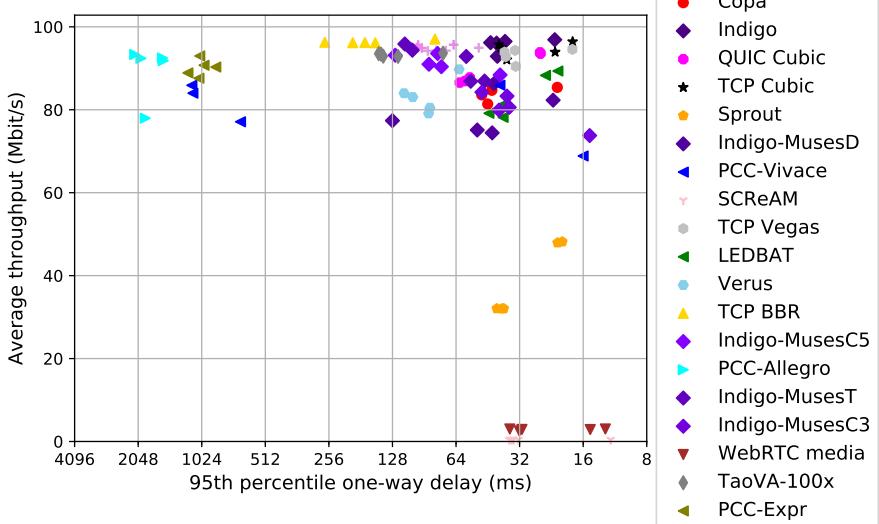
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fceef56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
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

test from India to AWS India 1, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from India to AWS India 1, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows



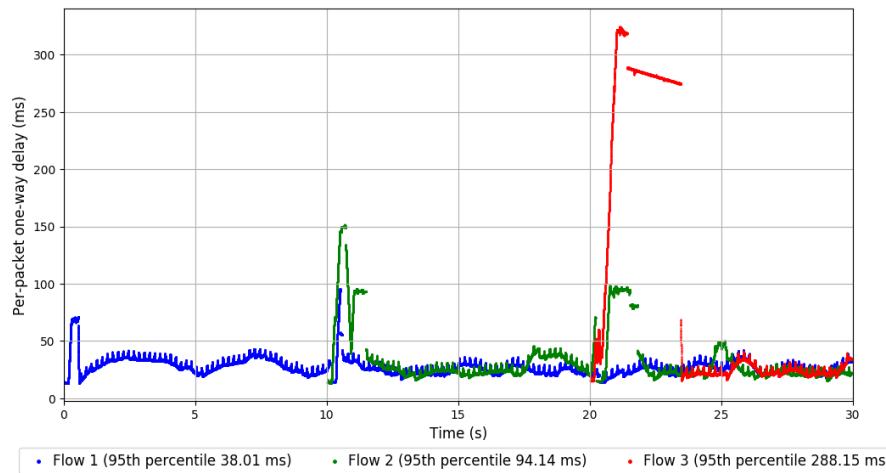
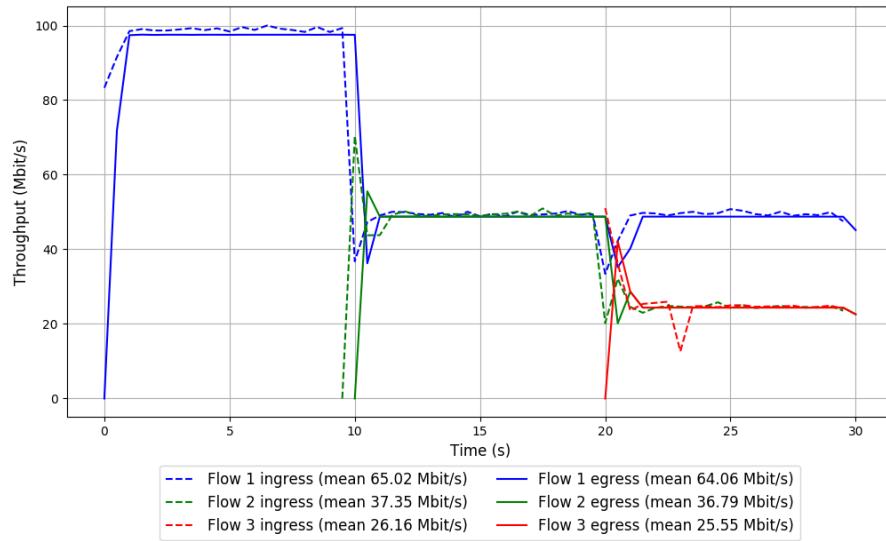
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	59.65	39.48	31.53	96.57	197.44	280.39	1.63	2.32	2.79
Copa	5	50.60	37.25	26.64	43.83	36.16	33.97	0.11	0.20	0.43
TCP Cubic	5	57.42	39.95	31.97	31.00	29.07	30.72	0.09	0.18	0.41
FillP	5	57.69	40.66	31.71	74.53	94.15	96.74	0.26	1.83	3.33
FillP-Sheep	5	58.40	40.04	28.06	62.98	80.73	93.04	0.14	0.37	0.85
Indigo	5	62.09	37.64	25.47	33.16	35.36	35.03	0.11	0.16	0.56
Indigo-MusesC3	5	52.08	34.28	23.15	34.45	34.71	33.23	0.06	0.10	0.50
Indigo-MusesC5	5	53.23	43.20	37.35	62.10	103.91	81.07	0.65	1.63	3.70
Indigo-MusesD	5	44.38	43.38	25.62	37.70	59.84	46.19	0.08	0.53	0.51
Indigo-MusesT	5	56.82	41.52	28.69	69.55	61.62	86.34	0.60	0.74	1.80
LEDBAT	5	49.33	37.94	27.17	32.49	33.92	34.91	0.10	0.17	0.59
PCC-Allegro	5	56.82	34.60	29.77	1870.26	954.45	228.31	17.58	10.60	3.09
PCC-Expr	5	57.16	36.74	25.86	988.00	479.56	147.46	27.40	4.68	1.48
QUIC Cubic	5	55.98	36.33	29.08	41.52	48.04	65.78	0.13	0.22	0.61
SCReAM	5	0.22	0.22	0.22	28.81	27.75	28.79	0.13	0.19	0.49
Sprout	5	19.36	19.29	19.02	31.14	31.77	32.11	0.13	0.16	0.48
TaoVA-100x	5	57.56	40.67	26.22	115.18	135.37	156.34	0.48	0.97	2.10
TCP Vegas	5	53.86	38.61	40.93	32.28	30.63	33.42	0.09	0.19	0.40
Verus	5	48.44	37.06	30.78	87.38	86.43	138.15	0.16	0.34	0.59
PCC-Vivace	5	54.38	27.01	24.38	852.03	257.36	28.49	2.73	2.47	0.52
WebRTC media	5	1.52	0.95	0.42	25.24	23.23	24.30	0.05	0.07	0.38

Run 1: Statistics of TCP BBR

```
Start at: 2019-03-09 13:10:37
End at: 2019-03-09 13:11:07
Local clock offset: 5.323 ms
Remote clock offset: -1.05 ms

# Below is generated by plot.py at 2019-03-09 15:18:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 80.527 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 64.06 Mbit/s
95th percentile per-packet one-way delay: 38.009 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 36.79 Mbit/s
95th percentile per-packet one-way delay: 94.135 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 25.55 Mbit/s
95th percentile per-packet one-way delay: 288.148 ms
Loss rate: 2.57%
```

Run 1: Report of TCP BBR — Data Link

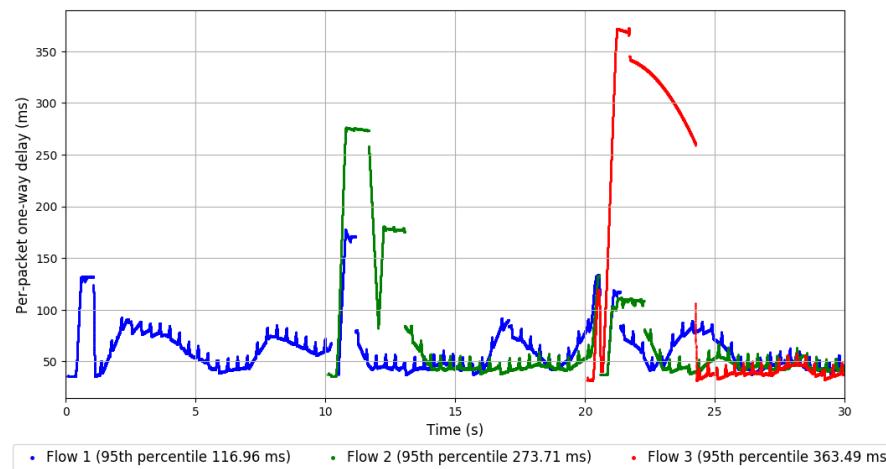
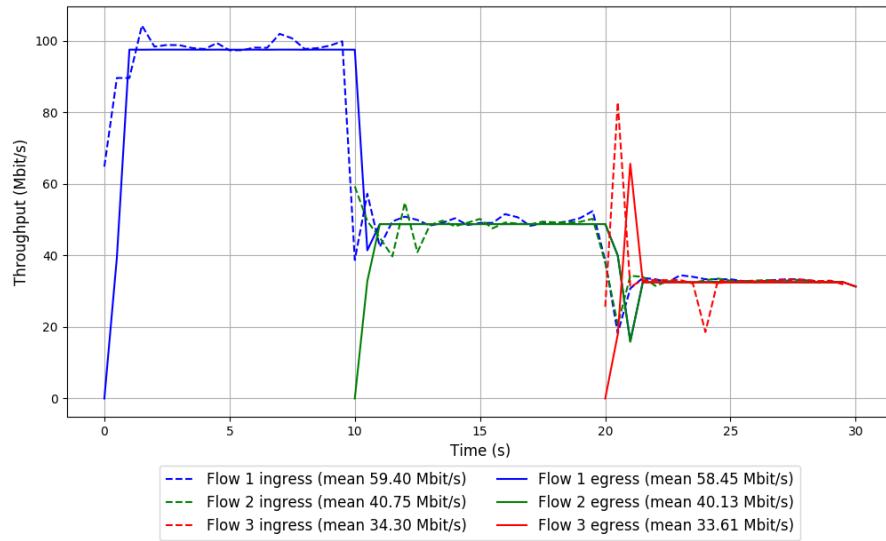


Run 2: Statistics of TCP BBR

```
Start at: 2019-03-09 13:38:28
End at: 2019-03-09 13:38:58
Local clock offset: -2.816 ms
Remote clock offset: -2.91 ms

# Below is generated by plot.py at 2019-03-09 15:18:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.29 Mbit/s
95th percentile per-packet one-way delay: 267.646 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 58.45 Mbit/s
95th percentile per-packet one-way delay: 116.956 ms
Loss rate: 1.75%
-- Flow 2:
Average throughput: 40.13 Mbit/s
95th percentile per-packet one-way delay: 273.712 ms
Loss rate: 1.76%
-- Flow 3:
Average throughput: 33.61 Mbit/s
95th percentile per-packet one-way delay: 363.485 ms
Loss rate: 2.47%
```

Run 2: Report of TCP BBR — Data Link

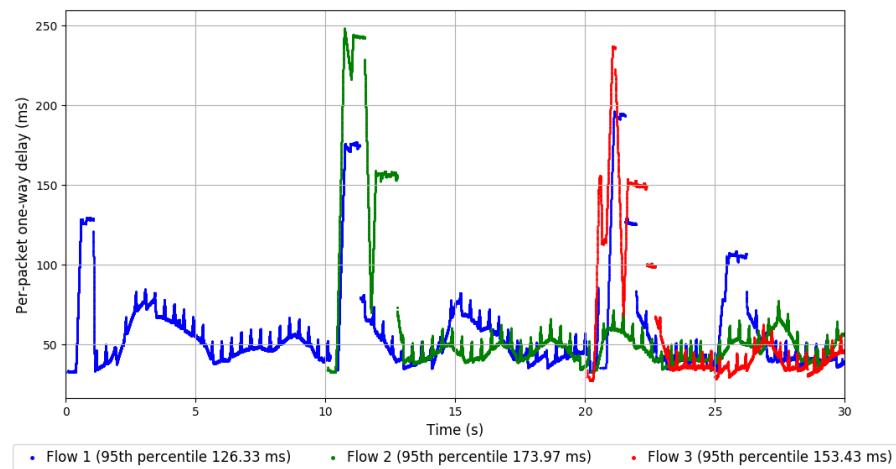
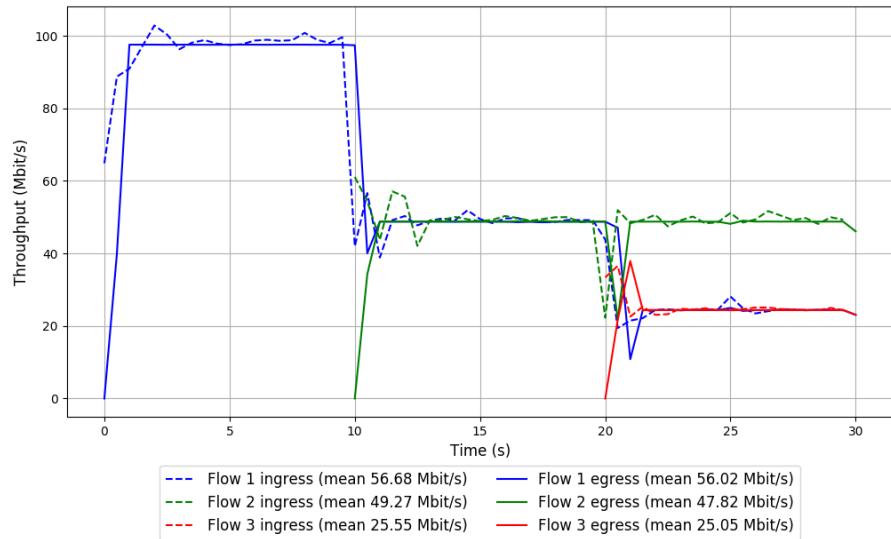


Run 3: Statistics of TCP BBR

```
Start at: 2019-03-09 14:06:01
End at: 2019-03-09 14:06:31
Local clock offset: 3.335 ms
Remote clock offset: -0.747 ms

# Below is generated by plot.py at 2019-03-09 15:18:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.16 Mbit/s
95th percentile per-packet one-way delay: 154.304 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 56.02 Mbit/s
95th percentile per-packet one-way delay: 126.331 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 47.82 Mbit/s
95th percentile per-packet one-way delay: 173.972 ms
Loss rate: 3.19%
-- Flow 3:
Average throughput: 25.05 Mbit/s
95th percentile per-packet one-way delay: 153.425 ms
Loss rate: 2.40%
```

Run 3: Report of TCP BBR — Data Link

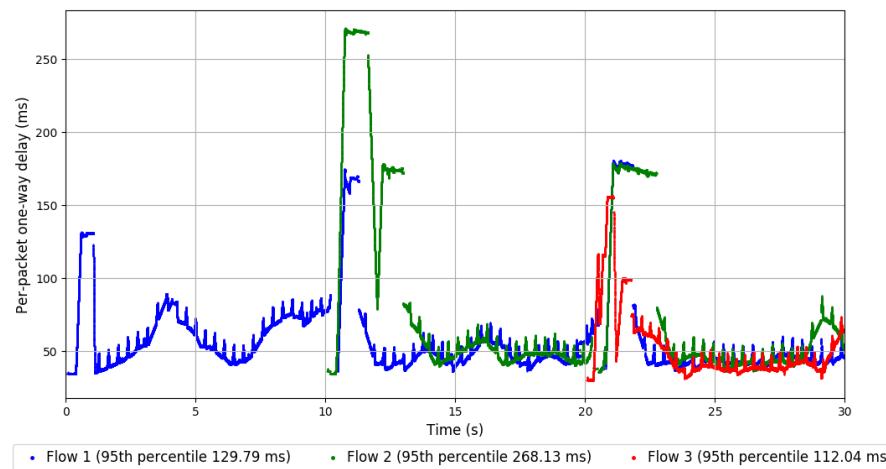
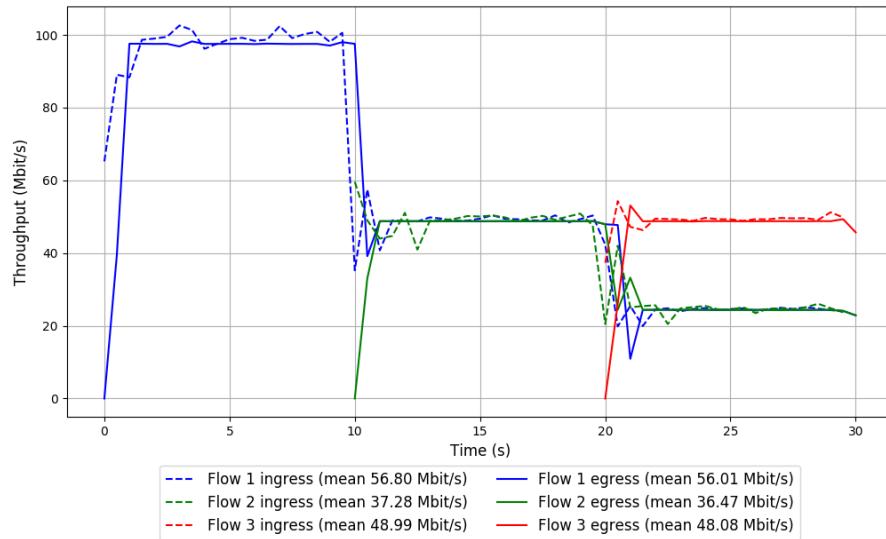


Run 4: Statistics of TCP BBR

```
Start at: 2019-03-09 14:33:53
End at: 2019-03-09 14:34:23
Local clock offset: -2.395 ms
Remote clock offset: -1.557 ms

# Below is generated by plot.py at 2019-03-09 15:18:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.23 Mbit/s
95th percentile per-packet one-way delay: 172.913 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 56.01 Mbit/s
95th percentile per-packet one-way delay: 129.792 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 36.47 Mbit/s
95th percentile per-packet one-way delay: 268.126 ms
Loss rate: 2.40%
-- Flow 3:
Average throughput: 48.08 Mbit/s
95th percentile per-packet one-way delay: 112.039 ms
Loss rate: 2.29%
```

Run 4: Report of TCP BBR — Data Link

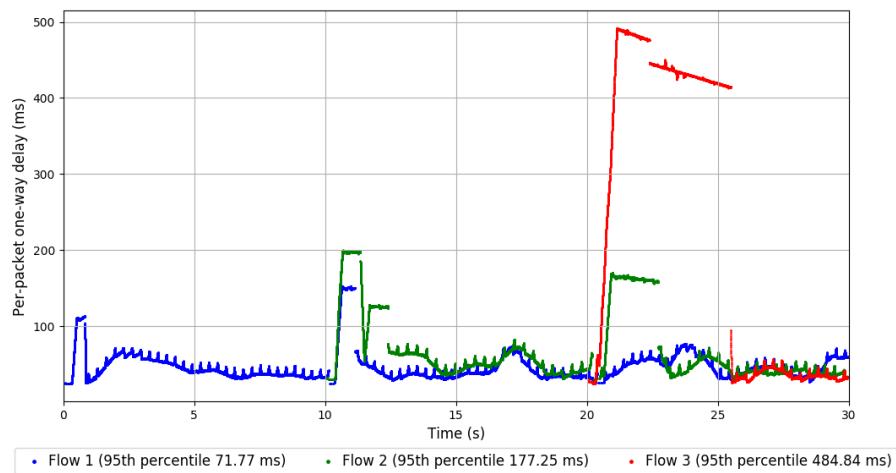
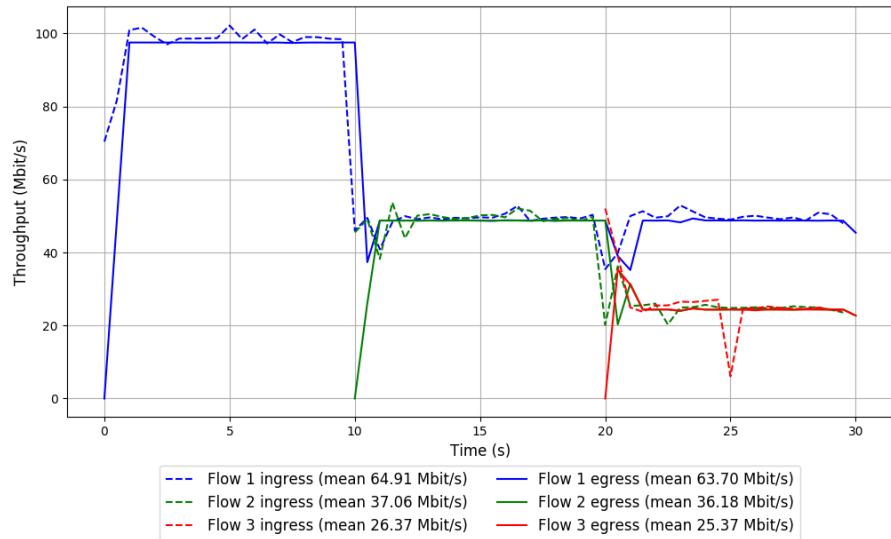


Run 5: Statistics of TCP BBR

```
Start at: 2019-03-09 15:04:23
End at: 2019-03-09 15:04:53
Local clock offset: -10.282 ms
Remote clock offset: -0.237 ms

# Below is generated by plot.py at 2019-03-09 15:18:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.18 Mbit/s
95th percentile per-packet one-way delay: 197.437 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 63.70 Mbit/s
95th percentile per-packet one-way delay: 71.766 ms
Loss rate: 2.00%
-- Flow 2:
Average throughput: 36.18 Mbit/s
95th percentile per-packet one-way delay: 177.247 ms
Loss rate: 2.62%
-- Flow 3:
Average throughput: 25.37 Mbit/s
95th percentile per-packet one-way delay: 484.843 ms
Loss rate: 4.23%
```

Run 5: Report of TCP BBR — Data Link

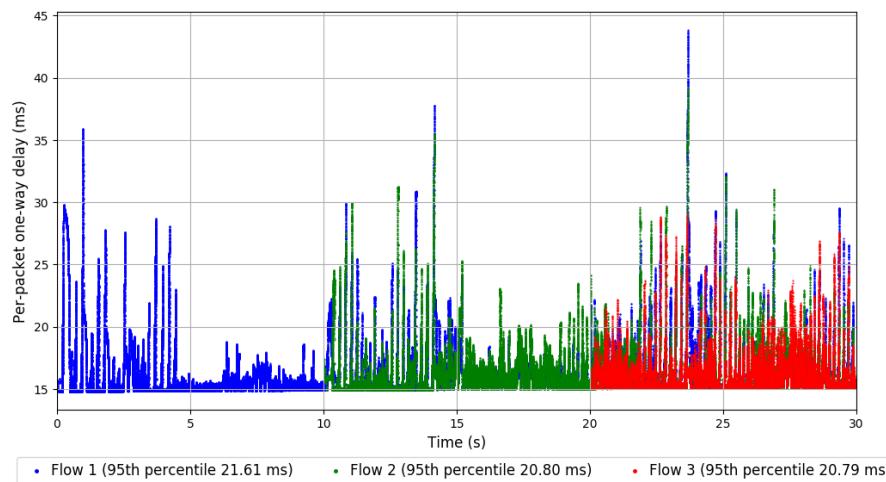
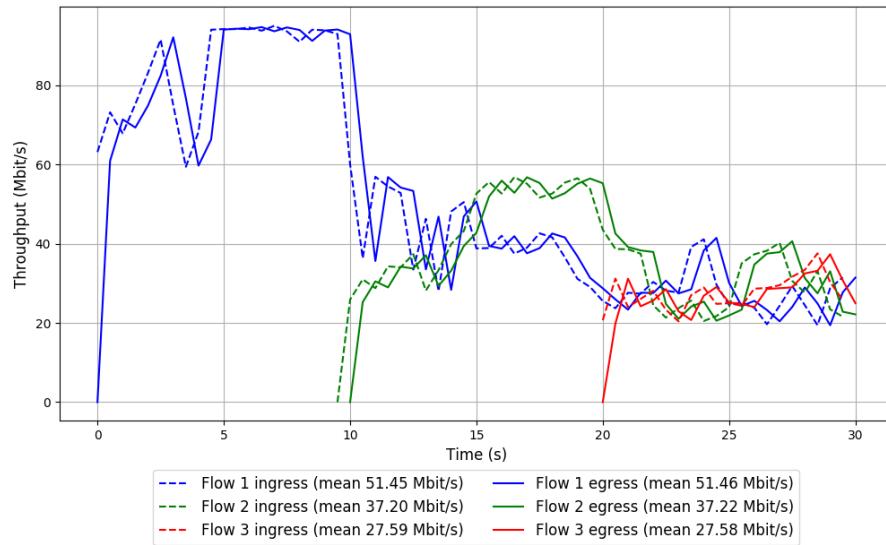


Run 1: Statistics of Copa

```
Start at: 2019-03-09 13:14:41
End at: 2019-03-09 13:15:11
Local clock offset: 5.635 ms
Remote clock offset: -1.665 ms

# Below is generated by plot.py at 2019-03-09 15:19:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.40 Mbit/s
95th percentile per-packet one-way delay: 21.217 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 51.46 Mbit/s
95th percentile per-packet one-way delay: 21.612 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 37.22 Mbit/s
95th percentile per-packet one-way delay: 20.799 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 20.789 ms
Loss rate: 0.30%
```

Run 1: Report of Copa — Data Link

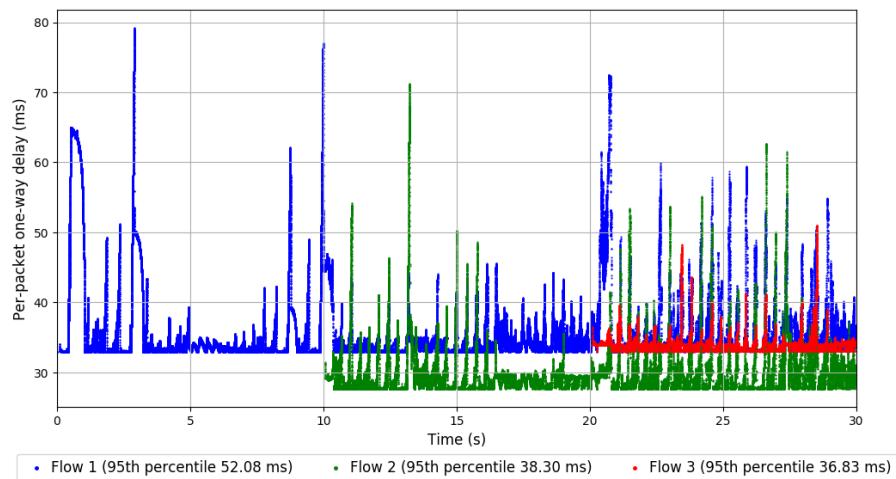
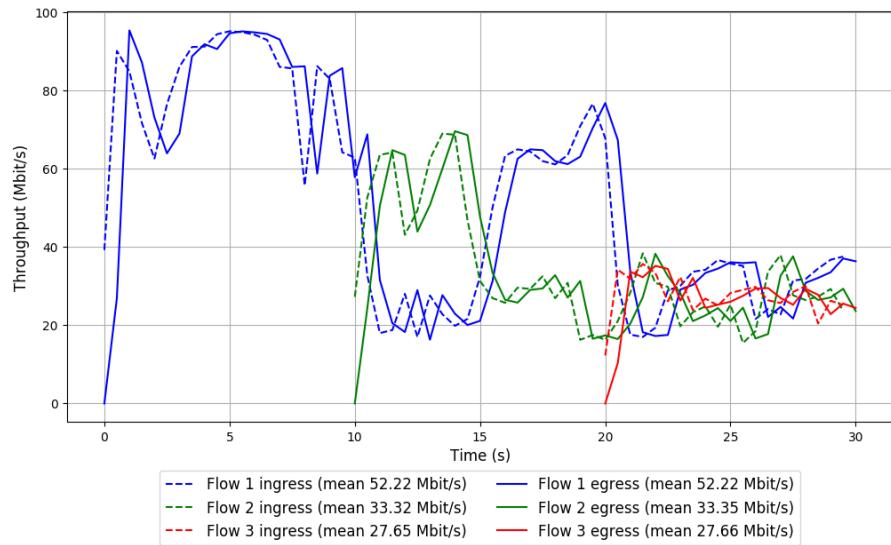


Run 2: Statistics of Copa

```
Start at: 2019-03-09 13:42:19
End at: 2019-03-09 13:42:49
Local clock offset: -4.808 ms
Remote clock offset: -2.099 ms

# Below is generated by plot.py at 2019-03-09 15:19:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.59 Mbit/s
95th percentile per-packet one-way delay: 48.367 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 52.22 Mbit/s
95th percentile per-packet one-way delay: 52.075 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 33.35 Mbit/s
95th percentile per-packet one-way delay: 38.298 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 27.66 Mbit/s
95th percentile per-packet one-way delay: 36.829 ms
Loss rate: 0.46%
```

Run 2: Report of Copa — Data Link

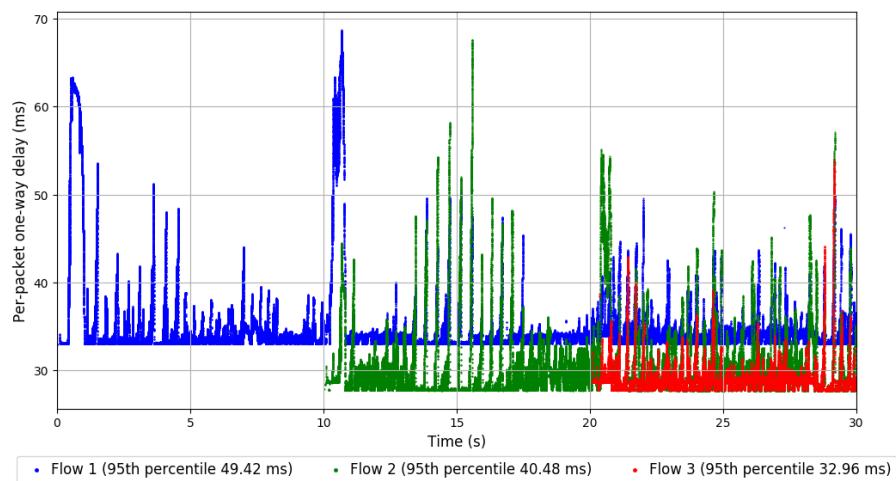
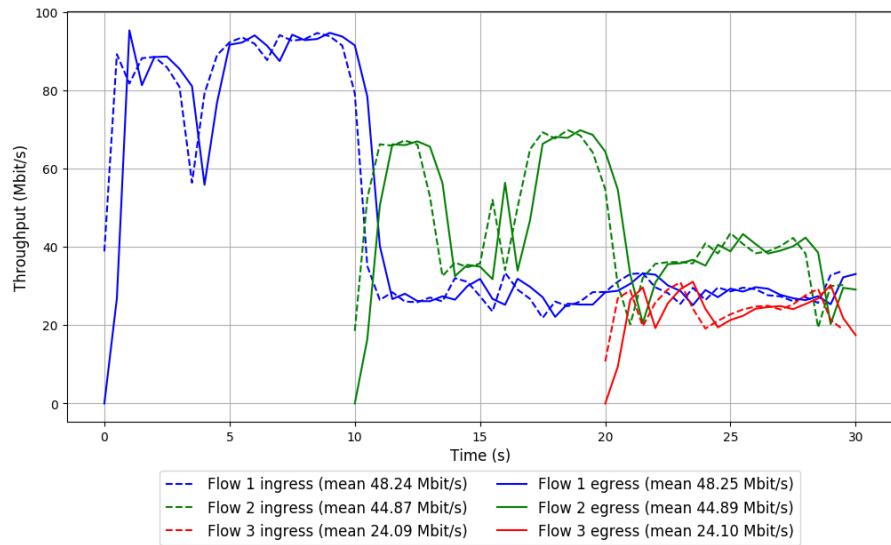


Run 3: Statistics of Copa

```
Start at: 2019-03-09 14:09:50
End at: 2019-03-09 14:10:20
Local clock offset: 4.062 ms
Remote clock offset: -0.524 ms

# Below is generated by plot.py at 2019-03-09 15:19:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.12 Mbit/s
95th percentile per-packet one-way delay: 43.407 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 48.25 Mbit/s
95th percentile per-packet one-way delay: 49.424 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 44.89 Mbit/s
95th percentile per-packet one-way delay: 40.480 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 24.10 Mbit/s
95th percentile per-packet one-way delay: 32.962 ms
Loss rate: 0.40%
```

Run 3: Report of Copa — Data Link

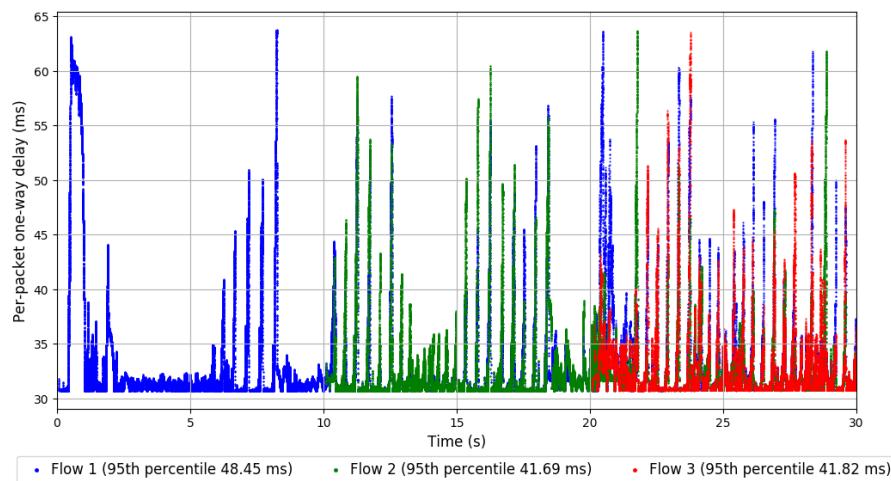
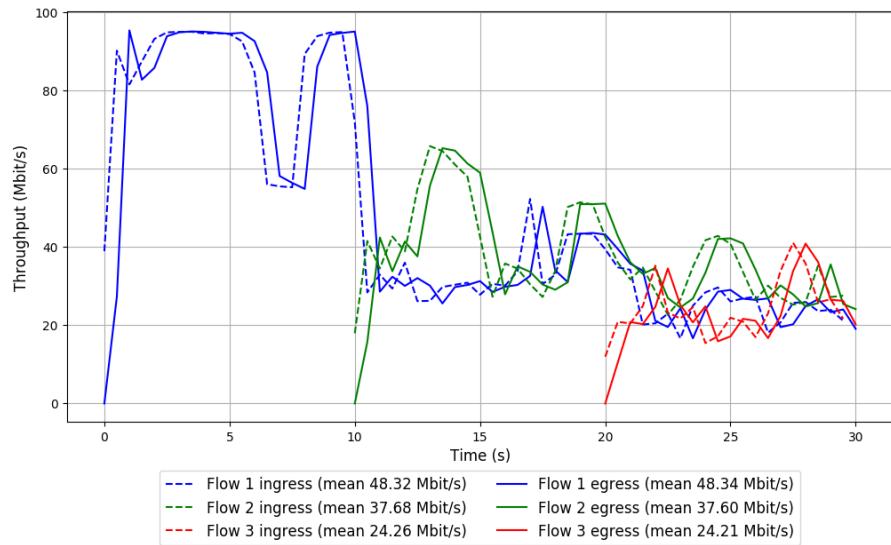


Run 4: Statistics of Copa

```
Start at: 2019-03-09 14:38:11
End at: 2019-03-09 14:38:41
Local clock offset: -5.777 ms
Remote clock offset: -0.42 ms

# Below is generated by plot.py at 2019-03-09 15:20:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.39 Mbit/s
95th percentile per-packet one-way delay: 45.319 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 48.34 Mbit/s
95th percentile per-packet one-way delay: 48.453 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 37.60 Mbit/s
95th percentile per-packet one-way delay: 41.691 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 24.21 Mbit/s
95th percentile per-packet one-way delay: 41.821 ms
Loss rate: 0.64%
```

Run 4: Report of Copa — Data Link

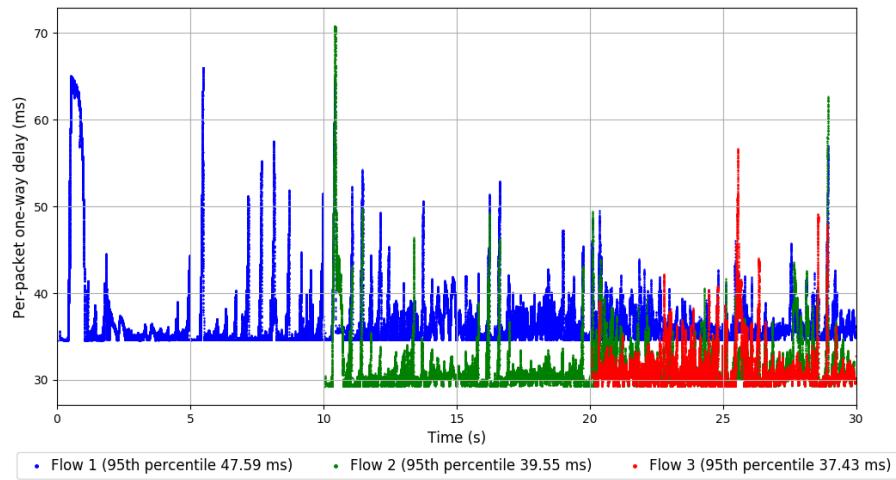
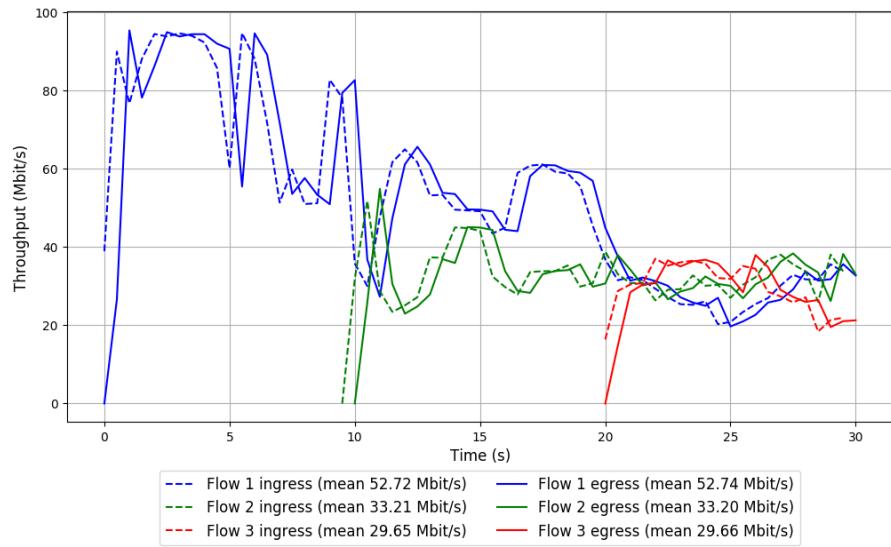


Run 5: Statistics of Copa

```
Start at: 2019-03-09 15:08:52
End at: 2019-03-09 15:09:22
Local clock offset: -6.508 ms
Remote clock offset: -1.044 ms

# Below is generated by plot.py at 2019-03-09 15:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.70 Mbit/s
95th percentile per-packet one-way delay: 43.306 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 52.74 Mbit/s
95th percentile per-packet one-way delay: 47.589 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 33.20 Mbit/s
95th percentile per-packet one-way delay: 39.552 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 29.66 Mbit/s
95th percentile per-packet one-way delay: 37.427 ms
Loss rate: 0.35%
```

Run 5: Report of Copa — Data Link

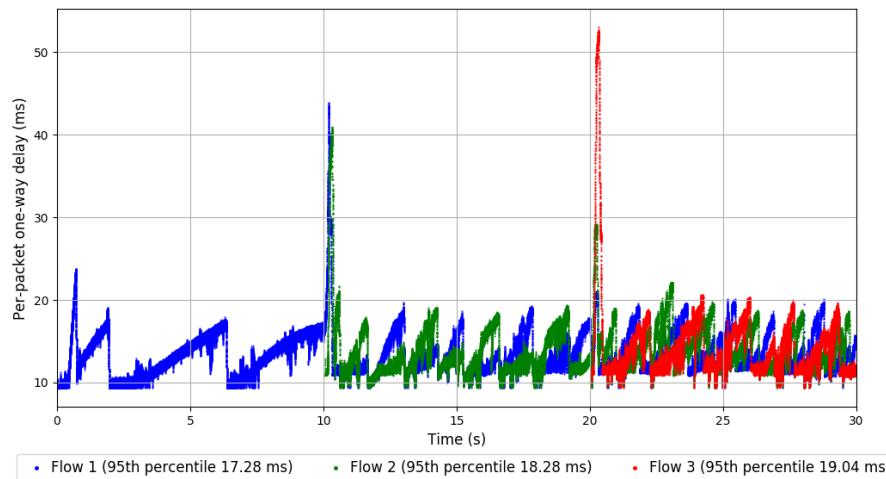
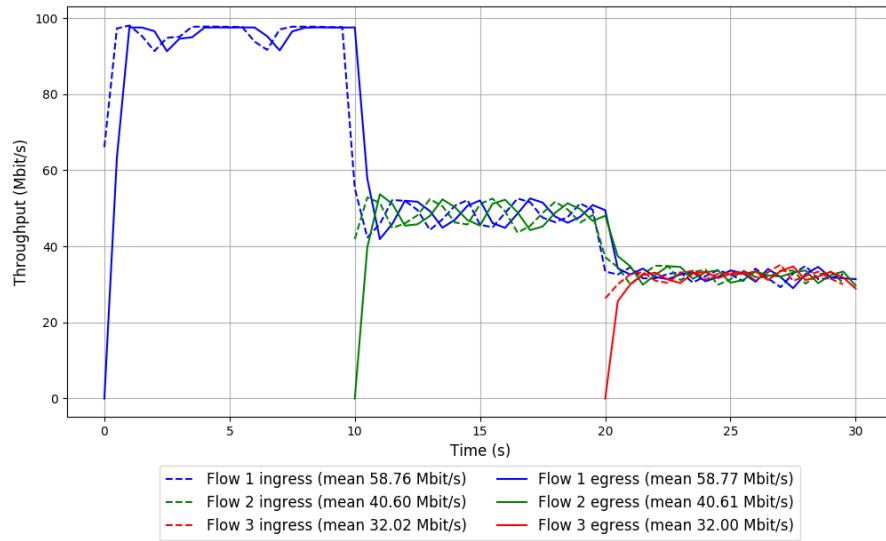


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2019-03-09 12:59:32
End at: 2019-03-09 13:00:02
Local clock offset: 1.811 ms
Remote clock offset: 0.47 ms

# Below is generated by plot.py at 2019-03-09 15:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.41 Mbit/s
95th percentile per-packet one-way delay: 17.957 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 58.77 Mbit/s
95th percentile per-packet one-way delay: 17.281 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 40.61 Mbit/s
95th percentile per-packet one-way delay: 18.279 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 32.00 Mbit/s
95th percentile per-packet one-way delay: 19.035 ms
Loss rate: 0.31%
```

Run 1: Report of TCP Cubic — Data Link

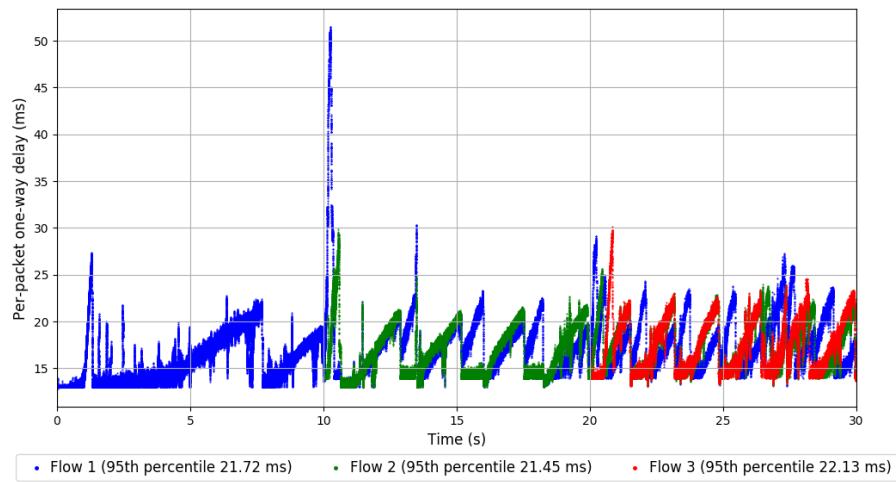
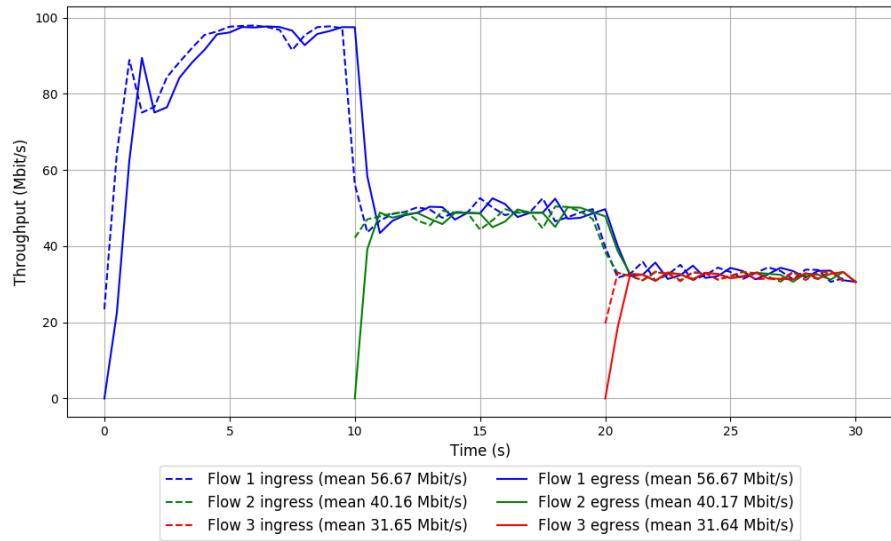


Run 2: Statistics of TCP Cubic

```
Start at: 2019-03-09 13:26:24
End at: 2019-03-09 13:26:54
Local clock offset: -0.774 ms
Remote clock offset: -1.466 ms

# Below is generated by plot.py at 2019-03-09 15:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.92 Mbit/s
95th percentile per-packet one-way delay: 21.730 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.67 Mbit/s
95th percentile per-packet one-way delay: 21.720 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 40.17 Mbit/s
95th percentile per-packet one-way delay: 21.455 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.64 Mbit/s
95th percentile per-packet one-way delay: 22.127 ms
Loss rate: 0.28%
```

Run 2: Report of TCP Cubic — Data Link

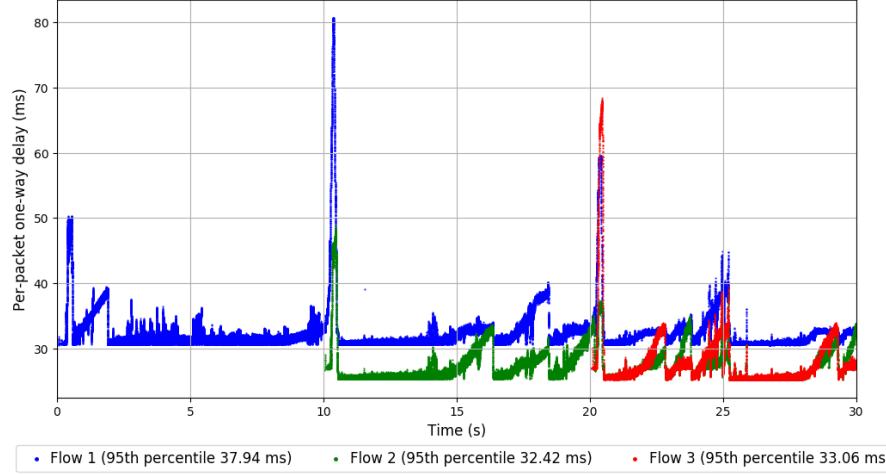
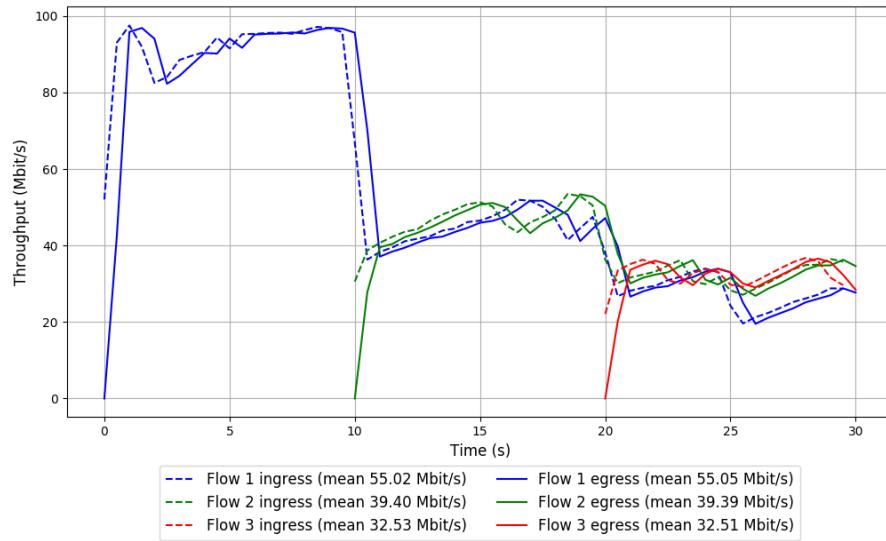


Run 3: Statistics of TCP Cubic

```
Start at: 2019-03-09 13:54:08
End at: 2019-03-09 13:54:38
Local clock offset: -0.922 ms
Remote clock offset: -0.9 ms

# Below is generated by plot.py at 2019-03-09 15:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.06 Mbit/s
95th percentile per-packet one-way delay: 36.783 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 55.05 Mbit/s
95th percentile per-packet one-way delay: 37.935 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 39.39 Mbit/s
95th percentile per-packet one-way delay: 32.416 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 32.51 Mbit/s
95th percentile per-packet one-way delay: 33.065 ms
Loss rate: 0.48%
```

Run 3: Report of TCP Cubic — Data Link

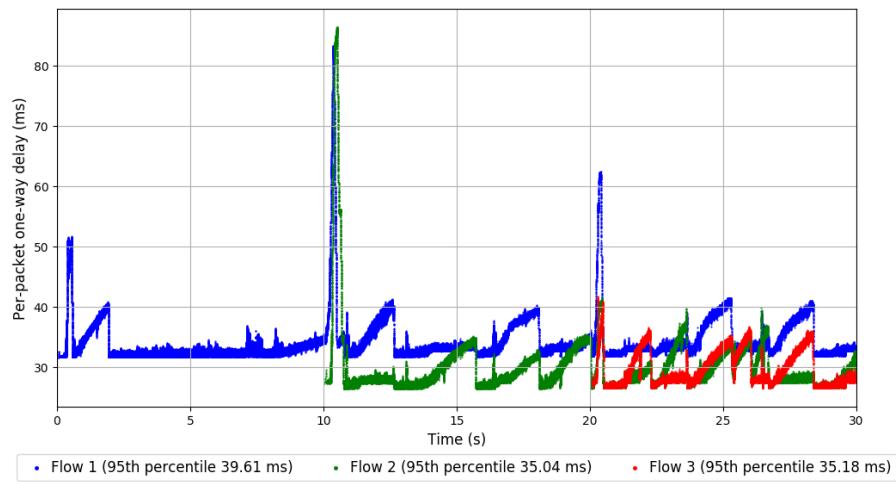
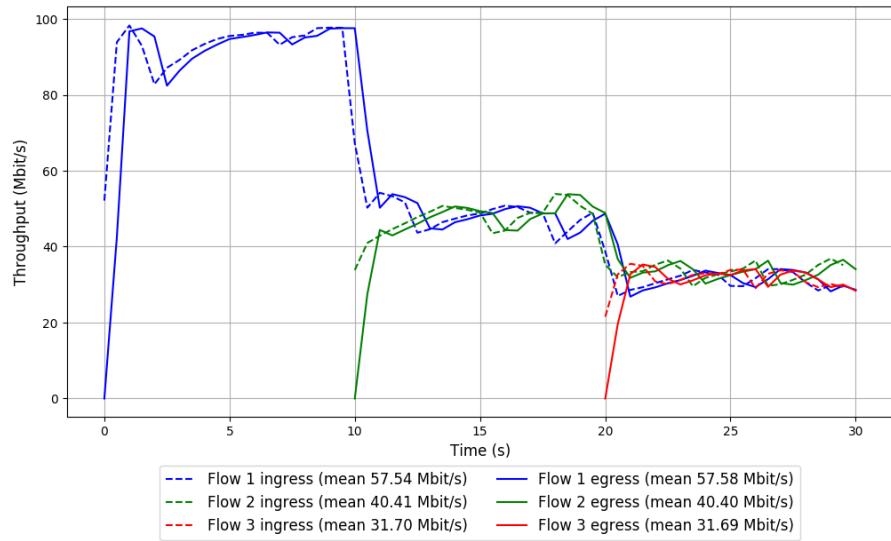


Run 4: Statistics of TCP Cubic

```
Start at: 2019-03-09 14:21:54
End at: 2019-03-09 14:22:24
Local clock offset: -2.125 ms
Remote clock offset: -1.04 ms

# Below is generated by plot.py at 2019-03-09 15:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.97 Mbit/s
95th percentile per-packet one-way delay: 39.120 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 57.58 Mbit/s
95th percentile per-packet one-way delay: 39.611 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 40.40 Mbit/s
95th percentile per-packet one-way delay: 35.036 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 31.69 Mbit/s
95th percentile per-packet one-way delay: 35.183 ms
Loss rate: 0.44%
```

Run 4: Report of TCP Cubic — Data Link

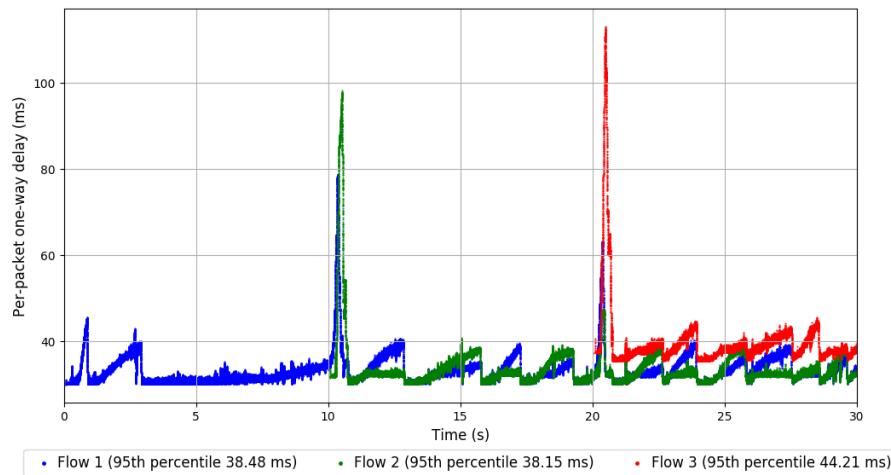
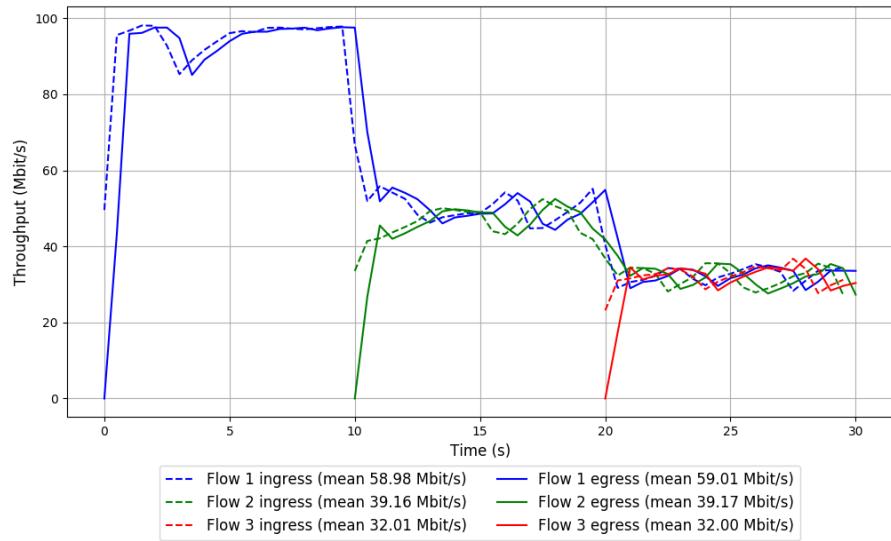


Run 5: Statistics of TCP Cubic

```
Start at: 2019-03-09 14:51:34
End at: 2019-03-09 14:52:04
Local clock offset: -4.256 ms
Remote clock offset: -1.617 ms

# Below is generated by plot.py at 2019-03-09 15:20:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.69 Mbit/s
95th percentile per-packet one-way delay: 40.102 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 59.01 Mbit/s
95th percentile per-packet one-way delay: 38.475 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 39.17 Mbit/s
95th percentile per-packet one-way delay: 38.150 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 32.00 Mbit/s
95th percentile per-packet one-way delay: 44.208 ms
Loss rate: 0.53%
```

Run 5: Report of TCP Cubic — Data Link

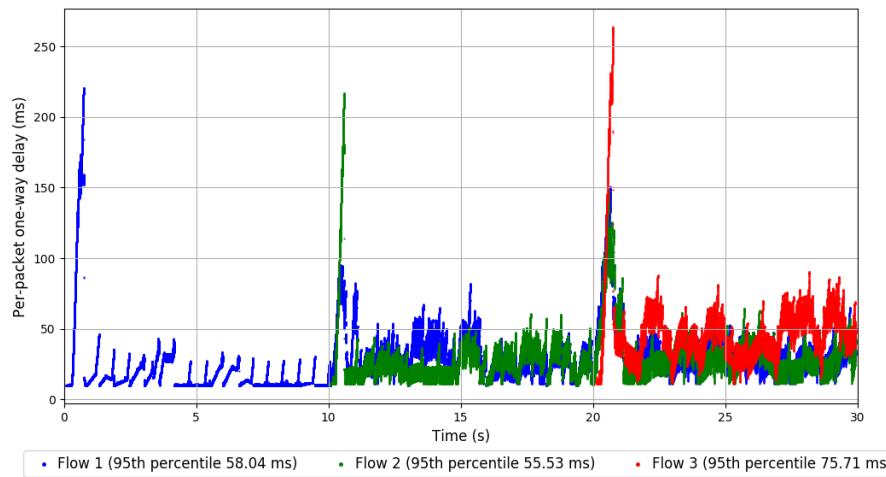
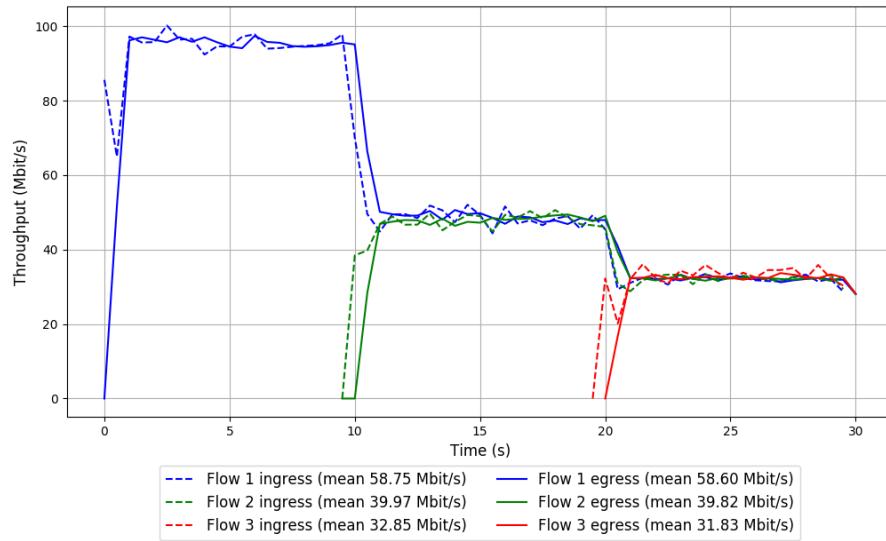


```
Run 1: Statistics of FillP
```

```
Start at: 2019-03-09 13:13:23
End at: 2019-03-09 13:13:53
Local clock offset: 2.391 ms
Remote clock offset: -0.854 ms

# Below is generated by plot.py at 2019-03-09 15:20:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.68 Mbit/s
95th percentile per-packet one-way delay: 65.706 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 58.60 Mbit/s
95th percentile per-packet one-way delay: 58.041 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 39.82 Mbit/s
95th percentile per-packet one-way delay: 55.532 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 31.83 Mbit/s
95th percentile per-packet one-way delay: 75.707 ms
Loss rate: 3.28%
```

Run 1: Report of FillP — Data Link

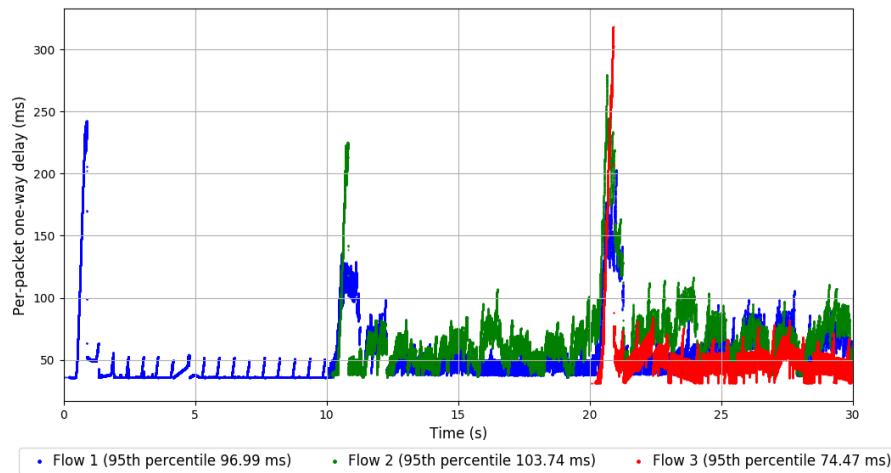
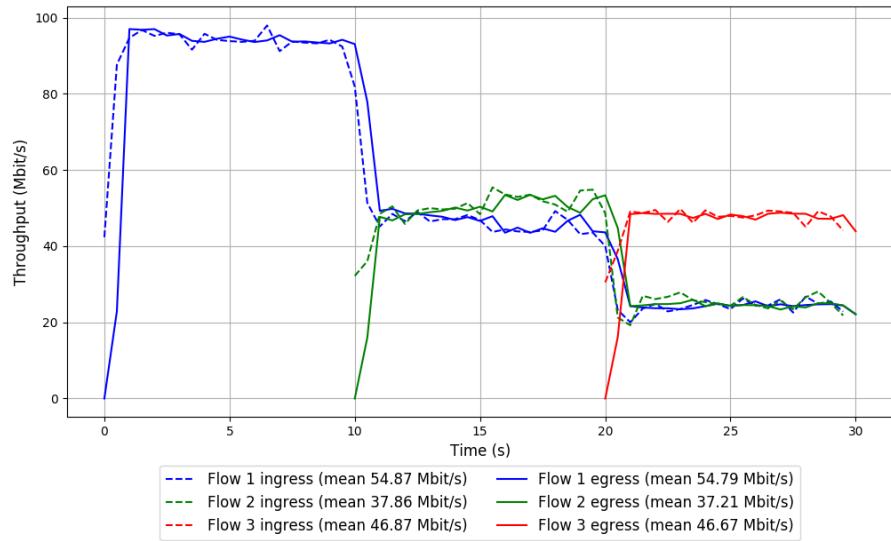


Run 2: Statistics of FillP

```
Start at: 2019-03-09 13:41:01
End at: 2019-03-09 13:41:31
Local clock offset: -1.535 ms
Remote clock offset: -1.841 ms

# Below is generated by plot.py at 2019-03-09 15:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.02 Mbit/s
95th percentile per-packet one-way delay: 97.940 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 54.79 Mbit/s
95th percentile per-packet one-way delay: 96.994 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 103.740 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 46.67 Mbit/s
95th percentile per-packet one-way delay: 74.466 ms
Loss rate: 0.78%
```

Run 2: Report of FillP — Data Link

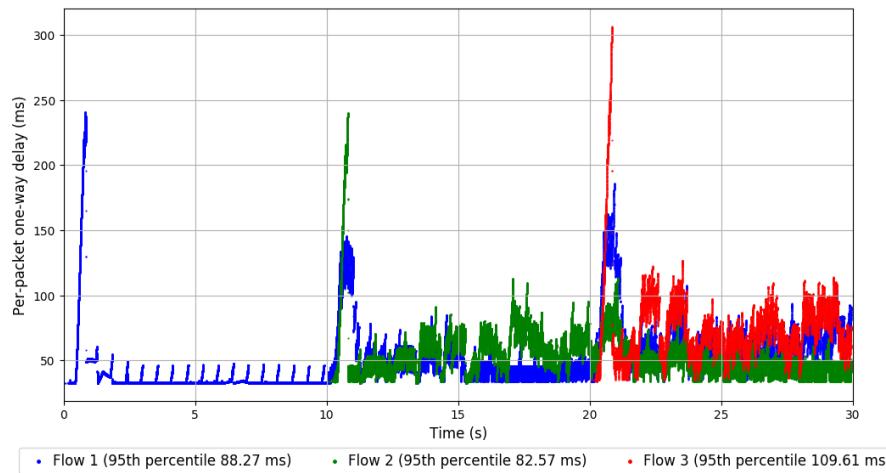
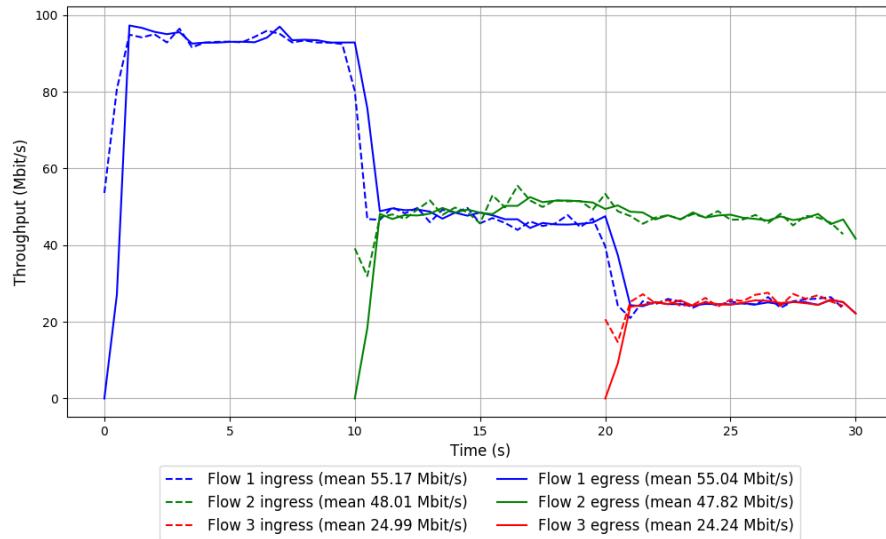


Run 3: Statistics of FillP

```
Start at: 2019-03-09 14:08:36
End at: 2019-03-09 14:09:06
Local clock offset: 3.48 ms
Remote clock offset: -0.772 ms

# Below is generated by plot.py at 2019-03-09 15:21:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.88 Mbit/s
95th percentile per-packet one-way delay: 92.887 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 55.04 Mbit/s
95th percentile per-packet one-way delay: 88.274 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 47.82 Mbit/s
95th percentile per-packet one-way delay: 82.568 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 24.24 Mbit/s
95th percentile per-packet one-way delay: 109.607 ms
Loss rate: 3.47%
```

Run 3: Report of FillP — Data Link

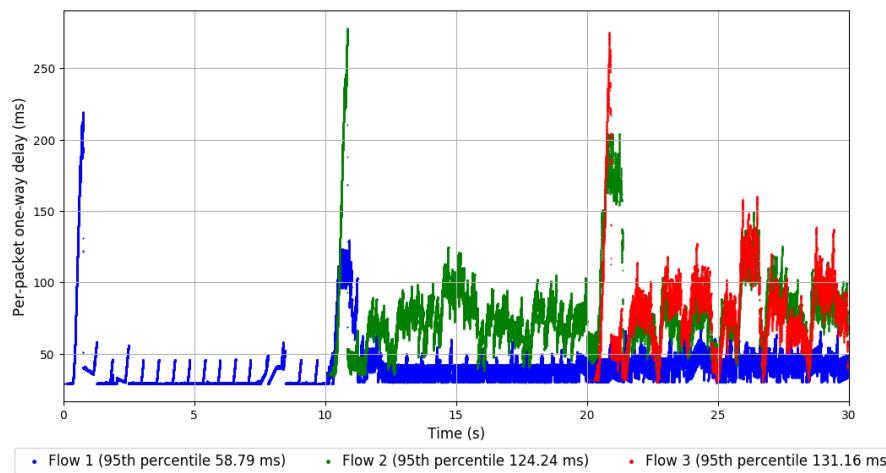
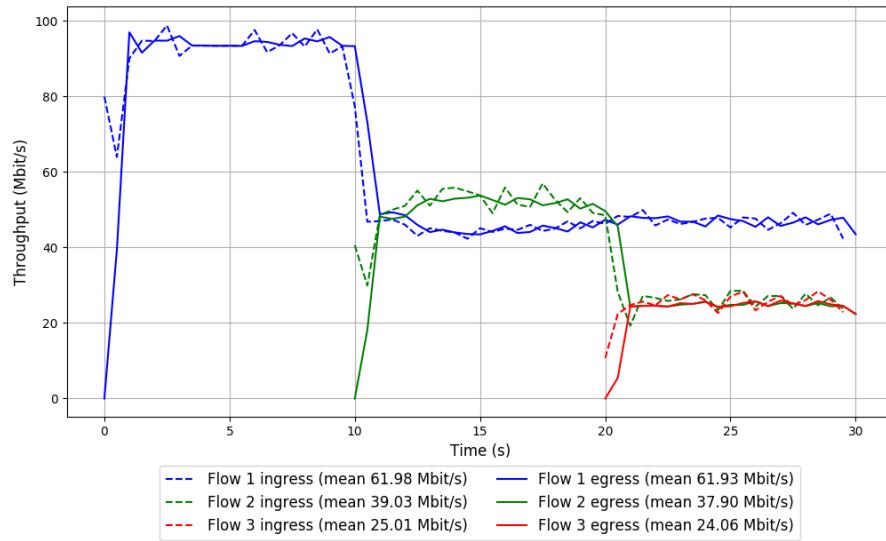


```
Run 4: Statistics of FillP
```

```
Start at: 2019-03-09 14:36:47
End at: 2019-03-09 14:37:17
Local clock offset: -2.013 ms
Remote clock offset: -0.65 ms

# Below is generated by plot.py at 2019-03-09 15:21:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.11 Mbit/s
95th percentile per-packet one-way delay: 104.554 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 61.93 Mbit/s
95th percentile per-packet one-way delay: 58.794 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 37.90 Mbit/s
95th percentile per-packet one-way delay: 124.244 ms
Loss rate: 3.05%
-- Flow 3:
Average throughput: 24.06 Mbit/s
95th percentile per-packet one-way delay: 131.156 ms
Loss rate: 4.21%
```

Run 4: Report of FillP — Data Link

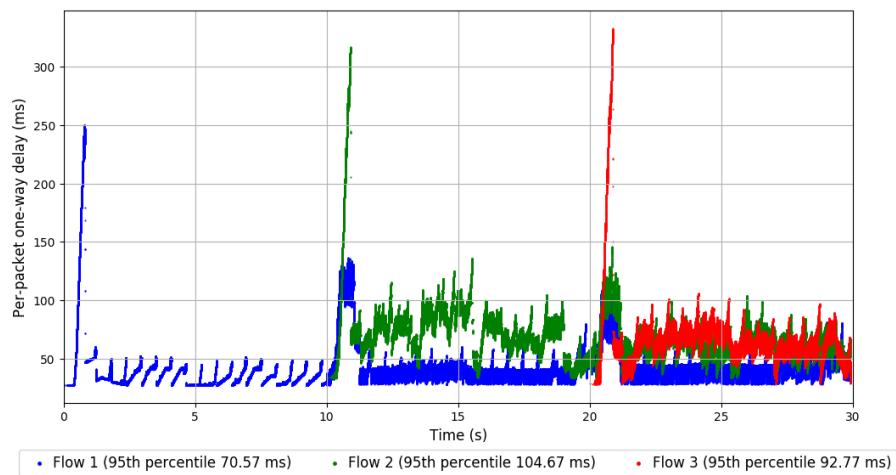
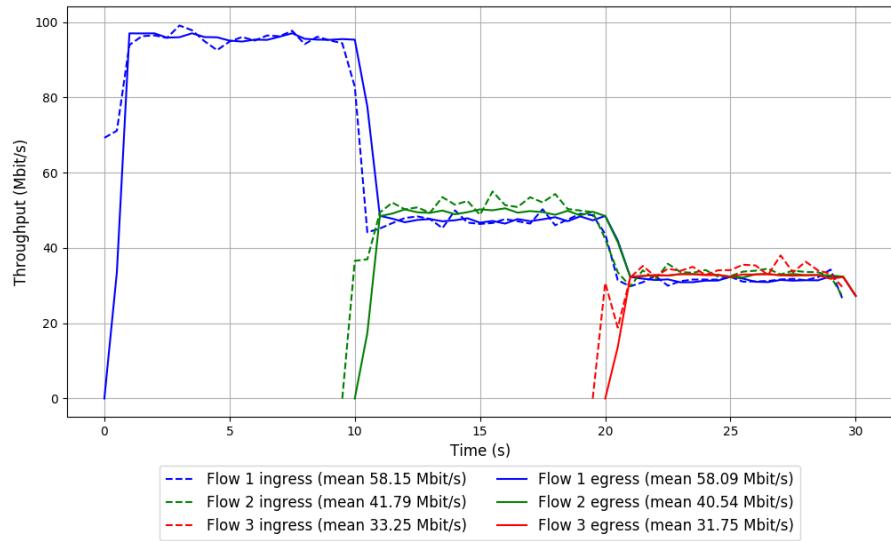


```
Run 5: Statistics of FillP
```

```
Start at: 2019-03-09 15:07:26
End at: 2019-03-09 15:07:56
Local clock offset: -7.753 ms
Remote clock offset: -0.48 ms

# Below is generated by plot.py at 2019-03-09 15:21:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 96.662 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 58.09 Mbit/s
95th percentile per-packet one-way delay: 70.567 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 40.54 Mbit/s
95th percentile per-packet one-way delay: 104.673 ms
Loss rate: 3.13%
-- Flow 3:
Average throughput: 31.75 Mbit/s
95th percentile per-packet one-way delay: 92.770 ms
Loss rate: 4.90%
```

Run 5: Report of FillP — Data Link

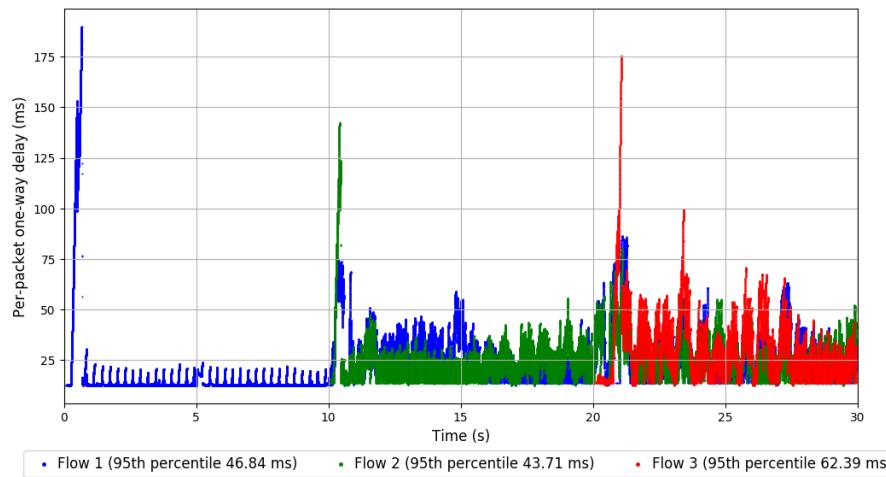
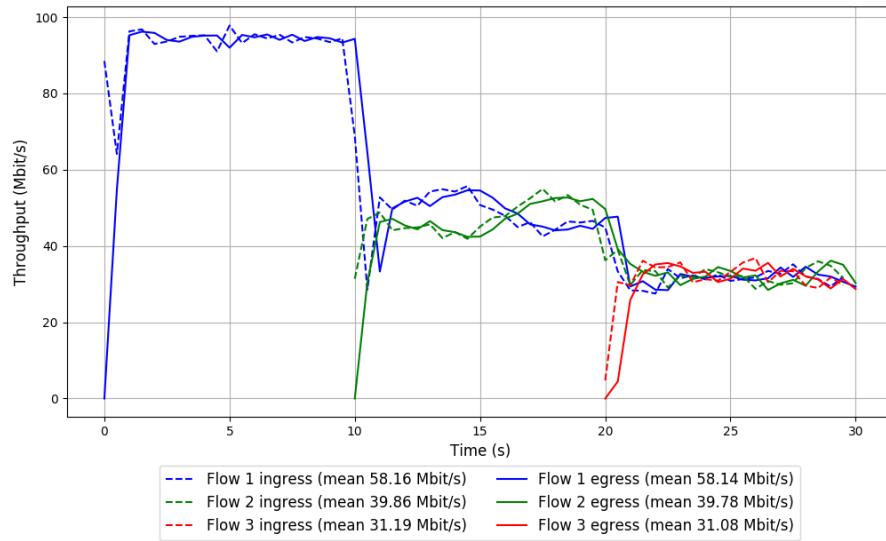


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2019-03-09 13:12:07
End at: 2019-03-09 13:12:37
Local clock offset: 4.988 ms
Remote clock offset: -0.704 ms

# Below is generated by plot.py at 2019-03-09 15:21:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.94 Mbit/s
95th percentile per-packet one-way delay: 49.976 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 58.14 Mbit/s
95th percentile per-packet one-way delay: 46.837 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 39.78 Mbit/s
95th percentile per-packet one-way delay: 43.711 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 31.08 Mbit/s
95th percentile per-packet one-way delay: 62.387 ms
Loss rate: 0.64%
```

Run 1: Report of FillP-Sheep — Data Link

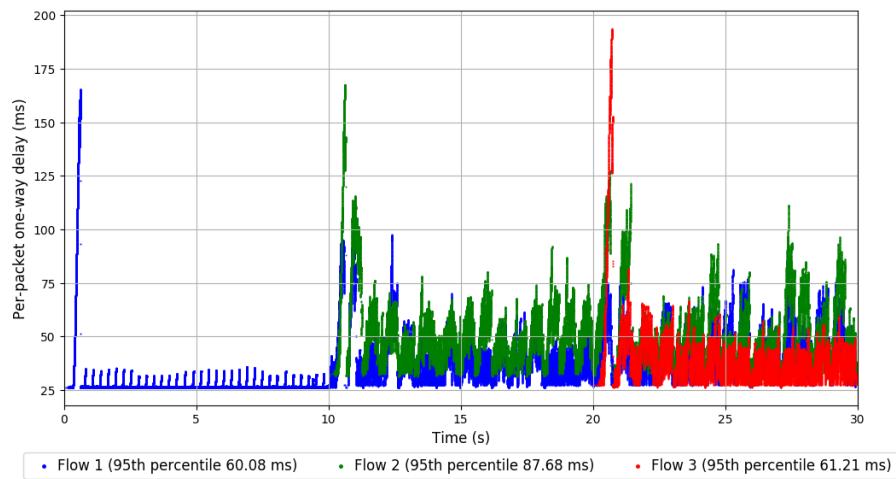
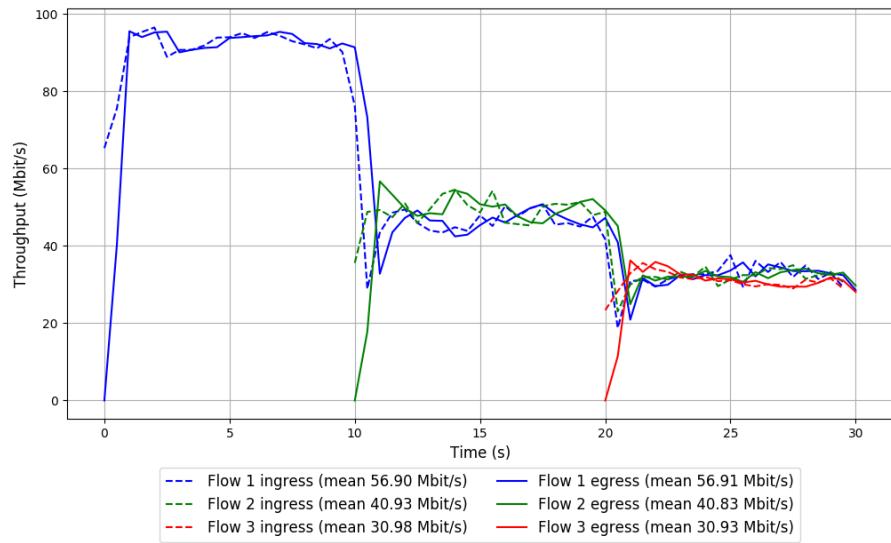


Run 2: Statistics of FillP-Sheep

```
Start at: 2019-03-09 13:39:46
End at: 2019-03-09 13:40:16
Local clock offset: -5.067 ms
Remote clock offset: -1.352 ms

# Below is generated by plot.py at 2019-03-09 15:21:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.26 Mbit/s
95th percentile per-packet one-way delay: 71.498 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 56.91 Mbit/s
95th percentile per-packet one-way delay: 60.075 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 40.83 Mbit/s
95th percentile per-packet one-way delay: 87.678 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 30.93 Mbit/s
95th percentile per-packet one-way delay: 61.214 ms
Loss rate: 0.56%
```

Run 2: Report of FillP-Sheep — Data Link

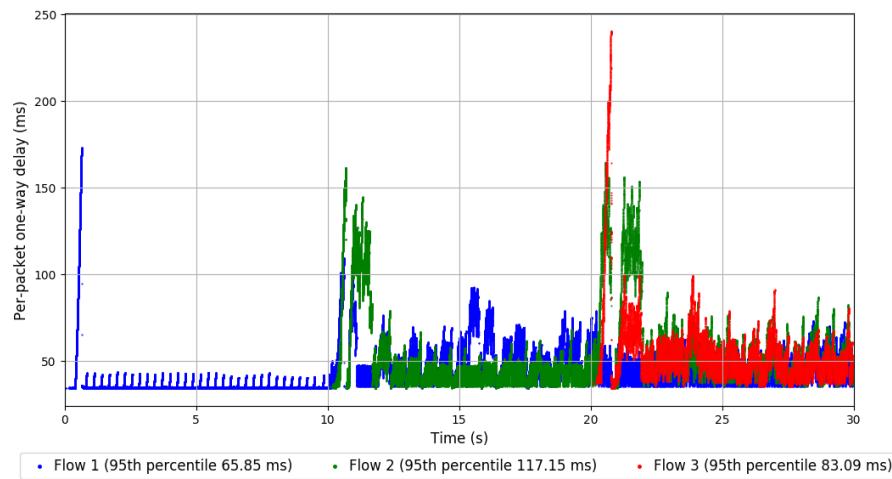
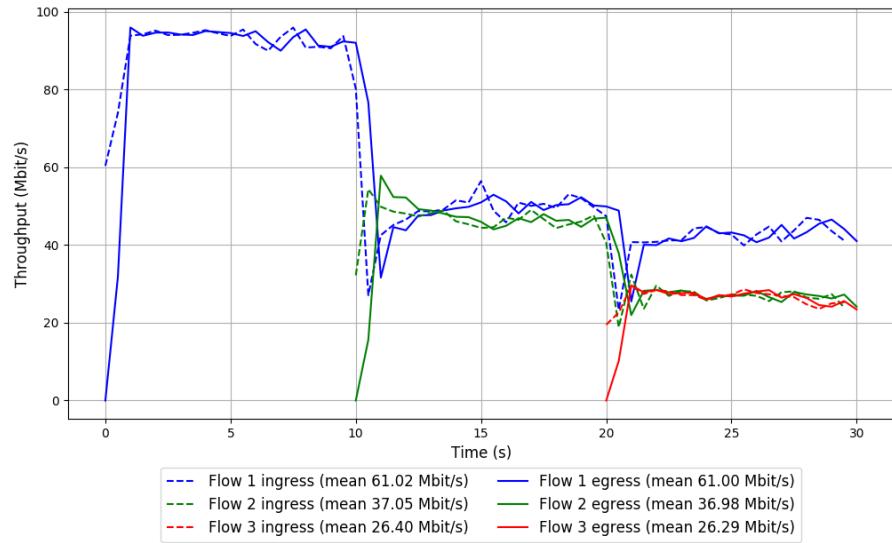


Run 3: Statistics of FillP-Sheep

```
Start at: 2019-03-09 14:07:22
End at: 2019-03-09 14:07:52
Local clock offset: 4.228 ms
Remote clock offset: -1.688 ms

# Below is generated by plot.py at 2019-03-09 15:21:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.32 Mbit/s
95th percentile per-packet one-way delay: 79.299 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 61.00 Mbit/s
95th percentile per-packet one-way delay: 65.851 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 36.98 Mbit/s
95th percentile per-packet one-way delay: 117.153 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 26.29 Mbit/s
95th percentile per-packet one-way delay: 83.087 ms
Loss rate: 0.93%
```

Run 3: Report of FillP-Sheep — Data Link

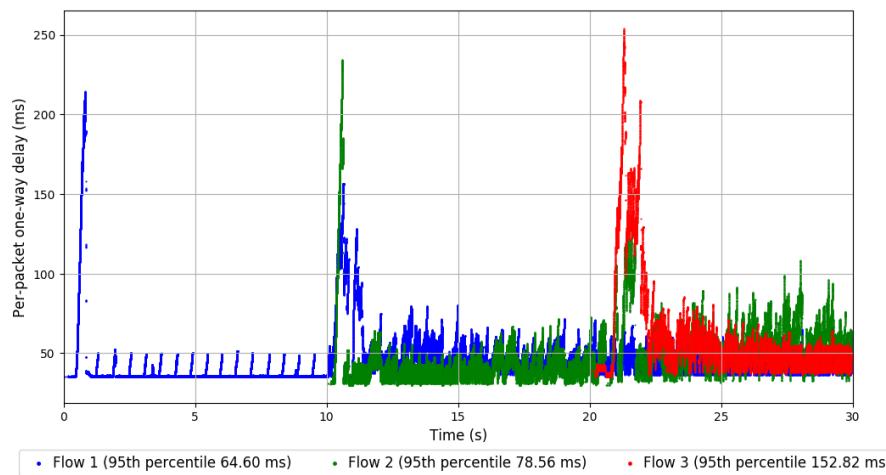
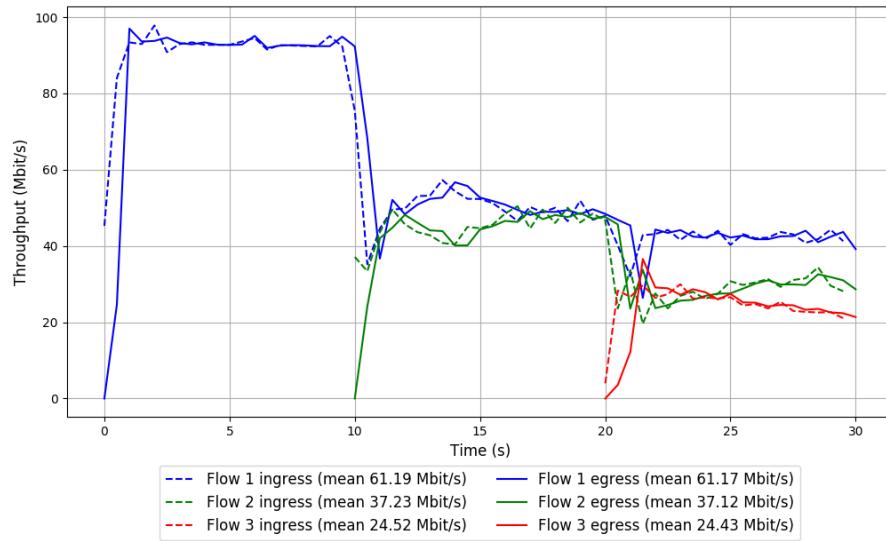


Run 4: Statistics of FillP-Sheep

```
Start at: 2019-03-09 14:35:27
End at: 2019-03-09 14:35:57
Local clock offset: -8.187 ms
Remote clock offset: -7.972 ms

# Below is generated by plot.py at 2019-03-09 15:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.97 Mbit/s
95th percentile per-packet one-way delay: 79.395 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 61.17 Mbit/s
95th percentile per-packet one-way delay: 64.596 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 37.12 Mbit/s
95th percentile per-packet one-way delay: 78.555 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 24.43 Mbit/s
95th percentile per-packet one-way delay: 152.817 ms
Loss rate: 0.81%
```

Run 4: Report of FillP-Sheep — Data Link

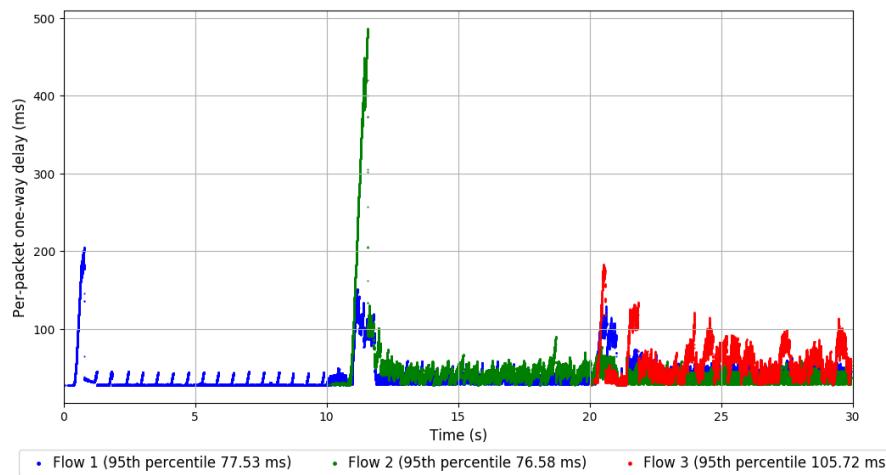
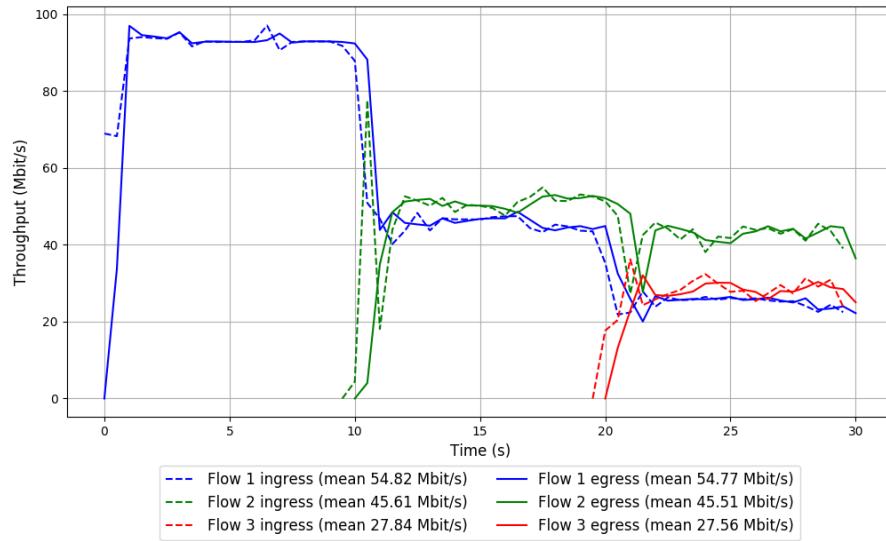


Run 5: Statistics of FillP-Sheep

```
Start at: 2019-03-09 15:06:04
End at: 2019-03-09 15:06:34
Local clock offset: -6.387 ms
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2019-03-09 15:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.21 Mbit/s
95th percentile per-packet one-way delay: 87.038 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 54.77 Mbit/s
95th percentile per-packet one-way delay: 77.526 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 45.51 Mbit/s
95th percentile per-packet one-way delay: 76.575 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 27.56 Mbit/s
95th percentile per-packet one-way delay: 105.716 ms
Loss rate: 1.29%
```

Run 5: Report of FillP-Sheep — Data Link

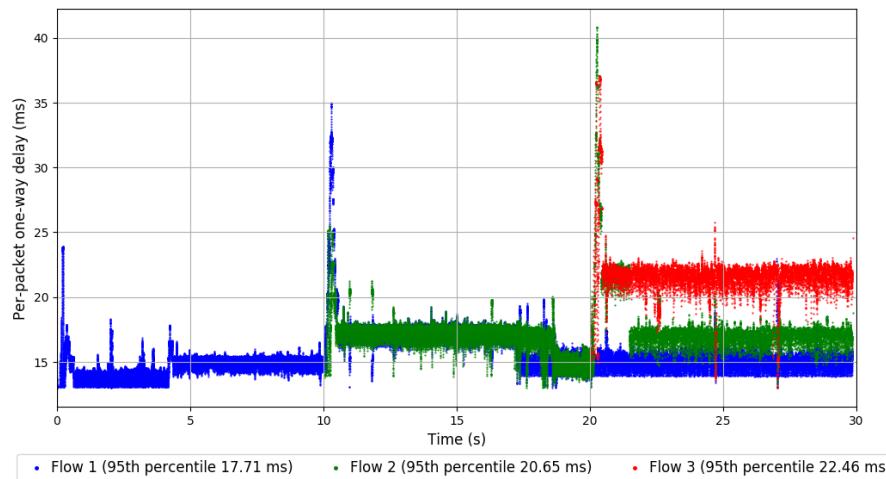
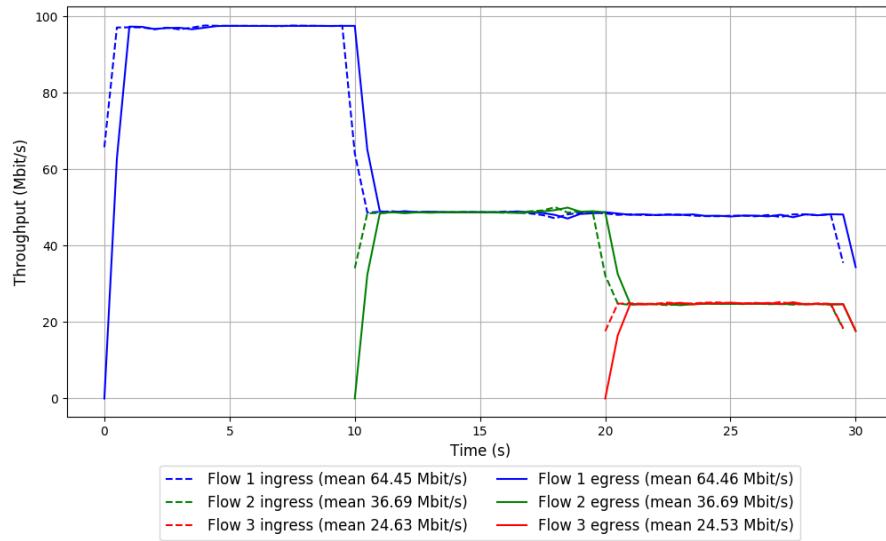


Run 1: Statistics of Indigo

```
Start at: 2019-03-09 13:08:00
End at: 2019-03-09 13:08:30
Local clock offset: 5.34 ms
Remote clock offset: -0.526 ms

# Below is generated by plot.py at 2019-03-09 15:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 21.815 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 64.46 Mbit/s
95th percentile per-packet one-way delay: 17.711 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 36.69 Mbit/s
95th percentile per-packet one-way delay: 20.648 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 24.53 Mbit/s
95th percentile per-packet one-way delay: 22.465 ms
Loss rate: 0.67%
```

Run 1: Report of Indigo — Data Link

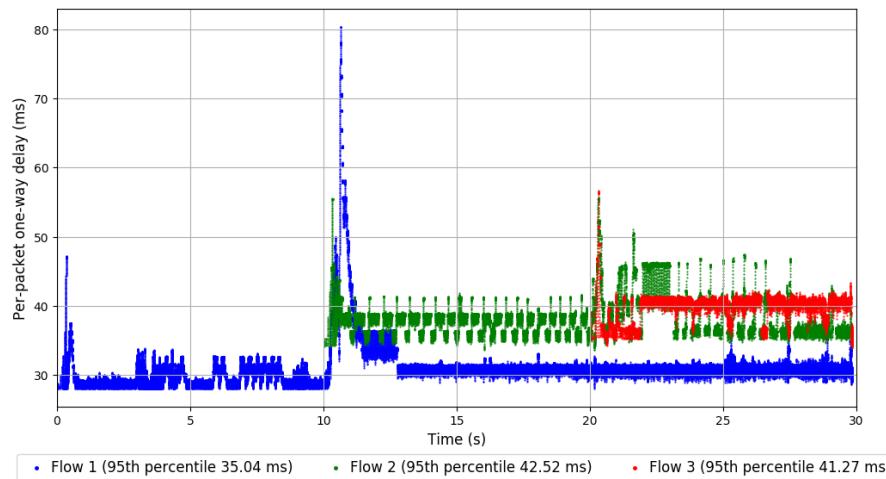
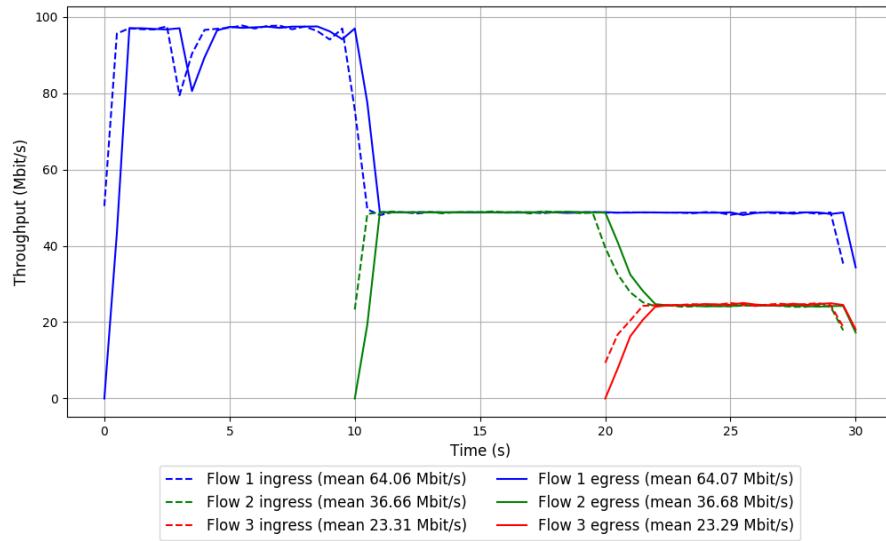


Run 2: Statistics of Indigo

```
Start at: 2019-03-09 13:35:42
End at: 2019-03-09 13:36:12
Local clock offset: -2.877 ms
Remote clock offset: -1.128 ms

# Below is generated by plot.py at 2019-03-09 15:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.08 Mbit/s
95th percentile per-packet one-way delay: 41.135 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 64.07 Mbit/s
95th percentile per-packet one-way delay: 35.037 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 36.68 Mbit/s
95th percentile per-packet one-way delay: 42.522 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 23.29 Mbit/s
95th percentile per-packet one-way delay: 41.271 ms
Loss rate: 0.58%
```

Run 2: Report of Indigo — Data Link

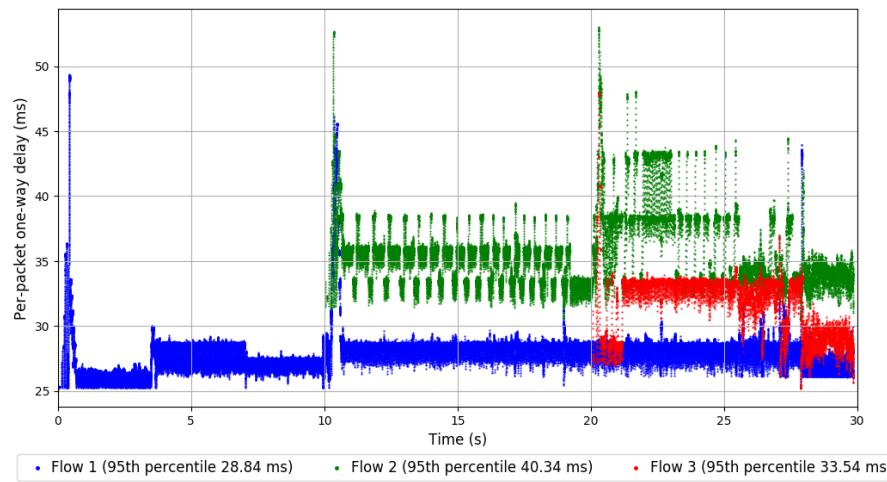
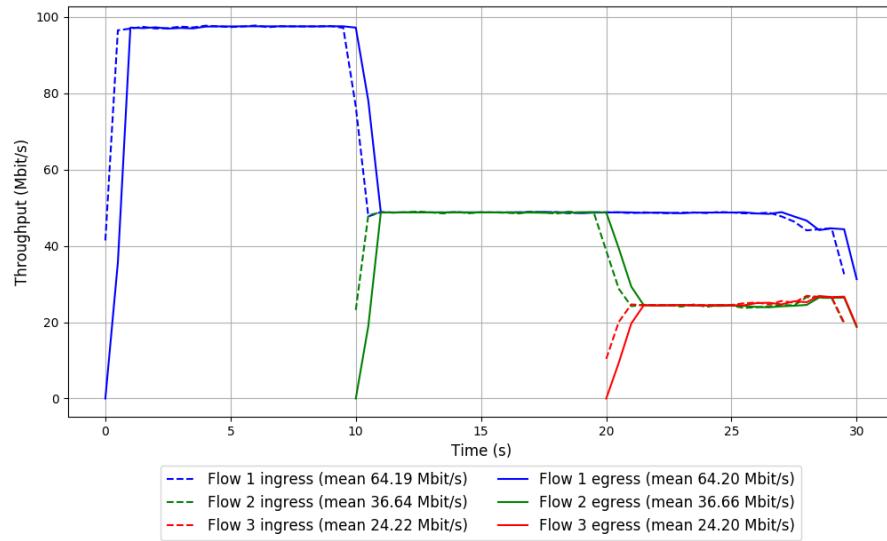


Run 3: Statistics of Indigo

```
Start at: 2019-03-09 14:03:10
End at: 2019-03-09 14:03:40
Local clock offset: 0.717 ms
Remote clock offset: -0.787 ms

# Below is generated by plot.py at 2019-03-09 15:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.49 Mbit/s
95th percentile per-packet one-way delay: 37.505 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 64.20 Mbit/s
95th percentile per-packet one-way delay: 28.838 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 36.66 Mbit/s
95th percentile per-packet one-way delay: 40.343 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 24.20 Mbit/s
95th percentile per-packet one-way delay: 33.540 ms
Loss rate: 0.53%
```

Run 3: Report of Indigo — Data Link

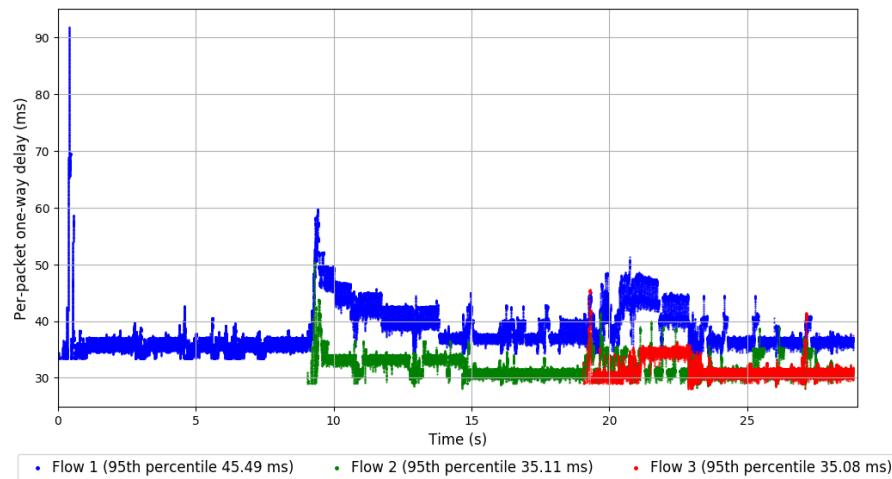
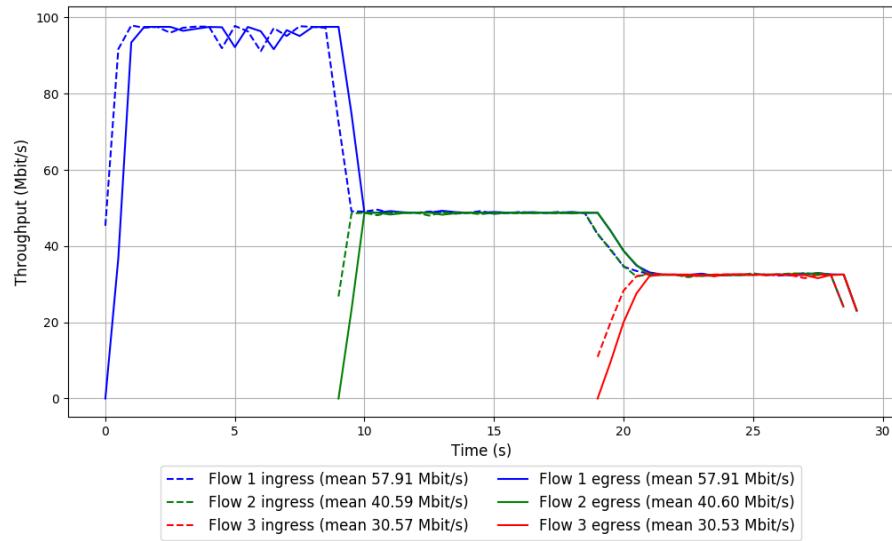


Run 4: Statistics of Indigo

```
Start at: 2019-03-09 14:31:05
End at: 2019-03-09 14:31:35
Local clock offset: -2.444 ms
Remote clock offset: -0.731 ms

# Below is generated by plot.py at 2019-03-09 15:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.19 Mbit/s
95th percentile per-packet one-way delay: 43.919 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 57.91 Mbit/s
95th percentile per-packet one-way delay: 45.494 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 40.60 Mbit/s
95th percentile per-packet one-way delay: 35.108 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 30.53 Mbit/s
95th percentile per-packet one-way delay: 35.080 ms
Loss rate: 0.47%
```

Run 4: Report of Indigo — Data Link

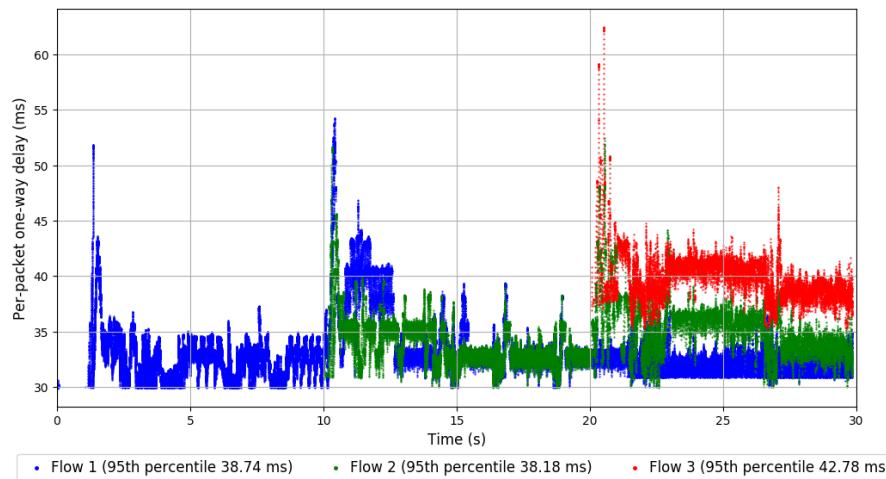
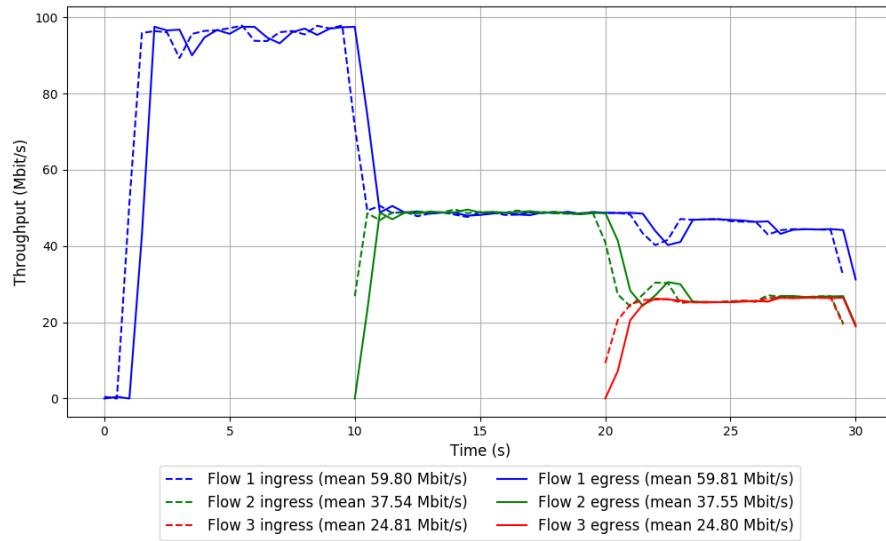


Run 5: Statistics of Indigo

```
Start at: 2019-03-09 15:01:30
End at: 2019-03-09 15:02:00
Local clock offset: -5.996 ms
Remote clock offset: -1.907 ms

# Below is generated by plot.py at 2019-03-09 15:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.89 Mbit/s
95th percentile per-packet one-way delay: 40.794 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 59.81 Mbit/s
95th percentile per-packet one-way delay: 38.740 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 38.183 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 24.80 Mbit/s
95th percentile per-packet one-way delay: 42.778 ms
Loss rate: 0.53%
```

Run 5: Report of Indigo — Data Link

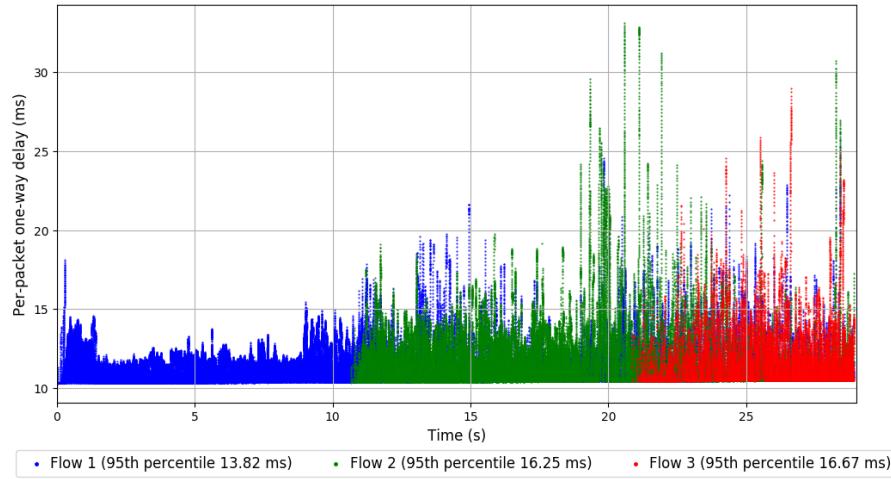
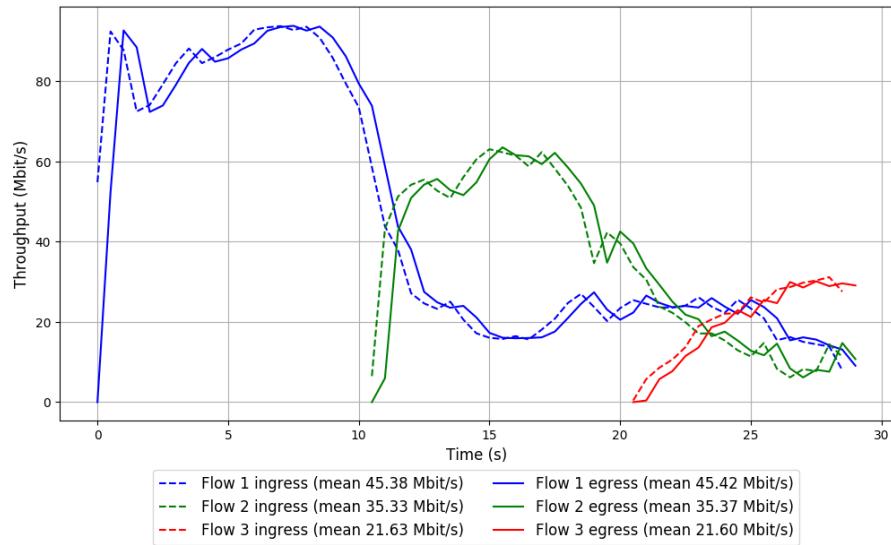


Run 1: Statistics of Indigo-MusesC3

```
Start at: 2019-03-09 13:19:53
End at: 2019-03-09 13:20:23
Local clock offset: -1.281 ms
Remote clock offset: -1.282 ms

# Below is generated by plot.py at 2019-03-09 15:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.78 Mbit/s
95th percentile per-packet one-way delay: 14.909 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 45.42 Mbit/s
95th percentile per-packet one-way delay: 13.820 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.37 Mbit/s
95th percentile per-packet one-way delay: 16.253 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 21.60 Mbit/s
95th percentile per-packet one-way delay: 16.667 ms
Loss rate: 0.41%
```

Run 1: Report of Indigo-MusesC3 — Data Link

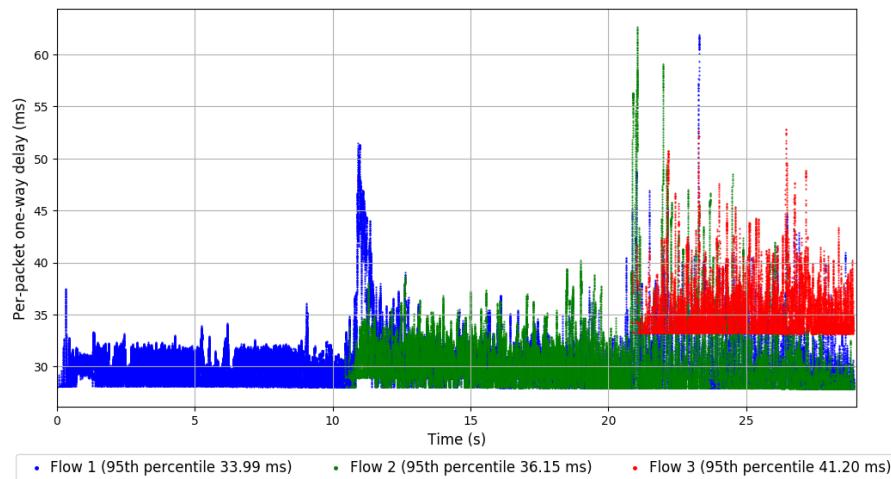
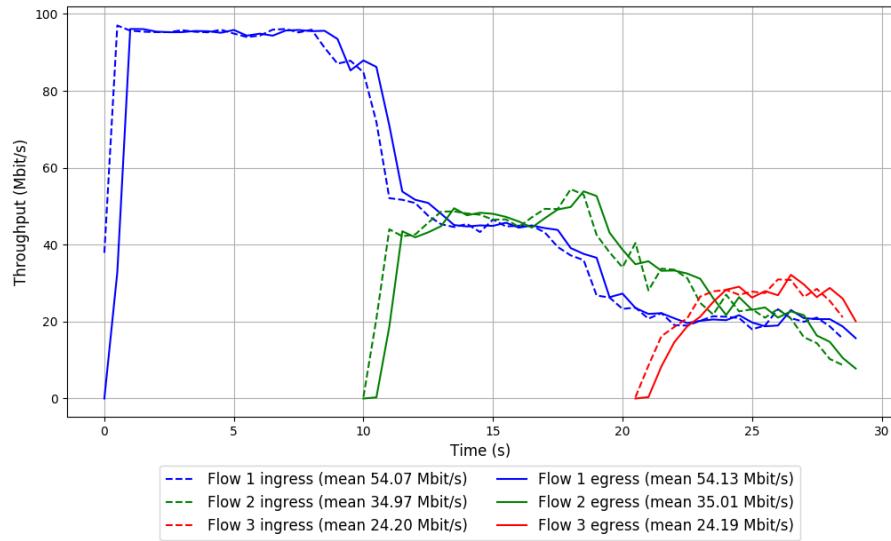


Run 2: Statistics of Indigo-MusesC3

```
Start at: 2019-03-09 13:47:35
End at: 2019-03-09 13:48:05
Local clock offset: -1.18 ms
Remote clock offset: -1.437 ms

# Below is generated by plot.py at 2019-03-09 15:23:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.29 Mbit/s
95th percentile per-packet one-way delay: 36.705 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 54.13 Mbit/s
95th percentile per-packet one-way delay: 33.993 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 35.01 Mbit/s
95th percentile per-packet one-way delay: 36.153 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 24.19 Mbit/s
95th percentile per-packet one-way delay: 41.197 ms
Loss rate: 0.69%
```

Run 2: Report of Indigo-MusesC3 — Data Link

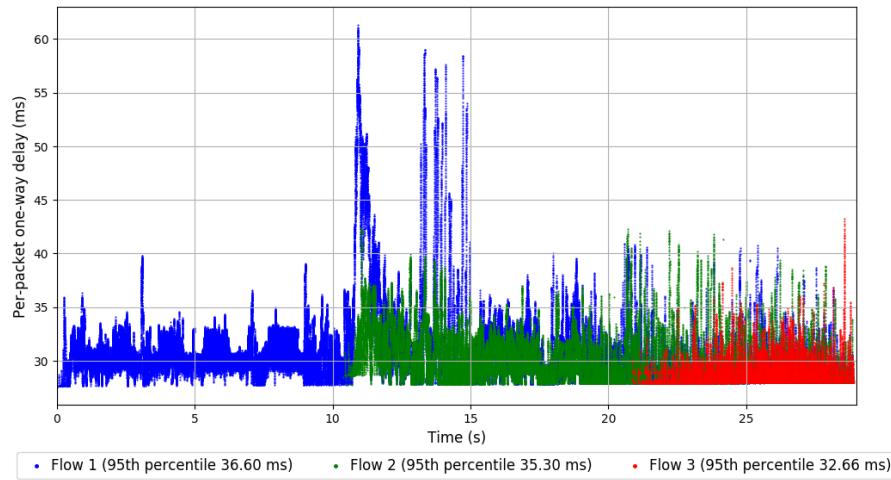
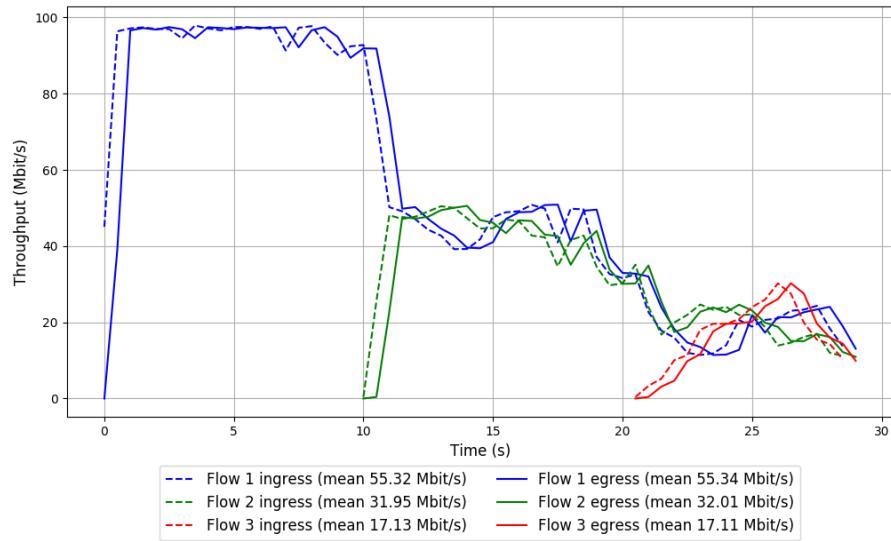


Run 3: Statistics of Indigo-MusesC3

```
Start at: 2019-03-09 14:15:07
End at: 2019-03-09 14:15:37
Local clock offset: 0.928 ms
Remote clock offset: -2.66 ms

# Below is generated by plot.py at 2019-03-09 15:23:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.58 Mbit/s
95th percentile per-packet one-way delay: 35.839 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 55.34 Mbit/s
95th percentile per-packet one-way delay: 36.600 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 32.01 Mbit/s
95th percentile per-packet one-way delay: 35.303 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 17.11 Mbit/s
95th percentile per-packet one-way delay: 32.655 ms
Loss rate: 0.46%
```

Run 3: Report of Indigo-MusesC3 — Data Link

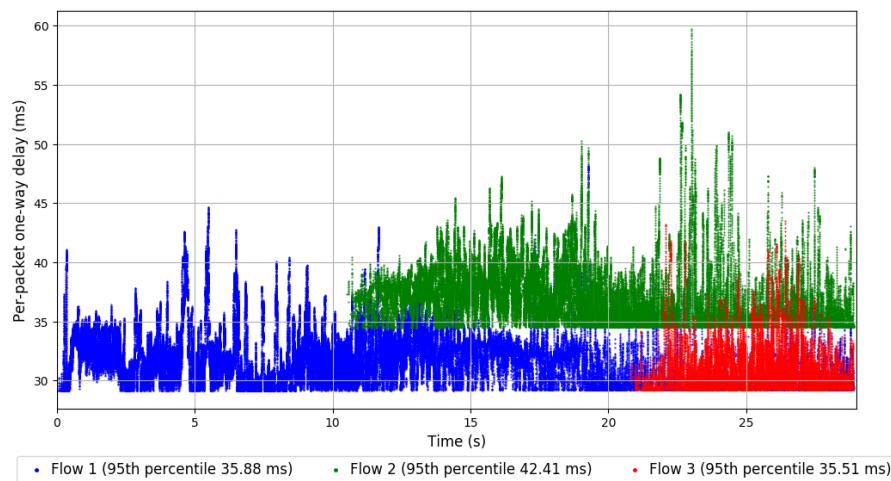
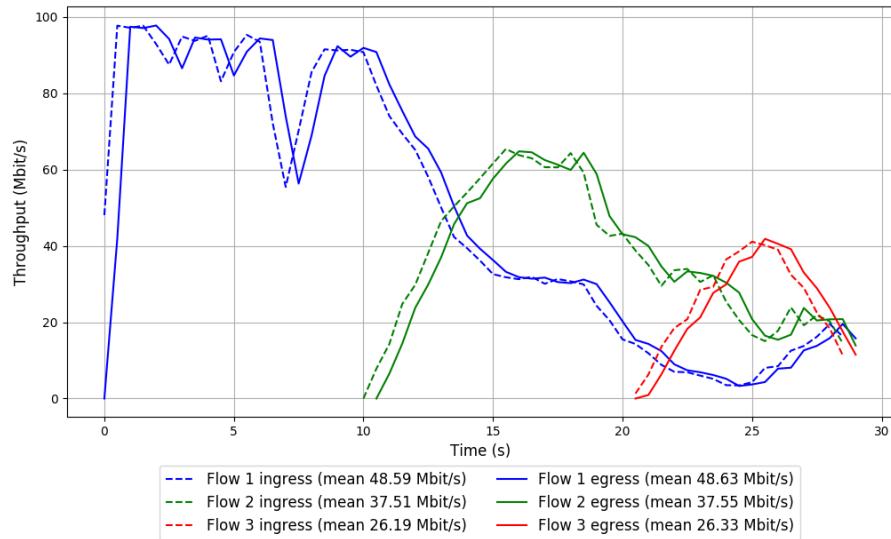


Run 4: Statistics of Indigo-MusesC3

```
Start at: 2019-03-09 14:43:33
End at: 2019-03-09 14:44:03
Local clock offset: -3.198 ms
Remote clock offset: -1.048 ms

# Below is generated by plot.py at 2019-03-09 15:23:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.92 Mbit/s
95th percentile per-packet one-way delay: 40.061 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 48.63 Mbit/s
95th percentile per-packet one-way delay: 35.885 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 42.407 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 26.33 Mbit/s
95th percentile per-packet one-way delay: 35.505 ms
Loss rate: 0.23%
```

Run 4: Report of Indigo-MusesC3 — Data Link

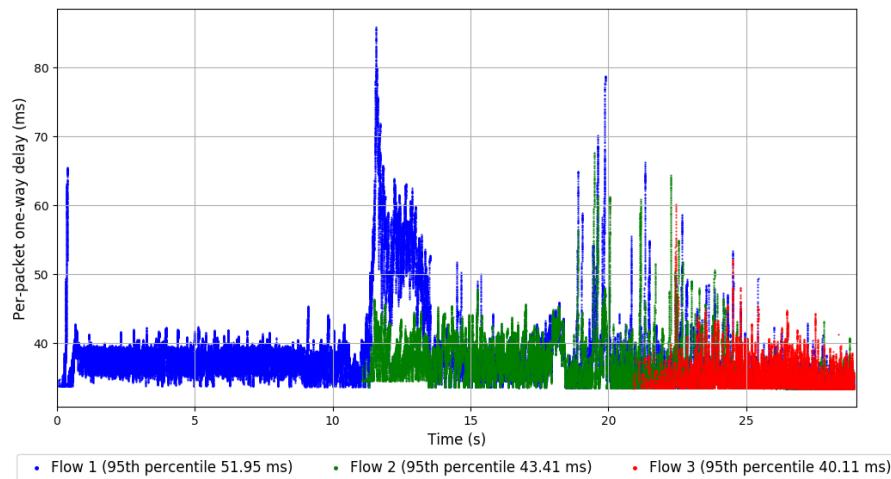
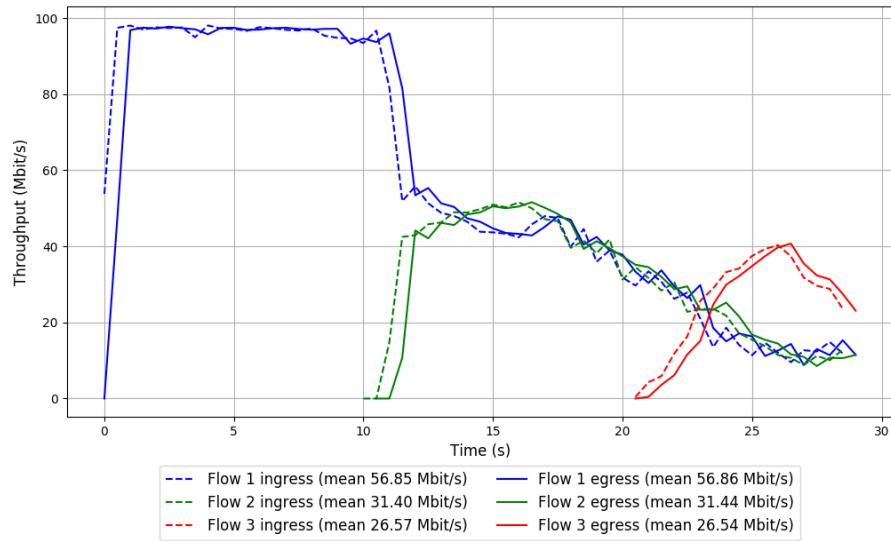


Run 5: Statistics of Indigo-MusesC3

```
Start at: 2019-03-09 15:14:51
End at: 2019-03-09 15:15:21
Local clock offset: -8.148 ms
Remote clock offset: -3.369 ms

# Below is generated by plot.py at 2019-03-09 15:23:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.24 Mbit/s
95th percentile per-packet one-way delay: 48.263 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 56.86 Mbit/s
95th percentile per-packet one-way delay: 51.949 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 43.411 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 26.54 Mbit/s
95th percentile per-packet one-way delay: 40.108 ms
Loss rate: 0.70%
```

Run 5: Report of Indigo-MusesC3 — Data Link

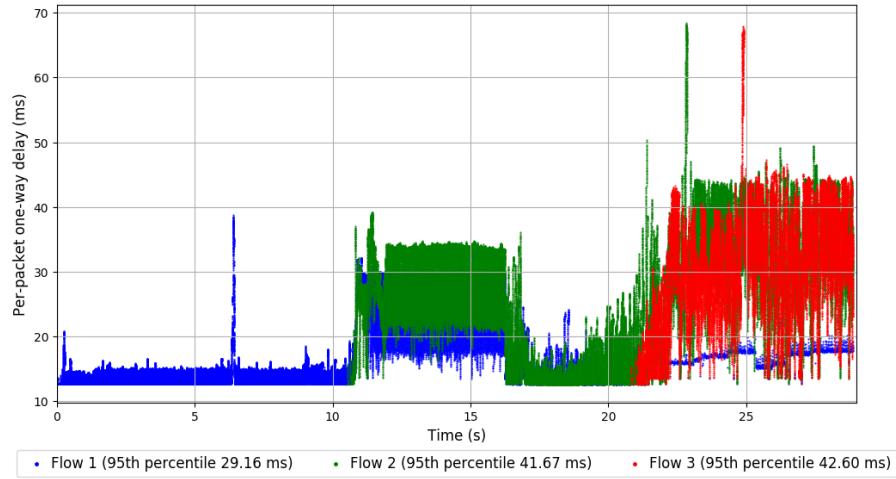
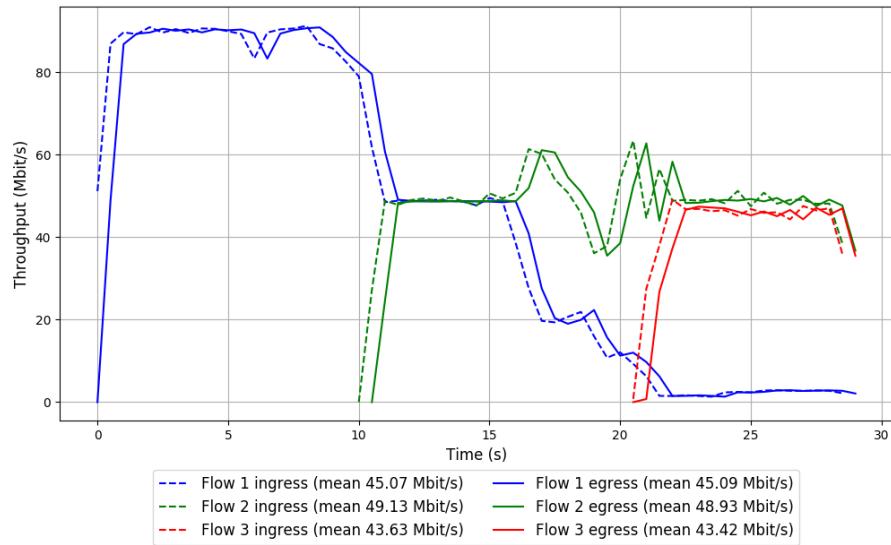


Run 1: Statistics of Indigo-MusesC5

```
Start at: 2019-03-09 13:06:48
End at: 2019-03-09 13:07:18
Local clock offset: 4.698 ms
Remote clock offset: -0.714 ms

# Below is generated by plot.py at 2019-03-09 15:23:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.40 Mbit/s
95th percentile per-packet one-way delay: 39.584 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 45.09 Mbit/s
95th percentile per-packet one-way delay: 29.157 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 48.93 Mbit/s
95th percentile per-packet one-way delay: 41.667 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 43.42 Mbit/s
95th percentile per-packet one-way delay: 42.596 ms
Loss rate: 0.77%
```

Run 1: Report of Indigo-MusesC5 — Data Link

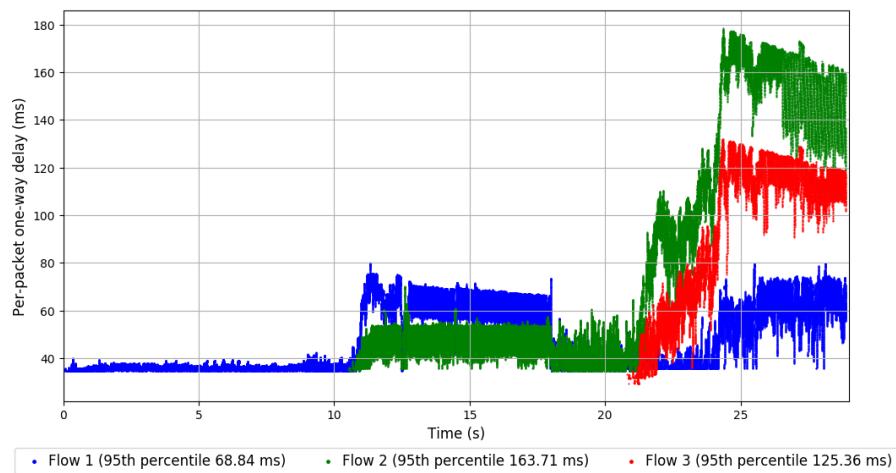
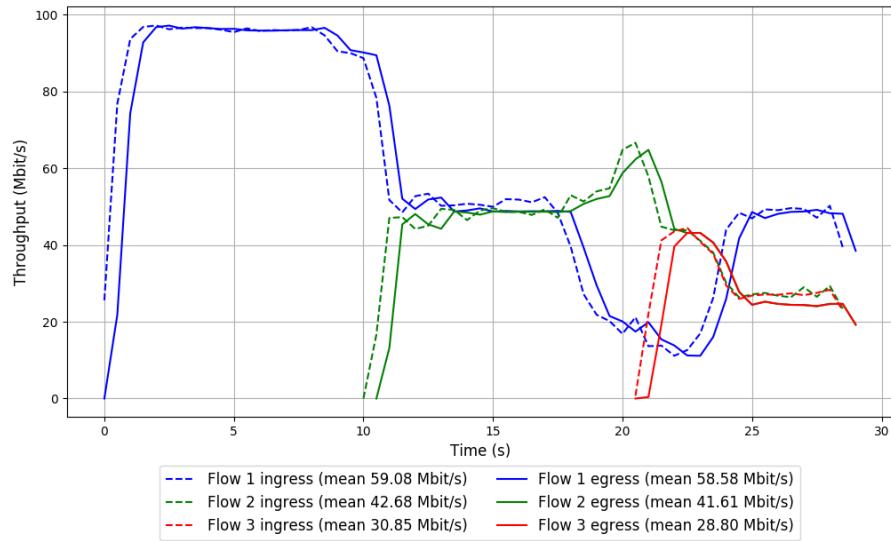


Run 2: Statistics of Indigo-MusesC5

```
Start at: 2019-03-09 13:34:24
End at: 2019-03-09 13:34:54
Local clock offset: -3.242 ms
Remote clock offset: -2.976 ms

# Below is generated by plot.py at 2019-03-09 15:23:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.16 Mbit/s
95th percentile per-packet one-way delay: 124.215 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 58.58 Mbit/s
95th percentile per-packet one-way delay: 68.844 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 41.61 Mbit/s
95th percentile per-packet one-way delay: 163.707 ms
Loss rate: 2.64%
-- Flow 3:
Average throughput: 28.80 Mbit/s
95th percentile per-packet one-way delay: 125.363 ms
Loss rate: 6.97%
```

Run 2: Report of Indigo-MusesC5 — Data Link

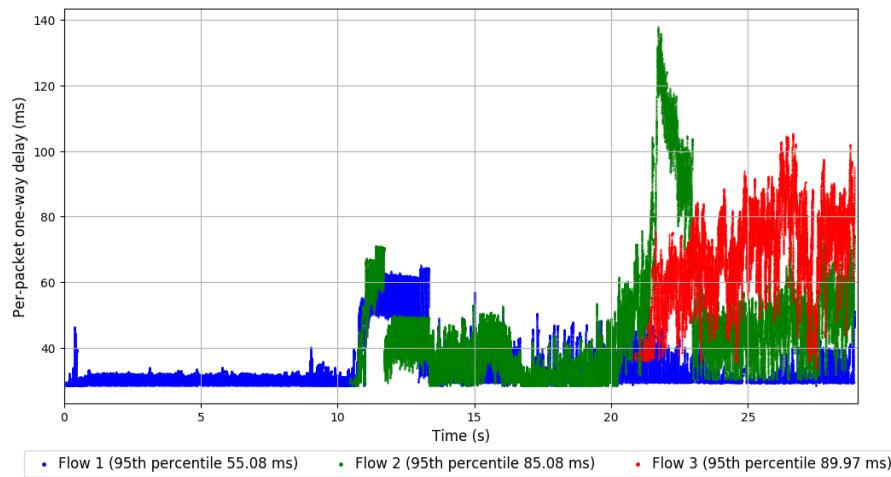
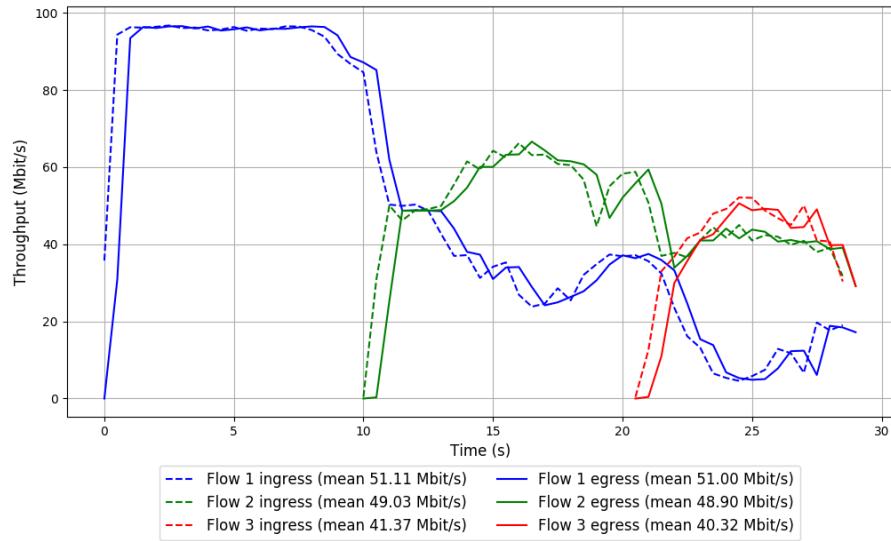


Run 3: Statistics of Indigo-MusesC5

```
Start at: 2019-03-09 14:01:49
End at: 2019-03-09 14:02:19
Local clock offset: 3.408 ms
Remote clock offset: -1.232 ms

# Below is generated by plot.py at 2019-03-09 15:23:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.58 Mbit/s
95th percentile per-packet one-way delay: 78.271 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 51.00 Mbit/s
95th percentile per-packet one-way delay: 55.075 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 48.90 Mbit/s
95th percentile per-packet one-way delay: 85.082 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 40.32 Mbit/s
95th percentile per-packet one-way delay: 89.967 ms
Loss rate: 2.96%
```

Run 3: Report of Indigo-MusesC5 — Data Link

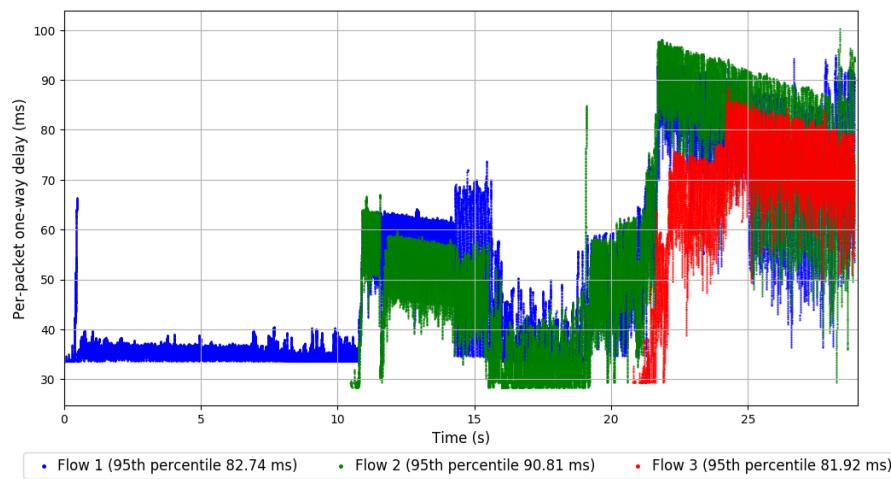
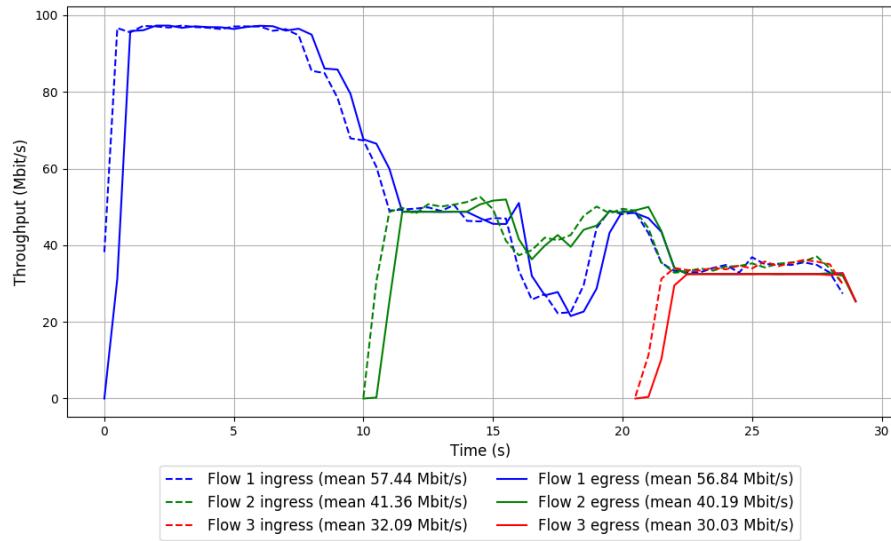


Run 4: Statistics of Indigo-MusesC5

```
Start at: 2019-03-09 14:29:48
End at: 2019-03-09 14:30:18
Local clock offset: -2.091 ms
Remote clock offset: -0.888 ms

# Below is generated by plot.py at 2019-03-09 15:23:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.98 Mbit/s
95th percentile per-packet one-way delay: 85.969 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 56.84 Mbit/s
95th percentile per-packet one-way delay: 82.736 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 40.19 Mbit/s
95th percentile per-packet one-way delay: 90.807 ms
Loss rate: 3.04%
-- Flow 3:
Average throughput: 30.03 Mbit/s
95th percentile per-packet one-way delay: 81.915 ms
Loss rate: 6.71%
```

Run 4: Report of Indigo-MusesC5 — Data Link

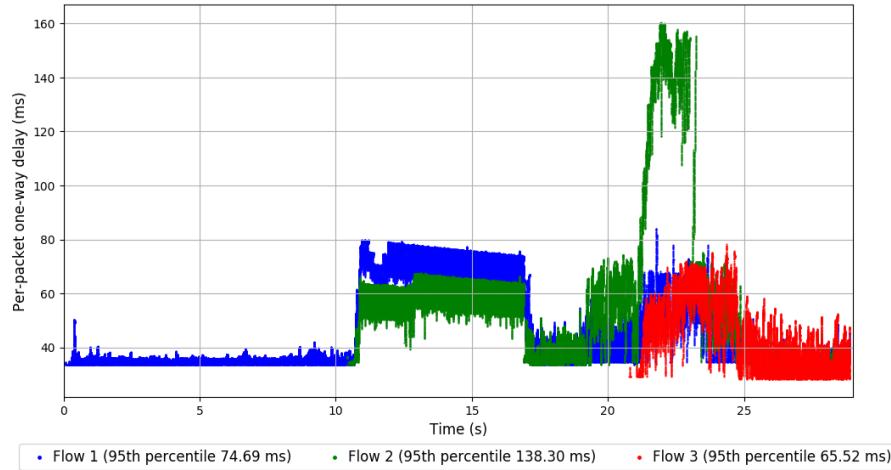
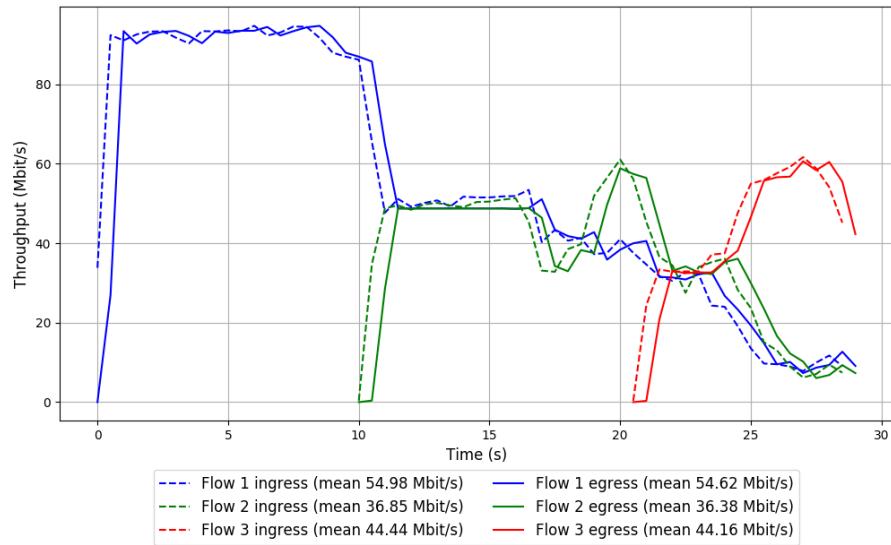


Run 5: Statistics of Indigo-MusesC5

```
Start at: 2019-03-09 15:00:02
End at: 2019-03-09 15:00:32
Local clock offset: -6.781 ms
Remote clock offset: -1.146 ms

# Below is generated by plot.py at 2019-03-09 15:24:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.39 Mbit/s
95th percentile per-packet one-way delay: 75.110 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 54.62 Mbit/s
95th percentile per-packet one-way delay: 74.691 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 36.38 Mbit/s
95th percentile per-packet one-way delay: 138.304 ms
Loss rate: 1.45%
-- Flow 3:
Average throughput: 44.16 Mbit/s
95th percentile per-packet one-way delay: 65.518 ms
Loss rate: 1.11%
```

Run 5: Report of Indigo-MusesC5 — Data Link

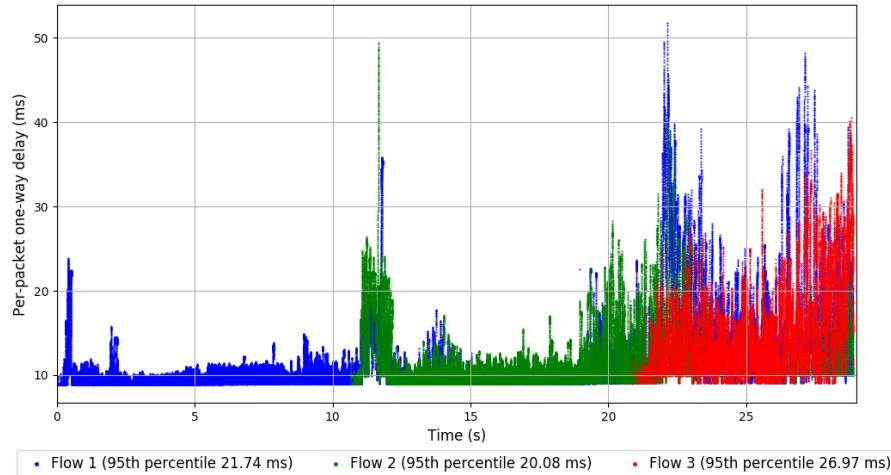
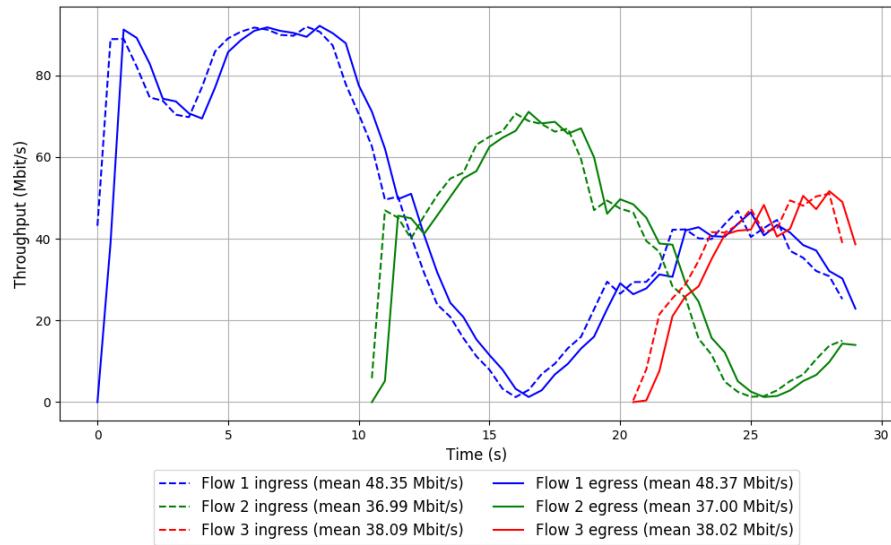


Run 1: Statistics of Indigo-MusesD

```
Start at: 2019-03-09 13:18:37
End at: 2019-03-09 13:19:07
Local clock offset: -1.078 ms
Remote clock offset: -0.144 ms

# Below is generated by plot.py at 2019-03-09 15:24:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.31 Mbit/s
95th percentile per-packet one-way delay: 22.203 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 48.37 Mbit/s
95th percentile per-packet one-way delay: 21.741 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 37.00 Mbit/s
95th percentile per-packet one-way delay: 20.084 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 38.02 Mbit/s
95th percentile per-packet one-way delay: 26.973 ms
Loss rate: 0.44%
```

Run 1: Report of Indigo-MusesD — Data Link

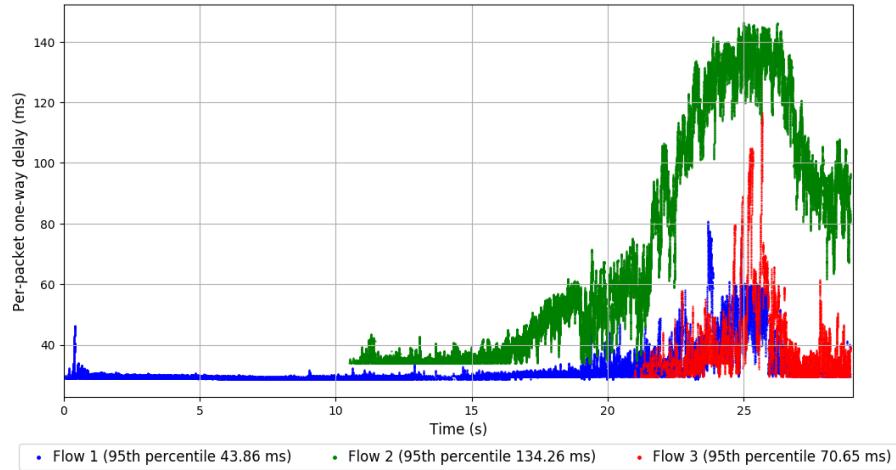
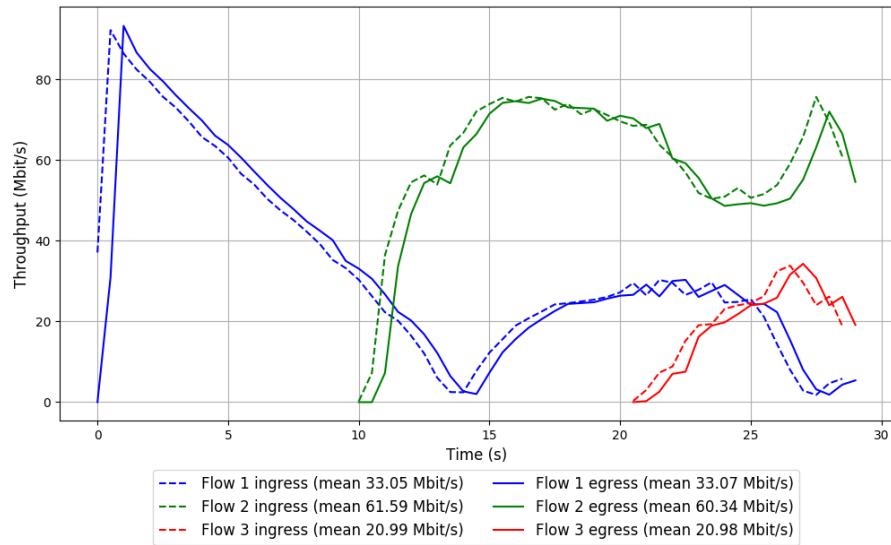


Run 2: Statistics of Indigo-MusesD

```
Start at: 2019-03-09 13:46:18
End at: 2019-03-09 13:46:48
Local clock offset: -1.082 ms
Remote clock offset: -1.319 ms

# Below is generated by plot.py at 2019-03-09 15:24:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.38 Mbit/s
95th percentile per-packet one-way delay: 128.051 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 33.07 Mbit/s
95th percentile per-packet one-way delay: 43.863 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 60.34 Mbit/s
95th percentile per-packet one-way delay: 134.260 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 20.98 Mbit/s
95th percentile per-packet one-way delay: 70.646 ms
Loss rate: 0.47%
```

Run 2: Report of Indigo-MusesD — Data Link

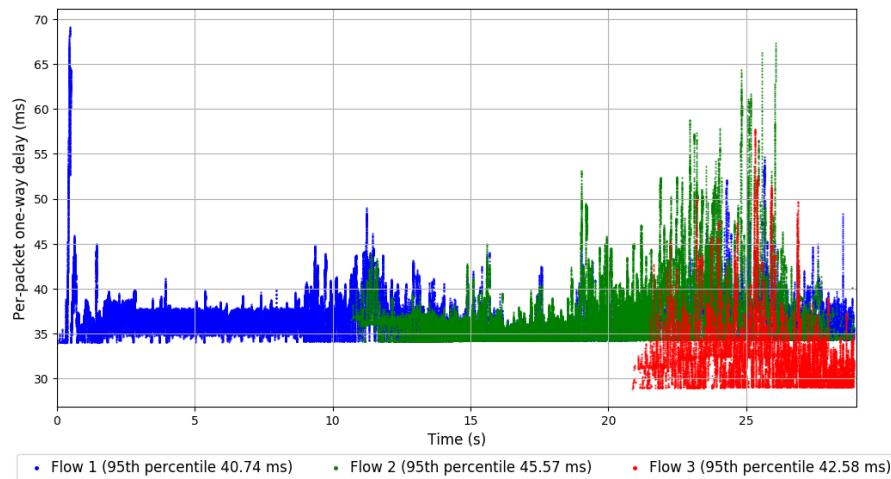
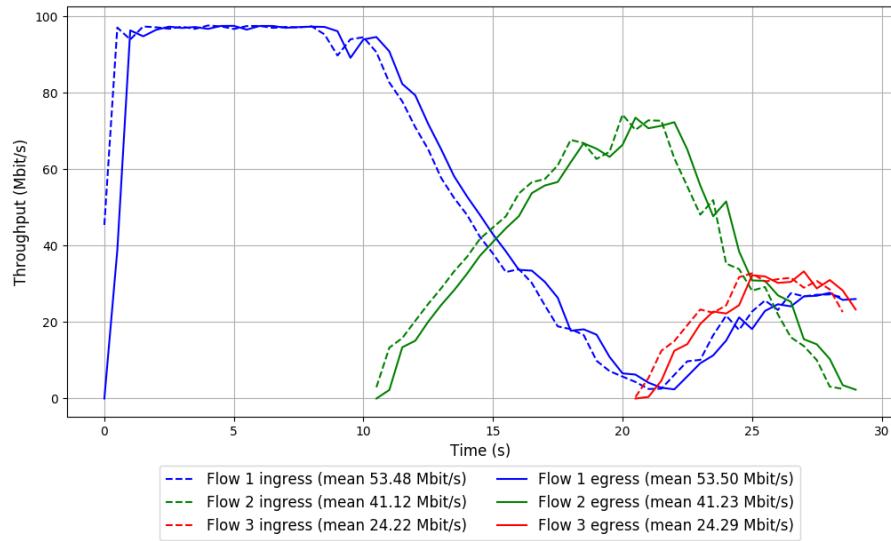


Run 3: Statistics of Indigo-MusesD

```
Start at: 2019-03-09 14:13:52
End at: 2019-03-09 14:14:22
Local clock offset: 4.394 ms
Remote clock offset: -1.18 ms

# Below is generated by plot.py at 2019-03-09 15:24:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.29 Mbit/s
95th percentile per-packet one-way delay: 42.328 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 53.50 Mbit/s
95th percentile per-packet one-way delay: 40.743 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 41.23 Mbit/s
95th percentile per-packet one-way delay: 45.568 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 24.29 Mbit/s
95th percentile per-packet one-way delay: 42.581 ms
Loss rate: 0.28%
```

Run 3: Report of Indigo-MusesD — Data Link

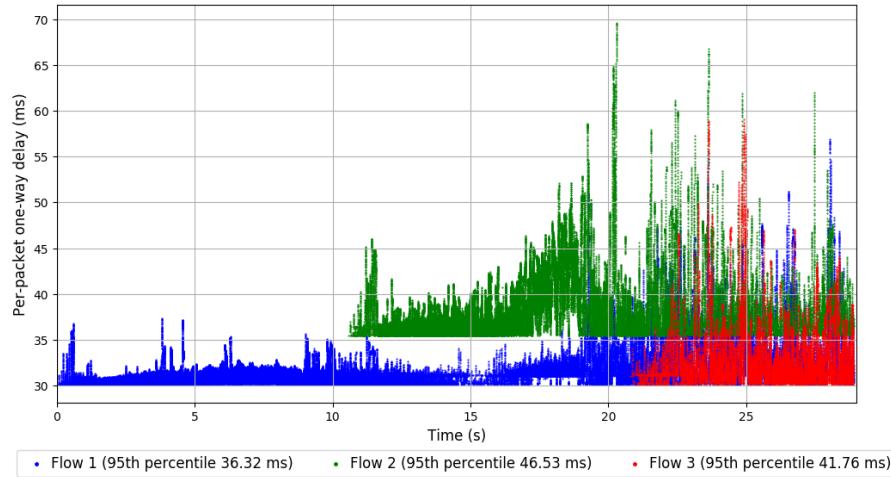
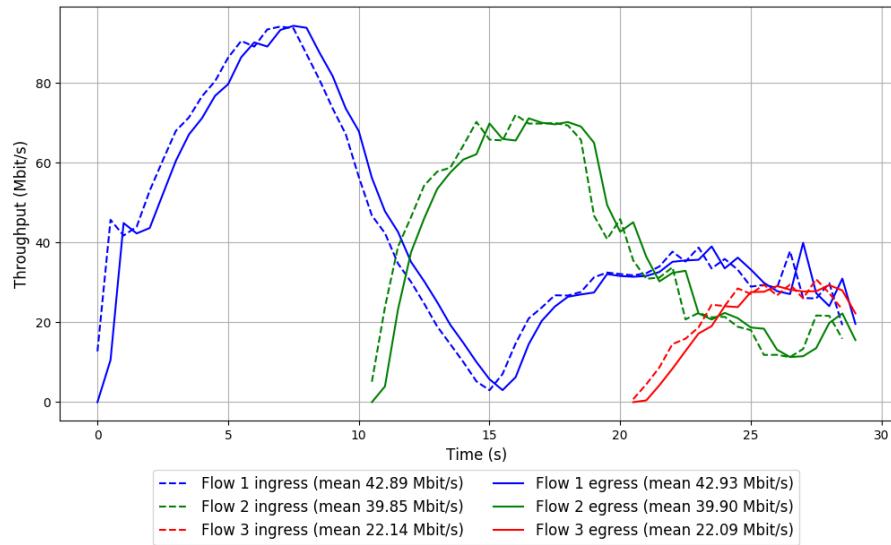


Run 4: Statistics of Indigo-MusesD

```
Start at: 2019-03-09 14:42:15
End at: 2019-03-09 14:42:45
Local clock offset: -2.513 ms
Remote clock offset: -1.514 ms

# Below is generated by plot.py at 2019-03-09 15:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.44 Mbit/s
95th percentile per-packet one-way delay: 43.153 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 42.93 Mbit/s
95th percentile per-packet one-way delay: 36.320 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 39.90 Mbit/s
95th percentile per-packet one-way delay: 46.534 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 22.09 Mbit/s
95th percentile per-packet one-way delay: 41.757 ms
Loss rate: 0.72%
```

Run 4: Report of Indigo-MusesD — Data Link

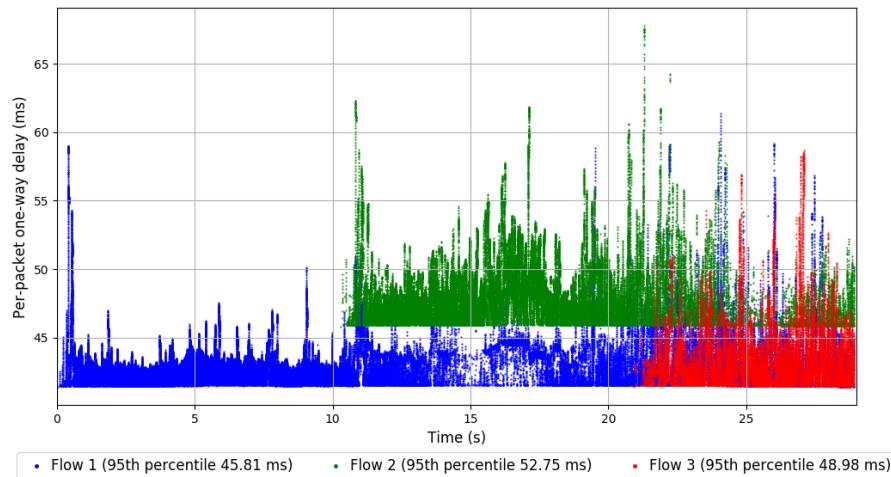
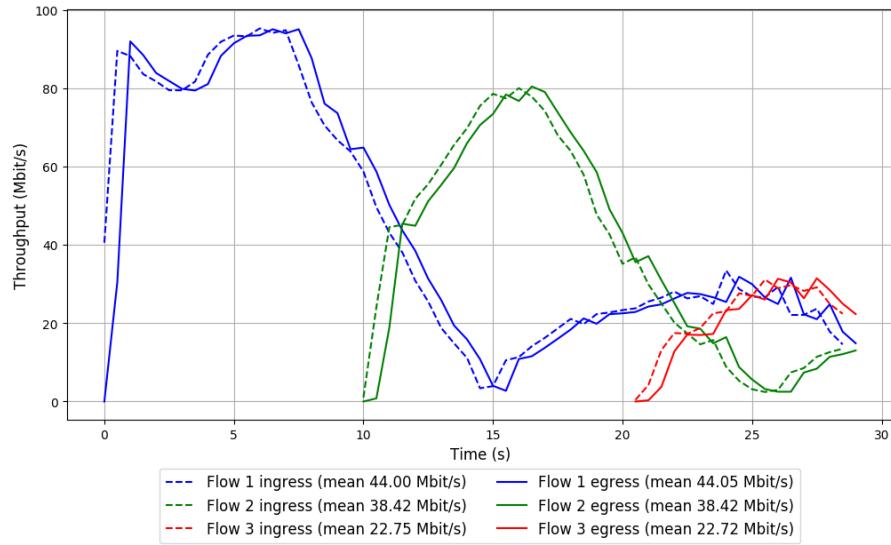


Run 5: Statistics of Indigo-MusesD

```
Start at: 2019-03-09 15:13:17
End at: 2019-03-09 15:13:47
Local clock offset: -6.777 ms
Remote clock offset: -13.115 ms

# Below is generated by plot.py at 2019-03-09 15:24:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.12 Mbit/s
95th percentile per-packet one-way delay: 50.790 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 44.05 Mbit/s
95th percentile per-packet one-way delay: 45.810 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 38.42 Mbit/s
95th percentile per-packet one-way delay: 52.751 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 22.72 Mbit/s
95th percentile per-packet one-way delay: 48.982 ms
Loss rate: 0.64%
```

Run 5: Report of Indigo-MusesD — Data Link

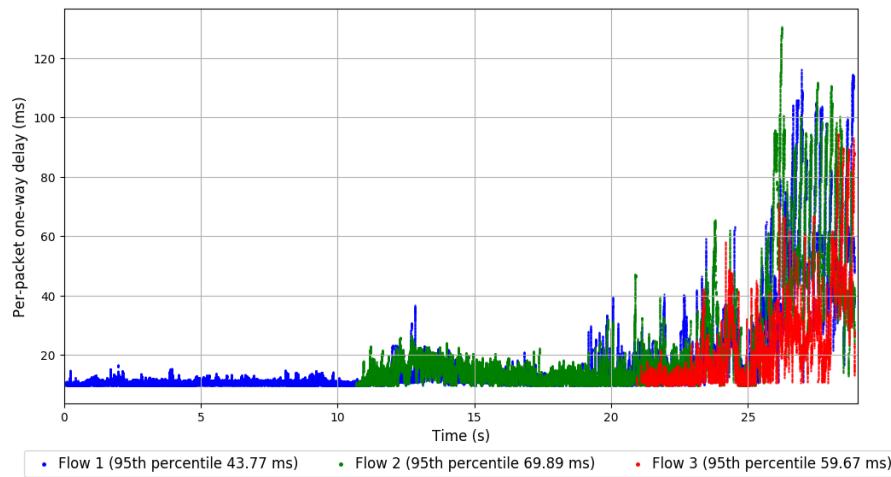
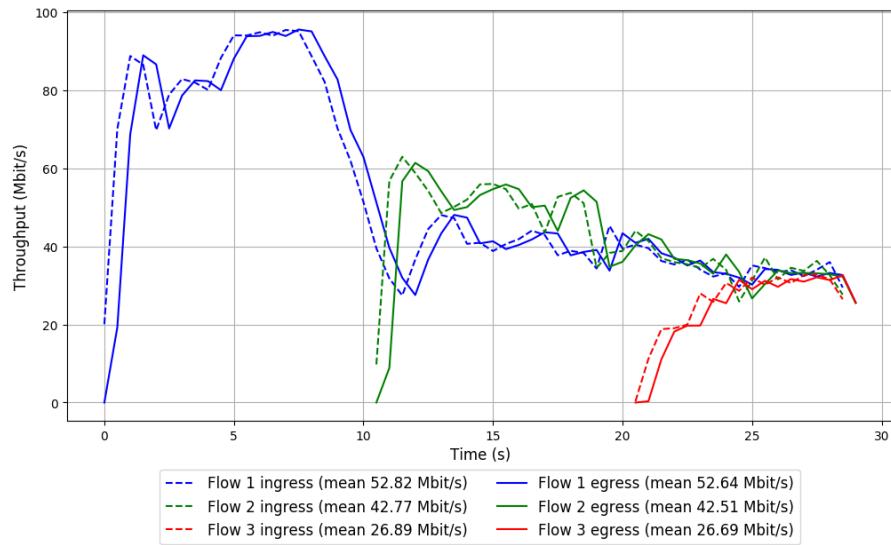


Run 1: Statistics of Indigo-MusesT

```
Start at: 2019-03-09 13:03:10
End at: 2019-03-09 13:03:40
Local clock offset: 1.896 ms
Remote clock offset: -0.3 ms

# Below is generated by plot.py at 2019-03-09 15:24:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.87 Mbit/s
95th percentile per-packet one-way delay: 54.524 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 52.64 Mbit/s
95th percentile per-packet one-way delay: 43.774 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 42.51 Mbit/s
95th percentile per-packet one-way delay: 69.885 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 26.69 Mbit/s
95th percentile per-packet one-way delay: 59.674 ms
Loss rate: 0.93%
```

Run 1: Report of Indigo-MusesT — Data Link

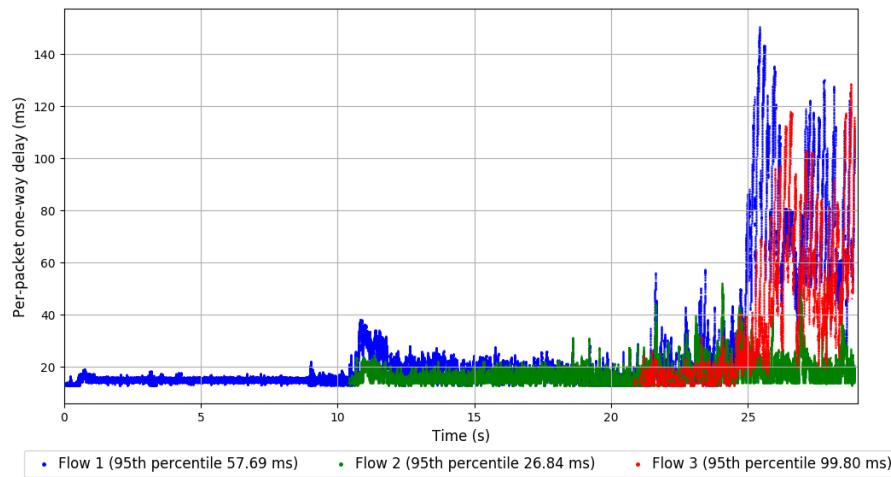
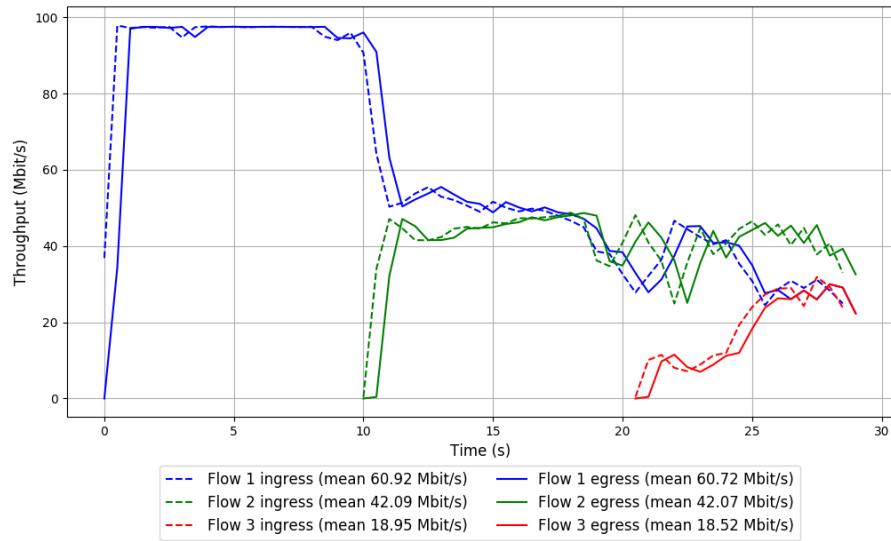


Run 2: Statistics of Indigo-MusesT

```
Start at: 2019-03-09 13:30:11
End at: 2019-03-09 13:30:41
Local clock offset: -1.616 ms
Remote clock offset: -1.436 ms

# Below is generated by plot.py at 2019-03-09 15:24:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.85 Mbit/s
95th percentile per-packet one-way delay: 57.253 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 60.72 Mbit/s
95th percentile per-packet one-way delay: 57.688 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 42.07 Mbit/s
95th percentile per-packet one-way delay: 26.838 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 18.52 Mbit/s
95th percentile per-packet one-way delay: 99.800 ms
Loss rate: 2.57%
```

Run 2: Report of Indigo-MusesT — Data Link

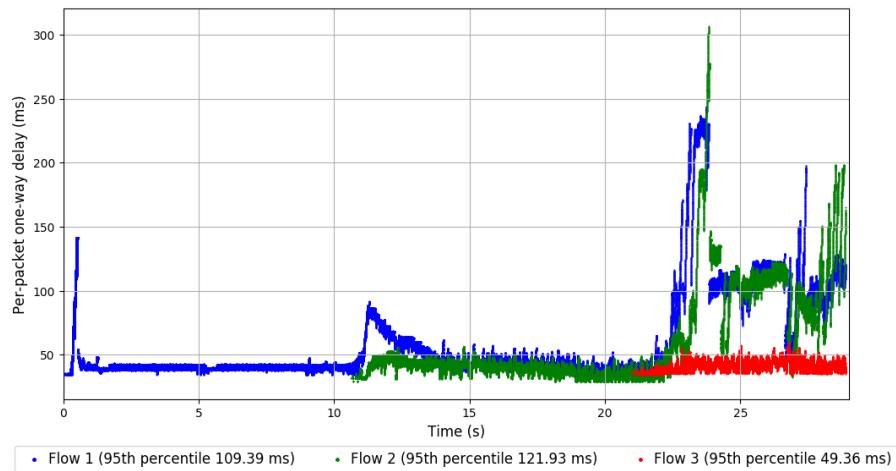
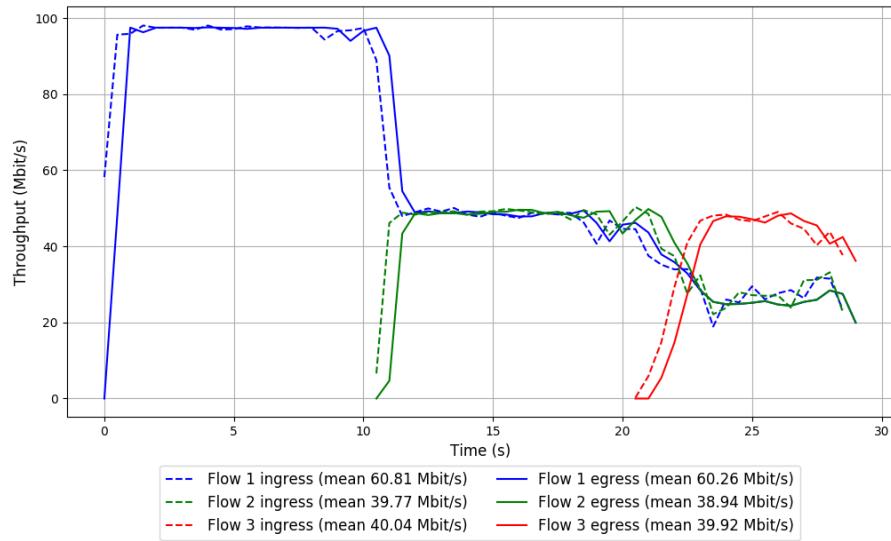


Run 3: Statistics of Indigo-MusesT

```
Start at: 2019-03-09 13:57:53
End at: 2019-03-09 13:58:23
Local clock offset: 3.522 ms
Remote clock offset: -1.247 ms

# Below is generated by plot.py at 2019-03-09 15:24:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 111.876 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 60.26 Mbit/s
95th percentile per-packet one-way delay: 109.394 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 38.94 Mbit/s
95th percentile per-packet one-way delay: 121.932 ms
Loss rate: 2.27%
-- Flow 3:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 49.359 ms
Loss rate: 0.87%
```

Run 3: Report of Indigo-MusesT — Data Link

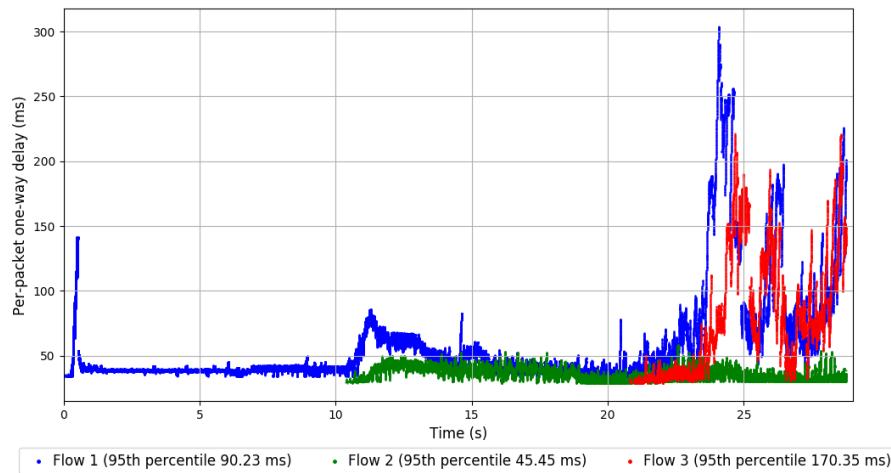
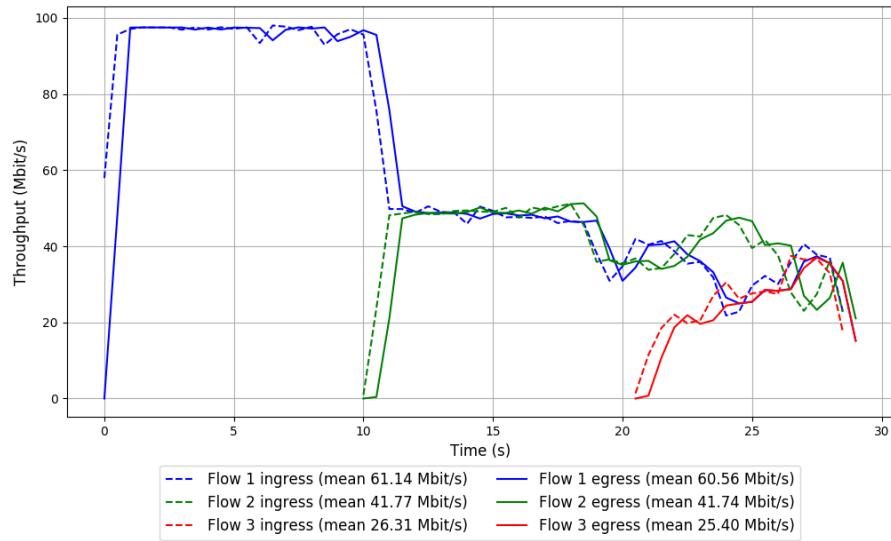


Run 4: Statistics of Indigo-MusesT

```
Start at: 2019-03-09 14:25:45
End at: 2019-03-09 14:26:15
Local clock offset: -0.743 ms
Remote clock offset: -0.934 ms

# Below is generated by plot.py at 2019-03-09 15:25:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.36 Mbit/s
95th percentile per-packet one-way delay: 103.028 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 60.56 Mbit/s
95th percentile per-packet one-way delay: 90.235 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 41.74 Mbit/s
95th percentile per-packet one-way delay: 45.453 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 25.40 Mbit/s
95th percentile per-packet one-way delay: 170.348 ms
Loss rate: 3.93%
```

Run 4: Report of Indigo-MusesT — Data Link

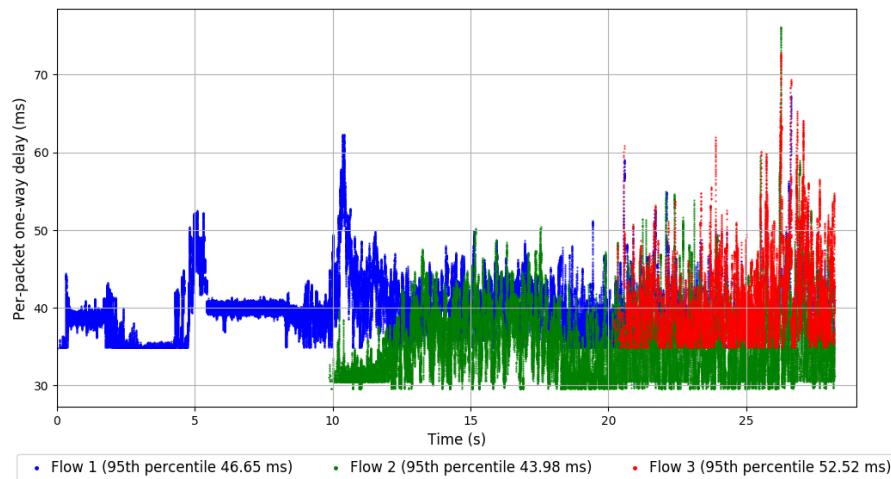
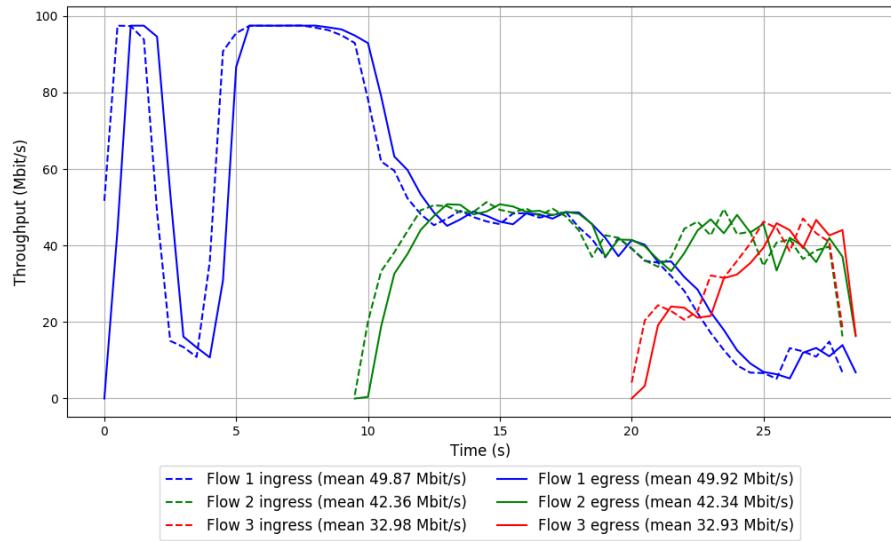


Run 5: Statistics of Indigo-MusesT

```
Start at: 2019-03-09 14:55:51
End at: 2019-03-09 14:56:21
Local clock offset: -4.701 ms
Remote clock offset: -0.92 ms

# Below is generated by plot.py at 2019-03-09 15:25:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.92 Mbit/s
95th percentile per-packet one-way delay: 46.894 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 49.92 Mbit/s
95th percentile per-packet one-way delay: 46.653 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 42.34 Mbit/s
95th percentile per-packet one-way delay: 43.983 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 32.93 Mbit/s
95th percentile per-packet one-way delay: 52.519 ms
Loss rate: 0.68%
```

Run 5: Report of Indigo-MusesT — Data Link

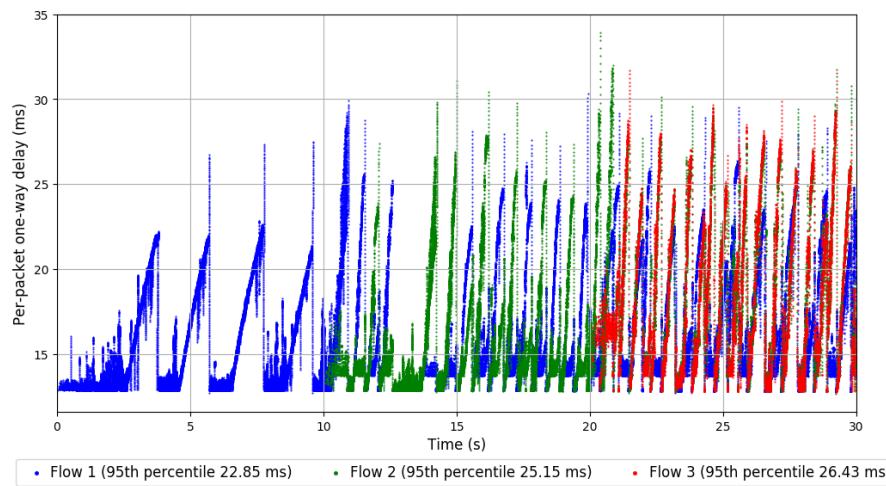
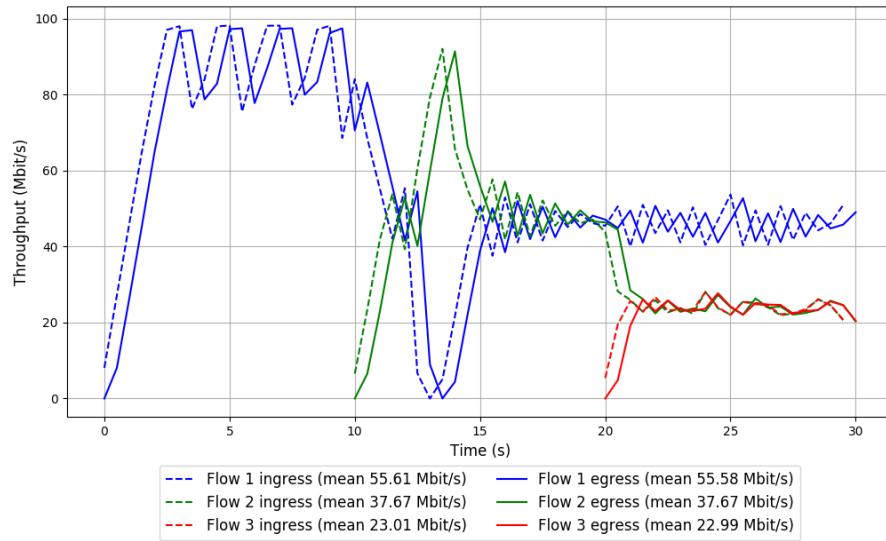


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2019-03-09 12:57:06
End at: 2019-03-09 12:57:36
Local clock offset: 2.699 ms
Remote clock offset: -1.851 ms

# Below is generated by plot.py at 2019-03-09 15:25:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.29 Mbit/s
95th percentile per-packet one-way delay: 24.142 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 55.58 Mbit/s
95th percentile per-packet one-way delay: 22.853 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 37.67 Mbit/s
95th percentile per-packet one-way delay: 25.147 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 22.99 Mbit/s
95th percentile per-packet one-way delay: 26.426 ms
Loss rate: 0.35%
```

Run 1: Report of LEDBAT — Data Link

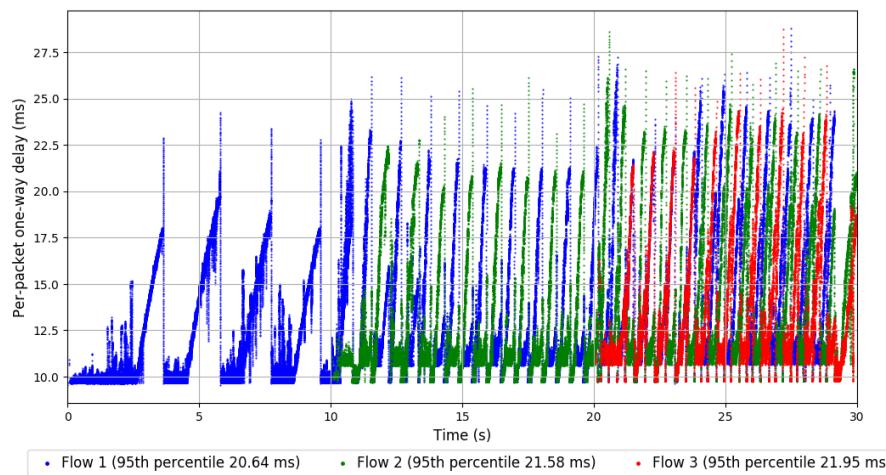
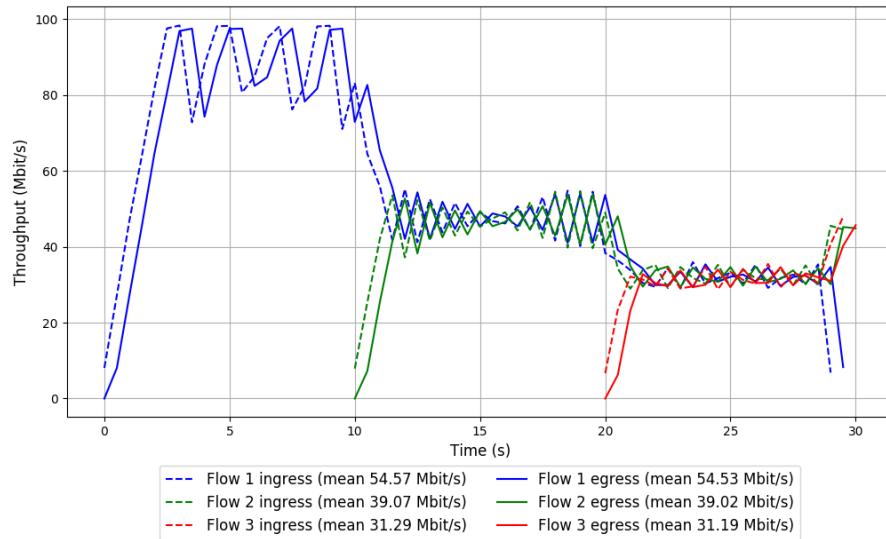


Run 2: Statistics of LEDBAT

```
Start at: 2019-03-09 13:23:51
End at: 2019-03-09 13:24:21
Local clock offset: -2.46 ms
Remote clock offset: -0.453 ms

# Below is generated by plot.py at 2019-03-09 15:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.34 Mbit/s
95th percentile per-packet one-way delay: 21.089 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 54.53 Mbit/s
95th percentile per-packet one-way delay: 20.639 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 39.02 Mbit/s
95th percentile per-packet one-way delay: 21.584 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 31.19 Mbit/s
95th percentile per-packet one-way delay: 21.952 ms
Loss rate: 0.57%
```

Run 2: Report of LEDBAT — Data Link

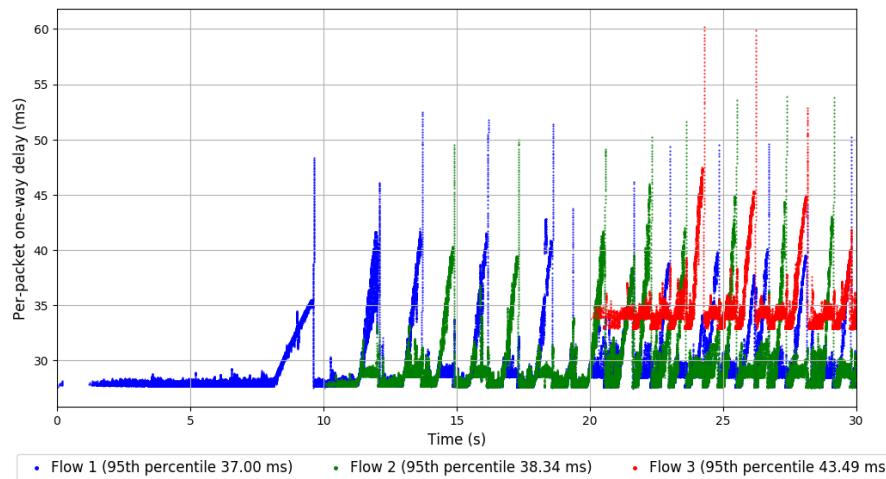
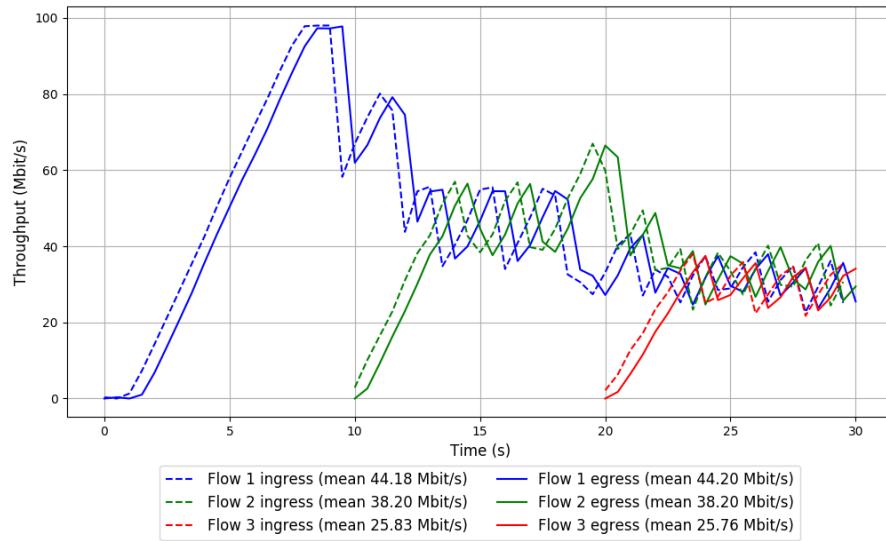


Run 3: Statistics of LEDBAT

```
Start at: 2019-03-09 13:51:39
End at: 2019-03-09 13:52:09
Local clock offset: 0.384 ms
Remote clock offset: -1.181 ms

# Below is generated by plot.py at 2019-03-09 15:25:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.17 Mbit/s
95th percentile per-packet one-way delay: 38.321 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 44.20 Mbit/s
95th percentile per-packet one-way delay: 36.996 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 38.20 Mbit/s
95th percentile per-packet one-way delay: 38.344 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 25.76 Mbit/s
95th percentile per-packet one-way delay: 43.490 ms
Loss rate: 0.75%
```

Run 3: Report of LEDBAT — Data Link

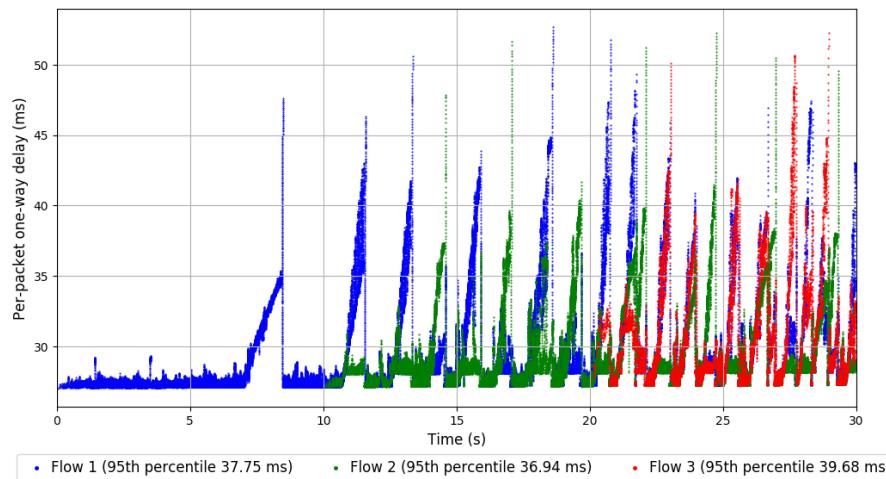
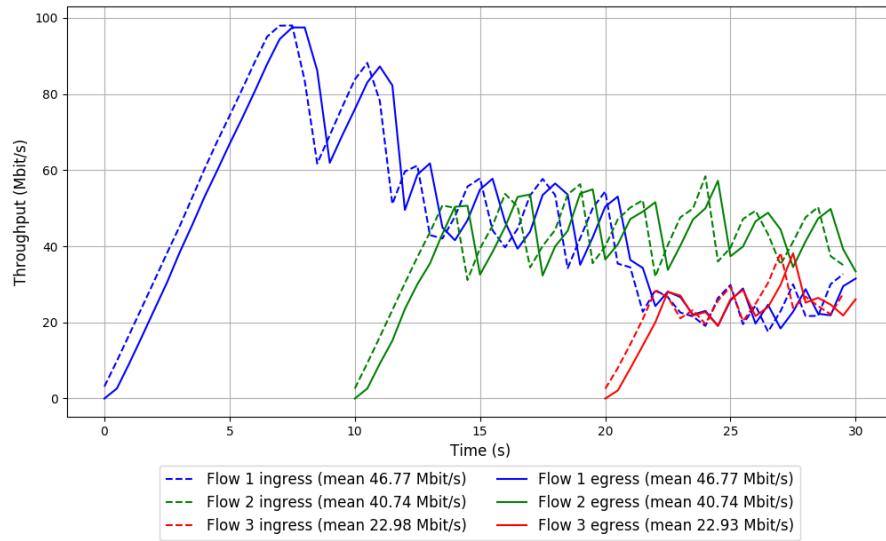


Run 4: Statistics of LEDBAT

```
Start at: 2019-03-09 14:19:24
End at: 2019-03-09 14:19:54
Local clock offset: -0.767 ms
Remote clock offset: -1.34 ms

# Below is generated by plot.py at 2019-03-09 15:25:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.49 Mbit/s
95th percentile per-packet one-way delay: 37.565 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 46.77 Mbit/s
95th percentile per-packet one-way delay: 37.753 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 40.74 Mbit/s
95th percentile per-packet one-way delay: 36.944 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 22.93 Mbit/s
95th percentile per-packet one-way delay: 39.680 ms
Loss rate: 0.61%
```

Run 4: Report of LEDBAT — Data Link

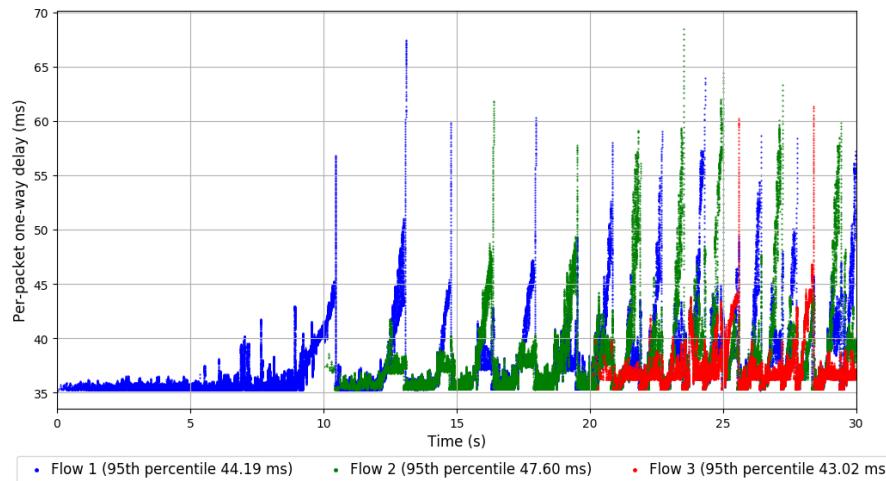
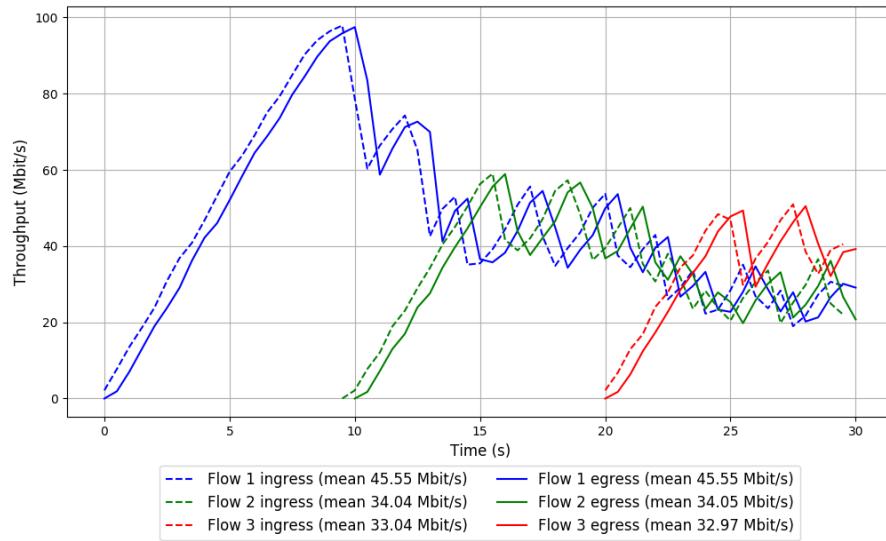


Run 5: Statistics of LEDBAT

```
Start at: 2019-03-09 14:48:43
End at: 2019-03-09 14:49:13
Local clock offset: -5.234 ms
Remote clock offset: -2.848 ms

# Below is generated by plot.py at 2019-03-09 15:25:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.15 Mbit/s
95th percentile per-packet one-way delay: 44.715 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 45.55 Mbit/s
95th percentile per-packet one-way delay: 44.187 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 34.05 Mbit/s
95th percentile per-packet one-way delay: 47.600 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 32.97 Mbit/s
95th percentile per-packet one-way delay: 43.019 ms
Loss rate: 0.67%
```

Run 5: Report of LEDBAT — Data Link

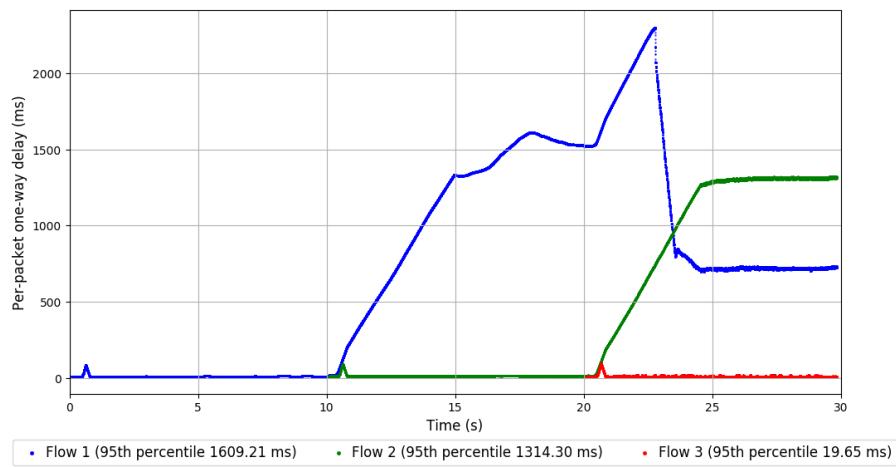
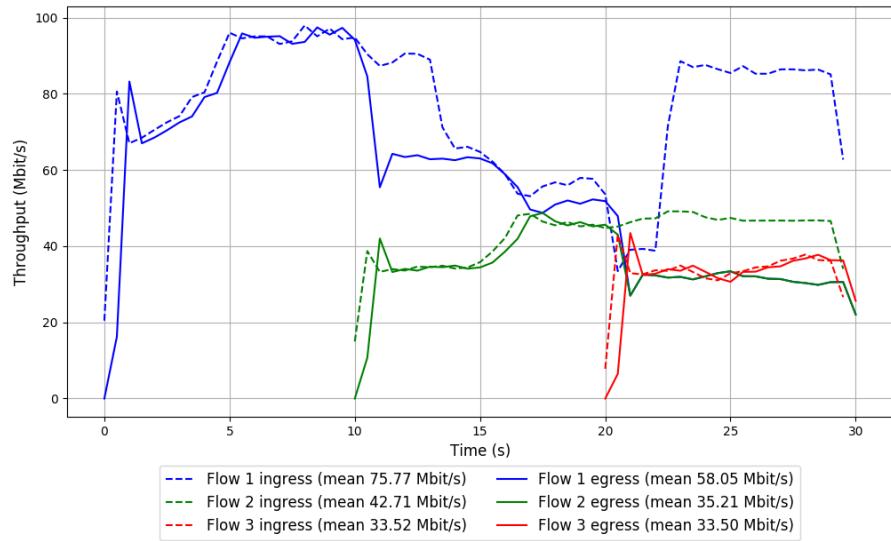


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2019-03-09 13:17:23
End at: 2019-03-09 13:17:53
Local clock offset: 0.819 ms
Remote clock offset: -1.347 ms

# Below is generated by plot.py at 2019-03-09 15:26:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.49 Mbit/s
95th percentile per-packet one-way delay: 1571.687 ms
Loss rate: 19.80%
-- Flow 1:
Average throughput: 58.05 Mbit/s
95th percentile per-packet one-way delay: 1609.207 ms
Loss rate: 23.45%
-- Flow 2:
Average throughput: 35.21 Mbit/s
95th percentile per-packet one-way delay: 1314.299 ms
Loss rate: 17.65%
-- Flow 3:
Average throughput: 33.50 Mbit/s
95th percentile per-packet one-way delay: 19.653 ms
Loss rate: 0.29%
```

Run 1: Report of PCC-Allegro — Data Link

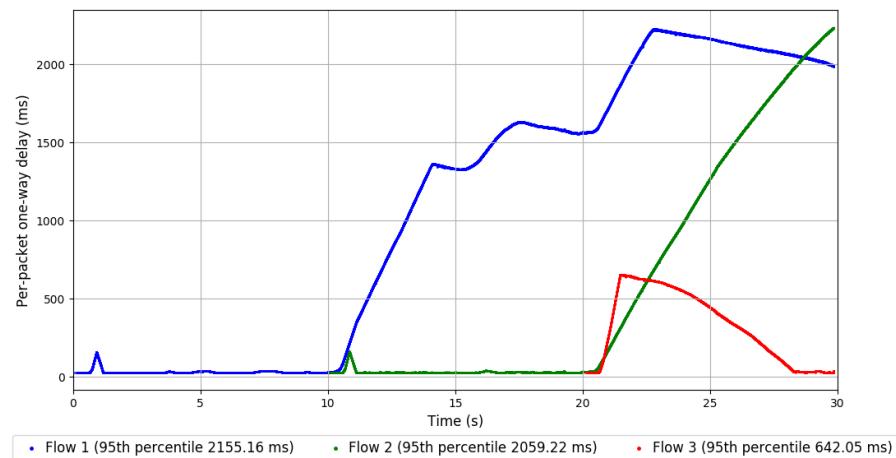
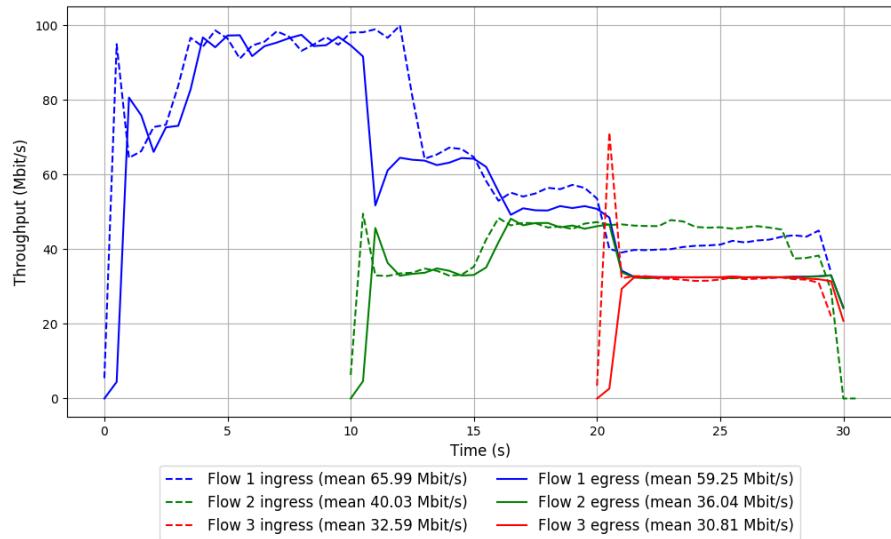


Run 2: Statistics of PCC-Allegro

```
Start at: 2019-03-09 13:45:03
End at: 2019-03-09 13:45:33
Local clock offset: -2.678 ms
Remote clock offset: -1.58 ms

# Below is generated by plot.py at 2019-03-09 15:26:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.32 Mbit/s
95th percentile per-packet one-way delay: 2126.553 ms
Loss rate: 10.83%
-- Flow 1:
Average throughput: 59.25 Mbit/s
95th percentile per-packet one-way delay: 2155.164 ms
Loss rate: 10.35%
-- Flow 2:
Average throughput: 36.04 Mbit/s
95th percentile per-packet one-way delay: 2059.225 ms
Loss rate: 13.87%
-- Flow 3:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 642.046 ms
Loss rate: 5.93%
```

Run 2: Report of PCC-Allegro — Data Link

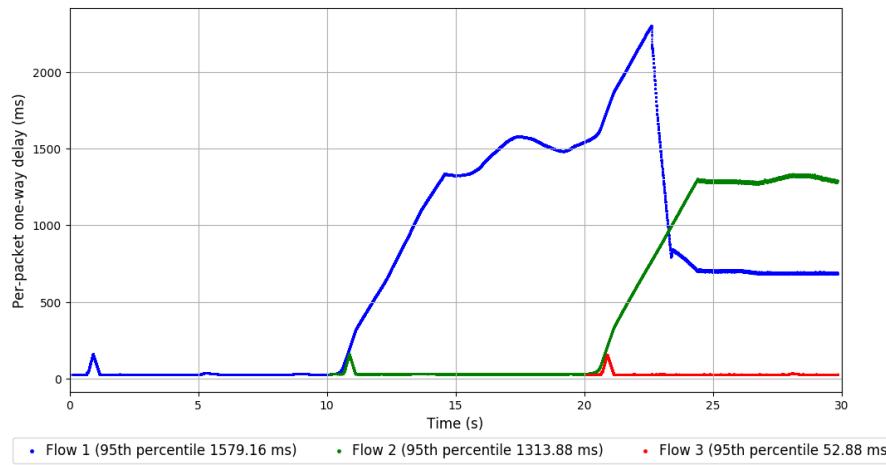
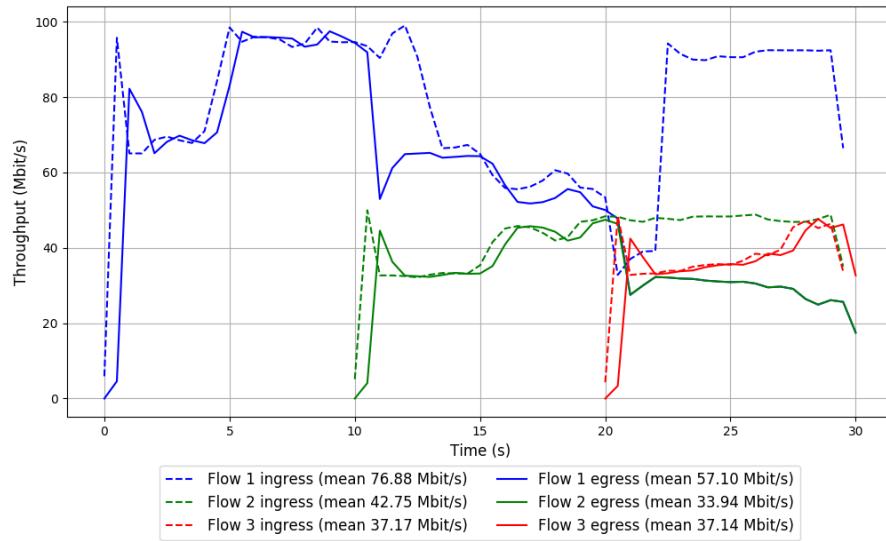


Run 3: Statistics of PCC-Allegro

```
Start at: 2019-03-09 14:12:32
End at: 2019-03-09 14:13:02
Local clock offset: 3.662 ms
Remote clock offset: -1.66 ms

# Below is generated by plot.py at 2019-03-09 15:26:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.85 Mbit/s
95th percentile per-packet one-way delay: 1557.378 ms
Loss rate: 21.99%
-- Flow 1:
Average throughput: 57.10 Mbit/s
95th percentile per-packet one-way delay: 1579.164 ms
Loss rate: 25.85%
-- Flow 2:
Average throughput: 33.94 Mbit/s
95th percentile per-packet one-way delay: 1313.879 ms
Loss rate: 20.76%
-- Flow 3:
Average throughput: 37.14 Mbit/s
95th percentile per-packet one-way delay: 52.879 ms
Loss rate: 0.56%
```

Run 3: Report of PCC-Allegro — Data Link

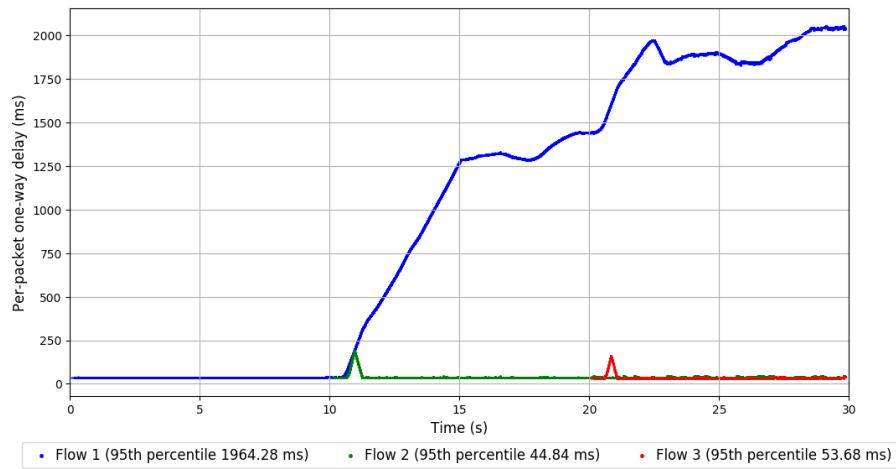
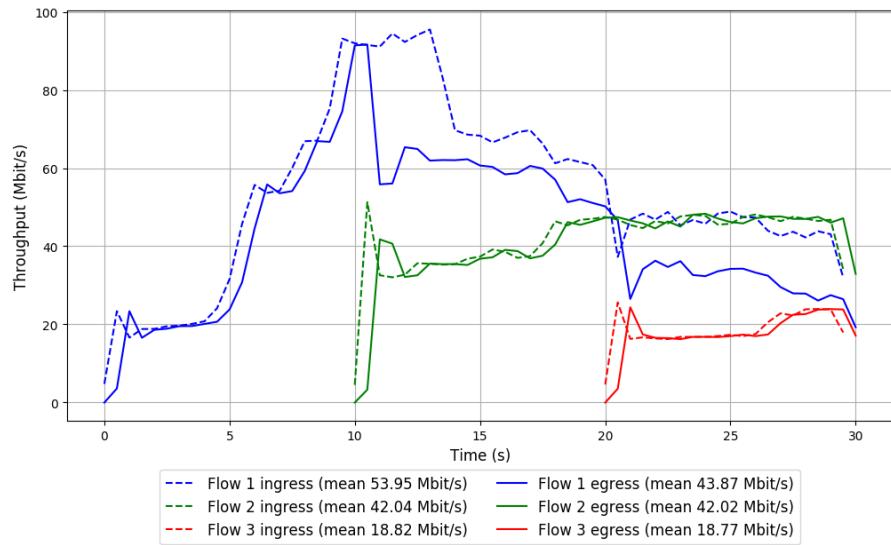


Run 4: Statistics of PCC-Allegro

```
Start at: 2019-03-09 14:40:58
End at: 2019-03-09 14:41:28
Local clock offset: -2.645 ms
Remote clock offset: -2.236 ms

# Below is generated by plot.py at 2019-03-09 15:26:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.96 Mbit/s
95th percentile per-packet one-way delay: 1895.456 ms
Loss rate: 11.66%
-- Flow 1:
Average throughput: 43.87 Mbit/s
95th percentile per-packet one-way delay: 1964.278 ms
Loss rate: 18.81%
-- Flow 2:
Average throughput: 42.02 Mbit/s
95th percentile per-packet one-way delay: 44.842 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 18.77 Mbit/s
95th percentile per-packet one-way delay: 53.679 ms
Loss rate: 0.70%
```

Run 4: Report of PCC-Allegro — Data Link

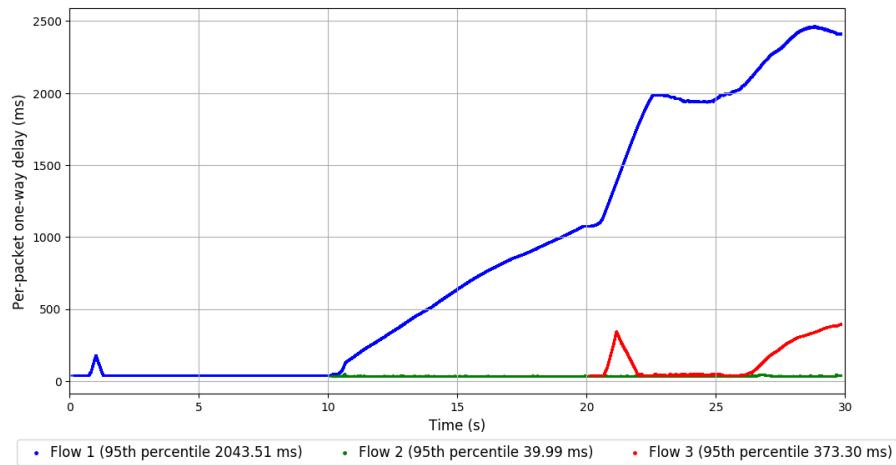
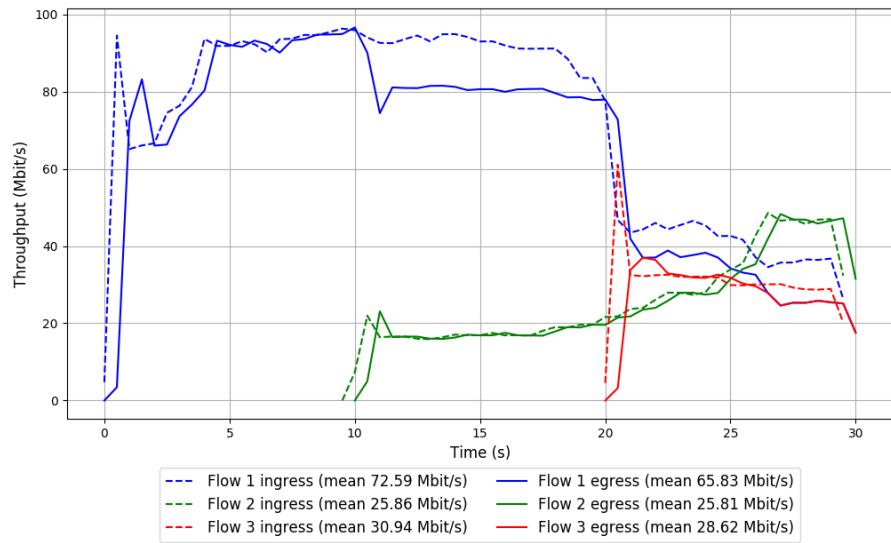


Run 5: Statistics of PCC-Allegro

```
Start at: 2019-03-09 15:11:56
End at: 2019-03-09 15:12:26
Local clock offset: -7.423 ms
Remote clock offset: -7.314 ms

# Below is generated by plot.py at 2019-03-09 15:26:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.40 Mbit/s
95th percentile per-packet one-way delay: 1986.764 ms
Loss rate: 7.74%
-- Flow 1:
Average throughput: 65.83 Mbit/s
95th percentile per-packet one-way delay: 2043.507 ms
Loss rate: 9.45%
-- Flow 2:
Average throughput: 25.81 Mbit/s
95th percentile per-packet one-way delay: 39.990 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 28.62 Mbit/s
95th percentile per-packet one-way delay: 373.296 ms
Loss rate: 7.96%
```

Run 5: Report of PCC-Allegro — Data Link

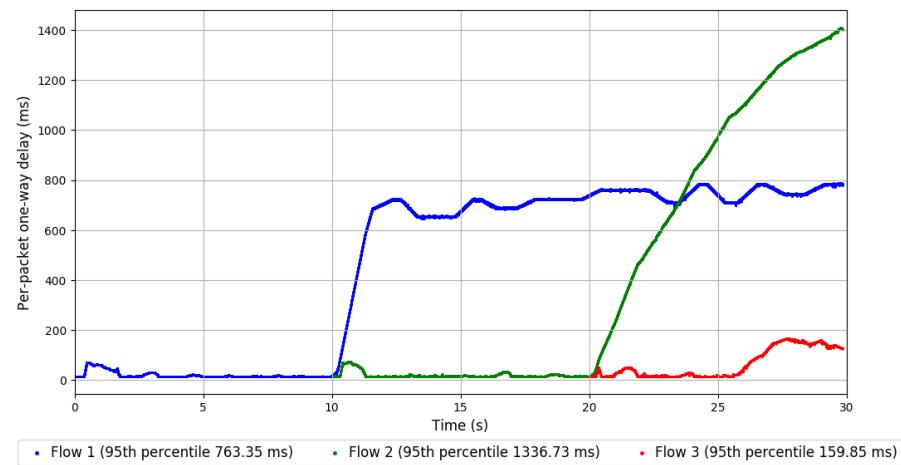
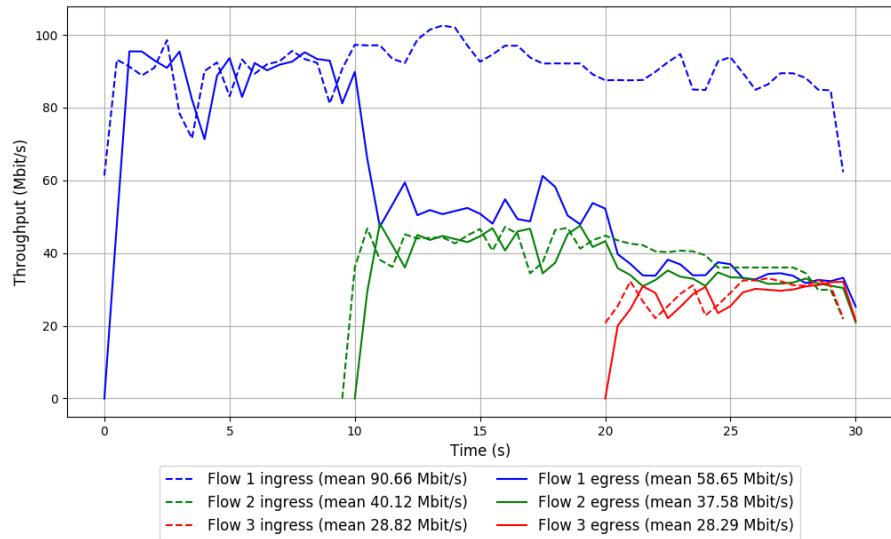


Run 1: Statistics of PCC-Expr

```
Start at: 2019-03-09 13:05:28
End at: 2019-03-09 13:05:58
Local clock offset: 6.007 ms
Remote clock offset: -0.265 ms

# Below is generated by plot.py at 2019-03-09 15:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.98 Mbit/s
95th percentile per-packet one-way delay: 1046.819 ms
Loss rate: 26.78%
-- Flow 1:
Average throughput: 58.65 Mbit/s
95th percentile per-packet one-way delay: 763.350 ms
Loss rate: 35.37%
-- Flow 2:
Average throughput: 37.58 Mbit/s
95th percentile per-packet one-way delay: 1336.733 ms
Loss rate: 6.43%
-- Flow 3:
Average throughput: 28.29 Mbit/s
95th percentile per-packet one-way delay: 159.851 ms
Loss rate: 2.07%
```

Run 1: Report of PCC-Expr — Data Link

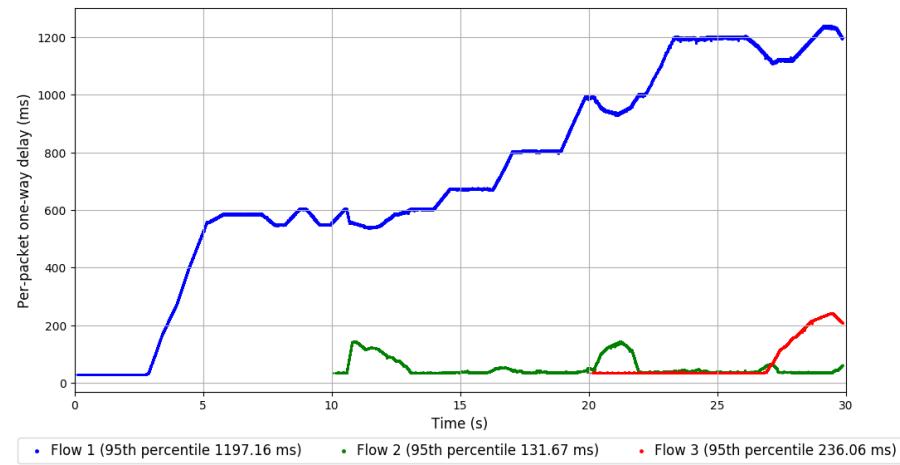
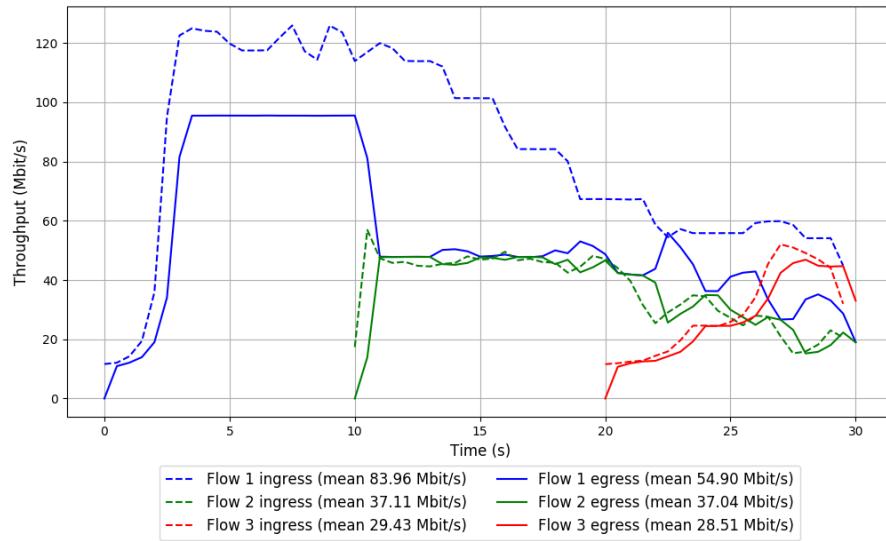


Run 2: Statistics of PCC-Expr

```
Start at: 2019-03-09 13:32:35
End at: 2019-03-09 13:33:05
Local clock offset: -0.854 ms
Remote clock offset: -0.909 ms

# Below is generated by plot.py at 2019-03-09 15:27:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.89 Mbit/s
95th percentile per-packet one-way delay: 1190.987 ms
Loss rate: 25.01%
-- Flow 1:
Average throughput: 54.90 Mbit/s
95th percentile per-packet one-way delay: 1197.162 ms
Loss rate: 34.72%
-- Flow 2:
Average throughput: 37.04 Mbit/s
95th percentile per-packet one-way delay: 131.669 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 28.51 Mbit/s
95th percentile per-packet one-way delay: 236.057 ms
Loss rate: 3.63%
```

Run 2: Report of PCC-Expr — Data Link

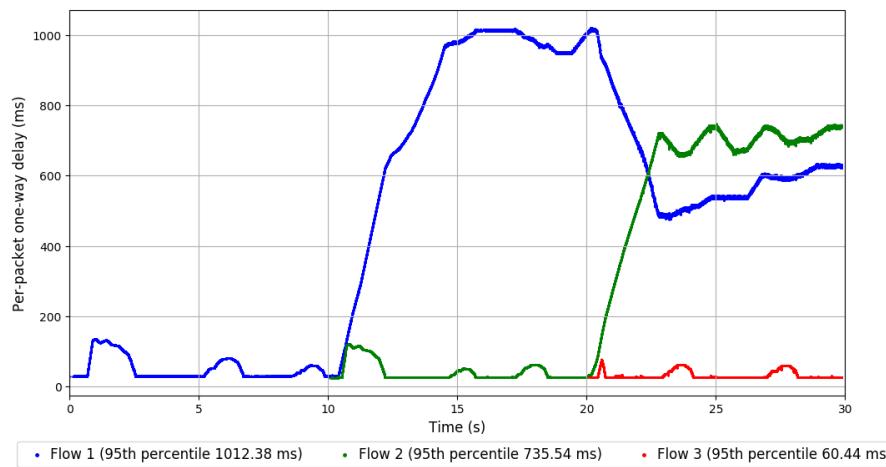
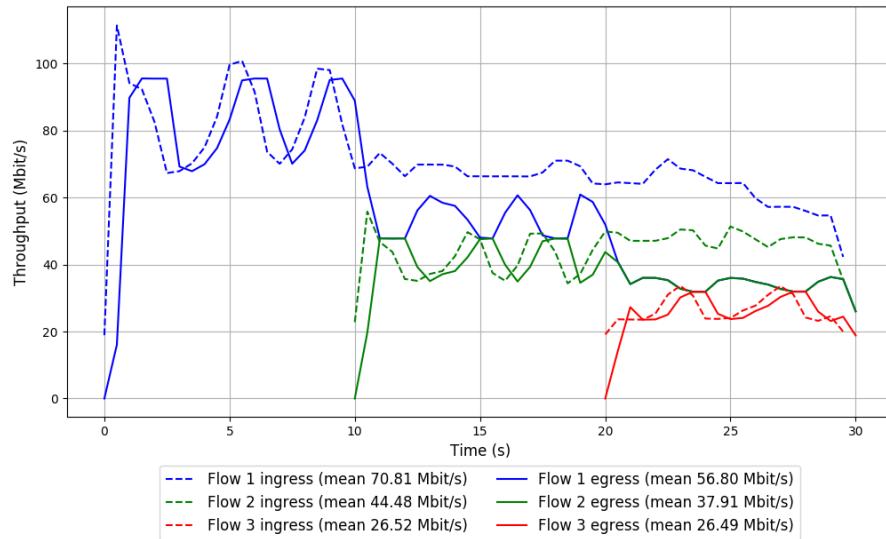


Run 3: Statistics of PCC-Expr

```
Start at: 2019-03-09 14:00:21
End at: 2019-03-09 14:00:51
Local clock offset: -0.919 ms
Remote clock offset: -1.365 ms

# Below is generated by plot.py at 2019-03-09 15:27:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 999.104 ms
Loss rate: 17.01%
-- Flow 1:
Average throughput: 56.80 Mbit/s
95th percentile per-packet one-way delay: 1012.377 ms
Loss rate: 19.91%
-- Flow 2:
Average throughput: 37.91 Mbit/s
95th percentile per-packet one-way delay: 735.540 ms
Loss rate: 14.95%
-- Flow 3:
Average throughput: 26.49 Mbit/s
95th percentile per-packet one-way delay: 60.435 ms
Loss rate: 0.57%
```

Run 3: Report of PCC-Expr — Data Link

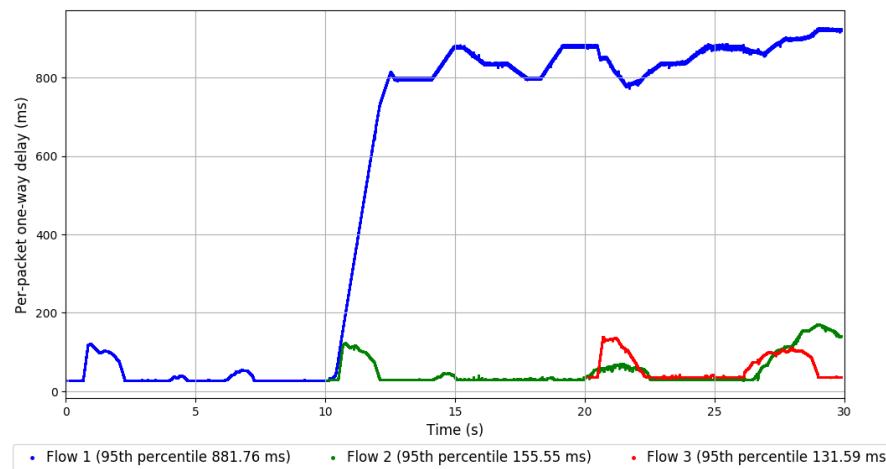
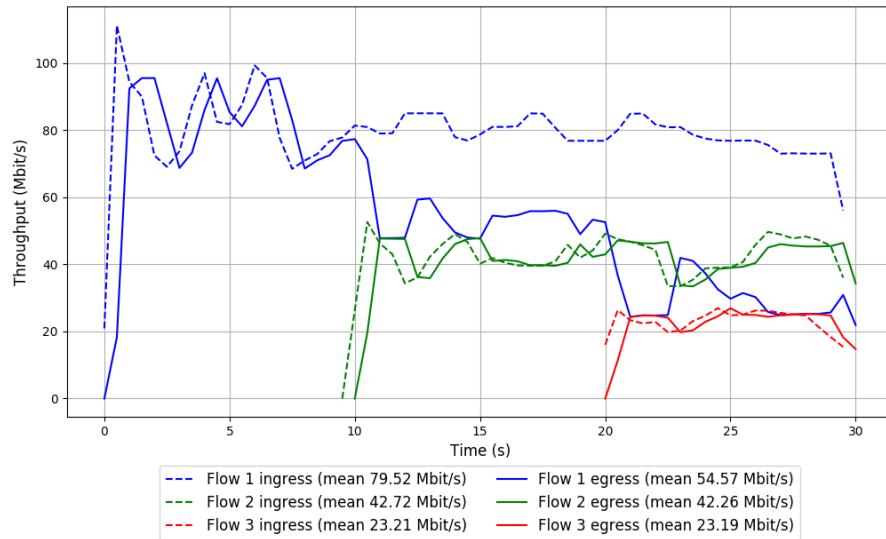


Run 4: Statistics of PCC-Expr

```
Start at: 2019-03-09 14:28:14
End at: 2019-03-09 14:28:44
Local clock offset: -1.332 ms
Remote clock offset: -0.205 ms

# Below is generated by plot.py at 2019-03-09 15:28:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.30 Mbit/s
95th percentile per-packet one-way delay: 879.000 ms
Loss rate: 22.01%
-- Flow 1:
Average throughput: 54.57 Mbit/s
95th percentile per-packet one-way delay: 881.765 ms
Loss rate: 31.48%
-- Flow 2:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 155.547 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 23.19 Mbit/s
95th percentile per-packet one-way delay: 131.588 ms
Loss rate: 0.60%
```

Run 4: Report of PCC-Expr — Data Link

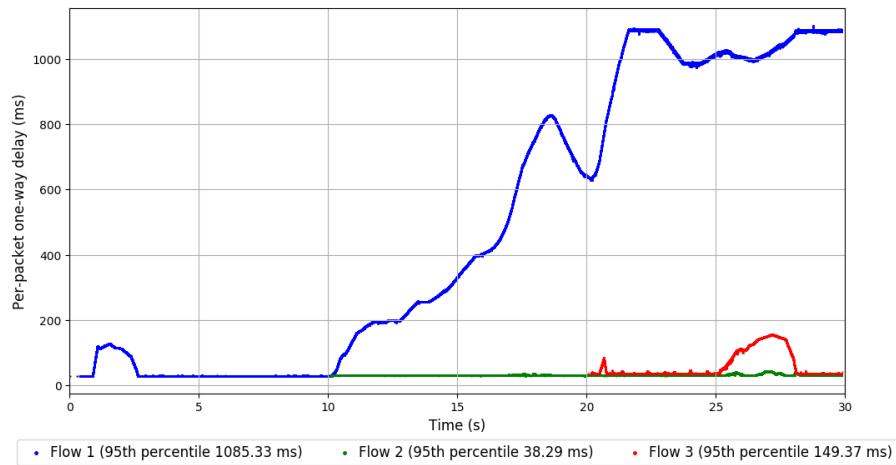
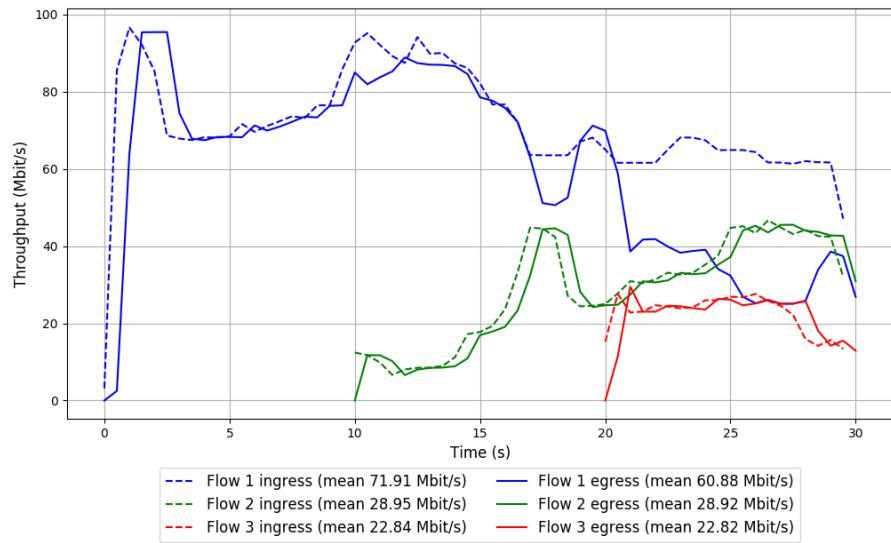


Run 5: Statistics of PCC-Expr

```
Start at: 2019-03-09 14:58:22
End at: 2019-03-09 14:58:52
Local clock offset: -5.356 ms
Remote clock offset: -0.254 ms

# Below is generated by plot.py at 2019-03-09 15:28:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.60 Mbit/s
95th percentile per-packet one-way delay: 1056.095 ms
Loss rate: 11.40%
-- Flow 1:
Average throughput: 60.88 Mbit/s
95th percentile per-packet one-way delay: 1085.331 ms
Loss rate: 15.50%
-- Flow 2:
Average throughput: 28.92 Mbit/s
95th percentile per-packet one-way delay: 38.291 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 22.82 Mbit/s
95th percentile per-packet one-way delay: 149.373 ms
Loss rate: 0.53%
```

Run 5: Report of PCC-Expr — Data Link

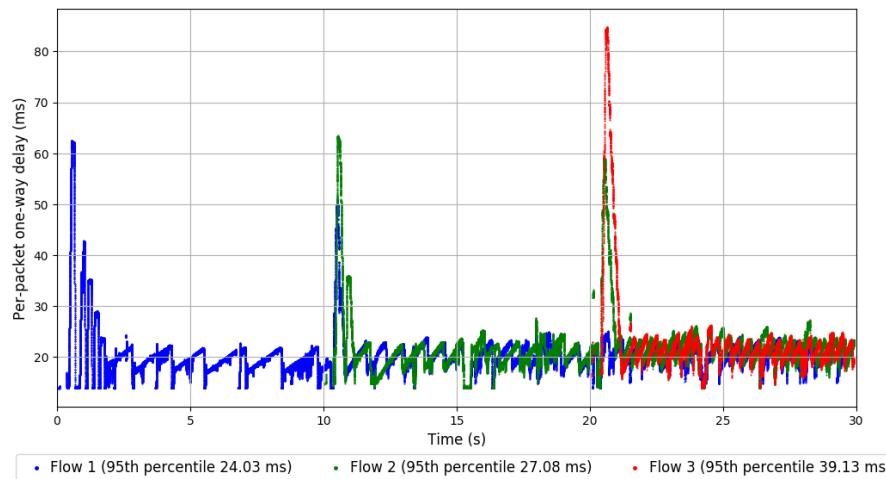
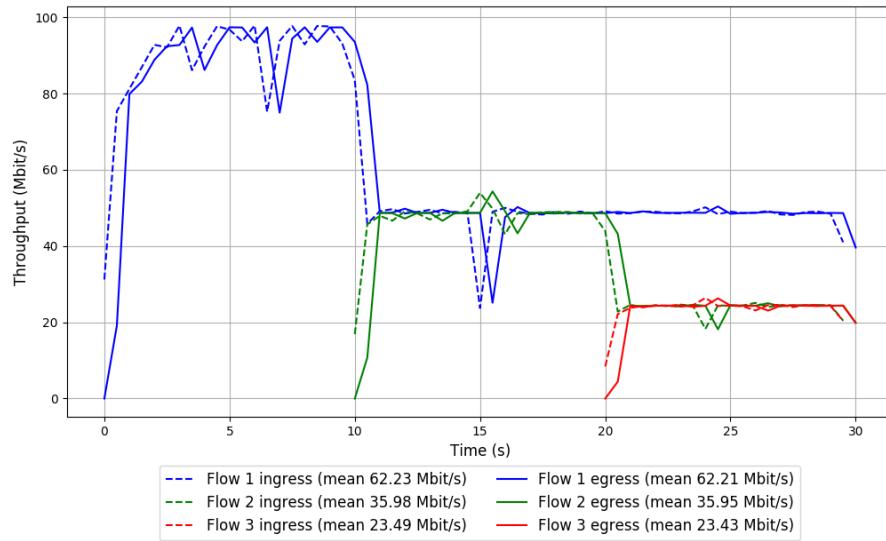


```
Run 1: Statistics of QUIC Cubic

Start at: 2019-03-09 13:01:56
End at: 2019-03-09 13:02:26
Local clock offset: 5.191 ms
Remote clock offset: -1.015 ms

# Below is generated by plot.py at 2019-03-09 15:28:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.84 Mbit/s
95th percentile per-packet one-way delay: 25.603 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 62.21 Mbit/s
95th percentile per-packet one-way delay: 24.028 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 35.95 Mbit/s
95th percentile per-packet one-way delay: 27.078 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 39.132 ms
Loss rate: 0.50%
```

Run 1: Report of QUIC Cubic — Data Link

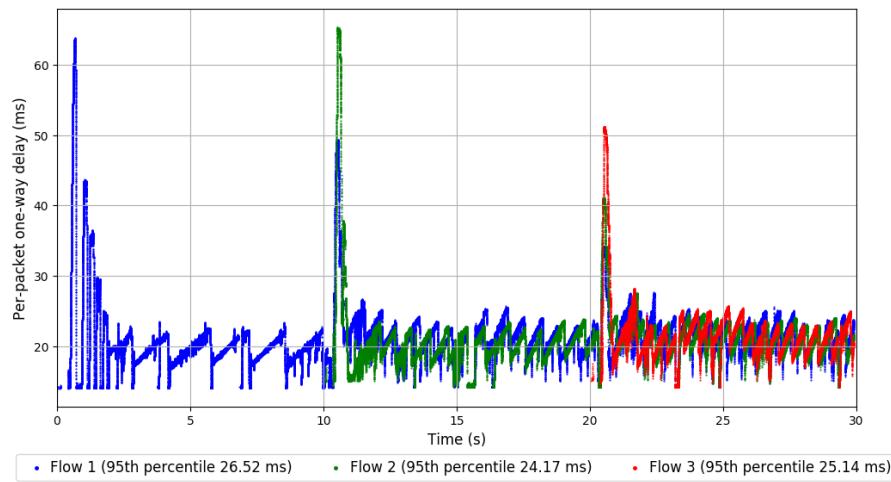
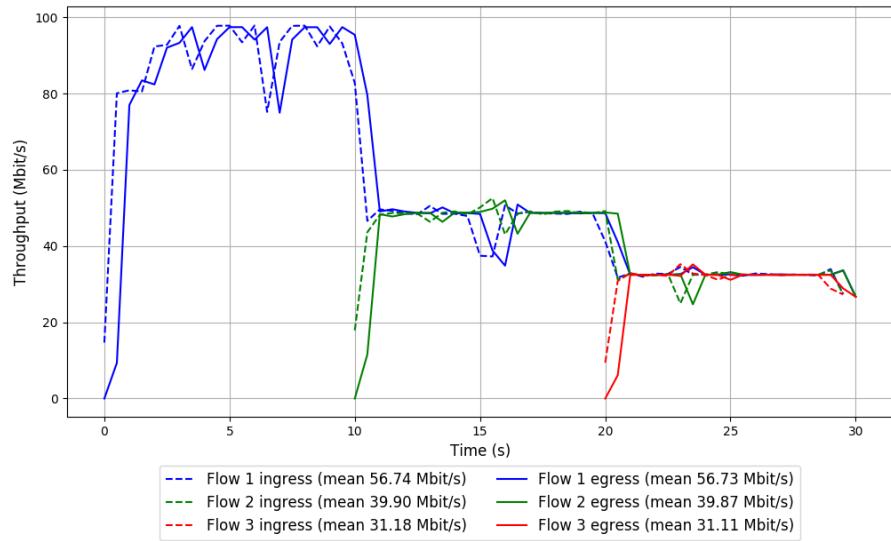


Run 2: Statistics of QUIC Cubic

```
Start at: 2019-03-09 13:28:50
End at: 2019-03-09 13:29:20
Local clock offset: 0.698 ms
Remote clock offset: -0.71 ms

# Below is generated by plot.py at 2019-03-09 15:28:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.53 Mbit/s
95th percentile per-packet one-way delay: 25.479 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 56.73 Mbit/s
95th percentile per-packet one-way delay: 26.521 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 39.87 Mbit/s
95th percentile per-packet one-way delay: 24.174 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 31.11 Mbit/s
95th percentile per-packet one-way delay: 25.135 ms
Loss rate: 0.47%
```

Run 2: Report of QUIC Cubic — Data Link

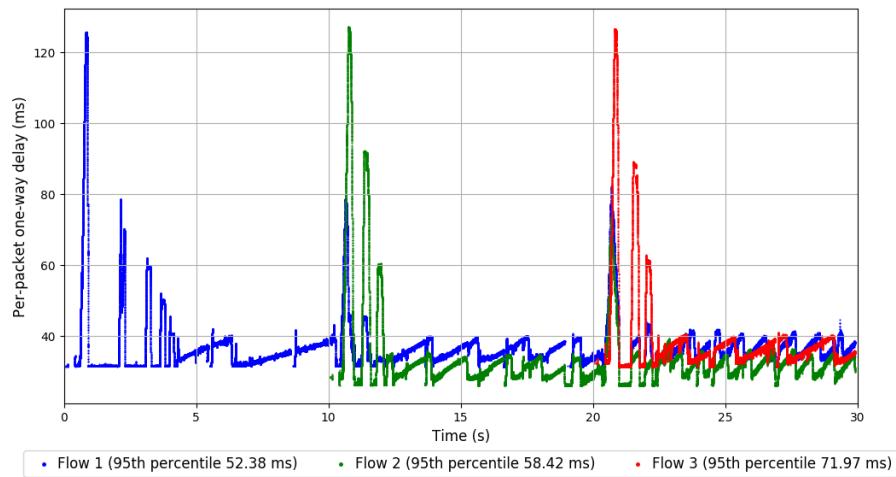
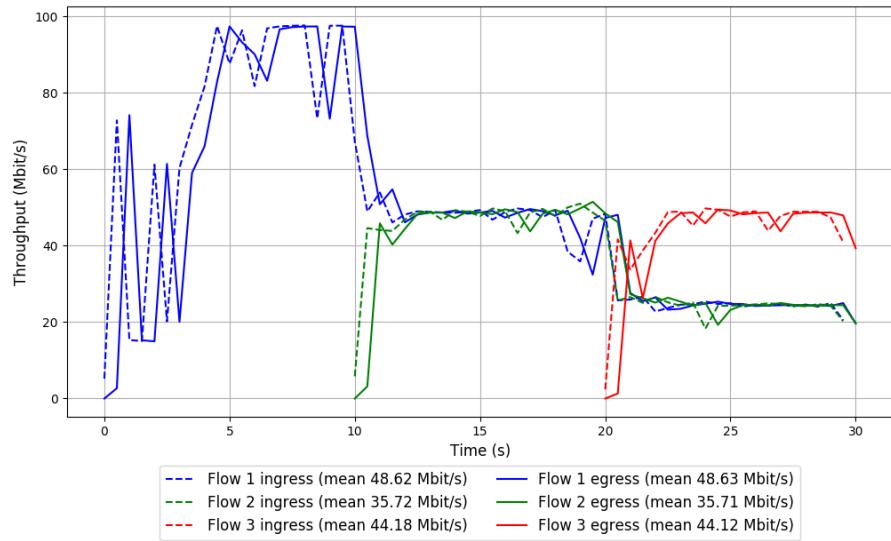


Run 3: Statistics of QUIC Cubic

```
Start at: 2019-03-09 13:56:32
End at: 2019-03-09 13:57:02
Local clock offset: 0.551 ms
Remote clock offset: -0.87 ms

# Below is generated by plot.py at 2019-03-09 15:28:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.91 Mbit/s
95th percentile per-packet one-way delay: 58.139 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 48.63 Mbit/s
95th percentile per-packet one-way delay: 52.383 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 35.71 Mbit/s
95th percentile per-packet one-way delay: 58.425 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 44.12 Mbit/s
95th percentile per-packet one-way delay: 71.965 ms
Loss rate: 0.62%
```

Run 3: Report of QUIC Cubic — Data Link

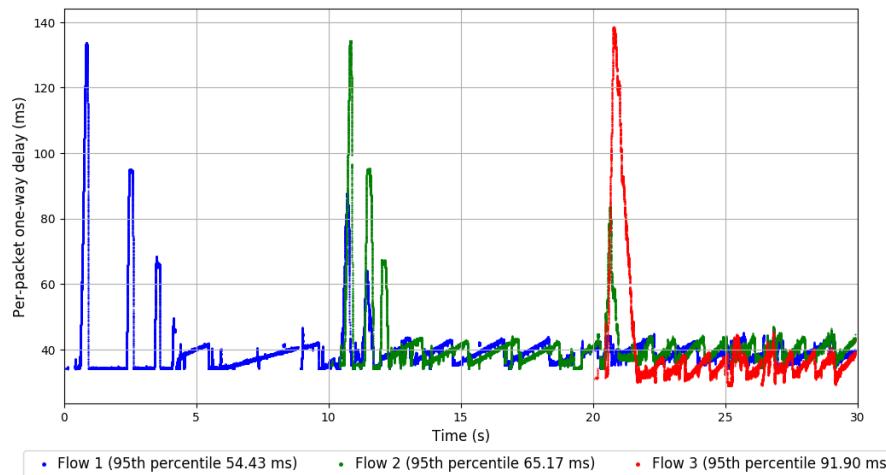
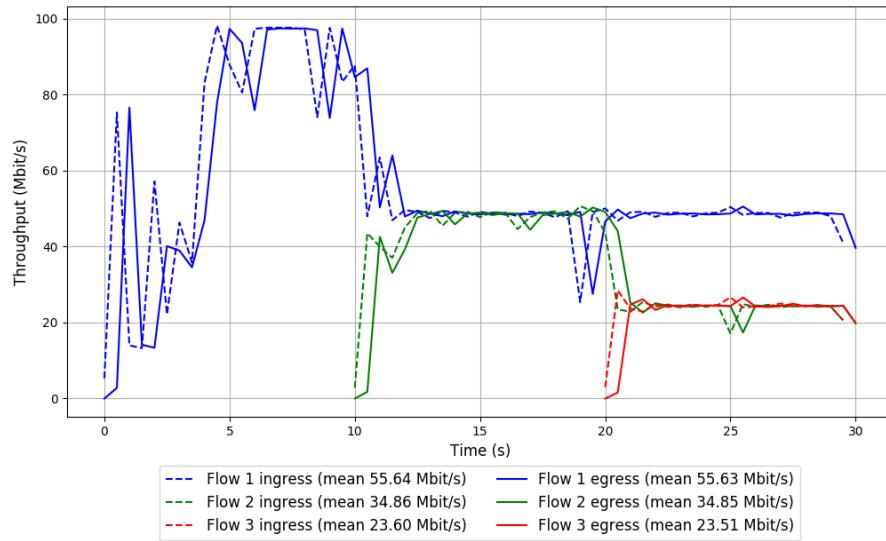


Run 4: Statistics of QUIC Cubic

```
Start at: 2019-03-09 14:24:21
End at: 2019-03-09 14:24:51
Local clock offset: -0.104 ms
Remote clock offset: -0.769 ms

# Below is generated by plot.py at 2019-03-09 15:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.55 Mbit/s
95th percentile per-packet one-way delay: 61.467 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 55.63 Mbit/s
95th percentile per-packet one-way delay: 54.432 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 34.85 Mbit/s
95th percentile per-packet one-way delay: 65.167 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 23.51 Mbit/s
95th percentile per-packet one-way delay: 91.898 ms
Loss rate: 0.74%
```

Run 4: Report of QUIC Cubic — Data Link

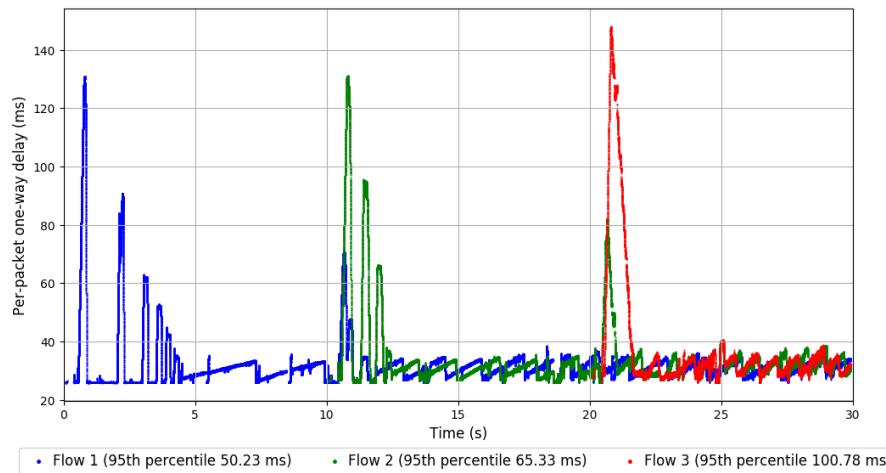
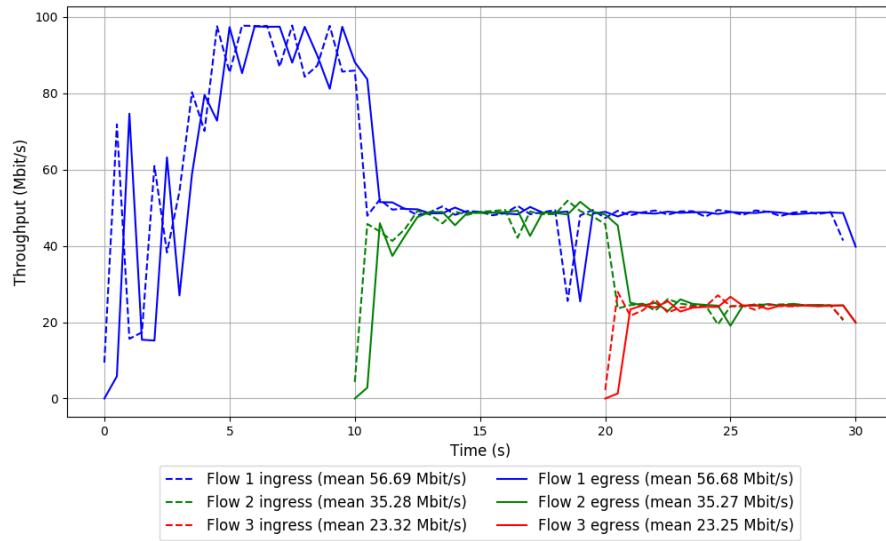


Run 5: Statistics of QUIC Cubic

```
Start at: 2019-03-09 14:54:27
End at: 2019-03-09 14:54:57
Local clock offset: -7.997 ms
Remote clock offset: -0.742 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.79 Mbit/s
95th percentile per-packet one-way delay: 55.123 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 56.68 Mbit/s
95th percentile per-packet one-way delay: 50.228 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 35.27 Mbit/s
95th percentile per-packet one-way delay: 65.335 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 23.25 Mbit/s
95th percentile per-packet one-way delay: 100.776 ms
Loss rate: 0.72%
```

Run 5: Report of QUIC Cubic — Data Link

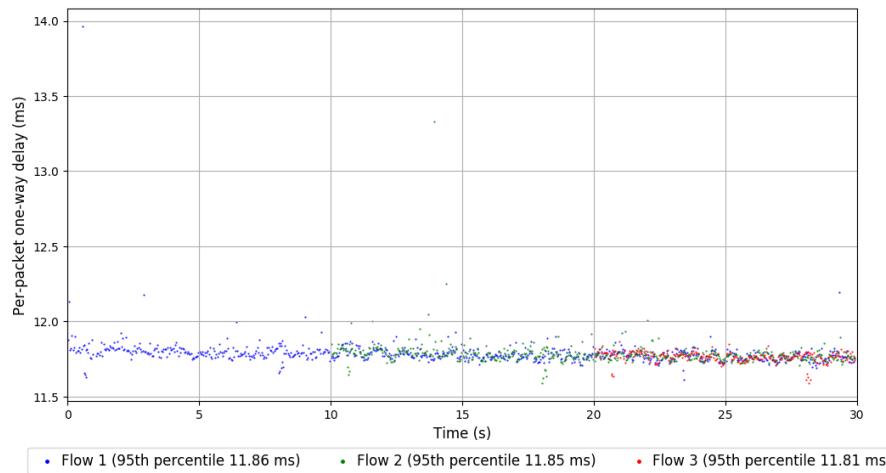
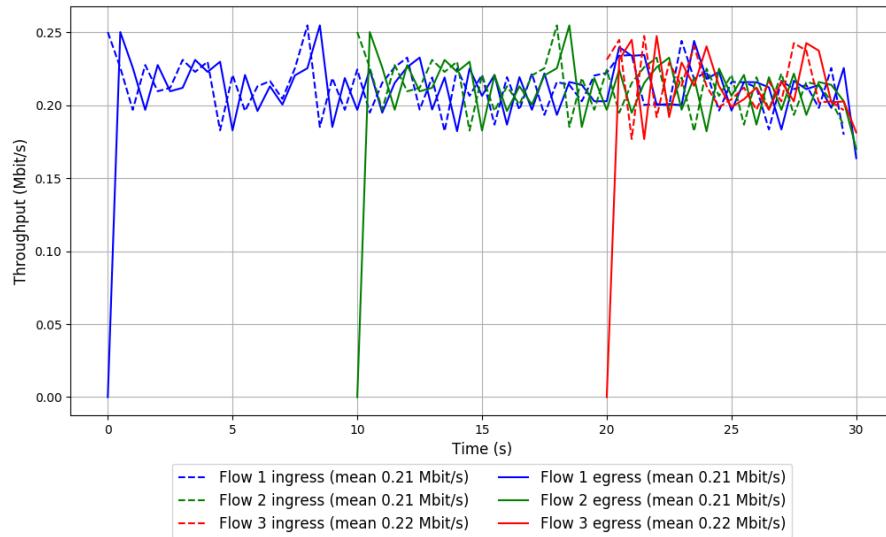


Run 1: Statistics of SCReAM

```
Start at: 2019-03-09 13:04:22
End at: 2019-03-09 13:04:52
Local clock offset: 4.019 ms
Remote clock offset: -0.281 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 11.849 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 11.855 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 11.850 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.812 ms
Loss rate: 0.36%
```

Run 1: Report of SCReAM — Data Link

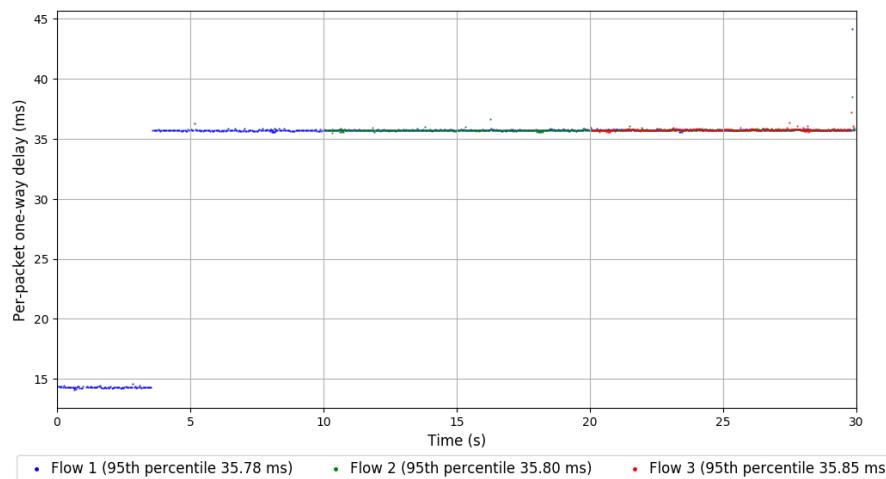
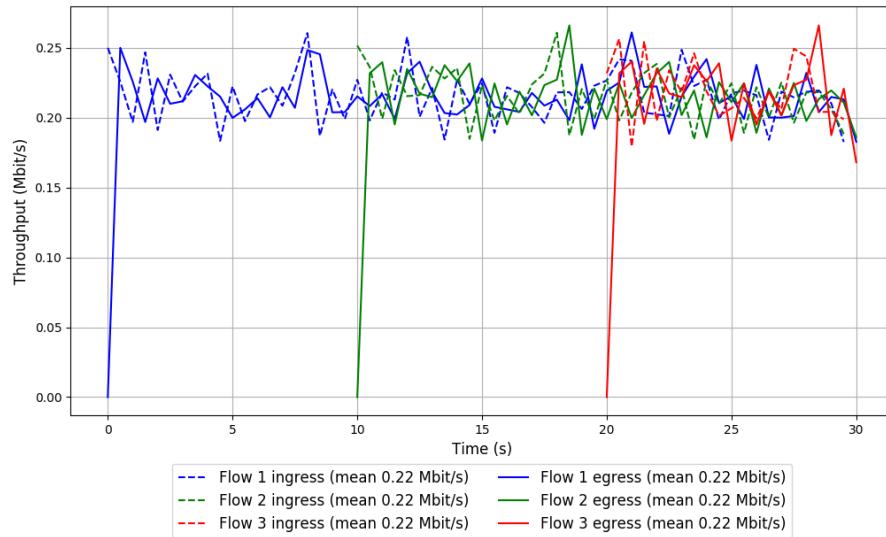


Run 2: Statistics of SCReAM

```
Start at: 2019-03-09 13:31:28
End at: 2019-03-09 13:31:58
Local clock offset: -1.031 ms
Remote clock offset: -2.14 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 35.797 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.782 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.805 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.850 ms
Loss rate: 0.70%
```

Run 2: Report of SCReAM — Data Link

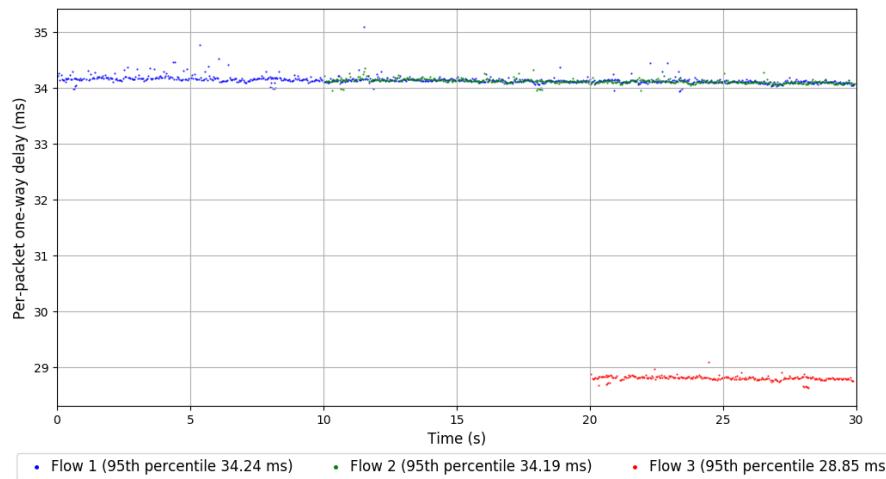
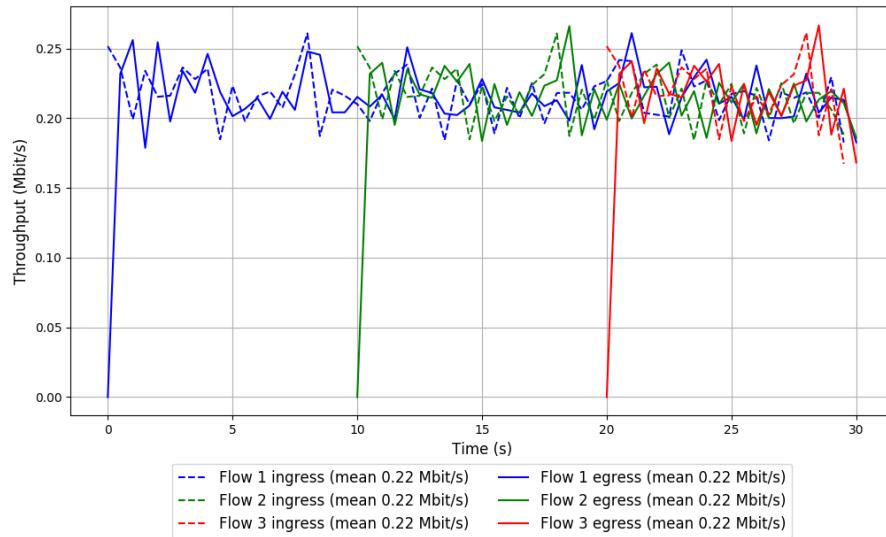


Run 3: Statistics of SCReAM

```
Start at: 2019-03-09 13:59:14
End at: 2019-03-09 13:59:44
Local clock offset: 3.643 ms
Remote clock offset: -0.901 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 34.210 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 34.240 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 34.187 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 28.853 ms
Loss rate: 0.35%
```

Run 3: Report of SCReAM — Data Link

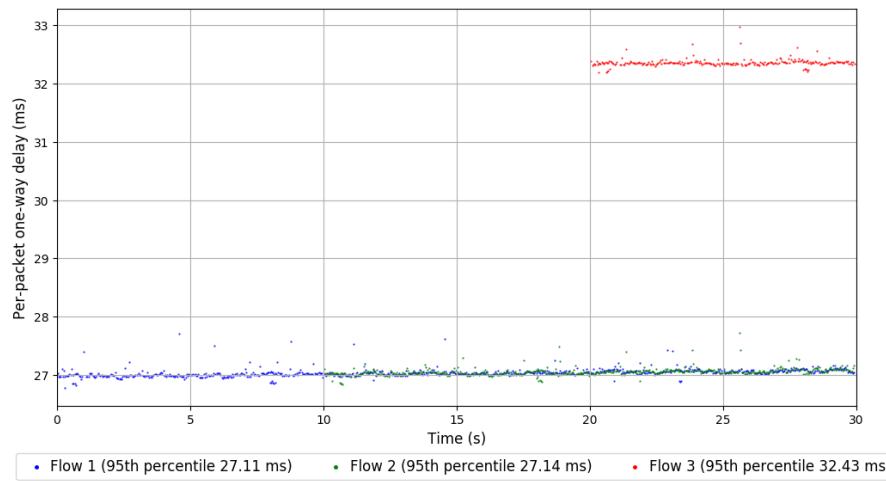
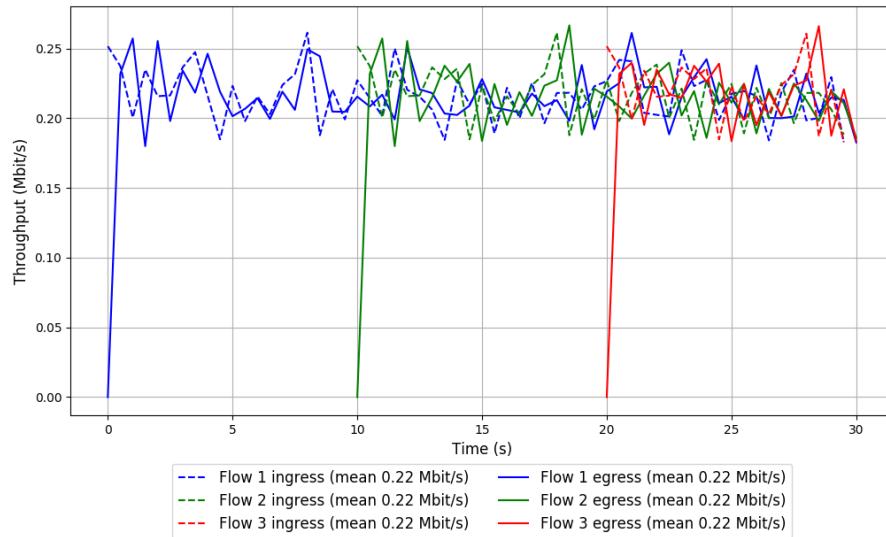


Run 4: Statistics of SCReAM

```
Start at: 2019-03-09 14:27:07
End at: 2019-03-09 14:27:37
Local clock offset: -2.816 ms
Remote clock offset: -0.787 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 32.366 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.109 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.138 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 32.432 ms
Loss rate: 0.35%
```

Run 4: Report of SCReAM — Data Link

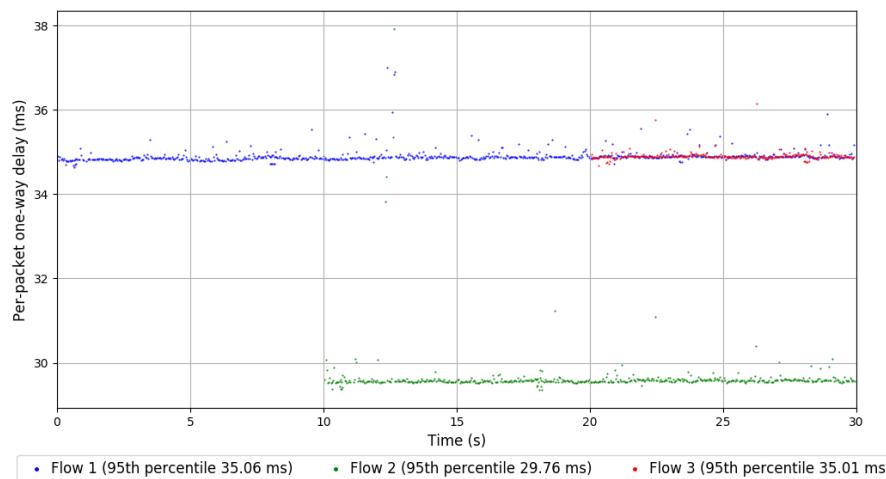
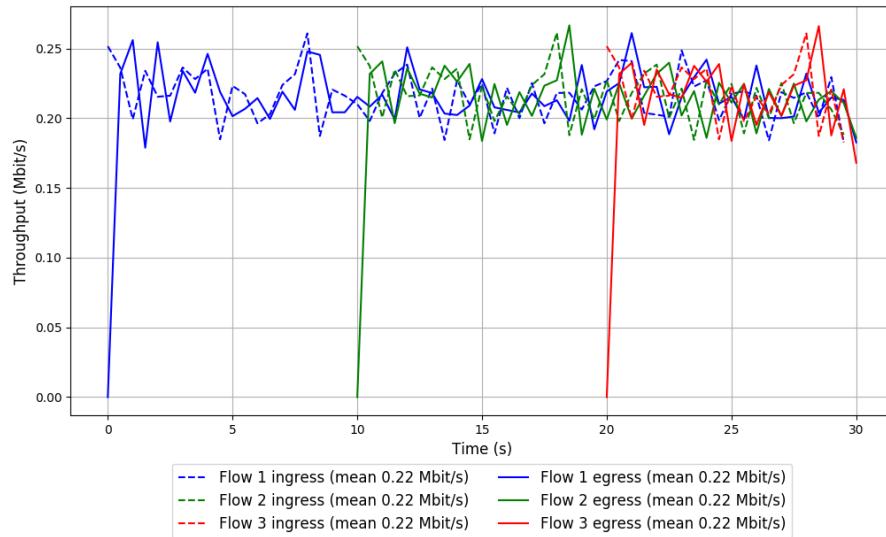


Run 5: Statistics of SCReAM

```
Start at: 2019-03-09 14:57:15
End at: 2019-03-09 14:57:45
Local clock offset: -5.676 ms
Remote clock offset: -1.651 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 34.982 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.064 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 29.764 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.010 ms
Loss rate: 0.70%
```

Run 5: Report of SCReAM — Data Link

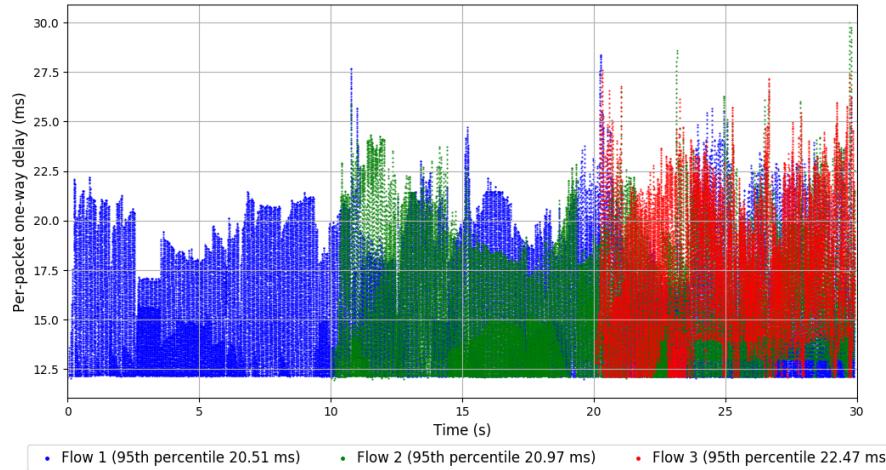
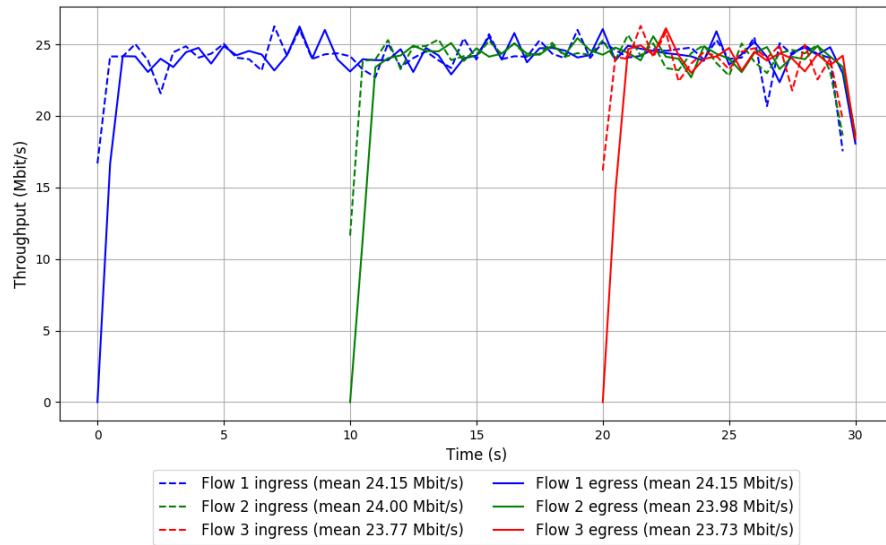


Run 1: Statistics of Sprout

```
Start at: 2019-03-09 12:58:23
End at: 2019-03-09 12:58:53
Local clock offset: 4.297 ms
Remote clock offset: 0.325 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.93 Mbit/s
95th percentile per-packet one-way delay: 21.140 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 24.15 Mbit/s
95th percentile per-packet one-way delay: 20.511 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 23.98 Mbit/s
95th percentile per-packet one-way delay: 20.971 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 23.73 Mbit/s
95th percentile per-packet one-way delay: 22.467 ms
Loss rate: 0.32%
```

Run 1: Report of Sprout — Data Link

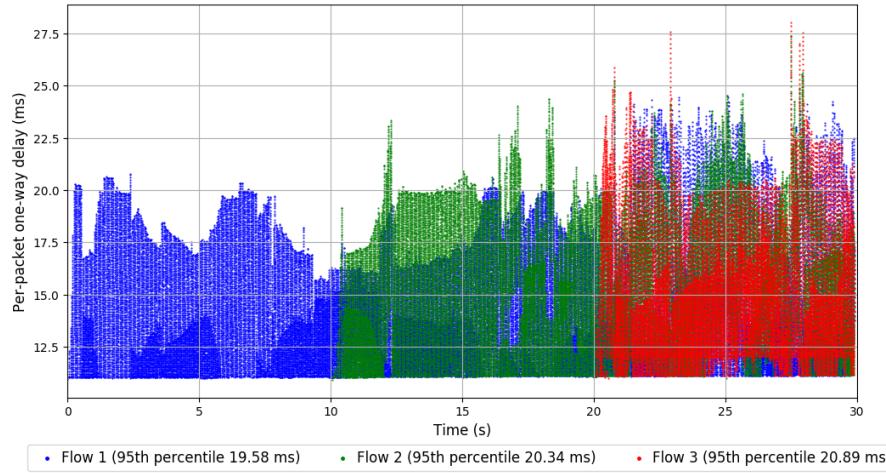
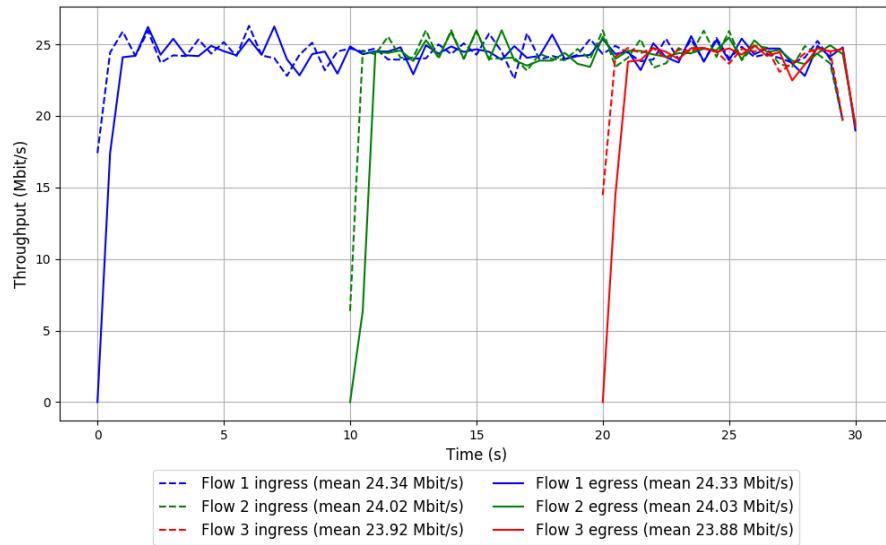


Run 2: Statistics of Sprout

```
Start at: 2019-03-09 13:25:14
End at: 2019-03-09 13:25:44
Local clock offset: -1.819 ms
Remote clock offset: -0.807 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.18 Mbit/s
95th percentile per-packet one-way delay: 20.098 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 24.33 Mbit/s
95th percentile per-packet one-way delay: 19.580 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 24.03 Mbit/s
95th percentile per-packet one-way delay: 20.339 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 23.88 Mbit/s
95th percentile per-packet one-way delay: 20.890 ms
Loss rate: 0.29%
```

Run 2: Report of Sprout — Data Link

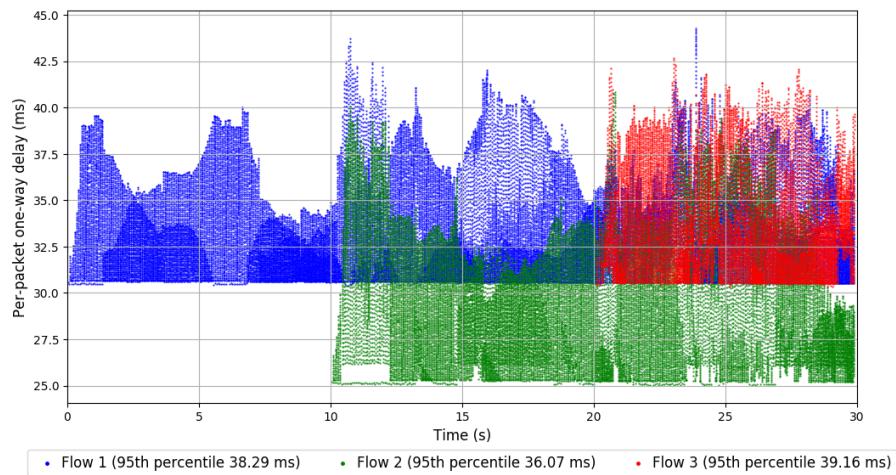
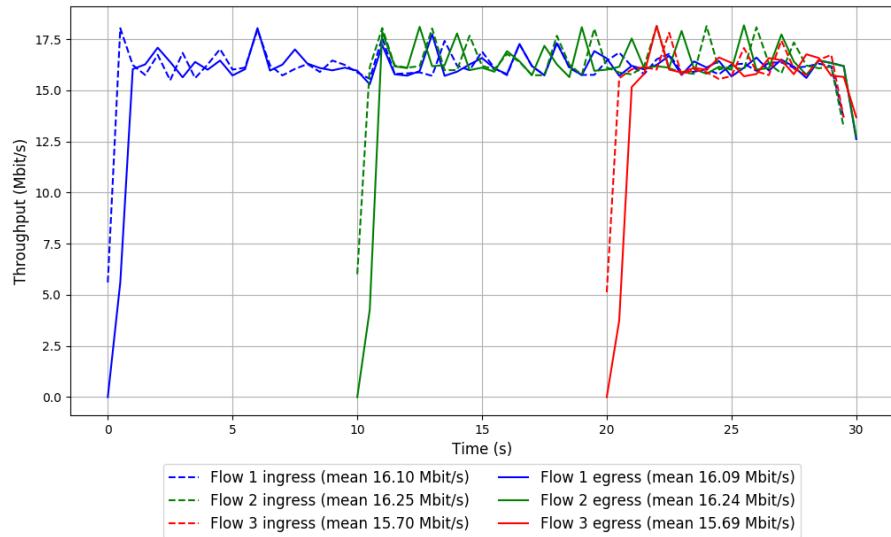


Run 3: Statistics of Sprout

```
Start at: 2019-03-09 13:52:58
End at: 2019-03-09 13:53:28
Local clock offset: -0.581 ms
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 38.071 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 16.09 Mbit/s
95th percentile per-packet one-way delay: 38.289 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 16.24 Mbit/s
95th percentile per-packet one-way delay: 36.073 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 15.69 Mbit/s
95th percentile per-packet one-way delay: 39.160 ms
Loss rate: 0.63%
```

Run 3: Report of Sprout — Data Link

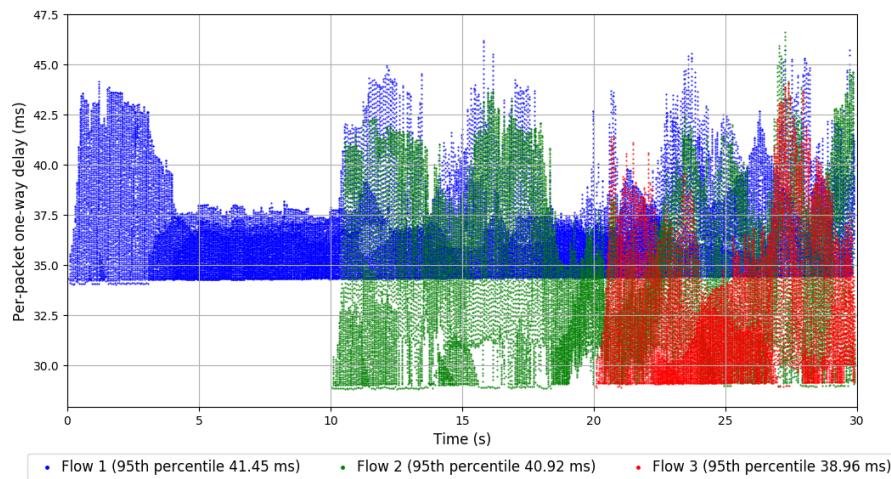
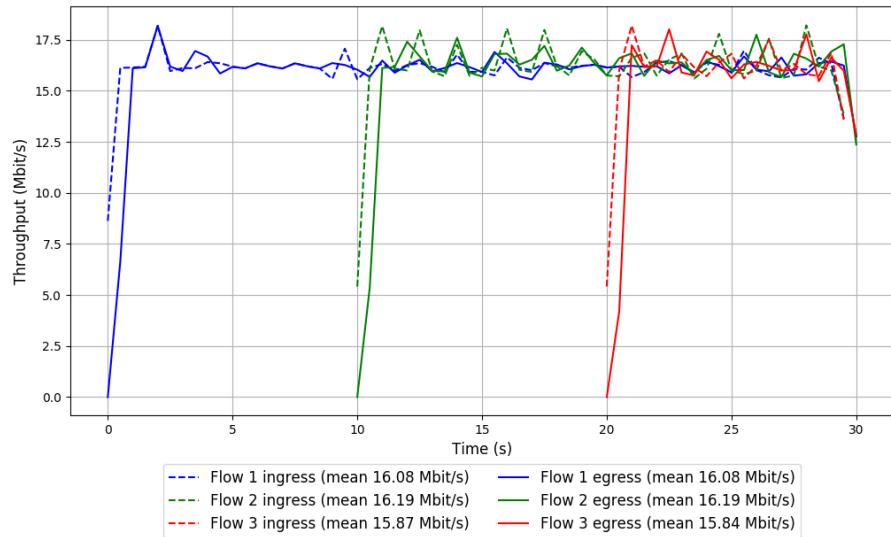


Run 4: Statistics of Sprout

```
Start at: 2019-03-09 14:20:45
End at: 2019-03-09 14:21:15
Local clock offset: 1.608 ms
Remote clock offset: -0.232 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 41.016 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 16.08 Mbit/s
95th percentile per-packet one-way delay: 41.447 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 16.19 Mbit/s
95th percentile per-packet one-way delay: 40.917 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 15.84 Mbit/s
95th percentile per-packet one-way delay: 38.961 ms
Loss rate: 0.52%
```

Run 4: Report of Sprout — Data Link

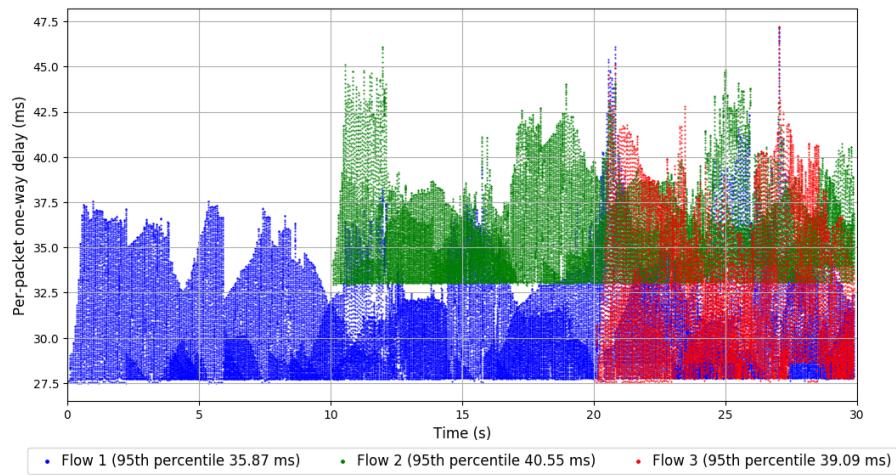
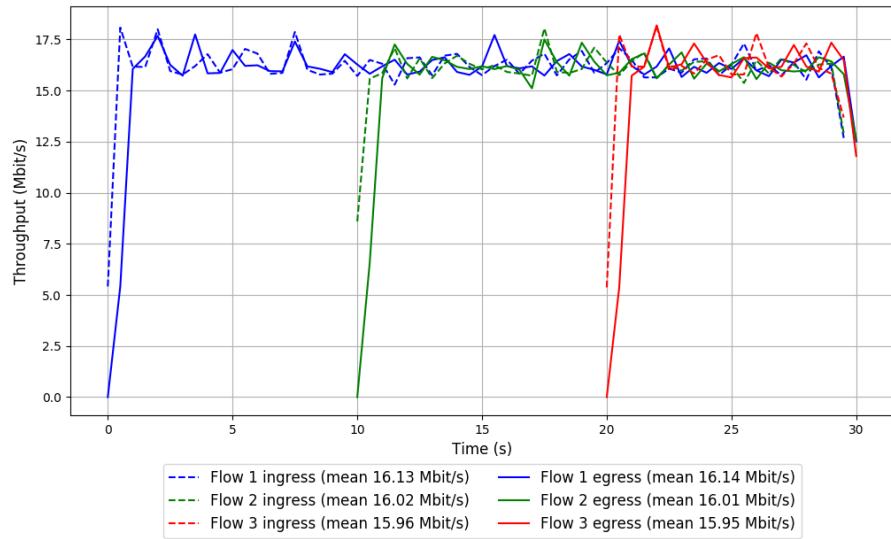


Run 5: Statistics of Sprout

```
Start at: 2019-03-09 14:50:21
End at: 2019-03-09 14:50:51
Local clock offset: -5.65 ms
Remote clock offset: -0.711 ms

# Below is generated by plot.py at 2019-03-09 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.02 Mbit/s
95th percentile per-packet one-way delay: 38.839 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 16.14 Mbit/s
95th percentile per-packet one-way delay: 35.871 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 16.01 Mbit/s
95th percentile per-packet one-way delay: 40.551 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 15.95 Mbit/s
95th percentile per-packet one-way delay: 39.094 ms
Loss rate: 0.62%
```

Run 5: Report of Sprout — Data Link

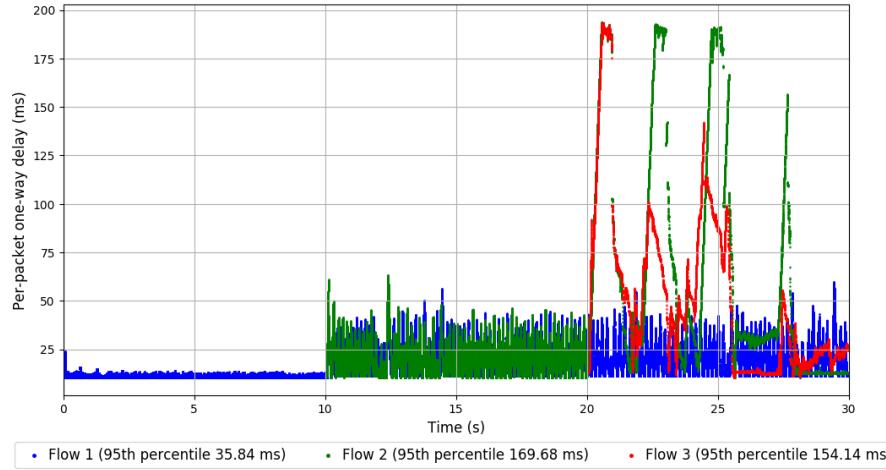
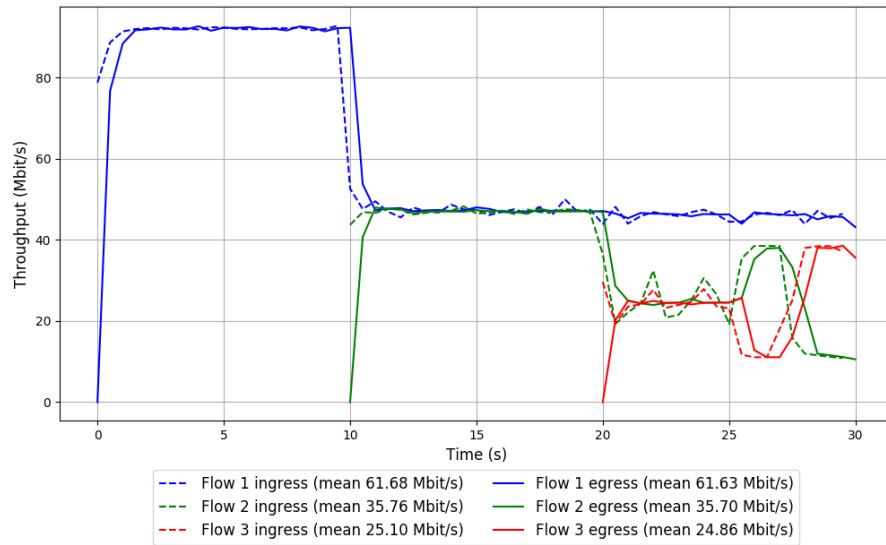


Run 1: Statistics of TaoVA-100x

```
Start at: 2019-03-09 12:54:35
End at: 2019-03-09 12:55:05
Local clock offset: 0.775 ms
Remote clock offset: -1.06 ms

# Below is generated by plot.py at 2019-03-09 15:29:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.65 Mbit/s
95th percentile per-packet one-way delay: 73.687 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 61.63 Mbit/s
95th percentile per-packet one-way delay: 35.841 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 35.70 Mbit/s
95th percentile per-packet one-way delay: 169.683 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 24.86 Mbit/s
95th percentile per-packet one-way delay: 154.138 ms
Loss rate: 1.19%
```

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

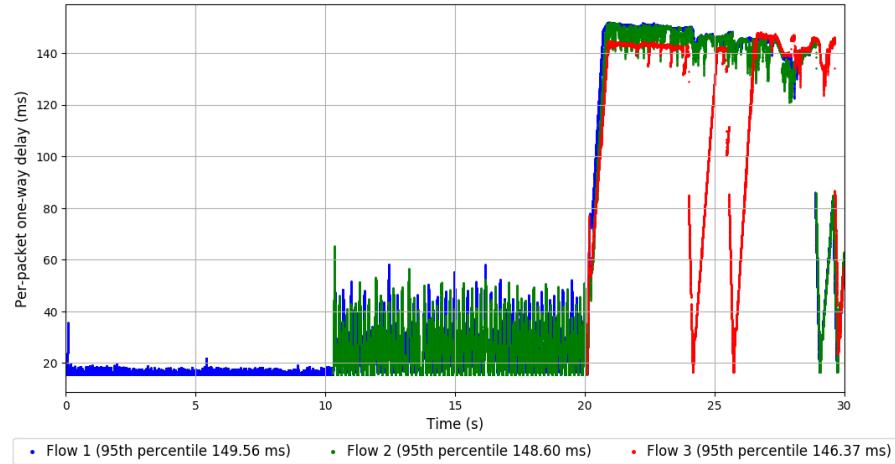
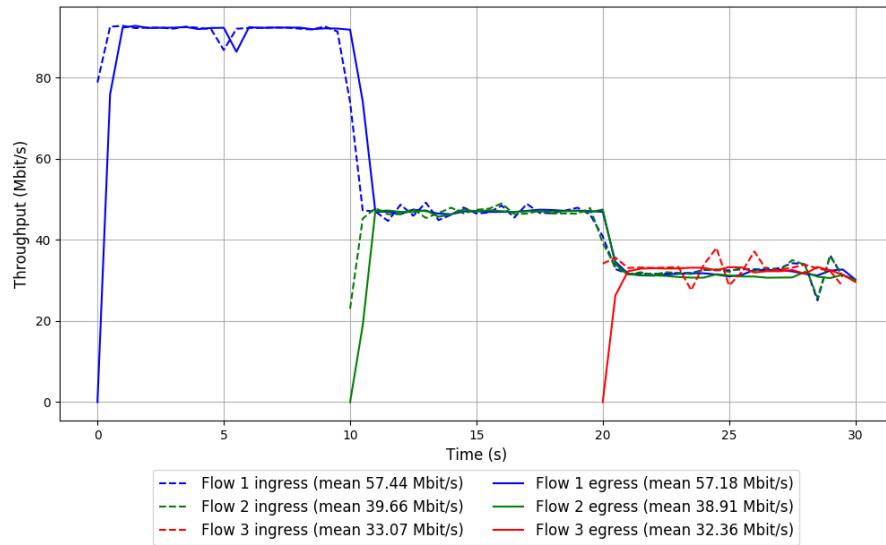


Run 2: Statistics of TaoVA-100x

```
Start at: 2019-03-09 13:21:05
End at: 2019-03-09 13:21:35
Local clock offset: -3.998 ms
Remote clock offset: -8.836 ms

# Below is generated by plot.py at 2019-03-09 15:29:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.53 Mbit/s
95th percentile per-packet one-way delay: 148.735 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 57.18 Mbit/s
95th percentile per-packet one-way delay: 149.562 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 38.91 Mbit/s
95th percentile per-packet one-way delay: 148.601 ms
Loss rate: 2.04%
-- Flow 3:
Average throughput: 32.36 Mbit/s
95th percentile per-packet one-way delay: 146.369 ms
Loss rate: 2.40%
```

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

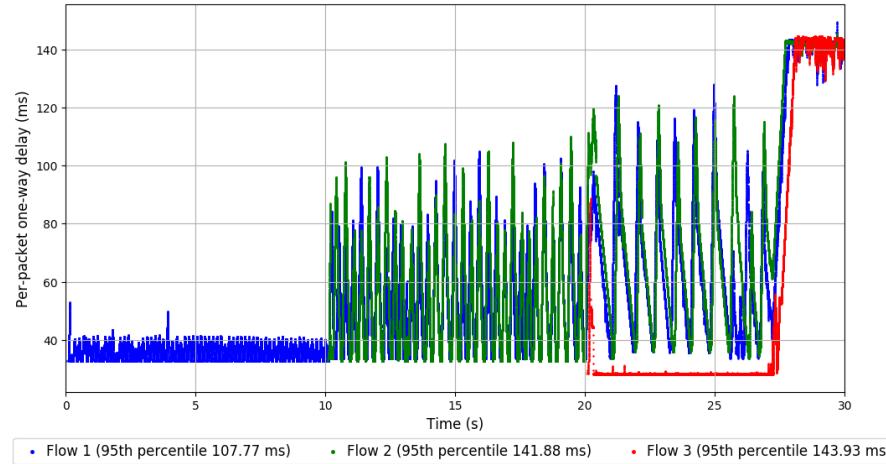
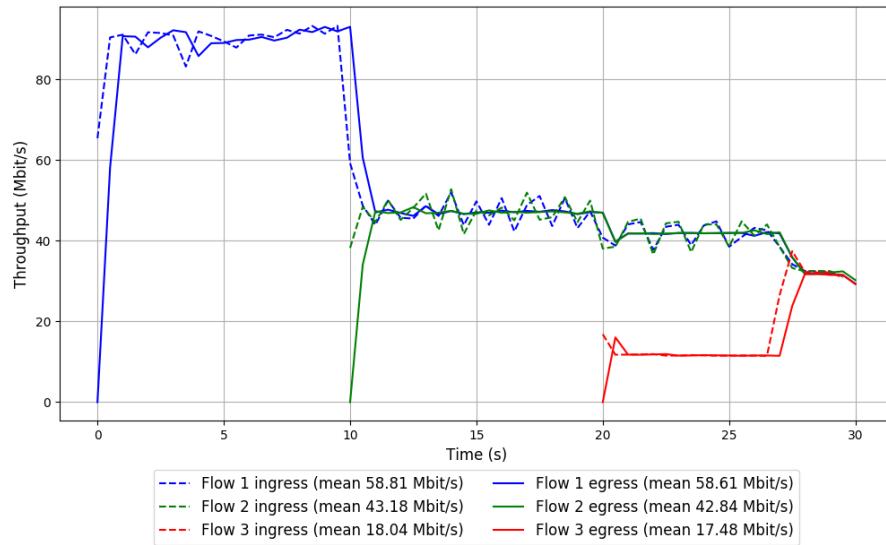


Run 3: Statistics of TaoVA-100x

```
Start at: 2019-03-09 13:48:56
End at: 2019-03-09 13:49:26
Local clock offset: -0.276 ms
Remote clock offset: -0.612 ms

# Below is generated by plot.py at 2019-03-09 15:29:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.92 Mbit/s
95th percentile per-packet one-way delay: 141.572 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 58.61 Mbit/s
95th percentile per-packet one-way delay: 107.765 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 42.84 Mbit/s
95th percentile per-packet one-way delay: 141.877 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 17.48 Mbit/s
95th percentile per-packet one-way delay: 143.932 ms
Loss rate: 3.47%
```

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

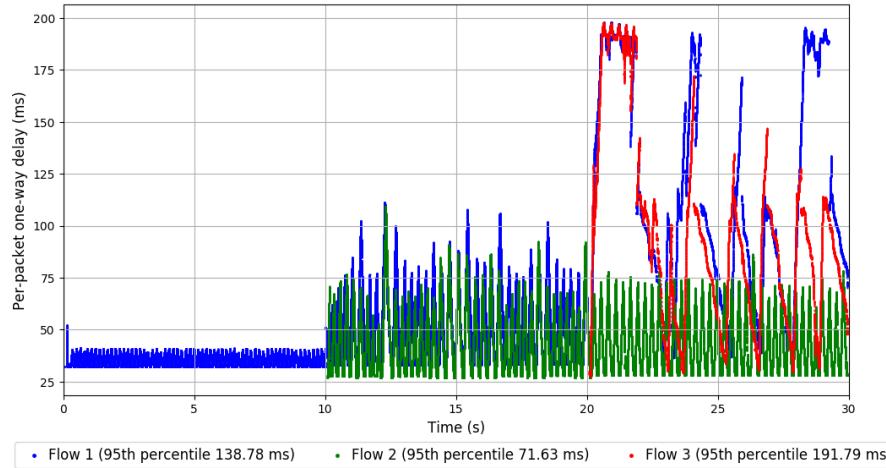
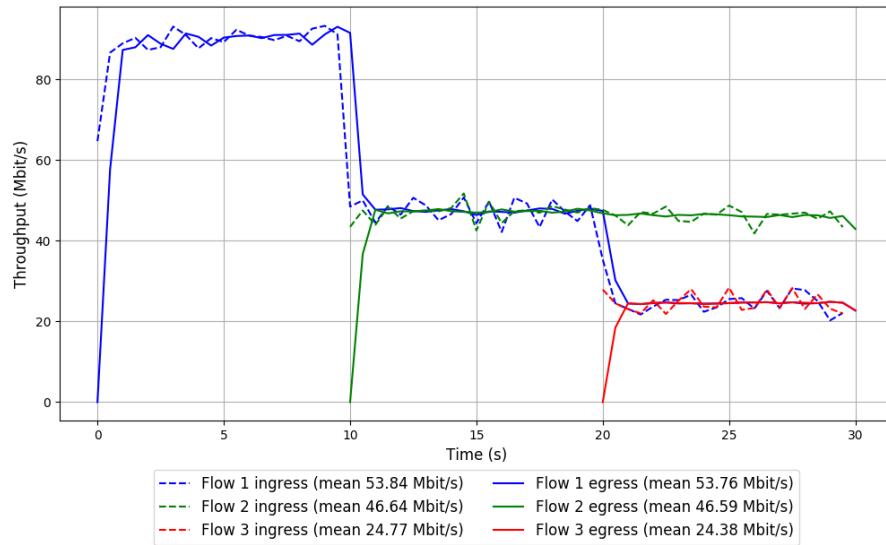


Run 4: Statistics of TaoVA-100x

```
Start at: 2019-03-09 14:16:23
End at: 2019-03-09 14:16:53
Local clock offset: 0.269 ms
Remote clock offset: -1.757 ms

# Below is generated by plot.py at 2019-03-09 15:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.86 Mbit/s
95th percentile per-packet one-way delay: 120.486 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 53.76 Mbit/s
95th percentile per-packet one-way delay: 138.778 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 46.59 Mbit/s
95th percentile per-packet one-way delay: 71.634 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 24.38 Mbit/s
95th percentile per-packet one-way delay: 191.788 ms
Loss rate: 2.06%
```

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

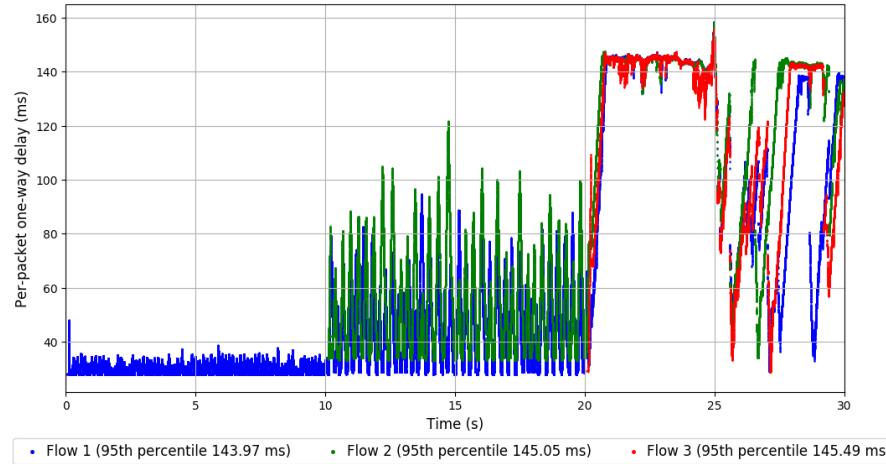
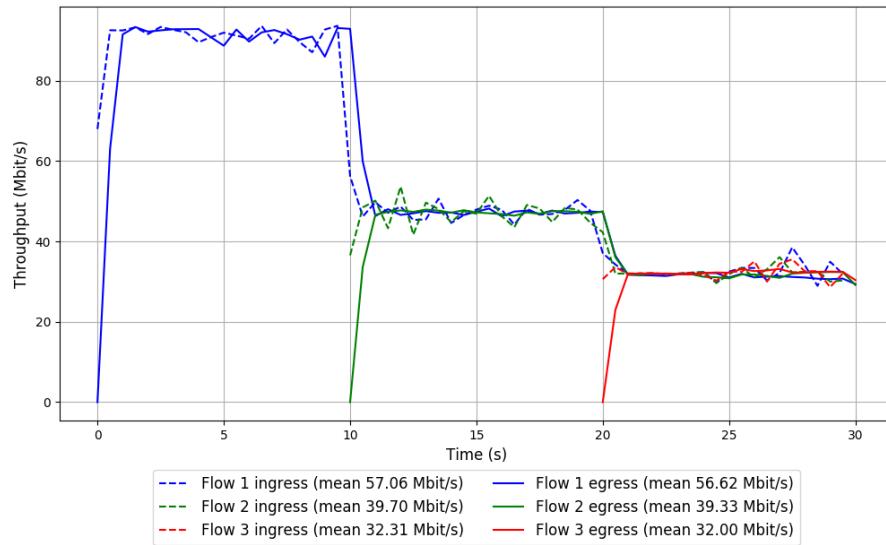


Run 5: Statistics of TaoVA-100x

```
Start at: 2019-03-09 14:45:11
End at: 2019-03-09 14:45:41
Local clock offset: -4.626 ms
Remote clock offset: -0.948 ms

# Below is generated by plot.py at 2019-03-09 15:30:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.41 Mbit/s
95th percentile per-packet one-way delay: 145.022 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 56.62 Mbit/s
95th percentile per-packet one-way delay: 143.966 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 39.33 Mbit/s
95th percentile per-packet one-way delay: 145.054 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 32.00 Mbit/s
95th percentile per-packet one-way delay: 145.491 ms
Loss rate: 1.36%
```

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

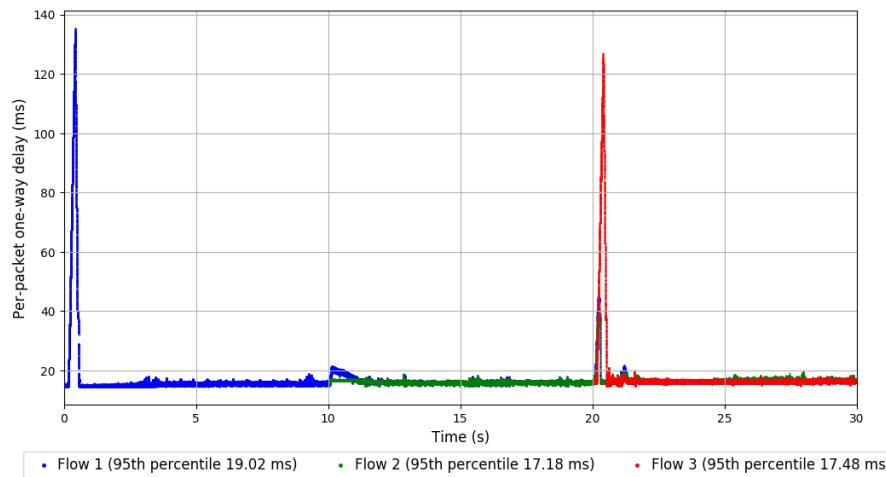
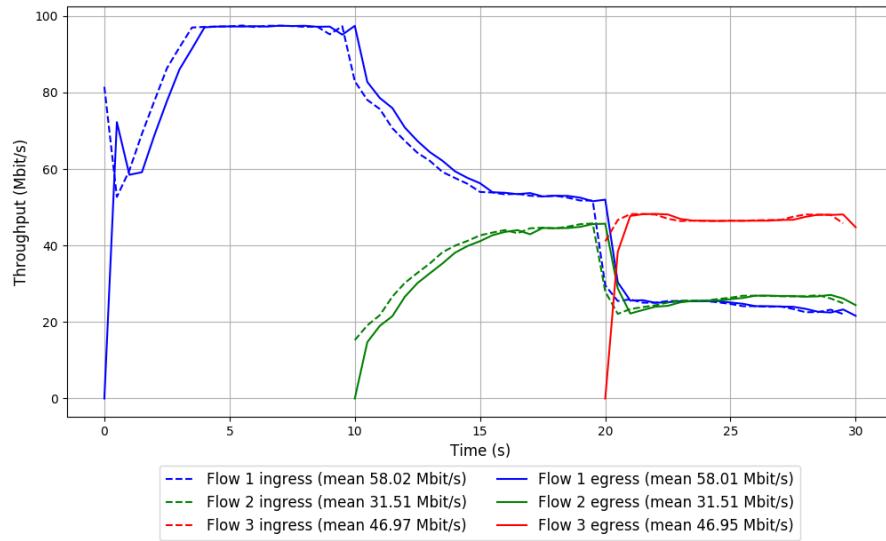


Run 1: Statistics of TCP Vegas

```
Start at: 2019-03-09 13:16:03
End at: 2019-03-09 13:16:33
Local clock offset: 3.778 ms
Remote clock offset: -2.372 ms

# Below is generated by plot.py at 2019-03-09 15:30:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.57 Mbit/s
95th percentile per-packet one-way delay: 18.001 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 58.01 Mbit/s
95th percentile per-packet one-way delay: 19.025 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 31.51 Mbit/s
95th percentile per-packet one-way delay: 17.176 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 46.95 Mbit/s
95th percentile per-packet one-way delay: 17.480 ms
Loss rate: 0.28%
```

Run 1: Report of TCP Vegas — Data Link

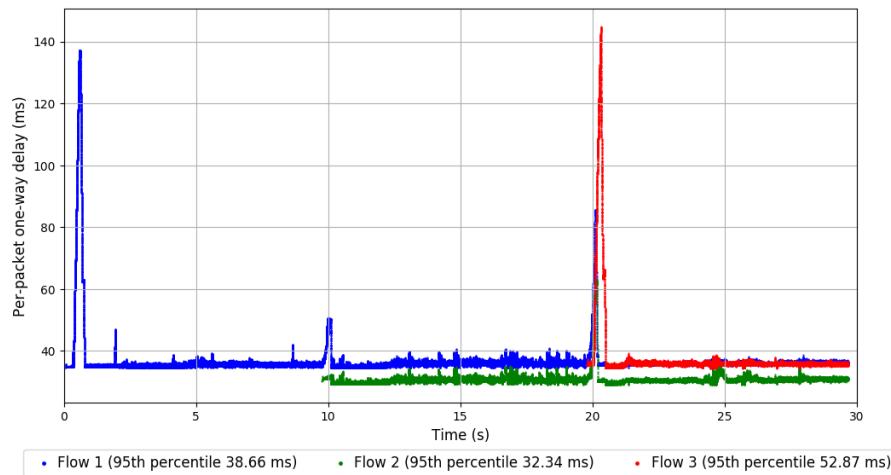
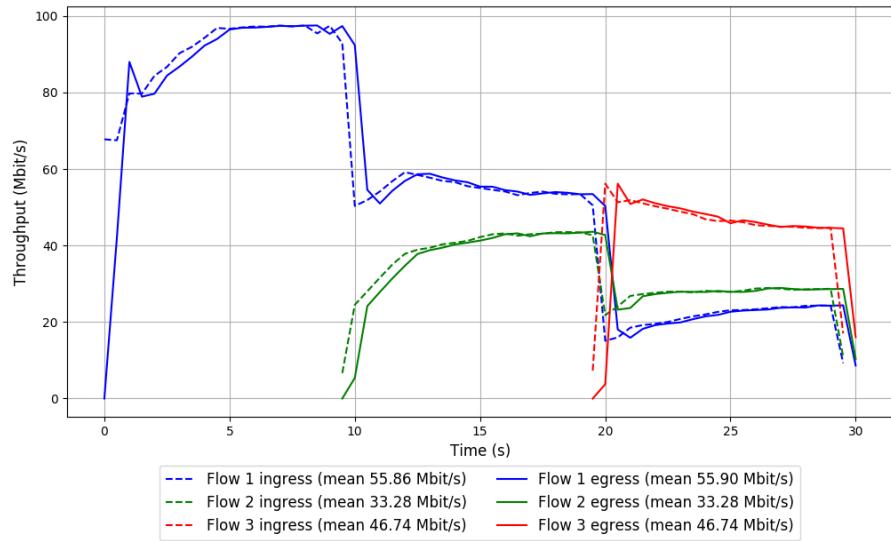


Run 2: Statistics of TCP Vegas

```
Start at: 2019-03-09 13:43:46
End at: 2019-03-09 13:44:16
Local clock offset: -2.537 ms
Remote clock offset: -1.602 ms

# Below is generated by plot.py at 2019-03-09 15:30:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.91 Mbit/s
95th percentile per-packet one-way delay: 37.721 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 55.90 Mbit/s
95th percentile per-packet one-way delay: 38.661 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 33.28 Mbit/s
95th percentile per-packet one-way delay: 32.336 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 46.74 Mbit/s
95th percentile per-packet one-way delay: 52.873 ms
Loss rate: 0.47%
```

Run 2: Report of TCP Vegas — Data Link

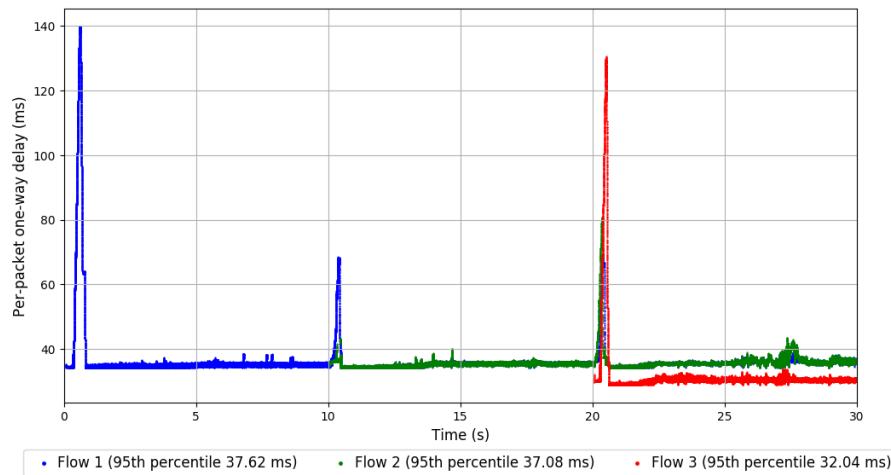
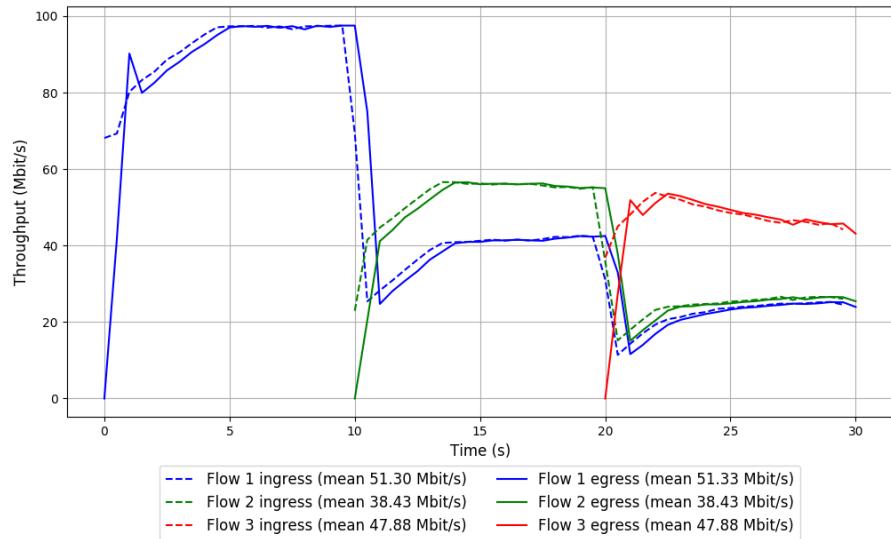


Run 3: Statistics of TCP Vegas

```
Start at: 2019-03-09 14:11:13
End at: 2019-03-09 14:11:43
Local clock offset: 4.549 ms
Remote clock offset: -1.326 ms

# Below is generated by plot.py at 2019-03-09 15:30:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.80 Mbit/s
95th percentile per-packet one-way delay: 37.216 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 51.33 Mbit/s
95th percentile per-packet one-way delay: 37.616 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 38.43 Mbit/s
95th percentile per-packet one-way delay: 37.077 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 47.88 Mbit/s
95th percentile per-packet one-way delay: 32.039 ms
Loss rate: 0.41%
```

Run 3: Report of TCP Vegas — Data Link

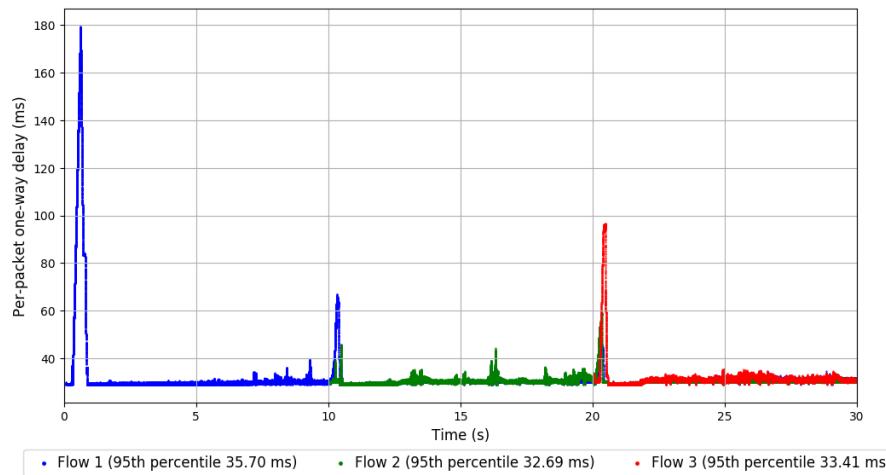
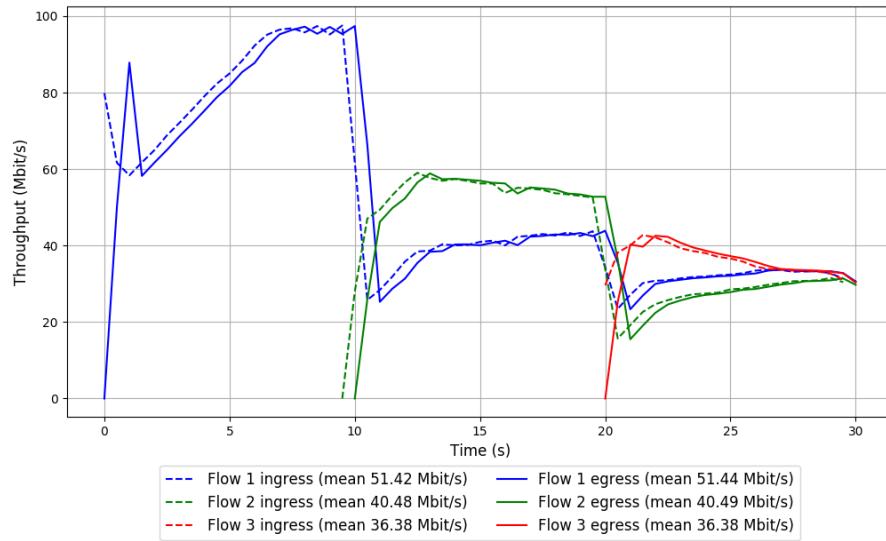


Run 4: Statistics of TCP Vegas

```
Start at: 2019-03-09 14:39:34
End at: 2019-03-09 14:40:04
Local clock offset: -2.346 ms
Remote clock offset: -0.514 ms

# Below is generated by plot.py at 2019-03-09 15:30:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.46 Mbit/s
95th percentile per-packet one-way delay: 33.370 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 51.44 Mbit/s
95th percentile per-packet one-way delay: 35.702 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 40.49 Mbit/s
95th percentile per-packet one-way delay: 32.686 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 36.38 Mbit/s
95th percentile per-packet one-way delay: 33.406 ms
Loss rate: 0.39%
```

Run 4: Report of TCP Vegas — Data Link

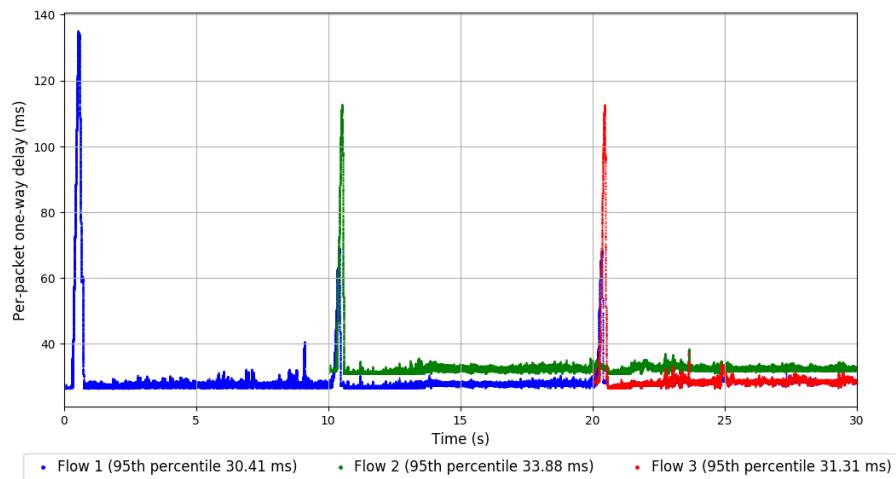
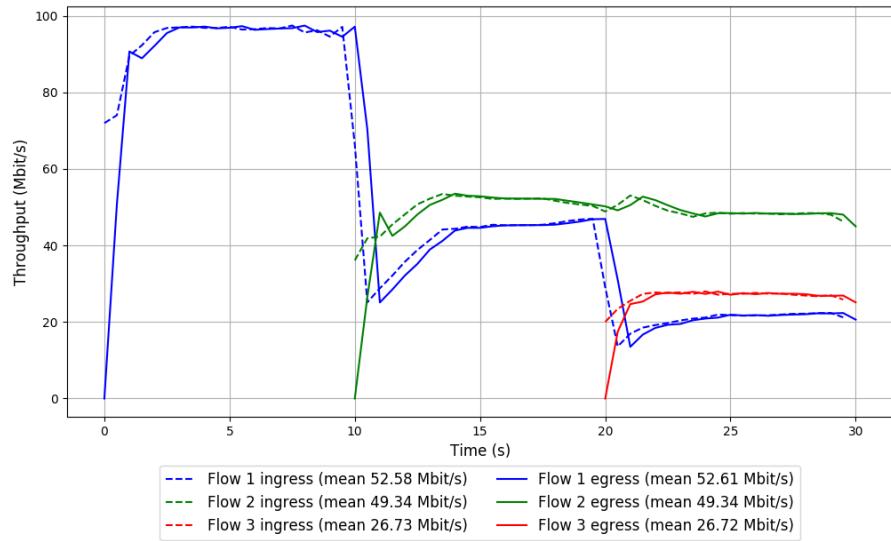


Run 5: Statistics of TCP Vegas

```
Start at: 2019-03-09 15:10:31
End at: 2019-03-09 15:11:01
Local clock offset: -9.565 ms
Remote clock offset: -1.131 ms

# Below is generated by plot.py at 2019-03-09 15:30:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.31 Mbit/s
95th percentile per-packet one-way delay: 33.611 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 52.61 Mbit/s
95th percentile per-packet one-way delay: 30.408 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 49.34 Mbit/s
95th percentile per-packet one-way delay: 33.881 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 26.72 Mbit/s
95th percentile per-packet one-way delay: 31.307 ms
Loss rate: 0.45%
```

Run 5: Report of TCP Vegas — Data Link

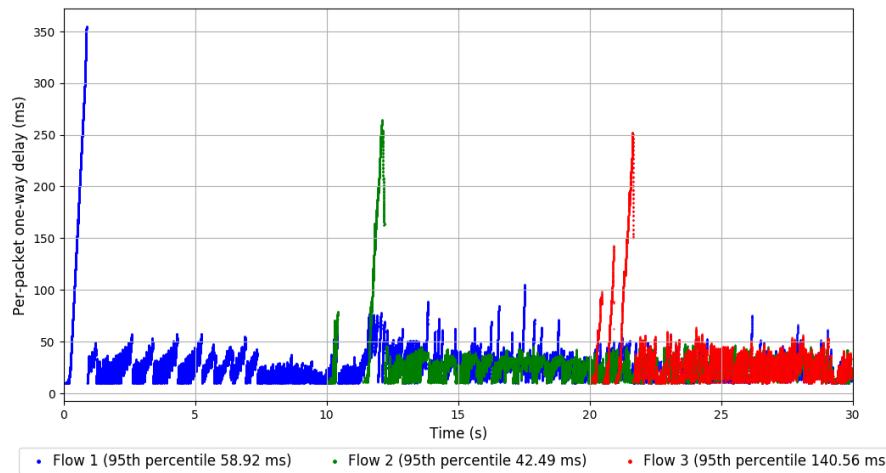
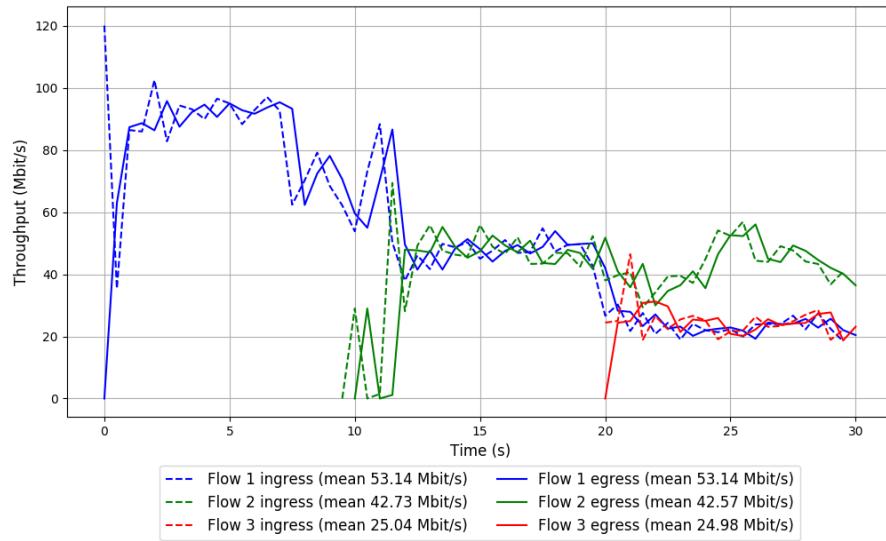


Run 1: Statistics of Verus

```
Start at: 2019-03-09 13:09:17
End at: 2019-03-09 13:09:47
Local clock offset: 2.759 ms
Remote clock offset: -0.282 ms

# Below is generated by plot.py at 2019-03-09 15:30:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.75 Mbit/s
95th percentile per-packet one-way delay: 61.882 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 53.14 Mbit/s
95th percentile per-packet one-way delay: 58.919 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 42.57 Mbit/s
95th percentile per-packet one-way delay: 42.494 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 24.98 Mbit/s
95th percentile per-packet one-way delay: 140.562 ms
Loss rate: 0.22%
```

Run 1: Report of Verus — Data Link

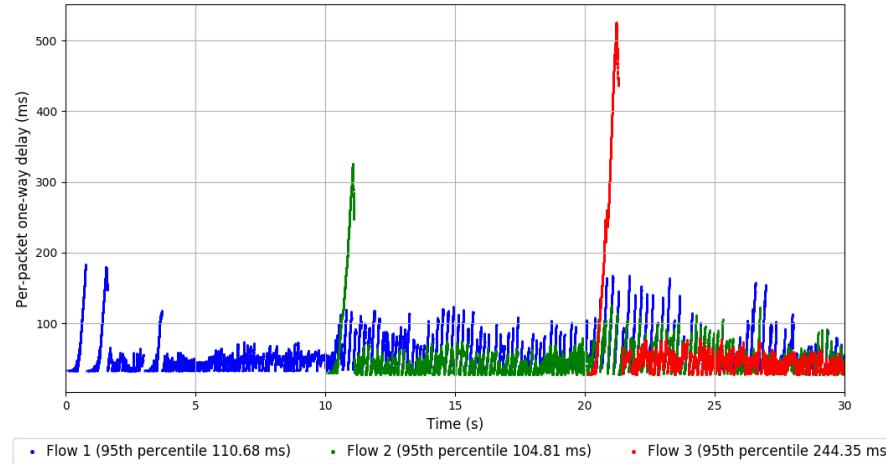
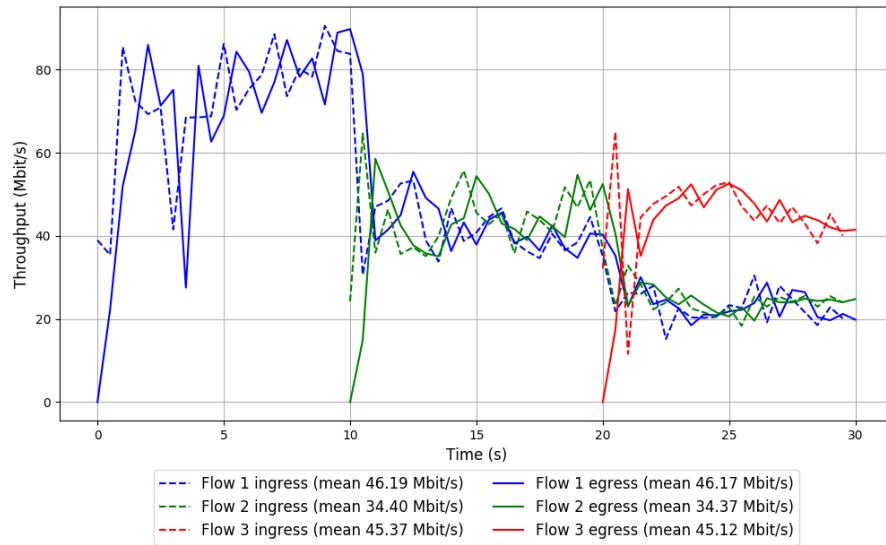


Run 2: Statistics of Verus

```
Start at: 2019-03-09 13:37:09
End at: 2019-03-09 13:37:39
Local clock offset: -4.807 ms
Remote clock offset: -2.046 ms

# Below is generated by plot.py at 2019-03-09 15:30:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.99 Mbit/s
95th percentile per-packet one-way delay: 112.821 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 46.17 Mbit/s
95th percentile per-packet one-way delay: 110.677 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 34.37 Mbit/s
95th percentile per-packet one-way delay: 104.810 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 45.12 Mbit/s
95th percentile per-packet one-way delay: 244.348 ms
Loss rate: 0.56%
```

Run 2: Report of Verus — Data Link

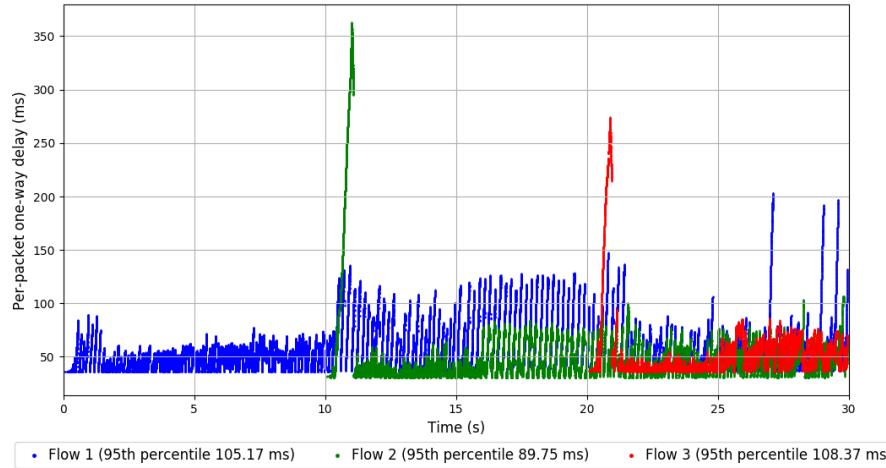
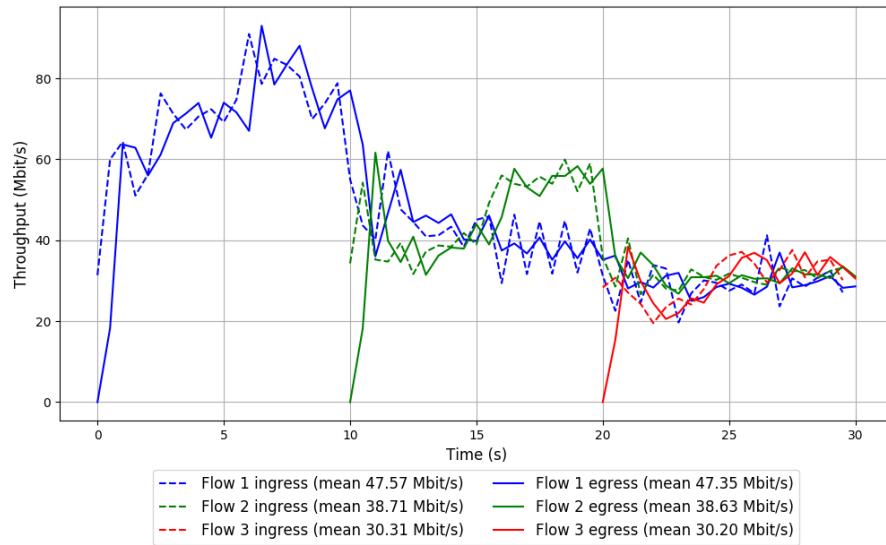


Run 3: Statistics of Verus

```
Start at: 2019-03-09 14:04:40
End at: 2019-03-09 14:05:10
Local clock offset: 3.924 ms
Remote clock offset: -2.601 ms

# Below is generated by plot.py at 2019-03-09 15:30:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.06 Mbit/s
95th percentile per-packet one-way delay: 102.581 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 47.35 Mbit/s
95th percentile per-packet one-way delay: 105.168 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 38.63 Mbit/s
95th percentile per-packet one-way delay: 89.751 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 30.20 Mbit/s
95th percentile per-packet one-way delay: 108.374 ms
Loss rate: 0.79%
```

Run 3: Report of Verus — Data Link

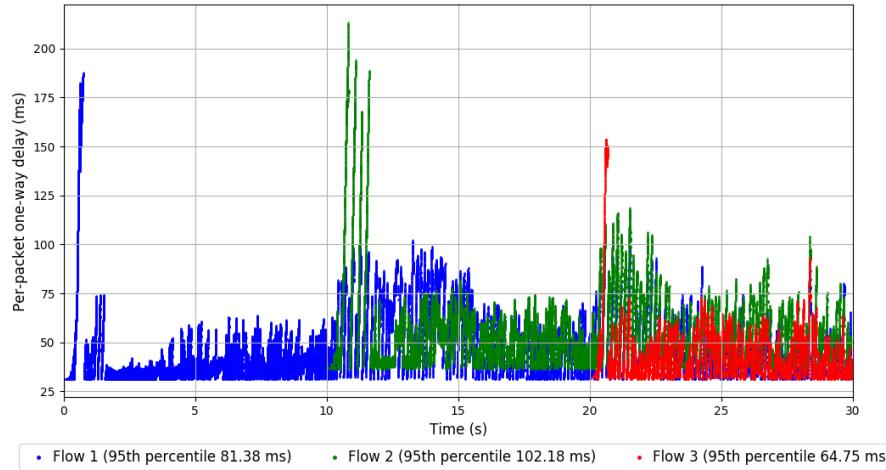
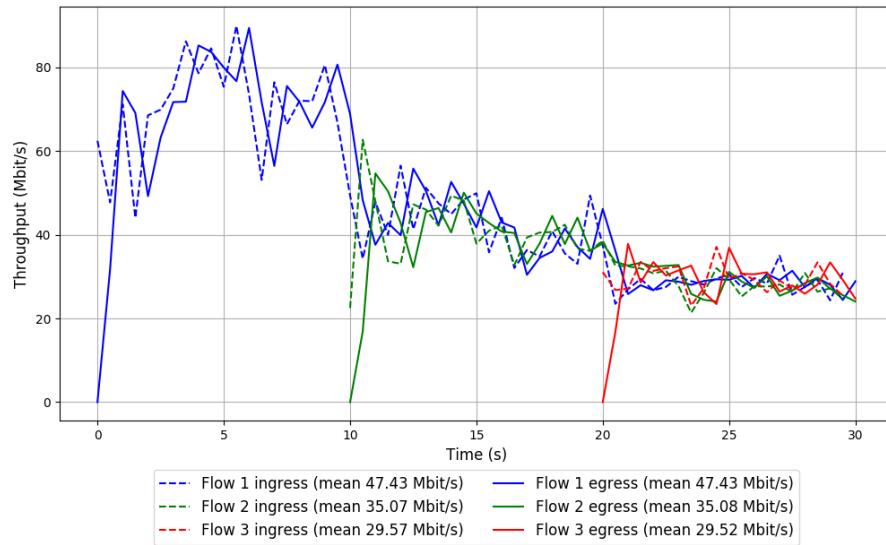


Run 4: Statistics of Verus

```
Start at: 2019-03-09 14:32:29
End at: 2019-03-09 14:32:59
Local clock offset: -1.397 ms
Remote clock offset: -2.58 ms

# Below is generated by plot.py at 2019-03-09 15:30:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.49 Mbit/s
95th percentile per-packet one-way delay: 85.117 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 47.43 Mbit/s
95th percentile per-packet one-way delay: 81.384 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 35.08 Mbit/s
95th percentile per-packet one-way delay: 102.183 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 29.52 Mbit/s
95th percentile per-packet one-way delay: 64.751 ms
Loss rate: 0.55%
```

Run 4: Report of Verus — Data Link

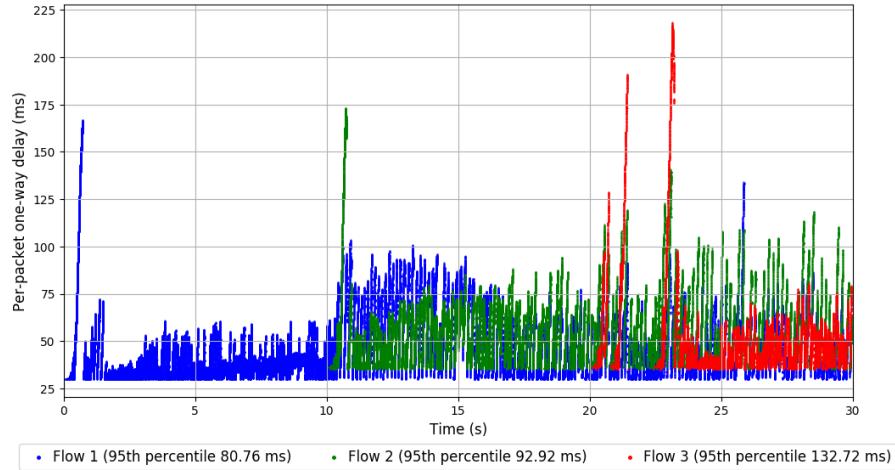
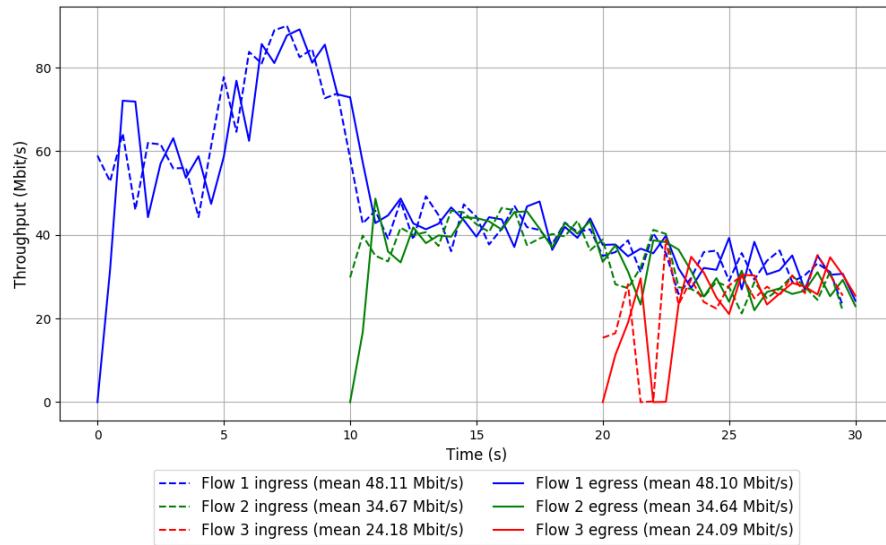


Run 5: Statistics of Verus

```
Start at: 2019-03-09 15:02:57
End at: 2019-03-09 15:03:27
Local clock offset: -5.02 ms
Remote clock offset: -0.74 ms

# Below is generated by plot.py at 2019-03-09 15:30:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.13 Mbit/s
95th percentile per-packet one-way delay: 86.308 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 48.10 Mbit/s
95th percentile per-packet one-way delay: 80.760 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 34.64 Mbit/s
95th percentile per-packet one-way delay: 92.921 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 24.09 Mbit/s
95th percentile per-packet one-way delay: 132.718 ms
Loss rate: 0.83%
```

Run 5: Report of Verus — Data Link

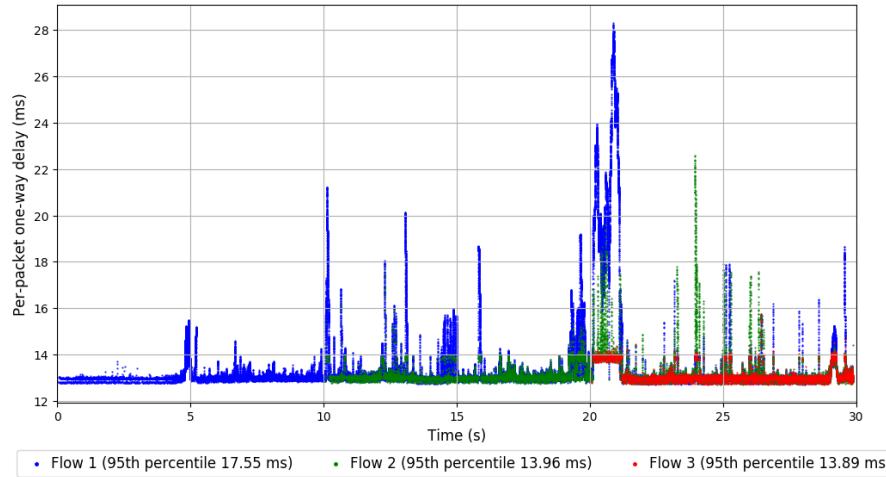
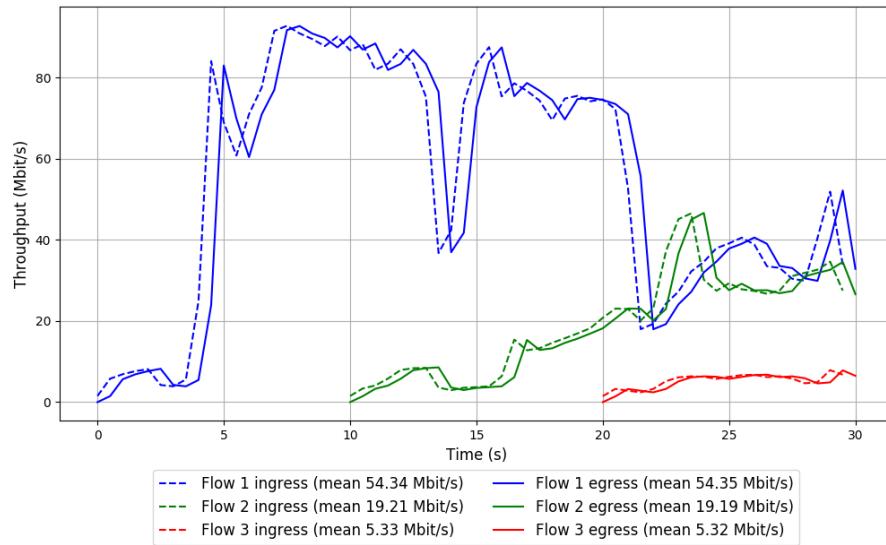


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2019-03-09 12:55:51
End at: 2019-03-09 12:56:21
Local clock offset: 3.963 ms
Remote clock offset: -0.525 ms

# Below is generated by plot.py at 2019-03-09 15:30:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.86 Mbit/s
95th percentile per-packet one-way delay: 16.017 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 54.35 Mbit/s
95th percentile per-packet one-way delay: 17.546 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 19.19 Mbit/s
95th percentile per-packet one-way delay: 13.957 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 5.32 Mbit/s
95th percentile per-packet one-way delay: 13.886 ms
Loss rate: 0.46%
```

Run 1: Report of PCC-Vivace — Data Link

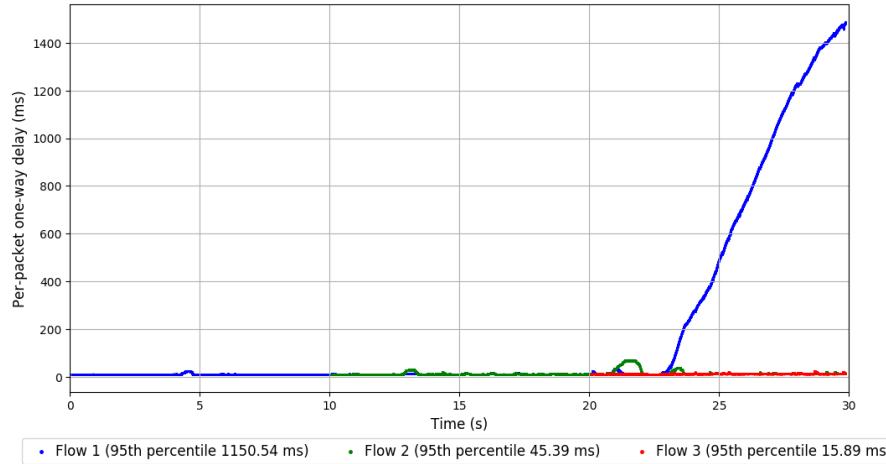
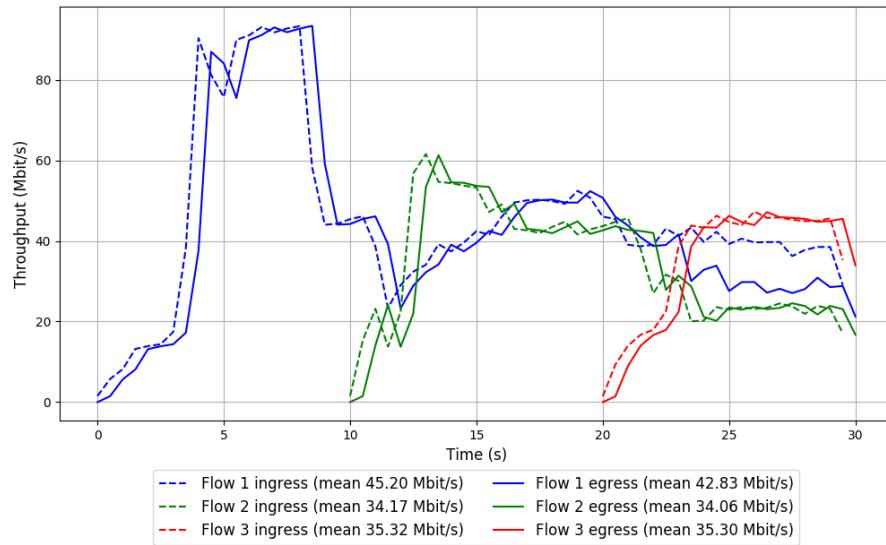


Run 2: Statistics of PCC-Vivace

```
Start at: 2019-03-09 13:22:33
End at: 2019-03-09 13:23:03
Local clock offset: -1.256 ms
Remote clock offset: -0.894 ms

# Below is generated by plot.py at 2019-03-09 15:31:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.11 Mbit/s
95th percentile per-packet one-way delay: 671.099 ms
Loss rate: 3.21%
-- Flow 1:
Average throughput: 42.83 Mbit/s
95th percentile per-packet one-way delay: 1150.544 ms
Loss rate: 5.34%
-- Flow 2:
Average throughput: 34.06 Mbit/s
95th percentile per-packet one-way delay: 45.389 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 35.30 Mbit/s
95th percentile per-packet one-way delay: 15.889 ms
Loss rate: 0.36%
```

Run 2: Report of PCC-Vivace — Data Link

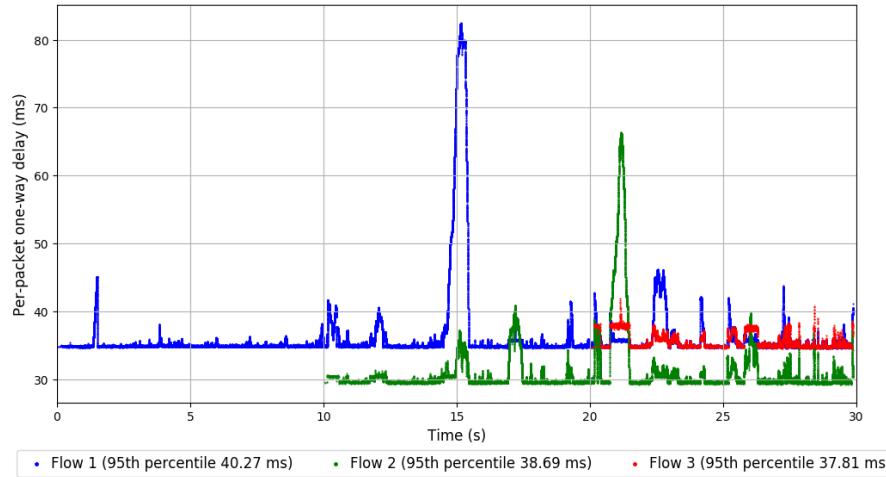
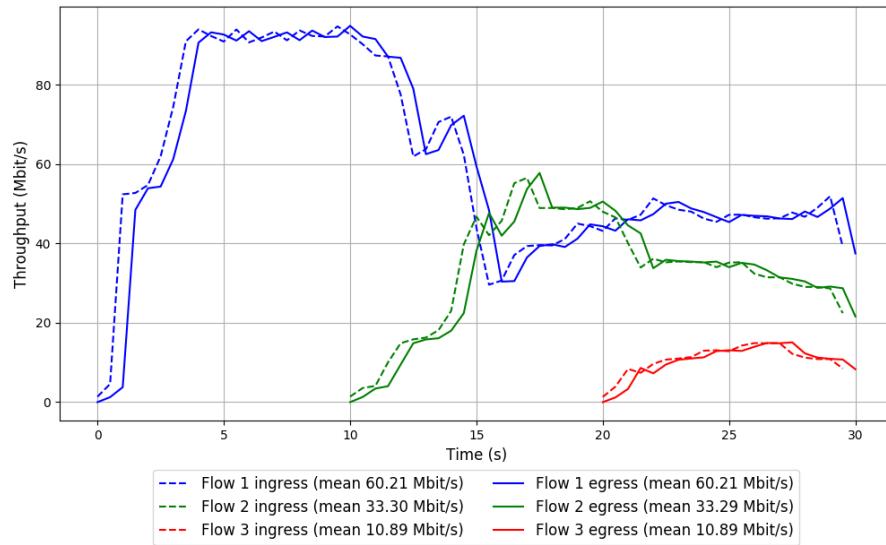


Run 3: Statistics of PCC-Vivace

```
Start at: 2019-03-09 13:50:23
End at: 2019-03-09 13:50:53
Local clock offset: 2.262 ms
Remote clock offset: -0.744 ms

# Below is generated by plot.py at 2019-03-09 15:31:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.92 Mbit/s
95th percentile per-packet one-way delay: 39.672 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 60.21 Mbit/s
95th percentile per-packet one-way delay: 40.265 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 33.29 Mbit/s
95th percentile per-packet one-way delay: 38.687 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 10.89 Mbit/s
95th percentile per-packet one-way delay: 37.806 ms
Loss rate: 0.47%
```

Run 3: Report of PCC-Vivace — Data Link

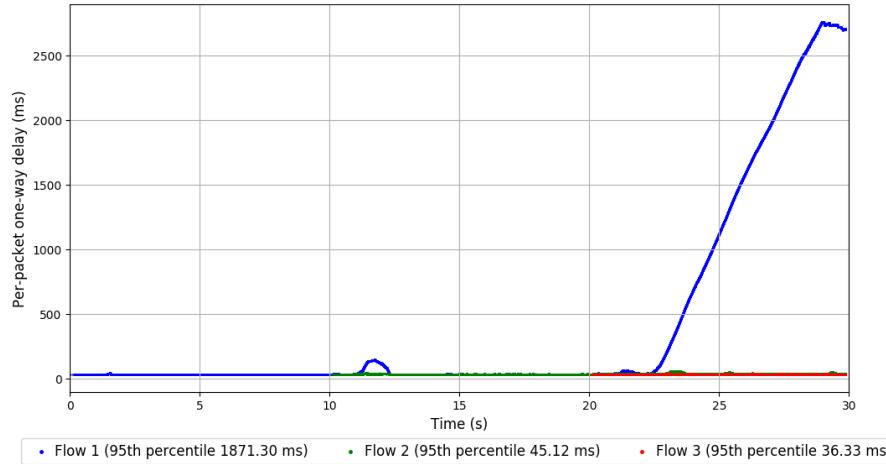
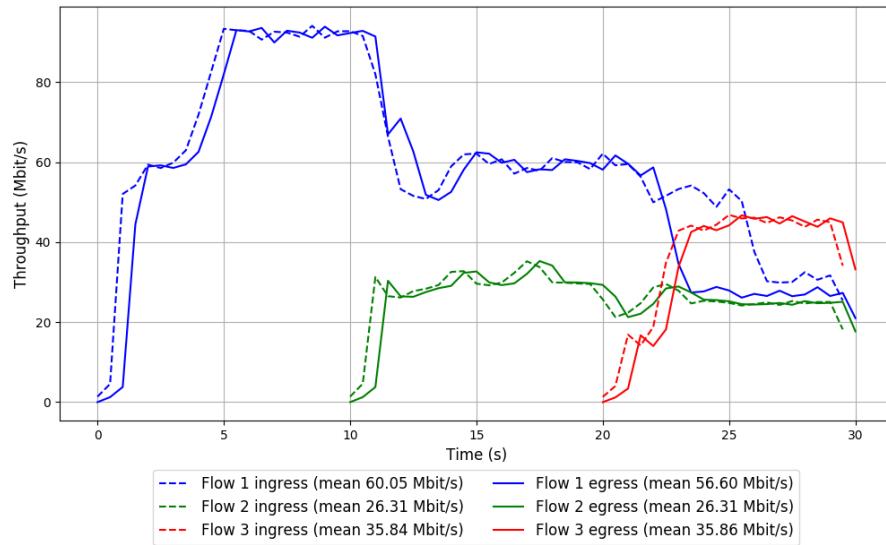


Run 4: Statistics of PCC-Vivace

```
Start at: 2019-03-09 14:17:59
End at: 2019-03-09 14:18:29
Local clock offset: 2.211 ms
Remote clock offset: -0.388 ms

# Below is generated by plot.py at 2019-03-09 15:31:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.89 Mbit/s
95th percentile per-packet one-way delay: 1140.826 ms
Loss rate: 4.08%
-- Flow 1:
Average throughput: 56.60 Mbit/s
95th percentile per-packet one-way delay: 1871.298 ms
Loss rate: 5.89%
-- Flow 2:
Average throughput: 26.31 Mbit/s
95th percentile per-packet one-way delay: 45.115 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 35.86 Mbit/s
95th percentile per-packet one-way delay: 36.328 ms
Loss rate: 0.56%
```

Run 4: Report of PCC-Vivace — Data Link

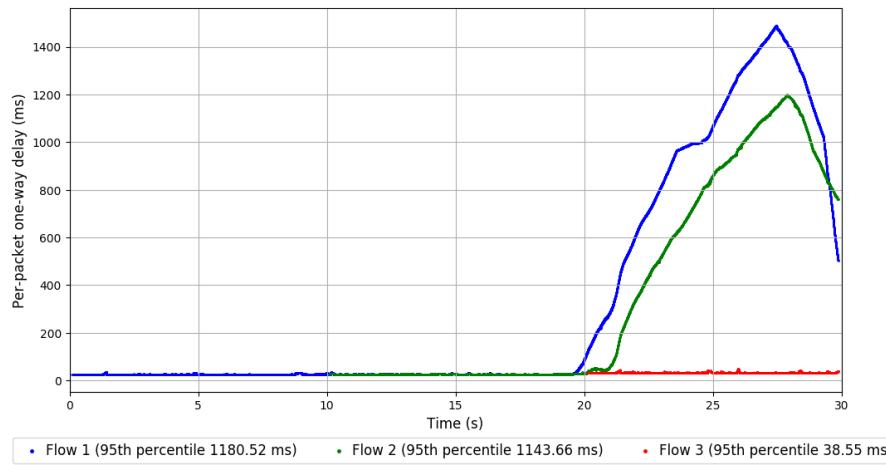
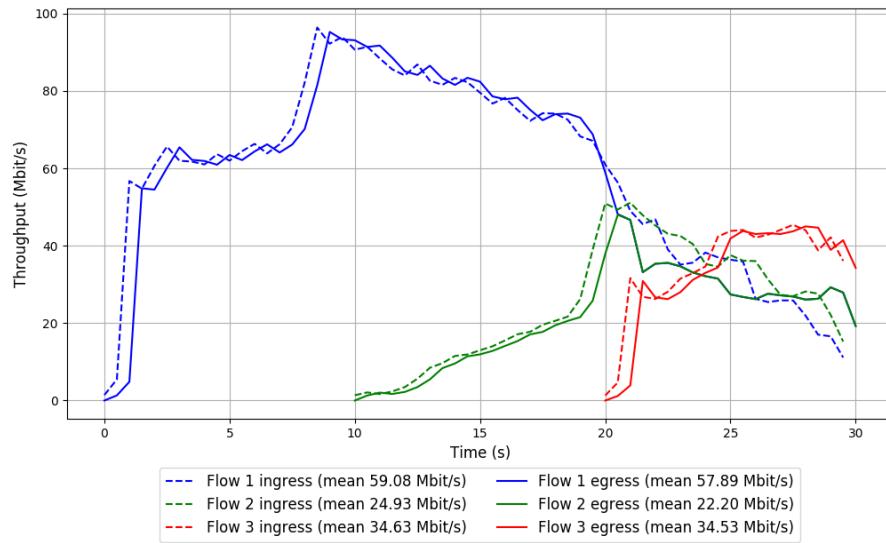


Run 5: Statistics of PCC-Vivace

```
Start at: 2019-03-09 14:47:00
End at: 2019-03-09 14:47:30
Local clock offset: -6.309 ms
Remote clock offset: -0.272 ms

# Below is generated by plot.py at 2019-03-09 15:31:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.00 Mbit/s
95th percentile per-packet one-way delay: 1127.973 ms
Loss rate: 3.68%
-- Flow 1:
Average throughput: 57.89 Mbit/s
95th percentile per-packet one-way delay: 1180.517 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 22.20 Mbit/s
95th percentile per-packet one-way delay: 1143.665 ms
Loss rate: 11.16%
-- Flow 3:
Average throughput: 34.53 Mbit/s
95th percentile per-packet one-way delay: 38.553 ms
Loss rate: 0.75%
```

Run 5: Report of PCC-Vivace — Data Link

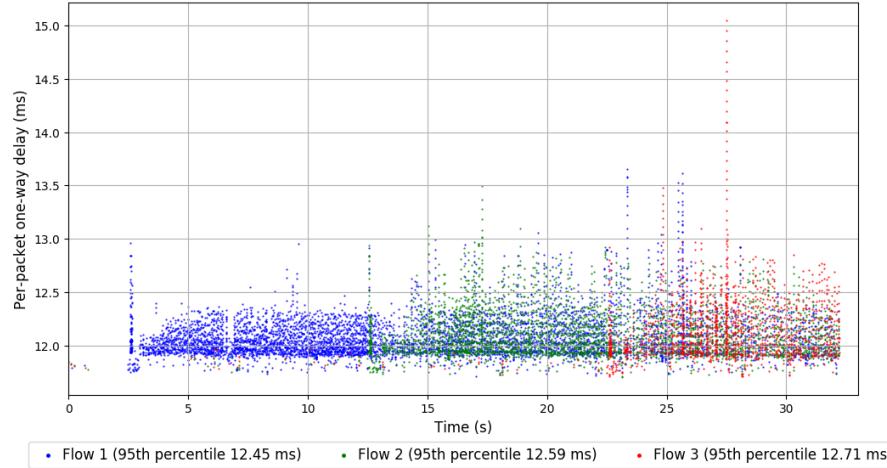
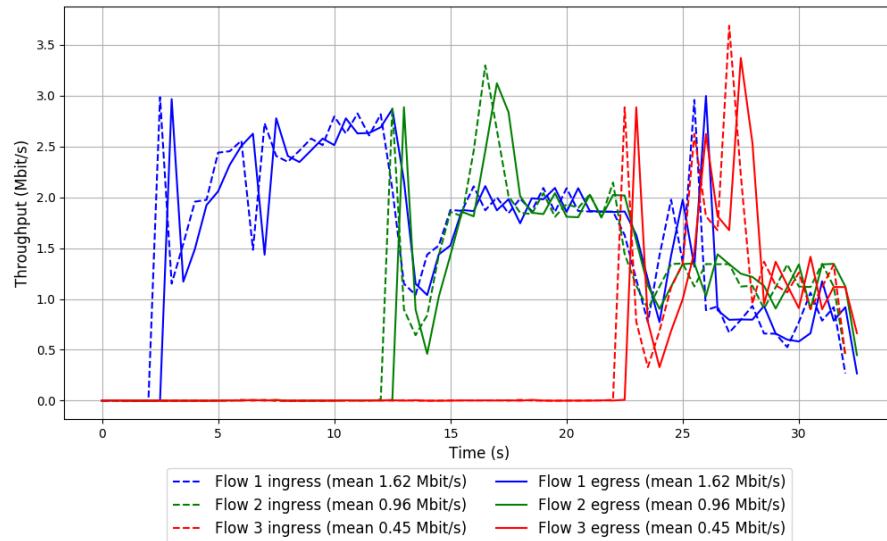


```
Run 1: Statistics of WebRTC media
```

```
Start at: 2019-03-09 13:00:50
End at: 2019-03-09 13:01:20
Local clock offset: 4.368 ms
Remote clock offset: 0.307 ms

# Below is generated by plot.py at 2019-03-09 15:31:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 12.562 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 12.447 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 12.593 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 12.711 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

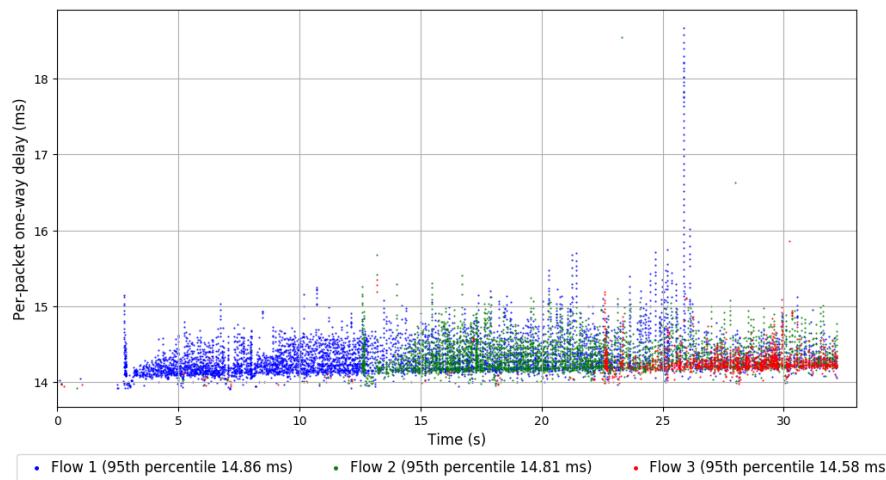
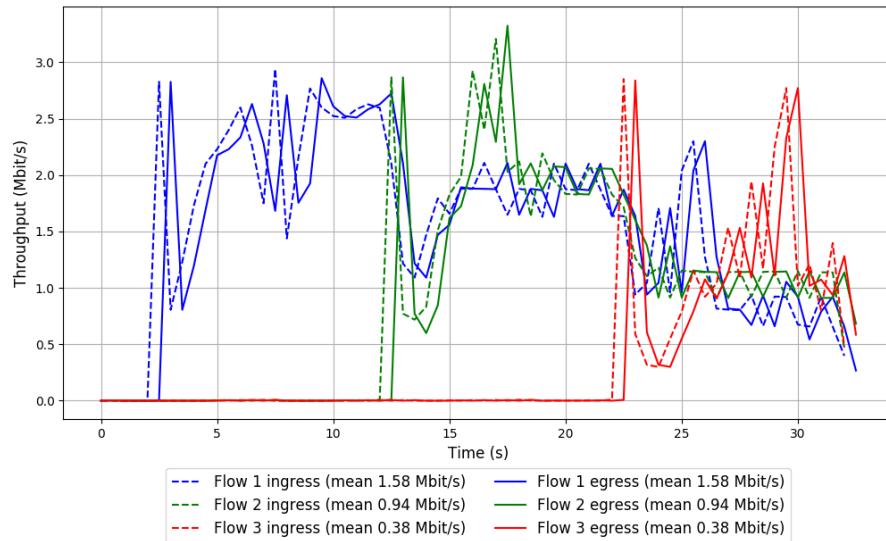


Run 2: Statistics of WebRTC media

```
Start at: 2019-03-09 13:27:43
End at: 2019-03-09 13:28:13
Local clock offset: -0.58 ms
Remote clock offset: -2.136 ms

# Below is generated by plot.py at 2019-03-09 15:31:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 14.816 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 14.855 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 14.810 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 14.580 ms
Loss rate: 0.01%
```

Run 2: Report of WebRTC media — Data Link

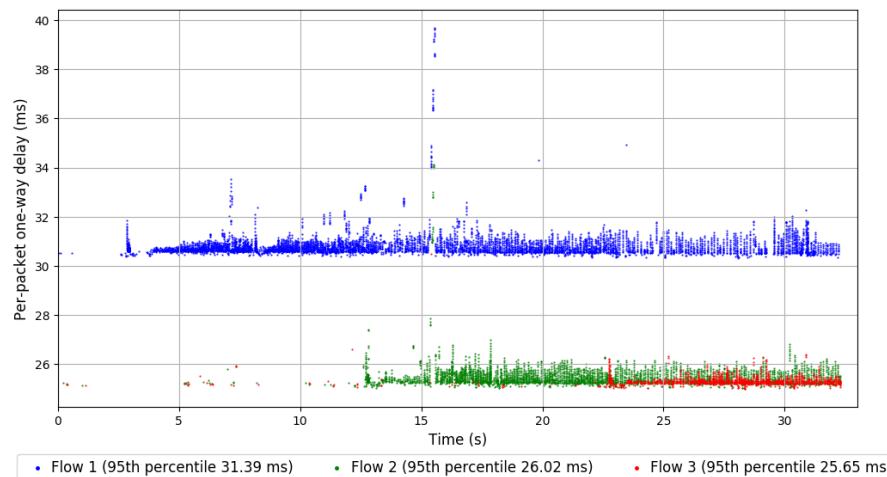
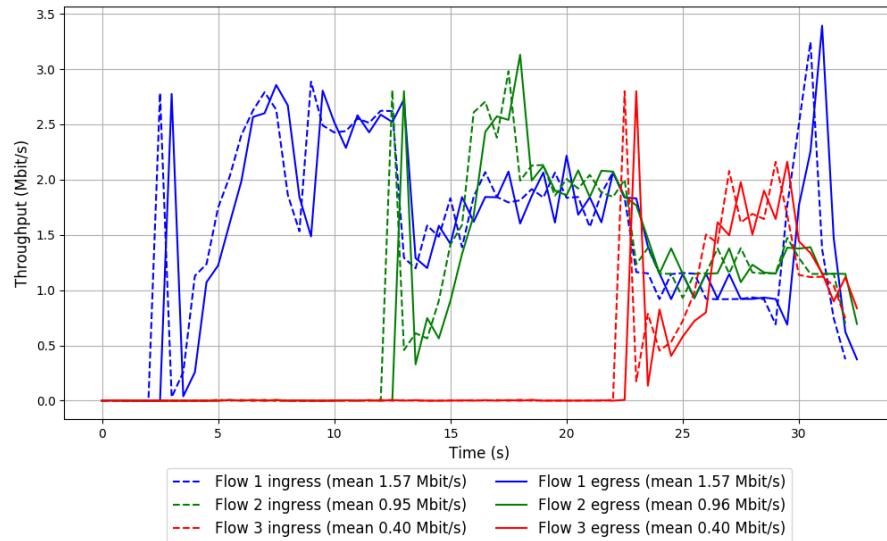


Run 3: Statistics of WebRTC media

```
Start at: 2019-03-09 13:55:25
End at: 2019-03-09 13:55:55
Local clock offset: -1.882 ms
Remote clock offset: -2.094 ms

# Below is generated by plot.py at 2019-03-09 15:31:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 31.197 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 31.390 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 26.020 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 25.649 ms
Loss rate: 0.23%
```

Run 3: Report of WebRTC media — Data Link

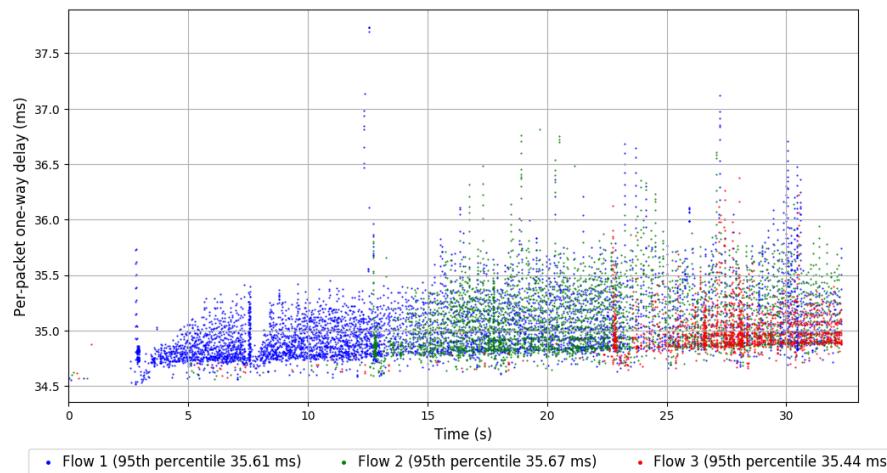
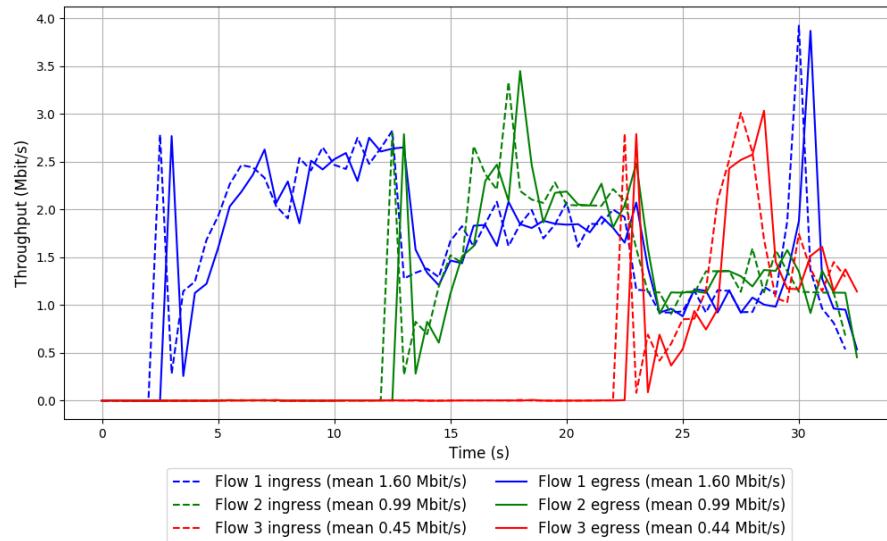


Run 4: Statistics of WebRTC media

```
Start at: 2019-03-09 14:23:13
End at: 2019-03-09 14:23:43
Local clock offset: 0.054 ms
Remote clock offset: -1.392 ms

# Below is generated by plot.py at 2019-03-09 15:31:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 35.617 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 35.607 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 35.667 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 35.438 ms
Loss rate: 0.80%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2019-03-09 14:53:17
End at: 2019-03-09 14:53:47
Local clock offset: -8.099 ms
Remote clock offset: -1.001 ms

# Below is generated by plot.py at 2019-03-09 15:31:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 32.085 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 31.916 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 27.064 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 33.105 ms
Loss rate: 0.84%
```

Run 5: Report of WebRTC media — Data Link

