

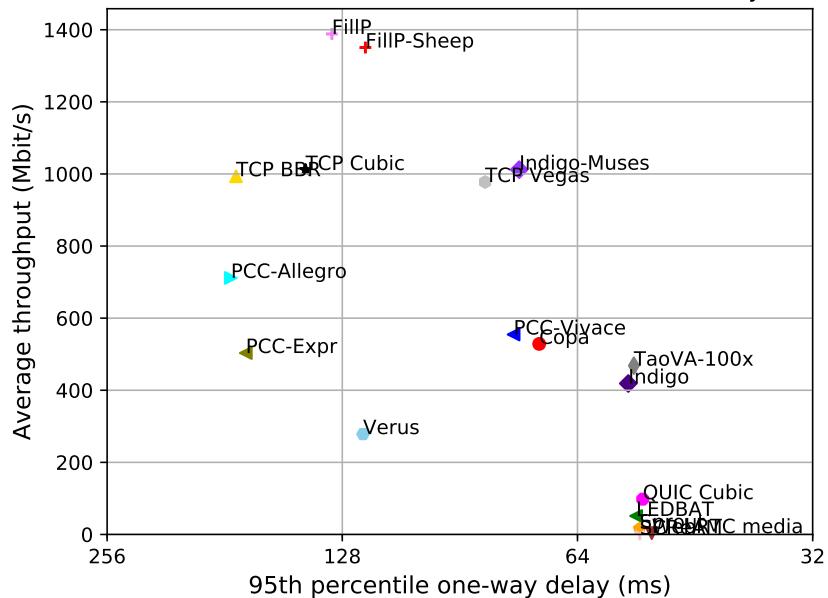
Pantheon Report

Generated at 2018-09-12 02:00:11 (UTC).
Data path: GCE Tokyo on `ens4` (*remote*) → GCE Sydney on `ens4` (*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.google.com` and have been applied to correct the timestamps in logs.

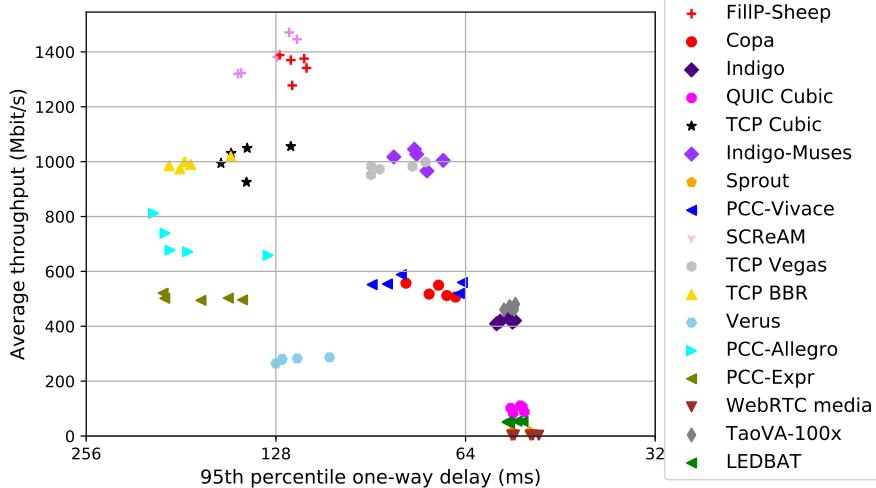
```
System info:  
Linux 4.15.0-1018-gcp  
net.core.default_qdisc = fq  
net.core.rmem_default = 16777216  
net.core.rmem_max = 536870912  
net.core.wmem_default = 16777216  
net.core.wmem_max = 536870912  
net.ipv4.tcp_rmem = 4096 16777216 536870912  
net.ipv4.tcp_wmem = 4096 16777216 536870912  
net.ipv4.tcp_mem = 190986 254651 381972  
  
Git summary:  
branch: muses @ f30bceca2aec2ef14a3cf71e25642f4a30905a03  
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834  
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe  
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/libutp @ b3465b942e2826f2b179eab4a906ce6bb7cf3cf  
third_party/muses @ 65ac1b19bbfed0c6349ae986009b4fa8643c40a  
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
```

test from GCE Tokyo to GCE Sydney, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE Tokyo to GCE Sydney, 5 runs of 30s each per scheme
3 flows with 10s interval between flows



4

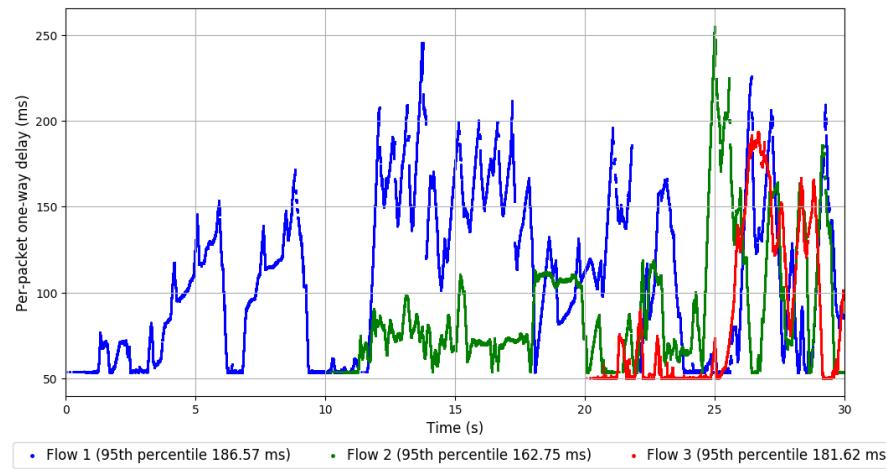
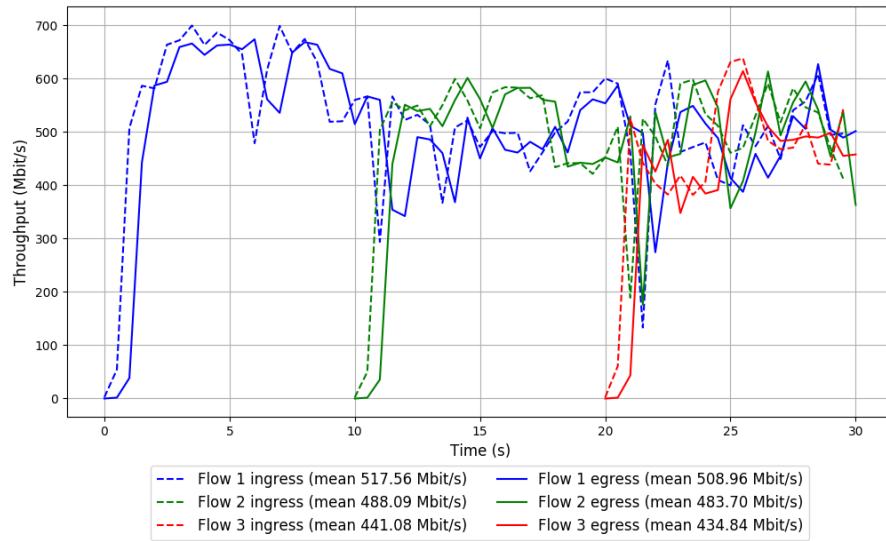
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	520.96	489.18	446.54	174.85	170.09	172.46	1.59	1.74	2.48
Copa	5	284.04	254.51	228.09	65.98	73.34	77.74	0.32	0.50	1.09
TCP Cubic	5	512.81	521.13	459.25	122.12	132.95	123.76	0.49	0.77	1.64
FillP	5	708.59	719.51	612.39	135.60	122.74	120.25	4.79	2.34	3.68
FillP-Sheep	5	713.71	655.10	613.77	123.32	117.27	99.29	1.20	1.49	1.57
Indigo	5	222.18	204.60	180.08	54.77	54.31	54.69	0.35	0.57	1.22
LEDBAT	5	32.38	22.69	11.62	53.51	52.75	53.06	0.64	1.05	2.07
Indigo-Muses	5	551.89	489.71	413.20	75.36	77.94	71.73	0.33	0.57	1.37
PCC-Allegro	5	398.55	344.08	261.09	180.69	183.64	115.86	4.39	5.12	1.98
PCC-Expr	5	275.22	247.26	194.92	170.57	170.84	87.91	3.07	3.43	1.69
QUIC Cubic	5	59.34	38.88	37.56	50.86	50.89	51.55	0.48	0.88	0.89
SCReAM	5	0.21	0.22	0.22	51.94	51.03	51.10	0.38	0.61	1.02
Sprout	5	8.08	8.01	7.77	51.36	52.10	52.26	0.38	0.31	1.21
TaoVA-100x	5	240.20	235.41	216.56	52.09	54.43	53.40	0.36	0.55	1.23
TCP Vegas	5	502.29	492.08	448.66	76.69	85.13	88.33	0.36	0.52	1.13
Verus	5	159.57	123.74	112.08	107.97	99.92	115.71	0.36	0.42	1.12
PCC-Vivace	5	333.59	282.74	101.90	79.08	87.22	53.80	0.37	0.69	1.53
WebRTC media	5	1.88	1.23	0.48	50.77	50.66	50.79	0.48	0.79	1.29

Run 1: Statistics of TCP BBR

```
Start at: 2018-09-11 20:16:12
End at: 2018-09-11 20:16:42
Local clock offset: -0.025 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-09-11 23:30:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 973.96 Mbit/s
95th percentile per-packet one-way delay: 181.808 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 508.96 Mbit/s
95th percentile per-packet one-way delay: 186.574 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 483.70 Mbit/s
95th percentile per-packet one-way delay: 162.750 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 434.84 Mbit/s
95th percentile per-packet one-way delay: 181.616 ms
Loss rate: 2.42%
```

Run 1: Report of TCP BBR — Data Link

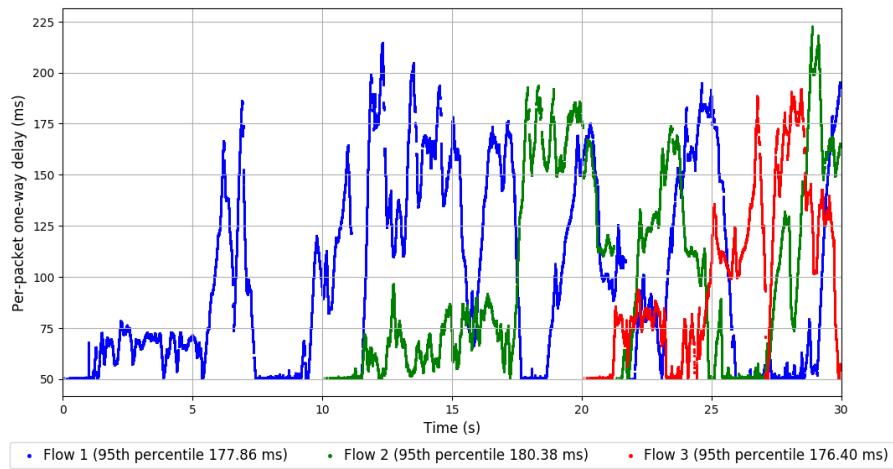
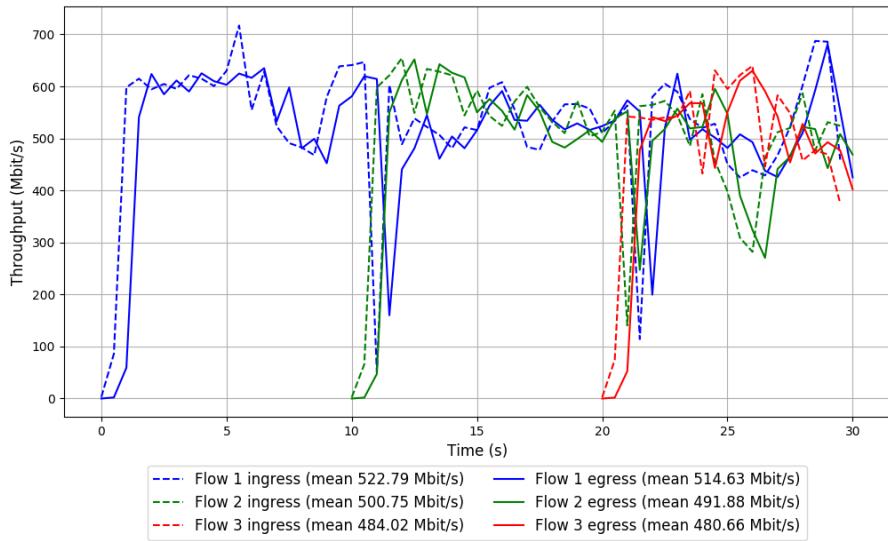


Run 2: Statistics of TCP BBR

```
Start at: 2018-09-11 20:48:03
End at: 2018-09-11 20:48:33
Local clock offset: 0.041 ms
Remote clock offset: -0.245 ms

# Below is generated by plot.py at 2018-09-11 23:30:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1000.34 Mbit/s
95th percentile per-packet one-way delay: 178.686 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 514.63 Mbit/s
95th percentile per-packet one-way delay: 177.860 ms
Loss rate: 1.90%
-- Flow 2:
Average throughput: 491.88 Mbit/s
95th percentile per-packet one-way delay: 180.375 ms
Loss rate: 2.27%
-- Flow 3:
Average throughput: 480.66 Mbit/s
95th percentile per-packet one-way delay: 176.399 ms
Loss rate: 1.71%
```

Run 2: Report of TCP BBR — Data Link

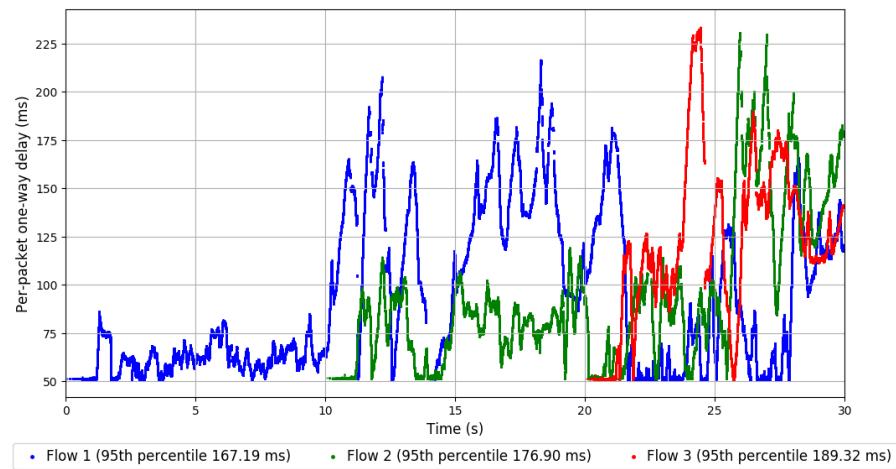
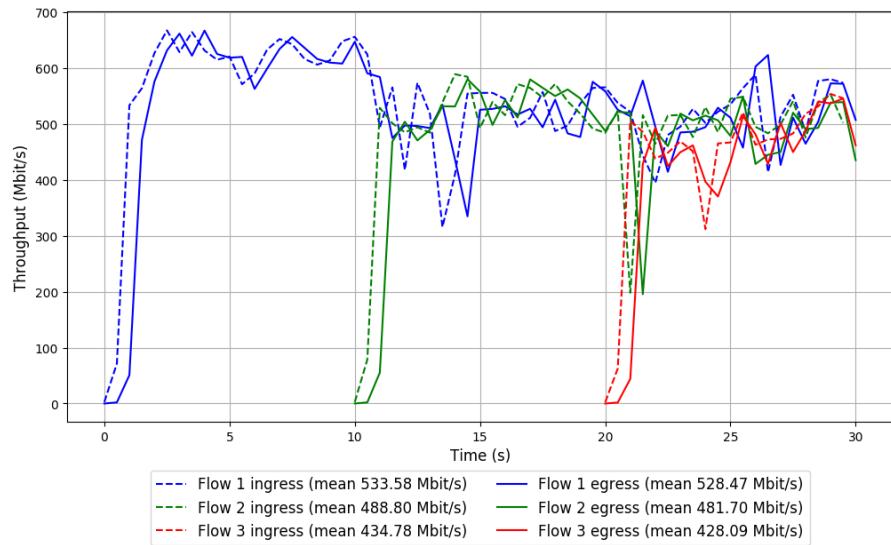


Run 3: Statistics of TCP BBR

```
Start at: 2018-09-11 21:19:51
End at: 2018-09-11 21:20:21
Local clock offset: -0.227 ms
Remote clock offset: -1.58 ms

# Below is generated by plot.py at 2018-09-11 23:30:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 990.16 Mbit/s
95th percentile per-packet one-way delay: 174.731 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 528.47 Mbit/s
95th percentile per-packet one-way delay: 167.185 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 481.70 Mbit/s
95th percentile per-packet one-way delay: 176.902 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 428.09 Mbit/s
95th percentile per-packet one-way delay: 189.324 ms
Loss rate: 2.54%
```

Run 3: Report of TCP BBR — Data Link

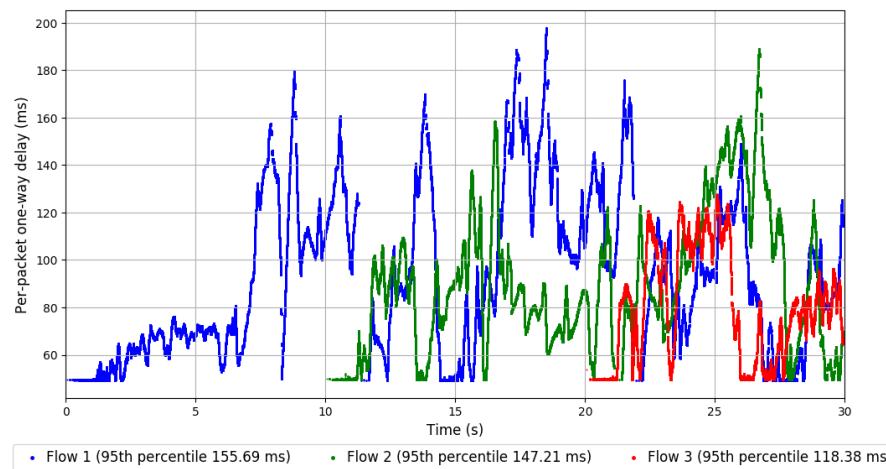
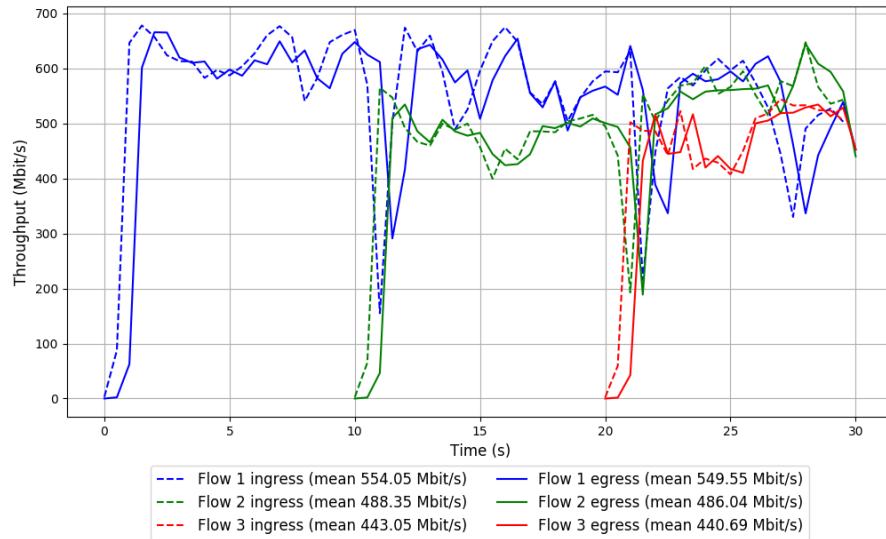


Run 4: Statistics of TCP BBR

```
Start at: 2018-09-11 21:51:28
End at: 2018-09-11 21:51:58
Local clock offset: 0.018 ms
Remote clock offset: 0.478 ms

# Below is generated by plot.py at 2018-09-11 23:31:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1018.27 Mbit/s
95th percentile per-packet one-way delay: 150.900 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 549.55 Mbit/s
95th percentile per-packet one-way delay: 155.689 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 486.04 Mbit/s
95th percentile per-packet one-way delay: 147.206 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 440.69 Mbit/s
95th percentile per-packet one-way delay: 118.379 ms
Loss rate: 1.58%
```

Run 4: Report of TCP BBR — Data Link

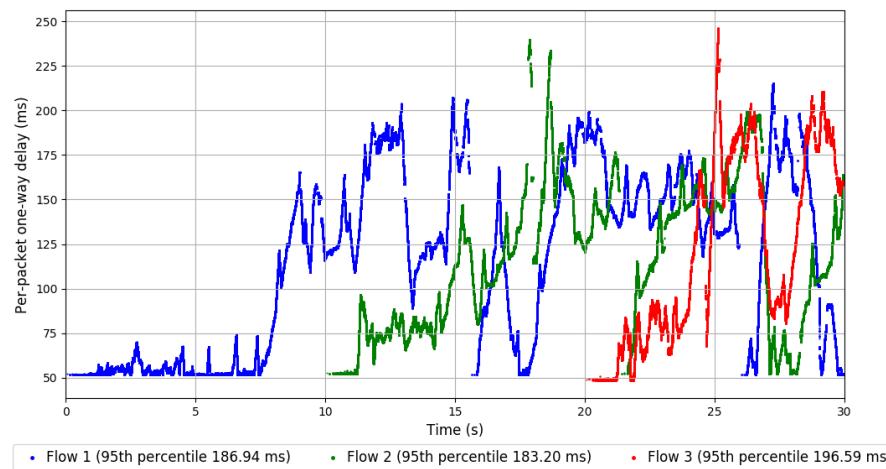
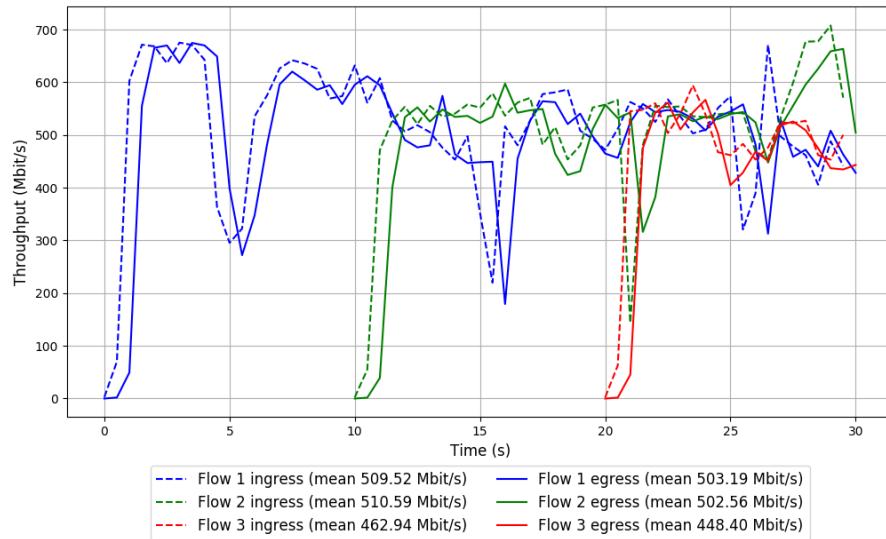


Run 5: Statistics of TCP BBR

```
Start at: 2018-09-11 22:22:55
End at: 2018-09-11 22:23:25
Local clock offset: 0.131 ms
Remote clock offset: 1.133 ms

# Below is generated by plot.py at 2018-09-11 23:31:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 985.40 Mbit/s
95th percentile per-packet one-way delay: 189.101 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 503.19 Mbit/s
95th percentile per-packet one-way delay: 186.945 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 502.56 Mbit/s
95th percentile per-packet one-way delay: 183.197 ms
Loss rate: 2.09%
-- Flow 3:
Average throughput: 448.40 Mbit/s
95th percentile per-packet one-way delay: 196.588 ms
Loss rate: 4.13%
```

Run 5: Report of TCP BBR — Data Link

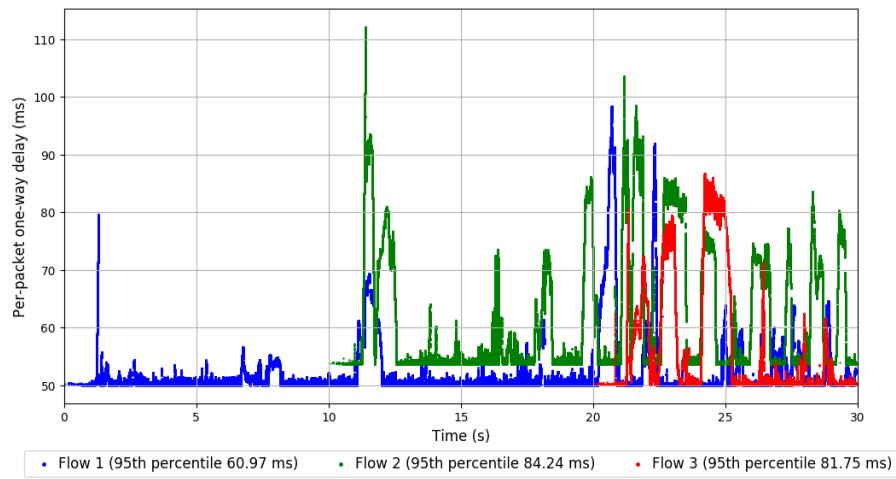
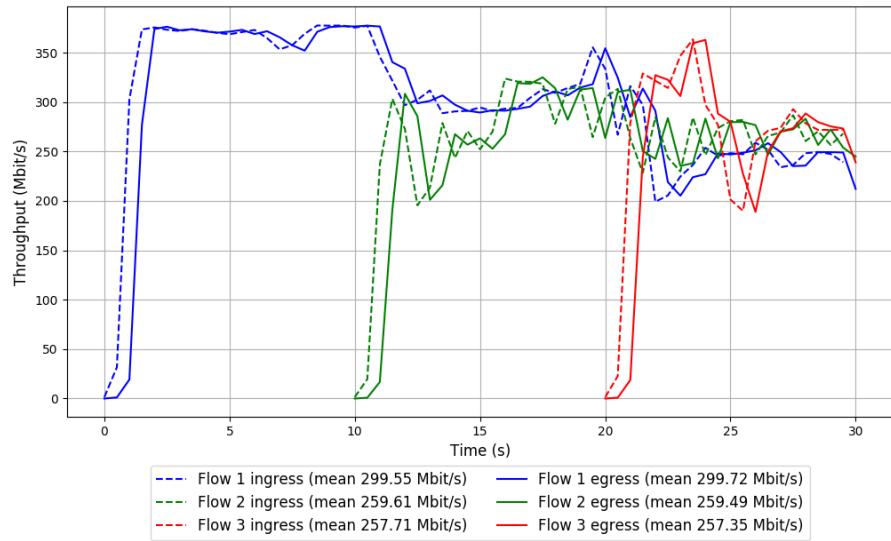


Run 1: Statistics of Copa

```
Start at: 2018-09-11 20:18:17
End at: 2018-09-11 20:18:47
Local clock offset: 0.194 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2018-09-11 23:31:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 557.18 Mbit/s
95th percentile per-packet one-way delay: 79.562 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 299.72 Mbit/s
95th percentile per-packet one-way delay: 60.969 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 259.49 Mbit/s
95th percentile per-packet one-way delay: 84.238 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 257.35 Mbit/s
95th percentile per-packet one-way delay: 81.752 ms
Loss rate: 1.16%
```

Run 1: Report of Copa — Data Link

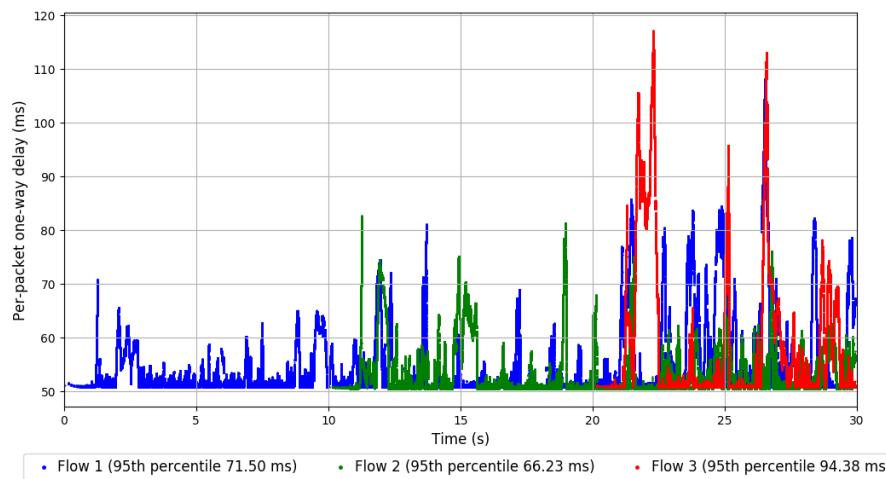
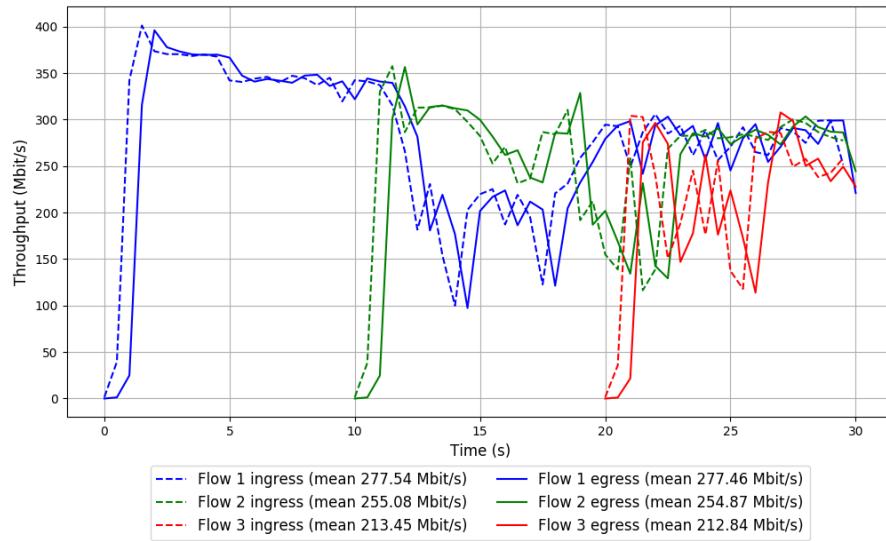


Run 2: Statistics of Copa

```
Start at: 2018-09-11 20:50:10
End at: 2018-09-11 20:50:40
Local clock offset: -0.157 ms
Remote clock offset: -0.916 ms

# Below is generated by plot.py at 2018-09-11 23:31:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 517.24 Mbit/s
95th percentile per-packet one-way delay: 73.113 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 277.46 Mbit/s
95th percentile per-packet one-way delay: 71.503 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 254.87 Mbit/s
95th percentile per-packet one-way delay: 66.231 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 212.84 Mbit/s
95th percentile per-packet one-way delay: 94.375 ms
Loss rate: 1.28%
```

Run 2: Report of Copa — Data Link

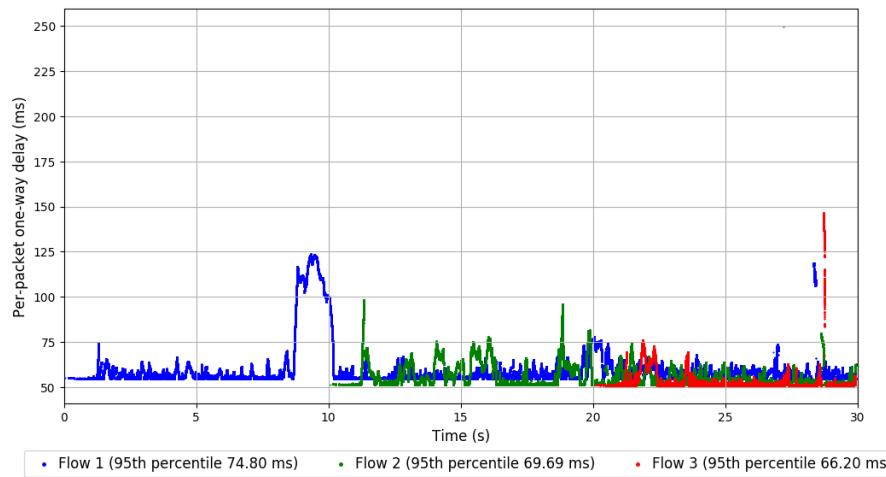
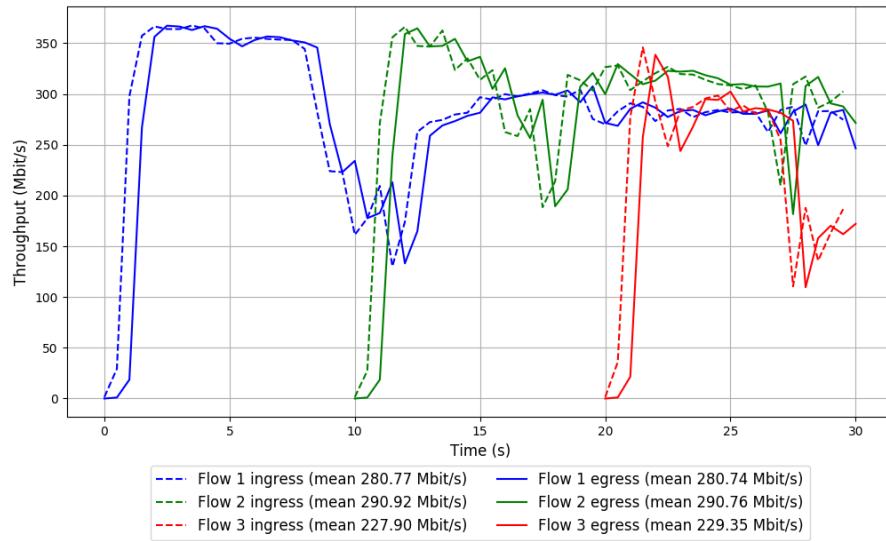


Run 3: Statistics of Copa

```
Start at: 2018-09-11 21:21:54
End at: 2018-09-11 21:22:24
Local clock offset: -0.265 ms
Remote clock offset: -1.61 ms

# Below is generated by plot.py at 2018-09-11 23:31:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 549.75 Mbit/s
95th percentile per-packet one-way delay: 70.633 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 280.74 Mbit/s
95th percentile per-packet one-way delay: 74.799 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 290.76 Mbit/s
95th percentile per-packet one-way delay: 69.694 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 229.35 Mbit/s
95th percentile per-packet one-way delay: 66.203 ms
Loss rate: 0.51%
```

Run 3: Report of Copa — Data Link

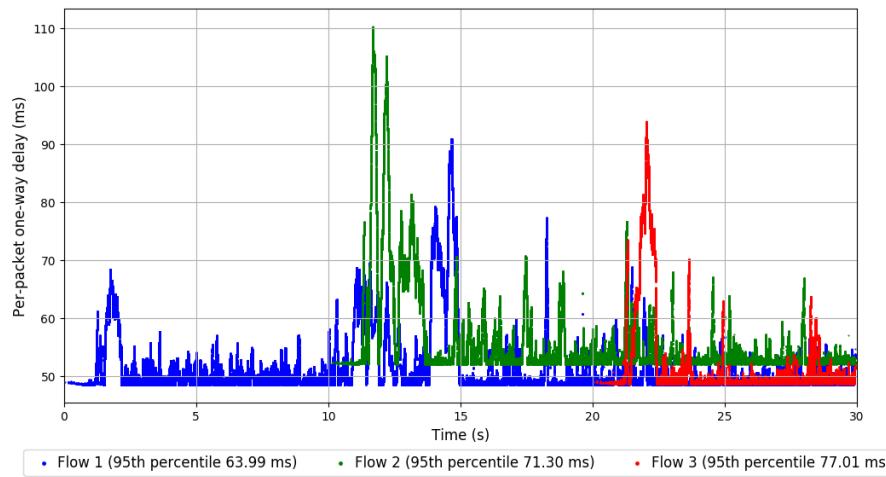
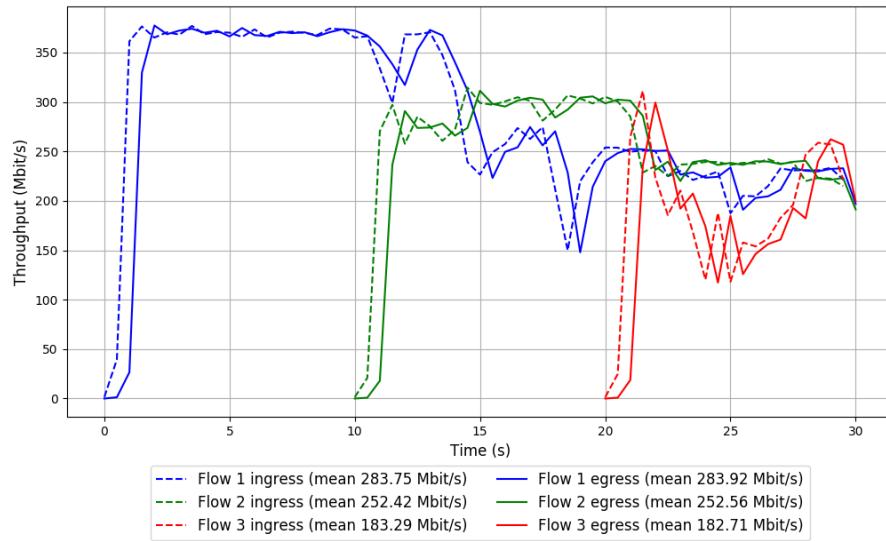


Run 4: Statistics of Copa

```
Start at: 2018-09-11 21:53:32
End at: 2018-09-11 21:54:02
Local clock offset: 0.106 ms
Remote clock offset: 1.289 ms

# Below is generated by plot.py at 2018-09-11 23:47:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 512.15 Mbit/s
95th percentile per-packet one-way delay: 68.528 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 283.92 Mbit/s
95th percentile per-packet one-way delay: 63.988 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 252.56 Mbit/s
95th percentile per-packet one-way delay: 71.302 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 182.71 Mbit/s
95th percentile per-packet one-way delay: 77.009 ms
Loss rate: 1.33%
```

Run 4: Report of Copa — Data Link

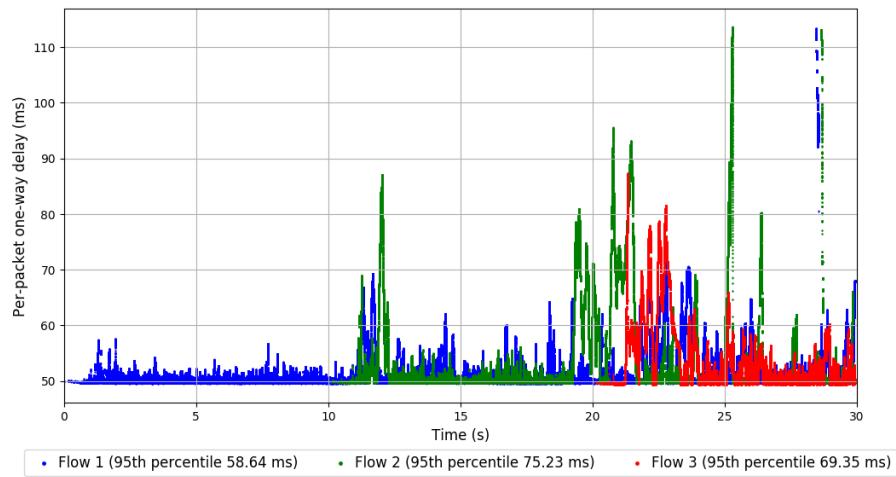
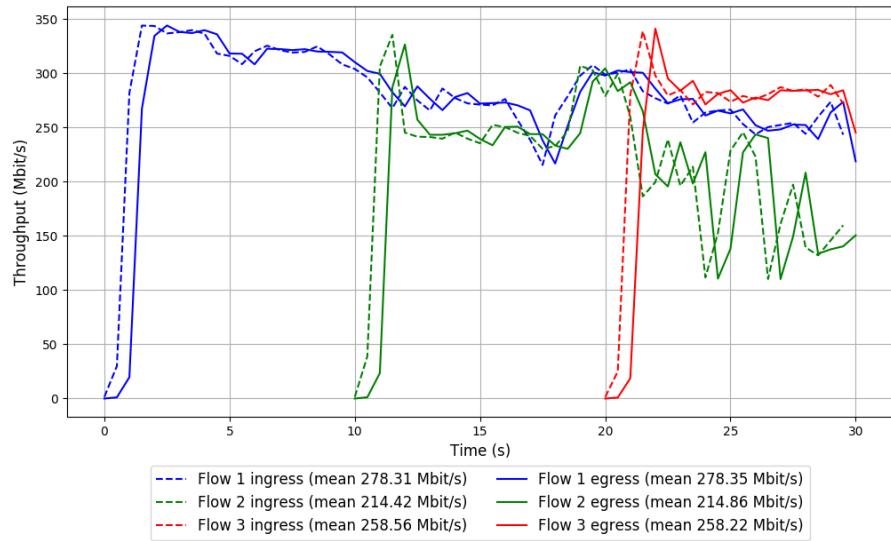


Run 5: Statistics of Copa

```
Start at: 2018-09-11 22:25:00
End at: 2018-09-11 22:25:30
Local clock offset: 0.084 ms
Remote clock offset: 0.252 ms

# Below is generated by plot.py at 2018-09-11 23:48:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 506.45 Mbit/s
95th percentile per-packet one-way delay: 66.383 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 278.35 Mbit/s
95th percentile per-packet one-way delay: 58.636 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 214.86 Mbit/s
95th percentile per-packet one-way delay: 75.228 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 258.22 Mbit/s
95th percentile per-packet one-way delay: 69.352 ms
Loss rate: 1.15%
```

Run 5: Report of Copa — Data Link

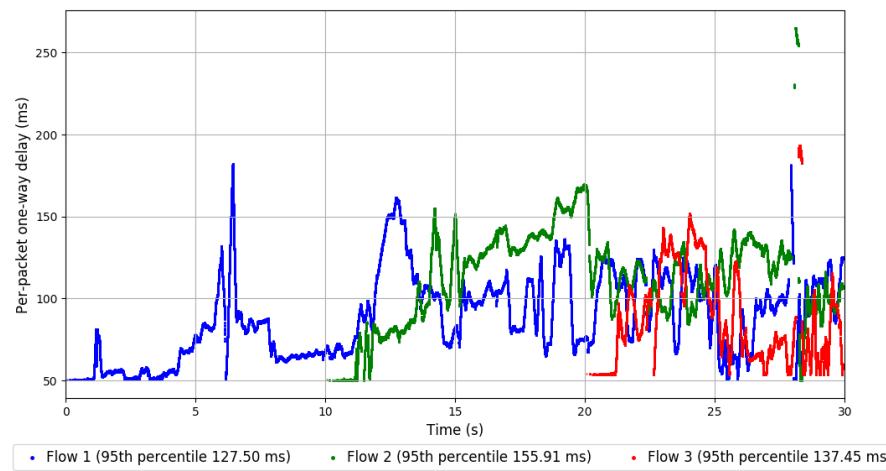
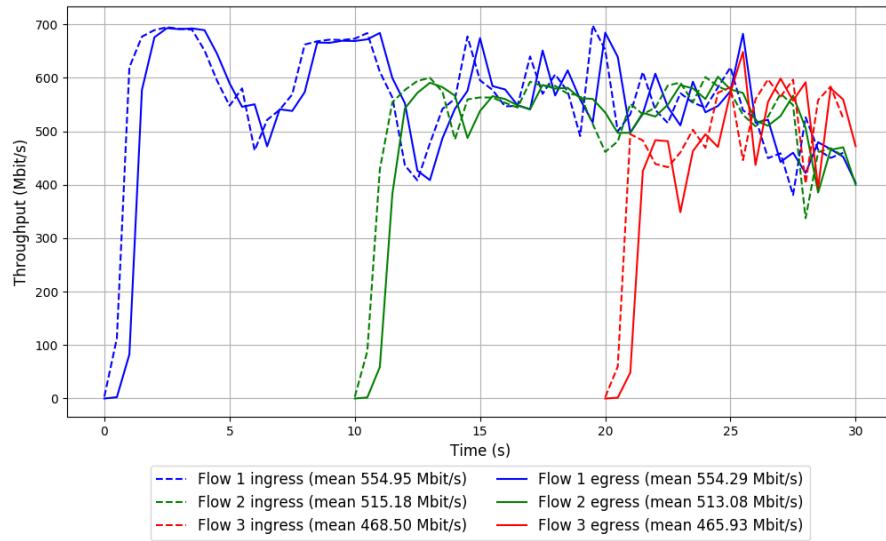


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-09-11 20:20:19
End at: 2018-09-11 20:20:49
Local clock offset: -0.015 ms
Remote clock offset: -0.168 ms

# Below is generated by plot.py at 2018-09-11 23:49:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1049.01 Mbit/s
95th percentile per-packet one-way delay: 142.148 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 554.29 Mbit/s
95th percentile per-packet one-way delay: 127.505 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 513.08 Mbit/s
95th percentile per-packet one-way delay: 155.915 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 465.93 Mbit/s
95th percentile per-packet one-way delay: 137.453 ms
Loss rate: 1.59%
```

Run 1: Report of TCP Cubic — Data Link

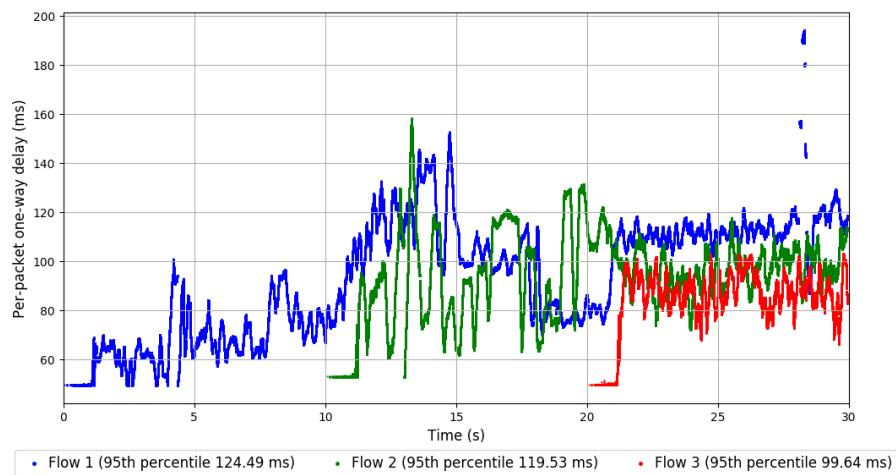
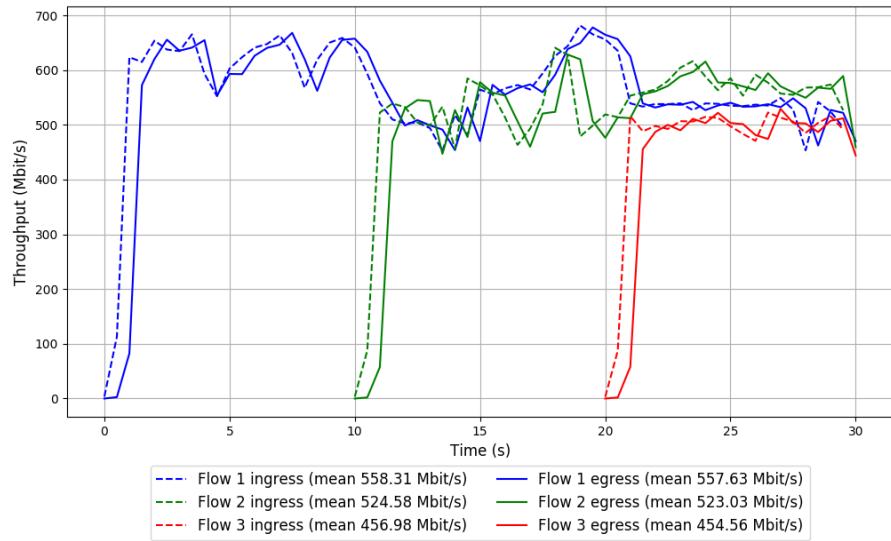


Run 2: Statistics of TCP Cubic

```
Start at: 2018-09-11 20:52:09
End at: 2018-09-11 20:52:39
Local clock offset: -0.185 ms
Remote clock offset: 0.389 ms

# Below is generated by plot.py at 2018-09-11 23:50:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1055.57 Mbit/s
95th percentile per-packet one-way delay: 121.224 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 557.63 Mbit/s
95th percentile per-packet one-way delay: 124.489 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 523.03 Mbit/s
95th percentile per-packet one-way delay: 119.528 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 454.56 Mbit/s
95th percentile per-packet one-way delay: 99.635 ms
Loss rate: 1.54%
```

Run 2: Report of TCP Cubic — Data Link

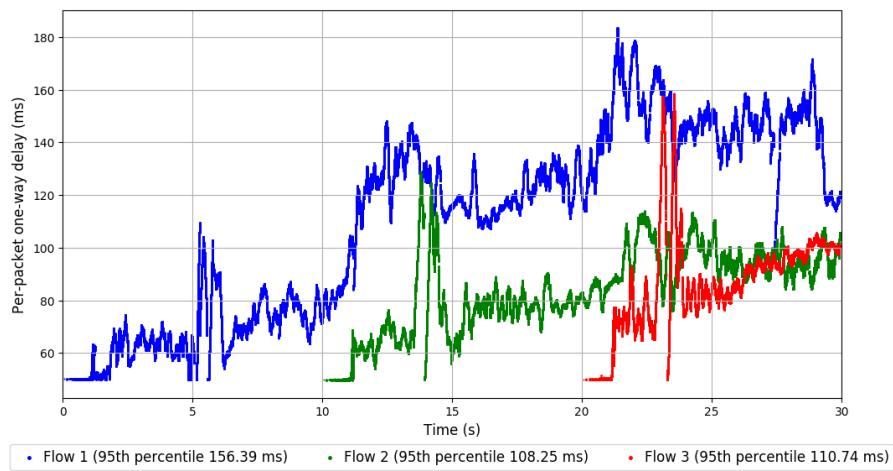
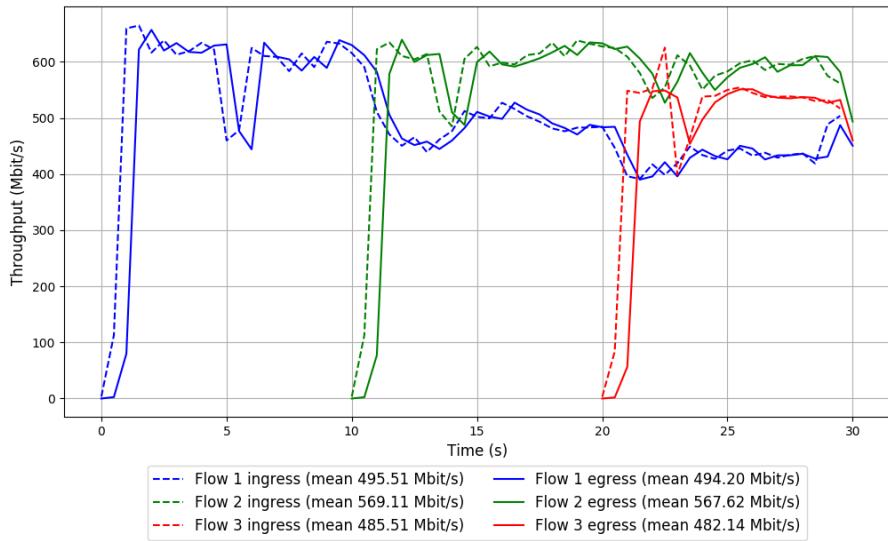


Run 3: Statistics of TCP Cubic

```
Start at: 2018-09-11 21:23:57
End at: 2018-09-11 21:24:27
Local clock offset: -0.233 ms
Remote clock offset: -0.16 ms

# Below is generated by plot.py at 2018-09-11 23:50:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1030.82 Mbit/s
95th percentile per-packet one-way delay: 150.731 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 494.20 Mbit/s
95th percentile per-packet one-way delay: 156.387 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 567.62 Mbit/s
95th percentile per-packet one-way delay: 108.249 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 482.14 Mbit/s
95th percentile per-packet one-way delay: 110.736 ms
Loss rate: 1.70%
```

Run 3: Report of TCP Cubic — Data Link

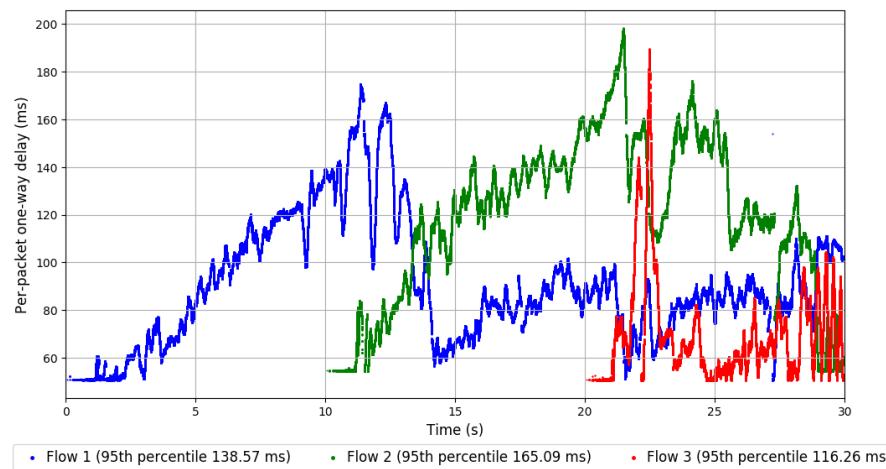
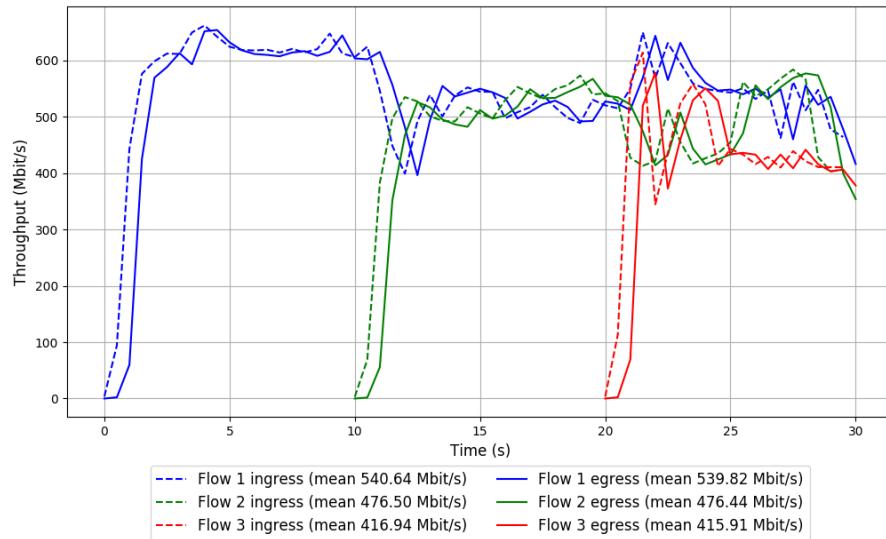


Run 4: Statistics of TCP Cubic

```
Start at: 2018-09-11 21:55:32
End at: 2018-09-11 21:56:02
Local clock offset: 0.093 ms
Remote clock offset: -0.861 ms

# Below is generated by plot.py at 2018-09-11 23:50:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 993.99 Mbit/s
95th percentile per-packet one-way delay: 156.454 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 539.82 Mbit/s
95th percentile per-packet one-way delay: 138.573 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 476.44 Mbit/s
95th percentile per-packet one-way delay: 165.088 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 415.91 Mbit/s
95th percentile per-packet one-way delay: 116.259 ms
Loss rate: 1.25%
```

Run 4: Report of TCP Cubic — Data Link

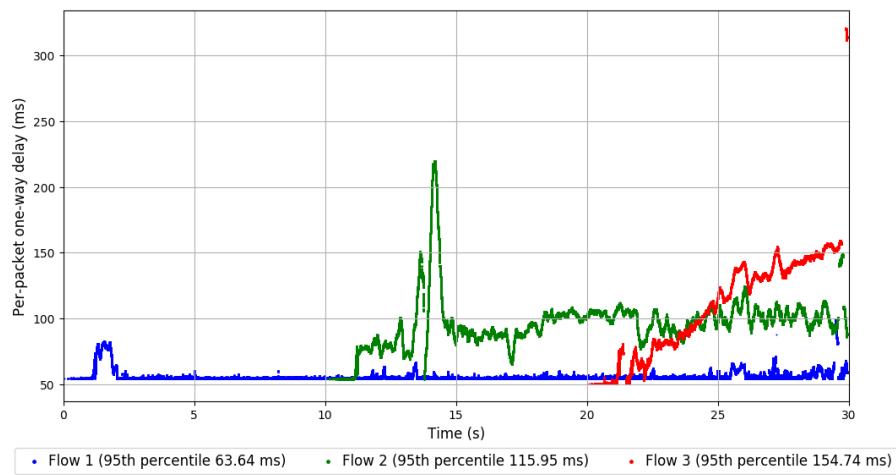
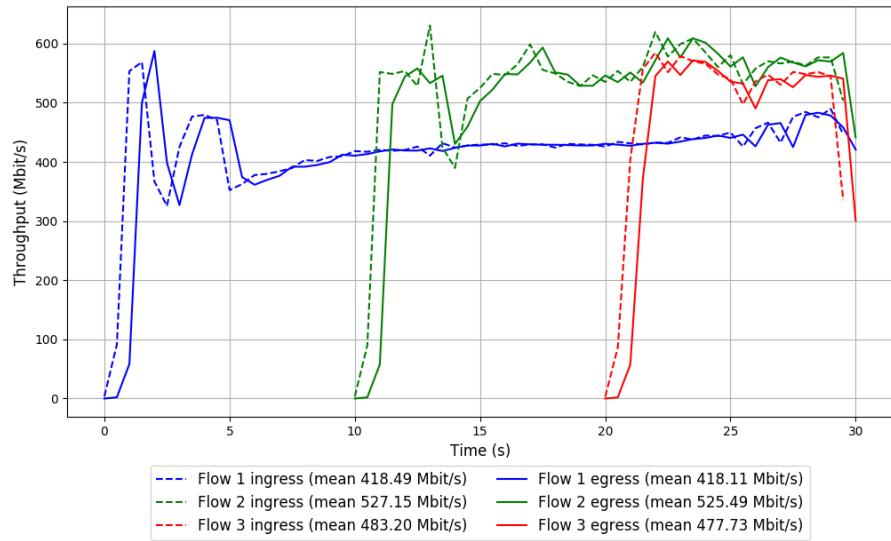


Run 5: Statistics of TCP Cubic

```
Start at: 2018-09-11 22:26:59
End at: 2018-09-11 22:27:29
Local clock offset: 0.171 ms
Remote clock offset: -0.951 ms

# Below is generated by plot.py at 2018-09-11 23:50:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 925.35 Mbit/s
95th percentile per-packet one-way delay: 142.524 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 418.11 Mbit/s
95th percentile per-packet one-way delay: 63.636 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 525.49 Mbit/s
95th percentile per-packet one-way delay: 115.953 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 477.73 Mbit/s
95th percentile per-packet one-way delay: 154.741 ms
Loss rate: 2.14%
```

Run 5: Report of TCP Cubic — Data Link

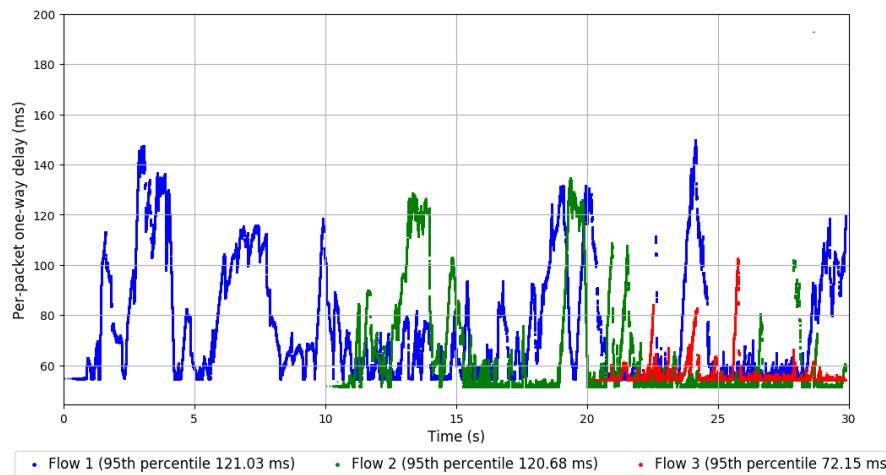
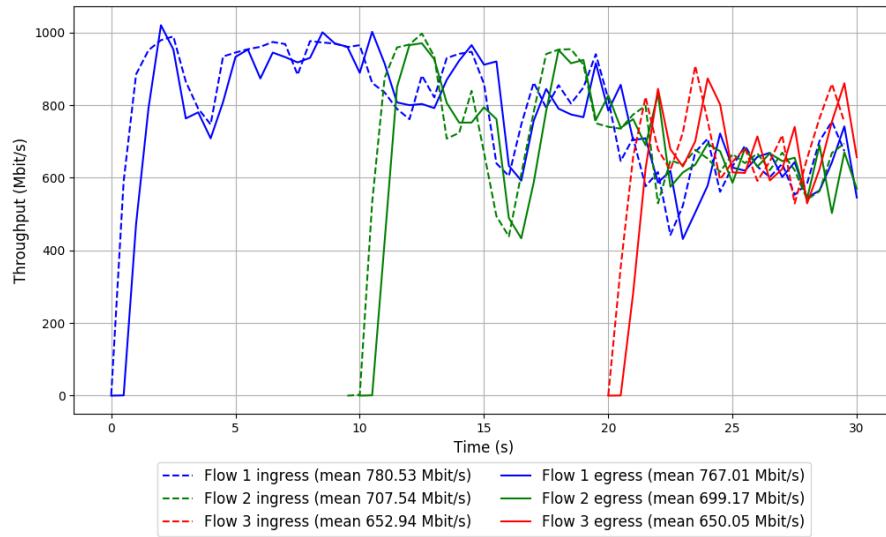


```
Run 1: Statistics of FillP

Start at: 2018-09-11 20:42:37
End at: 2018-09-11 20:43:07
Local clock offset: -0.35 ms
Remote clock offset: -1.564 ms

# Below is generated by plot.py at 2018-09-12 00:02:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1445.82 Mbit/s
95th percentile per-packet one-way delay: 118.467 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 767.01 Mbit/s
95th percentile per-packet one-way delay: 121.030 ms
Loss rate: 2.08%
-- Flow 2:
Average throughput: 699.17 Mbit/s
95th percentile per-packet one-way delay: 120.680 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 650.05 Mbit/s
95th percentile per-packet one-way delay: 72.153 ms
Loss rate: 1.50%
```

Run 1: Report of FillP — Data Link

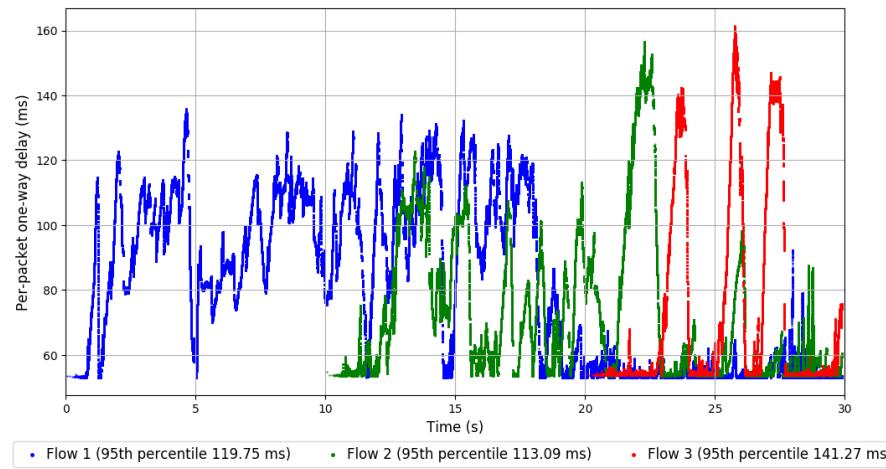
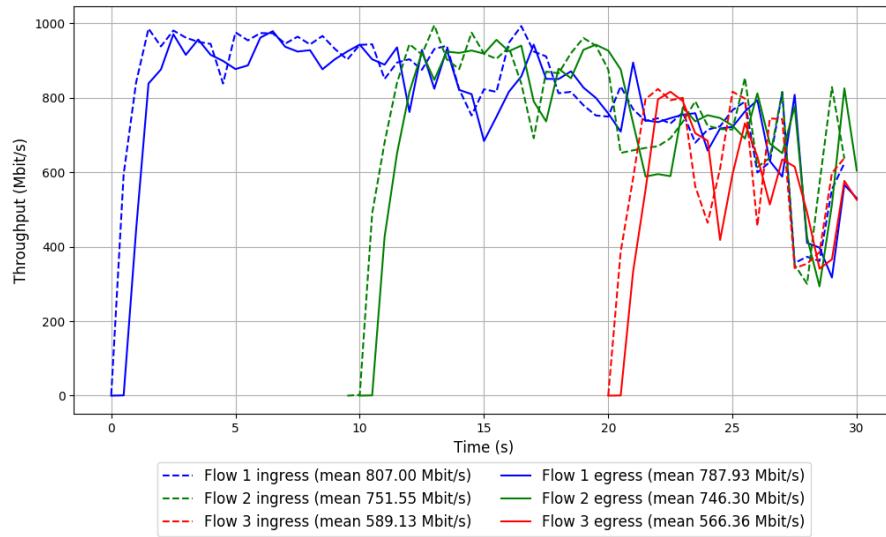


Run 2: Statistics of FillP

```
Start at: 2018-09-11 21:14:26
End at: 2018-09-11 21:14:56
Local clock offset: -0.127 ms
Remote clock offset: -0.223 ms

# Below is generated by plot.py at 2018-09-12 00:21:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1470.88 Mbit/s
95th percentile per-packet one-way delay: 121.942 ms
Loss rate: 2.47%
-- Flow 1:
Average throughput: 787.93 Mbit/s
95th percentile per-packet one-way delay: 119.752 ms
Loss rate: 2.69%
-- Flow 2:
Average throughput: 746.30 Mbit/s
95th percentile per-packet one-way delay: 113.089 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 566.36 Mbit/s
95th percentile per-packet one-way delay: 141.271 ms
Loss rate: 4.85%
```

Run 2: Report of FillP — Data Link

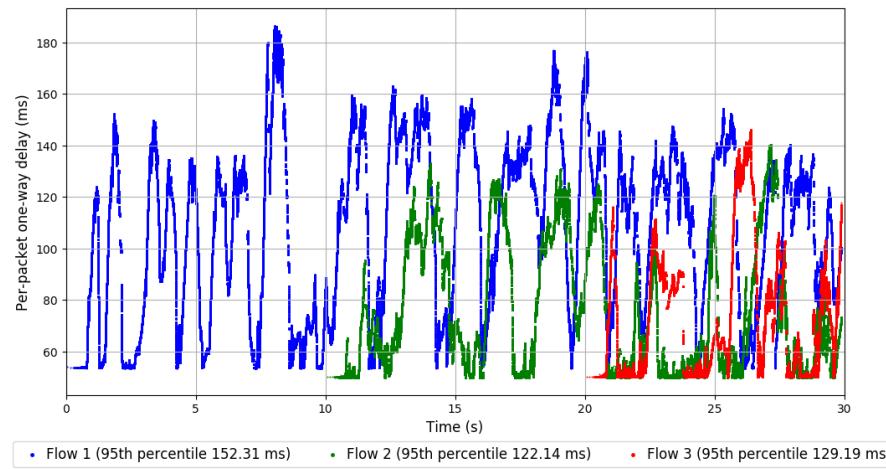
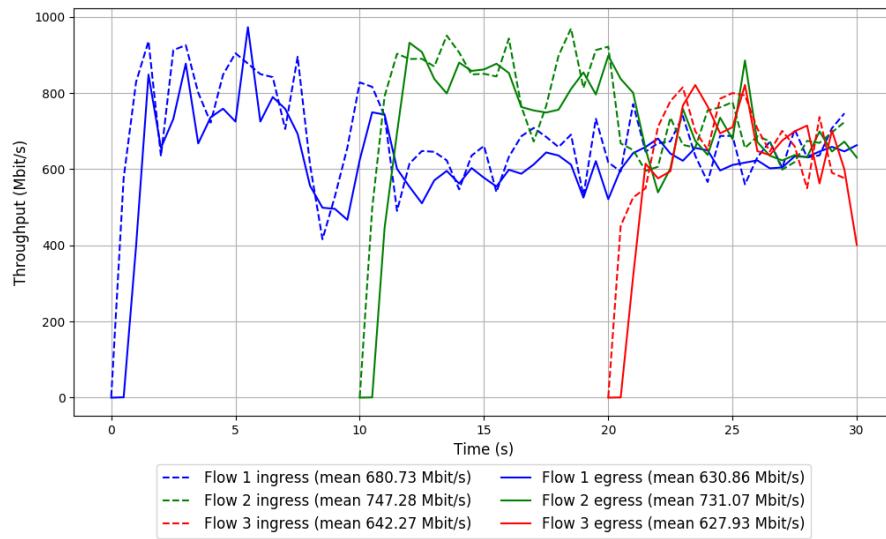


Run 3: Statistics of FillP

```
Start at: 2018-09-11 21:46:07
End at: 2018-09-11 21:46:37
Local clock offset: -0.006 ms
Remote clock offset: -0.229 ms

# Below is generated by plot.py at 2018-09-12 00:21:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1322.85 Mbit/s
95th percentile per-packet one-way delay: 145.296 ms
Loss rate: 5.19%
-- Flow 1:
Average throughput: 630.86 Mbit/s
95th percentile per-packet one-way delay: 152.313 ms
Loss rate: 7.66%
-- Flow 2:
Average throughput: 731.07 Mbit/s
95th percentile per-packet one-way delay: 122.137 ms
Loss rate: 2.67%
-- Flow 3:
Average throughput: 627.93 Mbit/s
95th percentile per-packet one-way delay: 129.195 ms
Loss rate: 3.22%
```

Run 3: Report of FillP — Data Link

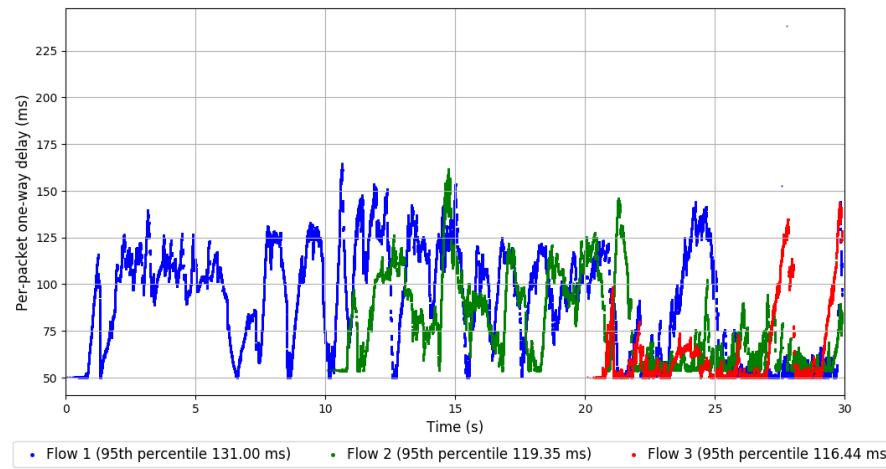
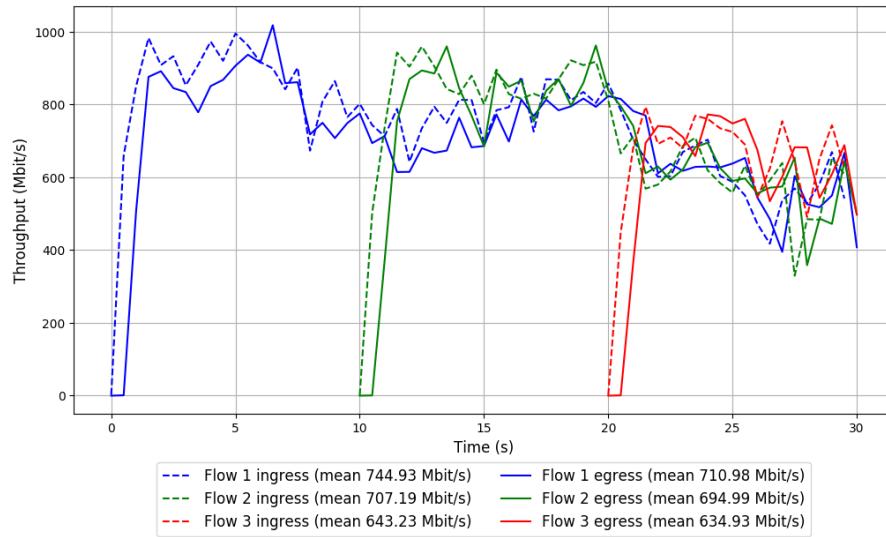


```
Run 4: Statistics of FillP
```

```
Start at: 2018-09-11 22:17:35
End at: 2018-09-11 22:18:05
Local clock offset: 0.266 ms
Remote clock offset: -0.254 ms

# Below is generated by plot.py at 2018-09-12 00:21:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1381.72 Mbit/s
95th percentile per-packet one-way delay: 127.360 ms
Loss rate: 3.62%
-- Flow 1:
Average throughput: 710.98 Mbit/s
95th percentile per-packet one-way delay: 131.000 ms
Loss rate: 4.87%
-- Flow 2:
Average throughput: 694.99 Mbit/s
95th percentile per-packet one-way delay: 119.351 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 634.93 Mbit/s
95th percentile per-packet one-way delay: 116.443 ms
Loss rate: 2.28%
```

Run 4: Report of FillP — Data Link

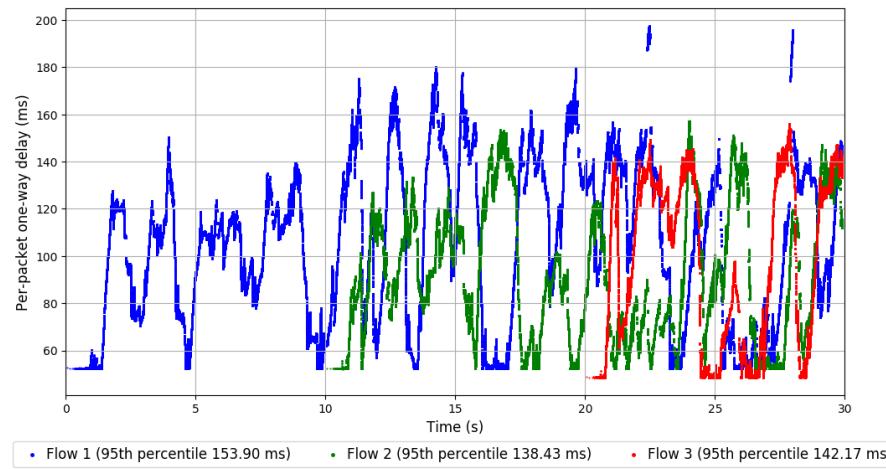
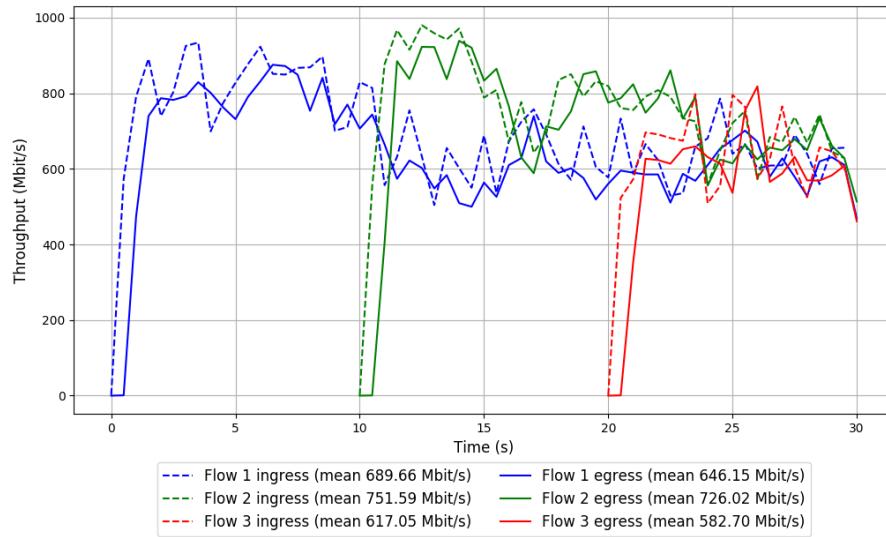


```
Run 5: Statistics of FillP
```

```
Start at: 2018-09-11 22:49:08
End at: 2018-09-11 22:49:38
Local clock offset: 0.126 ms
Remote clock offset: 1.043 ms

# Below is generated by plot.py at 2018-09-12 00:21:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1320.44 Mbit/s
95th percentile per-packet one-way delay: 146.985 ms
Loss rate: 5.64%
-- Flow 1:
Average throughput: 646.15 Mbit/s
95th percentile per-packet one-way delay: 153.902 ms
Loss rate: 6.64%
-- Flow 2:
Average throughput: 726.02 Mbit/s
95th percentile per-packet one-way delay: 138.434 ms
Loss rate: 3.91%
-- Flow 3:
Average throughput: 582.70 Mbit/s
95th percentile per-packet one-way delay: 142.169 ms
Loss rate: 6.53%
```

Run 5: Report of FillP — Data Link

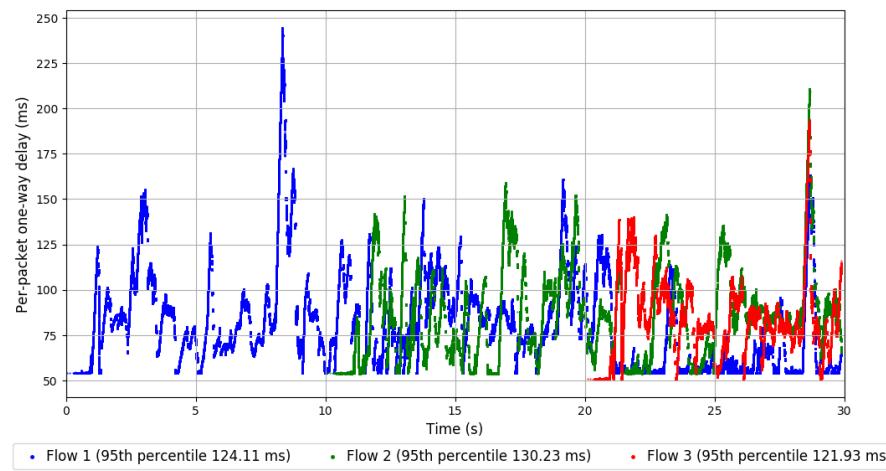
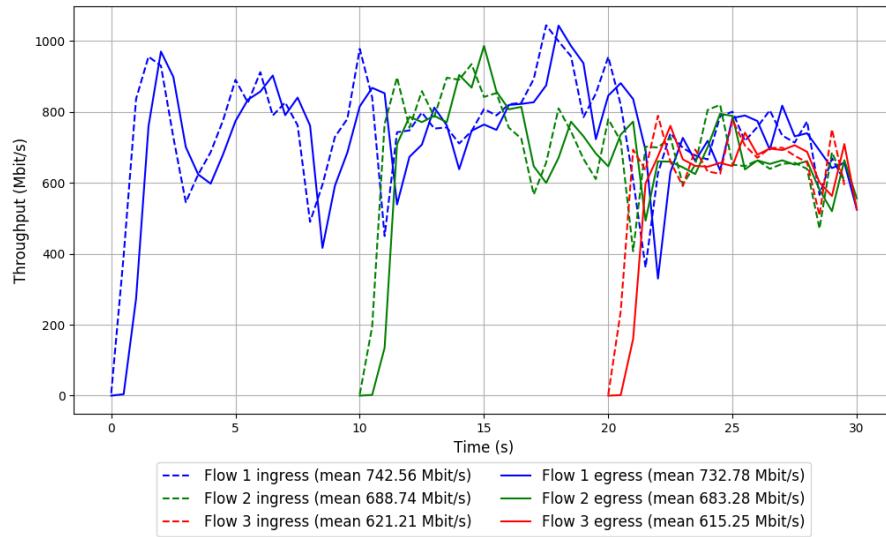


Run 1: Statistics of FillP-Sheep

```
Start at: 2018-09-11 20:29:17
End at: 2018-09-11 20:29:47
Local clock offset: -0.137 ms
Remote clock offset: -0.547 ms

# Below is generated by plot.py at 2018-09-12 00:21:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1388.58 Mbit/s
95th percentile per-packet one-way delay: 126.218 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 732.78 Mbit/s
95th percentile per-packet one-way delay: 124.112 ms
Loss rate: 1.66%
-- Flow 2:
Average throughput: 683.28 Mbit/s
95th percentile per-packet one-way delay: 130.227 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 615.25 Mbit/s
95th percentile per-packet one-way delay: 121.931 ms
Loss rate: 1.93%
```

Run 1: Report of FillP-Sheep — Data Link

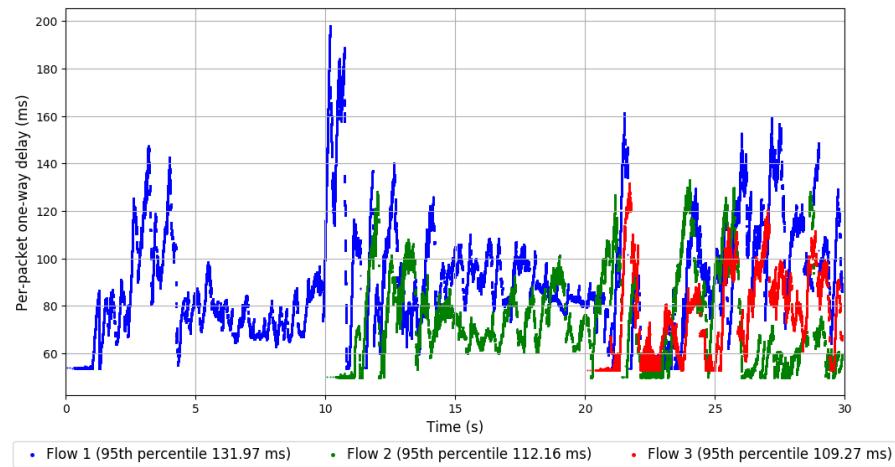
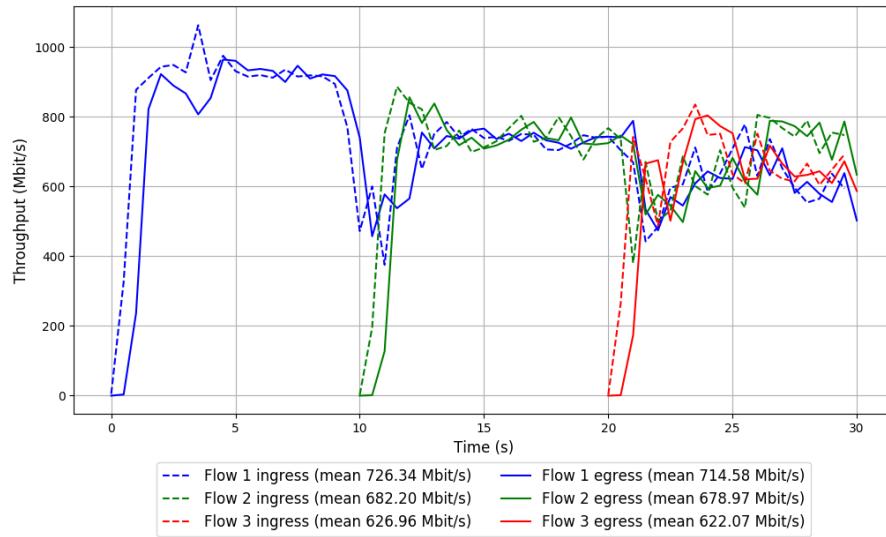


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-09-11 21:01:10
End at: 2018-09-11 21:01:40
Local clock offset: -0.207 ms
Remote clock offset: -0.221 ms

# Below is generated by plot.py at 2018-09-12 00:21:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1370.11 Mbit/s
95th percentile per-packet one-way delay: 121.200 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 714.58 Mbit/s
95th percentile per-packet one-way delay: 131.968 ms
Loss rate: 1.96%
-- Flow 2:
Average throughput: 678.97 Mbit/s
95th percentile per-packet one-way delay: 112.160 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 622.07 Mbit/s
95th percentile per-packet one-way delay: 109.268 ms
Loss rate: 1.82%
```

Run 2: Report of FillP-Sheep — Data Link

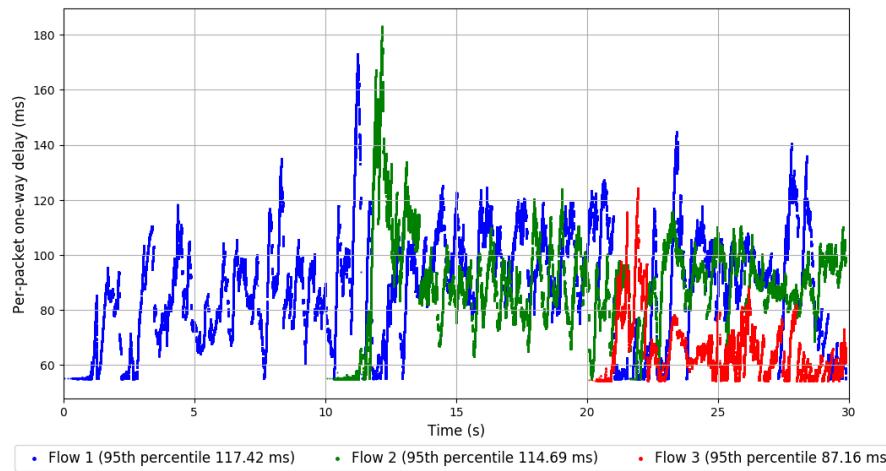
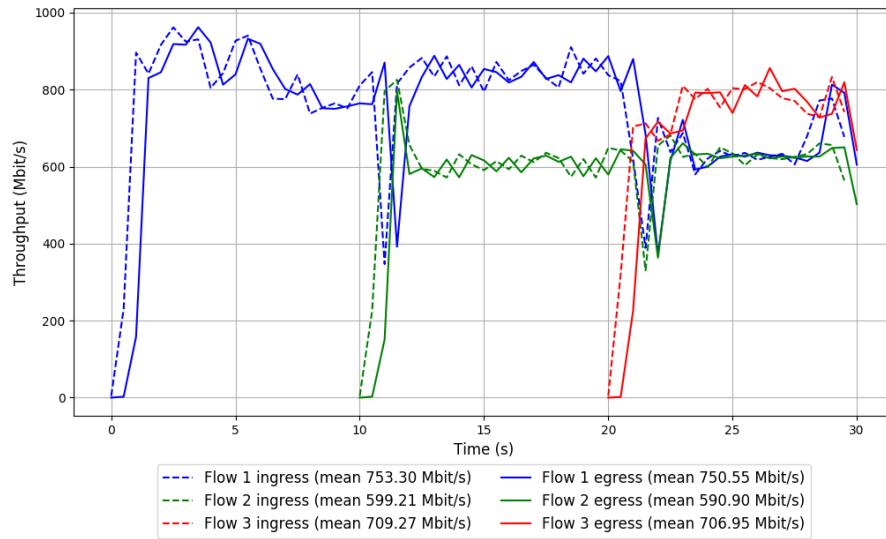


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-09-11 21:32:59
End at: 2018-09-11 21:33:29
Local clock offset: 0.094 ms
Remote clock offset: -1.387 ms

# Below is generated by plot.py at 2018-09-12 00:22:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1375.50 Mbit/s
95th percentile per-packet one-way delay: 115.443 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 750.55 Mbit/s
95th percentile per-packet one-way delay: 117.416 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 590.90 Mbit/s
95th percentile per-packet one-way delay: 114.692 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 706.95 Mbit/s
95th percentile per-packet one-way delay: 87.163 ms
Loss rate: 1.39%
```

Run 3: Report of FillP-Sheep — Data Link

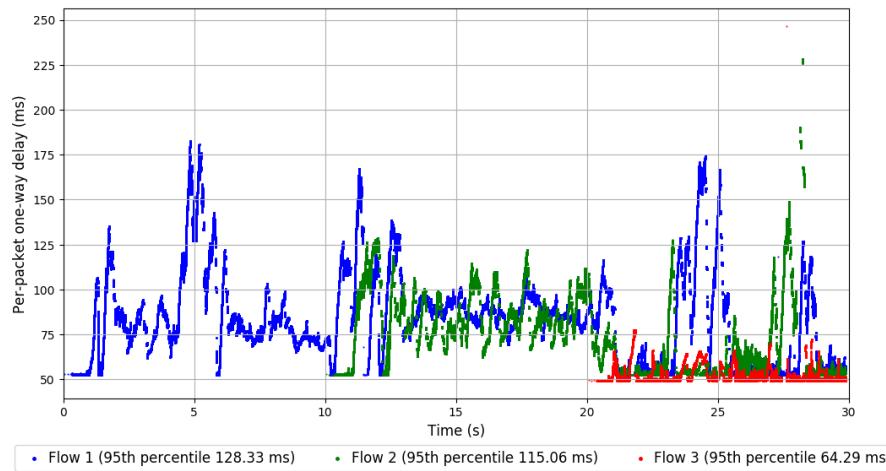
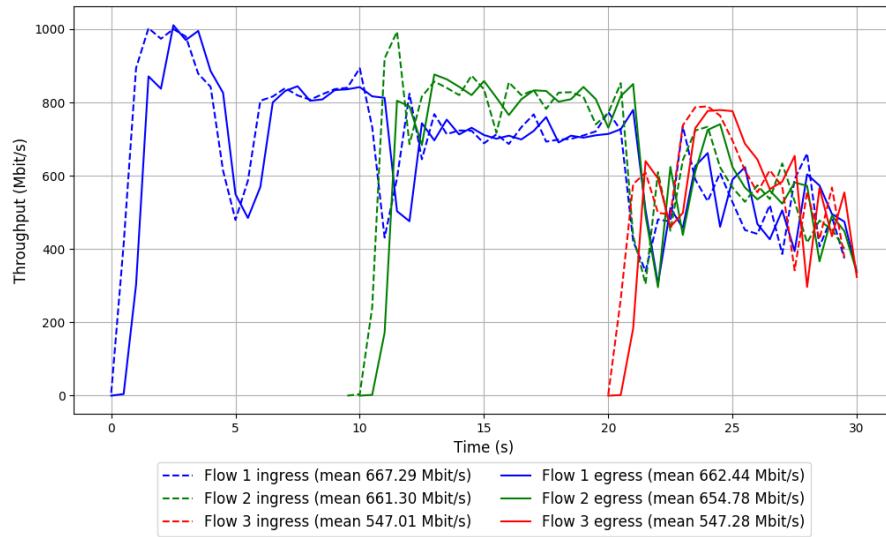


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-09-11 22:04:28
End at: 2018-09-11 22:04:58
Local clock offset: 0.225 ms
Remote clock offset: 0.959 ms

# Below is generated by plot.py at 2018-09-12 00:37:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1277.80 Mbit/s
95th percentile per-packet one-way delay: 120.602 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 662.44 Mbit/s
95th percentile per-packet one-way delay: 128.331 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 654.78 Mbit/s
95th percentile per-packet one-way delay: 115.064 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 547.28 Mbit/s
95th percentile per-packet one-way delay: 64.290 ms
Loss rate: 0.87%
```

Run 4: Report of FillP-Sheep — Data Link

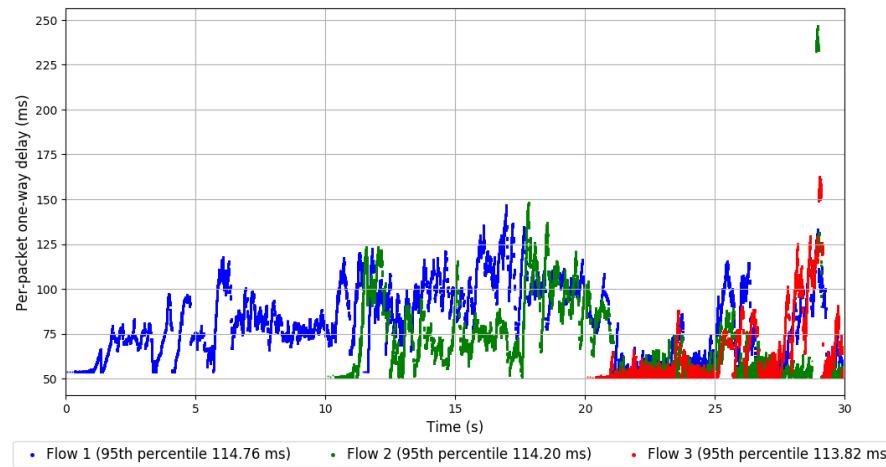
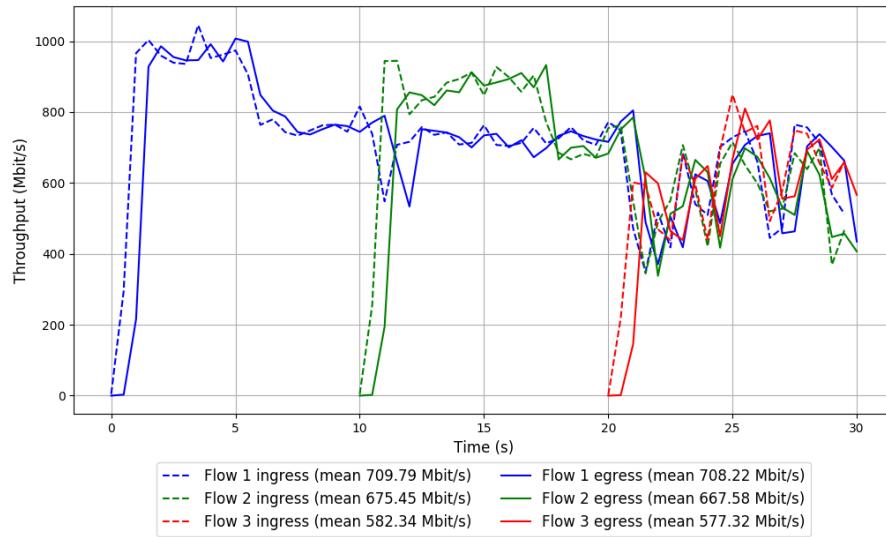


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-09-11 22:35:57
End at: 2018-09-11 22:36:27
Local clock offset: 0.203 ms
Remote clock offset: -0.925 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1341.31 Mbit/s
95th percentile per-packet one-way delay: 114.433 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 708.22 Mbit/s
95th percentile per-packet one-way delay: 114.758 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 667.58 Mbit/s
95th percentile per-packet one-way delay: 114.199 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 577.32 Mbit/s
95th percentile per-packet one-way delay: 113.821 ms
Loss rate: 1.82%
```

Run 5: Report of FillP-Sheep — Data Link

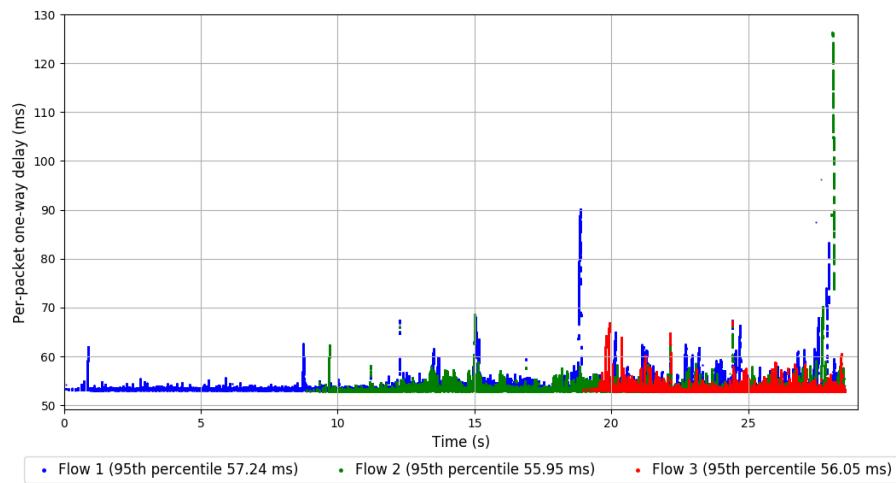
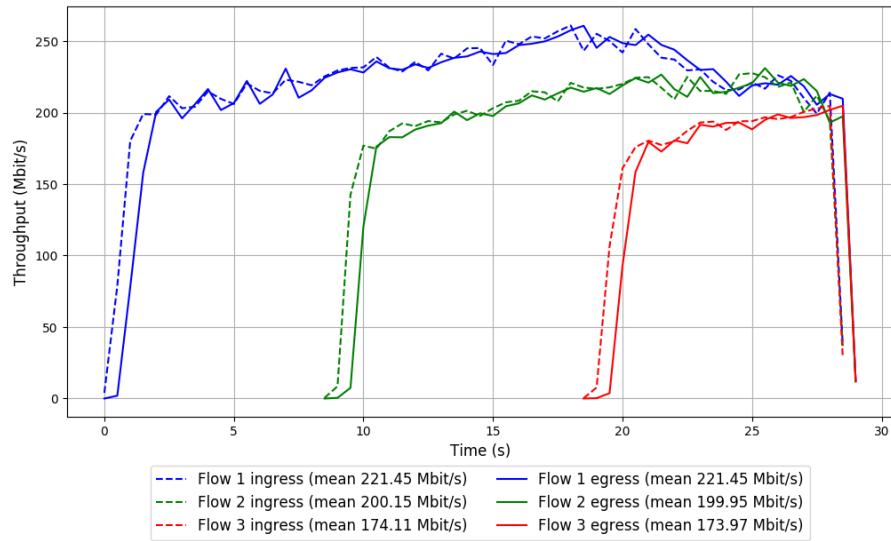


Run 1: Statistics of Indigo

```
Start at: 2018-09-11 20:22:24
End at: 2018-09-11 20:22:54
Local clock offset: 0.074 ms
Remote clock offset: 0.581 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 417.88 Mbit/s
95th percentile per-packet one-way delay: 56.425 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 221.45 Mbit/s
95th percentile per-packet one-way delay: 57.238 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 199.95 Mbit/s
95th percentile per-packet one-way delay: 55.955 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 173.97 Mbit/s
95th percentile per-packet one-way delay: 56.045 ms
Loss rate: 1.17%
```

Run 1: Report of Indigo — Data Link

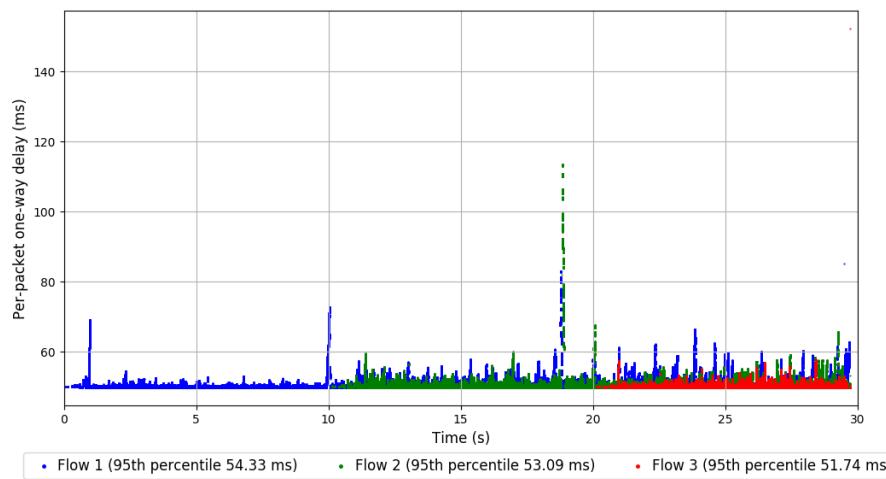
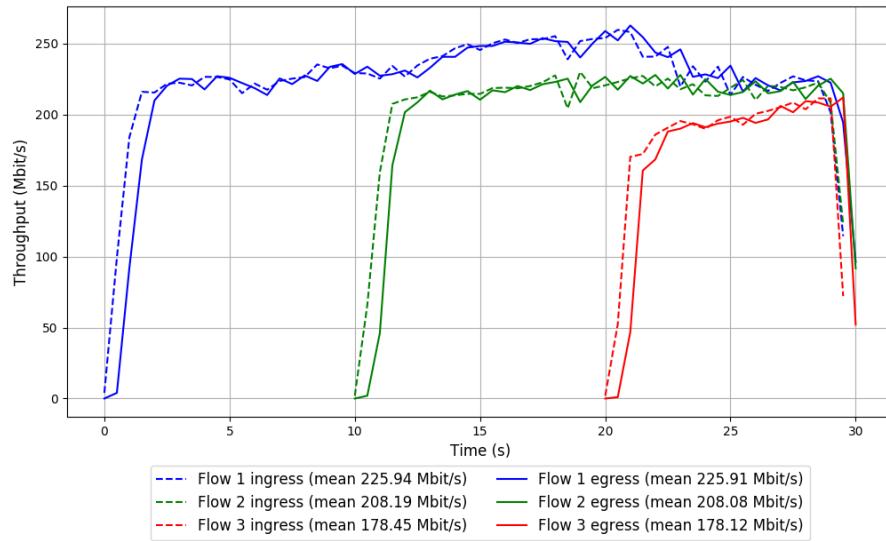


Run 2: Statistics of Indigo

```
Start at: 2018-09-11 20:54:13
End at: 2018-09-11 20:54:43
Local clock offset: -0.154 ms
Remote clock offset: -0.238 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 420.73 Mbit/s
95th percentile per-packet one-way delay: 53.502 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 225.91 Mbit/s
95th percentile per-packet one-way delay: 54.333 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 208.08 Mbit/s
95th percentile per-packet one-way delay: 53.095 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 178.12 Mbit/s
95th percentile per-packet one-way delay: 51.744 ms
Loss rate: 1.23%
```

Run 2: Report of Indigo — Data Link

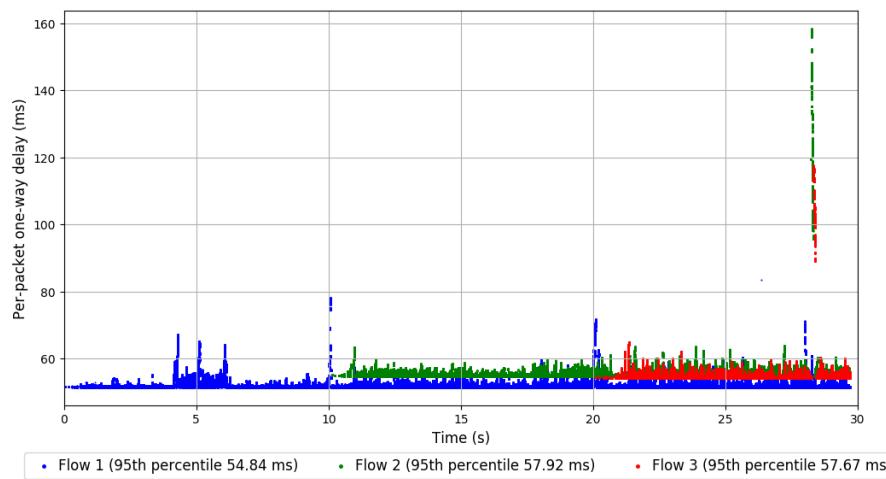
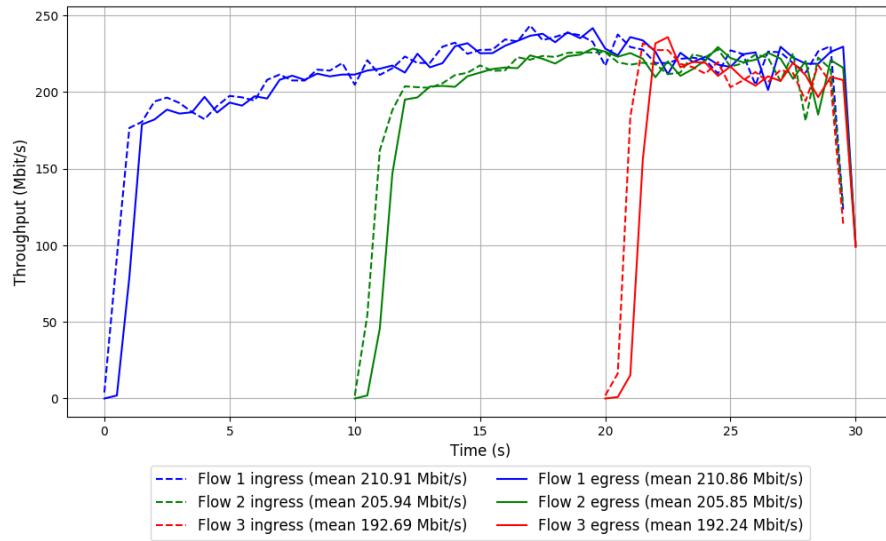


Run 3: Statistics of Indigo

```
Start at: 2018-09-11 21:26:01
End at: 2018-09-11 21:26:31
Local clock offset: -0.134 ms
Remote clock offset: -1.449 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 409.13 Mbit/s
95th percentile per-packet one-way delay: 57.139 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 210.86 Mbit/s
95th percentile per-packet one-way delay: 54.837 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 205.85 Mbit/s
95th percentile per-packet one-way delay: 57.917 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 192.24 Mbit/s
95th percentile per-packet one-way delay: 57.673 ms
Loss rate: 1.29%
```

Run 3: Report of Indigo — Data Link

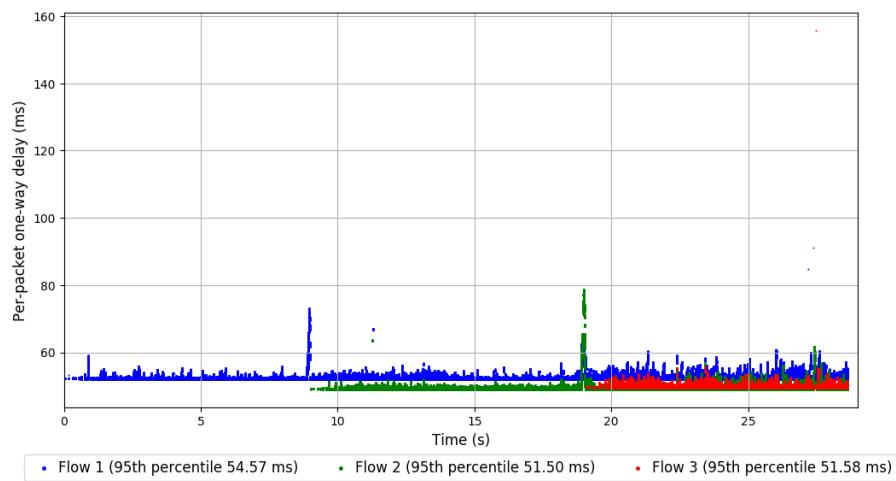
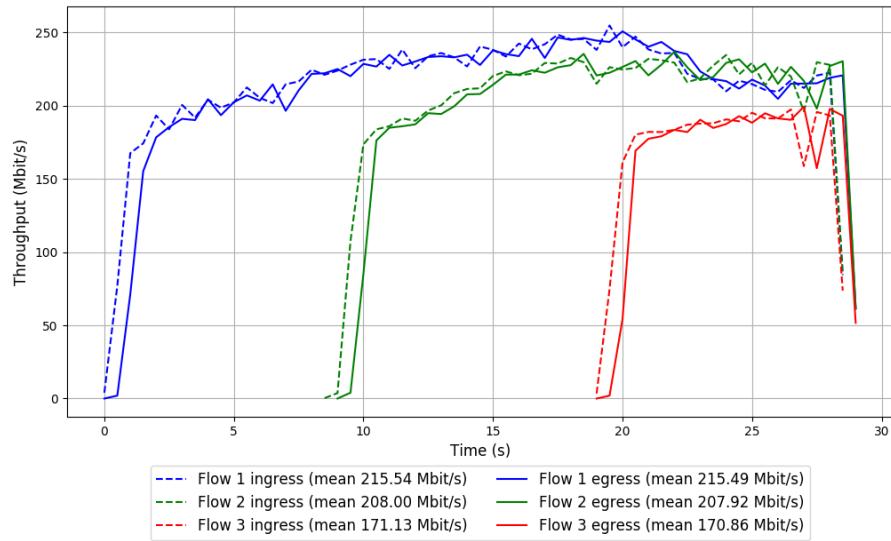


Run 4: Statistics of Indigo

```
Start at: 2018-09-11 21:57:34
End at: 2018-09-11 21:58:04
Local clock offset: 0.094 ms
Remote clock offset: 0.796 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 415.29 Mbit/s
95th percentile per-packet one-way delay: 53.912 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 215.49 Mbit/s
95th percentile per-packet one-way delay: 54.568 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 207.92 Mbit/s
95th percentile per-packet one-way delay: 51.498 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 170.86 Mbit/s
95th percentile per-packet one-way delay: 51.580 ms
Loss rate: 1.20%
```

Run 4: Report of Indigo — Data Link

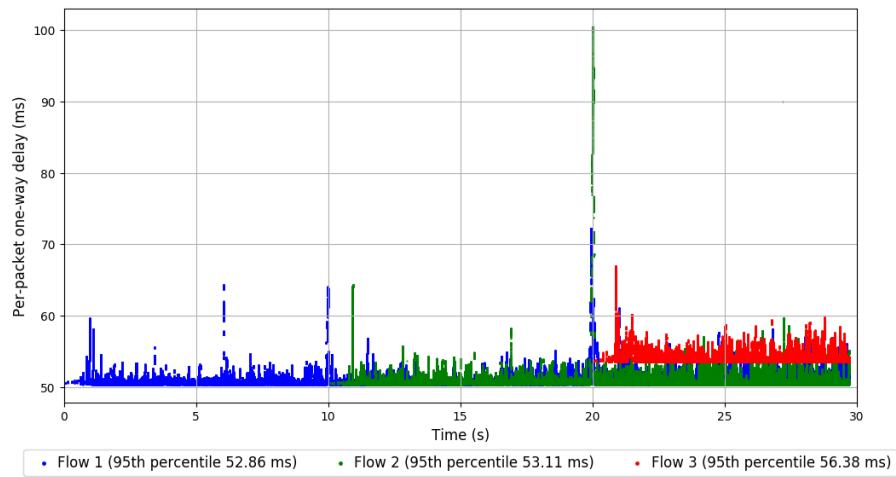
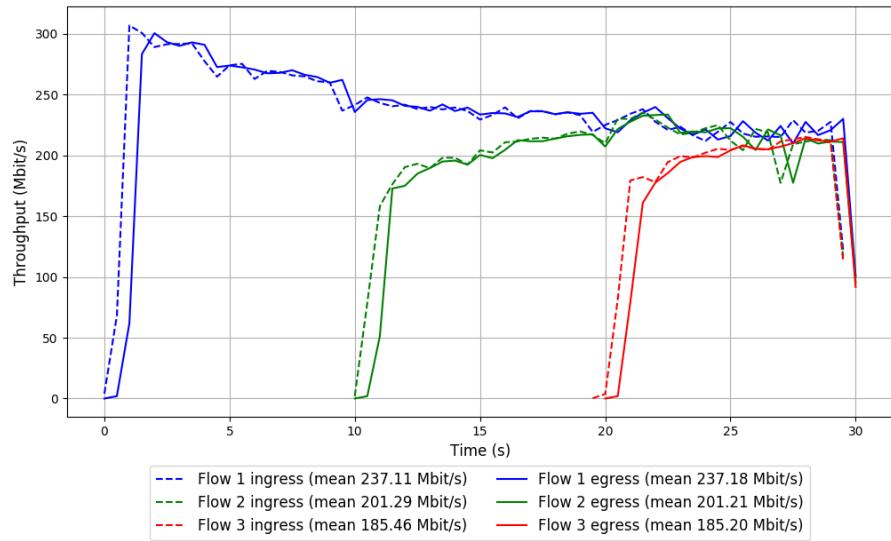


Run 5: Statistics of Indigo

```
Start at: 2018-09-11 22:28:57
End at: 2018-09-11 22:29:27
Local clock offset: 0.205 ms
Remote clock offset: -0.364 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 430.61 Mbit/s
95th percentile per-packet one-way delay: 54.531 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 237.18 Mbit/s
95th percentile per-packet one-way delay: 52.862 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 201.21 Mbit/s
95th percentile per-packet one-way delay: 53.108 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 185.20 Mbit/s
95th percentile per-packet one-way delay: 56.385 ms
Loss rate: 1.22%
```

Run 5: Report of Indigo — Data Link

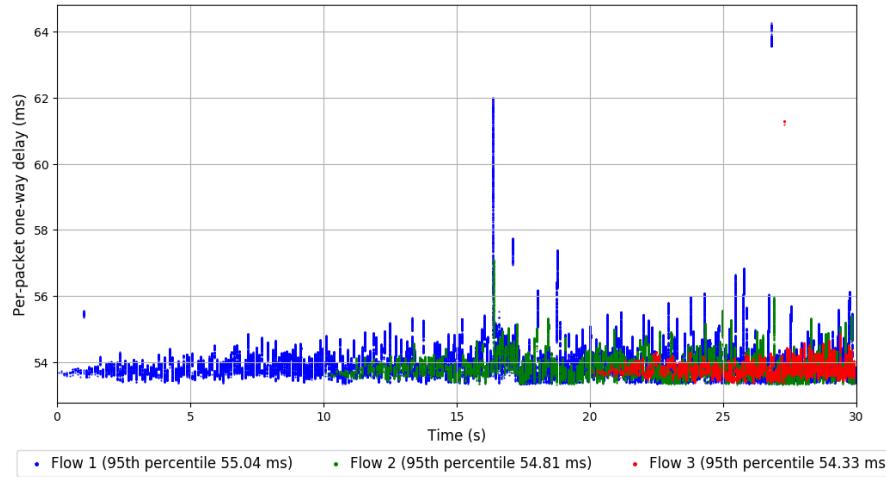
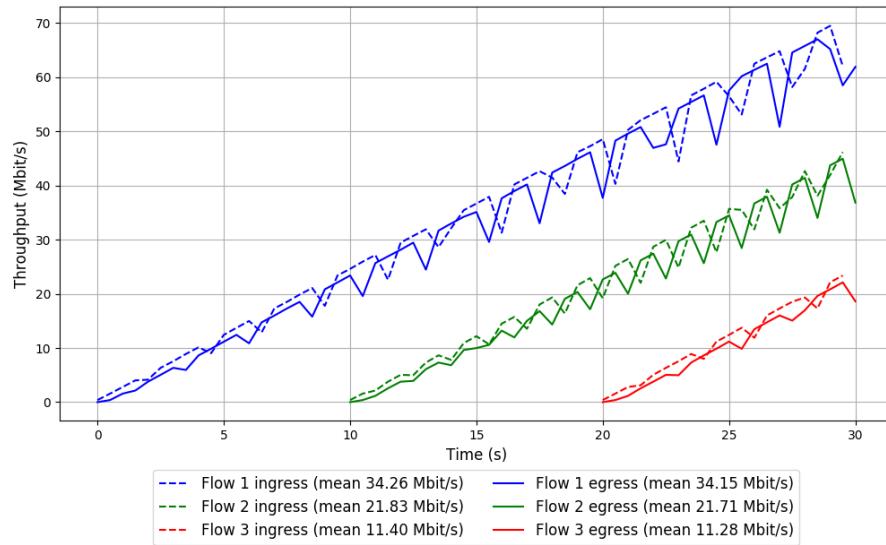


Run 1: Statistics of LEDBAT

```
Start at: 2018-09-11 20:33:30
End at: 2018-09-11 20:34:00
Local clock offset: -0.157 ms
Remote clock offset: -0.154 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.29 Mbit/s
95th percentile per-packet one-way delay: 54.935 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 34.15 Mbit/s
95th percentile per-packet one-way delay: 55.040 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 21.71 Mbit/s
95th percentile per-packet one-way delay: 54.815 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 11.28 Mbit/s
95th percentile per-packet one-way delay: 54.331 ms
Loss rate: 2.10%
```

Run 1: Report of LEDBAT — Data Link

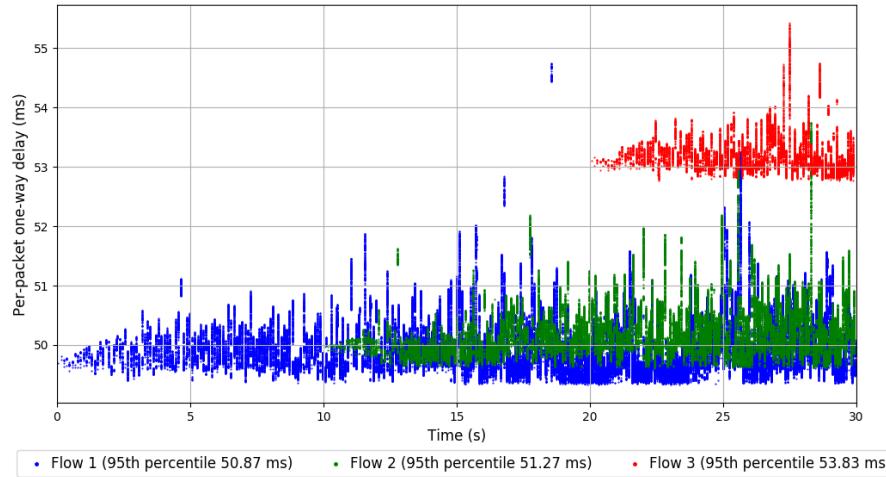
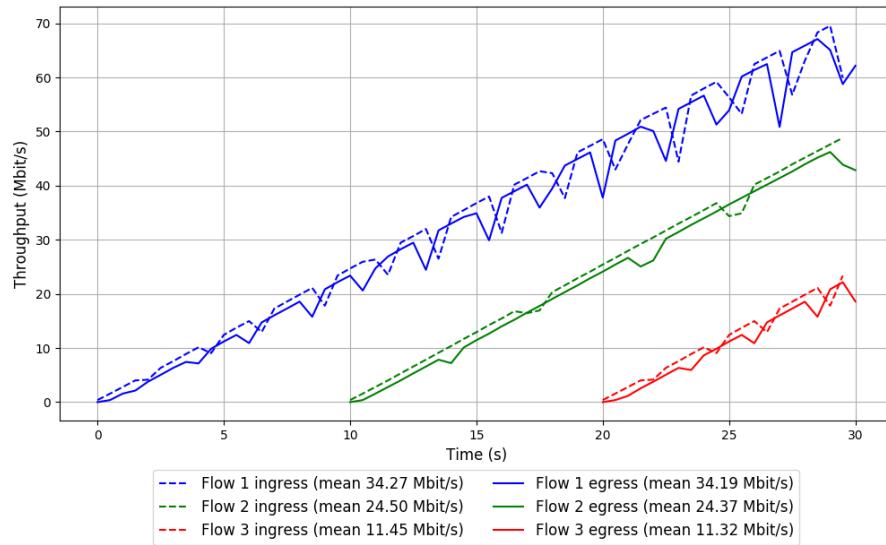


Run 2: Statistics of LEDBAT

```
Start at: 2018-09-11 21:05:18
End at: 2018-09-11 21:05:48
Local clock offset: -0.085 ms
Remote clock offset: 0.522 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.10 Mbit/s
95th percentile per-packet one-way delay: 53.025 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 34.19 Mbit/s
95th percentile per-packet one-way delay: 50.869 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 24.37 Mbit/s
95th percentile per-packet one-way delay: 51.266 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 11.32 Mbit/s
95th percentile per-packet one-way delay: 53.830 ms
Loss rate: 2.10%
```

Run 2: Report of LEDBAT — Data Link

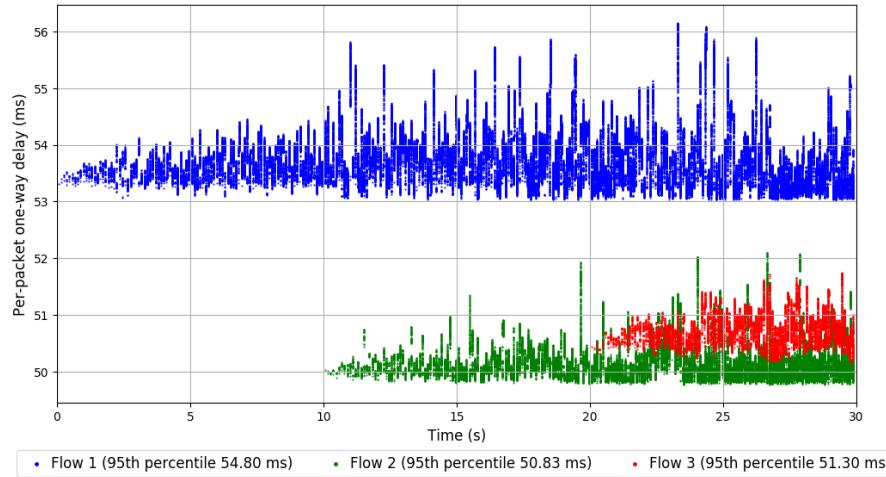
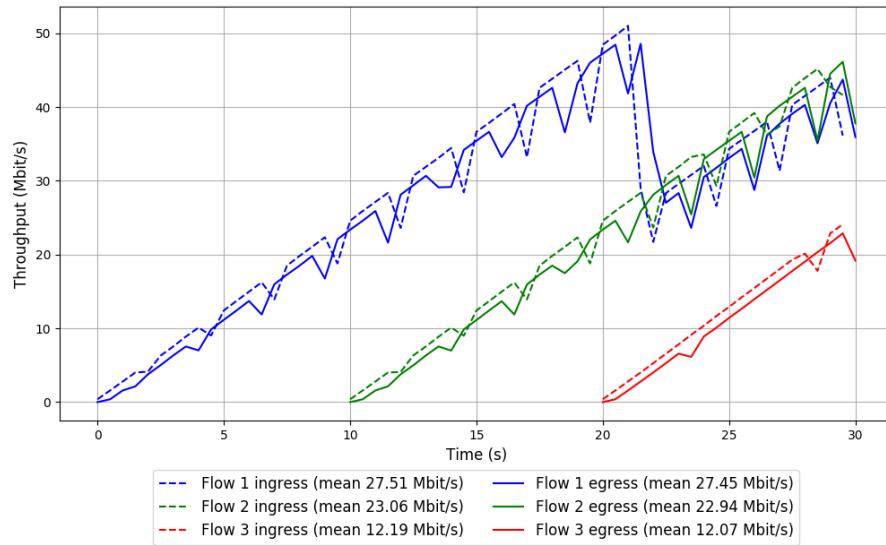


Run 3: Statistics of LEDBAT

```
Start at: 2018-09-11 21:37:02
End at: 2018-09-11 21:37:32
Local clock offset: -0.015 ms
Remote clock offset: -0.138 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.65 Mbit/s
95th percentile per-packet one-way delay: 54.515 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 27.45 Mbit/s
95th percentile per-packet one-way delay: 54.795 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 22.94 Mbit/s
95th percentile per-packet one-way delay: 50.834 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 12.07 Mbit/s
95th percentile per-packet one-way delay: 51.297 ms
Loss rate: 2.04%
```

Run 3: Report of LEDBAT — Data Link

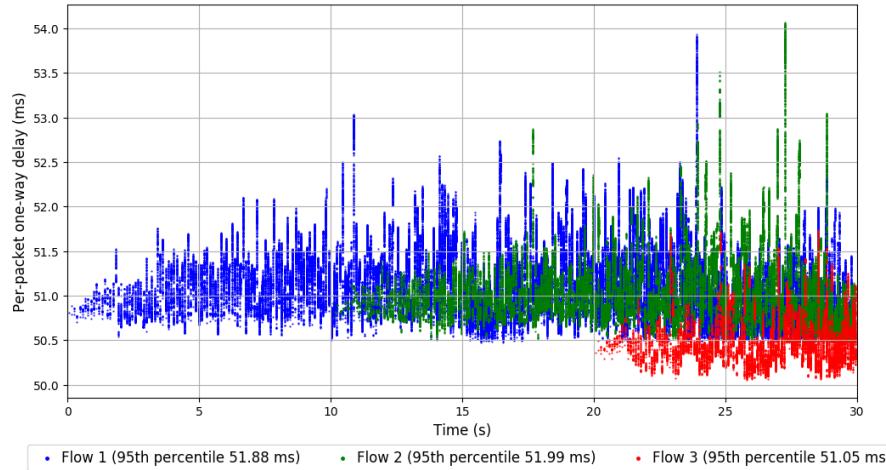
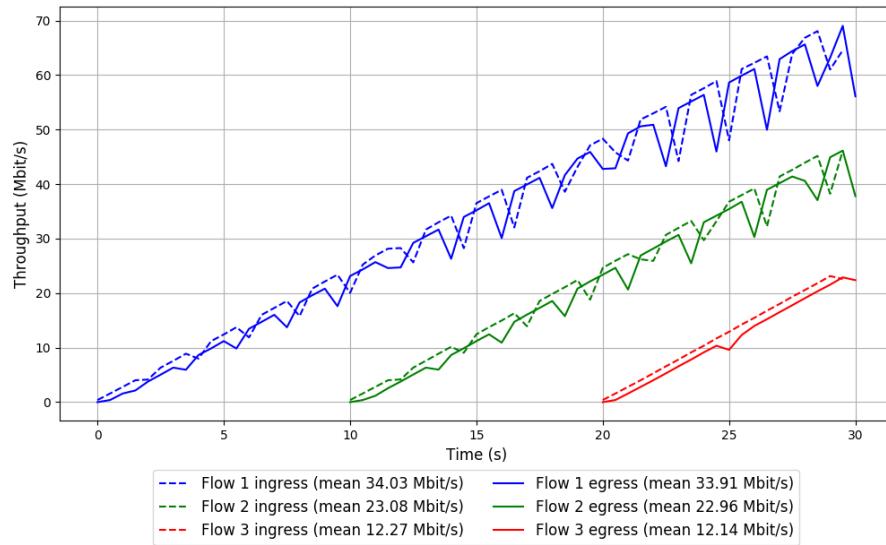


Run 4: Statistics of LEDBAT

```
Start at: 2018-09-11 22:08:26
End at: 2018-09-11 22:08:56
Local clock offset: -0.028 ms
Remote clock offset: -0.464 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.08 Mbit/s
95th percentile per-packet one-way delay: 51.875 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 33.91 Mbit/s
95th percentile per-packet one-way delay: 51.879 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 22.96 Mbit/s
95th percentile per-packet one-way delay: 51.987 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 12.14 Mbit/s
95th percentile per-packet one-way delay: 51.050 ms
Loss rate: 2.02%
```

Run 4: Report of LEDBAT — Data Link

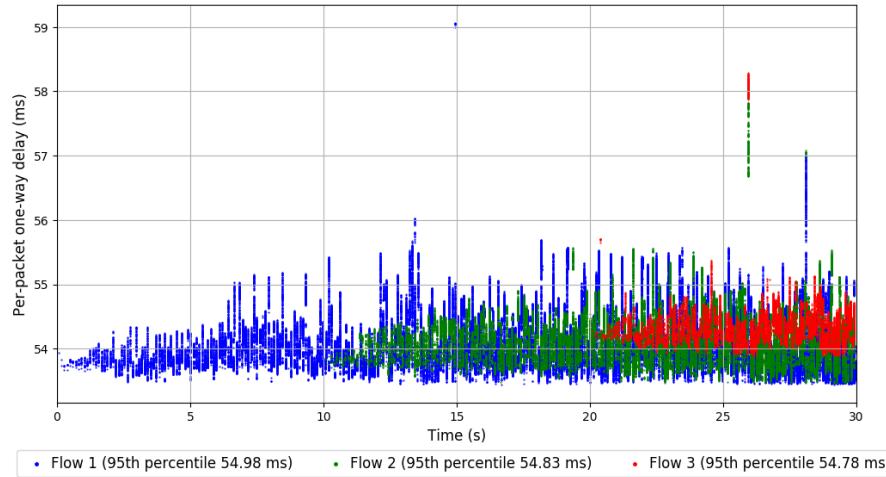
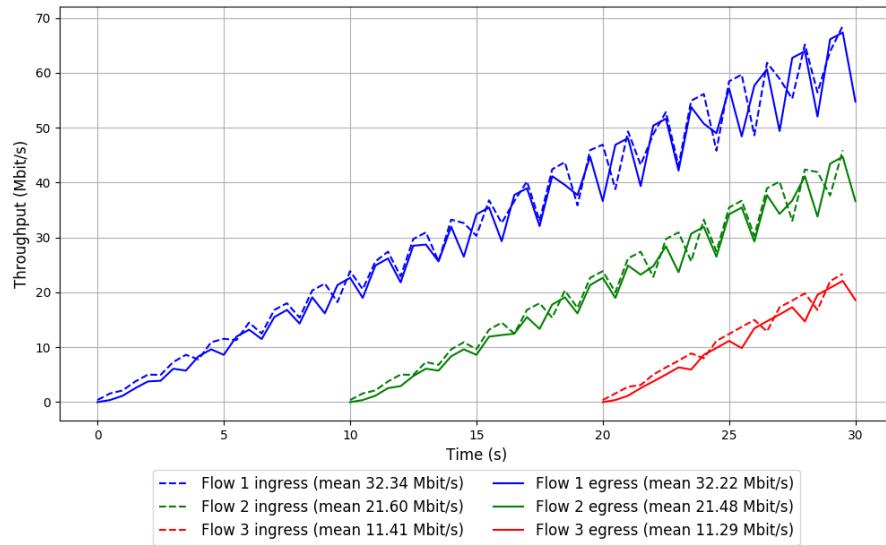


Run 5: Statistics of LEDBAT

```
Start at: 2018-09-11 22:39:57
End at: 2018-09-11 22:40:27
Local clock offset: 0.147 ms
Remote clock offset: -0.498 ms

# Below is generated by plot.py at 2018-09-12 00:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.22 Mbit/s
95th percentile per-packet one-way delay: 54.925 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 32.22 Mbit/s
95th percentile per-packet one-way delay: 54.977 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 21.48 Mbit/s
95th percentile per-packet one-way delay: 54.831 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 11.29 Mbit/s
95th percentile per-packet one-way delay: 54.776 ms
Loss rate: 2.11%
```

Run 5: Report of LEDBAT — Data Link

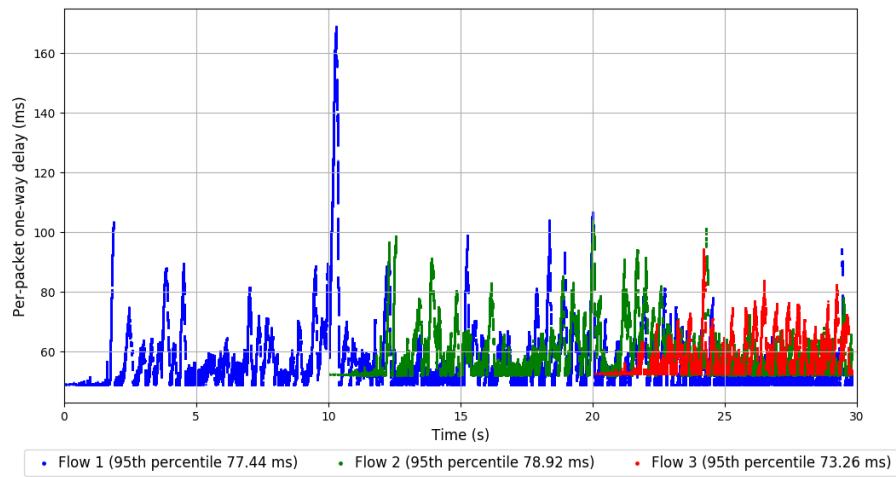
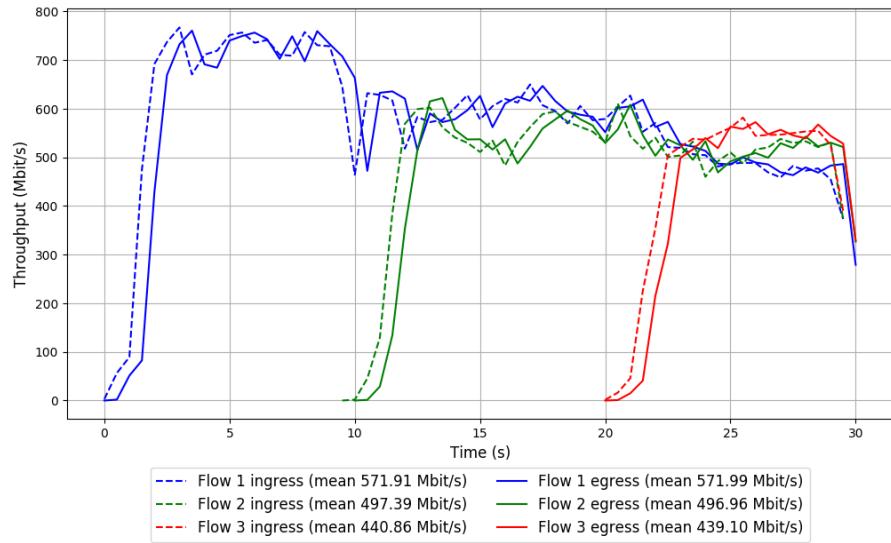


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-09-11 20:44:48
End at: 2018-09-11 20:45:18
Local clock offset: -0.194 ms
Remote clock offset: 0.711 ms

# Below is generated by plot.py at 2018-09-12 00:52:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1045.10 Mbit/s
95th percentile per-packet one-way delay: 77.146 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 571.99 Mbit/s
95th percentile per-packet one-way delay: 77.441 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 496.96 Mbit/s
95th percentile per-packet one-way delay: 78.915 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 439.10 Mbit/s
95th percentile per-packet one-way delay: 73.258 ms
Loss rate: 1.46%
```

Run 1: Report of Indigo-Muses — Data Link

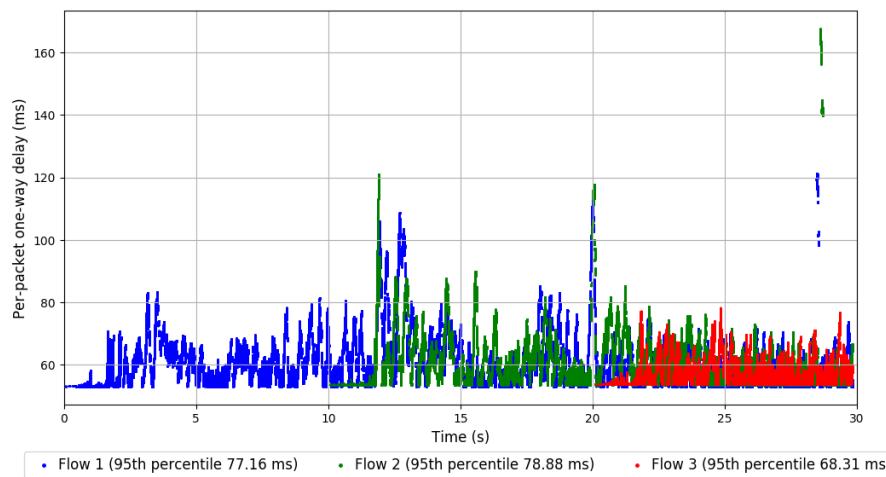
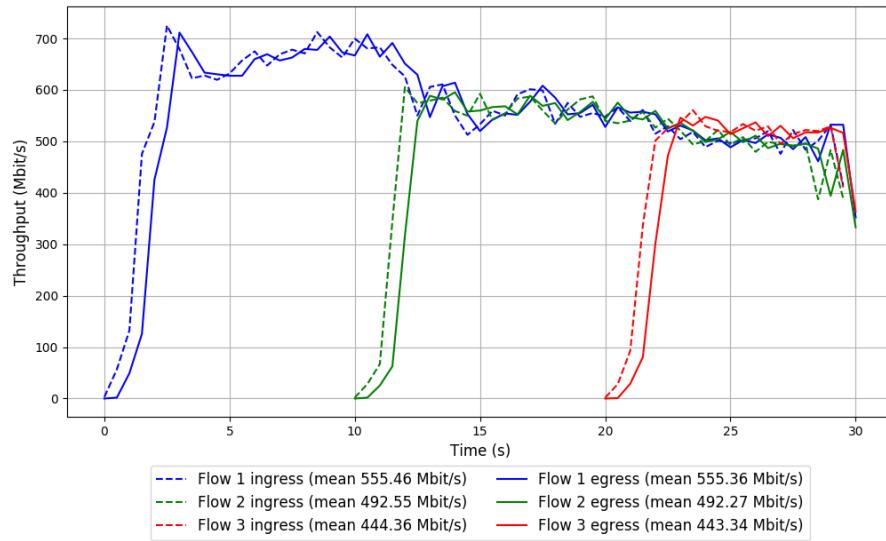


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-09-11 21:16:36
End at: 2018-09-11 21:17:06
Local clock offset: -0.206 ms
Remote clock offset: -0.342 ms

# Below is generated by plot.py at 2018-09-12 00:55:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1026.65 Mbit/s
95th percentile per-packet one-way delay: 76.522 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 555.36 Mbit/s
95th percentile per-packet one-way delay: 77.162 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 492.27 Mbit/s
95th percentile per-packet one-way delay: 78.876 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 443.34 Mbit/s
95th percentile per-packet one-way delay: 68.305 ms
Loss rate: 1.31%
```

Run 2: Report of Indigo-Muses — Data Link

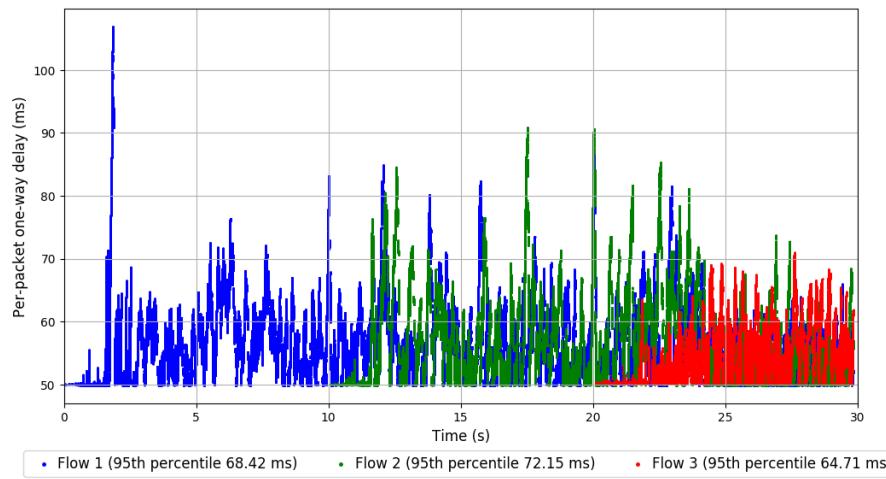
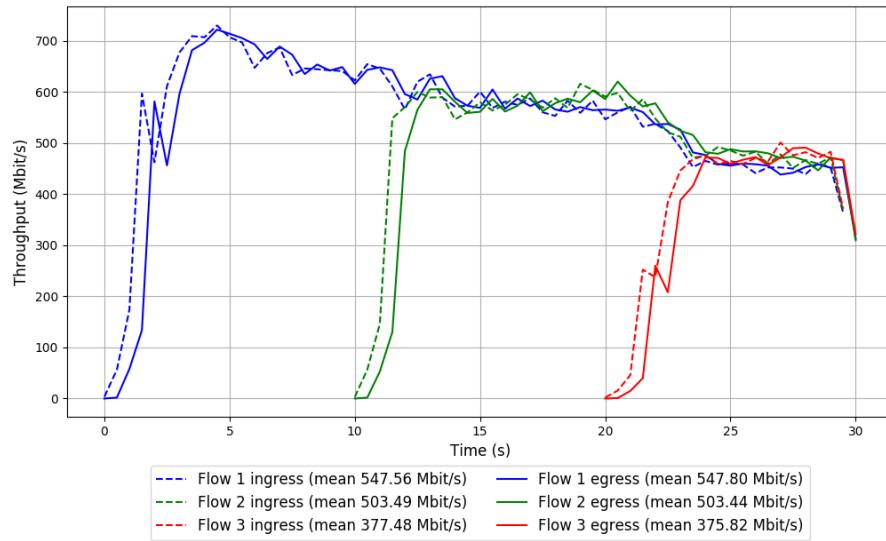


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-09-11 21:48:13
End at: 2018-09-11 21:48:43
Local clock offset: 0.082 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-09-12 00:55:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1004.49 Mbit/s
95th percentile per-packet one-way delay: 69.445 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 547.80 Mbit/s
95th percentile per-packet one-way delay: 68.420 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 503.44 Mbit/s
95th percentile per-packet one-way delay: 72.146 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 375.82 Mbit/s
95th percentile per-packet one-way delay: 64.711 ms
Loss rate: 1.51%
```

Run 3: Report of Indigo-Muses — Data Link

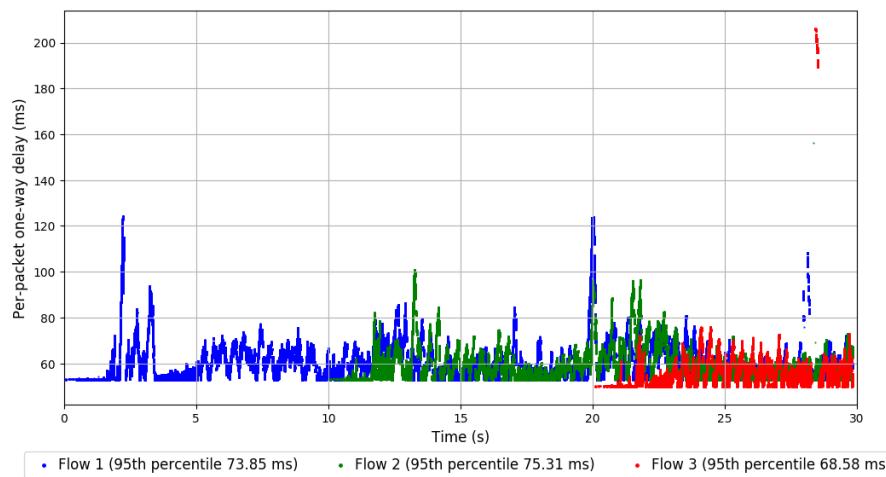
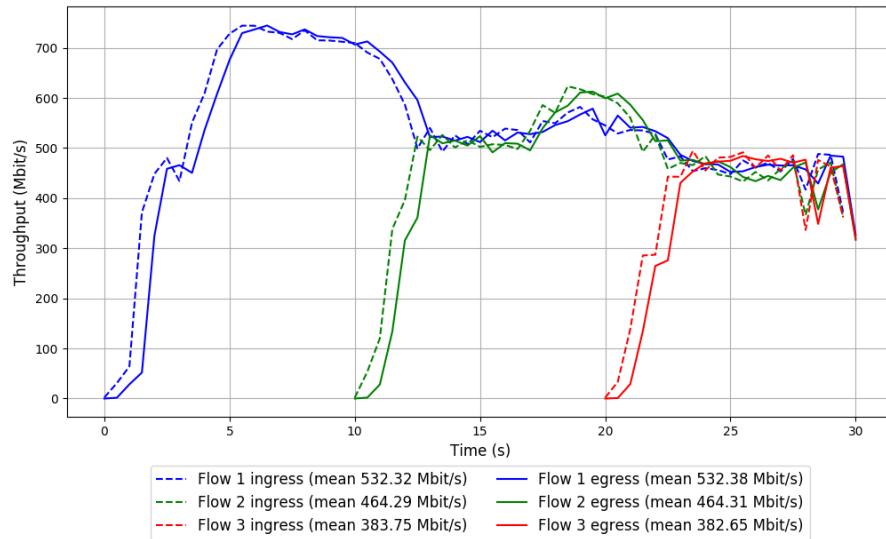


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-09-11 22:19:43
End at: 2018-09-11 22:20:13
Local clock offset: -0.014 ms
Remote clock offset: -0.219 ms

# Below is generated by plot.py at 2018-09-12 00:55:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 965.91 Mbit/s
95th percentile per-packet one-way delay: 73.685 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 532.38 Mbit/s
95th percentile per-packet one-way delay: 73.848 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 464.31 Mbit/s
95th percentile per-packet one-way delay: 75.310 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 382.65 Mbit/s
95th percentile per-packet one-way delay: 68.582 ms
Loss rate: 1.31%
```

Run 4: Report of Indigo-Muses — Data Link

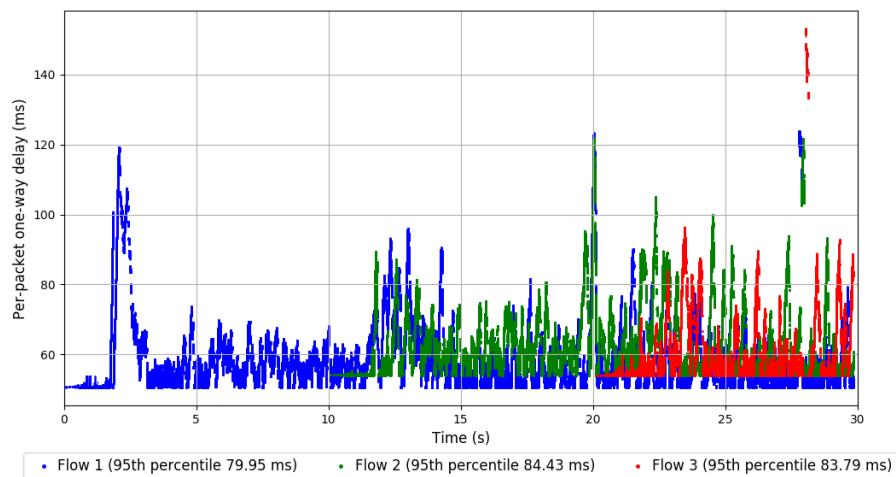
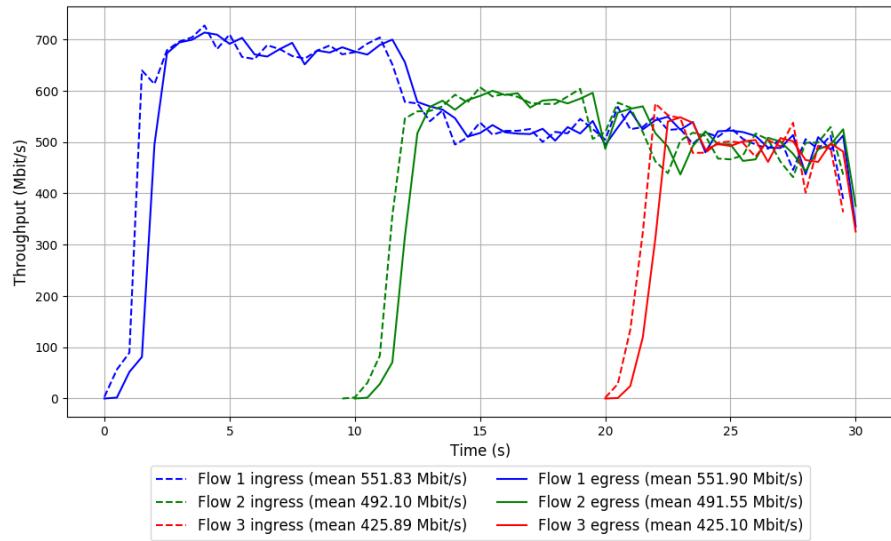


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-09-11 22:51:14
End at: 2018-09-11 22:51:44
Local clock offset: 0.29 ms
Remote clock offset: -0.546 ms

# Below is generated by plot.py at 2018-09-12 00:56:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1017.18 Mbit/s
95th percentile per-packet one-way delay: 83.185 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 551.90 Mbit/s
95th percentile per-packet one-way delay: 79.946 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 491.55 Mbit/s
95th percentile per-packet one-way delay: 84.433 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 425.10 Mbit/s
95th percentile per-packet one-way delay: 83.792 ms
Loss rate: 1.25%
```

Run 5: Report of Indigo-Muses — Data Link

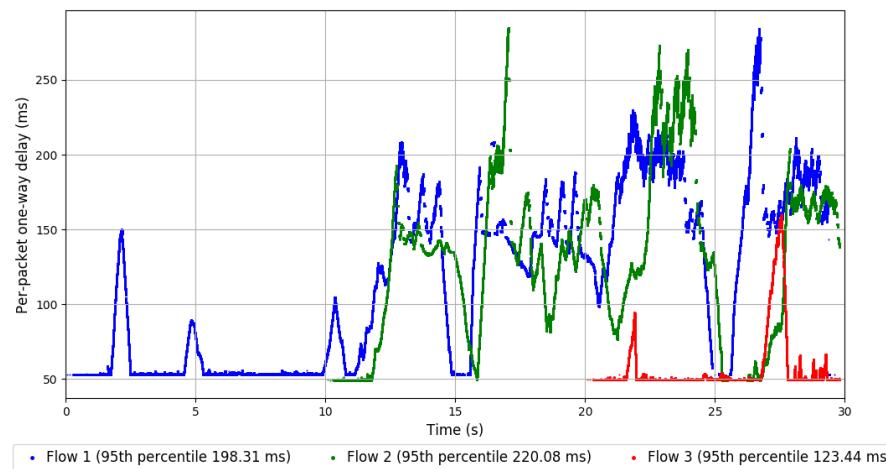
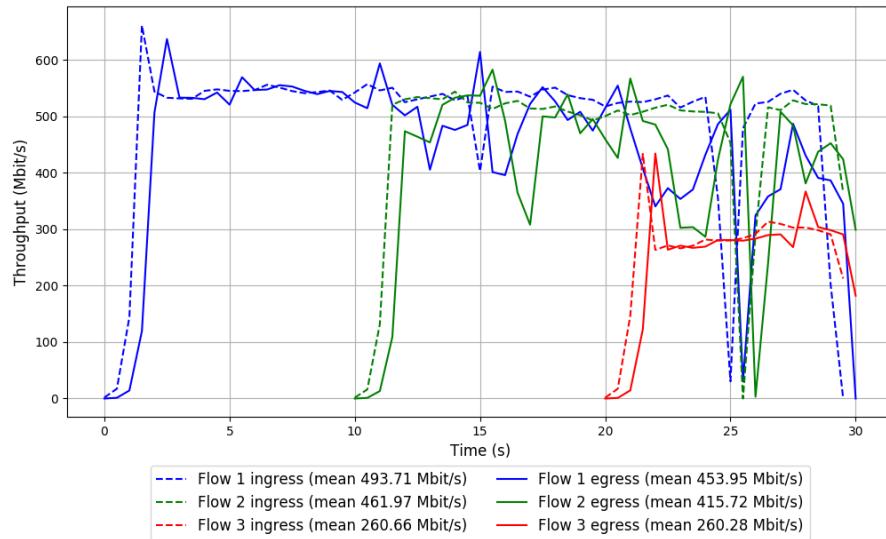


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-09-11 20:31:24
End at: 2018-09-11 20:31:54
Local clock offset: -0.25 ms
Remote clock offset: 0.527 ms

# Below is generated by plot.py at 2018-09-12 01:07:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 811.52 Mbit/s
95th percentile per-packet one-way delay: 200.117 ms
Loss rate: 8.22%
-- Flow 1:
Average throughput: 453.95 Mbit/s
95th percentile per-packet one-way delay: 198.313 ms
Loss rate: 8.05%
-- Flow 2:
Average throughput: 415.72 Mbit/s
95th percentile per-packet one-way delay: 220.078 ms
Loss rate: 10.47%
-- Flow 3:
Average throughput: 260.28 Mbit/s
95th percentile per-packet one-way delay: 123.438 ms
Loss rate: 1.16%
```

Run 1: Report of PCC-Allegro — Data Link

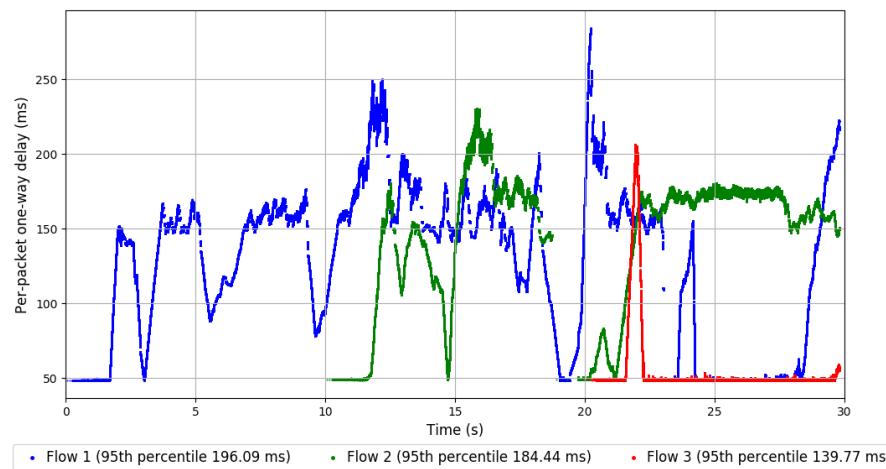
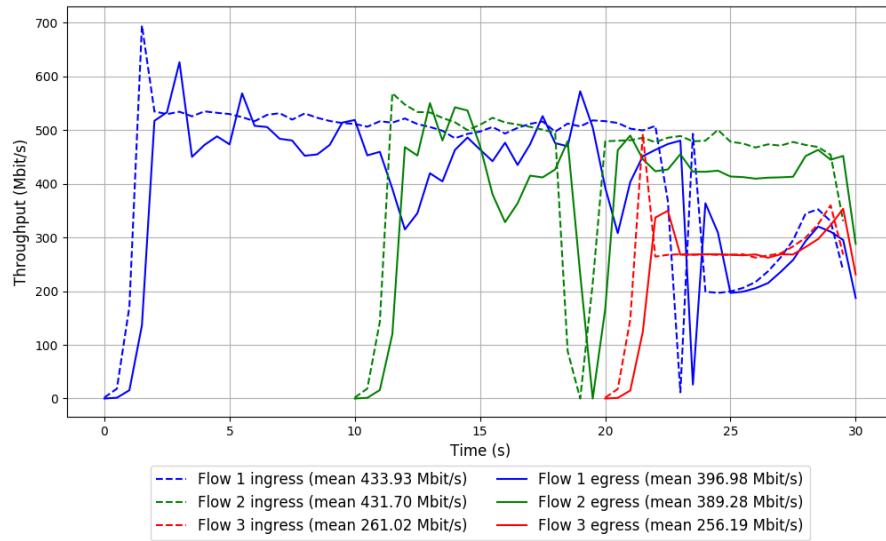


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-09-11 21:03:16
End at: 2018-09-11 21:03:46
Local clock offset: -0.113 ms
Remote clock offset: 1.246 ms

# Below is generated by plot.py at 2018-09-12 01:07:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 739.16 Mbit/s
95th percentile per-packet one-way delay: 191.939 ms
Loss rate: 8.71%
-- Flow 1:
Average throughput: 396.98 Mbit/s
95th percentile per-packet one-way delay: 196.086 ms
Loss rate: 8.83%
-- Flow 2:
Average throughput: 389.28 Mbit/s
95th percentile per-packet one-way delay: 184.435 ms
Loss rate: 10.29%
-- Flow 3:
Average throughput: 256.19 Mbit/s
95th percentile per-packet one-way delay: 139.768 ms
Loss rate: 2.85%
```

Run 2: Report of PCC-Allegro — Data Link

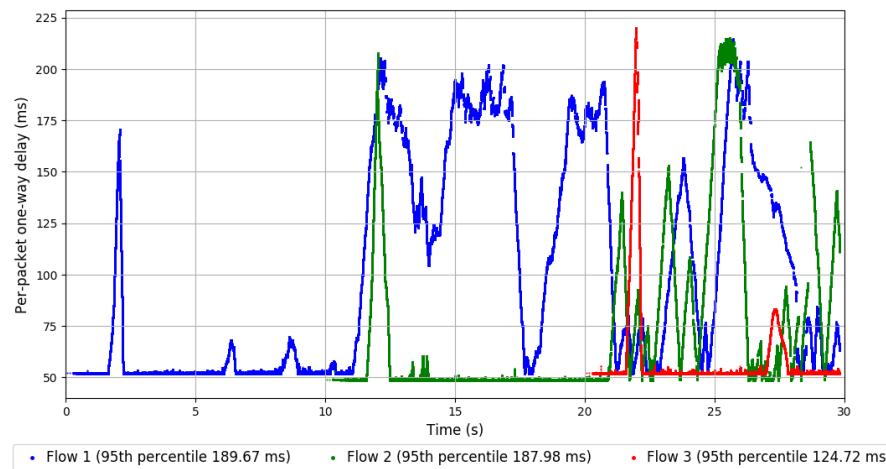
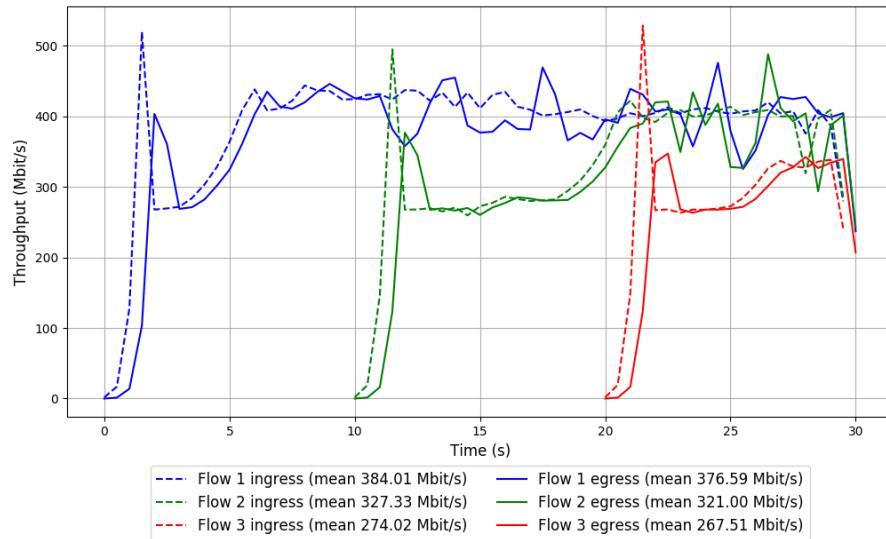


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-09-11 21:35:06
End at: 2018-09-11 21:35:36
Local clock offset: 0.147 ms
Remote clock offset: 1.277 ms

# Below is generated by plot.py at 2018-09-12 01:18:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 677.23 Mbit/s
95th percentile per-packet one-way delay: 188.408 ms
Loss rate: 2.47%
-- Flow 1:
Average throughput: 376.59 Mbit/s
95th percentile per-packet one-way delay: 189.671 ms
Loss rate: 2.28%
-- Flow 2:
Average throughput: 321.00 Mbit/s
95th percentile per-packet one-way delay: 187.978 ms
Loss rate: 2.43%
-- Flow 3:
Average throughput: 267.51 Mbit/s
95th percentile per-packet one-way delay: 124.723 ms
Loss rate: 3.40%
```

Run 3: Report of PCC-Allegro — Data Link

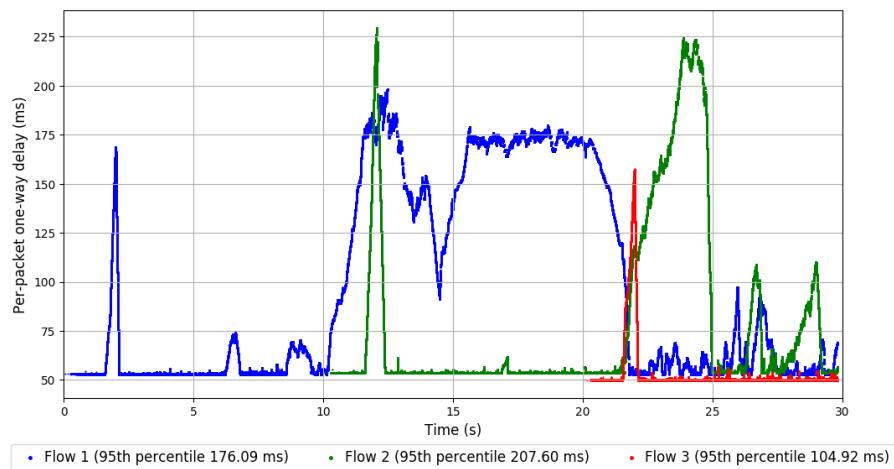
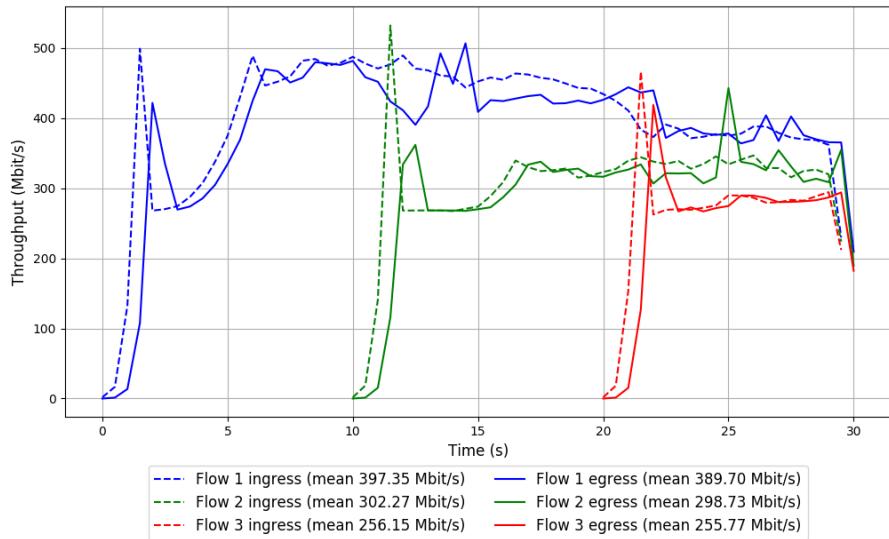


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-09-11 22:06:31
End at: 2018-09-11 22:07:01
Local clock offset: 0.057 ms
Remote clock offset: -0.168 ms

# Below is generated by plot.py at 2018-09-12 01:19:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 671.71 Mbit/s
95th percentile per-packet one-way delay: 176.677 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 389.70 Mbit/s
95th percentile per-packet one-way delay: 176.090 ms
Loss rate: 2.35%
-- Flow 2:
Average throughput: 298.73 Mbit/s
95th percentile per-packet one-way delay: 207.602 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 255.77 Mbit/s
95th percentile per-packet one-way delay: 104.922 ms
Loss rate: 1.20%
```

Run 4: Report of PCC-Allegro — Data Link

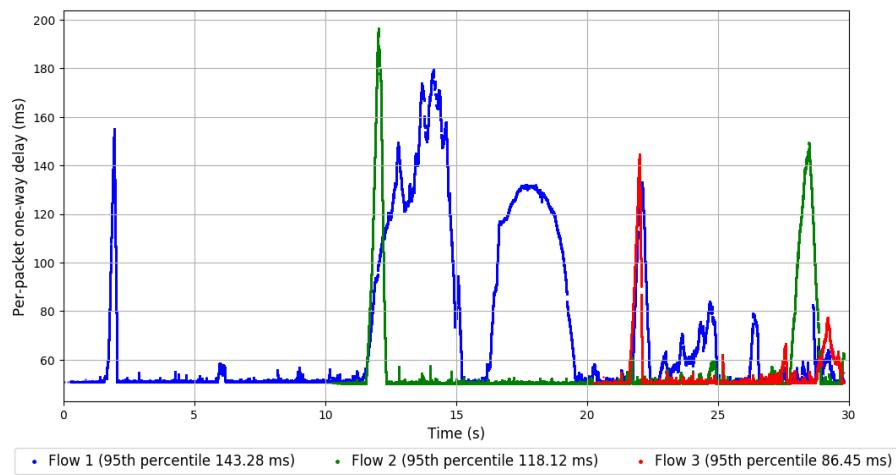
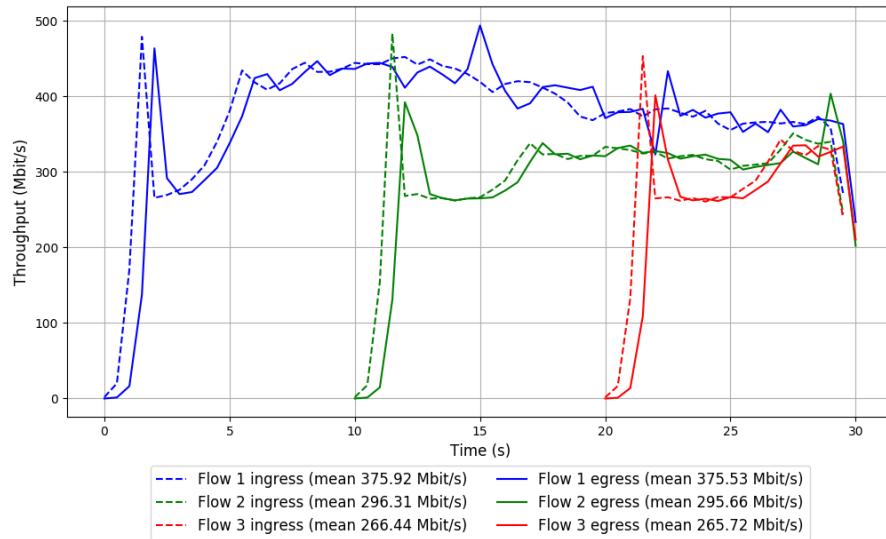


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-09-11 22:38:03
End at: 2018-09-11 22:38:33
Local clock offset: 0.168 ms
Remote clock offset: -0.476 ms

# Below is generated by plot.py at 2018-09-12 01:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 658.41 Mbit/s
95th percentile per-packet one-way delay: 131.671 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 375.53 Mbit/s
95th percentile per-packet one-way delay: 143.276 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 295.66 Mbit/s
95th percentile per-packet one-way delay: 118.119 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 265.72 Mbit/s
95th percentile per-packet one-way delay: 86.455 ms
Loss rate: 1.29%
```

Run 5: Report of PCC-Allegro — Data Link

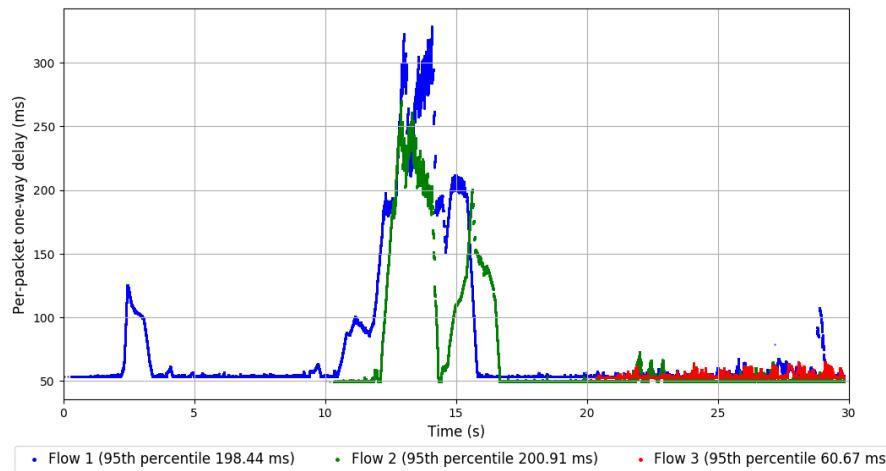
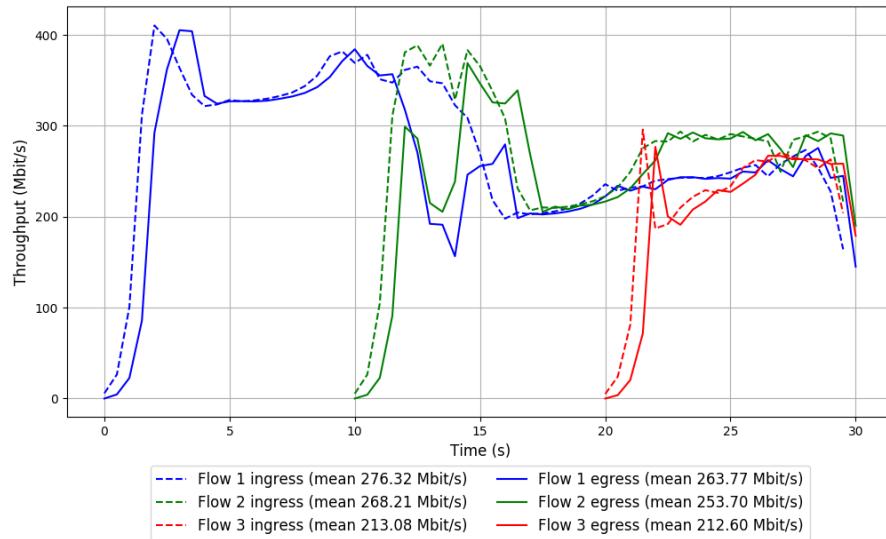


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-09-11 20:37:34
End at: 2018-09-11 20:38:04
Local clock offset: 0.0 ms
Remote clock offset: 0.338 ms

# Below is generated by plot.py at 2018-09-12 01:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 501.87 Mbit/s
95th percentile per-packet one-way delay: 192.148 ms
Loss rate: 4.74%
-- Flow 1:
Average throughput: 263.77 Mbit/s
95th percentile per-packet one-way delay: 198.438 ms
Loss rate: 4.88%
-- Flow 2:
Average throughput: 253.70 Mbit/s
95th percentile per-packet one-way delay: 200.905 ms
Loss rate: 5.90%
-- Flow 3:
Average throughput: 212.60 Mbit/s
95th percentile per-packet one-way delay: 60.666 ms
Loss rate: 1.28%
```

Run 1: Report of PCC-Expr — Data Link

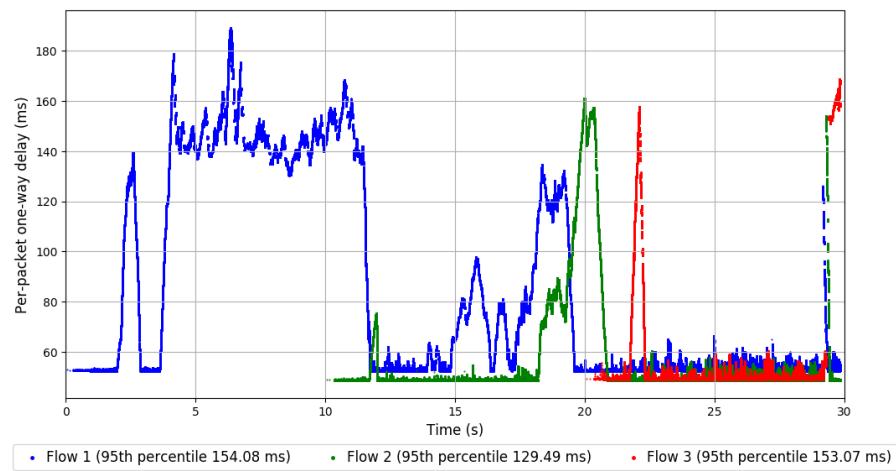
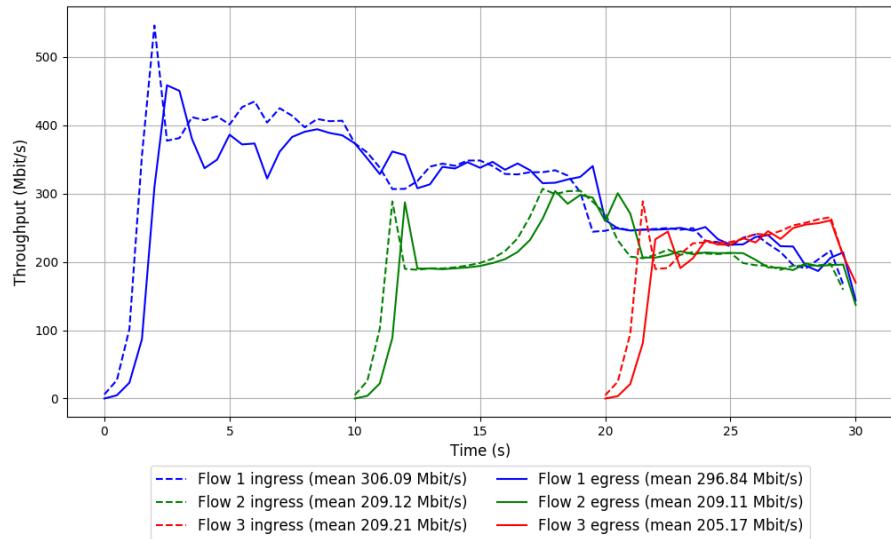


Run 2: Statistics of PCC-Expr

```
Start at: 2018-09-11 21:09:23
End at: 2018-09-11 21:09:53
Local clock offset: 0.057 ms
Remote clock offset: 1.094 ms

# Below is generated by plot.py at 2018-09-12 01:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 502.84 Mbit/s
95th percentile per-packet one-way delay: 152.309 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 296.84 Mbit/s
95th percentile per-packet one-way delay: 154.080 ms
Loss rate: 3.38%
-- Flow 2:
Average throughput: 209.11 Mbit/s
95th percentile per-packet one-way delay: 129.489 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 205.17 Mbit/s
95th percentile per-packet one-way delay: 153.073 ms
Loss rate: 2.94%
```

Run 2: Report of PCC-Expr — Data Link

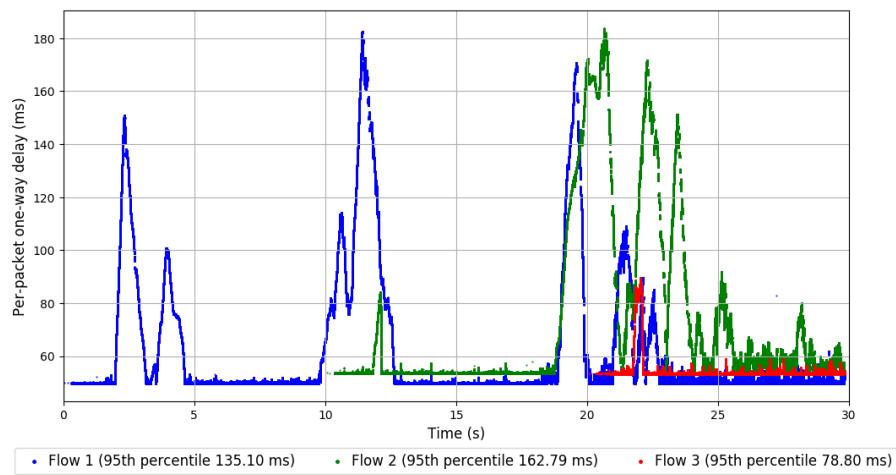
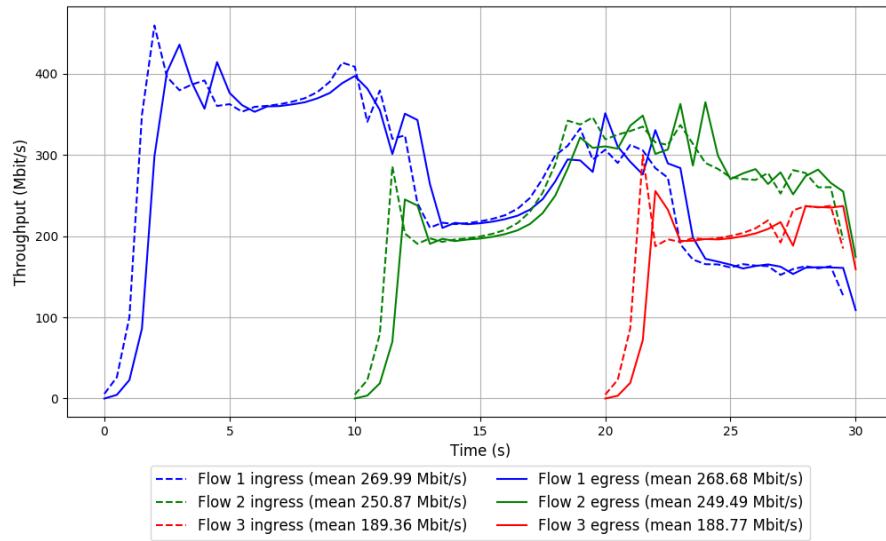


Run 3: Statistics of PCC-Expr

```
Start at: 2018-09-11 21:41:08
End at: 2018-09-11 21:41:38
Local clock offset: -0.24 ms
Remote clock offset: -0.236 ms

# Below is generated by plot.py at 2018-09-12 01:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 496.13 Mbit/s
95th percentile per-packet one-way delay: 144.579 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 268.68 Mbit/s
95th percentile per-packet one-way delay: 135.105 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 249.49 Mbit/s
95th percentile per-packet one-way delay: 162.787 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 188.77 Mbit/s
95th percentile per-packet one-way delay: 78.796 ms
Loss rate: 1.37%
```

Run 3: Report of PCC-Expr — Data Link

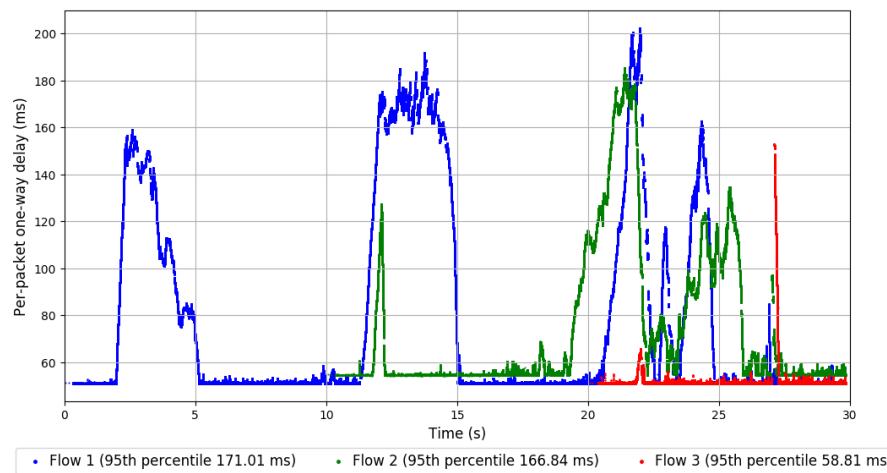
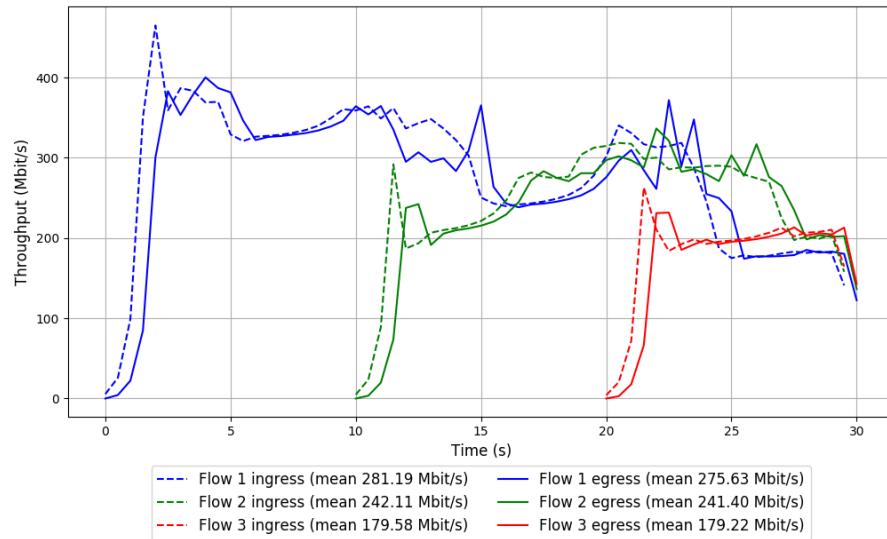


Run 4: Statistics of PCC-Expr

```
Start at: 2018-09-11 22:12:31
End at: 2018-09-11 22:13:01
Local clock offset: 0.306 ms
Remote clock offset: -0.877 ms

# Below is generated by plot.py at 2018-09-12 01:25:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 494.59 Mbit/s
95th percentile per-packet one-way delay: 168.292 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 275.63 Mbit/s
95th percentile per-packet one-way delay: 171.008 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 241.40 Mbit/s
95th percentile per-packet one-way delay: 166.843 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 179.22 Mbit/s
95th percentile per-packet one-way delay: 58.811 ms
Loss rate: 1.23%
```

Run 4: Report of PCC-Expr — Data Link

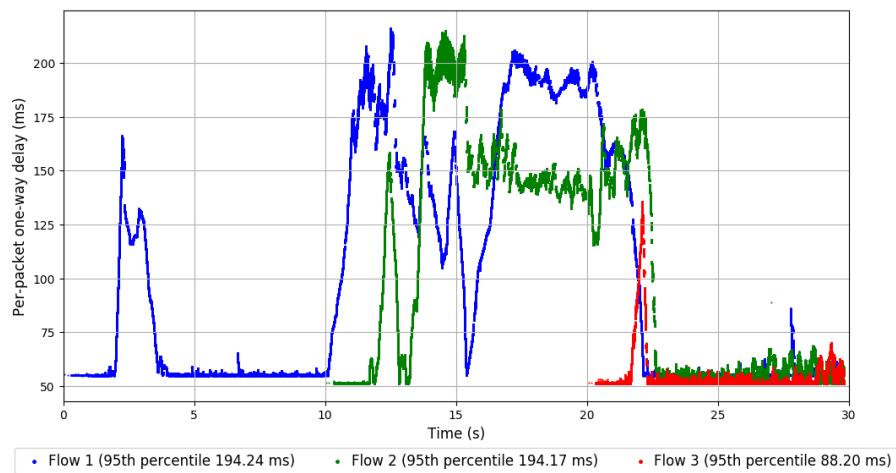
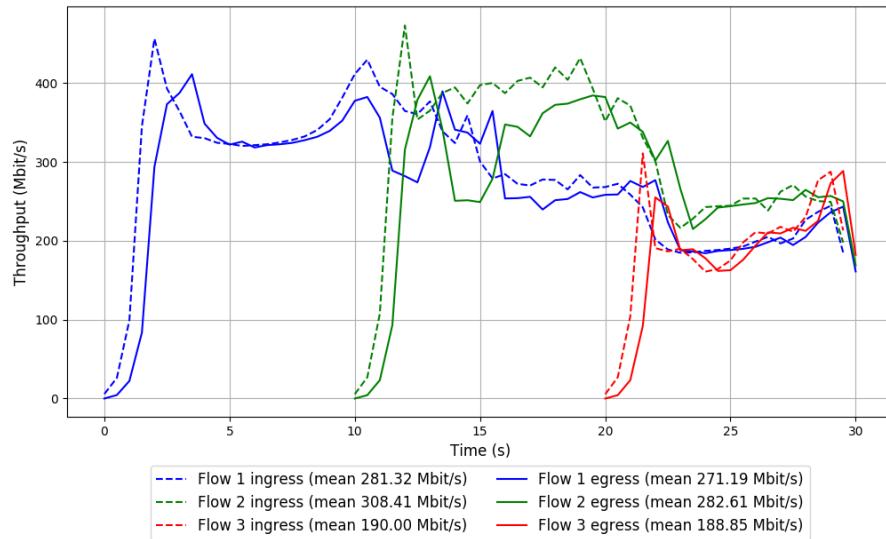


Run 5: Statistics of PCC-Expr

```
Start at: 2018-09-11 22:44:01
End at: 2018-09-11 22:44:31
Local clock offset: 0.068 ms
Remote clock offset: -1.743 ms

# Below is generated by plot.py at 2018-09-12 01:28:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 520.83 Mbit/s
95th percentile per-packet one-way delay: 193.304 ms
Loss rate: 5.50%
-- Flow 1:
Average throughput: 271.19 Mbit/s
95th percentile per-packet one-way delay: 194.235 ms
Loss rate: 3.94%
-- Flow 2:
Average throughput: 282.61 Mbit/s
95th percentile per-packet one-way delay: 194.168 ms
Loss rate: 8.83%
-- Flow 3:
Average throughput: 188.85 Mbit/s
95th percentile per-packet one-way delay: 88.203 ms
Loss rate: 1.63%
```

Run 5: Report of PCC-Expr — Data Link

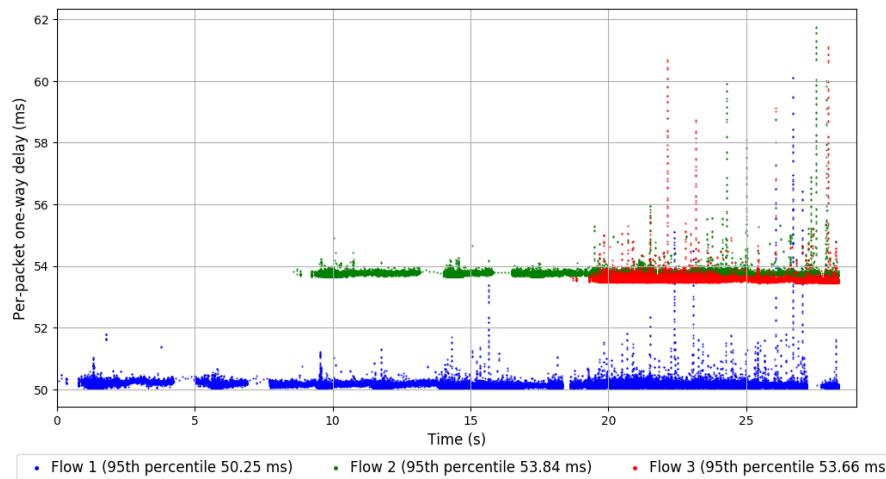
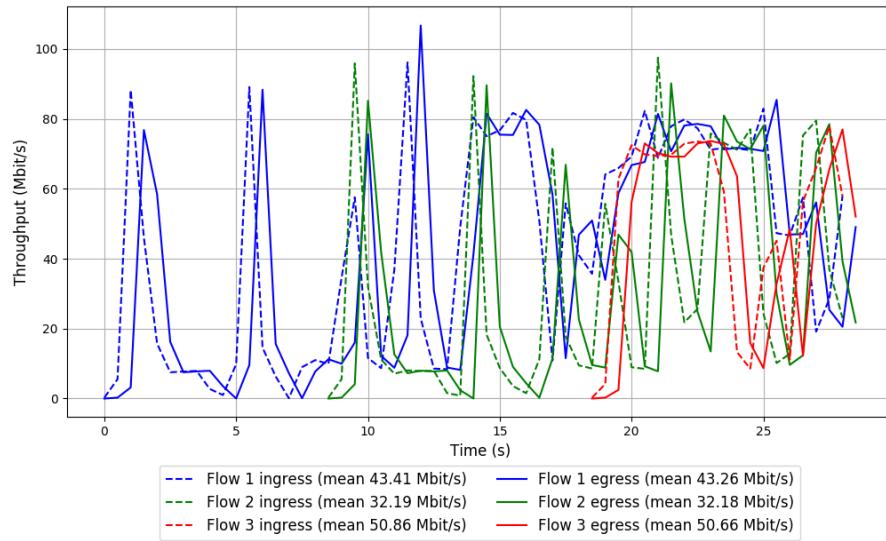


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-11 20:41:22
End at: 2018-09-11 20:41:52
Local clock offset: -0.081 ms
Remote clock offset: -0.184 ms

# Below is generated by plot.py at 2018-09-12 01:28:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.16 Mbit/s
95th percentile per-packet one-way delay: 53.780 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 43.26 Mbit/s
95th percentile per-packet one-way delay: 50.248 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 32.18 Mbit/s
95th percentile per-packet one-way delay: 53.840 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 50.66 Mbit/s
95th percentile per-packet one-way delay: 53.657 ms
Loss rate: 1.45%
```

Run 1: Report of QUIC Cubic — Data Link

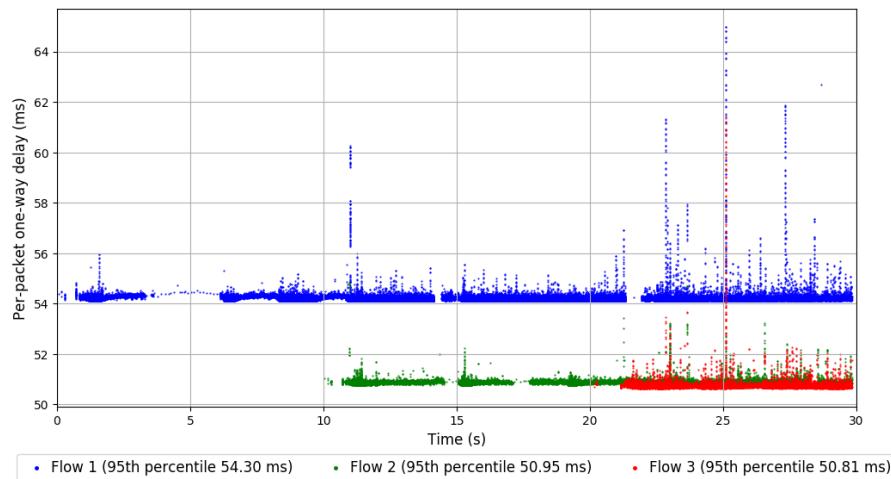
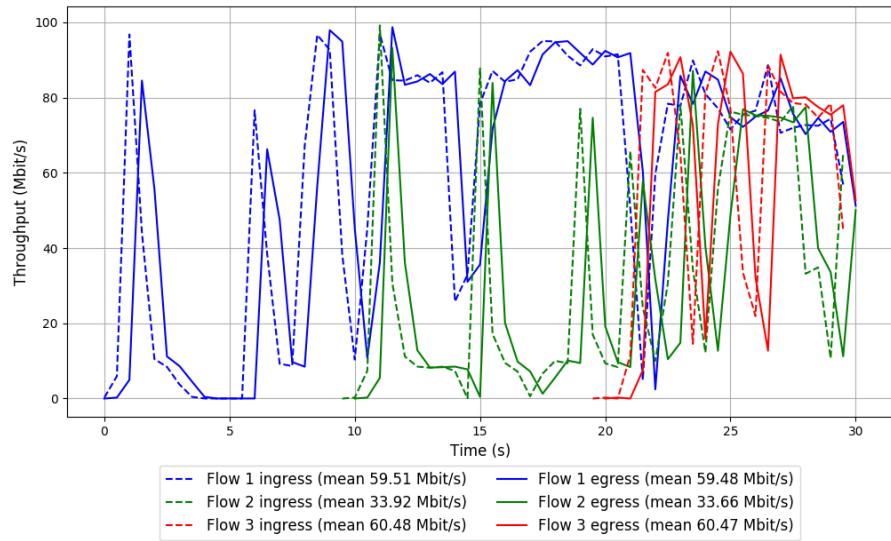


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-09-11 21:13:09
End at: 2018-09-11 21:13:39
Local clock offset: -0.052 ms
Remote clock offset: -0.773 ms

# Below is generated by plot.py at 2018-09-12 01:28:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 101.71 Mbit/s
95th percentile per-packet one-way delay: 54.269 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 59.48 Mbit/s
95th percentile per-packet one-way delay: 54.303 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 33.66 Mbit/s
95th percentile per-packet one-way delay: 50.951 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 60.47 Mbit/s
95th percentile per-packet one-way delay: 50.815 ms
Loss rate: 0.02%
```

Run 2: Report of QUIC Cubic — Data Link

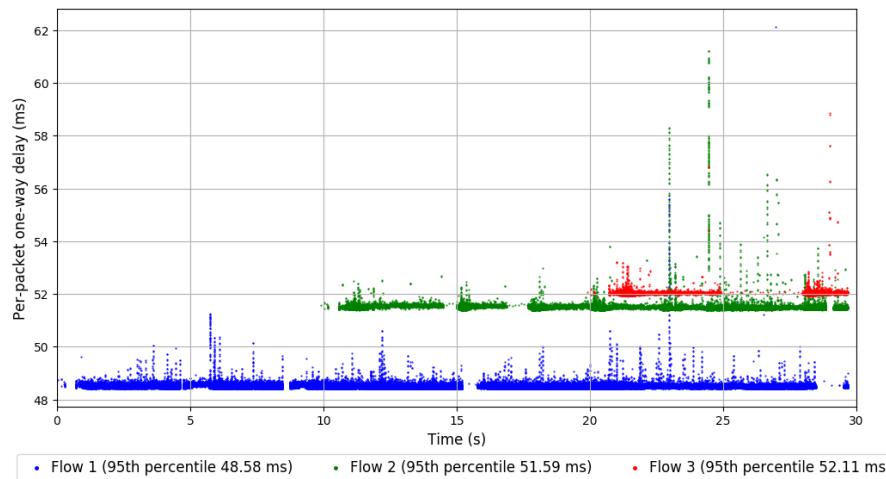
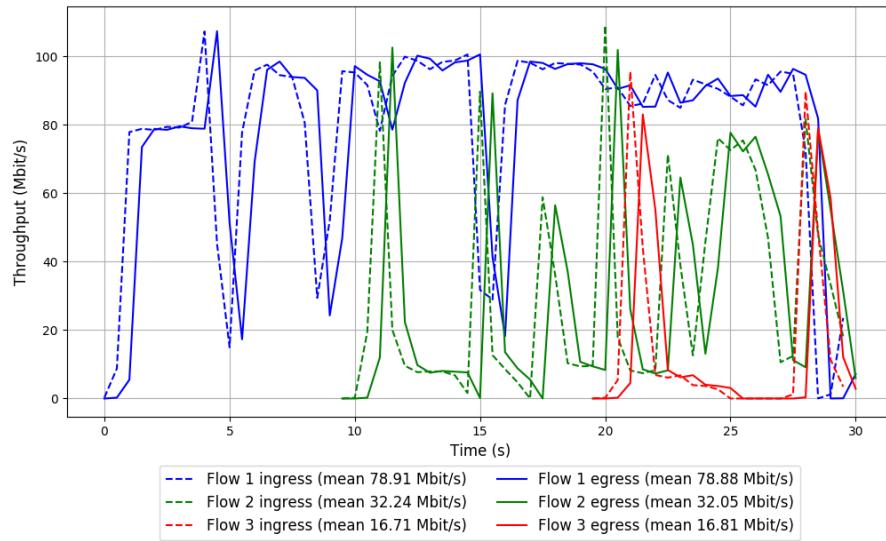


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-09-11 21:44:50
End at: 2018-09-11 21:45:20
Local clock offset: -0.043 ms
Remote clock offset: 1.346 ms

# Below is generated by plot.py at 2018-09-12 01:28:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.80 Mbit/s
95th percentile per-packet one-way delay: 51.970 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 78.88 Mbit/s
95th percentile per-packet one-way delay: 48.580 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 51.594 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 16.81 Mbit/s
95th percentile per-packet one-way delay: 52.113 ms
Loss rate: 0.45%
```

Run 3: Report of QUIC Cubic — Data Link

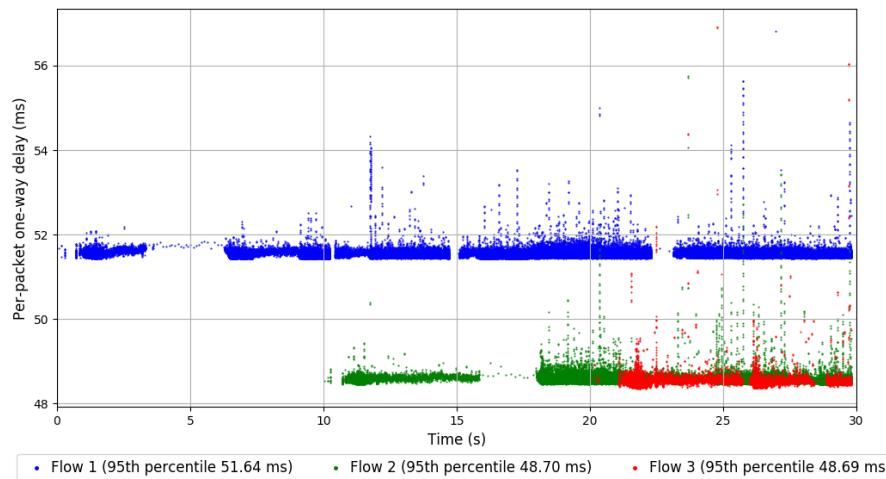
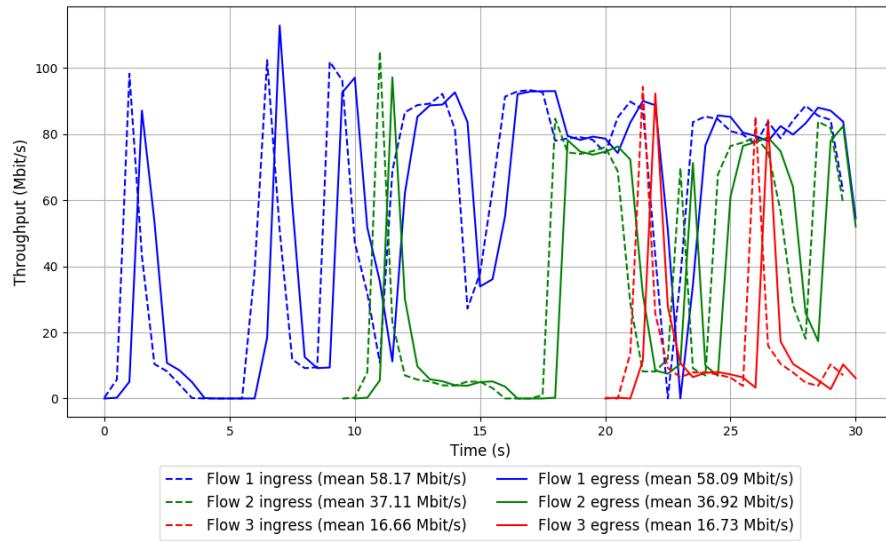


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-09-11 22:16:18
End at: 2018-09-11 22:16:48
Local clock offset: -0.044 ms
Remote clock offset: 1.11 ms

# Below is generated by plot.py at 2018-09-12 01:28:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.10 Mbit/s
95th percentile per-packet one-way delay: 51.616 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 58.09 Mbit/s
95th percentile per-packet one-way delay: 51.639 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 36.92 Mbit/s
95th percentile per-packet one-way delay: 48.705 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 16.73 Mbit/s
95th percentile per-packet one-way delay: 48.691 ms
Loss rate: 0.59%
```

Run 4: Report of QUIC Cubic — Data Link

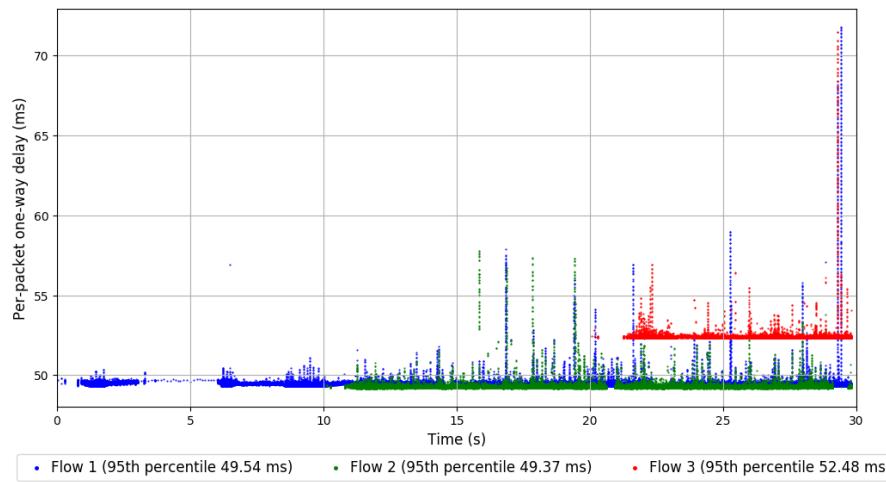
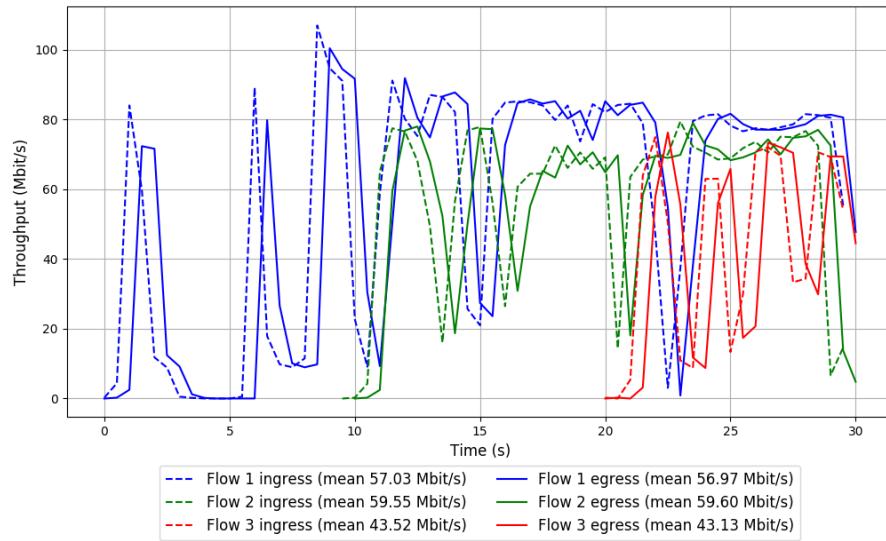


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-09-11 22:47:50
End at: 2018-09-11 22:48:20
Local clock offset: 0.303 ms
Remote clock offset: 1.073 ms

# Below is generated by plot.py at 2018-09-12 01:28:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 110.71 Mbit/s
95th percentile per-packet one-way delay: 52.386 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 56.97 Mbit/s
95th percentile per-packet one-way delay: 49.540 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 59.60 Mbit/s
95th percentile per-packet one-way delay: 49.367 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 43.13 Mbit/s
95th percentile per-packet one-way delay: 52.482 ms
Loss rate: 1.93%
```

Run 5: Report of QUIC Cubic — Data Link

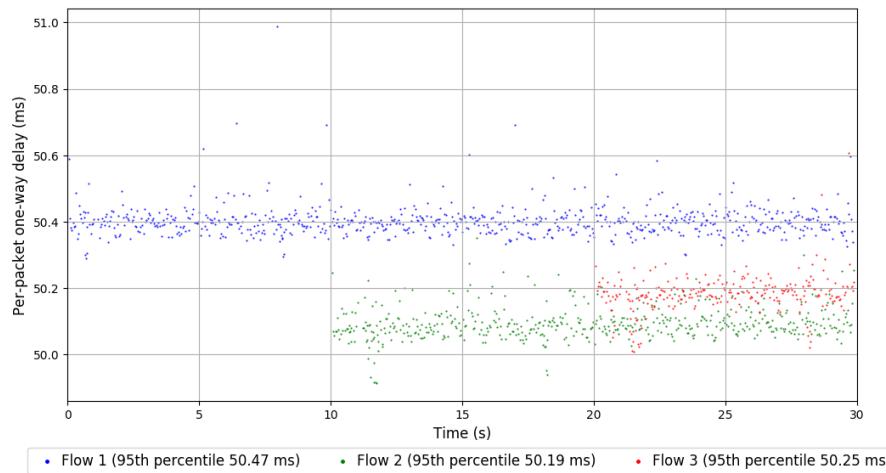
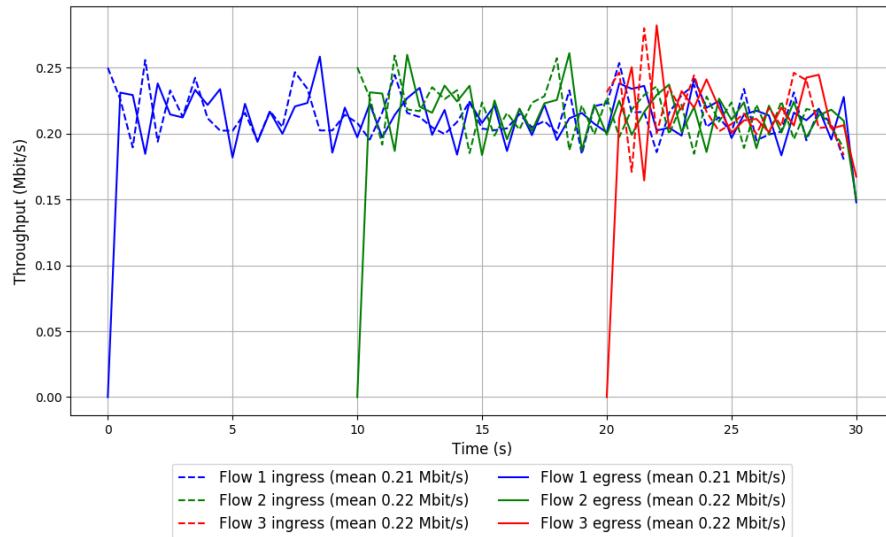


Run 1: Statistics of SCReAM

```
Start at: 2018-09-11 20:34:46
End at: 2018-09-11 20:35:16
Local clock offset: 0.088 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.440 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.472 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.185 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.254 ms
Loss rate: 0.74%
```

Run 1: Report of SCReAM — Data Link

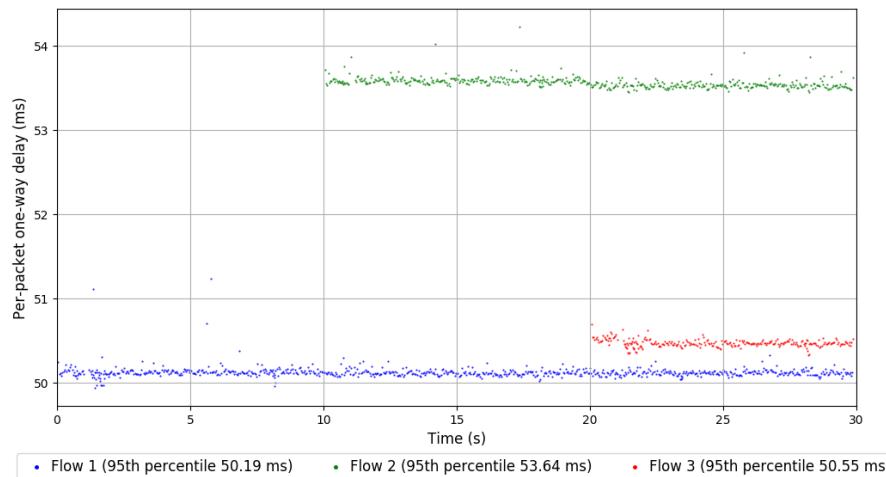
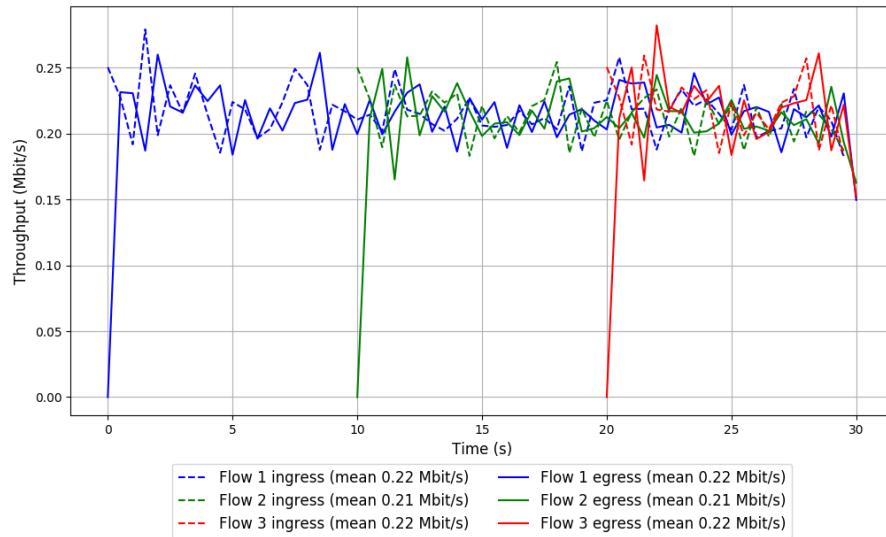


Run 2: Statistics of SCReAM

```
Start at: 2018-09-11 21:06:34
End at: 2018-09-11 21:07:04
Local clock offset: -0.068 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.610 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.192 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.644 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.545 ms
Loss rate: 1.09%
```

Run 2: Report of SCReAM — Data Link

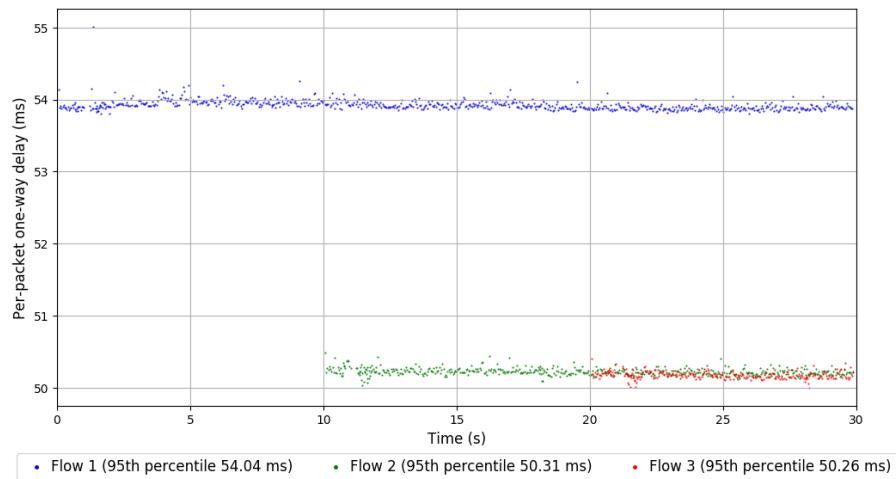
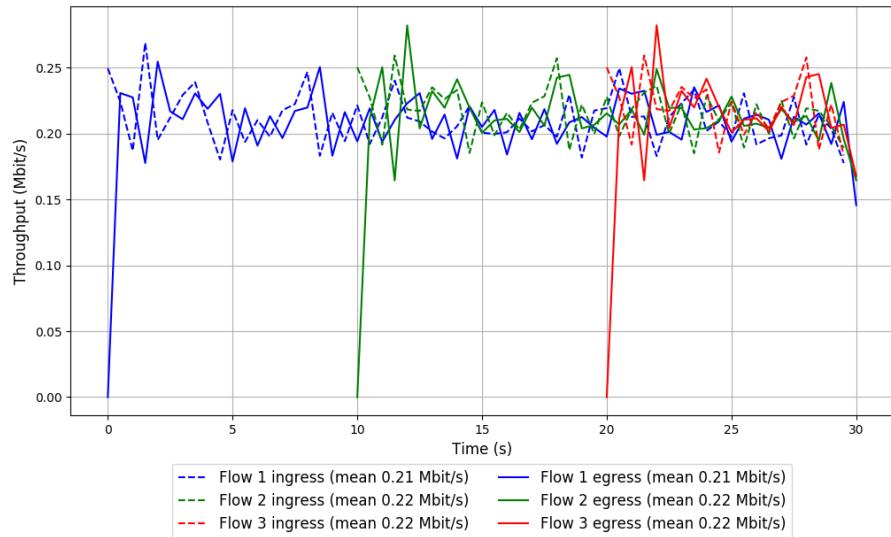


Run 3: Statistics of SCReAM

```
Start at: 2018-09-11 21:38:18
End at: 2018-09-11 21:38:48
Local clock offset: 0.196 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.003 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.036 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.308 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.261 ms
Loss rate: 1.09%
```

Run 3: Report of SCReAM — Data Link

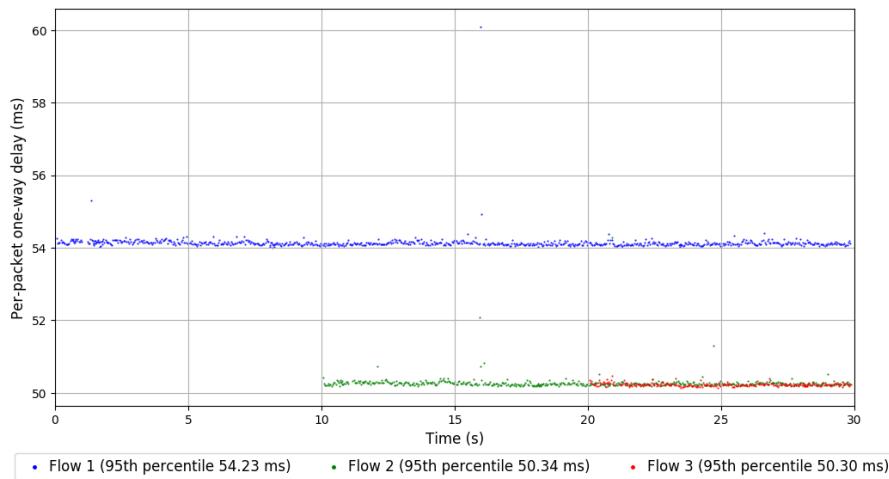
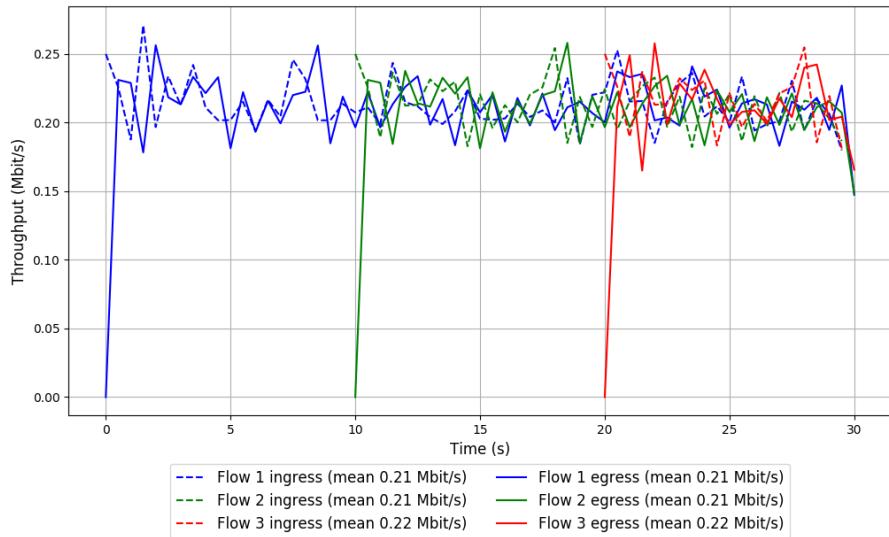


Run 4: Statistics of SCReAM

```
Start at: 2018-09-11 22:09:42
End at: 2018-09-11 22:10:12
Local clock offset: 0.253 ms
Remote clock offset: -0.194 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.203 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.227 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.339 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.303 ms
Loss rate: 1.09%
```

Run 4: Report of SCReAM — Data Link

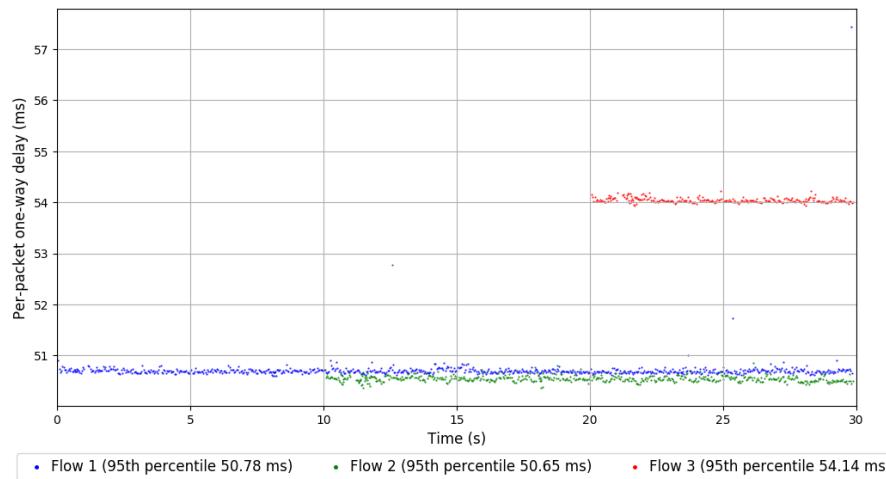
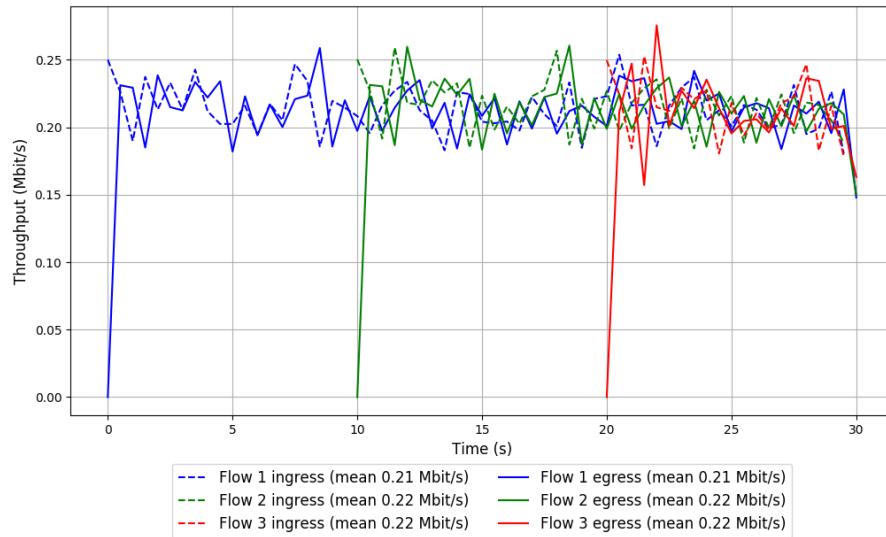


Run 5: Statistics of SCReAM

```
Start at: 2018-09-11 22:41:13
End at: 2018-09-11 22:41:43
Local clock offset: 0.153 ms
Remote clock offset: -0.559 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.060 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.777 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.650 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.139 ms
Loss rate: 1.08%
```

Run 5: Report of SCReAM — Data Link

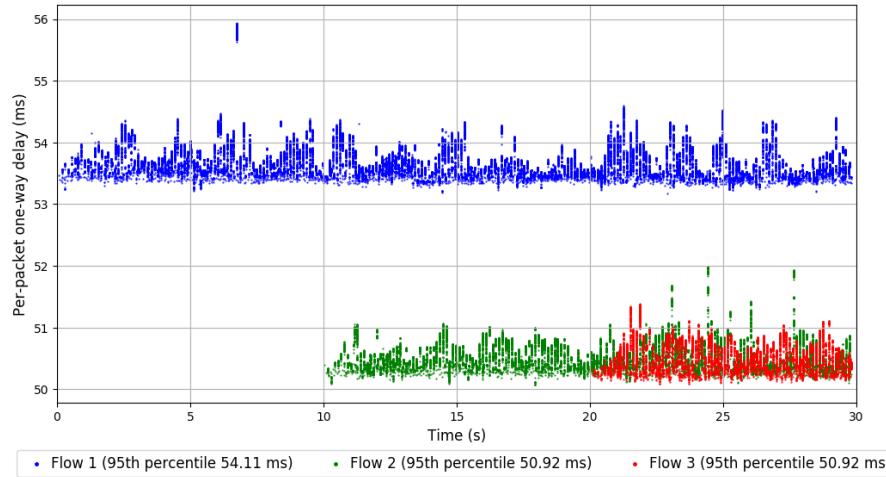
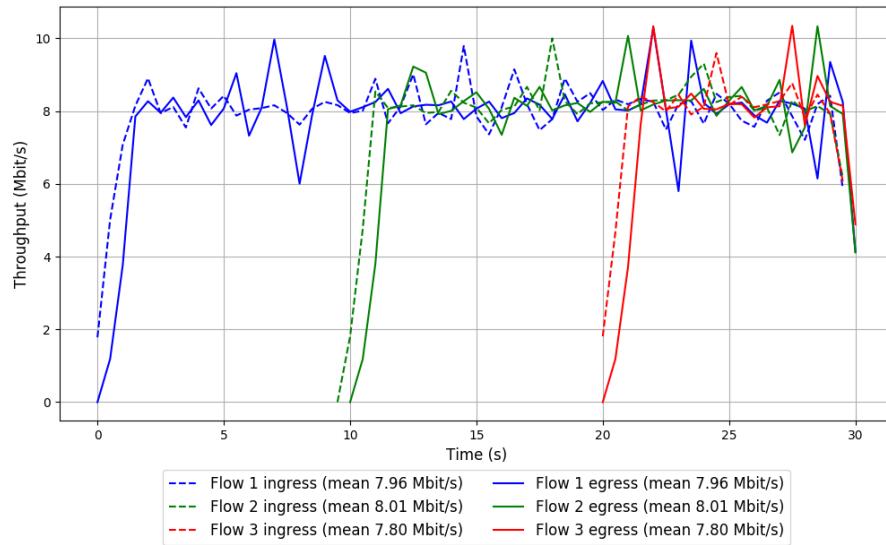


Run 1: Statistics of Sprout

```
Start at: 2018-09-11 20:46:51
End at: 2018-09-11 20:47:21
Local clock offset: -0.296 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.82 Mbit/s
95th percentile per-packet one-way delay: 53.980 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 54.108 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 50.924 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 50.922 ms
Loss rate: 0.77%
```

Run 1: Report of Sprout — Data Link

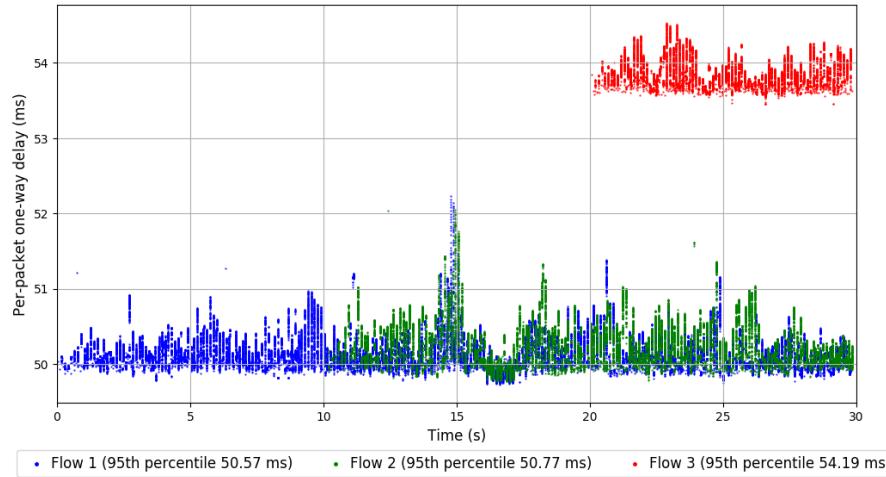
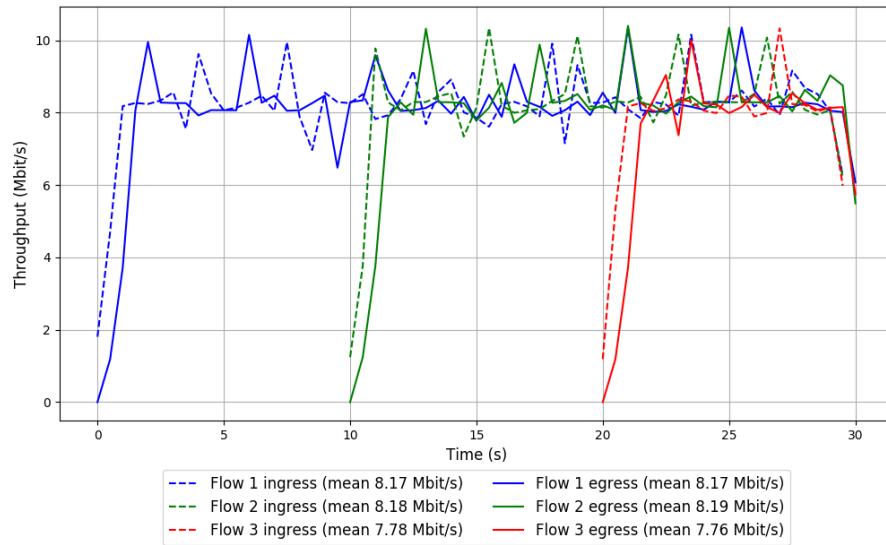


Run 2: Statistics of Sprout

```
Start at: 2018-09-11 21:18:39
End at: 2018-09-11 21:19:09
Local clock offset: -0.215 ms
Remote clock offset: -0.198 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.14 Mbit/s
95th percentile per-packet one-way delay: 53.902 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 50.571 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 50.767 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 54.194 ms
Loss rate: 1.33%
```

Run 2: Report of Sprout — Data Link

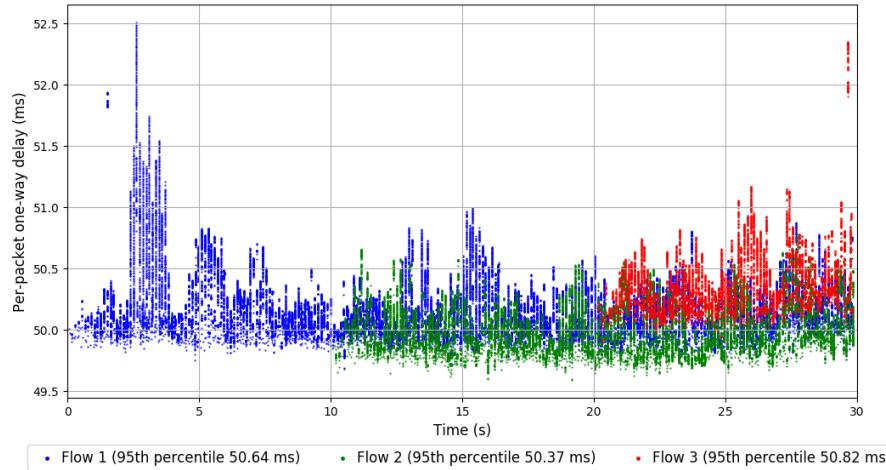
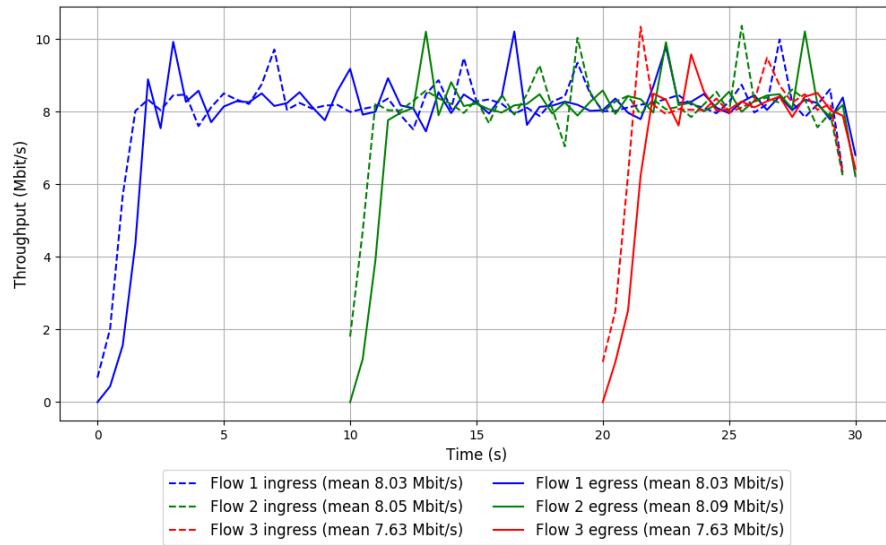


Run 3: Statistics of Sprout

```
Start at: 2018-09-11 21:50:15
End at: 2018-09-11 21:50:45
Local clock offset: -0.148 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.89 Mbit/s
95th percentile per-packet one-way delay: 50.625 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 50.644 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 50.367 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 50.817 ms
Loss rate: 1.30%
```

Run 3: Report of Sprout — Data Link

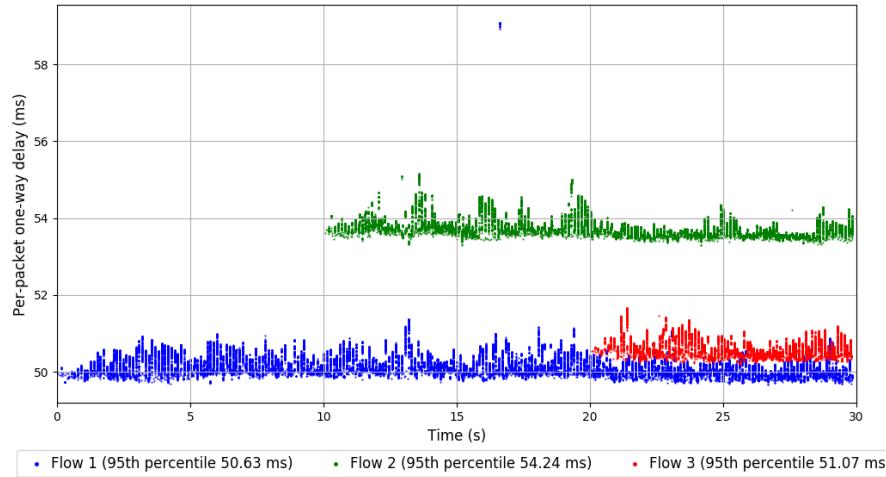
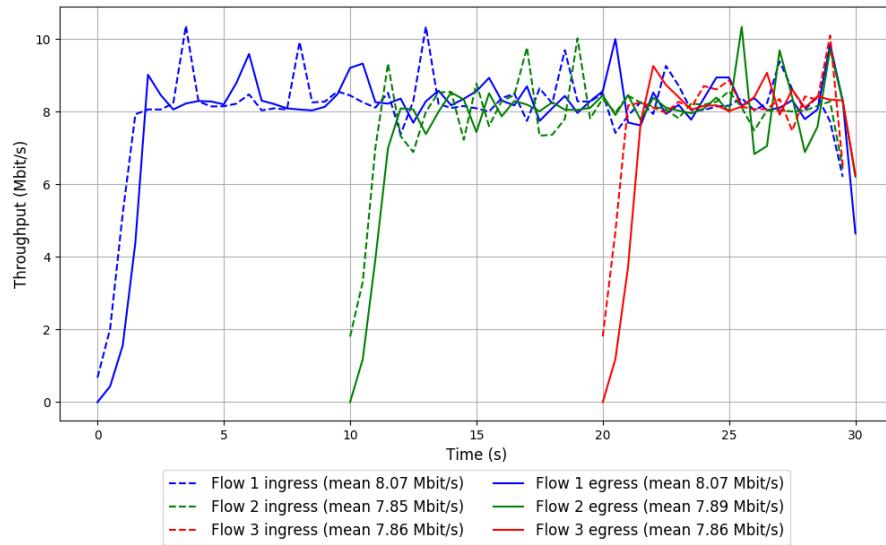


Run 4: Statistics of Sprout

```
Start at: 2018-09-11 22:21:42
End at: 2018-09-11 22:22:12
Local clock offset: 0.339 ms
Remote clock offset: 0.233 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.88 Mbit/s
95th percentile per-packet one-way delay: 53.955 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 8.07 Mbit/s
95th percentile per-packet one-way delay: 50.629 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 54.245 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 51.073 ms
Loss rate: 1.31%
```

Run 4: Report of Sprout — Data Link

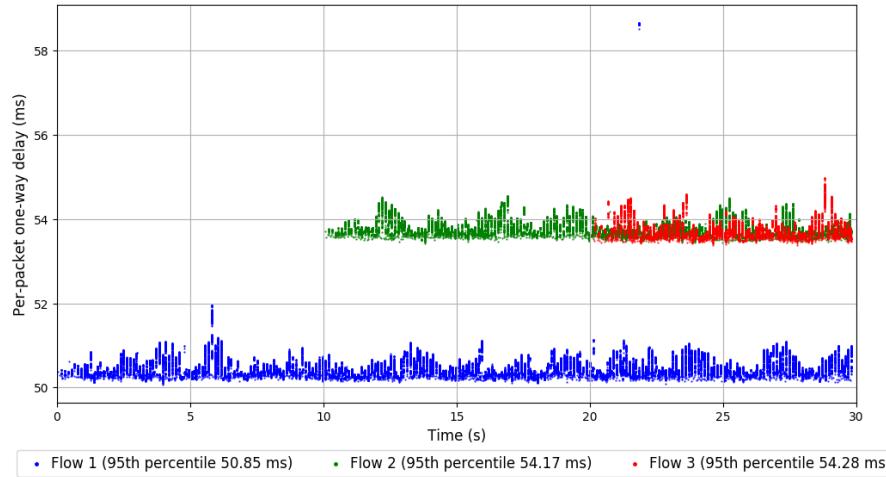
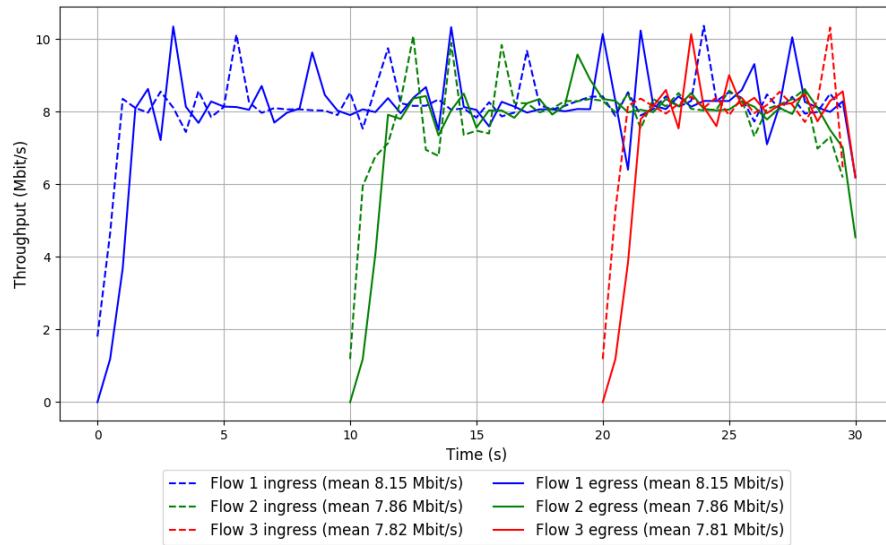


Run 5: Statistics of Sprout

```
Start at: 2018-09-11 22:53:15
End at: 2018-09-11 22:53:45
Local clock offset: 0.042 ms
Remote clock offset: -0.206 ms

# Below is generated by plot.py at 2018-09-12 01:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.92 Mbit/s
95th percentile per-packet one-way delay: 54.073 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 50.849 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 54.175 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 54.285 ms
Loss rate: 1.33%
```

Run 5: Report of Sprout — Data Link

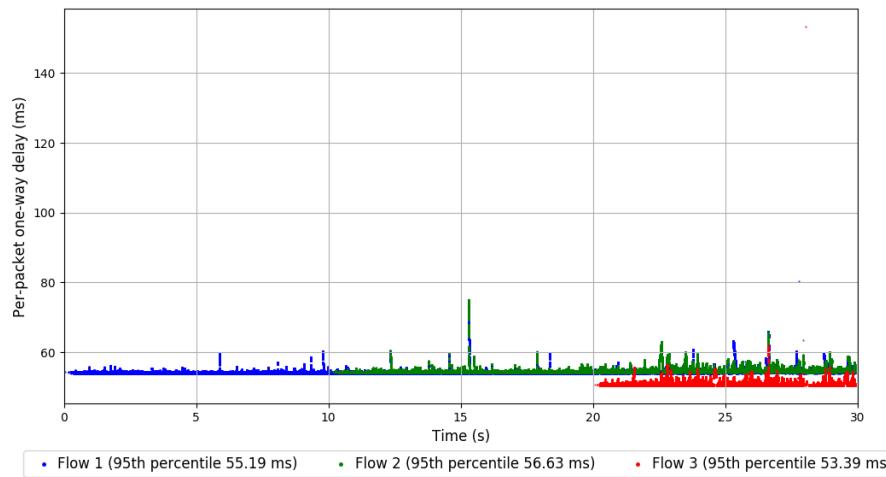
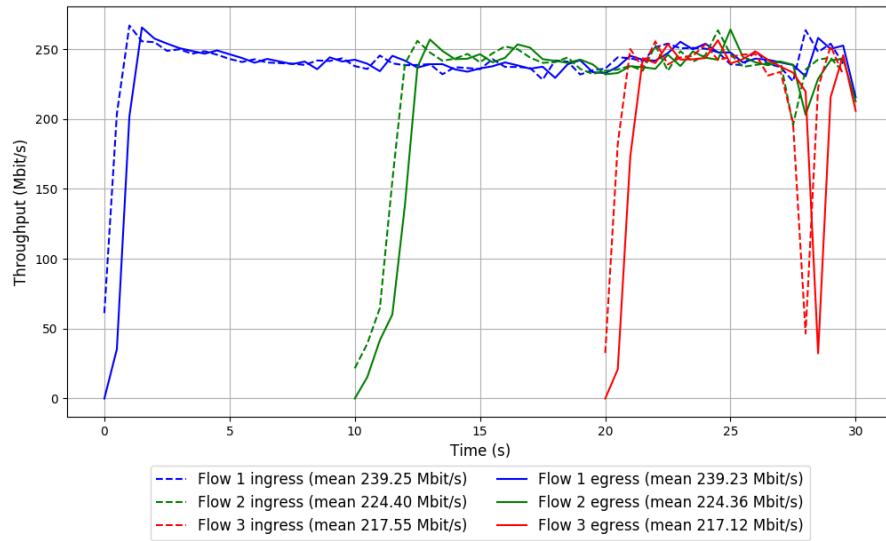


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-09-11 20:25:24
End at: 2018-09-11 20:25:54
Local clock offset: -0.075 ms
Remote clock offset: -0.828 ms

# Below is generated by plot.py at 2018-09-12 01:36:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 460.04 Mbit/s
95th percentile per-packet one-way delay: 55.619 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 239.23 Mbit/s
95th percentile per-packet one-way delay: 55.186 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 224.36 Mbit/s
95th percentile per-packet one-way delay: 56.628 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 217.12 Mbit/s
95th percentile per-packet one-way delay: 53.386 ms
Loss rate: 1.24%
```

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

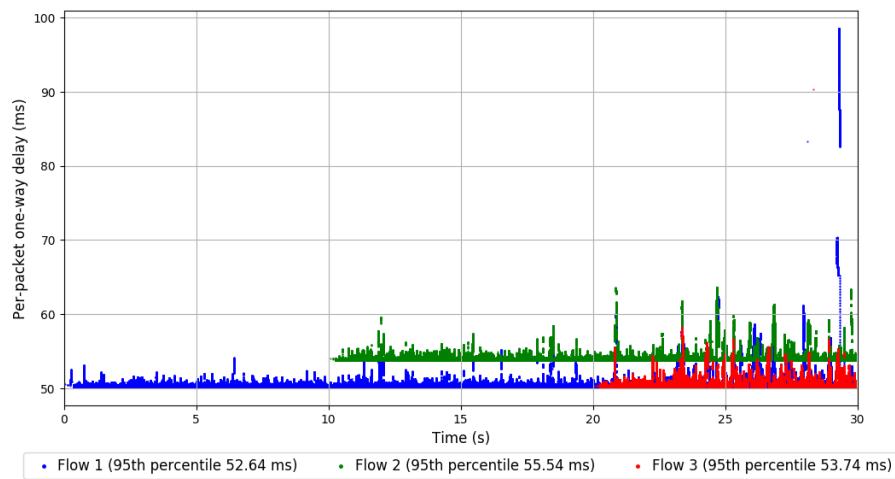
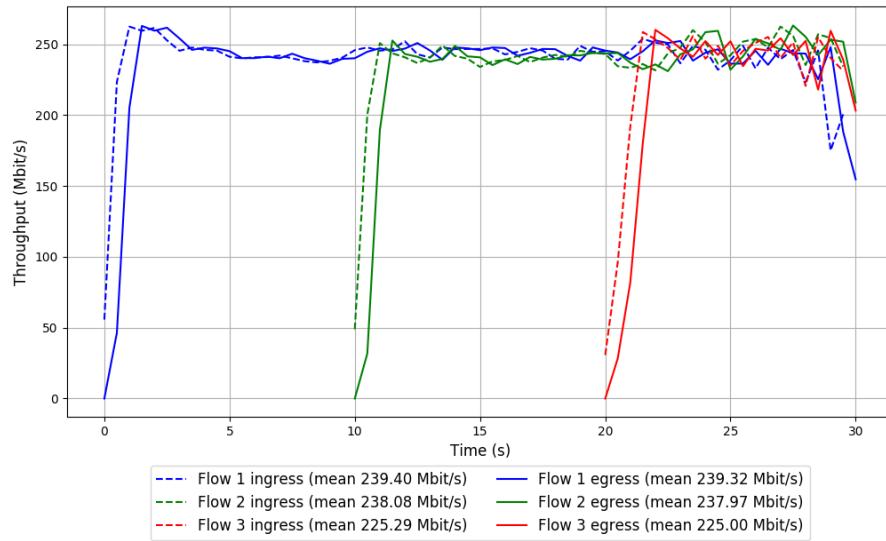


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-09-11 20:57:14
End at: 2018-09-11 20:57:44
Local clock offset: 0.174 ms
Remote clock offset: -0.248 ms

# Below is generated by plot.py at 2018-09-12 01:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.77 Mbit/s
95th percentile per-packet one-way delay: 54.485 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 239.32 Mbit/s
95th percentile per-packet one-way delay: 52.643 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 237.97 Mbit/s
95th percentile per-packet one-way delay: 55.544 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 225.00 Mbit/s
95th percentile per-packet one-way delay: 53.740 ms
Loss rate: 1.14%
```

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

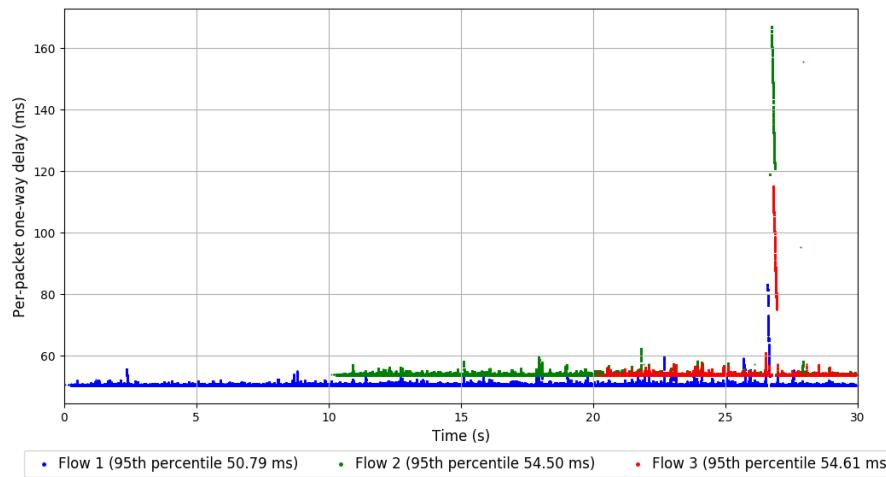
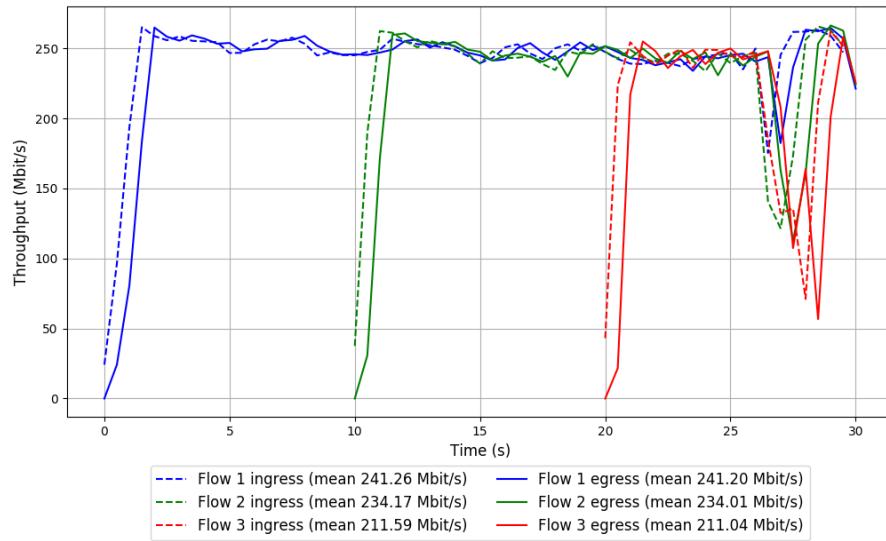


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-09-11 21:29:01
End at: 2018-09-11 21:29:31
Local clock offset: 0.13 ms
Remote clock offset: -0.002 ms

# Below is generated by plot.py at 2018-09-12 01:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 466.18 Mbit/s
95th percentile per-packet one-way delay: 54.033 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 241.20 Mbit/s
95th percentile per-packet one-way delay: 50.788 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 234.01 Mbit/s
95th percentile per-packet one-way delay: 54.502 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 211.04 Mbit/s
95th percentile per-packet one-way delay: 54.614 ms
Loss rate: 1.30%
```

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

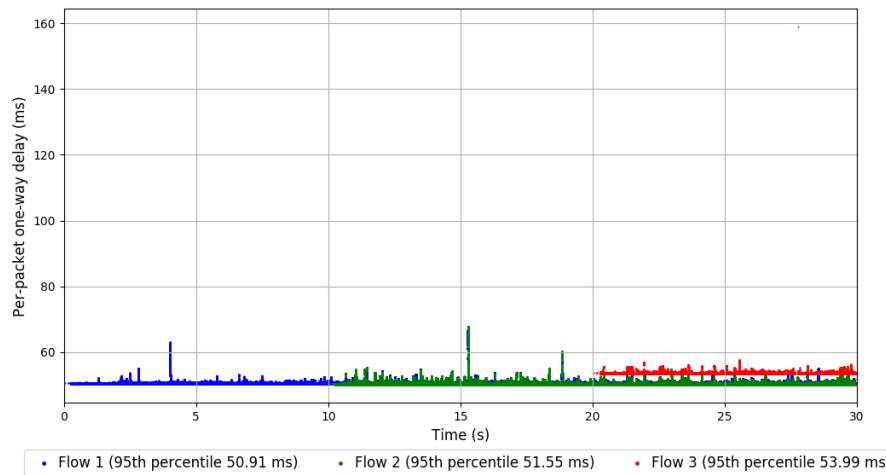
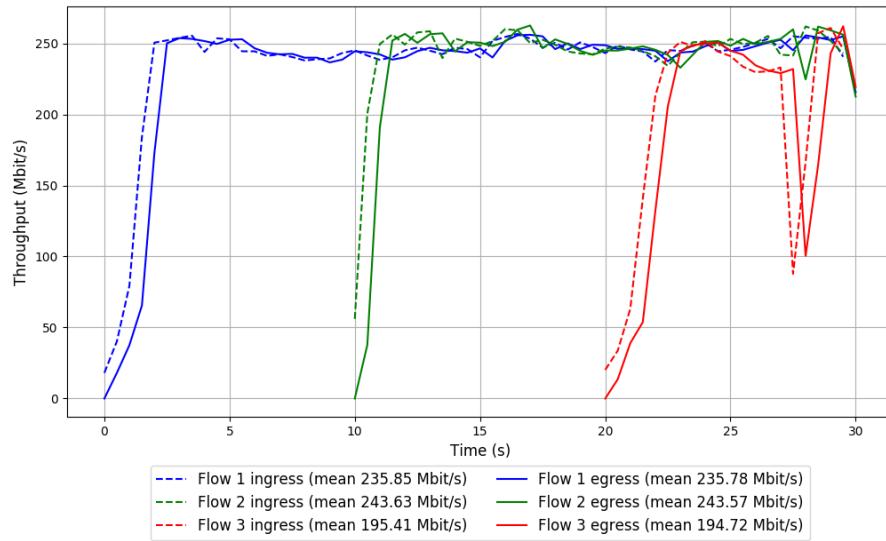


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-09-11 22:00:35
End at: 2018-09-11 22:01:05
Local clock offset: -0.052 ms
Remote clock offset: -0.144 ms

# Below is generated by plot.py at 2018-09-12 01:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 462.04 Mbit/s
95th percentile per-packet one-way delay: 53.540 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 235.78 Mbit/s
95th percentile per-packet one-way delay: 50.915 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 243.57 Mbit/s
95th percentile per-packet one-way delay: 51.546 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 194.72 Mbit/s
95th percentile per-packet one-way delay: 53.989 ms
Loss rate: 1.41%
```

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

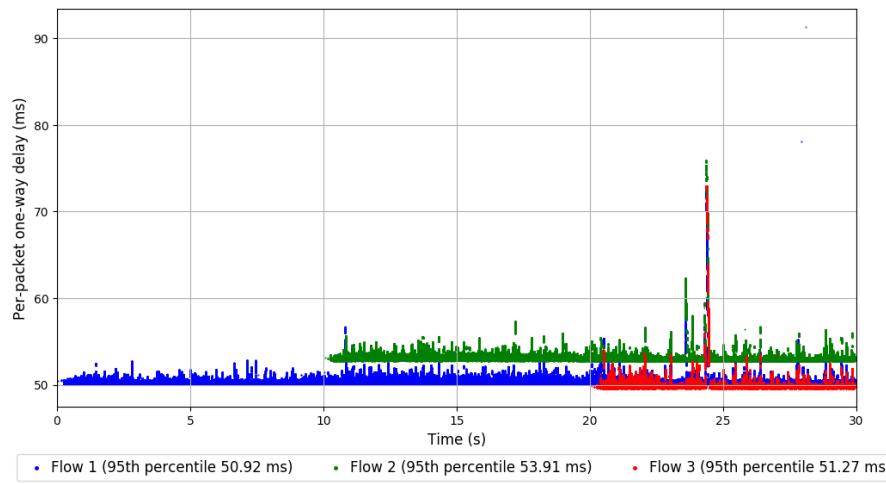
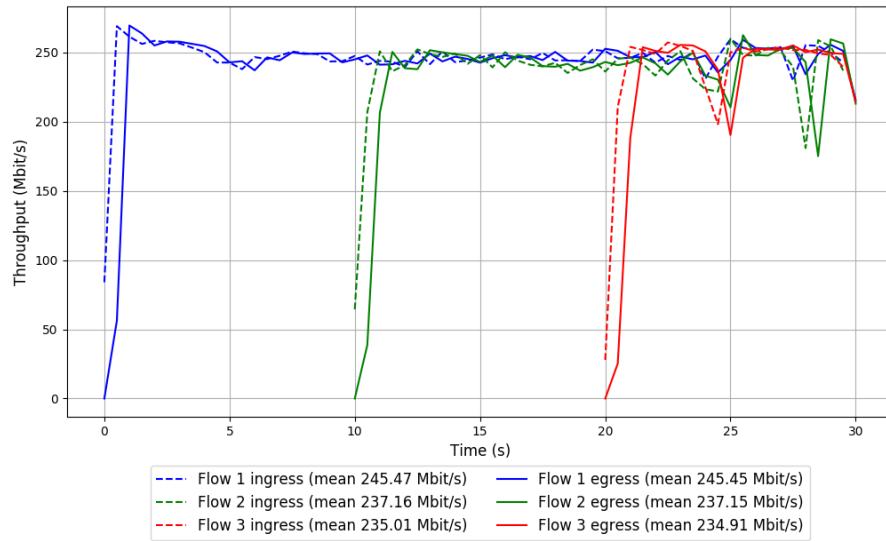


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-09-11 22:32:00
End at: 2018-09-11 22:32:30
Local clock offset: -0.172 ms
Remote clock offset: -0.338 ms

# Below is generated by plot.py at 2018-09-12 01:37:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.62 Mbit/s
95th percentile per-packet one-way delay: 53.330 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 245.45 Mbit/s
95th percentile per-packet one-way delay: 50.922 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 237.15 Mbit/s
95th percentile per-packet one-way delay: 53.914 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 234.91 Mbit/s
95th percentile per-packet one-way delay: 51.275 ms
Loss rate: 1.06%
```

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

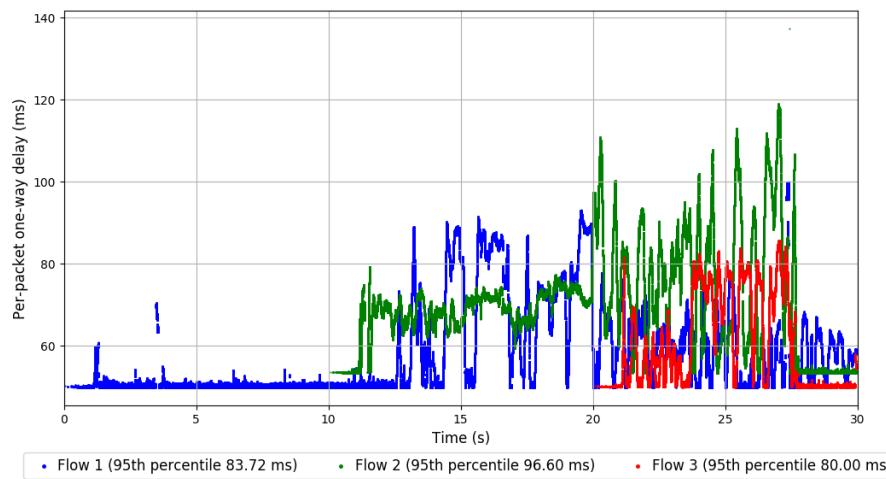
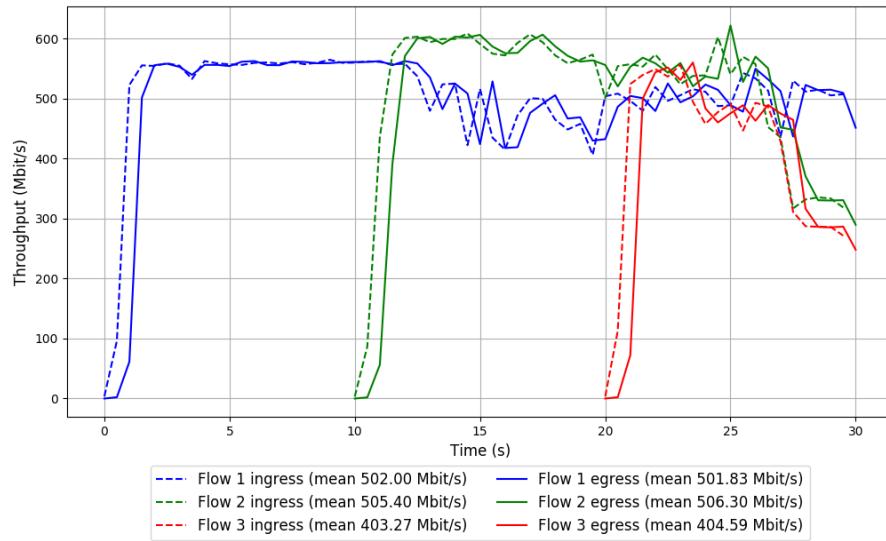


Run 1: Statistics of TCP Vegas

```
Start at: 2018-09-11 20:27:17
End at: 2018-09-11 20:27:47
Local clock offset: 0.011 ms
Remote clock offset: 0.248 ms

# Below is generated by plot.py at 2018-09-12 01:41:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 972.08 Mbit/s
95th percentile per-packet one-way delay: 87.582 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 501.83 Mbit/s
95th percentile per-packet one-way delay: 83.719 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 506.30 Mbit/s
95th percentile per-packet one-way delay: 96.602 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 404.59 Mbit/s
95th percentile per-packet one-way delay: 79.999 ms
Loss rate: 0.70%
```

Run 1: Report of TCP Vegas — Data Link

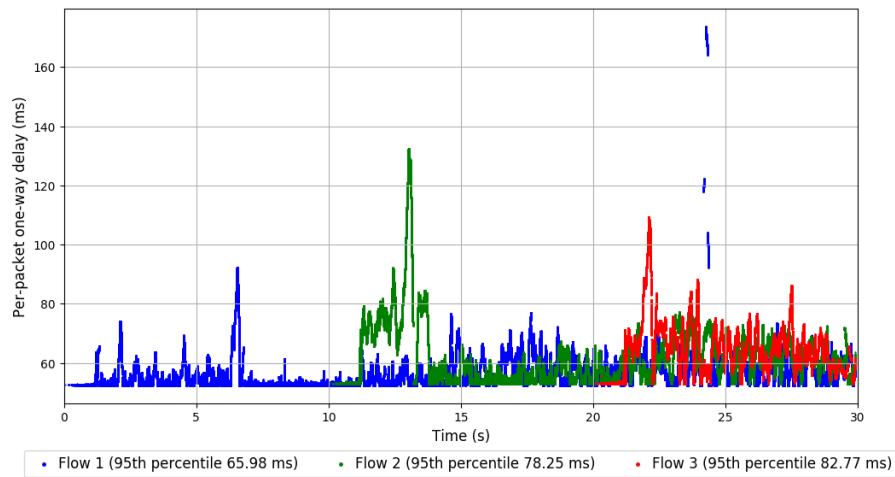
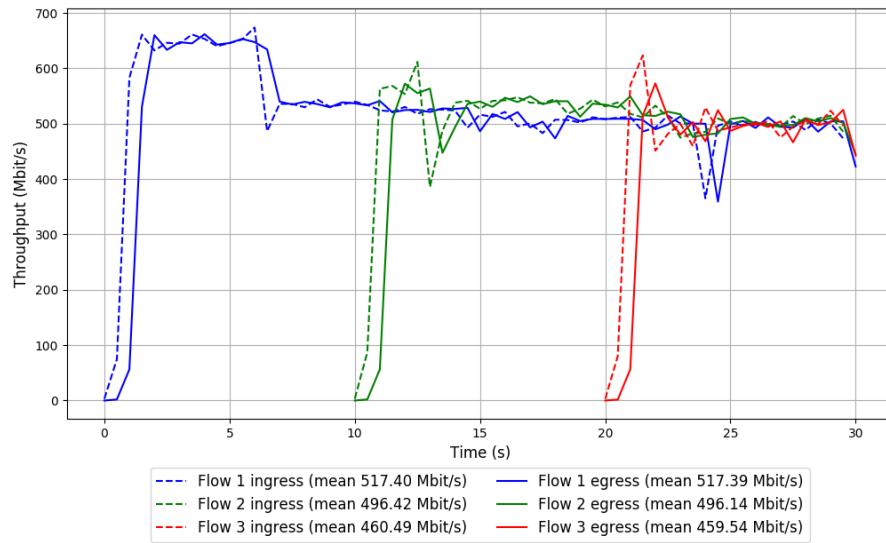


Run 2: Statistics of TCP Vegas

```
Start at: 2018-09-11 20:59:09
End at: 2018-09-11 20:59:39
Local clock offset: -0.079 ms
Remote clock offset: 0.395 ms

# Below is generated by plot.py at 2018-09-12 01:47:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 998.88 Mbit/s
95th percentile per-packet one-way delay: 74.070 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 517.39 Mbit/s
95th percentile per-packet one-way delay: 65.985 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 496.14 Mbit/s
95th percentile per-packet one-way delay: 78.254 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 459.54 Mbit/s
95th percentile per-packet one-way delay: 82.765 ms
Loss rate: 1.25%
```

Run 2: Report of TCP Vegas — Data Link

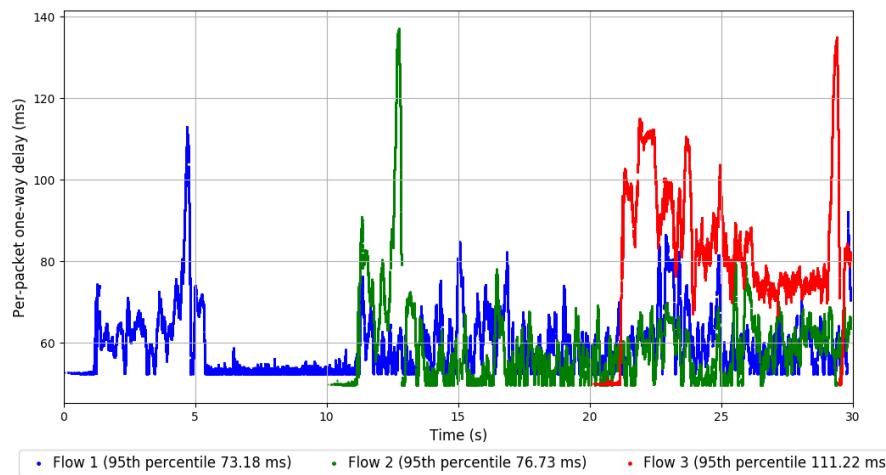
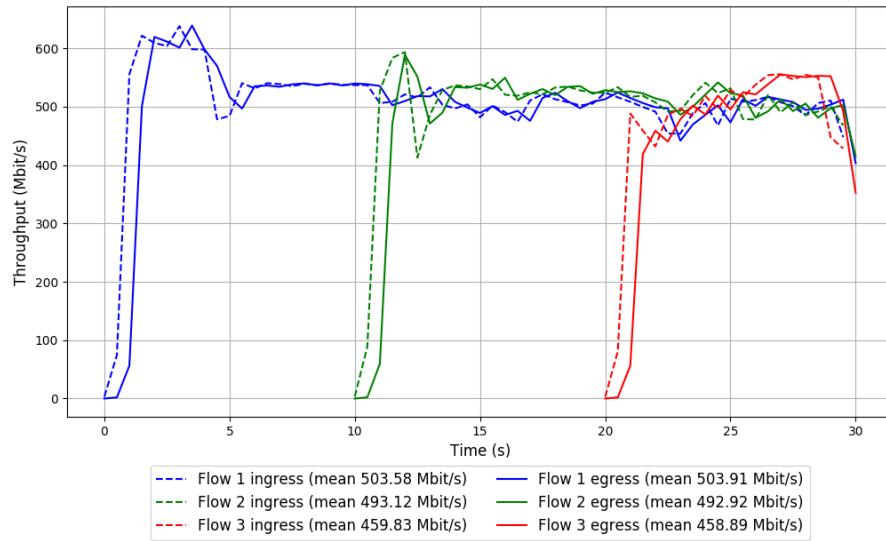


Run 3: Statistics of TCP Vegas

```
Start at: 2018-09-11 21:30:58
End at: 2018-09-11 21:31:28
Local clock offset: -0.202 ms
Remote clock offset: 0.285 ms

# Below is generated by plot.py at 2018-09-12 01:49:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 982.94 Mbit/s
95th percentile per-packet one-way delay: 90.365 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 503.91 Mbit/s
95th percentile per-packet one-way delay: 73.183 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 492.92 Mbit/s
95th percentile per-packet one-way delay: 76.735 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 458.89 Mbit/s
95th percentile per-packet one-way delay: 111.218 ms
Loss rate: 1.22%
```

Run 3: Report of TCP Vegas — Data Link

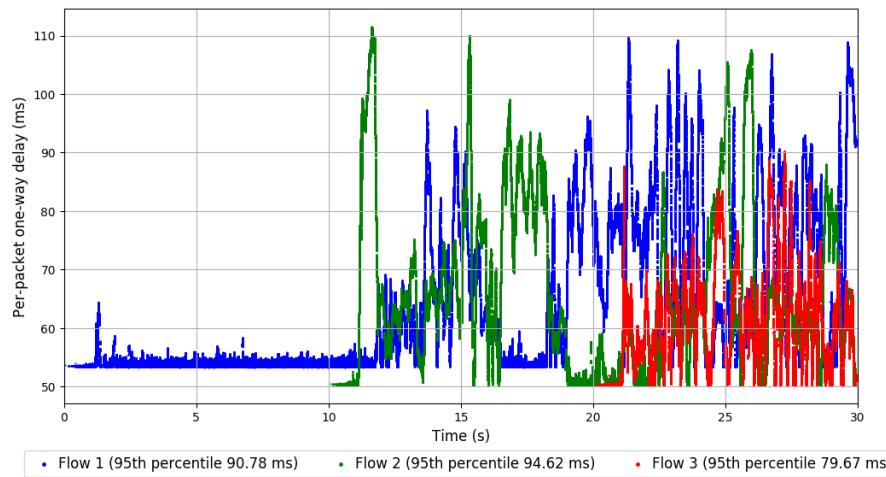
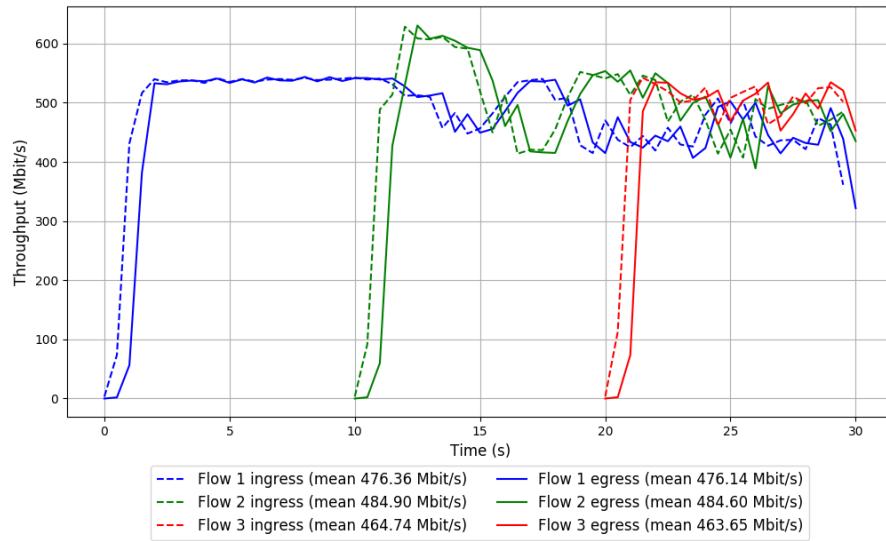


Run 4: Statistics of TCP Vegas

```
Start at: 2018-09-11 22:02:29
End at: 2018-09-11 22:02:59
Local clock offset: 0.221 ms
Remote clock offset: -0.327 ms

# Below is generated by plot.py at 2018-09-12 01:55:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 951.62 Mbit/s
95th percentile per-packet one-way delay: 90.413 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 476.14 Mbit/s
95th percentile per-packet one-way delay: 90.779 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 484.60 Mbit/s
95th percentile per-packet one-way delay: 94.625 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 463.65 Mbit/s
95th percentile per-packet one-way delay: 79.674 ms
Loss rate: 1.23%
```

Run 4: Report of TCP Vegas — Data Link

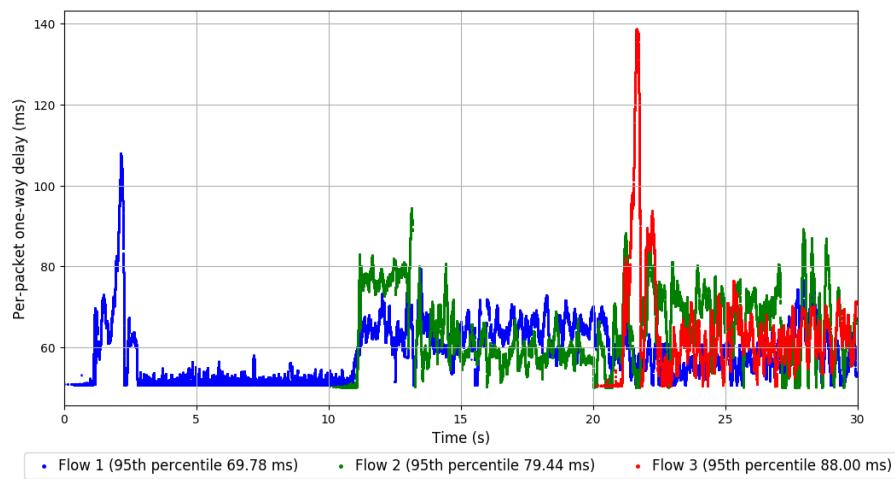
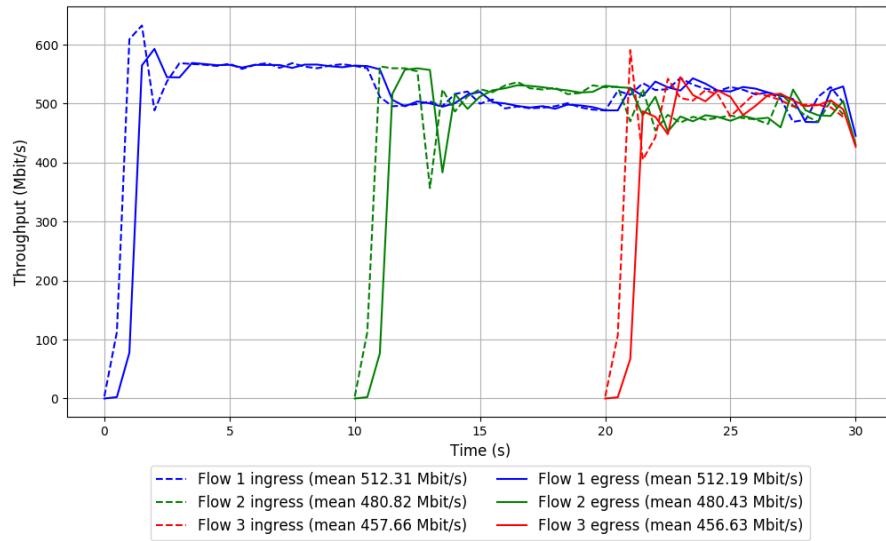


Run 5: Statistics of TCP Vegas

```
Start at: 2018-09-11 22:33:55
End at: 2018-09-11 22:34:25
Local clock offset: 0.197 ms
Remote clock offset: -0.498 ms

# Below is generated by plot.py at 2018-09-12 01:57:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 982.44 Mbit/s
95th percentile per-packet one-way delay: 77.683 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 512.19 Mbit/s
95th percentile per-packet one-way delay: 69.781 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 480.43 Mbit/s
95th percentile per-packet one-way delay: 79.439 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 456.63 Mbit/s
95th percentile per-packet one-way delay: 88.003 ms
Loss rate: 1.23%
```

Run 5: Report of TCP Vegas — Data Link

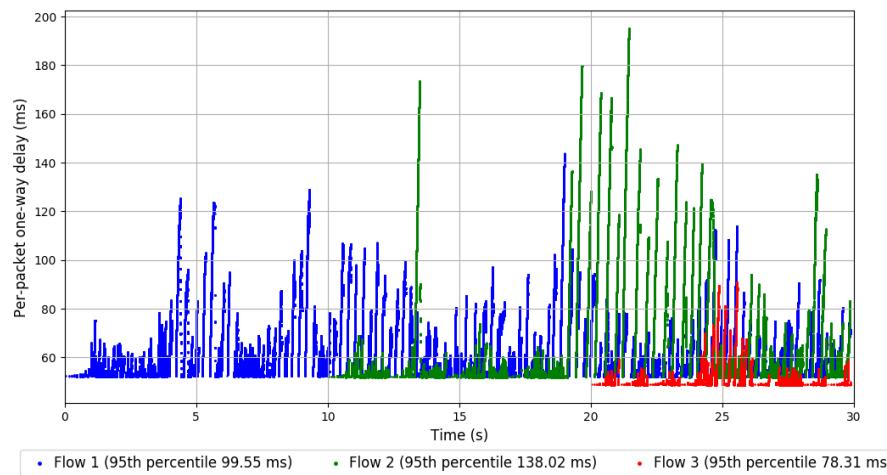
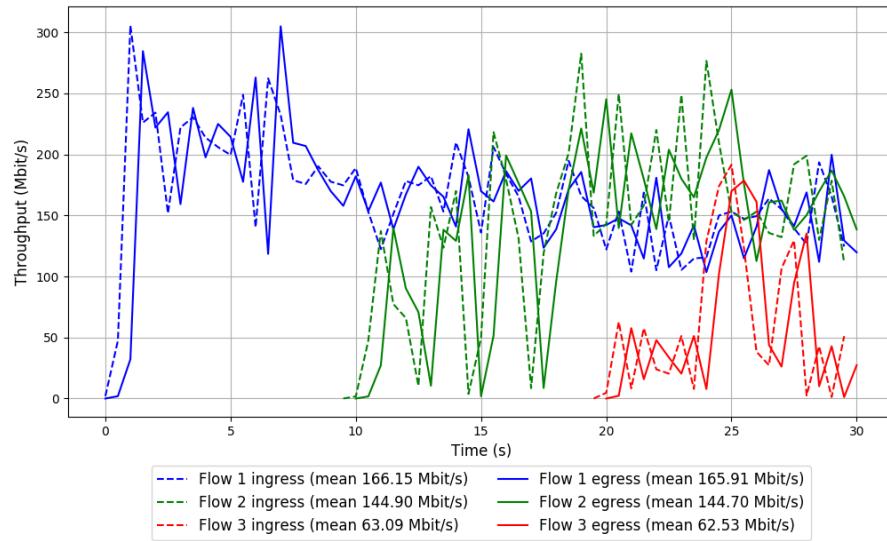


Run 1: Statistics of Verus

```
Start at: 2018-09-11 20:35:57
End at: 2018-09-11 20:36:27
Local clock offset: -0.237 ms
Remote clock offset: 1.25 ms

# Below is generated by plot.py at 2018-09-12 01:57:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.72 Mbit/s
95th percentile per-packet one-way delay: 118.359 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 165.91 Mbit/s
95th percentile per-packet one-way delay: 99.550 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 144.70 Mbit/s
95th percentile per-packet one-way delay: 138.018 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.53 Mbit/s
95th percentile per-packet one-way delay: 78.314 ms
Loss rate: 1.89%
```

Run 1: Report of Verus — Data Link

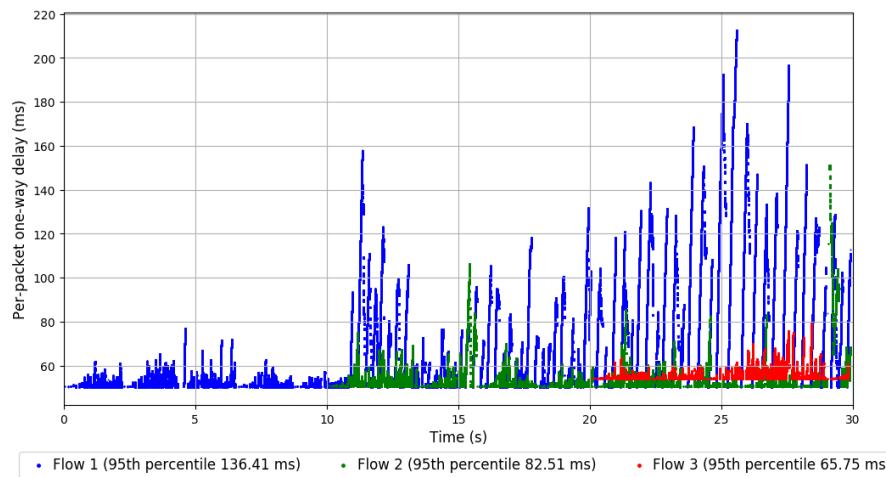
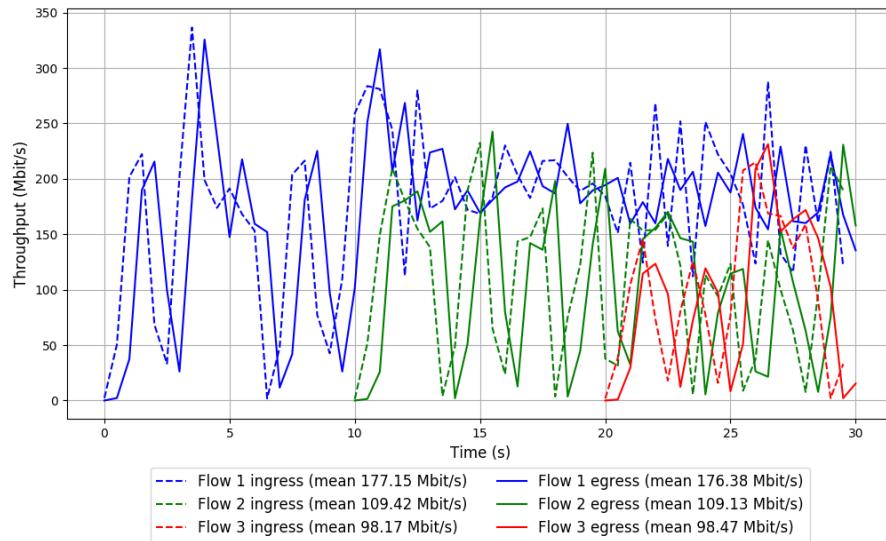


Run 2: Statistics of Verus

```
Start at: 2018-09-11 21:07:45
End at: 2018-09-11 21:08:15
Local clock offset: -0.108 ms
Remote clock offset: -0.557 ms

# Below is generated by plot.py at 2018-09-12 01:57:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 281.05 Mbit/s
95th percentile per-packet one-way delay: 125.090 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 176.38 Mbit/s
95th percentile per-packet one-way delay: 136.405 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 109.13 Mbit/s
95th percentile per-packet one-way delay: 82.514 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 98.47 Mbit/s
95th percentile per-packet one-way delay: 65.747 ms
Loss rate: 0.91%
```

Run 2: Report of Verus — Data Link

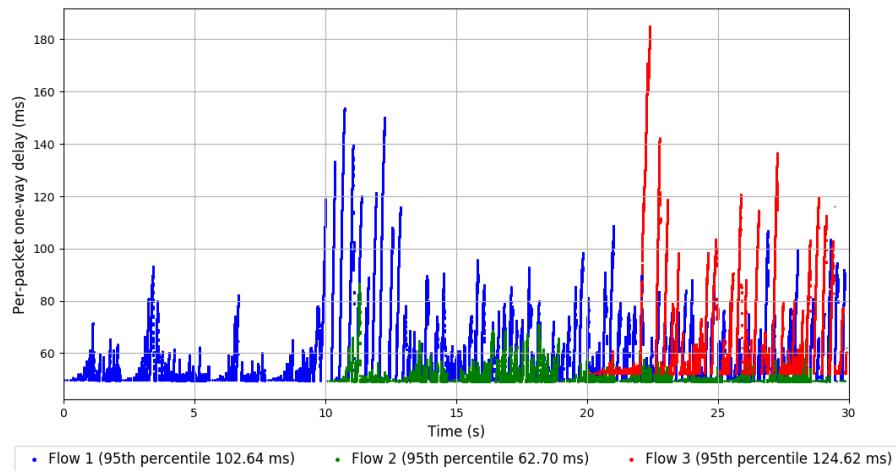
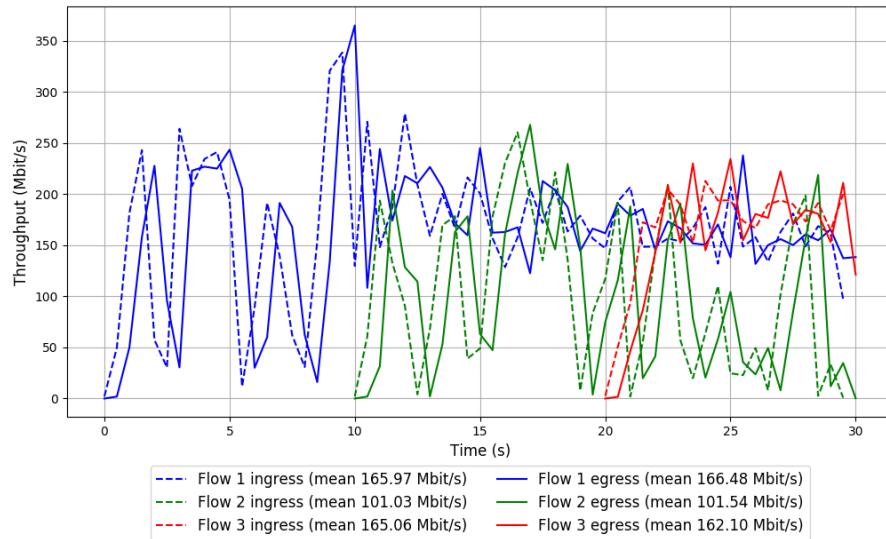


Run 3: Statistics of Verus

```
Start at: 2018-09-11 21:39:28
End at: 2018-09-11 21:39:58
Local clock offset: 0.057 ms
Remote clock offset: 0.556 ms

# Below is generated by plot.py at 2018-09-12 01:57:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 286.90 Mbit/s
95th percentile per-packet one-way delay: 105.216 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 166.48 Mbit/s
95th percentile per-packet one-way delay: 102.645 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 101.54 Mbit/s
95th percentile per-packet one-way delay: 62.704 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 162.10 Mbit/s
95th percentile per-packet one-way delay: 124.621 ms
Loss rate: 2.81%
```

Run 3: Report of Verus — Data Link

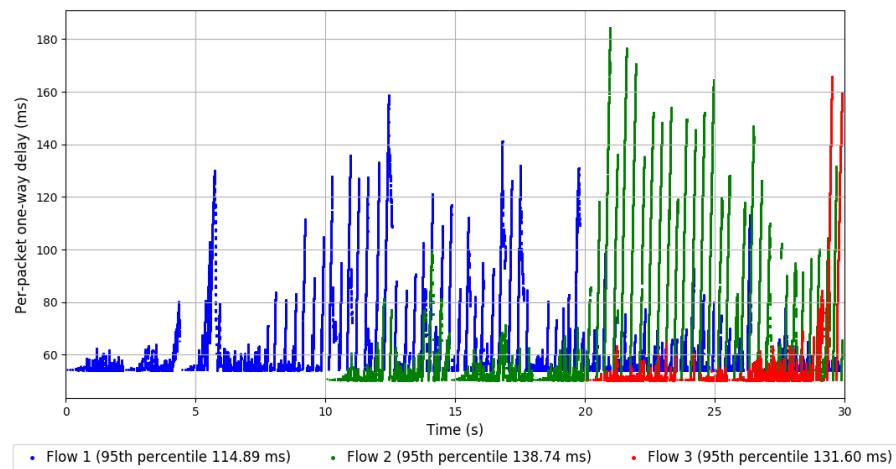
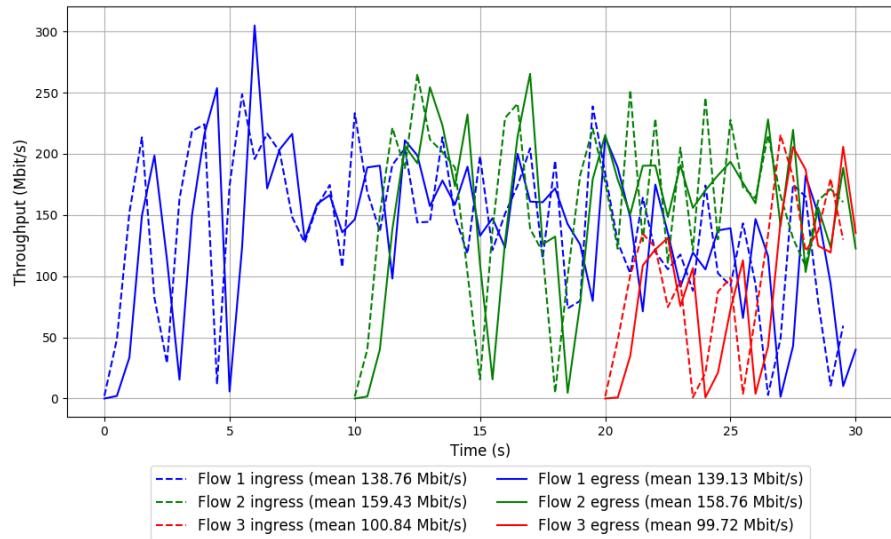


Run 4: Statistics of Verus

```
Start at: 2018-09-11 22:10:52
End at: 2018-09-11 22:11:22
Local clock offset: 0.227 ms
Remote clock offset: -0.515 ms

# Below is generated by plot.py at 2018-09-12 01:57:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.10 Mbit/s
95th percentile per-packet one-way delay: 125.346 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 139.13 Mbit/s
95th percentile per-packet one-way delay: 114.892 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 158.76 Mbit/s
95th percentile per-packet one-way delay: 138.740 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 99.72 Mbit/s
95th percentile per-packet one-way delay: 131.604 ms
Loss rate: 0.00%
```

Run 4: Report of Verus — Data Link

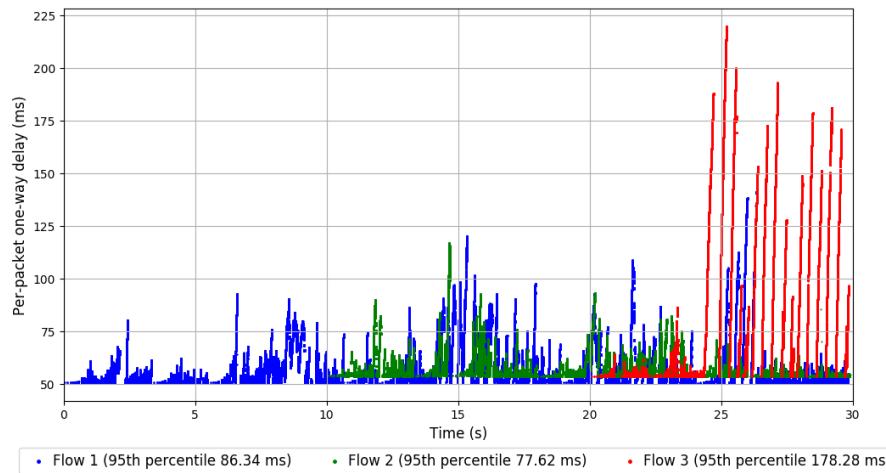
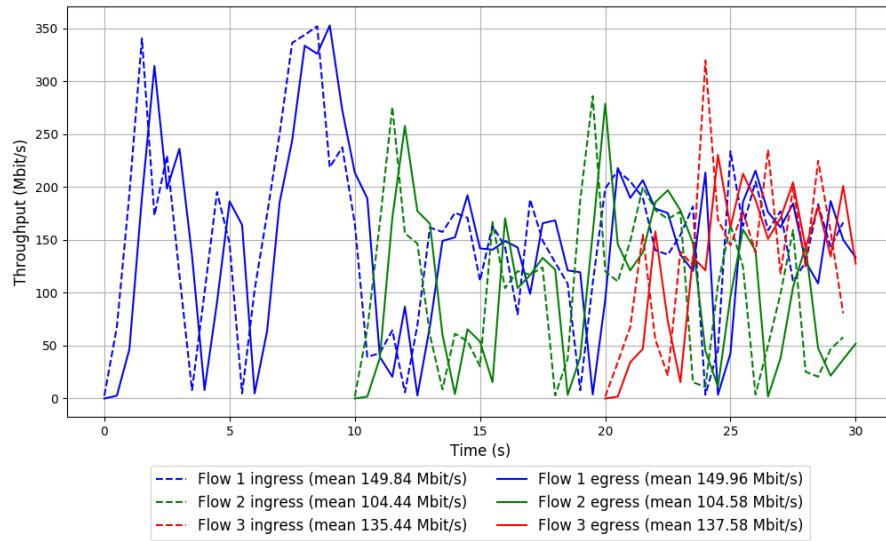


Run 5: Statistics of Verus

```
Start at: 2018-09-11 22:42:24
End at: 2018-09-11 22:42:54
Local clock offset: 0.237 ms
Remote clock offset: -0.249 ms

# Below is generated by plot.py at 2018-09-12 01:57:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 264.13 Mbit/s
95th percentile per-packet one-way delay: 128.047 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 149.96 Mbit/s
95th percentile per-packet one-way delay: 86.344 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 104.58 Mbit/s
95th percentile per-packet one-way delay: 77.619 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 137.58 Mbit/s
95th percentile per-packet one-way delay: 178.283 ms
Loss rate: 0.01%
```

Run 5: Report of Verus — Data Link

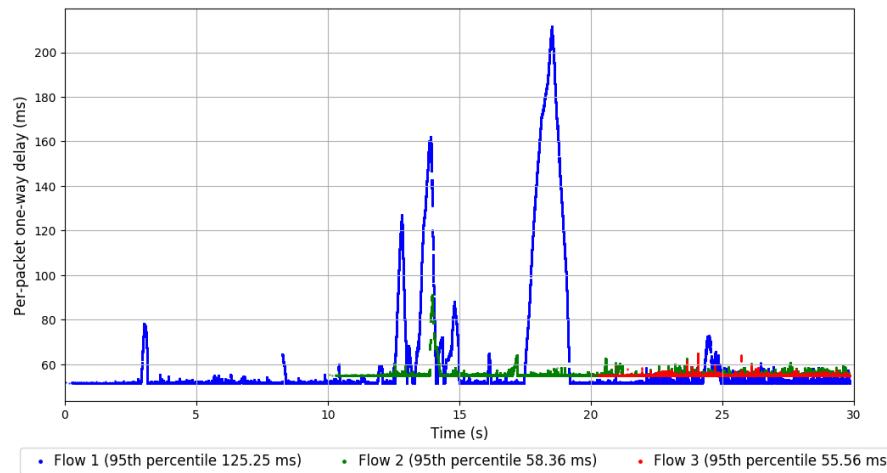
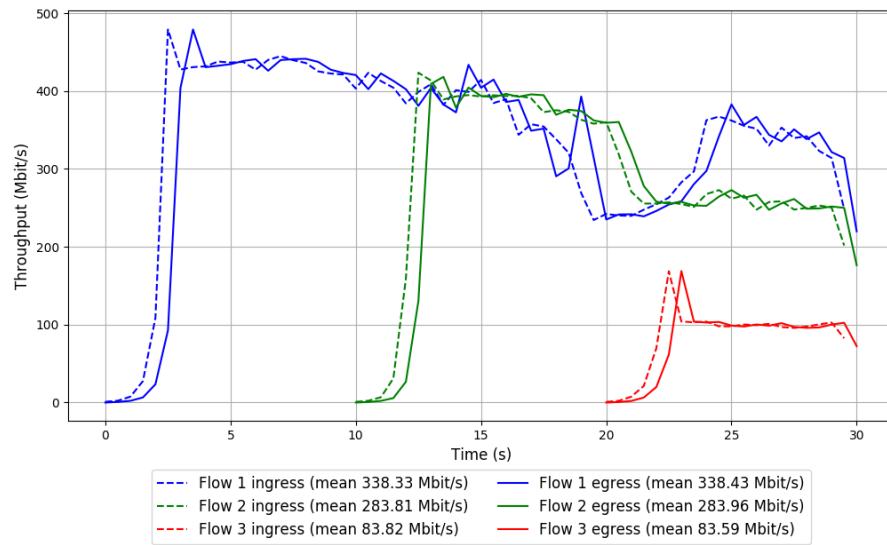


```
Run 1: Statistics of PCC-Vivace

Start at: 2018-09-11 20:39:33
End at: 2018-09-11 20:40:03
Local clock offset: -0.024 ms
Remote clock offset: -1.552 ms

# Below is generated by plot.py at 2018-09-12 01:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 554.26 Mbit/s
95th percentile per-packet one-way delay: 85.149 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 338.43 Mbit/s
95th percentile per-packet one-way delay: 125.254 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 283.96 Mbit/s
95th percentile per-packet one-way delay: 58.364 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 83.59 Mbit/s
95th percentile per-packet one-way delay: 55.565 ms
Loss rate: 1.35%
```

Run 1: Report of PCC-Vivace — Data Link

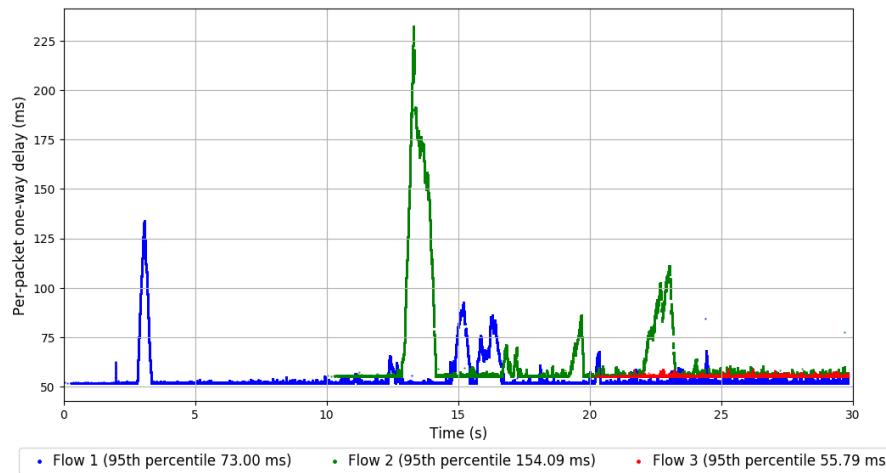
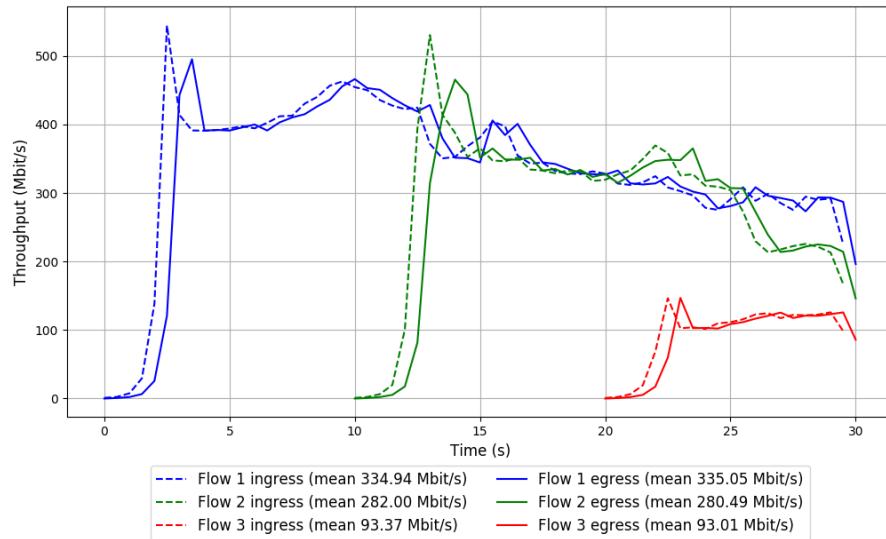


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-09-11 21:11:20
End at: 2018-09-11 21:11:50
Local clock offset: 0.06 ms
Remote clock offset: -1.586 ms

# Below is generated by plot.py at 2018-09-12 01:59:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 551.79 Mbit/s
95th percentile per-packet one-way delay: 90.046 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 335.05 Mbit/s
95th percentile per-packet one-way delay: 73.002 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 280.49 Mbit/s
95th percentile per-packet one-way delay: 154.091 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 93.01 Mbit/s
95th percentile per-packet one-way delay: 55.789 ms
Loss rate: 1.44%
```

Run 2: Report of PCC-Vivace — Data Link

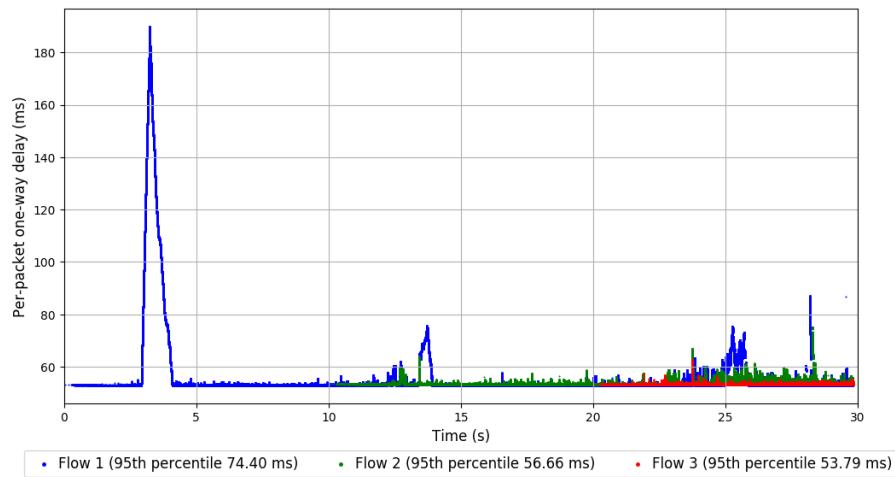
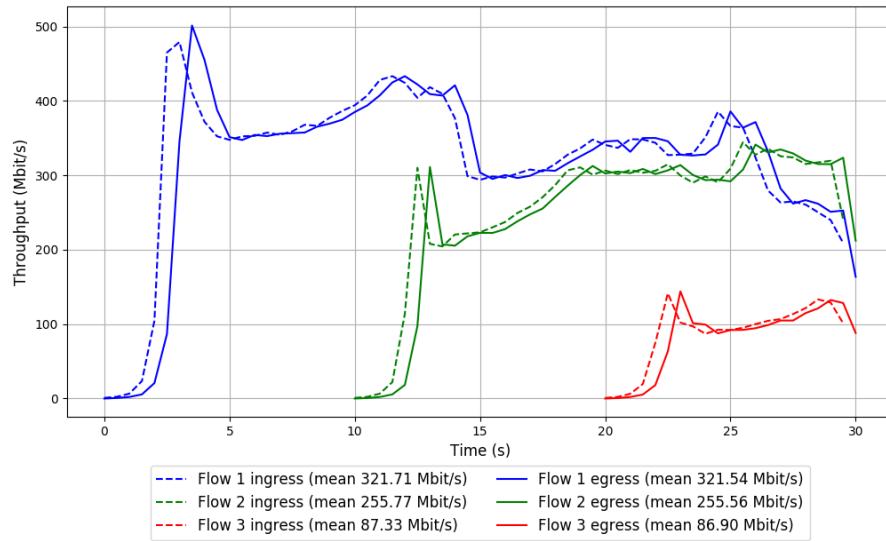


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-09-11 21:43:04
End at: 2018-09-11 21:43:34
Local clock offset: 0.05 ms
Remote clock offset: 0.179 ms

# Below is generated by plot.py at 2018-09-12 01:59:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 519.52 Mbit/s
95th percentile per-packet one-way delay: 65.459 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 321.54 Mbit/s
95th percentile per-packet one-way delay: 74.399 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 255.56 Mbit/s
95th percentile per-packet one-way delay: 56.656 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 86.90 Mbit/s
95th percentile per-packet one-way delay: 53.789 ms
Loss rate: 1.54%
```

Run 3: Report of PCC-Vivace — Data Link

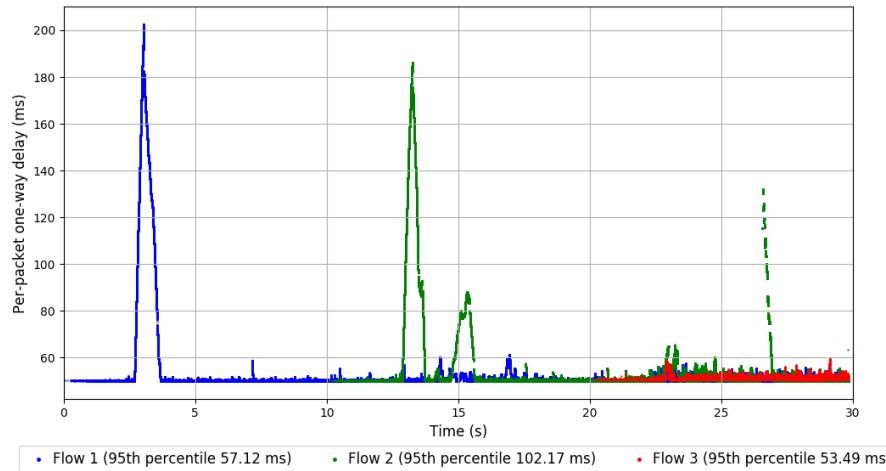
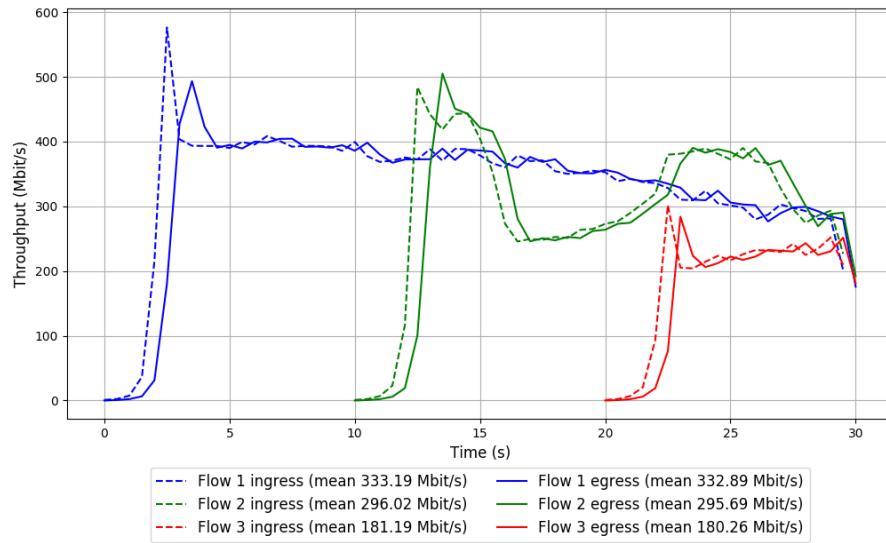


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-09-11 22:14:27
End at: 2018-09-11 22:14:57
Local clock offset: 0.332 ms
Remote clock offset: -0.201 ms

# Below is generated by plot.py at 2018-09-12 01:59:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 588.28 Mbit/s
95th percentile per-packet one-way delay: 80.927 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 332.89 Mbit/s
95th percentile per-packet one-way delay: 57.121 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 295.69 Mbit/s
95th percentile per-packet one-way delay: 102.170 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 180.26 Mbit/s
95th percentile per-packet one-way delay: 53.493 ms
Loss rate: 1.56%
```

Run 4: Report of PCC-Vivace — Data Link

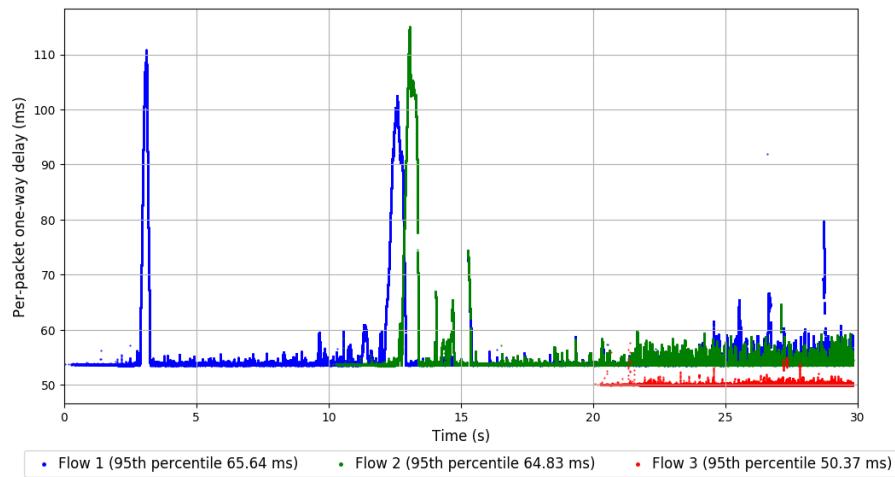
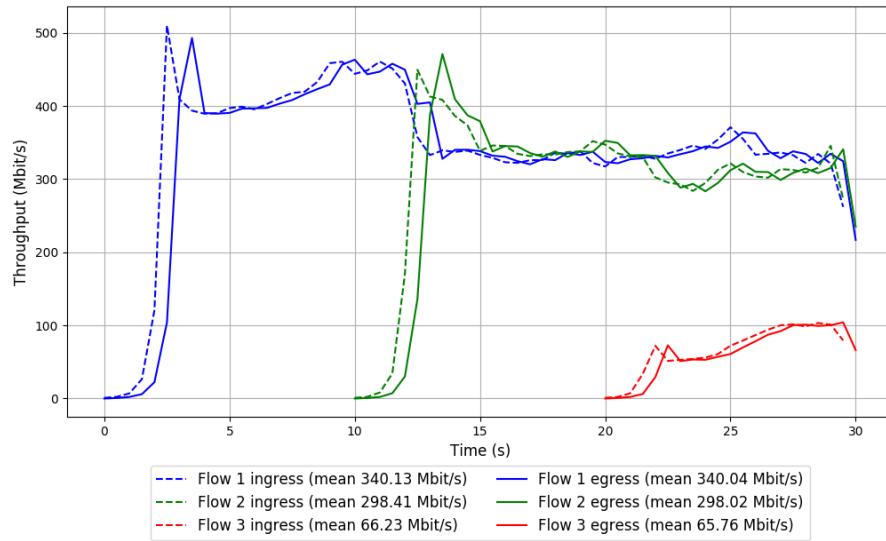


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-09-11 22:46:00
End at: 2018-09-11 22:46:30
Local clock offset: 0.123 ms
Remote clock offset: -0.313 ms

# Below is generated by plot.py at 2018-09-12 02:00:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.53 Mbit/s
95th percentile per-packet one-way delay: 64.752 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 340.04 Mbit/s
95th percentile per-packet one-way delay: 65.642 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 298.02 Mbit/s
95th percentile per-packet one-way delay: 64.829 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 65.76 Mbit/s
95th percentile per-packet one-way delay: 50.367 ms
Loss rate: 1.74%
```

Run 5: Report of PCC-Vivace — Data Link

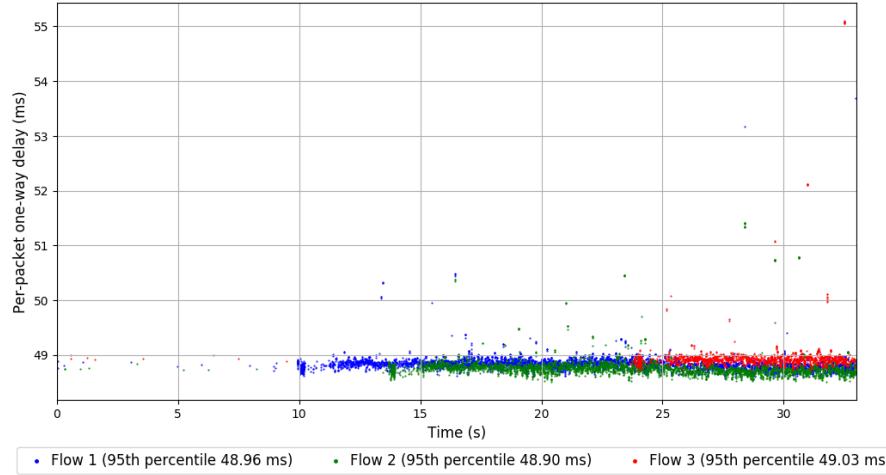
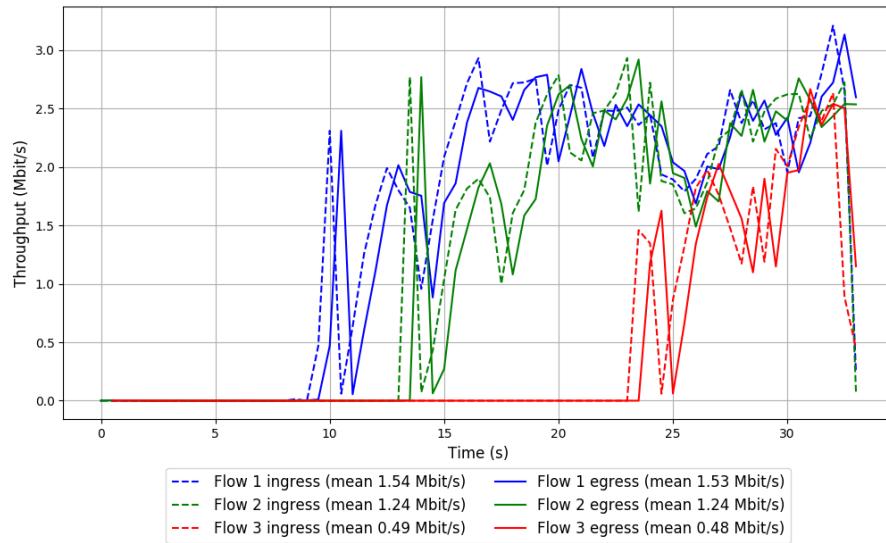


```
Run 1: Statistics of WebRTC media

Start at: 2018-09-11 20:24:12
End at: 2018-09-11 20:24:42
Local clock offset: -0.051 ms
Remote clock offset: 1.132 ms

# Below is generated by plot.py at 2018-09-12 02:00:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.23 Mbit/s
95th percentile per-packet one-way delay: 48.977 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 48.958 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 48.898 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 49.035 ms
Loss rate: 1.43%
```

Run 1: Report of WebRTC media — Data Link

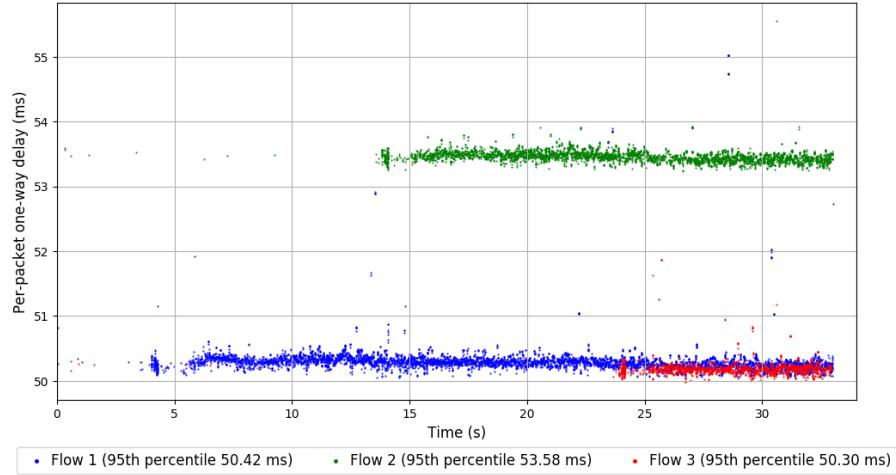
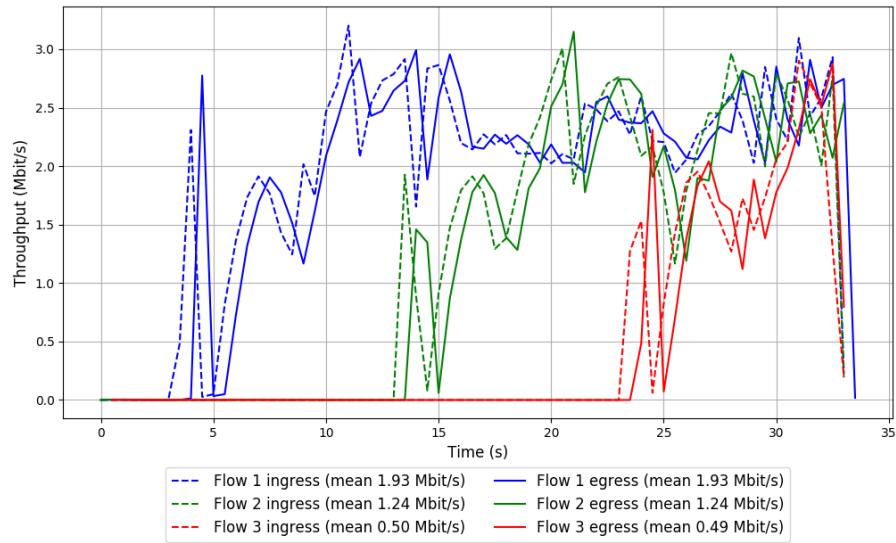


Run 2: Statistics of WebRTC media

```
Start at: 2018-09-11 20:56:03
End at: 2018-09-11 20:56:33
Local clock offset: -0.114 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2018-09-12 02:00:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.63 Mbit/s
95th percentile per-packet one-way delay: 53.531 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 50.420 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 53.583 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 50.295 ms
Loss rate: 2.25%
```

Run 2: Report of WebRTC media — Data Link

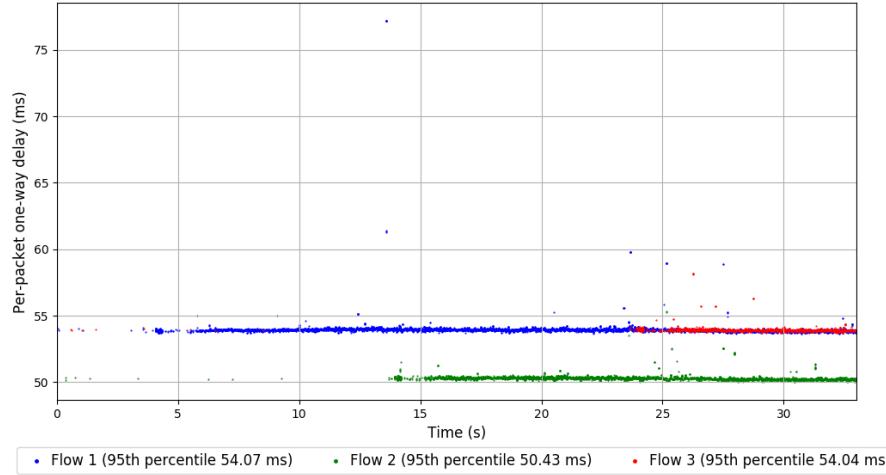
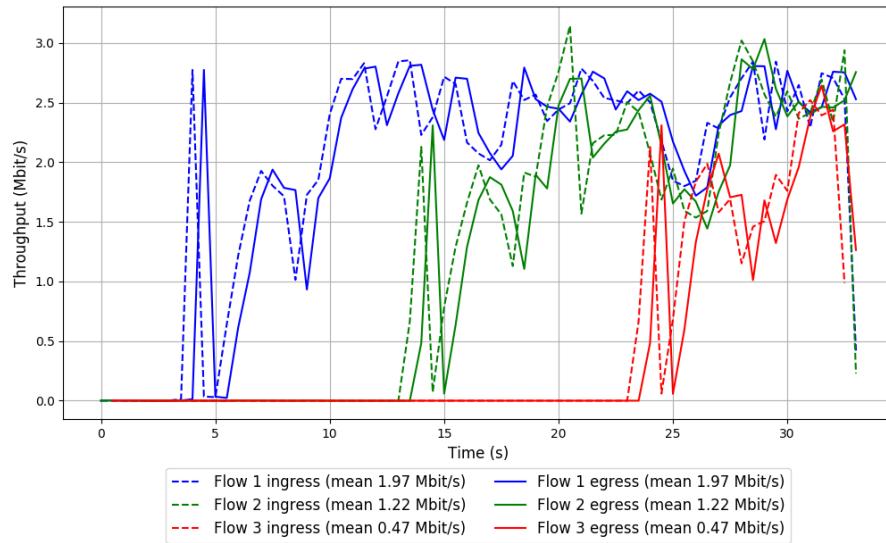


```
Run 3: Statistics of WebRTC media

Start at: 2018-09-11 21:27:50
End at: 2018-09-11 21:28:20
Local clock offset: 0.033 ms
Remote clock offset: -0.228 ms

# Below is generated by plot.py at 2018-09-12 02:00:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 54.040 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 54.074 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 50.426 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 54.037 ms
Loss rate: 0.28%
```

Run 3: Report of WebRTC media — Data Link

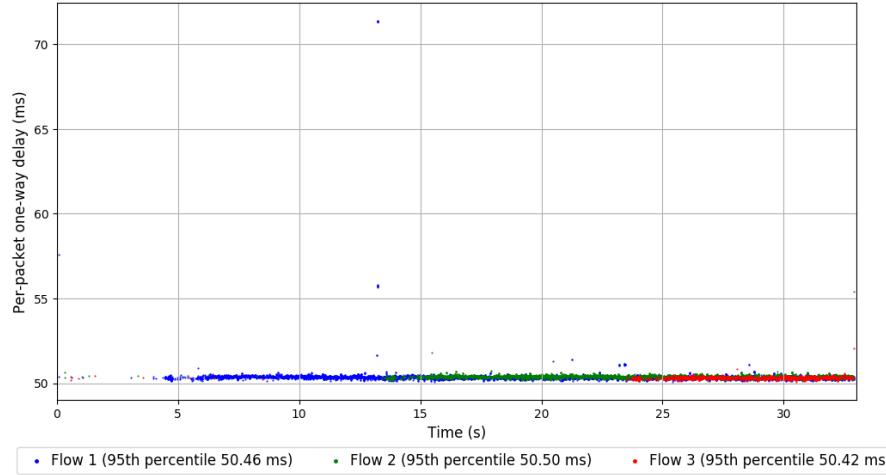
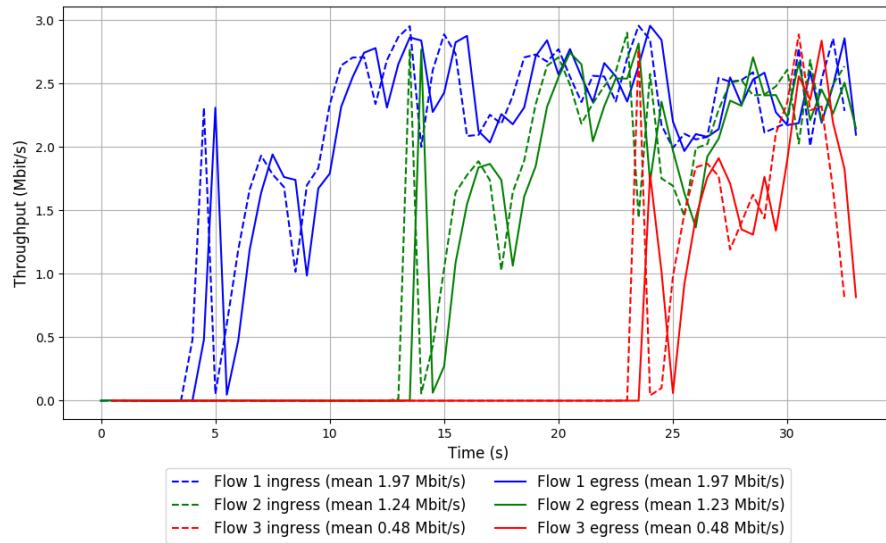


Run 4: Statistics of WebRTC media

```
Start at: 2018-09-11 21:59:24
End at: 2018-09-11 21:59:54
Local clock offset: 0.058 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-09-12 02:00:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 50.480 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 50.462 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 50.502 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 50.418 ms
Loss rate: 0.17%
```

Run 4: Report of WebRTC media — Data Link



```
Run 5: Statistics of WebRTC media

Start at: 2018-09-11 22:30:49
End at: 2018-09-11 22:31:19
Local clock offset: 0.027 ms
Remote clock offset: 0.466 ms

# Below is generated by plot.py at 2018-09-12 02:00:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.67 Mbit/s
95th percentile per-packet one-way delay: 50.060 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 49.923 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 49.877 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 50.157 ms
Loss rate: 2.30%
```

Run 5: Report of WebRTC media — Data Link

