

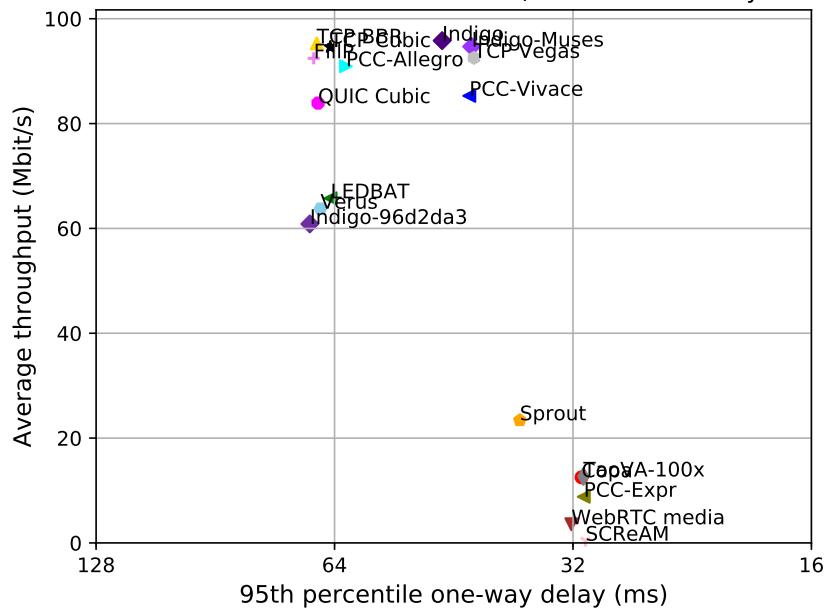
Pantheon Report

Generated at 2018-11-15 07:01:47 (UTC).
Data path: AWS California 2 on `ens5` (*local*) → Mexico on `em1` (*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.stanford.edu` and have been applied to correct the timestamps in logs.

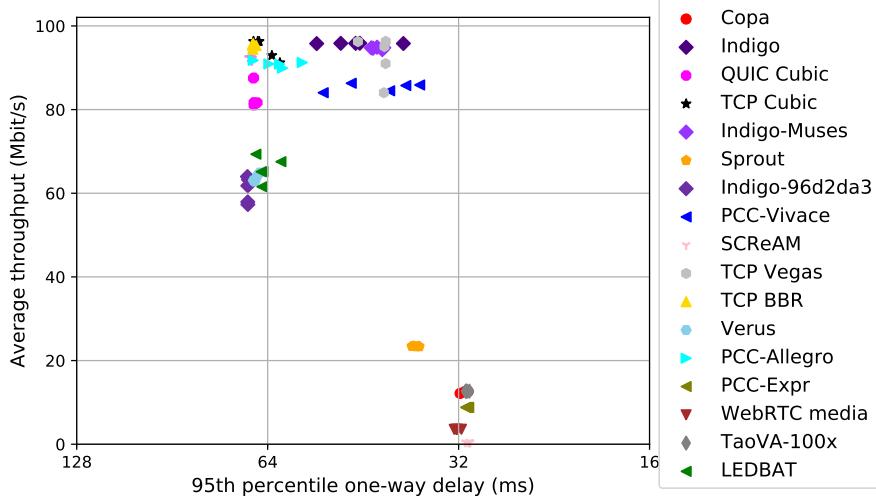
```
System info:  
Linux 4.15.0-1023-aws  
net.core.default_qdisc = fq  
net.core.rmem_default = 16777216  
net.core.rmem_max = 536870912  
net.core.wmem_default = 16777216  
net.core.wmem_max = 536870912  
net.ipv4.tcp_rmem = 4096 16777216 536870912  
net.ipv4.tcp_wmem = 4096 16777216 536870912  
  
Git summary:  
branch: muses @ 794ca3866981572cb73700a276691acf79c60f2b  
third_party/fillp @ d6da1459332fceef56963885d7eba17e6a32d4519  
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

test from AWS California 2 to Mexico, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS California 2 to Mexico, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows



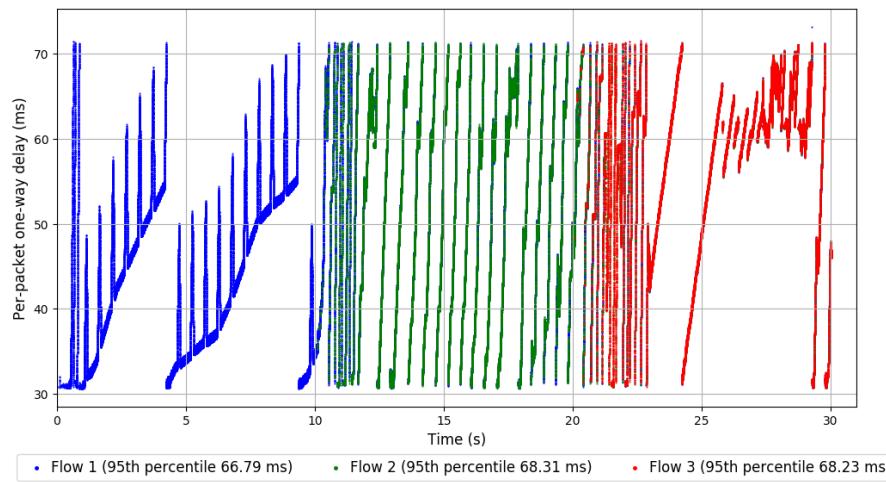
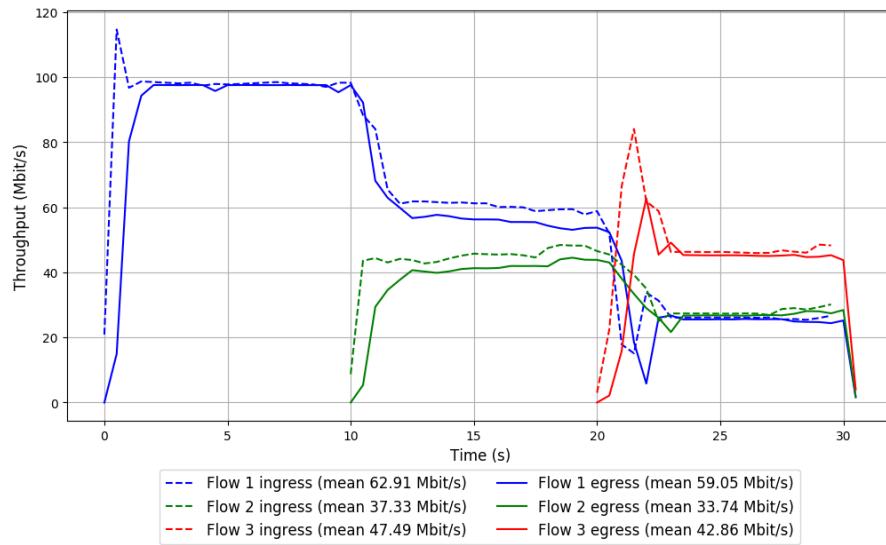
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	61.64	33.00	35.20	66.73	68.26	67.76	6.90	10.38	10.30
Copa	5	10.31	6.36	0.86	31.23	31.27	31.20	68.55	70.93	82.99
TCP Cubic	5	67.18	28.73	24.94	63.93	65.36	65.22	0.99	0.69	0.72
FillP	5	58.55	41.05	20.16	66.76	69.09	68.54	28.93	47.19	53.38
Indigo	5	66.39	30.41	28.34	44.09	48.98	50.63	0.07	0.09	0.03
Indigo-96d2da3	5	49.99	10.56	18.77	68.76	67.29	66.46	58.72	61.16	57.11
LEDBAT	5	40.35	28.78	19.03	64.10	65.59	61.65	0.14	0.22	0.06
Indigo-Muses	5	57.22	35.52	42.05	43.25	43.69	40.53	0.47	0.00	0.00
PCC-Allegro	5	81.03	9.81	10.28	61.50	63.02	63.14	2.00	1.95	3.76
PCC-Expr	5	0.03	10.17	6.18	30.88	31.01	31.04	85.71	47.25	35.95
QUIC Cubic	5	60.70	27.75	14.56	66.86	67.56	67.89	2.47	1.12	1.22
SCReAM	5	0.21	0.21	0.22	30.84	30.83	30.87	0.00	0.00	0.00
Sprout	5	11.80	11.72	11.53	37.12	37.66	37.31	0.03	0.05	0.00
TaoVA-100x	5	7.49	6.07	3.94	31.59	30.99	30.91	84.67	63.71	76.62
TCP Vegas	5	68.99	26.02	18.67	43.10	40.39	38.46	0.42	0.10	0.01
Verus	5	38.67	30.27	18.12	66.39	66.41	67.17	30.96	32.83	42.22
PCC-Vivace	5	64.21	24.68	14.16	43.74	43.09	44.17	0.02	0.06	0.08
WebRTC media	5	1.93	1.24	0.41	31.84	32.35	32.98	0.00	0.00	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2018-11-15 04:54:46
End at: 2018-11-15 04:55:16
Local clock offset: 0.682 ms
Remote clock offset: 1.137 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.79 Mbit/s
95th percentile per-packet one-way delay: 67.451 ms
Loss rate: 7.48%
-- Flow 1:
Average throughput: 59.05 Mbit/s
95th percentile per-packet one-way delay: 66.789 ms
Loss rate: 6.08%
-- Flow 2:
Average throughput: 33.74 Mbit/s
95th percentile per-packet one-way delay: 68.311 ms
Loss rate: 9.55%
-- Flow 3:
Average throughput: 42.86 Mbit/s
95th percentile per-packet one-way delay: 68.228 ms
Loss rate: 9.76%
```

Run 1: Report of TCP BBR — Data Link

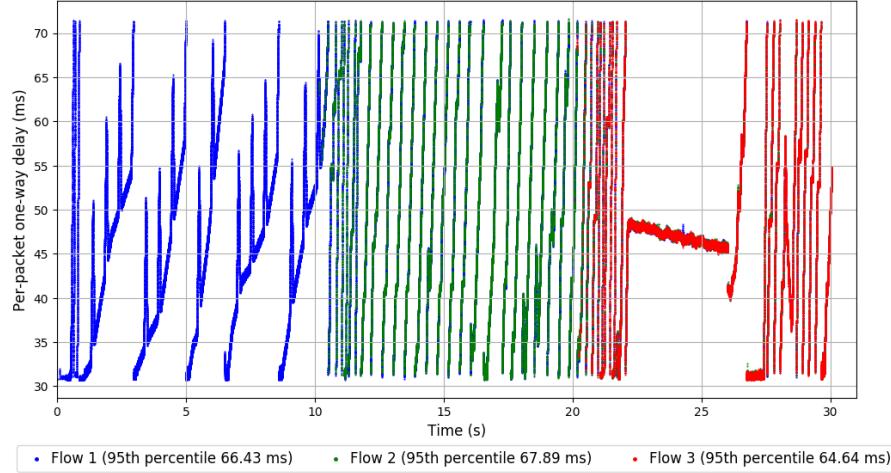
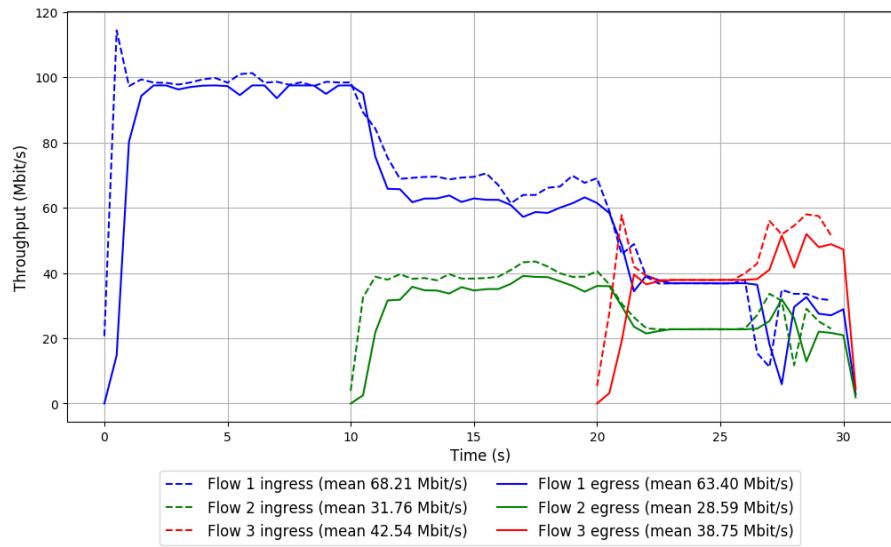


Run 2: Statistics of TCP BBR

```
Start at: 2018-11-15 05:19:26
End at: 2018-11-15 05:19:56
Local clock offset: 0.287 ms
Remote clock offset: 1.192 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.33 Mbit/s
95th percentile per-packet one-way delay: 66.740 ms
Loss rate: 7.84%
-- Flow 1:
Average throughput: 63.40 Mbit/s
95th percentile per-packet one-way delay: 66.429 ms
Loss rate: 6.97%
-- Flow 2:
Average throughput: 28.59 Mbit/s
95th percentile per-packet one-way delay: 67.894 ms
Loss rate: 9.95%
-- Flow 3:
Average throughput: 38.75 Mbit/s
95th percentile per-packet one-way delay: 64.637 ms
Loss rate: 8.89%
```

Run 2: Report of TCP BBR — Data Link

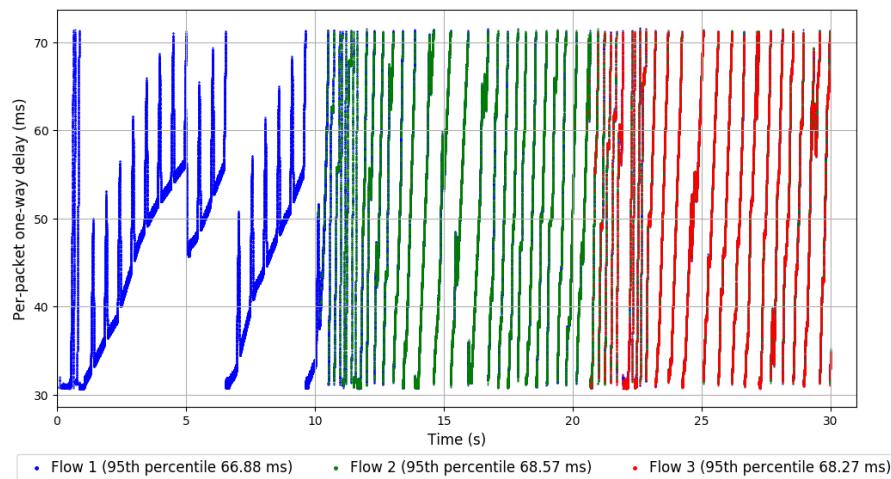
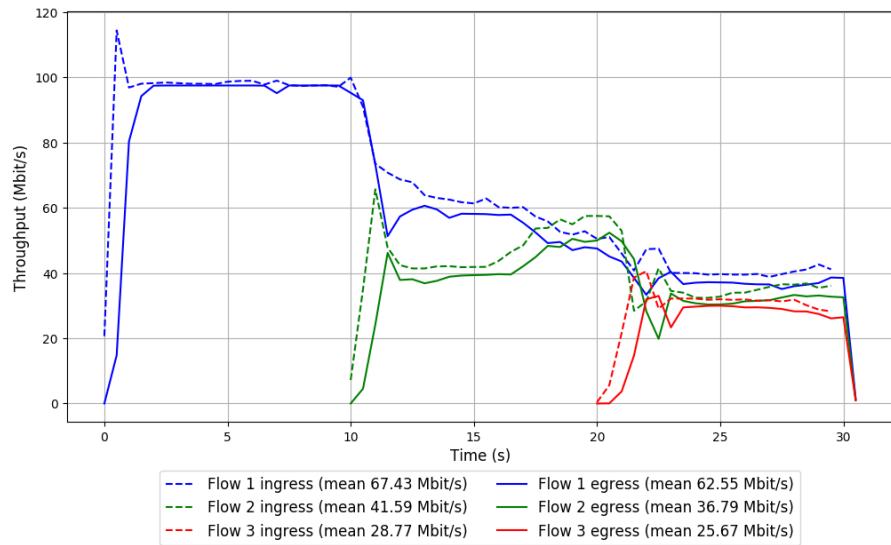


Run 3: Statistics of TCP BBR

```
Start at: 2018-11-15 05:44:25
End at: 2018-11-15 05:44:55
Local clock offset: 0.233 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.56 Mbit/s
95th percentile per-packet one-way delay: 67.606 ms
Loss rate: 8.72%
-- Flow 1:
Average throughput: 62.55 Mbit/s
95th percentile per-packet one-way delay: 66.880 ms
Loss rate: 7.23%
-- Flow 2:
Average throughput: 36.79 Mbit/s
95th percentile per-packet one-way delay: 68.573 ms
Loss rate: 11.54%
-- Flow 3:
Average throughput: 25.67 Mbit/s
95th percentile per-packet one-way delay: 68.273 ms
Loss rate: 11.01%
```

Run 3: Report of TCP BBR — Data Link

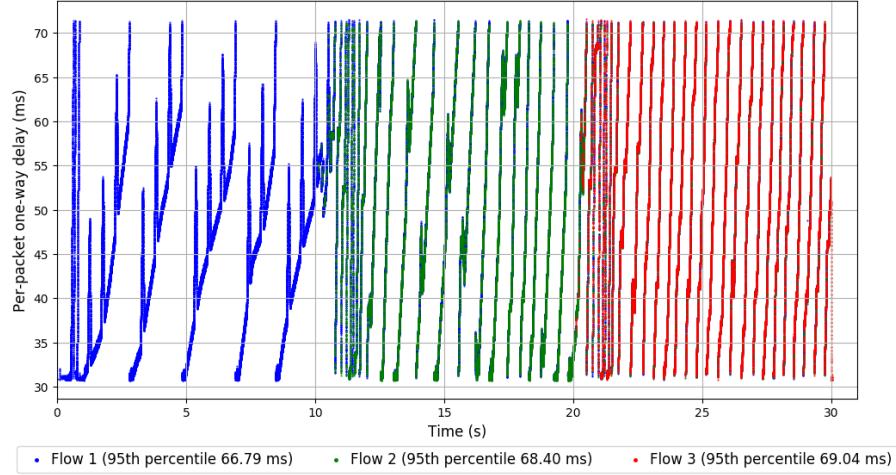
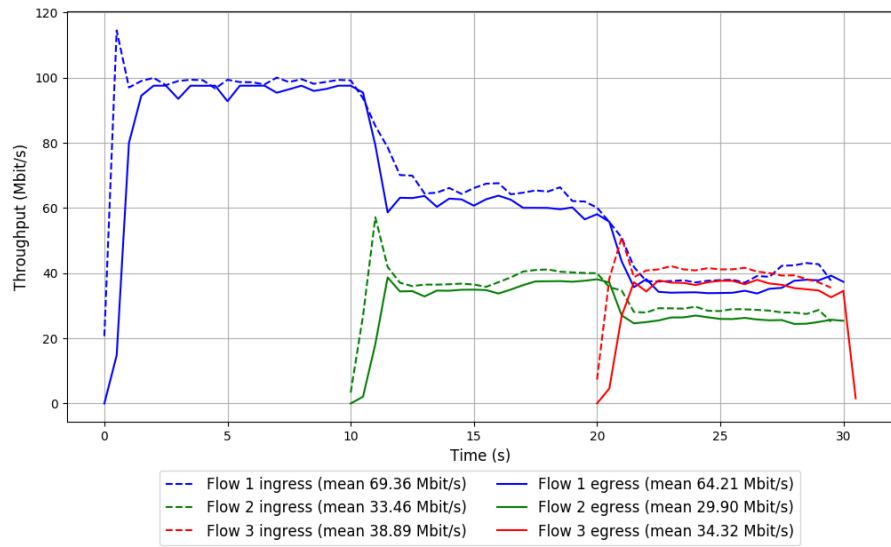


Run 4: Statistics of TCP BBR

```
Start at: 2018-11-15 06:09:06
End at: 2018-11-15 06:09:36
Local clock offset: -2.438 ms
Remote clock offset: -1.851 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 67.659 ms
Loss rate: 8.61%
-- Flow 1:
Average throughput: 64.21 Mbit/s
95th percentile per-packet one-way delay: 66.794 ms
Loss rate: 7.36%
-- Flow 2:
Average throughput: 29.90 Mbit/s
95th percentile per-packet one-way delay: 68.398 ms
Loss rate: 10.66%
-- Flow 3:
Average throughput: 34.32 Mbit/s
95th percentile per-packet one-way delay: 69.038 ms
Loss rate: 11.77%
```

Run 4: Report of TCP BBR — Data Link

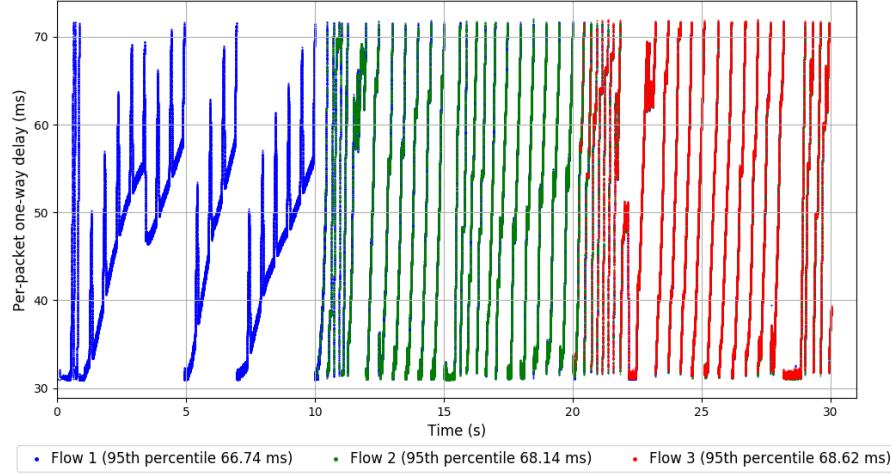
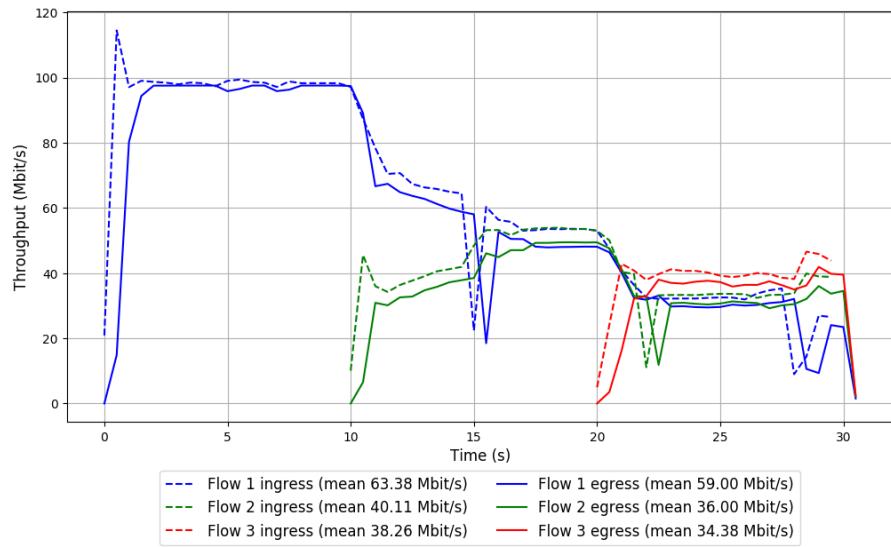


Run 5: Statistics of TCP BBR

```
Start at: 2018-11-15 06:33:39
End at: 2018-11-15 06:34:09
Local clock offset: -1.404 ms
Remote clock offset: -3.11 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.42 Mbit/s
95th percentile per-packet one-way delay: 67.540 ms
Loss rate: 8.14%
-- Flow 1:
Average throughput: 59.00 Mbit/s
95th percentile per-packet one-way delay: 66.740 ms
Loss rate: 6.88%
-- Flow 2:
Average throughput: 36.00 Mbit/s
95th percentile per-packet one-way delay: 68.139 ms
Loss rate: 10.22%
-- Flow 3:
Average throughput: 34.38 Mbit/s
95th percentile per-packet one-way delay: 68.621 ms
Loss rate: 10.06%
```

Run 5: Report of TCP BBR — Data Link

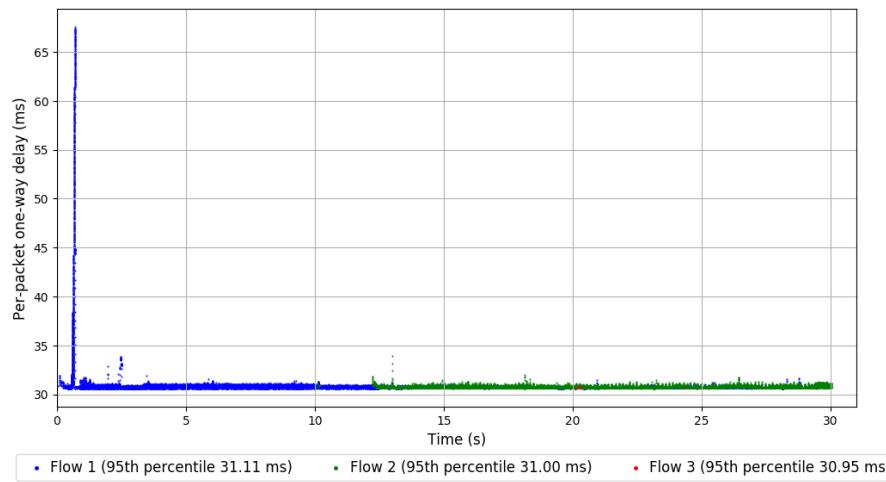
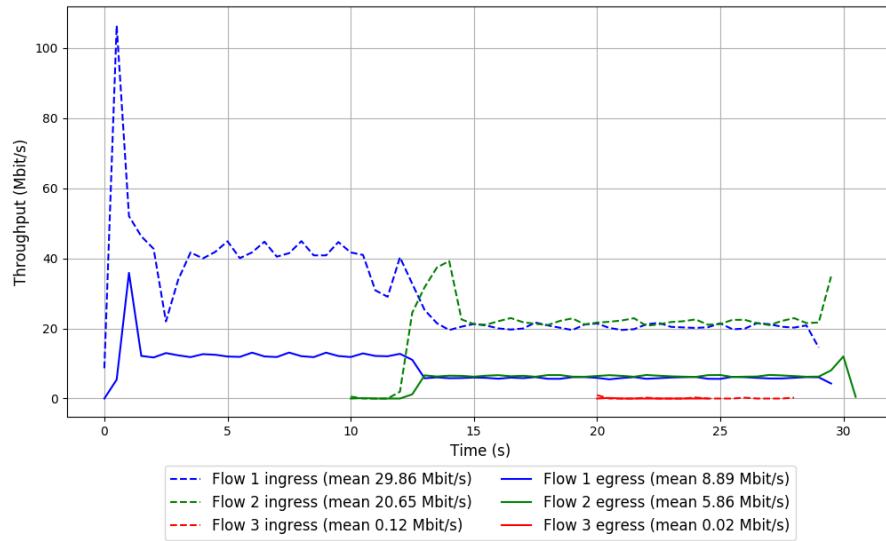


Run 1: Statistics of Copa

```
Start at: 2018-11-15 05:09:58
End at: 2018-11-15 05:10:28
Local clock offset: 0.316 ms
Remote clock offset: 1.586 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.60 Mbit/s
95th percentile per-packet one-way delay: 31.046 ms
Loss rate: 70.69%
-- Flow 1:
Average throughput: 8.89 Mbit/s
95th percentile per-packet one-way delay: 31.108 ms
Loss rate: 70.22%
-- Flow 2:
Average throughput: 5.86 Mbit/s
95th percentile per-packet one-way delay: 31.004 ms
Loss rate: 71.65%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 30.955 ms
Loss rate: 90.15%
```

Run 1: Report of Copa — Data Link

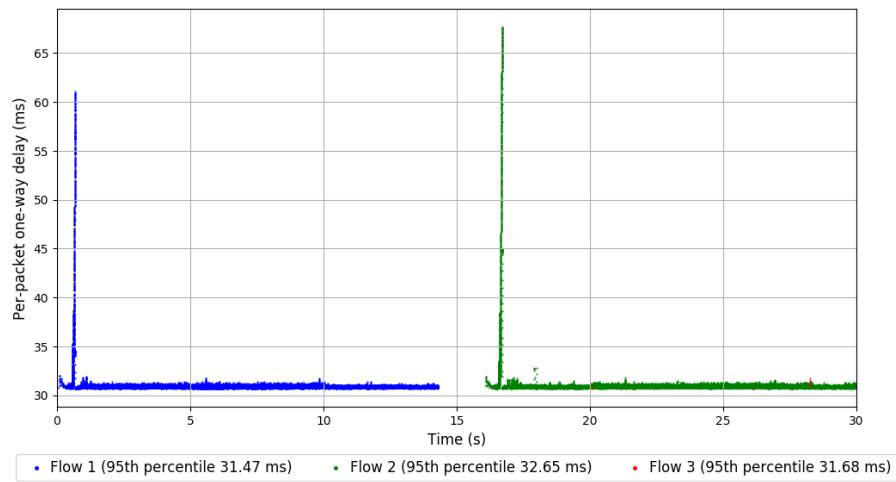
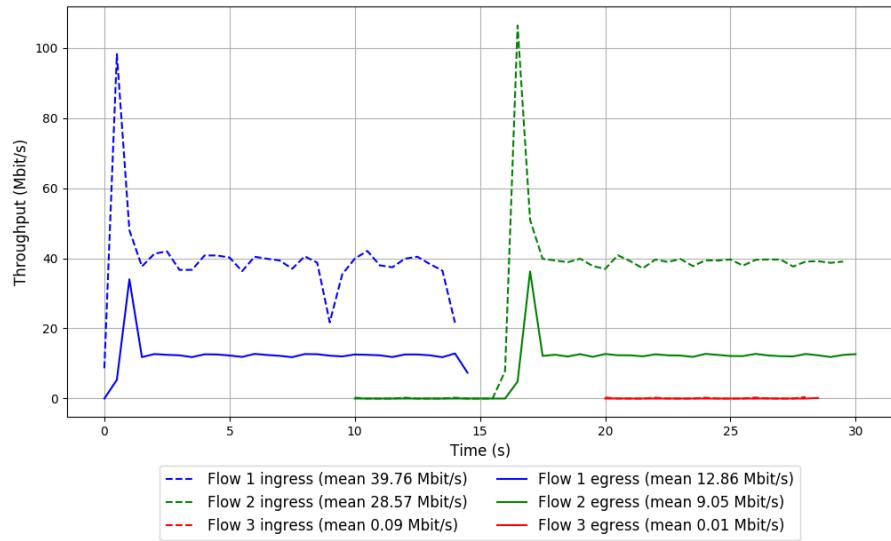


Run 2: Statistics of Copa

```
Start at: 2018-11-15 05:34:56
End at: 2018-11-15 05:35:26
Local clock offset: 0.25 ms
Remote clock offset: 0.457 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.15 Mbit/s
95th percentile per-packet one-way delay: 31.826 ms
Loss rate: 68.00%
-- Flow 1:
Average throughput: 12.86 Mbit/s
95th percentile per-packet one-way delay: 31.466 ms
Loss rate: 67.65%
-- Flow 2:
Average throughput: 9.05 Mbit/s
95th percentile per-packet one-way delay: 32.651 ms
Loss rate: 68.33%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 31.684 ms
Loss rate: 85.37%
```

Run 2: Report of Copa — Data Link

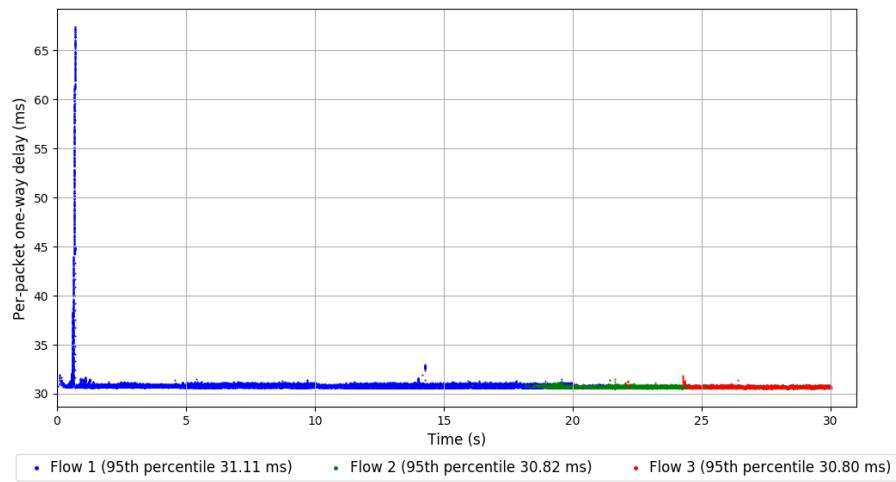
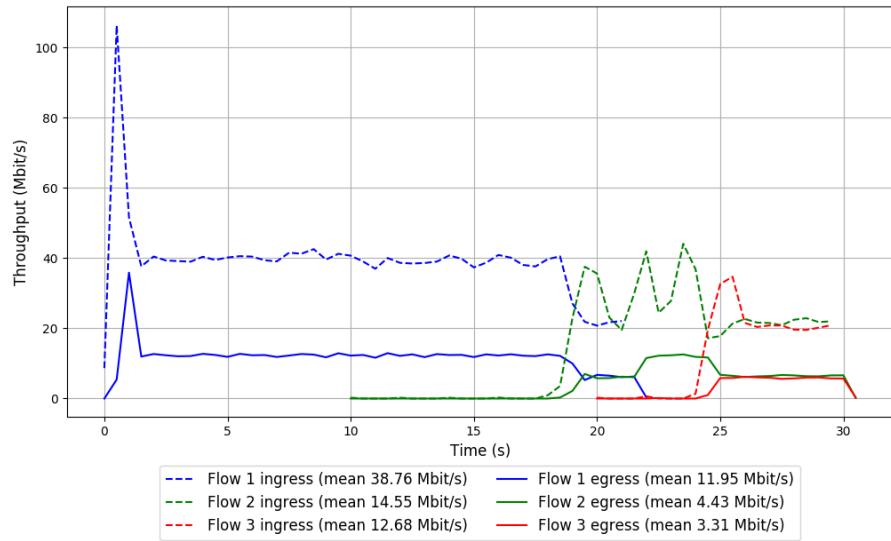


Run 3: Statistics of Copa

```
Start at: 2018-11-15 05:59:40
End at: 2018-11-15 06:00:10
Local clock offset: -0.716 ms
Remote clock offset: -1.124 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.025 ms
Loss rate: 69.74%
-- Flow 1:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 31.112 ms
Loss rate: 69.18%
-- Flow 2:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 30.823 ms
Loss rate: 69.54%
-- Flow 3:
Average throughput: 3.31 Mbit/s
95th percentile per-packet one-way delay: 30.799 ms
Loss rate: 73.89%
```

Run 3: Report of Copa — Data Link

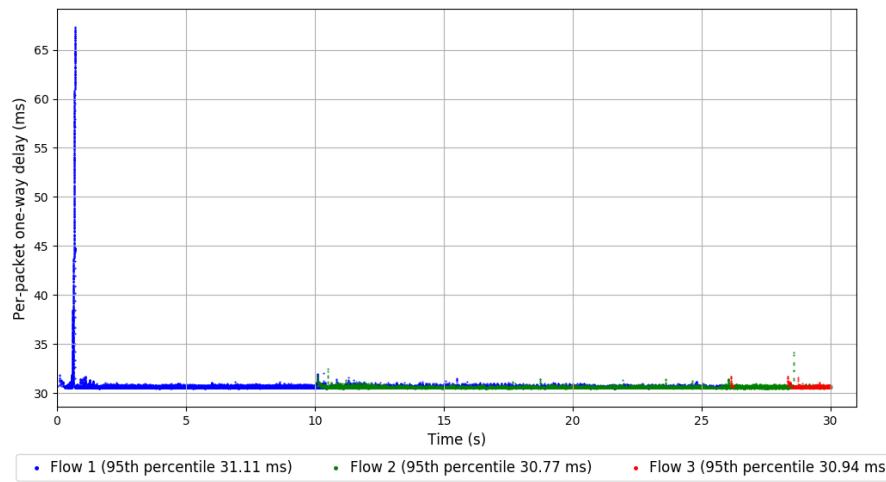
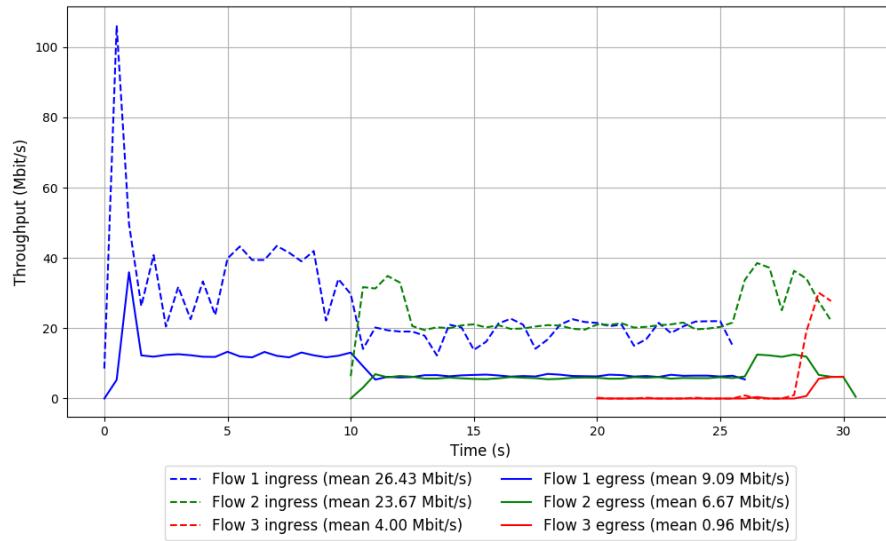


Run 4: Statistics of Copa

```
Start at: 2018-11-15 06:24:12
End at: 2018-11-15 06:24:42
Local clock offset: -3.572 ms
Remote clock offset: -3.161 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 30.906 ms
Loss rate: 68.40%
-- Flow 1:
Average throughput: 9.09 Mbit/s
95th percentile per-packet one-way delay: 31.113 ms
Loss rate: 65.60%
-- Flow 2:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 30.774 ms
Loss rate: 71.81%
-- Flow 3:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 30.938 ms
Loss rate: 76.01%
```

Run 4: Report of Copa — Data Link

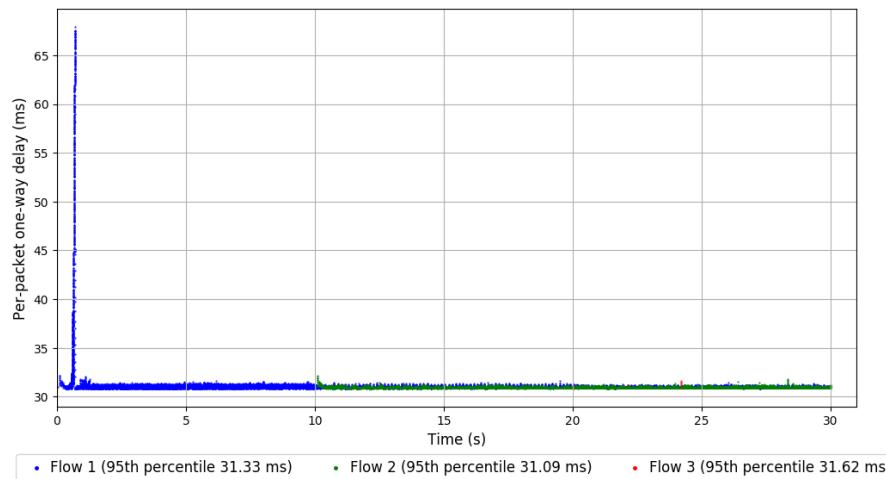
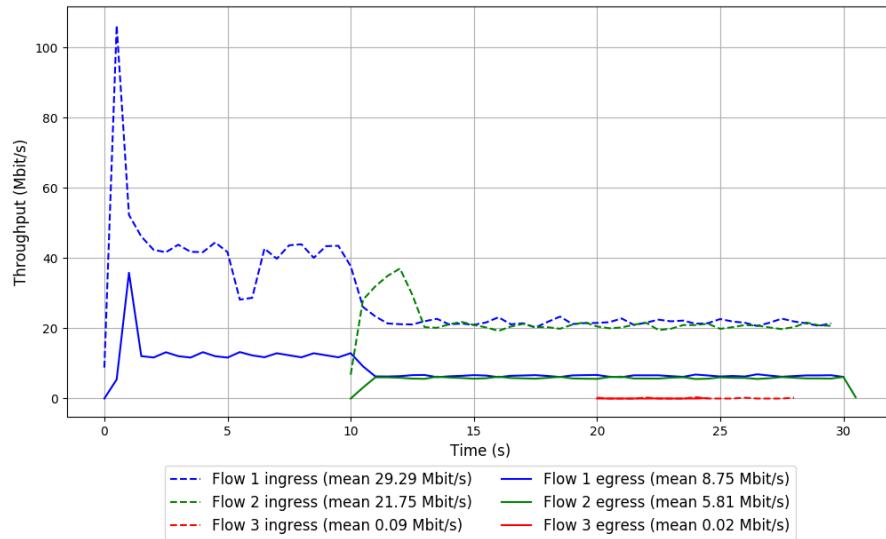


Run 5: Statistics of Copa

```
Start at: 2018-11-15 06:48:40
End at: 2018-11-15 06:49:10
Local clock offset: 0.279 ms
Remote clock offset: -3.29 ms

# Below is generated by plot.py at 2018-11-15 06:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.256 ms
Loss rate: 71.19%
-- Flow 1:
Average throughput: 8.75 Mbit/s
95th percentile per-packet one-way delay: 31.327 ms
Loss rate: 70.12%
-- Flow 2:
Average throughput: 5.81 Mbit/s
95th percentile per-packet one-way delay: 31.085 ms
Loss rate: 73.30%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 31.622 ms
Loss rate: 89.52%
```

Run 5: Report of Copa — Data Link

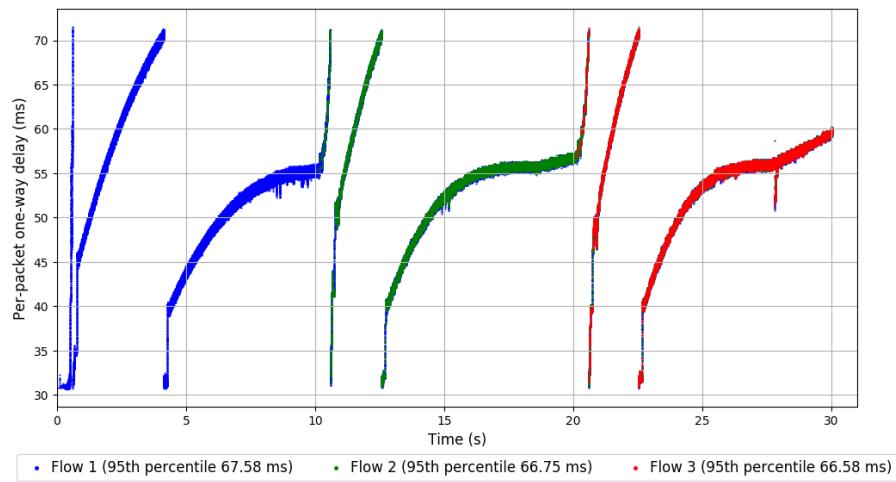
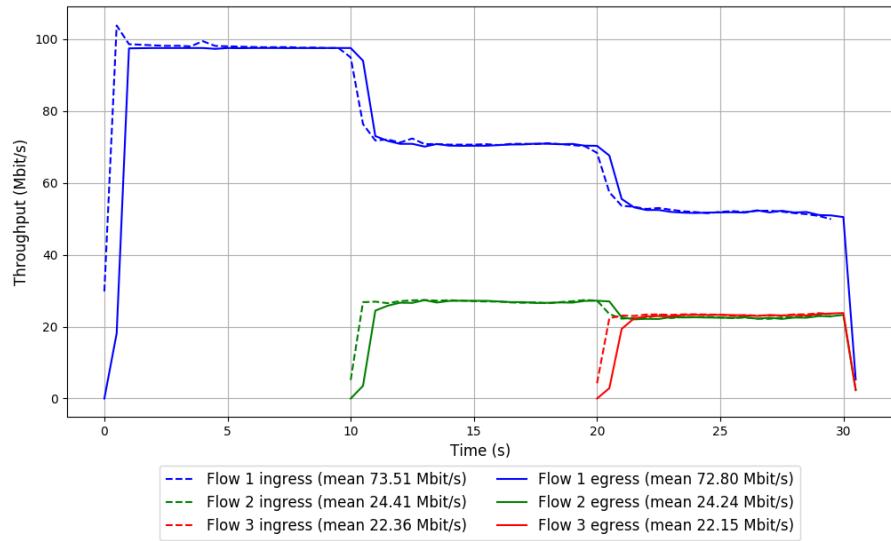


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-11-15 04:56:09
End at: 2018-11-15 04:56:39
Local clock offset: 0.696 ms
Remote clock offset: 1.207 ms

# Below is generated by plot.py at 2018-11-15 06:53:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 67.376 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 72.80 Mbit/s
95th percentile per-packet one-way delay: 67.578 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 24.24 Mbit/s
95th percentile per-packet one-way delay: 66.752 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 22.15 Mbit/s
95th percentile per-packet one-way delay: 66.577 ms
Loss rate: 0.94%
```

Run 1: Report of TCP Cubic — Data Link

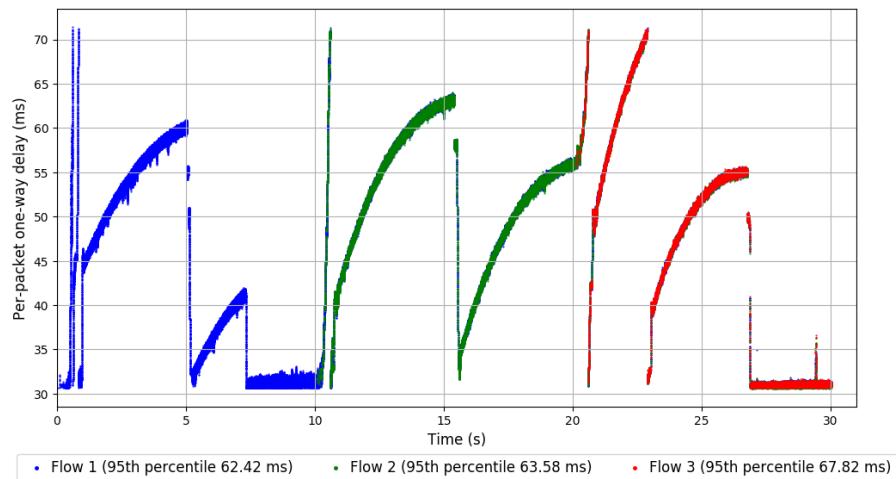
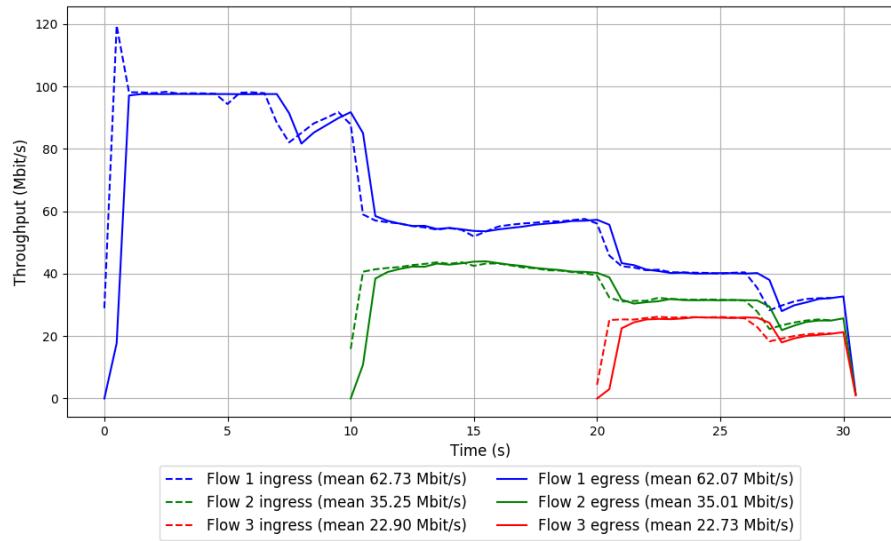


Run 2: Statistics of TCP Cubic

```
Start at: 2018-11-15 05:20:50
End at: 2018-11-15 05:21:20
Local clock offset: 0.254 ms
Remote clock offset: 0.962 ms

# Below is generated by plot.py at 2018-11-15 06:53:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 63.027 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 62.07 Mbit/s
95th percentile per-packet one-way delay: 62.425 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 35.01 Mbit/s
95th percentile per-packet one-way delay: 63.584 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 22.73 Mbit/s
95th percentile per-packet one-way delay: 67.822 ms
Loss rate: 0.97%
```

Run 2: Report of TCP Cubic — Data Link

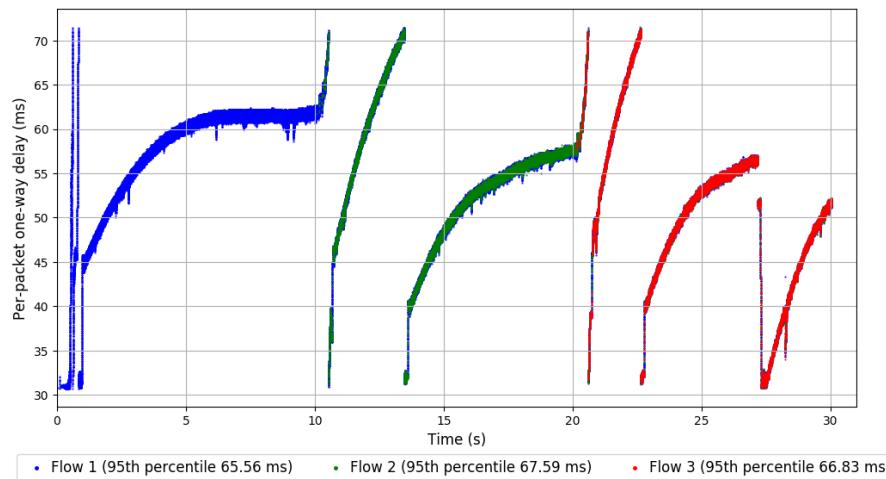
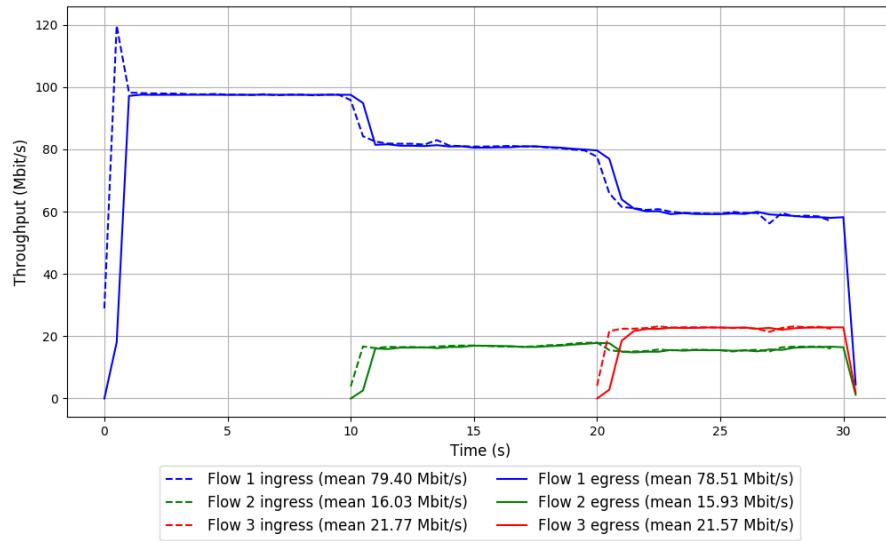


Run 3: Statistics of TCP Cubic

```
Start at: 2018-11-15 05:45:49
End at: 2018-11-15 05:46:19
Local clock offset: 0.22 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2018-11-15 06:53:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 66.013 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 78.51 Mbit/s
95th percentile per-packet one-way delay: 65.561 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 15.93 Mbit/s
95th percentile per-packet one-way delay: 67.595 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 21.57 Mbit/s
95th percentile per-packet one-way delay: 66.835 ms
Loss rate: 0.96%
```

Run 3: Report of TCP Cubic — Data Link

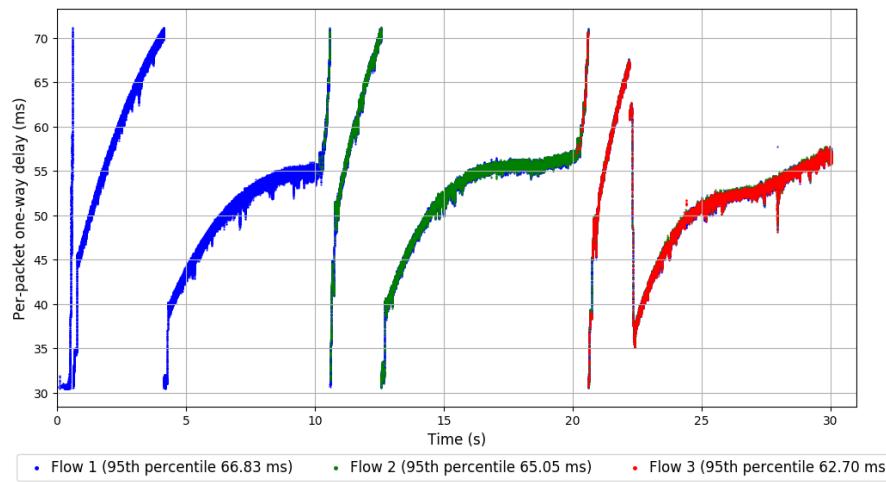
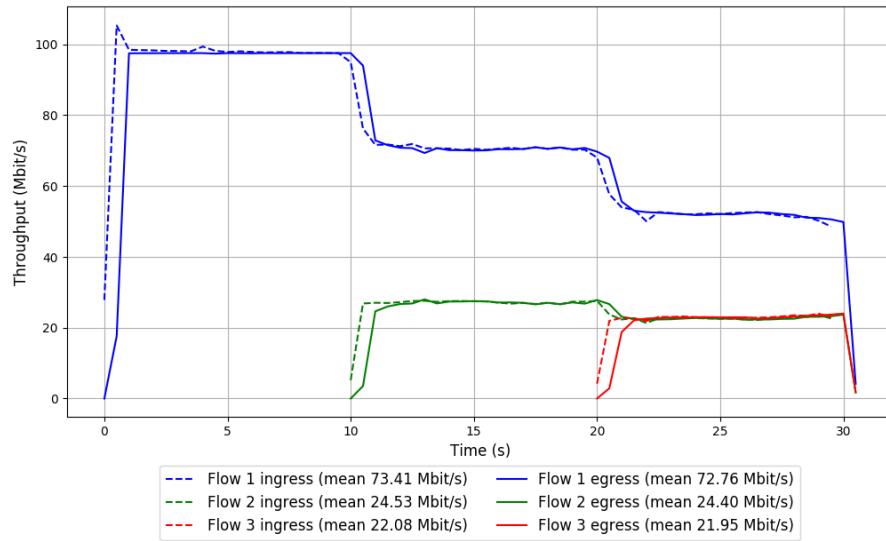


Run 4: Statistics of TCP Cubic

```
Start at: 2018-11-15 06:10:29
End at: 2018-11-15 06:10:59
Local clock offset: -2.569 ms
Remote clock offset: -2.204 ms

# Below is generated by plot.py at 2018-11-15 06:54:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.29 Mbit/s
95th percentile per-packet one-way delay: 66.344 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 72.76 Mbit/s
95th percentile per-packet one-way delay: 66.827 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 24.40 Mbit/s
95th percentile per-packet one-way delay: 65.051 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 21.95 Mbit/s
95th percentile per-packet one-way delay: 62.701 ms
Loss rate: 0.59%
```

Run 4: Report of TCP Cubic — Data Link

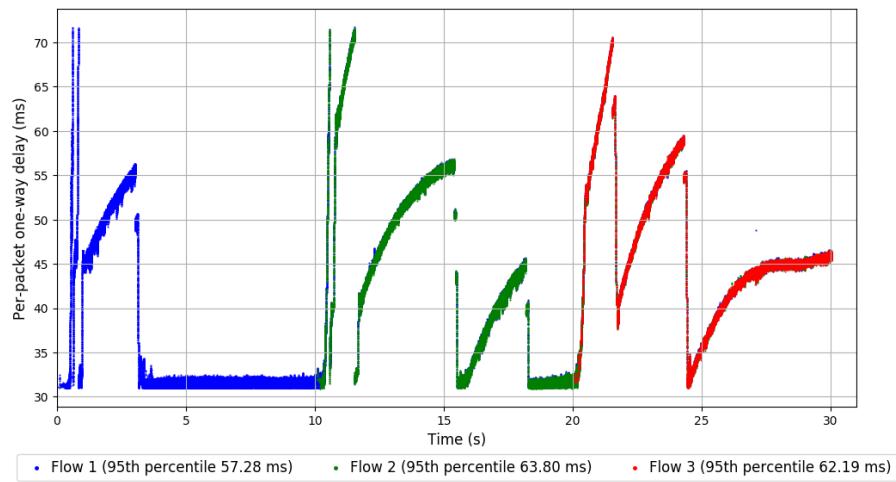
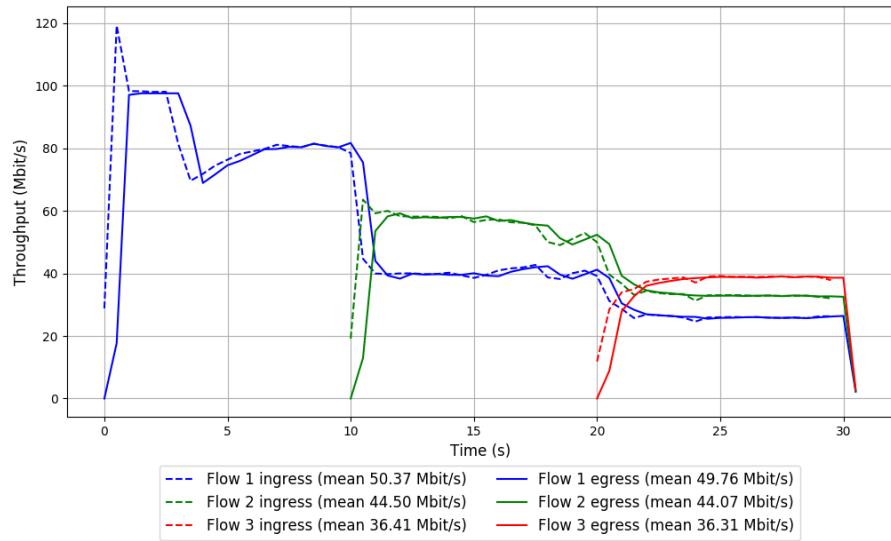


Run 5: Statistics of TCP Cubic

```
Start at: 2018-11-15 06:35:03
End at: 2018-11-15 06:35:33
Local clock offset: -1.182 ms
Remote clock offset: -3.225 ms

# Below is generated by plot.py at 2018-11-15 06:54:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.21 Mbit/s
95th percentile per-packet one-way delay: 61.220 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 49.76 Mbit/s
95th percentile per-packet one-way delay: 57.279 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 44.07 Mbit/s
95th percentile per-packet one-way delay: 63.803 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 36.31 Mbit/s
95th percentile per-packet one-way delay: 62.186 ms
Loss rate: 0.12%
```

Run 5: Report of TCP Cubic — Data Link

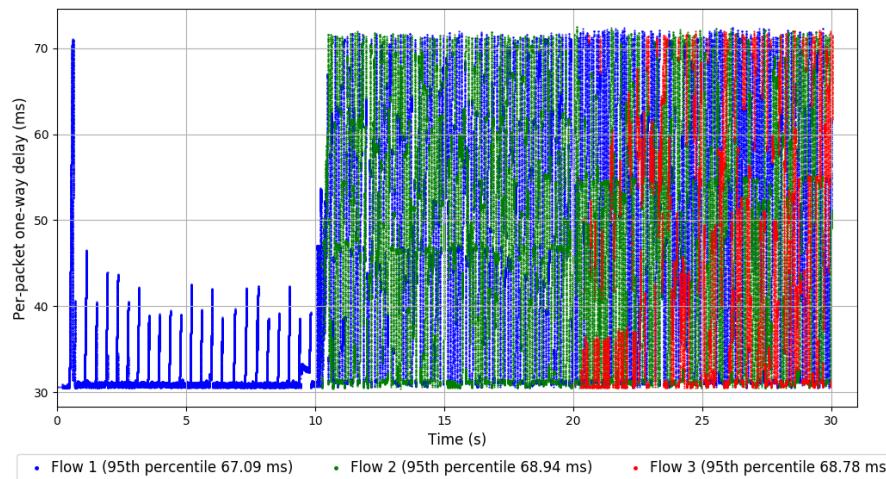
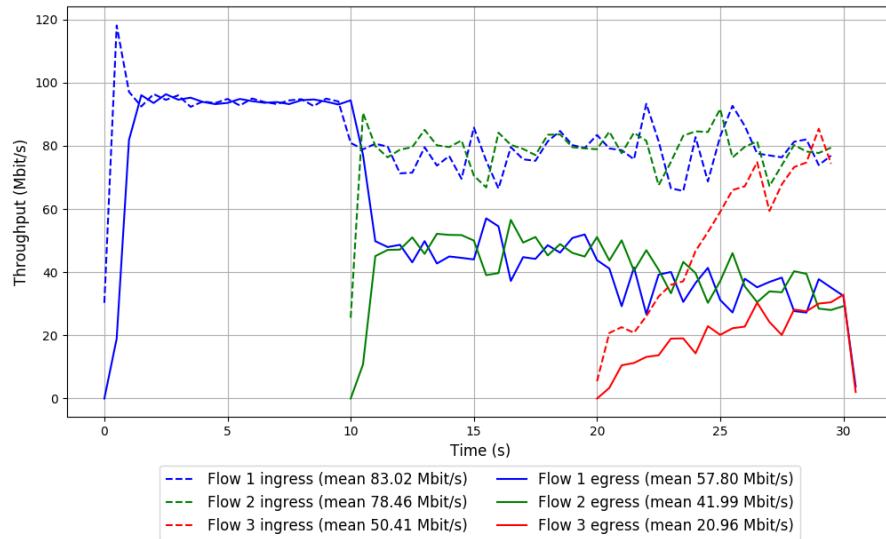


```
Run 1: Statistics of FillP

Start at: 2018-11-15 04:59:04
End at: 2018-11-15 04:59:34
Local clock offset: 0.578 ms
Remote clock offset: 1.34 ms

# Below is generated by plot.py at 2018-11-15 06:54:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.68 Mbit/s
95th percentile per-packet one-way delay: 68.037 ms
Loss rate: 38.92%
-- Flow 1:
Average throughput: 57.80 Mbit/s
95th percentile per-packet one-way delay: 67.094 ms
Loss rate: 30.30%
-- Flow 2:
Average throughput: 41.99 Mbit/s
95th percentile per-packet one-way delay: 68.938 ms
Loss rate: 46.43%
-- Flow 3:
Average throughput: 20.96 Mbit/s
95th percentile per-packet one-way delay: 68.784 ms
Loss rate: 58.27%
```

Run 1: Report of FillP — Data Link

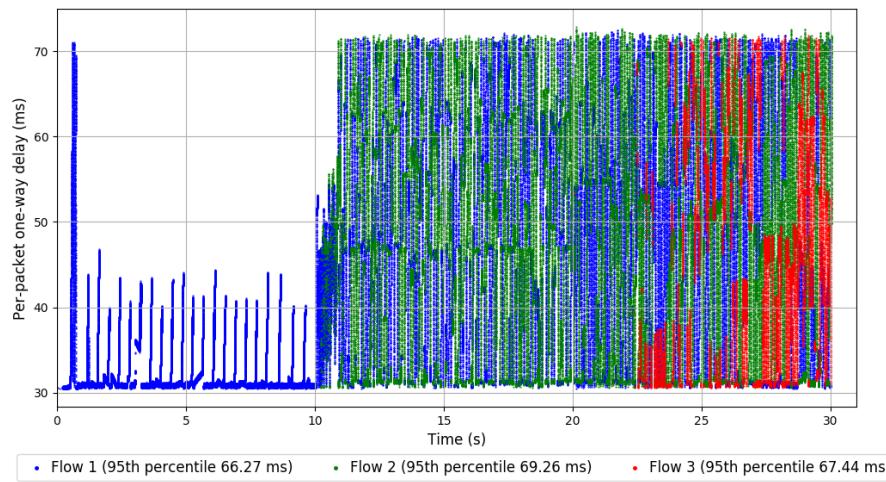
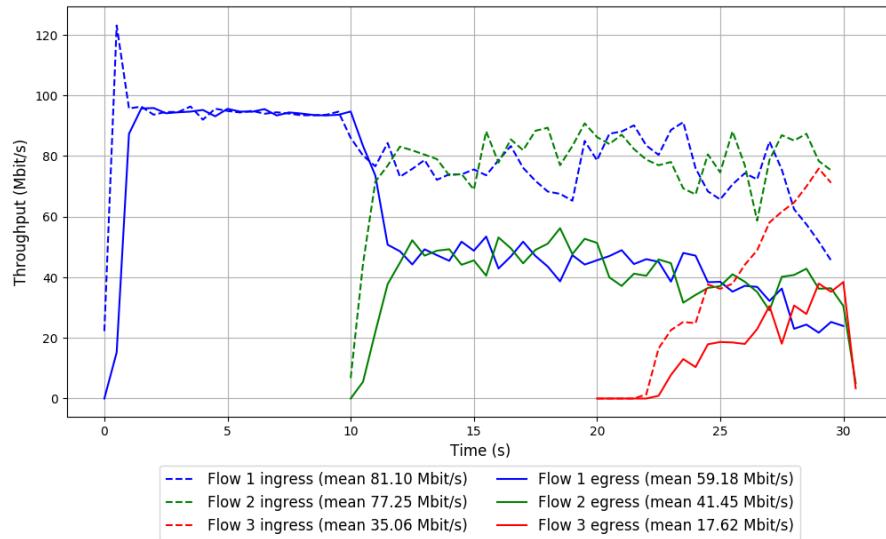


Run 2: Statistics of FillP

```
Start at: 2018-11-15 05:23:45
End at: 2018-11-15 05:24:15
Local clock offset: 0.308 ms
Remote clock offset: 0.948 ms

# Below is generated by plot.py at 2018-11-15 06:54:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.52 Mbit/s
95th percentile per-packet one-way delay: 67.778 ms
Loss rate: 35.72%
-- Flow 1:
Average throughput: 59.18 Mbit/s
95th percentile per-packet one-way delay: 66.273 ms
Loss rate: 27.02%
-- Flow 2:
Average throughput: 41.45 Mbit/s
95th percentile per-packet one-way delay: 69.261 ms
Loss rate: 46.24%
-- Flow 3:
Average throughput: 17.62 Mbit/s
95th percentile per-packet one-way delay: 67.445 ms
Loss rate: 49.73%
```

Run 2: Report of FillP — Data Link

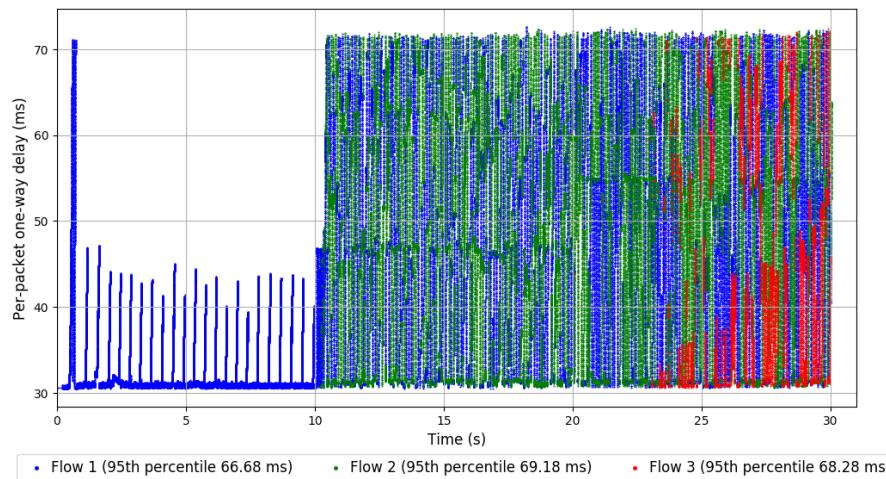
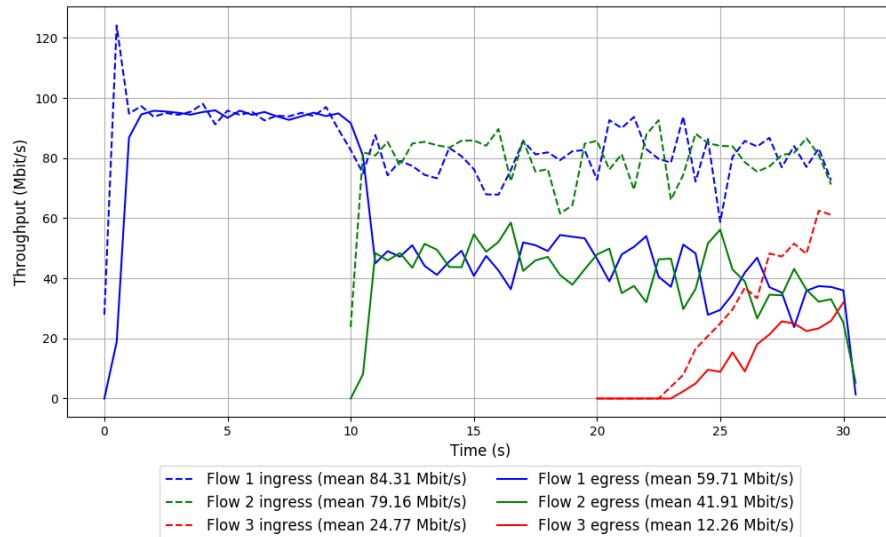


Run 3: Statistics of FillP

```
Start at: 2018-11-15 05:48:38
End at: 2018-11-15 05:49:08
Local clock offset: 0.223 ms
Remote clock offset: -0.314 ms

# Below is generated by plot.py at 2018-11-15 06:54:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.65 Mbit/s
95th percentile per-packet one-way delay: 67.796 ms
Loss rate: 36.83%
-- Flow 1:
Average throughput: 59.71 Mbit/s
95th percentile per-packet one-way delay: 66.683 ms
Loss rate: 29.16%
-- Flow 2:
Average throughput: 41.91 Mbit/s
95th percentile per-packet one-way delay: 69.180 ms
Loss rate: 46.97%
-- Flow 3:
Average throughput: 12.26 Mbit/s
95th percentile per-packet one-way delay: 68.280 ms
Loss rate: 50.51%
```

Run 3: Report of FillP — Data Link

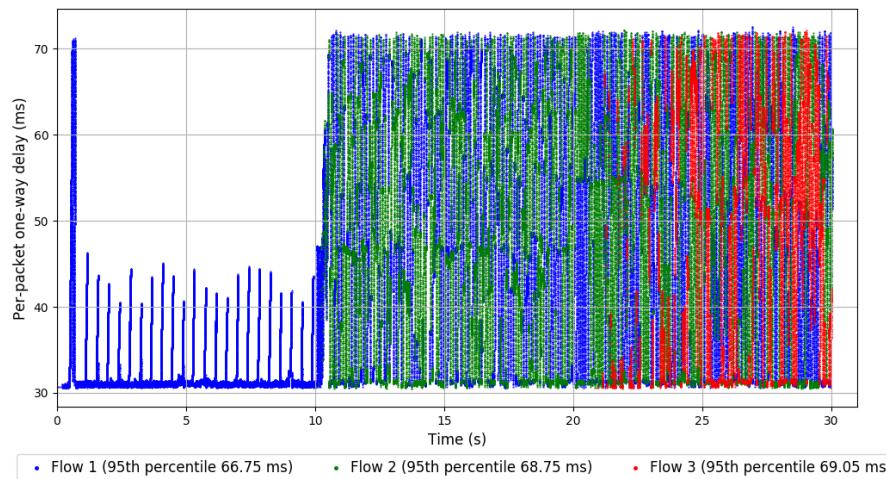
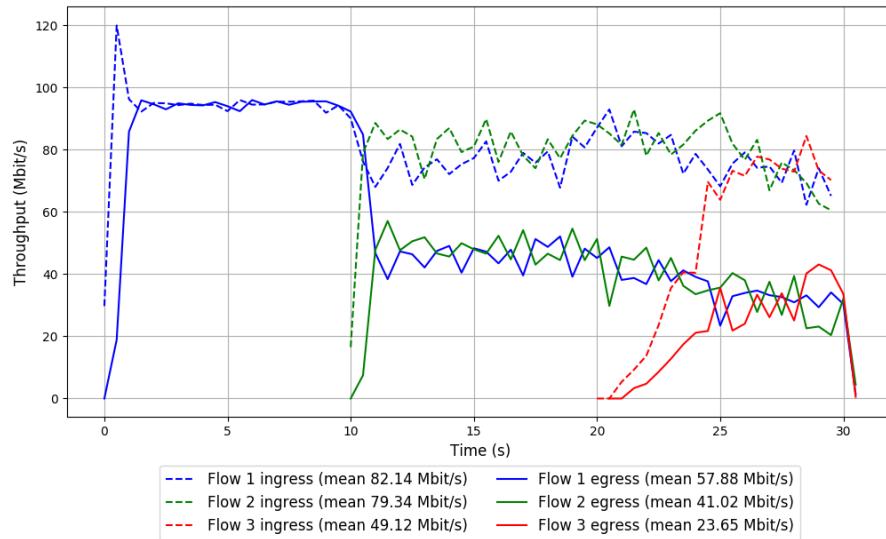


Run 4: Statistics of FillP

```
Start at: 2018-11-15 06:13:14
End at: 2018-11-15 06:13:44
Local clock offset: -2.829 ms
Remote clock offset: -2.216 ms

# Below is generated by plot.py at 2018-11-15 06:55:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.67 Mbit/s
95th percentile per-packet one-way delay: 67.918 ms
Loss rate: 38.67%
-- Flow 1:
Average throughput: 57.88 Mbit/s
95th percentile per-packet one-way delay: 66.752 ms
Loss rate: 29.48%
-- Flow 2:
Average throughput: 41.02 Mbit/s
95th percentile per-packet one-way delay: 68.754 ms
Loss rate: 48.22%
-- Flow 3:
Average throughput: 23.65 Mbit/s
95th percentile per-packet one-way delay: 69.047 ms
Loss rate: 54.08%
```

Run 4: Report of FillP — Data Link

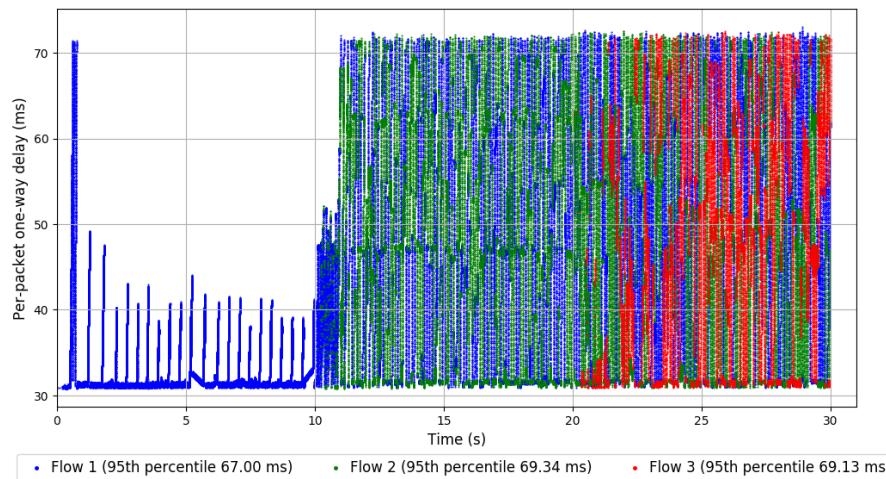
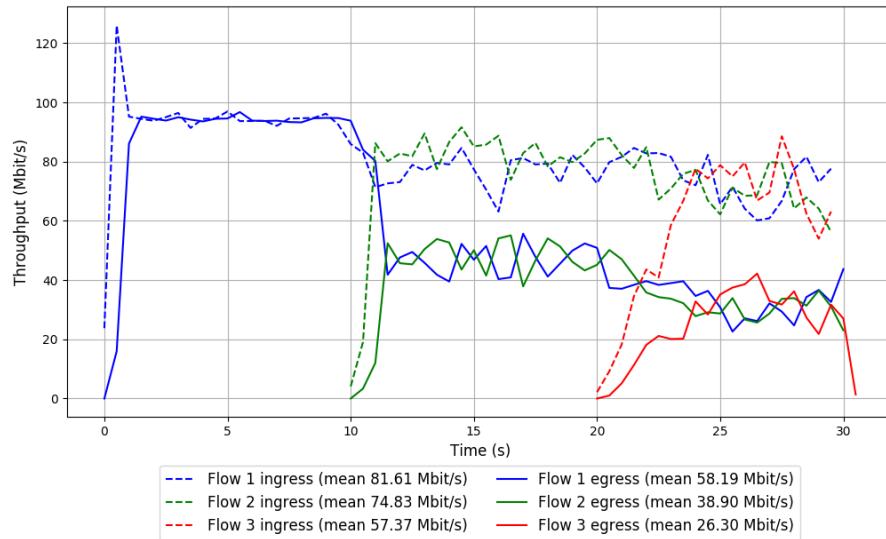


```
Run 5: Statistics of FillP
```

```
Start at: 2018-11-15 06:37:48
End at: 2018-11-15 06:38:18
Local clock offset: -0.674 ms
Remote clock offset: -3.193 ms

# Below is generated by plot.py at 2018-11-15 06:55:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.73 Mbit/s
95th percentile per-packet one-way delay: 68.427 ms
Loss rate: 38.37%
-- Flow 1:
Average throughput: 58.19 Mbit/s
95th percentile per-packet one-way delay: 66.995 ms
Loss rate: 28.71%
-- Flow 2:
Average throughput: 38.90 Mbit/s
95th percentile per-packet one-way delay: 69.339 ms
Loss rate: 48.09%
-- Flow 3:
Average throughput: 26.30 Mbit/s
95th percentile per-packet one-way delay: 69.133 ms
Loss rate: 54.30%
```

Run 5: Report of FillP — Data Link

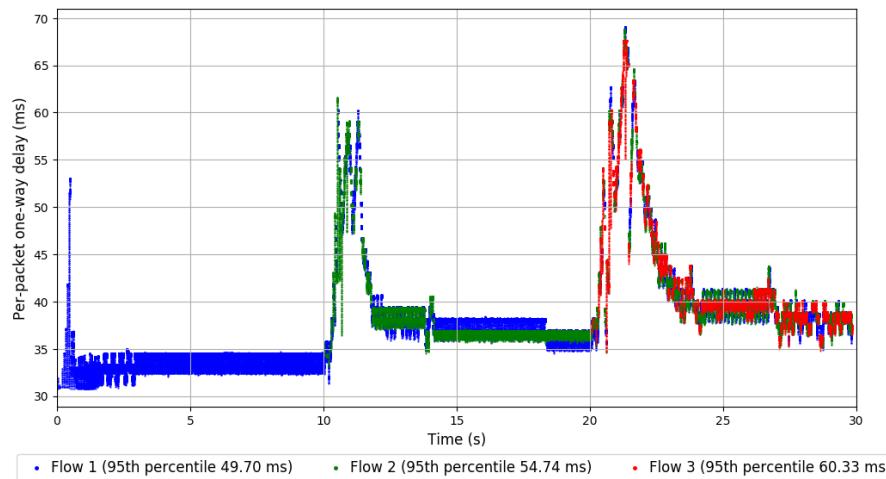
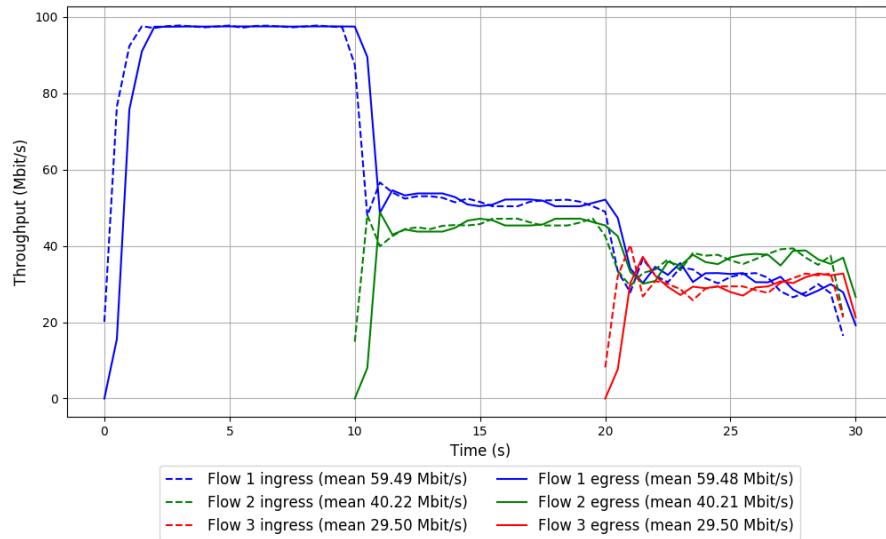


Run 1: Statistics of Indigo

```
Start at: 2018-11-15 04:53:22
End at: 2018-11-15 04:53:52
Local clock offset: 0.651 ms
Remote clock offset: 1.127 ms

# Below is generated by plot.py at 2018-11-15 06:55:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.78 Mbit/s
95th percentile per-packet one-way delay: 53.566 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.48 Mbit/s
95th percentile per-packet one-way delay: 49.700 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.21 Mbit/s
95th percentile per-packet one-way delay: 54.745 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.50 Mbit/s
95th percentile per-packet one-way delay: 60.331 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

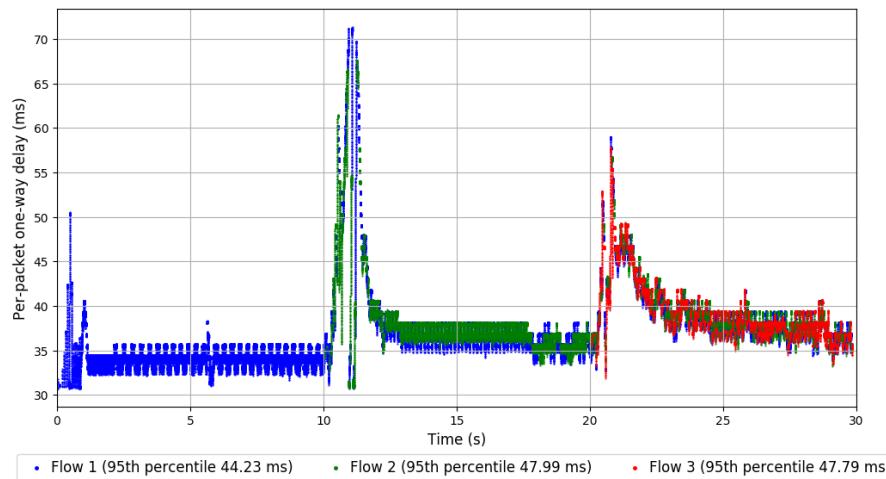
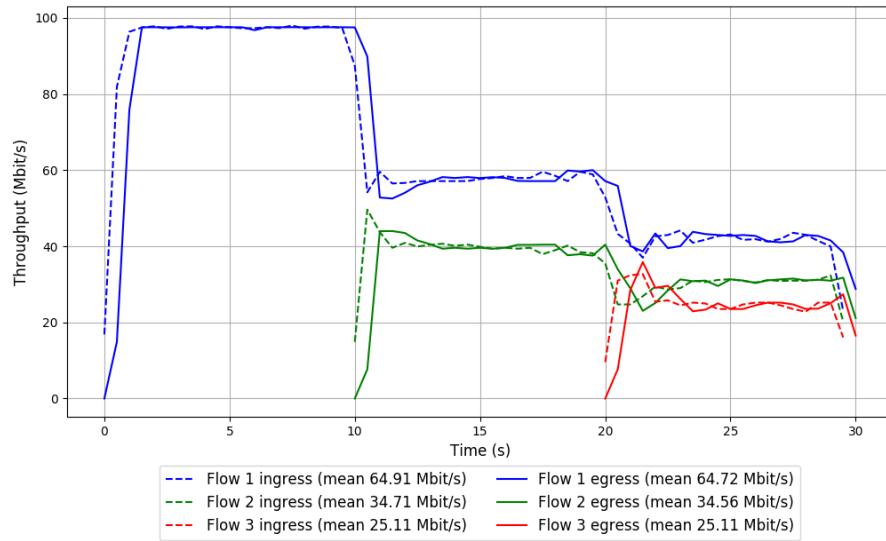


Run 2: Statistics of Indigo

```
Start at: 2018-11-15 05:18:01
End at: 2018-11-15 05:18:31
Local clock offset: 0.282 ms
Remote clock offset: 1.306 ms

# Below is generated by plot.py at 2018-11-15 06:55:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 46.498 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 64.72 Mbit/s
95th percentile per-packet one-way delay: 44.227 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 34.56 Mbit/s
95th percentile per-packet one-way delay: 47.993 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 25.11 Mbit/s
95th percentile per-packet one-way delay: 47.794 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

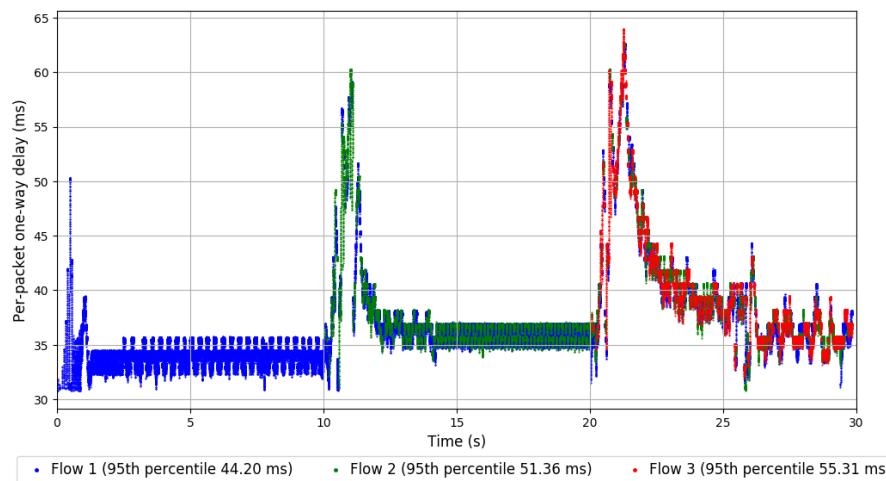
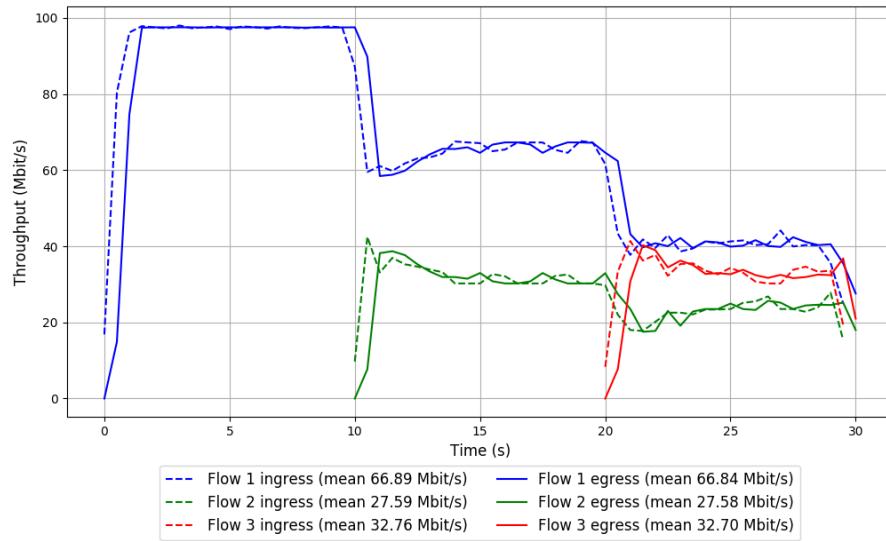


Run 3: Statistics of Indigo

```
Start at: 2018-11-15 05:42:59
End at: 2018-11-15 05:43:29
Local clock offset: 0.233 ms
Remote clock offset: 0.146 ms

# Below is generated by plot.py at 2018-11-15 06:55:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 49.081 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 66.84 Mbit/s
95th percentile per-packet one-way delay: 44.202 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 51.361 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.70 Mbit/s
95th percentile per-packet one-way delay: 55.314 ms
Loss rate: 0.16%
```

Run 3: Report of Indigo — Data Link

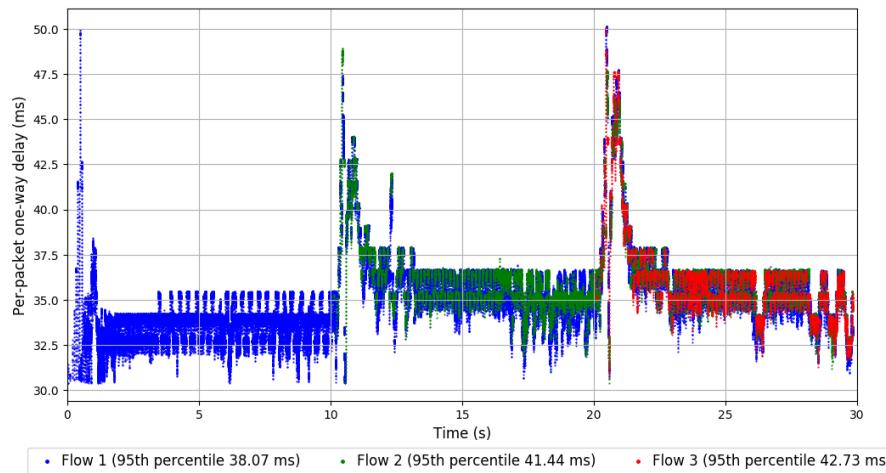
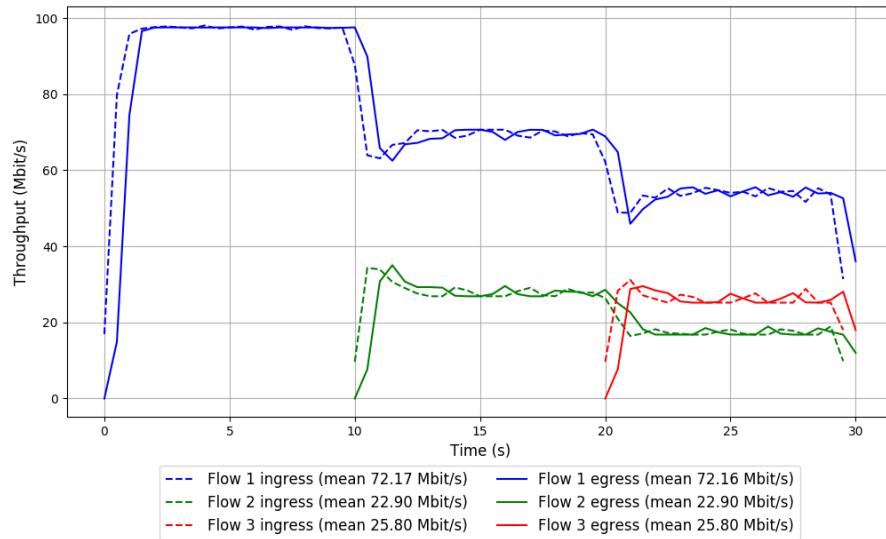


Run 4: Statistics of Indigo

```
Start at: 2018-11-15 06:07:42
End at: 2018-11-15 06:08:12
Local clock offset: -2.214 ms
Remote clock offset: -1.96 ms

# Below is generated by plot.py at 2018-11-15 06:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.80 Mbit/s
95th percentile per-packet one-way delay: 39.102 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.16 Mbit/s
95th percentile per-packet one-way delay: 38.069 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.90 Mbit/s
95th percentile per-packet one-way delay: 41.440 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.80 Mbit/s
95th percentile per-packet one-way delay: 42.725 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo — Data Link

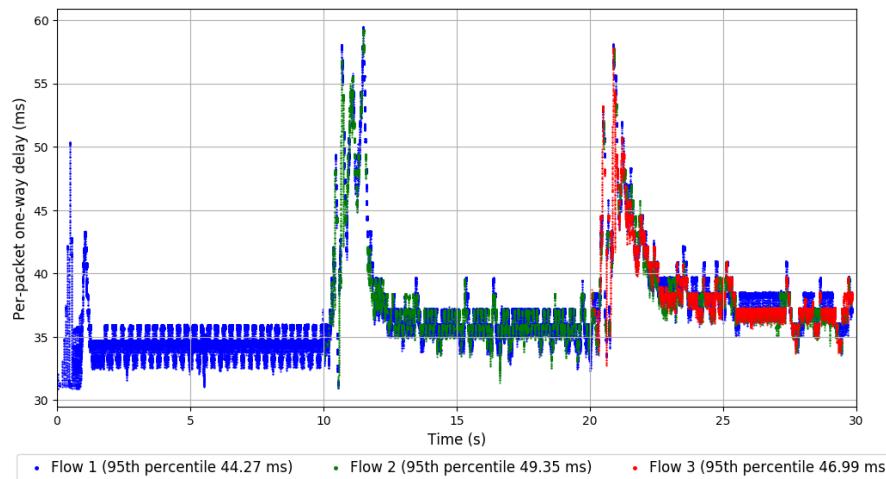
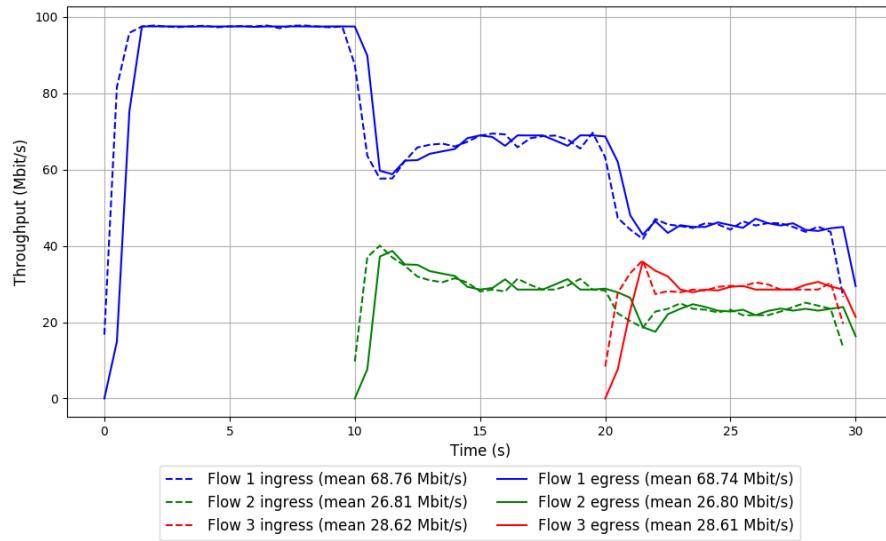


Run 5: Statistics of Indigo

```
Start at: 2018-11-15 06:32:14
End at: 2018-11-15 06:32:44
Local clock offset: -1.767 ms
Remote clock offset: -3.183 ms

# Below is generated by plot.py at 2018-11-15 06:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 45.808 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.74 Mbit/s
95th percentile per-packet one-way delay: 44.275 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.80 Mbit/s
95th percentile per-packet one-way delay: 49.350 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.61 Mbit/s
95th percentile per-packet one-way delay: 46.992 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link

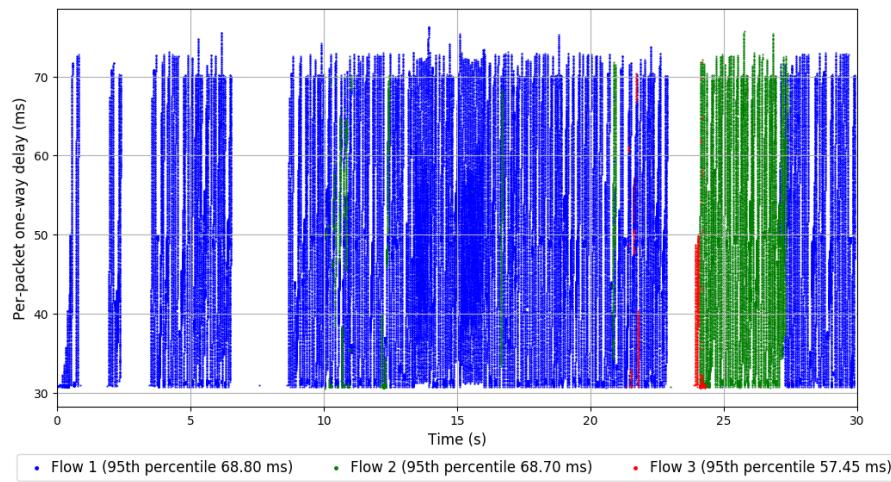
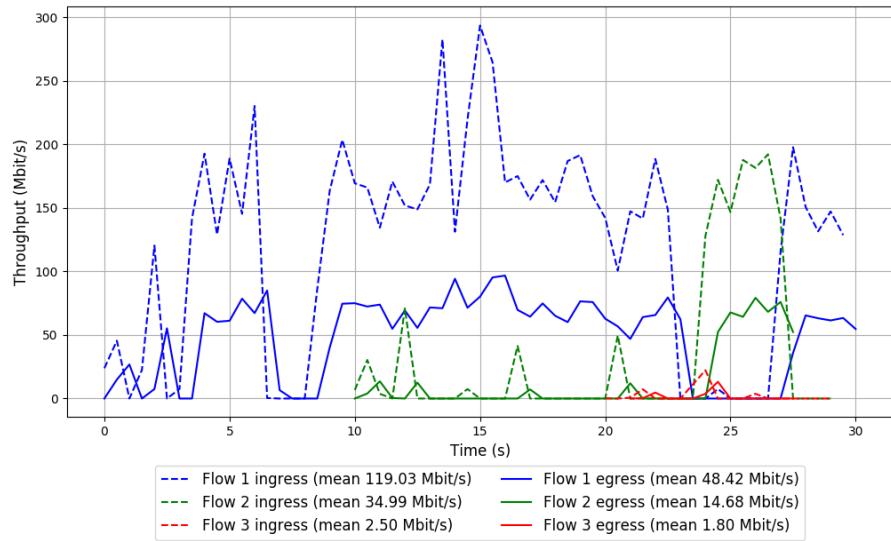


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-11-15 05:05:51
End at: 2018-11-15 05:06:21
Local clock offset: 0.345 ms
Remote clock offset: 1.547 ms

# Below is generated by plot.py at 2018-11-15 06:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.31 Mbit/s
95th percentile per-packet one-way delay: 68.768 ms
Loss rate: 59.77%
-- Flow 1:
Average throughput: 48.42 Mbit/s
95th percentile per-packet one-way delay: 68.796 ms
Loss rate: 59.30%
-- Flow 2:
Average throughput: 14.68 Mbit/s
95th percentile per-packet one-way delay: 68.699 ms
Loss rate: 62.51%
-- Flow 3:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 57.452 ms
Loss rate: 51.77%
```

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

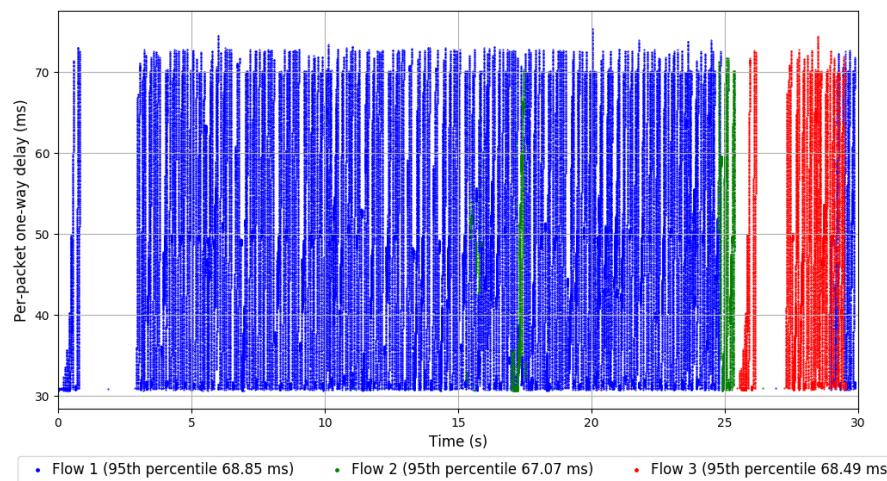
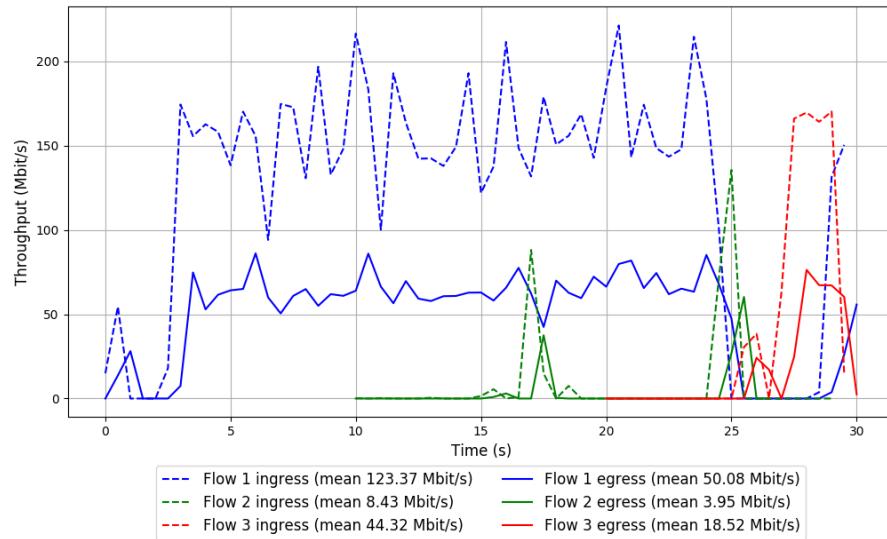


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-11-15 05:30:42
End at: 2018-11-15 05:31:12
Local clock offset: 0.27 ms
Remote clock offset: 0.661 ms

# Below is generated by plot.py at 2018-11-15 06:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.93 Mbit/s
95th percentile per-packet one-way delay: 68.794 ms
Loss rate: 59.36%
-- Flow 1:
Average throughput: 50.08 Mbit/s
95th percentile per-packet one-way delay: 68.851 ms
Loss rate: 59.40%
-- Flow 2:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 67.068 ms
Loss rate: 60.50%
-- Flow 3:
Average throughput: 18.52 Mbit/s
95th percentile per-packet one-way delay: 68.488 ms
Loss rate: 58.51%
```

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

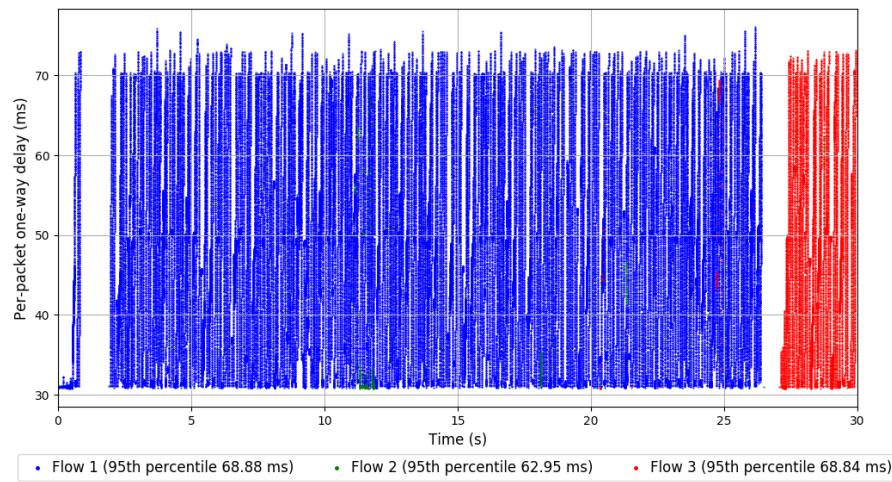
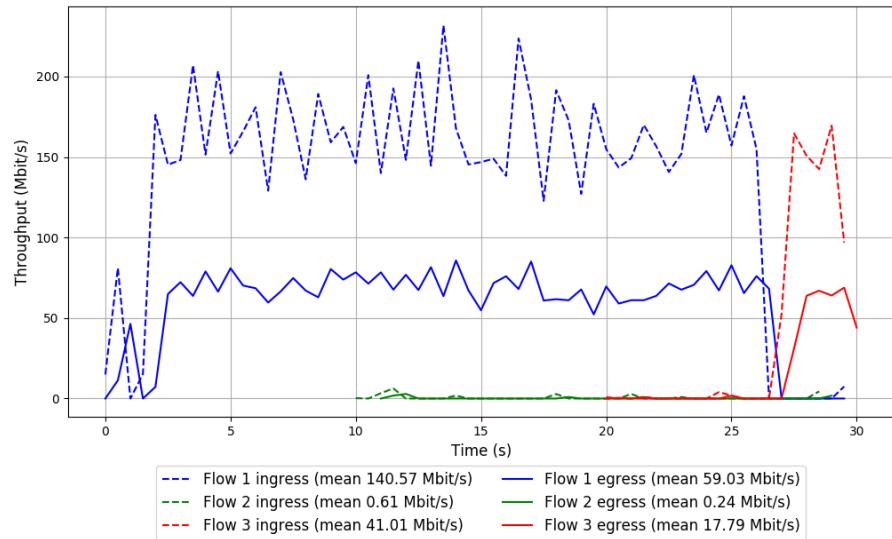


```
Run 3: Statistics of Indigo-96d2da3
```

```
Start at: 2018-11-15 05:55:33
End at: 2018-11-15 05:56:03
Local clock offset: 0.227 ms
Remote clock offset: -0.768 ms

# Below is generated by plot.py at 2018-11-15 06:56:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.98 Mbit/s
95th percentile per-packet one-way delay: 68.875 ms
Loss rate: 57.98%
-- Flow 1:
Average throughput: 59.03 Mbit/s
95th percentile per-packet one-way delay: 68.882 ms
Loss rate: 58.10%
-- Flow 2:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 62.946 ms
Loss rate: 62.82%
-- Flow 3:
Average throughput: 17.79 Mbit/s
95th percentile per-packet one-way delay: 68.843 ms
Loss rate: 56.52%
```

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

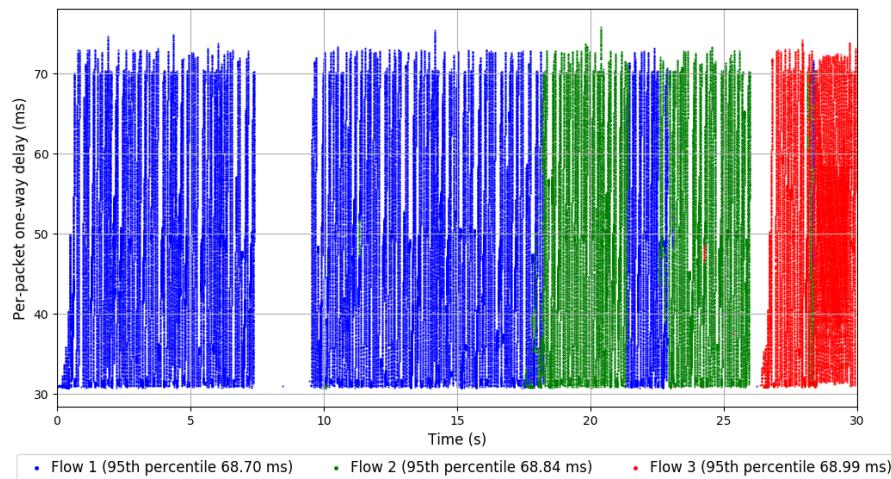
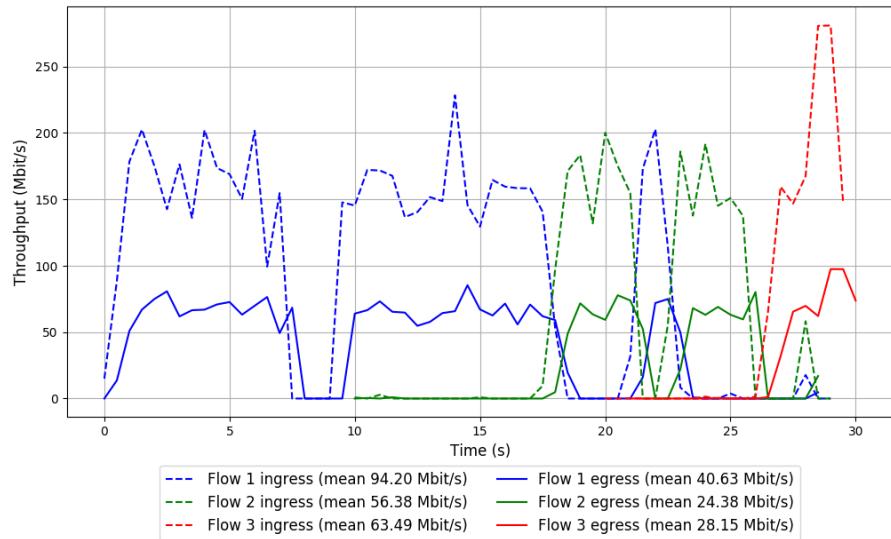


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-11-15 06:20:04
End at: 2018-11-15 06:20:34
Local clock offset: -3.302 ms
Remote clock offset: -2.573 ms

# Below is generated by plot.py at 2018-11-15 06:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.80 Mbit/s
95th percentile per-packet one-way delay: 68.789 ms
Loss rate: 58.83%
-- Flow 1:
Average throughput: 40.63 Mbit/s
95th percentile per-packet one-way delay: 68.699 ms
Loss rate: 58.44%
-- Flow 2:
Average throughput: 24.38 Mbit/s
95th percentile per-packet one-way delay: 68.841 ms
Loss rate: 59.12%
-- Flow 3:
Average throughput: 28.15 Mbit/s
95th percentile per-packet one-way delay: 68.986 ms
Loss rate: 60.08%
```

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

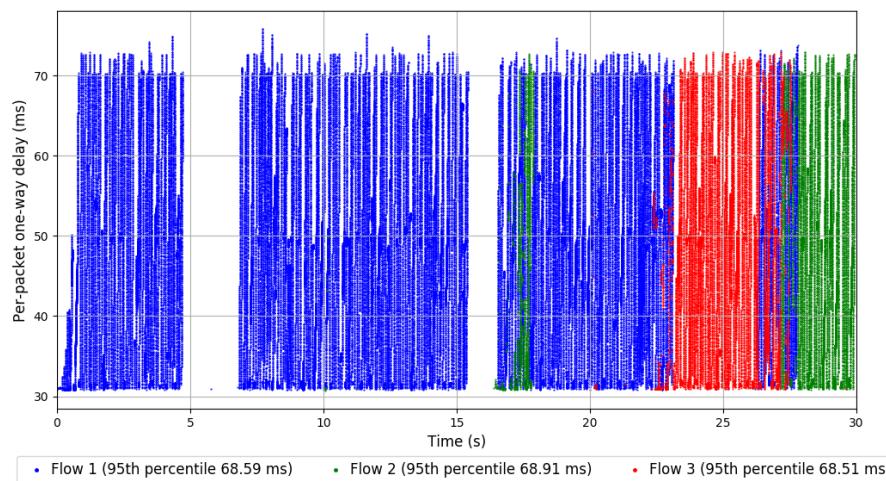
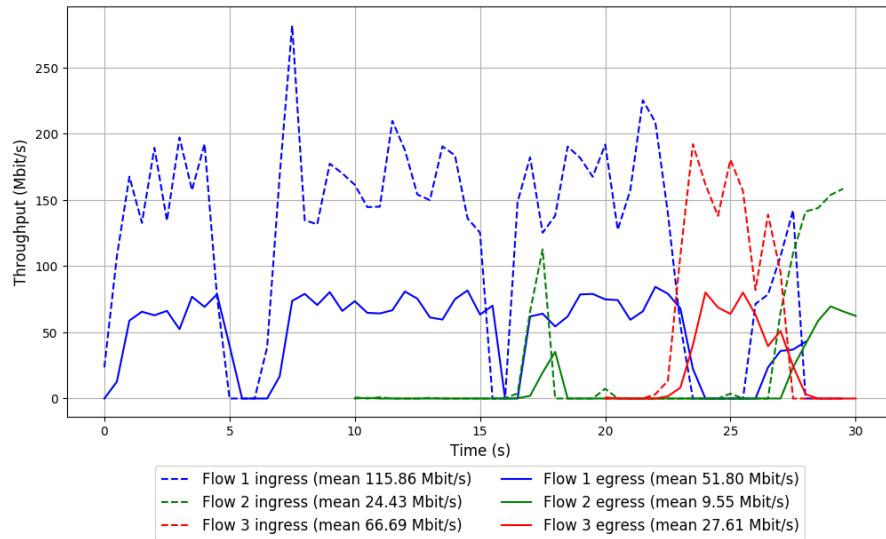


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-11-15 06:44:34
End at: 2018-11-15 06:45:04
Local clock offset: 0.017 ms
Remote clock offset: -3.248 ms

# Below is generated by plot.py at 2018-11-15 06:56:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.25 Mbit/s
95th percentile per-packet one-way delay: 68.616 ms
Loss rate: 58.69%
-- Flow 1:
Average throughput: 51.80 Mbit/s
95th percentile per-packet one-way delay: 68.593 ms
Loss rate: 58.38%
-- Flow 2:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 68.907 ms
Loss rate: 60.85%
-- Flow 3:
Average throughput: 27.61 Mbit/s
95th percentile per-packet one-way delay: 68.508 ms
Loss rate: 58.68%
```

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

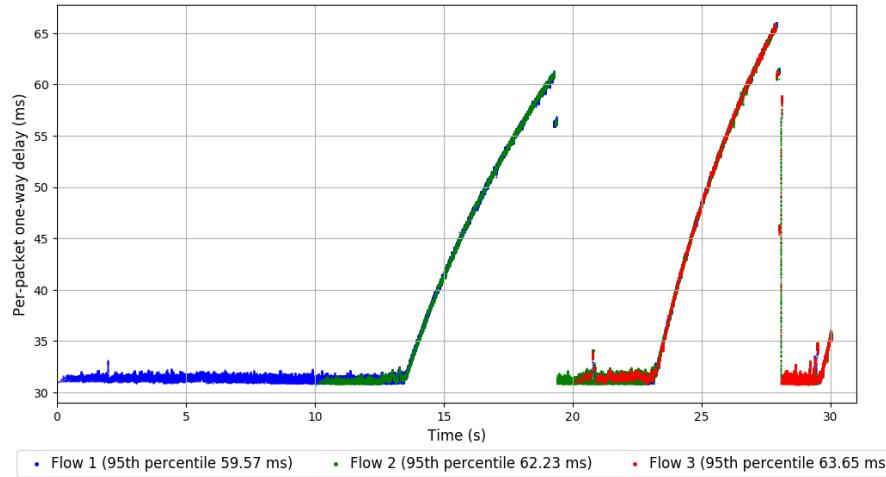
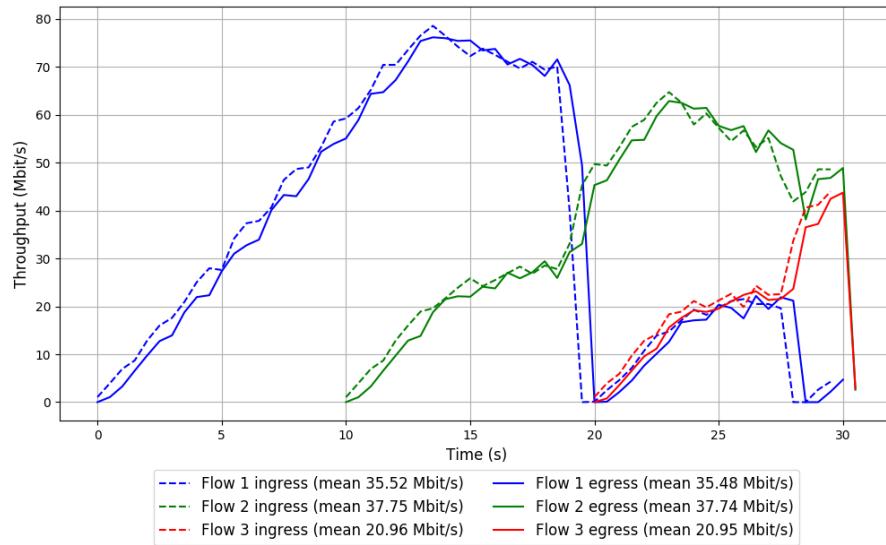


Run 1: Statistics of LEDBAT

```
Start at: 2018-11-15 05:04:29
End at: 2018-11-15 05:04:59
Local clock offset: 0.367 ms
Remote clock offset: 1.63 ms

# Below is generated by plot.py at 2018-11-15 06:56:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.55 Mbit/s
95th percentile per-packet one-way delay: 60.996 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 35.48 Mbit/s
95th percentile per-packet one-way delay: 59.571 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 37.74 Mbit/s
95th percentile per-packet one-way delay: 62.235 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.95 Mbit/s
95th percentile per-packet one-way delay: 63.648 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

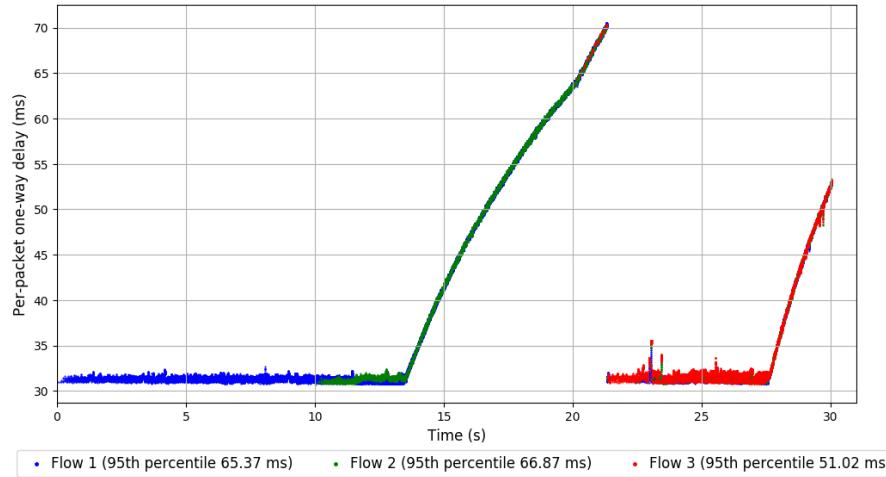
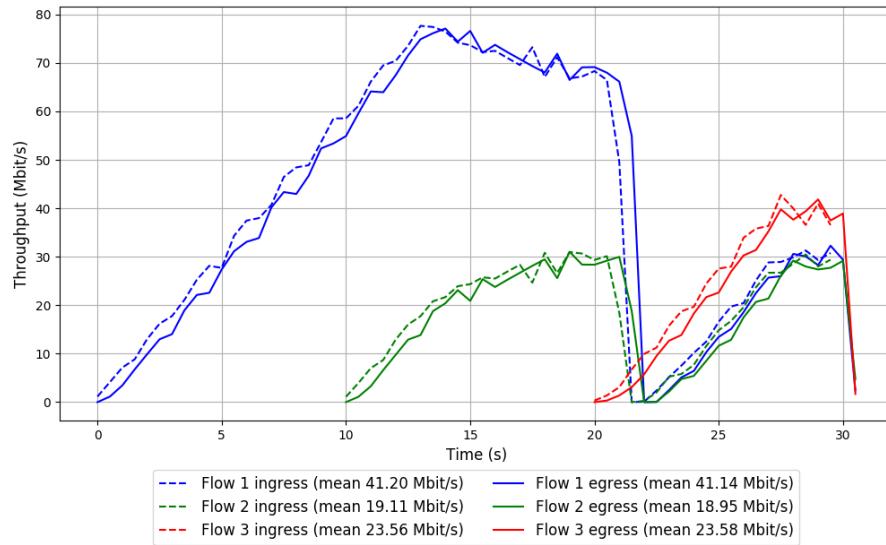


Run 2: Statistics of LEDBAT

```
Start at: 2018-11-15 05:29:16
End at: 2018-11-15 05:29:46
Local clock offset: 0.277 ms
Remote clock offset: 0.759 ms

# Below is generated by plot.py at 2018-11-15 06:56:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.55 Mbit/s
95th percentile per-packet one-way delay: 65.342 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 41.14 Mbit/s
95th percentile per-packet one-way delay: 65.372 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 18.95 Mbit/s
95th percentile per-packet one-way delay: 66.869 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 23.58 Mbit/s
95th percentile per-packet one-way delay: 51.021 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

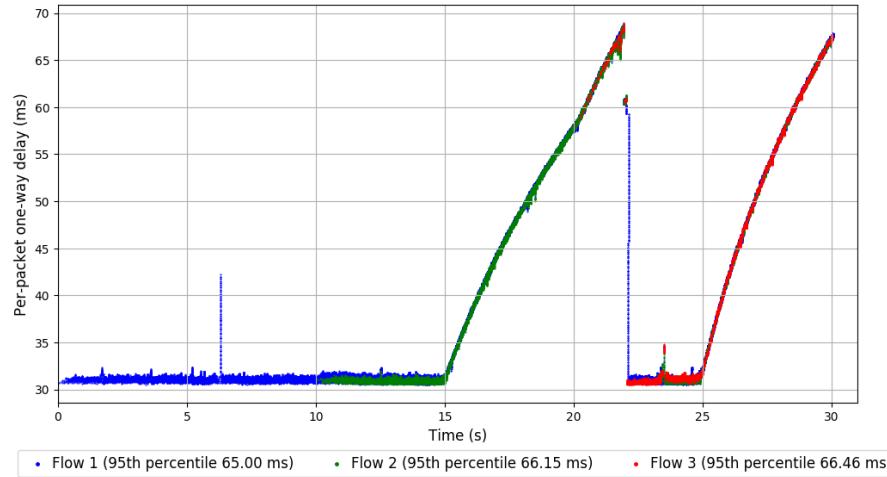
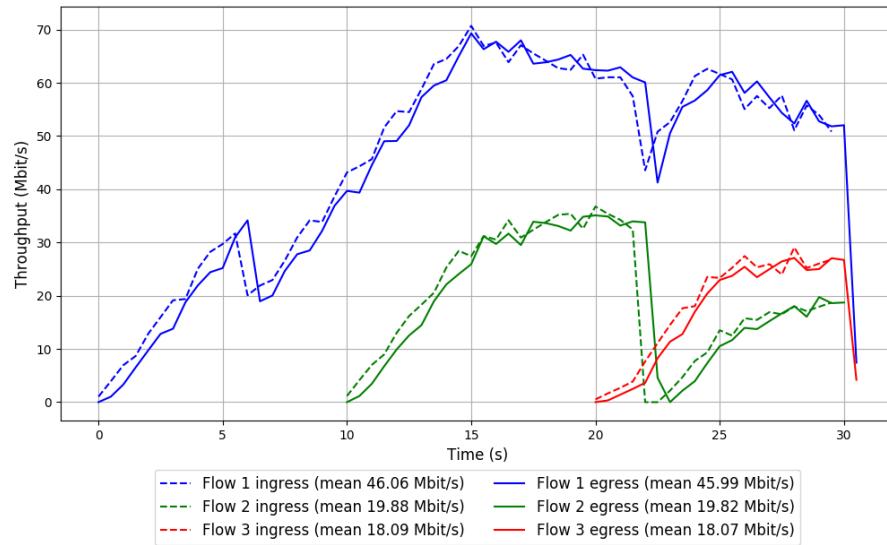


Run 3: Statistics of LEDBAT

```
Start at: 2018-11-15 05:54:09
End at: 2018-11-15 05:54:39
Local clock offset: 0.222 ms
Remote clock offset: -0.908 ms

# Below is generated by plot.py at 2018-11-15 06:56:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.14 Mbit/s
95th percentile per-packet one-way delay: 65.520 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 45.99 Mbit/s
95th percentile per-packet one-way delay: 65.005 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 19.82 Mbit/s
95th percentile per-packet one-way delay: 66.149 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 18.07 Mbit/s
95th percentile per-packet one-way delay: 66.457 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

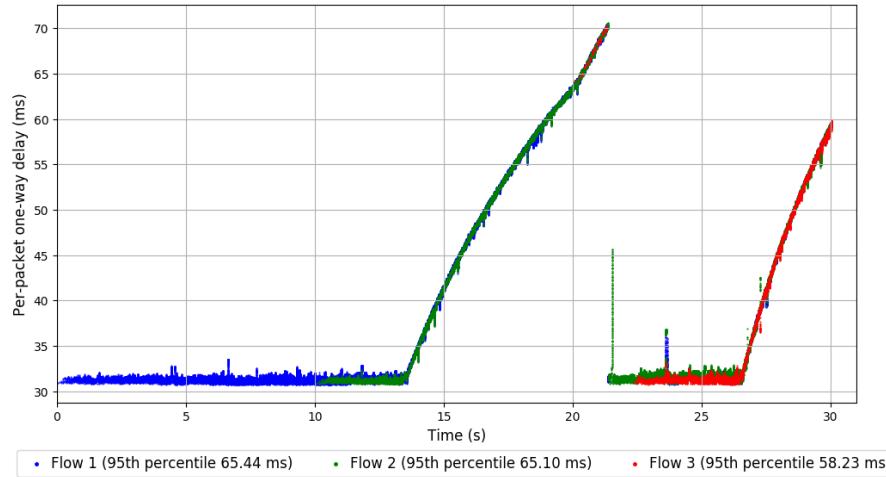
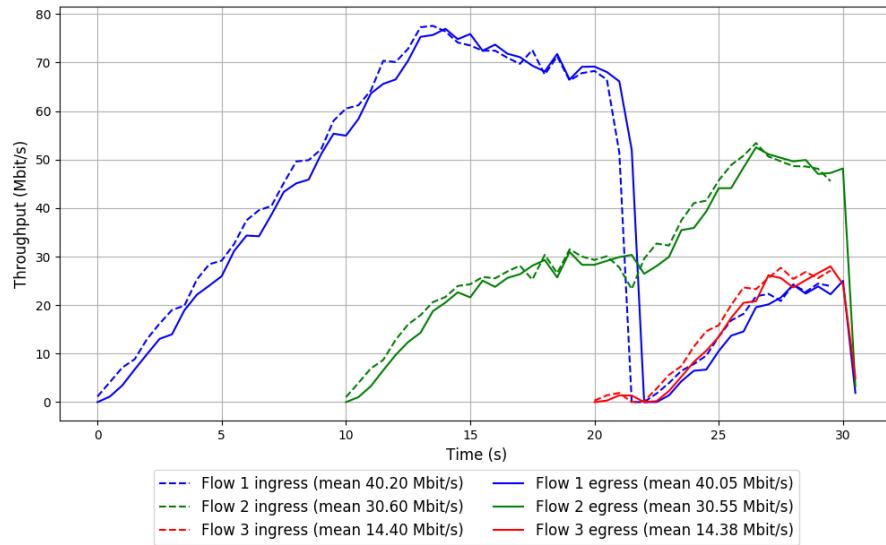


Run 4: Statistics of LEDBAT

```
Start at: 2018-11-15 06:18:41
End at: 2018-11-15 06:19:11
Local clock offset: -3.244 ms
Remote clock offset: -2.514 ms

# Below is generated by plot.py at 2018-11-15 06:56:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.18 Mbit/s
95th percentile per-packet one-way delay: 65.113 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 40.05 Mbit/s
95th percentile per-packet one-way delay: 65.445 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 30.55 Mbit/s
95th percentile per-packet one-way delay: 65.099 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 14.38 Mbit/s
95th percentile per-packet one-way delay: 58.232 ms
Loss rate: 0.19%
```

Run 4: Report of LEDBAT — Data Link

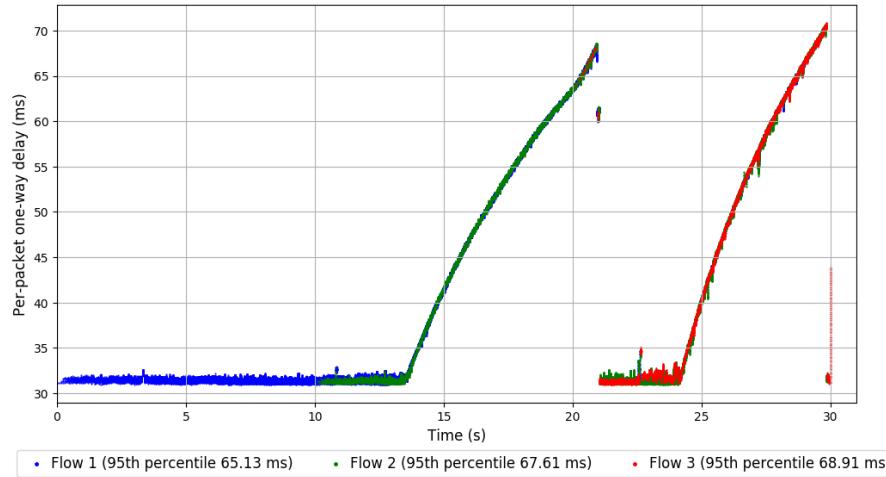
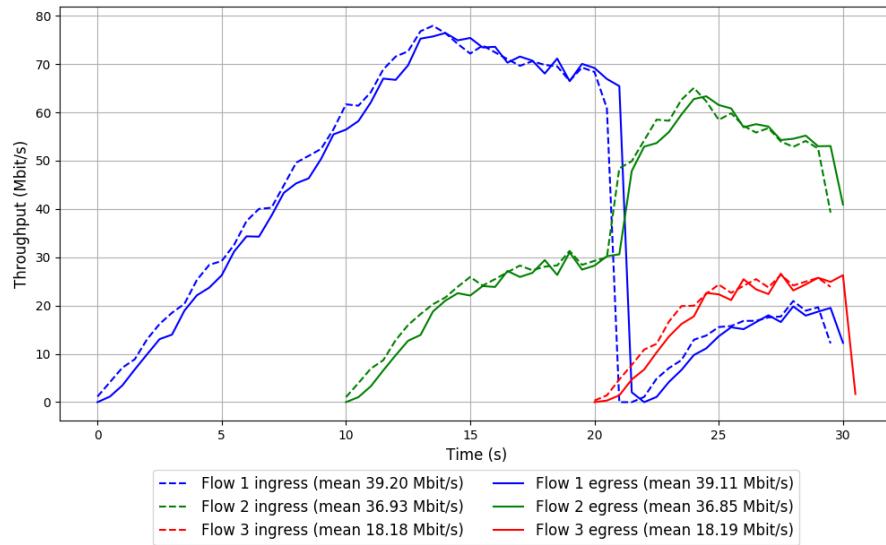


Run 5: Statistics of LEDBAT

```
Start at: 2018-11-15 06:43:12
End at: 2018-11-15 06:43:42
Local clock offset: -0.121 ms
Remote clock offset: -3.192 ms

# Below is generated by plot.py at 2018-11-15 06:56:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.33 Mbit/s
95th percentile per-packet one-way delay: 66.797 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 39.11 Mbit/s
95th percentile per-packet one-way delay: 65.129 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 36.85 Mbit/s
95th percentile per-packet one-way delay: 67.607 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 18.19 Mbit/s
95th percentile per-packet one-way delay: 68.906 ms
Loss rate: 0.12%
```

Run 5: Report of LEDBAT — Data Link

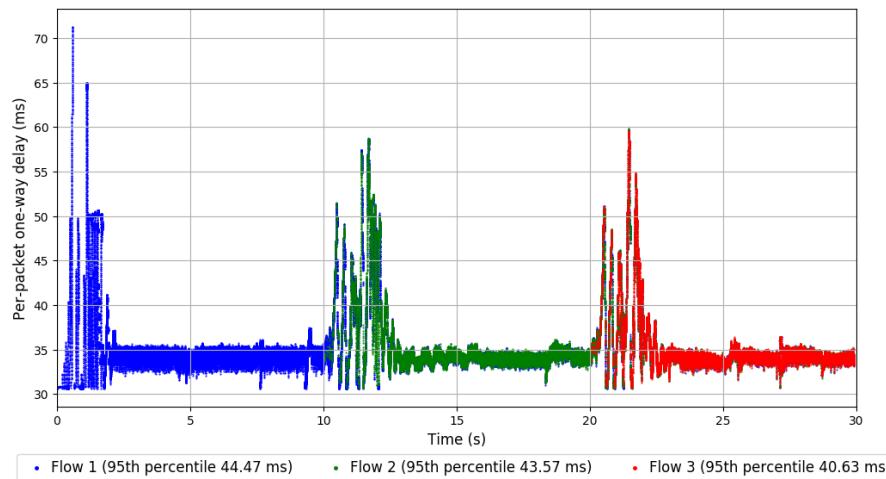
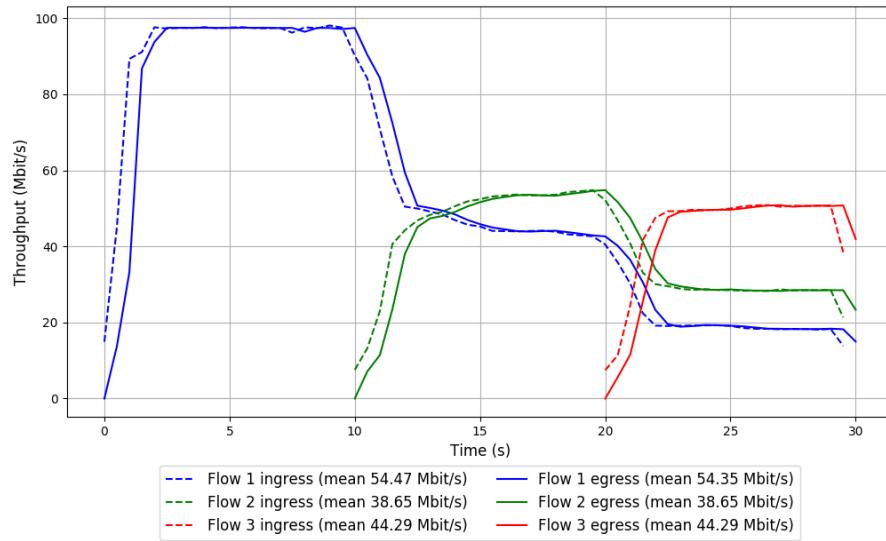


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-11-15 05:07:14
End at: 2018-11-15 05:07:44
Local clock offset: 0.312 ms
Remote clock offset: 1.553 ms

# Below is generated by plot.py at 2018-11-15 06:57:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.67 Mbit/s
95th percentile per-packet one-way delay: 43.664 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 54.35 Mbit/s
95th percentile per-packet one-way delay: 44.470 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 38.65 Mbit/s
95th percentile per-packet one-way delay: 43.567 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 44.29 Mbit/s
95th percentile per-packet one-way delay: 40.627 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-Muses — Data Link

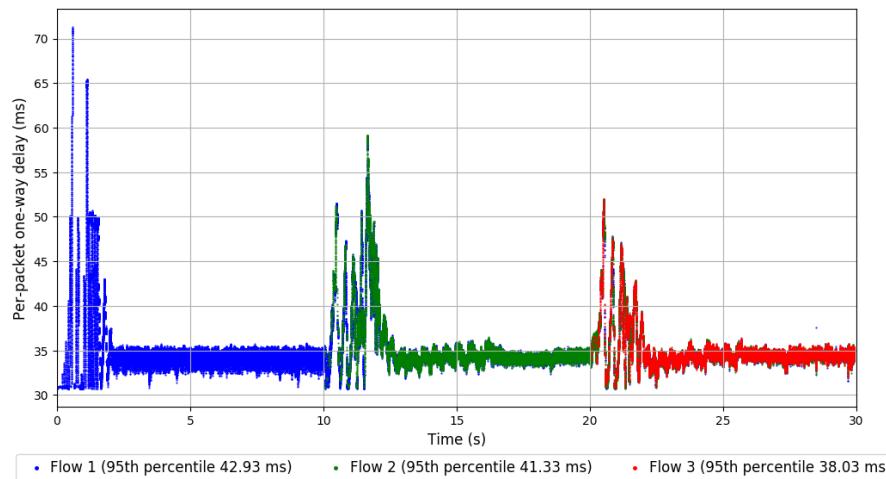
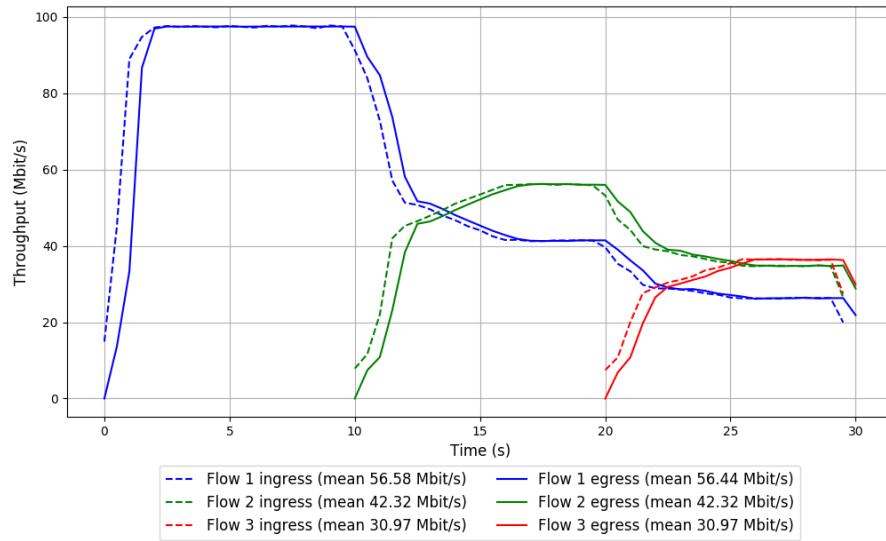


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-11-15 05:32:10
End at: 2018-11-15 05:32:40
Local clock offset: 0.27 ms
Remote clock offset: 0.642 ms

# Below is generated by plot.py at 2018-11-15 06:57:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.79 Mbit/s
95th percentile per-packet one-way delay: 41.988 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 56.44 Mbit/s
95th percentile per-packet one-way delay: 42.928 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 42.32 Mbit/s
95th percentile per-packet one-way delay: 41.334 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 30.97 Mbit/s
95th percentile per-packet one-way delay: 38.033 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo-Muses — Data Link

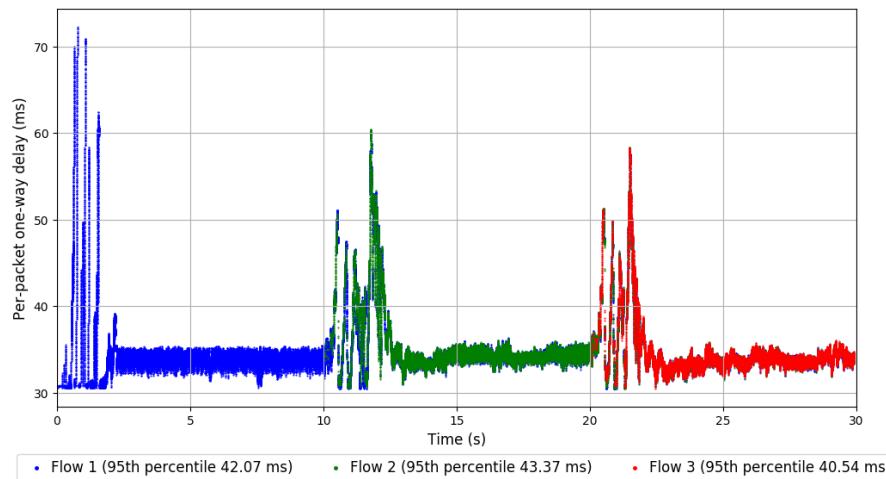
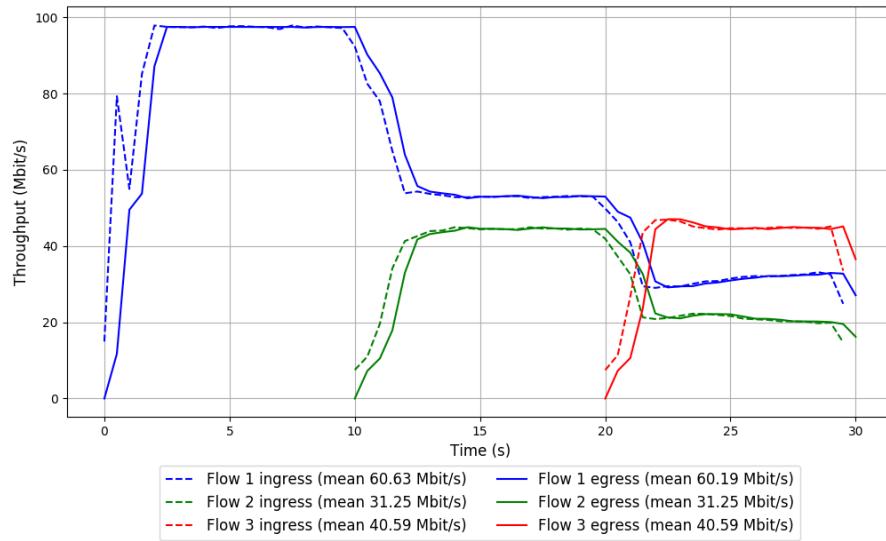


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-11-15 05:56:56
End at: 2018-11-15 05:57:26
Local clock offset: 0.185 ms
Remote clock offset: -0.897 ms

# Below is generated by plot.py at 2018-11-15 06:57:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.34 Mbit/s
95th percentile per-packet one-way delay: 42.217 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 60.19 Mbit/s
95th percentile per-packet one-way delay: 42.070 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 31.25 Mbit/s
95th percentile per-packet one-way delay: 43.368 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 40.59 Mbit/s
95th percentile per-packet one-way delay: 40.538 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo-Muses — Data Link

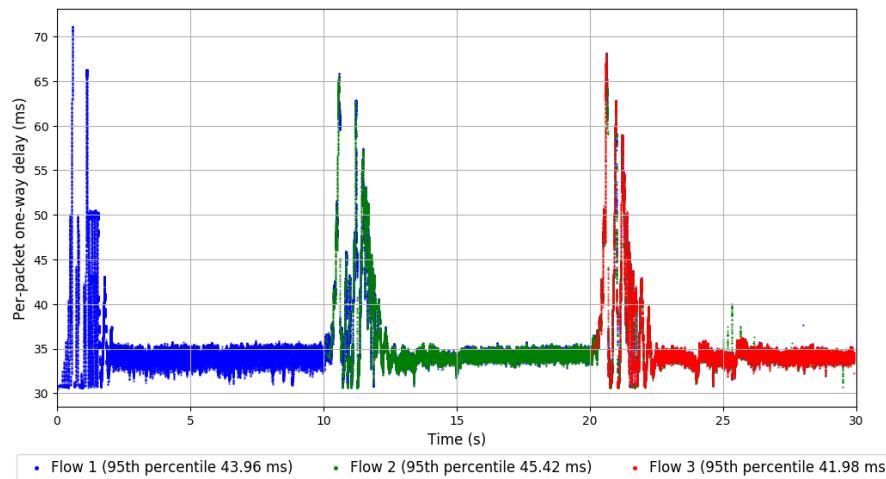
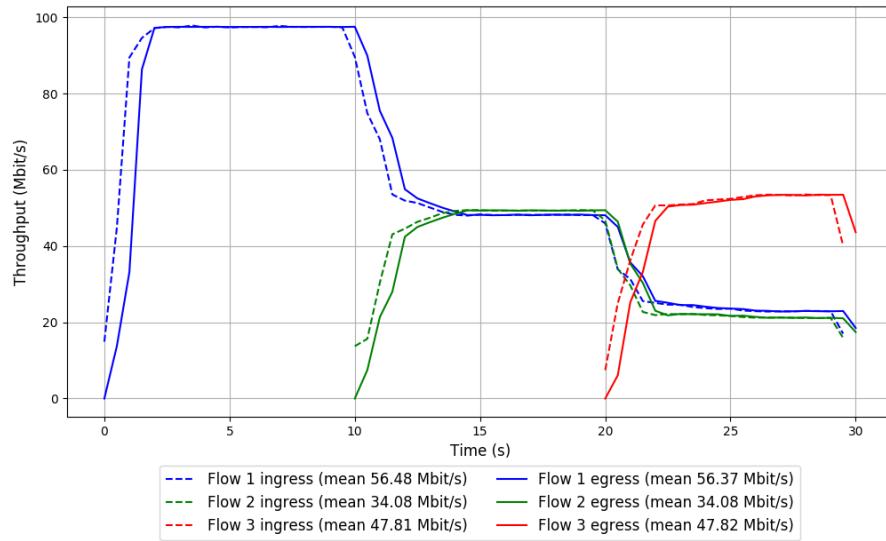


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-11-15 06:21:26
End at: 2018-11-15 06:21:56
Local clock offset: -3.399 ms
Remote clock offset: -2.834 ms

# Below is generated by plot.py at 2018-11-15 06:57:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.76 Mbit/s
95th percentile per-packet one-way delay: 43.921 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.37 Mbit/s
95th percentile per-packet one-way delay: 43.957 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 34.08 Mbit/s
95th percentile per-packet one-way delay: 45.425 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 47.82 Mbit/s
95th percentile per-packet one-way delay: 41.979 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo-Muses — Data Link

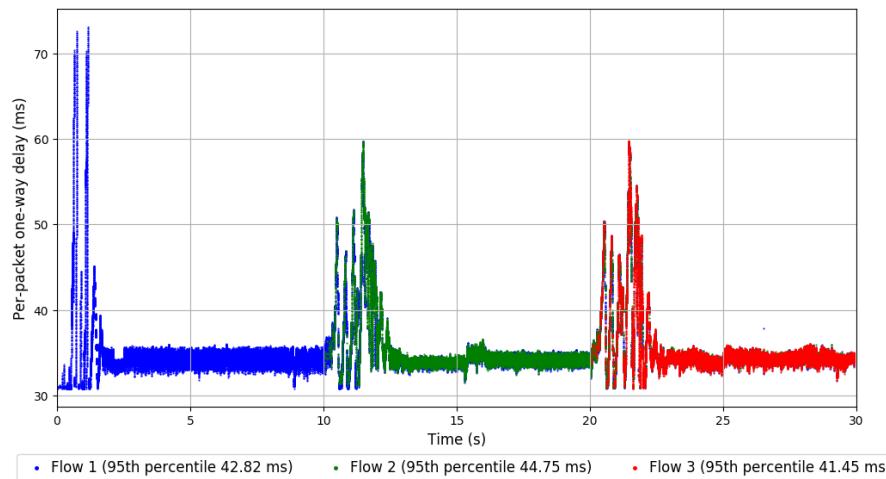
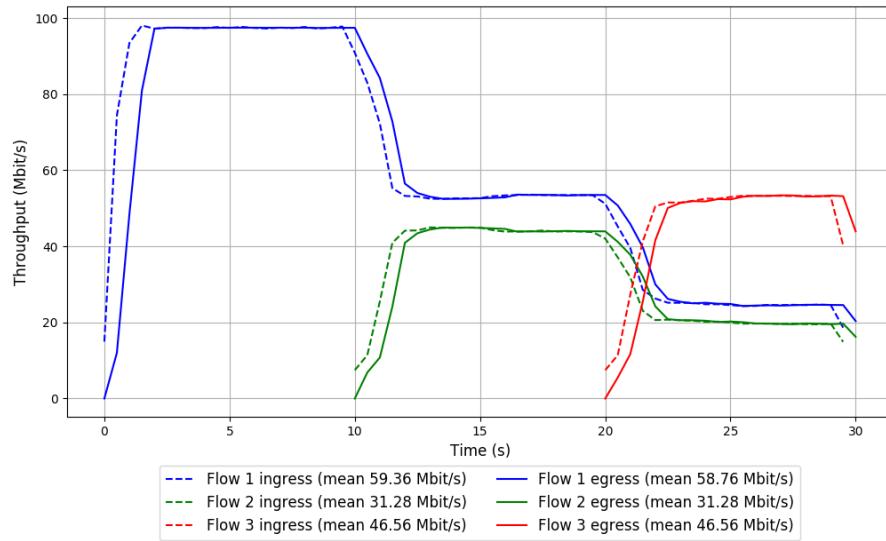


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-11-15 06:45:56
End at: 2018-11-15 06:46:26
Local clock offset: 0.117 ms
Remote clock offset: -3.274 ms

# Below is generated by plot.py at 2018-11-15 06:57:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 43.024 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 58.76 Mbit/s
95th percentile per-packet one-way delay: 42.823 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 31.28 Mbit/s
95th percentile per-packet one-way delay: 44.751 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.56 Mbit/s
95th percentile per-packet one-way delay: 41.452 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo-Muses — Data Link

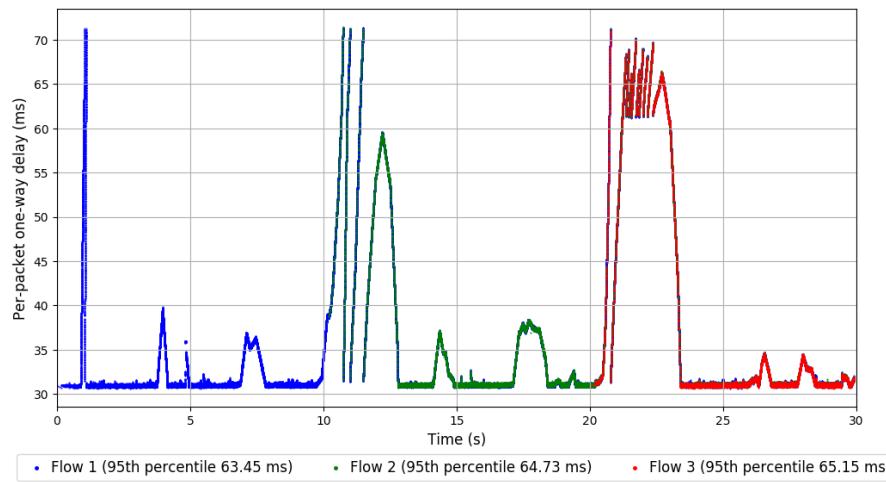
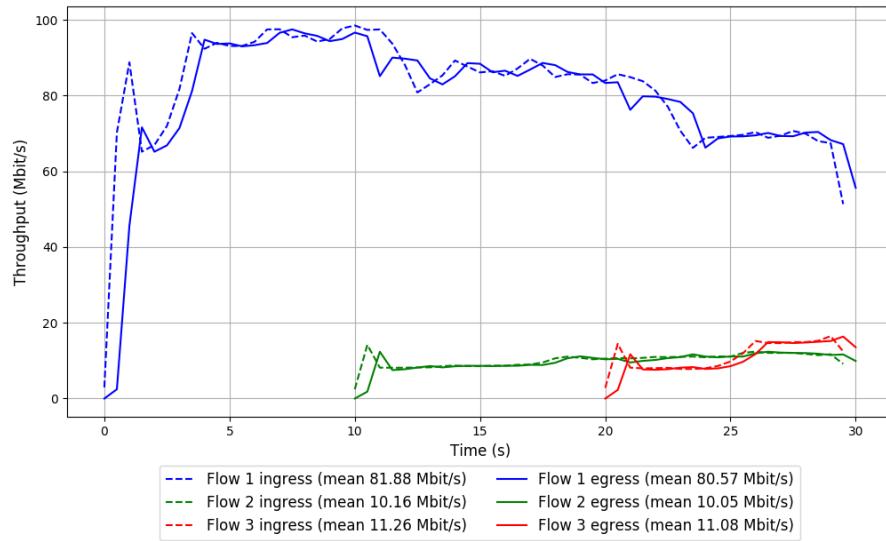


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-11-15 05:08:37
End at: 2018-11-15 05:09:07
Local clock offset: 0.3 ms
Remote clock offset: 1.651 ms

# Below is generated by plot.py at 2018-11-15 06:58:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.91 Mbit/s
95th percentile per-packet one-way delay: 63.724 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 80.57 Mbit/s
95th percentile per-packet one-way delay: 63.445 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 10.05 Mbit/s
95th percentile per-packet one-way delay: 64.733 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 11.08 Mbit/s
95th percentile per-packet one-way delay: 65.151 ms
Loss rate: 1.53%
```

Run 1: Report of PCC-Allegro — Data Link

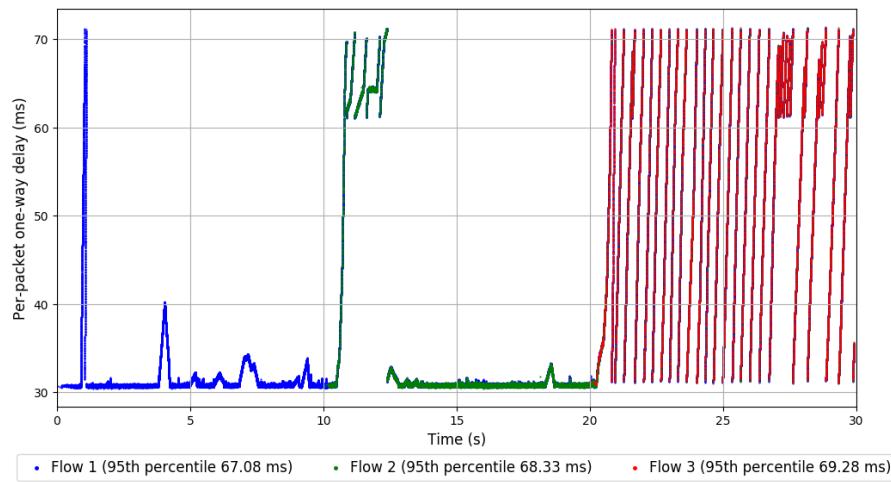
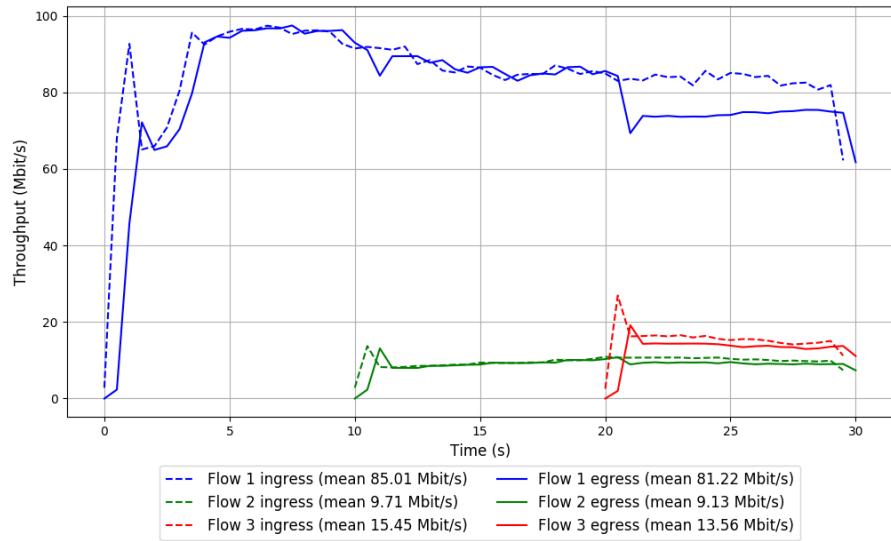


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-11-15 05:33:35
End at: 2018-11-15 05:34:05
Local clock offset: 0.253 ms
Remote clock offset: 0.388 ms

# Below is generated by plot.py at 2018-11-15 06:58:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.76 Mbit/s
95th percentile per-packet one-way delay: 67.443 ms
Loss rate: 4.95%
-- Flow 1:
Average throughput: 81.22 Mbit/s
95th percentile per-packet one-way delay: 67.084 ms
Loss rate: 4.45%
-- Flow 2:
Average throughput: 9.13 Mbit/s
95th percentile per-packet one-way delay: 68.325 ms
Loss rate: 5.88%
-- Flow 3:
Average throughput: 13.56 Mbit/s
95th percentile per-packet one-way delay: 69.279 ms
Loss rate: 12.19%
```

Run 2: Report of PCC-Allegro — Data Link

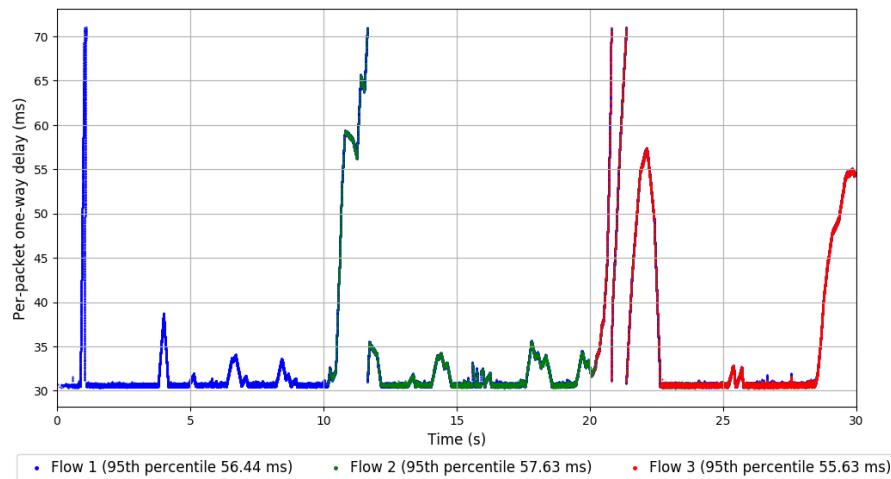
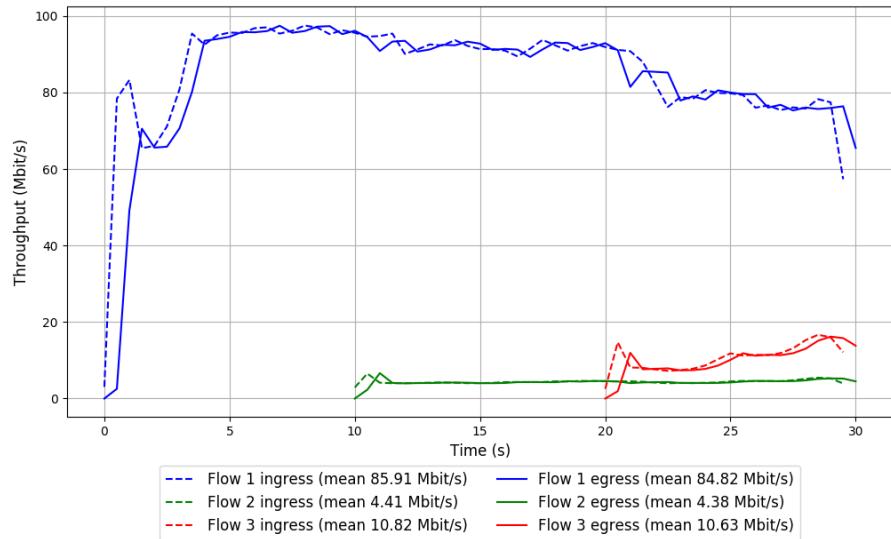


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-11-15 05:58:19
End at: 2018-11-15 05:58:49
Local clock offset: -0.22 ms
Remote clock offset: -1.061 ms

# Below is generated by plot.py at 2018-11-15 06:58:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.25 Mbit/s
95th percentile per-packet one-way delay: 56.447 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 84.82 Mbit/s
95th percentile per-packet one-way delay: 56.440 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 57.626 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 10.63 Mbit/s
95th percentile per-packet one-way delay: 55.634 ms
Loss rate: 1.51%
```

Run 3: Report of PCC-Allegro — Data Link

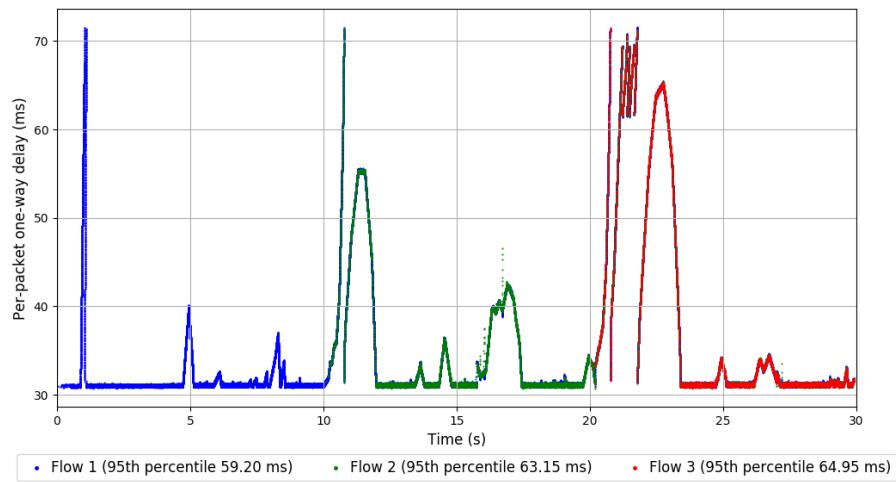
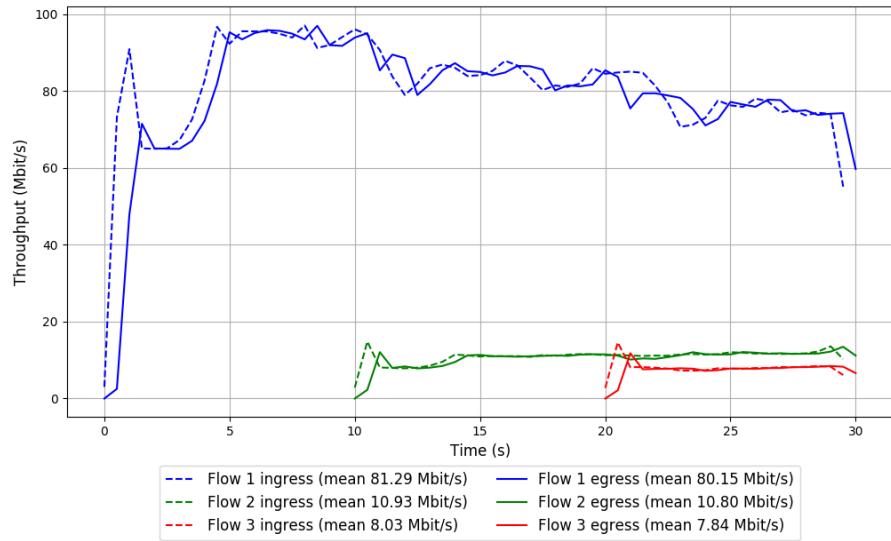


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-11-15 06:22:50
End at: 2018-11-15 06:23:20
Local clock offset: -3.504 ms
Remote clock offset: -2.808 ms

# Below is generated by plot.py at 2018-11-15 06:58:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.91 Mbit/s
95th percentile per-packet one-way delay: 60.651 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 80.15 Mbit/s
95th percentile per-packet one-way delay: 59.204 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 10.80 Mbit/s
95th percentile per-packet one-way delay: 63.146 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 64.947 ms
Loss rate: 2.38%
```

Run 4: Report of PCC-Allegro — Data Link

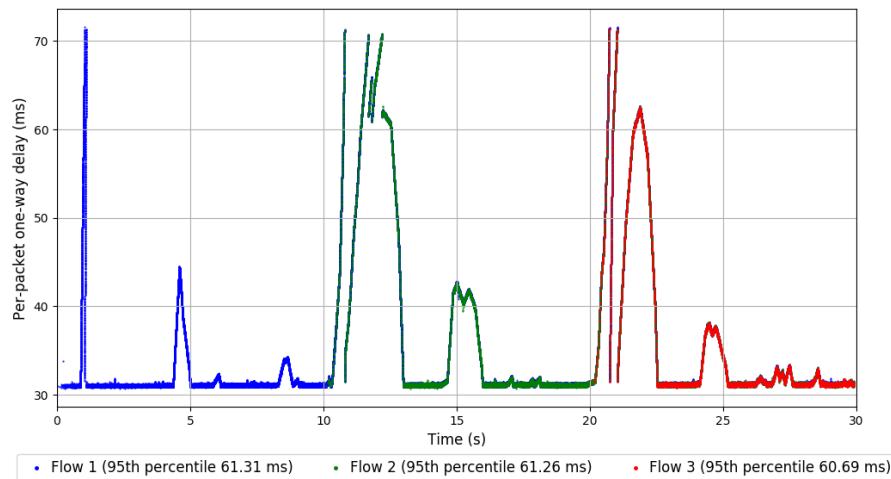
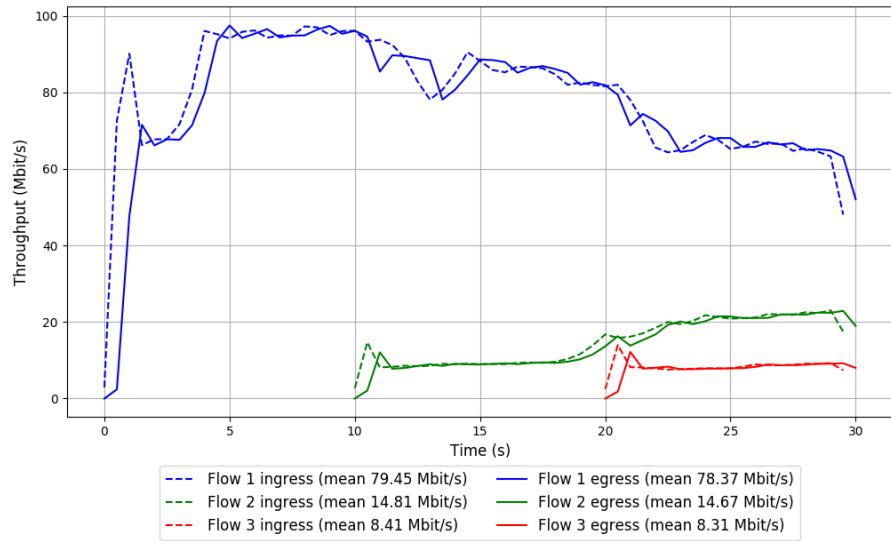


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-11-15 06:47:19
End at: 2018-11-15 06:47:49
Local clock offset: 0.22 ms
Remote clock offset: -3.271 ms

# Below is generated by plot.py at 2018-11-15 06:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.86 Mbit/s
95th percentile per-packet one-way delay: 61.283 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 78.37 Mbit/s
95th percentile per-packet one-way delay: 61.310 ms
Loss rate: 1.36%
-- Flow 2:
Average throughput: 14.67 Mbit/s
95th percentile per-packet one-way delay: 61.255 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 8.31 Mbit/s
95th percentile per-packet one-way delay: 60.689 ms
Loss rate: 1.17%
```

Run 5: Report of PCC-Allegro — Data Link

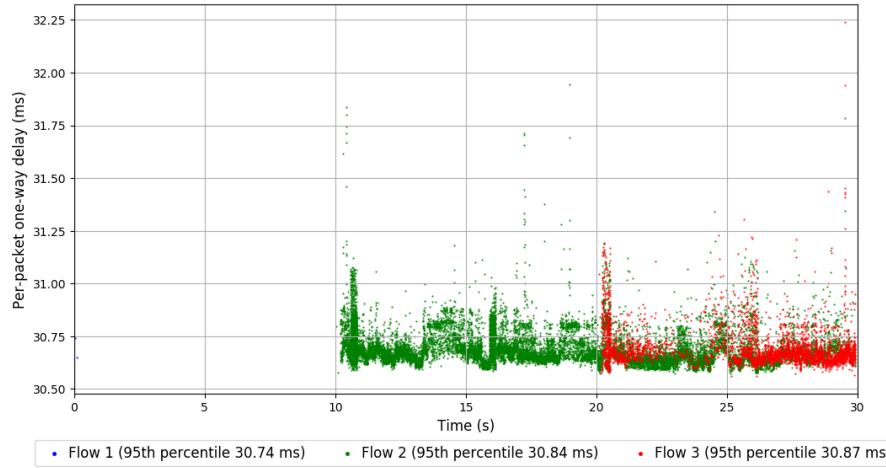
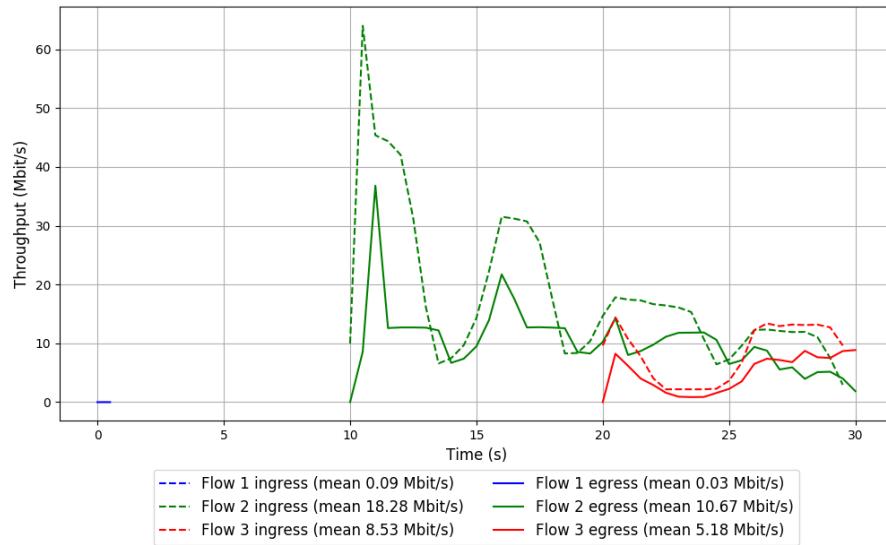


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-11-15 05:00:27
End at: 2018-11-15 05:00:57
Local clock offset: 0.517 ms
Remote clock offset: 1.345 ms

# Below is generated by plot.py at 2018-11-15 06:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 30.848 ms
Loss rate: 41.20%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 30.740 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.67 Mbit/s
95th percentile per-packet one-way delay: 30.844 ms
Loss rate: 41.64%
-- Flow 3:
Average throughput: 5.18 Mbit/s
95th percentile per-packet one-way delay: 30.867 ms
Loss rate: 39.31%
```

Run 1: Report of PCC-Expr — Data Link

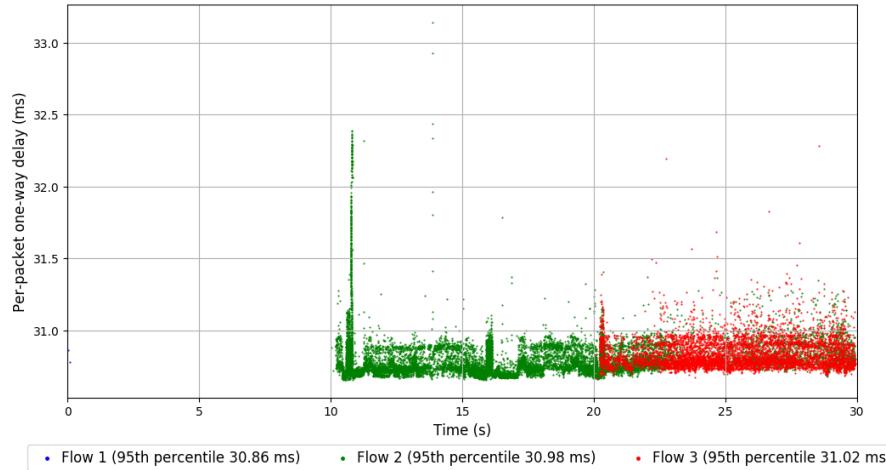
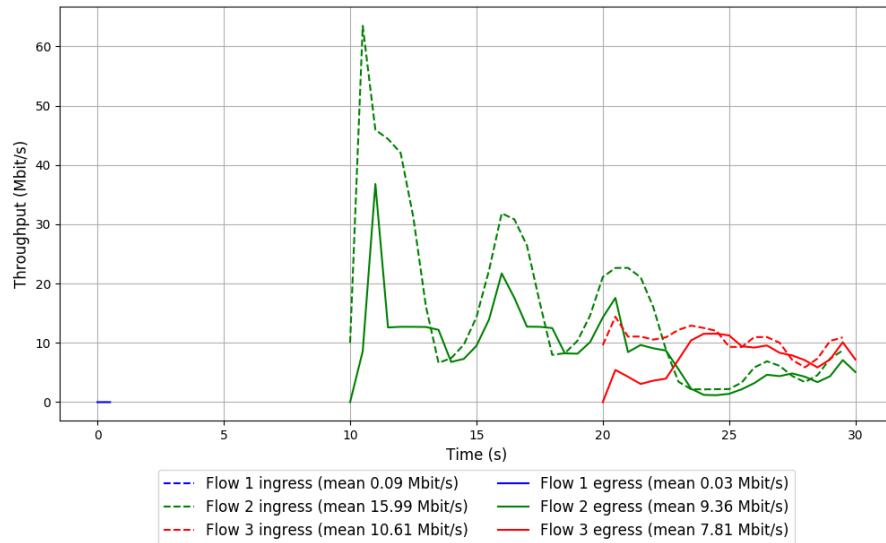


Run 2: Statistics of PCC-Expr

```
Start at: 2018-11-15 05:25:10
End at: 2018-11-15 05:25:40
Local clock offset: 0.311 ms
Remote clock offset: 0.893 ms

# Below is generated by plot.py at 2018-11-15 06:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 30.997 ms
Loss rate: 37.72%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 30.861 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.36 Mbit/s
95th percentile per-packet one-way delay: 30.983 ms
Loss rate: 41.45%
-- Flow 3:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 31.016 ms
Loss rate: 26.40%
```

Run 2: Report of PCC-Expr — Data Link

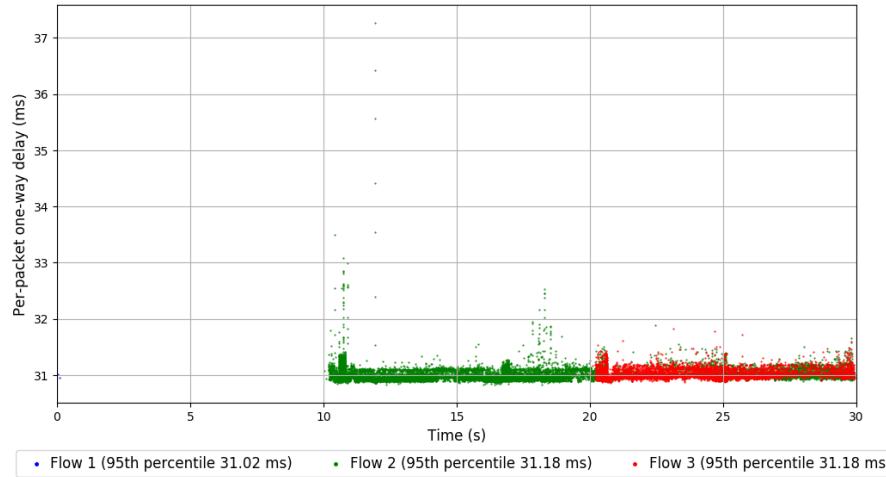
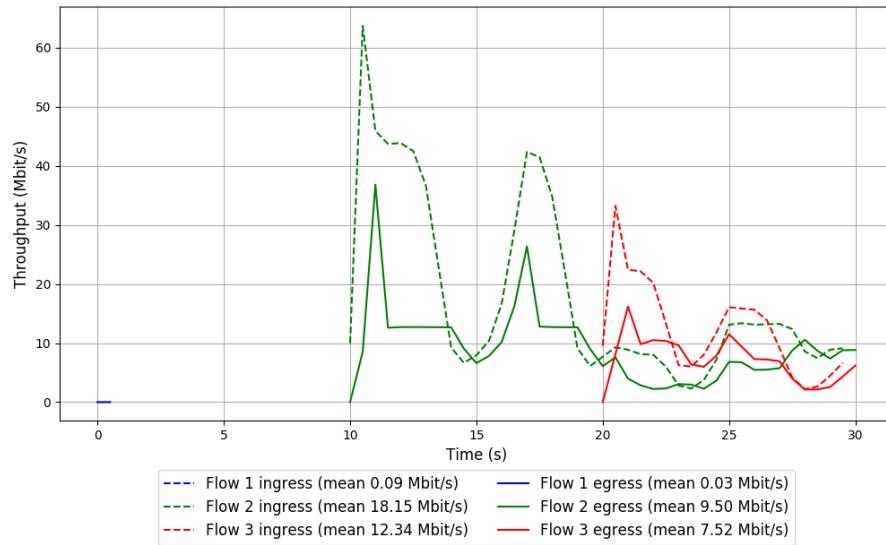


Run 3: Statistics of PCC-Expr

```
Start at: 2018-11-15 05:50:02
End at: 2018-11-15 05:50:32
Local clock offset: 0.199 ms
Remote clock offset: -0.284 ms

# Below is generated by plot.py at 2018-11-15 06:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 31.180 ms
Loss rate: 45.47%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 31.020 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.50 Mbit/s
95th percentile per-packet one-way delay: 31.179 ms
Loss rate: 47.65%
-- Flow 3:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 31.183 ms
Loss rate: 39.04%
```

Run 3: Report of PCC-Expr — Data Link

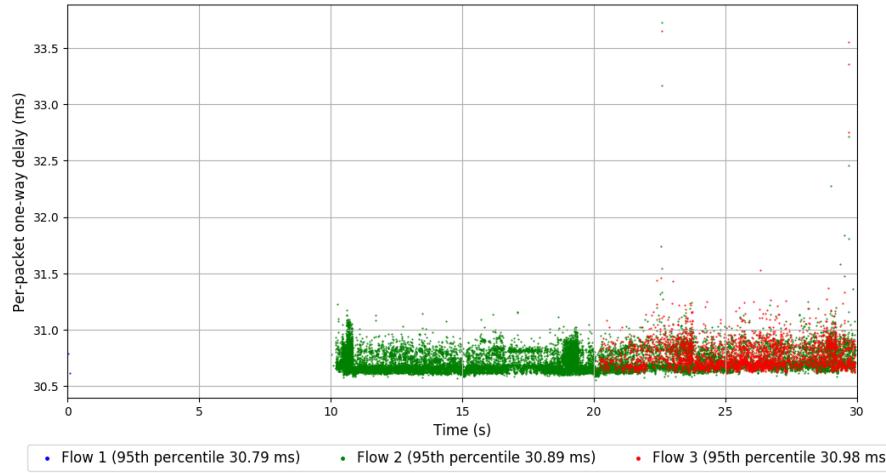
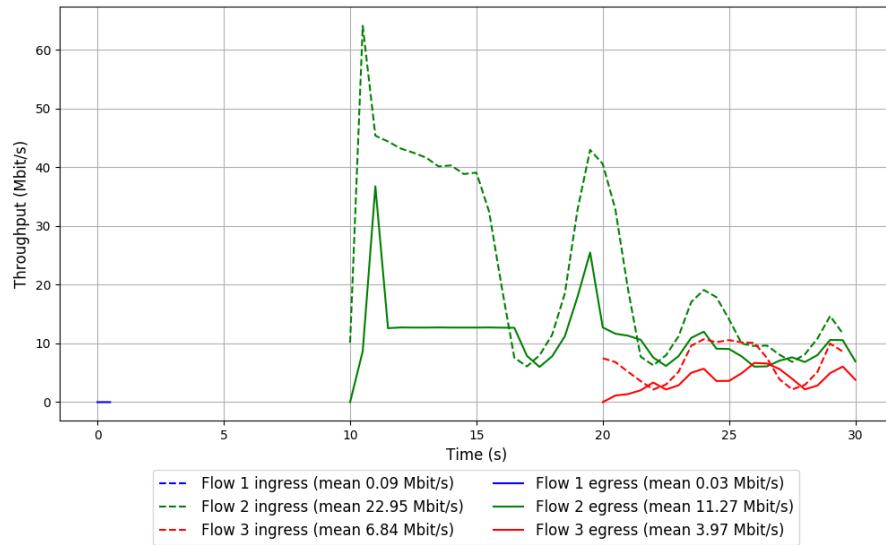


Run 4: Statistics of PCC-Expr

```
Start at: 2018-11-15 06:14:38
End at: 2018-11-15 06:15:08
Local clock offset: -2.963 ms
Remote clock offset: -2.372 ms

# Below is generated by plot.py at 2018-11-15 06:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 30.906 ms
Loss rate: 49.75%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 30.789 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 11.27 Mbit/s
95th percentile per-packet one-way delay: 30.892 ms
Loss rate: 50.91%
-- Flow 3:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 30.982 ms
Loss rate: 41.93%
```

Run 4: Report of PCC-Expr — Data Link

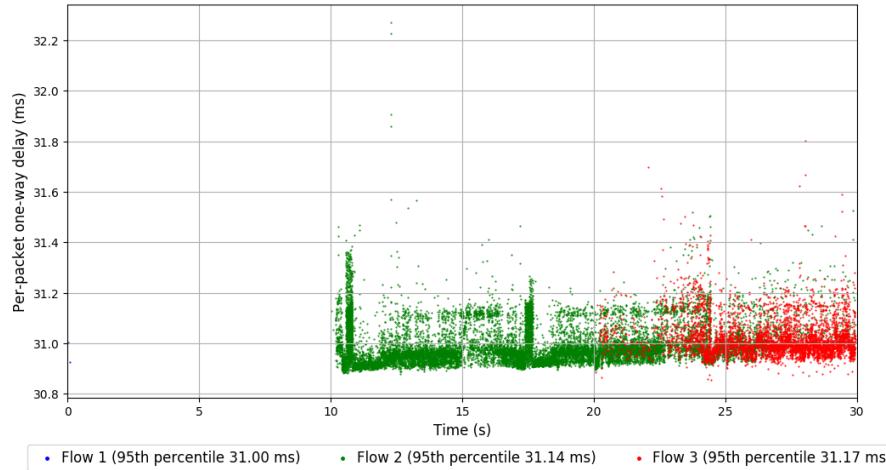
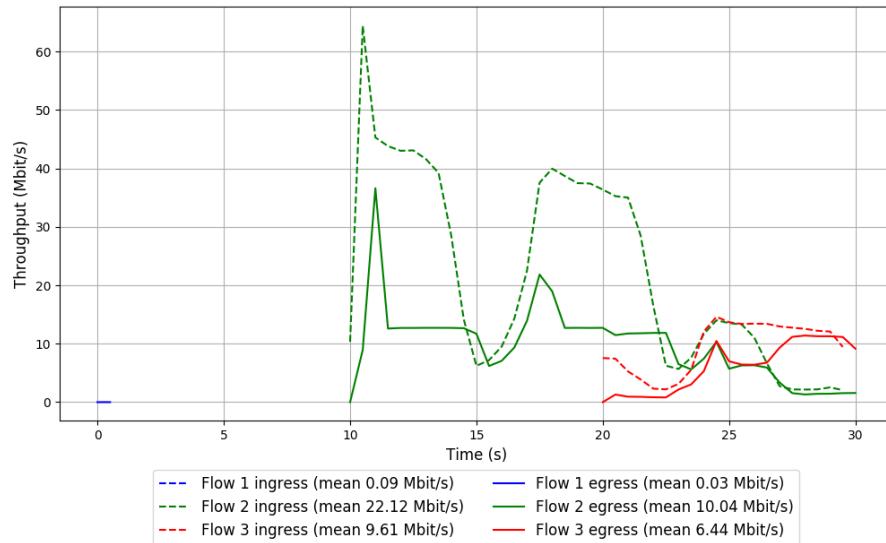


Run 5: Statistics of PCC-Expr

```
Start at: 2018-11-15 06:39:11
End at: 2018-11-15 06:39:41
Local clock offset: -0.511 ms
Remote clock offset: -3.211 ms

# Below is generated by plot.py at 2018-11-15 06:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 31.151 ms
Loss rate: 50.79%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 31.005 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.04 Mbit/s
95th percentile per-packet one-way delay: 31.145 ms
Loss rate: 54.61%
-- Flow 3:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 31.168 ms
Loss rate: 33.06%
```

Run 5: Report of PCC-Expr — Data Link

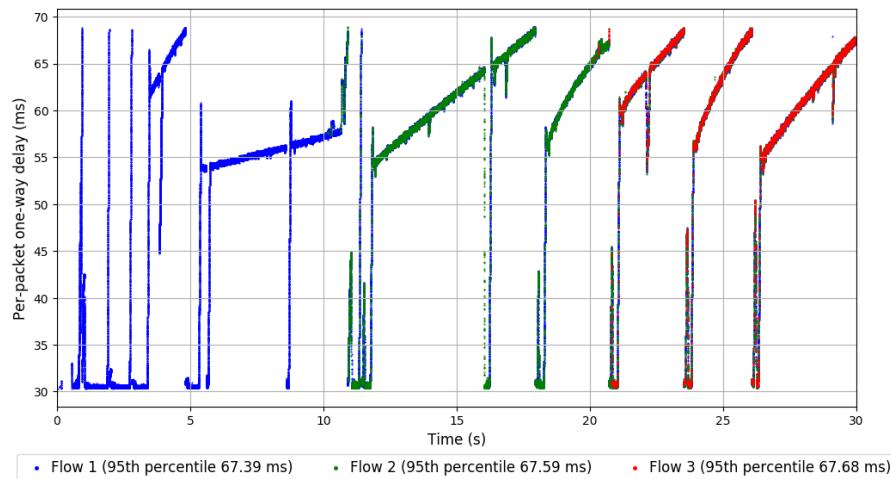
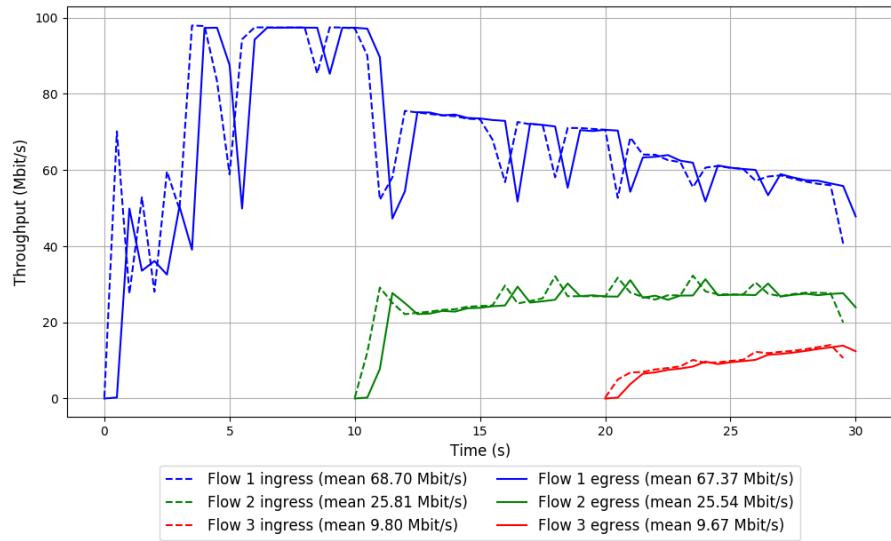


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-11-15 04:57:40
End at: 2018-11-15 04:58:10
Local clock offset: 0.659 ms
Remote clock offset: 1.071 ms

# Below is generated by plot.py at 2018-11-15 06:59:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.50 Mbit/s
95th percentile per-packet one-way delay: 67.446 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 67.37 Mbit/s
95th percentile per-packet one-way delay: 67.393 ms
Loss rate: 1.81%
-- Flow 2:
Average throughput: 25.54 Mbit/s
95th percentile per-packet one-way delay: 67.594 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 67.677 ms
Loss rate: 1.25%
```

Run 1: Report of QUIC Cubic — Data Link

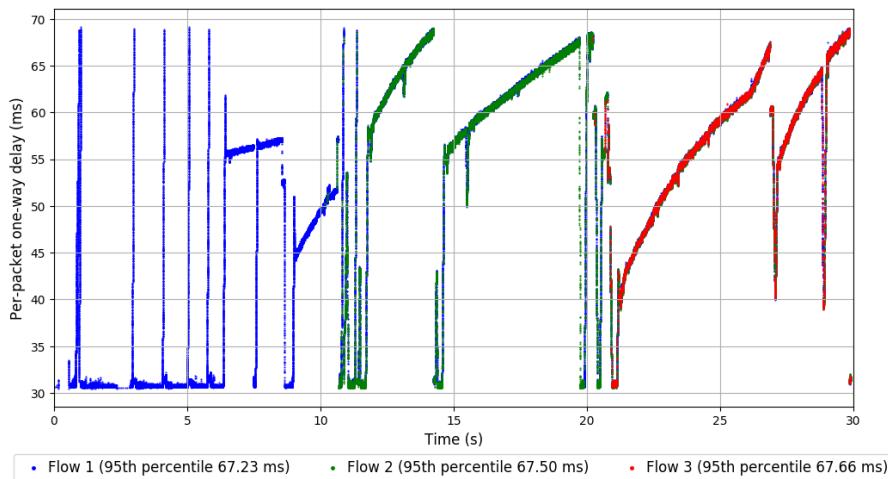
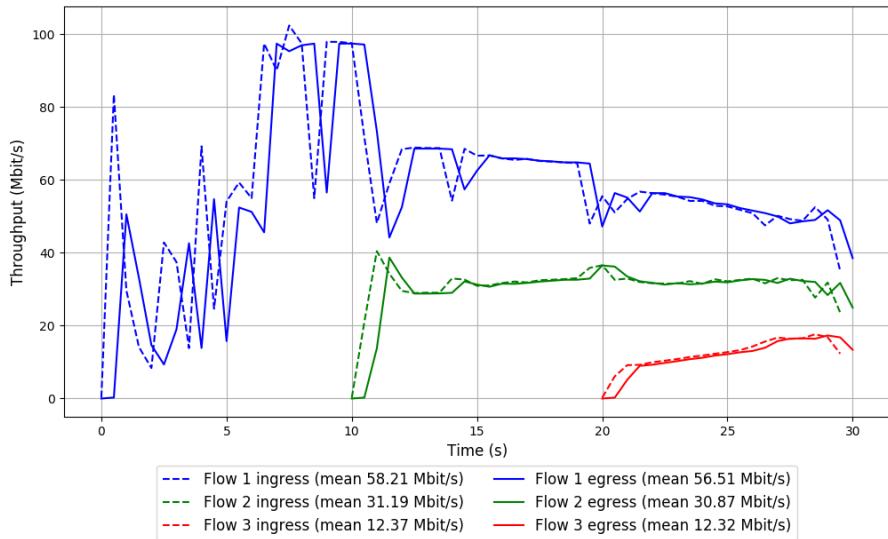


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-11-15 05:22:21
End at: 2018-11-15 05:22:51
Local clock offset: 0.296 ms
Remote clock offset: 0.928 ms

# Below is generated by plot.py at 2018-11-15 06:59:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.06 Mbit/s
95th percentile per-packet one-way delay: 67.286 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 56.51 Mbit/s
95th percentile per-packet one-way delay: 67.226 ms
Loss rate: 2.91%
-- Flow 2:
Average throughput: 30.87 Mbit/s
95th percentile per-packet one-way delay: 67.504 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 12.32 Mbit/s
95th percentile per-packet one-way delay: 67.664 ms
Loss rate: 0.75%
```

Run 2: Report of QUIC Cubic — Data Link

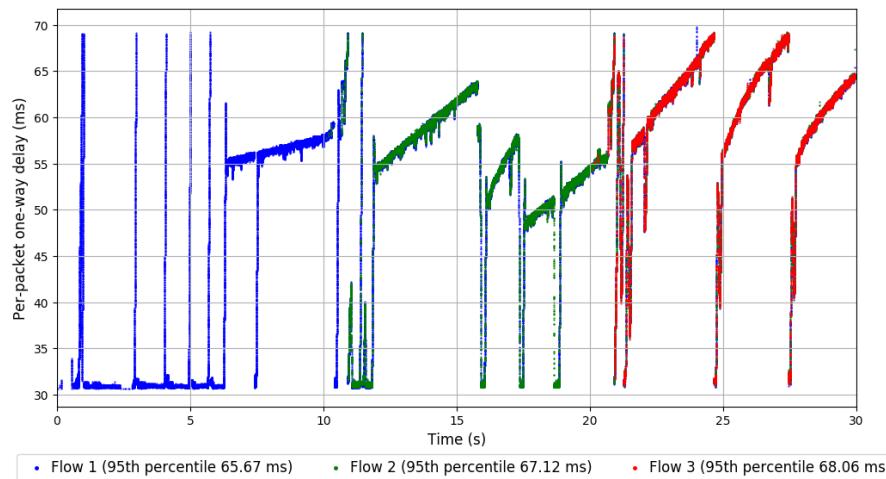
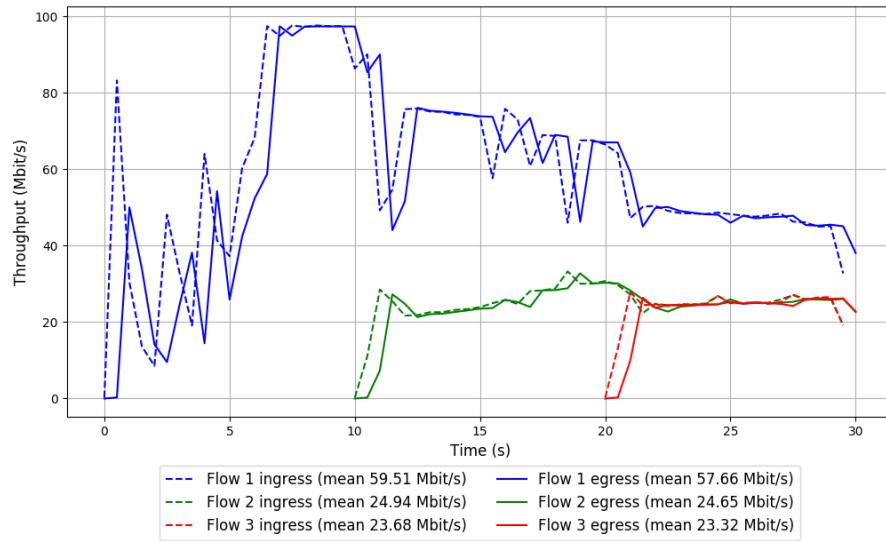


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-11-15 05:47:14
End at: 2018-11-15 05:47:44
Local clock offset: 0.224 ms
Remote clock offset: -0.148 ms

# Below is generated by plot.py at 2018-11-15 06:59:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.68 Mbit/s
95th percentile per-packet one-way delay: 66.438 ms
Loss rate: 2.49%
-- Flow 1:
Average throughput: 57.66 Mbit/s
95th percentile per-packet one-way delay: 65.672 ms
Loss rate: 3.01%
-- Flow 2:
Average throughput: 24.65 Mbit/s
95th percentile per-packet one-way delay: 67.119 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 23.32 Mbit/s
95th percentile per-packet one-way delay: 68.057 ms
Loss rate: 1.43%
```

Run 3: Report of QUIC Cubic — Data Link

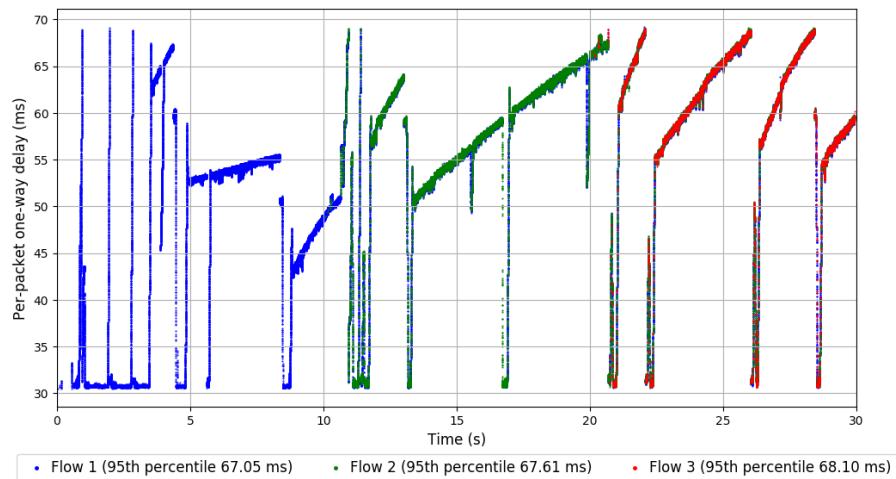
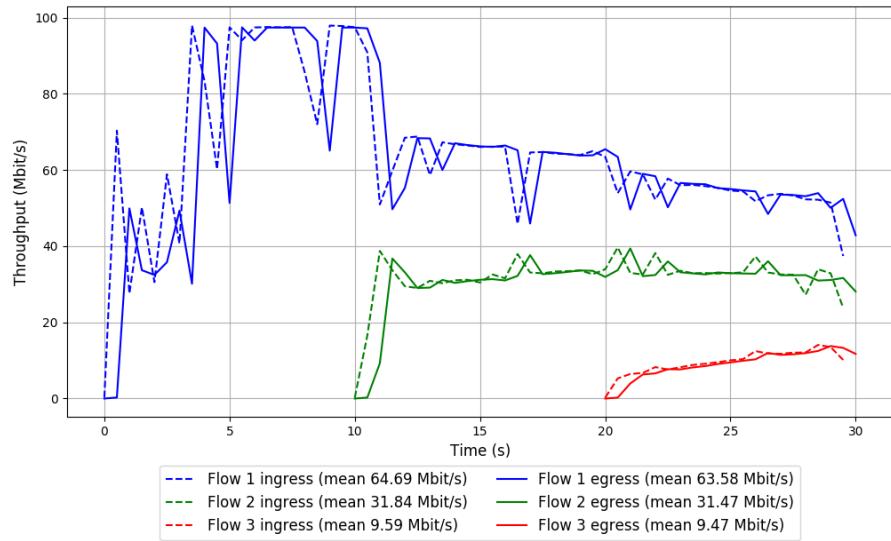


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-11-15 06:11:52
End at: 2018-11-15 06:12:22
Local clock offset: -2.72 ms
Remote clock offset: -2.109 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.60 Mbit/s
95th percentile per-packet one-way delay: 67.274 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 63.58 Mbit/s
95th percentile per-packet one-way delay: 67.046 ms
Loss rate: 1.62%
-- Flow 2:
Average throughput: 31.47 Mbit/s
95th percentile per-packet one-way delay: 67.609 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 68.099 ms
Loss rate: 1.25%
```

Run 4: Report of QUIC Cubic — Data Link

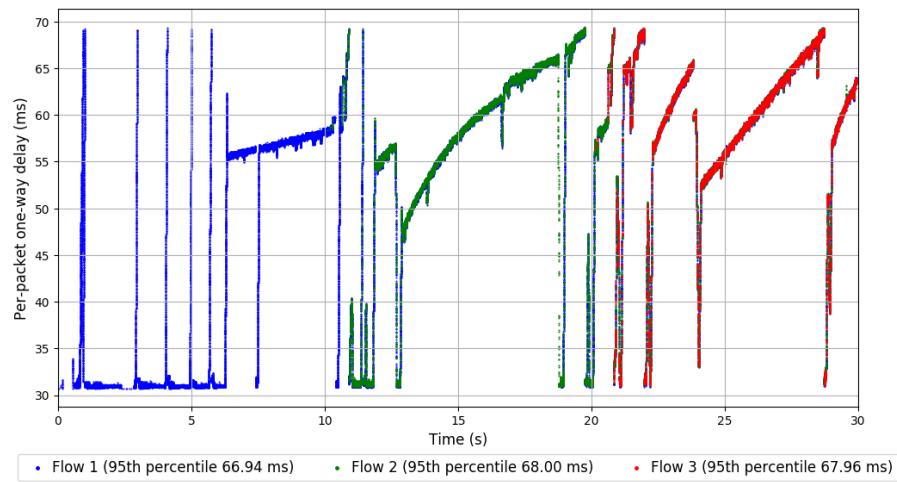
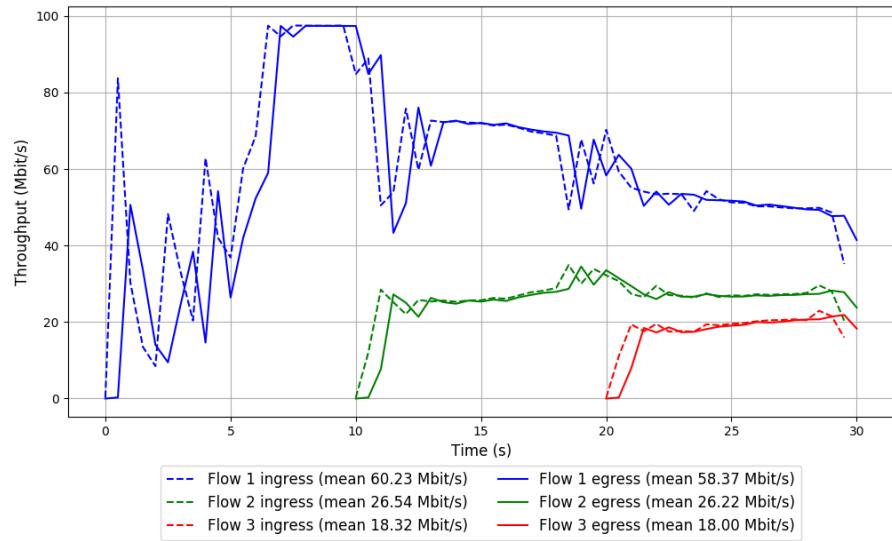


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-11-15 06:36:26
End at: 2018-11-15 06:36:56
Local clock offset: -0.879 ms
Remote clock offset: -3.243 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.71 Mbit/s
95th percentile per-packet one-way delay: 67.290 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 58.37 Mbit/s
95th percentile per-packet one-way delay: 66.941 ms
Loss rate: 2.99%
-- Flow 2:
Average throughput: 26.22 Mbit/s
95th percentile per-packet one-way delay: 67.998 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 18.00 Mbit/s
95th percentile per-packet one-way delay: 67.957 ms
Loss rate: 1.43%
```

Run 5: Report of QUIC Cubic — Data Link

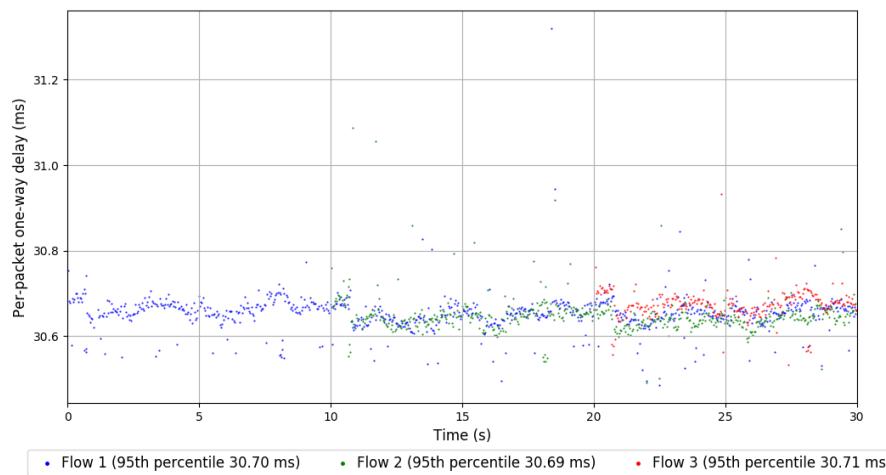
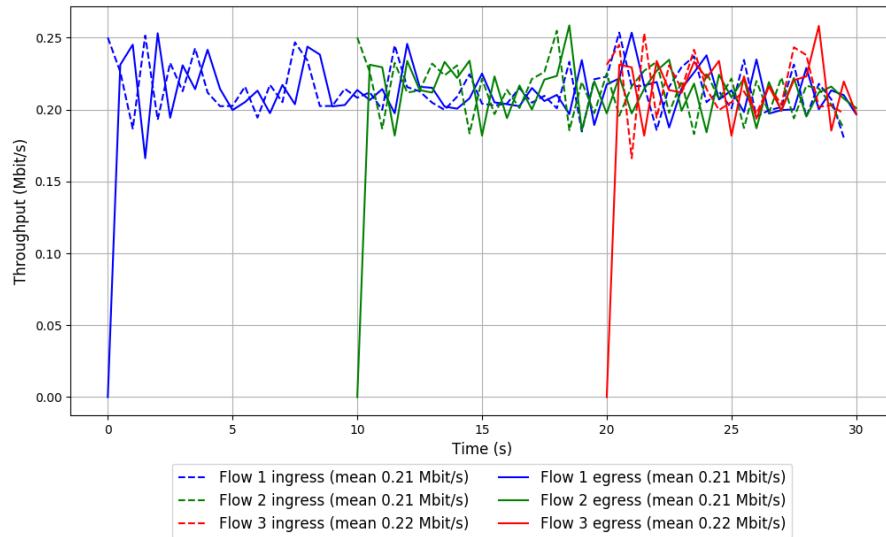


```
Run 1: Statistics of SCReAM

Start at: 2018-11-15 04:50:41
End at: 2018-11-15 04:51:11
Local clock offset: 0.622 ms
Remote clock offset: 0.786 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.702 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.696 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.694 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.712 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

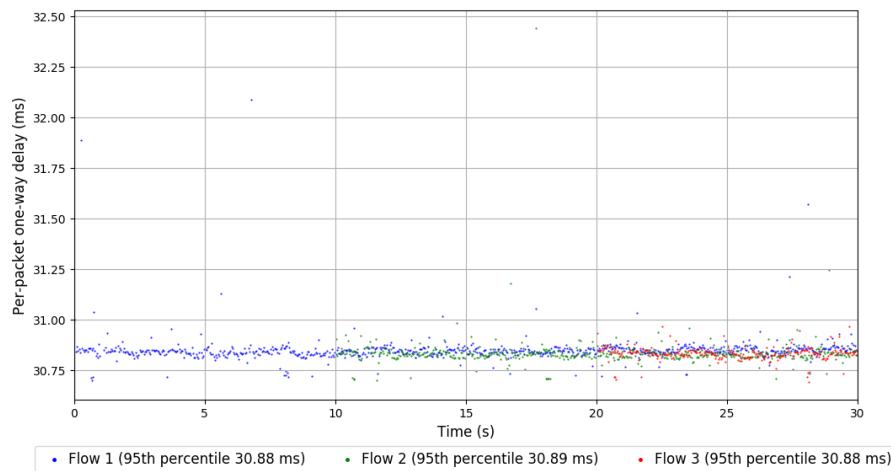
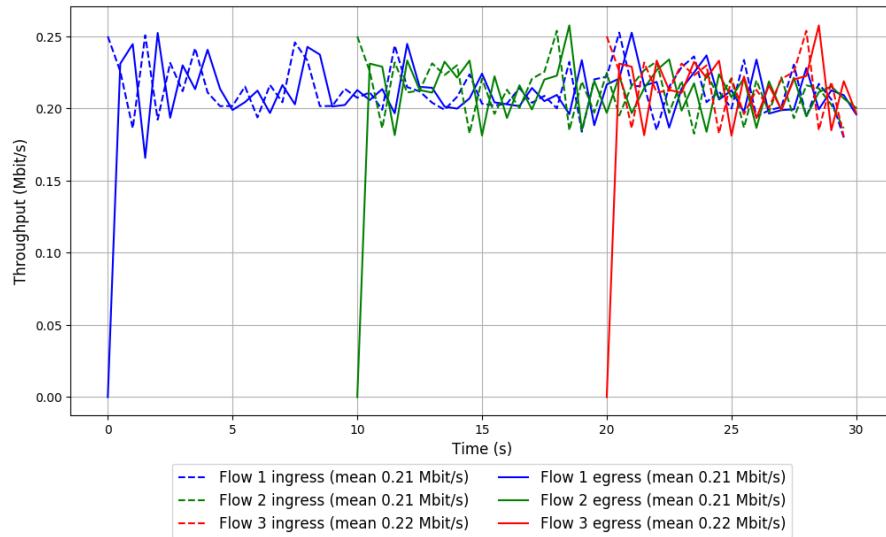


Run 2: Statistics of SCReAM

```
Start at: 2018-11-15 05:15:20
End at: 2018-11-15 05:15:50
Local clock offset: 0.282 ms
Remote clock offset: 1.354 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.884 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.882 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.889 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.879 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

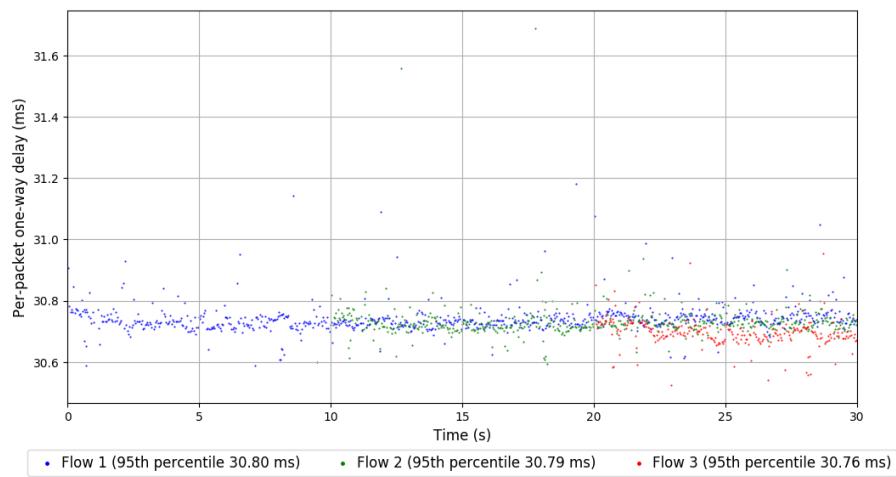
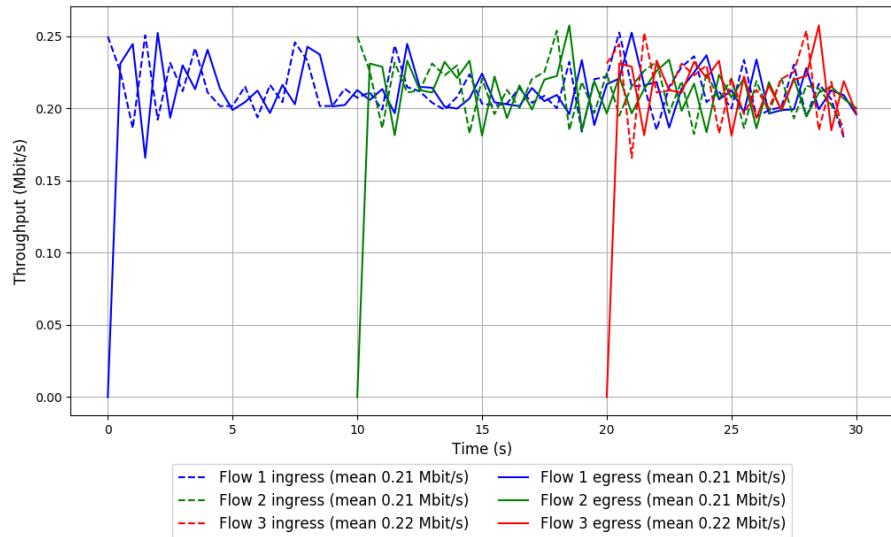


Run 3: Statistics of SCReAM

```
Start at: 2018-11-15 05:40:18
End at: 2018-11-15 05:40:48
Local clock offset: 0.24 ms
Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.792 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.803 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.792 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.756 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

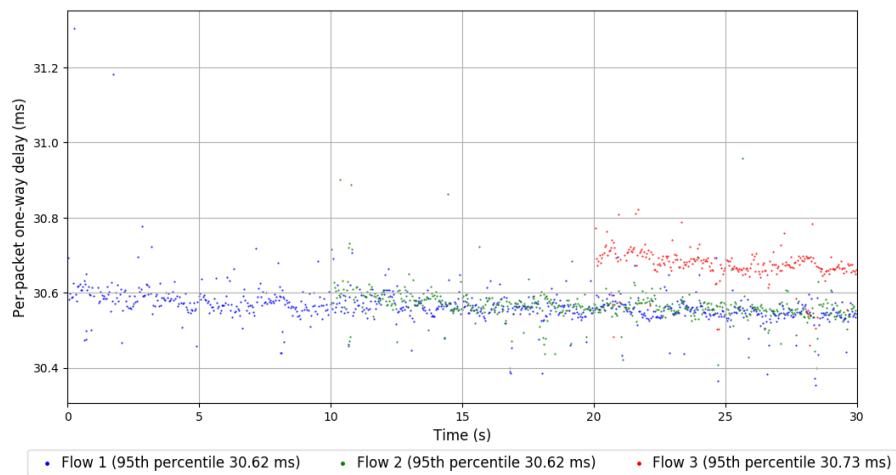
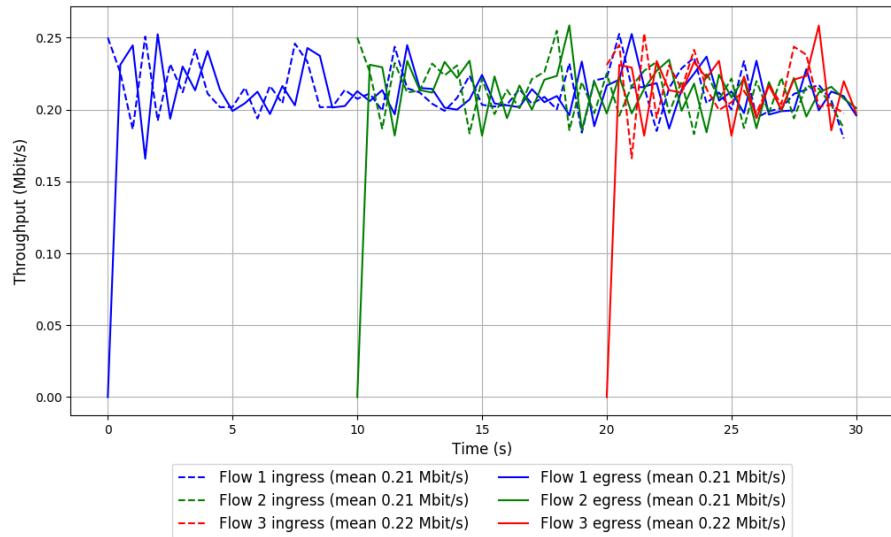


Run 4: Statistics of SCReAM

```
Start at: 2018-11-15 06:05:01
End at: 2018-11-15 06:05:31
Local clock offset: -1.855 ms
Remote clock offset: -1.74 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.695 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.622 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.616 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.728 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

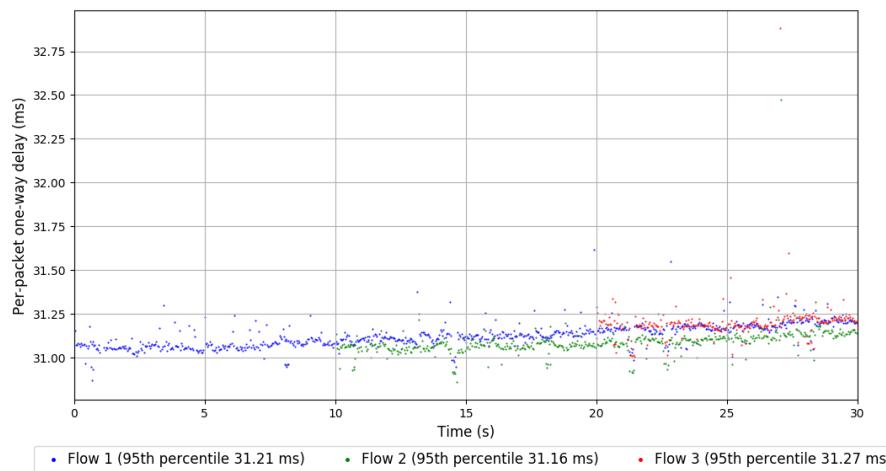
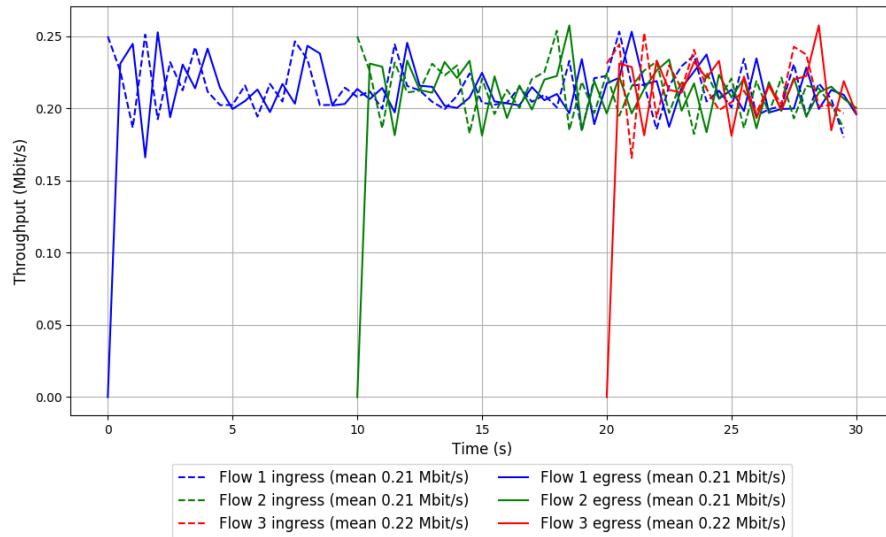


Run 5: Statistics of SCReAM

```
Start at: 2018-11-15 06:29:33
End at: 2018-11-15 06:30:03
Local clock offset: -2.573 ms
Remote clock offset: -3.182 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.229 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.215 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.158 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.274 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

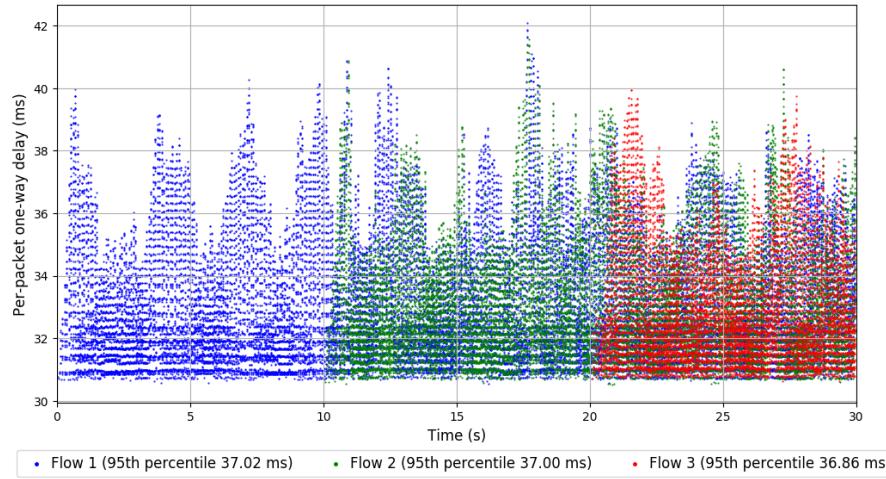
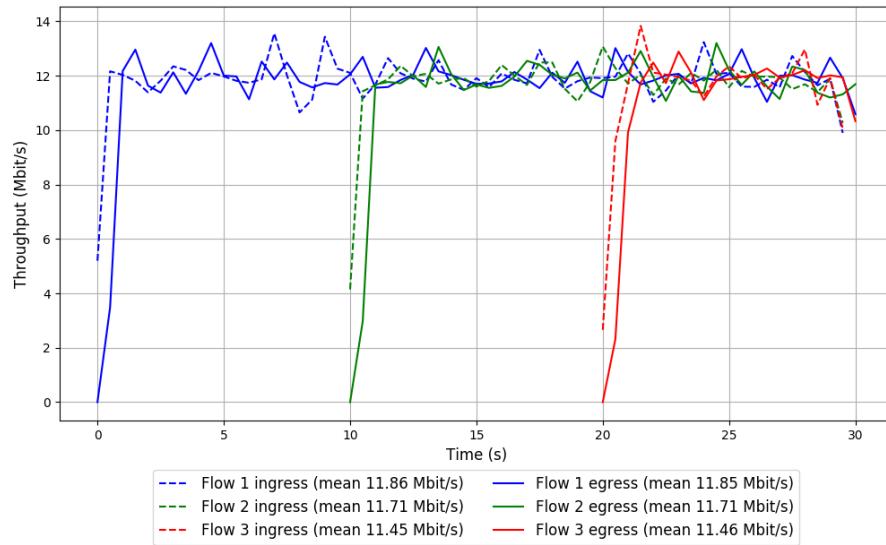


Run 1: Statistics of Sprout

```
Start at: 2018-11-15 04:49:22
End at: 2018-11-15 04:49:52
Local clock offset: 0.606 ms
Remote clock offset: 0.9 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 36.998 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 11.85 Mbit/s
95th percentile per-packet one-way delay: 37.018 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 36.999 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.46 Mbit/s
95th percentile per-packet one-way delay: 36.863 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

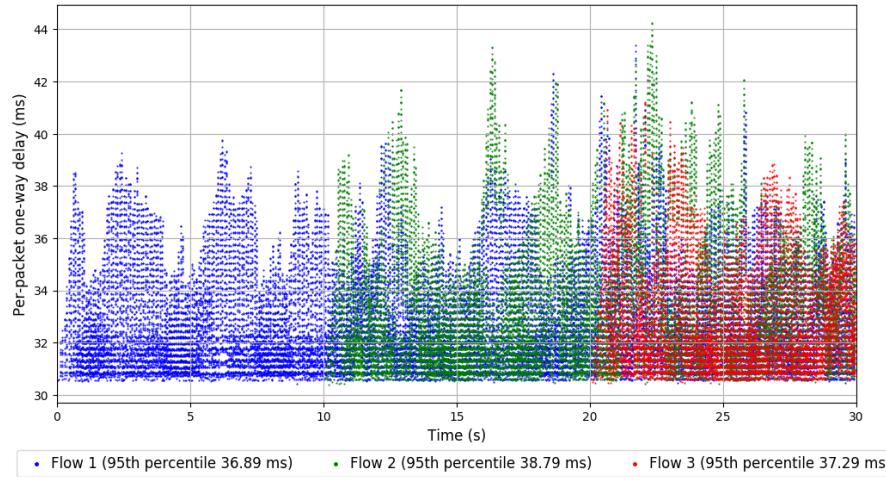
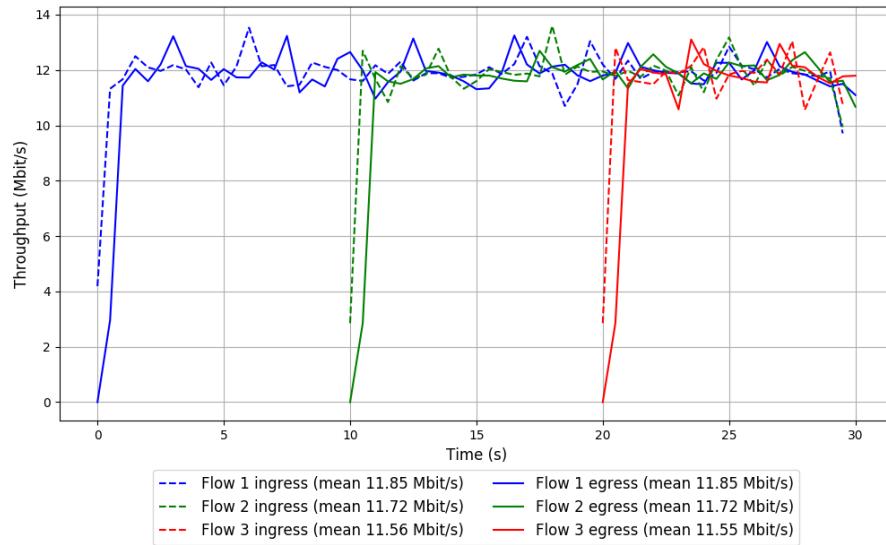


Run 2: Statistics of Sprout

```
Start at: 2018-11-15 05:14:01
End at: 2018-11-15 05:14:31
Local clock offset: 0.286 ms
Remote clock offset: 1.239 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.46 Mbit/s
95th percentile per-packet one-way delay: 37.634 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.85 Mbit/s
95th percentile per-packet one-way delay: 36.888 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 38.791 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 37.290 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

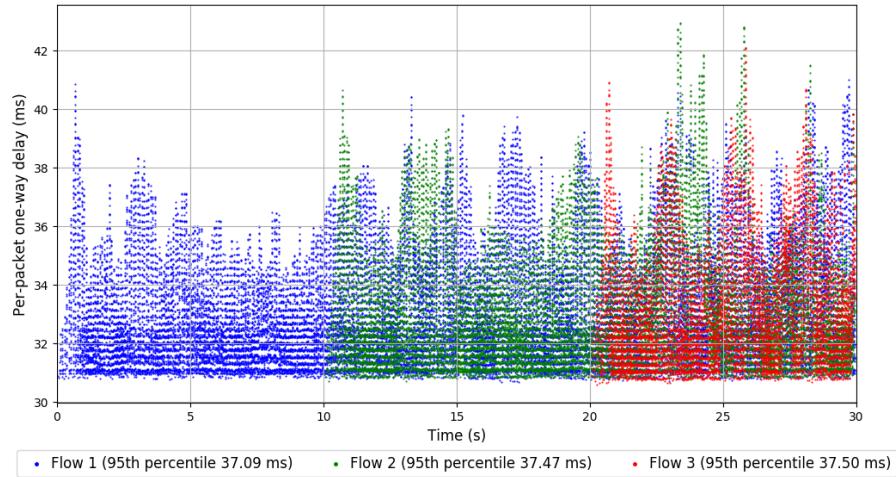
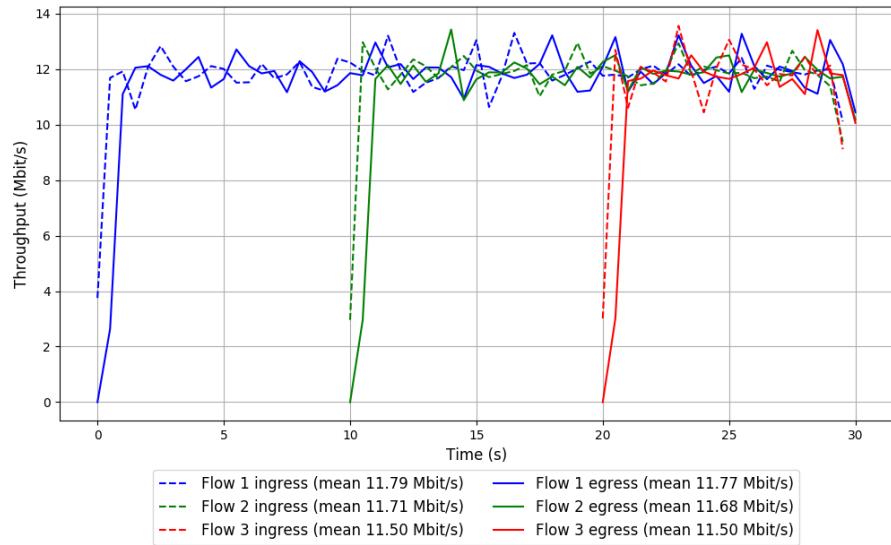


Run 3: Statistics of Sprout

```
Start at: 2018-11-15 05:38:58
End at: 2018-11-15 05:39:28
Local clock offset: 0.262 ms
Remote clock offset: 0.324 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.34 Mbit/s
95th percentile per-packet one-way delay: 37.293 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 37.095 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 11.68 Mbit/s
95th percentile per-packet one-way delay: 37.468 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 11.50 Mbit/s
95th percentile per-packet one-way delay: 37.504 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

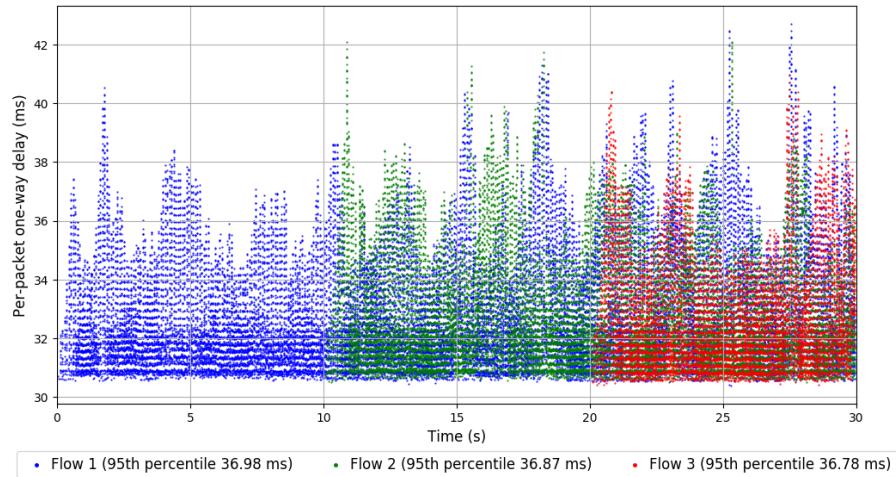
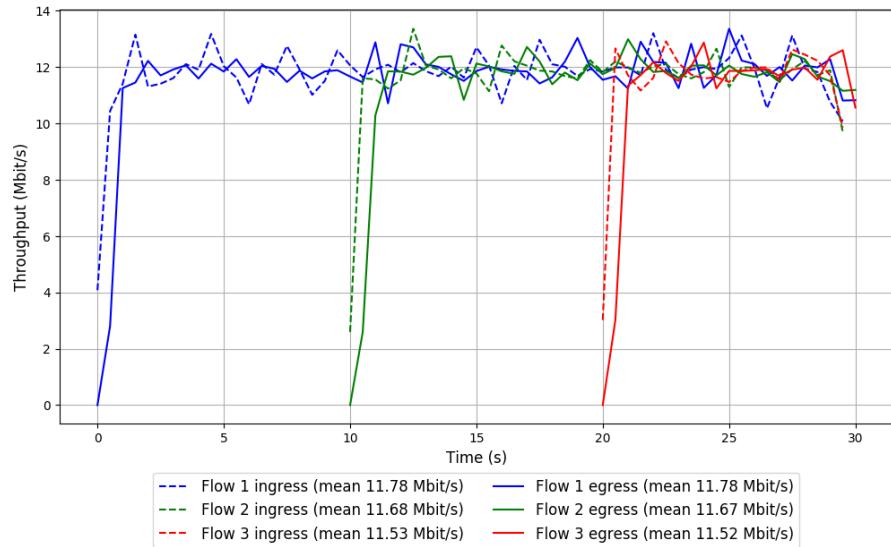


Run 4: Statistics of Sprout

```
Start at: 2018-11-15 06:03:42
End at: 2018-11-15 06:04:12
Local clock offset: -1.62 ms
Remote clock offset: -1.504 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.35 Mbit/s
95th percentile per-packet one-way delay: 36.910 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 36.977 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 36.871 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.52 Mbit/s
95th percentile per-packet one-way delay: 36.777 ms
Loss rate: 0.01%
```

Run 4: Report of Sprout — Data Link

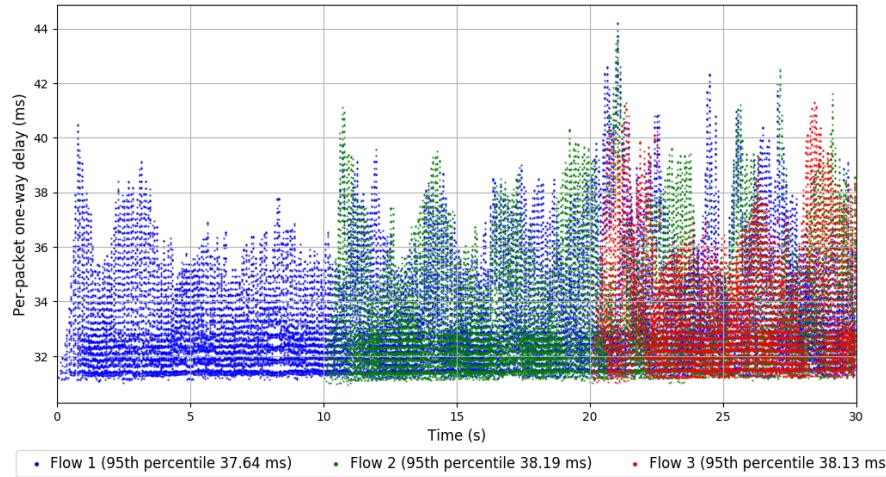
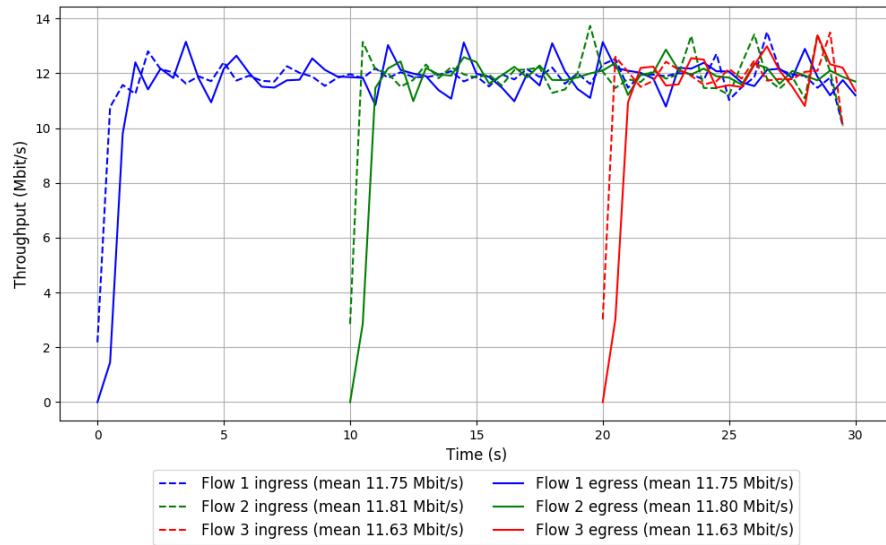


Run 5: Statistics of Sprout

```
Start at: 2018-11-15 06:28:14
End at: 2018-11-15 06:28:44
Local clock offset: -3.113 ms
Remote clock offset: -3.041 ms

# Below is generated by plot.py at 2018-11-15 06:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.44 Mbit/s
95th percentile per-packet one-way delay: 37.915 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 37.644 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 38.187 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.63 Mbit/s
95th percentile per-packet one-way delay: 38.127 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

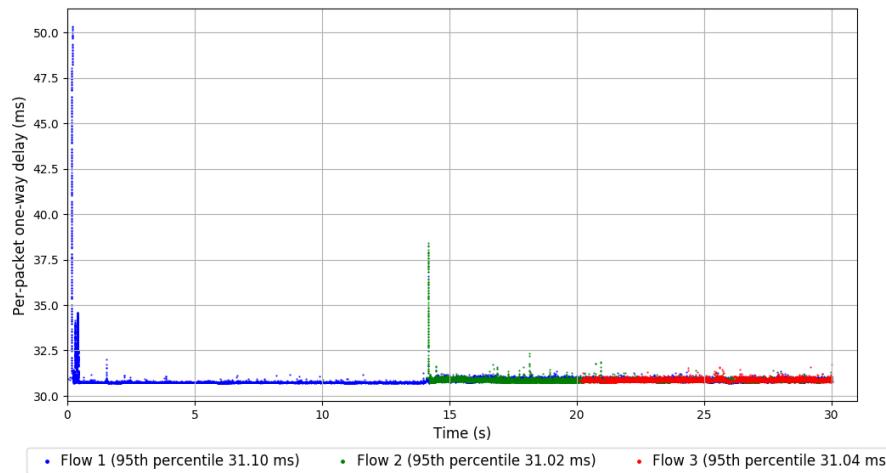
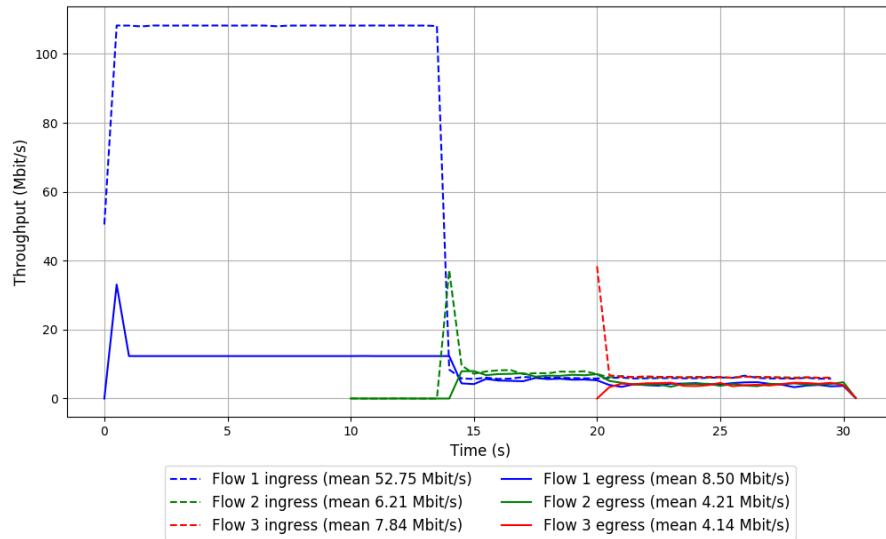


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-11-15 05:03:09
End at: 2018-11-15 05:03:39
Local clock offset: 0.382 ms
Remote clock offset: 1.521 ms

# Below is generated by plot.py at 2018-11-15 06:59:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 31.055 ms
Loss rate: 78.69%
-- Flow 1:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 31.104 ms
Loss rate: 83.88%
-- Flow 2:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 31.023 ms
Loss rate: 32.29%
-- Flow 3:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 31.039 ms
Loss rate: 47.25%
```

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

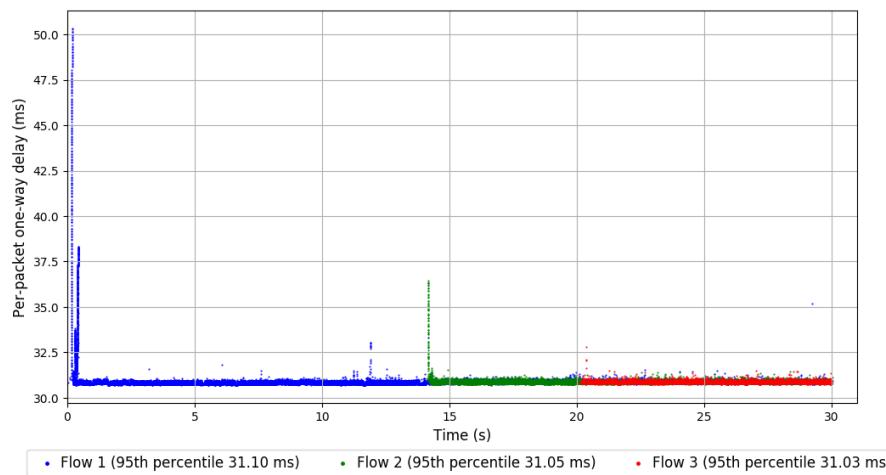
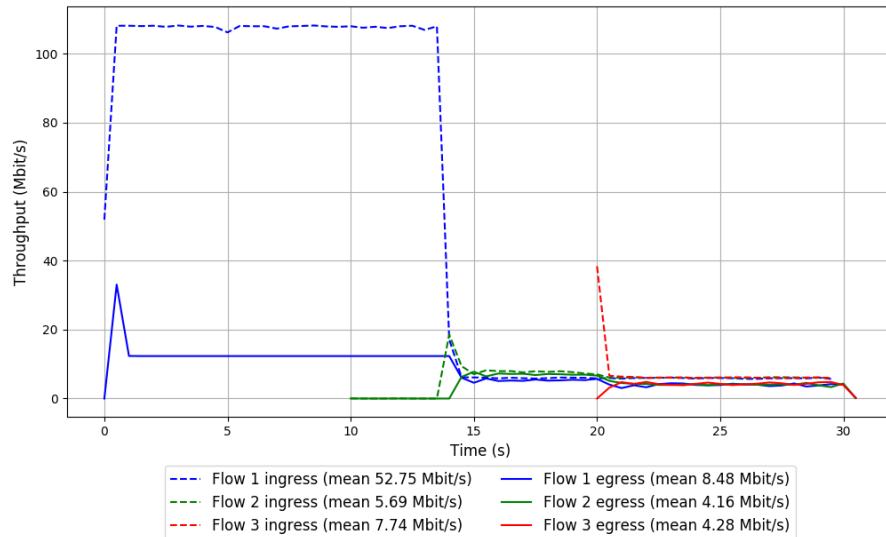


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-11-15 05:27:53
End at: 2018-11-15 05:28:23
Local clock offset: 0.312 ms
Remote clock offset: 0.838 ms

# Below is generated by plot.py at 2018-11-15 06:59:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 31.060 ms
Loss rate: 78.55%
-- Flow 1:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 31.103 ms
Loss rate: 83.92%
-- Flow 2:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 31.047 ms
Loss rate: 26.85%
-- Flow 3:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: 31.030 ms
Loss rate: 44.70%
```

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

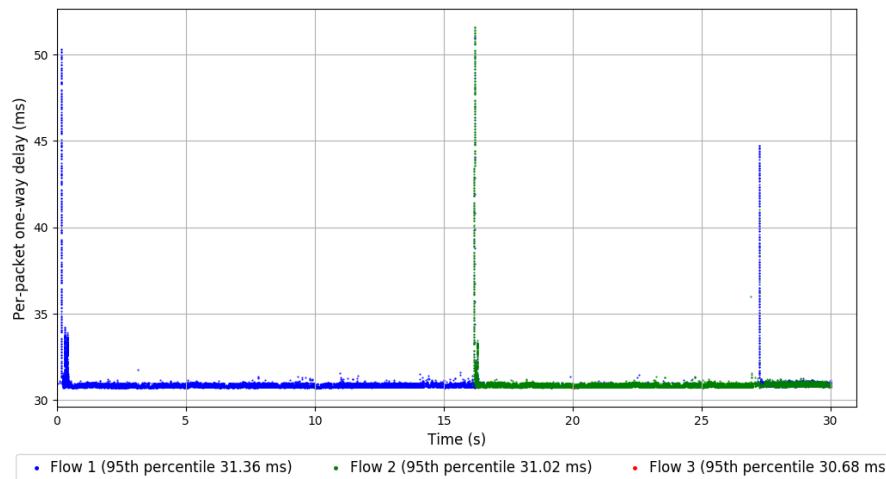
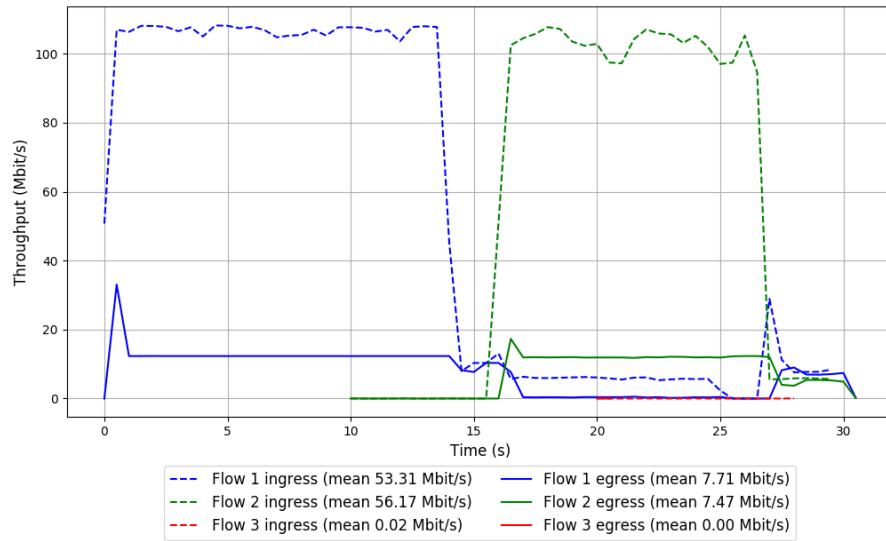


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-11-15 05:52:48
End at: 2018-11-15 05:53:18
Local clock offset: 0.22 ms
Remote clock offset: -0.623 ms

# Below is generated by plot.py at 2018-11-15 06:59:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 31.157 ms
Loss rate: 86.02%
-- Flow 1:
Average throughput: 7.71 Mbit/s
95th percentile per-packet one-way delay: 31.357 ms
Loss rate: 85.54%
-- Flow 2:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 31.022 ms
Loss rate: 86.71%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.685 ms
Loss rate: 99.16%
```

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

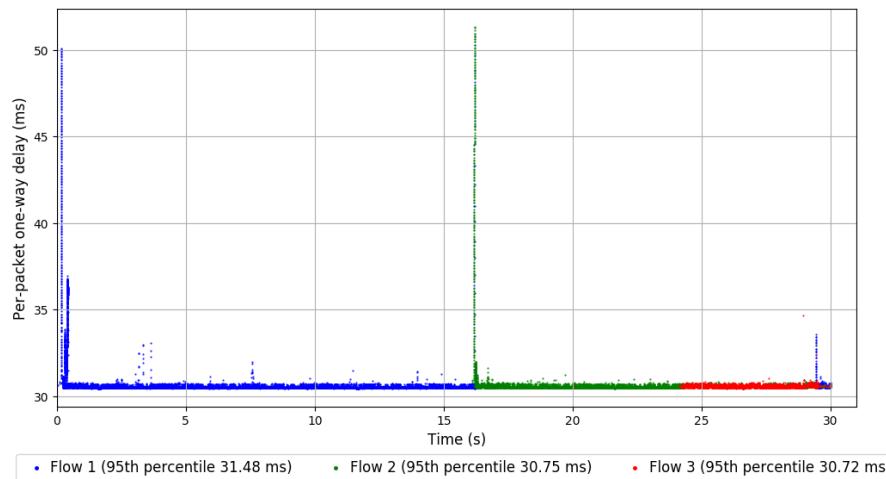
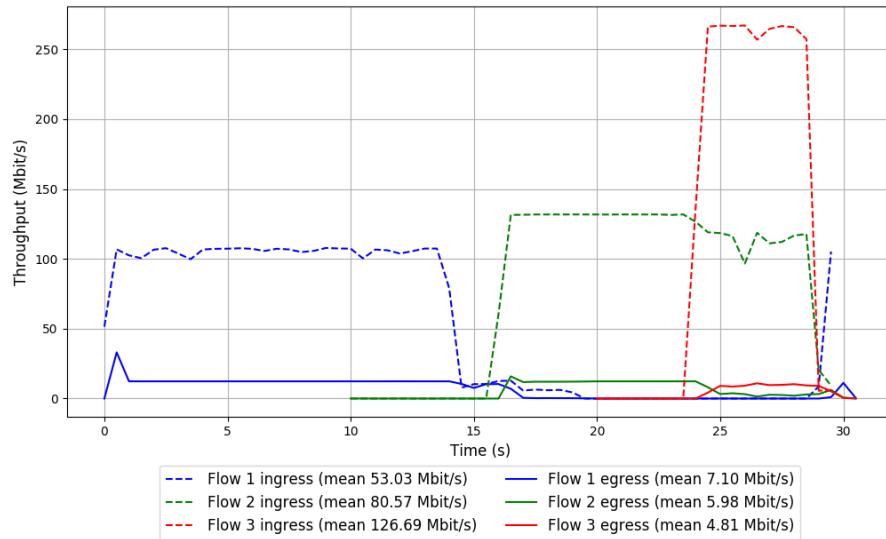


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-11-15 06:17:20
End at: 2018-11-15 06:17:50
Local clock offset: -3.134 ms
Remote clock offset: -2.663 ms

# Below is generated by plot.py at 2018-11-15 06:59:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 30.772 ms
Loss rate: 91.48%
-- Flow 1:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 31.478 ms
Loss rate: 86.61%
-- Flow 2:
Average throughput: 5.98 Mbit/s
95th percentile per-packet one-way delay: 30.751 ms
Loss rate: 92.58%
-- Flow 3:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 30.716 ms
Loss rate: 96.21%
```

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

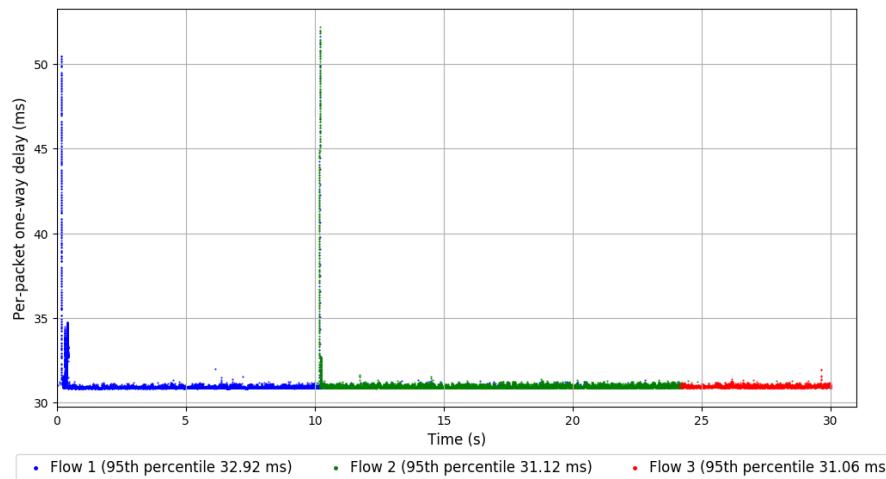
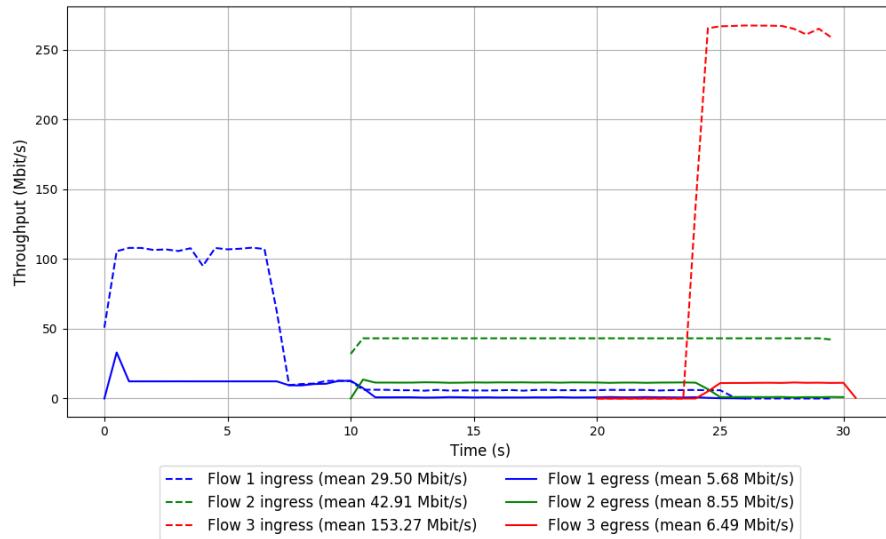


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-11-15 06:41:52
End at: 2018-11-15 06:42:22
Local clock offset: -0.174 ms
Remote clock offset: -3.174 ms

# Below is generated by plot.py at 2018-11-15 06:59:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 31.190 ms
Loss rate: 88.33%
-- Flow 1:
Average throughput: 5.68 Mbit/s
95th percentile per-packet one-way delay: 32.916 ms
Loss rate: 83.38%
-- Flow 2:
Average throughput: 8.55 Mbit/s
95th percentile per-packet one-way delay: 31.117 ms
Loss rate: 80.10%
-- Flow 3:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 31.058 ms
Loss rate: 95.77%
```

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

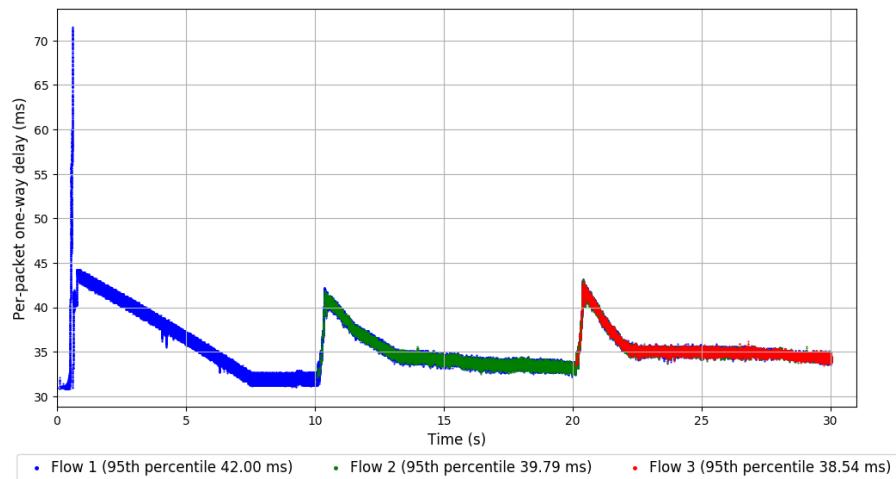
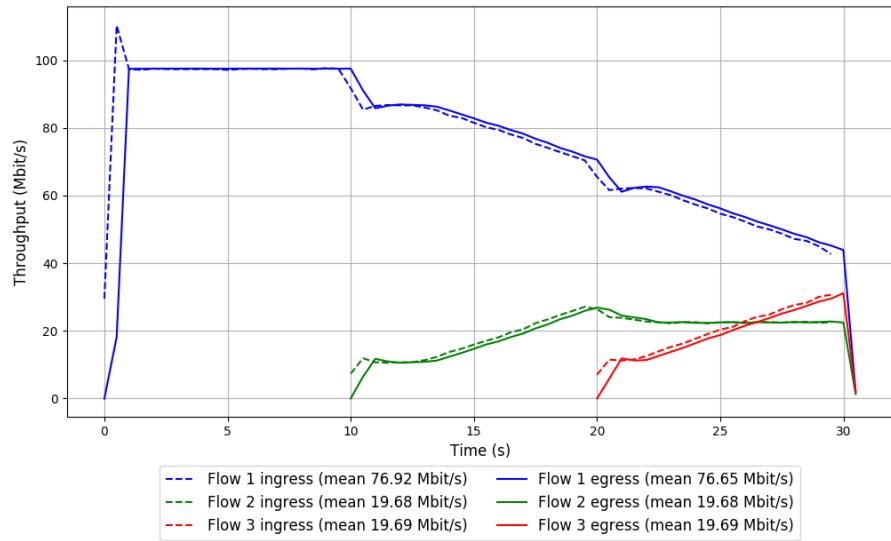


Run 1: Statistics of TCP Vegas

```
Start at: 2018-11-15 04:51:59
End at: 2018-11-15 04:52:29
Local clock offset: 0.645 ms
Remote clock offset: 1.193 ms

# Below is generated by plot.py at 2018-11-15 07:00:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 41.696 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 76.65 Mbit/s
95th percentile per-packet one-way delay: 42.001 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 19.68 Mbit/s
95th percentile per-packet one-way delay: 39.792 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.69 Mbit/s
95th percentile per-packet one-way delay: 38.540 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

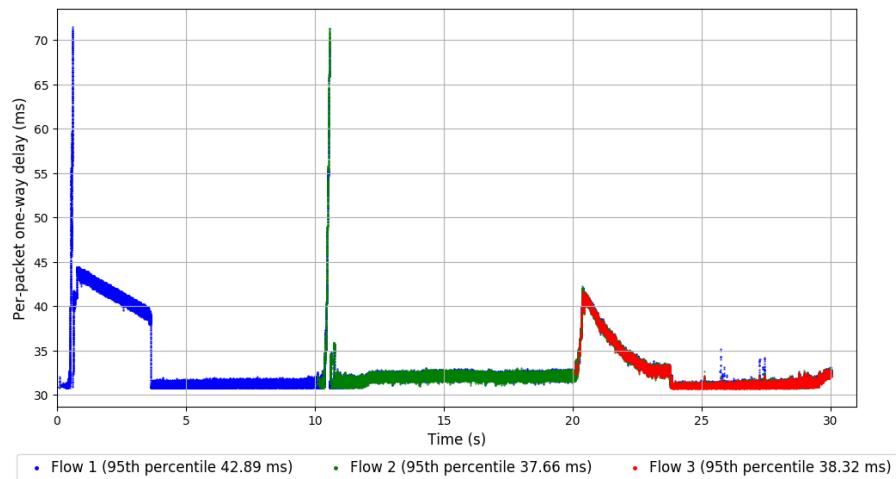
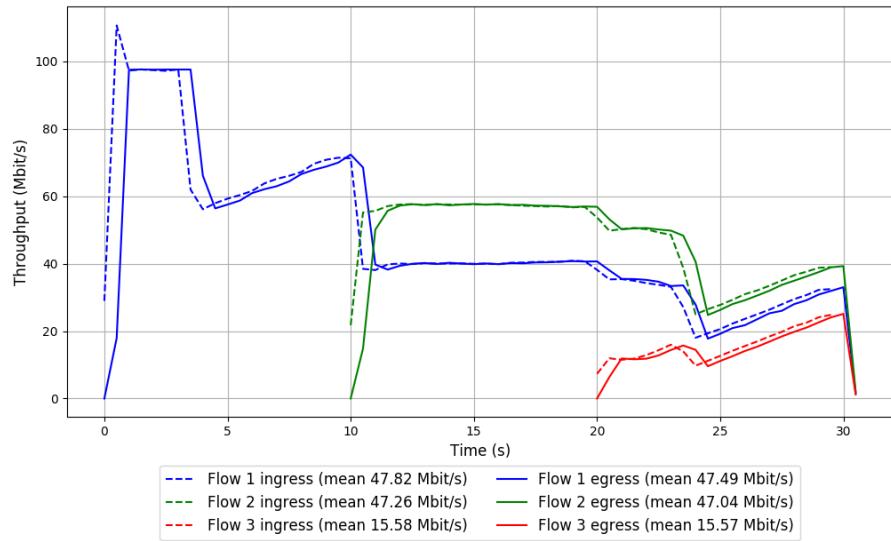


Run 2: Statistics of TCP Vegas

```
Start at: 2018-11-15 05:16:38
End at: 2018-11-15 05:17:08
Local clock offset: 0.277 ms
Remote clock offset: 1.352 ms

# Below is generated by plot.py at 2018-11-15 07:00:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.03 Mbit/s
95th percentile per-packet one-way delay: 41.973 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 47.49 Mbit/s
95th percentile per-packet one-way delay: 42.892 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 47.04 Mbit/s
95th percentile per-packet one-way delay: 37.659 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 15.57 Mbit/s
95th percentile per-packet one-way delay: 38.323 ms
Loss rate: 0.04%
```

Run 2: Report of TCP Vegas — Data Link

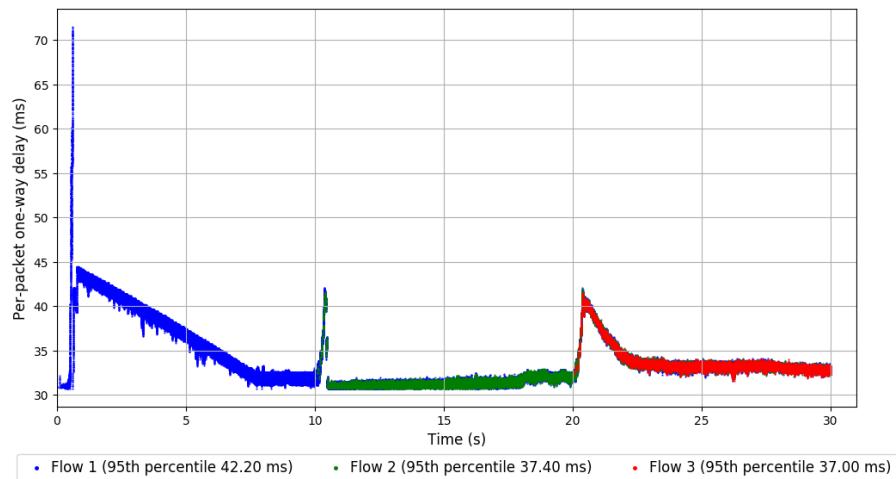
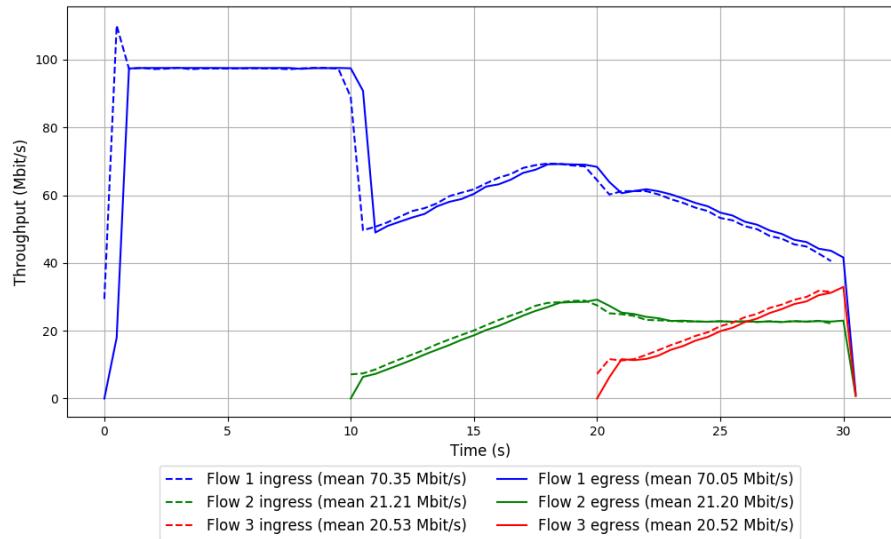


Run 3: Statistics of TCP Vegas

```
Start at: 2018-11-15 05:41:36
End at: 2018-11-15 05:42:06
Local clock offset: 0.245 ms
Remote clock offset: 0.19 ms

# Below is generated by plot.py at 2018-11-15 07:00:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.00 Mbit/s
95th percentile per-packet one-way delay: 41.712 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 70.05 Mbit/s
95th percentile per-packet one-way delay: 42.204 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 21.20 Mbit/s
95th percentile per-packet one-way delay: 37.403 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 20.52 Mbit/s
95th percentile per-packet one-way delay: 36.998 ms
Loss rate: 0.01%
```

Run 3: Report of TCP Vegas — Data Link

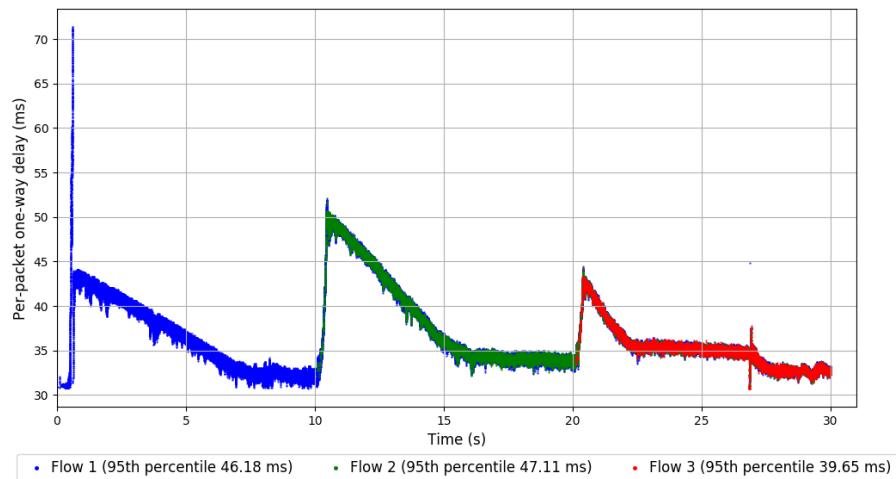
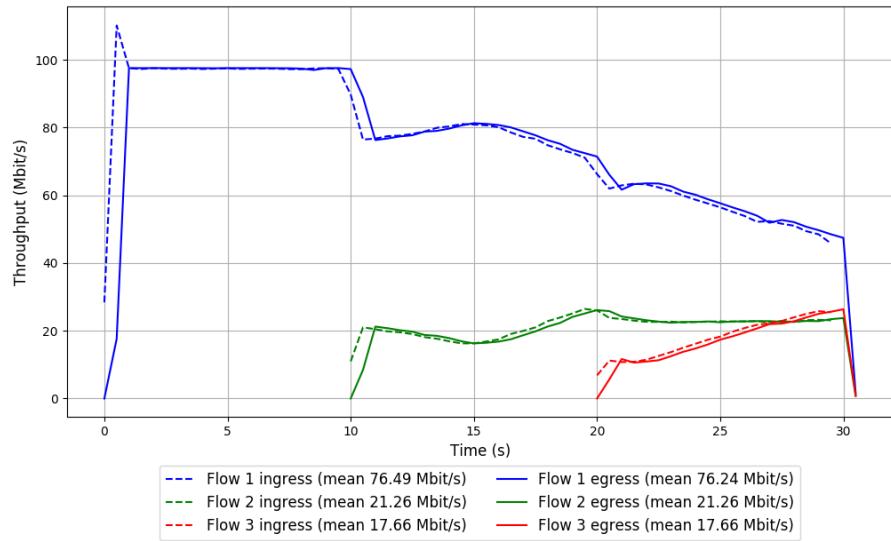


Run 4: Statistics of TCP Vegas

```
Start at: 2018-11-15 06:06:19
End at: 2018-11-15 06:06:49
Local clock offset: -2.079 ms
Remote clock offset: -1.64 ms

# Below is generated by plot.py at 2018-11-15 07:00:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 46.114 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 76.24 Mbit/s
95th percentile per-packet one-way delay: 46.179 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 21.26 Mbit/s
95th percentile per-packet one-way delay: 47.110 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.66 Mbit/s
95th percentile per-packet one-way delay: 39.651 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link

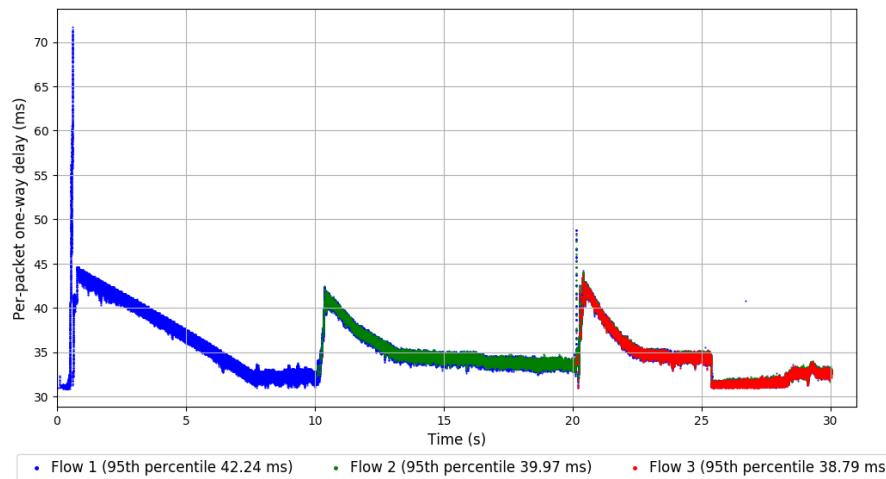
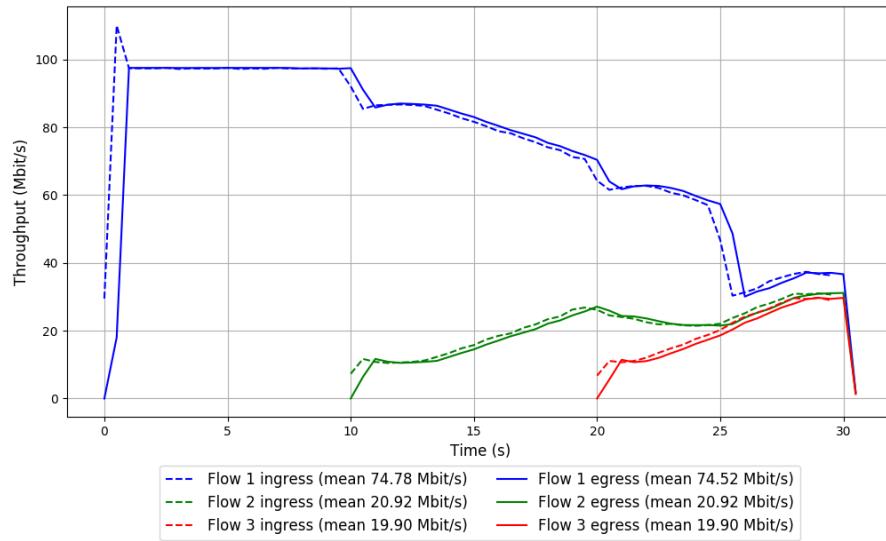


Run 5: Statistics of TCP Vegas

```
Start at: 2018-11-15 06:30:51
End at: 2018-11-15 06:31:21
Local clock offset: -2.201 ms
Remote clock offset: -3.202 ms

# Below is generated by plot.py at 2018-11-15 07:00:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.07 Mbit/s
95th percentile per-packet one-way delay: 41.889 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 74.52 Mbit/s
95th percentile per-packet one-way delay: 42.244 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 20.92 Mbit/s
95th percentile per-packet one-way delay: 39.970 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.90 Mbit/s
95th percentile per-packet one-way delay: 38.794 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Vegas — Data Link

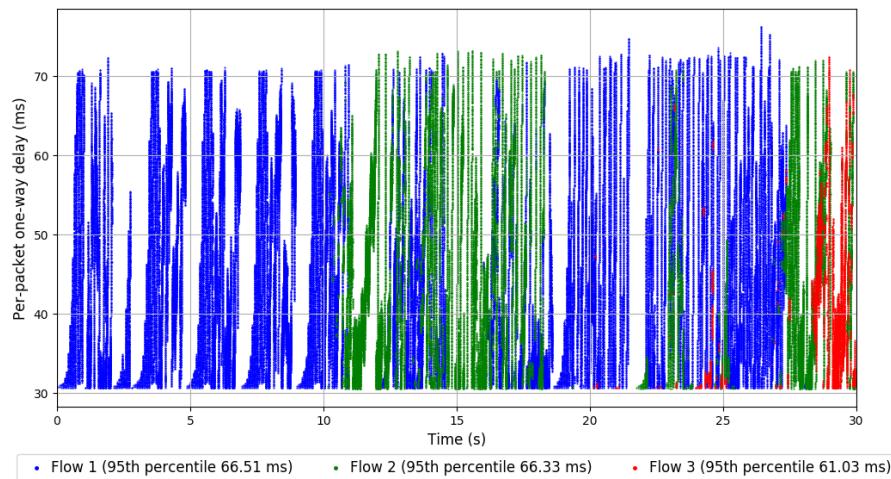
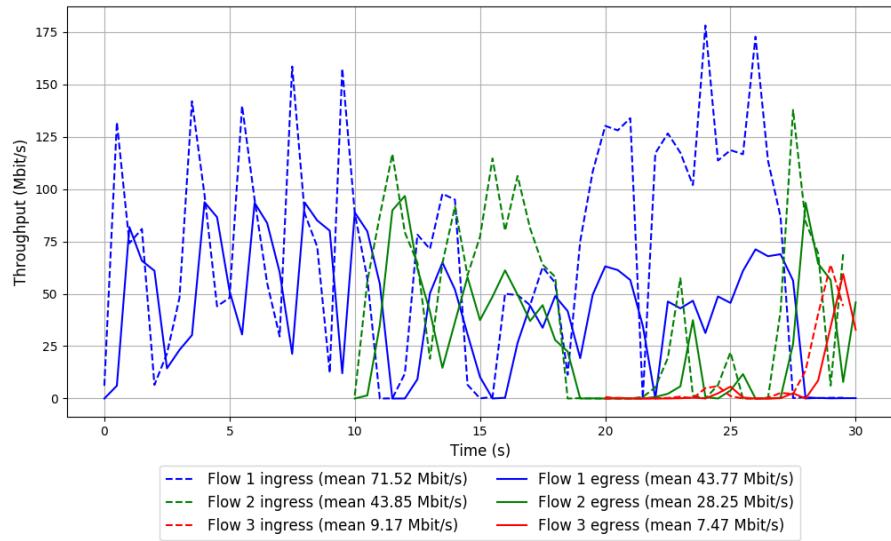


Run 1: Statistics of Verus

```
Start at: 2018-11-15 05:01:46
End at: 2018-11-15 05:02:17
Local clock offset: 0.447 ms
Remote clock offset: 1.401 ms

# Below is generated by plot.py at 2018-11-15 07:00:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.39 Mbit/s
95th percentile per-packet one-way delay: 66.376 ms
Loss rate: 37.39%
-- Flow 1:
Average throughput: 43.77 Mbit/s
95th percentile per-packet one-way delay: 66.511 ms
Loss rate: 38.93%
-- Flow 2:
Average throughput: 28.25 Mbit/s
95th percentile per-packet one-way delay: 66.334 ms
Loss rate: 35.63%
-- Flow 3:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 61.031 ms
Loss rate: 18.57%
```

Run 1: Report of Verus — Data Link

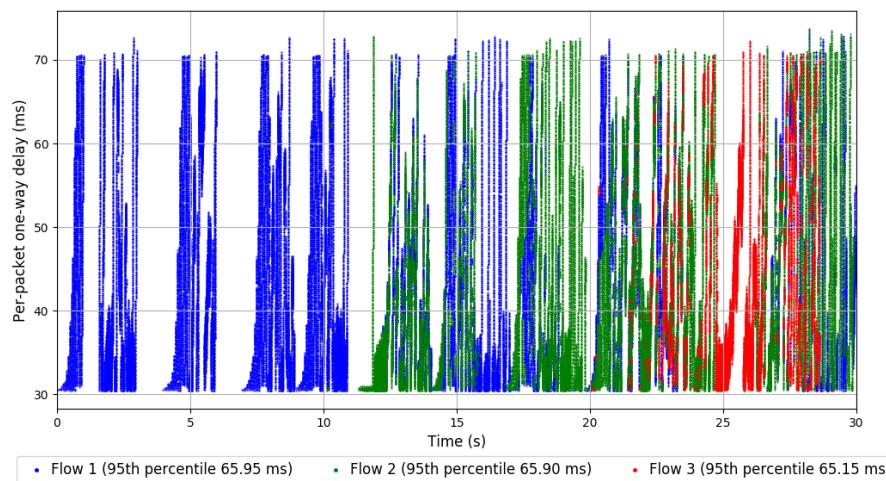
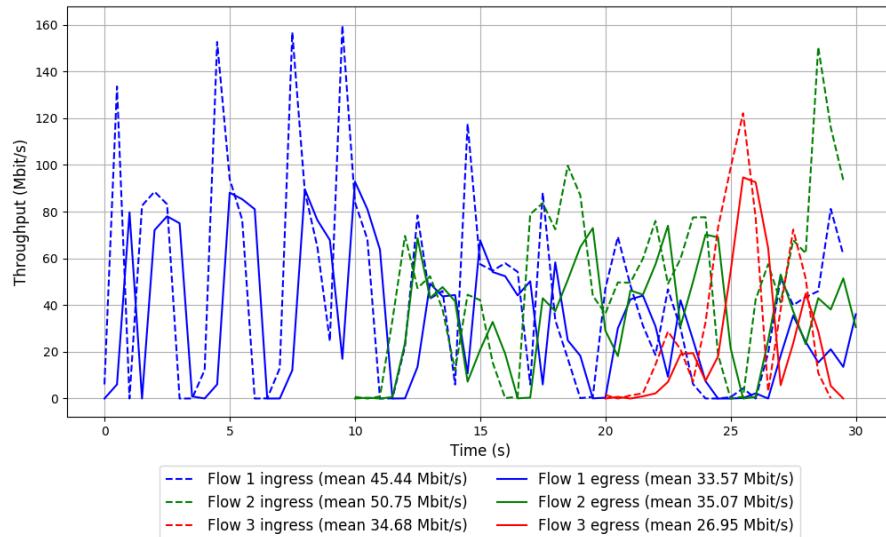


Run 2: Statistics of Verus

```
Start at: 2018-11-15 05:26:30
End at: 2018-11-15 05:27:00
Local clock offset: 0.313 ms
Remote clock offset: 0.66 ms

# Below is generated by plot.py at 2018-11-15 07:00:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.94 Mbit/s
95th percentile per-packet one-way delay: 65.850 ms
Loss rate: 27.80%
-- Flow 1:
Average throughput: 33.57 Mbit/s
95th percentile per-packet one-way delay: 65.950 ms
Loss rate: 26.08%
-- Flow 2:
Average throughput: 35.07 Mbit/s
95th percentile per-packet one-way delay: 65.898 ms
Loss rate: 30.90%
-- Flow 3:
Average throughput: 26.95 Mbit/s
95th percentile per-packet one-way delay: 65.151 ms
Loss rate: 25.45%
```

Run 2: Report of Verus — Data Link

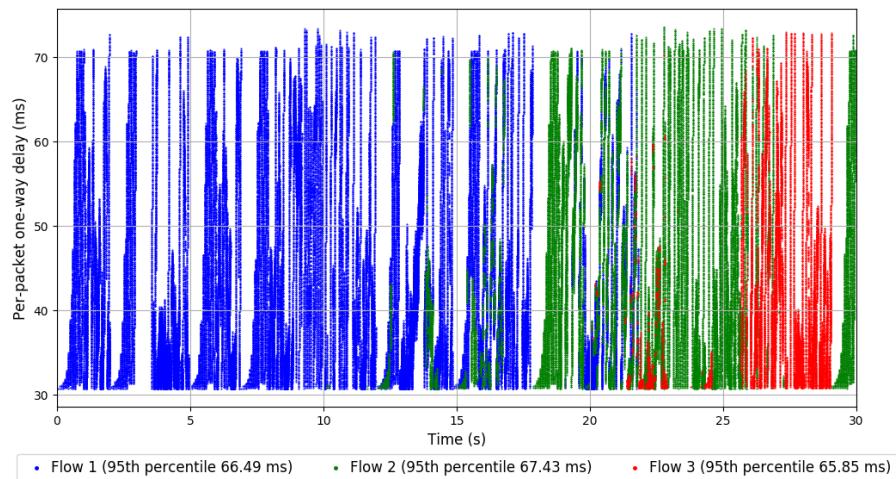
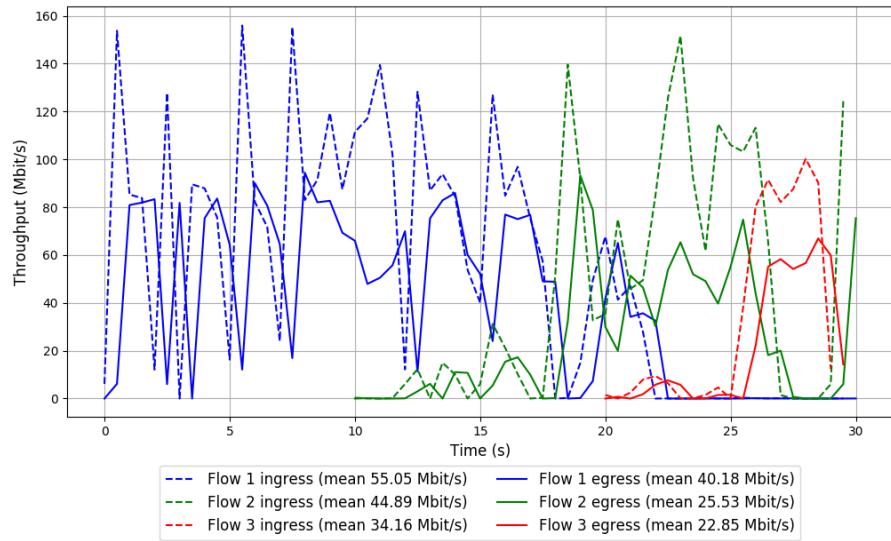


Run 3: Statistics of Verus

```
Start at: 2018-11-15 05:51:21
End at: 2018-11-15 05:51:51
Local clock offset: 0.222 ms
Remote clock offset: -0.497 ms

# Below is generated by plot.py at 2018-11-15 07:00:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.64 Mbit/s
95th percentile per-packet one-way delay: 66.707 ms
Loss rate: 32.83%
-- Flow 1:
Average throughput: 40.18 Mbit/s
95th percentile per-packet one-way delay: 66.487 ms
Loss rate: 27.17%
-- Flow 2:
Average throughput: 25.53 Mbit/s
95th percentile per-packet one-way delay: 67.431 ms
Loss rate: 43.09%
-- Flow 3:
Average throughput: 22.85 Mbit/s
95th percentile per-packet one-way delay: 65.853 ms
Loss rate: 33.12%
```

Run 3: Report of Verus — Data Link

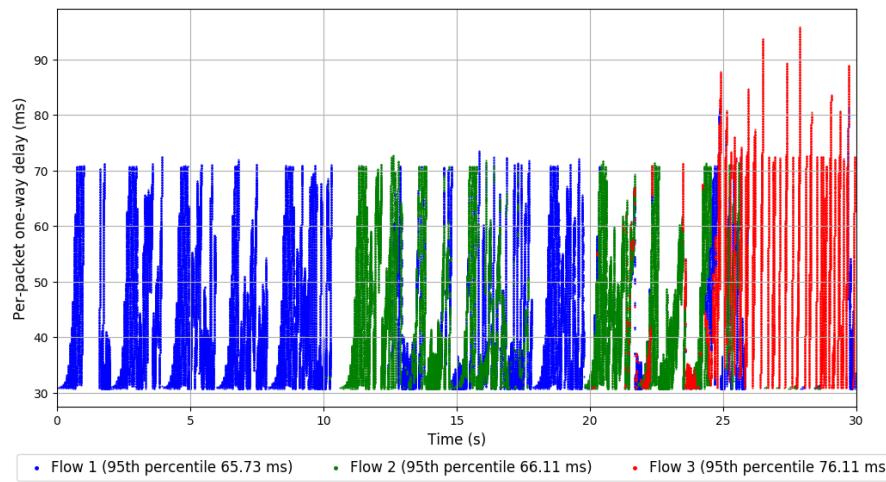
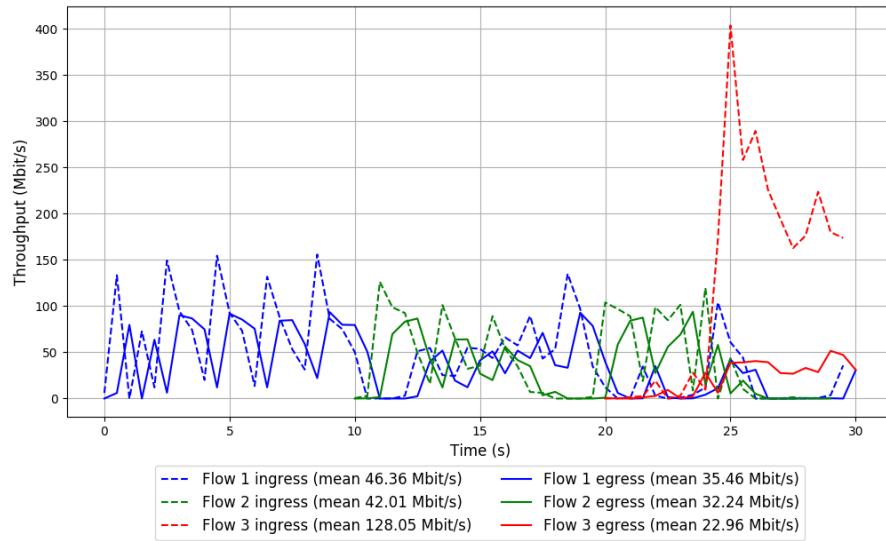


Run 4: Statistics of Verus

```
Start at: 2018-11-15 06:15:57
End at: 2018-11-15 06:16:27
Local clock offset: -3.053 ms
Remote clock offset: -2.356 ms

# Below is generated by plot.py at 2018-11-15 07:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.06 Mbit/s
95th percentile per-packet one-way delay: 67.420 ms
Loss rate: 45.25%
-- Flow 1:
Average throughput: 35.46 Mbit/s
95th percentile per-packet one-way delay: 65.727 ms
Loss rate: 23.50%
-- Flow 2:
Average throughput: 32.24 Mbit/s
95th percentile per-packet one-way delay: 66.109 ms
Loss rate: 24.82%
-- Flow 3:
Average throughput: 22.96 Mbit/s
95th percentile per-packet one-way delay: 76.111 ms
Loss rate: 82.01%
```

Run 4: Report of Verus — Data Link

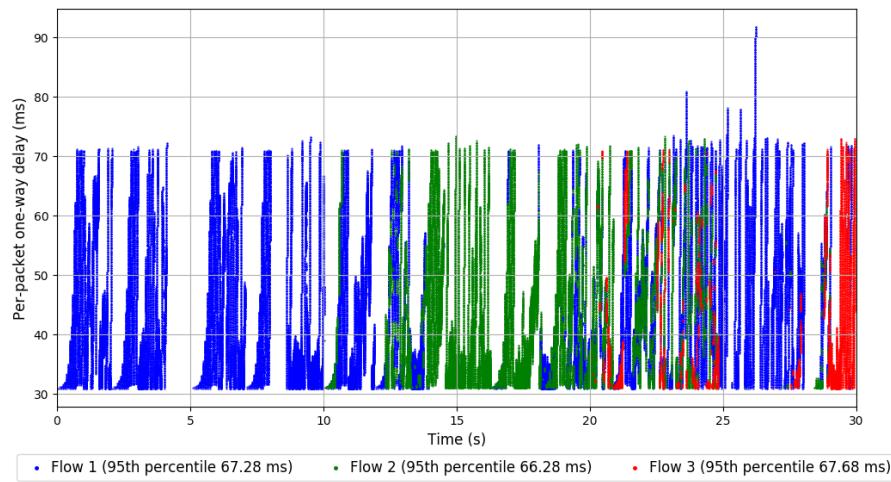
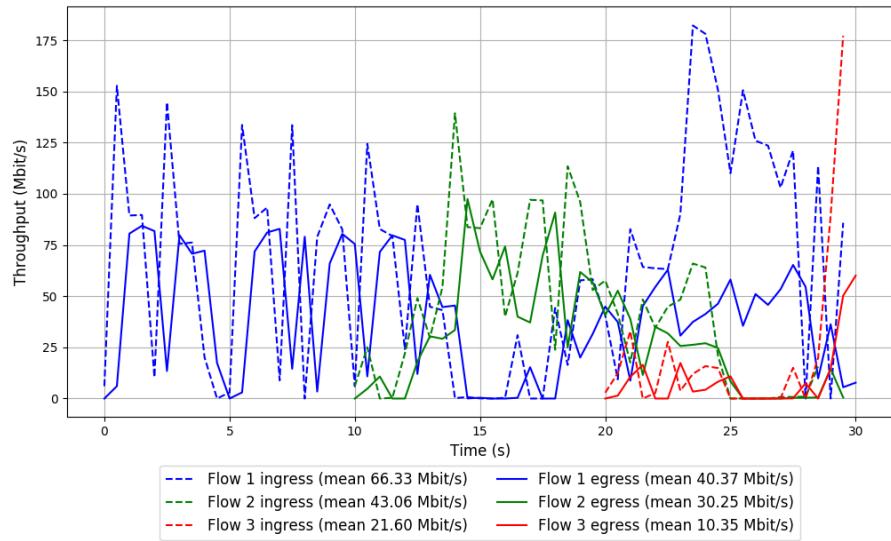


Run 5: Statistics of Verus

```
Start at: 2018-11-15 06:40:30
End at: 2018-11-15 06:41:00
Local clock offset: -0.36 ms
Remote clock offset: -3.204 ms

# Below is generated by plot.py at 2018-11-15 07:01:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.78 Mbit/s
95th percentile per-packet one-way delay: 67.037 ms
Loss rate: 37.46%
-- Flow 1:
Average throughput: 40.37 Mbit/s
95th percentile per-packet one-way delay: 67.279 ms
Loss rate: 39.11%
-- Flow 2:
Average throughput: 30.25 Mbit/s
95th percentile per-packet one-way delay: 66.284 ms
Loss rate: 29.70%
-- Flow 3:
Average throughput: 10.35 Mbit/s
95th percentile per-packet one-way delay: 67.680 ms
Loss rate: 51.95%
```

Run 5: Report of Verus — Data Link

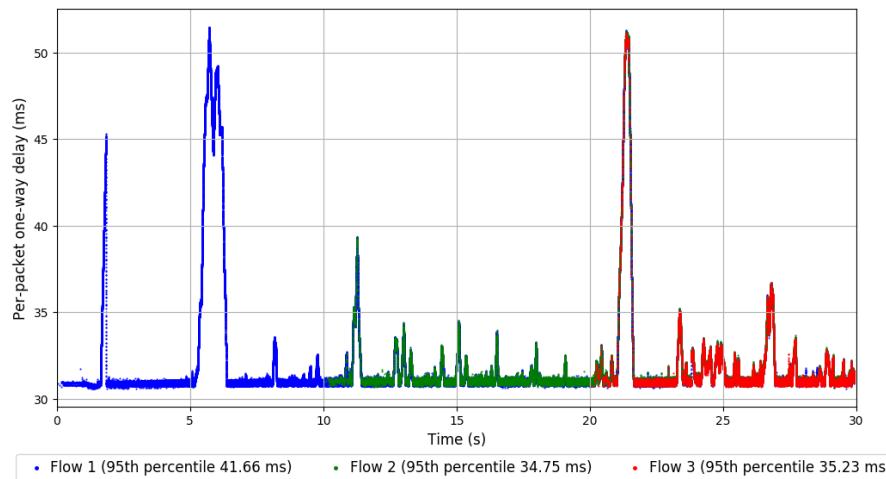
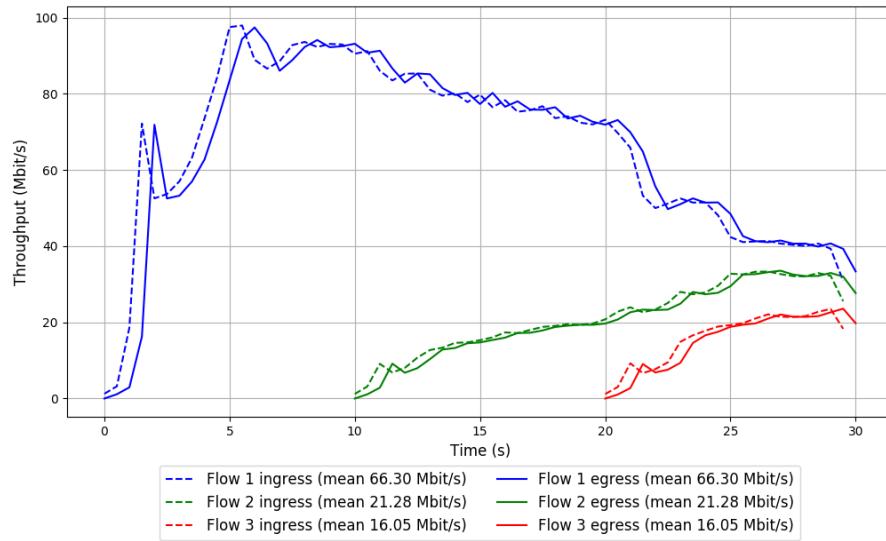


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-11-15 04:47:57
End at: 2018-11-15 04:48:27
Local clock offset: 0.601 ms
Remote clock offset: 0.889 ms

# Below is generated by plot.py at 2018-11-15 07:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.76 Mbit/s
95th percentile per-packet one-way delay: 38.765 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.30 Mbit/s
95th percentile per-packet one-way delay: 41.659 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.28 Mbit/s
95th percentile per-packet one-way delay: 34.753 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.05 Mbit/s
95th percentile per-packet one-way delay: 35.227 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

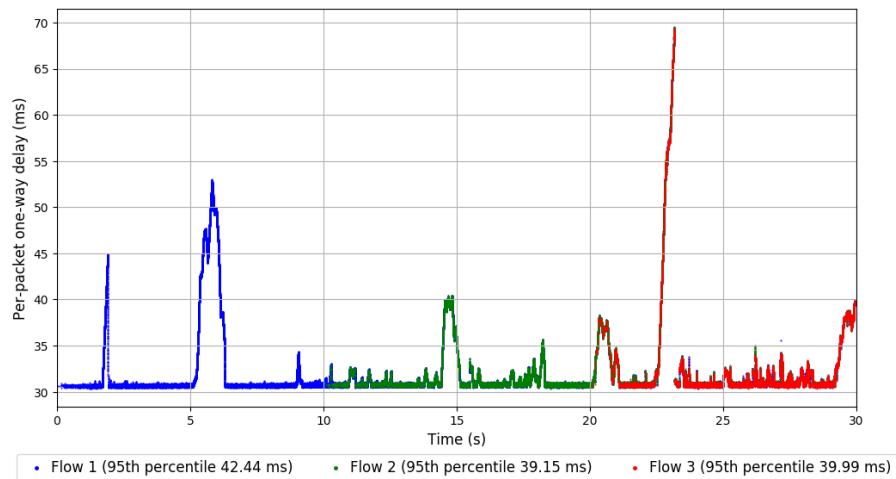
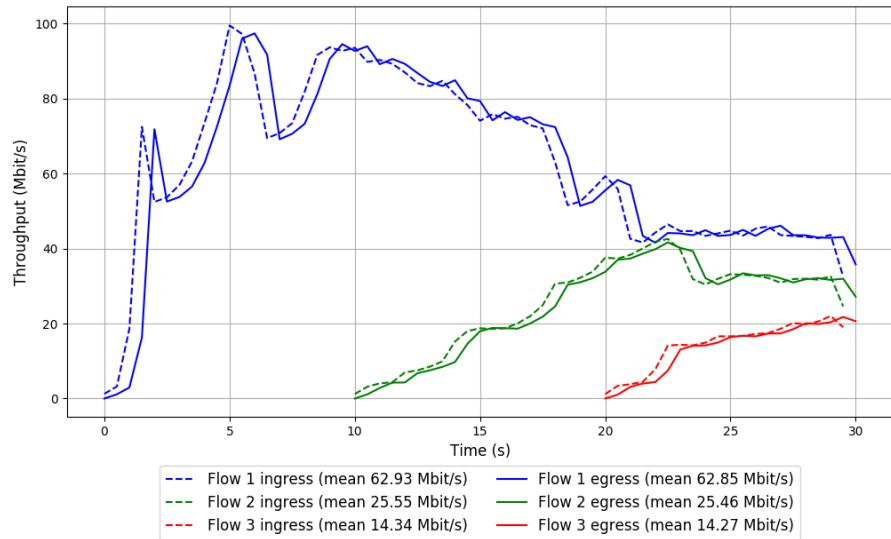


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-11-15 05:12:36
End at: 2018-11-15 05:13:06
Local clock offset: 0.291 ms
Remote clock offset: 1.33 ms

# Below is generated by plot.py at 2018-11-15 07:01:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.50 Mbit/s
95th percentile per-packet one-way delay: 41.101 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 62.85 Mbit/s
95th percentile per-packet one-way delay: 42.437 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 25.46 Mbit/s
95th percentile per-packet one-way delay: 39.147 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 14.27 Mbit/s
95th percentile per-packet one-way delay: 39.986 ms
Loss rate: 0.39%
```

Run 2: Report of PCC-Vivace — Data Link

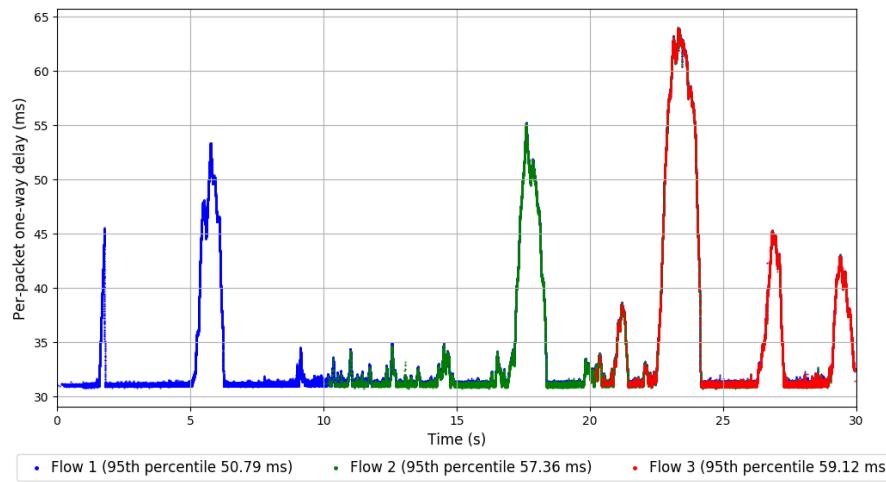
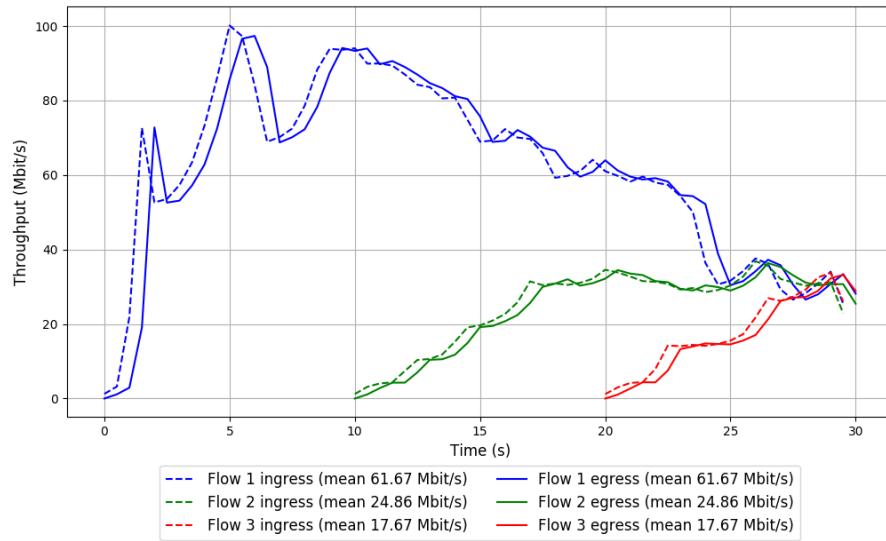


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-11-15 05:37:34
End at: 2018-11-15 05:38:04
Local clock offset: 0.239 ms
Remote clock offset: 0.489 ms

# Below is generated by plot.py at 2018-11-15 07:01:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.03 Mbit/s
95th percentile per-packet one-way delay: 52.318 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.67 Mbit/s
95th percentile per-packet one-way delay: 50.790 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.86 Mbit/s
95th percentile per-packet one-way delay: 57.356 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.67 Mbit/s
95th percentile per-packet one-way delay: 59.117 ms
Loss rate: 0.00%
```

Run 3: Report of PCC-Vivace — Data Link

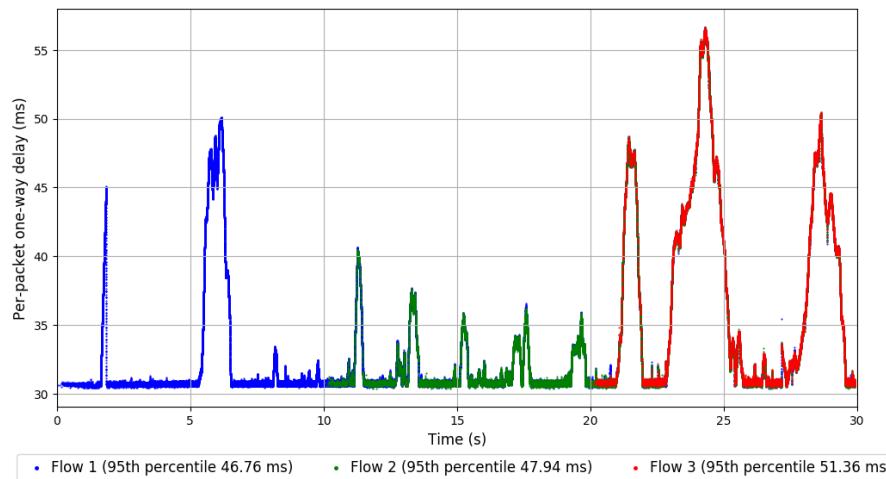
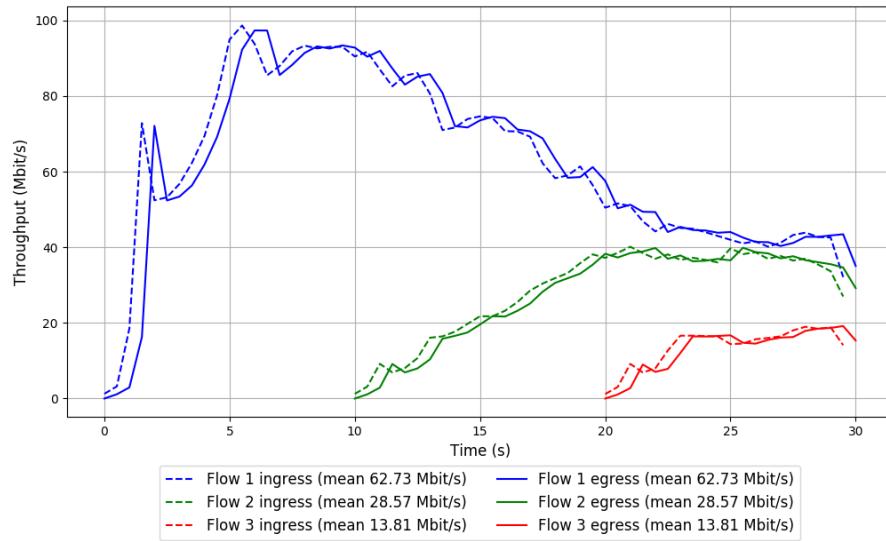


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-11-15 06:02:18
End at: 2018-11-15 06:02:48
Local clock offset: -1.36 ms
Remote clock offset: -1.39 ms

# Below is generated by plot.py at 2018-11-15 07:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.30 Mbit/s
95th percentile per-packet one-way delay: 47.257 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.73 Mbit/s
95th percentile per-packet one-way delay: 46.761 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.57 Mbit/s
95th percentile per-packet one-way delay: 47.937 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.81 Mbit/s
95th percentile per-packet one-way delay: 51.359 ms
Loss rate: 0.00%
```

Run 4: Report of PCC-Vivace — Data Link

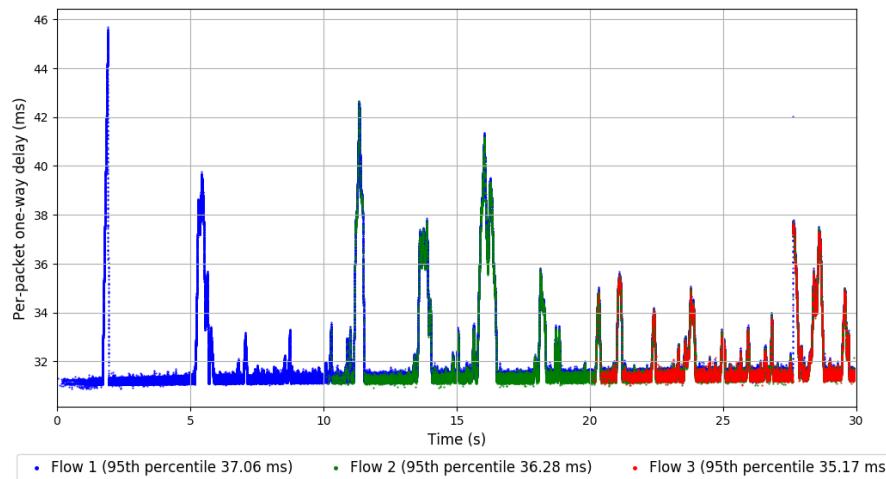
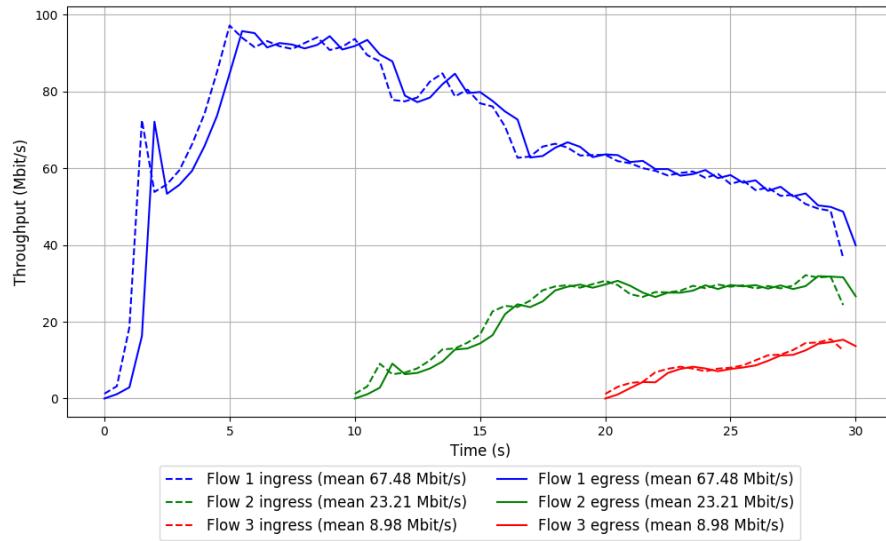


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-11-15 06:26:49
End at: 2018-11-15 06:27:19
Local clock offset: -3.679 ms
Remote clock offset: -3.035 ms

# Below is generated by plot.py at 2018-11-15 07:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.88 Mbit/s
95th percentile per-packet one-way delay: 36.859 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 67.48 Mbit/s
95th percentile per-packet one-way delay: 37.062 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.21 Mbit/s
95th percentile per-packet one-way delay: 36.282 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.98 Mbit/s
95th percentile per-packet one-way delay: 35.167 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

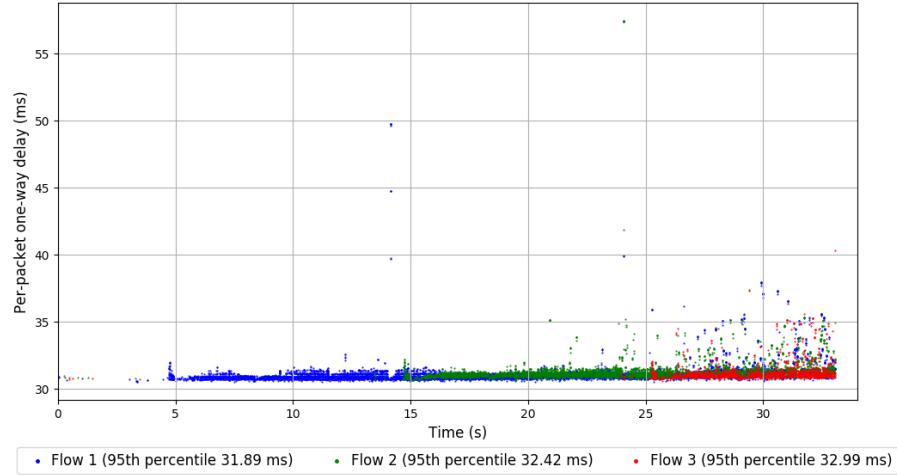
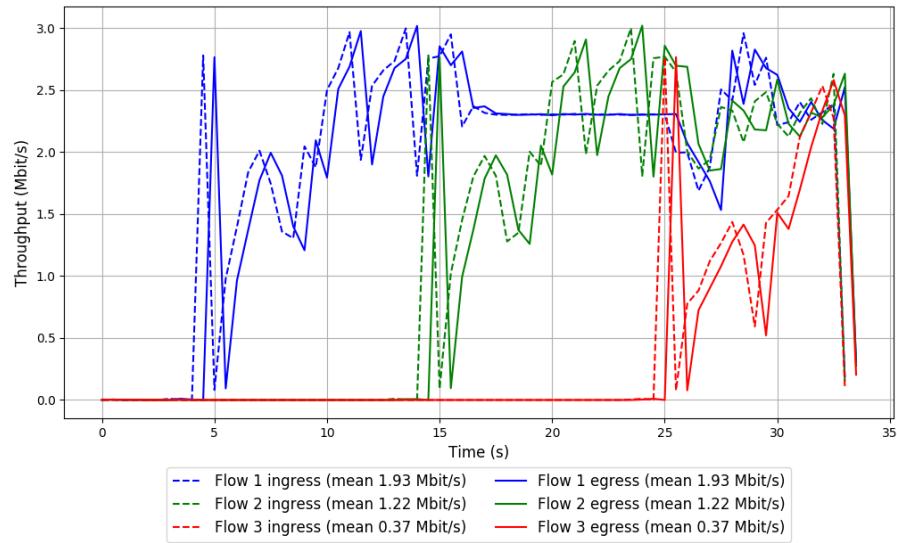


```
Run 1: Statistics of WebRTC media

Start at: 2018-11-15 05:11:18
End at: 2018-11-15 05:11:48
Local clock offset: 0.299 ms
Remote clock offset: 1.62 ms

# Below is generated by plot.py at 2018-11-15 07:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 32.242 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 31.887 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 32.417 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 32.989 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

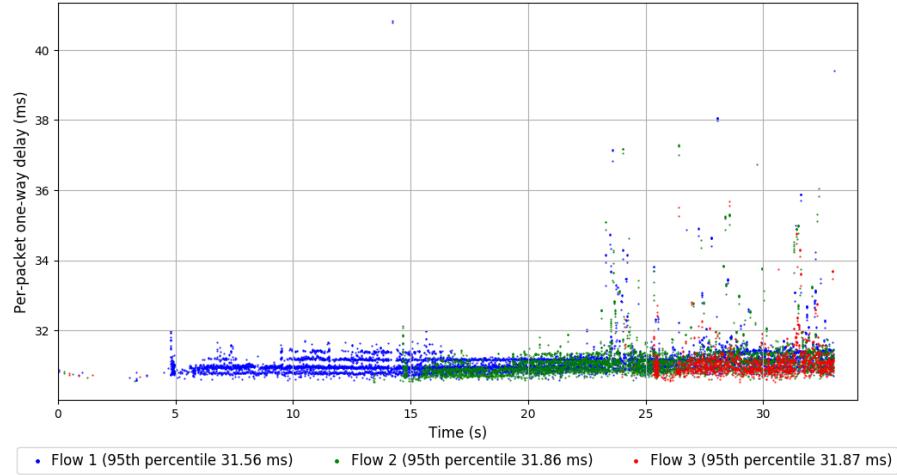
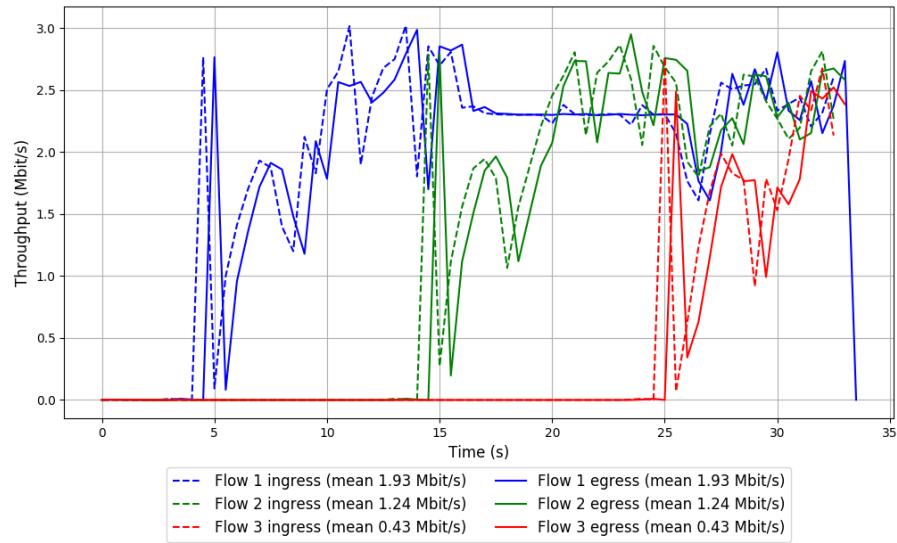


Run 2: Statistics of WebRTC media

```
Start at: 2018-11-15 05:36:16
End at: 2018-11-15 05:36:46
Local clock offset: 0.241 ms
Remote clock offset: 0.368 ms

# Below is generated by plot.py at 2018-11-15 07:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 31.672 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 31.557 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 31.857 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.872 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

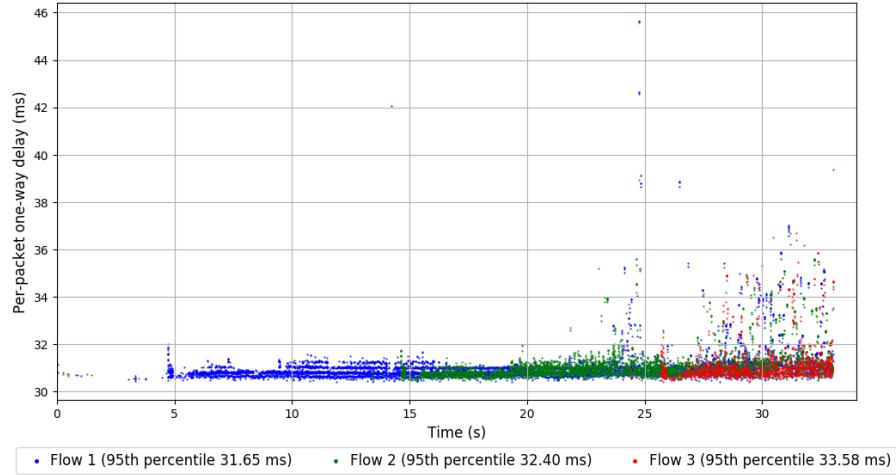
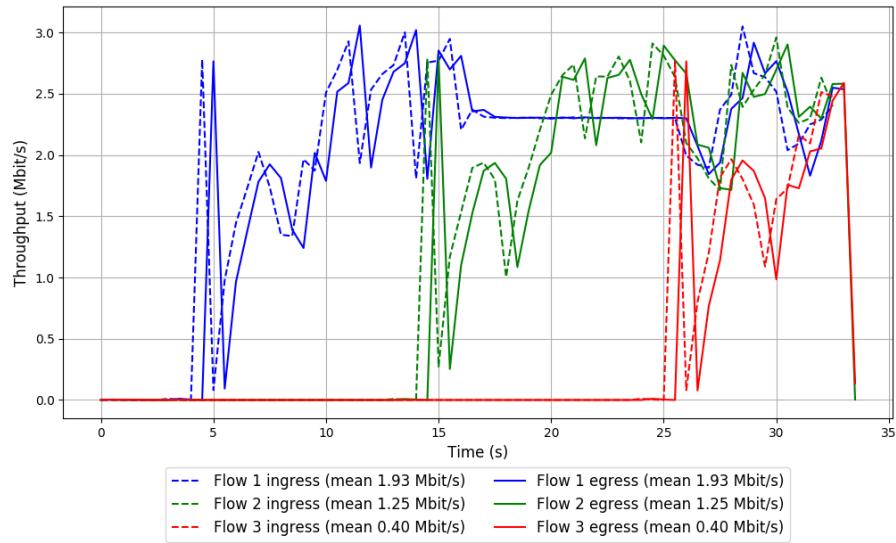


Run 3: Statistics of WebRTC media

```
Start at: 2018-11-15 06:01:00
End at: 2018-11-15 06:01:30
Local clock offset: -1.046 ms
Remote clock offset: -1.27 ms

# Below is generated by plot.py at 2018-11-15 07:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 32.075 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 31.649 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 32.396 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 33.581 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

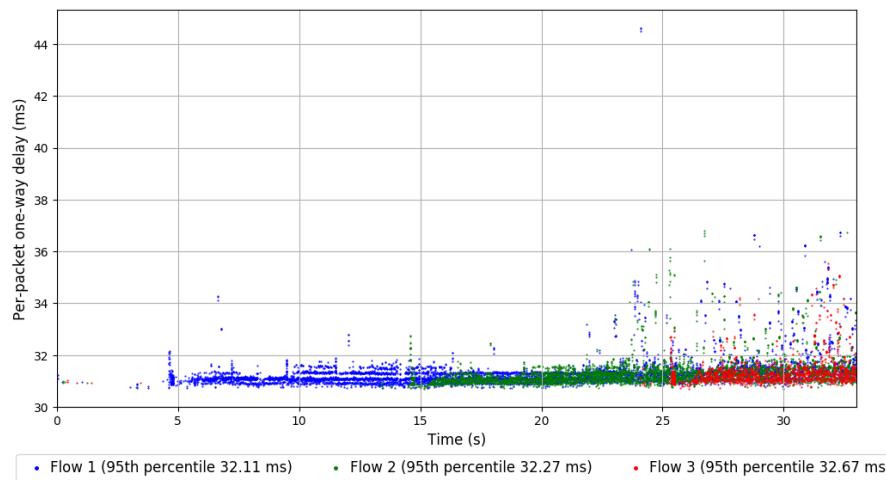
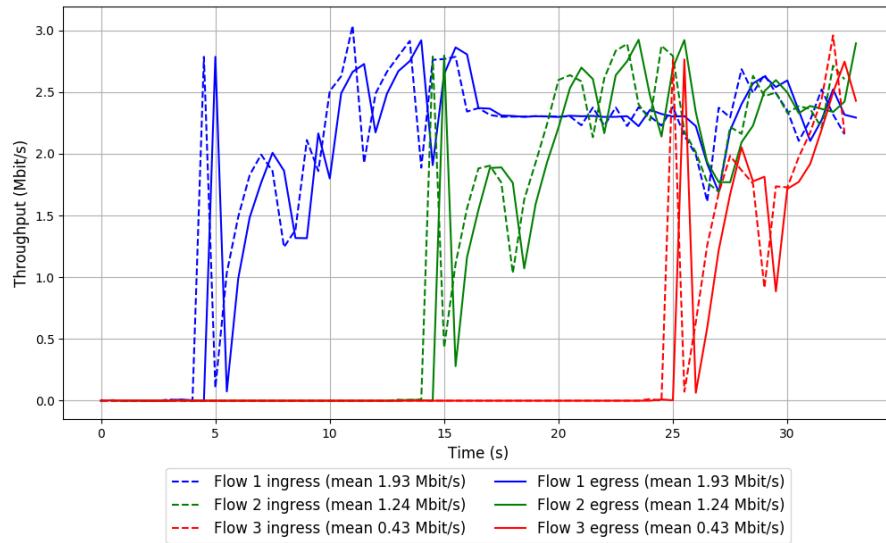


Run 4: Statistics of WebRTC media

```
Start at: 2018-11-15 06:25:31
End at: 2018-11-15 06:26:01
Local clock offset: -3.634 ms
Remote clock offset: -2.92 ms

# Below is generated by plot.py at 2018-11-15 07:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 32.276 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 32.111 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 32.269 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 32.669 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



```
Run 5: Statistics of WebRTC media

Start at: 2018-11-15 06:50:00
End at: 2018-11-15 06:50:30
Local clock offset: 0.351 ms
Remote clock offset: -3.368 ms

# Below is generated by plot.py at 2018-11-15 07:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 32.510 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 31.988 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 32.808 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 33.792 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

