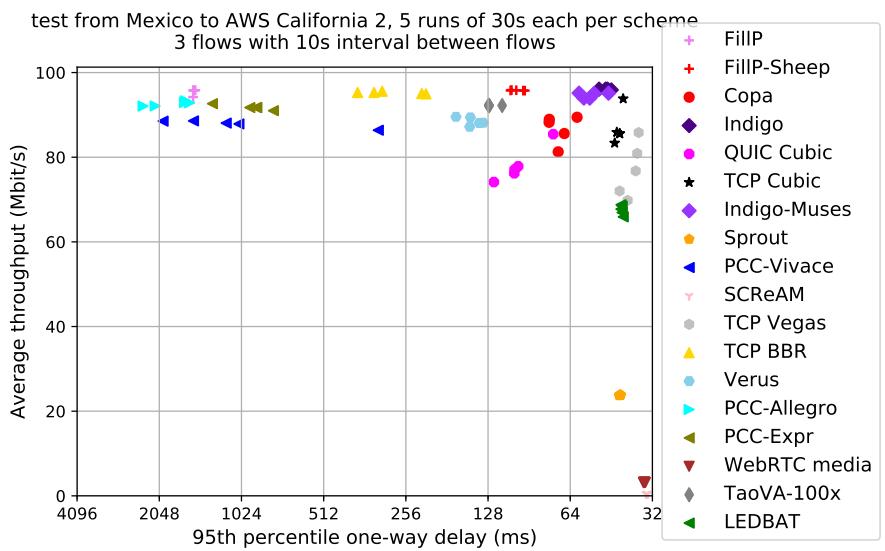
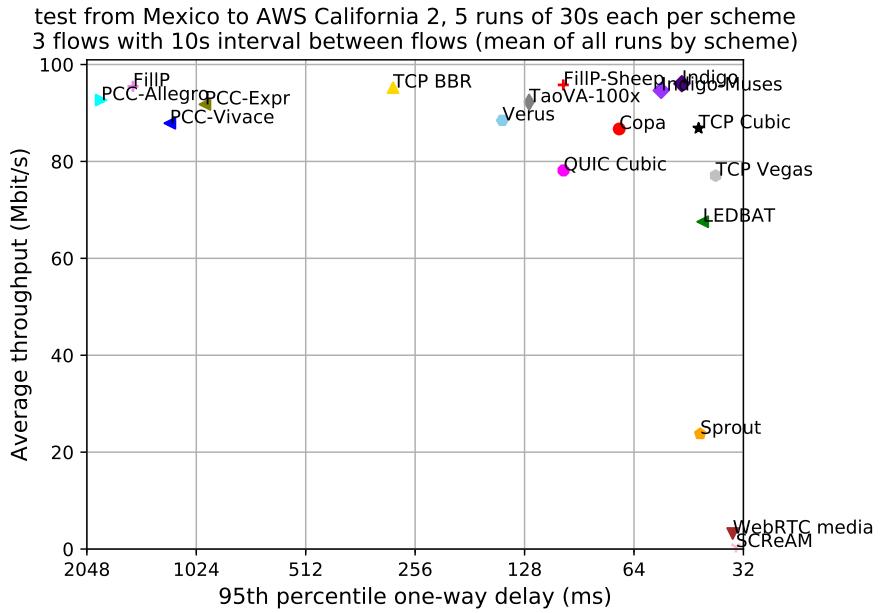


Pantheon Report

Generated at 2018-09-08 02:46:55 (UTC).
Data path: Mexico on `em1` (*remote*) → AWS California 2 on `ens5` (*local*).
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

```
System info:  
Linux 4.15.0-1020-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  
net.ipv4.tcp_mem = 536870912 536870912 536870912  
  
Git summary:  
branch: muses @ e0a9b05ad97d268013b7cc9a9c95637b593a1b4c  
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834  
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe  
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf  
third_party/muses @ 7631aea3923a3598767c87765ae5103aca0678d3  
third_party/pantheon-tunnel @ cbfce6db5ff5740dafe1771f813cd646339e1952  
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
```



4

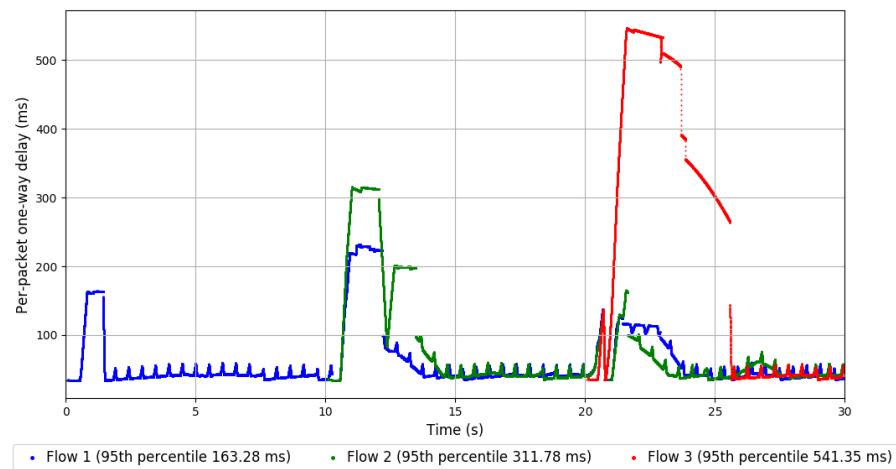
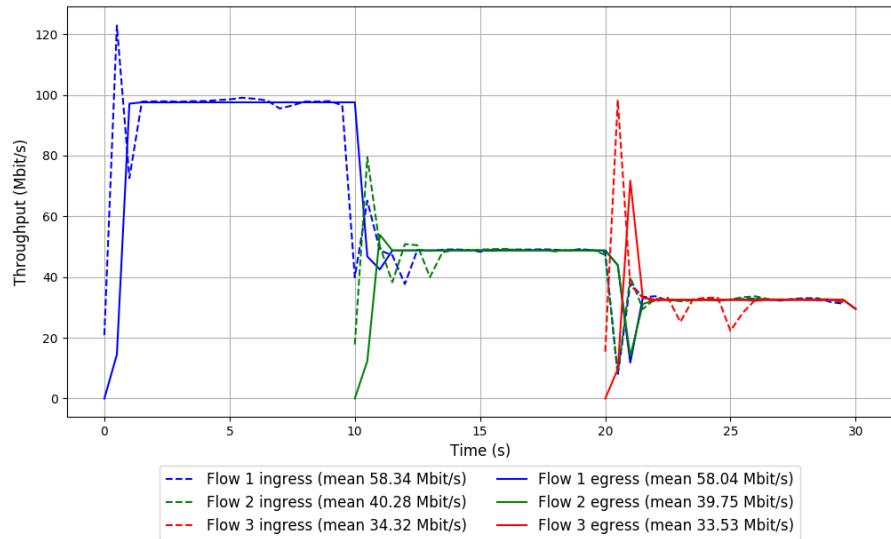
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	57.49	38.94	35.74	176.76	202.59	483.51	0.77	1.22	3.11
Copa	5	51.27	40.42	25.75	102.98	48.31	43.53	0.17	0.24	0.60
TCP Cubic	5	50.02	40.58	29.65	45.49	41.34	50.33	0.16	0.31	0.66
FillP	5	57.26	40.08	35.10	1016.00	1345.30	739.92	6.15	11.36	8.52
FillP-Sheep	5	57.69	40.73	33.34	88.74	101.34	179.43	0.86	0.79	0.90
Indigo	5	58.47	39.44	34.72	47.16	48.61	44.40	0.23	0.40	0.73
LEDBAT	5	40.51	30.96	19.46	41.60	41.29	43.40	0.18	0.41	0.84
Indigo-Muses	5	56.35	36.12	43.33	53.08	50.79	61.55	0.16	0.31	0.70
PCC-Allegro	5	59.51	36.82	26.43	1873.67	1872.39	272.81	13.61	13.29	2.53
PCC-Expr	5	55.51	39.07	31.31	942.75	735.31	201.68	32.54	9.61	1.93
QUIC Cubic	5	44.10	36.00	30.71	88.32	116.50	123.91	0.19	0.40	1.03
SCReAM	5	0.21	0.21	0.22	33.54	33.55	33.54	0.21	0.40	0.71
Sprout	5	11.99	11.95	11.71	41.70	42.27	42.70	0.26	0.28	0.67
TaoVA-100x	5	55.22	38.53	34.31	122.49	128.67	123.23	0.71	1.55	3.14
TCP Vegas	5	42.56	33.96	35.94	48.16	36.17	38.84	0.27	0.27	0.71
Verus	5	53.91	37.44	29.24	141.97	117.35	233.37	0.36	0.67	1.36
PCC-Vivace	5	56.31	32.69	29.90	1263.99	606.69	84.01	3.99	3.75	0.96
WebRTC media	5	1.79	1.01	0.42	34.21	34.23	34.38	0.13	0.21	0.68

Run 1: Statistics of TCP BBR

```
Start at: 2018-09-08 00:37:34
End at: 2018-09-08 00:38:04
Local clock offset: -3.092 ms
Remote clock offset: -3.835 ms

# Below is generated by plot.py at 2018-09-08 02:35:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.59 Mbit/s
95th percentile per-packet one-way delay: 312.651 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 58.04 Mbit/s
95th percentile per-packet one-way delay: 163.278 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 39.75 Mbit/s
95th percentile per-packet one-way delay: 311.776 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 33.53 Mbit/s
95th percentile per-packet one-way delay: 541.348 ms
Loss rate: 2.93%
```

Run 1: Report of TCP BBR — Data Link

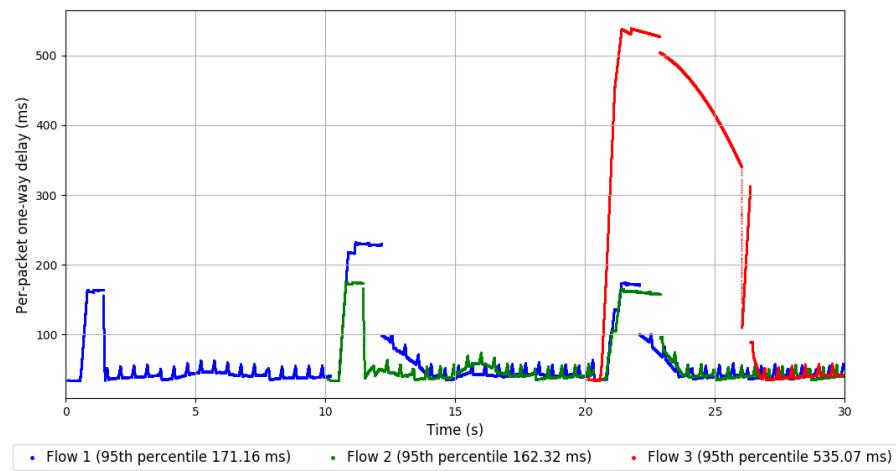
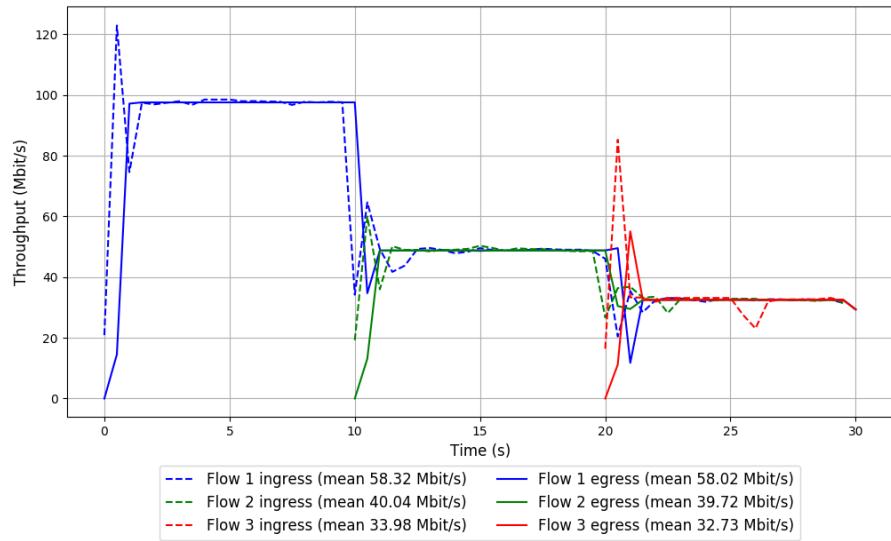


Run 2: Statistics of TCP BBR

```
Start at: 2018-09-08 01:02:48
End at: 2018-09-08 01:03:18
Local clock offset: 0.368 ms
Remote clock offset: -2.364 ms

# Below is generated by plot.py at 2018-09-08 02:35:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.29 Mbit/s
95th percentile per-packet one-way delay: 384.612 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 58.02 Mbit/s
95th percentile per-packet one-way delay: 171.164 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 39.72 Mbit/s
95th percentile per-packet one-way delay: 162.325 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 32.73 Mbit/s
95th percentile per-packet one-way delay: 535.074 ms
Loss rate: 4.30%
```

Run 2: Report of TCP BBR — Data Link

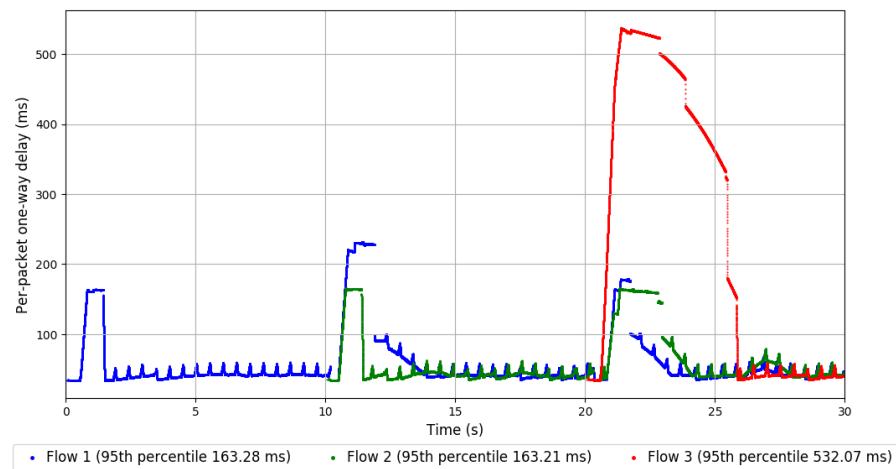
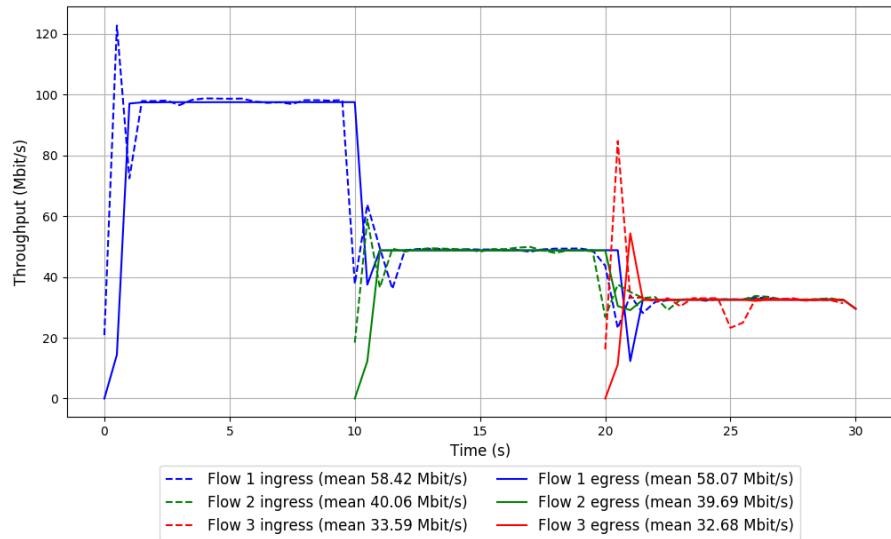


Run 3: Statistics of TCP BBR

```
Start at: 2018-09-08 01:27:43
End at: 2018-09-08 01:28:13
Local clock offset: 0.739 ms
Remote clock offset: -1.039 ms

# Below is generated by plot.py at 2018-09-08 02:35:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.30 Mbit/s
95th percentile per-packet one-way delay: 334.740 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 58.07 Mbit/s
95th percentile per-packet one-way delay: 163.284 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 39.69 Mbit/s
95th percentile per-packet one-way delay: 163.205 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 32.68 Mbit/s
95th percentile per-packet one-way delay: 532.074 ms
Loss rate: 3.33%
```

Run 3: Report of TCP BBR — Data Link

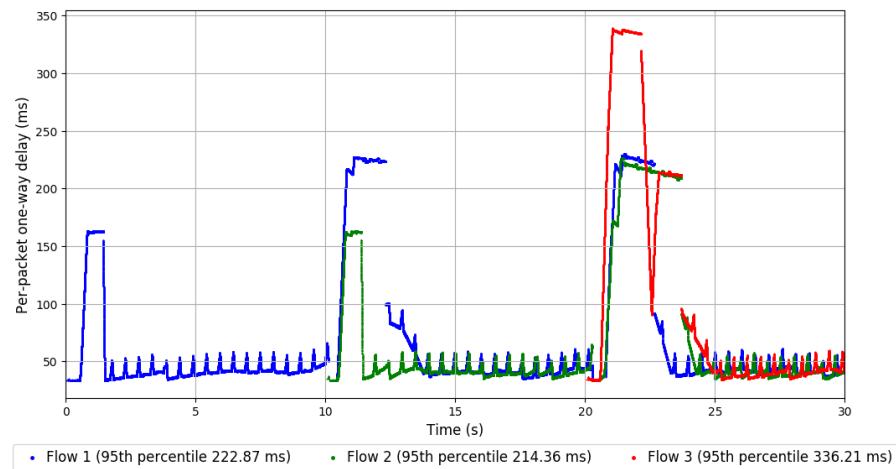
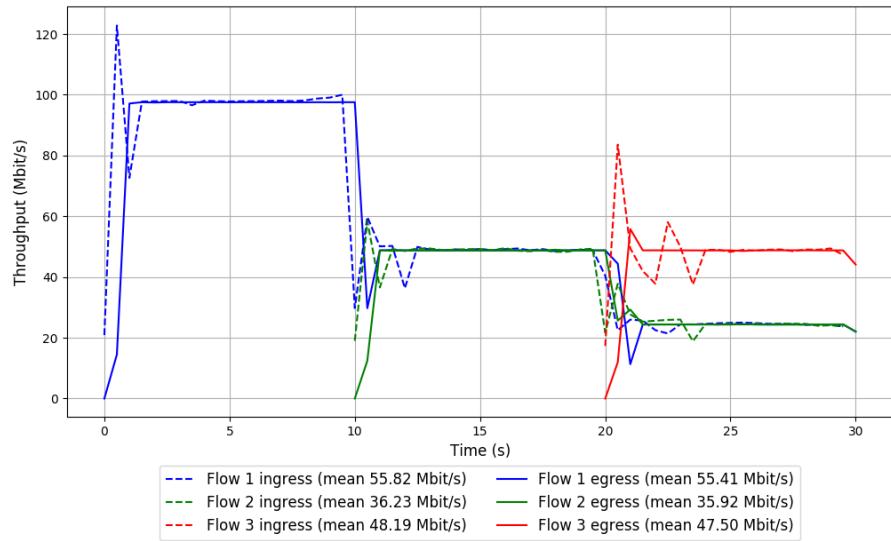


Run 4: Statistics of TCP BBR

```
Start at: 2018-09-08 01:52:50
End at: 2018-09-08 01:53:20
Local clock offset: 0.675 ms
Remote clock offset: 0.274 ms

# Below is generated by plot.py at 2018-09-08 02:35:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.04 Mbit/s
95th percentile per-packet one-way delay: 223.872 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 55.41 Mbit/s
95th percentile per-packet one-way delay: 222.866 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 35.92 Mbit/s
95th percentile per-packet one-way delay: 214.361 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 47.50 Mbit/s
95th percentile per-packet one-way delay: 336.215 ms
Loss rate: 2.07%
```

Run 4: Report of TCP BBR — Data Link

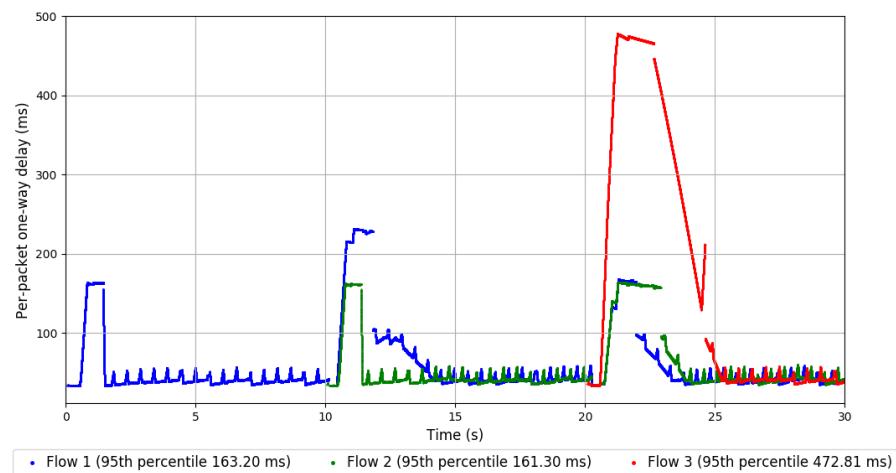
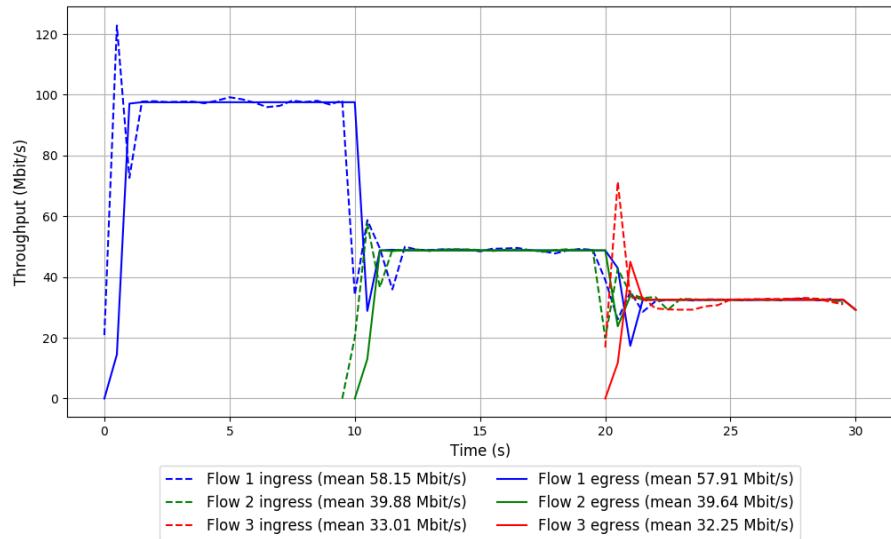


Run 5: Statistics of TCP BBR

```
Start at: 2018-09-08 02:17:40
End at: 2018-09-08 02:18:10
Local clock offset: 0.544 ms
Remote clock offset: 1.151 ms

# Below is generated by plot.py at 2018-09-08 02:35:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.97 Mbit/s
95th percentile per-packet one-way delay: 216.040 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 57.91 Mbit/s
95th percentile per-packet one-way delay: 163.198 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 39.64 Mbit/s
95th percentile per-packet one-way delay: 161.298 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 32.25 Mbit/s
95th percentile per-packet one-way delay: 472.815 ms
Loss rate: 2.93%
```

Run 5: Report of TCP BBR — Data Link

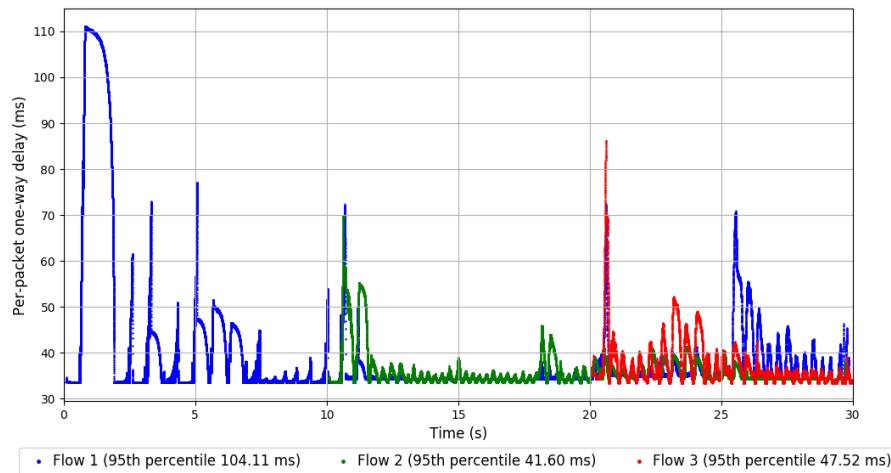
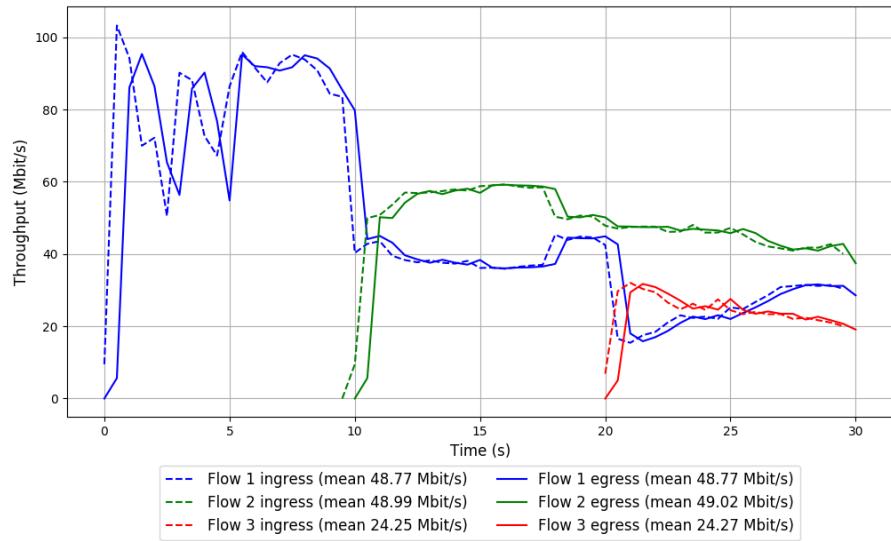


Run 1: Statistics of Copa

```
Start at: 2018-09-08 00:45:47
End at: 2018-09-08 00:46:17
Local clock offset: -2.9 ms
Remote clock offset: -3.506 ms

# Below is generated by plot.py at 2018-09-08 02:36:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.44 Mbit/s
95th percentile per-packet one-way delay: 60.410 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 48.77 Mbit/s
95th percentile per-packet one-way delay: 104.111 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 49.02 Mbit/s
95th percentile per-packet one-way delay: 41.605 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 24.27 Mbit/s
95th percentile per-packet one-way delay: 47.522 ms
Loss rate: 0.57%
```

Run 1: Report of Copa — Data Link

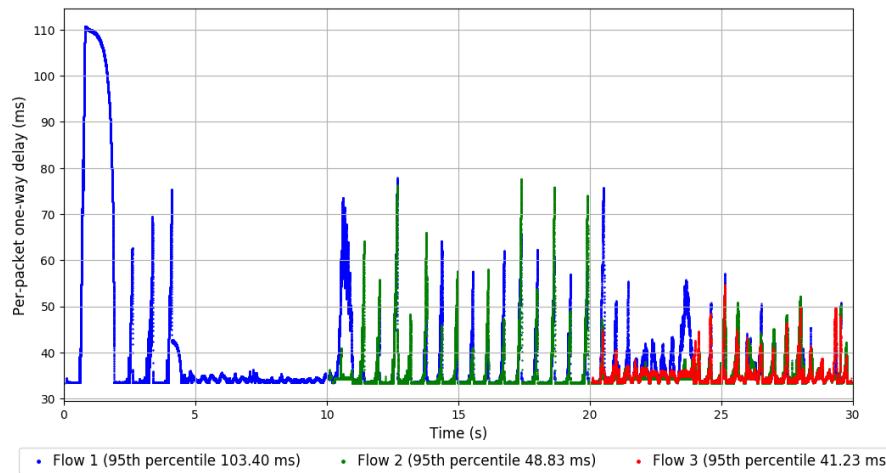
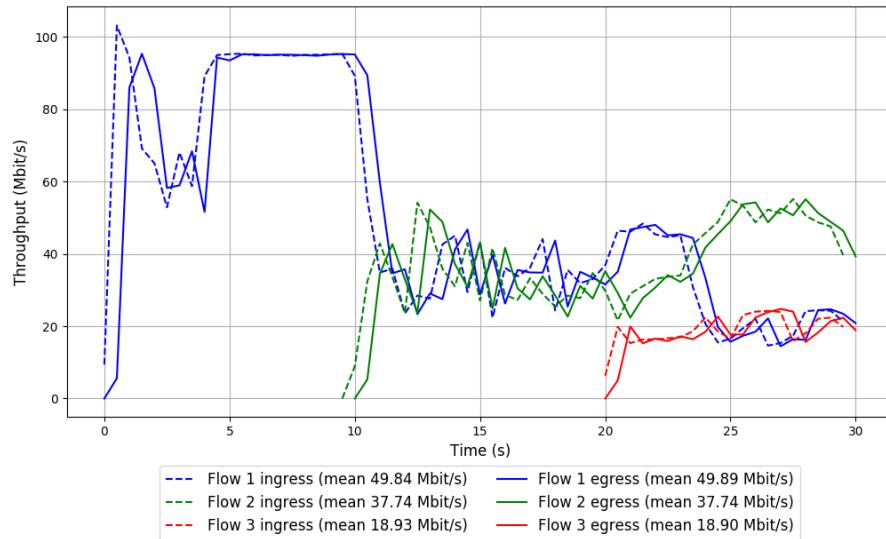


Run 2: Statistics of Copa

```
Start at: 2018-09-08 01:11:00
End at: 2018-09-08 01:11:30
Local clock offset: 1.023 ms
Remote clock offset: -1.79 ms

# Below is generated by plot.py at 2018-09-08 02:36:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.27 Mbit/s
95th percentile per-packet one-way delay: 70.840 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 49.89 Mbit/s
95th percentile per-packet one-way delay: 103.397 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 37.74 Mbit/s
95th percentile per-packet one-way delay: 48.830 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 18.90 Mbit/s
95th percentile per-packet one-way delay: 41.230 ms
Loss rate: 0.74%
```

Run 2: Report of Copa — Data Link

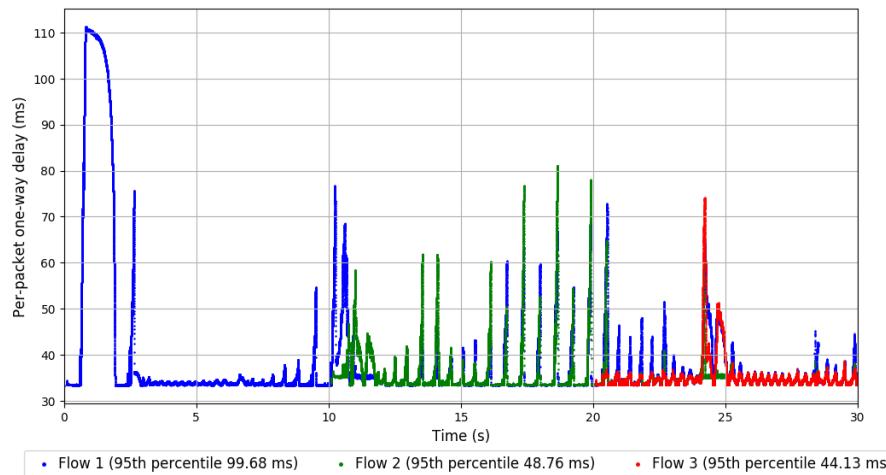
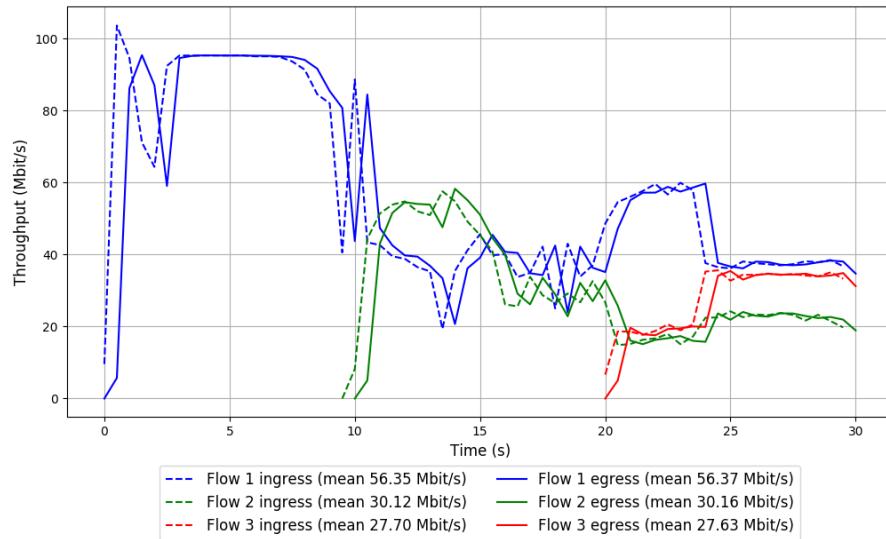


Run 3: Statistics of Copa

```
Start at: 2018-09-08 01:36:14
End at: 2018-09-08 01:36:44
Local clock offset: 0.759 ms
Remote clock offset: -0.353 ms

# Below is generated by plot.py at 2018-09-08 02:36:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.60 Mbit/s
95th percentile per-packet one-way delay: 67.280 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 56.37 Mbit/s
95th percentile per-packet one-way delay: 99.683 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 30.16 Mbit/s
95th percentile per-packet one-way delay: 48.755 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 27.63 Mbit/s
95th percentile per-packet one-way delay: 44.129 ms
Loss rate: 0.88%
```

Run 3: Report of Copa — Data Link

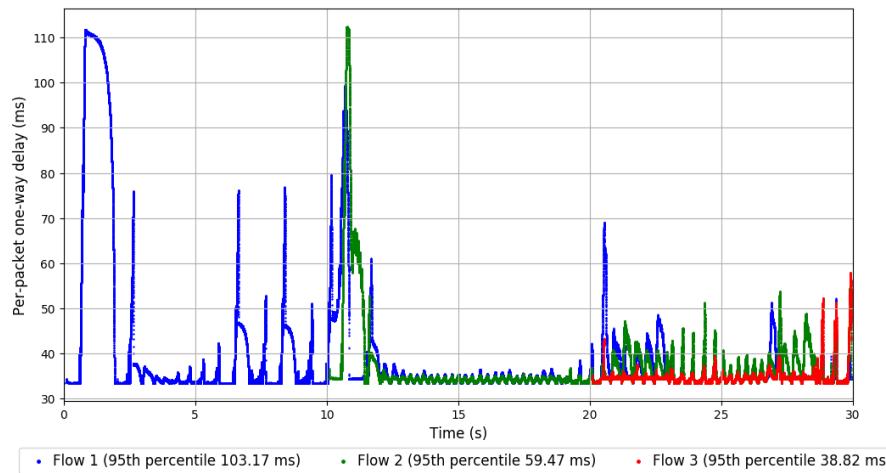
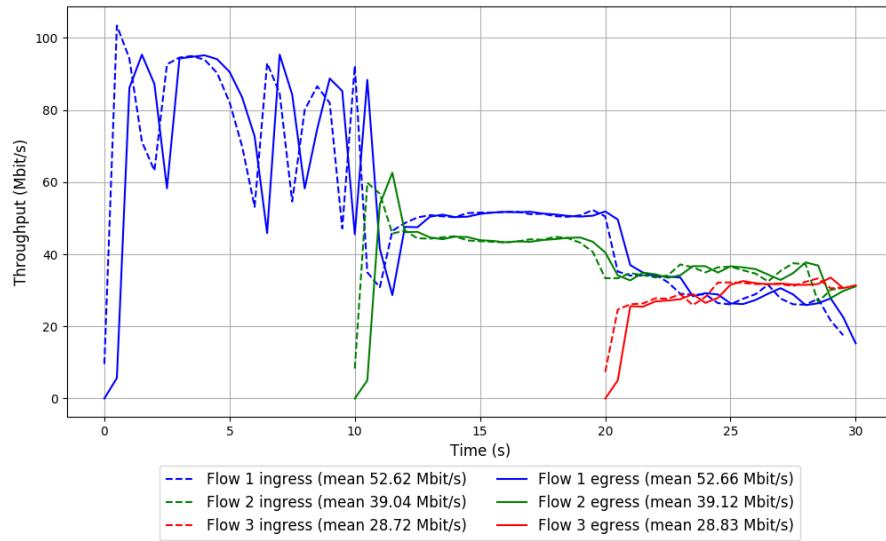


Run 4: Statistics of Copa

```
Start at: 2018-09-08 02:01:04
End at: 2018-09-08 02:01:34
Local clock offset: 0.663 ms
Remote clock offset: 0.644 ms

# Below is generated by plot.py at 2018-09-08 02:37:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.25 Mbit/s
95th percentile per-packet one-way delay: 76.492 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 52.66 Mbit/s
95th percentile per-packet one-way delay: 103.168 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 39.12 Mbit/s
95th percentile per-packet one-way delay: 59.471 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 28.83 Mbit/s
95th percentile per-packet one-way delay: 38.818 ms
Loss rate: 0.28%
```

Run 4: Report of Copa — Data Link

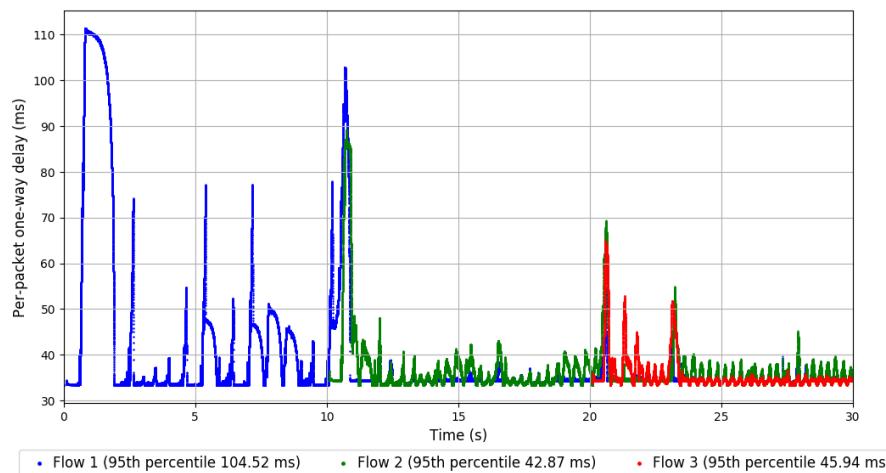
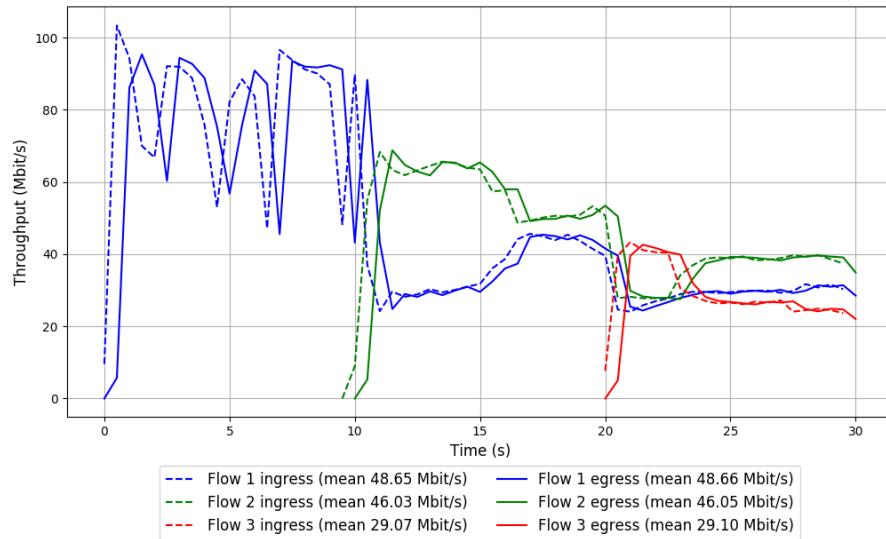


Run 5: Statistics of Copa

```
Start at: 2018-09-08 02:25:53
End at: 2018-09-08 02:26:23
Local clock offset: 0.381 ms
Remote clock offset: 1.385 ms

# Below is generated by plot.py at 2018-09-08 02:37:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.96 Mbit/s
95th percentile per-packet one-way delay: 76.364 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 48.66 Mbit/s
95th percentile per-packet one-way delay: 104.521 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 46.05 Mbit/s
95th percentile per-packet one-way delay: 42.874 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 29.10 Mbit/s
95th percentile per-packet one-way delay: 45.938 ms
Loss rate: 0.55%
```

Run 5: Report of Copa — Data Link

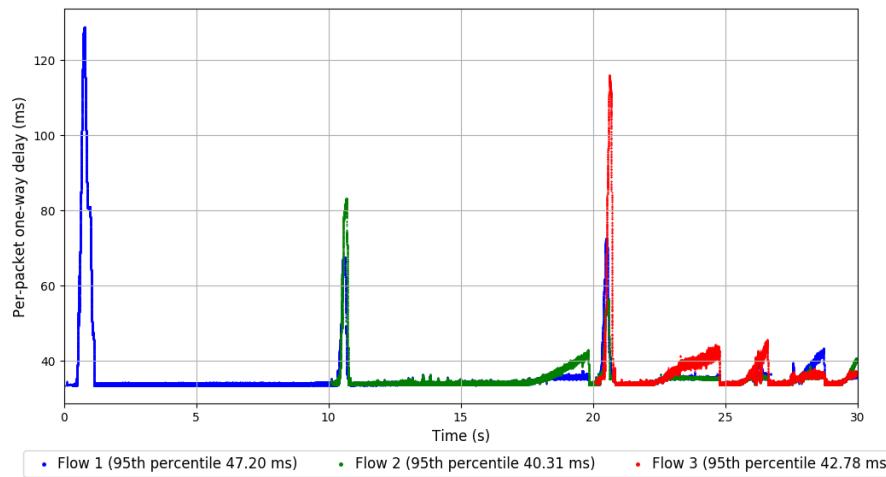
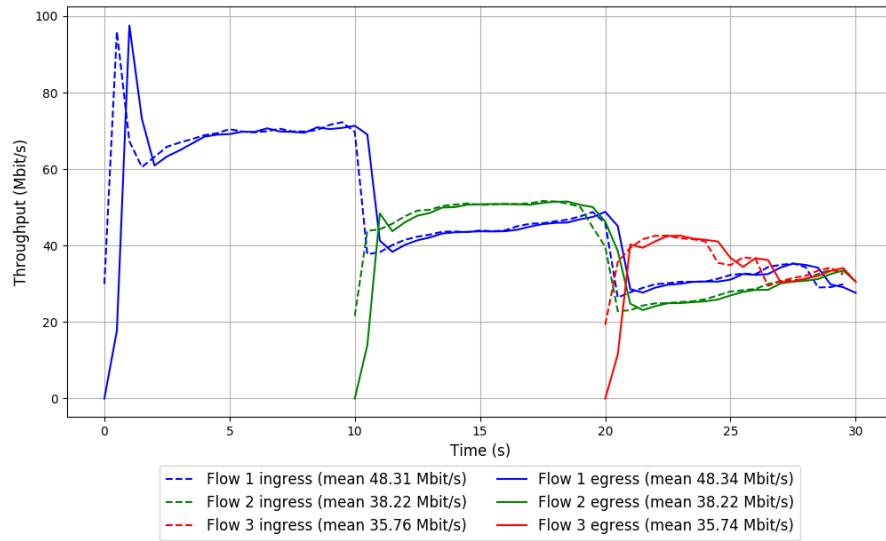


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-09-08 00:36:11
End at: 2018-09-08 00:36:41
Local clock offset: -2.988 ms
Remote clock offset: -3.811 ms

# Below is generated by plot.py at 2018-09-08 02:37:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.61 Mbit/s
95th percentile per-packet one-way delay: 42.183 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 48.34 Mbit/s
95th percentile per-packet one-way delay: 47.197 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 38.22 Mbit/s
95th percentile per-packet one-way delay: 40.308 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 35.74 Mbit/s
95th percentile per-packet one-way delay: 42.777 ms
Loss rate: 0.71%
```

Run 1: Report of TCP Cubic — Data Link

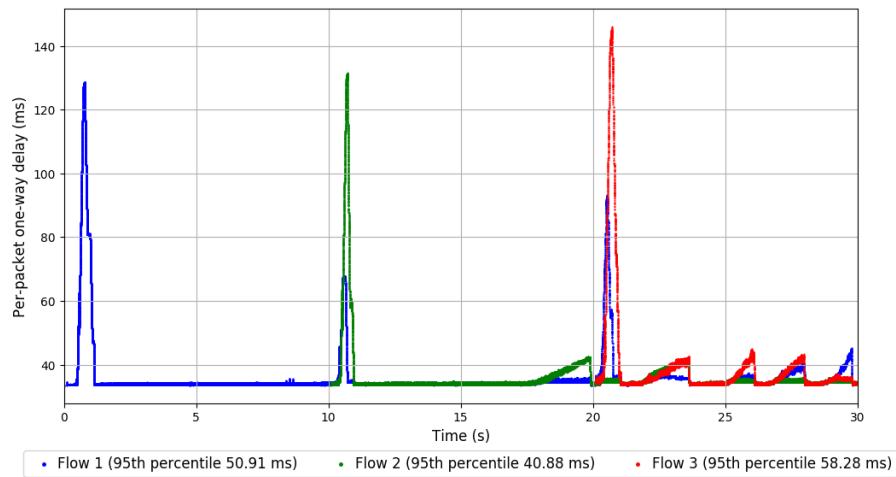
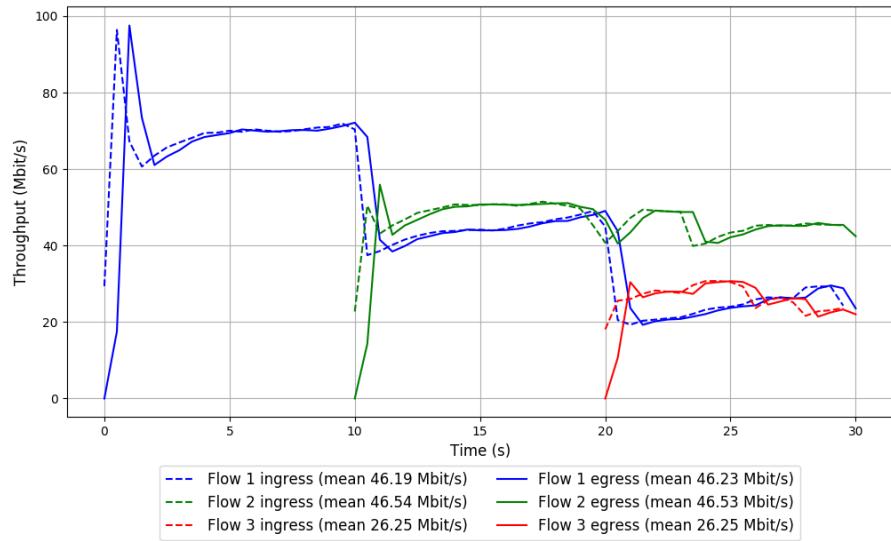


Run 2: Statistics of TCP Cubic

```
Start at: 2018-09-08 01:01:25
End at: 2018-09-08 01:01:55
Local clock offset: 0.232 ms
Remote clock offset: -2.555 ms

# Below is generated by plot.py at 2018-09-08 02:37:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.90 Mbit/s
95th percentile per-packet one-way delay: 43.227 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 46.23 Mbit/s
95th percentile per-packet one-way delay: 50.915 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 46.53 Mbit/s
95th percentile per-packet one-way delay: 40.879 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 26.25 Mbit/s
95th percentile per-packet one-way delay: 58.277 ms
Loss rate: 0.66%
```

Run 2: Report of TCP Cubic — Data Link

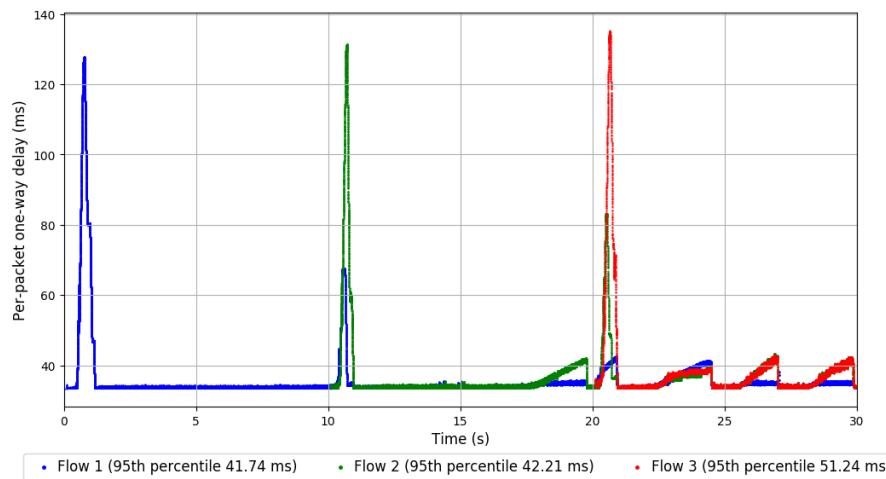
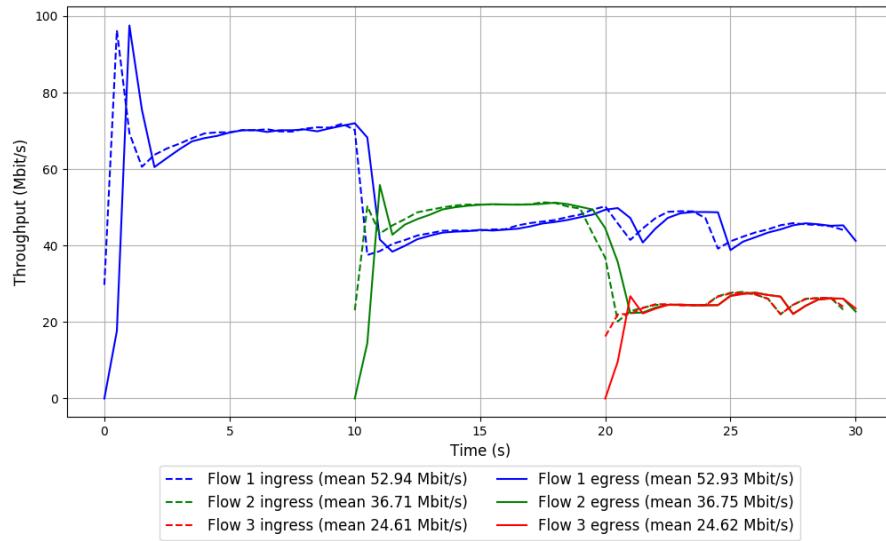


Run 3: Statistics of TCP Cubic

```
Start at: 2018-09-08 01:26:21
End at: 2018-09-08 01:26:51
Local clock offset: 0.765 ms
Remote clock offset: -0.932 ms

# Below is generated by plot.py at 2018-09-08 02:37:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.55 Mbit/s
95th percentile per-packet one-way delay: 42.155 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 52.93 Mbit/s
95th percentile per-packet one-way delay: 41.741 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 36.75 Mbit/s
95th percentile per-packet one-way delay: 42.213 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 24.62 Mbit/s
95th percentile per-packet one-way delay: 51.236 ms
Loss rate: 0.59%
```

Run 3: Report of TCP Cubic — Data Link

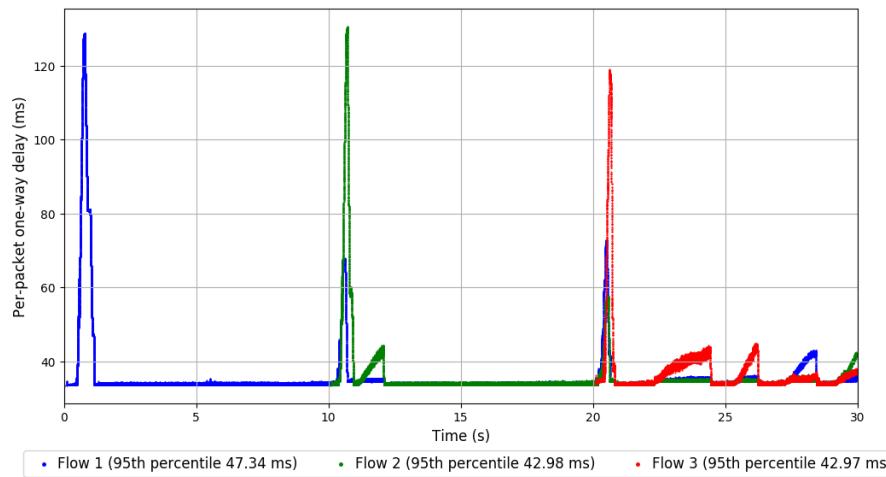
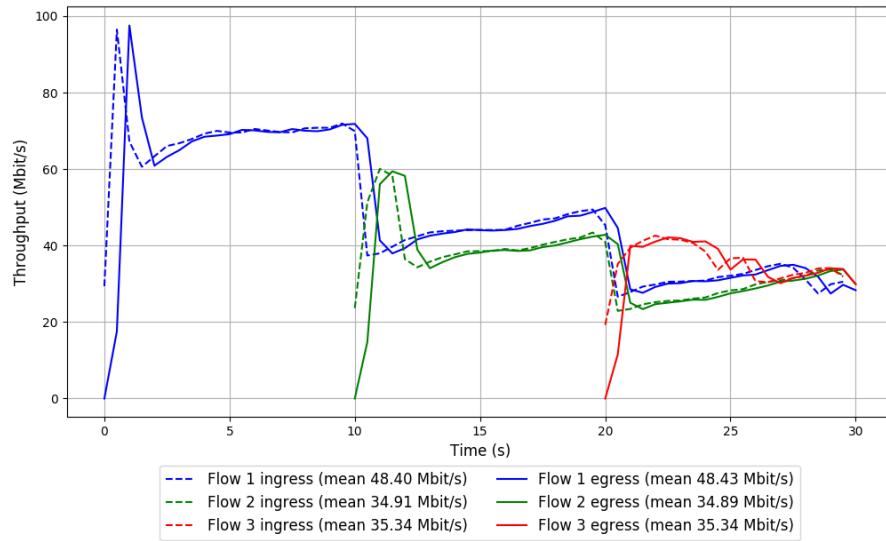


Run 4: Statistics of TCP Cubic

```
Start at: 2018-09-08 01:51:28
End at: 2018-09-08 01:51:58
Local clock offset: 0.587 ms
Remote clock offset: 0.032 ms

# Below is generated by plot.py at 2018-09-08 02:37:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.36 Mbit/s
95th percentile per-packet one-way delay: 43.998 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 48.43 Mbit/s
95th percentile per-packet one-way delay: 47.339 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 34.89 Mbit/s
95th percentile per-packet one-way delay: 42.976 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 35.34 Mbit/s
95th percentile per-packet one-way delay: 42.972 ms
Loss rate: 0.66%
```

Run 4: Report of TCP Cubic — Data Link

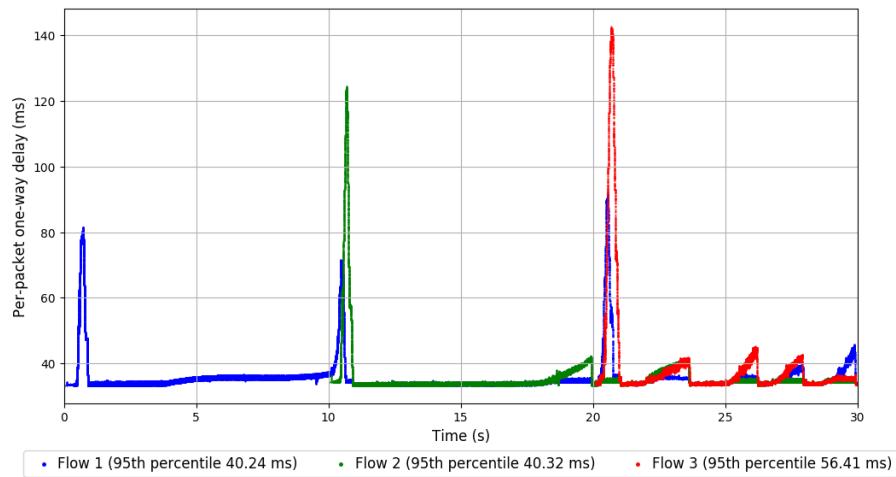
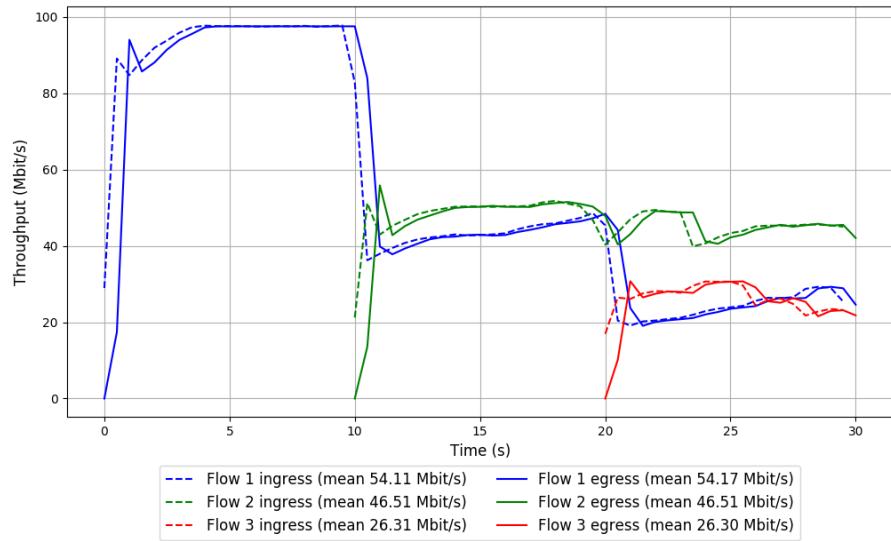


Run 5: Statistics of TCP Cubic

```
Start at: 2018-09-08 02:16:17
End at: 2018-09-08 02:16:47
Local clock offset: 0.589 ms
Remote clock offset: 1.1 ms

# Below is generated by plot.py at 2018-09-08 02:37:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.82 Mbit/s
95th percentile per-packet one-way delay: 40.956 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 54.17 Mbit/s
95th percentile per-packet one-way delay: 40.237 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 46.51 Mbit/s
95th percentile per-packet one-way delay: 40.317 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 26.30 Mbit/s
95th percentile per-packet one-way delay: 56.412 ms
Loss rate: 0.66%
```

Run 5: Report of TCP Cubic — Data Link

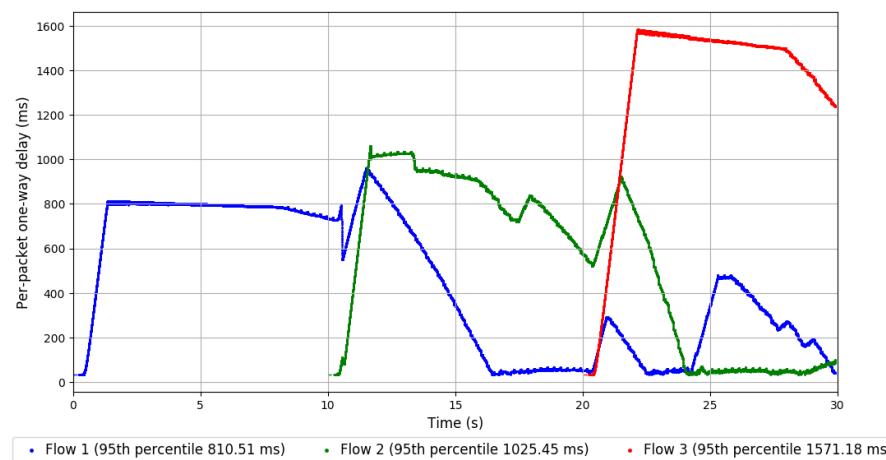
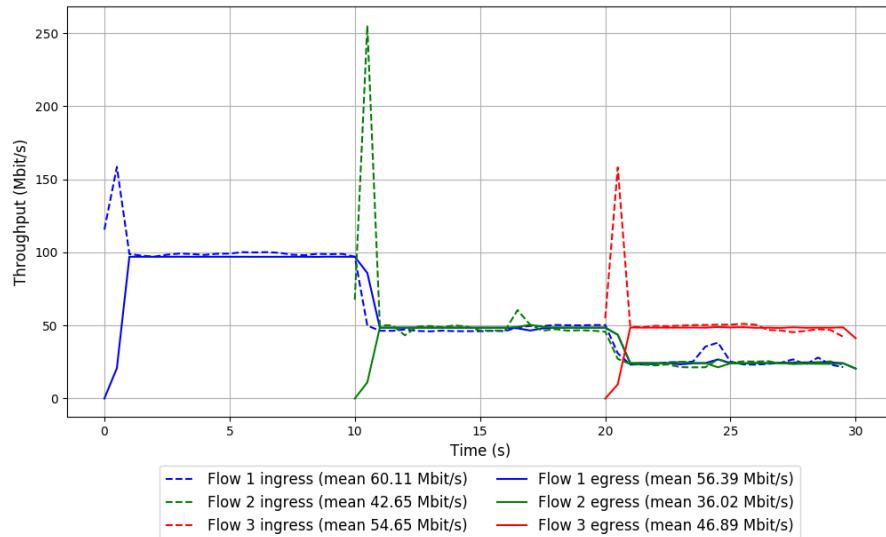


```
Run 1: Statistics of FillP

Start at: 2018-09-08 00:50:02
End at: 2018-09-08 00:50:32
Local clock offset: -1.482 ms
Remote clock offset: -2.993 ms

# Below is generated by plot.py at 2018-09-08 02:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.81 Mbit/s
95th percentile per-packet one-way delay: 1534.967 ms
Loss rate: 10.32%
-- Flow 1:
Average throughput: 56.39 Mbit/s
95th percentile per-packet one-way delay: 810.506 ms
Loss rate: 6.39%
-- Flow 2:
Average throughput: 36.02 Mbit/s
95th percentile per-packet one-way delay: 1025.451 ms
Loss rate: 15.83%
-- Flow 3:
Average throughput: 46.89 Mbit/s
95th percentile per-packet one-way delay: 1571.182 ms
Loss rate: 14.75%
```

Run 1: Report of FillP — Data Link

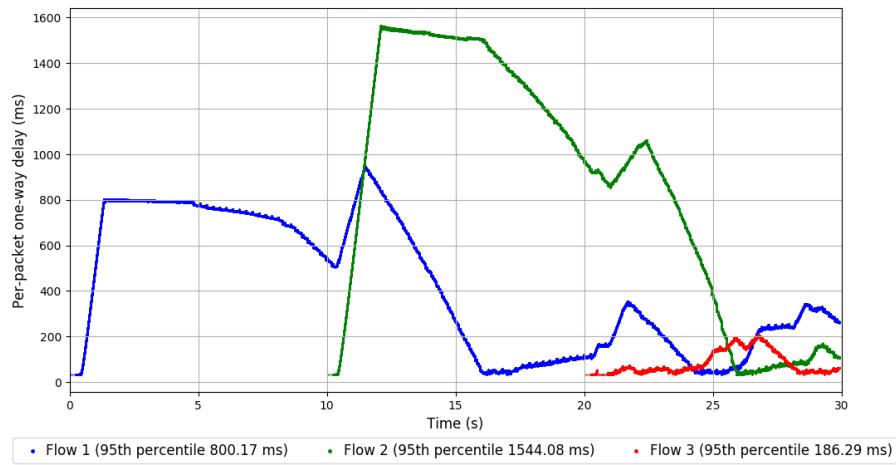
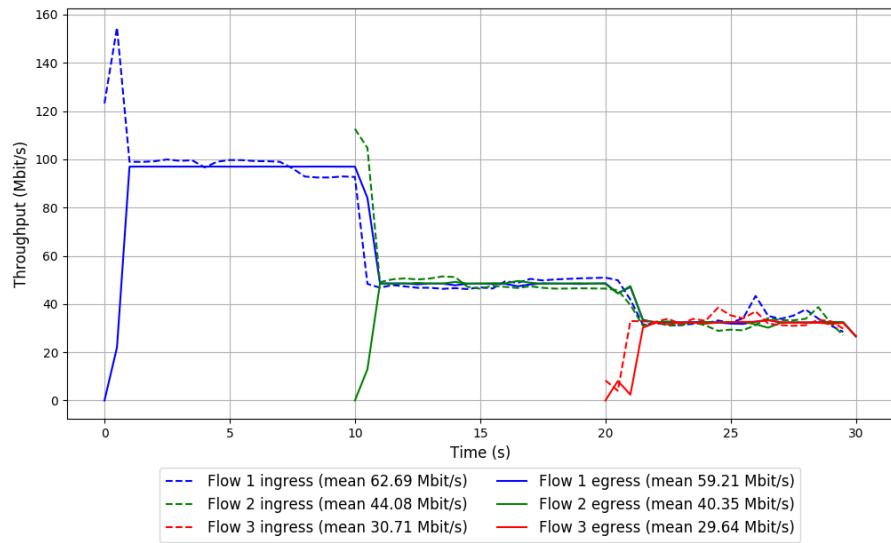


Run 2: Statistics of FillP

```
Start at: 2018-09-08 01:15:05
End at: 2018-09-08 01:15:35
Local clock offset: 1.255 ms
Remote clock offset: -1.681 ms

# Below is generated by plot.py at 2018-09-08 02:37:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.83 Mbit/s
95th percentile per-packet one-way delay: 1511.193 ms
Loss rate: 6.45%
-- Flow 1:
Average throughput: 59.21 Mbit/s
95th percentile per-packet one-way delay: 800.175 ms
Loss rate: 5.75%
-- Flow 2:
Average throughput: 40.35 Mbit/s
95th percentile per-packet one-way delay: 1544.075 ms
Loss rate: 8.76%
-- Flow 3:
Average throughput: 29.64 Mbit/s
95th percentile per-packet one-way delay: 186.292 ms
Loss rate: 4.12%
```

Run 2: Report of FillP — Data Link

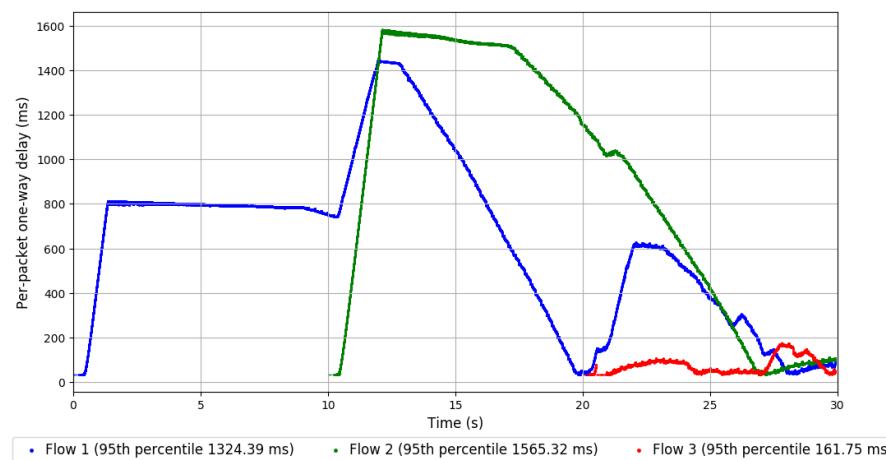
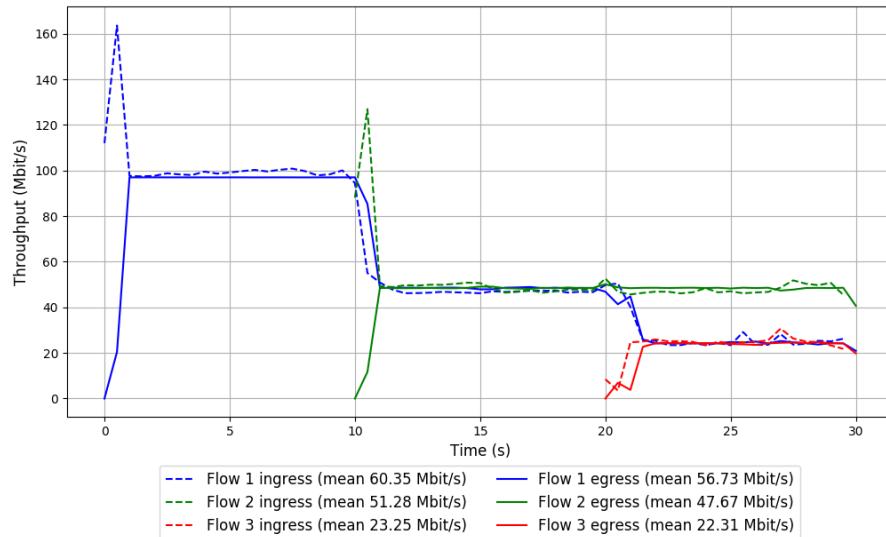


Run 3: Statistics of FillP

```
Start at: 2018-09-08 01:40:20
End at: 2018-09-08 01:40:50
Local clock offset: 0.772 ms
Remote clock offset: -0.178 ms

# Below is generated by plot.py at 2018-09-08 02:37:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.80 Mbit/s
95th percentile per-packet one-way delay: 1536.406 ms
Loss rate: 6.46%
-- Flow 1:
Average throughput: 56.73 Mbit/s
95th percentile per-packet one-way delay: 1324.393 ms
Loss rate: 6.19%
-- Flow 2:
Average throughput: 47.67 Mbit/s
95th percentile per-packet one-way delay: 1565.320 ms
Loss rate: 7.33%
-- Flow 3:
Average throughput: 22.31 Mbit/s
95th percentile per-packet one-way delay: 161.755 ms
Loss rate: 4.68%
```

Run 3: Report of FillP — Data Link

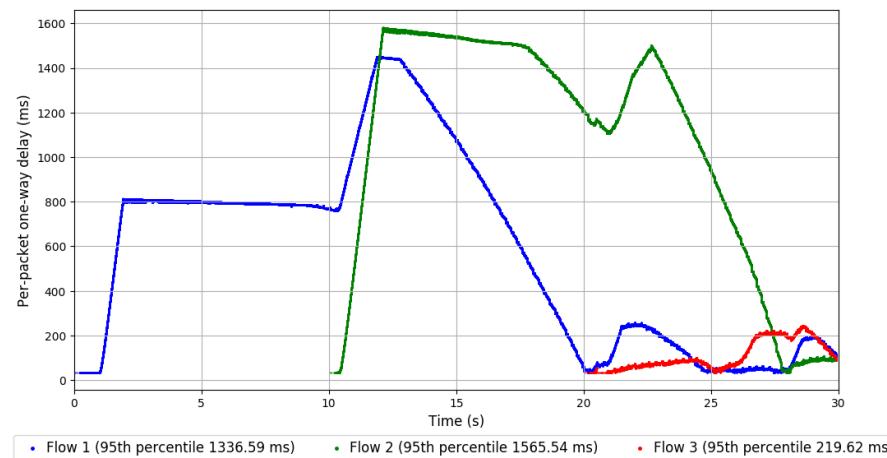
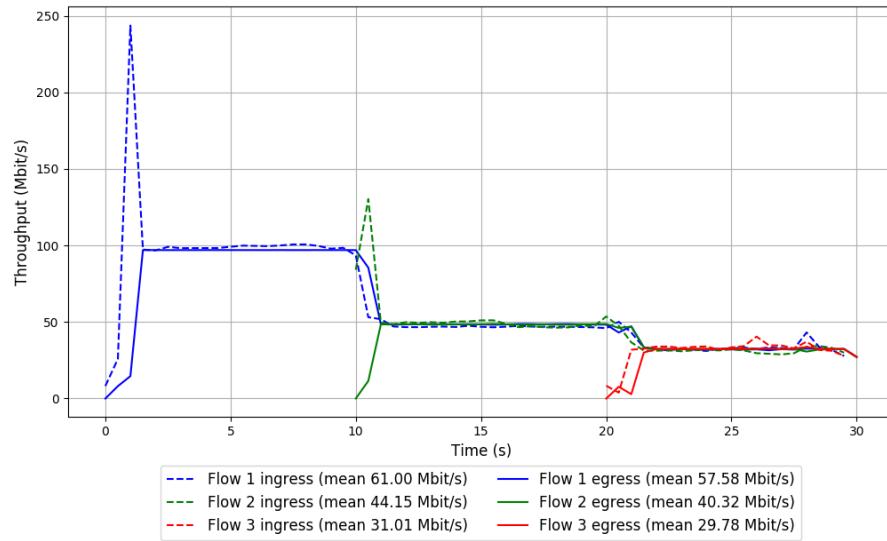


```
Run 4: Statistics of FillP
```

```
Start at: 2018-09-08 02:05:10
End at: 2018-09-08 02:05:40
Local clock offset: 0.668 ms
Remote clock offset: 0.795 ms

# Below is generated by plot.py at 2018-09-08 02:37:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.22 Mbit/s
95th percentile per-packet one-way delay: 1539.727 ms
Loss rate: 6.60%
-- Flow 1:
Average throughput: 57.58 Mbit/s
95th percentile per-packet one-way delay: 1336.586 ms
Loss rate: 5.79%
-- Flow 2:
Average throughput: 40.32 Mbit/s
95th percentile per-packet one-way delay: 1565.544 ms
Loss rate: 8.98%
-- Flow 3:
Average throughput: 29.78 Mbit/s
95th percentile per-packet one-way delay: 219.625 ms
Loss rate: 4.59%
```

Run 4: Report of FillP — Data Link

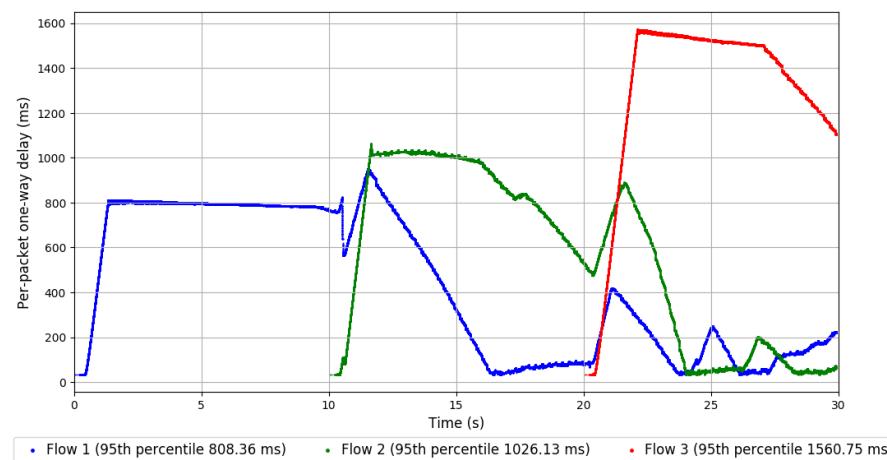
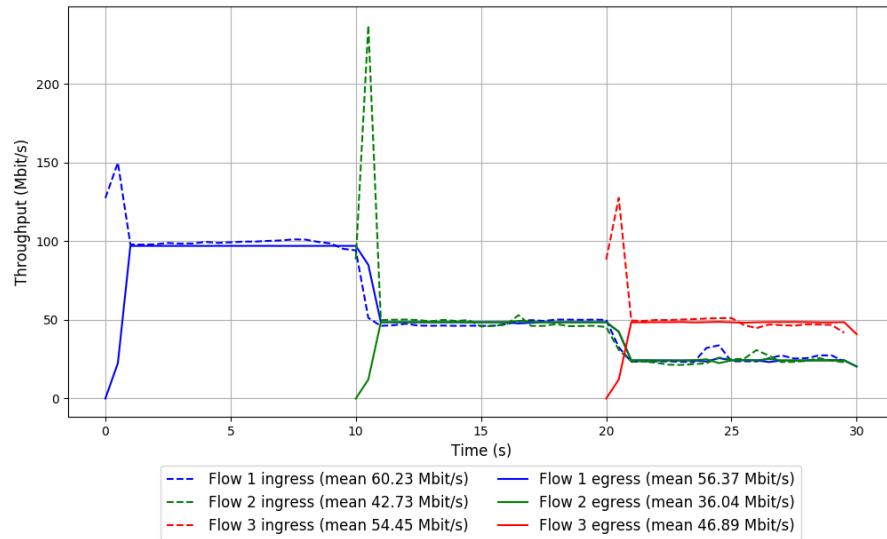


Run 5: Statistics of FillP

```
Start at: 2018-09-08 02:30:06
End at: 2018-09-08 02:30:36
Local clock offset: 0.423 ms
Remote clock offset: 1.613 ms

# Below is generated by plot.py at 2018-09-08 02:38:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.82 Mbit/s
95th percentile per-packet one-way delay: 1523.341 ms
Loss rate: 10.41%
-- Flow 1:
Average throughput: 56.37 Mbit/s
95th percentile per-packet one-way delay: 808.362 ms
Loss rate: 6.61%
-- Flow 2:
Average throughput: 36.04 Mbit/s
95th percentile per-packet one-way delay: 1026.130 ms
Loss rate: 15.90%
-- Flow 3:
Average throughput: 46.89 Mbit/s
95th percentile per-packet one-way delay: 1560.752 ms
Loss rate: 14.44%
```

Run 5: Report of FillP — Data Link

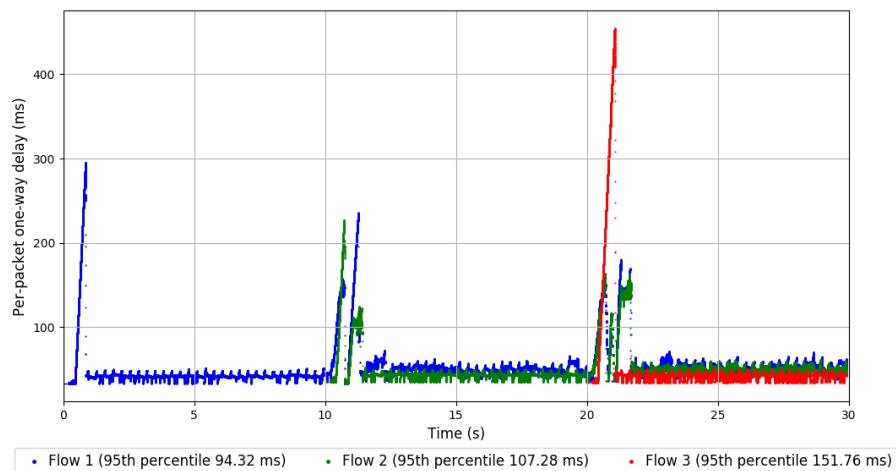
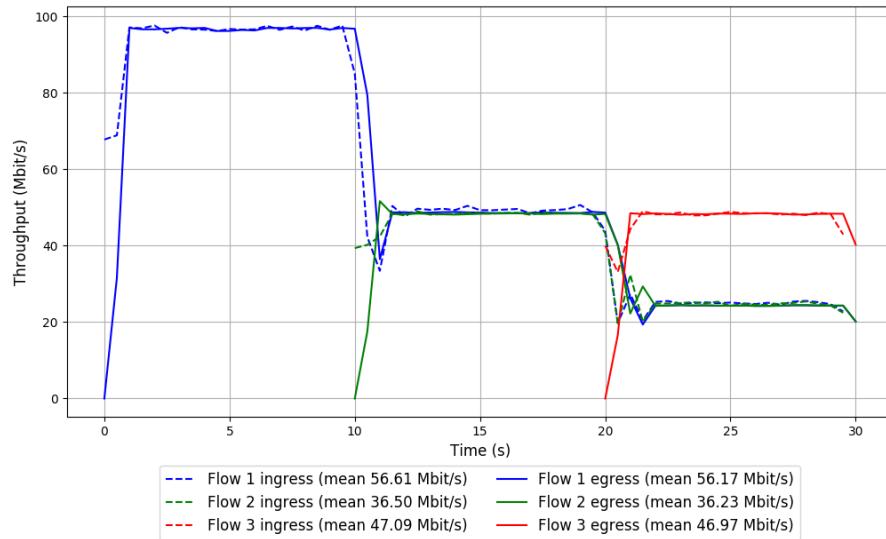


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2018-09-08 00:47:22
End at: 2018-09-08 00:47:52
Local clock offset: -2.24 ms
Remote clock offset: -3.209 ms

# Below is generated by plot.py at 2018-09-08 02:38:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.77 Mbit/s
95th percentile per-packet one-way delay: 105.923 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 56.17 Mbit/s
95th percentile per-packet one-way delay: 94.316 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 36.23 Mbit/s
95th percentile per-packet one-way delay: 107.279 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 46.97 Mbit/s
95th percentile per-packet one-way delay: 151.760 ms
Loss rate: 0.82%
```

Run 1: Report of FillP-Sheep — Data Link

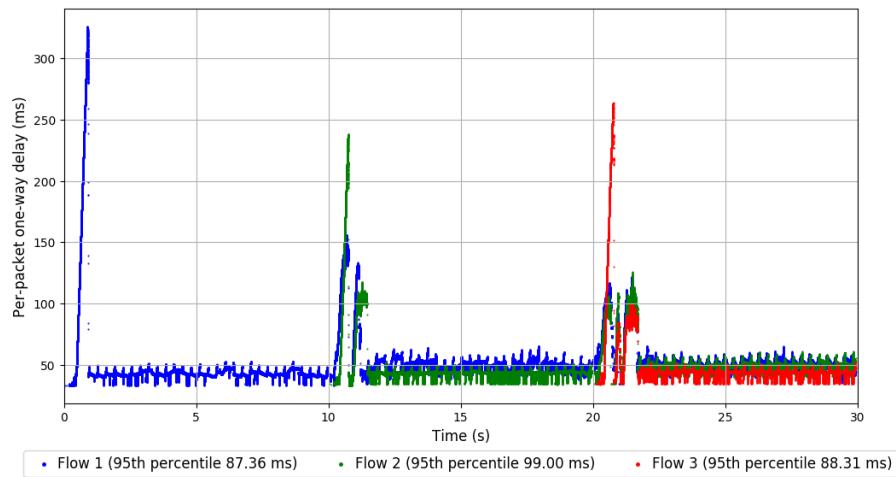
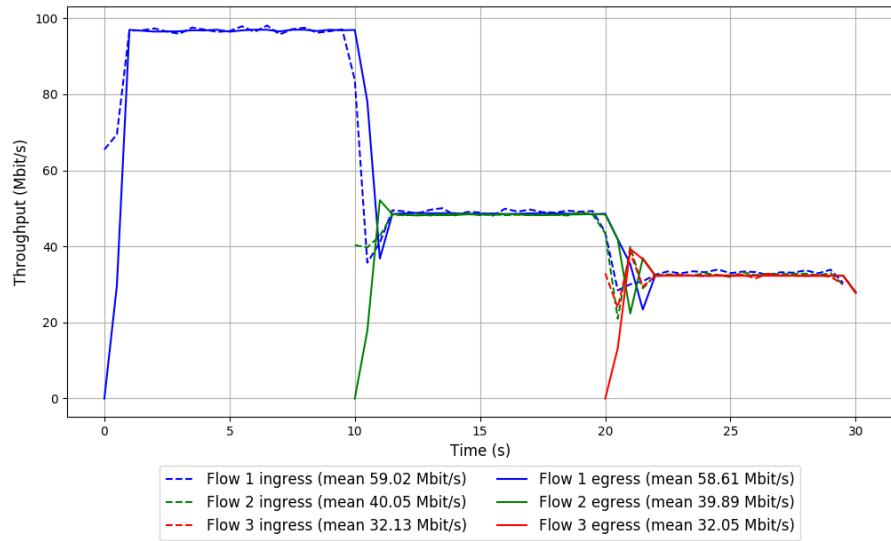


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-09-08 01:12:25
End at: 2018-09-08 01:12:55
Local clock offset: 1.006 ms
Remote clock offset: -1.783 ms

# Below is generated by plot.py at 2018-09-08 02:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 93.837 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 58.61 Mbit/s
95th percentile per-packet one-way delay: 87.358 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 39.89 Mbit/s
95th percentile per-packet one-way delay: 99.000 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 88.312 ms
Loss rate: 0.89%
```

Run 2: Report of FillP-Sheep — Data Link

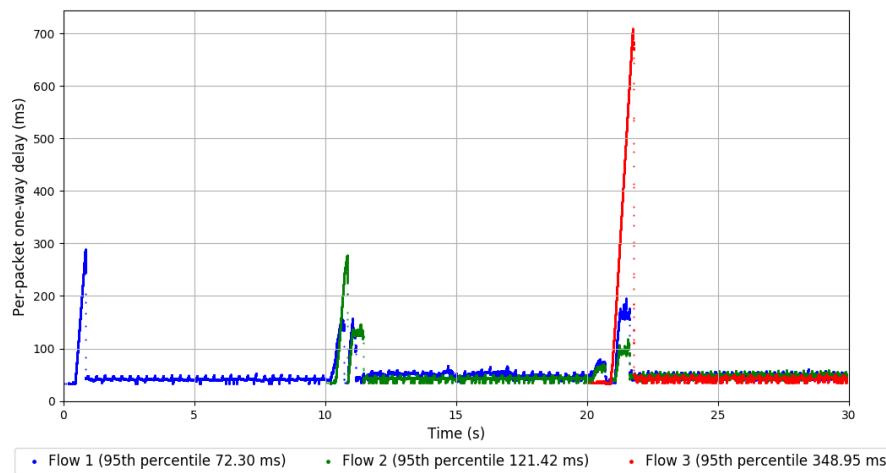
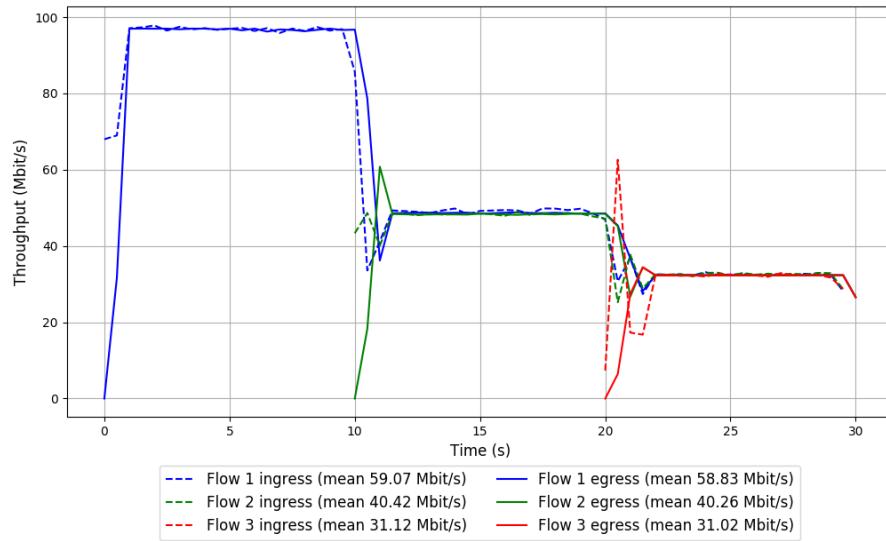


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-09-08 01:37:39
End at: 2018-09-08 01:38:09
Local clock offset: 0.677 ms
Remote clock offset: -0.253 ms

# Below is generated by plot.py at 2018-09-08 02:38:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.83 Mbit/s
95th percentile per-packet one-way delay: 100.862 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 58.83 Mbit/s
95th percentile per-packet one-way delay: 72.303 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 40.26 Mbit/s
95th percentile per-packet one-way delay: 121.418 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 31.02 Mbit/s
95th percentile per-packet one-way delay: 348.950 ms
Loss rate: 0.90%
```

Run 3: Report of FillP-Sheep — Data Link

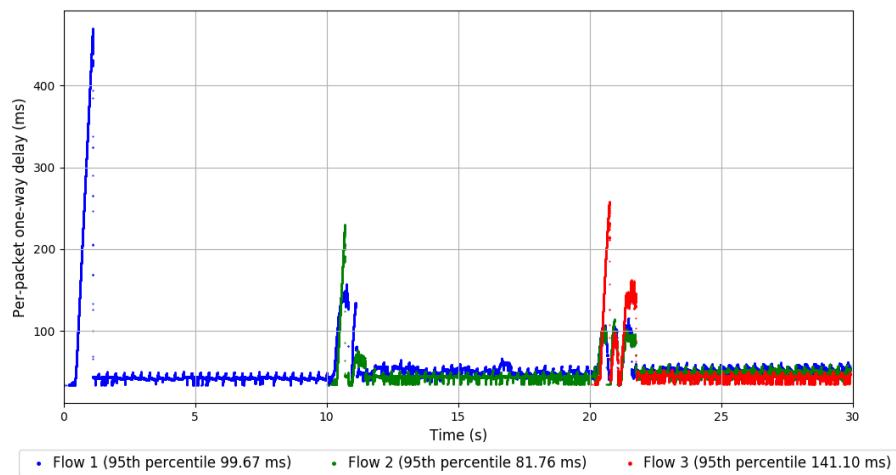
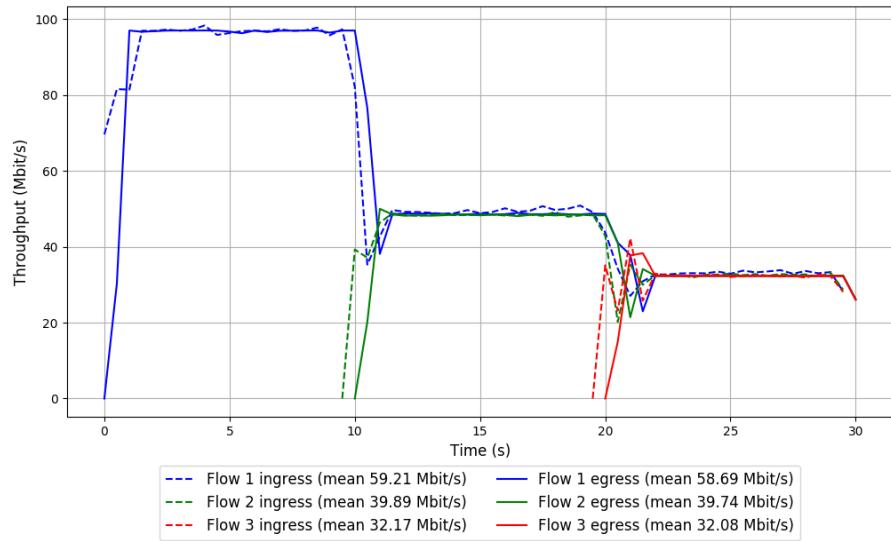


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-09-08 02:02:30
End at: 2018-09-08 02:03:00
Local clock offset: 0.662 ms
Remote clock offset: 0.751 ms

# Below is generated by plot.py at 2018-09-08 02:39:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 95.176 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 58.69 Mbit/s
95th percentile per-packet one-way delay: 99.670 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 39.74 Mbit/s
95th percentile per-packet one-way delay: 81.757 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 32.08 Mbit/s
95th percentile per-packet one-way delay: 141.097 ms
Loss rate: 0.92%
```

Run 4: Report of FillP-Sheep — Data Link

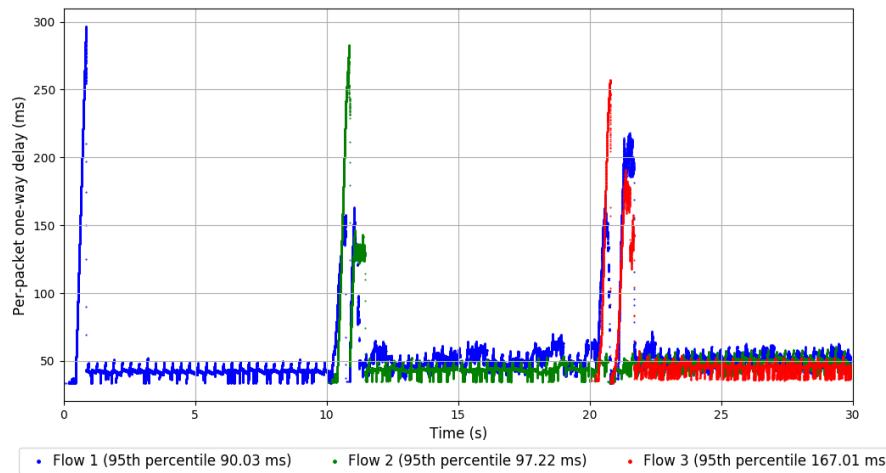
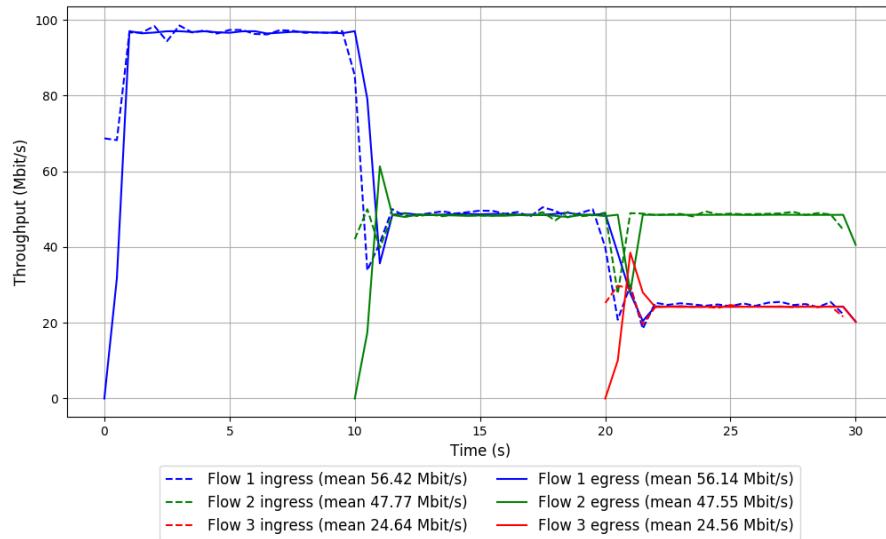


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-09-08 02:27:19
End at: 2018-09-08 02:27:49
Local clock offset: 0.461 ms
Remote clock offset: 1.477 ms

# Below is generated by plot.py at 2018-09-08 02:39:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.87 Mbit/s
95th percentile per-packet one-way delay: 104.971 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 56.14 Mbit/s
95th percentile per-packet one-way delay: 90.033 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 47.55 Mbit/s
95th percentile per-packet one-way delay: 97.224 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 24.56 Mbit/s
95th percentile per-packet one-way delay: 167.014 ms
Loss rate: 0.98%
```

Run 5: Report of FillP-Sheep — Data Link

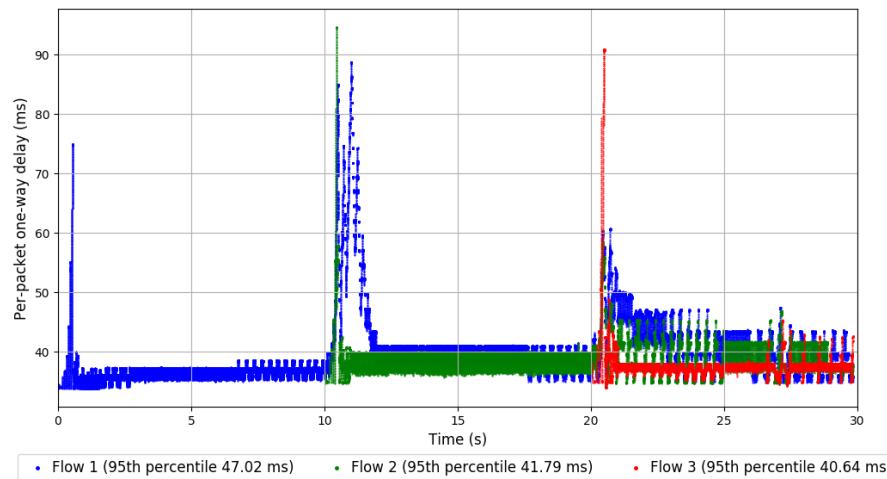
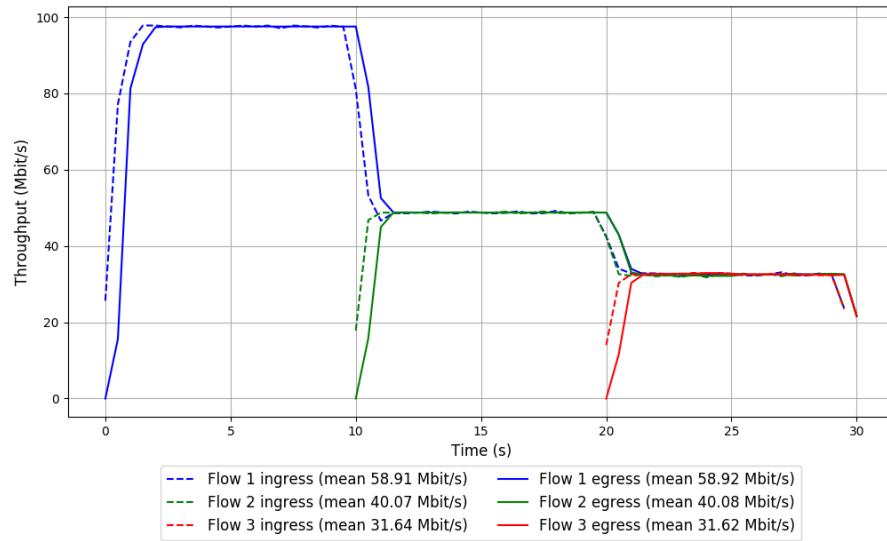


Run 1: Statistics of Indigo

```
Start at: 2018-09-08 00:41:42
End at: 2018-09-08 00:42:12
Local clock offset: -3.056 ms
Remote clock offset: -3.667 ms

# Below is generated by plot.py at 2018-09-08 02:39:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 45.253 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 58.92 Mbit/s
95th percentile per-packet one-way delay: 47.020 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 40.08 Mbit/s
95th percentile per-packet one-way delay: 41.786 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 31.62 Mbit/s
95th percentile per-packet one-way delay: 40.643 ms
Loss rate: 0.71%
```

Run 1: Report of Indigo — Data Link

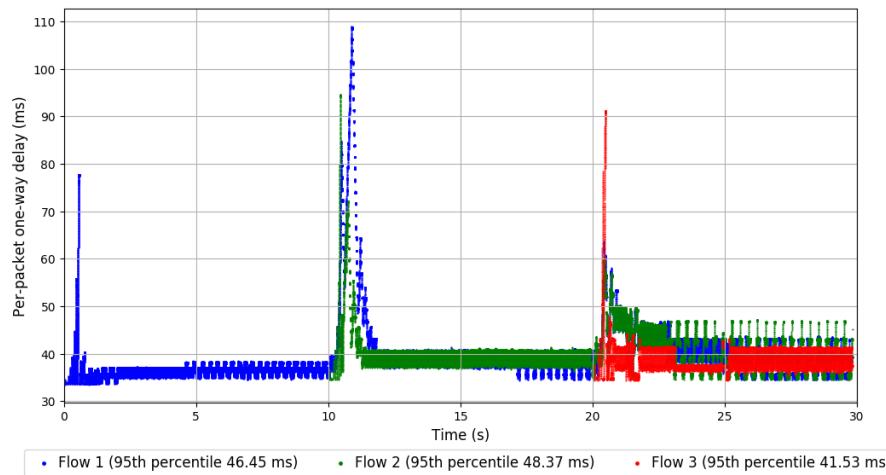
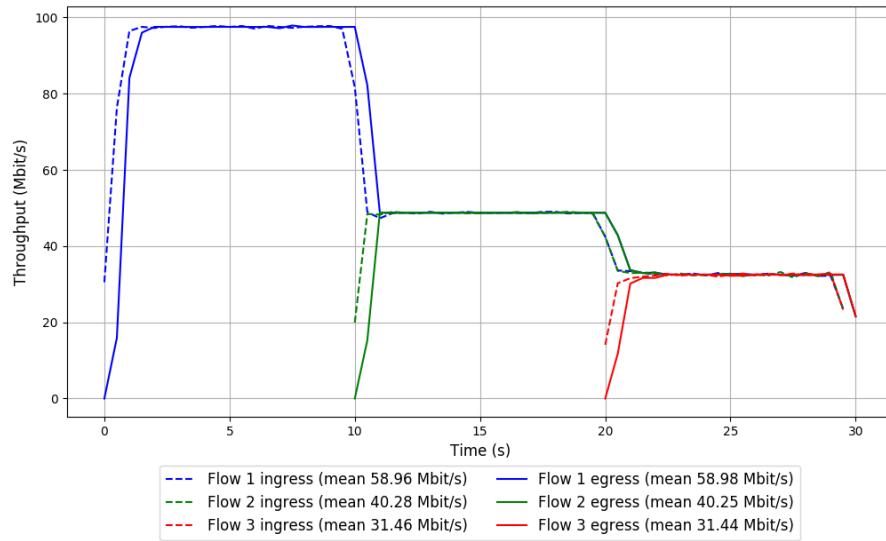


Run 2: Statistics of Indigo

```
Start at: 2018-09-08 01:06:56
End at: 2018-09-08 01:07:26
Local clock offset: 0.767 ms
Remote clock offset: -2.102 ms

# Below is generated by plot.py at 2018-09-08 02:39:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.01 Mbit/s
95th percentile per-packet one-way delay: 46.738 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 58.98 Mbit/s
95th percentile per-packet one-way delay: 46.454 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 40.25 Mbit/s
95th percentile per-packet one-way delay: 48.370 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 41.528 ms
Loss rate: 0.71%
```

Run 2: Report of Indigo — Data Link

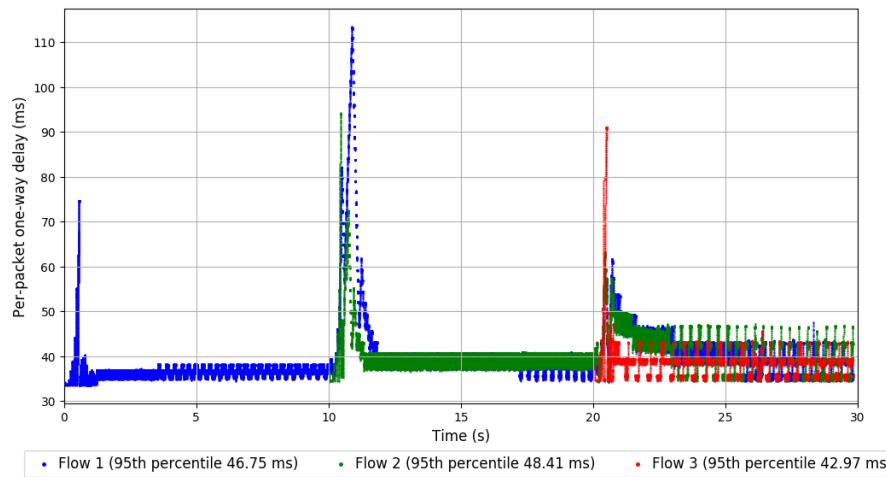
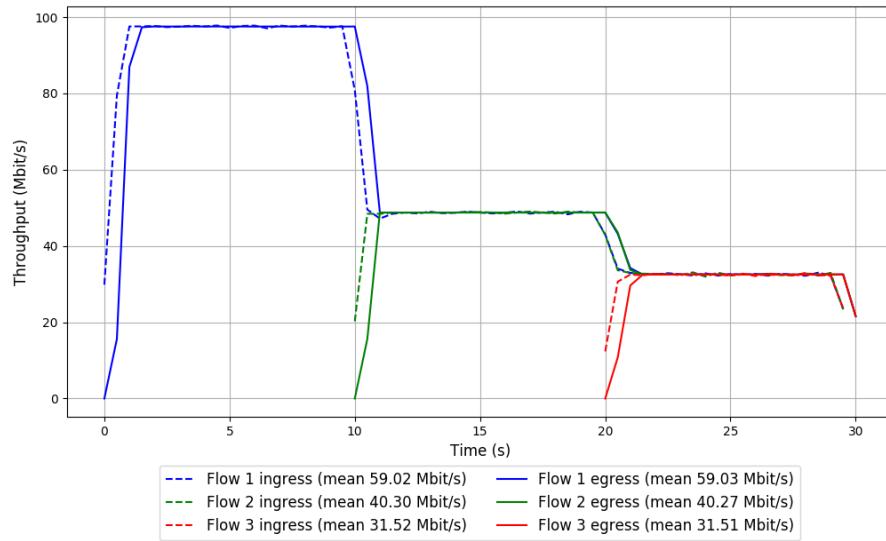


Run 3: Statistics of Indigo

```
Start at: 2018-09-08 01:32:08
End at: 2018-09-08 01:32:38
Local clock offset: 0.748 ms
Remote clock offset: -0.566 ms

# Below is generated by plot.py at 2018-09-08 02:39:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.08 Mbit/s
95th percentile per-packet one-way delay: 46.739 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 59.03 Mbit/s
95th percentile per-packet one-way delay: 46.752 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 40.27 Mbit/s
95th percentile per-packet one-way delay: 48.415 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 31.51 Mbit/s
95th percentile per-packet one-way delay: 42.972 ms
Loss rate: 0.69%
```

Run 3: Report of Indigo — Data Link

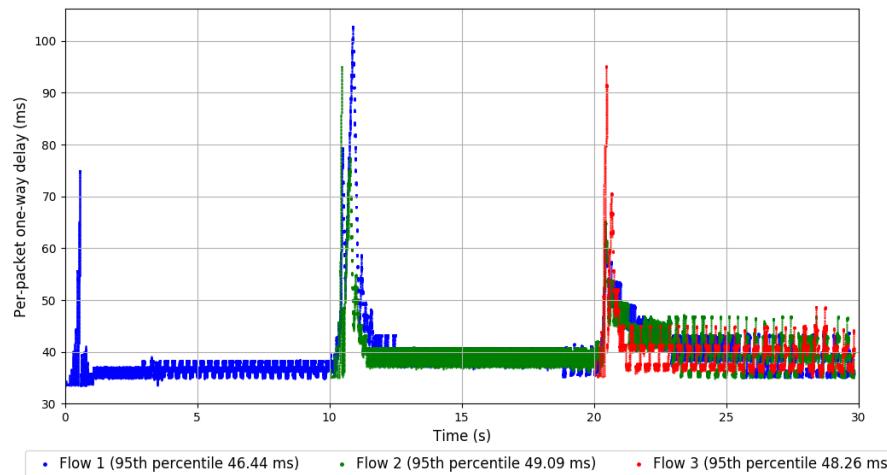
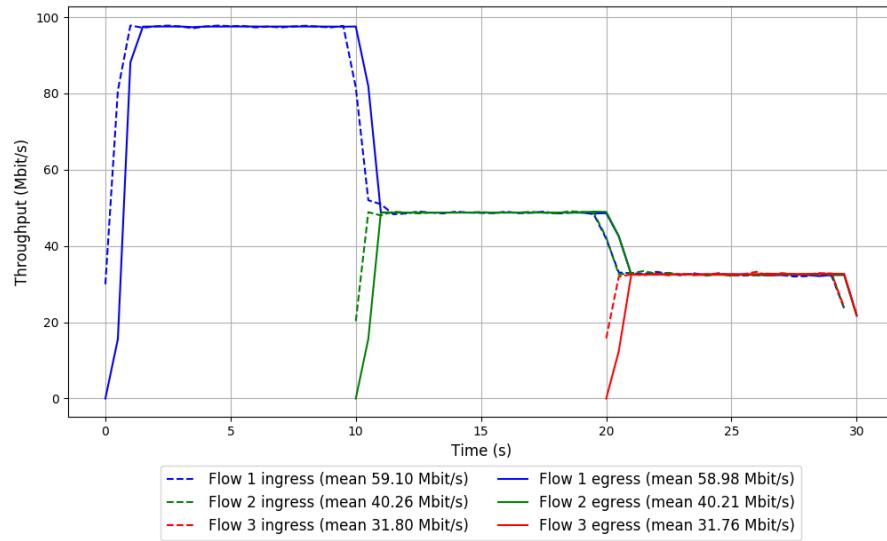


Run 4: Statistics of Indigo

```
Start at: 2018-09-08 01:57:00
End at: 2018-09-08 01:57:30
Local clock offset: 0.65 ms
Remote clock offset: 0.409 ms

# Below is generated by plot.py at 2018-09-08 02:39:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.10 Mbit/s
95th percentile per-packet one-way delay: 47.485 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 58.98 Mbit/s
95th percentile per-packet one-way delay: 46.441 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 40.21 Mbit/s
95th percentile per-packet one-way delay: 49.089 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 31.76 Mbit/s
95th percentile per-packet one-way delay: 48.262 ms
Loss rate: 0.79%
```

Run 4: Report of Indigo — Data Link

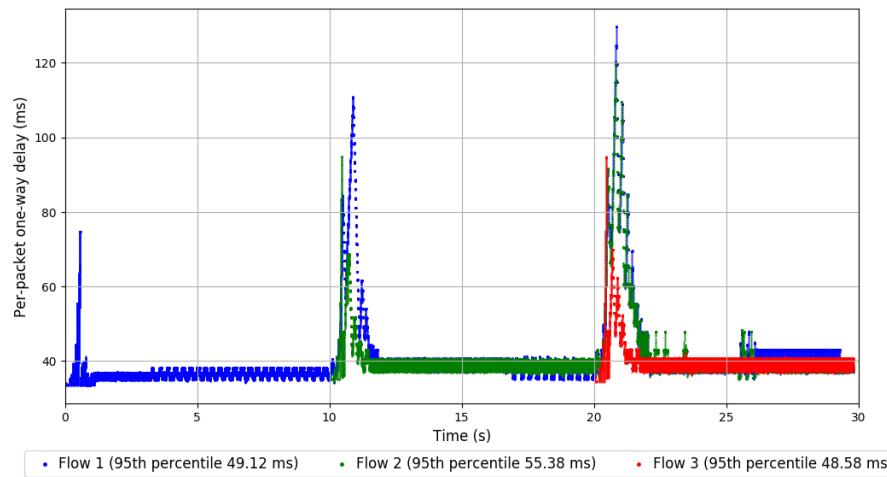
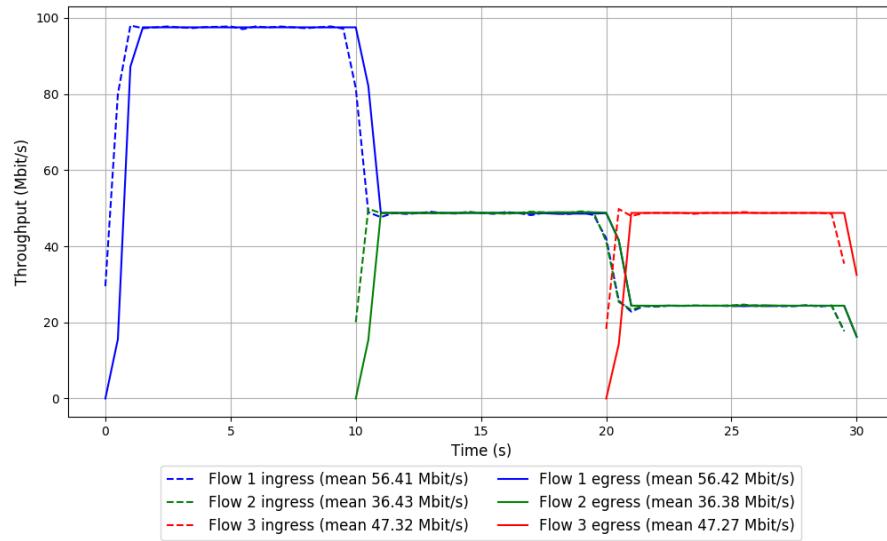


Run 5: Statistics of Indigo

```
Start at: 2018-09-08 02:21:48
End at: 2018-09-08 02:22:18
Local clock offset: 0.547 ms
Remote clock offset: 1.315 ms

# Below is generated by plot.py at 2018-09-08 02:39:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.09 Mbit/s
95th percentile per-packet one-way delay: 50.176 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 56.42 Mbit/s
95th percentile per-packet one-way delay: 49.117 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 36.38 Mbit/s
95th percentile per-packet one-way delay: 55.382 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 47.27 Mbit/s
95th percentile per-packet one-way delay: 48.580 ms
Loss rate: 0.75%
```

Run 5: Report of Indigo — Data Link

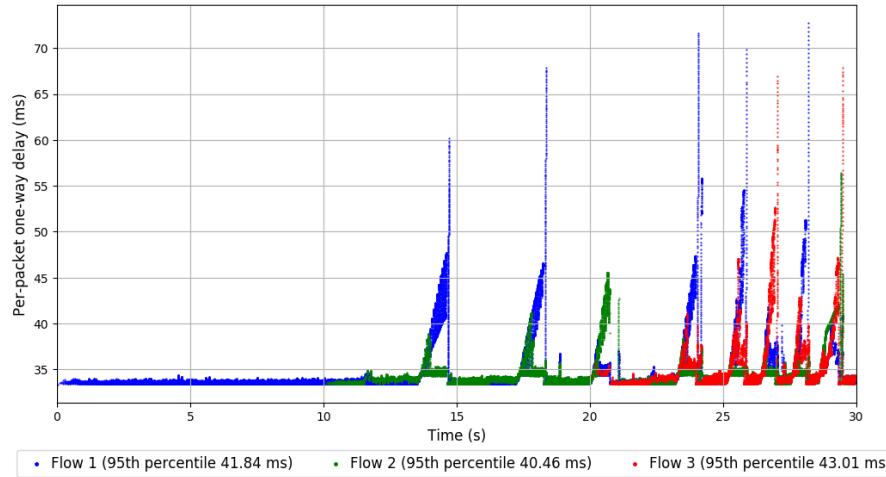
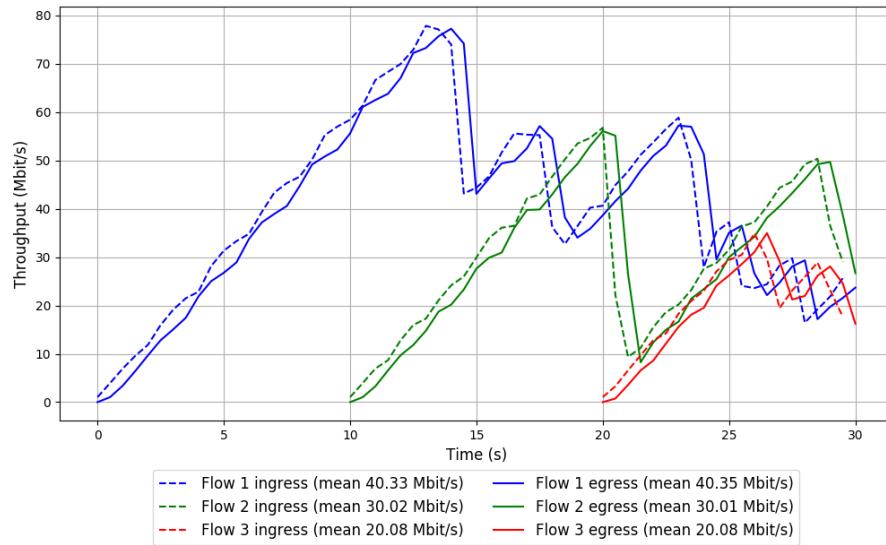


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-08 00:34:49
End at: 2018-09-08 00:35:19
Local clock offset: -3.07 ms
Remote clock offset: -4.03 ms

# Below is generated by plot.py at 2018-09-08 02:39:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.94 Mbit/s
95th percentile per-packet one-way delay: 41.365 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 40.35 Mbit/s
95th percentile per-packet one-way delay: 41.842 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 30.01 Mbit/s
95th percentile per-packet one-way delay: 40.461 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 20.08 Mbit/s
95th percentile per-packet one-way delay: 43.010 ms
Loss rate: 0.64%
```

Run 1: Report of LEDBAT — Data Link

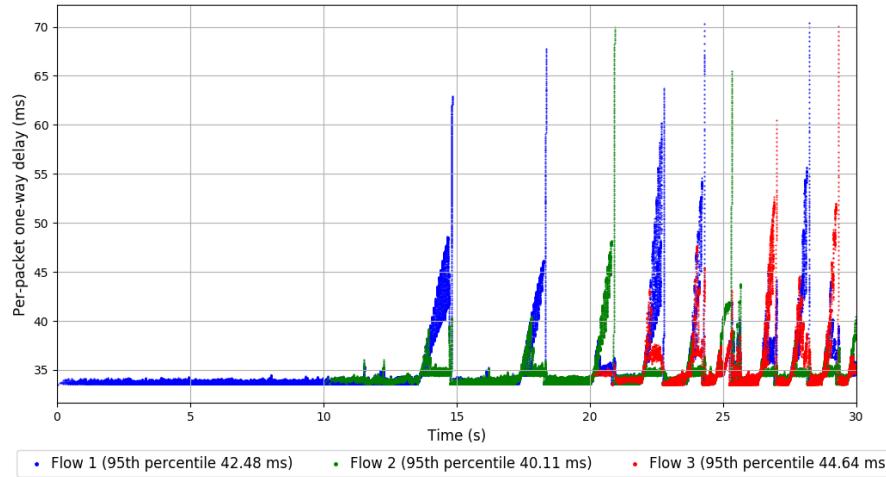
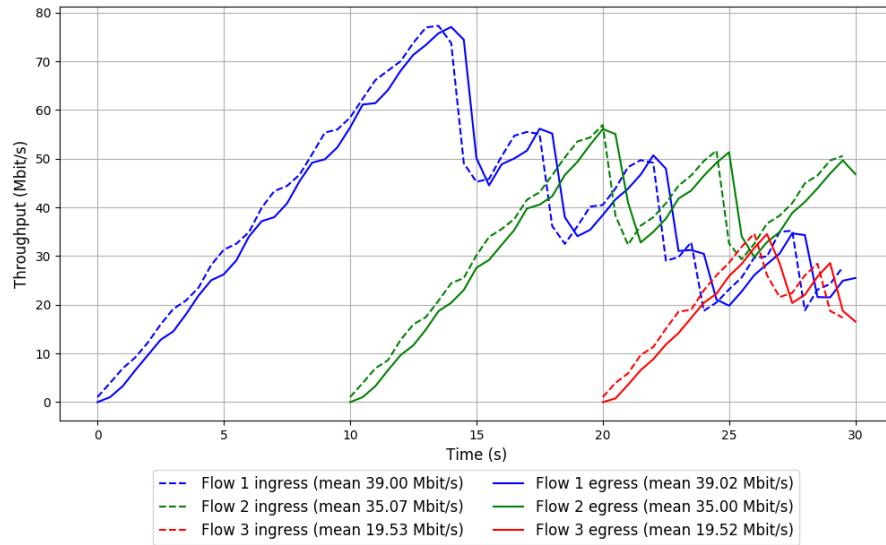


Run 2: Statistics of LEDBAT

```
Start at: 2018-09-08 01:00:00
End at: 2018-09-08 01:00:30
Local clock offset: 0.206 ms
Remote clock offset: -2.451 ms

# Below is generated by plot.py at 2018-09-08 02:39:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.77 Mbit/s
95th percentile per-packet one-way delay: 41.720 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 39.02 Mbit/s
95th percentile per-packet one-way delay: 42.479 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 35.00 Mbit/s
95th percentile per-packet one-way delay: 40.106 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 44.639 ms
Loss rate: 0.66%
```

Run 2: Report of LEDBAT — Data Link

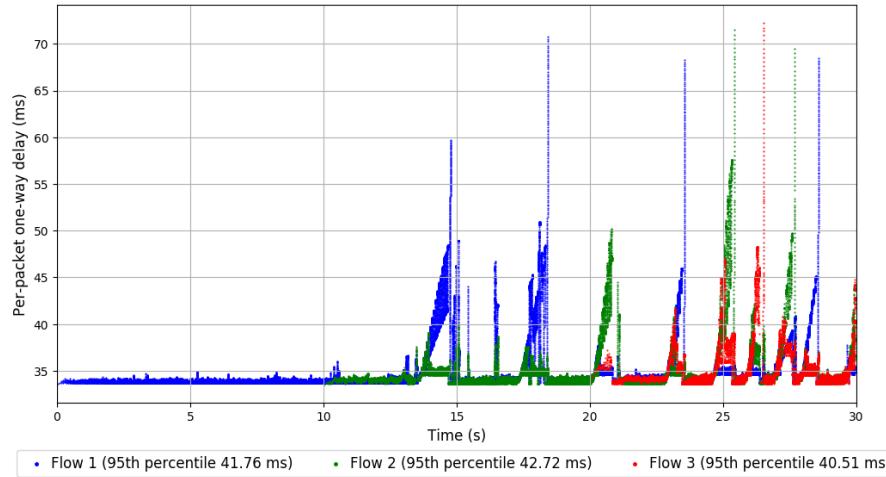
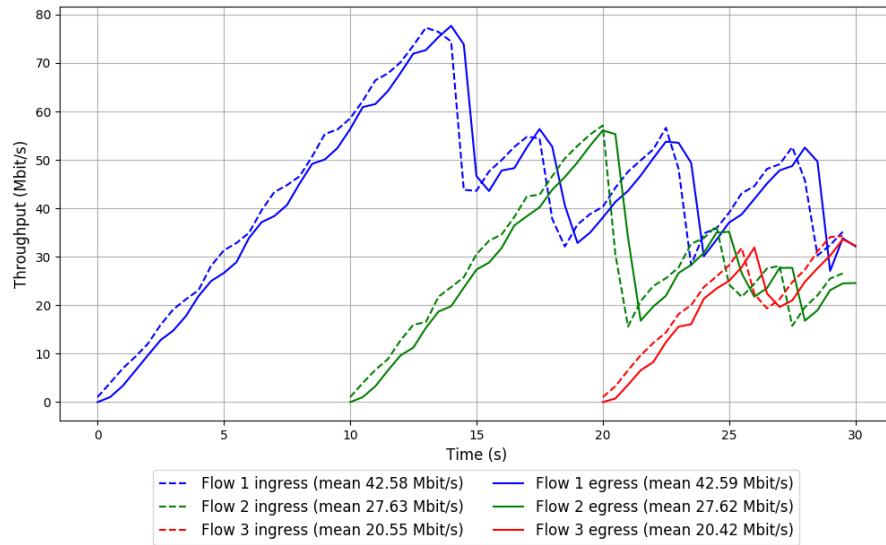


Run 3: Statistics of LEDBAT

```
Start at: 2018-09-08 01:24:58
End at: 2018-09-08 01:25:28
Local clock offset: 0.771 ms
Remote clock offset: -1.15 ms

# Below is generated by plot.py at 2018-09-08 02:39:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.73 Mbit/s
95th percentile per-packet one-way delay: 41.763 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 42.59 Mbit/s
95th percentile per-packet one-way delay: 41.759 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 27.62 Mbit/s
95th percentile per-packet one-way delay: 42.724 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 20.42 Mbit/s
95th percentile per-packet one-way delay: 40.510 ms
Loss rate: 1.25%
```

Run 3: Report of LEDBAT — Data Link

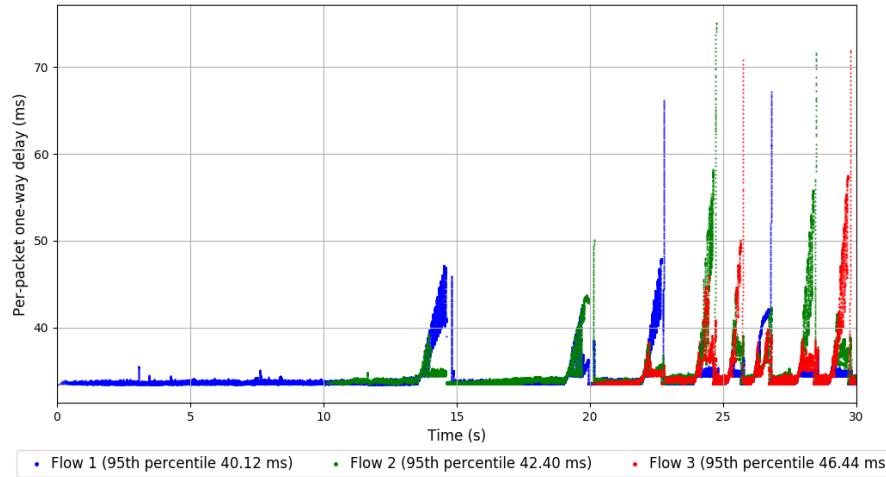
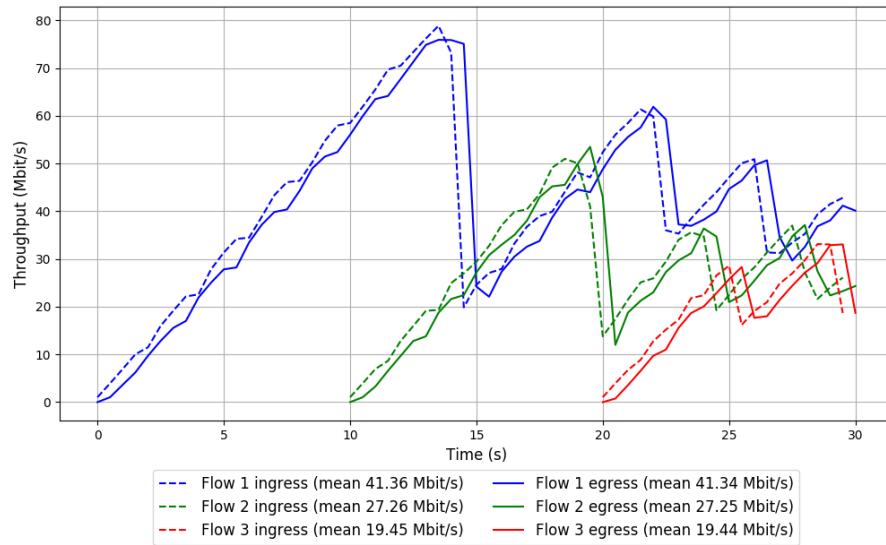


Run 4: Statistics of LEDBAT

```
Start at: 2018-09-08 01:50:06
End at: 2018-09-08 01:50:36
Local clock offset: 0.706 ms
Remote clock offset: 0.158 ms

# Below is generated by plot.py at 2018-09-08 02:39:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.91 Mbit/s
95th percentile per-packet one-way delay: 40.944 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 41.34 Mbit/s
95th percentile per-packet one-way delay: 40.123 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 27.25 Mbit/s
95th percentile per-packet one-way delay: 42.396 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 19.44 Mbit/s
95th percentile per-packet one-way delay: 46.444 ms
Loss rate: 0.68%
```

Run 4: Report of LEDBAT — Data Link

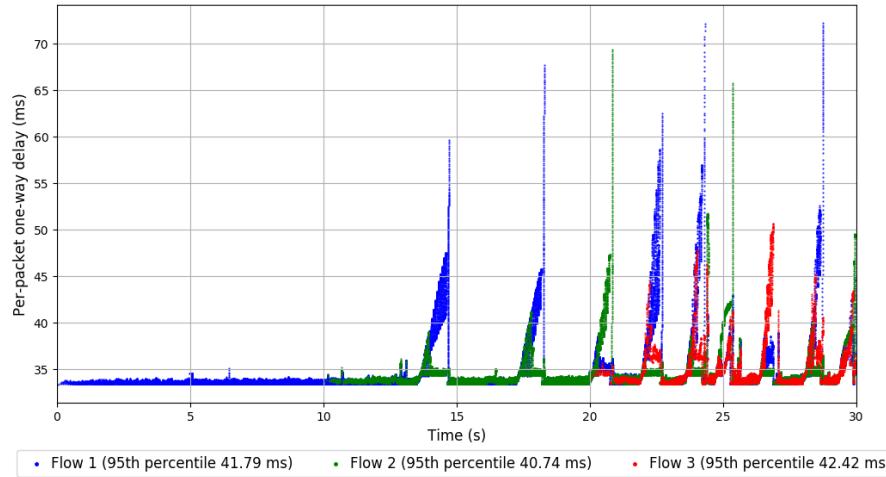
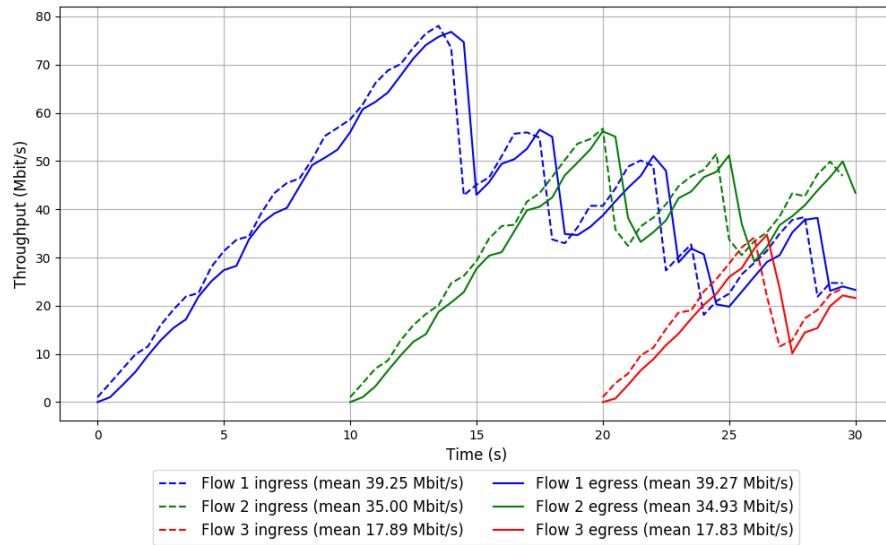


Run 5: Statistics of LEDBAT

```
Start at: 2018-09-08 02:14:55
End at: 2018-09-08 02:15:25
Local clock offset: 0.638 ms
Remote clock offset: 1.05 ms

# Below is generated by plot.py at 2018-09-08 02:40:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.42 Mbit/s
95th percentile per-packet one-way delay: 41.310 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 39.27 Mbit/s
95th percentile per-packet one-way delay: 41.792 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 34.93 Mbit/s
95th percentile per-packet one-way delay: 40.742 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 17.83 Mbit/s
95th percentile per-packet one-way delay: 42.421 ms
Loss rate: 0.99%
```

Run 5: Report of LEDBAT — Data Link

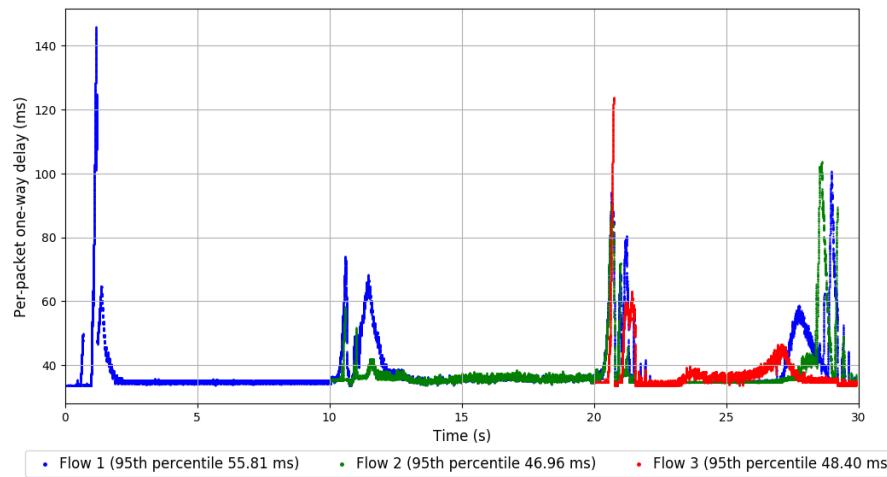
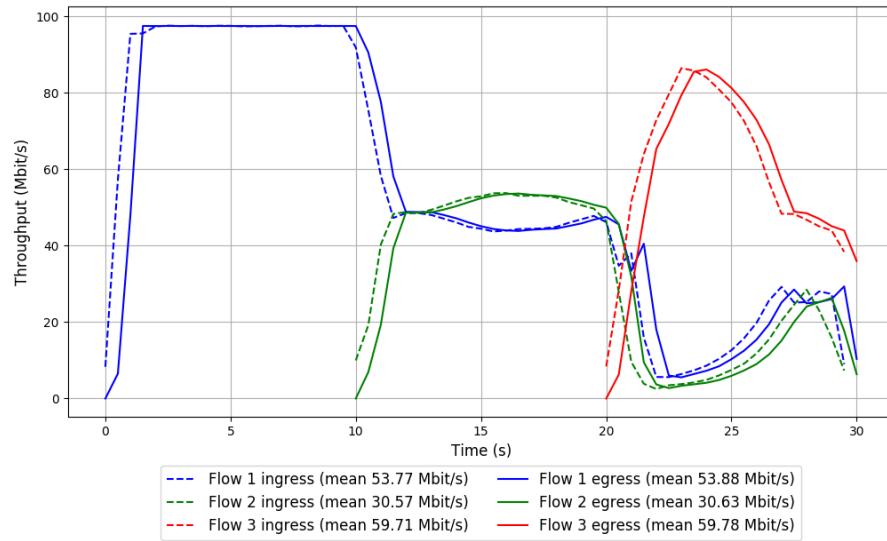


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-09-08 00:38:57
End at: 2018-09-08 00:39:27
Local clock offset: -2.996 ms
Remote clock offset: -3.71 ms

# Below is generated by plot.py at 2018-09-08 02:40:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.94 Mbit/s
95th percentile per-packet one-way delay: 54.289 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 53.88 Mbit/s
95th percentile per-packet one-way delay: 55.808 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 30.63 Mbit/s
95th percentile per-packet one-way delay: 46.963 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 59.78 Mbit/s
95th percentile per-packet one-way delay: 48.403 ms
Loss rate: 0.53%
```

Run 1: Report of Indigo-Muses — Data Link

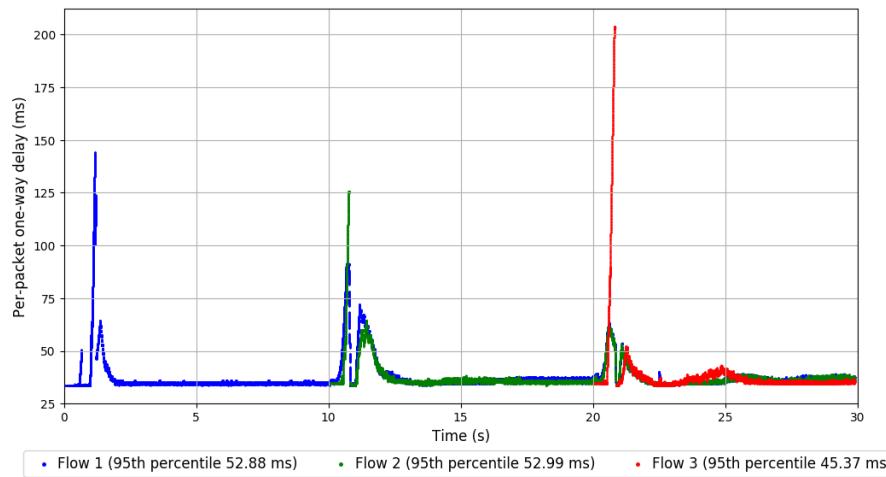
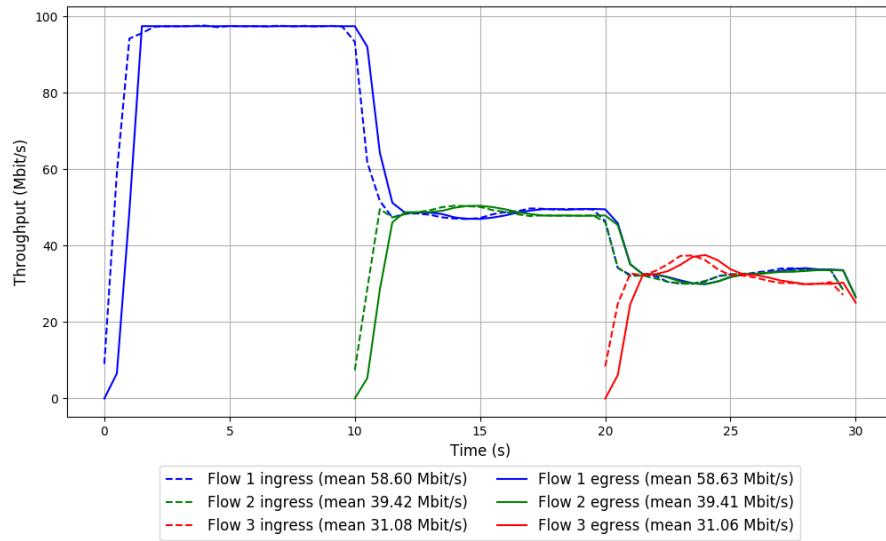


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-09-08 01:04:12
End at: 2018-09-08 01:04:42
Local clock offset: 0.488 ms
Remote clock offset: -2.418 ms

# Below is generated by plot.py at 2018-09-08 02:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 52.315 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 58.63 Mbit/s
95th percentile per-packet one-way delay: 52.884 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 52.991 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 31.06 Mbit/s
95th percentile per-packet one-way delay: 45.370 ms
Loss rate: 0.71%
```

Run 2: Report of Indigo-Muses — Data Link

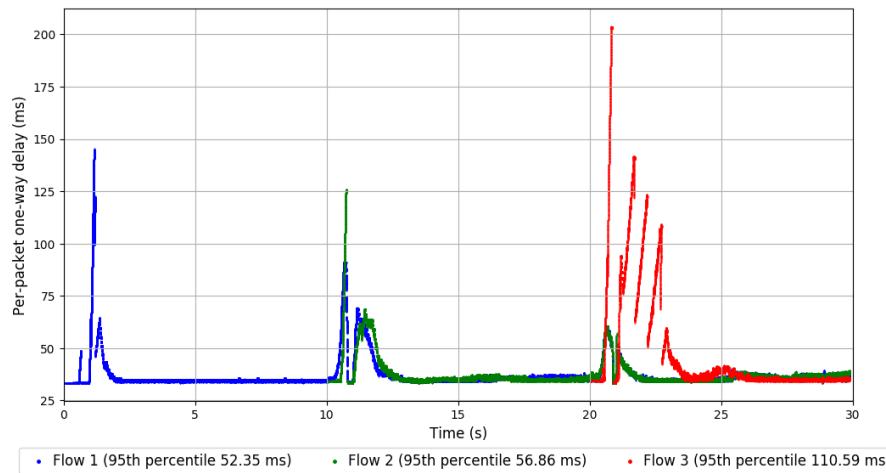
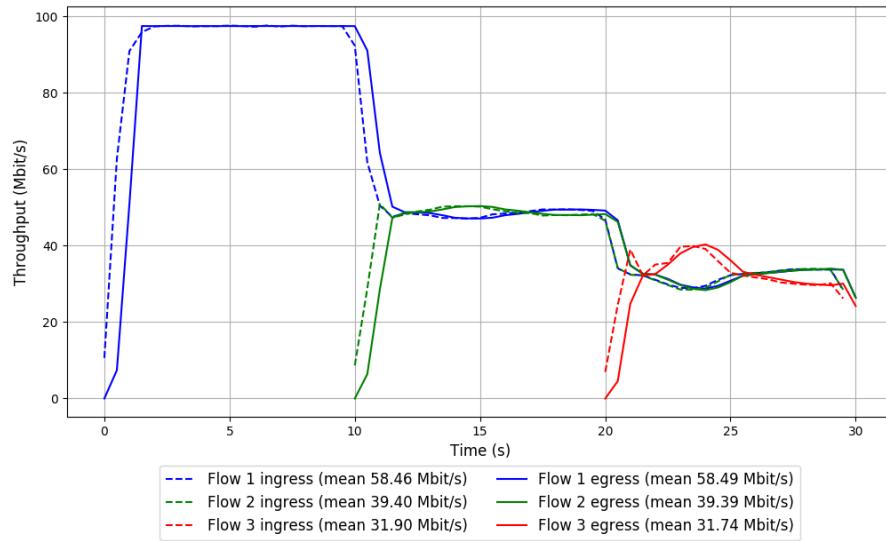


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-09-08 01:29:17
End at: 2018-09-08 01:29:47
Local clock offset: 0.728 ms
Remote clock offset: -0.637 ms

# Below is generated by plot.py at 2018-09-08 02:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.15 Mbit/s
95th percentile per-packet one-way delay: 59.422 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 58.49 Mbit/s
95th percentile per-packet one-way delay: 52.347 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 39.39 Mbit/s
95th percentile per-packet one-way delay: 56.861 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 31.74 Mbit/s
95th percentile per-packet one-way delay: 110.591 ms
Loss rate: 1.15%
```

Run 3: Report of Indigo-Muses — Data Link

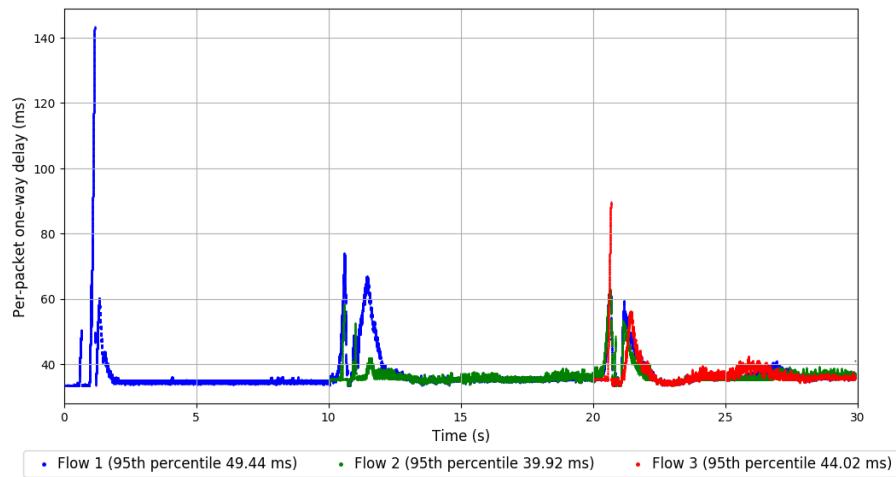
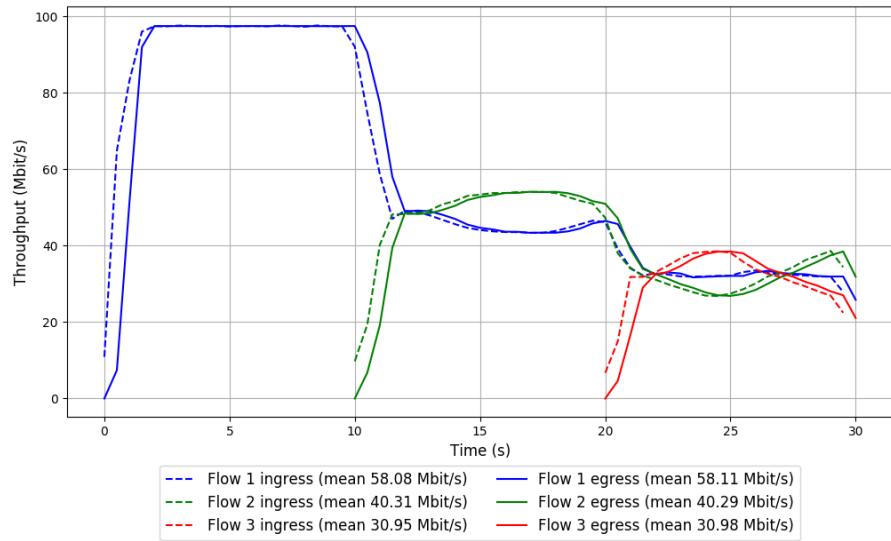


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-09-08 01:54:14
End at: 2018-09-08 01:54:44
Local clock offset: 0.65 ms
Remote clock offset: 0.284 ms

# Below is generated by plot.py at 2018-09-08 02:40:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.12 Mbit/s
95th percentile per-packet one-way delay: 46.343 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 58.11 Mbit/s
95th percentile per-packet one-way delay: 49.437 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 40.29 Mbit/s
95th percentile per-packet one-way delay: 39.921 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 30.98 Mbit/s
95th percentile per-packet one-way delay: 44.018 ms
Loss rate: 0.57%
```

Run 4: Report of Indigo-Muses — Data Link

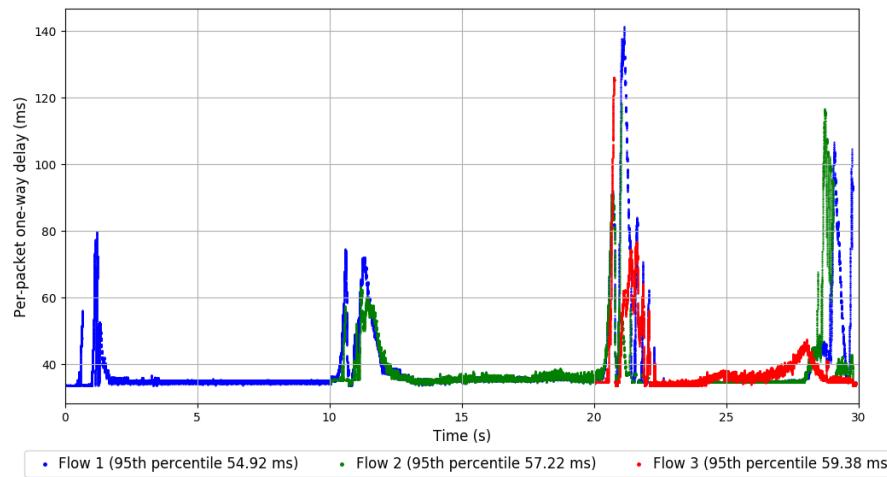
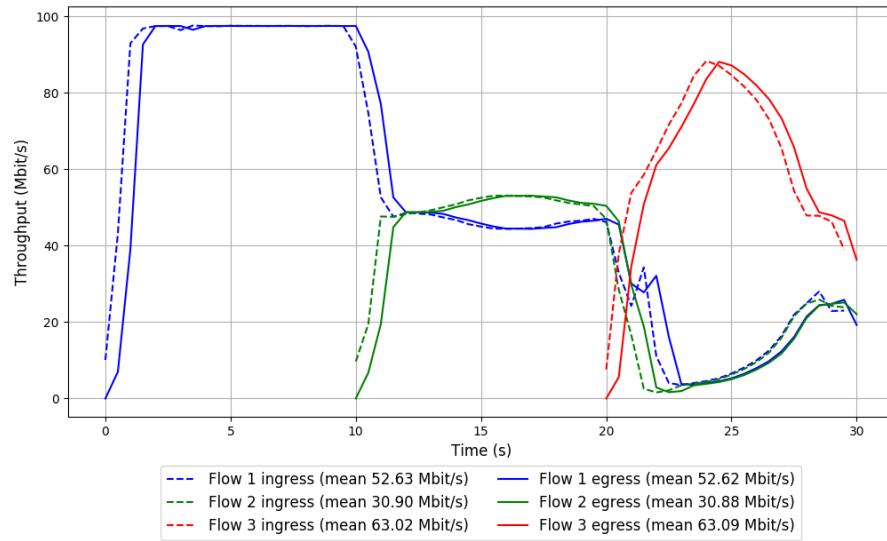


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-09-08 02:19:03
End at: 2018-09-08 02:19:33
Local clock offset: 0.614 ms
Remote clock offset: 0.998 ms

# Below is generated by plot.py at 2018-09-08 02:40:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.96 Mbit/s
95th percentile per-packet one-way delay: 57.044 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 52.62 Mbit/s
95th percentile per-packet one-way delay: 54.920 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 30.88 Mbit/s
95th percentile per-packet one-way delay: 57.218 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 63.09 Mbit/s
95th percentile per-packet one-way delay: 59.385 ms
Loss rate: 0.53%
```

Run 5: Report of Indigo-Muses — Data Link

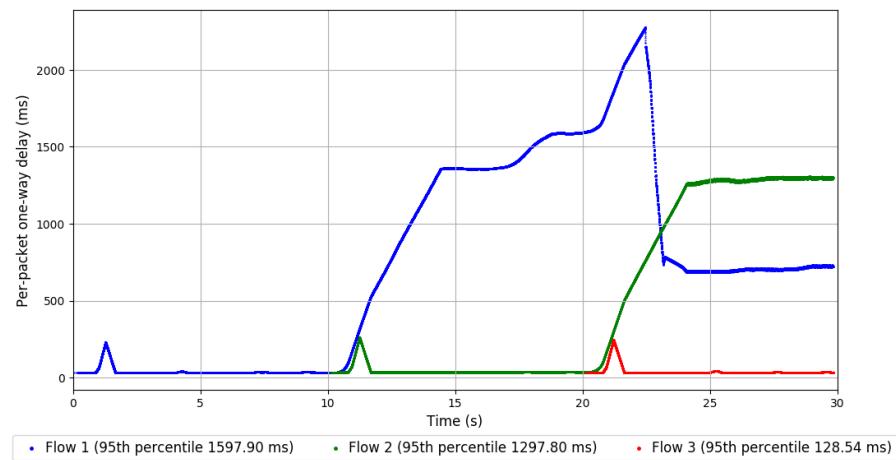
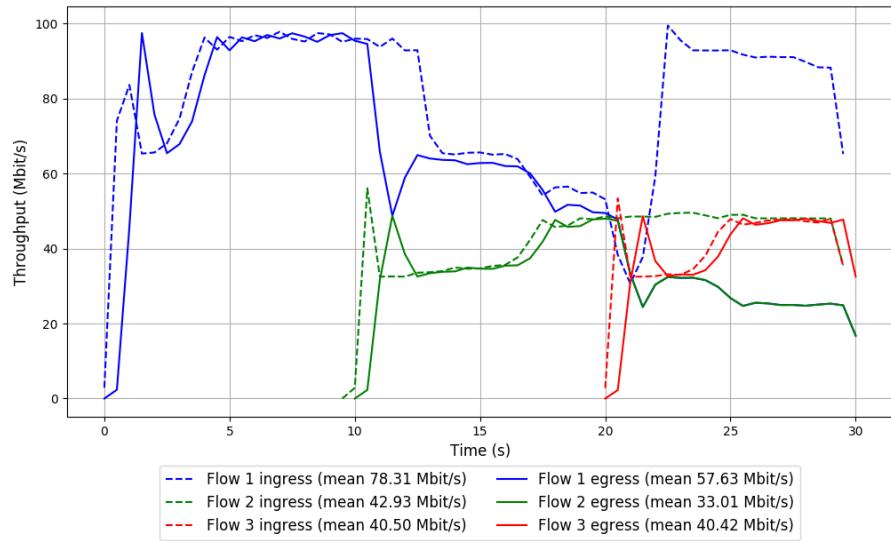


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-09-08 00:27:51
End at: 2018-09-08 00:28:21
Local clock offset: -3.053 ms
Remote clock offset: -4.517 ms

# Below is generated by plot.py at 2018-09-08 02:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.85 Mbit/s
95th percentile per-packet one-way delay: 1586.172 ms
Loss rate: 22.94%
-- Flow 1:
Average throughput: 57.63 Mbit/s
95th percentile per-packet one-way delay: 1597.903 ms
Loss rate: 26.56%
-- Flow 2:
Average throughput: 33.01 Mbit/s
95th percentile per-packet one-way delay: 1297.802 ms
Loss rate: 23.37%
-- Flow 3:
Average throughput: 40.42 Mbit/s
95th percentile per-packet one-way delay: 128.539 ms
Loss rate: 0.84%
```

Run 1: Report of PCC-Allegro — Data Link

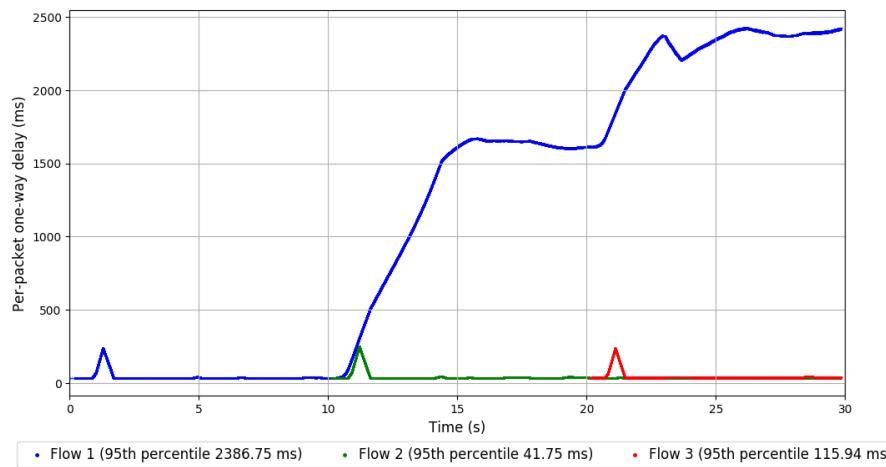
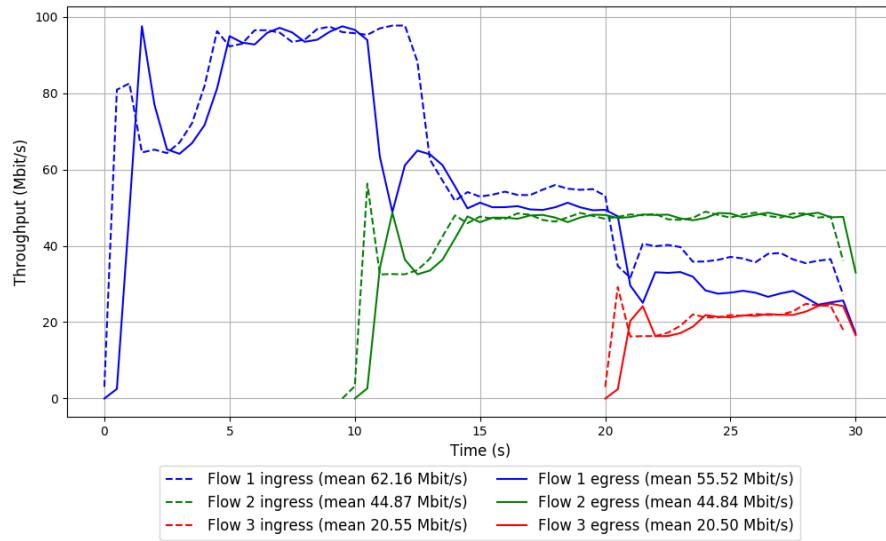


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-09-08 00:52:49
End at: 2018-09-08 00:53:19
Local clock offset: -0.874 ms
Remote clock offset: -2.857 ms

# Below is generated by plot.py at 2018-09-08 02:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.07 Mbit/s
95th percentile per-packet one-way delay: 2347.488 ms
Loss rate: 7.01%
-- Flow 1:
Average throughput: 55.52 Mbit/s
95th percentile per-packet one-way delay: 2386.747 ms
Loss rate: 10.86%
-- Flow 2:
Average throughput: 44.84 Mbit/s
95th percentile per-packet one-way delay: 41.753 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 20.50 Mbit/s
95th percentile per-packet one-way delay: 115.942 ms
Loss rate: 0.89%
```

Run 2: Report of PCC-Allegro — Data Link

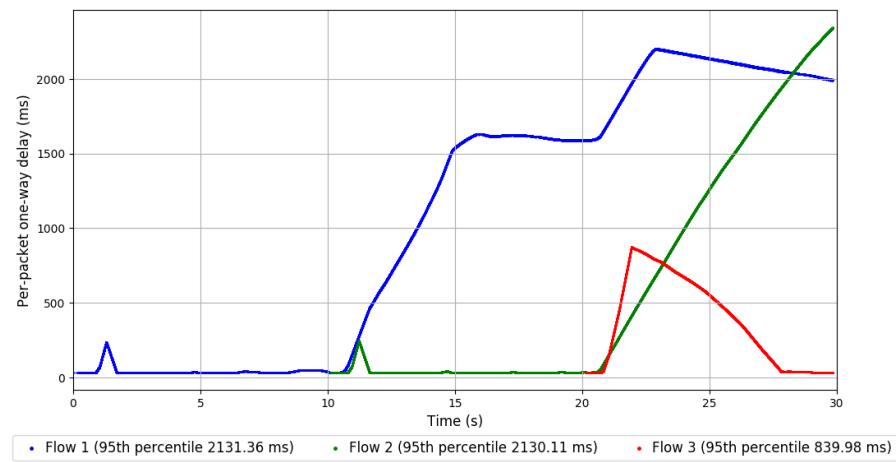
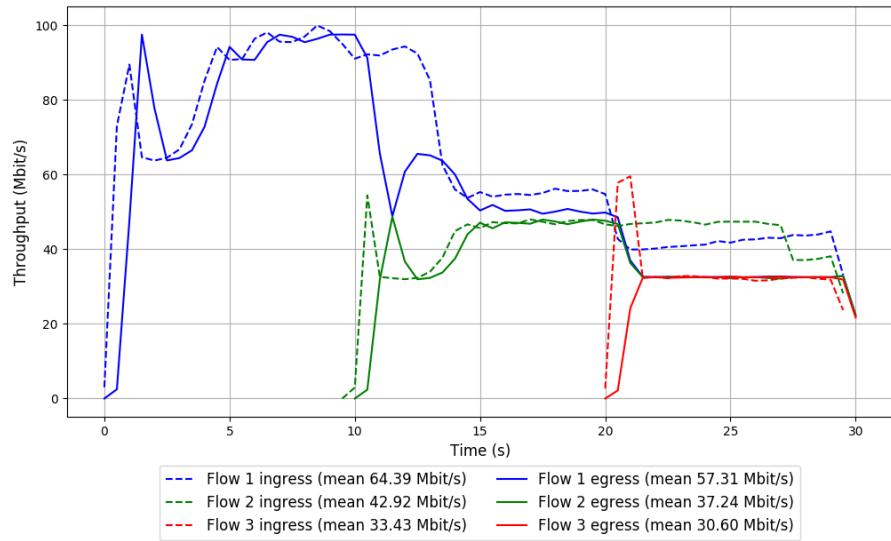


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-09-08 01:17:54
End at: 2018-09-08 01:18:24
Local clock offset: 1.042 ms
Remote clock offset: -1.4 ms

# Below is generated by plot.py at 2018-09-08 02:41:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.11 Mbit/s
95th percentile per-packet one-way delay: 2120.345 ms
Loss rate: 11.58%
-- Flow 1:
Average throughput: 57.31 Mbit/s
95th percentile per-packet one-way delay: 2131.363 ms
Loss rate: 11.17%
-- Flow 2:
Average throughput: 37.24 Mbit/s
95th percentile per-packet one-way delay: 2130.108 ms
Loss rate: 13.50%
-- Flow 3:
Average throughput: 30.60 Mbit/s
95th percentile per-packet one-way delay: 839.983 ms
Loss rate: 9.05%
```

Run 3: Report of PCC-Allegro — Data Link

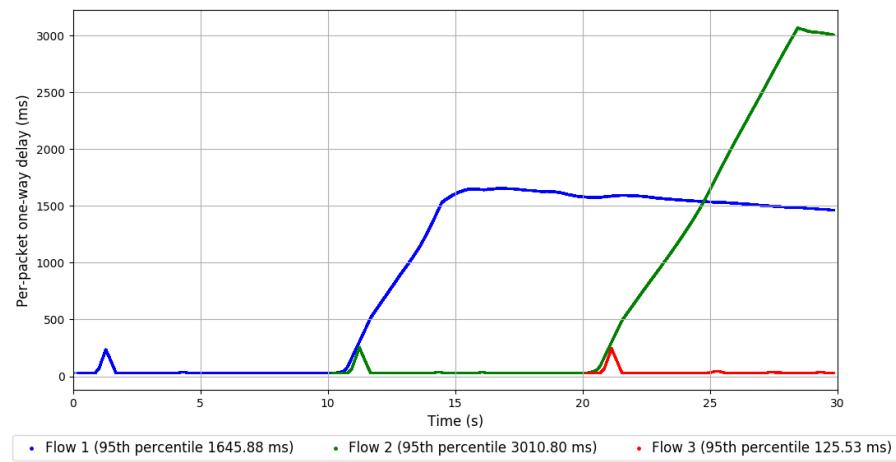
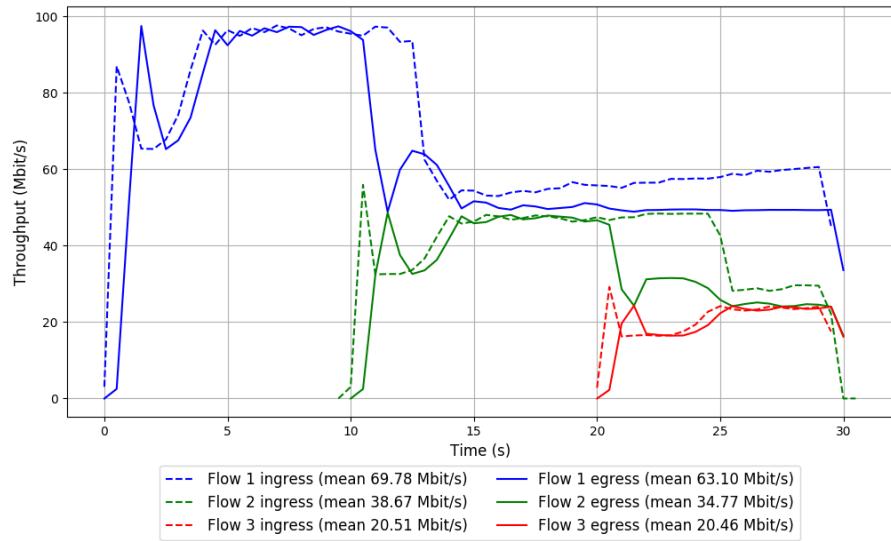


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-09-08 01:43:07
End at: 2018-09-08 01:43:37
Local clock offset: 0.819 ms
Remote clock offset: -0.315 ms

# Below is generated by plot.py at 2018-09-08 02:41:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.92 Mbit/s
95th percentile per-packet one-way delay: 1654.767 ms
Loss rate: 10.41%
-- Flow 1:
Average throughput: 63.10 Mbit/s
95th percentile per-packet one-way delay: 1645.883 ms
Loss rate: 9.77%
-- Flow 2:
Average throughput: 34.77 Mbit/s
95th percentile per-packet one-way delay: 3010.805 ms
Loss rate: 14.47%
-- Flow 3:
Average throughput: 20.46 Mbit/s
95th percentile per-packet one-way delay: 125.532 ms
Loss rate: 0.90%
```

Run 4: Report of PCC-Allegro — Data Link

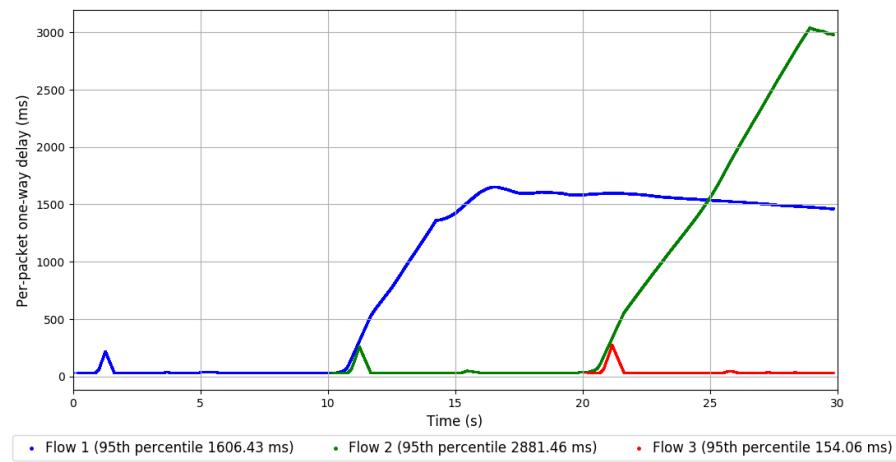
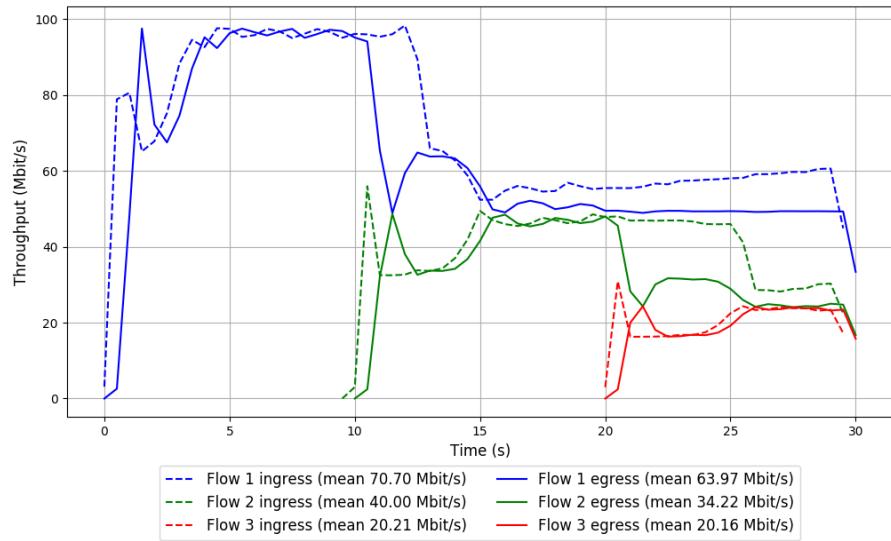


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-09-08 02:07:57
End at: 2018-09-08 02:08:27
Local clock offset: 0.596 ms
Remote clock offset: 0.84 ms

# Below is generated by plot.py at 2018-09-08 02:41:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.34 Mbit/s
95th percentile per-packet one-way delay: 1643.497 ms
Loss rate: 10.43%
-- Flow 1:
Average throughput: 63.97 Mbit/s
95th percentile per-packet one-way delay: 1606.432 ms
Loss rate: 9.70%
-- Flow 2:
Average throughput: 34.22 Mbit/s
95th percentile per-packet one-way delay: 2881.463 ms
Loss rate: 14.72%
-- Flow 3:
Average throughput: 20.16 Mbit/s
95th percentile per-packet one-way delay: 154.061 ms
Loss rate: 0.95%
```

Run 5: Report of PCC-Allegro — Data Link

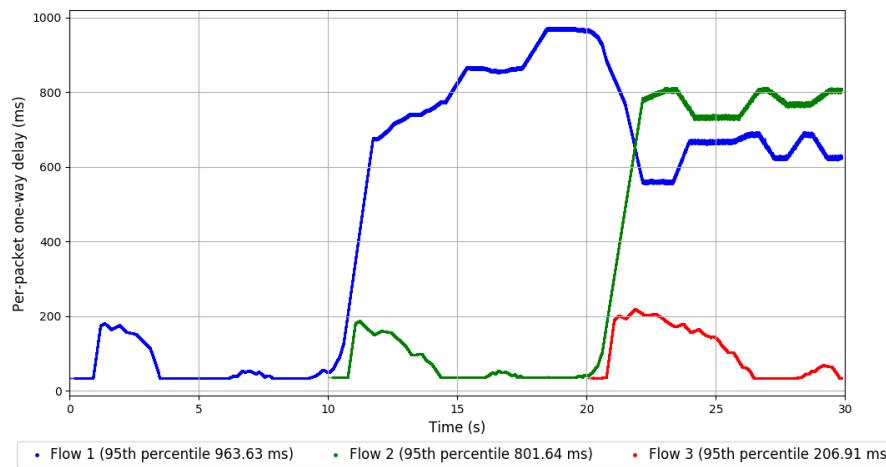
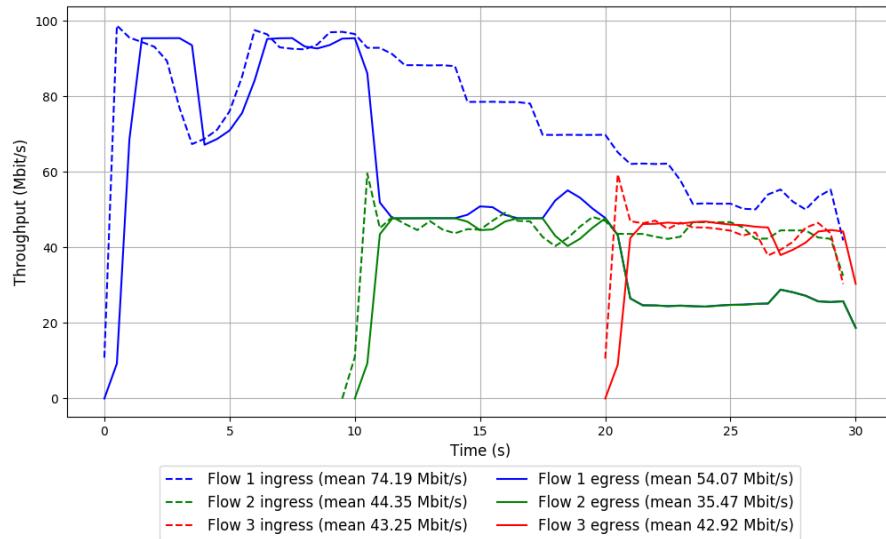


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-09-08 00:29:14
End at: 2018-09-08 00:29:44
Local clock offset: -3.065 ms
Remote clock offset: -4.69 ms

# Below is generated by plot.py at 2018-09-08 02:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.76 Mbit/s
95th percentile per-packet one-way delay: 899.610 ms
Loss rate: 22.40%
-- Flow 1:
Average throughput: 54.07 Mbit/s
95th percentile per-packet one-way delay: 963.631 ms
Loss rate: 27.28%
-- Flow 2:
Average throughput: 35.47 Mbit/s
95th percentile per-packet one-way delay: 801.645 ms
Loss rate: 20.29%
-- Flow 3:
Average throughput: 42.92 Mbit/s
95th percentile per-packet one-way delay: 206.909 ms
Loss rate: 1.40%
```

Run 1: Report of PCC-Expr — Data Link

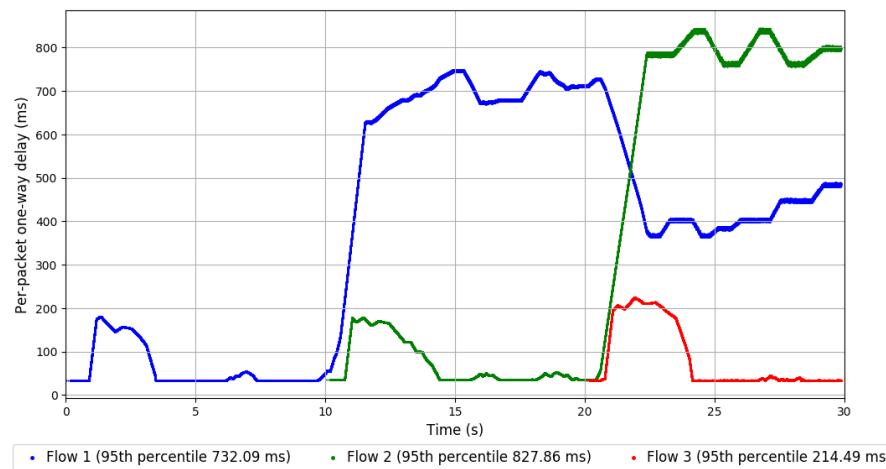
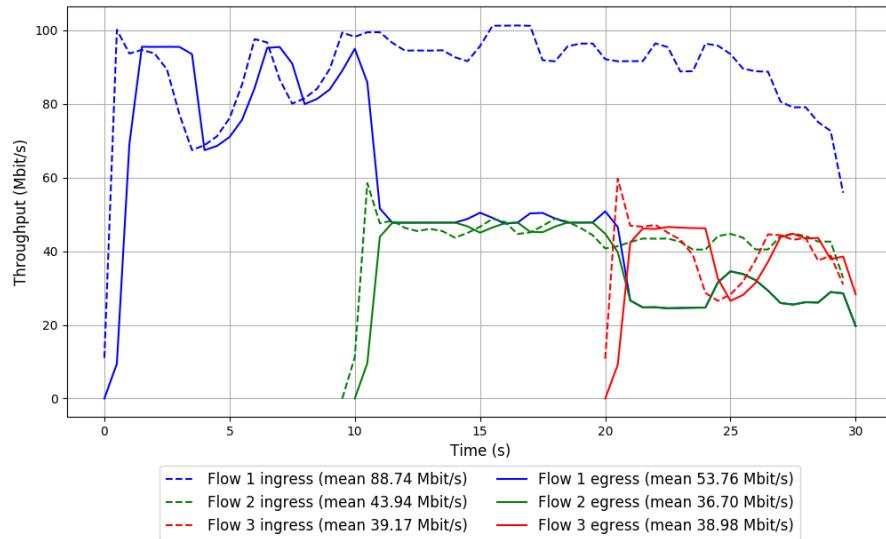


Run 2: Statistics of PCC-Expr

```
Start at: 2018-09-08 00:54:11
End at: 2018-09-08 00:54:41
Local clock offset: -0.624 ms
Remote clock offset: -2.739 ms

# Below is generated by plot.py at 2018-09-08 02:43:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.99 Mbit/s
95th percentile per-packet one-way delay: 782.263 ms
Loss rate: 30.65%
-- Flow 1:
Average throughput: 53.76 Mbit/s
95th percentile per-packet one-way delay: 732.085 ms
Loss rate: 39.54%
-- Flow 2:
Average throughput: 36.70 Mbit/s
95th percentile per-packet one-way delay: 827.859 ms
Loss rate: 16.76%
-- Flow 3:
Average throughput: 38.98 Mbit/s
95th percentile per-packet one-way delay: 214.493 ms
Loss rate: 1.14%
```

Run 2: Report of PCC-Expr — Data Link

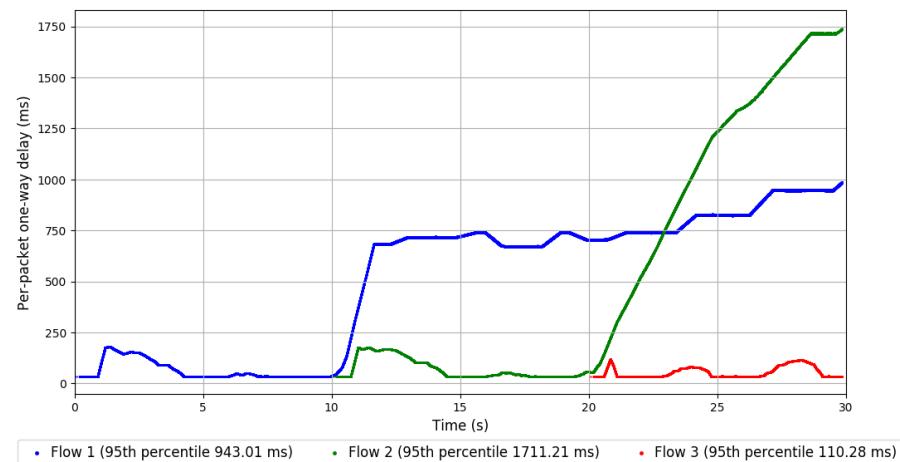
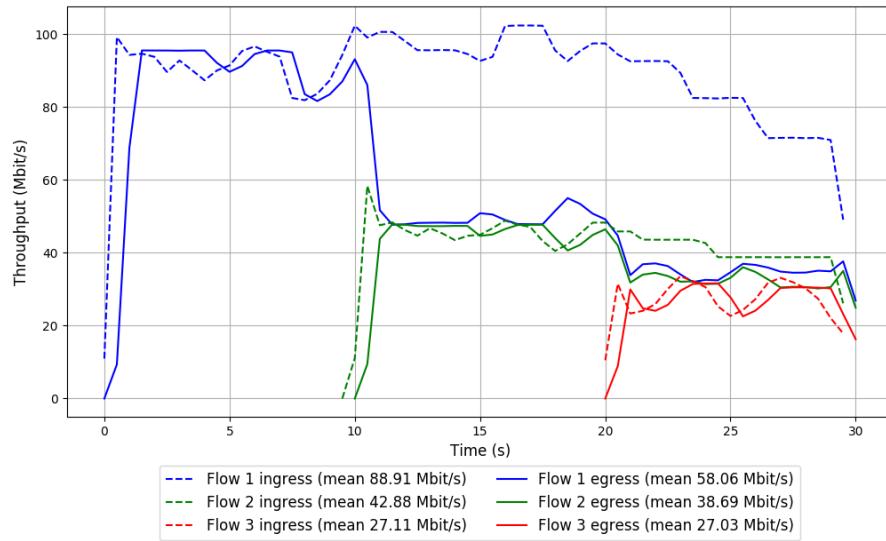


Run 3: Statistics of PCC-Expr

```
Start at: 2018-09-08 01:19:16
End at: 2018-09-08 01:19:46
Local clock offset: 0.949 ms
Remote clock offset: -1.395 ms

# Below is generated by plot.py at 2018-09-08 02:43:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.65 Mbit/s
95th percentile per-packet one-way delay: 1308.762 ms
Loss rate: 26.84%
-- Flow 1:
Average throughput: 58.06 Mbit/s
95th percentile per-packet one-way delay: 943.012 ms
Loss rate: 34.84%
-- Flow 2:
Average throughput: 38.69 Mbit/s
95th percentile per-packet one-way delay: 1711.210 ms
Loss rate: 10.03%
-- Flow 3:
Average throughput: 27.03 Mbit/s
95th percentile per-packet one-way delay: 110.285 ms
Loss rate: 0.96%
```

Run 3: Report of PCC-Expr — Data Link

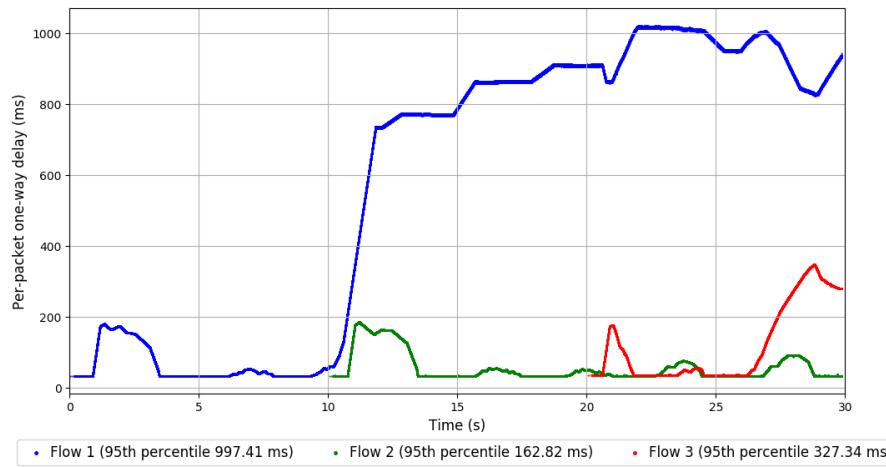
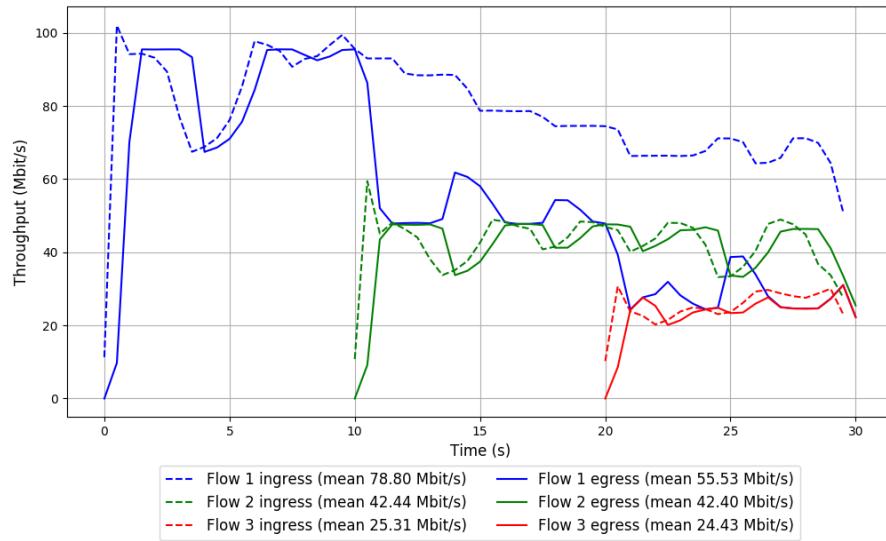


Run 4: Statistics of PCC-Expr

```
Start at: 2018-09-08 01:44:29
End at: 2018-09-08 01:44:59
Local clock offset: 0.823 ms
Remote clock offset: -0.108 ms

# Below is generated by plot.py at 2018-09-08 02:43:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.74 Mbit/s
95th percentile per-packet one-way delay: 954.641 ms
Loss rate: 20.66%
-- Flow 1:
Average throughput: 55.53 Mbit/s
95th percentile per-packet one-way delay: 997.415 ms
Loss rate: 29.66%
-- Flow 2:
Average throughput: 42.40 Mbit/s
95th percentile per-packet one-way delay: 162.822 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 24.43 Mbit/s
95th percentile per-packet one-way delay: 327.341 ms
Loss rate: 4.12%
```

Run 4: Report of PCC-Expr — Data Link

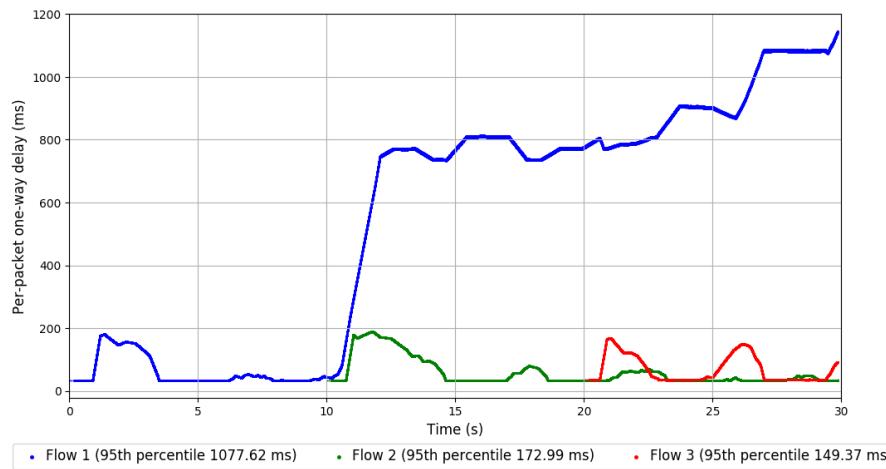
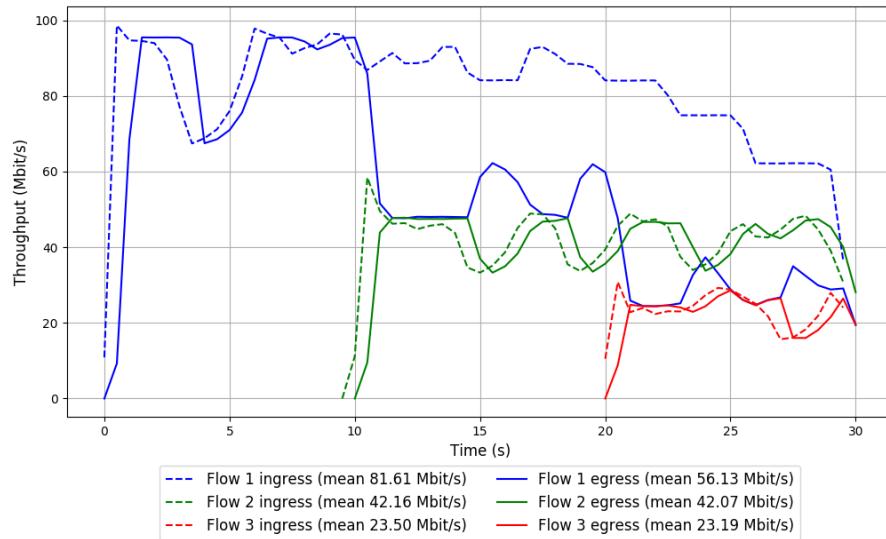


Run 5: Statistics of PCC-Expr

```
Start at: 2018-09-08 02:09:19
End at: 2018-09-08 02:09:49
Local clock offset: 0.686 ms
Remote clock offset: 0.903 ms

# Below is generated by plot.py at 2018-09-08 02:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.72 Mbit/s
95th percentile per-packet one-way delay: 903.357 ms
Loss rate: 22.06%
-- Flow 1:
Average throughput: 56.13 Mbit/s
95th percentile per-packet one-way delay: 1077.616 ms
Loss rate: 31.37%
-- Flow 2:
Average throughput: 42.07 Mbit/s
95th percentile per-packet one-way delay: 172.992 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 23.19 Mbit/s
95th percentile per-packet one-way delay: 149.368 ms
Loss rate: 2.01%
```

Run 5: Report of PCC-Expr — Data Link

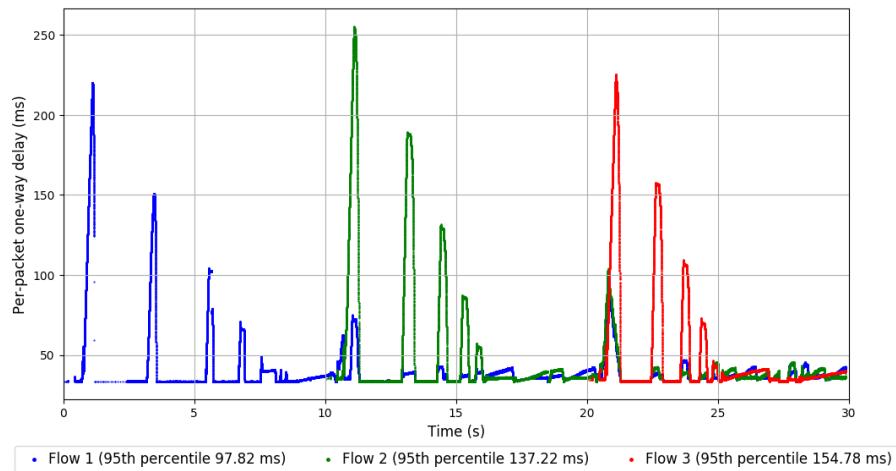
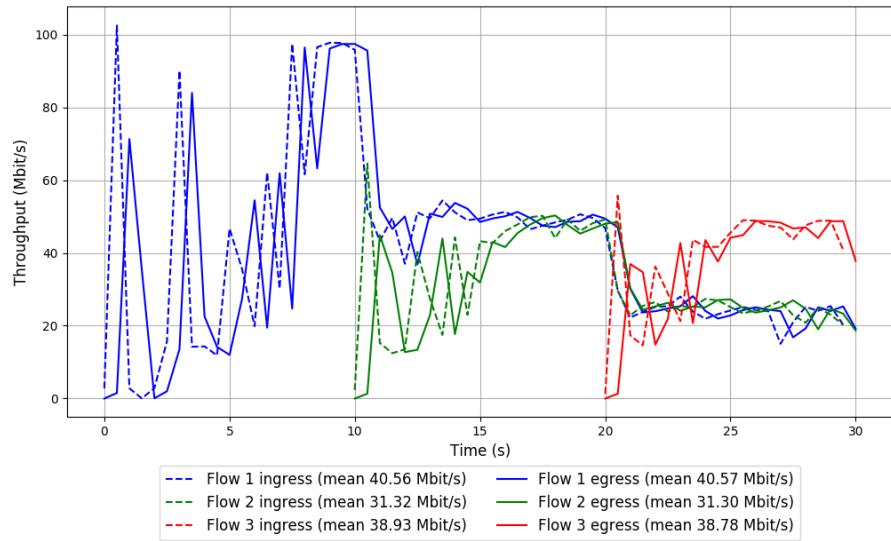


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-09-08 00:40:20
End at: 2018-09-08 00:40:50
Local clock offset: -3.13 ms
Remote clock offset: -3.564 ms

# Below is generated by plot.py at 2018-09-08 02:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.14 Mbit/s
95th percentile per-packet one-way delay: 121.865 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 40.57 Mbit/s
95th percentile per-packet one-way delay: 97.823 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 31.30 Mbit/s
95th percentile per-packet one-way delay: 137.216 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 38.78 Mbit/s
95th percentile per-packet one-way delay: 154.781 ms
Loss rate: 1.02%
```

Run 1: Report of QUIC Cubic — Data Link

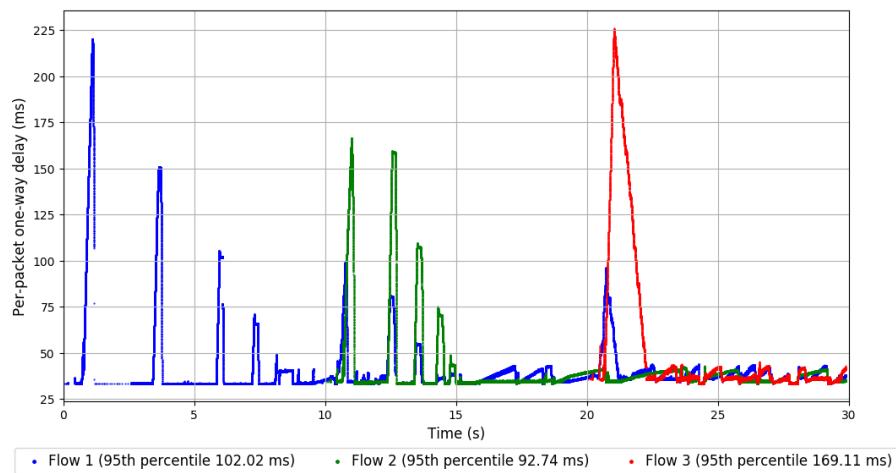
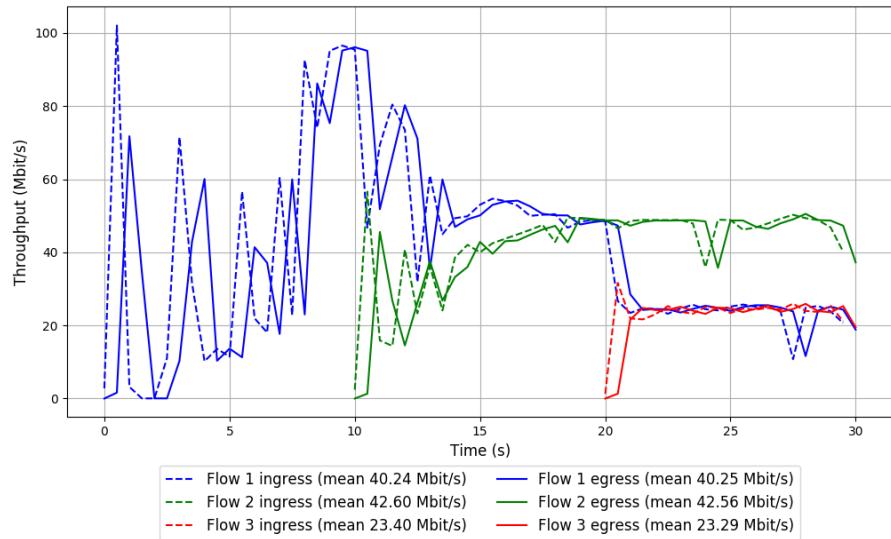


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-09-08 01:05:34
End at: 2018-09-08 01:06:04
Local clock offset: 0.674 ms
Remote clock offset: -2.188 ms

# Below is generated by plot.py at 2018-09-08 02:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.20 Mbit/s
95th percentile per-packet one-way delay: 102.568 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 40.25 Mbit/s
95th percentile per-packet one-way delay: 102.018 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 42.56 Mbit/s
95th percentile per-packet one-way delay: 92.736 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 23.29 Mbit/s
95th percentile per-packet one-way delay: 169.107 ms
Loss rate: 1.13%
```

Run 2: Report of QUIC Cubic — Data Link

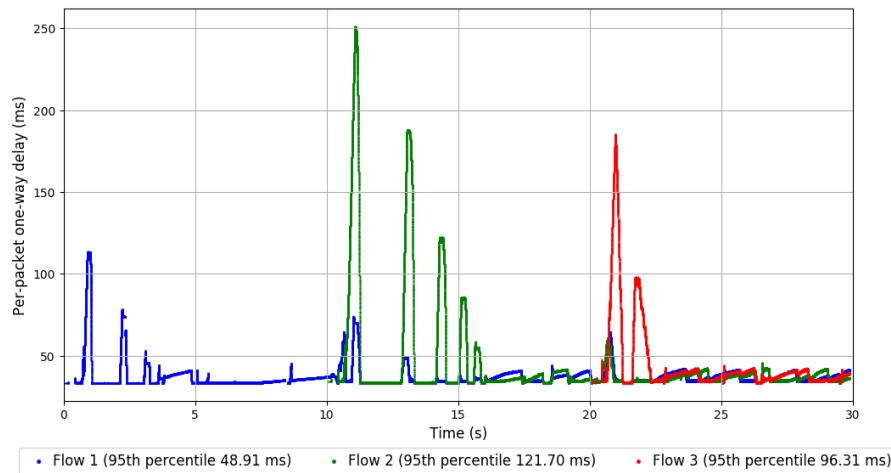
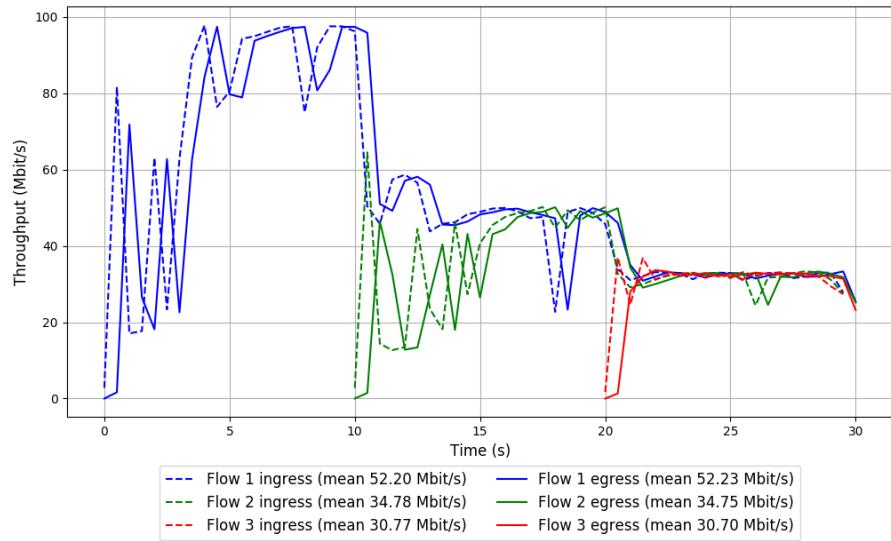


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-09-08 01:30:44
End at: 2018-09-08 01:31:14
Local clock offset: 0.648 ms
Remote clock offset: -0.622 ms

# Below is generated by plot.py at 2018-09-08 02:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.44 Mbit/s
95th percentile per-packet one-way delay: 73.850 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 52.23 Mbit/s
95th percentile per-packet one-way delay: 48.909 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 34.75 Mbit/s
95th percentile per-packet one-way delay: 121.705 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 30.70 Mbit/s
95th percentile per-packet one-way delay: 96.306 ms
Loss rate: 0.88%
```

Run 3: Report of QUIC Cubic — Data Link

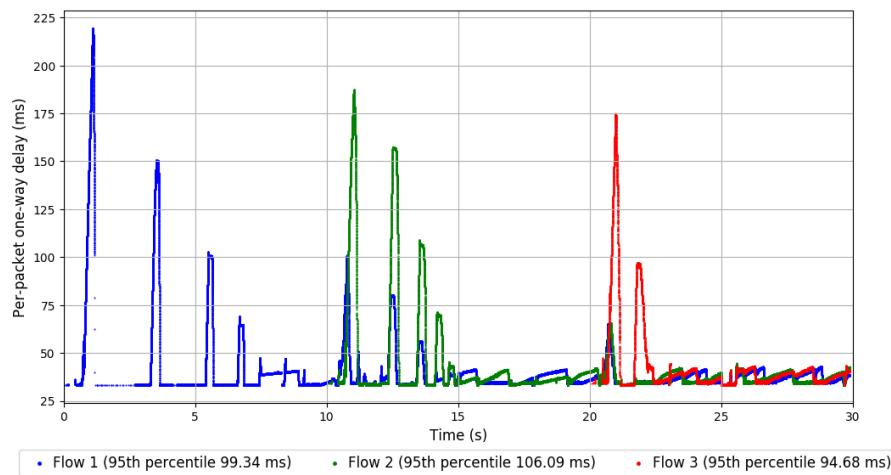
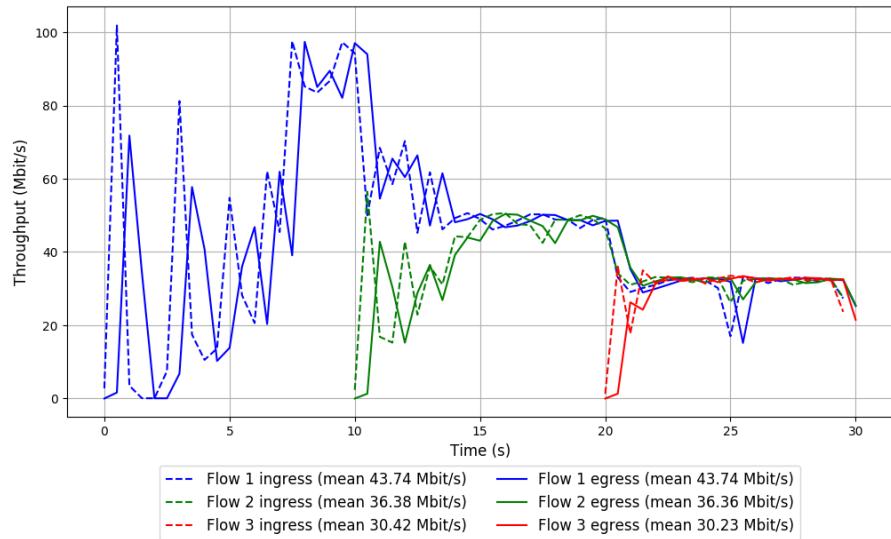


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-09-08 01:55:37
End at: 2018-09-08 01:56:07
Local clock offset: 0.55 ms
Remote clock offset: 0.452 ms

# Below is generated by plot.py at 2018-09-08 02:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.85 Mbit/s
95th percentile per-packet one-way delay: 99.272 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 43.74 Mbit/s
95th percentile per-packet one-way delay: 99.345 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 36.36 Mbit/s
95th percentile per-packet one-way delay: 106.090 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 30.23 Mbit/s
95th percentile per-packet one-way delay: 94.679 ms
Loss rate: 1.28%
```

Run 4: Report of QUIC Cubic — Data Link

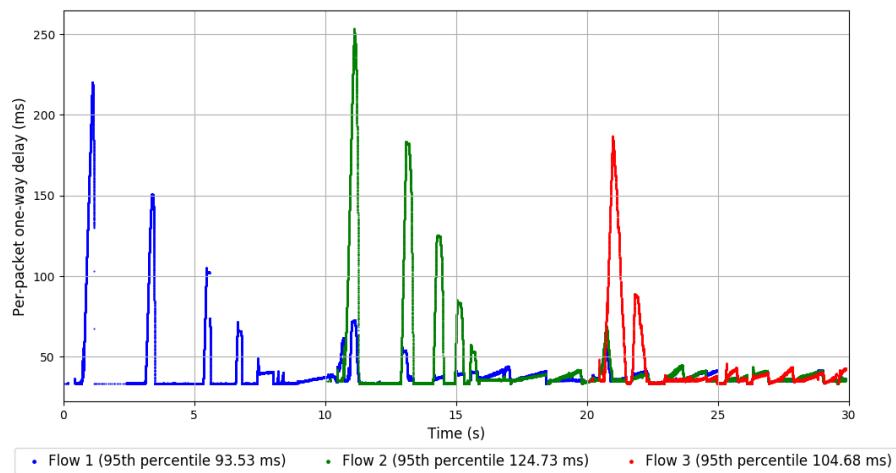
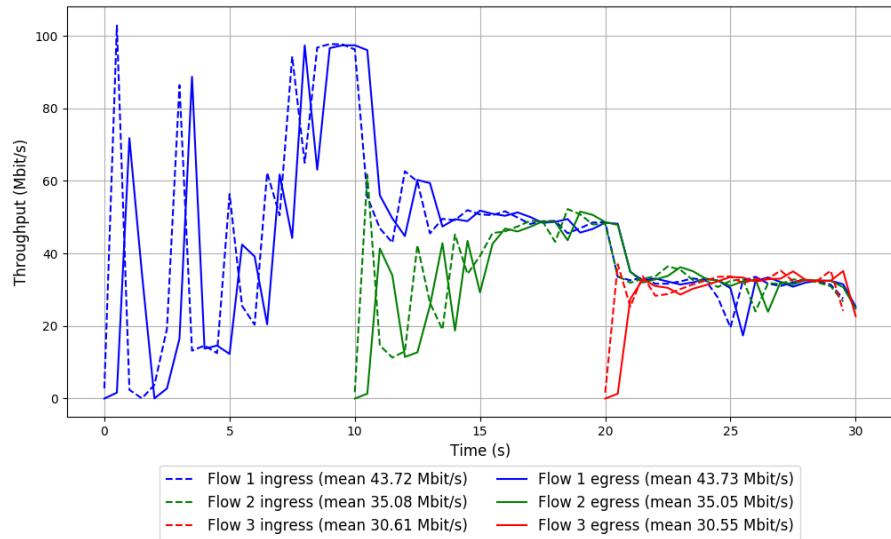


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-09-08 02:20:26
End at: 2018-09-08 02:20:56
Local clock offset: 0.558 ms
Remote clock offset: 1.25 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.09 Mbit/s
95th percentile per-packet one-way delay: 102.357 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 43.73 Mbit/s
95th percentile per-packet one-way delay: 93.527 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 35.05 Mbit/s
95th percentile per-packet one-way delay: 124.732 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 30.55 Mbit/s
95th percentile per-packet one-way delay: 104.681 ms
Loss rate: 0.85%
```

Run 5: Report of QUIC Cubic — Data Link

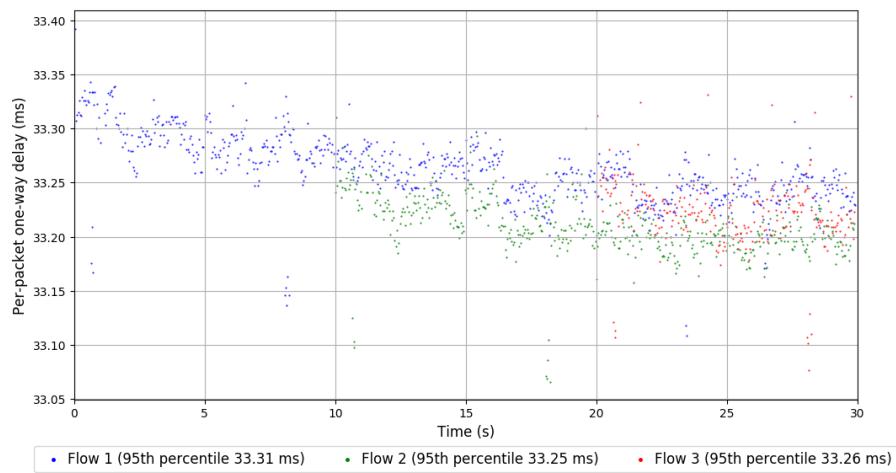
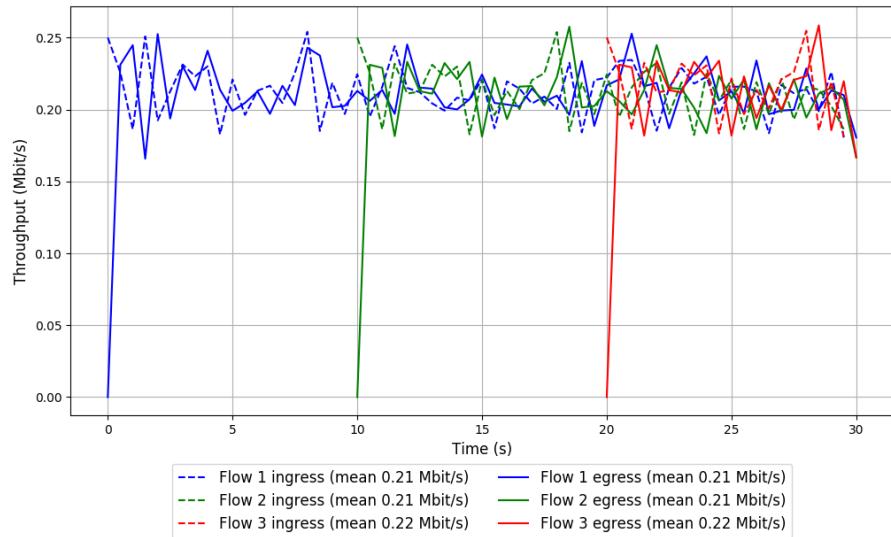


Run 1: Statistics of SCReAM

```
Start at: 2018-09-08 00:48:44
End at: 2018-09-08 00:49:14
Local clock offset: -1.953 ms
Remote clock offset: -3.046 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.304 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.313 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.251 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.259 ms
Loss rate: 0.71%
```

Run 1: Report of SCReAM — Data Link

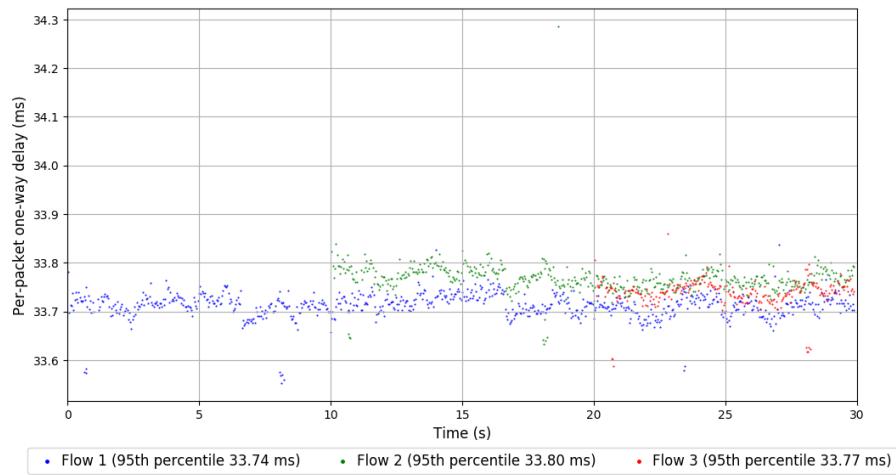
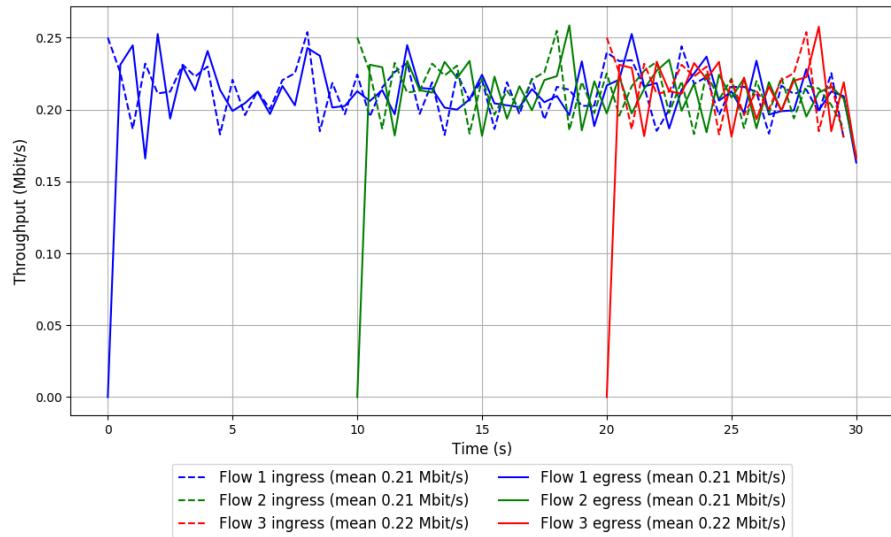


Run 2: Statistics of SCReAM

```
Start at: 2018-09-08 01:13:47
End at: 2018-09-08 01:14:17
Local clock offset: 1.181 ms
Remote clock offset: -1.885 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.791 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.745 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.805 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.772 ms
Loss rate: 0.71%
```

Run 2: Report of SCReAM — Data Link

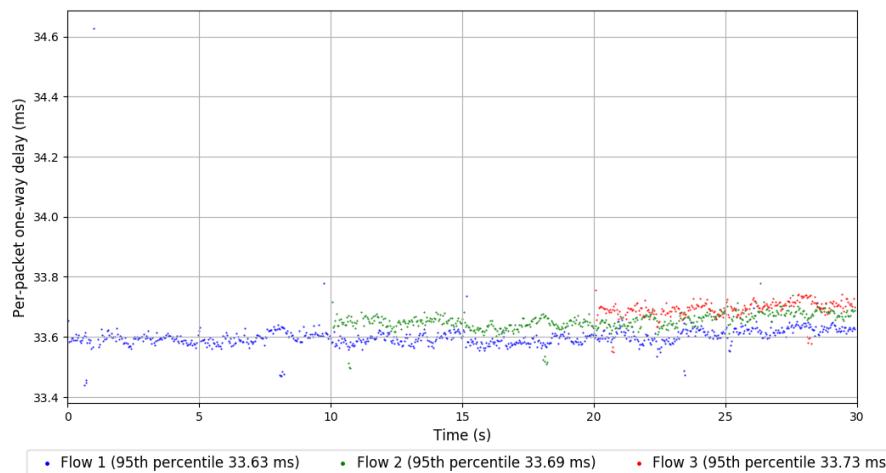
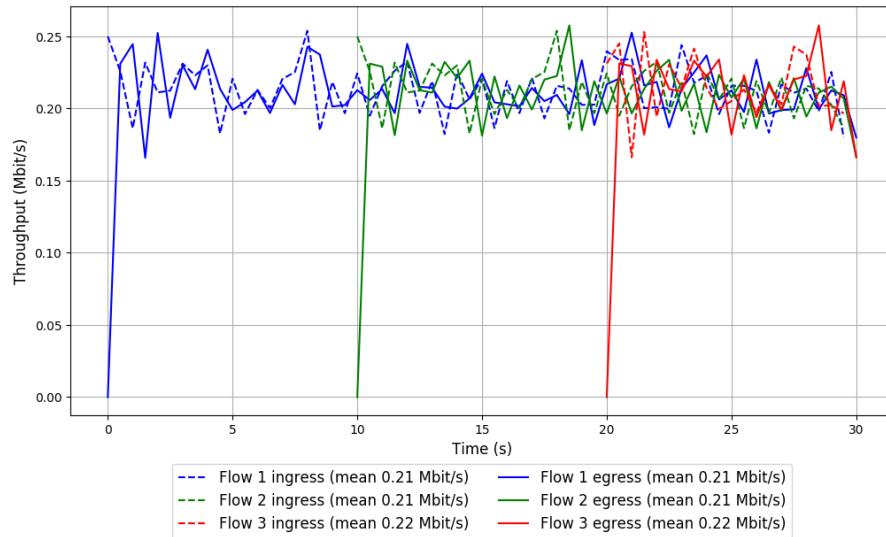


```
Run 3: Statistics of SCReAM

Start at: 2018-09-08 01:39:02
End at: 2018-09-08 01:39:32
Local clock offset: 0.782 ms
Remote clock offset: -0.401 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.709 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.635 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.691 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.731 ms
Loss rate: 0.71%
```

Run 3: Report of SCReAM — Data Link

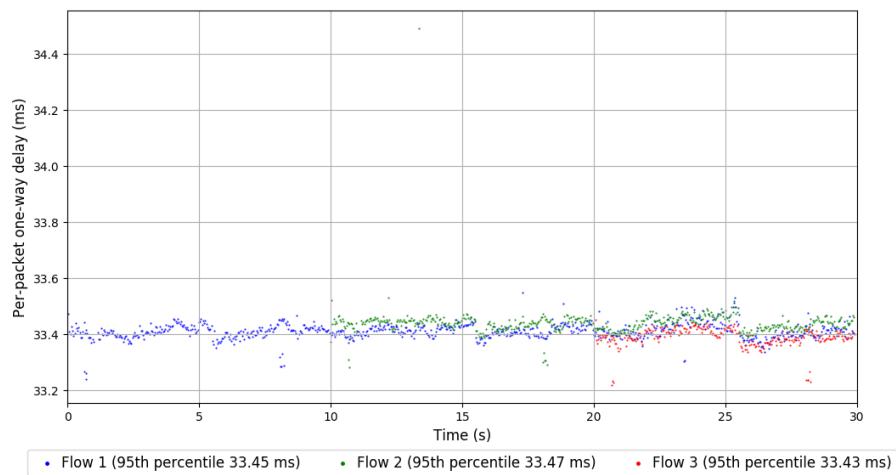
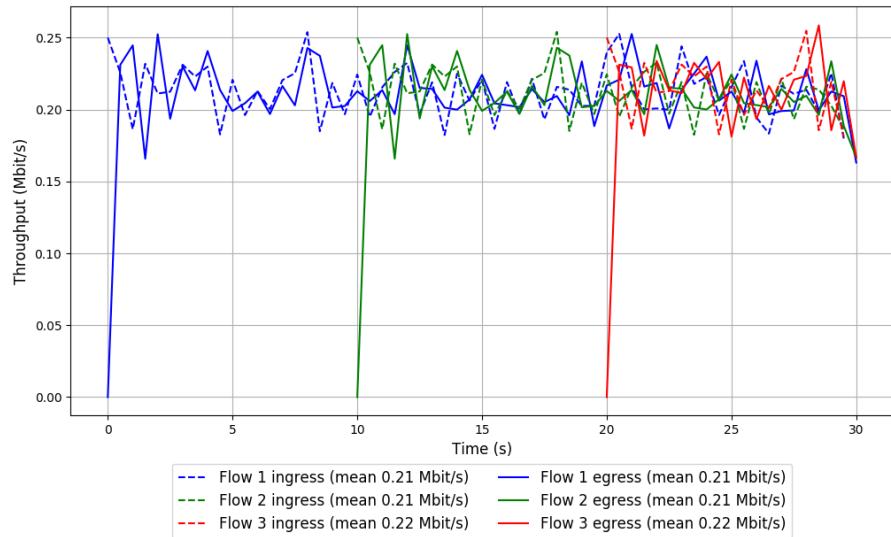


Run 4: Statistics of SCReAM

```
Start at: 2018-09-08 02:03:52
End at: 2018-09-08 02:04:22
Local clock offset: 0.577 ms
Remote clock offset: 0.769 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.468 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.455 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.474 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.430 ms
Loss rate: 0.71%
```

Run 4: Report of SCReAM — Data Link

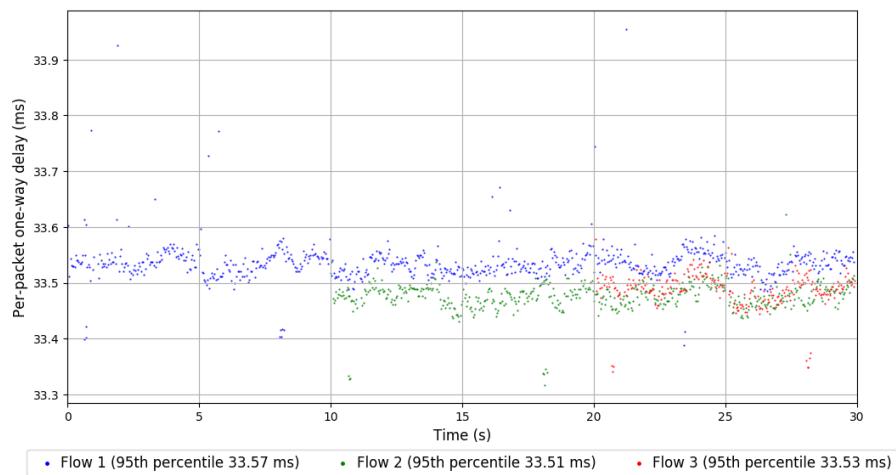
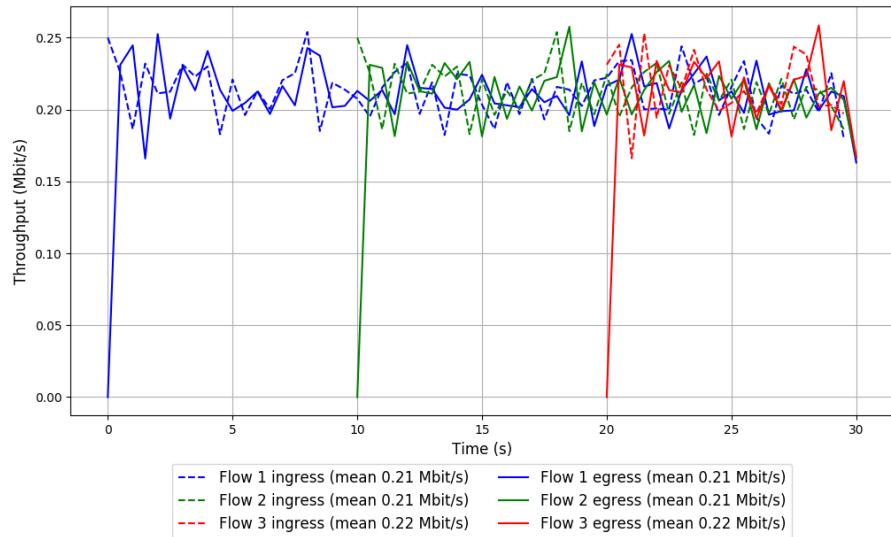


Run 5: Statistics of SCReAM

```
Start at: 2018-09-08 02:28:48
End at: 2018-09-08 02:29:18
Local clock offset: 0.437 ms
Remote clock offset: 1.472 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.561 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.569 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.508 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.527 ms
Loss rate: 0.71%
```

Run 5: Report of SCReAM — Data Link

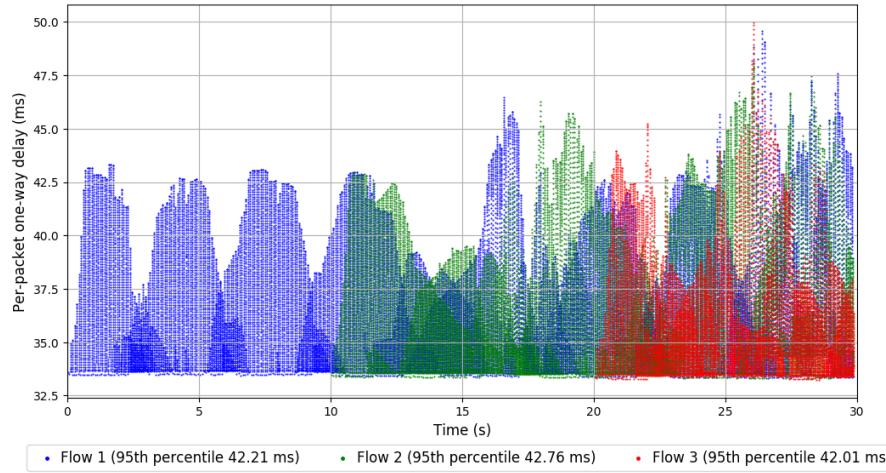
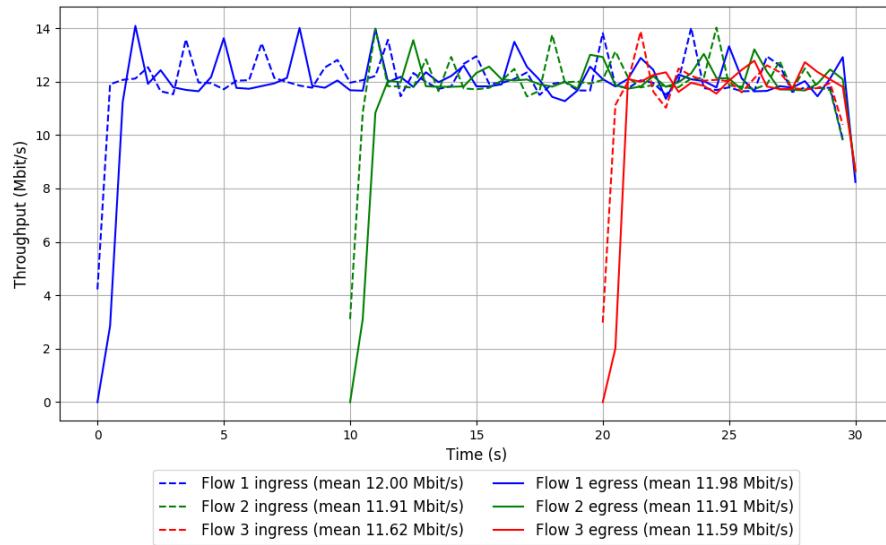


Run 1: Statistics of Sprout

```
Start at: 2018-09-08 00:44:28
End at: 2018-09-08 00:44:58
Local clock offset: -3.119 ms
Remote clock offset: -3.35 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.70 Mbit/s
95th percentile per-packet one-way delay: 42.354 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 11.98 Mbit/s
95th percentile per-packet one-way delay: 42.207 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 11.91 Mbit/s
95th percentile per-packet one-way delay: 42.759 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 11.59 Mbit/s
95th percentile per-packet one-way delay: 42.012 ms
Loss rate: 0.82%
```

Run 1: Report of Sprout — Data Link

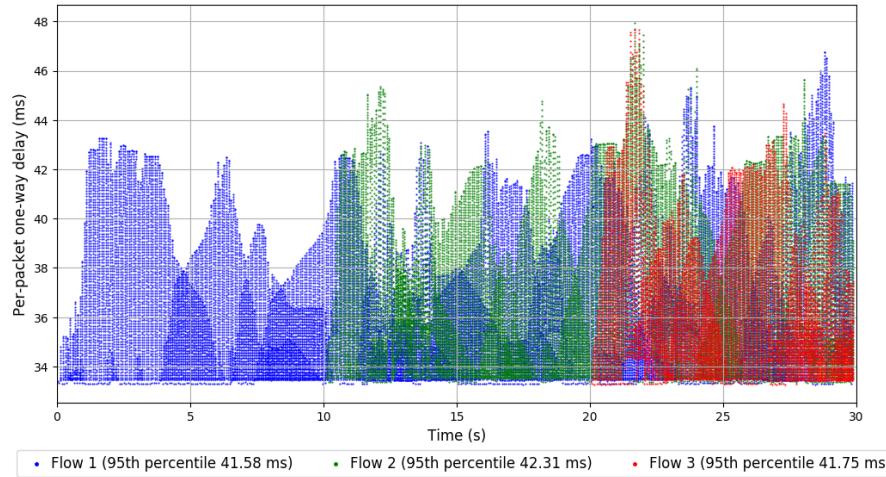
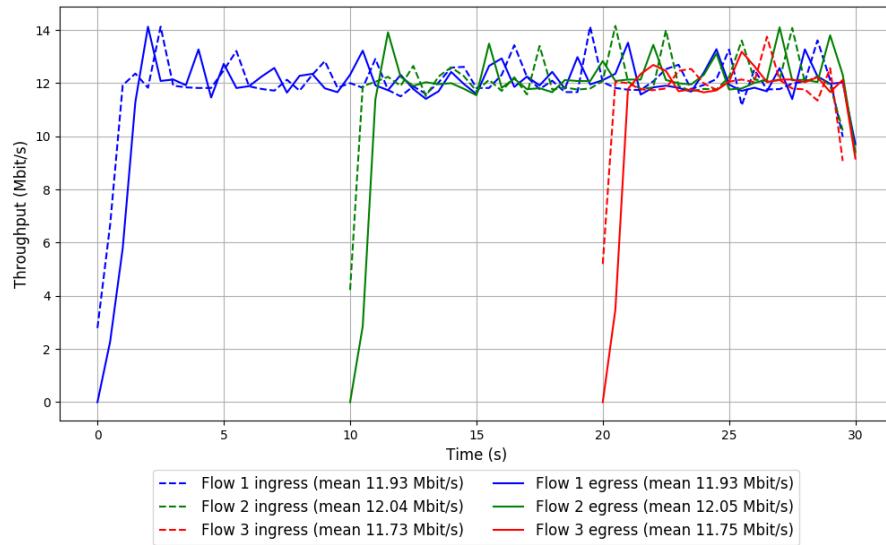


Run 2: Statistics of Sprout

```
Start at: 2018-09-08 01:09:41
End at: 2018-09-08 01:10:11
Local clock offset: 0.865 ms
Remote clock offset: -1.932 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.80 Mbit/s
95th percentile per-packet one-way delay: 41.904 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 41.578 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 42.309 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 41.746 ms
Loss rate: 0.40%
```

Run 2: Report of Sprout — Data Link

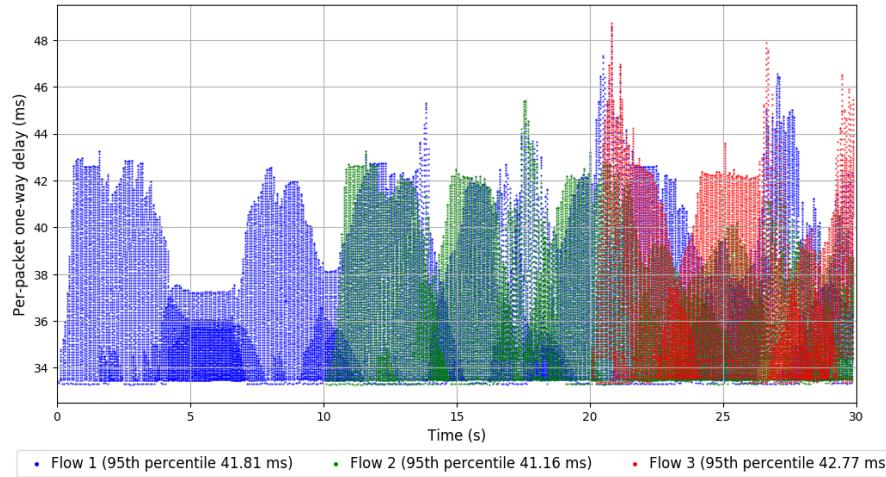
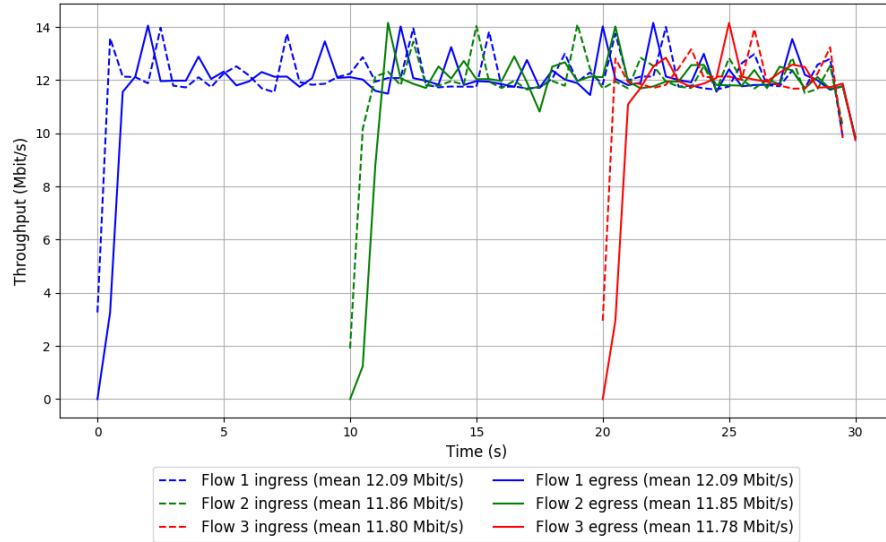


Run 3: Statistics of Sprout

```
Start at: 2018-09-08 01:34:55
End at: 2018-09-08 01:35:25
Local clock offset: 0.733 ms
Remote clock offset: -0.382 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.84 Mbit/s
95th percentile per-packet one-way delay: 41.781 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 12.09 Mbit/s
95th percentile per-packet one-way delay: 41.812 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 11.85 Mbit/s
95th percentile per-packet one-way delay: 41.161 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 42.768 ms
Loss rate: 0.84%
```

Run 3: Report of Sprout — Data Link

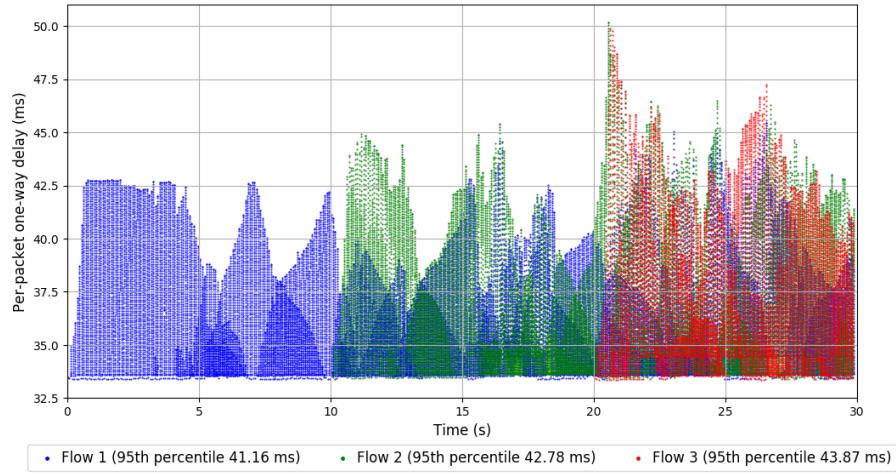
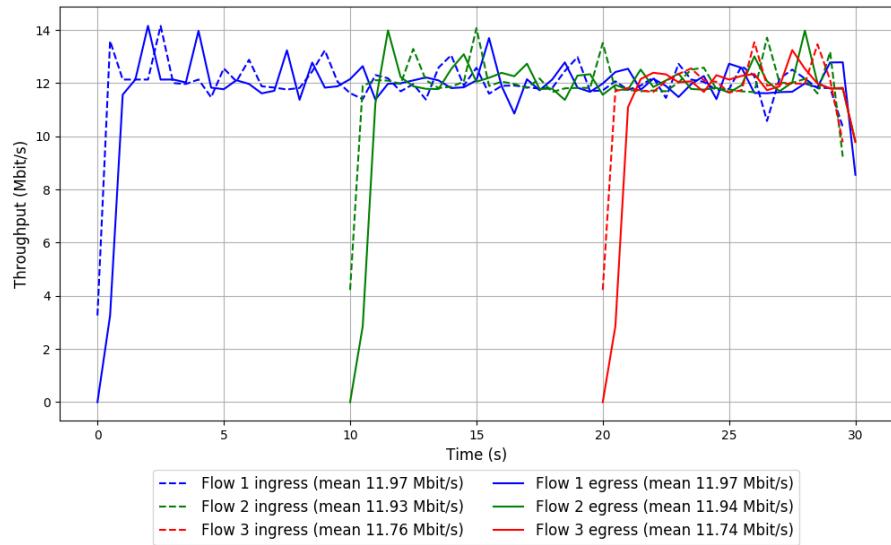


Run 4: Statistics of Sprout

```
Start at: 2018-09-08 01:59:45
End at: 2018-09-08 02:00:15
Local clock offset: 0.565 ms
Remote clock offset: 0.439 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.77 Mbit/s
95th percentile per-packet one-way delay: 42.207 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 41.160 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 11.94 Mbit/s
95th percentile per-packet one-way delay: 42.784 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 43.867 ms
Loss rate: 0.84%
```

Run 4: Report of Sprout — Data Link

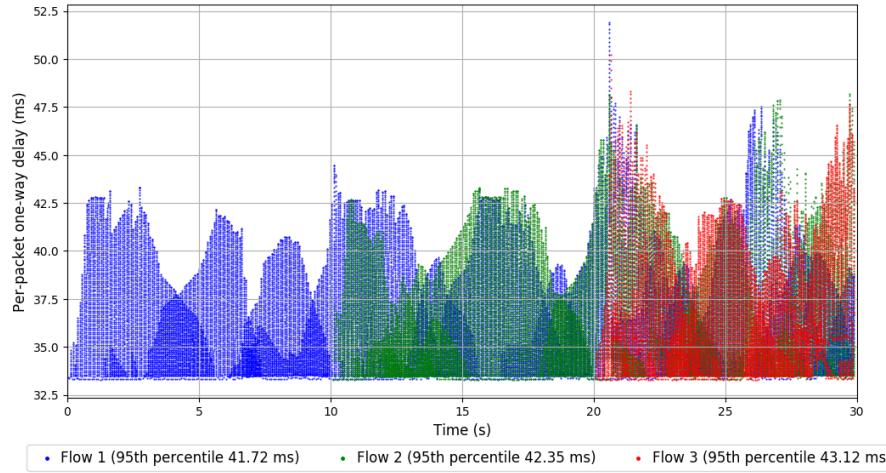
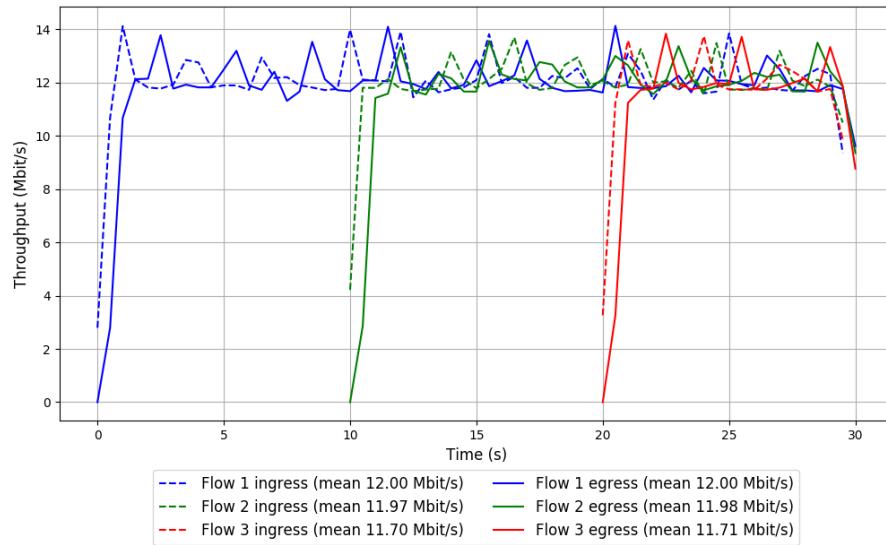


Run 5: Statistics of Sprout

```
Start at: 2018-09-08 02:24:34
End at: 2018-09-08 02:25:04
Local clock offset: 0.481 ms
Remote clock offset: 1.385 ms

# Below is generated by plot.py at 2018-09-08 02:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.81 Mbit/s
95th percentile per-packet one-way delay: 42.182 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 12.00 Mbit/s
95th percentile per-packet one-way delay: 41.724 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 11.98 Mbit/s
95th percentile per-packet one-way delay: 42.349 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 43.117 ms
Loss rate: 0.47%
```

Run 5: Report of Sprout — Data Link

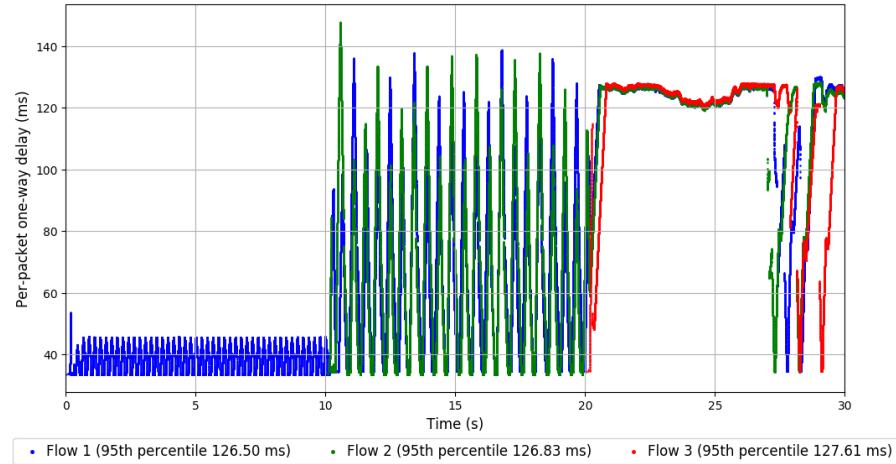
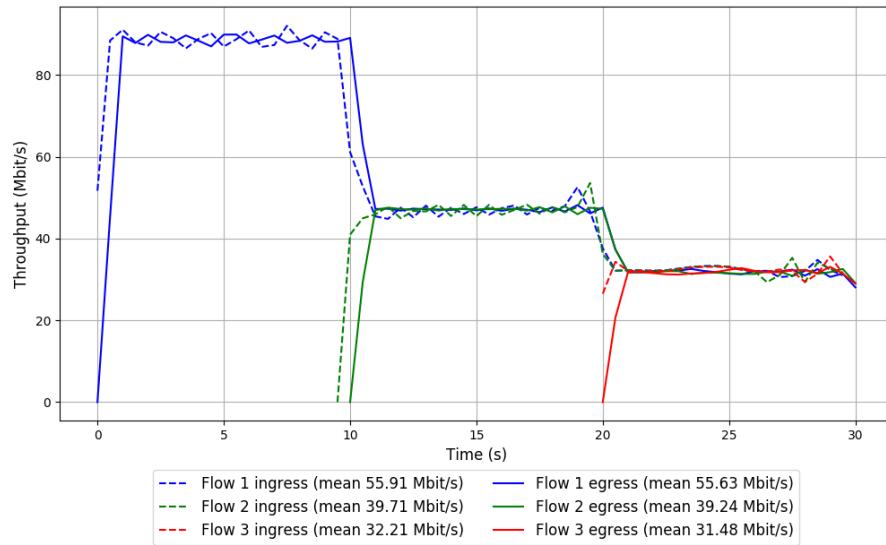


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-09-08 00:31:59
End at: 2018-09-08 00:32:29
Local clock offset: -2.969 ms
Remote clock offset: -4.278 ms

# Below is generated by plot.py at 2018-09-08 02:45:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 127.013 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 55.63 Mbit/s
95th percentile per-packet one-way delay: 126.499 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 39.24 Mbit/s
95th percentile per-packet one-way delay: 126.835 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 31.48 Mbit/s
95th percentile per-packet one-way delay: 127.611 ms
Loss rate: 2.89%
```

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

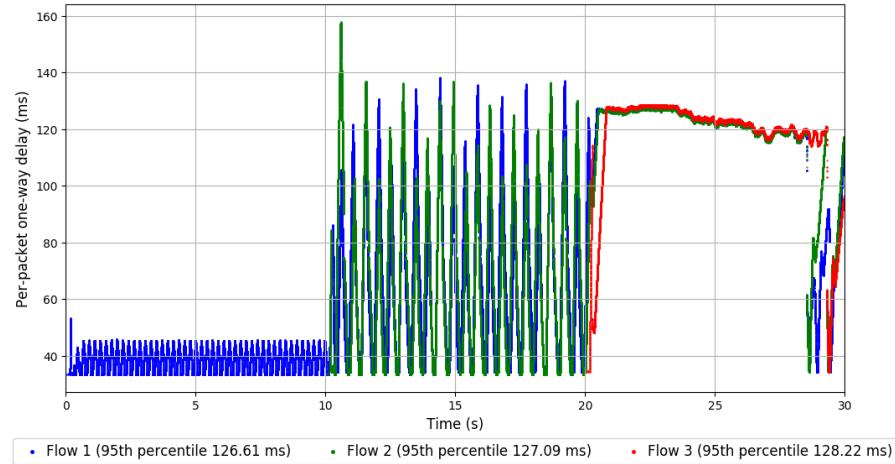
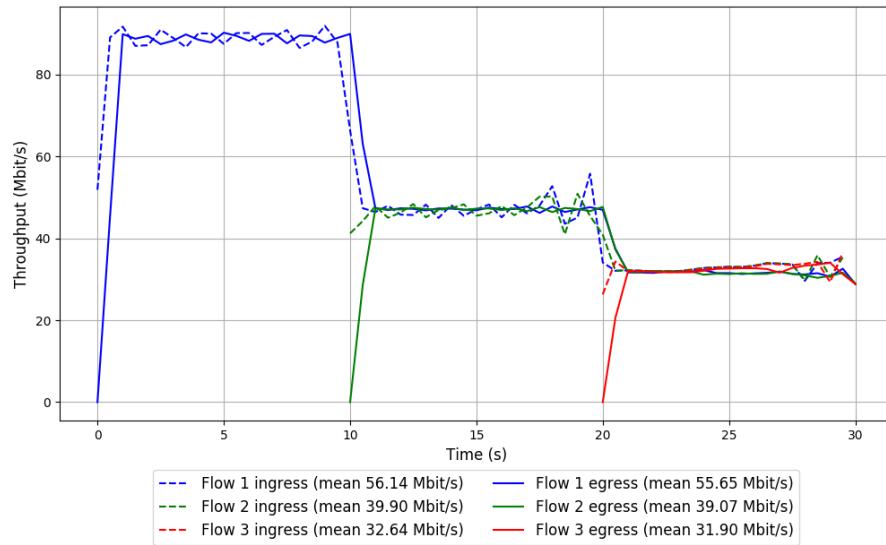


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-09-08 00:56:57
End at: 2018-09-08 00:57:27
Local clock offset: -0.28 ms
Remote clock offset: -2.61 ms

# Below is generated by plot.py at 2018-09-08 02:45:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.22 Mbit/s
95th percentile per-packet one-way delay: 127.230 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 55.65 Mbit/s
95th percentile per-packet one-way delay: 126.612 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 39.07 Mbit/s
95th percentile per-packet one-way delay: 127.086 ms
Loss rate: 2.38%
-- Flow 3:
Average throughput: 31.90 Mbit/s
95th percentile per-packet one-way delay: 128.225 ms
Loss rate: 2.91%
```

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

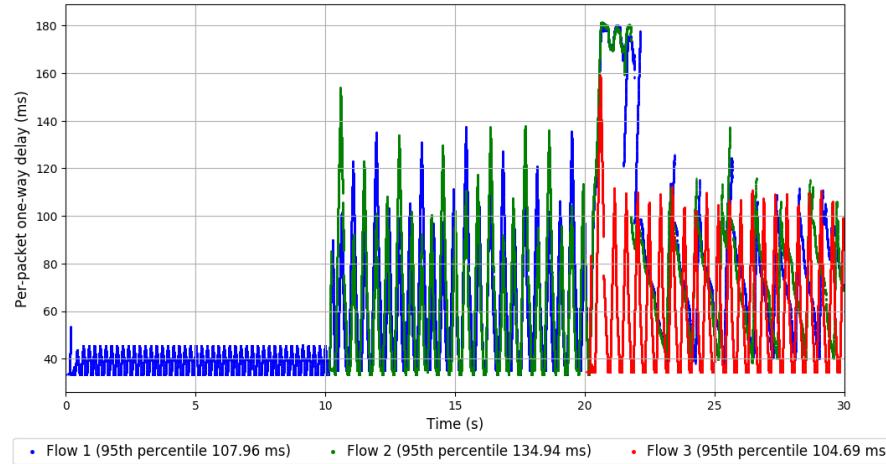
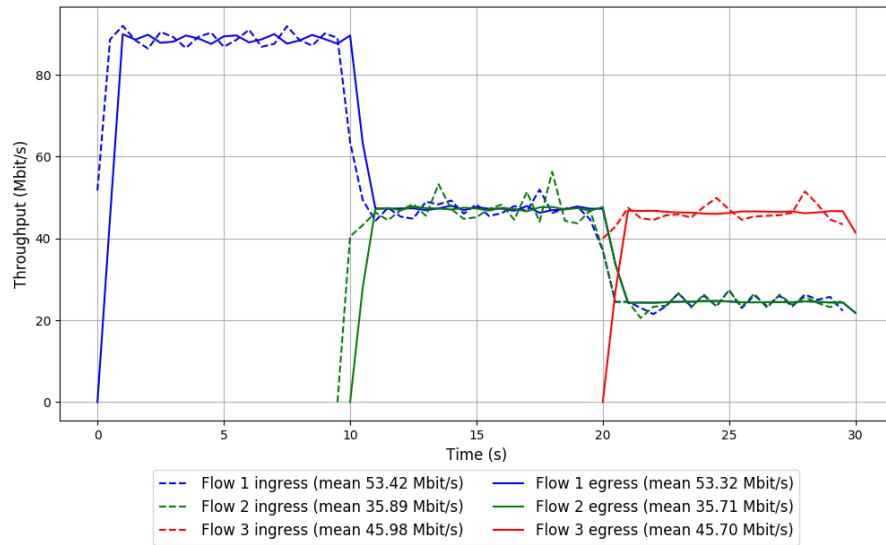


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-09-08 01:22:06
End at: 2018-09-08 01:22:36
Local clock offset: 0.759 ms
Remote clock offset: -1.213 ms

# Below is generated by plot.py at 2018-09-08 02:45:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.22 Mbit/s
95th percentile per-packet one-way delay: 113.648 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 53.32 Mbit/s
95th percentile per-packet one-way delay: 107.961 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 35.71 Mbit/s
95th percentile per-packet one-way delay: 134.940 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 45.70 Mbit/s
95th percentile per-packet one-way delay: 104.690 ms
Loss rate: 1.25%
```

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

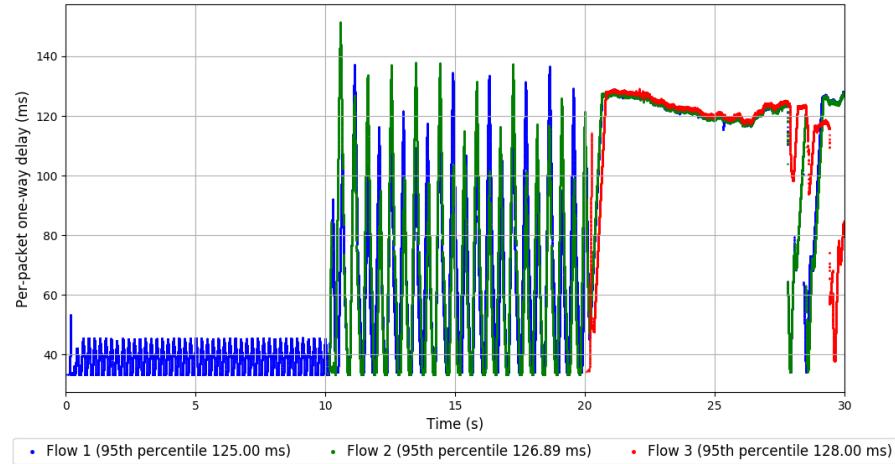
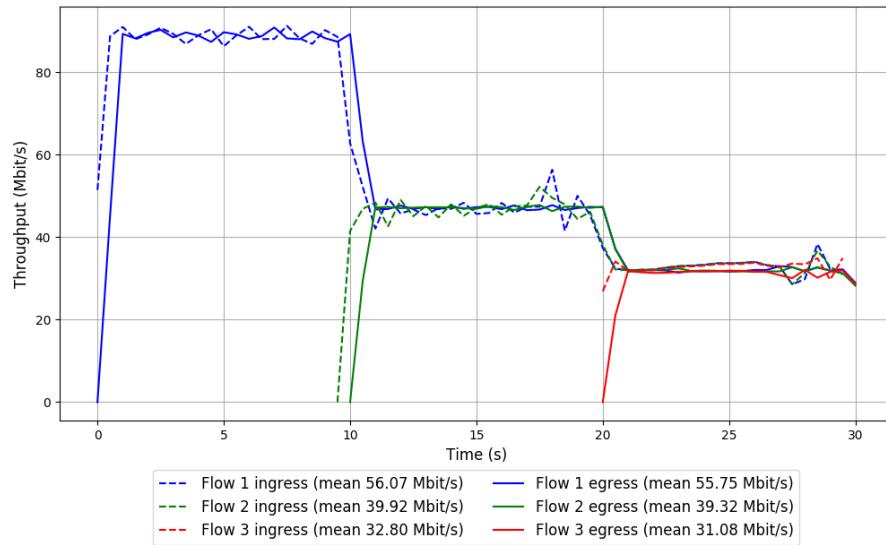


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-09-08 01:47:15
End at: 2018-09-08 01:47:45
Local clock offset: 0.67 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2018-09-08 02:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.22 Mbit/s
95th percentile per-packet one-way delay: 126.746 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 55.75 Mbit/s
95th percentile per-packet one-way delay: 124.999 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 39.32 Mbit/s
95th percentile per-packet one-way delay: 126.888 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 31.08 Mbit/s
95th percentile per-packet one-way delay: 127.999 ms
Loss rate: 5.86%
```

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

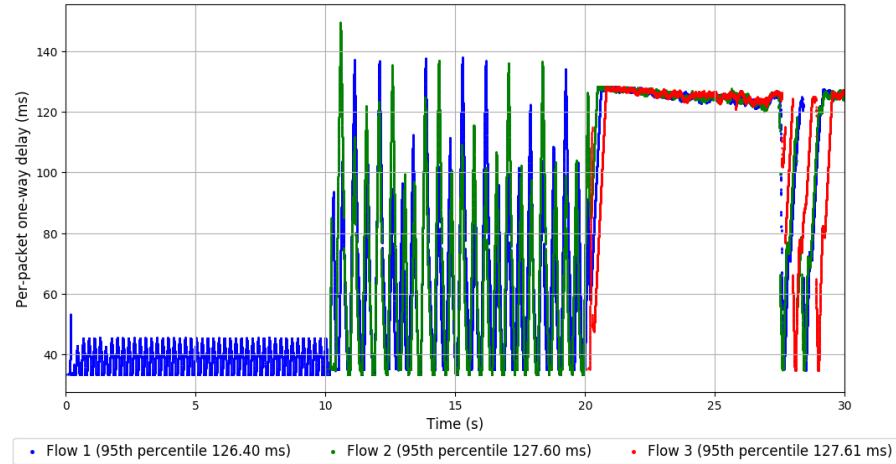
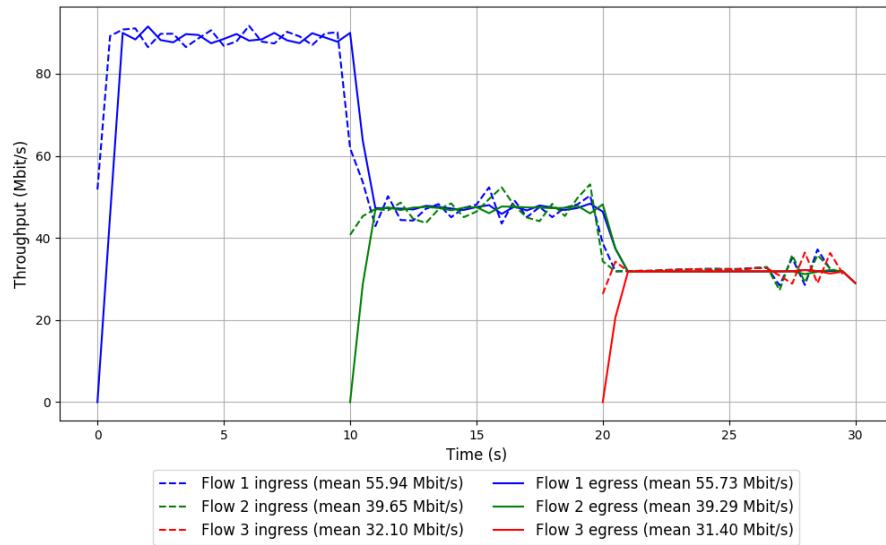


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-09-08 02:12:04
End at: 2018-09-08 02:12:34
Local clock offset: 0.699 ms
Remote clock offset: 1.042 ms

# Below is generated by plot.py at 2018-09-08 02:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.29 Mbit/s
95th percentile per-packet one-way delay: 127.275 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 55.73 Mbit/s
95th percentile per-packet one-way delay: 126.399 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 39.29 Mbit/s
95th percentile per-packet one-way delay: 127.604 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 31.40 Mbit/s
95th percentile per-packet one-way delay: 127.611 ms
Loss rate: 2.81%
```

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

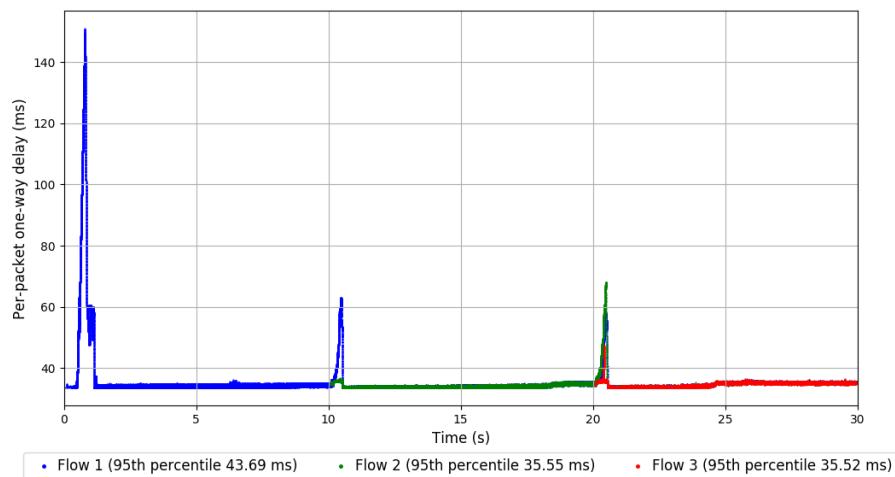
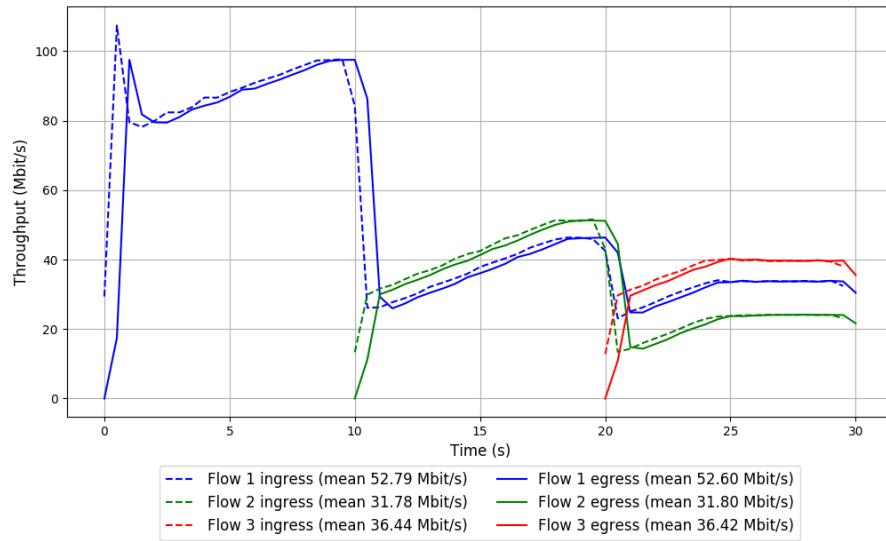


Run 1: Statistics of TCP Vegas

```
Start at: 2018-09-08 00:43:05
End at: 2018-09-08 00:43:35
Local clock offset: -3.097 ms
Remote clock offset: -3.585 ms

# Below is generated by plot.py at 2018-09-08 02:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.82 Mbit/s
95th percentile per-packet one-way delay: 35.937 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 52.60 Mbit/s
95th percentile per-packet one-way delay: 43.694 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 31.80 Mbit/s
95th percentile per-packet one-way delay: 35.545 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 36.42 Mbit/s
95th percentile per-packet one-way delay: 35.522 ms
Loss rate: 0.71%
```

Run 1: Report of TCP Vegas — Data Link

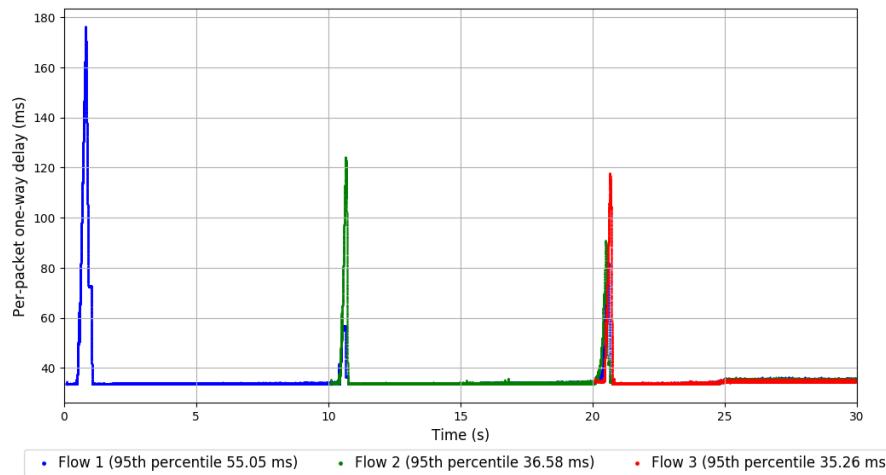
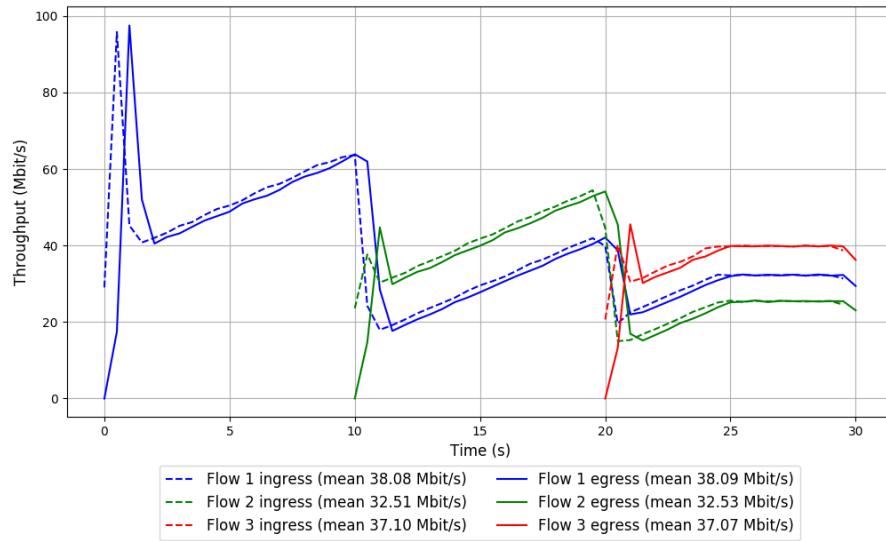


Run 2: Statistics of TCP Vegas

```
Start at: 2018-09-08 01:08:20
End at: 2018-09-08 01:08:50
Local clock offset: 0.866 ms
Remote clock offset: -2.01 ms

# Below is generated by plot.py at 2018-09-08 02:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.02 Mbit/s
95th percentile per-packet one-way delay: 42.201 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 38.09 Mbit/s
95th percentile per-packet one-way delay: 55.052 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 32.53 Mbit/s
95th percentile per-packet one-way delay: 36.580 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 37.07 Mbit/s
95th percentile per-packet one-way delay: 35.261 ms
Loss rate: 0.72%
```

Run 2: Report of TCP Vegas — Data Link

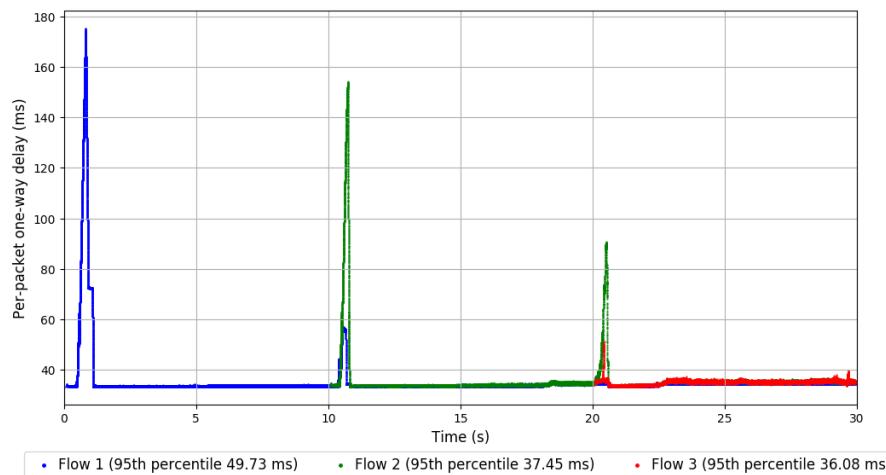
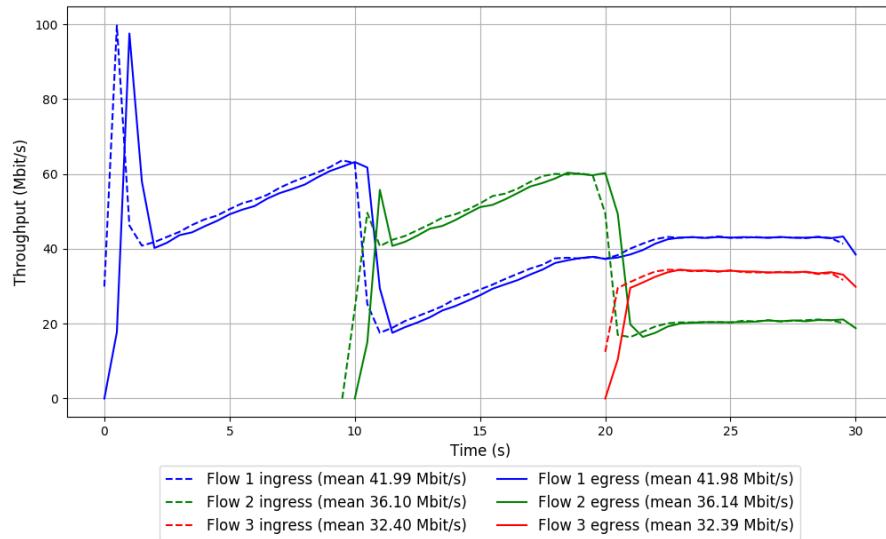


Run 3: Statistics of TCP Vegas

```
Start at: 2018-09-08 01:33:33
End at: 2018-09-08 01:34:03
Local clock offset: 0.723 ms
Remote clock offset: -0.468 ms

# Below is generated by plot.py at 2018-09-08 02:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.76 Mbit/s
95th percentile per-packet one-way delay: 36.851 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 41.98 Mbit/s
95th percentile per-packet one-way delay: 49.728 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 36.14 Mbit/s
95th percentile per-packet one-way delay: 37.447 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 32.39 Mbit/s
95th percentile per-packet one-way delay: 36.081 ms
Loss rate: 0.68%
```

Run 3: Report of TCP Vegas — Data Link

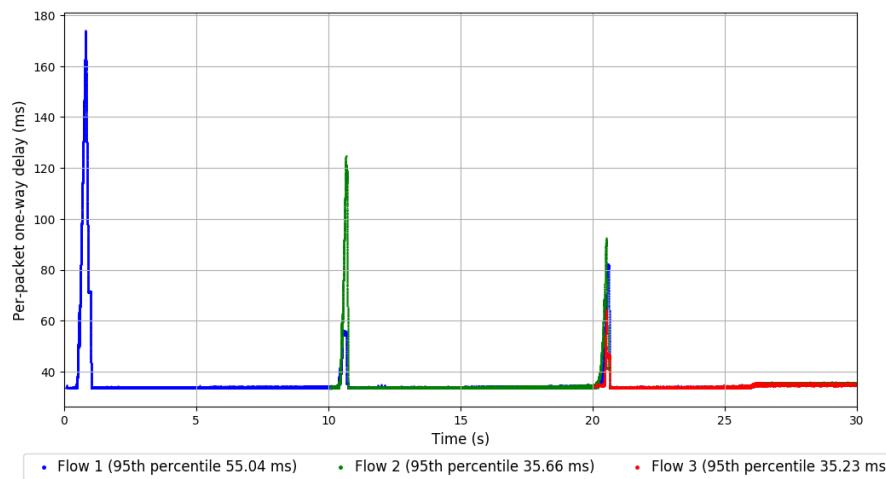
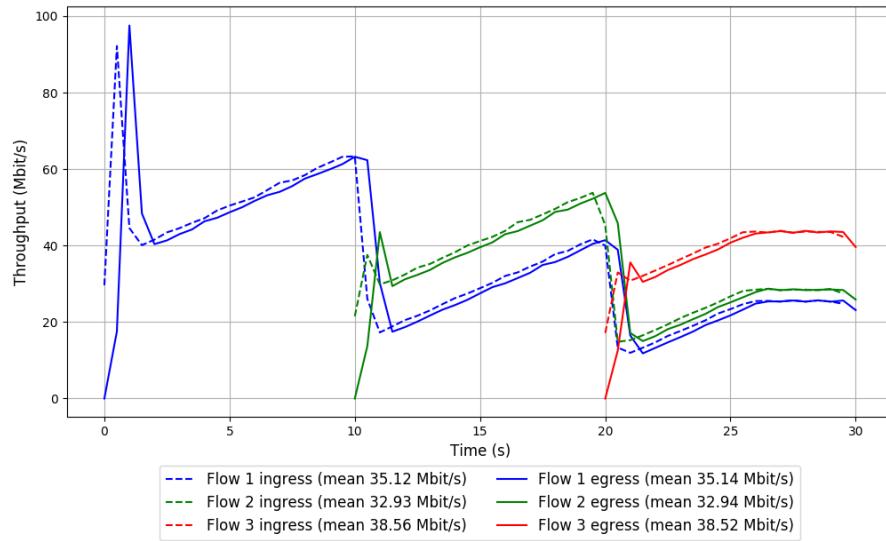


Run 4: Statistics of TCP Vegas

```
Start at: 2018-09-08 01:58:23
End at: 2018-09-08 01:58:53
Local clock offset: 0.636 ms
Remote clock offset: 0.477 ms

# Below is generated by plot.py at 2018-09-08 02:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.80 Mbit/s
95th percentile per-packet one-way delay: 39.437 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 35.14 Mbit/s
95th percentile per-packet one-way delay: 55.040 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 32.94 Mbit/s
95th percentile per-packet one-way delay: 35.662 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 38.52 Mbit/s
95th percentile per-packet one-way delay: 35.234 ms
Loss rate: 0.75%
```

Run 4: Report of TCP Vegas — Data Link

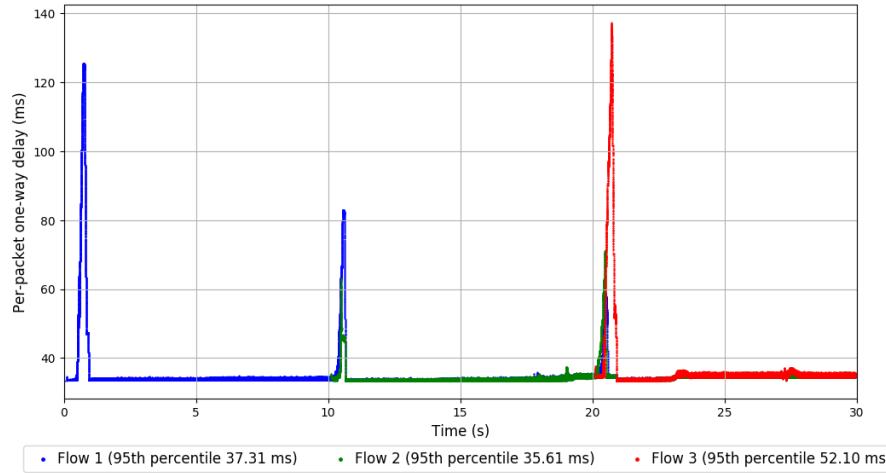
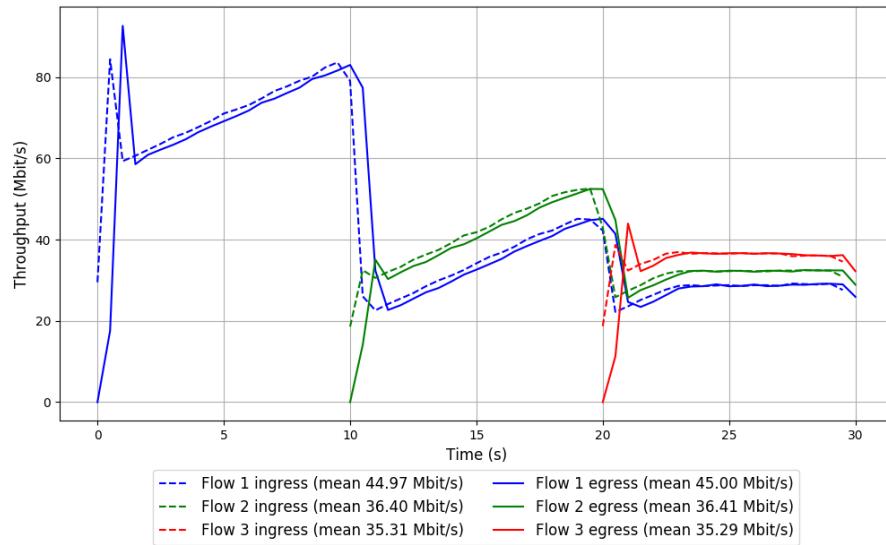


Run 5: Statistics of TCP Vegas

```
Start at: 2018-09-08 02:23:12
End at: 2018-09-08 02:23:42
Local clock offset: 0.513 ms
Remote clock offset: 1.285 ms

# Below is generated by plot.py at 2018-09-08 02:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.91 Mbit/s
95th percentile per-packet one-way delay: 36.383 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 45.00 Mbit/s
95th percentile per-packet one-way delay: 37.310 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 36.41 Mbit/s
95th percentile per-packet one-way delay: 35.607 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 35.29 Mbit/s
95th percentile per-packet one-way delay: 52.096 ms
Loss rate: 0.70%
```

Run 5: Report of TCP Vegas — Data Link

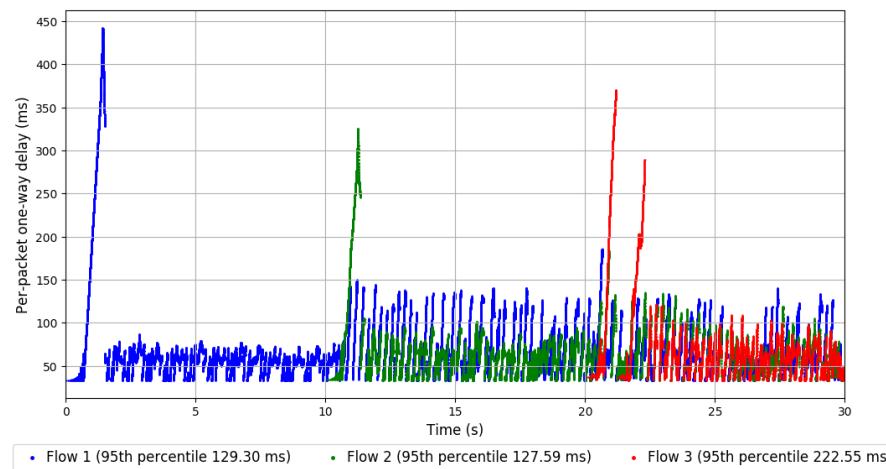
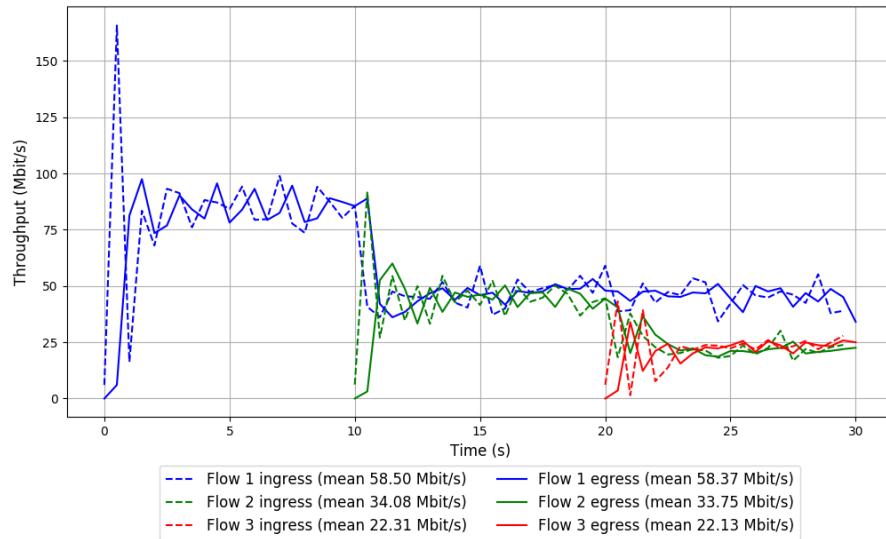


Run 1: Statistics of Verus

```
Start at: 2018-09-08 00:51:25
End at: 2018-09-08 00:51:55
Local clock offset: -1.131 ms
Remote clock offset: -2.948 ms

# Below is generated by plot.py at 2018-09-08 02:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.14 Mbit/s
95th percentile per-packet one-way delay: 133.333 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 58.37 Mbit/s
95th percentile per-packet one-way delay: 129.304 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 33.75 Mbit/s
95th percentile per-packet one-way delay: 127.592 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 22.13 Mbit/s
95th percentile per-packet one-way delay: 222.553 ms
Loss rate: 1.43%
```

Run 1: Report of Verus — Data Link

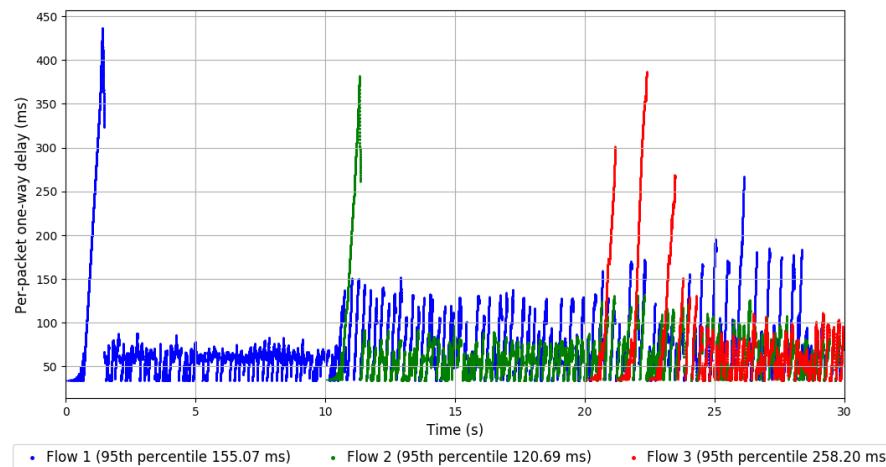
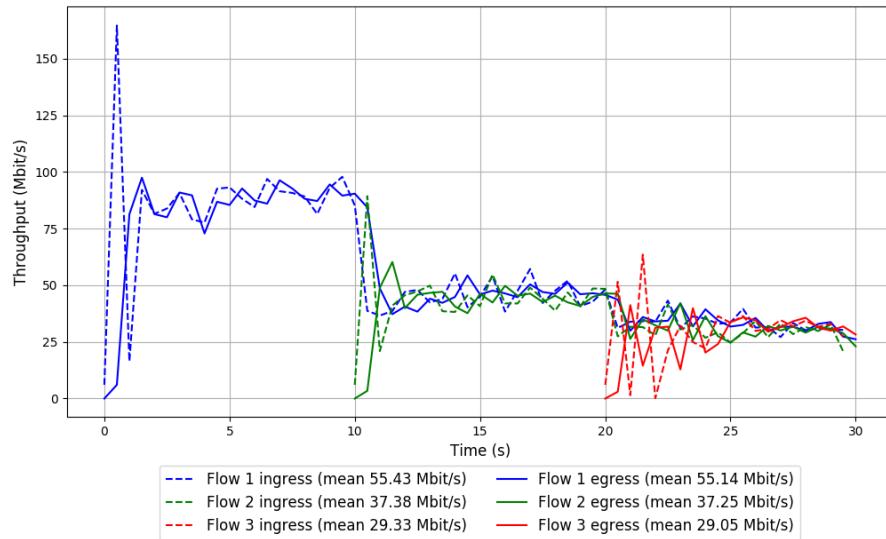


Run 2: Statistics of Verus

```
Start at: 2018-09-08 01:16:29
End at: 2018-09-08 01:16:59
Local clock offset: 1.135 ms
Remote clock offset: -1.764 ms

# Below is generated by plot.py at 2018-09-08 02:46:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.54 Mbit/s
95th percentile per-packet one-way delay: 167.760 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 55.14 Mbit/s
95th percentile per-packet one-way delay: 155.075 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 37.25 Mbit/s
95th percentile per-packet one-way delay: 120.695 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 29.05 Mbit/s
95th percentile per-packet one-way delay: 258.204 ms
Loss rate: 1.32%
```

Run 2: Report of Verus — Data Link

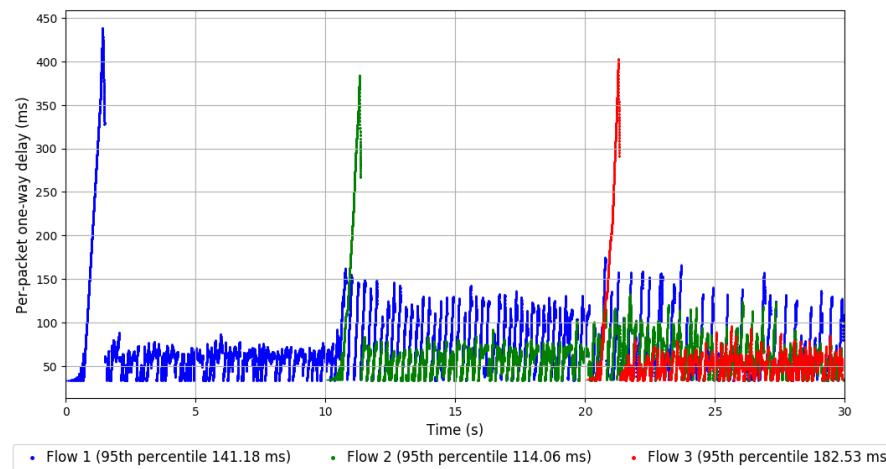
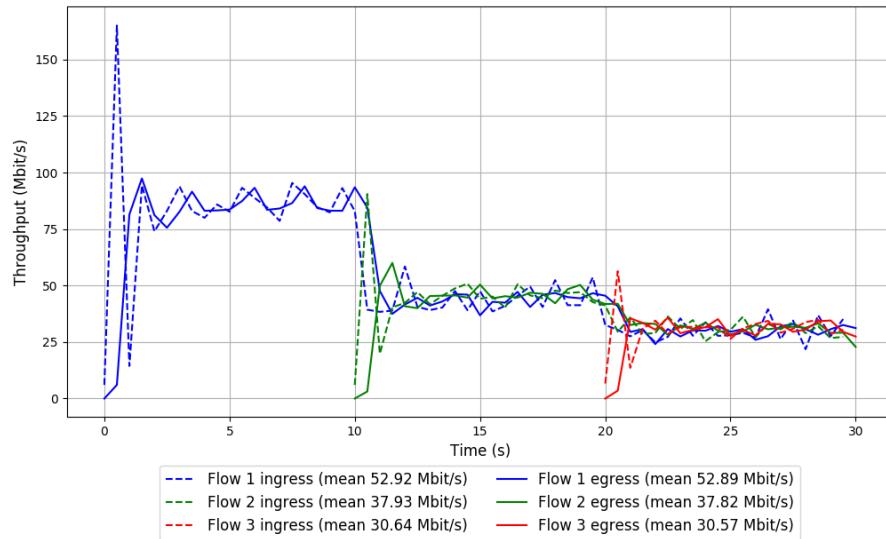


Run 3: Statistics of Verus

```
Start at: 2018-09-08 01:41:43
End at: 2018-09-08 01:42:13
Local clock offset: 0.788 ms
Remote clock offset: -0.212 ms

# Below is generated by plot.py at 2018-09-08 02:46:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.08 Mbit/s
95th percentile per-packet one-way delay: 137.758 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 52.89 Mbit/s
95th percentile per-packet one-way delay: 141.180 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 37.82 Mbit/s
95th percentile per-packet one-way delay: 114.061 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 30.57 Mbit/s
95th percentile per-packet one-way delay: 182.532 ms
Loss rate: 1.20%
```

Run 3: Report of Verus — Data Link

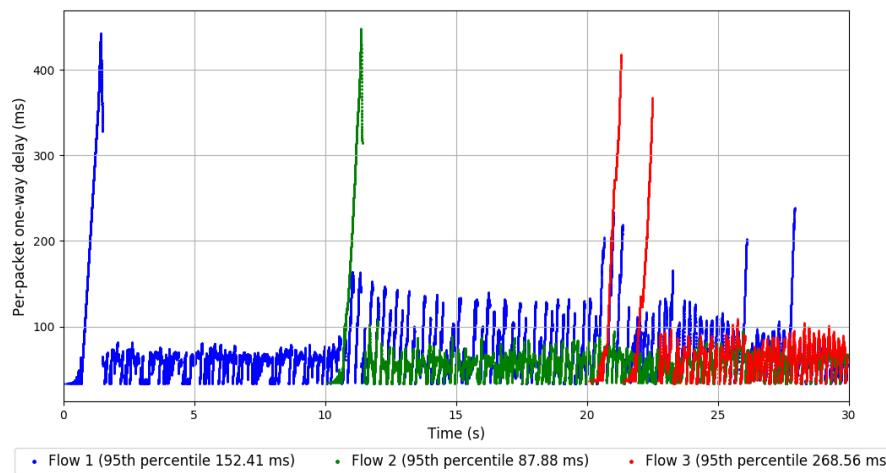
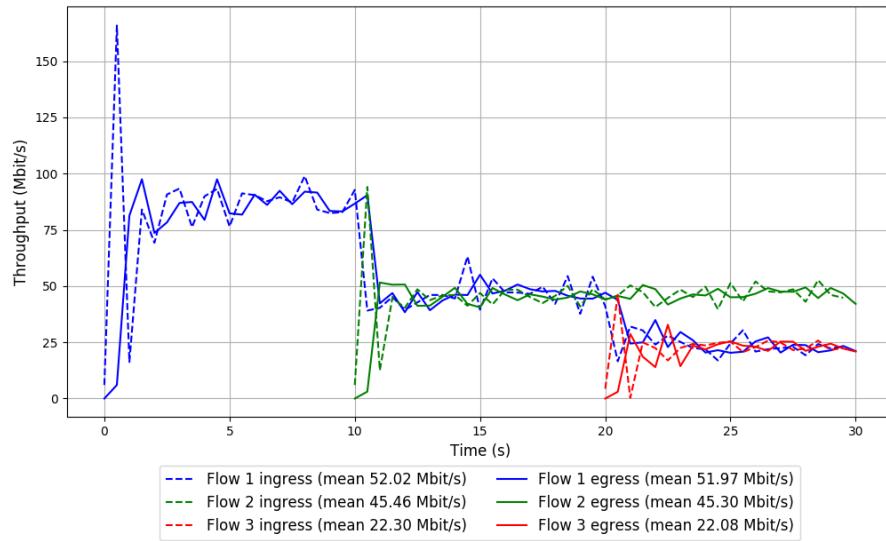


Run 4: Statistics of Verus

```
Start at: 2018-09-08 02:06:33
End at: 2018-09-08 02:07:03
Local clock offset: 0.676 ms
Remote clock offset: 0.621 ms

# Below is generated by plot.py at 2018-09-08 02:46:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.40 Mbit/s
95th percentile per-packet one-way delay: 148.573 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 51.97 Mbit/s
95th percentile per-packet one-way delay: 152.407 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 45.30 Mbit/s
95th percentile per-packet one-way delay: 87.882 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 22.08 Mbit/s
95th percentile per-packet one-way delay: 268.563 ms
Loss rate: 1.57%
```

Run 4: Report of Verus — Data Link

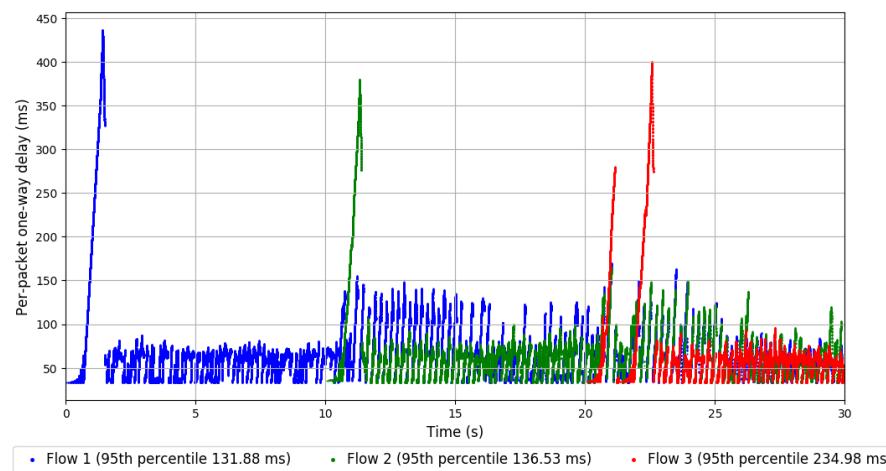
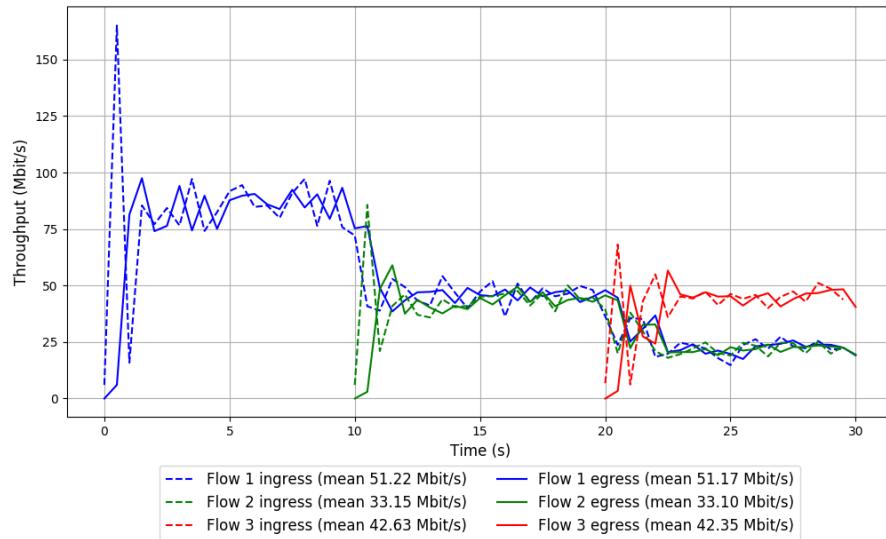


Run 5: Statistics of Verus

```
Start at: 2018-09-08 02:31:32
End at: 2018-09-08 02:32:02
Local clock offset: 0.327 ms
Remote clock offset: 1.345 ms

# Below is generated by plot.py at 2018-09-08 02:46:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.19 Mbit/s
95th percentile per-packet one-way delay: 149.380 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 51.17 Mbit/s
95th percentile per-packet one-way delay: 131.885 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 33.10 Mbit/s
95th percentile per-packet one-way delay: 136.534 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 42.35 Mbit/s
95th percentile per-packet one-way delay: 234.984 ms
Loss rate: 1.30%
```

Run 5: Report of Verus — Data Link

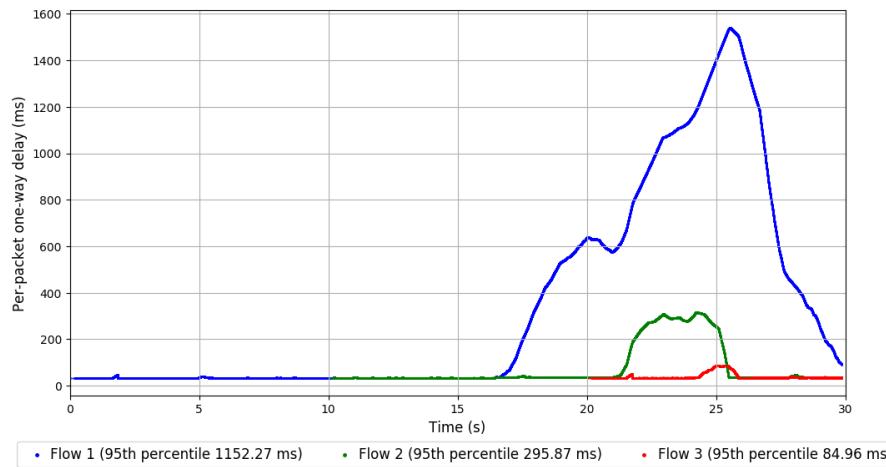
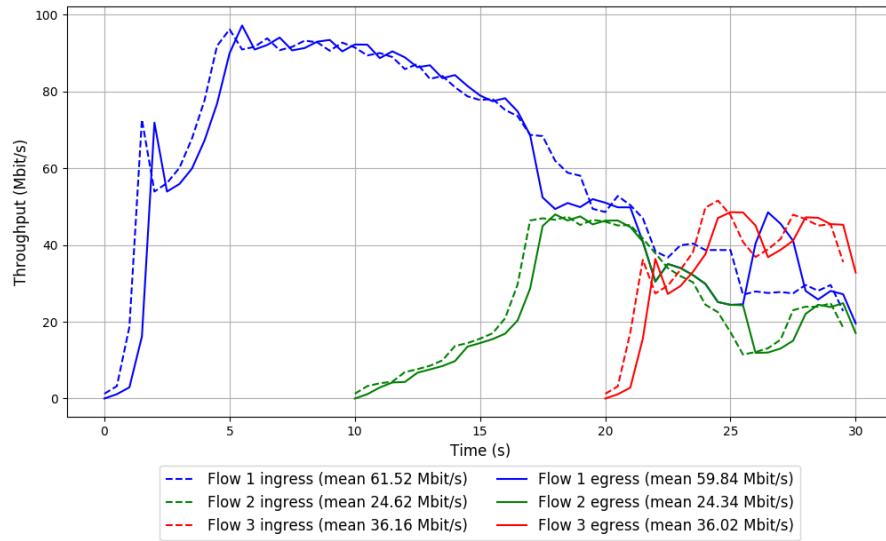


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-09-08 00:33:25
End at: 2018-09-08 00:33:55
Local clock offset: -2.95 ms
Remote clock offset: -4.374 ms

# Below is generated by plot.py at 2018-09-08 02:46:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.87 Mbit/s
95th percentile per-packet one-way delay: 1046.754 ms
Loss rate: 2.41%
-- Flow 1:
Average throughput: 59.84 Mbit/s
95th percentile per-packet one-way delay: 1152.265 ms
Loss rate: 2.93%
-- Flow 2:
Average throughput: 24.34 Mbit/s
95th percentile per-packet one-way delay: 295.874 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 36.02 Mbit/s
95th percentile per-packet one-way delay: 84.959 ms
Loss rate: 1.02%
```

Run 1: Report of PCC-Vivace — Data Link

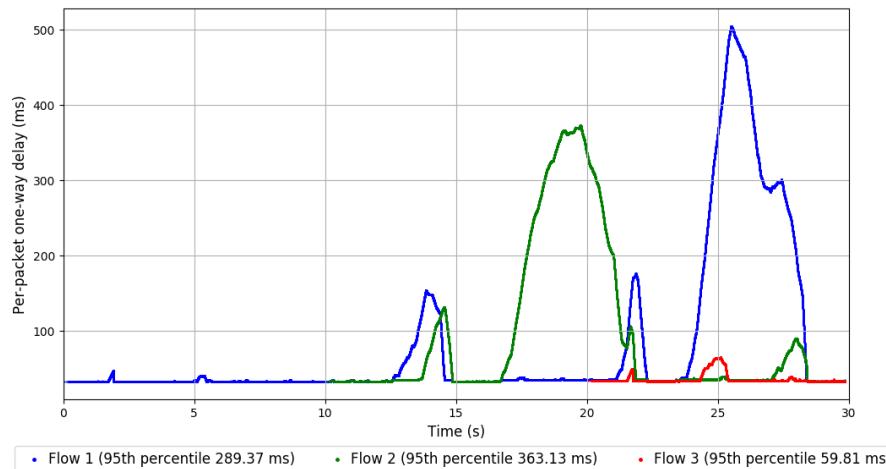
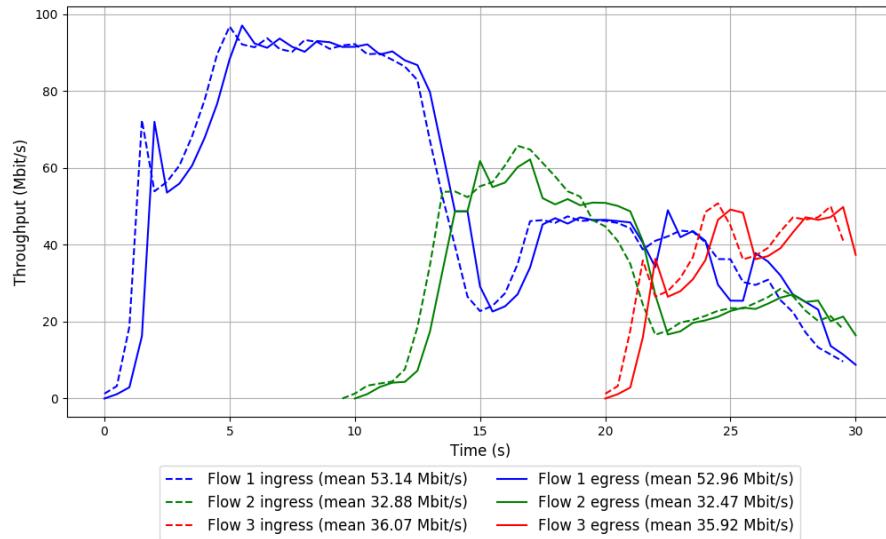


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-09-08 00:58:34
End at: 2018-09-08 00:59:04
Local clock offset: 0.017 ms
Remote clock offset: -2.396 ms

# Below is generated by plot.py at 2018-09-08 02:46:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.38 Mbit/s
95th percentile per-packet one-way delay: 323.050 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 52.96 Mbit/s
95th percentile per-packet one-way delay: 289.372 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 32.47 Mbit/s
95th percentile per-packet one-way delay: 363.135 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 35.92 Mbit/s
95th percentile per-packet one-way delay: 59.814 ms
Loss rate: 1.07%
```

Run 2: Report of PCC-Vivace — Data Link

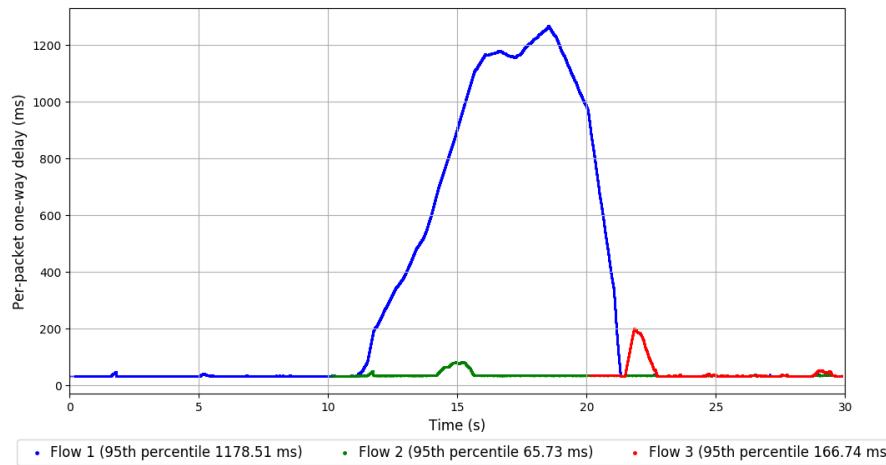
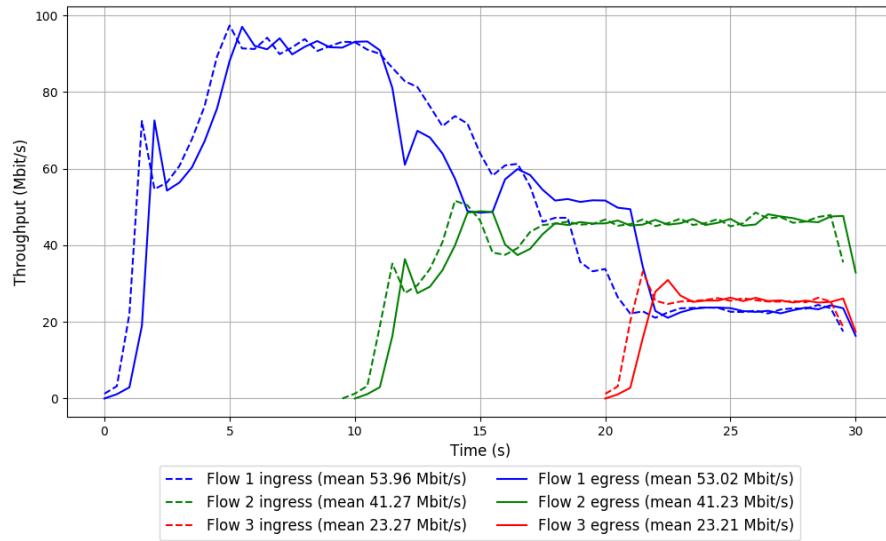


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-09-08 01:23:34
End at: 2018-09-08 01:24:04
Local clock offset: 0.815 ms
Remote clock offset: -1.168 ms

# Below is generated by plot.py at 2018-09-08 02:46:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.06 Mbit/s
95th percentile per-packet one-way delay: 1165.105 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 53.02 Mbit/s
95th percentile per-packet one-way delay: 1178.512 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 41.23 Mbit/s
95th percentile per-packet one-way delay: 65.729 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 23.21 Mbit/s
95th percentile per-packet one-way delay: 166.738 ms
Loss rate: 0.92%
```

Run 3: Report of PCC-Vivace — Data Link

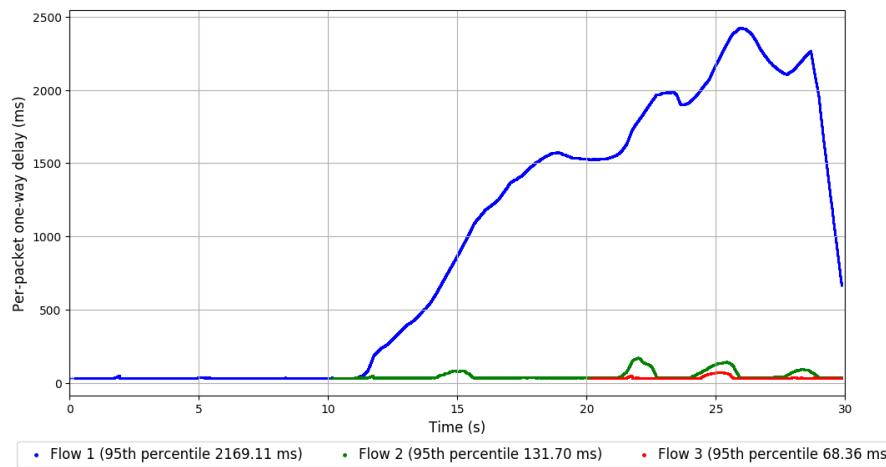
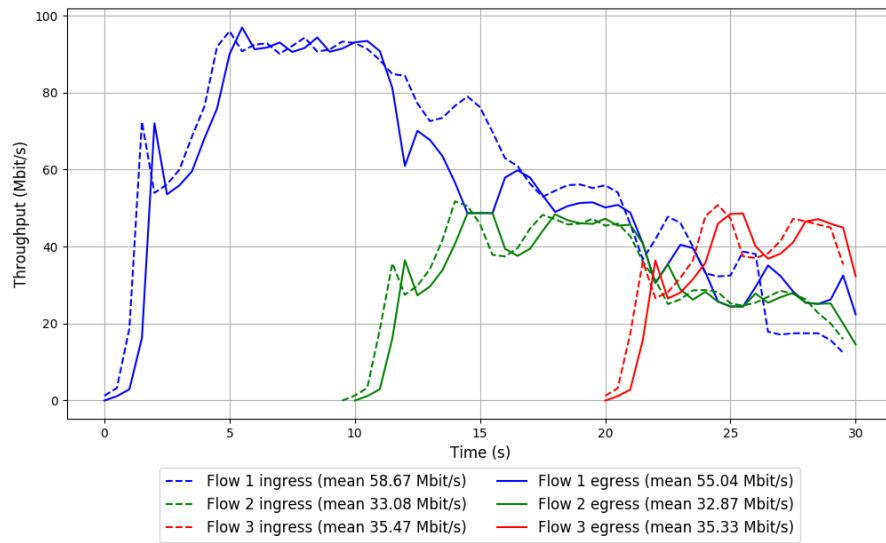


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-09-08 01:48:41
End at: 2018-09-08 01:49:11
Local clock offset: 0.629 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-09-08 02:46:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.52 Mbit/s
95th percentile per-packet one-way delay: 1984.135 ms
Loss rate: 4.39%
-- Flow 1:
Average throughput: 55.04 Mbit/s
95th percentile per-packet one-way delay: 2169.114 ms
Loss rate: 6.37%
-- Flow 2:
Average throughput: 32.87 Mbit/s
95th percentile per-packet one-way delay: 131.696 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 35.33 Mbit/s
95th percentile per-packet one-way delay: 68.364 ms
Loss rate: 0.99%
```

Run 4: Report of PCC-Vivace — Data Link

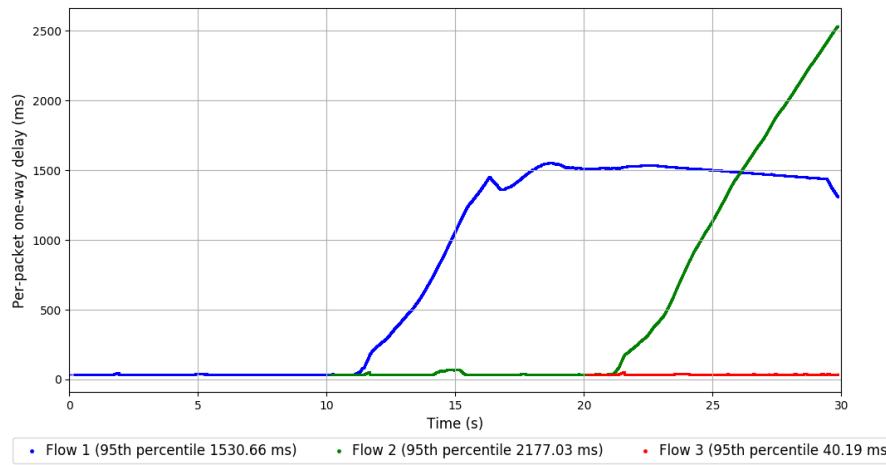
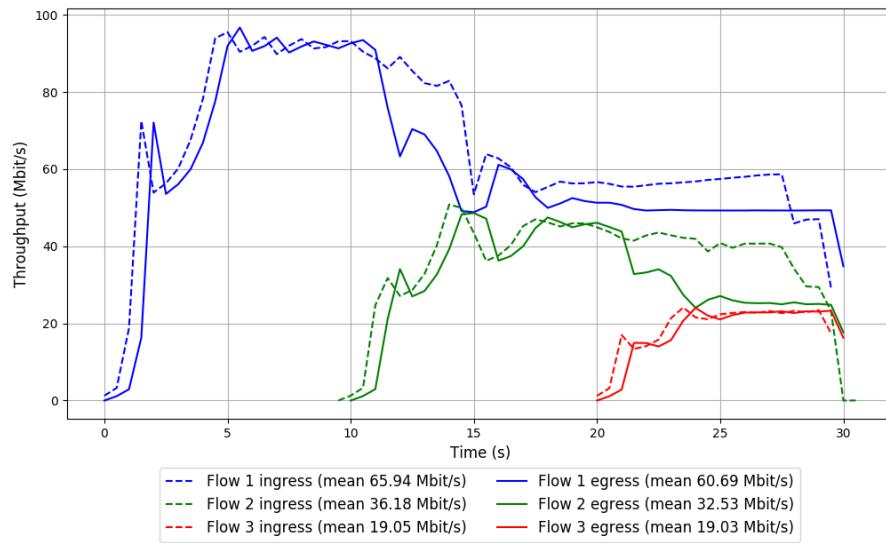


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-09-08 02:13:30
End at: 2018-09-08 02:14:00
Local clock offset: 0.624 ms
Remote clock offset: 0.983 ms

# Below is generated by plot.py at 2018-09-08 02:46:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.57 Mbit/s
95th percentile per-packet one-way delay: 1535.327 ms
Loss rate: 9.29%
-- Flow 1:
Average throughput: 60.69 Mbit/s
95th percentile per-packet one-way delay: 1530.665 ms
Loss rate: 8.16%
-- Flow 2:
Average throughput: 32.53 Mbit/s
95th percentile per-packet one-way delay: 2177.029 ms
Loss rate: 14.36%
-- Flow 3:
Average throughput: 19.03 Mbit/s
95th percentile per-packet one-way delay: 40.194 ms
Loss rate: 0.79%
```

Run 5: Report of PCC-Vivace — Data Link

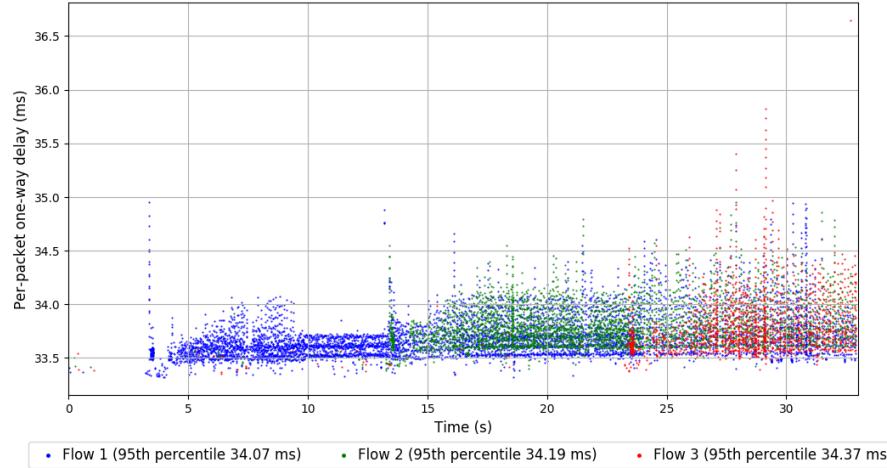
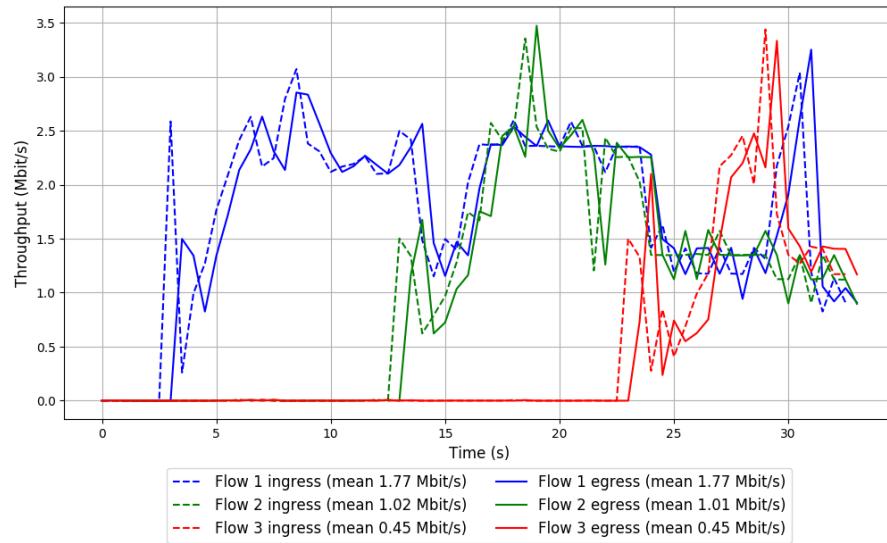


Run 1: Statistics of WebRTC media

```
Start at: 2018-09-08 00:30:40
End at: 2018-09-08 00:31:10
Local clock offset: -2.995 ms
Remote clock offset: -4.338 ms

# Below is generated by plot.py at 2018-09-08 02:46:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 34.172 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 34.068 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 34.188 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 34.370 ms
Loss rate: 0.01%
```

Run 1: Report of WebRTC media — Data Link

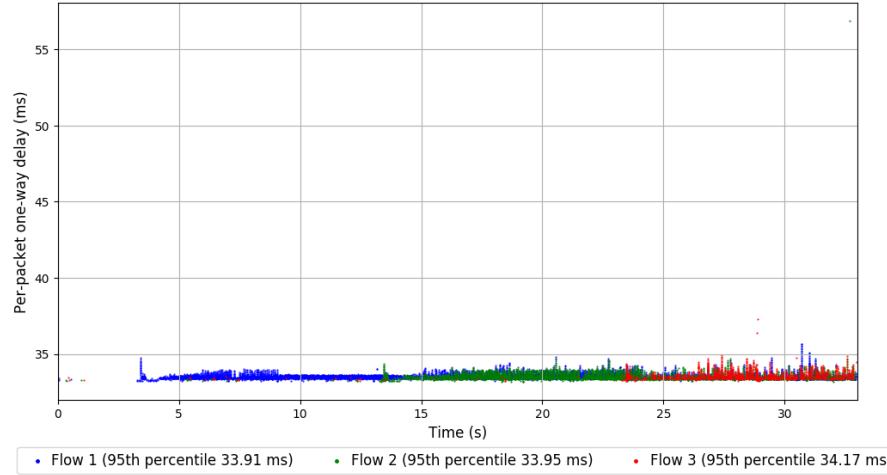
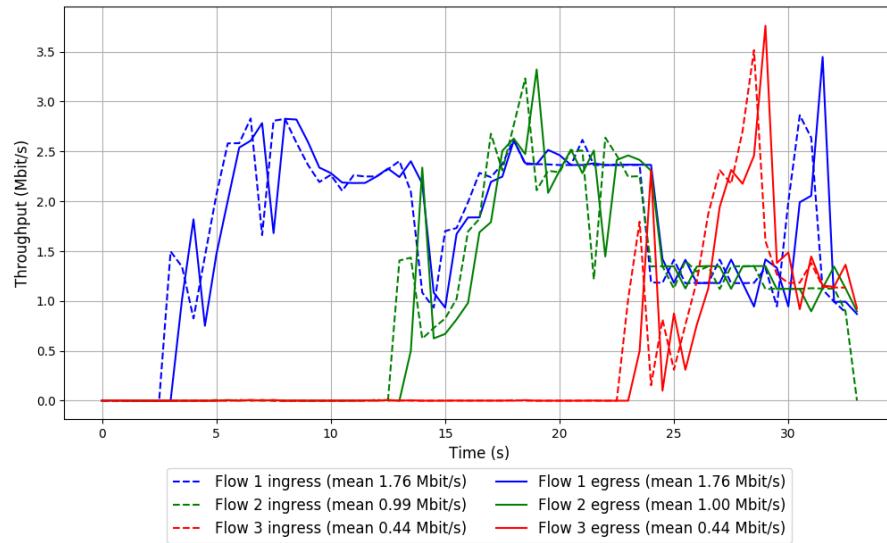


Run 2: Statistics of WebRTC media

```
Start at: 2018-09-08 00:55:38
End at: 2018-09-08 00:56:08
Local clock offset: -0.477 ms
Remote clock offset: -2.677 ms

# Below is generated by plot.py at 2018-09-08 02:46:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 33.960 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 33.915 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 33.954 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 34.169 ms
Loss rate: 0.72%
```

Run 2: Report of WebRTC media — Data Link

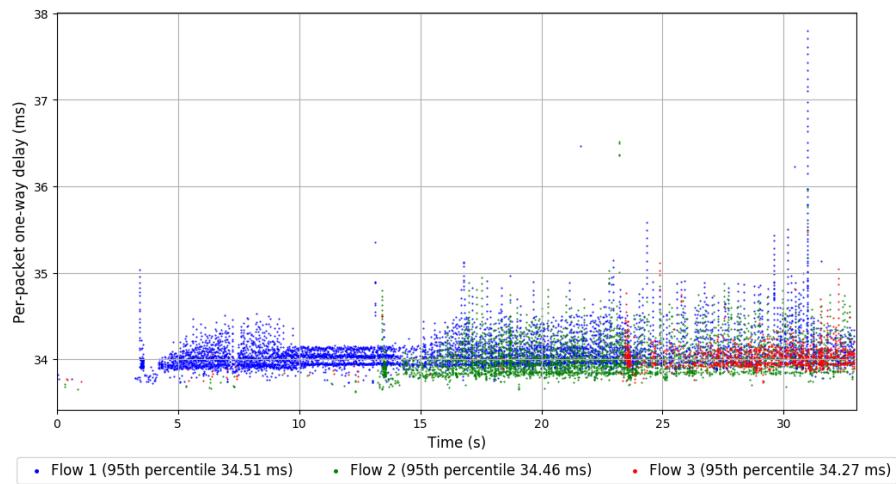
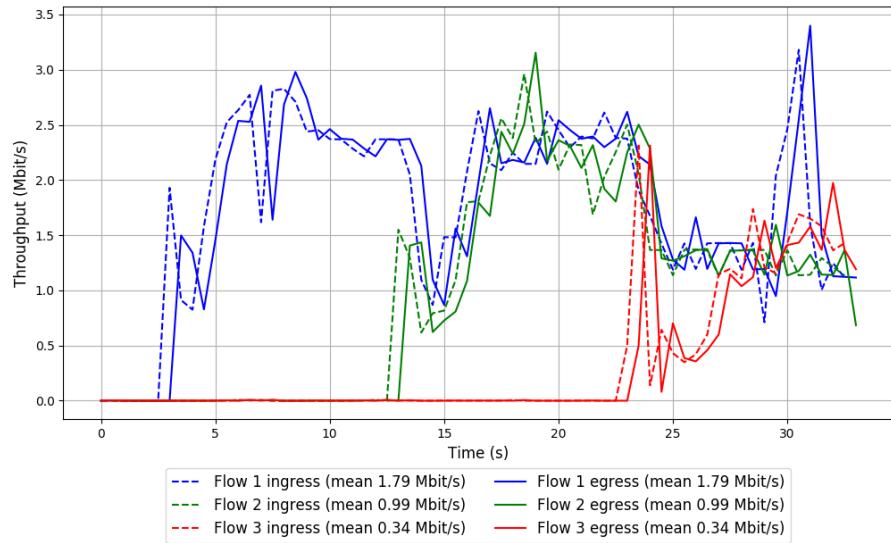


Run 3: Statistics of WebRTC media

```
Start at: 2018-09-08 01:20:48
End at: 2018-09-08 01:21:18
Local clock offset: 0.897 ms
Remote clock offset: -1.558 ms

# Below is generated by plot.py at 2018-09-08 02:46:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 34.484 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 34.513 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 34.461 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 34.275 ms
Loss rate: 1.07%
```

Run 3: Report of WebRTC media — Data Link

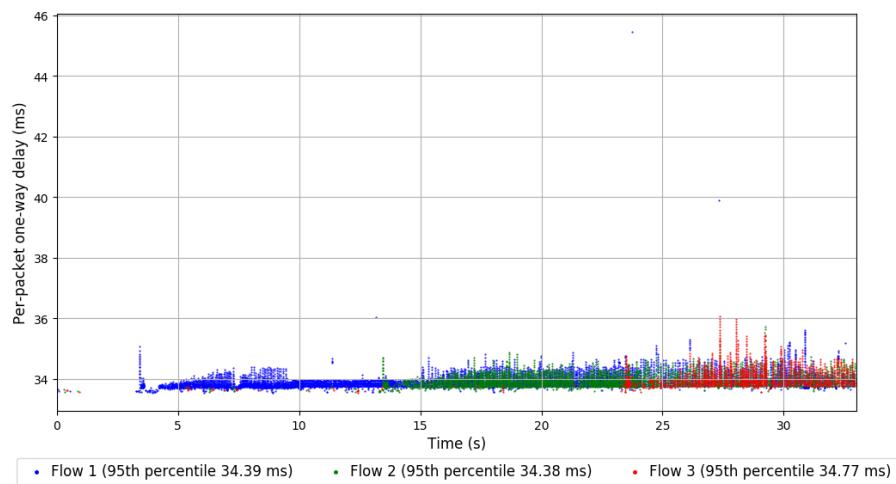
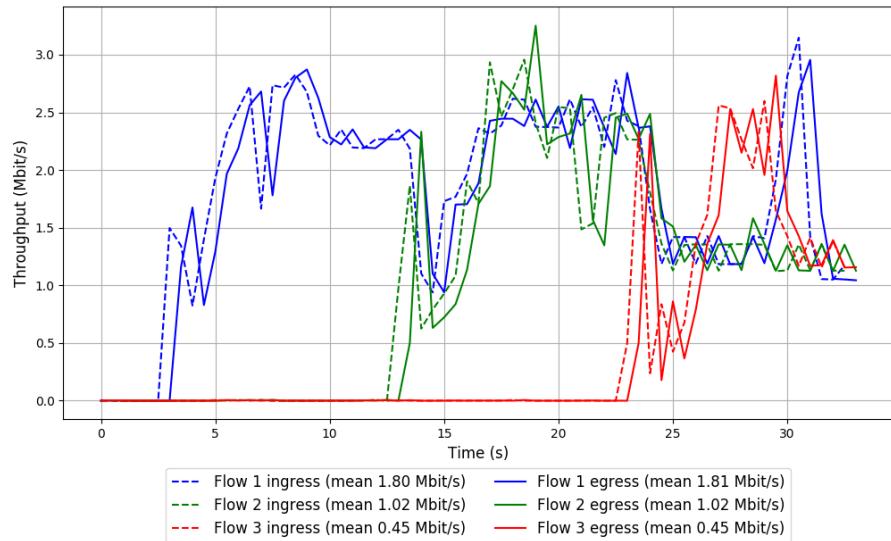


Run 4: Statistics of WebRTC media

```
Start at: 2018-09-08 01:45:56
End at: 2018-09-08 01:46:27
Local clock offset: 0.806 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2018-09-08 02:46:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 34.455 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 34.392 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 34.384 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 34.773 ms
Loss rate: 0.78%
```

Run 4: Report of WebRTC media — Data Link



```
Run 5: Statistics of WebRTC media

Start at: 2018-09-08 02:10:46
End at: 2018-09-08 02:11:16
Local clock offset: 0.69 ms
Remote clock offset: 0.823 ms

# Below is generated by plot.py at 2018-09-08 02:46:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 34.187 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 34.183 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 34.147 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 34.328 ms
Loss rate: 0.81%
```

Run 5: Report of WebRTC media — Data Link

