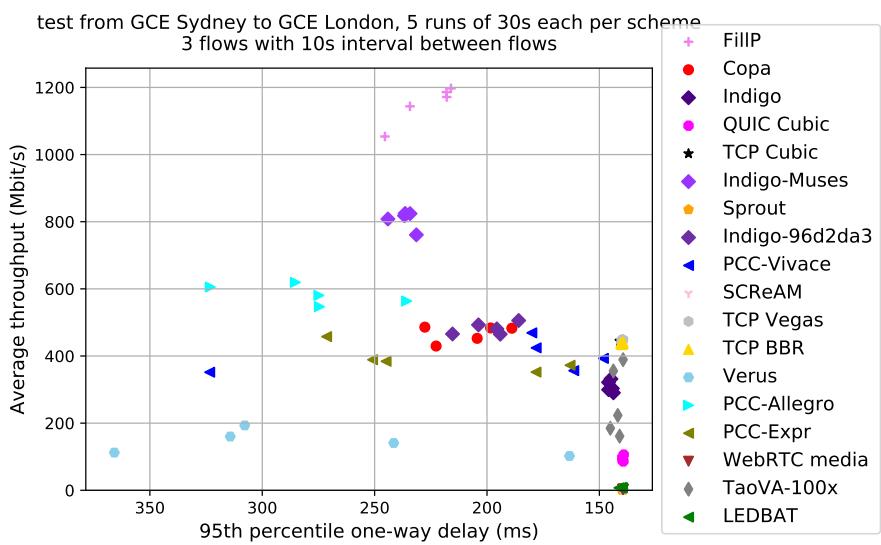
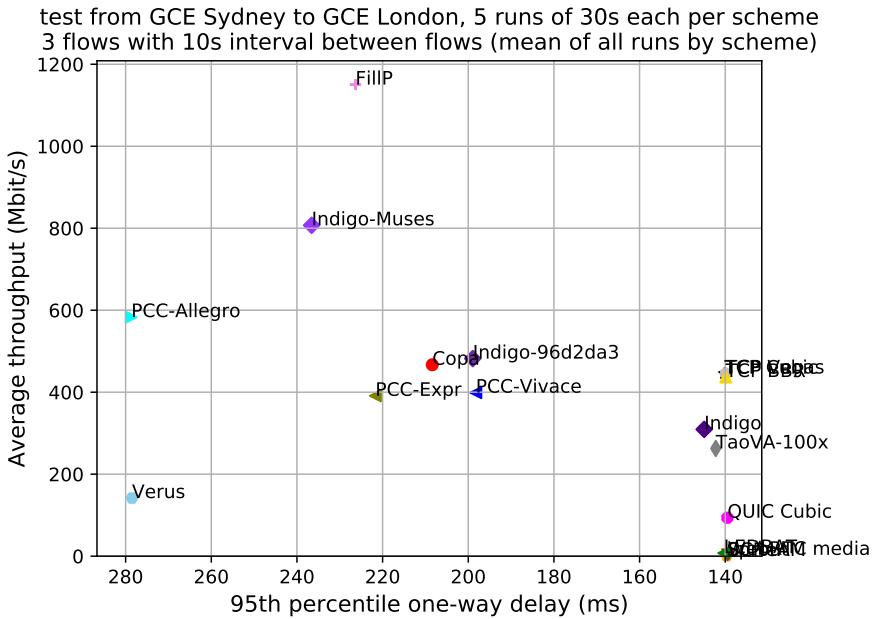


Pantheon Report

Generated at 2018-10-10 10:21:56 (UTC).
Data path: GCE Sydney on `ens4` (*local*) → GCE London on `ens4` (*remote*).
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 4.15.0-1021-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  
  
Git summary:  
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be  
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6  
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95  
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf  
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a  
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd  
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1  
M receiver/src/buffer.h  
M receiver/src/core.cpp  
M sender/src/buffer.h  
M sender/src/core.cpp  
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab  
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42  
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2  
M src/ScreamClient  
M src/ScreamServer  
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26  
M src/examples/cellsim.cc  
M src/examples/sproutbt2.cc  
M src/network/sproutconn.cc  
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494  
M src/verus.hpp  
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851



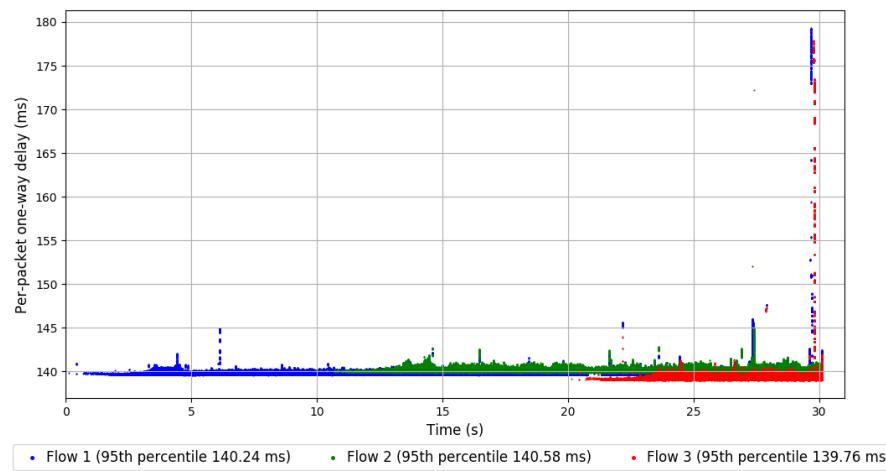
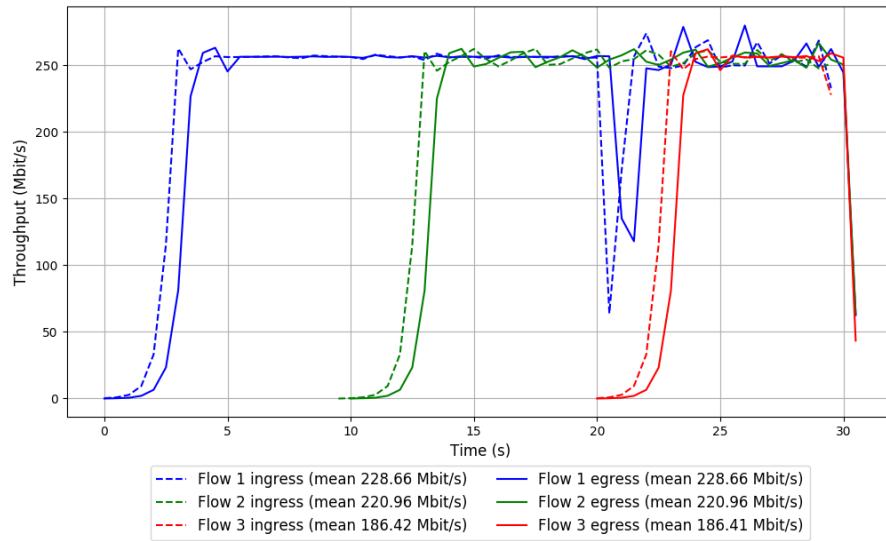
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	228.76	219.45	186.56	139.89	139.09	139.43	0.00	0.00	0.01
Copa	5	246.08	238.63	186.24	210.15	208.00	194.06	0.05	0.07	0.17
TCP Cubic	5	233.87	222.37	190.26	139.97	139.89	140.25	0.00	0.00	0.02
FillP	5	612.60	580.00	457.54	230.31	221.85	208.75	6.37	3.19	0.89
Indigo	5	160.45	156.30	142.06	143.40	145.56	148.26	0.00	0.00	0.03
Indigo-96d2da3	5	264.59	242.51	179.17	200.65	200.91	184.38	0.14	0.21	0.04
LEDBAT	5	4.80	3.21	1.54	140.36	139.72	139.82	0.00	0.00	0.00
Indigo-Muses	5	475.43	390.81	226.13	232.20	241.37	254.82	0.69	0.48	2.44
PCC-Allegro	5	308.48	286.53	255.95	274.58	254.52	289.51	4.32	4.58	6.03
PCC-Expr	5	208.69	207.76	134.17	217.97	206.42	224.42	1.49	3.53	1.02
QUIC Cubic	5	48.02	51.65	36.14	139.18	139.38	138.70	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	138.70	139.07	139.28	0.00	0.00	0.07
Sprout	5	0.58	0.54	0.56	139.14	138.70	139.13	0.00	0.00	0.00
TaoVA-100x	5	126.81	159.75	88.61	140.38	141.08	144.42	0.01	0.02	0.04
TCP Vegas	5	234.57	222.73	188.91	139.54	140.01	142.15	0.00	0.00	0.00
Verus	5	93.46	60.61	26.01	285.89	244.64	156.26	7.07	4.00	0.00
PCC-Vivace	5	223.53	204.78	118.46	188.51	196.33	206.63	1.16	2.03	0.89
WebRTC media	5	1.82	1.06	0.32	139.21	138.98	139.25	0.00	0.00	0.08

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-10 06:19:05
End at: 2018-10-10 06:19:35
Local clock offset: -0.03 ms
Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2018-10-10 08:58:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.93 Mbit/s
95th percentile per-packet one-way delay: 140.449 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.66 Mbit/s
95th percentile per-packet one-way delay: 140.237 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 220.96 Mbit/s
95th percentile per-packet one-way delay: 140.576 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 186.41 Mbit/s
95th percentile per-packet one-way delay: 139.761 ms
Loss rate: 0.00%
```

Run 1: Report of TCP BBR — Data Link

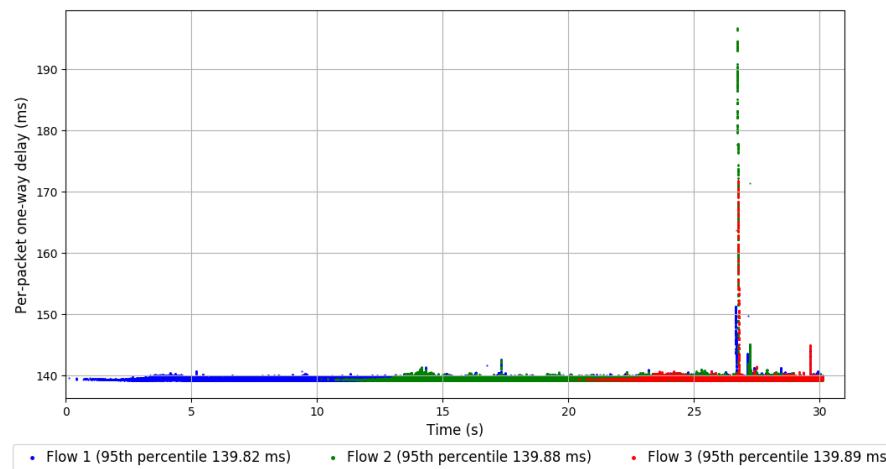
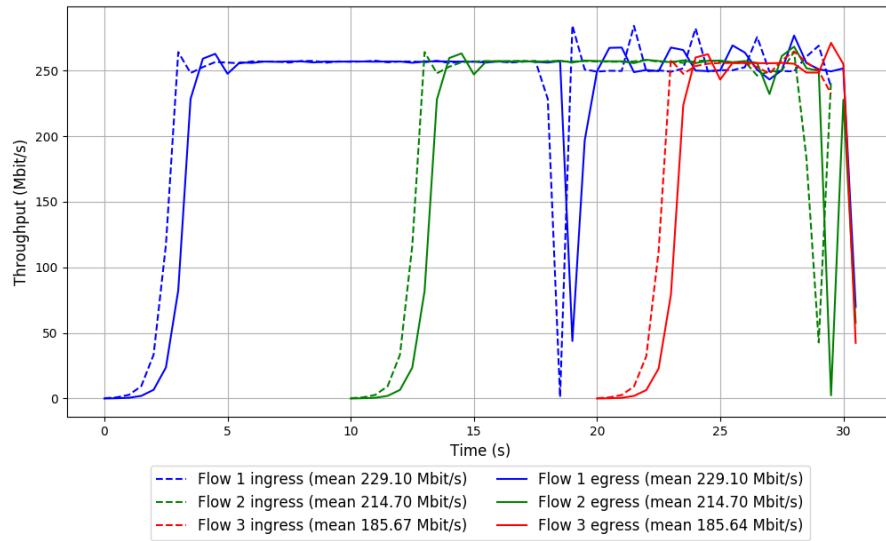


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-10 06:50:31
End at: 2018-10-10 06:51:01
Local clock offset: -0.059 ms
Remote clock offset: -0.204 ms

# Below is generated by plot.py at 2018-10-10 08:58:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 433.84 Mbit/s
95th percentile per-packet one-way delay: 139.847 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 229.10 Mbit/s
95th percentile per-packet one-way delay: 139.816 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 214.70 Mbit/s
95th percentile per-packet one-way delay: 139.879 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 185.64 Mbit/s
95th percentile per-packet one-way delay: 139.889 ms
Loss rate: 0.02%
```

Run 2: Report of TCP BBR — Data Link

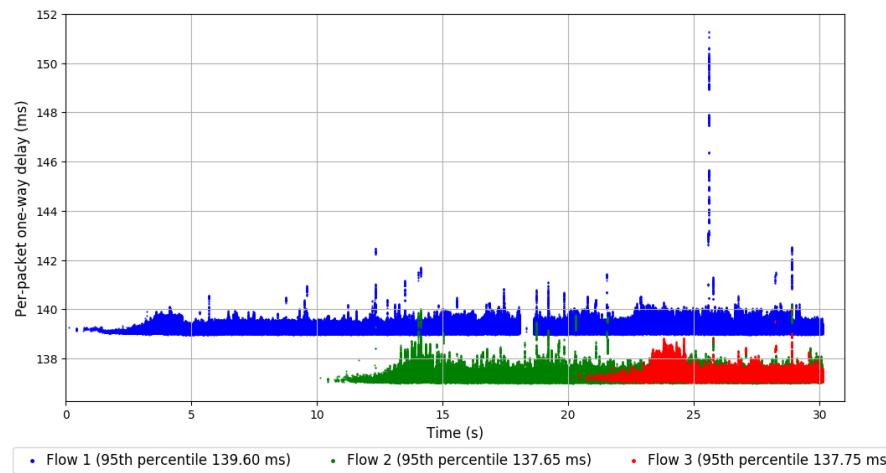
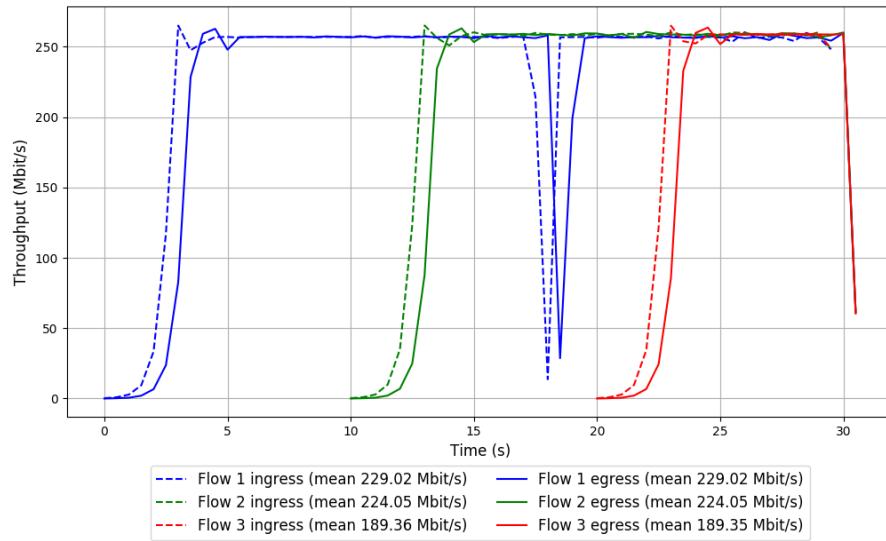


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-10 07:21:46
End at: 2018-10-10 07:22:16
Local clock offset: -0.09 ms
Remote clock offset: -0.523 ms

# Below is generated by plot.py at 2018-10-10 08:58:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 441.28 Mbit/s
95th percentile per-packet one-way delay: 139.508 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 229.02 Mbit/s
95th percentile per-packet one-way delay: 139.599 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 224.05 Mbit/s
95th percentile per-packet one-way delay: 137.649 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 189.35 Mbit/s
95th percentile per-packet one-way delay: 137.747 ms
Loss rate: 0.00%
```

Run 3: Report of TCP BBR — Data Link

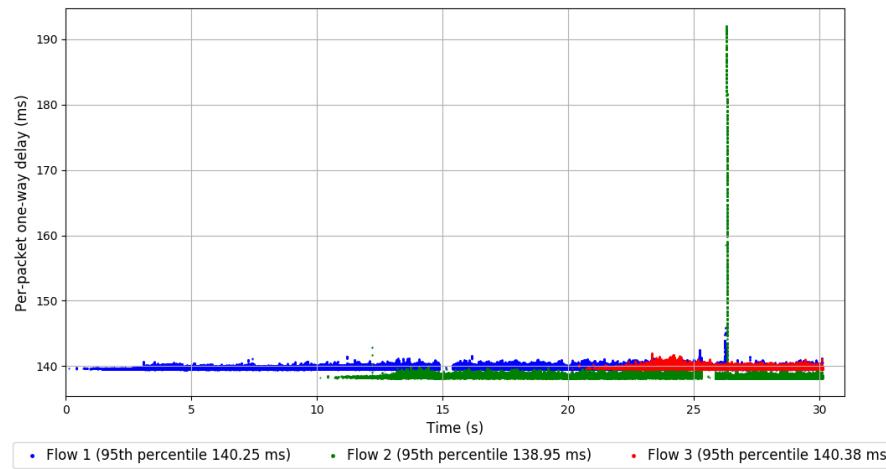
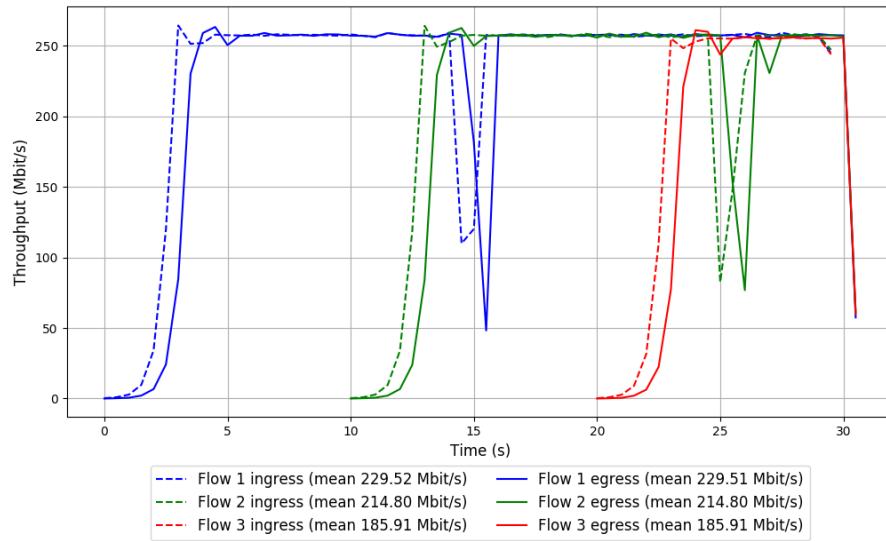


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-10 07:53:28
End at: 2018-10-10 07:53:58
Local clock offset: 0.197 ms
Remote clock offset: 0.157 ms

# Below is generated by plot.py at 2018-10-10 08:58:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 434.48 Mbit/s
95th percentile per-packet one-way delay: 140.208 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 229.51 Mbit/s
95th percentile per-packet one-way delay: 140.247 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 214.80 Mbit/s
95th percentile per-packet one-way delay: 138.948 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 185.91 Mbit/s
95th percentile per-packet one-way delay: 140.379 ms
Loss rate: 0.01%
```

Run 4: Report of TCP BBR — Data Link

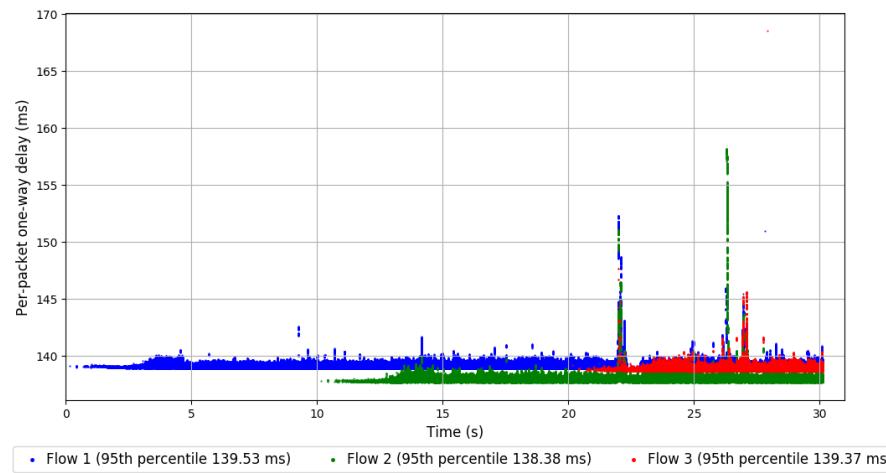
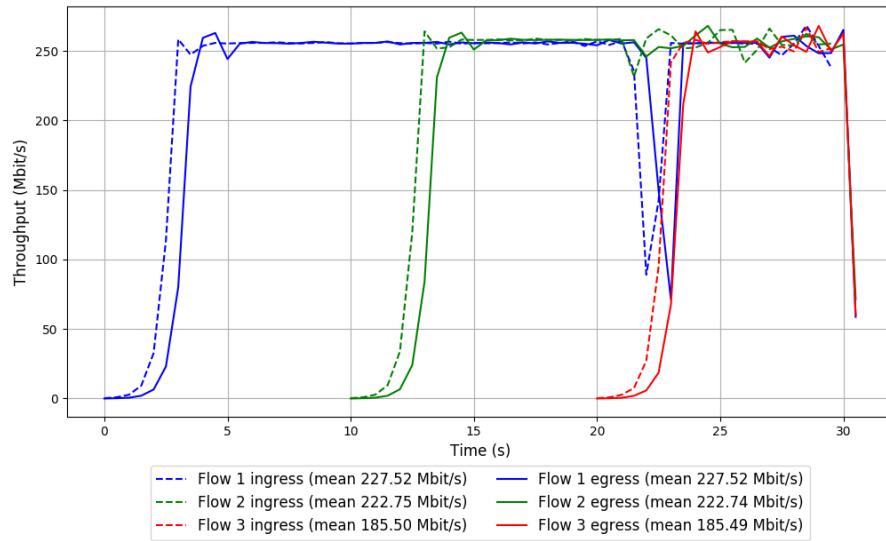


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-10 08:25:11
End at: 2018-10-10 08:25:41
Local clock offset: -0.055 ms
Remote clock offset: -0.534 ms

# Below is generated by plot.py at 2018-10-10 08:58:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.51 Mbit/s
95th percentile per-packet one-way delay: 139.452 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 227.52 Mbit/s
95th percentile per-packet one-way delay: 139.531 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 222.74 Mbit/s
95th percentile per-packet one-way delay: 138.381 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 185.49 Mbit/s
95th percentile per-packet one-way delay: 139.370 ms
Loss rate: 0.00%
```

Run 5: Report of TCP BBR — Data Link

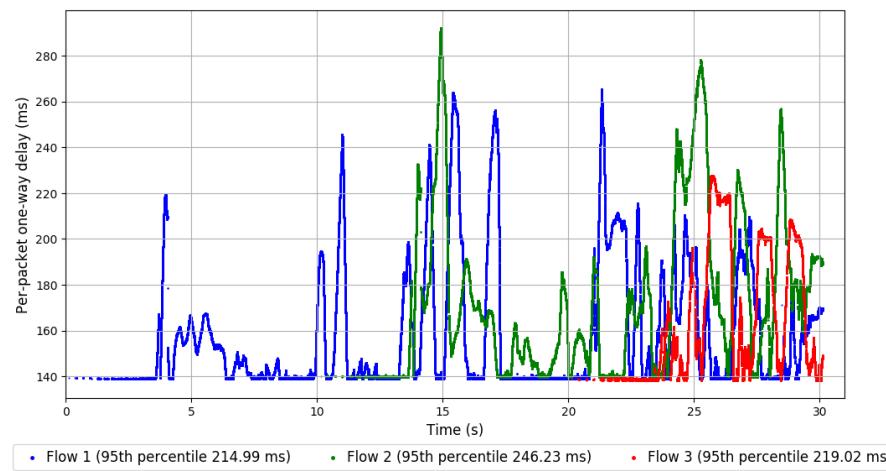
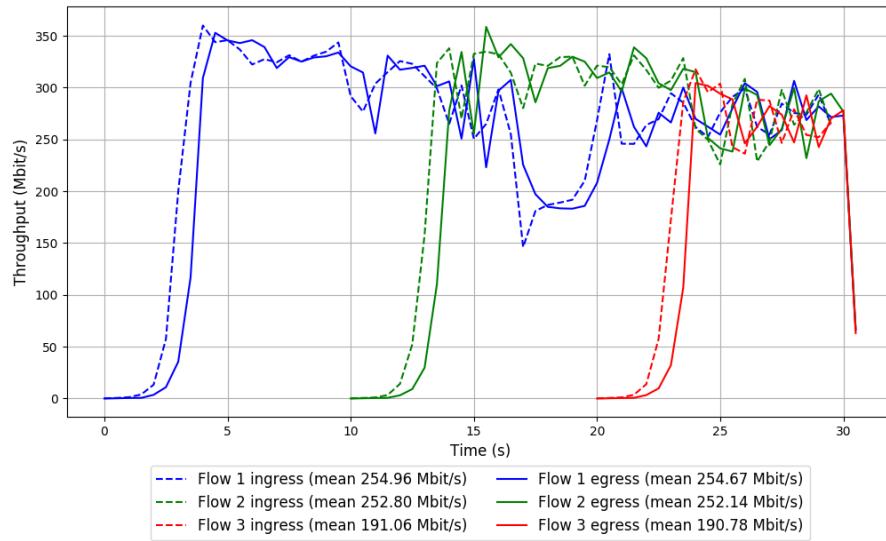


Run 1: Statistics of Copa

```
Start at: 2018-10-10 06:32:44
End at: 2018-10-10 06:33:14
Local clock offset: 0.015 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2018-10-10 09:06:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 485.93 Mbit/s
95th percentile per-packet one-way delay: 227.653 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 254.67 Mbit/s
95th percentile per-packet one-way delay: 214.994 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 252.14 Mbit/s
95th percentile per-packet one-way delay: 246.232 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 190.78 Mbit/s
95th percentile per-packet one-way delay: 219.018 ms
Loss rate: 0.15%
```

Run 1: Report of Copa — Data Link

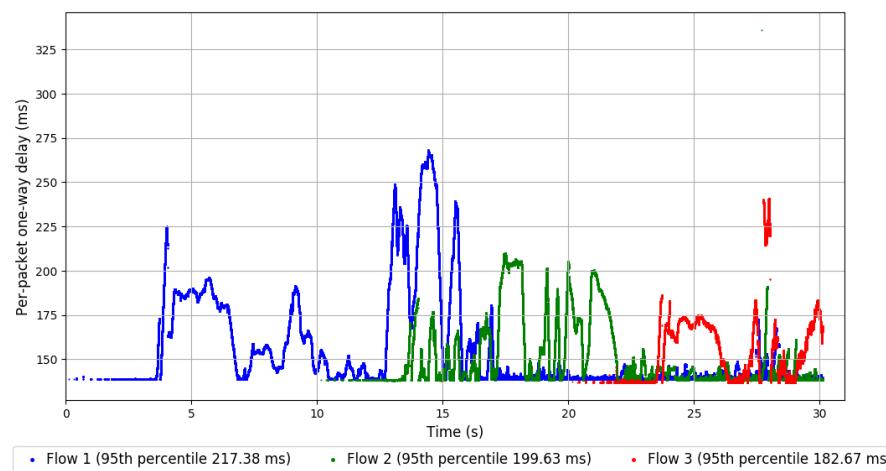
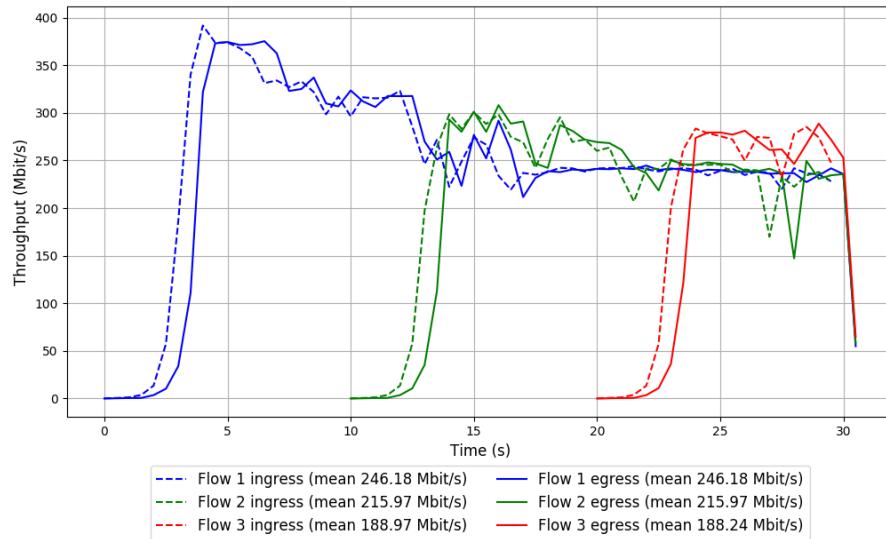


Run 2: Statistics of Copa

```
Start at: 2018-10-10 07:04:14
End at: 2018-10-10 07:04:44
Local clock offset: -0.039 ms
Remote clock offset: -0.54 ms

# Below is generated by plot.py at 2018-10-10 09:06:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.59 Mbit/s
95th percentile per-packet one-way delay: 204.370 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 246.18 Mbit/s
95th percentile per-packet one-way delay: 217.382 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 215.97 Mbit/s
95th percentile per-packet one-way delay: 199.634 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 188.24 Mbit/s
95th percentile per-packet one-way delay: 182.674 ms
Loss rate: 0.38%
```

Run 2: Report of Copa — Data Link

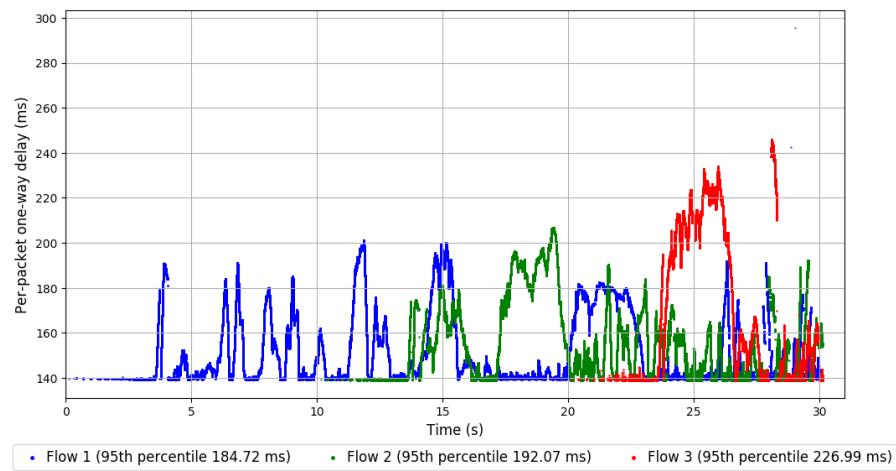
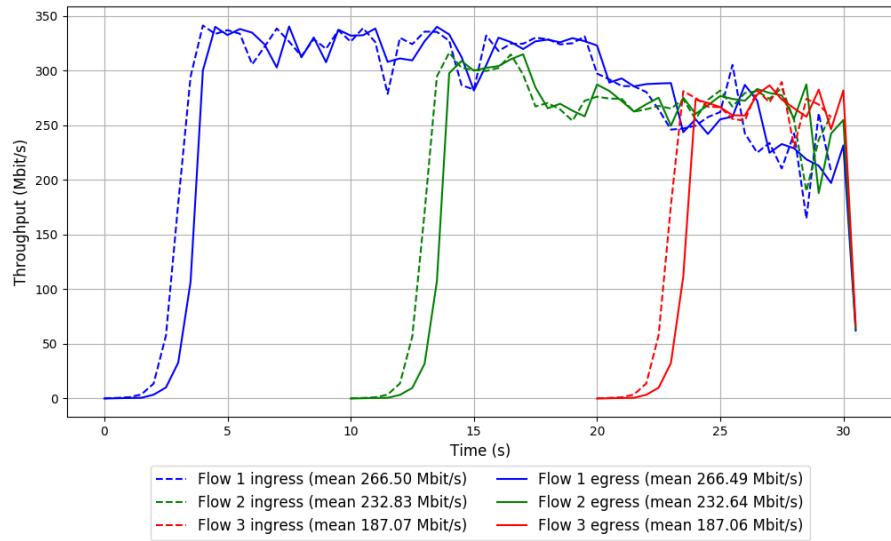


Run 3: Statistics of Copa

```
Start at: 2018-10-10 07:35:50
End at: 2018-10-10 07:36:20
Local clock offset: 0.006 ms
Remote clock offset: -0.534 ms

# Below is generated by plot.py at 2018-10-10 09:06:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 483.60 Mbit/s
95th percentile per-packet one-way delay: 198.402 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 266.49 Mbit/s
95th percentile per-packet one-way delay: 184.718 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 232.64 Mbit/s
95th percentile per-packet one-way delay: 192.071 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 187.06 Mbit/s
95th percentile per-packet one-way delay: 226.992 ms
Loss rate: 0.02%
```

Run 3: Report of Copa — Data Link

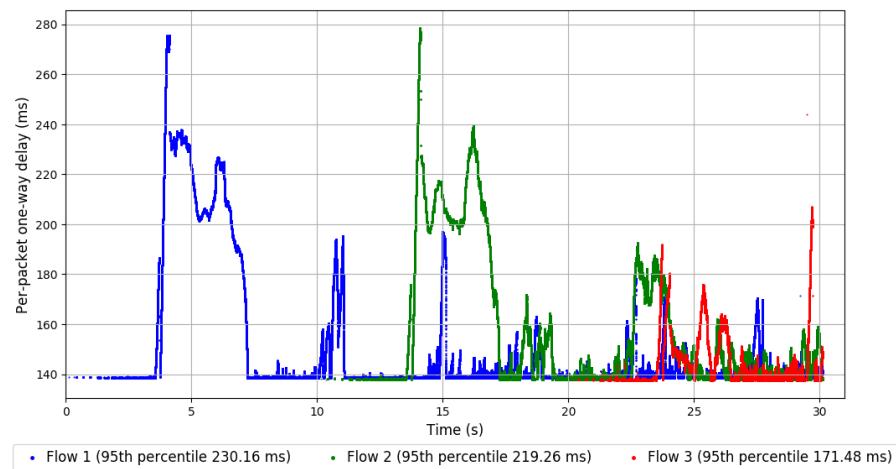
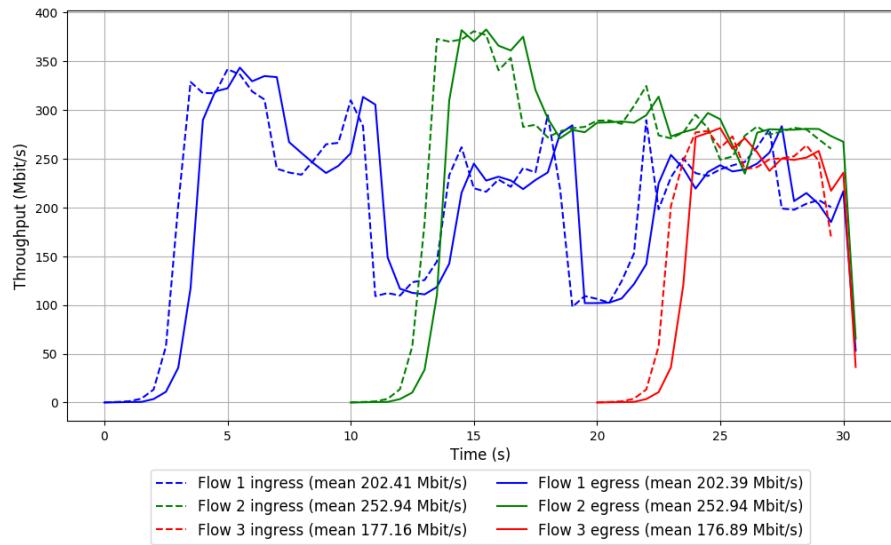


Run 4: Statistics of Copa

```
Start at: 2018-10-10 08:07:30
End at: 2018-10-10 08:08:00
Local clock offset: 0.028 ms
Remote clock offset: -0.521 ms

# Below is generated by plot.py at 2018-10-10 09:11:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 429.64 Mbit/s
95th percentile per-packet one-way delay: 222.642 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 202.39 Mbit/s
95th percentile per-packet one-way delay: 230.158 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 252.94 Mbit/s
95th percentile per-packet one-way delay: 219.256 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 176.89 Mbit/s
95th percentile per-packet one-way delay: 171.484 ms
Loss rate: 0.14%
```

Run 4: Report of Copa — Data Link

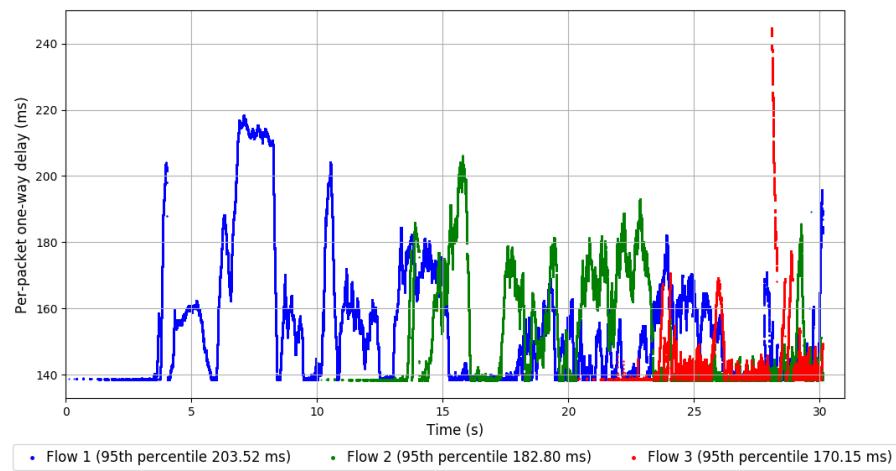
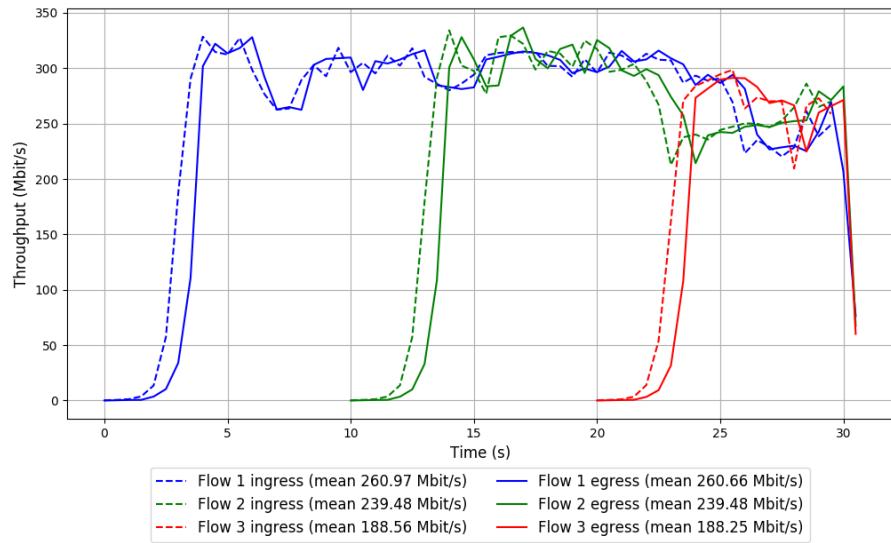


Run 5: Statistics of Copa

```
Start at: 2018-10-10 08:39:00
End at: 2018-10-10 08:39:30
Local clock offset: -0.1 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2018-10-10 09:12:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.73 Mbit/s
95th percentile per-packet one-way delay: 188.939 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 260.66 Mbit/s
95th percentile per-packet one-way delay: 203.520 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 239.48 Mbit/s
95th percentile per-packet one-way delay: 182.799 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 188.25 Mbit/s
95th percentile per-packet one-way delay: 170.148 ms
Loss rate: 0.15%
```

Run 5: Report of Copa — Data Link

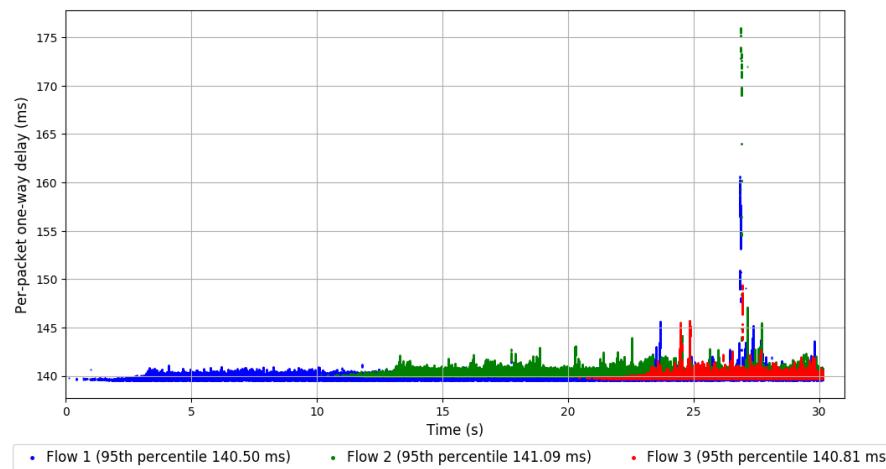
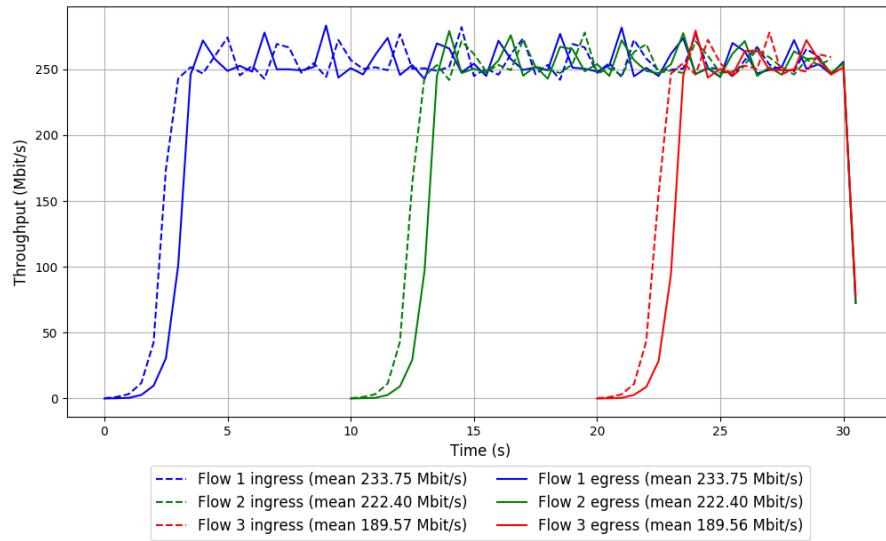


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-10 06:22:59
End at: 2018-10-10 06:23:29
Local clock offset: -0.197 ms
Remote clock offset: 0.226 ms

# Below is generated by plot.py at 2018-10-10 09:12:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 444.89 Mbit/s
95th percentile per-packet one-way delay: 140.876 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 233.75 Mbit/s
95th percentile per-packet one-way delay: 140.496 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 222.40 Mbit/s
95th percentile per-packet one-way delay: 141.093 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 189.56 Mbit/s
95th percentile per-packet one-way delay: 140.813 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Cubic — Data Link

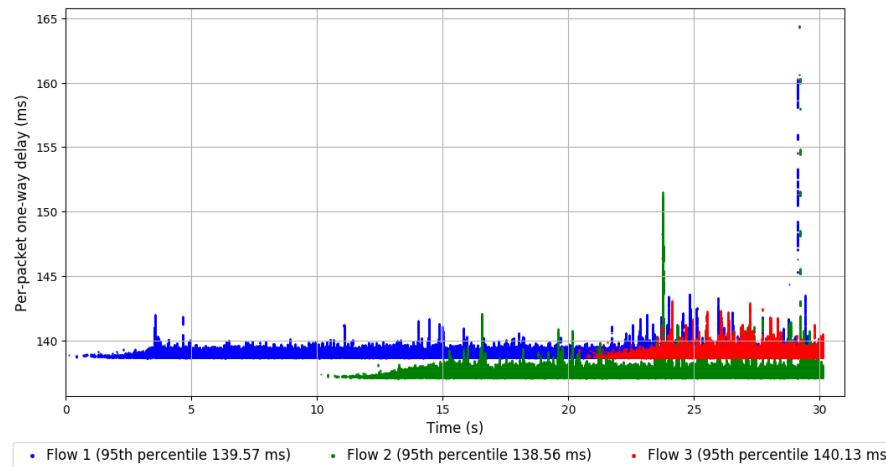
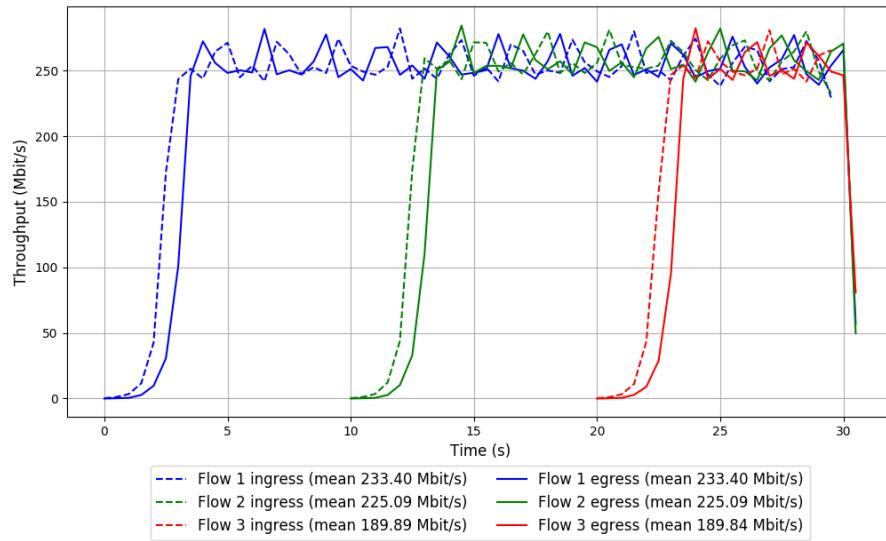


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-10 06:54:22
End at: 2018-10-10 06:54:52
Local clock offset: 0.243 ms
Remote clock offset: -0.172 ms

# Below is generated by plot.py at 2018-10-10 09:12:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 446.44 Mbit/s
95th percentile per-packet one-way delay: 139.567 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 233.40 Mbit/s
95th percentile per-packet one-way delay: 139.568 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 225.09 Mbit/s
95th percentile per-packet one-way delay: 138.564 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 189.84 Mbit/s
95th percentile per-packet one-way delay: 140.131 ms
Loss rate: 0.03%
```

Run 2: Report of TCP Cubic — Data Link

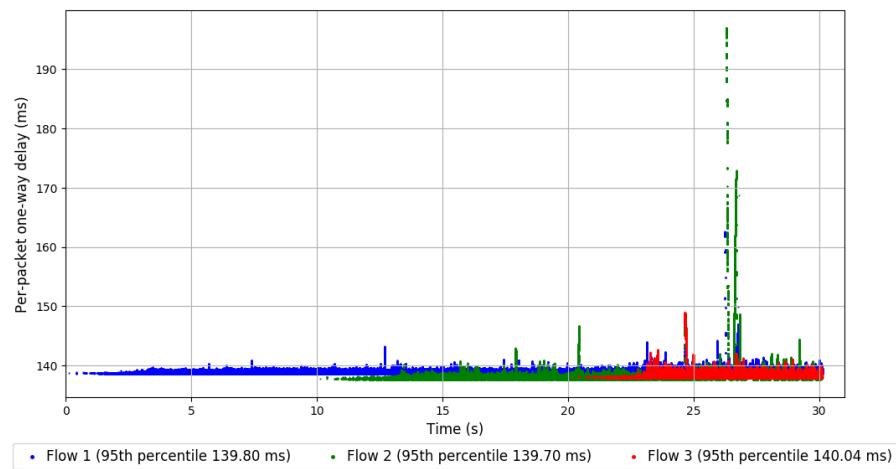
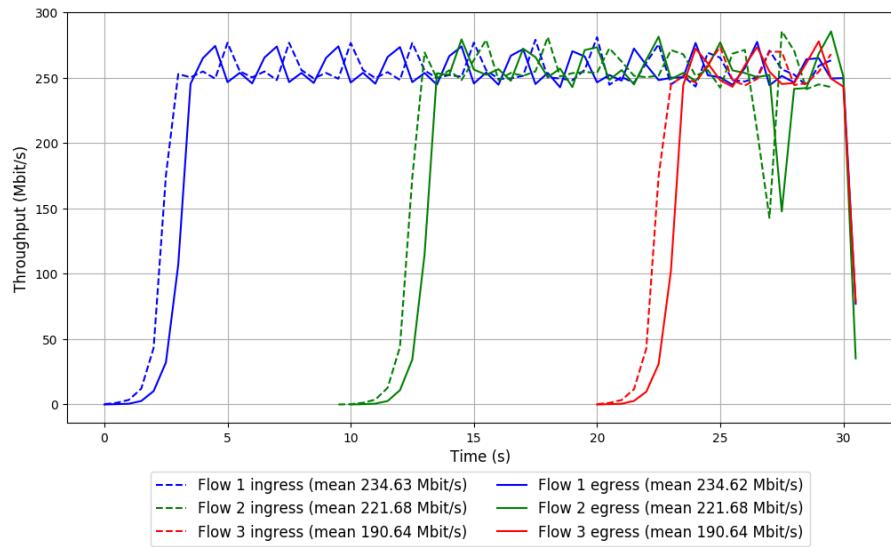


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-10 07:25:38
End at: 2018-10-10 07:26:08
Local clock offset: -0.01 ms
Remote clock offset: -0.505 ms

# Below is generated by plot.py at 2018-10-10 09:12:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.71 Mbit/s
95th percentile per-packet one-way delay: 139.808 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 234.62 Mbit/s
95th percentile per-packet one-way delay: 139.799 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 221.68 Mbit/s
95th percentile per-packet one-way delay: 139.700 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 190.64 Mbit/s
95th percentile per-packet one-way delay: 140.037 ms
Loss rate: 0.00%
```

Run 3: Report of TCP Cubic — Data Link

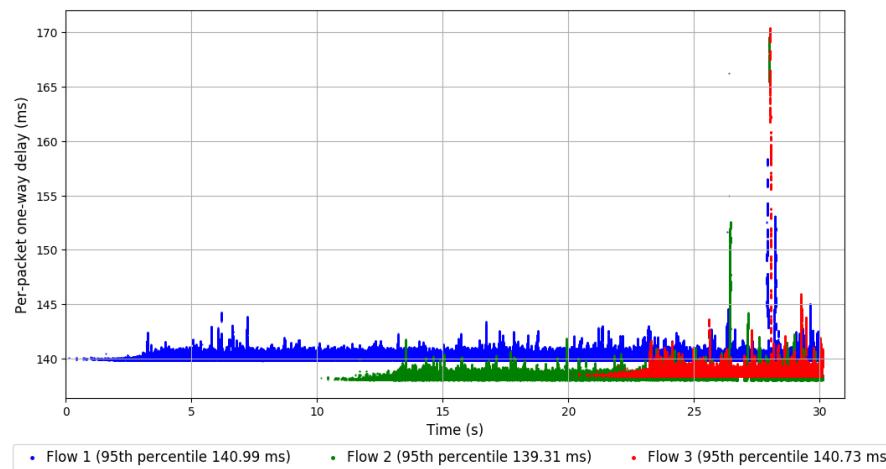
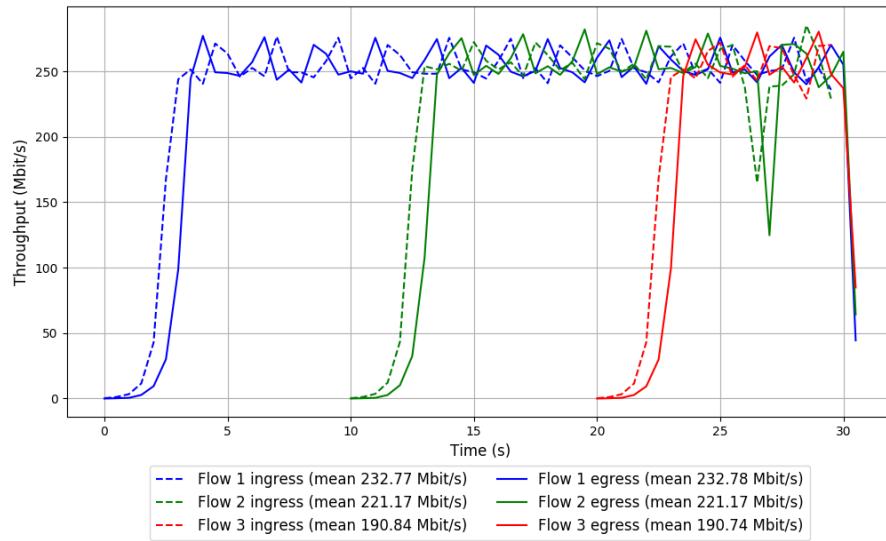


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-10 07:57:20
End at: 2018-10-10 07:57:50
Local clock offset: 0.005 ms
Remote clock offset: -0.185 ms

# Below is generated by plot.py at 2018-10-10 09:12:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 443.51 Mbit/s
95th percentile per-packet one-way delay: 140.819 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 232.78 Mbit/s
95th percentile per-packet one-way delay: 140.986 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 221.17 Mbit/s
95th percentile per-packet one-way delay: 139.307 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 190.74 Mbit/s
95th percentile per-packet one-way delay: 140.732 ms
Loss rate: 0.05%
```

Run 4: Report of TCP Cubic — Data Link

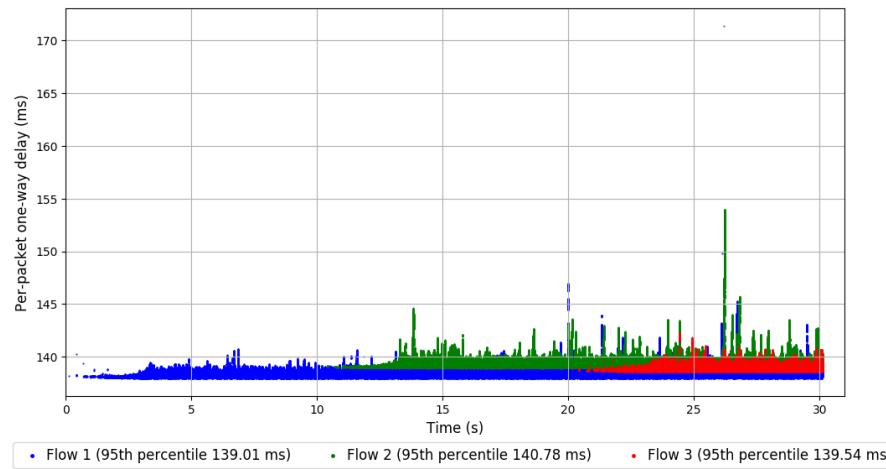
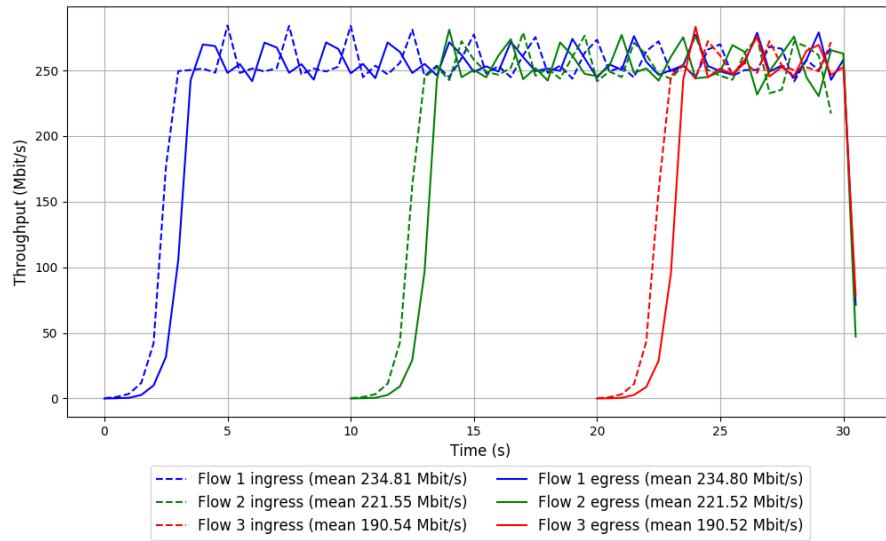


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-10 08:29:00
End at: 2018-10-10 08:29:30
Local clock offset: -0.062 ms
Remote clock offset: -0.503 ms

# Below is generated by plot.py at 2018-10-10 09:12:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.66 Mbit/s
95th percentile per-packet one-way delay: 139.969 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 234.80 Mbit/s
95th percentile per-packet one-way delay: 139.006 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 221.52 Mbit/s
95th percentile per-packet one-way delay: 140.784 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 190.52 Mbit/s
95th percentile per-packet one-way delay: 139.541 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Cubic — Data Link

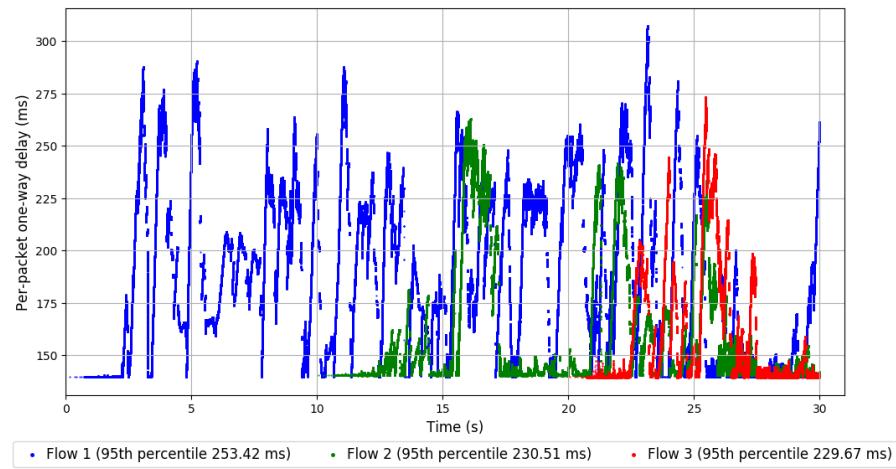
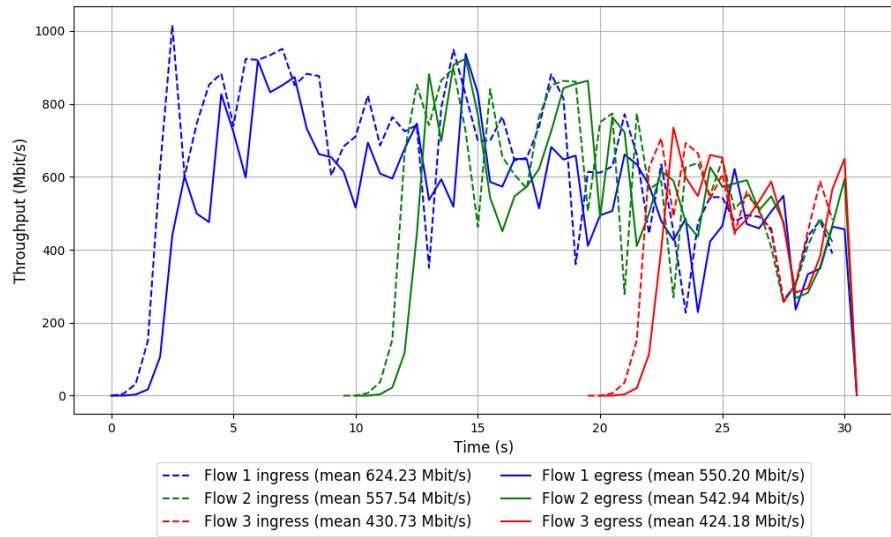


```
Run 1: Statistics of FillP

Start at: 2018-10-10 06:15:05
End at: 2018-10-10 06:15:35
Local clock offset: -0.004 ms
Remote clock offset: 0.22 ms

# Below is generated by plot.py at 2018-10-10 09:26:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1053.89 Mbit/s
95th percentile per-packet one-way delay: 245.409 ms
Loss rate: 7.54%
-- Flow 1:
Average throughput: 550.20 Mbit/s
95th percentile per-packet one-way delay: 253.422 ms
Loss rate: 11.86%
-- Flow 2:
Average throughput: 542.94 Mbit/s
95th percentile per-packet one-way delay: 230.512 ms
Loss rate: 2.62%
-- Flow 3:
Average throughput: 424.18 Mbit/s
95th percentile per-packet one-way delay: 229.670 ms
Loss rate: 1.51%
```

Run 1: Report of FillP — Data Link

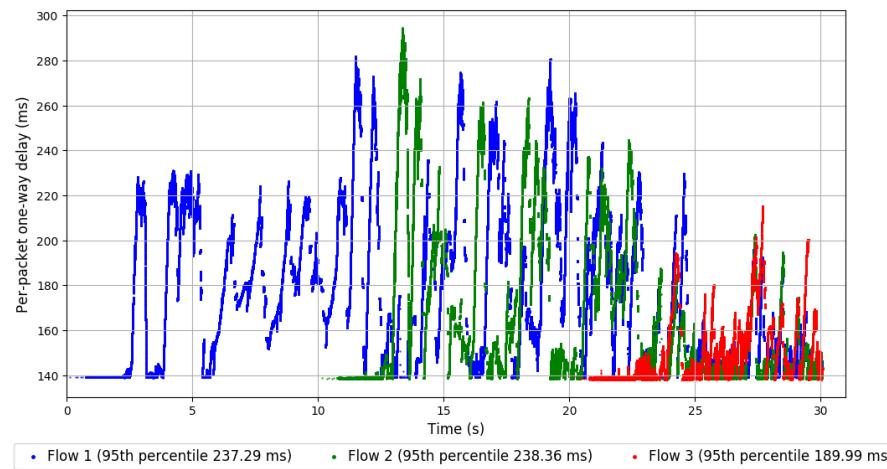
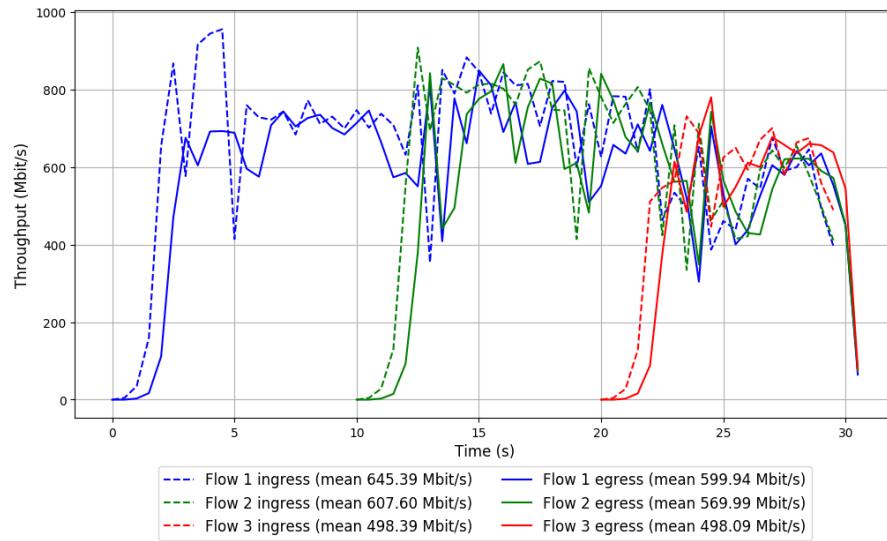


Run 2: Statistics of FillP

```
Start at: 2018-10-10 06:46:19
End at: 2018-10-10 06:46:49
Local clock offset: -0.102 ms
Remote clock offset: -0.19 ms

# Below is generated by plot.py at 2018-10-10 09:27:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1143.62 Mbit/s
95th percentile per-packet one-way delay: 234.277 ms
Loss rate: 5.80%
-- Flow 1:
Average throughput: 599.94 Mbit/s
95th percentile per-packet one-way delay: 237.292 ms
Loss rate: 7.02%
-- Flow 2:
Average throughput: 569.99 Mbit/s
95th percentile per-packet one-way delay: 238.356 ms
Loss rate: 6.19%
-- Flow 3:
Average throughput: 498.09 Mbit/s
95th percentile per-packet one-way delay: 189.991 ms
Loss rate: 0.03%
```

Run 2: Report of FillP — Data Link

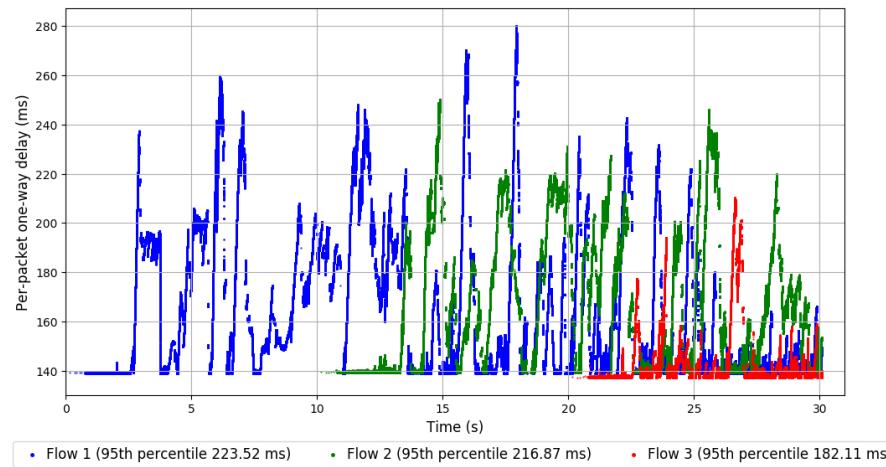
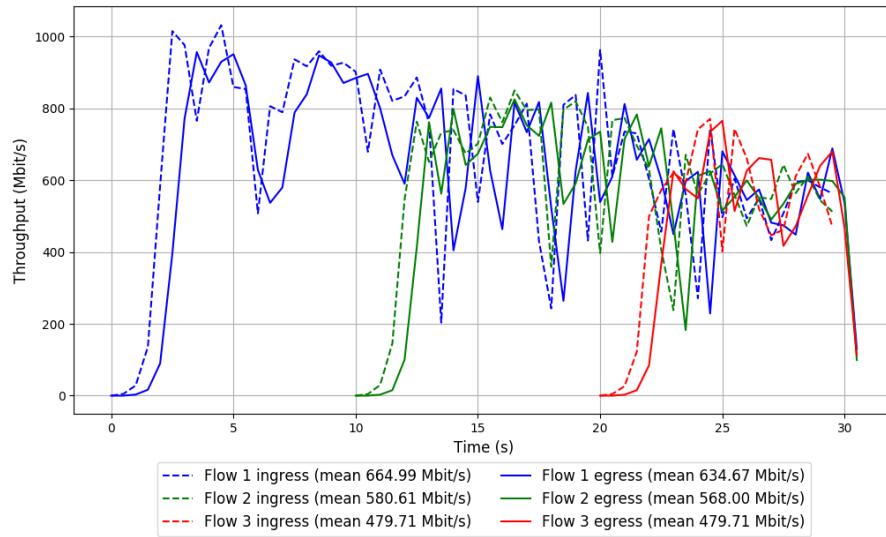


Run 3: Statistics of FillP

```
Start at: 2018-10-10 07:17:37
End at: 2018-10-10 07:18:07
Local clock offset: 0.04 ms
Remote clock offset: -0.172 ms

# Below is generated by plot.py at 2018-10-10 09:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1171.55 Mbit/s
95th percentile per-packet one-way delay: 217.929 ms
Loss rate: 3.20%
-- Flow 1:
Average throughput: 634.67 Mbit/s
95th percentile per-packet one-way delay: 223.522 ms
Loss rate: 4.56%
-- Flow 2:
Average throughput: 568.00 Mbit/s
95th percentile per-packet one-way delay: 216.874 ms
Loss rate: 2.17%
-- Flow 3:
Average throughput: 479.71 Mbit/s
95th percentile per-packet one-way delay: 182.114 ms
Loss rate: 0.00%
```

Run 3: Report of FillP — Data Link

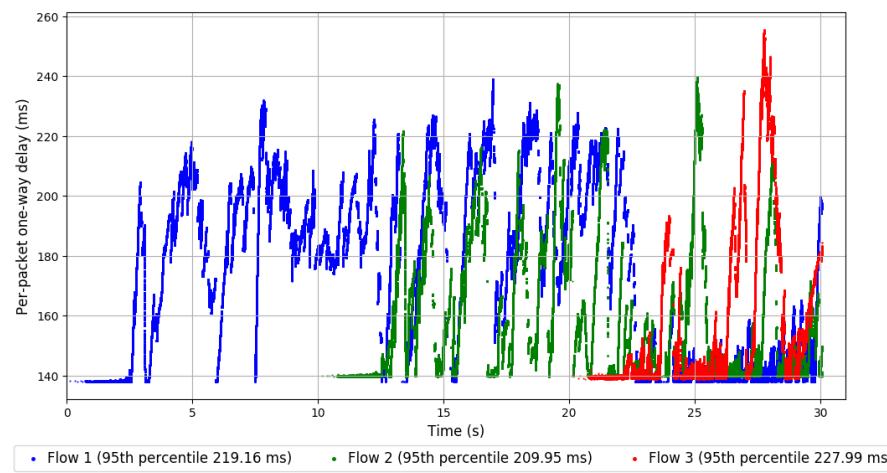
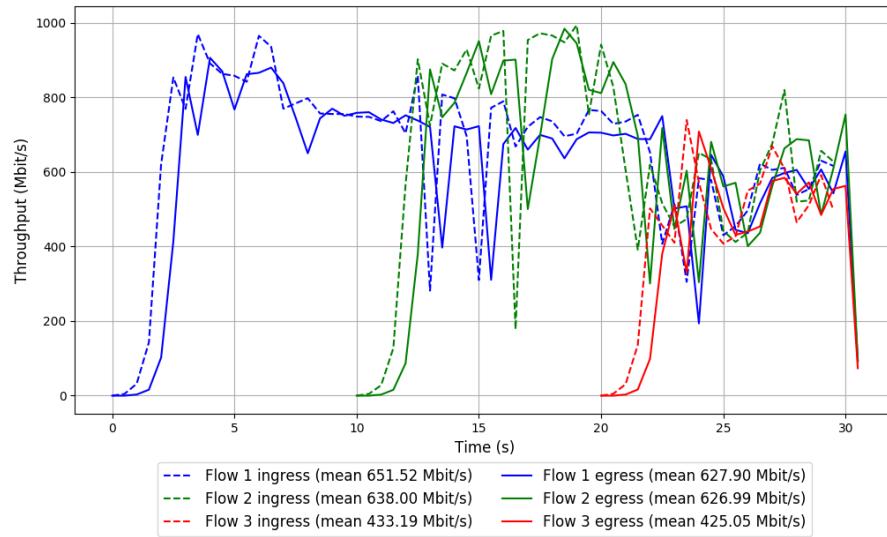


Run 4: Statistics of FillP

```
Start at: 2018-10-10 07:49:24
End at: 2018-10-10 07:49:54
Local clock offset: 0.009 ms
Remote clock offset: -0.195 ms

# Below is generated by plot.py at 2018-10-10 09:30:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1185.95 Mbit/s
95th percentile per-packet one-way delay: 218.052 ms
Loss rate: 2.76%
-- Flow 1:
Average throughput: 627.90 Mbit/s
95th percentile per-packet one-way delay: 219.163 ms
Loss rate: 3.62%
-- Flow 2:
Average throughput: 626.99 Mbit/s
95th percentile per-packet one-way delay: 209.951 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 425.05 Mbit/s
95th percentile per-packet one-way delay: 227.992 ms
Loss rate: 1.88%
```

Run 4: Report of FillP — Data Link

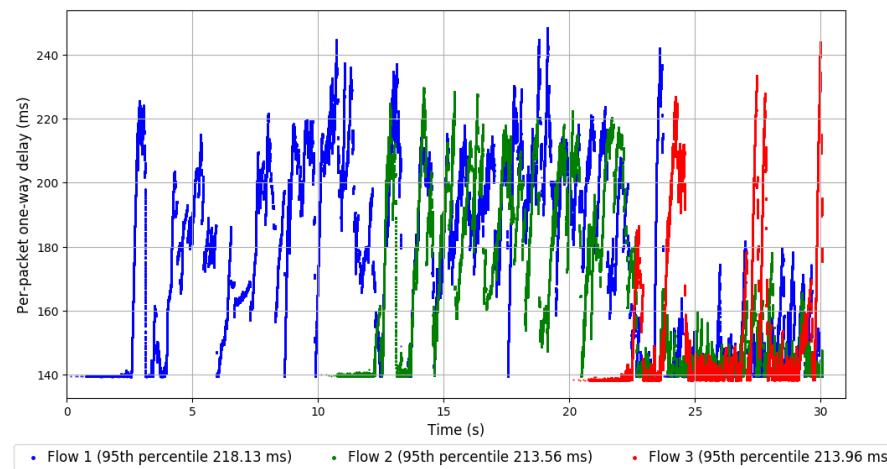
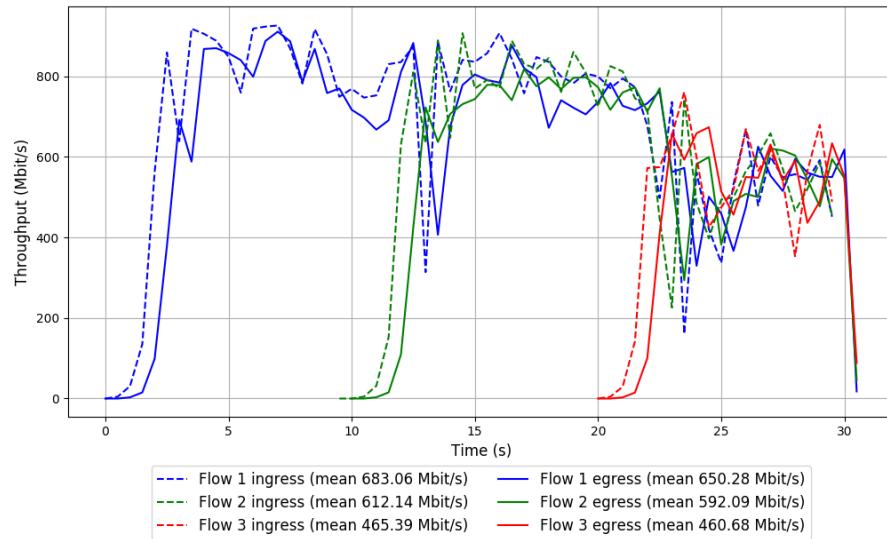


```
Run 5: Statistics of FillP

Start at: 2018-10-10 08:21:03
End at: 2018-10-10 08:21:33
Local clock offset: -0.027 ms
Remote clock offset: 0.173 ms

# Below is generated by plot.py at 2018-10-10 09:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1197.09 Mbit/s
95th percentile per-packet one-way delay: 216.051 ms
Loss rate: 3.82%
-- Flow 1:
Average throughput: 650.28 Mbit/s
95th percentile per-packet one-way delay: 218.129 ms
Loss rate: 4.80%
-- Flow 2:
Average throughput: 592.09 Mbit/s
95th percentile per-packet one-way delay: 213.564 ms
Loss rate: 3.24%
-- Flow 3:
Average throughput: 460.68 Mbit/s
95th percentile per-packet one-way delay: 213.962 ms
Loss rate: 1.01%
```

Run 5: Report of FillP — Data Link

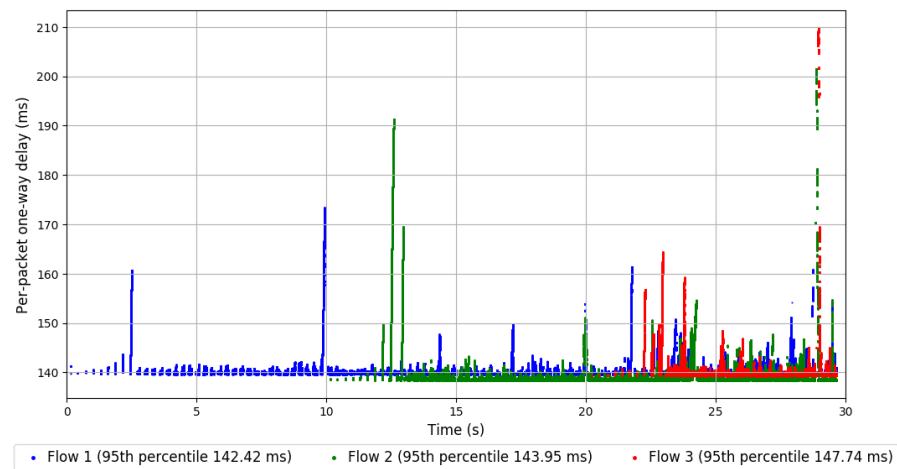
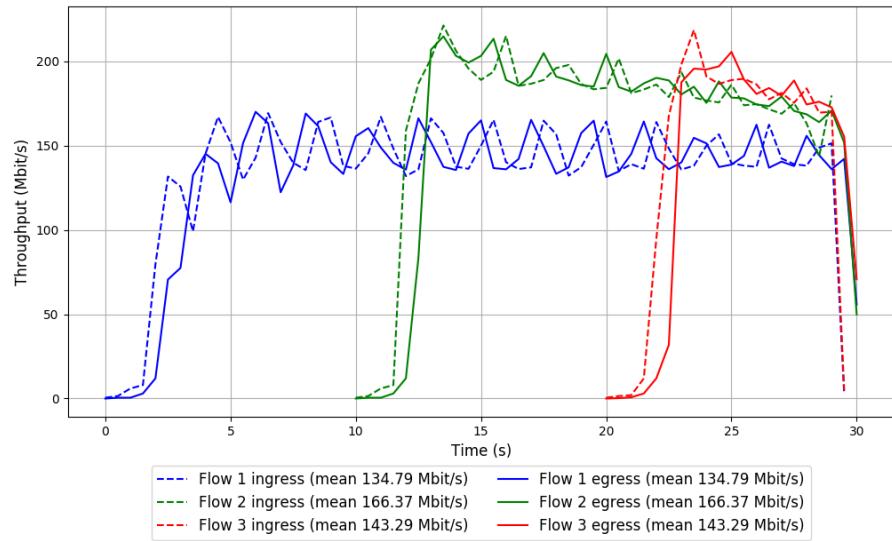


Run 1: Statistics of Indigo

```
Start at: 2018-10-10 06:10:07
End at: 2018-10-10 06:10:37
Local clock offset: -0.13 ms
Remote clock offset: -0.14 ms

# Below is generated by plot.py at 2018-10-10 09:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.45 Mbit/s
95th percentile per-packet one-way delay: 143.743 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 134.79 Mbit/s
95th percentile per-packet one-way delay: 142.423 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 166.37 Mbit/s
95th percentile per-packet one-way delay: 143.947 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 143.29 Mbit/s
95th percentile per-packet one-way delay: 147.740 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

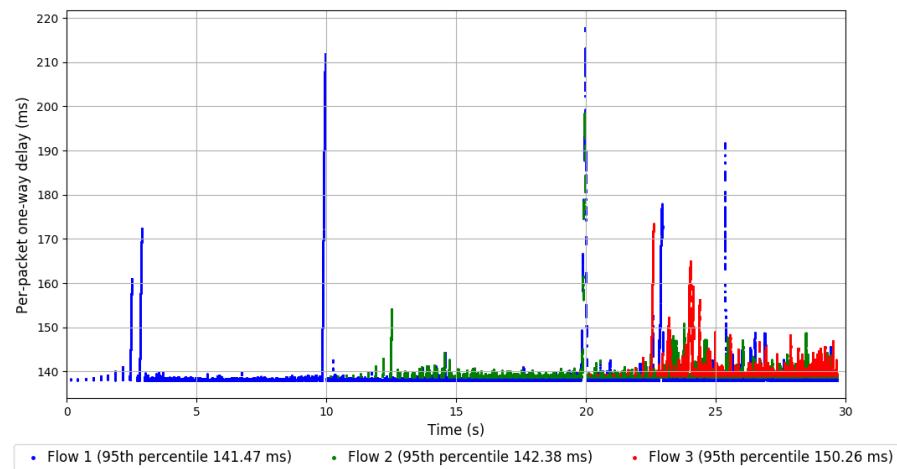
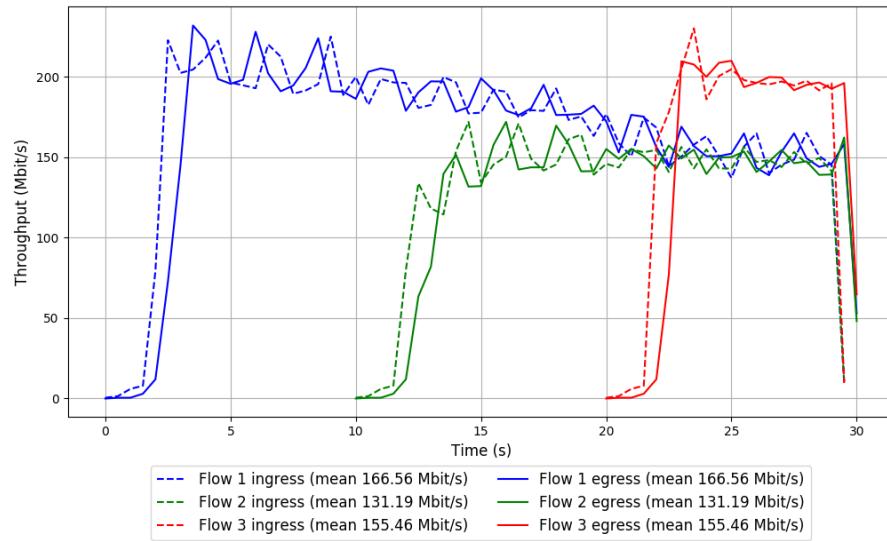


Run 2: Statistics of Indigo

```
Start at: 2018-10-10 06:41:20
End at: 2018-10-10 06:41:50
Local clock offset: 0.063 ms
Remote clock offset: -0.207 ms

# Below is generated by plot.py at 2018-10-10 09:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 303.29 Mbit/s
95th percentile per-packet one-way delay: 144.209 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 166.56 Mbit/s
95th percentile per-packet one-way delay: 141.466 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 131.19 Mbit/s
95th percentile per-packet one-way delay: 142.384 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 155.46 Mbit/s
95th percentile per-packet one-way delay: 150.265 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

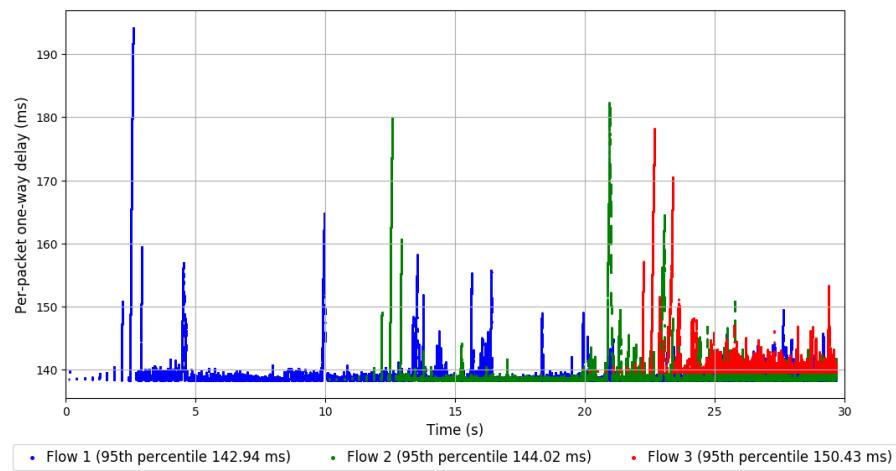
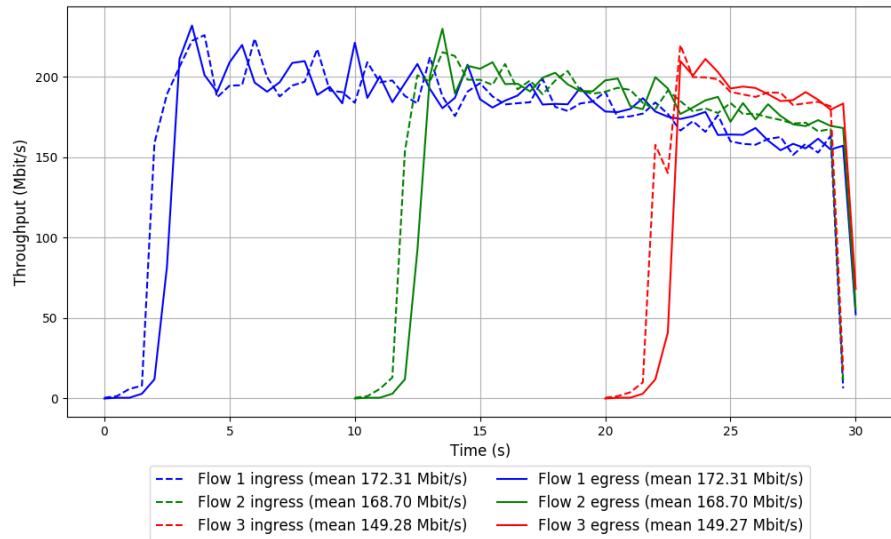


Run 3: Statistics of Indigo

```
Start at: 2018-10-10 07:12:36
End at: 2018-10-10 07:13:06
Local clock offset: 0.006 ms
Remote clock offset: 0.196 ms

# Below is generated by plot.py at 2018-10-10 09:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.74 Mbit/s
95th percentile per-packet one-way delay: 144.848 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 172.31 Mbit/s
95th percentile per-packet one-way delay: 142.936 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 168.70 Mbit/s
95th percentile per-packet one-way delay: 144.016 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 149.27 Mbit/s
95th percentile per-packet one-way delay: 150.434 ms
Loss rate: 0.02%
```

Run 3: Report of Indigo — Data Link

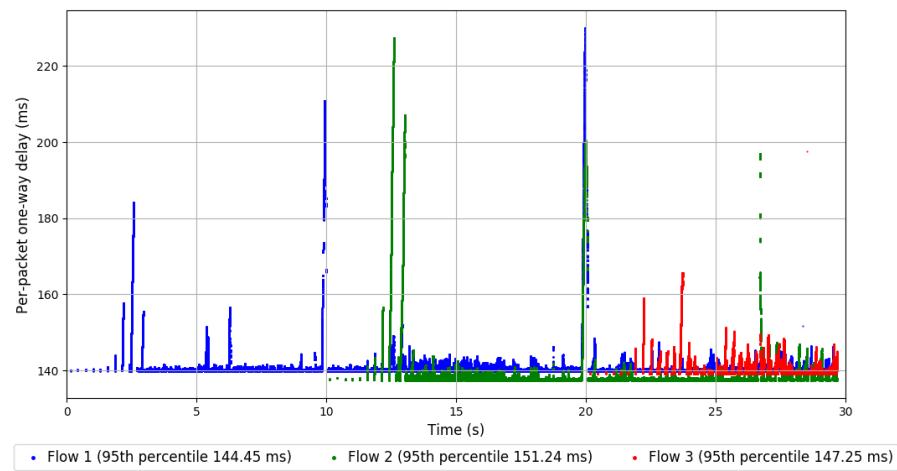
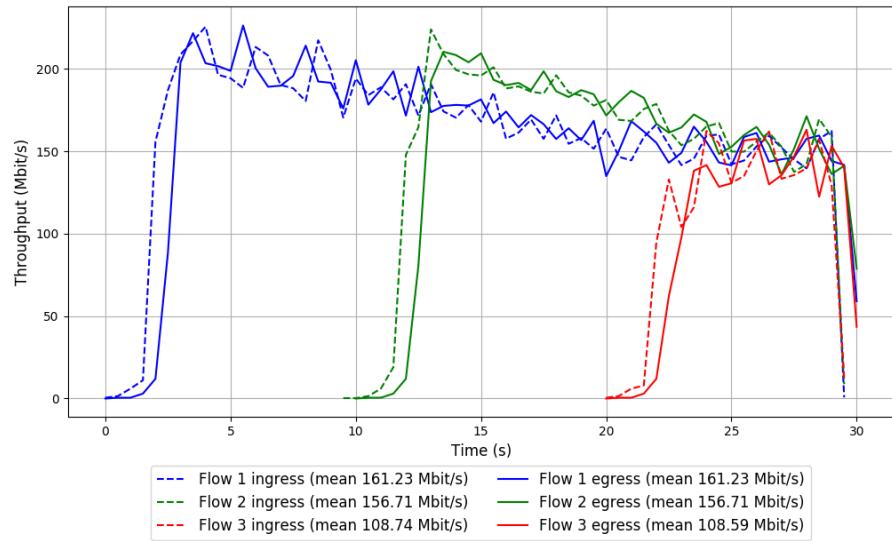


Run 4: Statistics of Indigo

```
Start at: 2018-10-10 07:44:27
End at: 2018-10-10 07:44:57
Local clock offset: -0.051 ms
Remote clock offset: -0.149 ms

# Below is generated by plot.py at 2018-10-10 09:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.75 Mbit/s
95th percentile per-packet one-way delay: 145.897 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 161.23 Mbit/s
95th percentile per-packet one-way delay: 144.451 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 156.71 Mbit/s
95th percentile per-packet one-way delay: 151.235 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 108.59 Mbit/s
95th percentile per-packet one-way delay: 147.252 ms
Loss rate: 0.14%
```

Run 4: Report of Indigo — Data Link

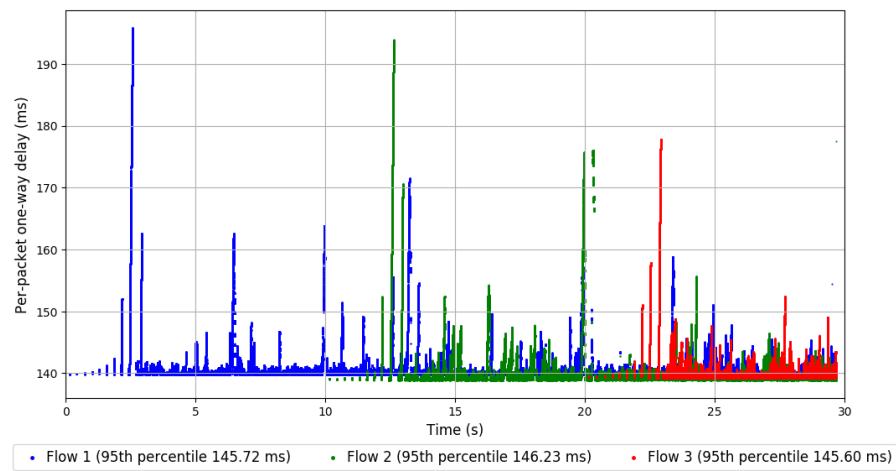
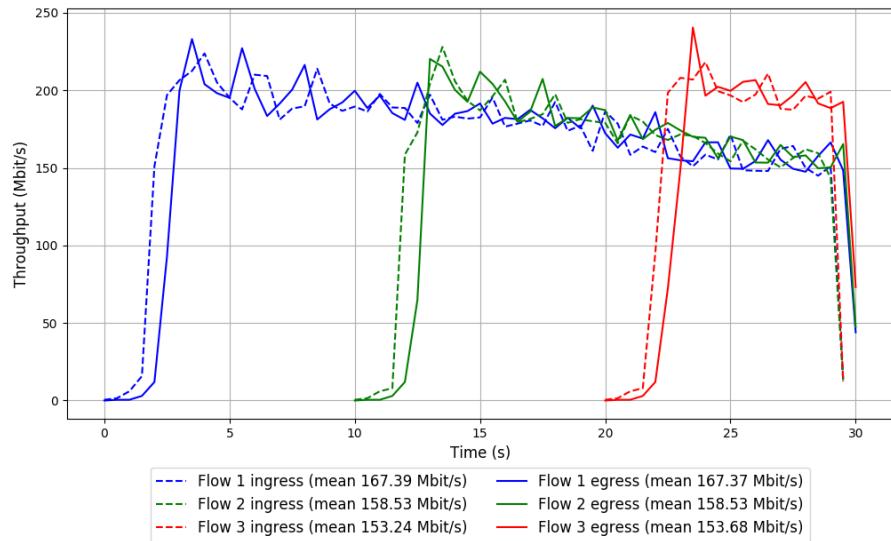


Run 5: Statistics of Indigo

```
Start at: 2018-10-10 08:16:04
End at: 2018-10-10 08:16:34
Local clock offset: 0.011 ms
Remote clock offset: -0.173 ms

# Below is generated by plot.py at 2018-10-10 09:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.55 Mbit/s
95th percentile per-packet one-way delay: 145.919 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 167.37 Mbit/s
95th percentile per-packet one-way delay: 145.718 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 158.53 Mbit/s
95th percentile per-packet one-way delay: 146.233 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 153.68 Mbit/s
95th percentile per-packet one-way delay: 145.596 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link

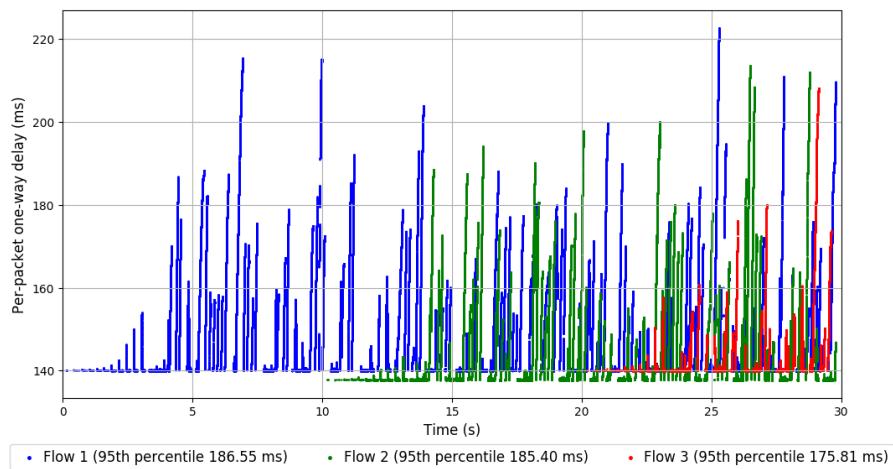
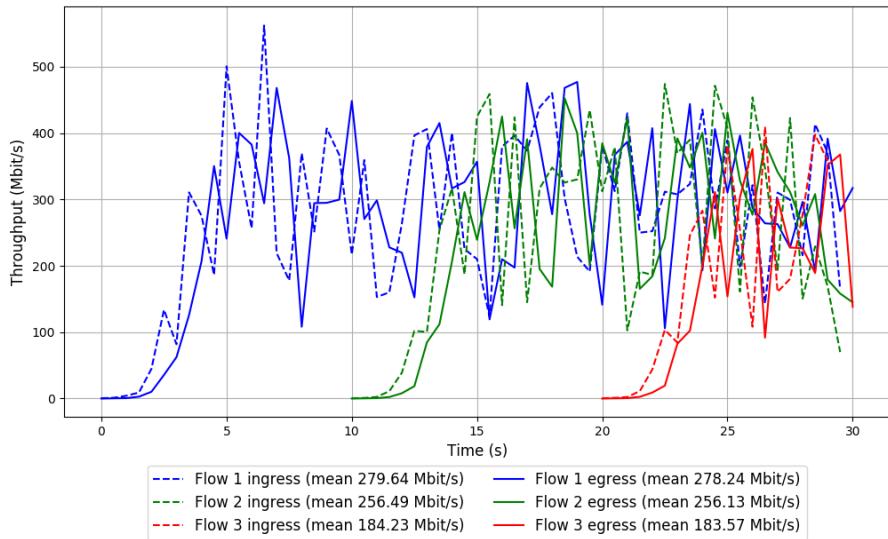


```
Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-10 06:13:16
End at: 2018-10-10 06:13:46
Local clock offset: -0.026 ms
Remote clock offset: 0.196 ms

# Below is generated by plot.py at 2018-10-10 09:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 505.74 Mbit/s
95th percentile per-packet one-way delay: 185.899 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 278.24 Mbit/s
95th percentile per-packet one-way delay: 186.552 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 256.13 Mbit/s
95th percentile per-packet one-way delay: 185.395 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 183.57 Mbit/s
95th percentile per-packet one-way delay: 175.815 ms
Loss rate: 0.00%
```

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

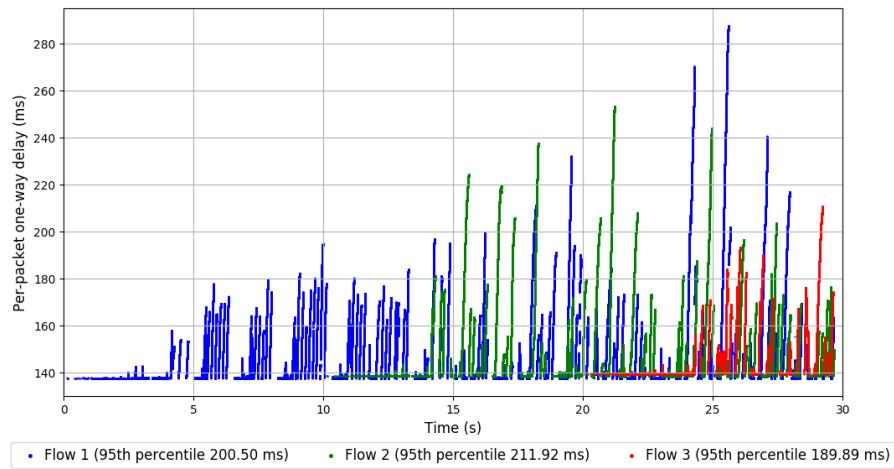
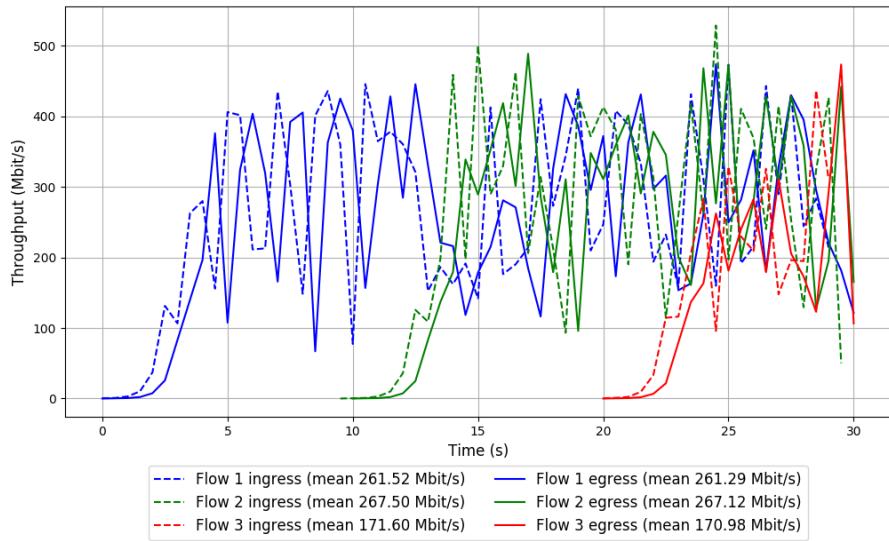


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-10 06:44:31
End at: 2018-10-10 06:45:01
Local clock offset: -0.139 ms
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2018-10-10 09:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 492.70 Mbit/s
95th percentile per-packet one-way delay: 203.798 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 261.29 Mbit/s
95th percentile per-packet one-way delay: 200.503 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 267.12 Mbit/s
95th percentile per-packet one-way delay: 211.919 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 170.98 Mbit/s
95th percentile per-packet one-way delay: 189.888 ms
Loss rate: 0.00%
```

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

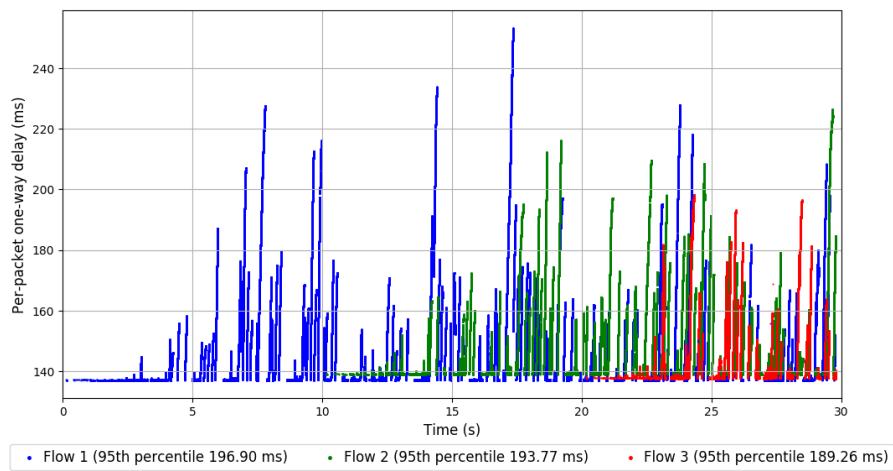
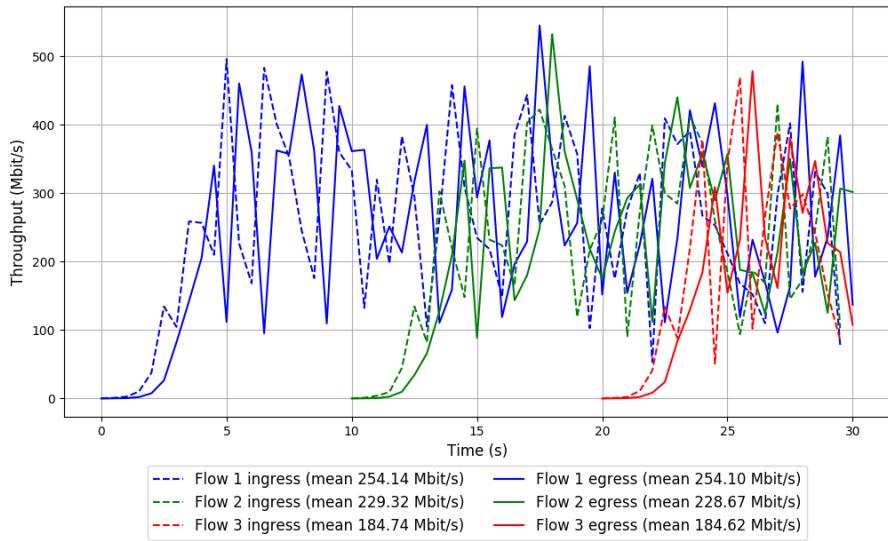


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-10 07:15:50
End at: 2018-10-10 07:16:20
Local clock offset: -0.023 ms
Remote clock offset: -0.538 ms

# Below is generated by plot.py at 2018-10-10 09:36:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 465.02 Mbit/s
95th percentile per-packet one-way delay: 194.093 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 254.10 Mbit/s
95th percentile per-packet one-way delay: 196.895 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 228.67 Mbit/s
95th percentile per-packet one-way delay: 193.766 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 184.62 Mbit/s
95th percentile per-packet one-way delay: 189.260 ms
Loss rate: 0.06%
```

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

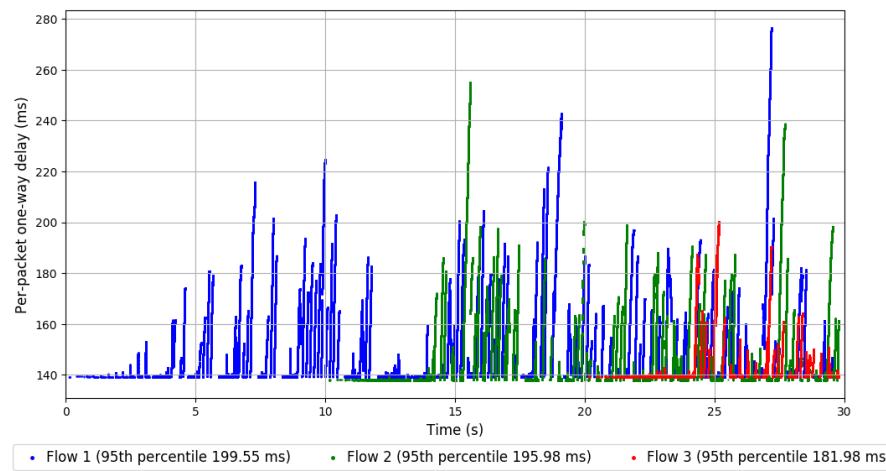
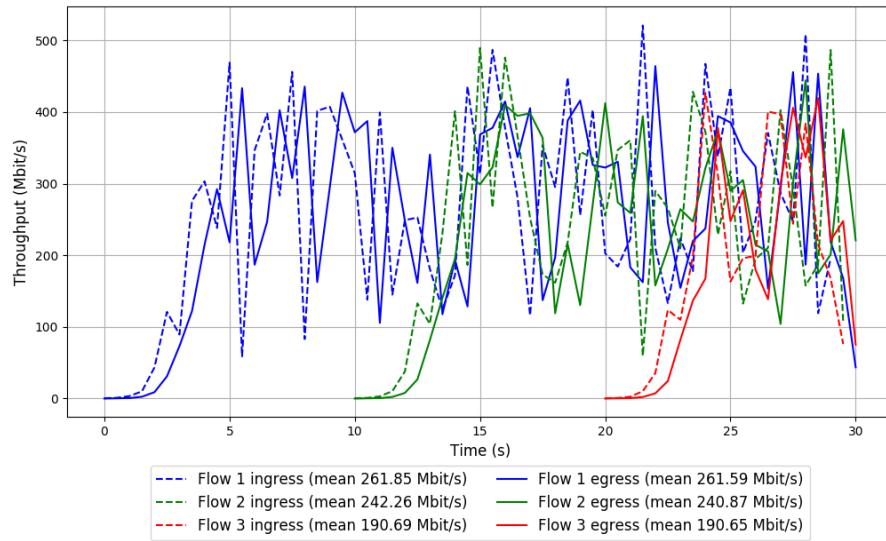


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-10 07:47:36
End at: 2018-10-10 07:48:06
Local clock offset: -0.027 ms
Remote clock offset: -0.55 ms

# Below is generated by plot.py at 2018-10-10 09:37:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.81 Mbit/s
95th percentile per-packet one-way delay: 195.618 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 261.59 Mbit/s
95th percentile per-packet one-way delay: 199.546 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 240.87 Mbit/s
95th percentile per-packet one-way delay: 195.982 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 190.65 Mbit/s
95th percentile per-packet one-way delay: 181.984 ms
Loss rate: 0.03%
```

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

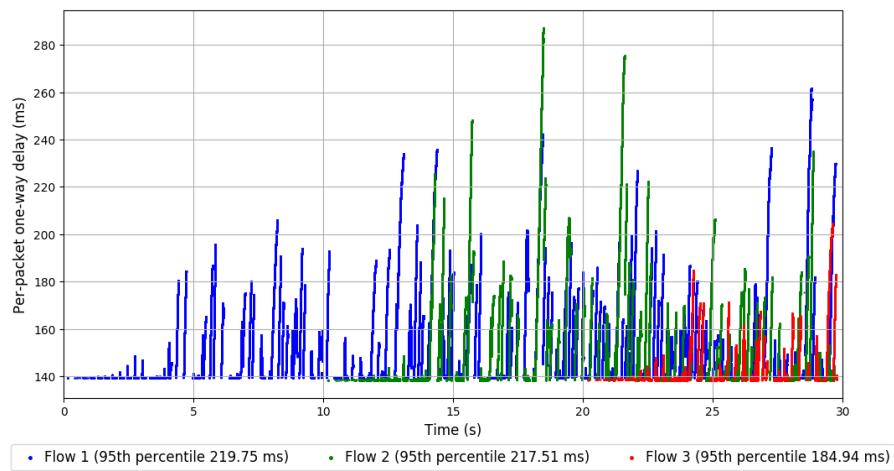
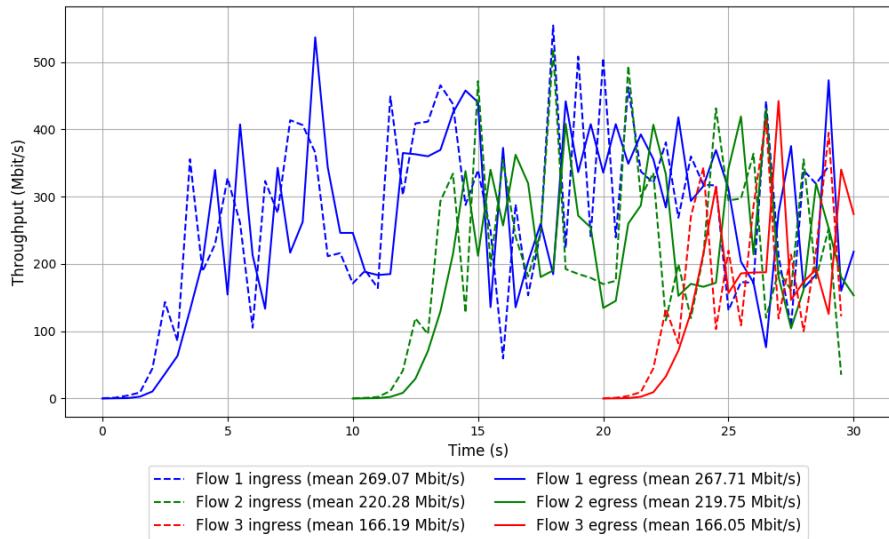


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-10 08:19:16
End at: 2018-10-10 08:19:46
Local clock offset: -0.051 ms
Remote clock offset: -0.16 ms

# Below is generated by plot.py at 2018-10-10 09:37:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 465.61 Mbit/s
95th percentile per-packet one-way delay: 215.343 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 267.71 Mbit/s
95th percentile per-packet one-way delay: 219.749 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 219.75 Mbit/s
95th percentile per-packet one-way delay: 217.507 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 166.05 Mbit/s
95th percentile per-packet one-way delay: 184.938 ms
Loss rate: 0.10%
```

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

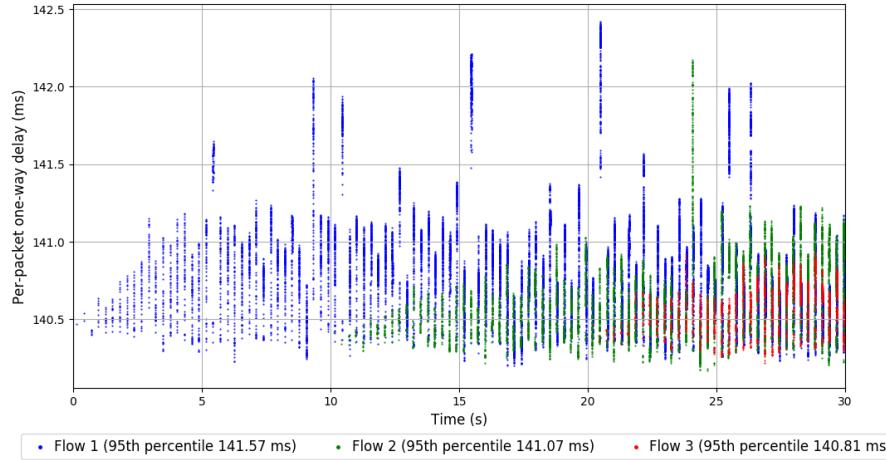
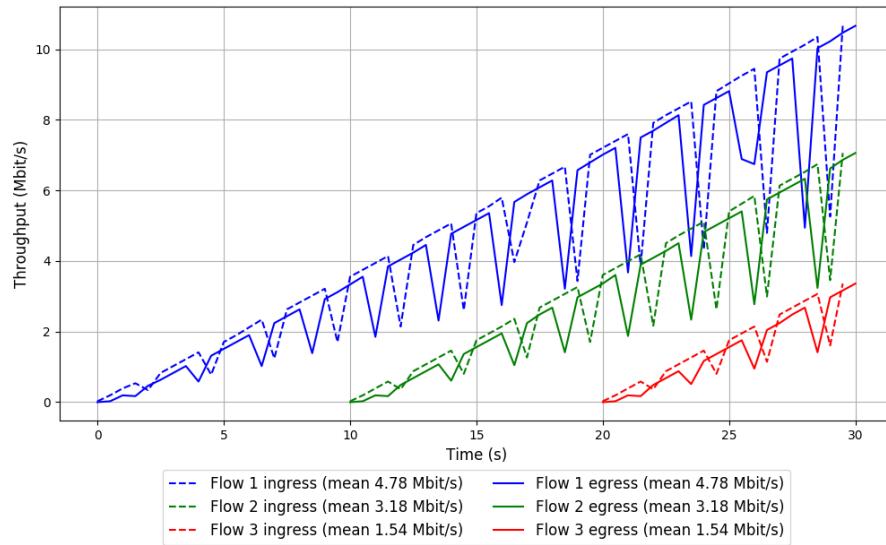


Run 1: Statistics of LEDBAT

```
Start at: 2018-10-10 06:26:43
End at: 2018-10-10 06:27:13
Local clock offset: -0.042 ms
Remote clock offset: 0.212 ms

# Below is generated by plot.py at 2018-10-10 09:37:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.40 Mbit/s
95th percentile per-packet one-way delay: 141.318 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 141.567 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 141.067 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 140.805 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

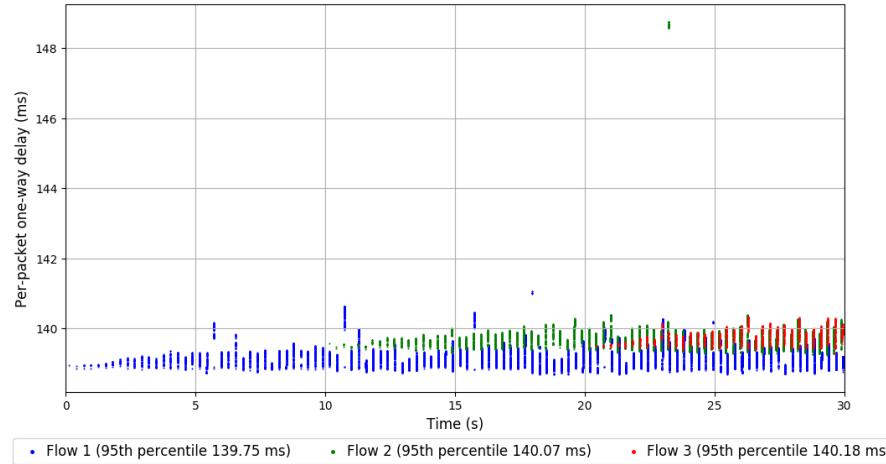
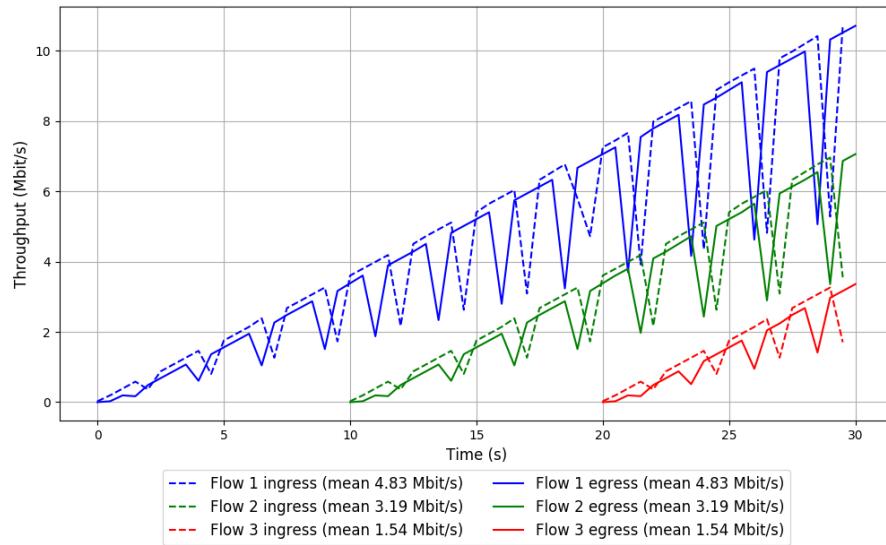


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-10 06:58:08
End at: 2018-10-10 06:58:38
Local clock offset: -0.011 ms
Remote clock offset: 0.187 ms

# Below is generated by plot.py at 2018-10-10 09:37:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.45 Mbit/s
95th percentile per-packet one-way delay: 139.992 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 139.750 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 140.075 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 140.179 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

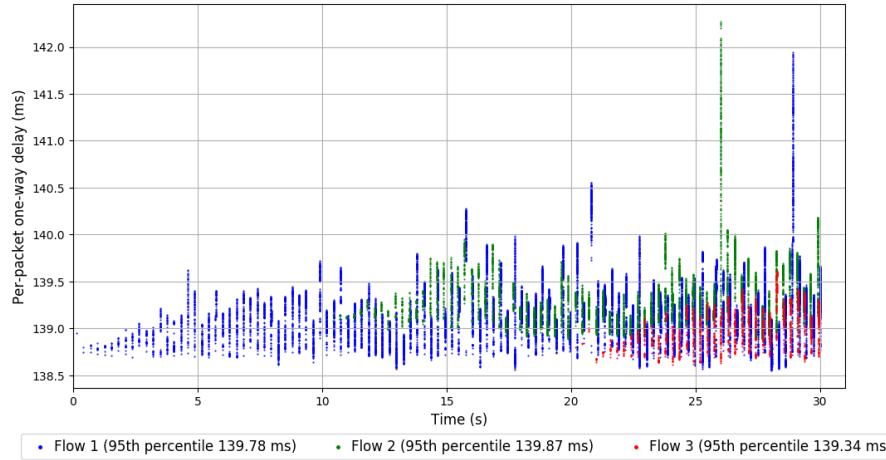
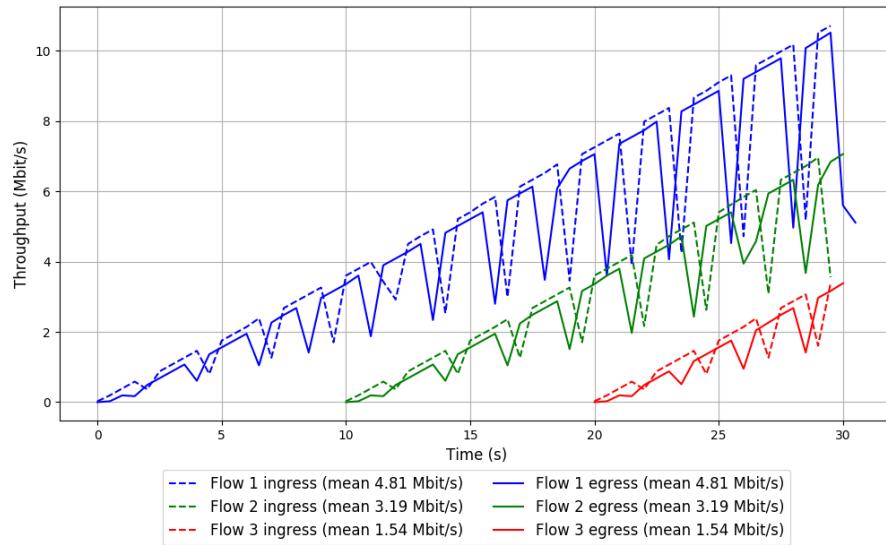


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-10 07:29:24
End at: 2018-10-10 07:29:54
Local clock offset: -0.011 ms
Remote clock offset: -0.521 ms

# Below is generated by plot.py at 2018-10-10 09:37:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.43 Mbit/s
95th percentile per-packet one-way delay: 139.793 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 139.781 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 139.874 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 139.341 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

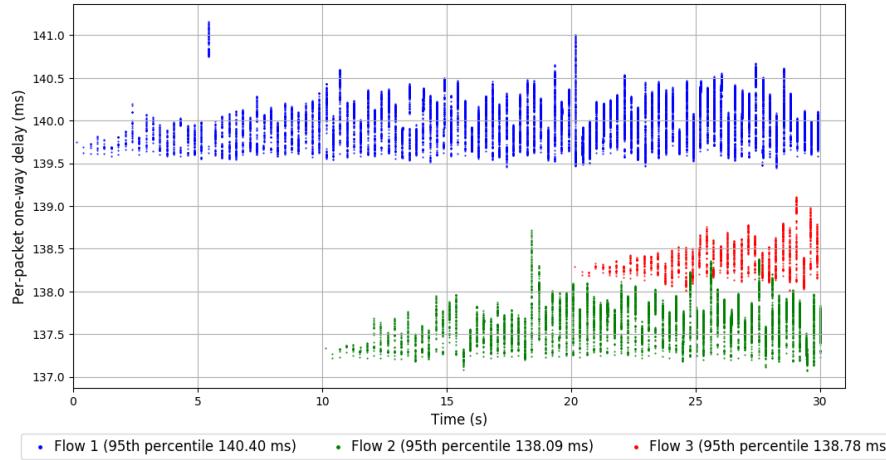
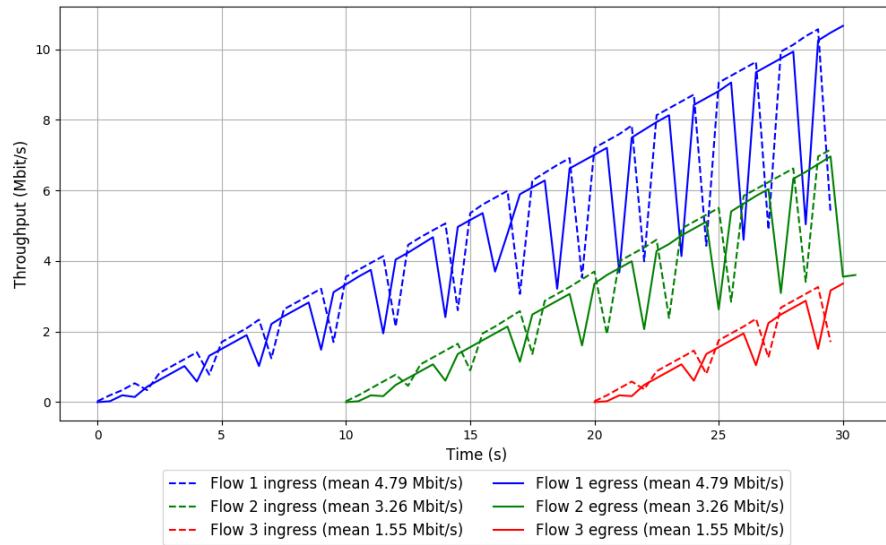


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-10 08:01:08
End at: 2018-10-10 08:01:38
Local clock offset: 0.252 ms
Remote clock offset: -0.163 ms

# Below is generated by plot.py at 2018-10-10 09:37:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.45 Mbit/s
95th percentile per-packet one-way delay: 140.342 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 140.396 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 138.086 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 138.777 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link

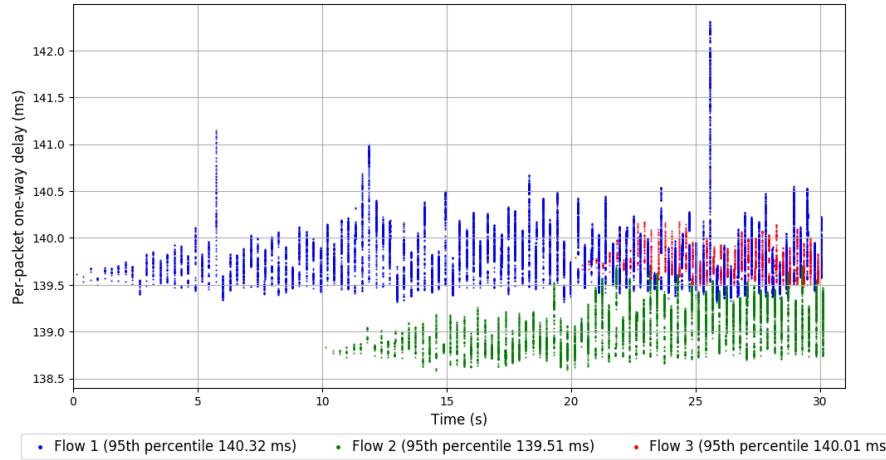
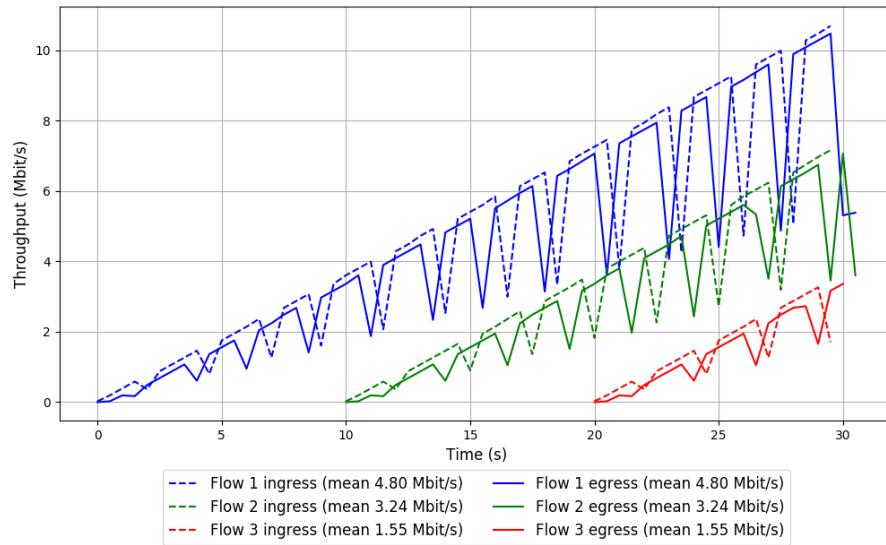


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-10 08:32:57
End at: 2018-10-10 08:33:27
Local clock offset: -0.223 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2018-10-10 09:37:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.46 Mbit/s
95th percentile per-packet one-way delay: 140.239 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 140.322 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 139.513 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 140.013 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

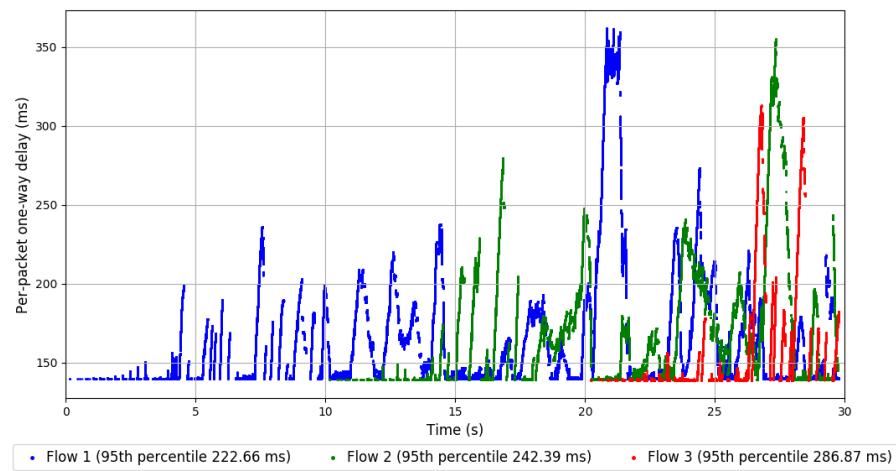
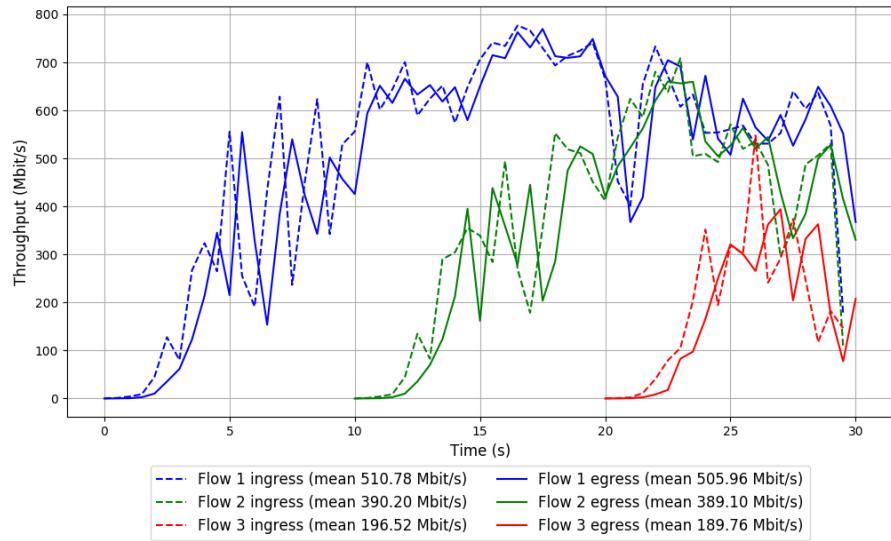


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-10 06:20:51
End at: 2018-10-10 06:21:21
Local clock offset: -0.062 ms
Remote clock offset: -0.493 ms

# Below is generated by plot.py at 2018-10-10 09:45:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 824.16 Mbit/s
95th percentile per-packet one-way delay: 234.226 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 505.96 Mbit/s
95th percentile per-packet one-way delay: 222.665 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 389.10 Mbit/s
95th percentile per-packet one-way delay: 242.388 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 189.76 Mbit/s
95th percentile per-packet one-way delay: 286.869 ms
Loss rate: 3.43%
```

Run 1: Report of Indigo-Muses — Data Link

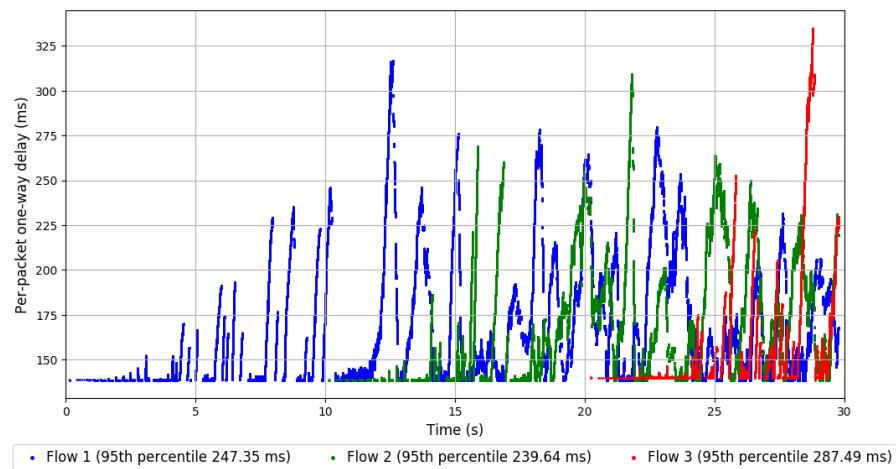
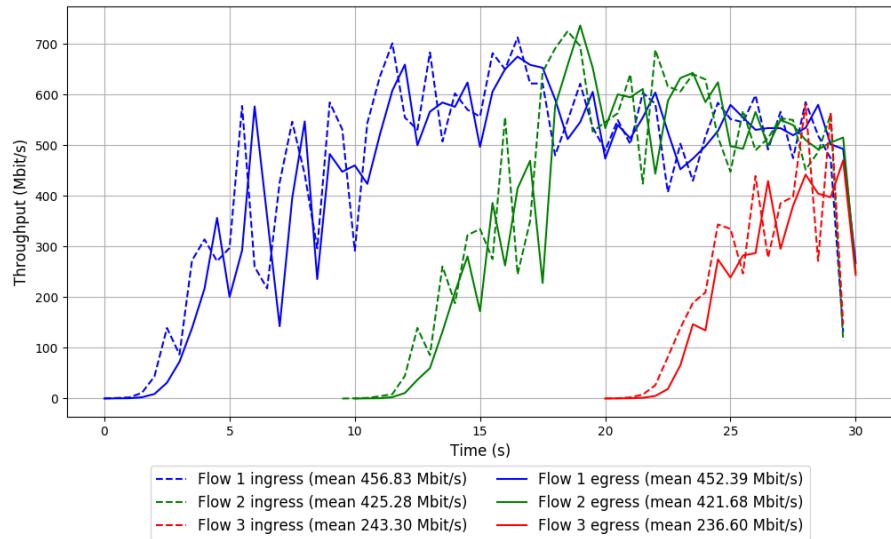


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-10 06:52:16
End at: 2018-10-10 06:52:46
Local clock offset: -0.136 ms
Remote clock offset: 0.155 ms

# Below is generated by plot.py at 2018-10-10 09:45:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 808.11 Mbit/s
95th percentile per-packet one-way delay: 244.087 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 452.39 Mbit/s
95th percentile per-packet one-way delay: 247.351 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 421.68 Mbit/s
95th percentile per-packet one-way delay: 239.638 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 236.60 Mbit/s
95th percentile per-packet one-way delay: 287.487 ms
Loss rate: 2.77%
```

Run 2: Report of Indigo-Muses — Data Link

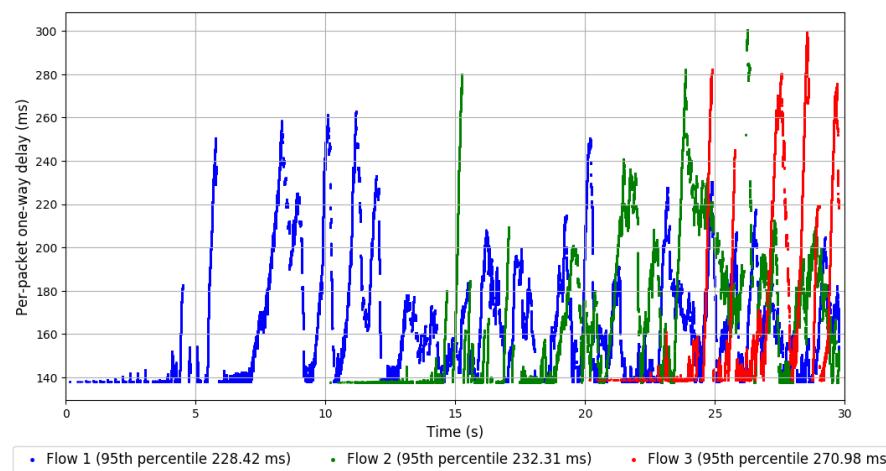
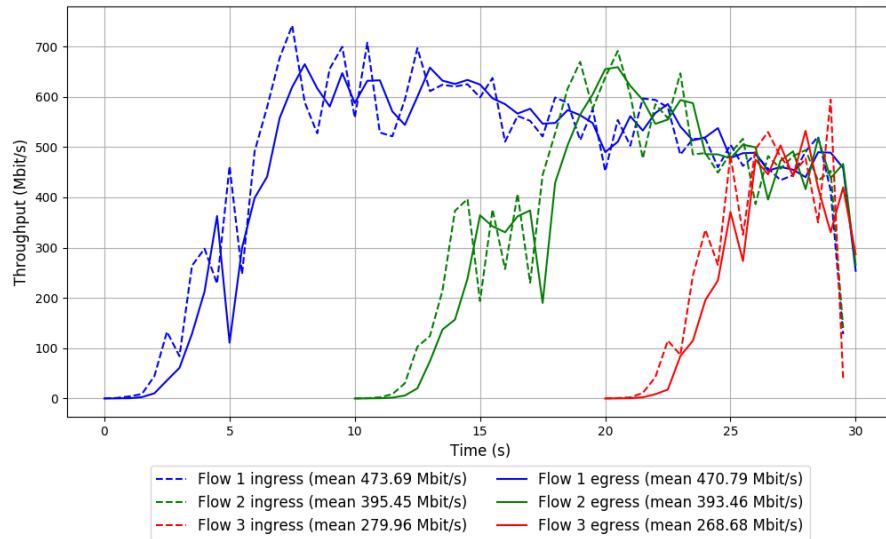


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-10 07:23:32
End at: 2018-10-10 07:24:02
Local clock offset: 0.25 ms
Remote clock offset: -0.187 ms

# Below is generated by plot.py at 2018-10-10 09:45:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 818.07 Mbit/s
95th percentile per-packet one-way delay: 236.727 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 470.79 Mbit/s
95th percentile per-packet one-way delay: 228.419 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 393.46 Mbit/s
95th percentile per-packet one-way delay: 232.311 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 268.68 Mbit/s
95th percentile per-packet one-way delay: 270.976 ms
Loss rate: 3.21%
```

Run 3: Report of Indigo-Muses — Data Link

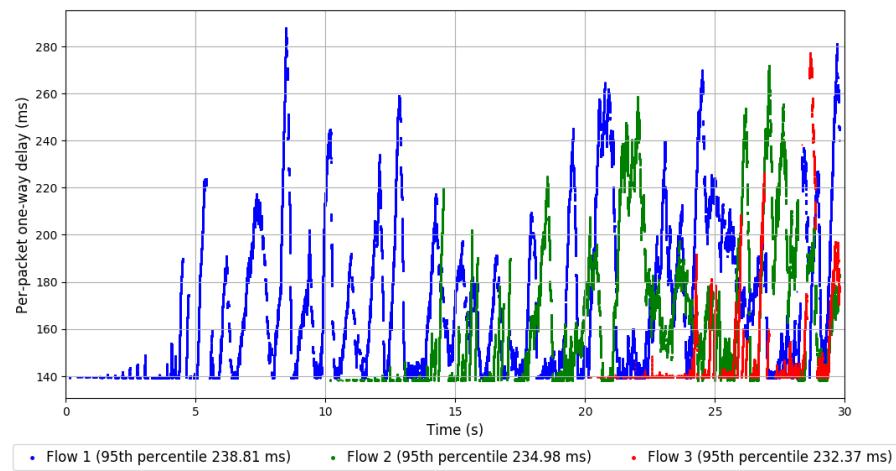
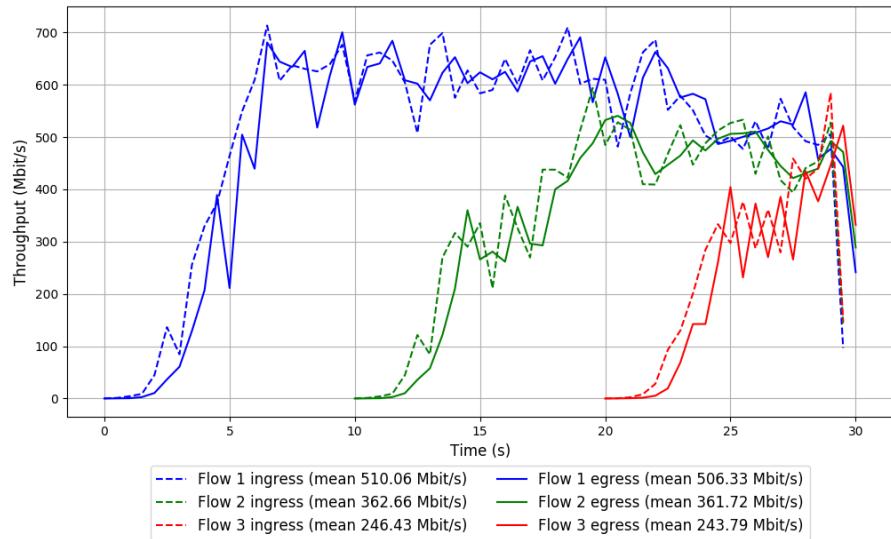


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-10 07:55:13
End at: 2018-10-10 07:55:43
Local clock offset: 0.023 ms
Remote clock offset: -0.195 ms

# Below is generated by plot.py at 2018-10-10 09:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 824.68 Mbit/s
95th percentile per-packet one-way delay: 236.419 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 506.33 Mbit/s
95th percentile per-packet one-way delay: 238.811 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 361.72 Mbit/s
95th percentile per-packet one-way delay: 234.979 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 243.79 Mbit/s
95th percentile per-packet one-way delay: 232.371 ms
Loss rate: 1.05%
```

Run 4: Report of Indigo-Muses — Data Link

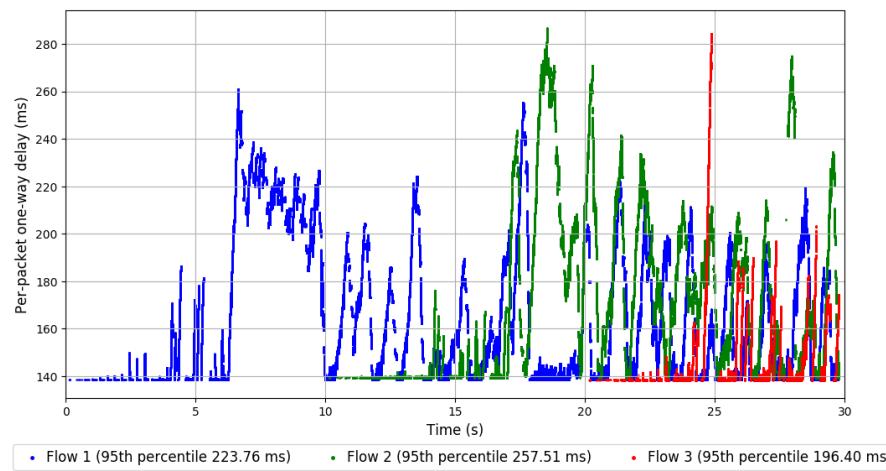
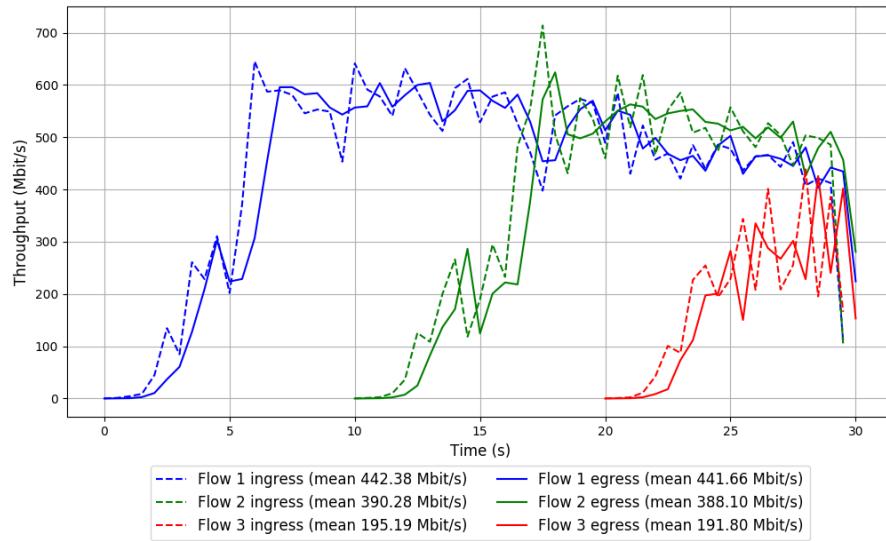


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-10 08:26:57
End at: 2018-10-10 08:27:27
Local clock offset: -0.054 ms
Remote clock offset: -0.137 ms

# Below is generated by plot.py at 2018-10-10 09:48:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 760.86 Mbit/s
95th percentile per-packet one-way delay: 231.427 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 441.66 Mbit/s
95th percentile per-packet one-way delay: 223.758 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 388.10 Mbit/s
95th percentile per-packet one-way delay: 257.509 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 191.80 Mbit/s
95th percentile per-packet one-way delay: 196.398 ms
Loss rate: 1.73%
```

Run 5: Report of Indigo-Muses — Data Link

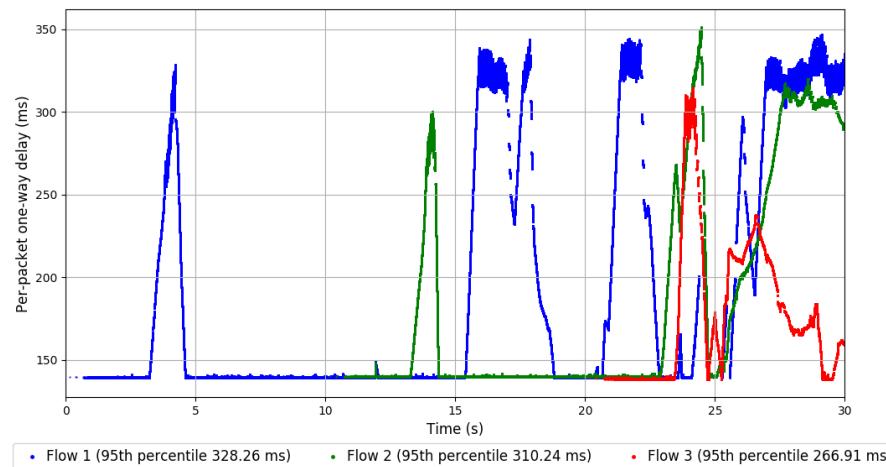
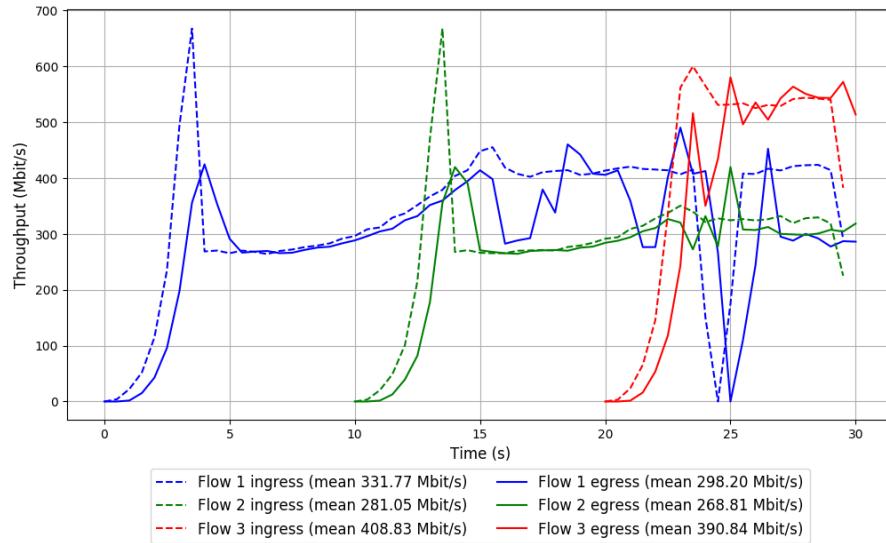


Run 1: Statistics of PCC-Allegro

```
Start at: 2018-10-10 06:05:00
End at: 2018-10-10 06:05:30
Local clock offset: 0.048 ms
Remote clock offset: -0.192 ms

# Below is generated by plot.py at 2018-10-10 09:55:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 605.39 Mbit/s
95th percentile per-packet one-way delay: 323.107 ms
Loss rate: 7.29%
-- Flow 1:
Average throughput: 298.20 Mbit/s
95th percentile per-packet one-way delay: 328.258 ms
Loss rate: 10.11%
-- Flow 2:
Average throughput: 268.81 Mbit/s
95th percentile per-packet one-way delay: 310.237 ms
Loss rate: 4.35%
-- Flow 3:
Average throughput: 390.84 Mbit/s
95th percentile per-packet one-way delay: 266.910 ms
Loss rate: 4.38%
```

Run 1: Report of PCC-Allegro — Data Link

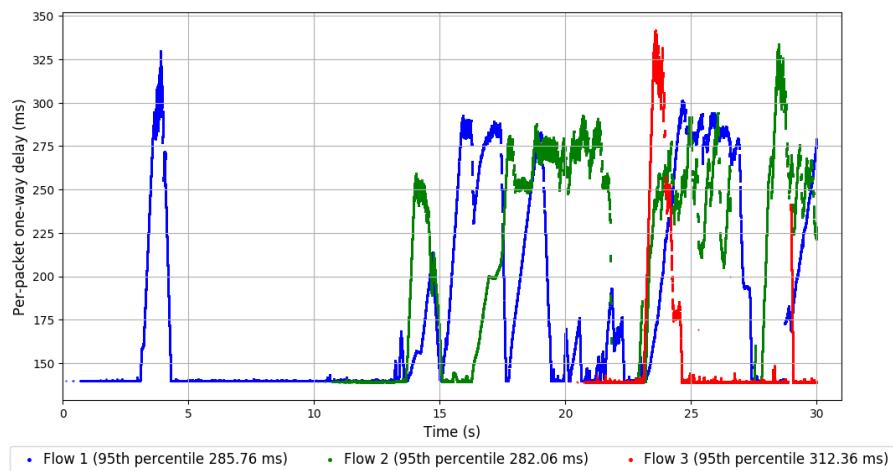
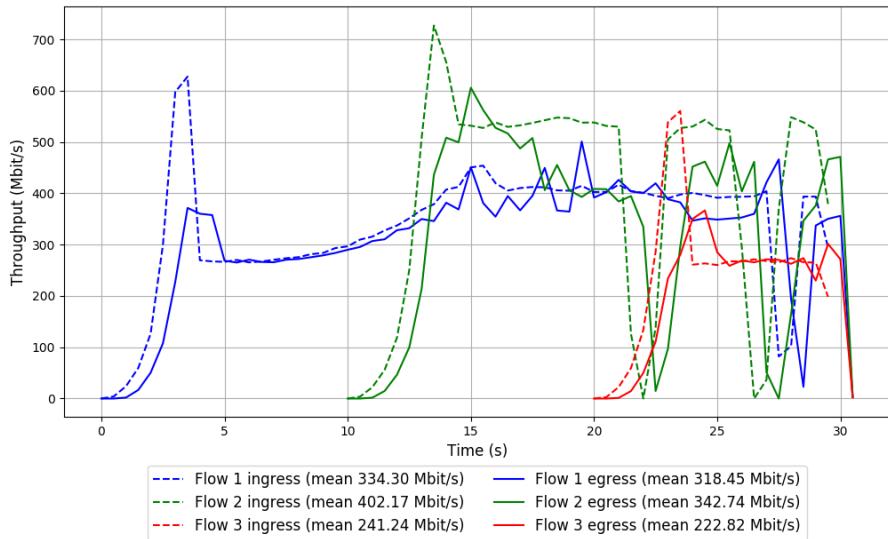


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-10 06:36:14
End at: 2018-10-10 06:36:44
Local clock offset: 0.098 ms
Remote clock offset: -0.202 ms

# Below is generated by plot.py at 2018-10-10 09:57:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 619.26 Mbit/s
95th percentile per-packet one-way delay: 285.264 ms
Loss rate: 9.02%
-- Flow 1:
Average throughput: 318.45 Mbit/s
95th percentile per-packet one-way delay: 285.764 ms
Loss rate: 4.74%
-- Flow 2:
Average throughput: 342.74 Mbit/s
95th percentile per-packet one-way delay: 282.063 ms
Loss rate: 14.78%
-- Flow 3:
Average throughput: 222.82 Mbit/s
95th percentile per-packet one-way delay: 312.361 ms
Loss rate: 7.63%
```

Run 2: Report of PCC-Allegro — Data Link

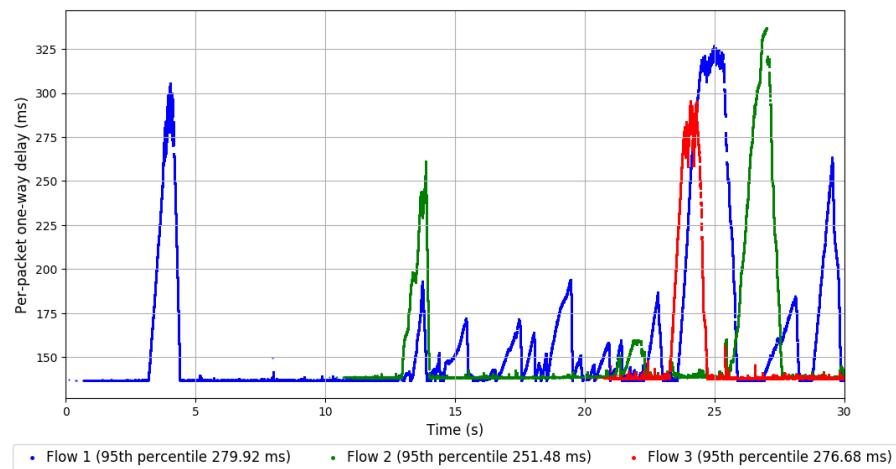
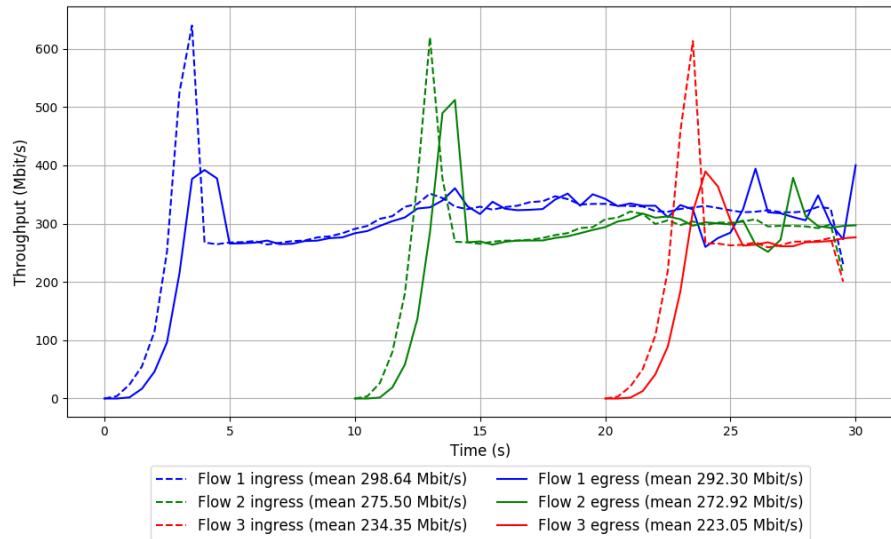


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-10 07:07:40
End at: 2018-10-10 07:08:10
Local clock offset: 0.077 ms
Remote clock offset: -0.543 ms

# Below is generated by plot.py at 2018-10-10 09:57:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 547.02 Mbit/s
95th percentile per-packet one-way delay: 274.567 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 292.30 Mbit/s
95th percentile per-packet one-way delay: 279.922 ms
Loss rate: 2.12%
-- Flow 2:
Average throughput: 272.92 Mbit/s
95th percentile per-packet one-way delay: 251.477 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 223.05 Mbit/s
95th percentile per-packet one-way delay: 276.675 ms
Loss rate: 4.82%
```

Run 3: Report of PCC-Allegro — Data Link

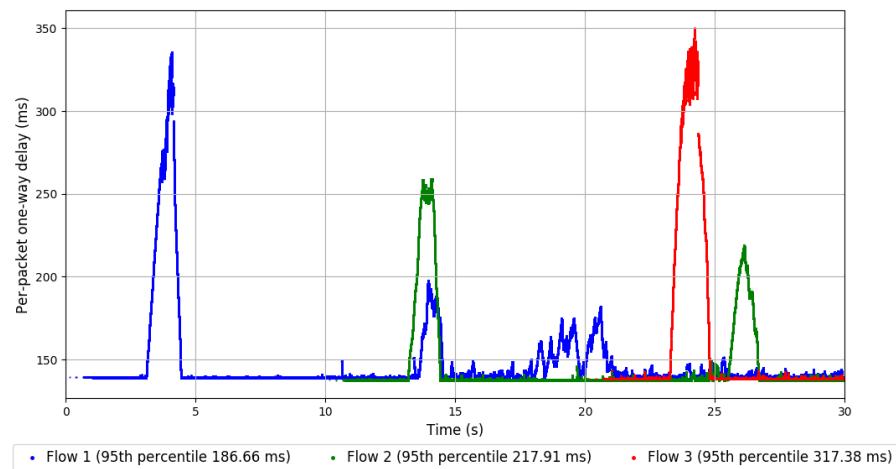
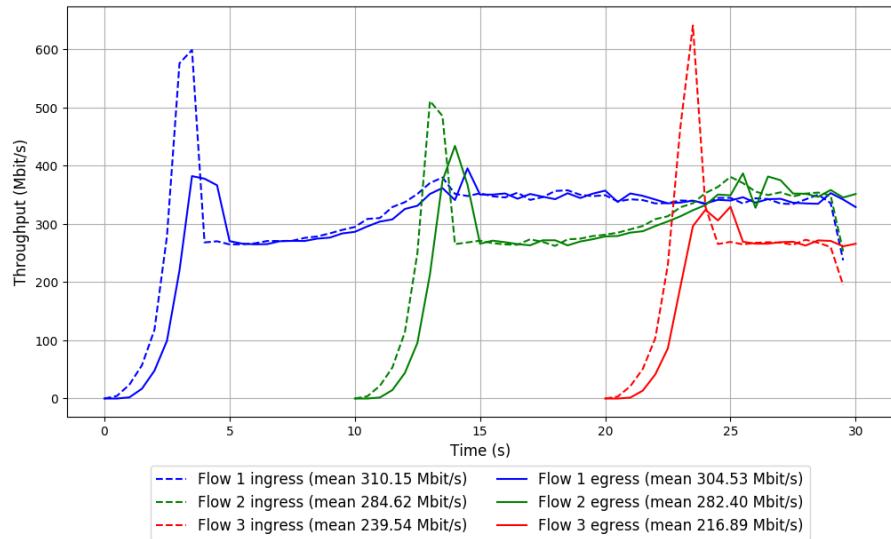


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-10 07:39:19
End at: 2018-10-10 07:39:49
Local clock offset: 0.032 ms
Remote clock offset: -0.154 ms

# Below is generated by plot.py at 2018-10-10 10:03:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 563.70 Mbit/s
95th percentile per-packet one-way delay: 235.759 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 304.53 Mbit/s
95th percentile per-packet one-way delay: 186.665 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 282.40 Mbit/s
95th percentile per-packet one-way delay: 217.911 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 216.89 Mbit/s
95th percentile per-packet one-way delay: 317.380 ms
Loss rate: 9.47%
```

Run 4: Report of PCC-Allegro — Data Link

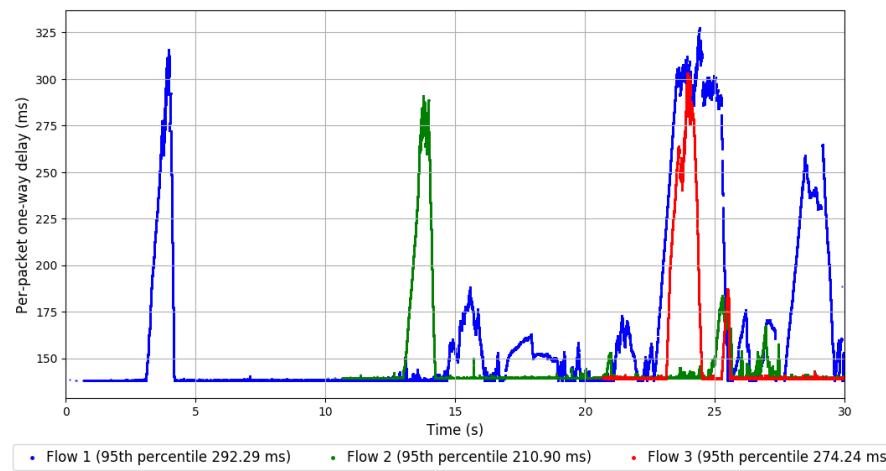
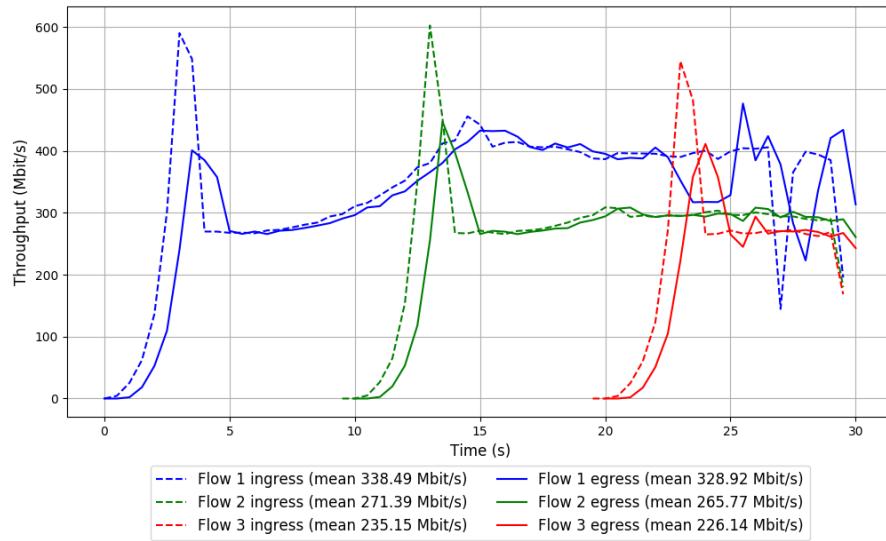


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-10 08:10:54
End at: 2018-10-10 08:11:24
Local clock offset: -0.025 ms
Remote clock offset: -0.181 ms

# Below is generated by plot.py at 2018-10-10 10:04:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 580.47 Mbit/s
95th percentile per-packet one-way delay: 274.799 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 328.92 Mbit/s
95th percentile per-packet one-way delay: 292.294 ms
Loss rate: 2.83%
-- Flow 2:
Average throughput: 265.77 Mbit/s
95th percentile per-packet one-way delay: 210.900 ms
Loss rate: 2.07%
-- Flow 3:
Average throughput: 226.14 Mbit/s
95th percentile per-packet one-way delay: 274.237 ms
Loss rate: 3.84%
```

Run 5: Report of PCC-Allegro — Data Link

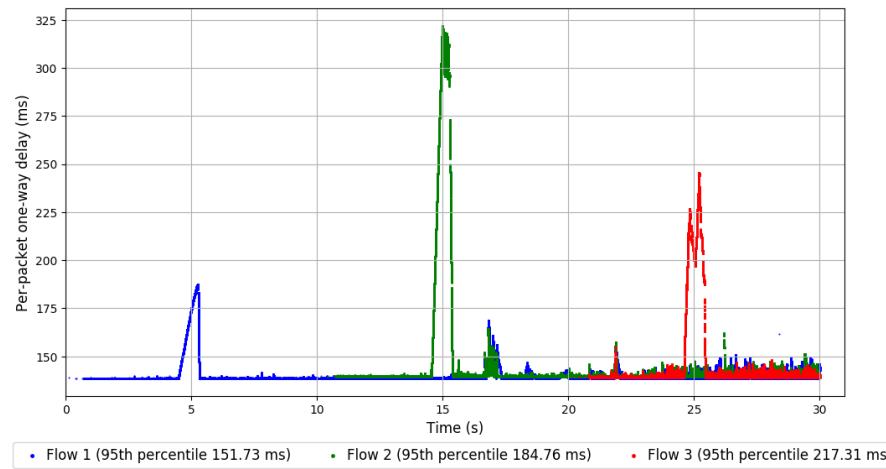
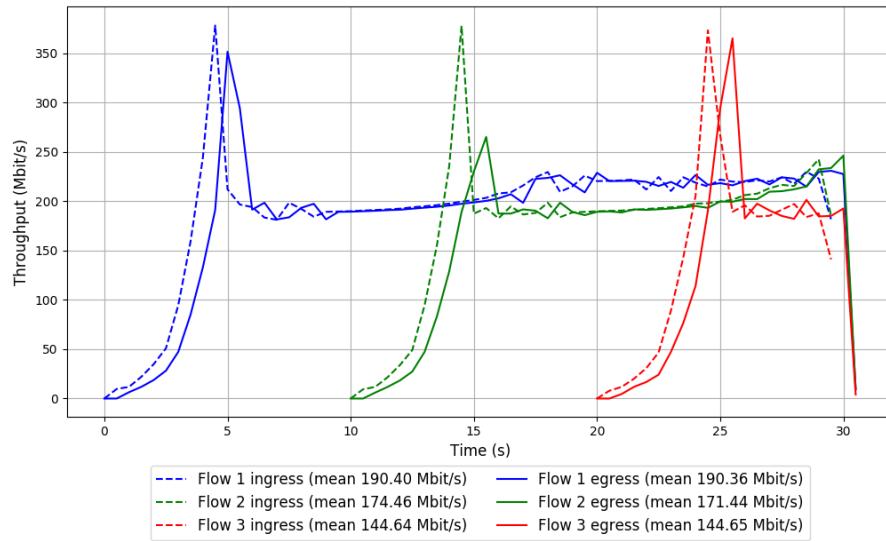


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-10-10 06:24:46
End at: 2018-10-10 06:25:16
Local clock offset: 0.176 ms
Remote clock offset: -0.521 ms

# Below is generated by plot.py at 2018-10-10 10:04:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.06 Mbit/s
95th percentile per-packet one-way delay: 178.201 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 190.36 Mbit/s
95th percentile per-packet one-way delay: 151.732 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 171.44 Mbit/s
95th percentile per-packet one-way delay: 184.765 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 144.65 Mbit/s
95th percentile per-packet one-way delay: 217.315 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Expr — Data Link

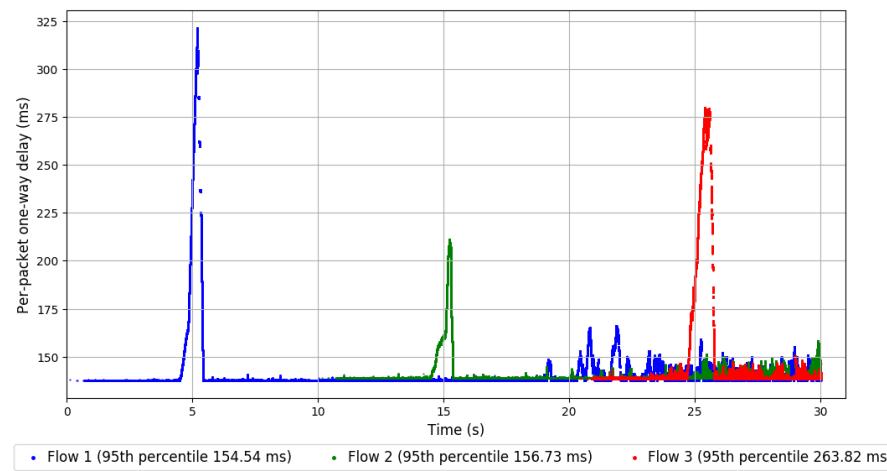
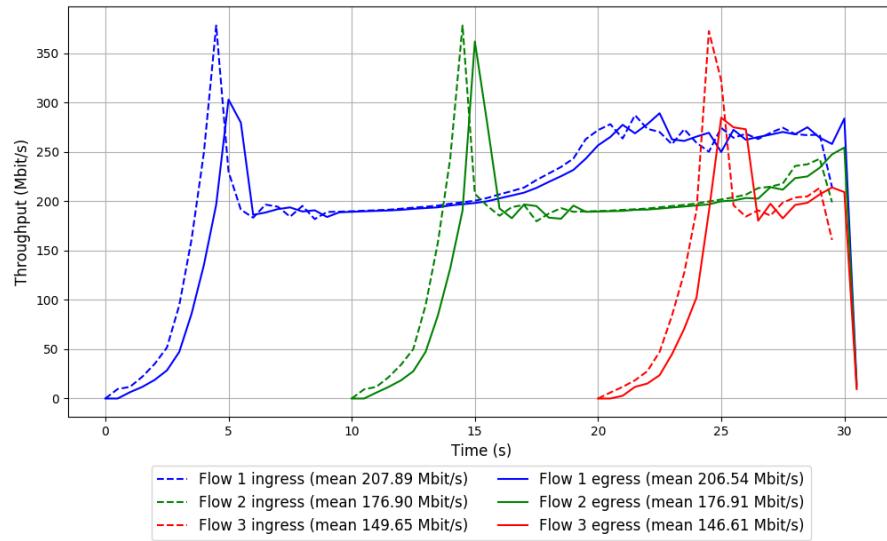


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-10 06:56:09
End at: 2018-10-10 06:56:39
Local clock offset: -0.027 ms
Remote clock offset: -0.612 ms

# Below is generated by plot.py at 2018-10-10 10:04:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 372.44 Mbit/s
95th percentile per-packet one-way delay: 163.057 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 206.54 Mbit/s
95th percentile per-packet one-way delay: 154.544 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 176.91 Mbit/s
95th percentile per-packet one-way delay: 156.734 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 146.61 Mbit/s
95th percentile per-packet one-way delay: 263.820 ms
Loss rate: 1.99%
```

Run 2: Report of PCC-Expr — Data Link

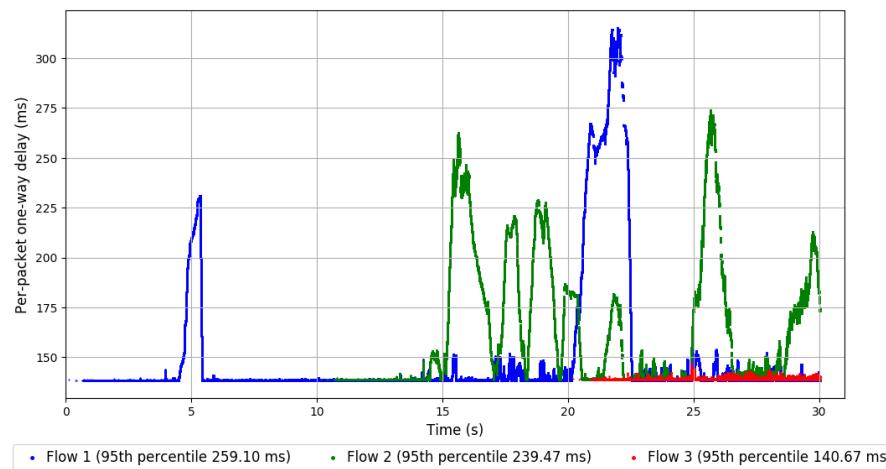
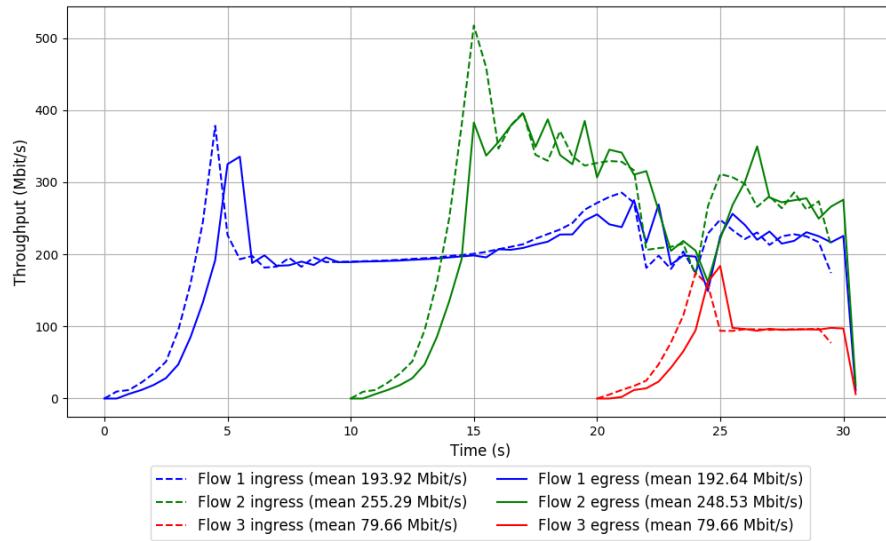


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-10 07:27:24
End at: 2018-10-10 07:27:54
Local clock offset: 0.166 ms
Remote clock offset: -0.526 ms

# Below is generated by plot.py at 2018-10-10 10:04:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.16 Mbit/s
95th percentile per-packet one-way delay: 244.912 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 192.64 Mbit/s
95th percentile per-packet one-way delay: 259.101 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 248.53 Mbit/s
95th percentile per-packet one-way delay: 239.470 ms
Loss rate: 2.63%
-- Flow 3:
Average throughput: 79.66 Mbit/s
95th percentile per-packet one-way delay: 140.673 ms
Loss rate: 0.00%
```

Run 3: Report of PCC-Expr — Data Link

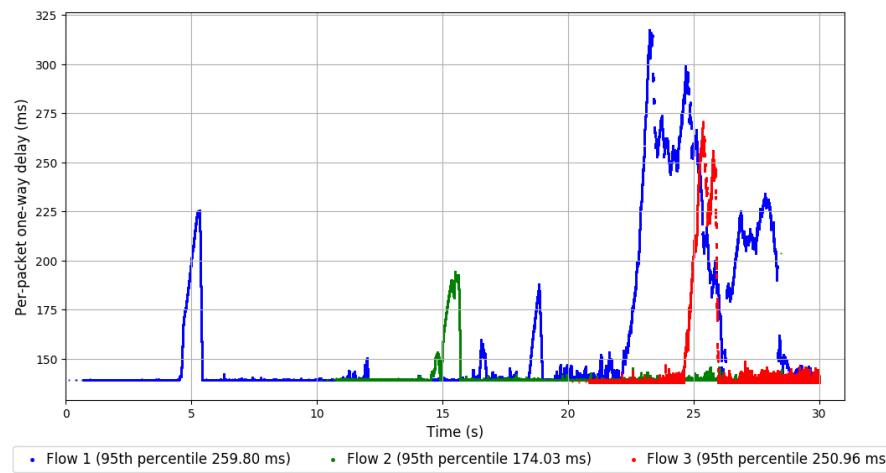
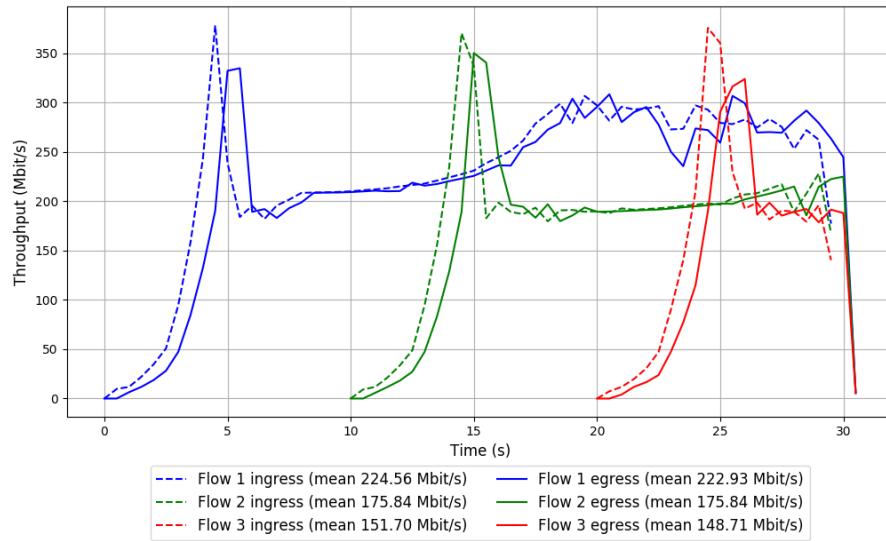


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-10 07:59:06
End at: 2018-10-10 07:59:36
Local clock offset: 0.21 ms
Remote clock offset: -0.213 ms

# Below is generated by plot.py at 2018-10-10 10:07:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.93 Mbit/s
95th percentile per-packet one-way delay: 250.920 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 222.93 Mbit/s
95th percentile per-packet one-way delay: 259.802 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 175.84 Mbit/s
95th percentile per-packet one-way delay: 174.025 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 148.71 Mbit/s
95th percentile per-packet one-way delay: 250.958 ms
Loss rate: 1.97%
```

Run 4: Report of PCC-Expr — Data Link

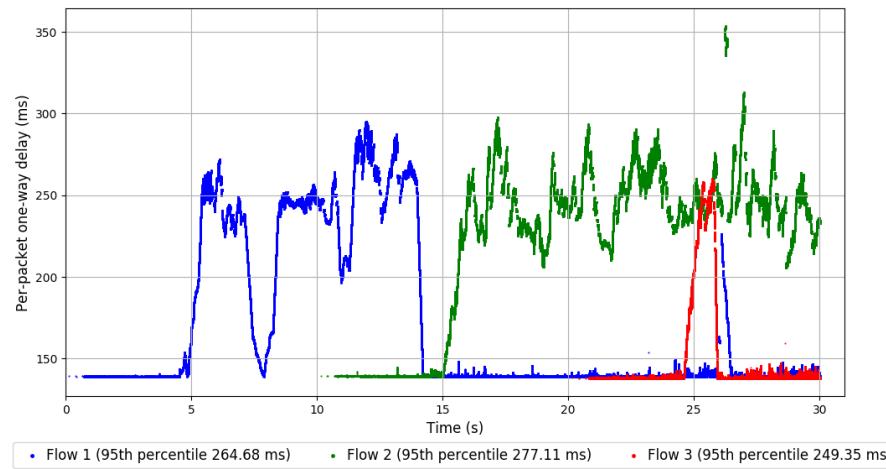
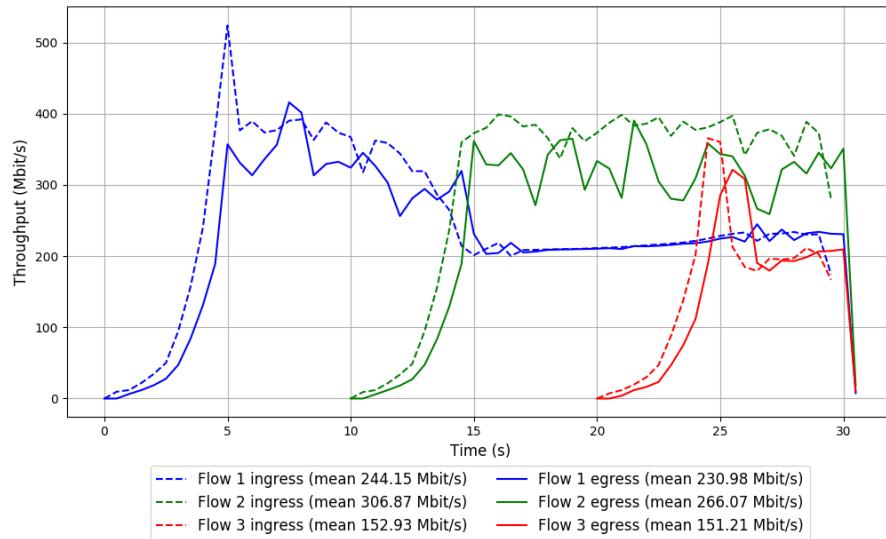


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-10 08:30:46
End at: 2018-10-10 08:31:16
Local clock offset: 0.119 ms
Remote clock offset: -0.522 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 457.76 Mbit/s
95th percentile per-packet one-way delay: 271.369 ms
Loss rate: 8.20%
-- Flow 1:
Average throughput: 230.98 Mbit/s
95th percentile per-packet one-way delay: 264.679 ms
Loss rate: 5.39%
-- Flow 2:
Average throughput: 266.07 Mbit/s
95th percentile per-packet one-way delay: 277.112 ms
Loss rate: 13.29%
-- Flow 3:
Average throughput: 151.21 Mbit/s
95th percentile per-packet one-way delay: 249.354 ms
Loss rate: 1.13%
```

Run 5: Report of PCC-Expr — Data Link

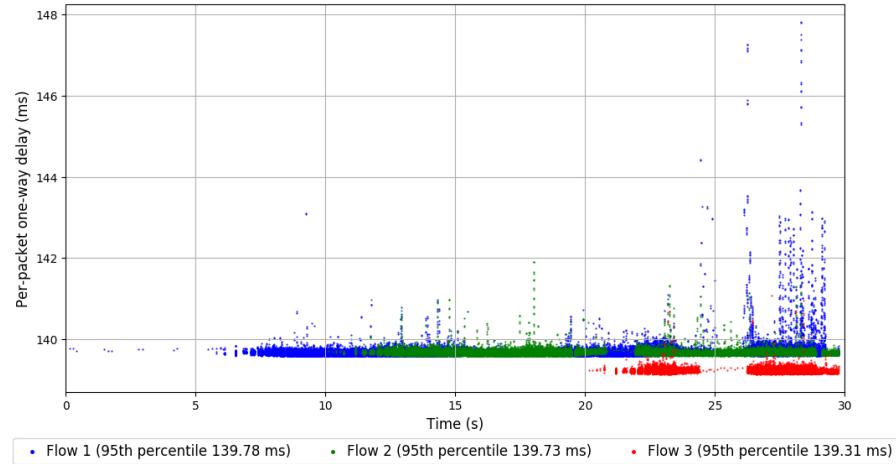
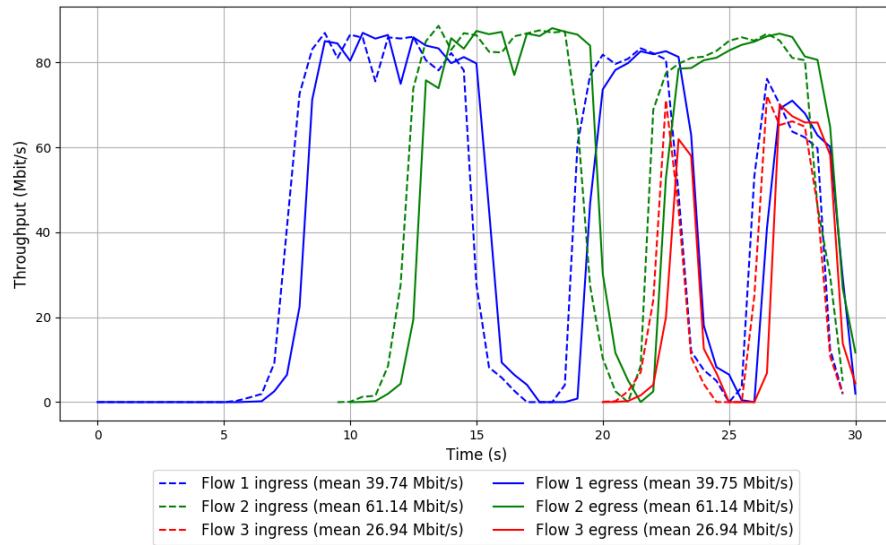


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-10-10 06:08:42
End at: 2018-10-10 06:09:12
Local clock offset: -0.147 ms
Remote clock offset: -0.135 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.00 Mbit/s
95th percentile per-packet one-way delay: 139.745 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.75 Mbit/s
95th percentile per-packet one-way delay: 139.776 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.14 Mbit/s
95th percentile per-packet one-way delay: 139.728 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.94 Mbit/s
95th percentile per-packet one-way delay: 139.315 ms
Loss rate: 0.00%
```

Run 1: Report of QUIC Cubic — Data Link

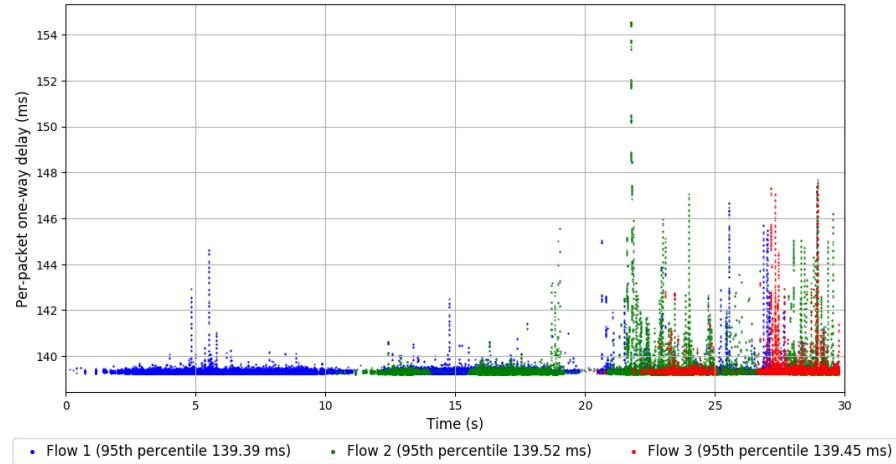
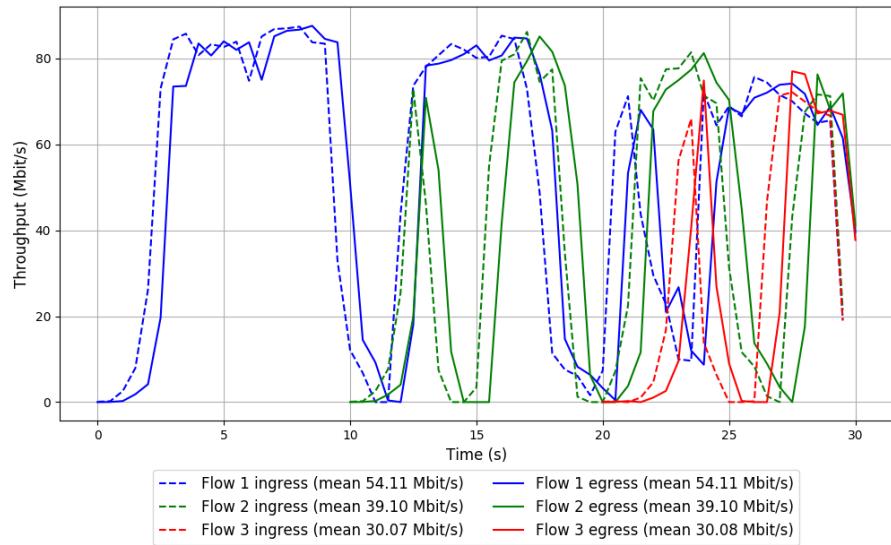


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-10 06:39:56
End at: 2018-10-10 06:40:26
Local clock offset: -0.011 ms
Remote clock offset: 0.172 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.77 Mbit/s
95th percentile per-packet one-way delay: 139.413 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.11 Mbit/s
95th percentile per-packet one-way delay: 139.393 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.10 Mbit/s
95th percentile per-packet one-way delay: 139.522 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.08 Mbit/s
95th percentile per-packet one-way delay: 139.451 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link

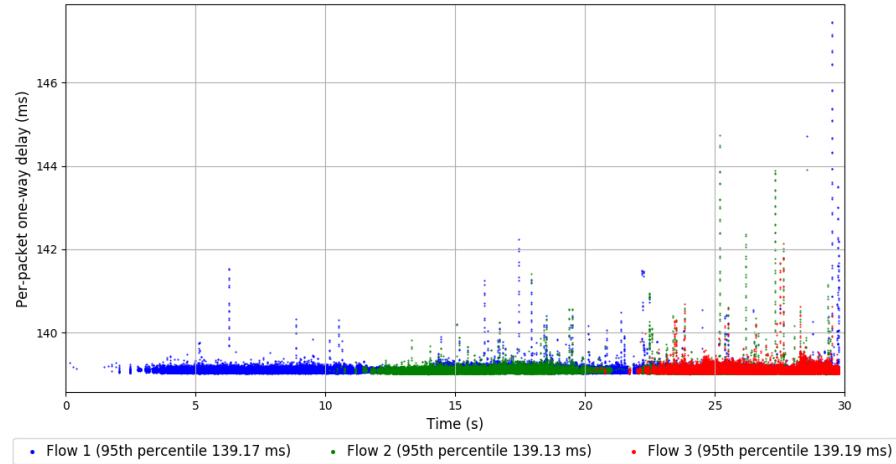
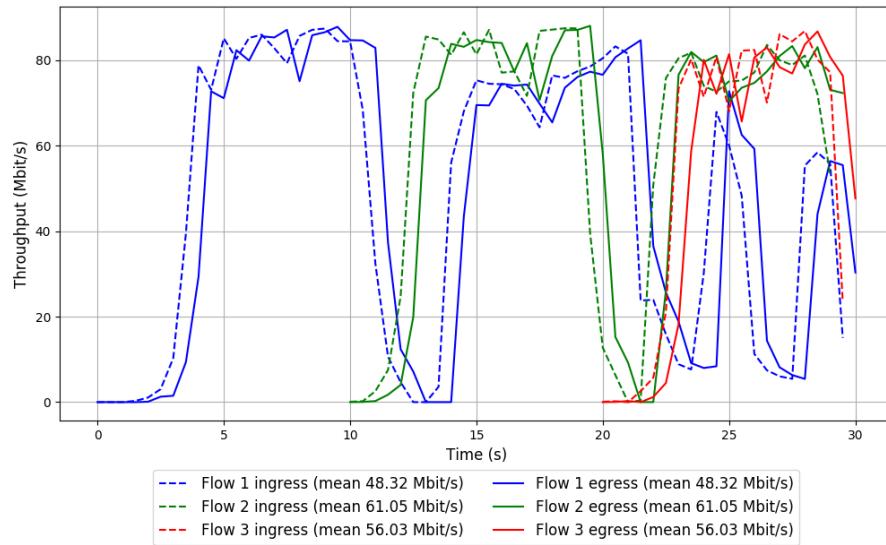


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-10 07:11:11
End at: 2018-10-10 07:11:41
Local clock offset: 0.266 ms
Remote clock offset: -0.135 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 106.28 Mbit/s
95th percentile per-packet one-way delay: 139.161 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.32 Mbit/s
95th percentile per-packet one-way delay: 139.167 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.05 Mbit/s
95th percentile per-packet one-way delay: 139.135 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 56.03 Mbit/s
95th percentile per-packet one-way delay: 139.189 ms
Loss rate: 0.01%
```

Run 3: Report of QUIC Cubic — Data Link

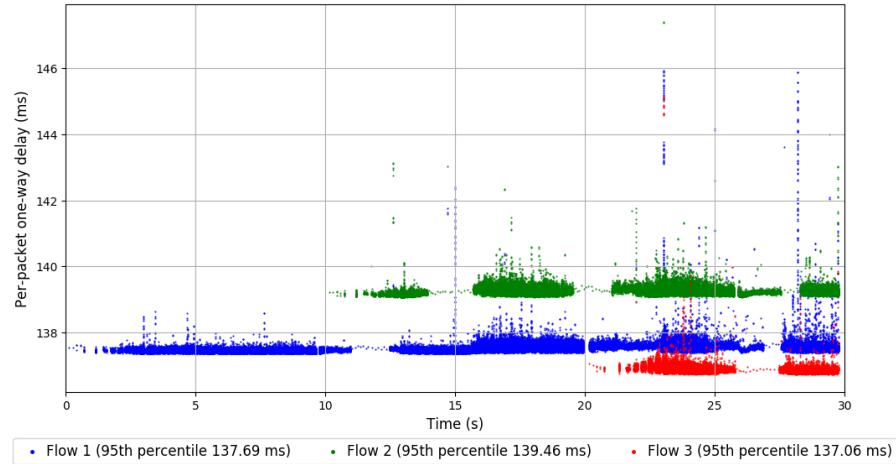
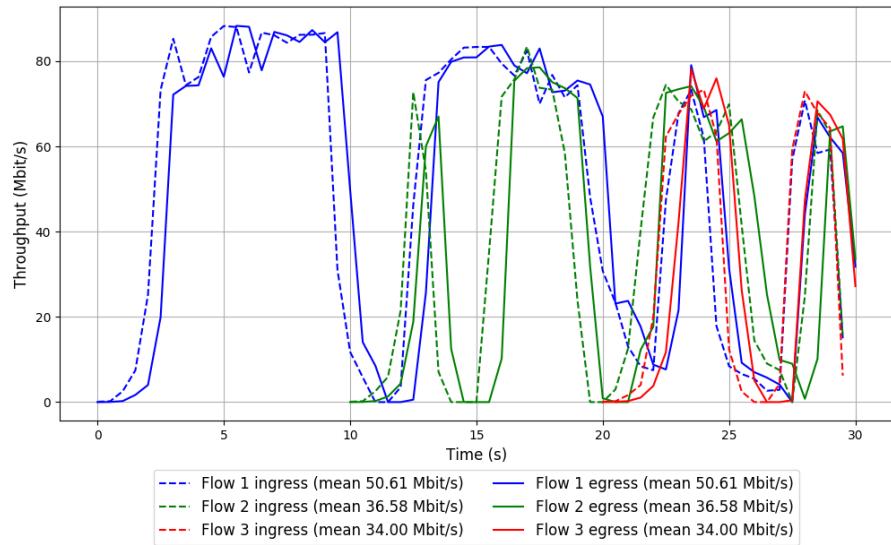


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-10 07:43:00
End at: 2018-10-10 07:43:30
Local clock offset: 0.234 ms
Remote clock offset: -0.515 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.85 Mbit/s
95th percentile per-packet one-way delay: 139.345 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.61 Mbit/s
95th percentile per-packet one-way delay: 137.692 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.58 Mbit/s
95th percentile per-packet one-way delay: 139.456 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.00 Mbit/s
95th percentile per-packet one-way delay: 137.057 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link

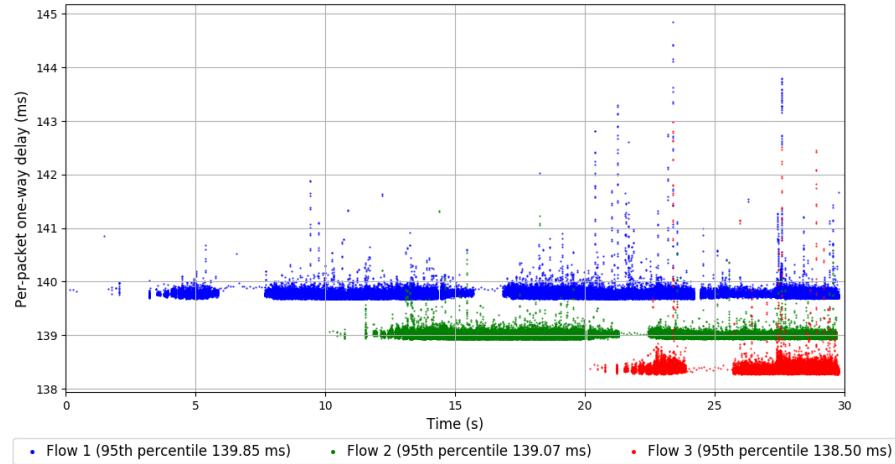
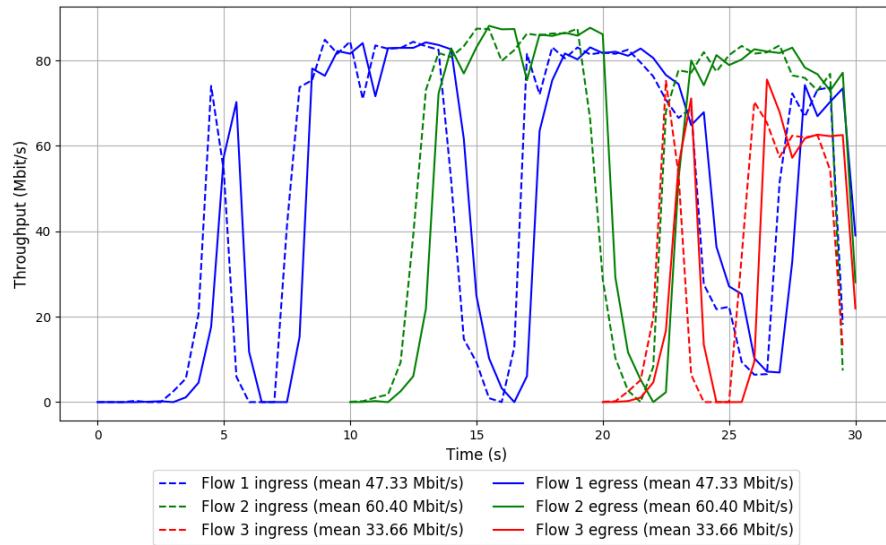


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-10 08:14:39
End at: 2018-10-10 08:15:09
Local clock offset: -0.043 ms
Remote clock offset: -0.178 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.04 Mbit/s
95th percentile per-packet one-way delay: 139.821 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.33 Mbit/s
95th percentile per-packet one-way delay: 139.852 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 60.40 Mbit/s
95th percentile per-packet one-way delay: 139.067 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.66 Mbit/s
95th percentile per-packet one-way delay: 138.499 ms
Loss rate: 0.00%
```

Run 5: Report of QUIC Cubic — Data Link

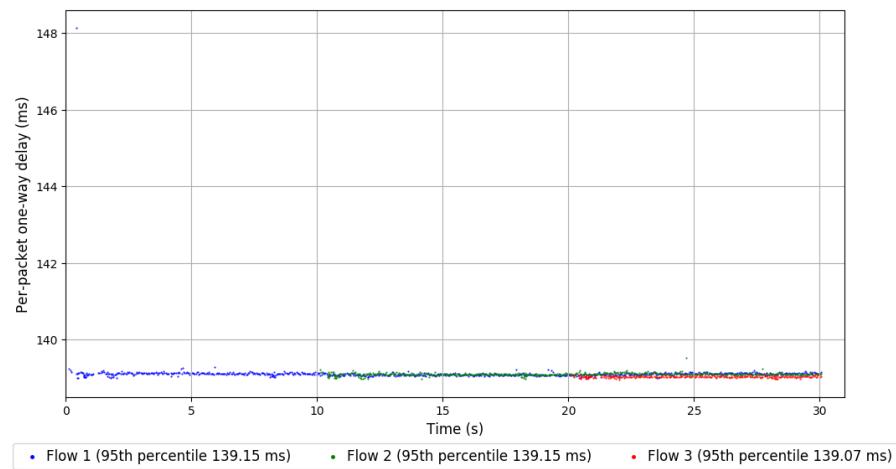
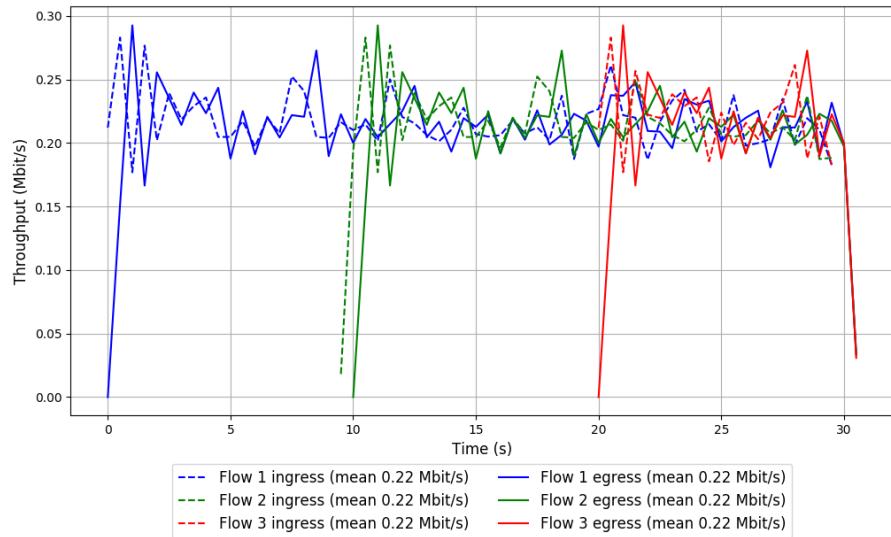


Run 1: Statistics of SCReAM

```
Start at: 2018-10-10 06:11:59
End at: 2018-10-10 06:12:29
Local clock offset: 0.03 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 139.145 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.149 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.146 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.074 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

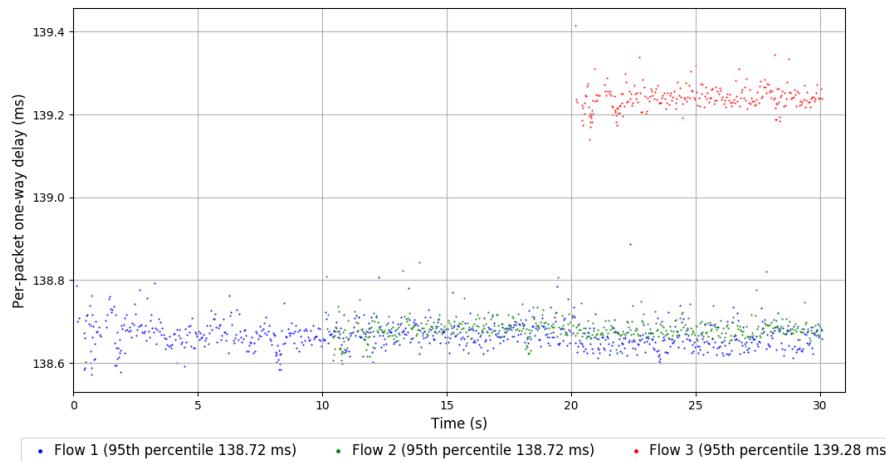
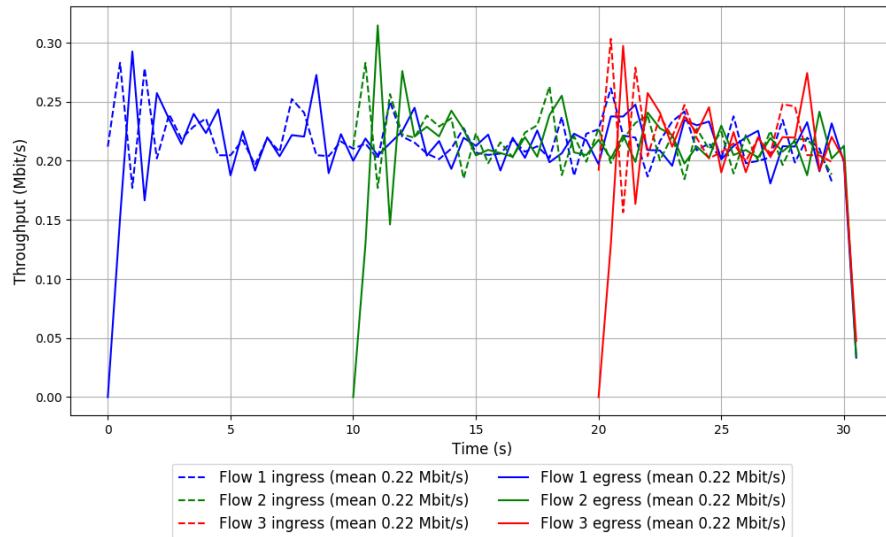


Run 2: Statistics of SCReAM

```
Start at: 2018-10-10 06:43:14
End at: 2018-10-10 06:43:44
Local clock offset: 0.059 ms
Remote clock offset: 0.137 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 139.252 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.719 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.720 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.283 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

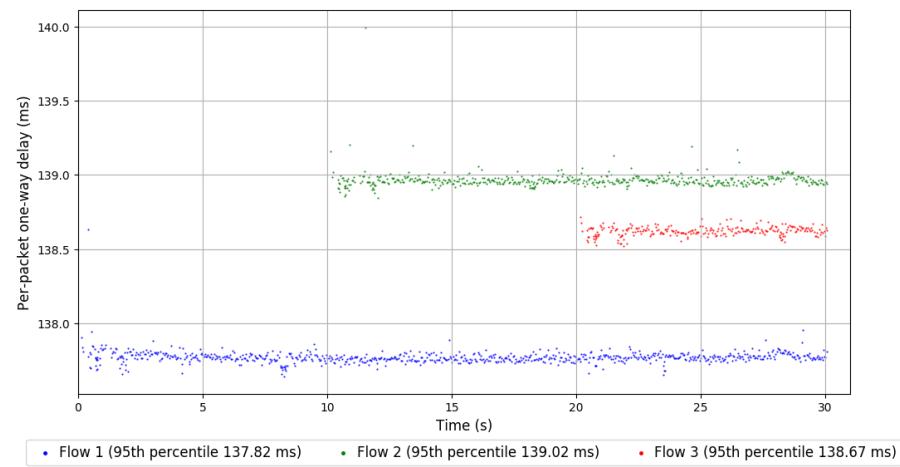
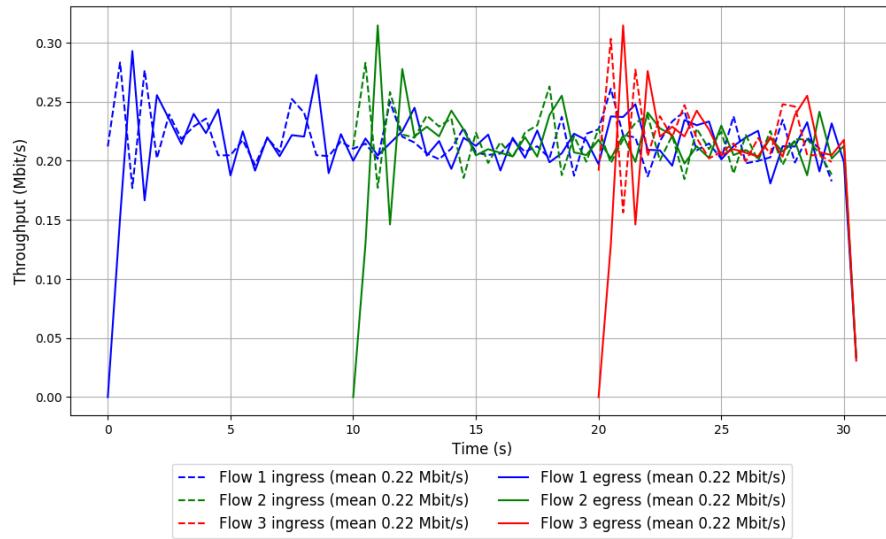


Run 3: Statistics of SCReAM

```
Start at: 2018-10-10 07:14:33
End at: 2018-10-10 07:15:03
Local clock offset: 0.1 ms
Remote clock offset: -0.505 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 138.990 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.823 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.016 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.674 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

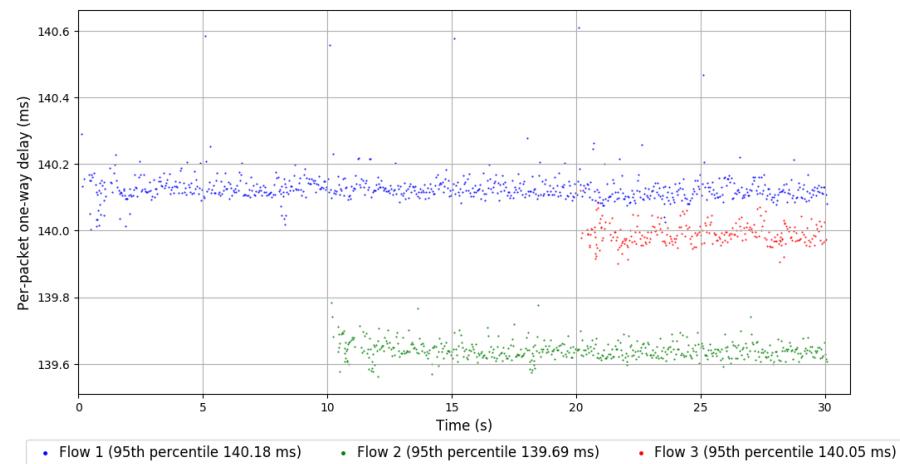
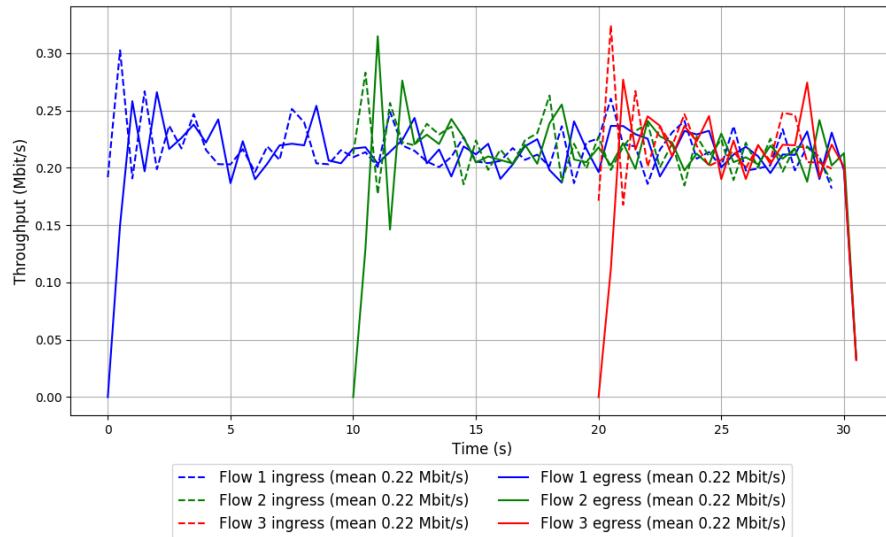


Run 4: Statistics of SCReAM

```
Start at: 2018-10-10 07:46:19
End at: 2018-10-10 07:46:49
Local clock offset: 0.198 ms
Remote clock offset: 0.193 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 140.162 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.182 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.689 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.046 ms
Loss rate: 0.35%
```

Run 4: Report of SCReAM — Data Link

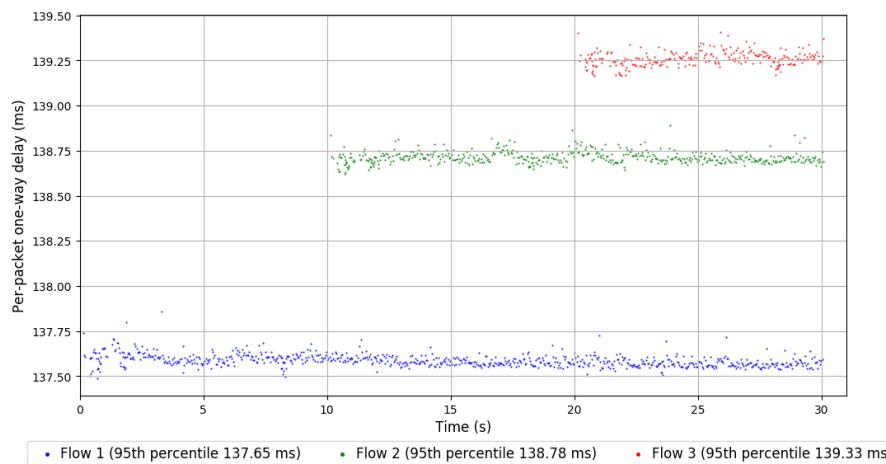
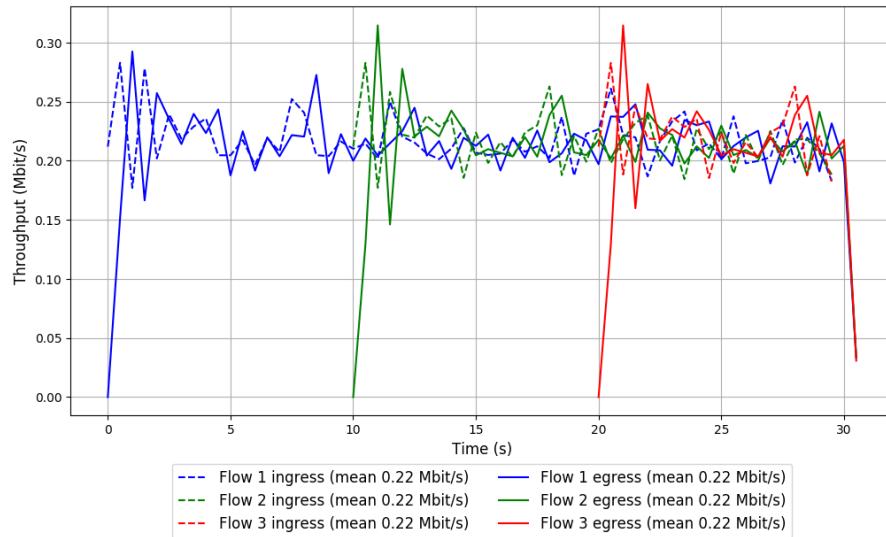


Run 5: Statistics of SCReAM

```
Start at: 2018-10-10 08:17:59
End at: 2018-10-10 08:18:29
Local clock offset: -0.191 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 139.280 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.647 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.779 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.328 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

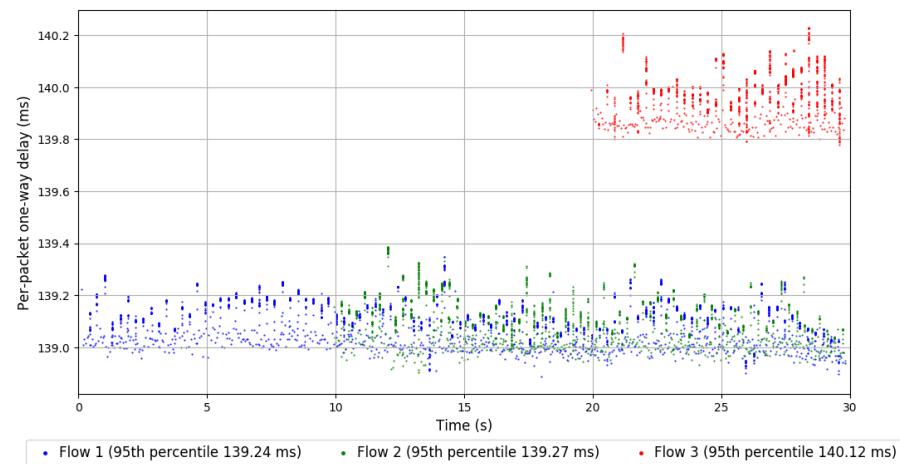
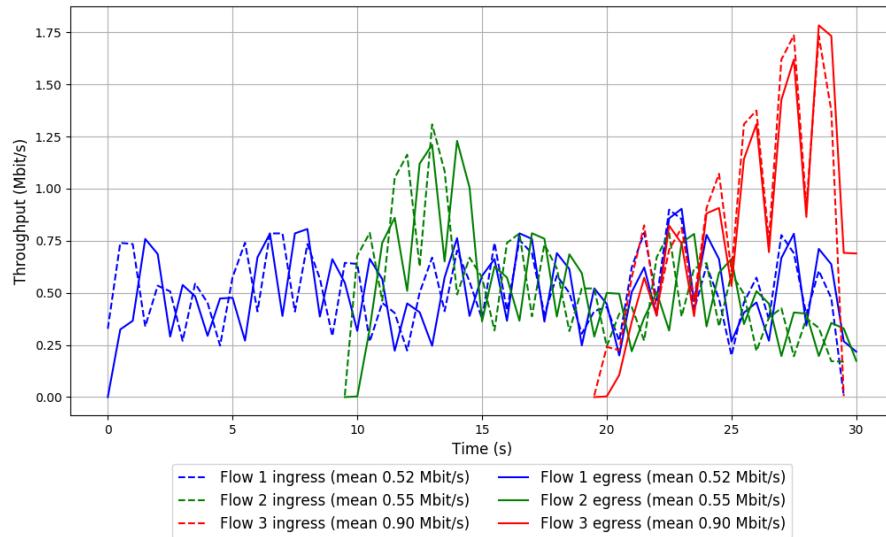


Run 1: Statistics of Sprout

```
Start at: 2018-10-10 06:03:40
End at: 2018-10-10 06:04:10
Local clock offset: 0.099 ms
Remote clock offset: -0.167 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 140.055 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 139.239 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 139.272 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 140.117 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

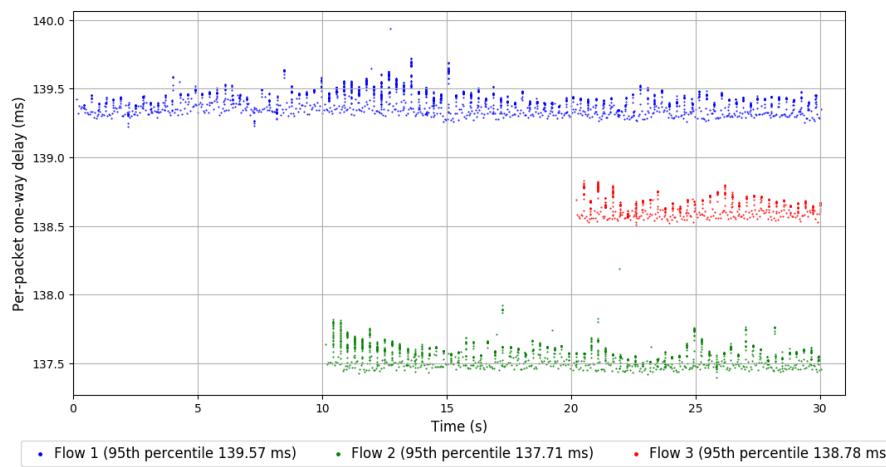
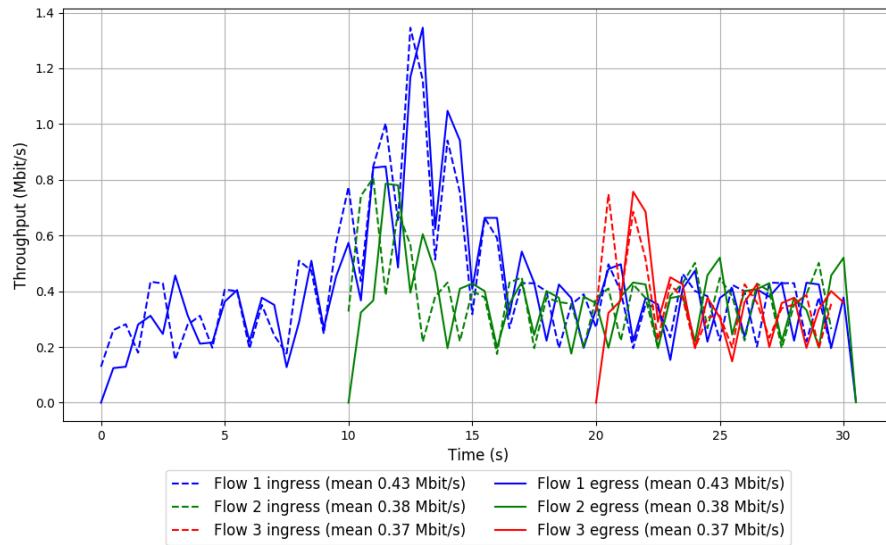


Run 2: Statistics of Sprout

```
Start at: 2018-10-10 06:34:56
End at: 2018-10-10 06:35:26
Local clock offset: -0.004 ms
Remote clock offset: -0.165 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 139.532 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 139.572 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 137.712 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 138.784 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

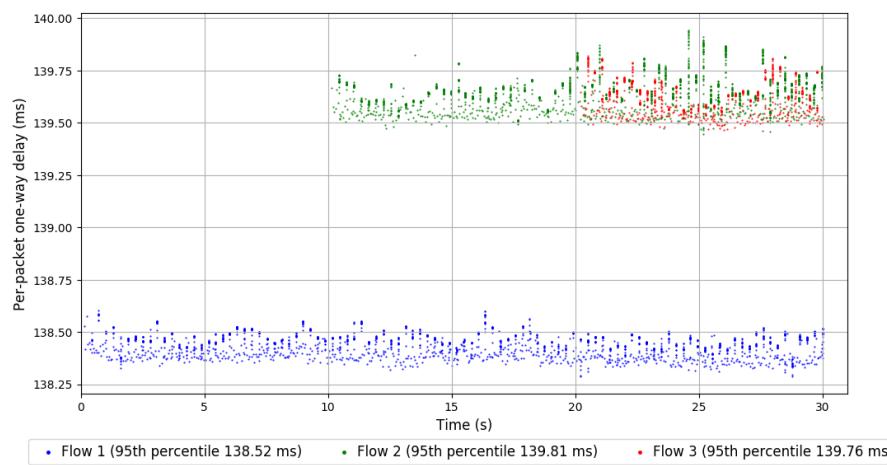
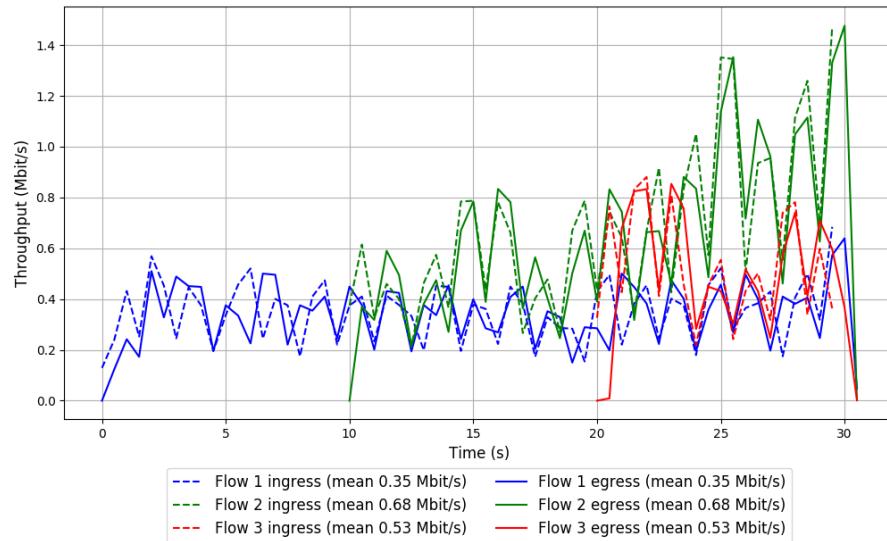


Run 3: Statistics of Sprout

```
Start at: 2018-10-10 07:06:22
End at: 2018-10-10 07:06:52
Local clock offset: 0.135 ms
Remote clock offset: 0.18 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 139.761 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 138.522 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 139.810 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 139.765 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

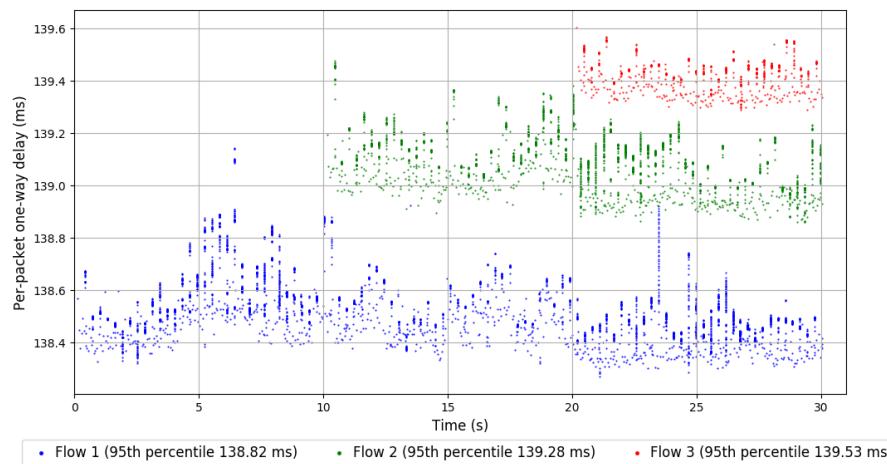
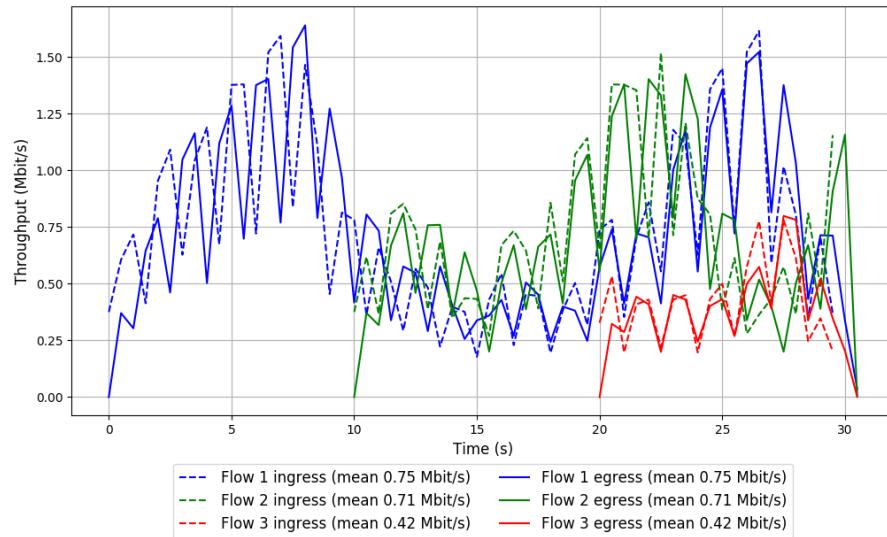


Run 4: Statistics of Sprout

```
Start at: 2018-10-10 07:38:01
End at: 2018-10-10 07:38:31
Local clock offset: 0.158 ms
Remote clock offset: -0.128 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 139.437 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 138.823 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 139.279 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 139.534 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

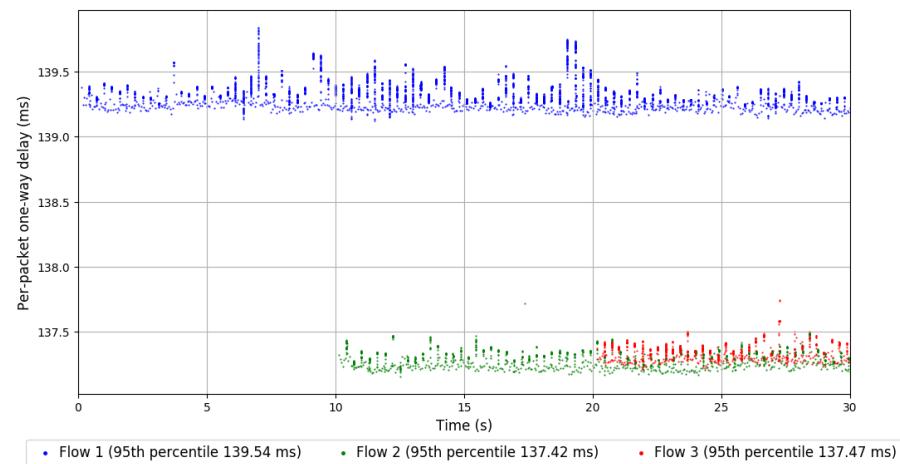
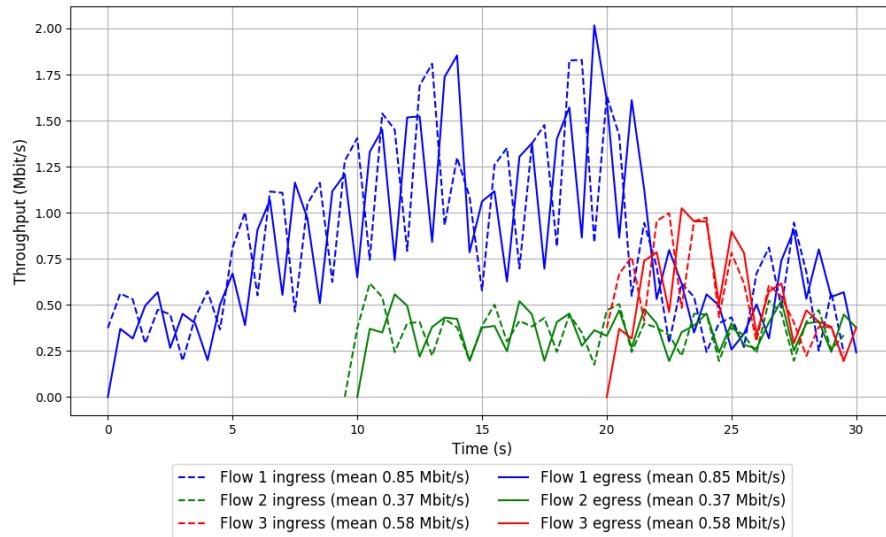


Run 5: Statistics of Sprout

```
Start at: 2018-10-10 08:09:36
End at: 2018-10-10 08:10:06
Local clock offset: 0.14 ms
Remote clock offset: -0.189 ms

# Below is generated by plot.py at 2018-10-10 10:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 139.491 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 139.541 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 137.419 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 137.466 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

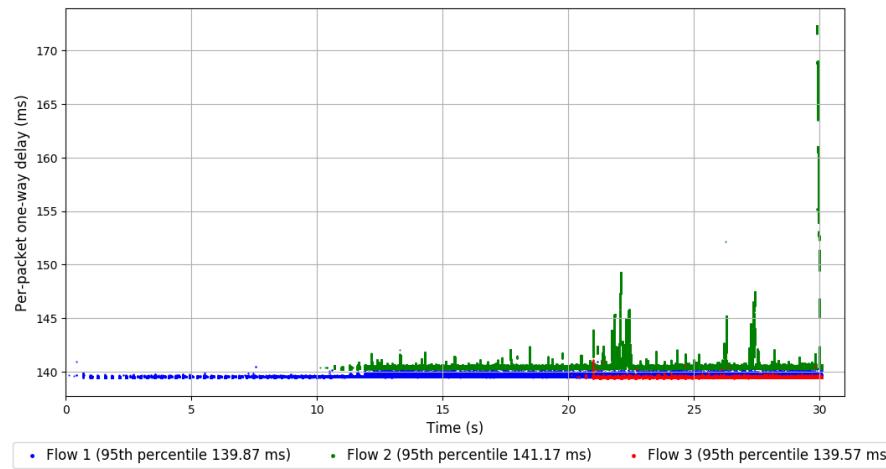
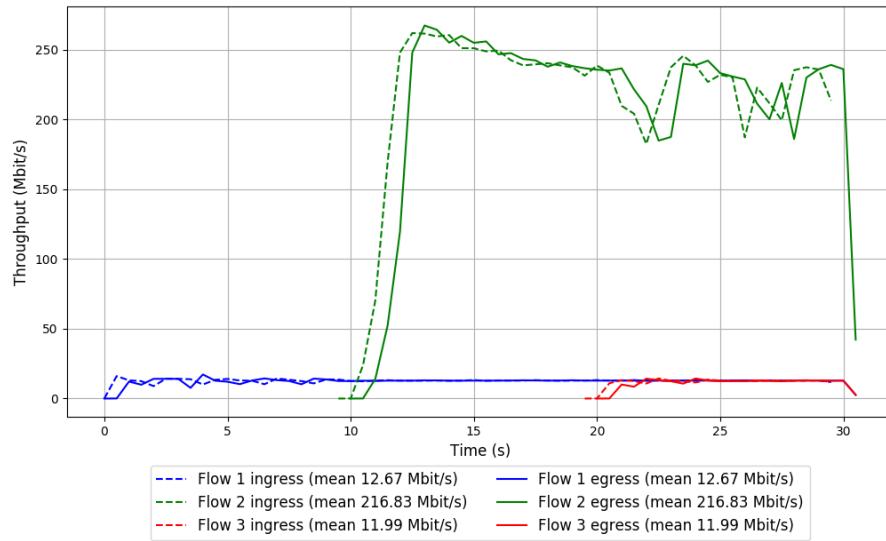


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-10 06:29:21
End at: 2018-10-10 06:29:51
Local clock offset: -0.006 ms
Remote clock offset: 0.219 ms

# Below is generated by plot.py at 2018-10-10 10:11:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 161.20 Mbit/s
95th percentile per-packet one-way delay: 140.980 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 12.67 Mbit/s
95th percentile per-packet one-way delay: 139.868 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 216.83 Mbit/s
95th percentile per-packet one-way delay: 141.167 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 139.575 ms
Loss rate: 0.00%
```

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

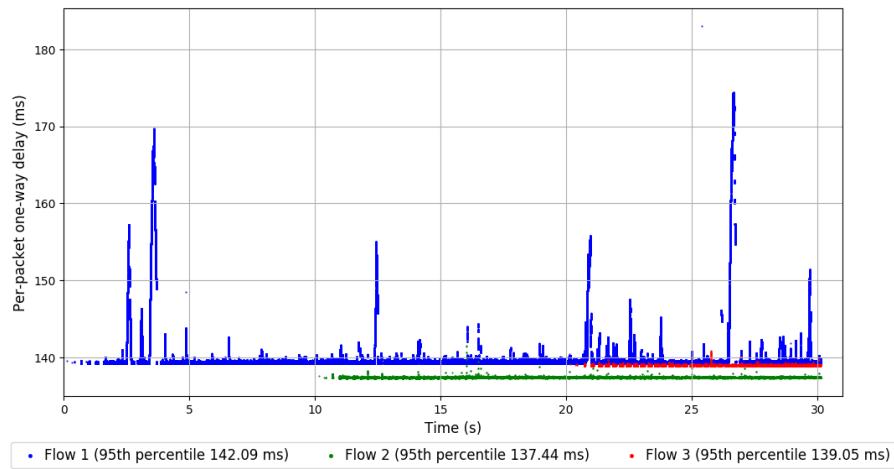
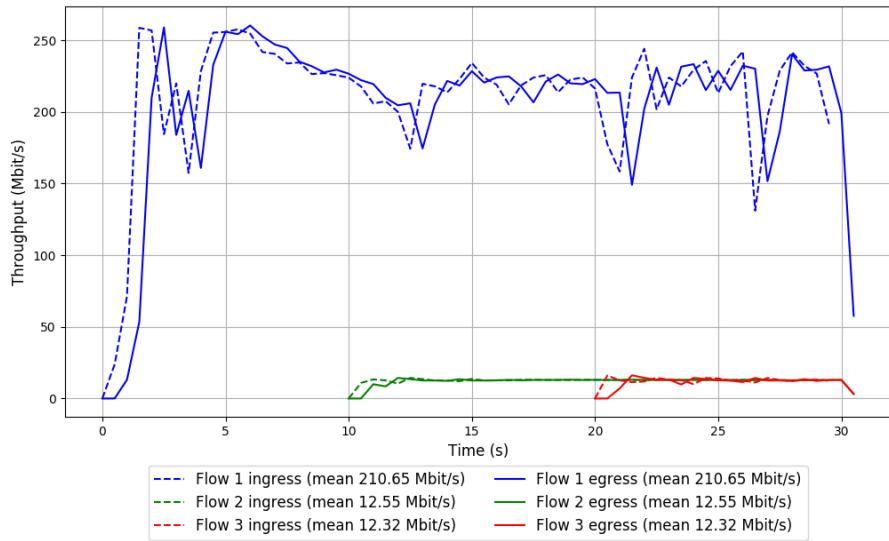


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-10 07:00:45
End at: 2018-10-10 07:01:15
Local clock offset: -0.015 ms
Remote clock offset: -0.21 ms

# Below is generated by plot.py at 2018-10-10 10:11:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 223.09 Mbit/s
95th percentile per-packet one-way delay: 141.795 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 210.65 Mbit/s
95th percentile per-packet one-way delay: 142.089 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 12.55 Mbit/s
95th percentile per-packet one-way delay: 137.439 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.32 Mbit/s
95th percentile per-packet one-way delay: 139.046 ms
Loss rate: 0.00%
```

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

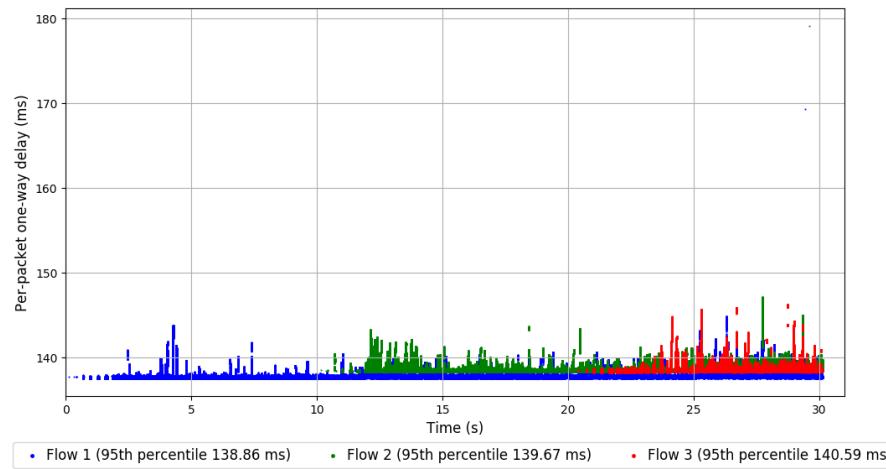
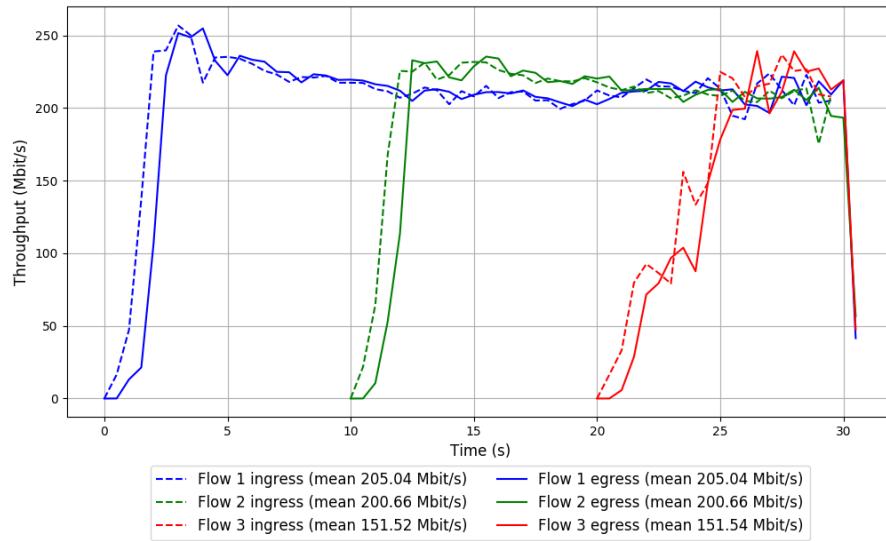


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-10 07:32:02
End at: 2018-10-10 07:32:32
Local clock offset: 0.081 ms
Remote clock offset: 0.2 ms

# Below is generated by plot.py at 2018-10-10 10:13:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.00 Mbit/s
95th percentile per-packet one-way delay: 139.441 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 205.04 Mbit/s
95th percentile per-packet one-way delay: 138.856 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 200.66 Mbit/s
95th percentile per-packet one-way delay: 139.672 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 151.54 Mbit/s
95th percentile per-packet one-way delay: 140.588 ms
Loss rate: 0.00%
```

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

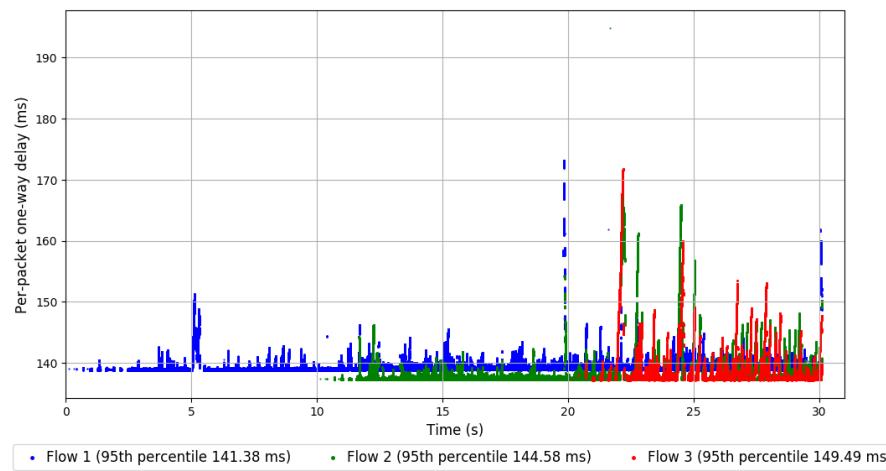
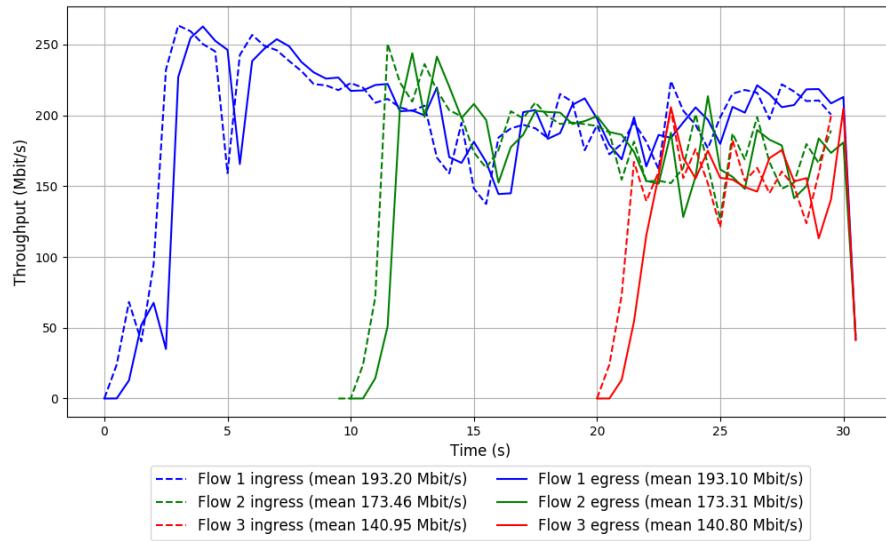


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-10 08:03:45
End at: 2018-10-10 08:04:16
Local clock offset: -0.234 ms
Remote clock offset: -0.536 ms

# Below is generated by plot.py at 2018-10-10 10:13:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 355.44 Mbit/s
95th percentile per-packet one-way delay: 143.768 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 193.10 Mbit/s
95th percentile per-packet one-way delay: 141.383 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 173.31 Mbit/s
95th percentile per-packet one-way delay: 144.578 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 140.80 Mbit/s
95th percentile per-packet one-way delay: 149.491 ms
Loss rate: 0.08%
```

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

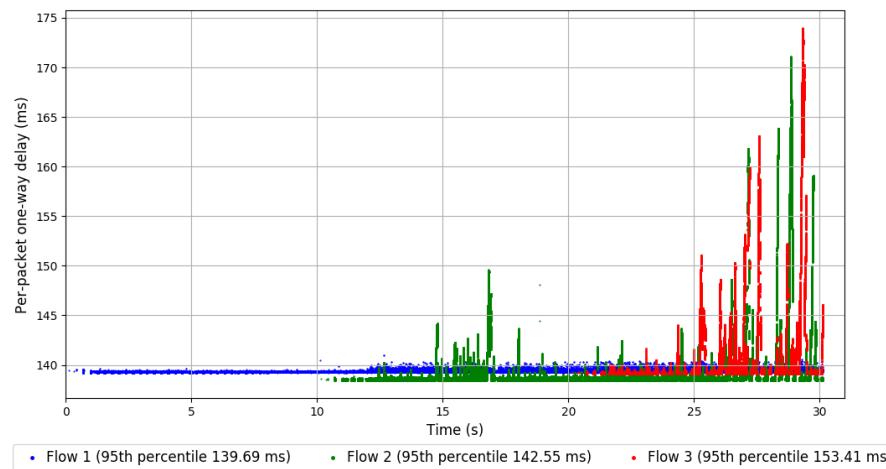
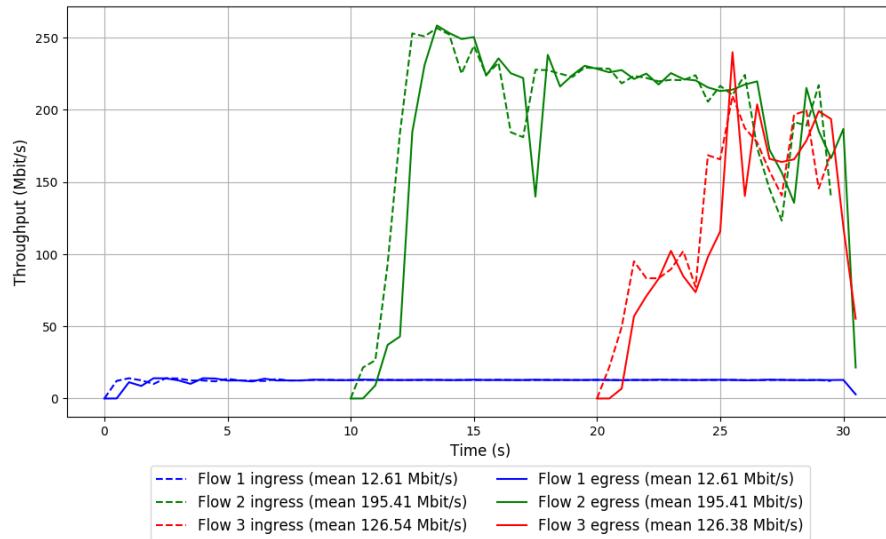


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-10 08:35:34
End at: 2018-10-10 08:36:04
Local clock offset: -0.195 ms
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2018-10-10 10:13:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 184.79 Mbit/s
95th percentile per-packet one-way delay: 145.117 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 139.688 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 195.41 Mbit/s
95th percentile per-packet one-way delay: 142.547 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 126.38 Mbit/s
95th percentile per-packet one-way delay: 153.406 ms
Loss rate: 0.13%
```

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

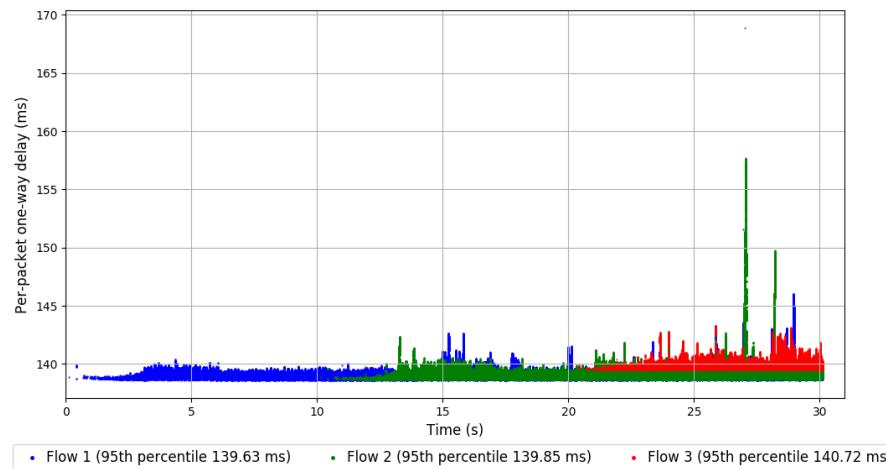
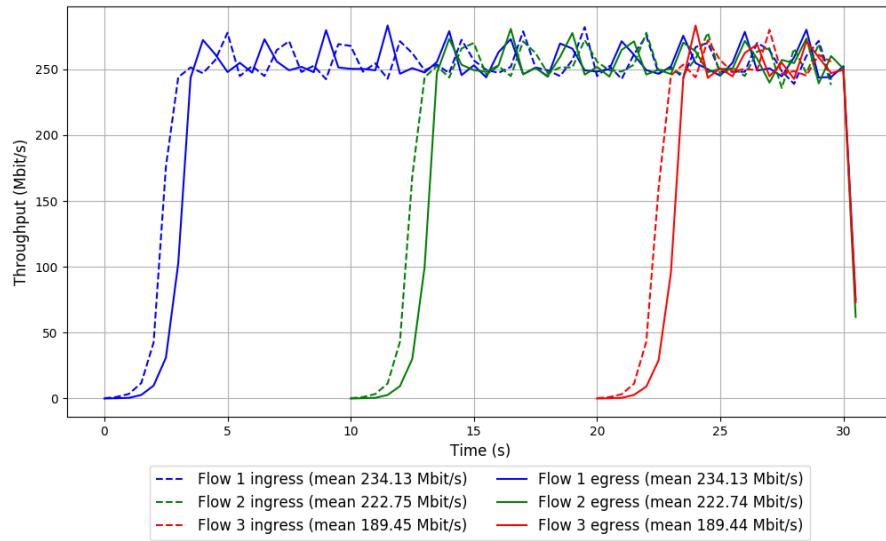


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-10 06:30:58
End at: 2018-10-10 06:31:28
Local clock offset: 0.065 ms
Remote clock offset: 0.218 ms

# Below is generated by plot.py at 2018-10-10 10:13:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.47 Mbit/s
95th percentile per-packet one-way delay: 140.175 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 234.13 Mbit/s
95th percentile per-packet one-way delay: 139.633 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 222.74 Mbit/s
95th percentile per-packet one-way delay: 139.851 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 189.44 Mbit/s
95th percentile per-packet one-way delay: 140.717 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

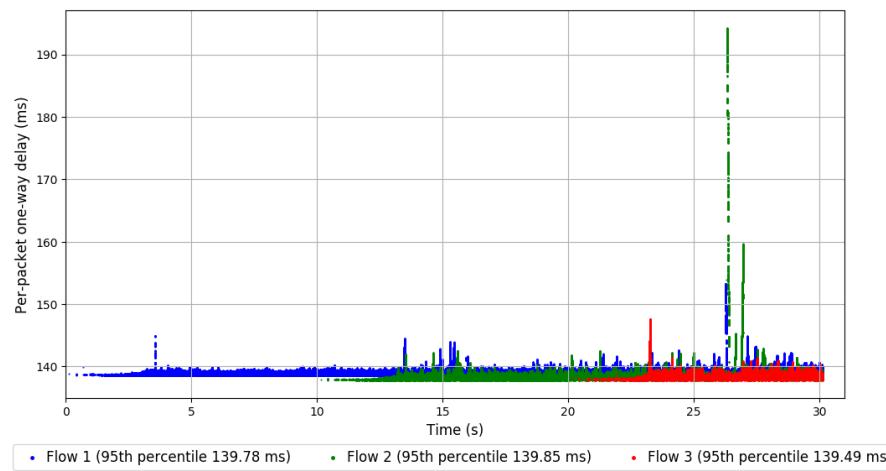
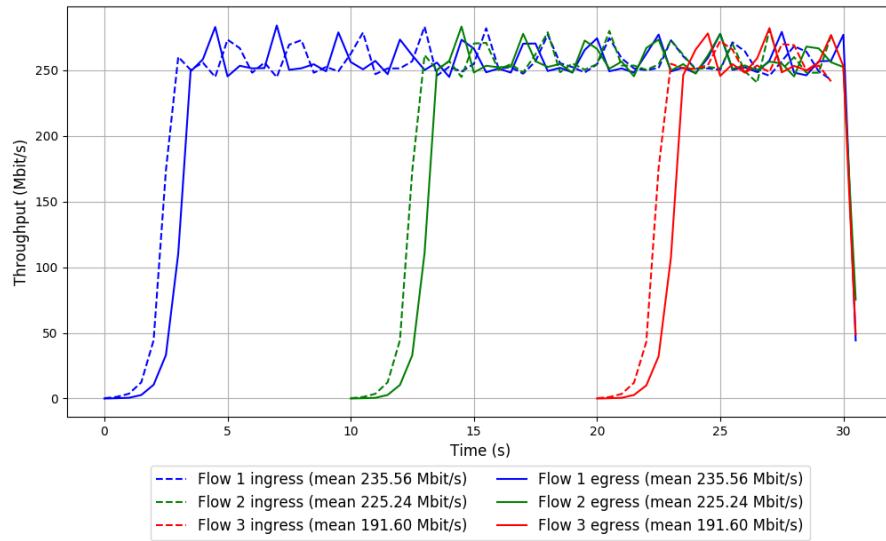


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-10 07:02:28
End at: 2018-10-10 07:02:58
Local clock offset: -0.165 ms
Remote clock offset: 0.149 ms

# Below is generated by plot.py at 2018-10-10 10:14:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 449.29 Mbit/s
95th percentile per-packet one-way delay: 139.752 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 235.56 Mbit/s
95th percentile per-packet one-way delay: 139.779 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 225.24 Mbit/s
95th percentile per-packet one-way delay: 139.852 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.60 Mbit/s
95th percentile per-packet one-way delay: 139.491 ms
Loss rate: 0.00%
```

Run 2: Report of TCP Vegas — Data Link

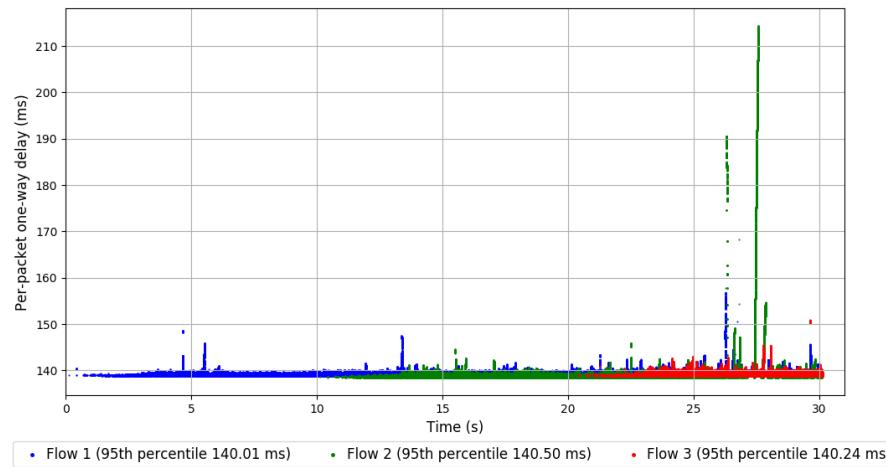
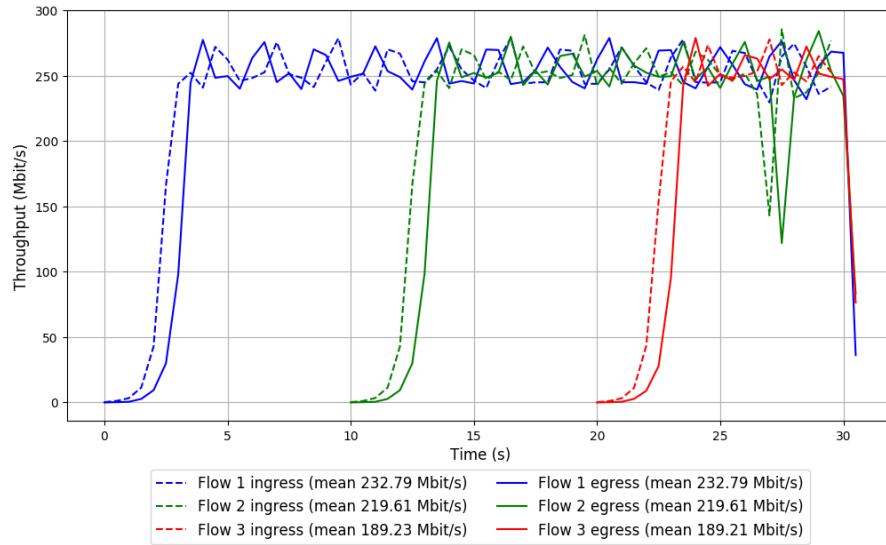


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-10 07:34:04
End at: 2018-10-10 07:34:34
Local clock offset: 0.141 ms
Remote clock offset: -0.521 ms

# Below is generated by plot.py at 2018-10-10 10:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 441.80 Mbit/s
95th percentile per-packet one-way delay: 140.168 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 232.79 Mbit/s
95th percentile per-packet one-way delay: 140.015 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 219.61 Mbit/s
95th percentile per-packet one-way delay: 140.505 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 189.21 Mbit/s
95th percentile per-packet one-way delay: 140.235 ms
Loss rate: 0.00%
```

Run 3: Report of TCP Vegas — Data Link

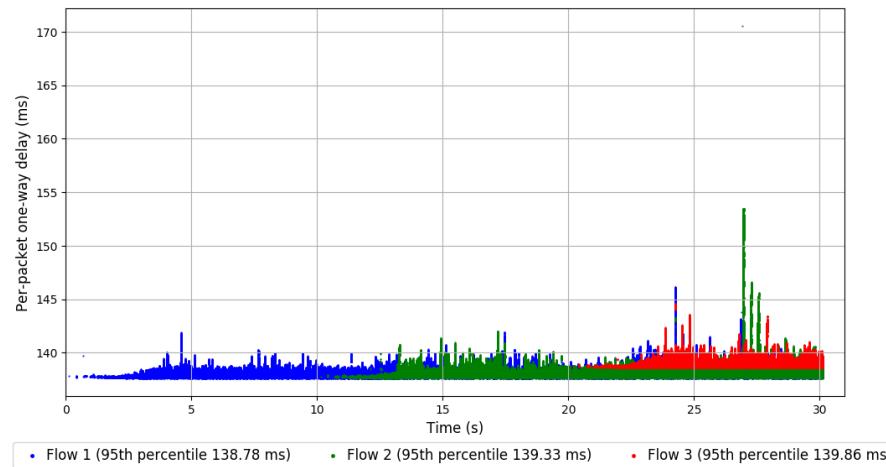
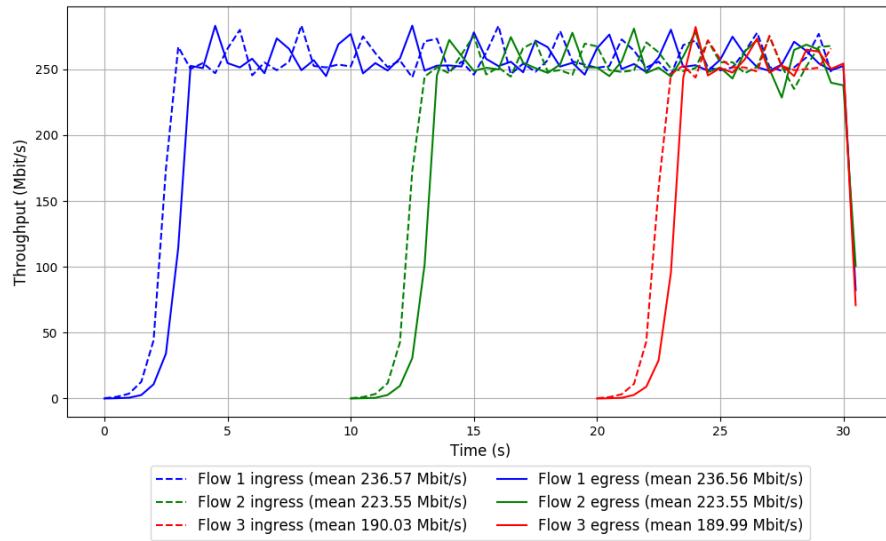


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-10 08:05:44
End at: 2018-10-10 08:06:14
Local clock offset: 0.001 ms
Remote clock offset: -0.529 ms

# Below is generated by plot.py at 2018-10-10 10:16:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 448.62 Mbit/s
95th percentile per-packet one-way delay: 139.362 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 236.56 Mbit/s
95th percentile per-packet one-way delay: 138.775 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 223.55 Mbit/s
95th percentile per-packet one-way delay: 139.329 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 189.99 Mbit/s
95th percentile per-packet one-way delay: 139.863 ms
Loss rate: 0.02%
```

Run 4: Report of TCP Vegas — Data Link

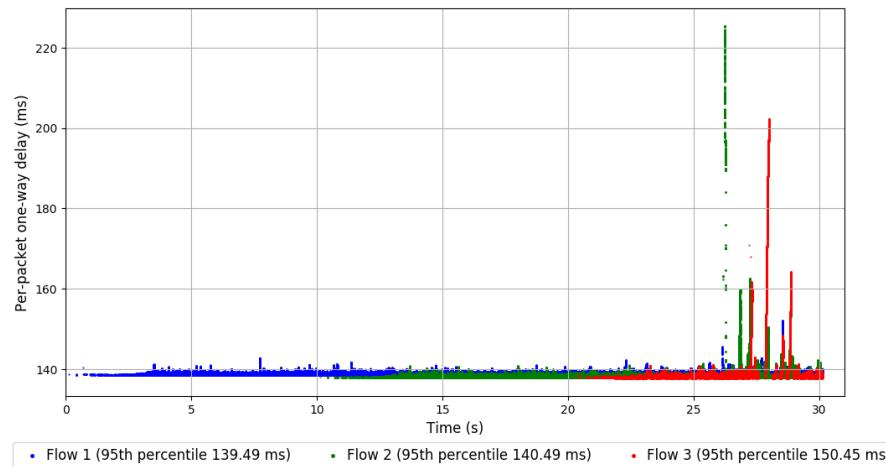
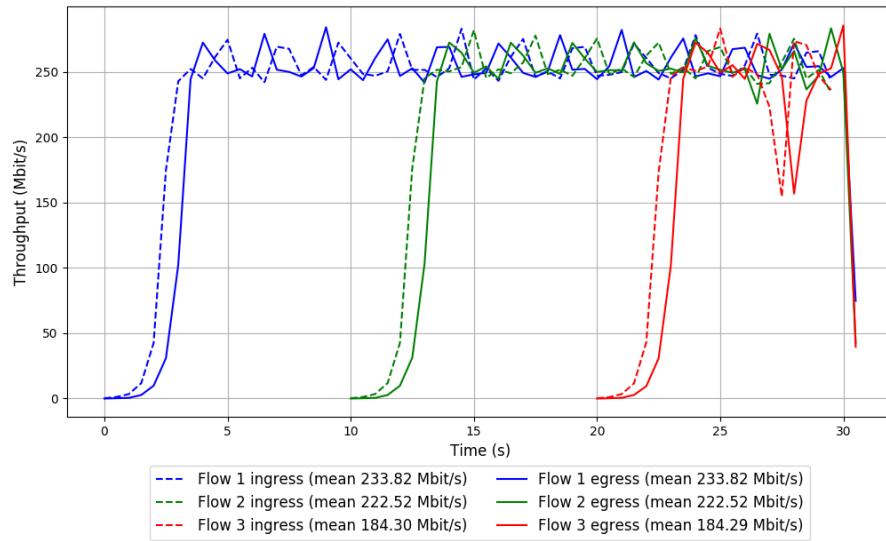


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-10 08:37:14
End at: 2018-10-10 08:37:44
Local clock offset: 0.04 ms
Remote clock offset: -0.547 ms

# Below is generated by plot.py at 2018-10-10 10:17:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 443.30 Mbit/s
95th percentile per-packet one-way delay: 139.854 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 233.82 Mbit/s
95th percentile per-packet one-way delay: 139.492 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 222.52 Mbit/s
95th percentile per-packet one-way delay: 140.493 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 184.29 Mbit/s
95th percentile per-packet one-way delay: 150.450 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Vegas — Data Link

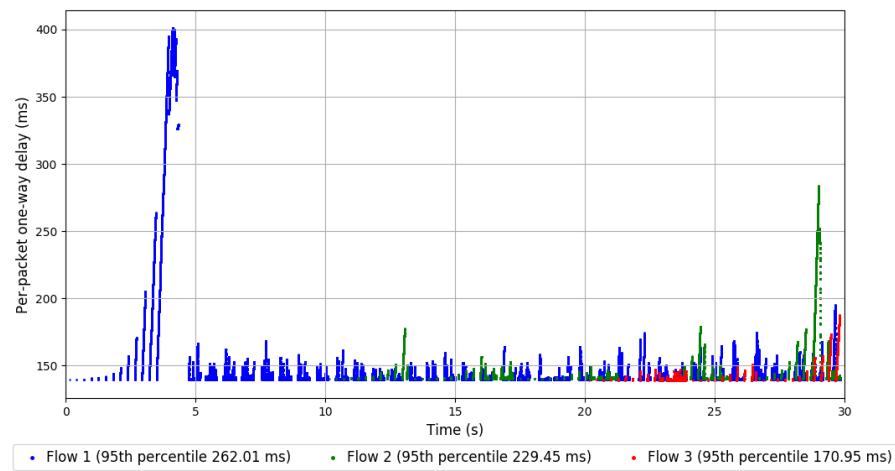
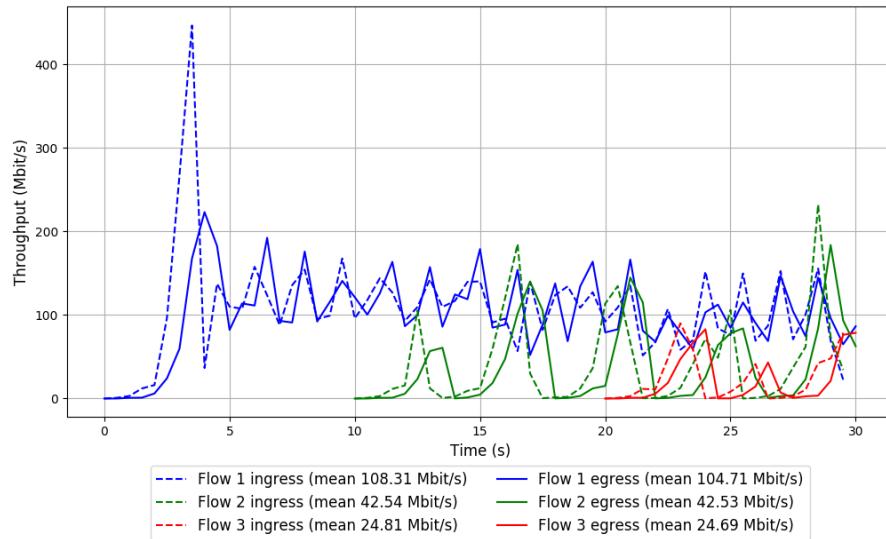


Run 1: Statistics of Verus

```
Start at: 2018-10-10 06:07:08
End at: 2018-10-10 06:07:38
Local clock offset: 0.006 ms
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2018-10-10 10:17:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 140.92 Mbit/s
95th percentile per-packet one-way delay: 241.494 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 104.71 Mbit/s
95th percentile per-packet one-way delay: 262.011 ms
Loss rate: 3.33%
-- Flow 2:
Average throughput: 42.53 Mbit/s
95th percentile per-packet one-way delay: 229.453 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 24.69 Mbit/s
95th percentile per-packet one-way delay: 170.946 ms
Loss rate: 0.00%
```

Run 1: Report of Verus — Data Link

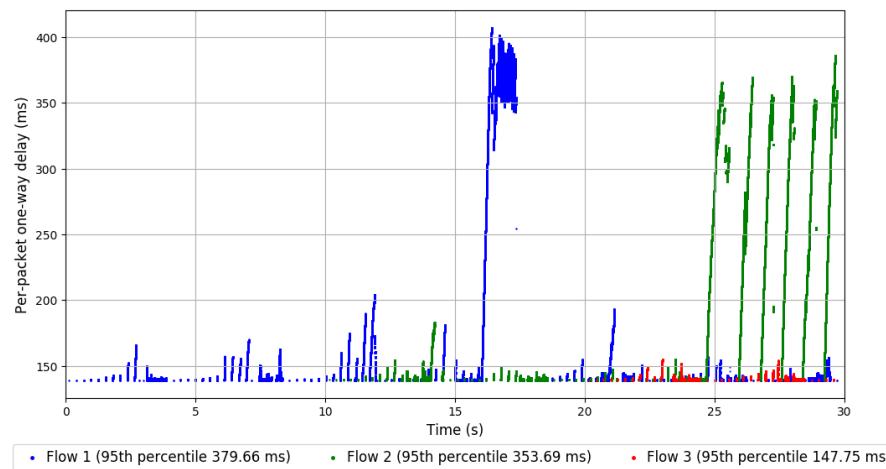
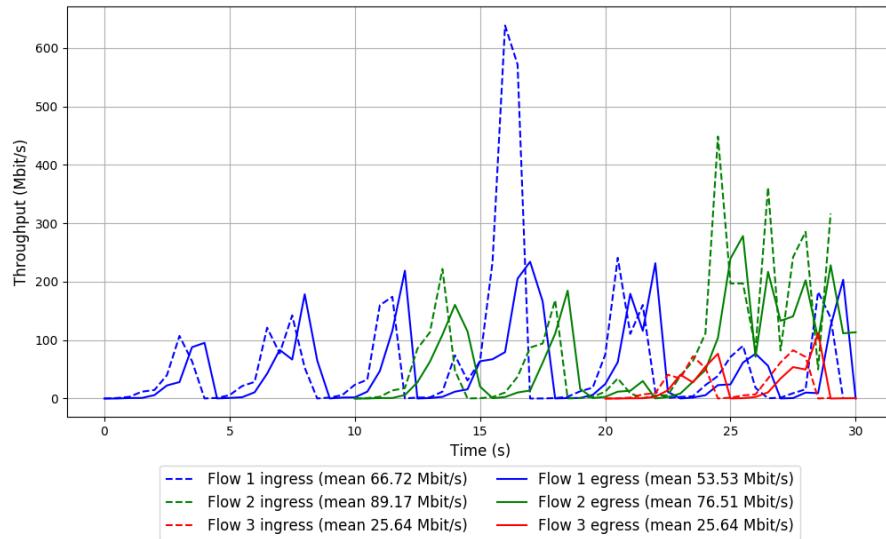


Run 2: Statistics of Verus

```
Start at: 2018-10-10 06:38:24
End at: 2018-10-10 06:38:54
Local clock offset: 0.08 ms
Remote clock offset: -0.187 ms

# Below is generated by plot.py at 2018-10-10 10:17:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.28 Mbit/s
95th percentile per-packet one-way delay: 365.812 ms
Loss rate: 15.74%
-- Flow 1:
Average throughput: 53.53 Mbit/s
95th percentile per-packet one-way delay: 379.660 ms
Loss rate: 19.78%
-- Flow 2:
Average throughput: 76.51 Mbit/s
95th percentile per-packet one-way delay: 353.687 ms
Loss rate: 13.32%
-- Flow 3:
Average throughput: 25.64 Mbit/s
95th percentile per-packet one-way delay: 147.755 ms
Loss rate: 0.00%
```

Run 2: Report of Verus — Data Link

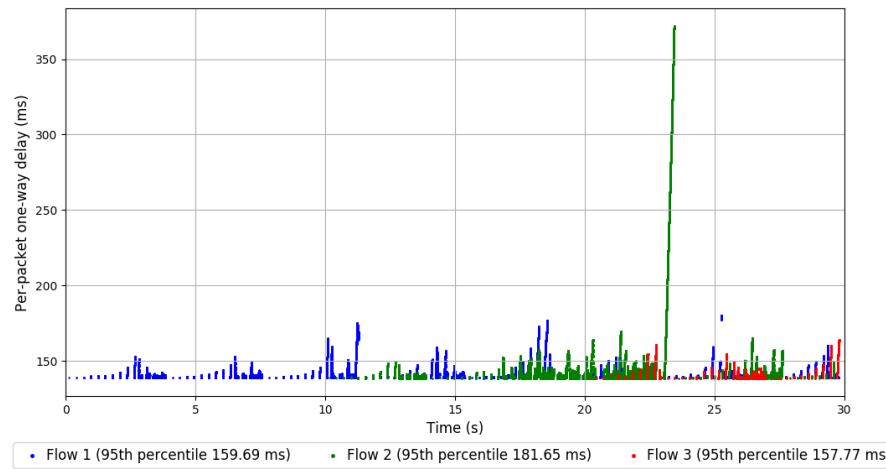
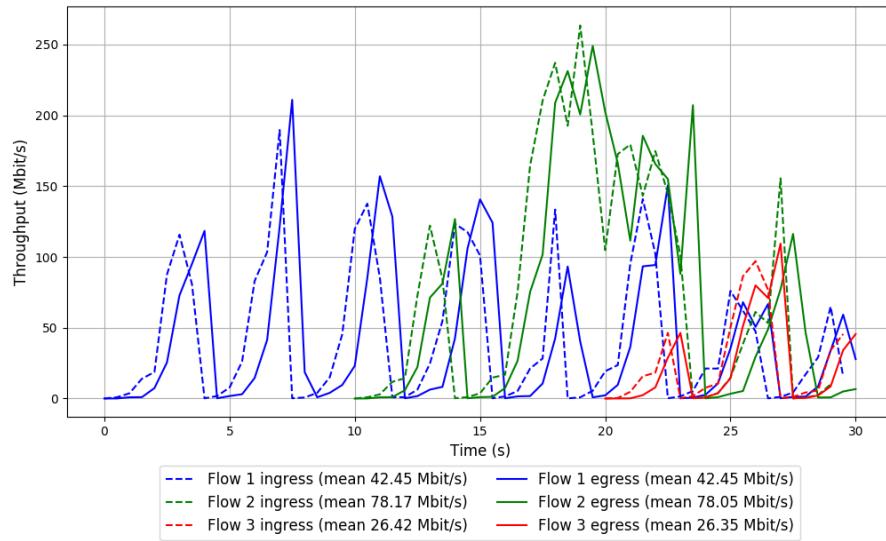


Run 3: Statistics of Verus

```
Start at: 2018-10-10 07:09:41
End at: 2018-10-10 07:10:11
Local clock offset: 0.001 ms
Remote clock offset: -0.525 ms

# Below is generated by plot.py at 2018-10-10 10:17:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 102.16 Mbit/s
95th percentile per-packet one-way delay: 163.296 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 42.45 Mbit/s
95th percentile per-packet one-way delay: 159.692 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 78.05 Mbit/s
95th percentile per-packet one-way delay: 181.654 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 26.35 Mbit/s
95th percentile per-packet one-way delay: 157.766 ms
Loss rate: 0.00%
```

Run 3: Report of Verus — Data Link

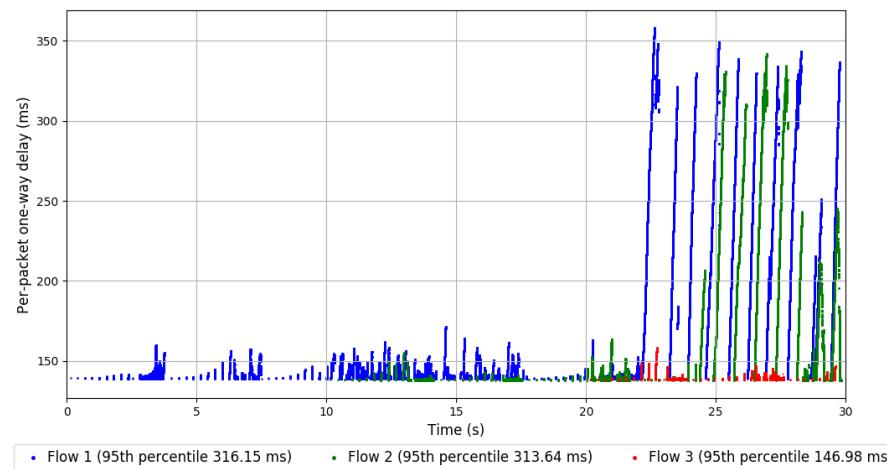
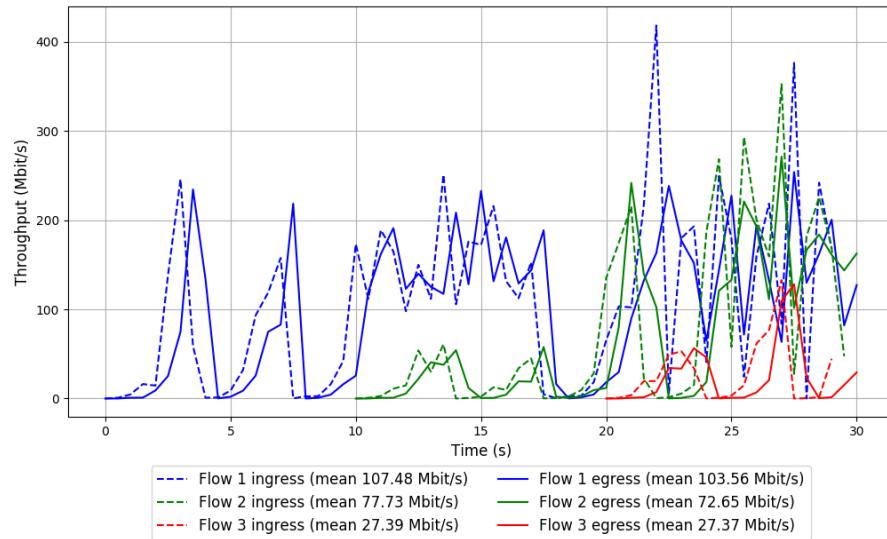


Run 4: Statistics of Verus

```
Start at: 2018-10-10 07:41:23
End at: 2018-10-10 07:41:53
Local clock offset: 0.142 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2018-10-10 10:19:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 160.18 Mbit/s
95th percentile per-packet one-way delay: 314.239 ms
Loss rate: 3.94%
-- Flow 1:
Average throughput: 103.56 Mbit/s
95th percentile per-packet one-way delay: 316.150 ms
Loss rate: 3.01%
-- Flow 2:
Average throughput: 72.65 Mbit/s
95th percentile per-packet one-way delay: 313.639 ms
Loss rate: 6.54%
-- Flow 3:
Average throughput: 27.37 Mbit/s
95th percentile per-packet one-way delay: 146.981 ms
Loss rate: 0.00%
```

Run 4: Report of Verus — Data Link

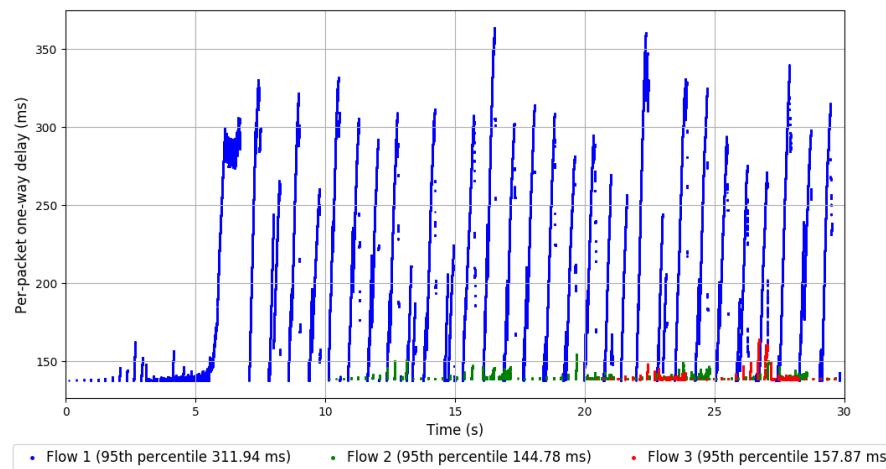
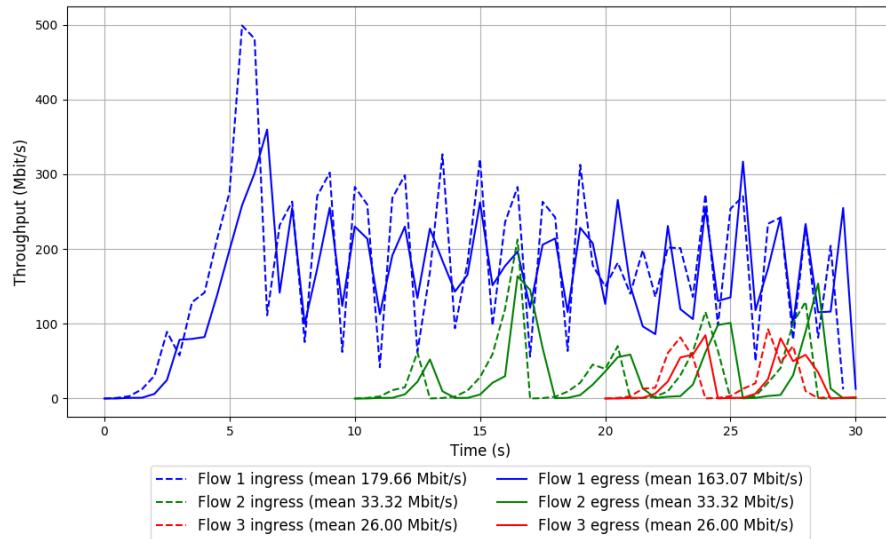


Run 5: Statistics of Verus

```
Start at: 2018-10-10 08:12:59
End at: 2018-10-10 08:13:29
Local clock offset: -0.016 ms
Remote clock offset: 0.211 ms

# Below is generated by plot.py at 2018-10-10 10:19:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 193.24 Mbit/s
95th percentile per-packet one-way delay: 307.786 ms
Loss rate: 7.90%
-- Flow 1:
Average throughput: 163.07 Mbit/s
95th percentile per-packet one-way delay: 311.936 ms
Loss rate: 9.23%
-- Flow 2:
Average throughput: 33.32 Mbit/s
95th percentile per-packet one-way delay: 144.778 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.00 Mbit/s
95th percentile per-packet one-way delay: 157.870 ms
Loss rate: 0.00%
```

Run 5: Report of Verus — Data Link

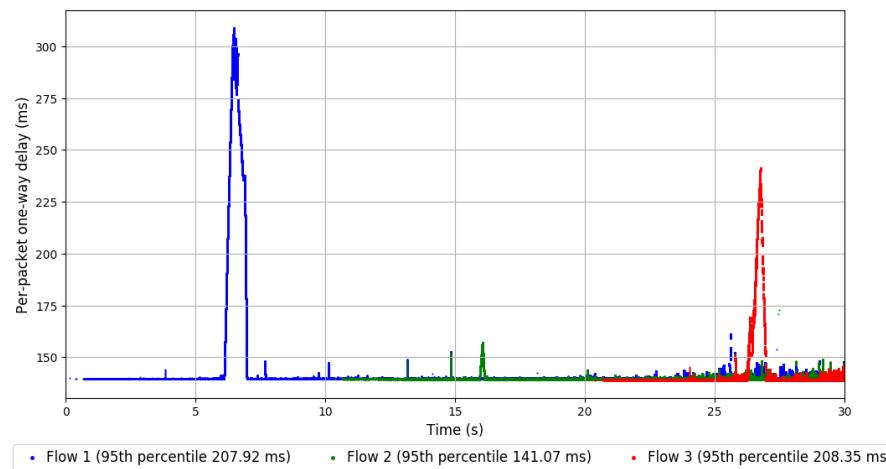
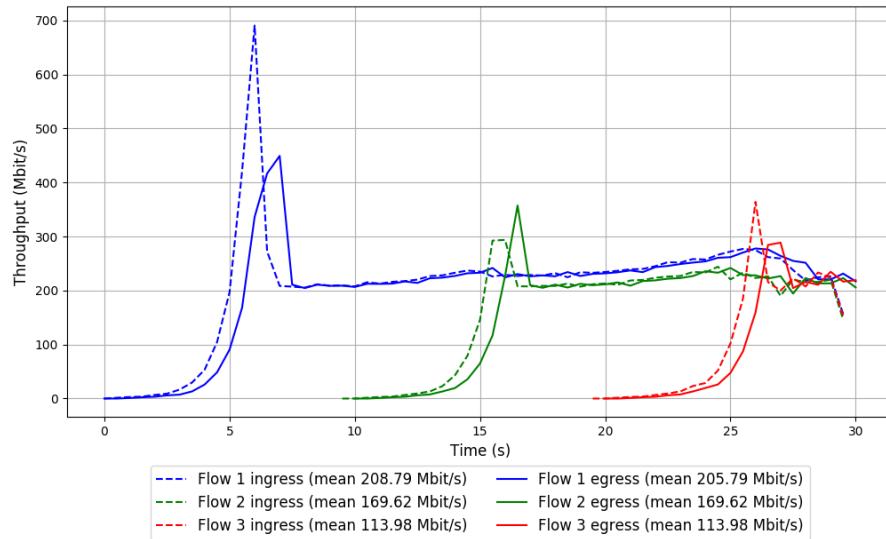


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-10-10 06:17:17
End at: 2018-10-10 06:17:47
Local clock offset: 0.086 ms
Remote clock offset: -0.162 ms

# Below is generated by plot.py at 2018-10-10 10:21:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 356.40 Mbit/s
95th percentile per-packet one-way delay: 161.406 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 205.79 Mbit/s
95th percentile per-packet one-way delay: 207.918 ms
Loss rate: 1.44%
-- Flow 2:
Average throughput: 169.62 Mbit/s
95th percentile per-packet one-way delay: 141.071 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 113.98 Mbit/s
95th percentile per-packet one-way delay: 208.346 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

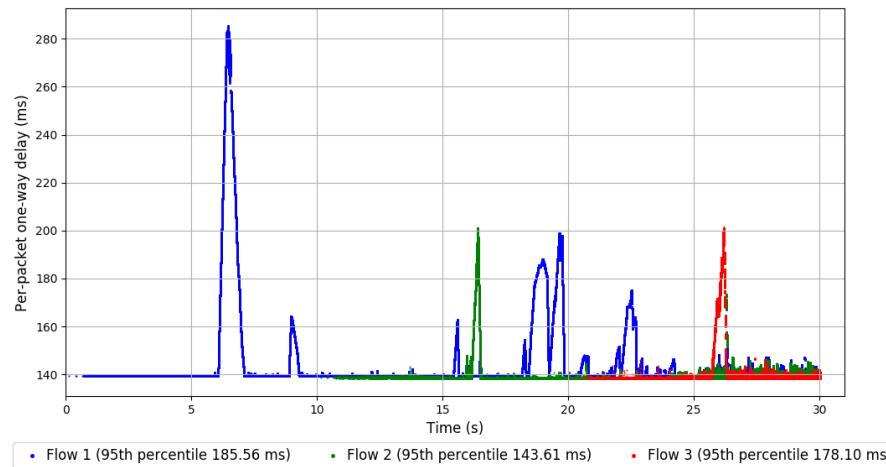
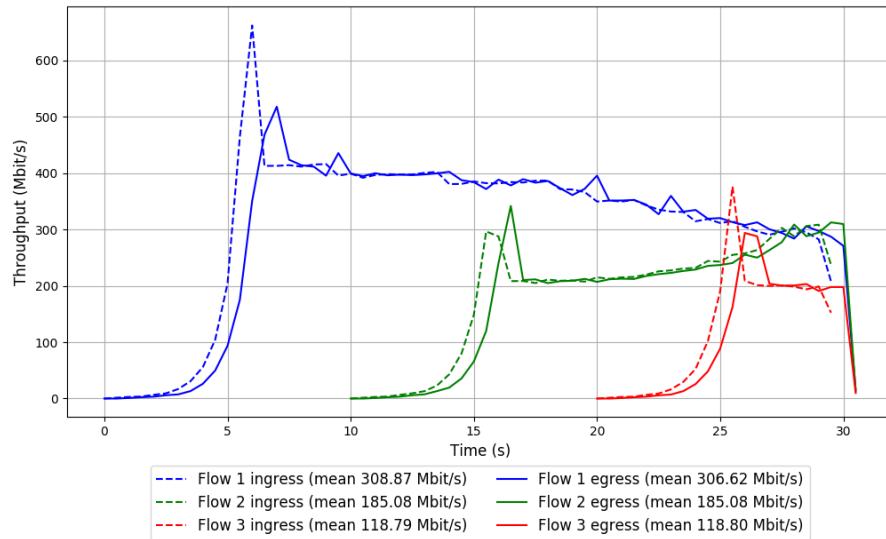


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-10 06:48:34
End at: 2018-10-10 06:49:04
Local clock offset: -0.215 ms
Remote clock offset: -0.22 ms

# Below is generated by plot.py at 2018-10-10 10:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 468.92 Mbit/s
95th percentile per-packet one-way delay: 180.062 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 306.62 Mbit/s
95th percentile per-packet one-way delay: 185.564 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 185.08 Mbit/s
95th percentile per-packet one-way delay: 143.610 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 118.80 Mbit/s
95th percentile per-packet one-way delay: 178.104 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Vivace — Data Link

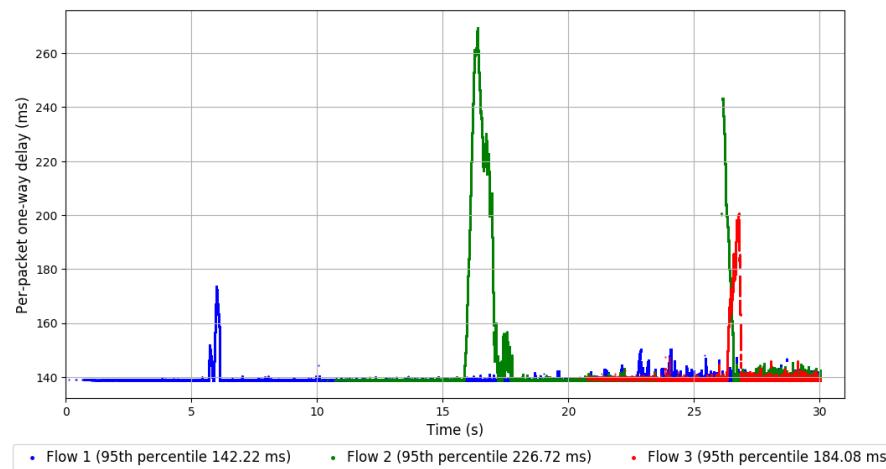
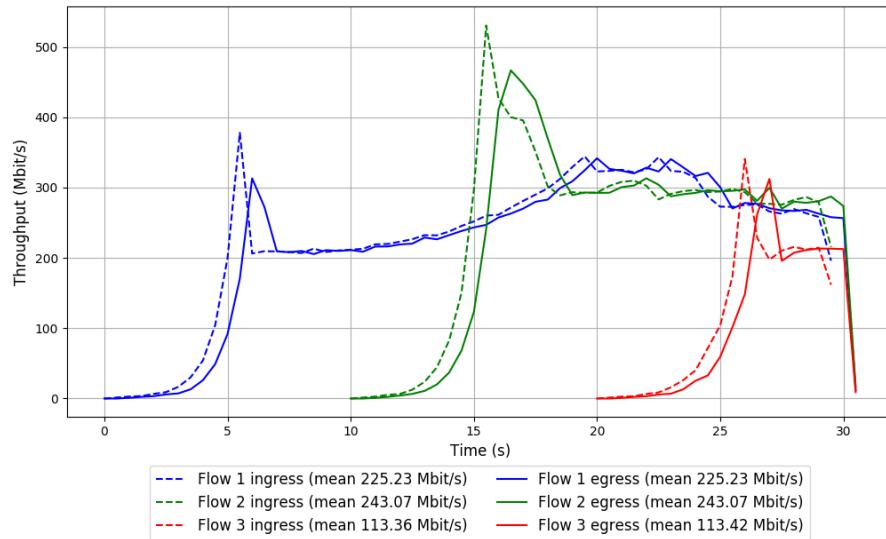


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-10 07:19:53
End at: 2018-10-10 07:20:23
Local clock offset: -0.266 ms
Remote clock offset: -0.521 ms

# Below is generated by plot.py at 2018-10-10 10:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.28 Mbit/s
95th percentile per-packet one-way delay: 178.128 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 225.23 Mbit/s
95th percentile per-packet one-way delay: 142.219 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 243.07 Mbit/s
95th percentile per-packet one-way delay: 226.725 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 113.42 Mbit/s
95th percentile per-packet one-way delay: 184.078 ms
Loss rate: 0.00%
```

Run 3: Report of PCC-Vivace — Data Link

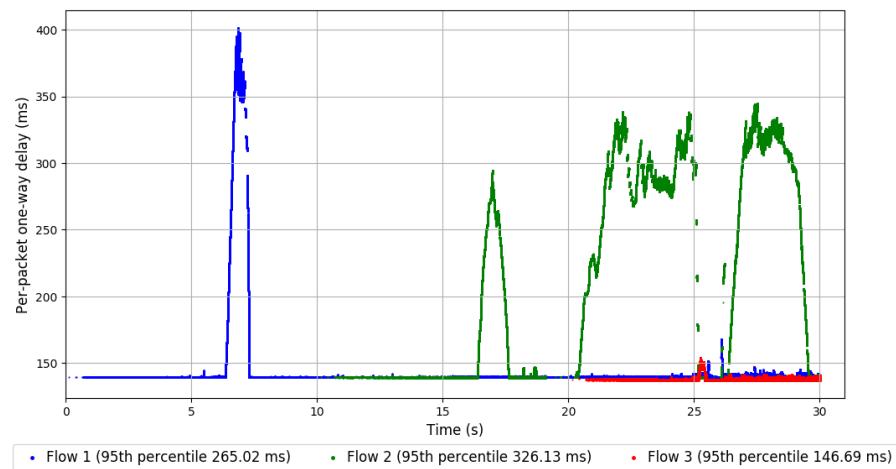
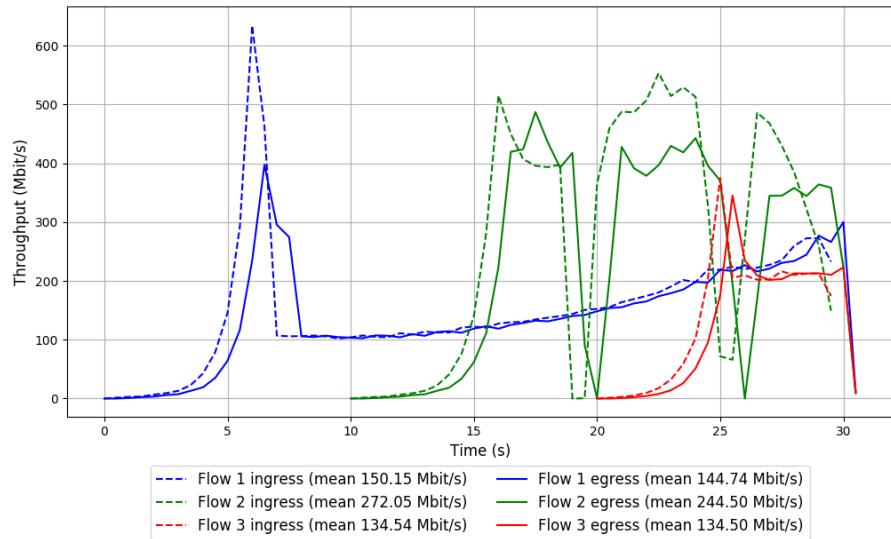


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-10 07:51:40
End at: 2018-10-10 07:52:10
Local clock offset: 0.105 ms
Remote clock offset: -0.184 ms

# Below is generated by plot.py at 2018-10-10 10:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.68 Mbit/s
95th percentile per-packet one-way delay: 323.399 ms
Loss rate: 6.33%
-- Flow 1:
Average throughput: 144.74 Mbit/s
95th percentile per-packet one-way delay: 265.019 ms
Loss rate: 3.61%
-- Flow 2:
Average throughput: 244.50 Mbit/s
95th percentile per-packet one-way delay: 326.135 ms
Loss rate: 10.14%
-- Flow 3:
Average throughput: 134.50 Mbit/s
95th percentile per-packet one-way delay: 146.688 ms
Loss rate: 0.03%
```

Run 4: Report of PCC-Vivace — Data Link

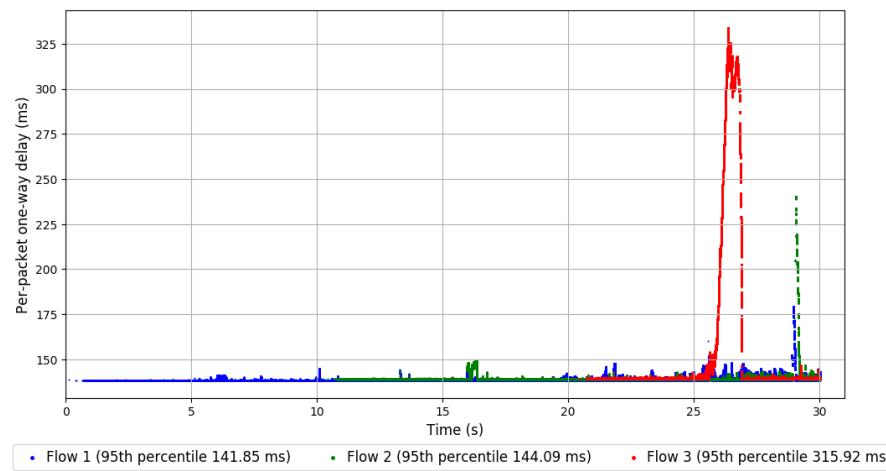
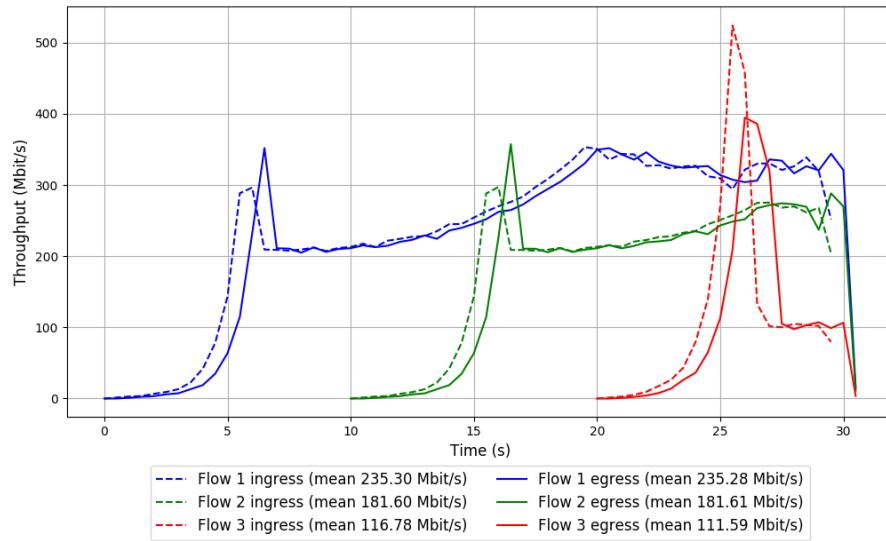


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-10 08:23:20
End at: 2018-10-10 08:23:50
Local clock offset: 0.054 ms
Remote clock offset: -0.207 ms

# Below is generated by plot.py at 2018-10-10 10:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.83 Mbit/s
95th percentile per-packet one-way delay: 148.208 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 235.28 Mbit/s
95th percentile per-packet one-way delay: 141.848 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 181.61 Mbit/s
95th percentile per-packet one-way delay: 144.088 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 111.59 Mbit/s
95th percentile per-packet one-way delay: 315.921 ms
Loss rate: 4.44%
```

Run 5: Report of PCC-Vivace — Data Link

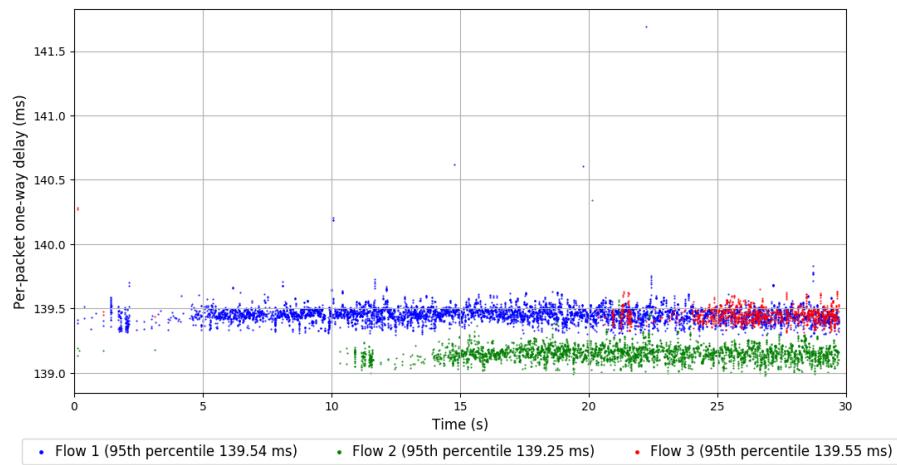
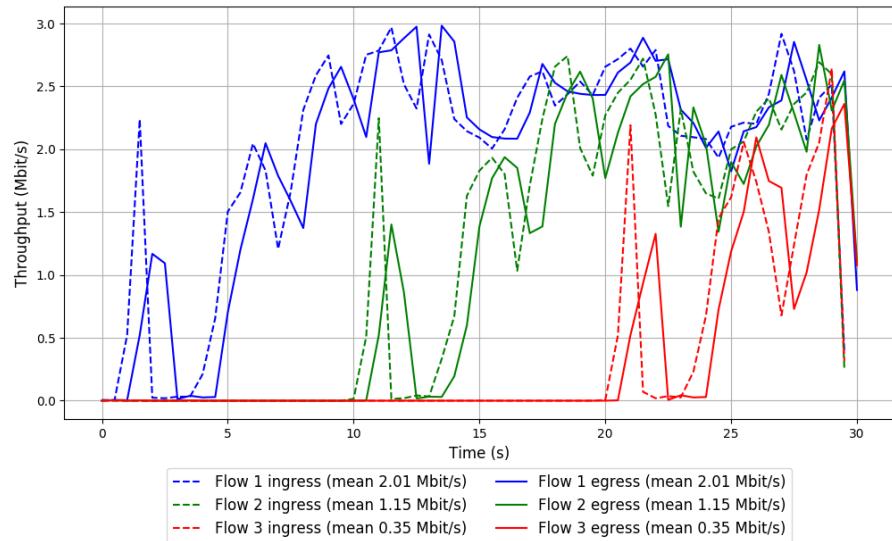


Run 1: Statistics of WebRTC media

```
Start at: 2018-10-10 06:28:02
End at: 2018-10-10 06:28:32
Local clock offset: 0.174 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2018-10-10 10:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 139.530 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 139.543 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 139.247 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 139.553 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

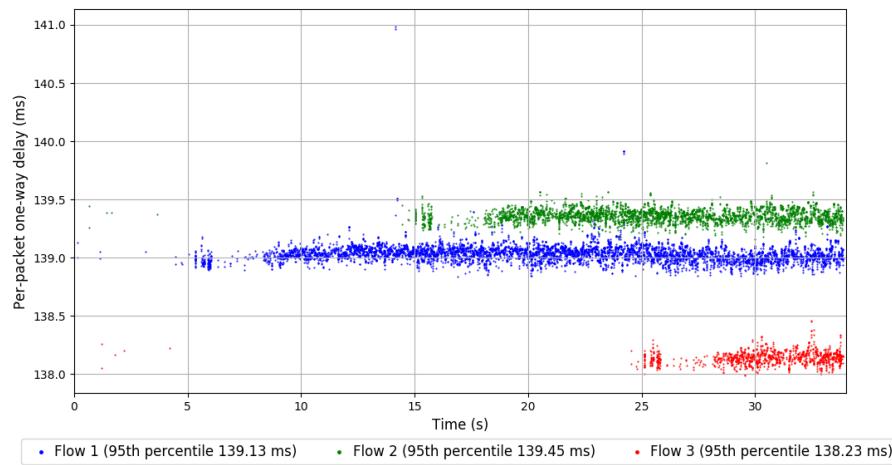
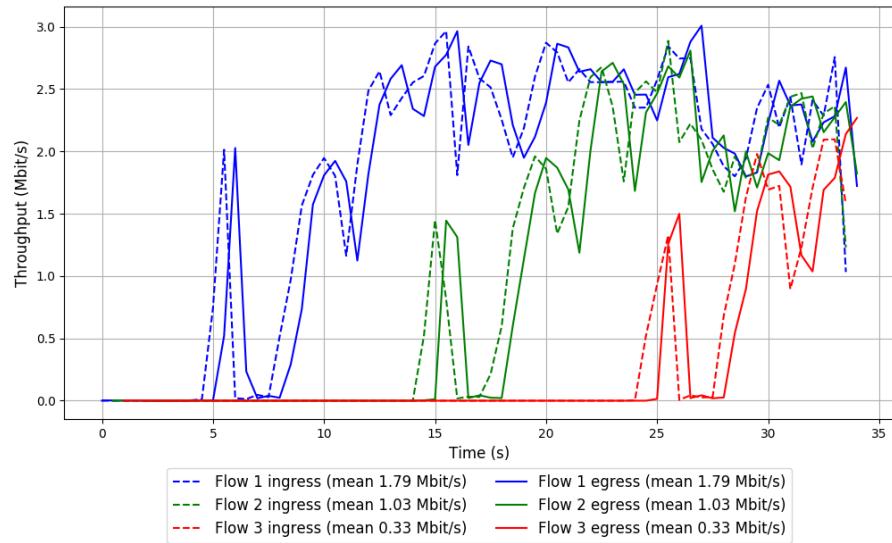


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-10 06:59:27
End at: 2018-10-10 06:59:57
Local clock offset: -0.012 ms
Remote clock offset: -0.227 ms

# Below is generated by plot.py at 2018-10-10 10:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 139.414 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 139.128 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 139.449 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 138.229 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

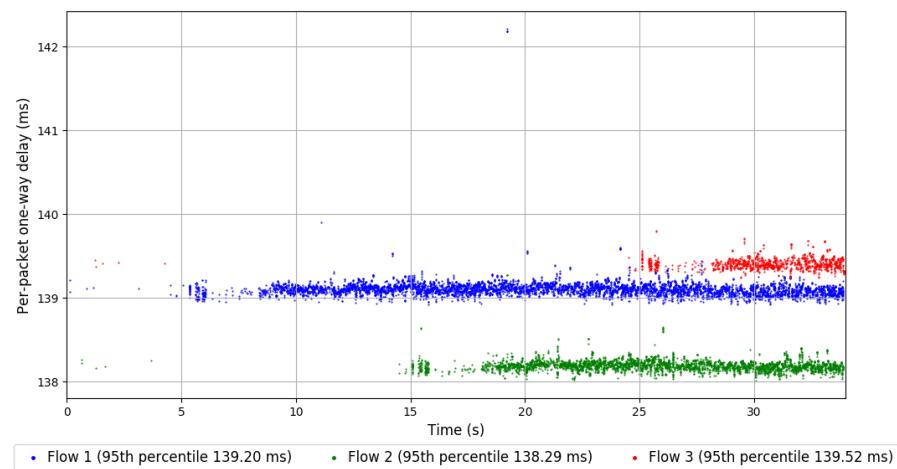
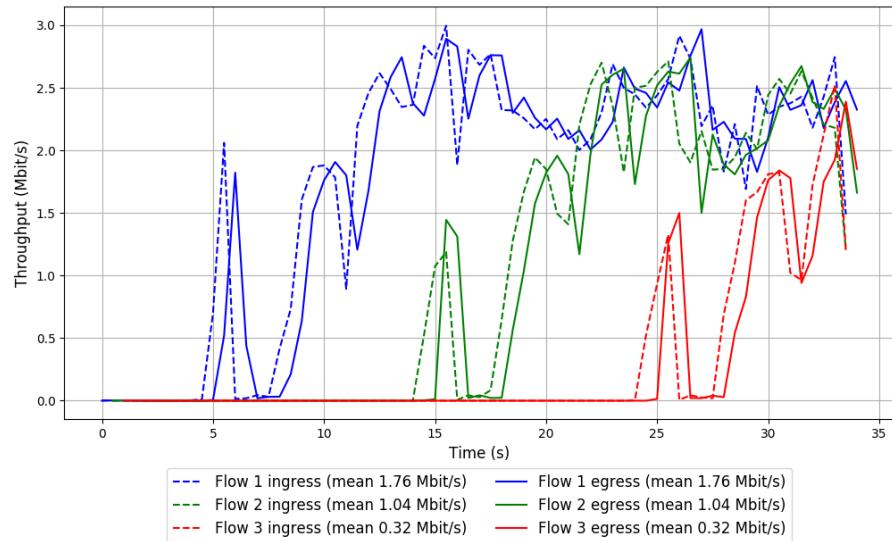


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-10 07:30:44
End at: 2018-10-10 07:31:14
Local clock offset: 0.036 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-10-10 10:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 139.408 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 139.201 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 138.289 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 139.519 ms
Loss rate: 0.09%
```

Run 3: Report of WebRTC media — Data Link

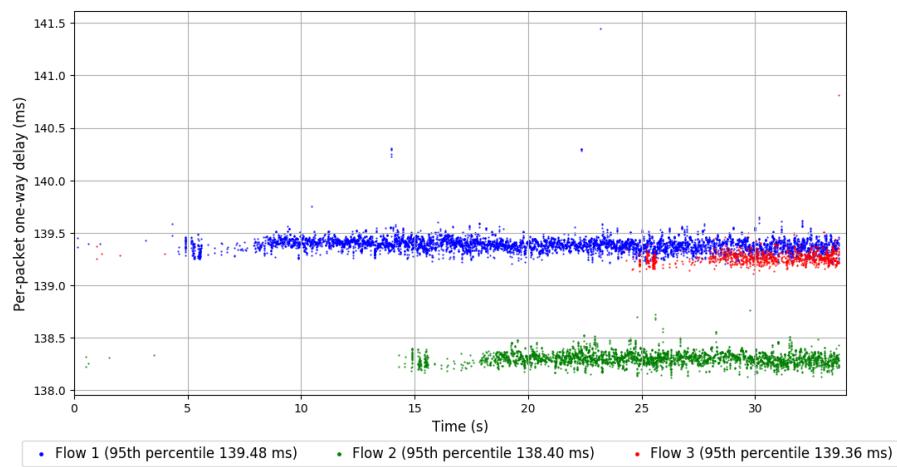
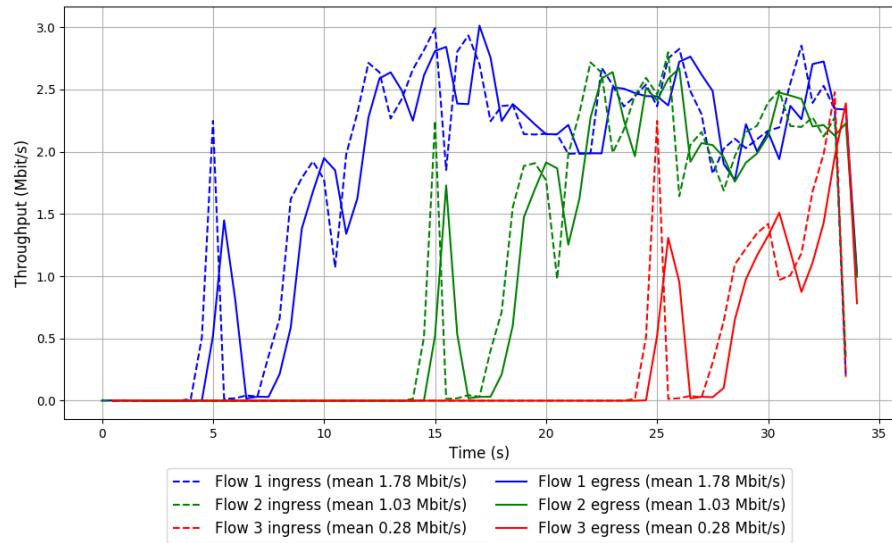


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-10 08:02:27
End at: 2018-10-10 08:02:57
Local clock offset: -0.083 ms
Remote clock offset: -0.531 ms

# Below is generated by plot.py at 2018-10-10 10:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 139.460 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 139.480 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 138.396 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 139.358 ms
Loss rate: 0.32%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-10 08:34:16
End at: 2018-10-10 08:34:46
Local clock offset: -0.052 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2018-10-10 10:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 139.514 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 138.720 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 139.513 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 139.604 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

