

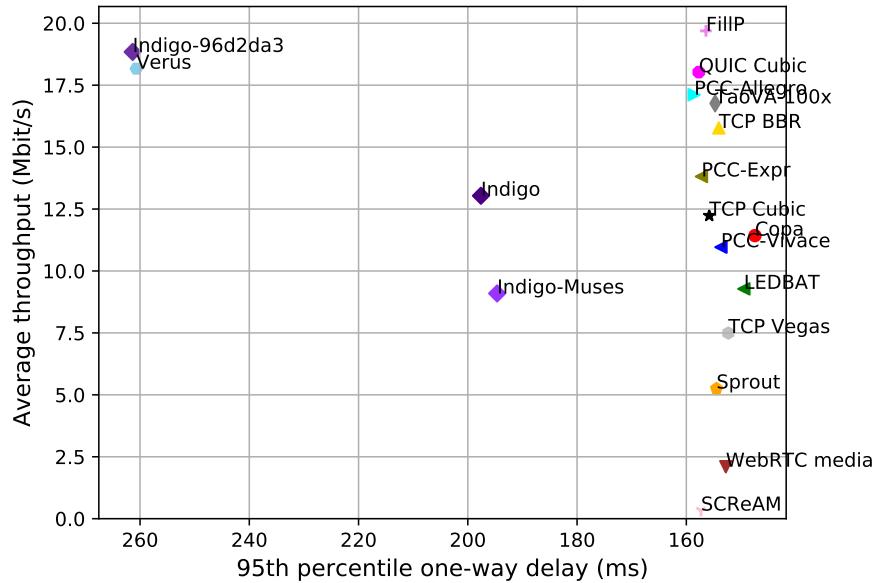
Pantheon Report

Generated at 2018-10-26 11:44:50 (UTC).
Data path: China on `eno1` (*remote*) → AWS Korea on `ens5` (*local*).
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against `ntp.nict.jp` and have been applied to correct the timestamps in logs.

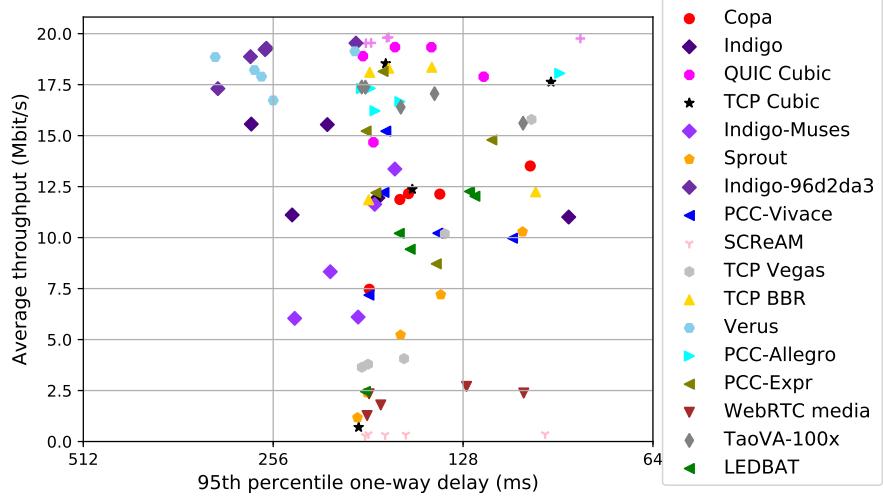
```
System info:  
Linux 4.15.0-1023-aws  
net.core.default_qdisc = fq  
net.core.rmem_default = 16777216  
net.core.rmem_max = 536870912  
net.core.wmem_default = 16777216  
net.core.wmem_max = 536870912  
net.ipv4.tcp_rmem = 4096 16777216 536870912  
net.ipv4.tcp_wmem = 4096 16777216 536870912  
  
Git summary:  
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be  
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6  
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95  
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf  
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a  
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd  
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1  
M receiver/src/buffer.h  
M receiver/src/core.cpp  
M sender/src/buffer.h  
M sender/src/core.cpp  
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab  
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42  
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2  
M src/ScreamClient  
M src/ScreamServer  
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26  
M src/examples/cellsim.cc  
M src/examples/sproutbt2.cc  
M src/network/sproutconn.cc  
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494  
M src/verus.hpp  
M tools/plot.py
```

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

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



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



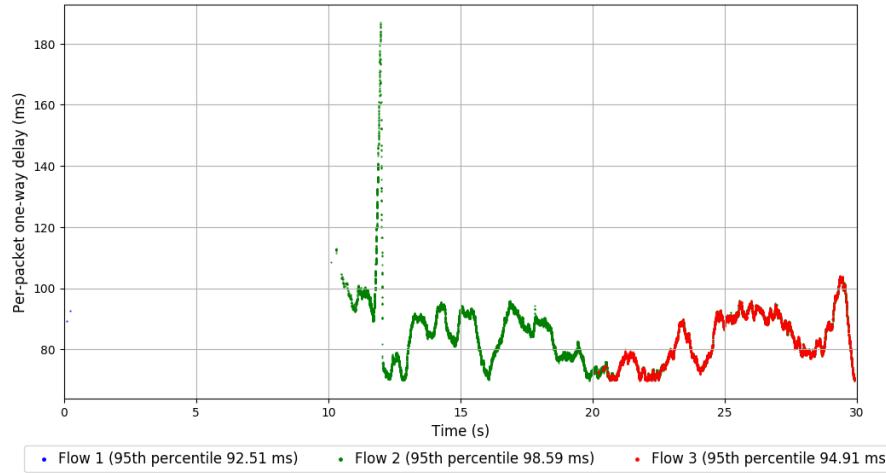
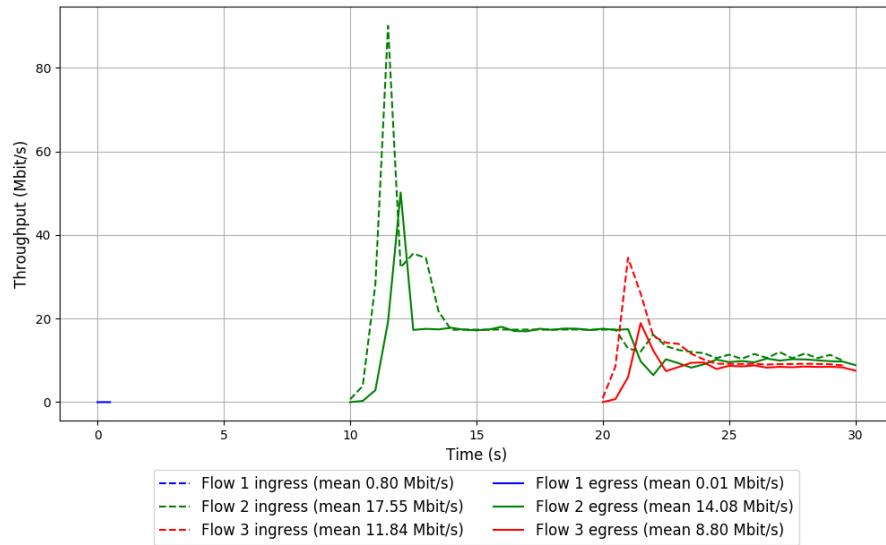
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	8.21	9.53	3.79	149.86	150.65	148.17	52.24	26.45	28.45
Copa	5	5.97	5.84	4.89	147.81	146.37	147.68	3.47	1.31	5.66
TCP Cubic	5	6.94	6.40	6.87	156.58	154.54	150.74	8.95	9.48	7.62
FillP	5	12.41	7.84	6.37	176.94	151.48	151.15	41.24	29.23	33.19
Indigo	5	60.29	9.02	7.09	157.46	182.11	202.68	52.87	61.09	79.12
Indigo-96d2da3	5	12.63	6.26	6.72	257.39	268.71	264.97	64.91	68.02	72.49
LEDBAT	5	5.48	4.35	2.89	147.29	148.52	143.38	0.92	1.60	3.48
Indigo-Muses	5	4.10	4.51	6.17	191.70	196.65	168.15	9.11	9.32	3.24
PCC-Allegro	5	14.52	3.20	1.45	158.25	156.11	155.56	51.69	58.81	50.41
PCC-Expr	5	6.08	7.70	8.08	155.50	156.83	154.91	39.52	16.60	29.32
QUIC Cubic	5	9.68	7.89	9.55	154.36	157.61	159.84	5.53	12.17	15.18
SCReAM	5	0.14	0.18	0.21	161.04	151.78	149.81	0.48	0.81	1.56
Sprout	5	2.68	2.79	2.56	152.05	153.05	148.31	2.16	1.06	2.31
TaoVA-100x	5	8.20	7.09	11.83	154.82	154.10	152.01	8.40	16.12	20.42
TCP Vegas	5	4.66	2.54	4.23	150.27	152.38	150.23	0.47	1.02	1.57
Verus	5	13.66	5.51	3.58	240.42	243.38	238.86	60.84	61.84	60.59
PCC-Vivace	5	3.87	8.35	4.74	153.68	153.09	152.53	3.41	5.88	6.43
WebRTC media	5	0.99	0.84	0.28	153.08	152.33	146.81	18.65	1.13	19.97

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-26 09:51:18
End at: 2018-10-26 09:51:48
Local clock offset: -1.818 ms
Remote clock offset: 16.505 ms

# Below is generated by plot.py at 2018-10-26 11:41:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 98.205 ms
Loss rate: 22.04%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 92.510 ms
Loss rate: 98.79%
-- Flow 2:
Average throughput: 14.08 Mbit/s
95th percentile per-packet one-way delay: 98.586 ms
Loss rate: 20.45%
-- Flow 3:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 94.911 ms
Loss rate: 26.70%
```

Run 1: Report of TCP BBR — Data Link

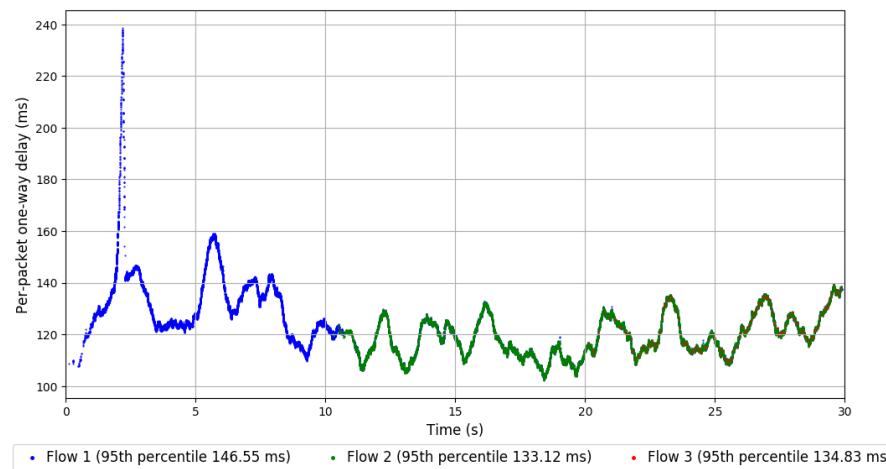
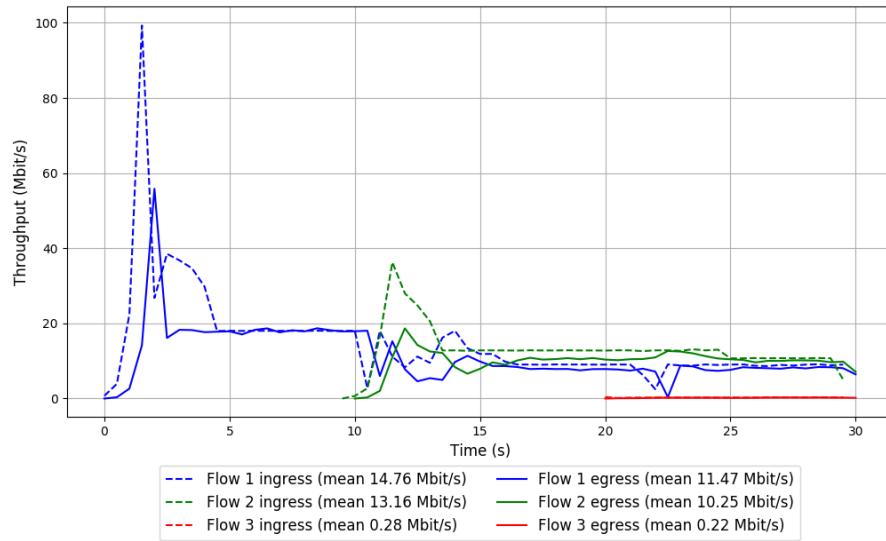


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-26 10:15:34
End at: 2018-10-26 10:16:04
Local clock offset: -1.423 ms
Remote clock offset: 15.84 ms

# Below is generated by plot.py at 2018-10-26 11:42:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.35 Mbit/s
95th percentile per-packet one-way delay: 143.476 ms
Loss rate: 22.79%
-- Flow 1:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 146.550 ms
Loss rate: 22.72%
-- Flow 2:
Average throughput: 10.25 Mbit/s
95th percentile per-packet one-way delay: 133.124 ms
Loss rate: 22.92%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 134.832 ms
Loss rate: 21.63%
```

Run 2: Report of TCP BBR — Data Link

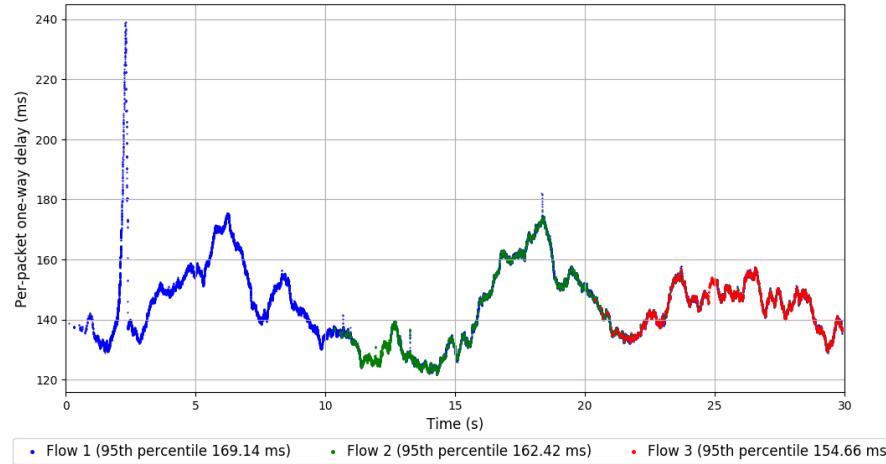
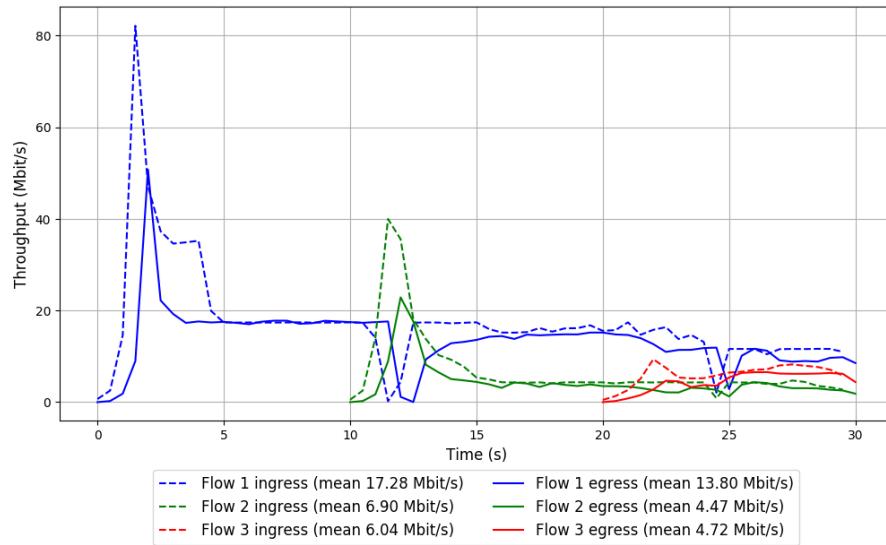


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-26 10:40:47
End at: 2018-10-26 10:41:17
Local clock offset: -1.215 ms
Remote clock offset: 25.906 ms

# Below is generated by plot.py at 2018-10-26 11:42:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.31 Mbit/s
95th percentile per-packet one-way delay: 167.947 ms
Loss rate: 23.89%
-- Flow 1:
Average throughput: 13.80 Mbit/s
95th percentile per-packet one-way delay: 169.138 ms
Loss rate: 20.73%
-- Flow 2:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 162.418 ms
Loss rate: 35.92%
-- Flow 3:
Average throughput: 4.72 Mbit/s
95th percentile per-packet one-way delay: 154.663 ms
Loss rate: 23.58%
```

Run 3: Report of TCP BBR — Data Link

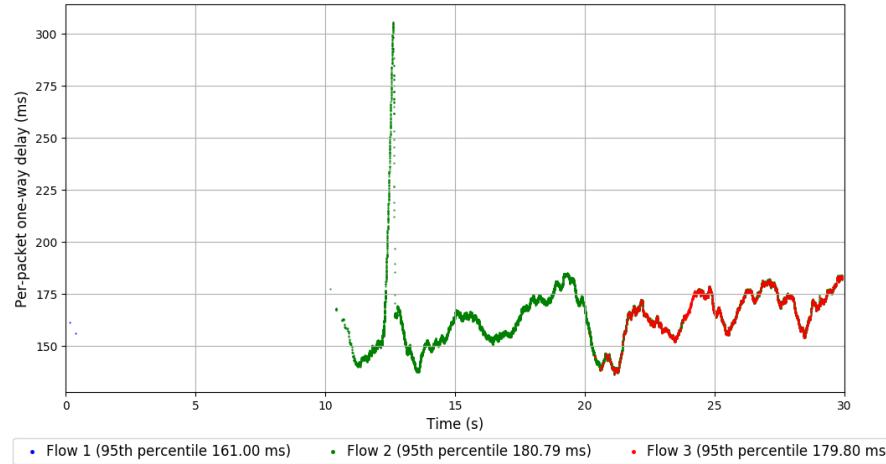
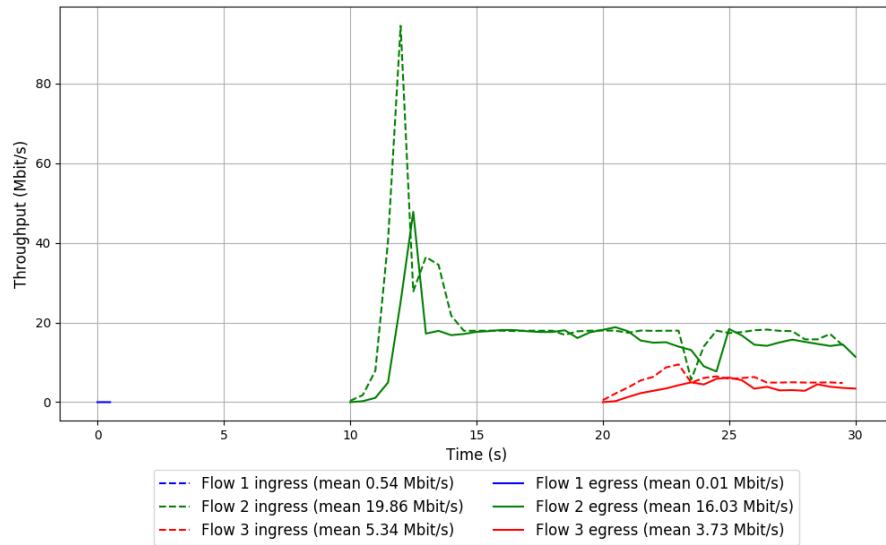


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-26 11:05:56
End at: 2018-10-26 11:06:26
Local clock offset: 0.186 ms
Remote clock offset: 36.445 ms

# Below is generated by plot.py at 2018-10-26 11:42:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.85 Mbit/s
95th percentile per-packet one-way delay: 180.681 ms
Loss rate: 21.67%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 160.999 ms
Loss rate: 98.79%
-- Flow 2:
Average throughput: 16.03 Mbit/s
95th percentile per-packet one-way delay: 180.790 ms
Loss rate: 20.30%
-- Flow 3:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 179.800 ms
Loss rate: 31.70%
```

Run 4: Report of TCP BBR — Data Link

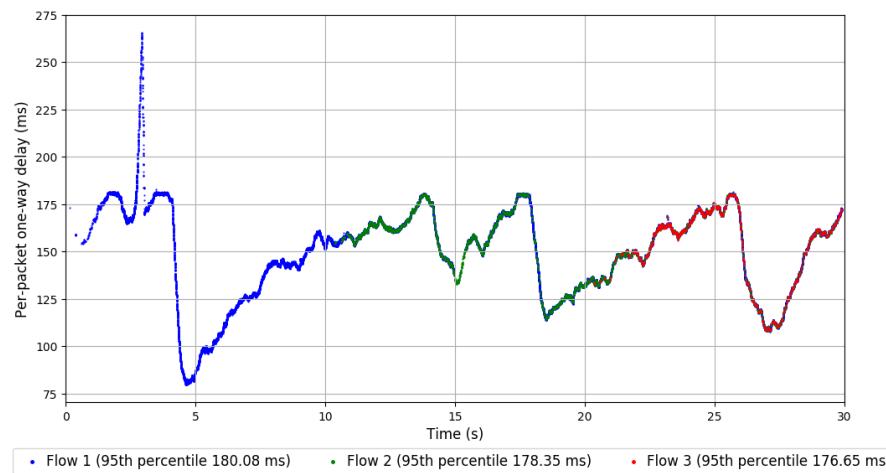
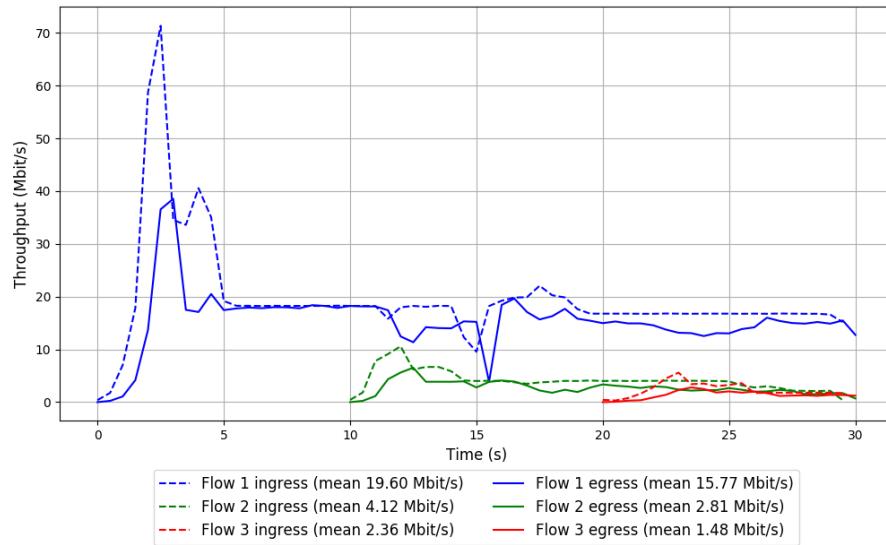


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-26 11:31:42
End at: 2018-10-26 11:32:12
Local clock offset: 2.386 ms
Remote clock offset: -20.7 ms

# Below is generated by plot.py at 2018-10-26 11:42:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.10 Mbit/s
95th percentile per-packet one-way delay: 179.963 ms
Loss rate: 22.26%
-- Flow 1:
Average throughput: 15.77 Mbit/s
95th percentile per-packet one-way delay: 180.080 ms
Loss rate: 20.16%
-- Flow 2:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 178.351 ms
Loss rate: 32.68%
-- Flow 3:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 176.649 ms
Loss rate: 38.65%
```

Run 5: Report of TCP BBR — Data Link

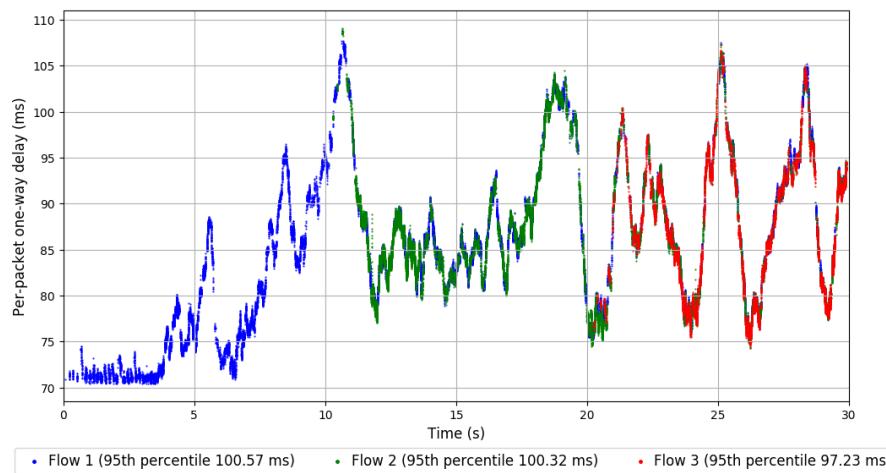
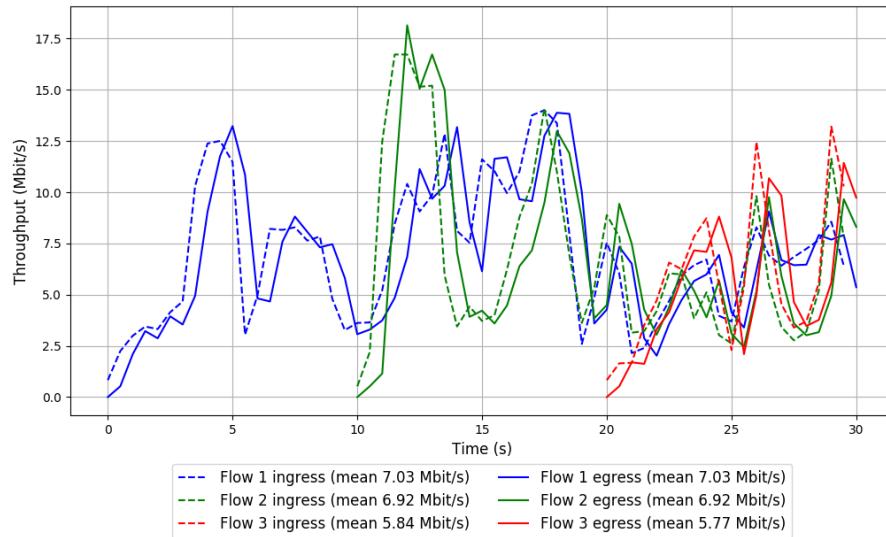


Run 1: Statistics of Copa

```
Start at: 2018-10-26 09:40:54
End at: 2018-10-26 09:41:24
Local clock offset: -1.636 ms
Remote clock offset: 19.139 ms

# Below is generated by plot.py at 2018-10-26 11:42:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.51 Mbit/s
95th percentile per-packet one-way delay: 100.162 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 100.574 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 6.92 Mbit/s
95th percentile per-packet one-way delay: 100.322 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 5.77 Mbit/s
95th percentile per-packet one-way delay: 97.231 ms
Loss rate: 2.56%
```

Run 1: Report of Copa — Data Link

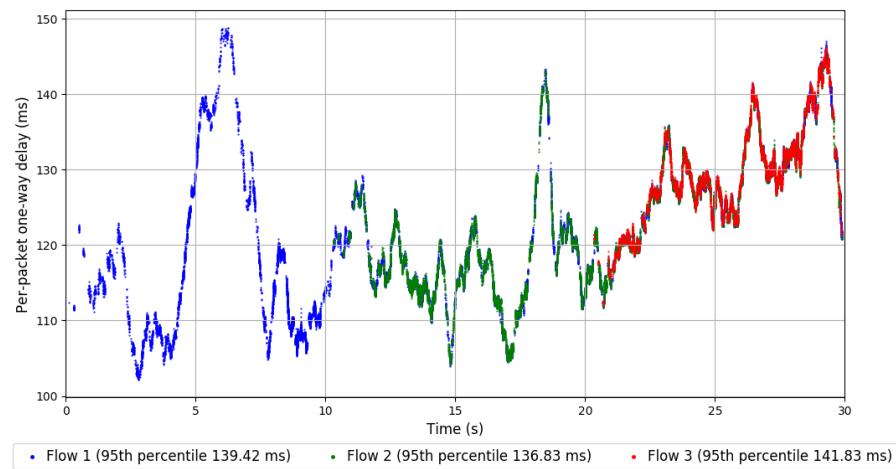
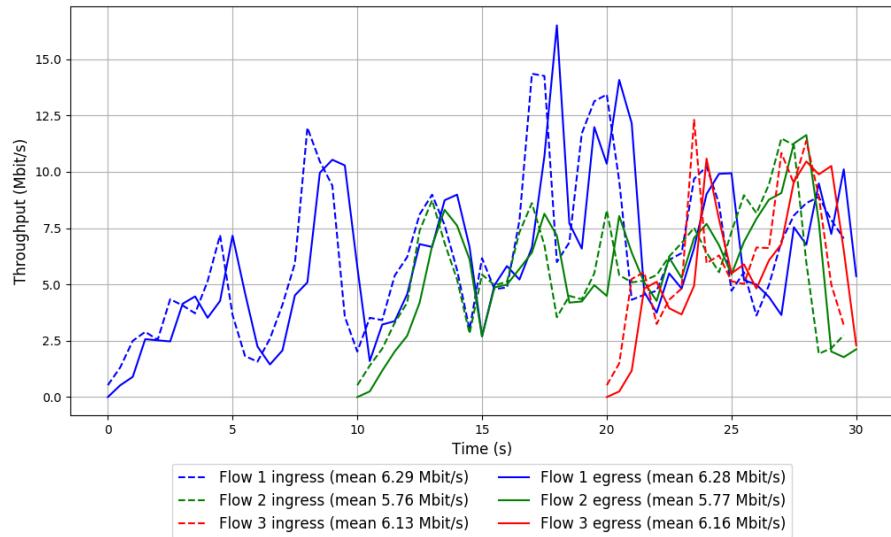


Run 2: Statistics of Copa

```
Start at: 2018-10-26 10:04:40
End at: 2018-10-26 10:05:10
Local clock offset: -1.974 ms
Remote clock offset: 13.739 ms

# Below is generated by plot.py at 2018-10-26 11:42:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.13 Mbit/s
95th percentile per-packet one-way delay: 139.351 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 6.28 Mbit/s
95th percentile per-packet one-way delay: 139.421 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 5.77 Mbit/s
95th percentile per-packet one-way delay: 136.827 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 6.16 Mbit/s
95th percentile per-packet one-way delay: 141.831 ms
Loss rate: 1.25%
```

Run 2: Report of Copa — Data Link

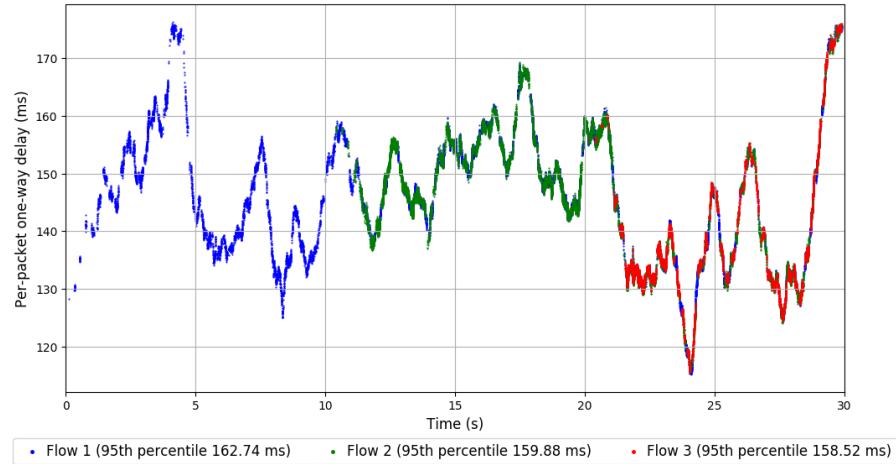
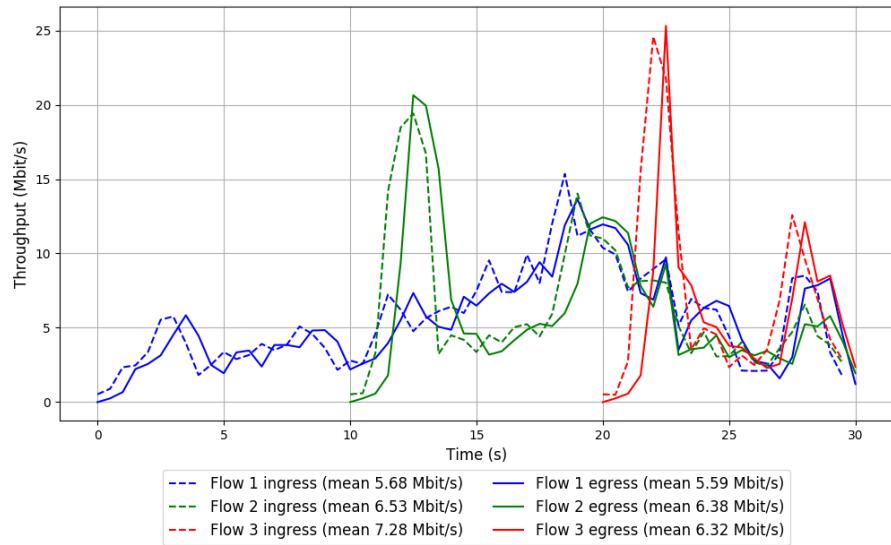


Run 3: Statistics of Copa

```
Start at: 2018-10-26 10:29:34
End at: 2018-10-26 10:30:04
Local clock offset: -1.415 ms
Remote clock offset: 16.217 ms

# Below is generated by plot.py at 2018-10-26 11:42:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 161.226 ms
Loss rate: 5.19%
-- Flow 1:
Average throughput: 5.59 Mbit/s
95th percentile per-packet one-way delay: 162.741 ms
Loss rate: 2.27%
-- Flow 2:
Average throughput: 6.38 Mbit/s
95th percentile per-packet one-way delay: 159.877 ms
Loss rate: 3.41%
-- Flow 3:
Average throughput: 6.32 Mbit/s
95th percentile per-packet one-way delay: 158.522 ms
Loss rate: 15.28%
```

Run 3: Report of Copa — Data Link

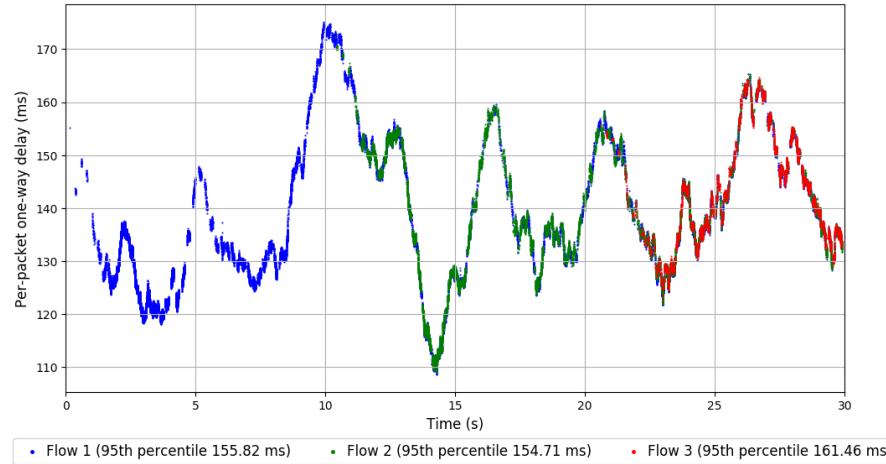
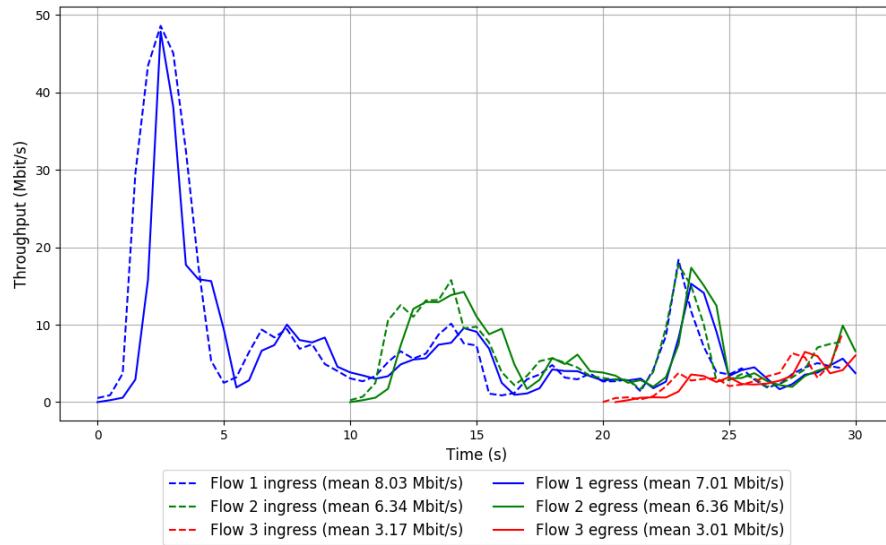


Run 4: Statistics of Copa

```
Start at: 2018-10-26 10:54:54
End at: 2018-10-26 10:55:24
Local clock offset: -1.212 ms
Remote clock offset: 36.147 ms

# Below is generated by plot.py at 2018-10-26 11:42:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.16 Mbit/s
95th percentile per-packet one-way delay: 156.227 ms
Loss rate: 8.93%
-- Flow 1:
Average throughput: 7.01 Mbit/s
95th percentile per-packet one-way delay: 155.822 ms
Loss rate: 13.32%
-- Flow 2:
Average throughput: 6.36 Mbit/s
95th percentile per-packet one-way delay: 154.706 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 161.456 ms
Loss rate: 7.39%
```

Run 4: Report of Copa — Data Link

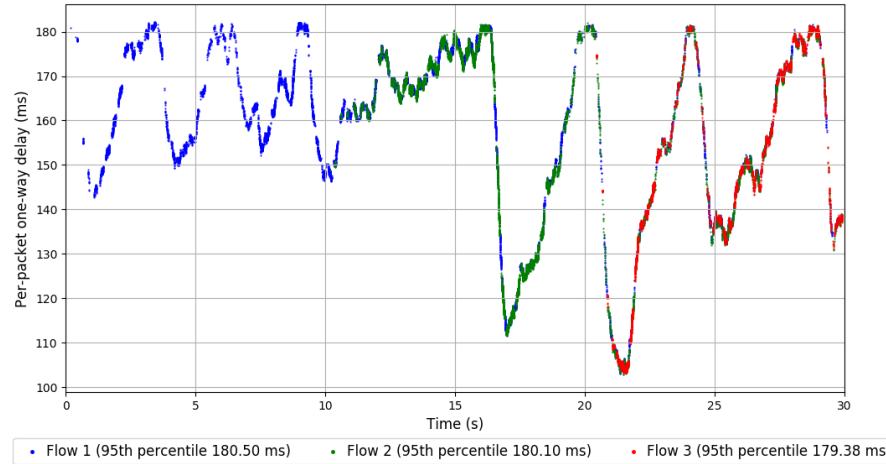
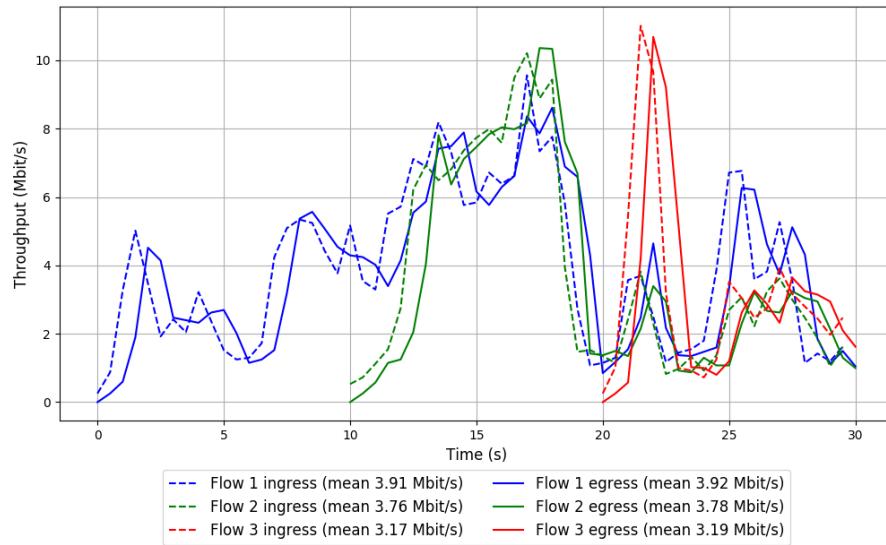


Run 5: Statistics of Copa

```
Start at: 2018-10-26 11:20:24
End at: 2018-10-26 11:20:54
Local clock offset: 2.109 ms
Remote clock offset: -7.652 ms

# Below is generated by plot.py at 2018-10-26 11:42:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 180.242 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 180.495 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 180.104 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 179.377 ms
Loss rate: 1.82%
```

Run 5: Report of Copa — Data Link

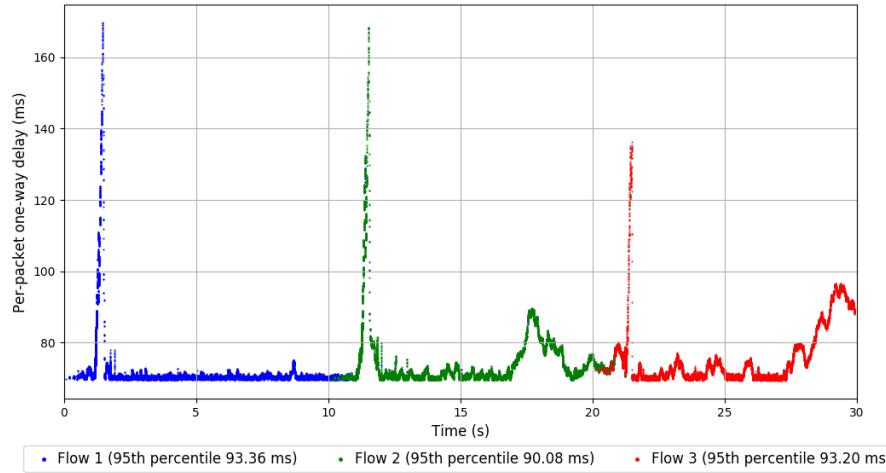
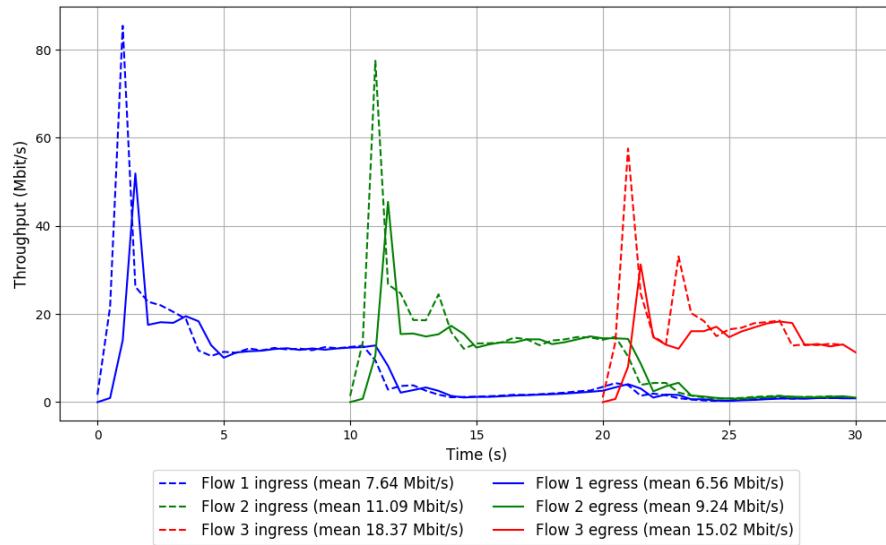


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-26 09:39:35
End at: 2018-10-26 09:40:05
Local clock offset: -1.717 ms
Remote clock offset: 20.797 ms

# Below is generated by plot.py at 2018-10-26 11:42:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.63 Mbit/s
95th percentile per-packet one-way delay: 92.859 ms
Loss rate: 16.85%
-- Flow 1:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 93.361 ms
Loss rate: 14.48%
-- Flow 2:
Average throughput: 9.24 Mbit/s
95th percentile per-packet one-way delay: 90.080 ms
Loss rate: 17.21%
-- Flow 3:
Average throughput: 15.02 Mbit/s
95th percentile per-packet one-way delay: 93.196 ms
Loss rate: 19.38%
```

Run 1: Report of TCP Cubic — Data Link

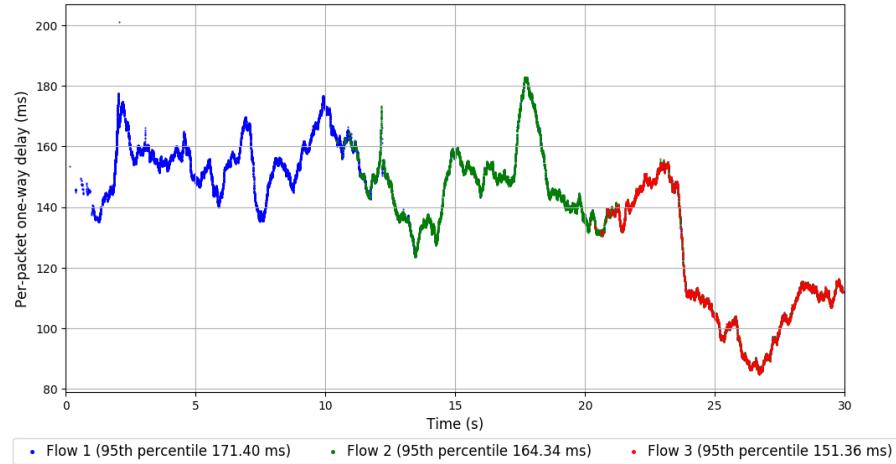
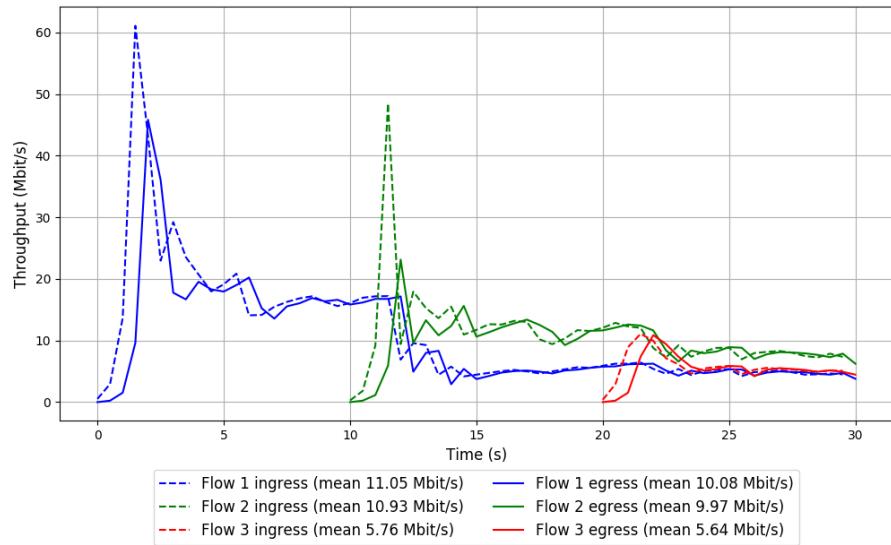


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-26 10:03:19
End at: 2018-10-26 10:03:49
Local clock offset: -1.946 ms
Remote clock offset: 14.315 ms

# Below is generated by plot.py at 2018-10-26 11:42:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.53 Mbit/s
95th percentile per-packet one-way delay: 169.768 ms
Loss rate: 9.05%
-- Flow 1:
Average throughput: 10.08 Mbit/s
95th percentile per-packet one-way delay: 171.401 ms
Loss rate: 9.39%
-- Flow 2:
Average throughput: 9.97 Mbit/s
95th percentile per-packet one-way delay: 164.343 ms
Loss rate: 9.82%
-- Flow 3:
Average throughput: 5.64 Mbit/s
95th percentile per-packet one-way delay: 151.364 ms
Loss rate: 4.13%
```

Run 2: Report of TCP Cubic — Data Link

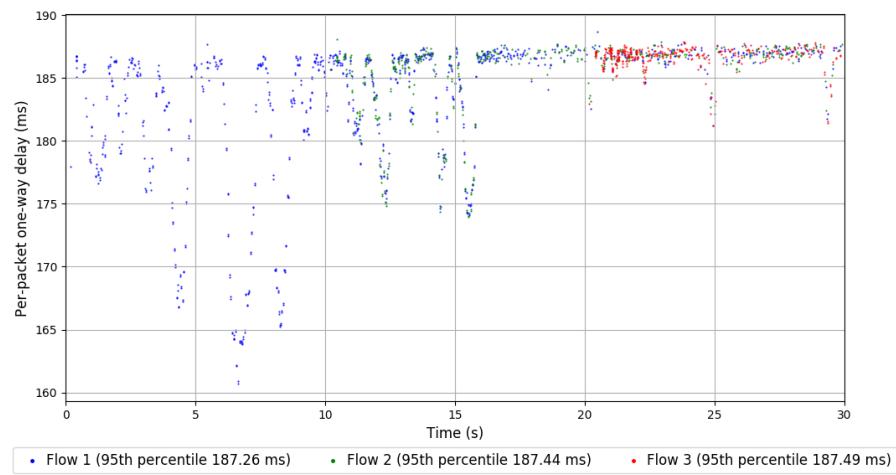
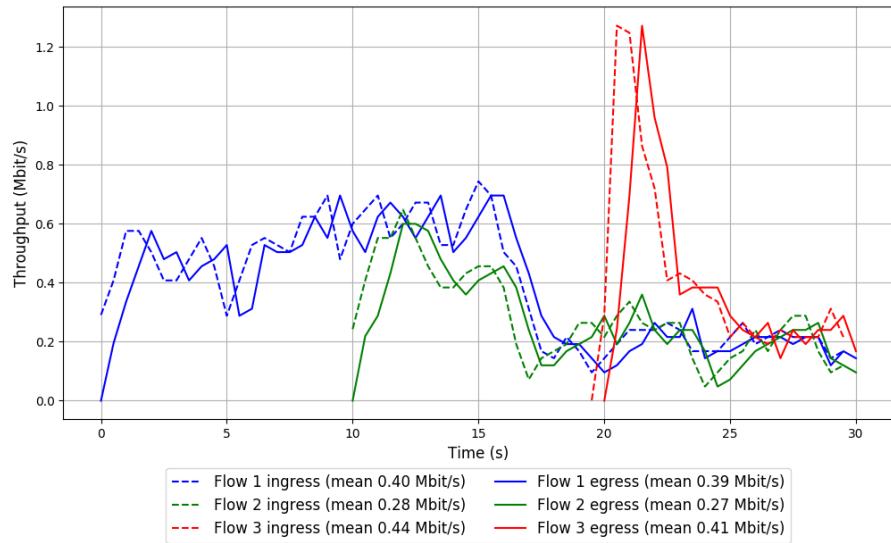


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-26 10:28:06
End at: 2018-10-26 10:28:36
Local clock offset: -1.525 ms
Remote clock offset: 7.255 ms

# Below is generated by plot.py at 2018-10-26 11:42:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 187.397 ms
Loss rate: 4.46%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 187.259 ms
Loss rate: 3.44%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 187.445 ms
Loss rate: 4.25%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 187.485 ms
Loss rate: 7.50%
```

Run 3: Report of TCP Cubic — Data Link

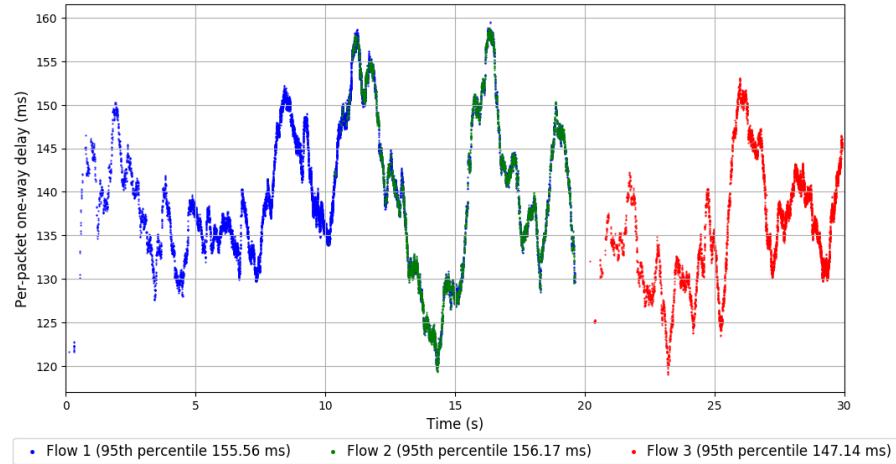
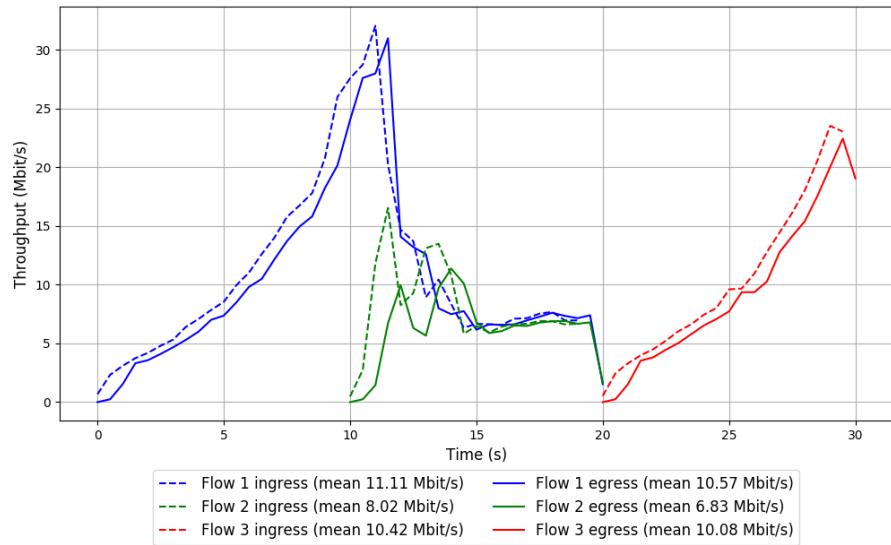


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-26 10:53:32
End at: 2018-10-26 10:54:02
Local clock offset: -1.279 ms
Remote clock offset: 38.614 ms

# Below is generated by plot.py at 2018-10-26 11:42:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.37 Mbit/s
95th percentile per-packet one-way delay: 154.032 ms
Loss rate: 6.89%
-- Flow 1:
Average throughput: 10.57 Mbit/s
95th percentile per-packet one-way delay: 155.562 ms
Loss rate: 4.87%
-- Flow 2:
Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 156.172 ms
Loss rate: 14.93%
-- Flow 3:
Average throughput: 10.08 Mbit/s
95th percentile per-packet one-way delay: 147.144 ms
Loss rate: 5.22%
```

Run 4: Report of TCP Cubic — Data Link

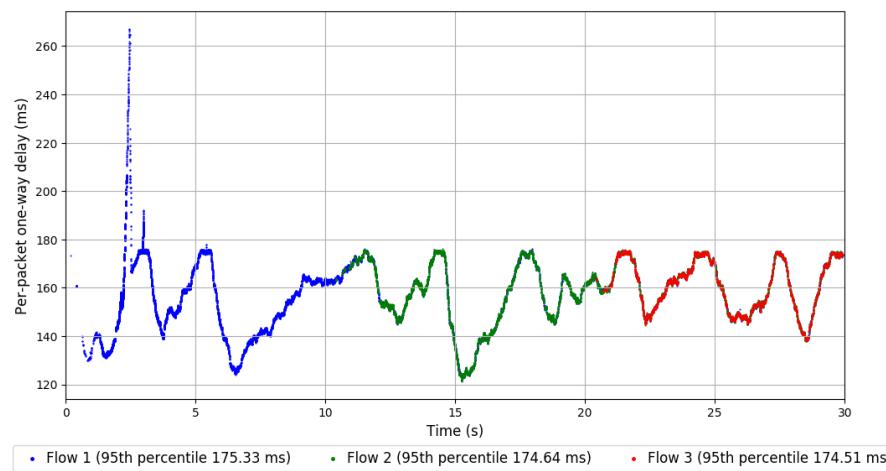
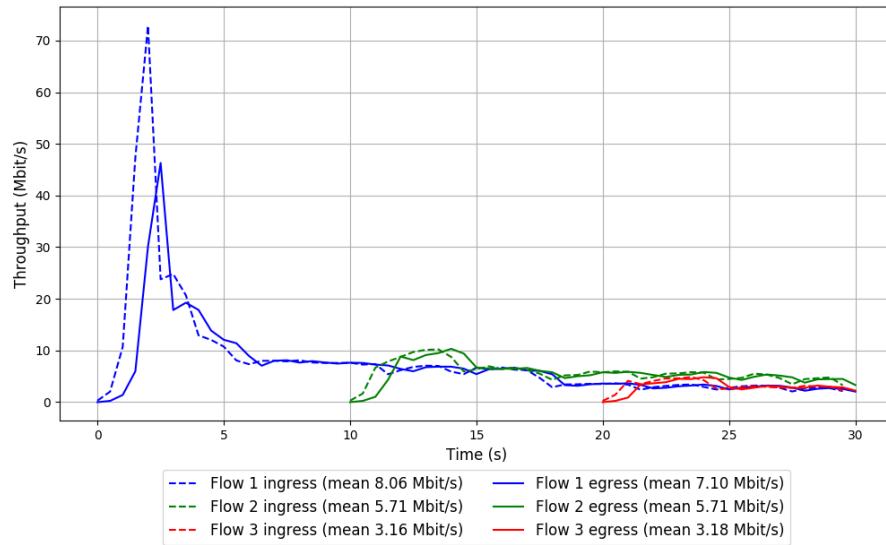


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-26 11:18:58
End at: 2018-10-26 11:19:28
Local clock offset: 1.928 ms
Remote clock offset: 1.386 ms

# Below is generated by plot.py at 2018-10-26 11:42:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 174.961 ms
Loss rate: 8.36%
-- Flow 1:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 175.332 ms
Loss rate: 12.58%
-- Flow 2:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 174.637 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 174.515 ms
Loss rate: 1.87%
```

Run 5: Report of TCP Cubic — Data Link

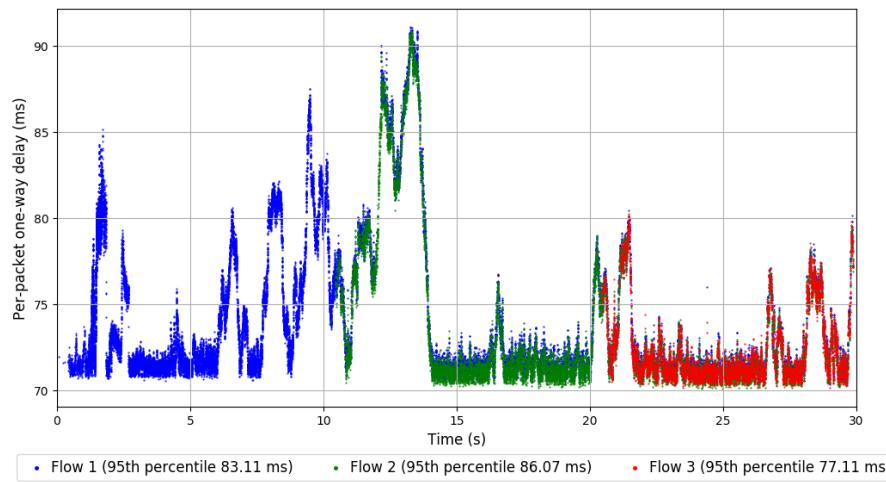
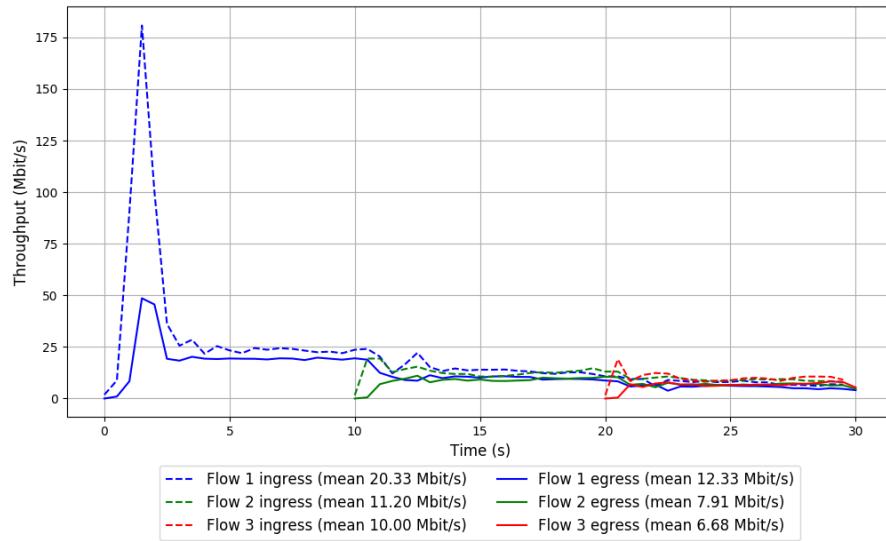


```
Run 1: Statistics of FillP

Start at: 2018-10-26 09:36:54
End at: 2018-10-26 09:37:24
Local clock offset: -1.54 ms
Remote clock offset: 21.377 ms

# Below is generated by plot.py at 2018-10-26 11:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.76 Mbit/s
95th percentile per-packet one-way delay: 83.425 ms
Loss rate: 36.72%
-- Flow 1:
Average throughput: 12.33 Mbit/s
95th percentile per-packet one-way delay: 83.108 ms
Loss rate: 39.64%
-- Flow 2:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 86.071 ms
Loss rate: 29.91%
-- Flow 3:
Average throughput: 6.68 Mbit/s
95th percentile per-packet one-way delay: 77.114 ms
Loss rate: 34.14%
```

Run 1: Report of FillP — Data Link

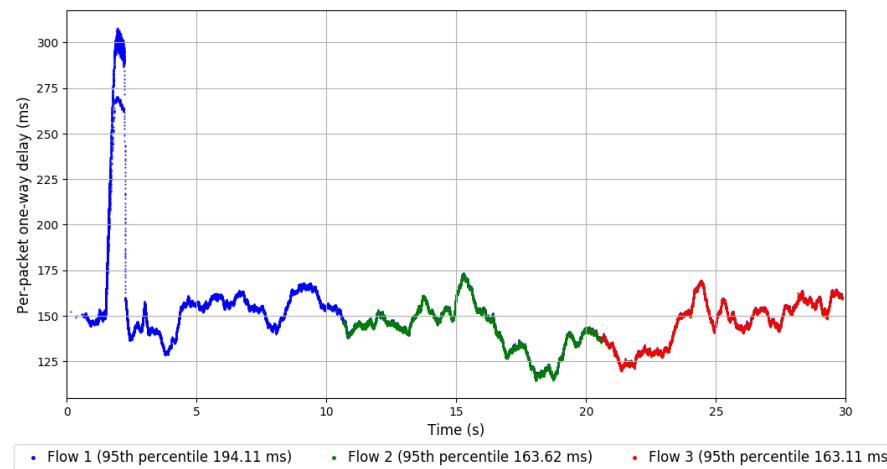
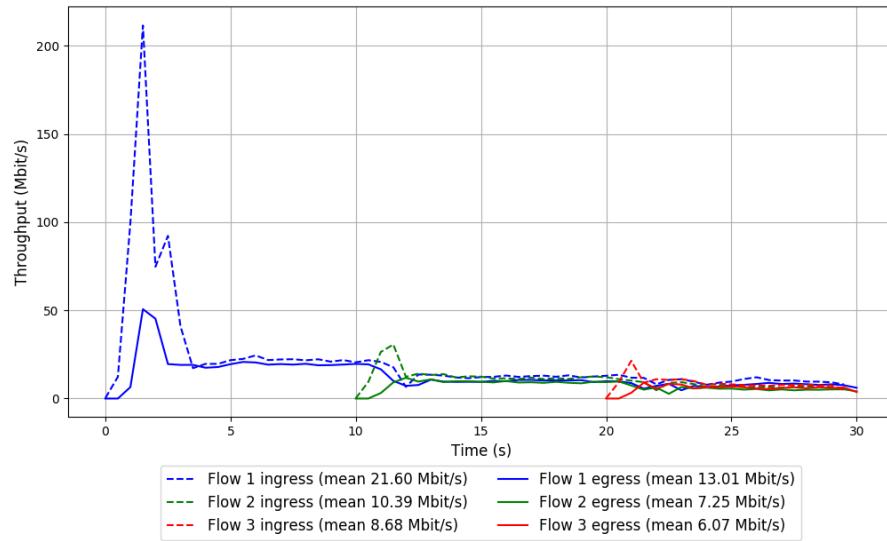


Run 2: Statistics of FillP

```
Start at: 2018-10-26 10:00:23
End at: 2018-10-26 10:00:53
Local clock offset: -2.108 ms
Remote clock offset: 11.597 ms

# Below is generated by plot.py at 2018-10-26 11:42:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.80 Mbit/s
95th percentile per-packet one-way delay: 169.072 ms
Loss rate: 37.37%
-- Flow 1:
Average throughput: 13.01 Mbit/s
95th percentile per-packet one-way delay: 194.111 ms
Loss rate: 40.19%
-- Flow 2:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 163.615 ms
Loss rate: 30.95%
-- Flow 3:
Average throughput: 6.07 Mbit/s
95th percentile per-packet one-way delay: 163.114 ms
Loss rate: 31.58%
```

Run 2: Report of FillP — Data Link

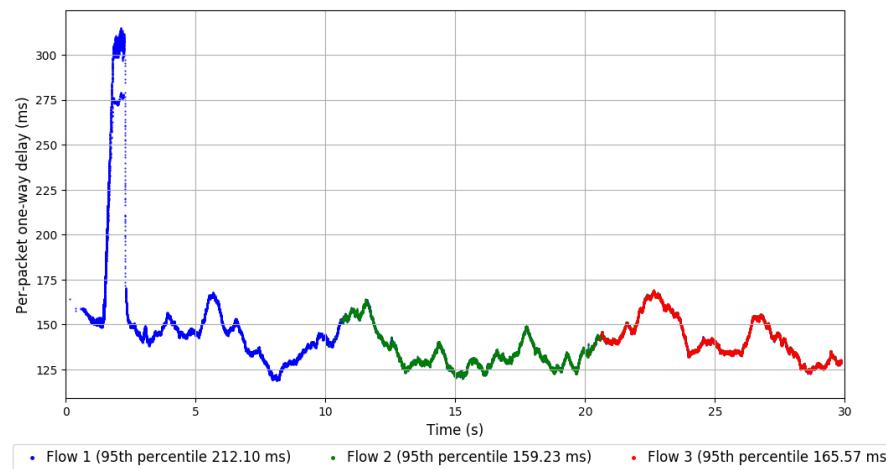
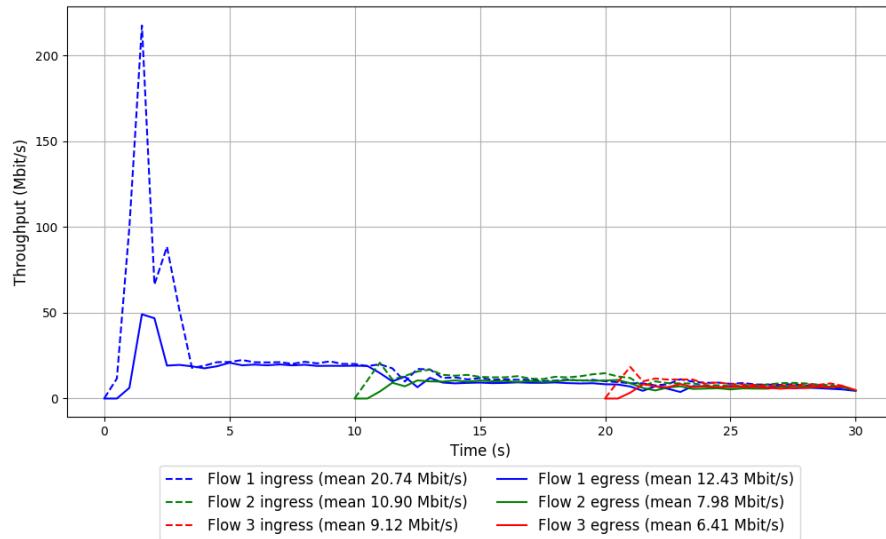


Run 3: Statistics of FillP

```
Start at: 2018-10-26 10:25:05
End at: 2018-10-26 10:25:35
Local clock offset: -1.372 ms
Remote clock offset: 8.243 ms

# Below is generated by plot.py at 2018-10-26 11:42:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.82 Mbit/s
95th percentile per-packet one-way delay: 167.982 ms
Loss rate: 36.58%
-- Flow 1:
Average throughput: 12.43 Mbit/s
95th percentile per-packet one-way delay: 212.099 ms
Loss rate: 40.54%
-- Flow 2:
Average throughput: 7.98 Mbit/s
95th percentile per-packet one-way delay: 159.227 ms
Loss rate: 27.56%
-- Flow 3:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 165.567 ms
Loss rate: 31.12%
```

Run 3: Report of FillP — Data Link

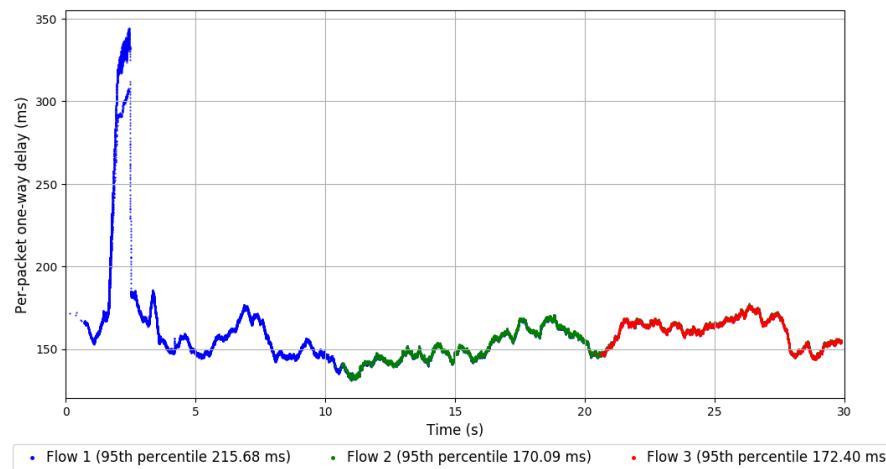
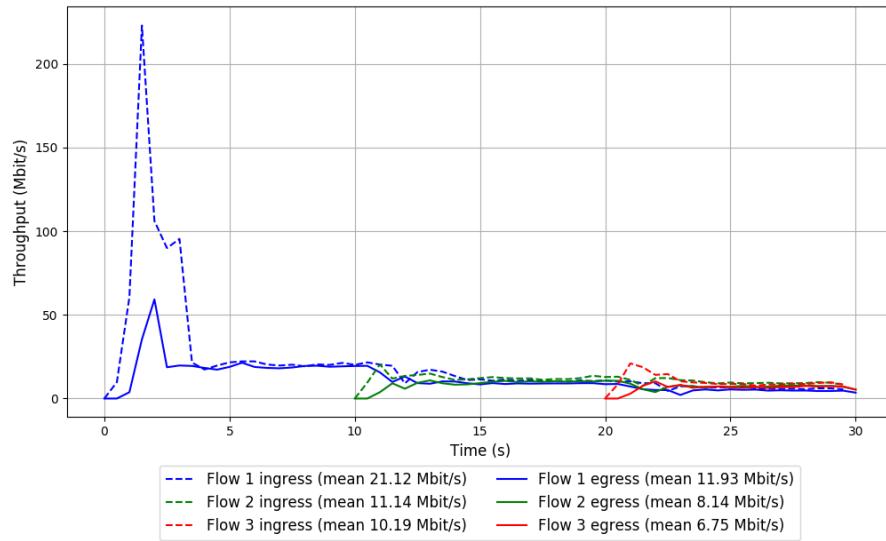


Run 4: Statistics of FillP

```
Start at: 2018-10-26 10:50:25
End at: 2018-10-26 10:50:55
Local clock offset: -1.186 ms
Remote clock offset: 31.095 ms

# Below is generated by plot.py at 2018-10-26 11:42:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.53 Mbit/s
95th percentile per-packet one-way delay: 182.507 ms
Loss rate: 39.25%
-- Flow 1:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 215.683 ms
Loss rate: 43.97%
-- Flow 2:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 170.085 ms
Loss rate: 27.70%
-- Flow 3:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 172.402 ms
Loss rate: 35.12%
```

Run 4: Report of FillP — Data Link

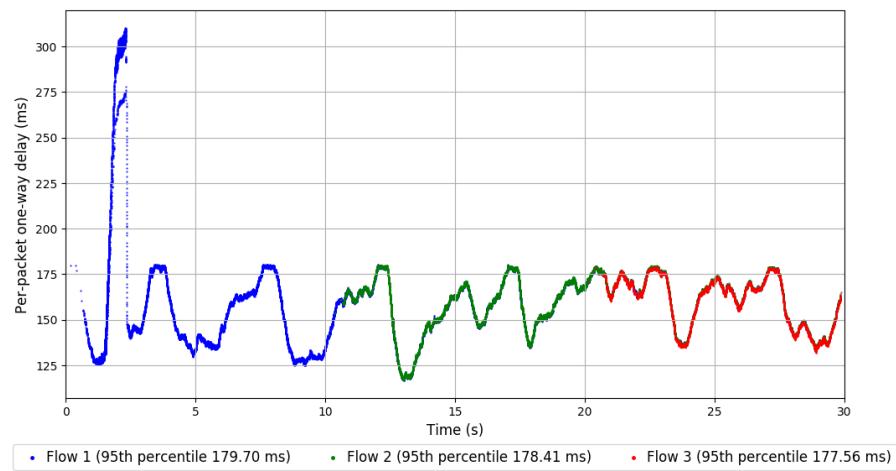
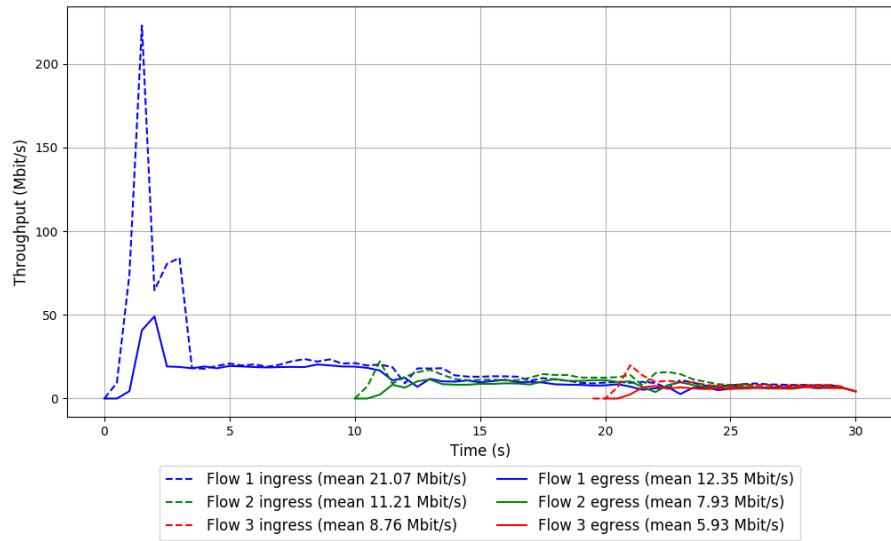


Run 5: Statistics of FillP

```
Start at: 2018-10-26 11:15:44
End at: 2018-10-26 11:16:14
Local clock offset: 1.512 ms
Remote clock offset: 4.053 ms

# Below is generated by plot.py at 2018-10-26 11:42:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.55 Mbit/s
95th percentile per-packet one-way delay: 179.042 ms
Loss rate: 38.33%
-- Flow 1:
Average throughput: 12.35 Mbit/s
95th percentile per-packet one-way delay: 179.698 ms
Loss rate: 41.87%
-- Flow 2:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 178.415 ms
Loss rate: 30.04%
-- Flow 3:
Average throughput: 5.93 Mbit/s
95th percentile per-packet one-way delay: 177.558 ms
Loss rate: 33.99%
```

Run 5: Report of FillP — Data Link

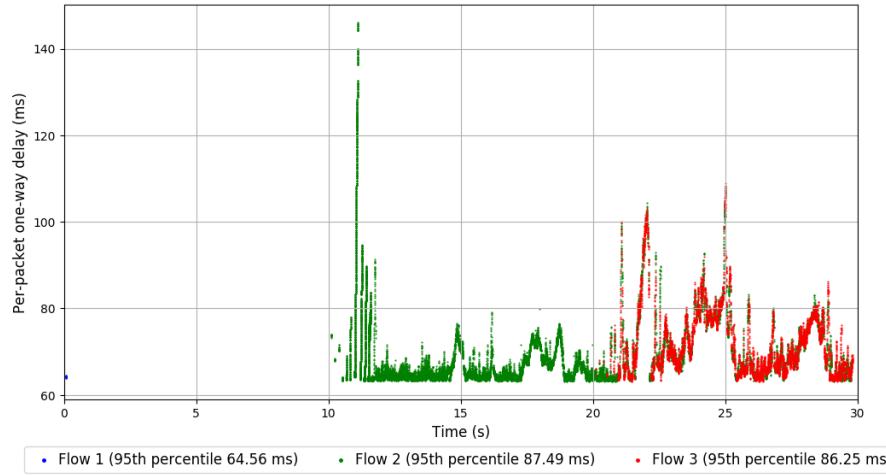
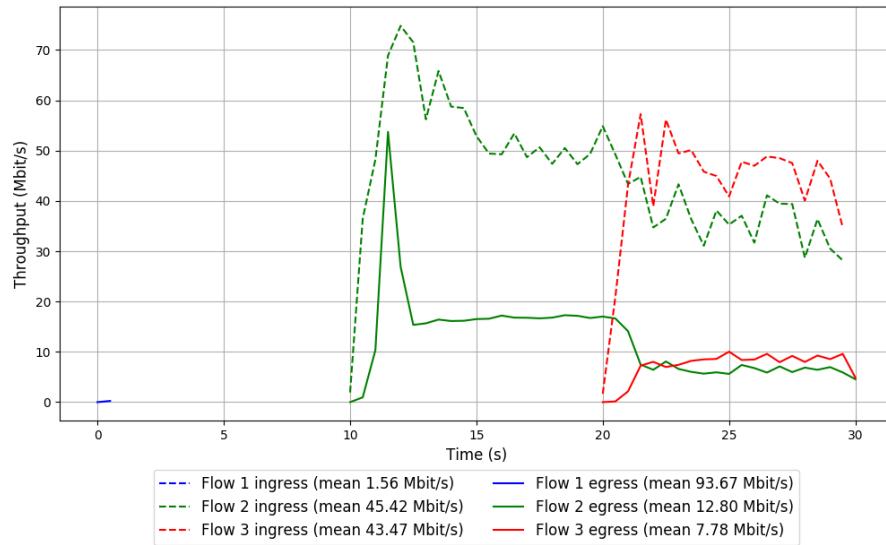


Run 1: Statistics of Indigo

```
Start at: 2018-10-26 09:38:15
End at: 2018-10-26 09:38:45
Local clock offset: -1.736 ms
Remote clock offset: 27.786 ms

# Below is generated by plot.py at 2018-10-26 11:42:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.01 Mbit/s
95th percentile per-packet one-way delay: 87.051 ms
Loss rate: 75.35%
-- Flow 1:
Average throughput: 93.67 Mbit/s
95th percentile per-packet one-way delay: 64.565 ms
Loss rate: 41.37%
-- Flow 2:
Average throughput: 12.80 Mbit/s
95th percentile per-packet one-way delay: 87.491 ms
Loss rate: 72.03%
-- Flow 3:
Average throughput: 7.78 Mbit/s
95th percentile per-packet one-way delay: 86.247 ms
Loss rate: 82.35%
```

Run 1: Report of Indigo — Data Link

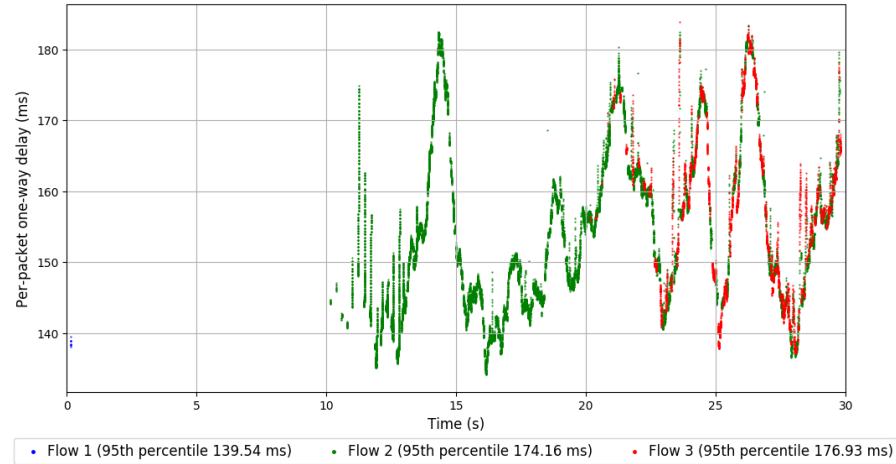
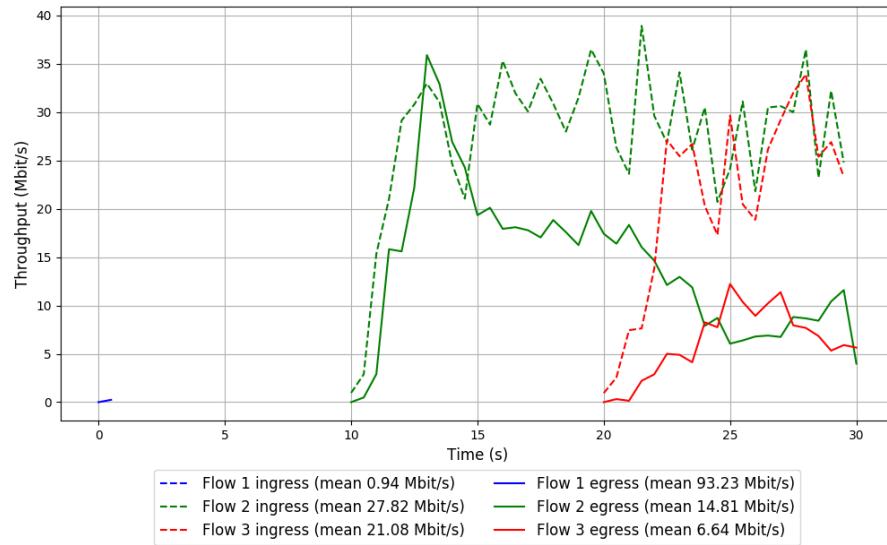


Run 2: Statistics of Indigo

```
Start at: 2018-10-26 10:01:50
End at: 2018-10-26 10:02:20
Local clock offset: -2.331 ms
Remote clock offset: 9.972 ms

# Below is generated by plot.py at 2018-10-26 11:42:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 174.693 ms
Loss rate: 53.29%
-- Flow 1:
Average throughput: 93.23 Mbit/s
95th percentile per-packet one-way delay: 139.537 ms
Loss rate: 37.69%
-- Flow 2:
Average throughput: 14.81 Mbit/s
95th percentile per-packet one-way delay: 174.160 ms
Loss rate: 47.32%
-- Flow 3:
Average throughput: 6.64 Mbit/s
95th percentile per-packet one-way delay: 176.927 ms
Loss rate: 69.16%
```

Run 2: Report of Indigo — Data Link

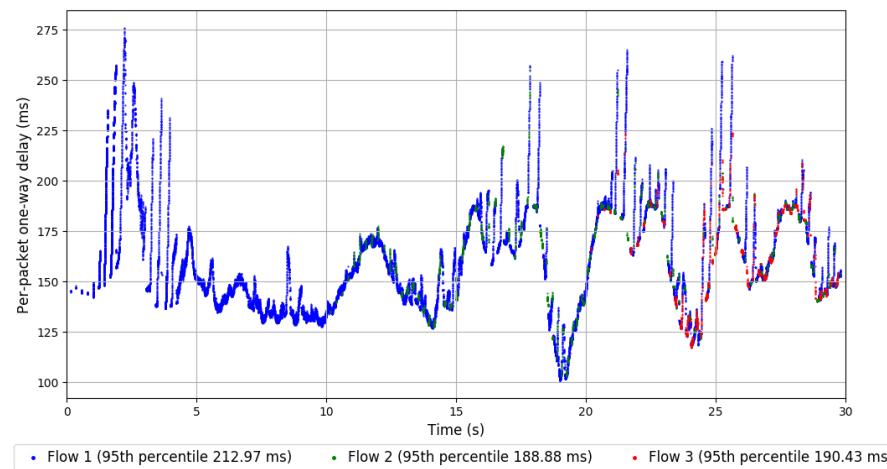
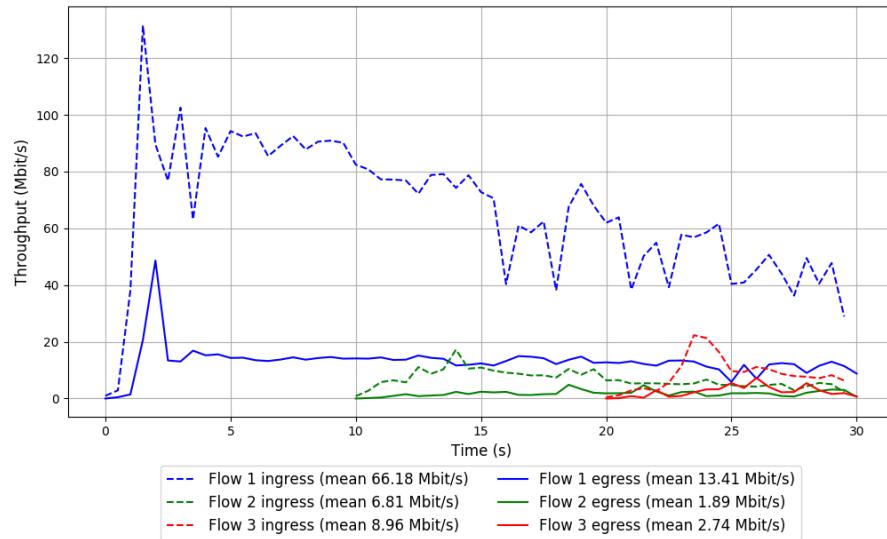


Run 3: Statistics of Indigo

```
Start at: 2018-10-26 10:26:29
End at: 2018-10-26 10:26:59
Local clock offset: -1.624 ms
Remote clock offset: 5.501 ms

# Below is generated by plot.py at 2018-10-26 11:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.54 Mbit/s
95th percentile per-packet one-way delay: 210.082 ms
Loss rate: 79.03%
-- Flow 1:
Average throughput: 13.41 Mbit/s
95th percentile per-packet one-way delay: 212.967 ms
Loss rate: 79.87%
-- Flow 2:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 188.877 ms
Loss rate: 72.55%
-- Flow 3:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 190.432 ms
Loss rate: 70.11%
```

Run 3: Report of Indigo — Data Link

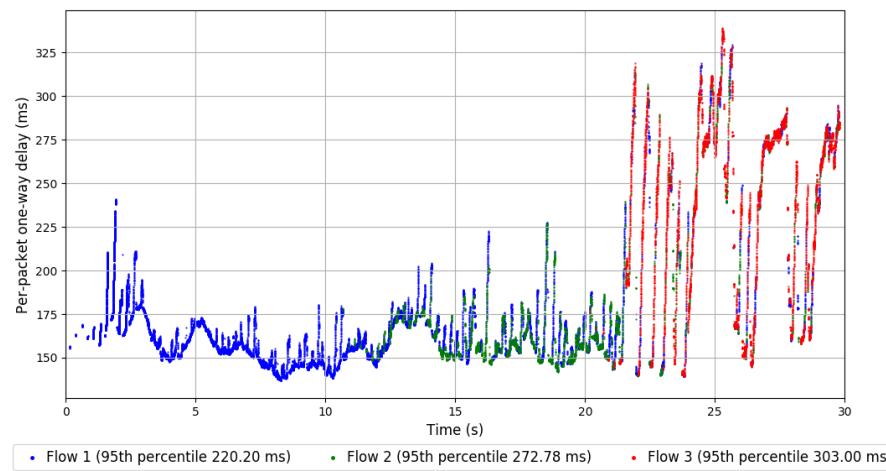
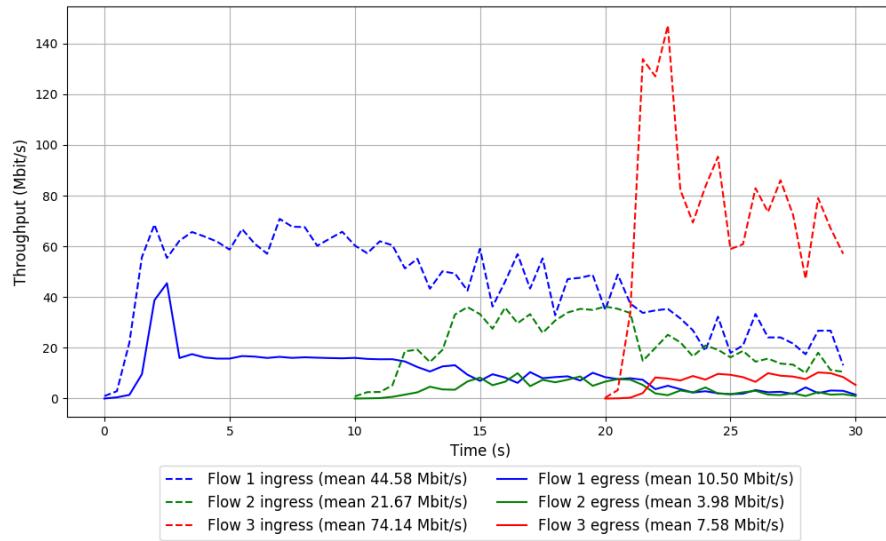


Run 4: Statistics of Indigo

```
Start at: 2018-10-26 10:51:53
End at: 2018-10-26 10:52:23
Local clock offset: -1.326 ms
Remote clock offset: 31.442 ms

# Below is generated by plot.py at 2018-10-26 11:42:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.57 Mbit/s
95th percentile per-packet one-way delay: 277.297 ms
Loss rate: 81.48%
-- Flow 1:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 220.199 ms
Loss rate: 76.67%
-- Flow 2:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 272.778 ms
Loss rate: 81.88%
-- Flow 3:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 303.001 ms
Loss rate: 90.03%
```

Run 4: Report of Indigo — Data Link

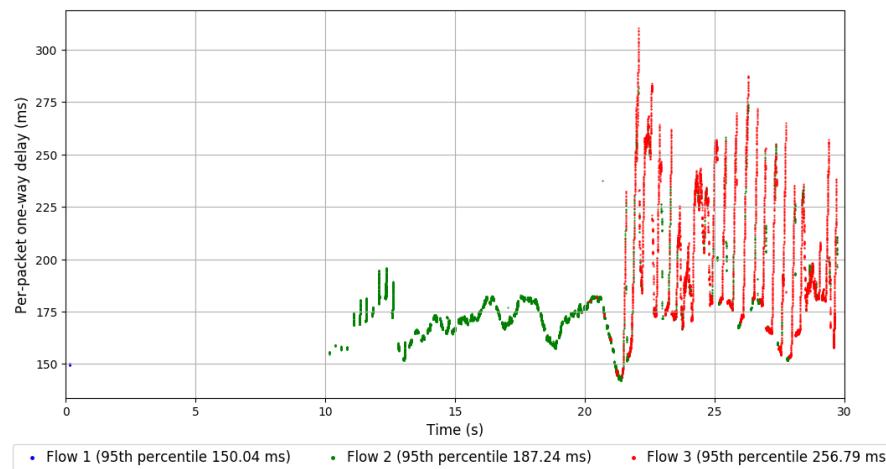
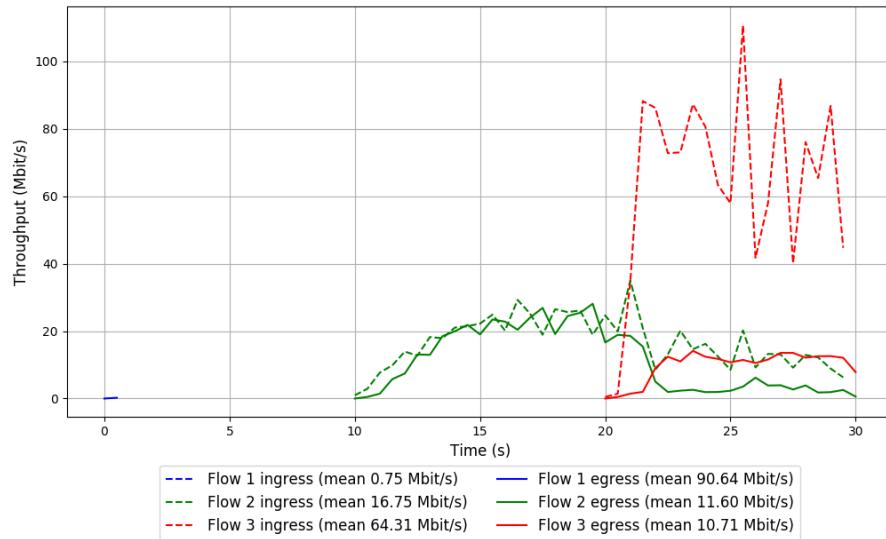


Run 5: Statistics of Indigo

```
Start at: 2018-10-26 11:17:16
End at: 2018-10-26 11:17:46
Local clock offset: 1.64 ms
Remote clock offset: -2.544 ms

# Below is generated by plot.py at 2018-10-26 11:42:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.11 Mbit/s
95th percentile per-packet one-way delay: 238.876 ms
Loss rate: 65.92%
-- Flow 1:
Average throughput: 90.64 Mbit/s
95th percentile per-packet one-way delay: 150.043 ms
Loss rate: 28.74%
-- Flow 2:
Average throughput: 11.60 Mbit/s
95th percentile per-packet one-way delay: 187.235 ms
Loss rate: 31.66%
-- Flow 3:
Average throughput: 10.71 Mbit/s
95th percentile per-packet one-way delay: 256.791 ms
Loss rate: 83.93%
```

Run 5: Report of Indigo — Data Link

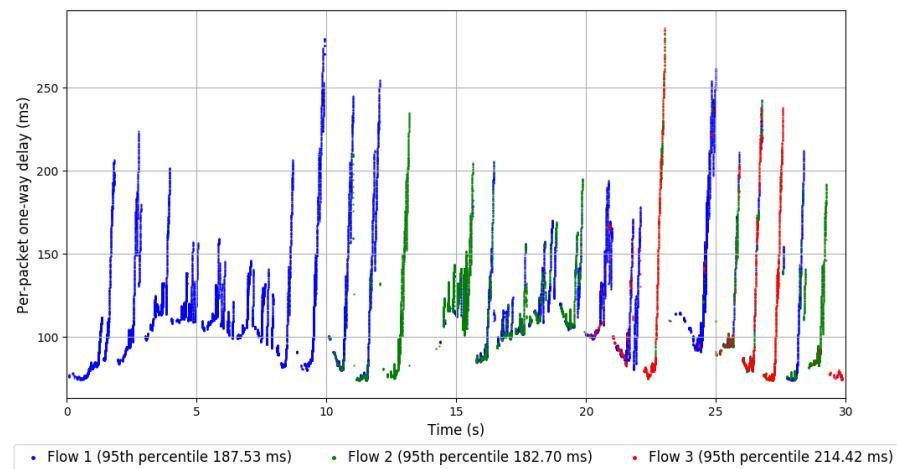
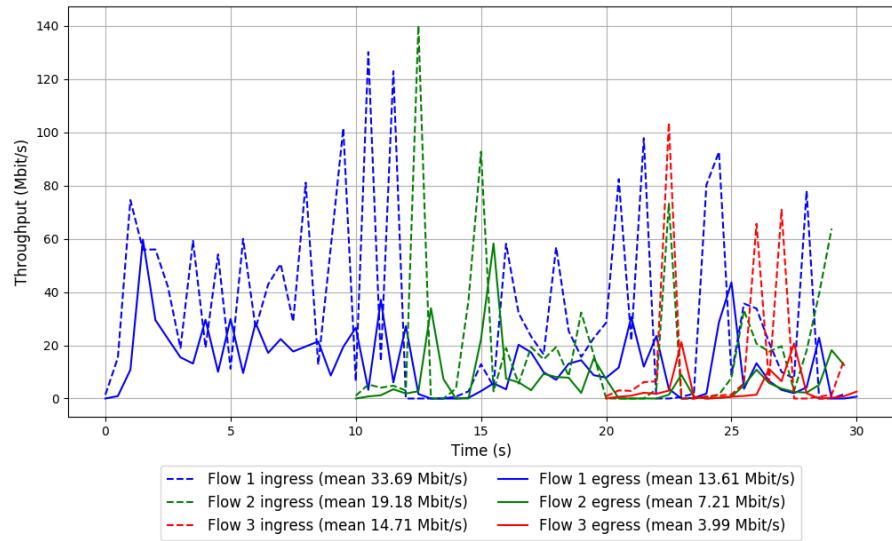


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-26 09:42:13
End at: 2018-10-26 09:42:43
Local clock offset: -1.473 ms
Remote clock offset: 15.531 ms

# Below is generated by plot.py at 2018-10-26 11:42:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.54 Mbit/s
95th percentile per-packet one-way delay: 189.254 ms
Loss rate: 61.68%
-- Flow 1:
Average throughput: 13.61 Mbit/s
95th percentile per-packet one-way delay: 187.534 ms
Loss rate: 59.80%
-- Flow 2:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 182.700 ms
Loss rate: 62.24%
-- Flow 3:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 214.417 ms
Loss rate: 73.31%
```

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

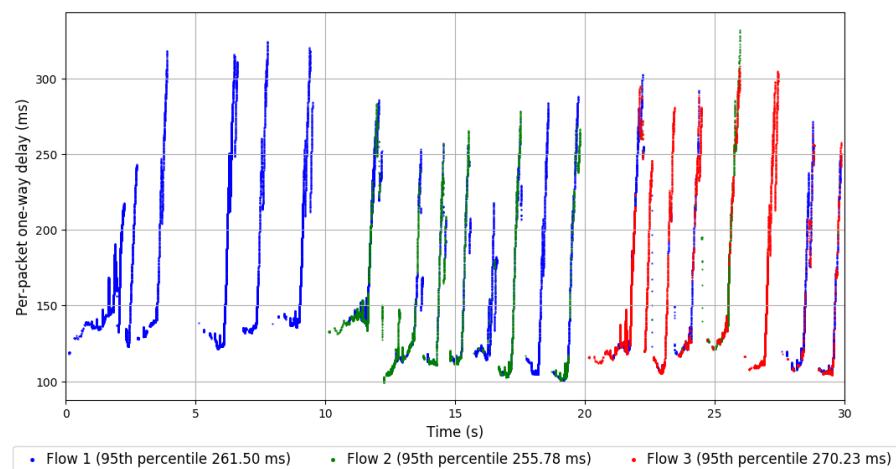
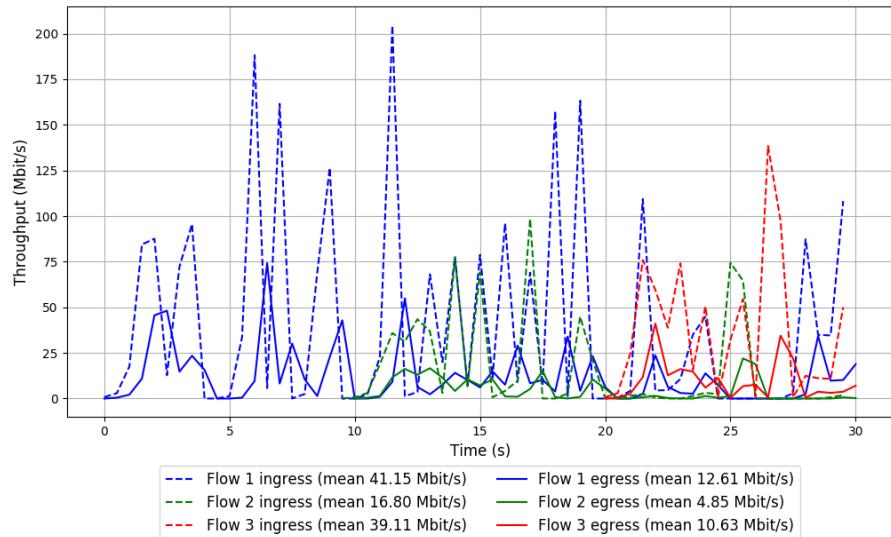


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 10:06:01
End at: 2018-10-26 10:06:31
Local clock offset: -1.938 ms
Remote clock offset: 9.955 ms

# Below is generated by plot.py at 2018-10-26 11:42:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.28 Mbit/s
95th percentile per-packet one-way delay: 262.408 ms
Loss rate: 70.27%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 261.497 ms
Loss rate: 69.34%
-- Flow 2:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 255.781 ms
Loss rate: 71.13%
-- Flow 3:
Average throughput: 10.63 Mbit/s
95th percentile per-packet one-way delay: 270.225 ms
Loss rate: 72.50%
```

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

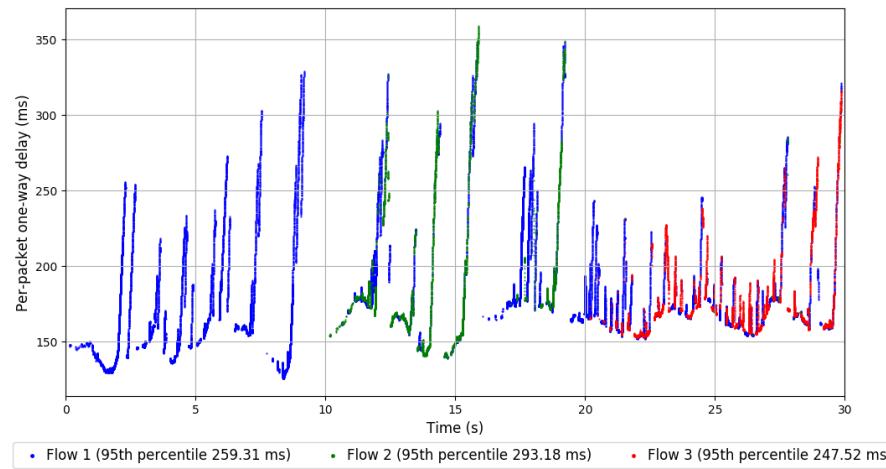
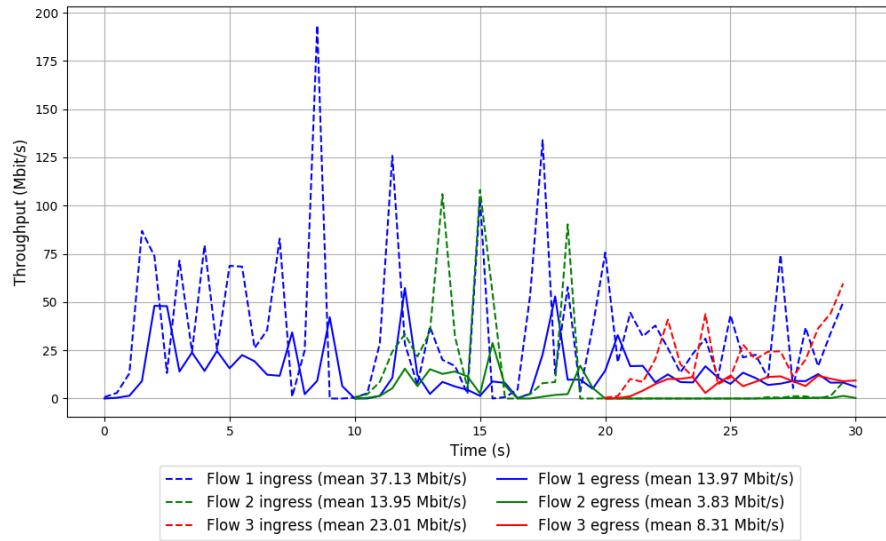


```
Run 3: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-26 10:31:03
End at: 2018-10-26 10:31:33
Local clock offset: -1.423 ms
Remote clock offset: 8.23 ms

# Below is generated by plot.py at 2018-10-26 11:42:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.22 Mbit/s
95th percentile per-packet one-way delay: 263.714 ms
Loss rate: 64.24%
-- Flow 1:
Average throughput: 13.97 Mbit/s
95th percentile per-packet one-way delay: 259.307 ms
Loss rate: 62.22%
-- Flow 2:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 293.181 ms
Loss rate: 72.76%
-- Flow 3:
Average throughput: 8.31 Mbit/s
95th percentile per-packet one-way delay: 247.521 ms
Loss rate: 63.61%
```

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

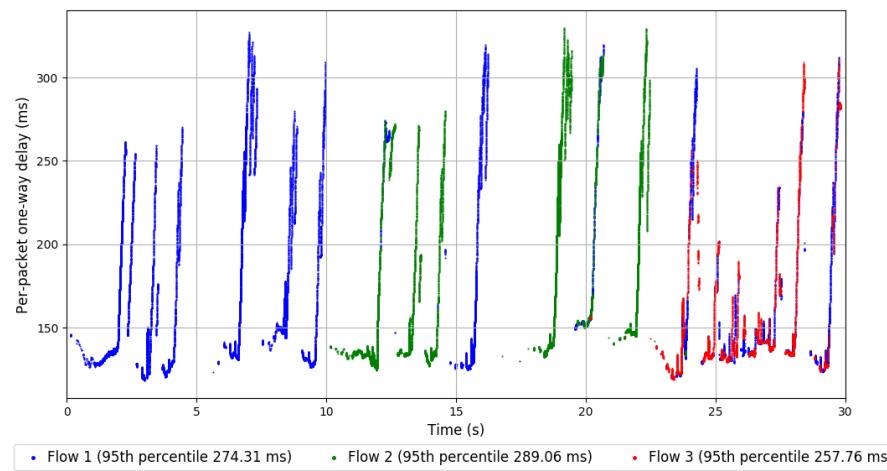
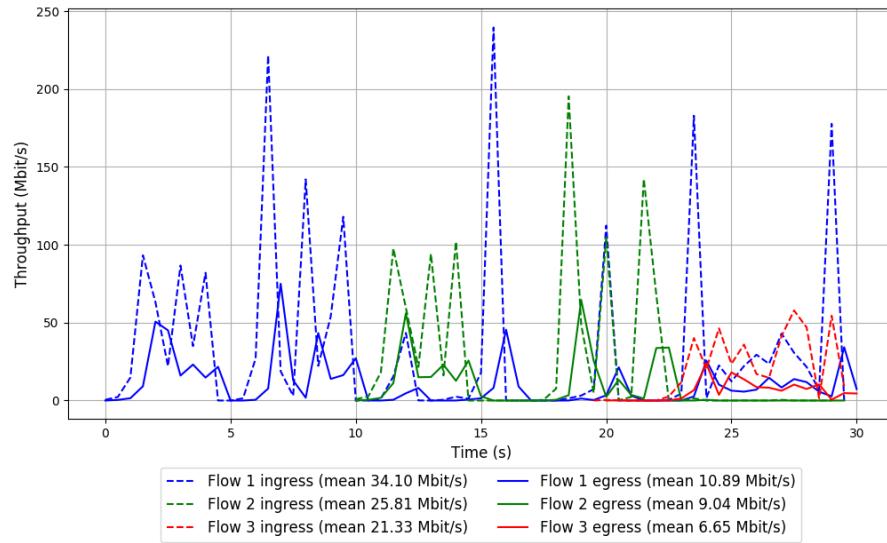


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 10:56:17
End at: 2018-10-26 10:56:47
Local clock offset: -1.367 ms
Remote clock offset: 35.626 ms

# Below is generated by plot.py at 2018-10-26 11:43:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.87 Mbit/s
95th percentile per-packet one-way delay: 278.102 ms
Loss rate: 67.52%
-- Flow 1:
Average throughput: 10.89 Mbit/s
95th percentile per-packet one-way delay: 274.314 ms
Loss rate: 68.29%
-- Flow 2:
Average throughput: 9.04 Mbit/s
95th percentile per-packet one-way delay: 289.059 ms
Loss rate: 64.98%
-- Flow 3:
Average throughput: 6.65 Mbit/s
95th percentile per-packet one-way delay: 257.762 ms
Loss rate: 69.73%
```

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

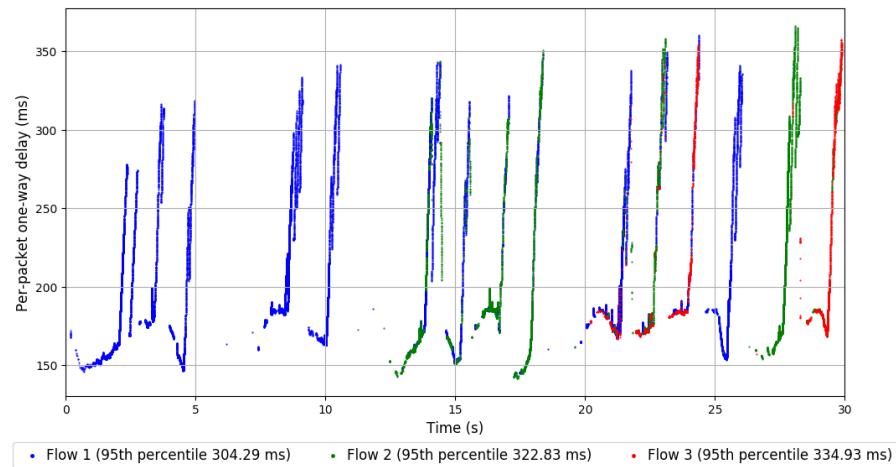
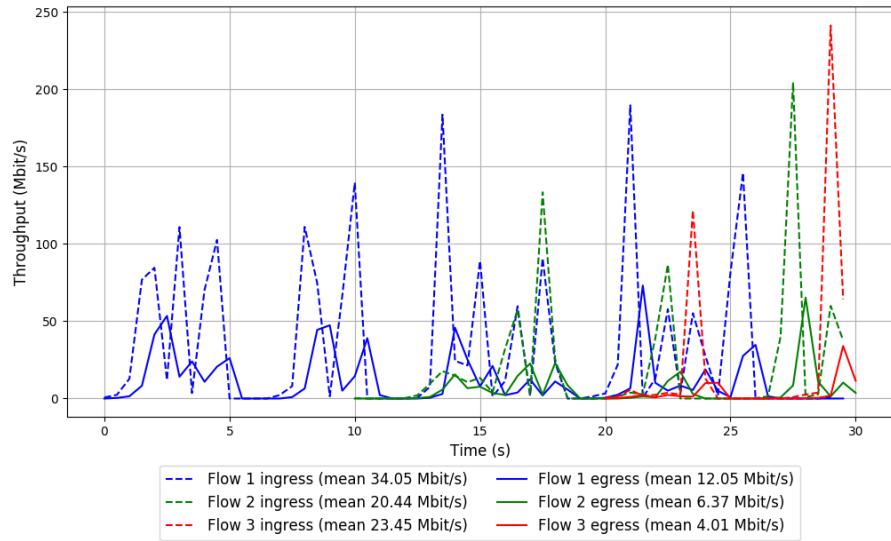


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 11:21:48
End at: 2018-10-26 11:22:18
Local clock offset: 1.912 ms
Remote clock offset: -14.163 ms

# Below is generated by plot.py at 2018-10-26 11:43:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.30 Mbit/s
95th percentile per-packet one-way delay: 313.288 ms
Loss rate: 68.52%
-- Flow 1:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 304.290 ms
Loss rate: 64.89%
-- Flow 2:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 322.830 ms
Loss rate: 69.01%
-- Flow 3:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 334.929 ms
Loss rate: 83.29%
```

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

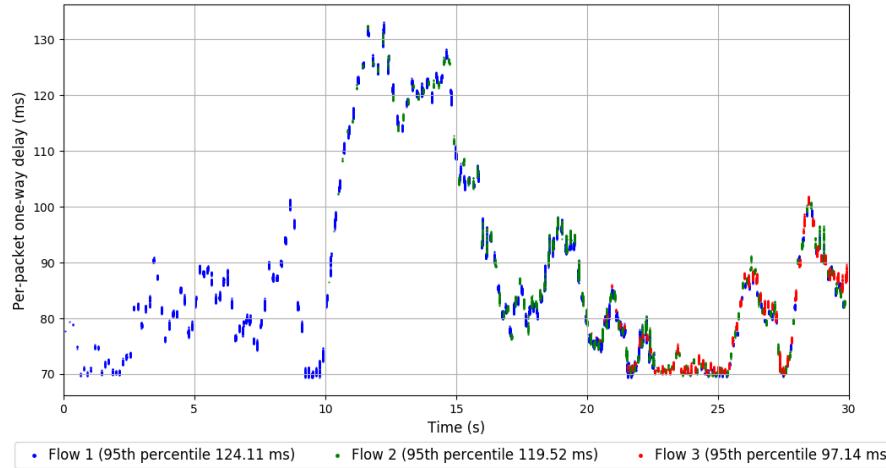
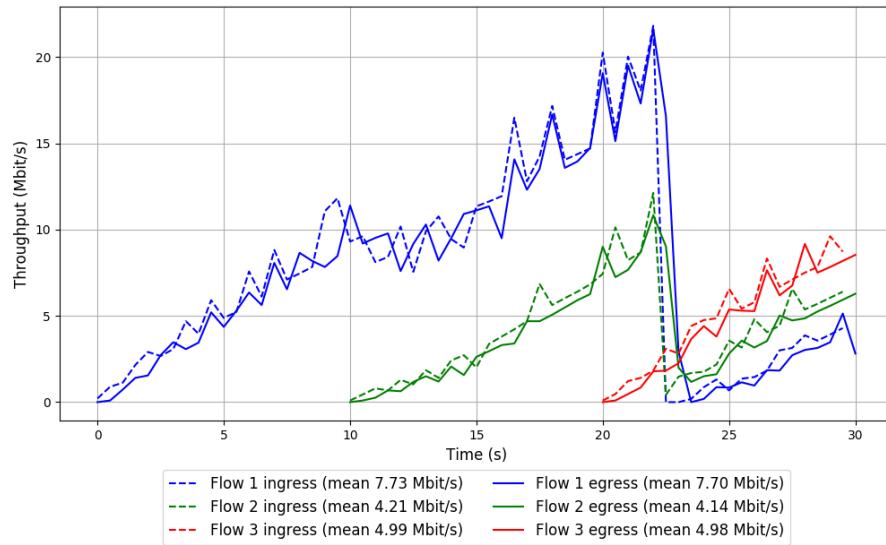


Run 1: Statistics of LEDBAT

```
Start at: 2018-10-26 09:43:33
End at: 2018-10-26 09:44:03
Local clock offset: -1.725 ms
Remote clock offset: 18.827 ms

# Below is generated by plot.py at 2018-10-26 11:43:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.03 Mbit/s
95th percentile per-packet one-way delay: 122.604 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 124.113 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 119.515 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 4.98 Mbit/s
95th percentile per-packet one-way delay: 97.137 ms
Loss rate: 1.64%
```

Run 1: Report of LEDBAT — Data Link

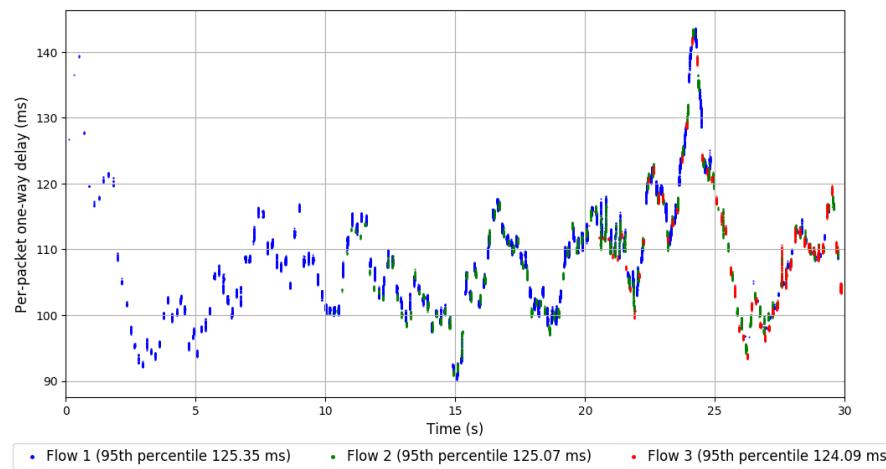
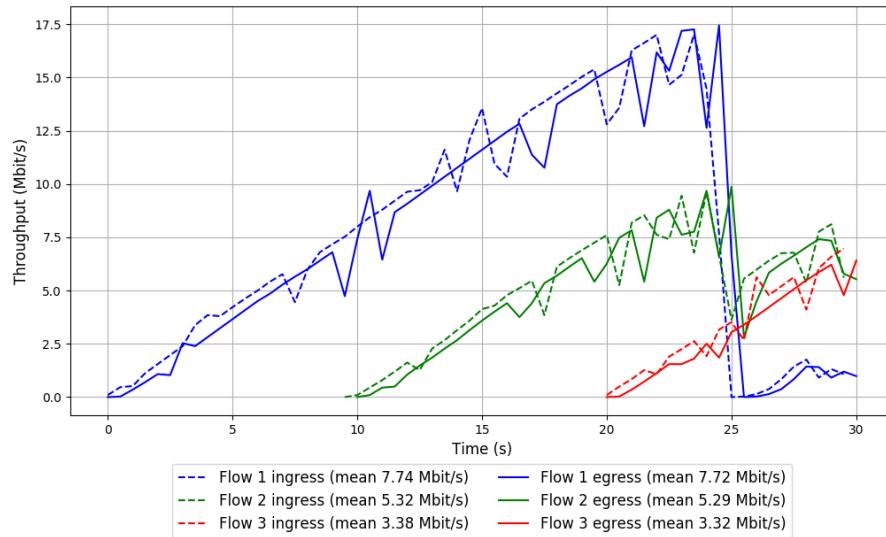


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-26 10:07:26
End at: 2018-10-26 10:07:56
Local clock offset: -1.846 ms
Remote clock offset: 12.56 ms

# Below is generated by plot.py at 2018-10-26 11:43:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.26 Mbit/s
95th percentile per-packet one-way delay: 125.038 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 125.350 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 125.066 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 3.32 Mbit/s
95th percentile per-packet one-way delay: 124.086 ms
Loss rate: 3.55%
```

Run 2: Report of LEDBAT — Data Link

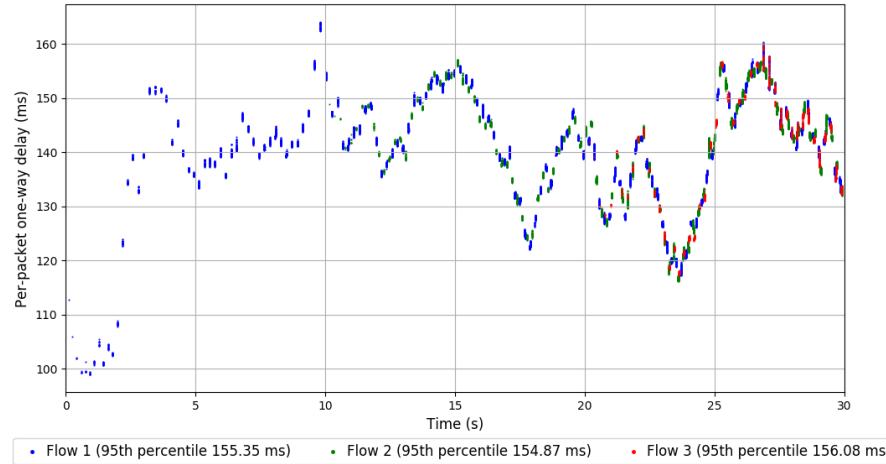
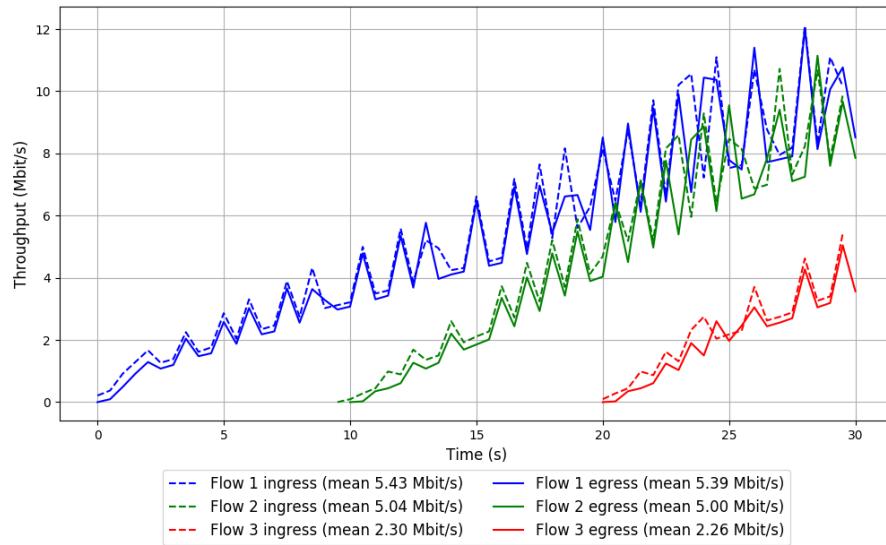


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-26 10:32:31
End at: 2018-10-26 10:33:01
Local clock offset: -1.5 ms
Remote clock offset: 17.705 ms

# Below is generated by plot.py at 2018-10-26 11:43:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.43 Mbit/s
95th percentile per-packet one-way delay: 155.274 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 155.352 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 5.00 Mbit/s
95th percentile per-packet one-way delay: 154.872 ms
Loss rate: 1.99%
-- Flow 3:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 156.081 ms
Loss rate: 4.04%
```

Run 3: Report of LEDBAT — Data Link

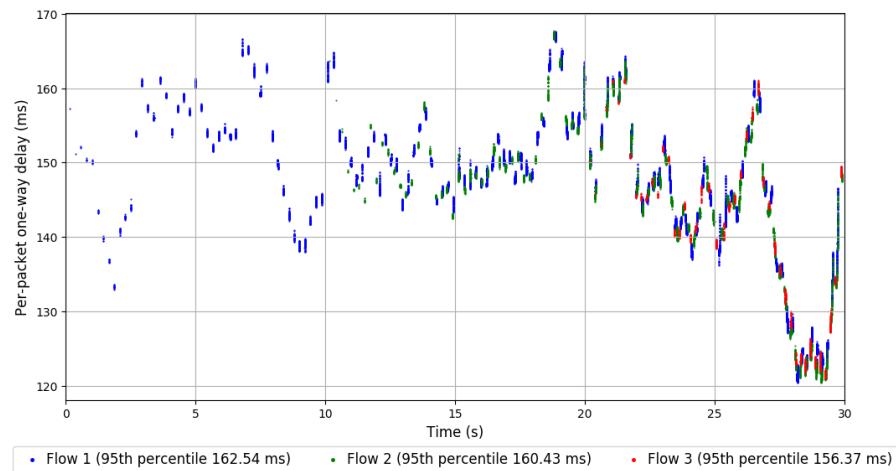
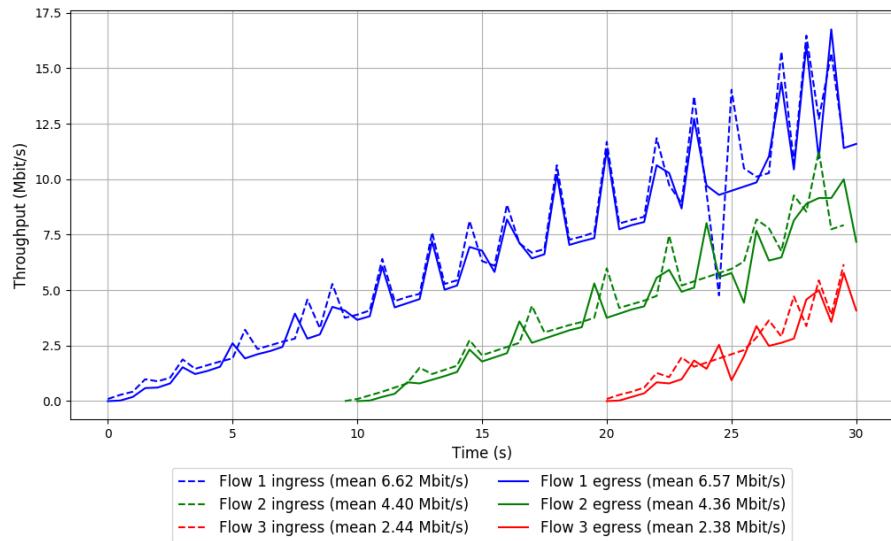


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-26 10:57:44
End at: 2018-10-26 10:58:14
Local clock offset: -1.107 ms
Remote clock offset: 42.92 ms

# Below is generated by plot.py at 2018-10-26 11:43:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.21 Mbit/s
95th percentile per-packet one-way delay: 161.587 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 162.544 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 160.429 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 156.372 ms
Loss rate: 4.32%
```

Run 4: Report of LEDBAT — Data Link

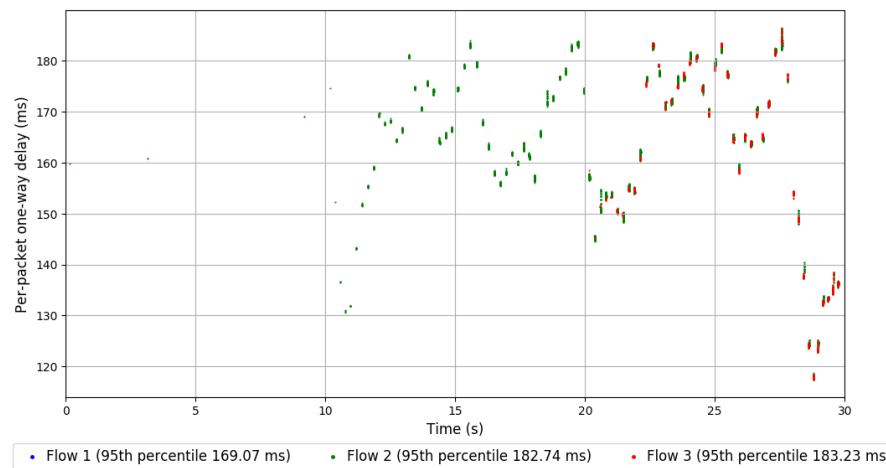
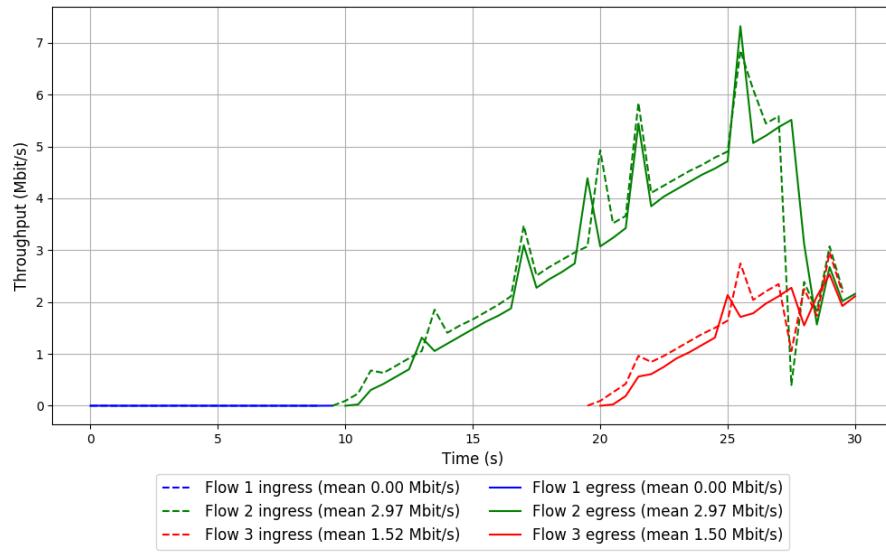


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-26 11:23:23
End at: 2018-10-26 11:23:53
Local clock offset: 2.228 ms
Remote clock offset: -14.43 ms

# Below is generated by plot.py at 2018-10-26 11:43:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 182.853 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 169.068 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 182.740 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 183.231 ms
Loss rate: 3.84%
```

Run 5: Report of LEDBAT — Data Link

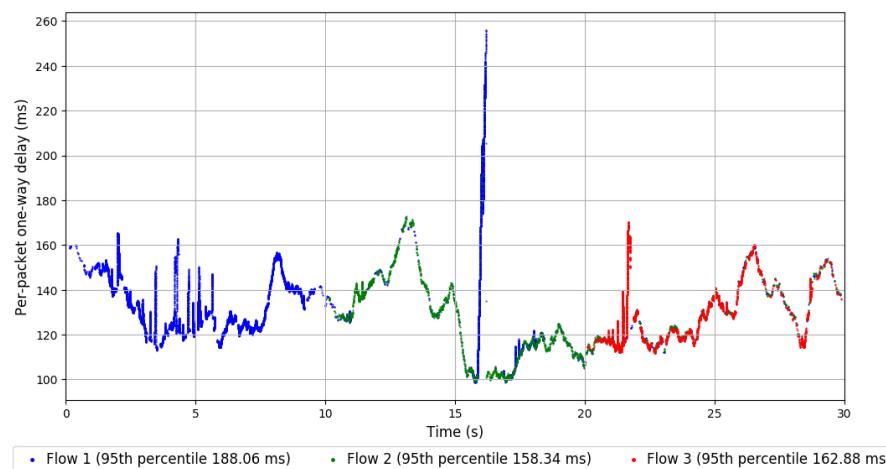
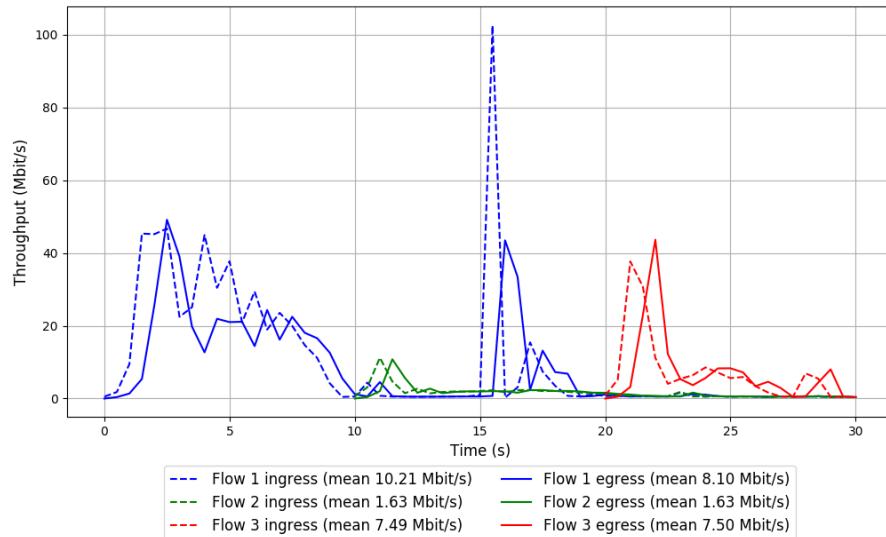


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-26 09:59:02
End at: 2018-10-26 09:59:32
Local clock offset: -1.923 ms
Remote clock offset: 12.857 ms

# Below is generated by plot.py at 2018-10-26 11:43:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.63 Mbit/s
95th percentile per-packet one-way delay: 176.726 ms
Loss rate: 16.16%
-- Flow 1:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 188.061 ms
Loss rate: 21.31%
-- Flow 2:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 158.338 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 7.50 Mbit/s
95th percentile per-packet one-way delay: 162.885 ms
Loss rate: 1.59%
```

Run 1: Report of Indigo-Muses — Data Link

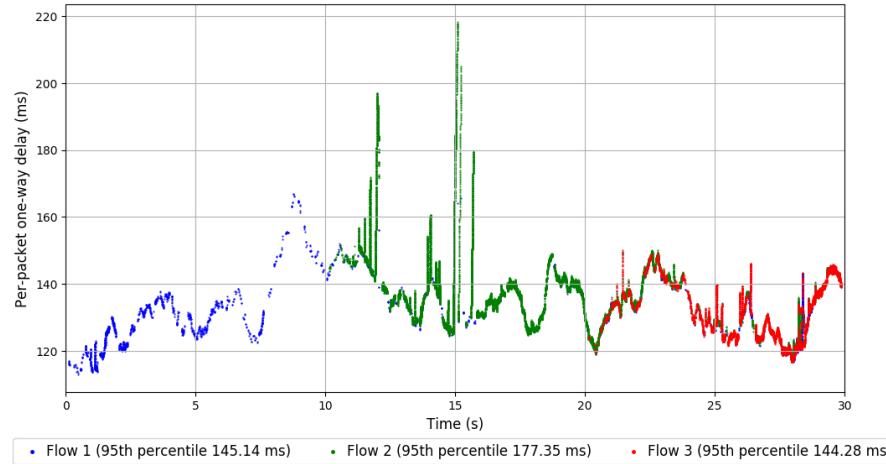
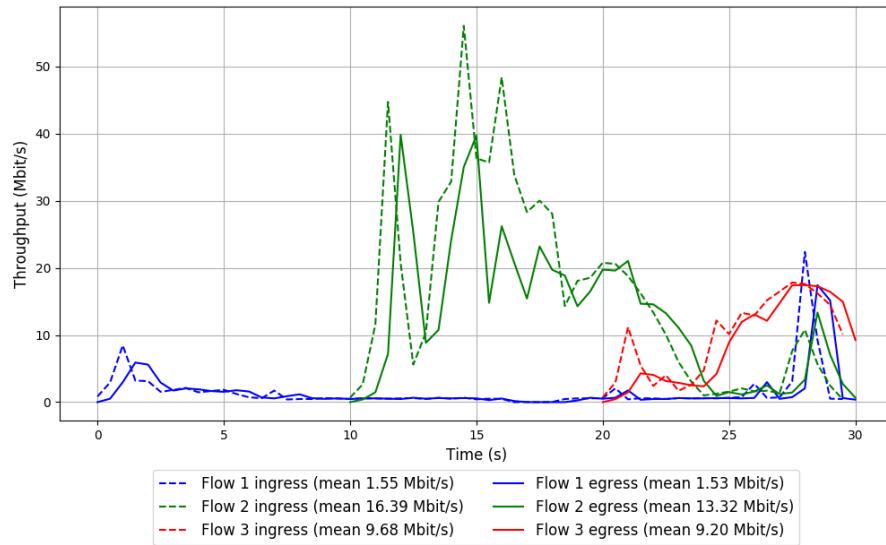


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-26 10:23:43
End at: 2018-10-26 10:24:13
Local clock offset: -1.473 ms
Remote clock offset: 11.0 ms

# Below is generated by plot.py at 2018-10-26 11:43:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.36 Mbit/s
95th percentile per-packet one-way delay: 164.190 ms
Loss rate: 15.15%
-- Flow 1:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 145.142 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 13.32 Mbit/s
95th percentile per-packet one-way delay: 177.350 ms
Loss rate: 19.53%
-- Flow 3:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 144.276 ms
Loss rate: 6.87%
```

Run 2: Report of Indigo-Muses — Data Link

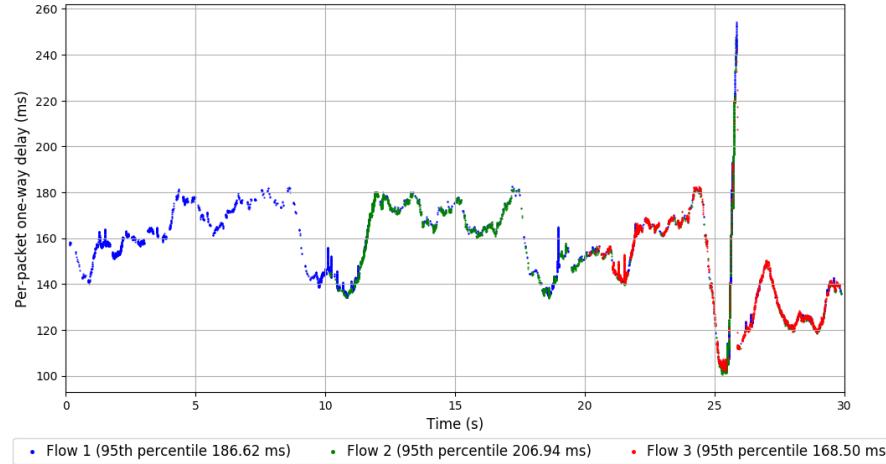
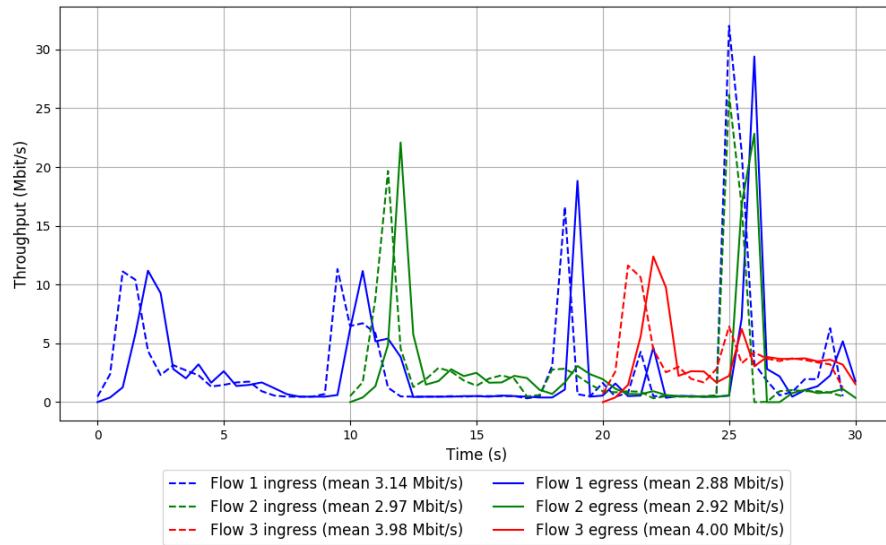


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-26 10:49:05
End at: 2018-10-26 10:49:35
Local clock offset: -1.183 ms
Remote clock offset: 35.658 ms

# Below is generated by plot.py at 2018-10-26 11:43:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.10 Mbit/s
95th percentile per-packet one-way delay: 187.750 ms
Loss rate: 5.71%
-- Flow 1:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 186.625 ms
Loss rate: 9.08%
-- Flow 2:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 206.937 ms
Loss rate: 3.01%
-- Flow 3:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 168.495 ms
Loss rate: 1.69%
```

Run 3: Report of Indigo-Muses — Data Link

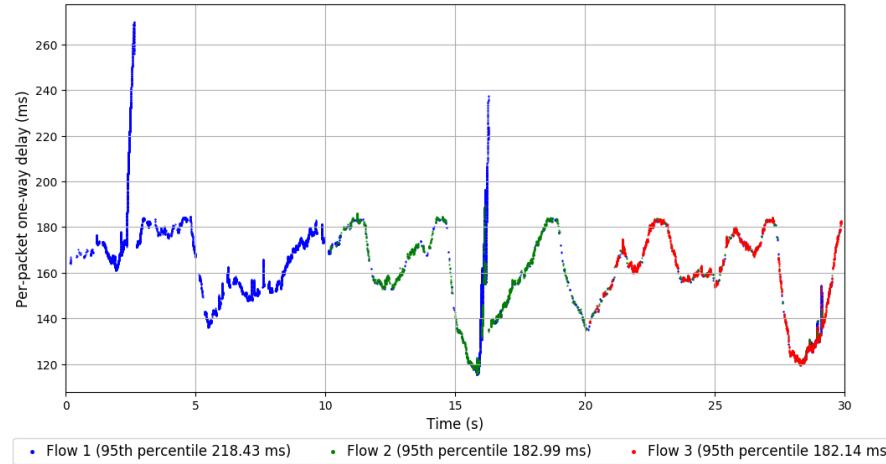
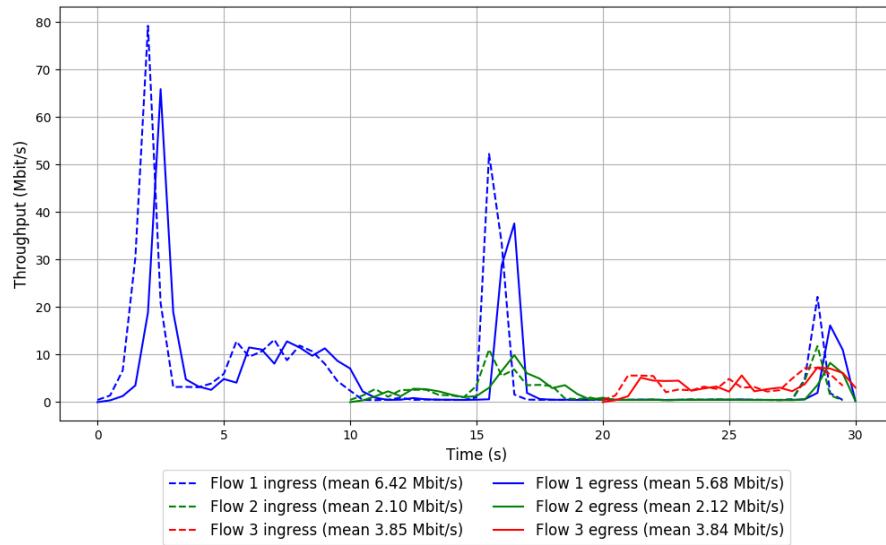


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-26 11:14:20
End at: 2018-10-26 11:14:50
Local clock offset: 1.405 ms
Remote clock offset: 2.817 ms

# Below is generated by plot.py at 2018-10-26 11:43:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.33 Mbit/s
95th percentile per-packet one-way delay: 207.825 ms
Loss rate: 9.07%
-- Flow 1:
Average throughput: 5.68 Mbit/s
95th percentile per-packet one-way delay: 218.426 ms
Loss rate: 12.24%
-- Flow 2:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 182.994 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 182.136 ms
Loss rate: 2.53%
```

Run 4: Report of Indigo-Muses — Data Link

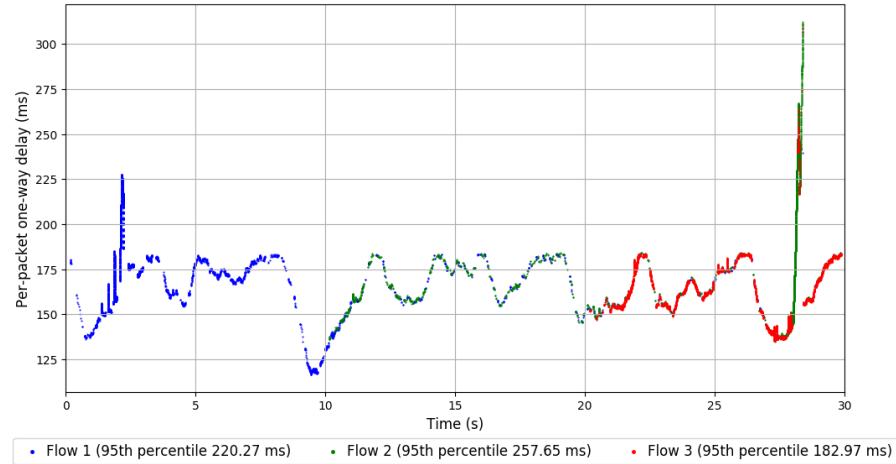
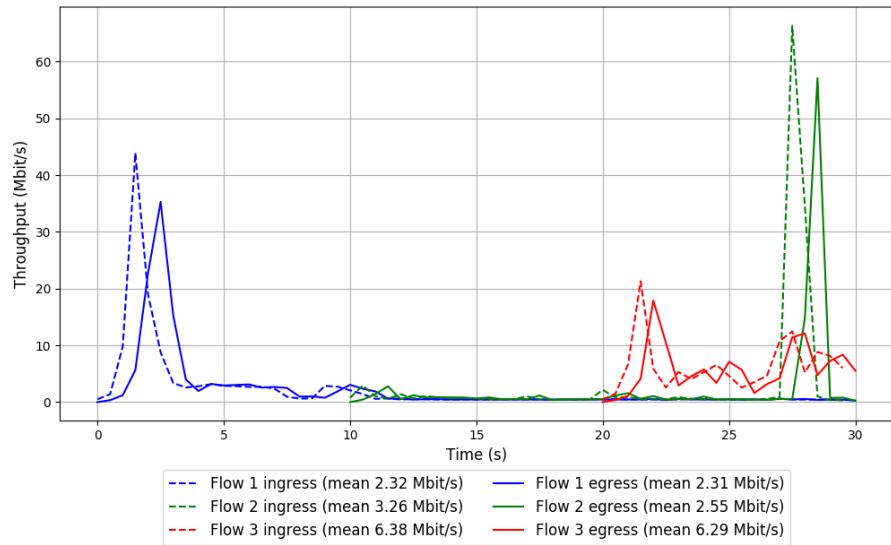


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-26 11:40:33
End at: 2018-10-26 11:41:03
Local clock offset: -0.047 ms
Remote clock offset: -28.45 ms

# Below is generated by plot.py at 2018-10-26 11:43:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.04 Mbit/s
95th percentile per-packet one-way delay: 236.675 ms
Loss rate: 9.08%
-- Flow 1:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 220.268 ms
Loss rate: 1.45%
-- Flow 2:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 257.650 ms
Loss rate: 22.65%
-- Flow 3:
Average throughput: 6.29 Mbit/s
95th percentile per-packet one-way delay: 182.968 ms
Loss rate: 3.50%
```

Run 5: Report of Indigo-Muses — Data Link

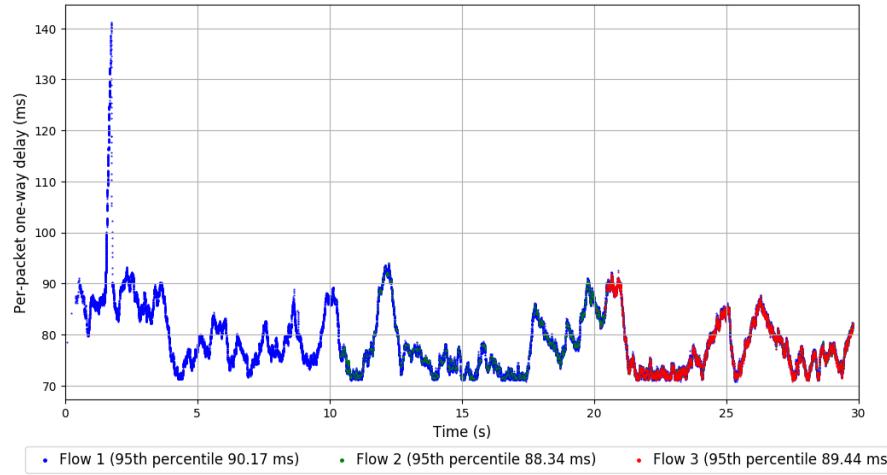
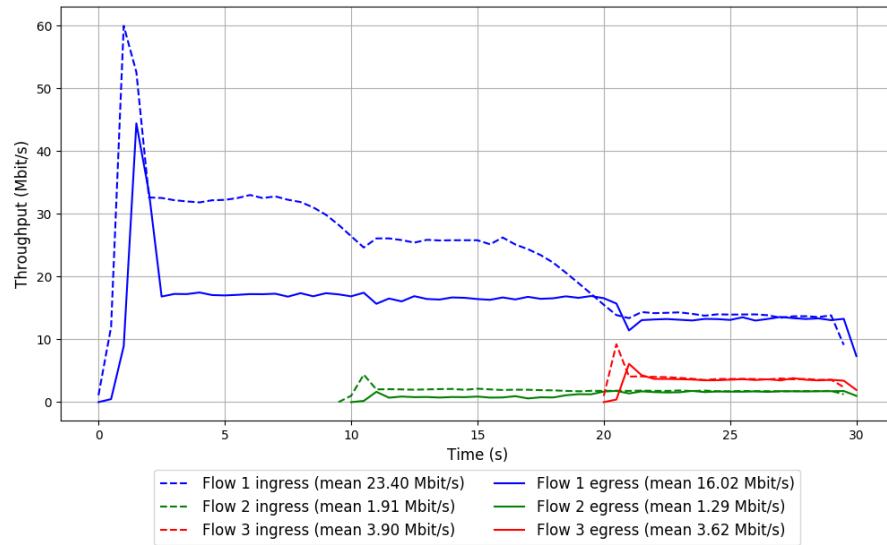


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-10-26 09:55:11
End at: 2018-10-26 09:55:41
Local clock offset: -1.951 ms
Remote clock offset: 14.34 ms

# Below is generated by plot.py at 2018-10-26 11:43:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.06 Mbit/s
95th percentile per-packet one-way delay: 89.931 ms
Loss rate: 30.76%
-- Flow 1:
Average throughput: 16.02 Mbit/s
95th percentile per-packet one-way delay: 90.169 ms
Loss rate: 31.86%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 88.338 ms
Loss rate: 32.98%
-- Flow 3:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 89.435 ms
Loss rate: 8.44%
```

Run 1: Report of PCC-Allegro — Data Link

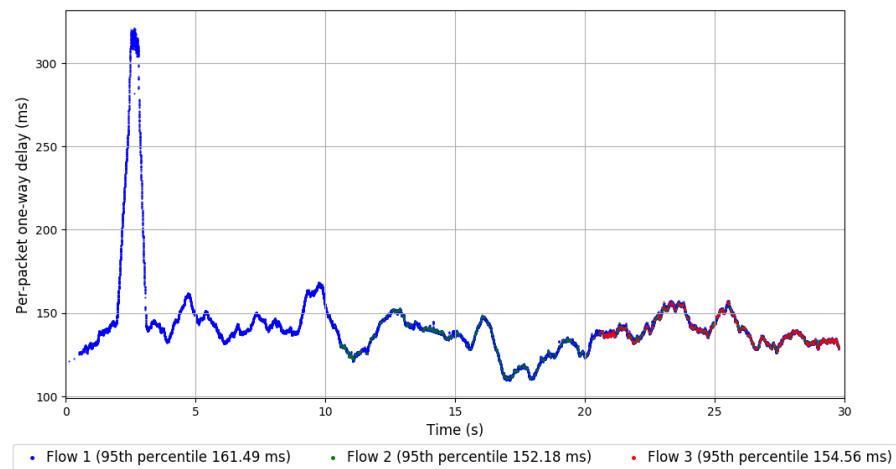
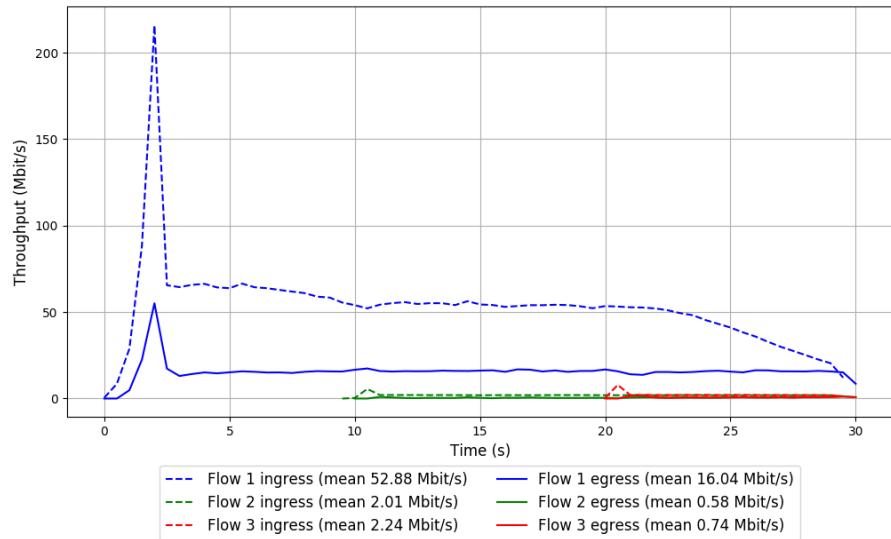


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-26 10:19:40
End at: 2018-10-26 10:20:10
Local clock offset: -1.537 ms
Remote clock offset: 10.395 ms

# Below is generated by plot.py at 2018-10-26 11:43:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.67 Mbit/s
95th percentile per-packet one-way delay: 161.179 ms
Loss rate: 69.86%
-- Flow 1:
Average throughput: 16.04 Mbit/s
95th percentile per-packet one-way delay: 161.489 ms
Loss rate: 69.85%
-- Flow 2:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 152.177 ms
Loss rate: 71.62%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 154.561 ms
Loss rate: 67.47%
```

Run 2: Report of PCC-Allegro — Data Link

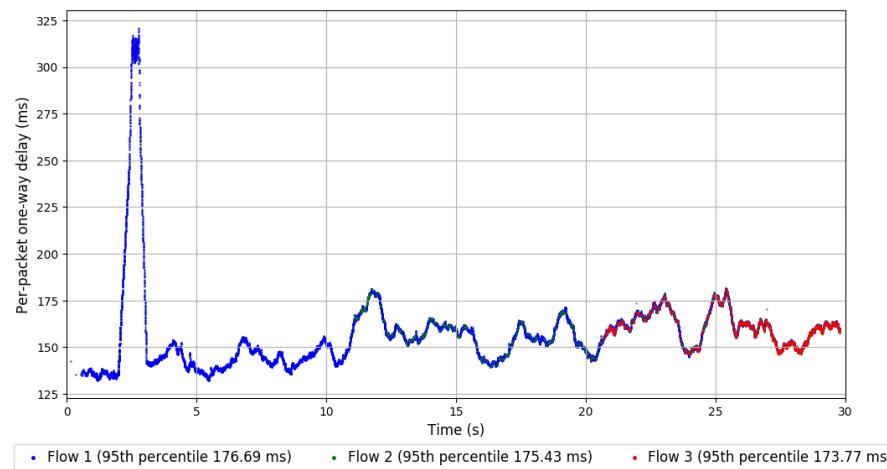
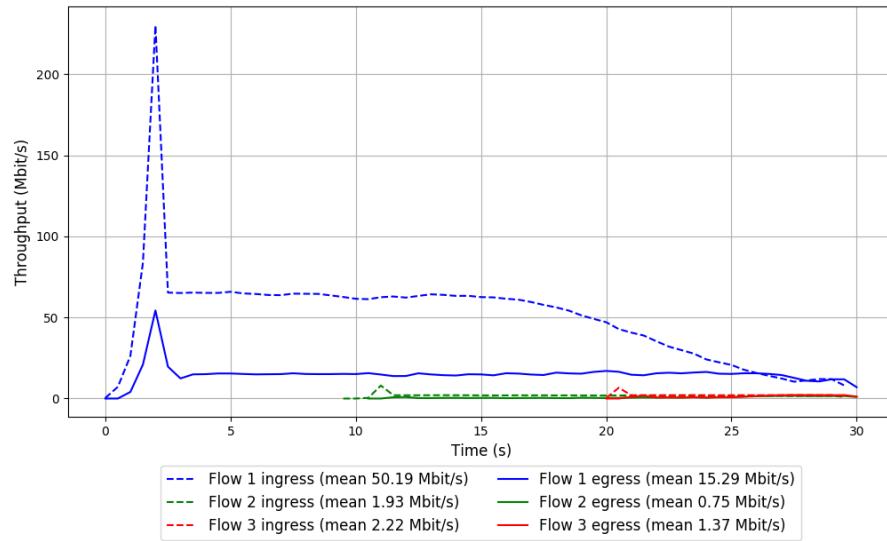


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-26 10:44:53
End at: 2018-10-26 10:45:23
Local clock offset: -1.176 ms
Remote clock offset: 28.065 ms

# Below is generated by plot.py at 2018-10-26 11:43:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.22 Mbit/s
95th percentile per-packet one-way delay: 176.549 ms
Loss rate: 69.14%
-- Flow 1:
Average throughput: 15.29 Mbit/s
95th percentile per-packet one-way delay: 176.689 ms
Loss rate: 69.73%
-- Flow 2:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 175.433 ms
Loss rate: 62.68%
-- Flow 3:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 173.766 ms
Loss rate: 39.80%
```

Run 3: Report of PCC-Allegro — Data Link

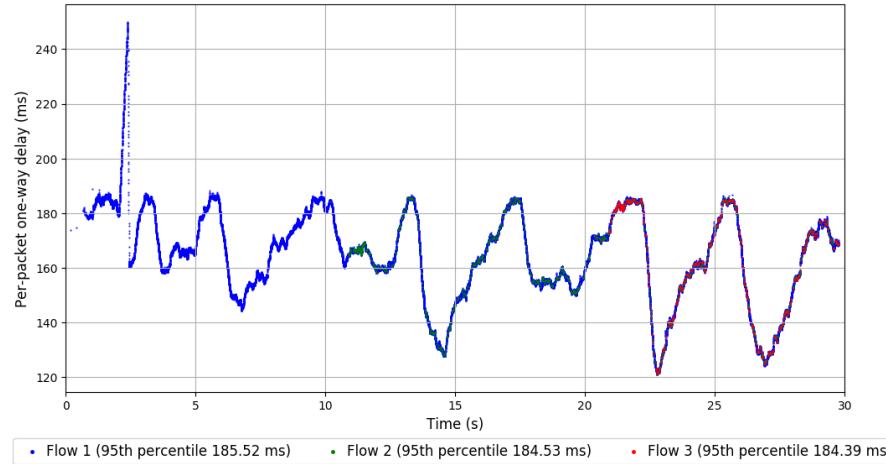
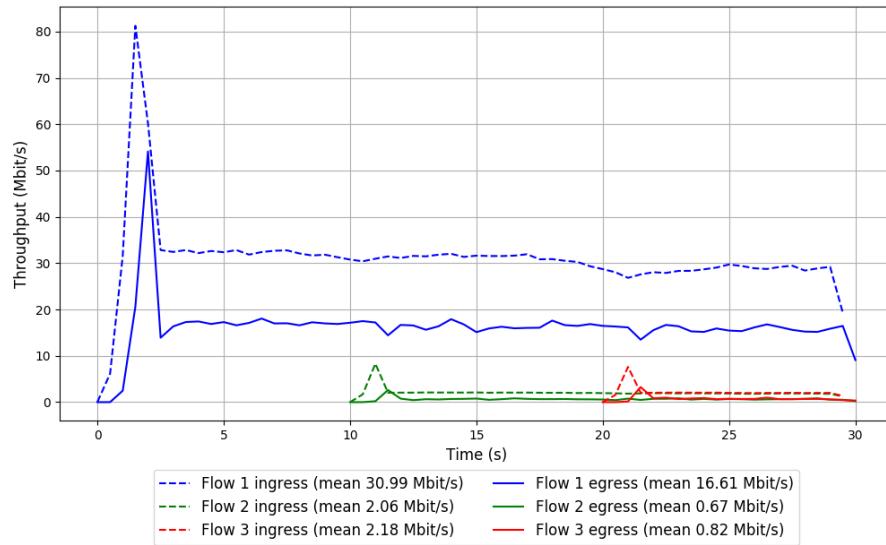


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-26 11:10:09
End at: 2018-10-26 11:10:39
Local clock offset: 0.776 ms
Remote clock offset: 14.327 ms

# Below is generated by plot.py at 2018-10-26 11:43:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.31 Mbit/s
95th percentile per-packet one-way delay: 185.488 ms
Loss rate: 48.08%
-- Flow 1:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 185.518 ms
Loss rate: 46.83%
-- Flow 2:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 184.533 ms
Loss rate: 68.00%
-- Flow 3:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 184.386 ms
Loss rate: 64.19%
```

Run 4: Report of PCC-Allegro — Data Link

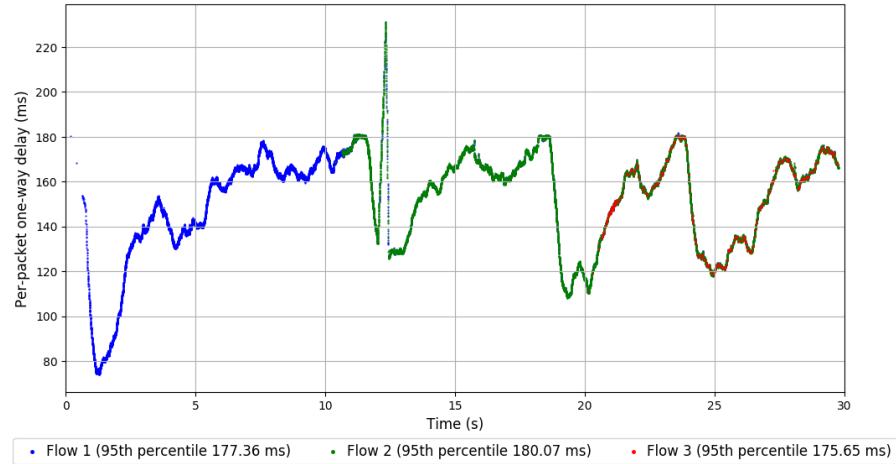
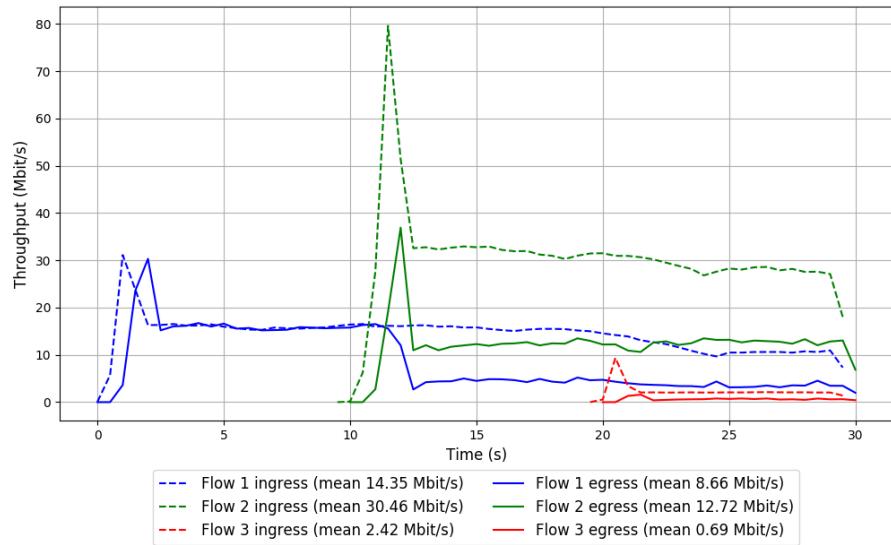


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-26 11:36:20
End at: 2018-10-26 11:36:50
Local clock offset: 1.123 ms
Remote clock offset: -25.552 ms

# Below is generated by plot.py at 2018-10-26 11:43:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.32 Mbit/s
95th percentile per-packet one-way delay: 179.657 ms
Loss rate: 51.53%
-- Flow 1:
Average throughput: 8.66 Mbit/s
95th percentile per-packet one-way delay: 177.364 ms
Loss rate: 40.17%
-- Flow 2:
Average throughput: 12.72 Mbit/s
95th percentile per-packet one-way delay: 180.074 ms
Loss rate: 58.76%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 175.646 ms
Loss rate: 72.17%
```

Run 5: Report of PCC-Allegro — Data Link

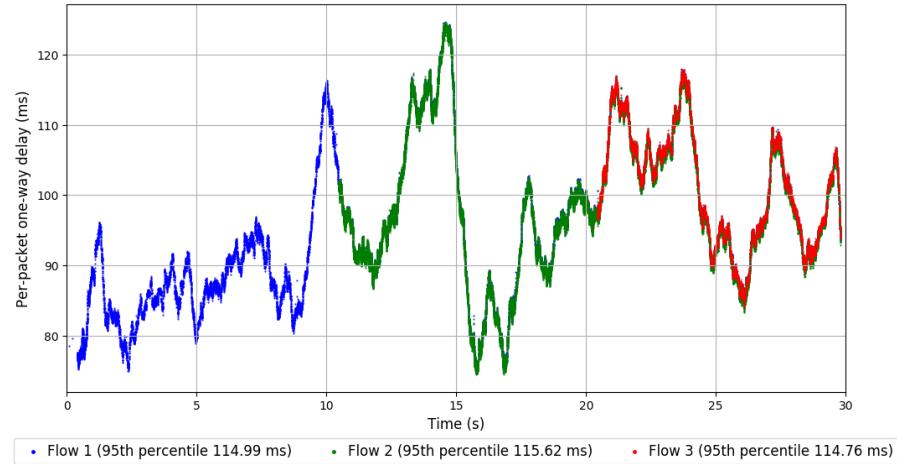
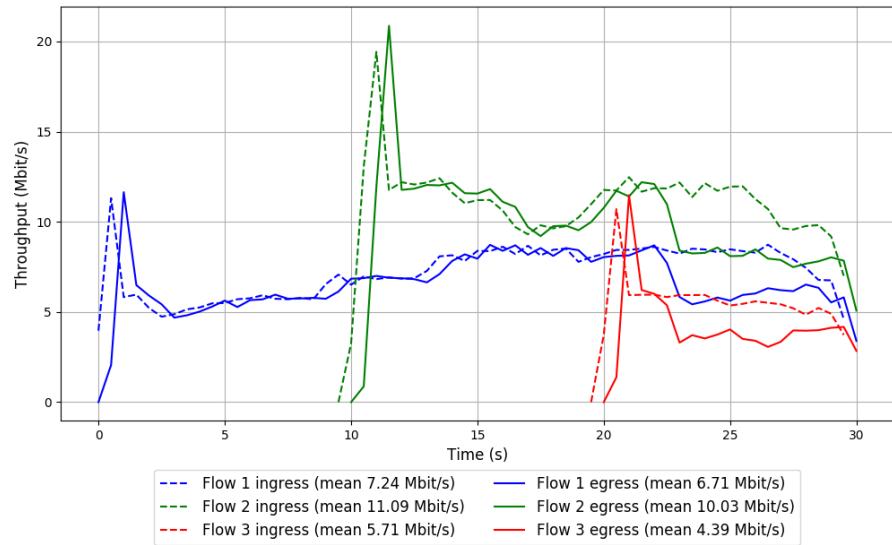


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-10-26 09:57:41
End at: 2018-10-26 09:58:11
Local clock offset: -1.994 ms
Remote clock offset: 9.91 ms

# Below is generated by plot.py at 2018-10-26 11:43:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.79 Mbit/s
95th percentile per-packet one-way delay: 115.248 ms
Loss rate: 10.85%
-- Flow 1:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 114.991 ms
Loss rate: 7.80%
-- Flow 2:
Average throughput: 10.03 Mbit/s
95th percentile per-packet one-way delay: 115.618 ms
Loss rate: 10.34%
-- Flow 3:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 114.758 ms
Loss rate: 24.50%
```

Run 1: Report of PCC-Expr — Data Link

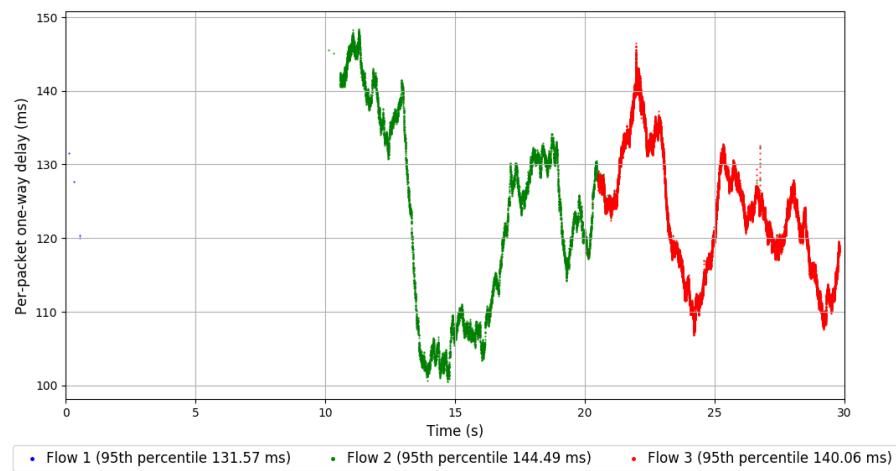
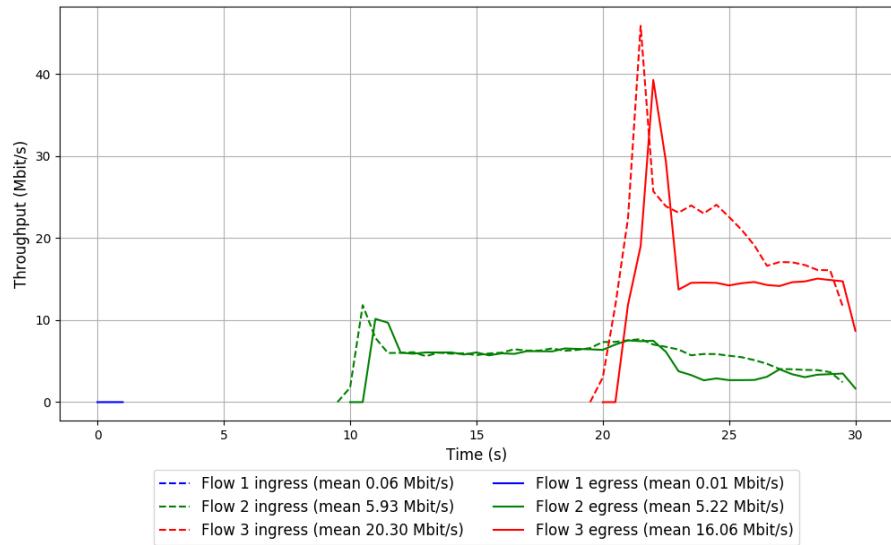


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-26 10:22:22
End at: 2018-10-26 10:22:52
Local clock offset: -1.534 ms
Remote clock offset: 9.784 ms

# Below is generated by plot.py at 2018-10-26 11:43:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.71 Mbit/s
95th percentile per-packet one-way delay: 141.162 ms
Loss rate: 18.82%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 131.567 ms
Loss rate: 86.98%
-- Flow 2:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 144.493 ms
Loss rate: 12.87%
-- Flow 3:
Average throughput: 16.06 Mbit/s
95th percentile per-packet one-way delay: 140.058 ms
Loss rate: 22.31%
```

Run 2: Report of PCC-Expr — Data Link

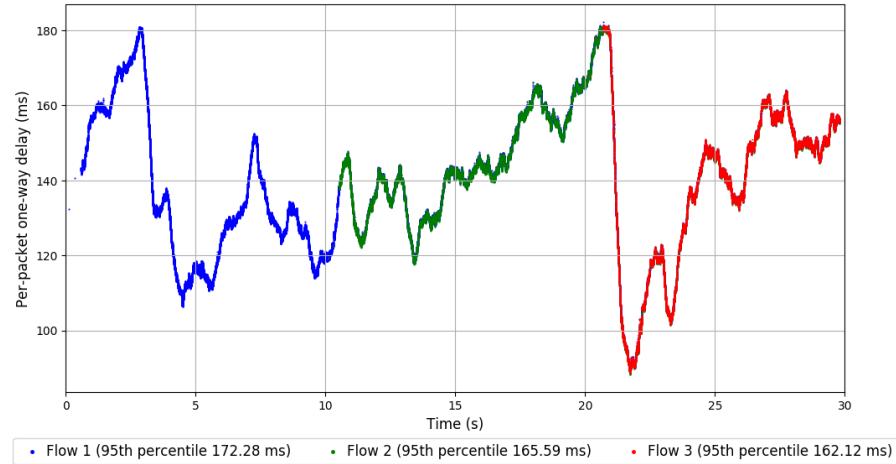
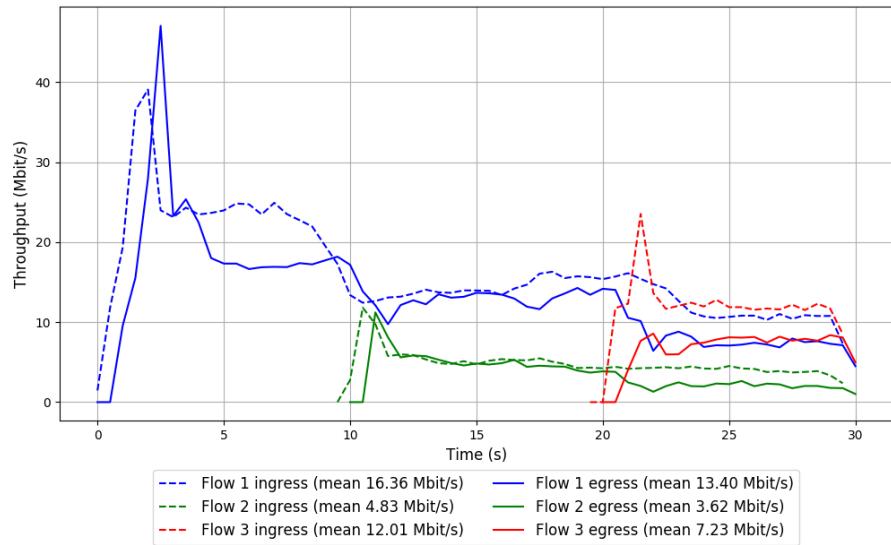


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-26 10:47:37
End at: 2018-10-26 10:48:07
Local clock offset: -1.059 ms
Remote clock offset: 35.462 ms

# Below is generated by plot.py at 2018-10-26 11:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.15 Mbit/s
95th percentile per-packet one-way delay: 171.422 ms
Loss rate: 23.41%
-- Flow 1:
Average throughput: 13.40 Mbit/s
95th percentile per-packet one-way delay: 172.280 ms
Loss rate: 18.63%
-- Flow 2:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 165.587 ms
Loss rate: 25.84%
-- Flow 3:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 162.120 ms
Loss rate: 41.18%
```

Run 3: Report of PCC-Expr — Data Link

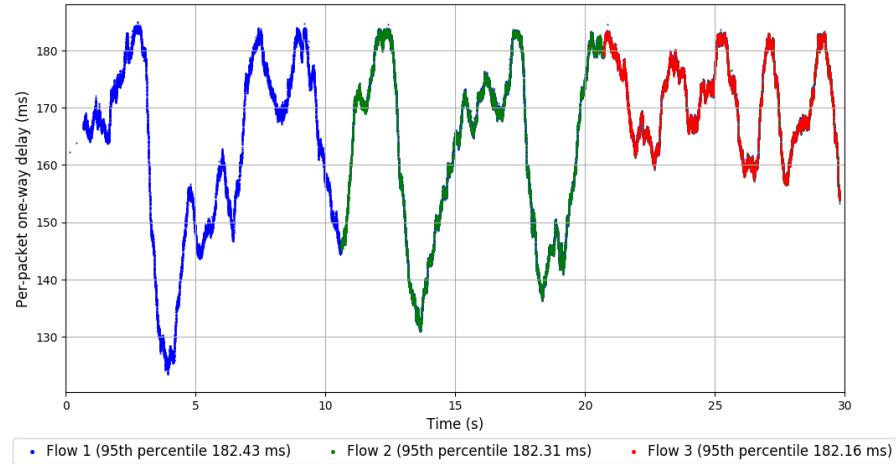
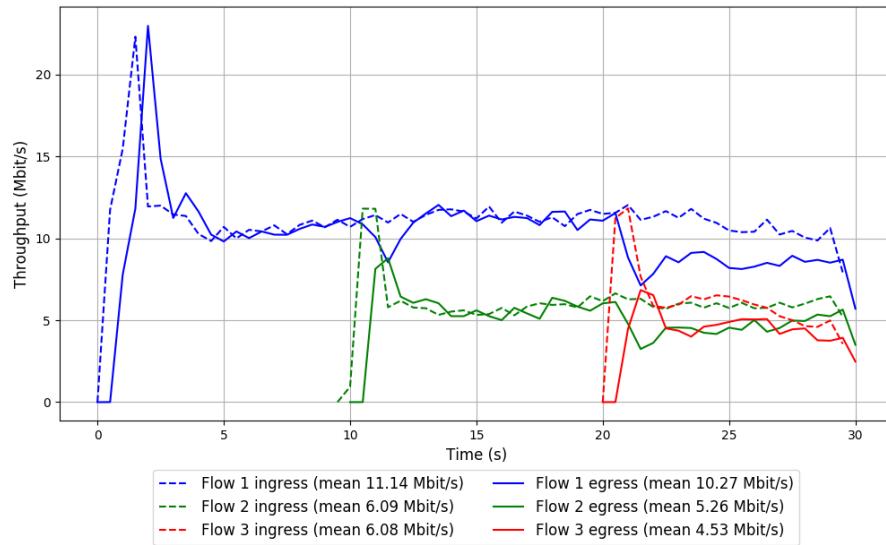


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-26 11:12:53
End at: 2018-10-26 11:13:23
Local clock offset: 1.317 ms
Remote clock offset: 7.224 ms

# Below is generated by plot.py at 2018-10-26 11:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.22 Mbit/s
95th percentile per-packet one-way delay: 182.369 ms
Loss rate: 12.15%
-- Flow 1:
Average throughput: 10.27 Mbit/s
95th percentile per-packet one-way delay: 182.434 ms
Loss rate: 8.48%
-- Flow 2:
Average throughput: 5.26 Mbit/s
95th percentile per-packet one-way delay: 182.311 ms
Loss rate: 14.69%
-- Flow 3:
Average throughput: 4.53 Mbit/s
95th percentile per-packet one-way delay: 182.163 ms
Loss rate: 27.37%
```

Run 4: Report of PCC-Expr — Data Link

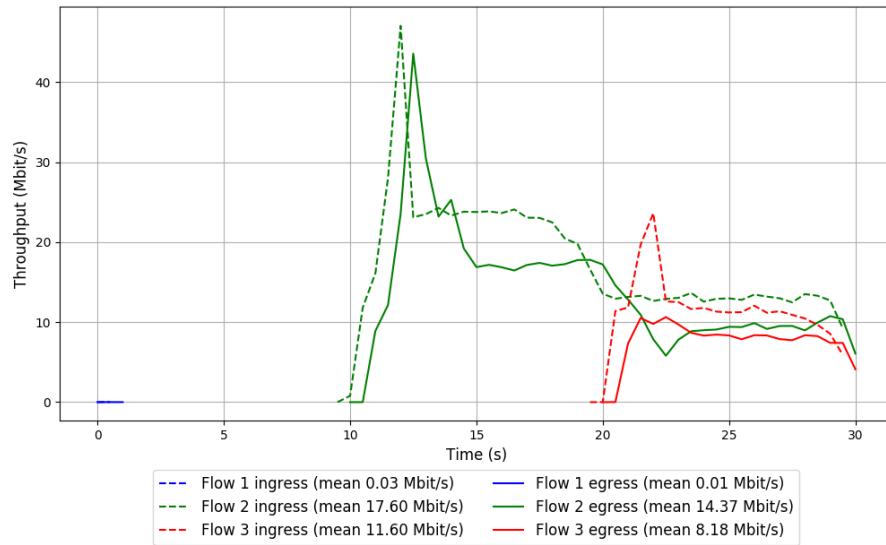


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-26 11:39:07
End at: 2018-10-26 11:39:37
Local clock offset: 0.447 ms
Remote clock offset: -25.132 ms

# Below is generated by plot.py at 2018-10-26 11:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 175.980 ms
Loss rate: 22.21%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 176.213 ms
Loss rate: 75.71%
-- Flow 2:
Average throughput: 14.37 Mbit/s
95th percentile per-packet one-way delay: 176.156 ms
Loss rate: 19.26%
-- Flow 3:
Average throughput: 8.18 Mbit/s
95th percentile per-packet one-way delay: 175.438 ms
Loss rate: 31.22%
```

Run 5: Report of PCC-Expr — Data Link

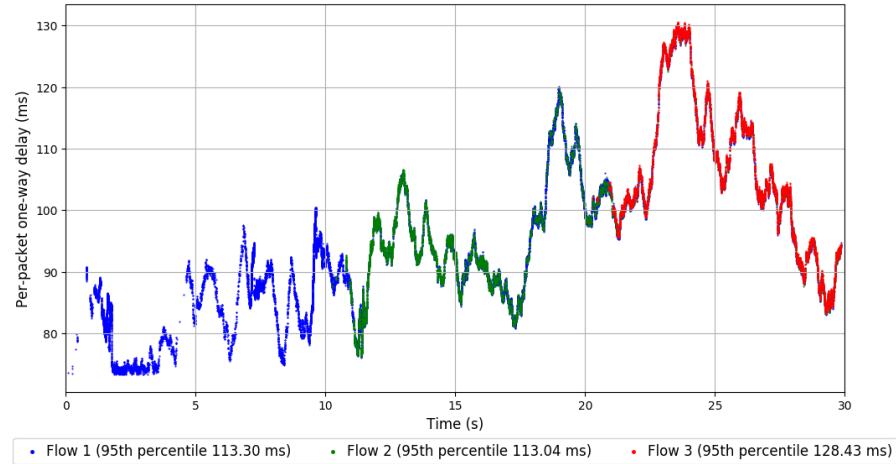
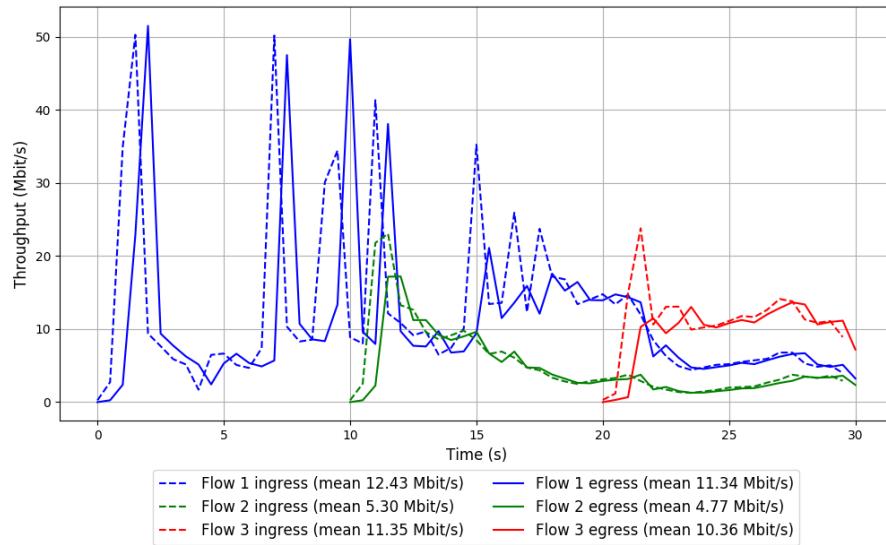


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-10-26 09:48:42
End at: 2018-10-26 09:49:12
Local clock offset: -1.948 ms
Remote clock offset: 13.105 ms

# Below is generated by plot.py at 2018-10-26 11:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.89 Mbit/s
95th percentile per-packet one-way delay: 118.734 ms
Loss rate: 9.73%
-- Flow 1:
Average throughput: 11.34 Mbit/s
95th percentile per-packet one-way delay: 113.296 ms
Loss rate: 9.24%
-- Flow 2:
Average throughput: 4.77 Mbit/s
95th percentile per-packet one-way delay: 113.040 ms
Loss rate: 10.85%
-- Flow 3:
Average throughput: 10.36 Mbit/s
95th percentile per-packet one-way delay: 128.429 ms
Loss rate: 10.30%
```

Run 1: Report of QUIC Cubic — Data Link

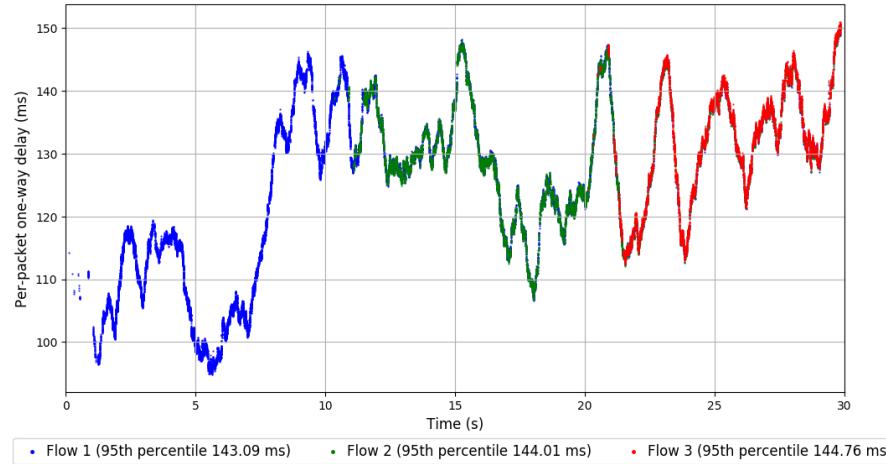
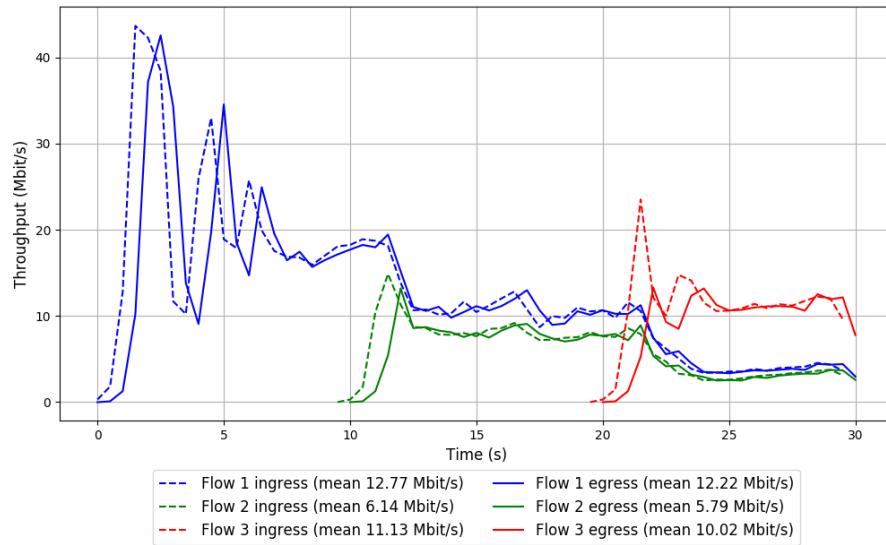


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-26 10:12:53
End at: 2018-10-26 10:13:23
Local clock offset: -1.594 ms
Remote clock offset: 10.46 ms

# Below is generated by plot.py at 2018-10-26 11:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.34 Mbit/s
95th percentile per-packet one-way delay: 143.689 ms
Loss rate: 6.50%
-- Flow 1:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 143.094 ms
Loss rate: 4.93%
-- Flow 2:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 144.011 ms
Loss rate: 6.72%
-- Flow 3:
Average throughput: 10.02 Mbit/s
95th percentile per-packet one-way delay: 144.759 ms
Loss rate: 11.71%
```

Run 2: Report of QUIC Cubic — Data Link

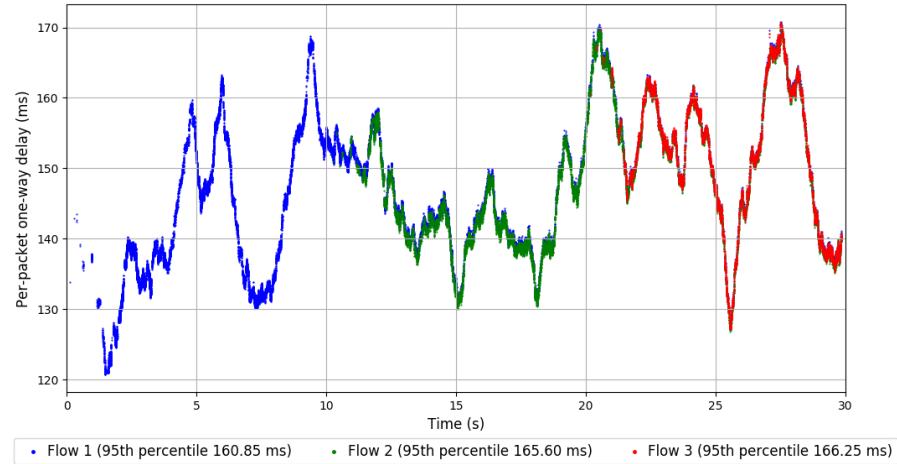
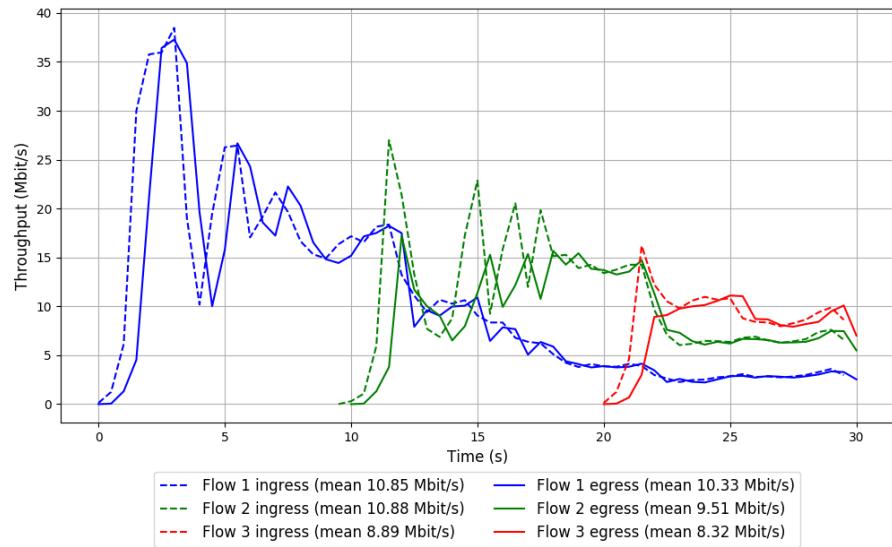


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-26 10:38:00
End at: 2018-10-26 10:38:30
Local clock offset: -1.324 ms
Remote clock offset: 29.865 ms

# Below is generated by plot.py at 2018-10-26 11:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.34 Mbit/s
95th percentile per-packet one-way delay: 164.109 ms
Loss rate: 8.72%
-- Flow 1:
Average throughput: 10.33 Mbit/s
95th percentile per-packet one-way delay: 160.848 ms
Loss rate: 5.47%
-- Flow 2:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 165.600 ms
Loss rate: 13.62%
-- Flow 3:
Average throughput: 8.32 Mbit/s
95th percentile per-packet one-way delay: 166.253 ms
Loss rate: 8.62%
```

Run 3: Report of QUIC Cubic — Data Link

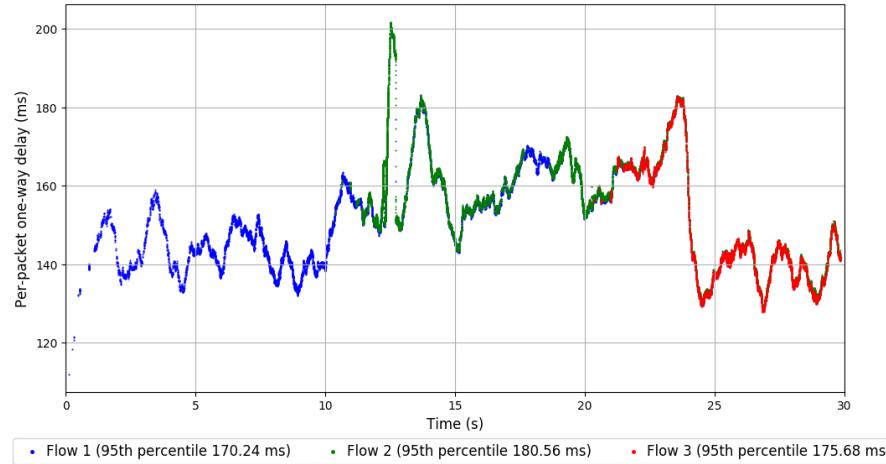
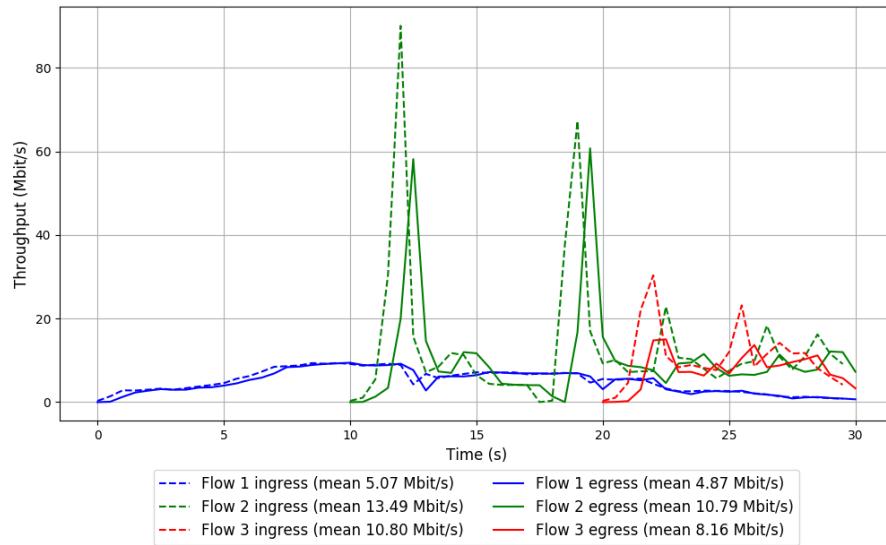


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-26 11:03:11
End at: 2018-10-26 11:03:41
Local clock offset: -0.572 ms
Remote clock offset: 40.585 ms

# Below is generated by plot.py at 2018-10-26 11:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.67 Mbit/s
95th percentile per-packet one-way delay: 177.555 ms
Loss rate: 17.18%
-- Flow 1:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 170.237 ms
Loss rate: 4.50%
-- Flow 2:
Average throughput: 10.79 Mbit/s
95th percentile per-packet one-way delay: 180.565 ms
Loss rate: 20.80%
-- Flow 3:
Average throughput: 8.16 Mbit/s
95th percentile per-packet one-way delay: 175.680 ms
Loss rate: 26.07%
```

Run 4: Report of QUIC Cubic — Data Link

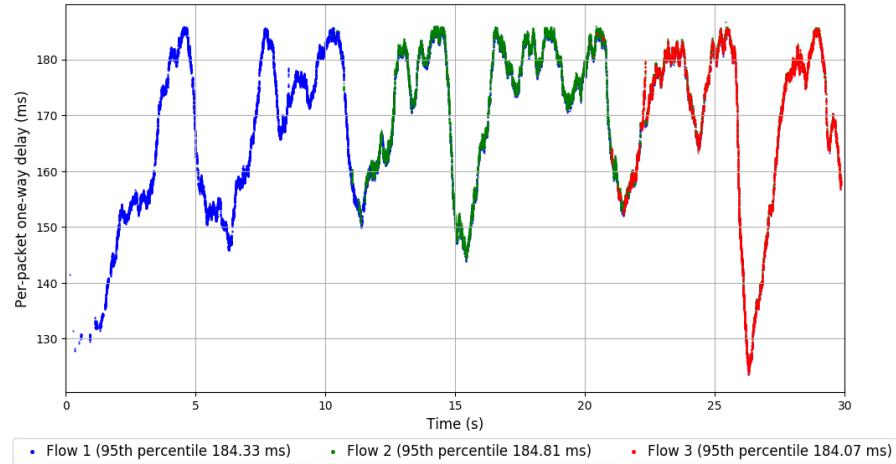
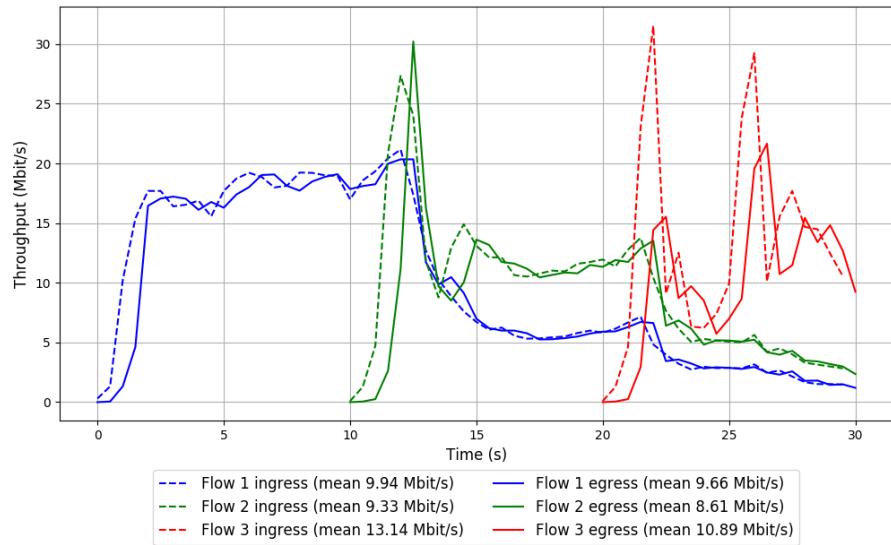


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-26 11:28:56
End at: 2018-10-26 11:29:26
Local clock offset: 2.641 ms
Remote clock offset: -23.046 ms

# Below is generated by plot.py at 2018-10-26 11:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.90 Mbit/s
95th percentile per-packet one-way delay: 184.494 ms
Loss rate: 8.48%
-- Flow 1:
Average throughput: 9.66 Mbit/s
95th percentile per-packet one-way delay: 184.328 ms
Loss rate: 3.52%
-- Flow 2:
Average throughput: 8.61 Mbit/s
95th percentile per-packet one-way delay: 184.814 ms
Loss rate: 8.88%
-- Flow 3:
Average throughput: 10.89 Mbit/s
95th percentile per-packet one-way delay: 184.066 ms
Loss rate: 19.22%
```

Run 5: Report of QUIC Cubic — Data Link

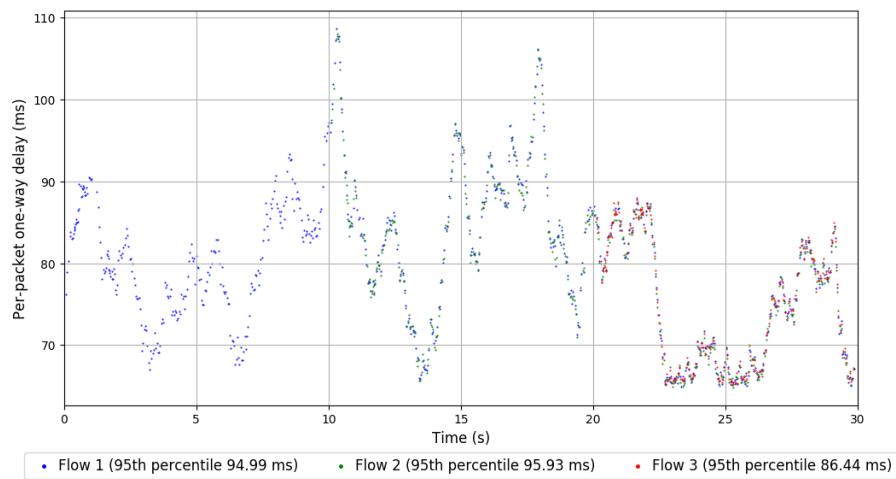
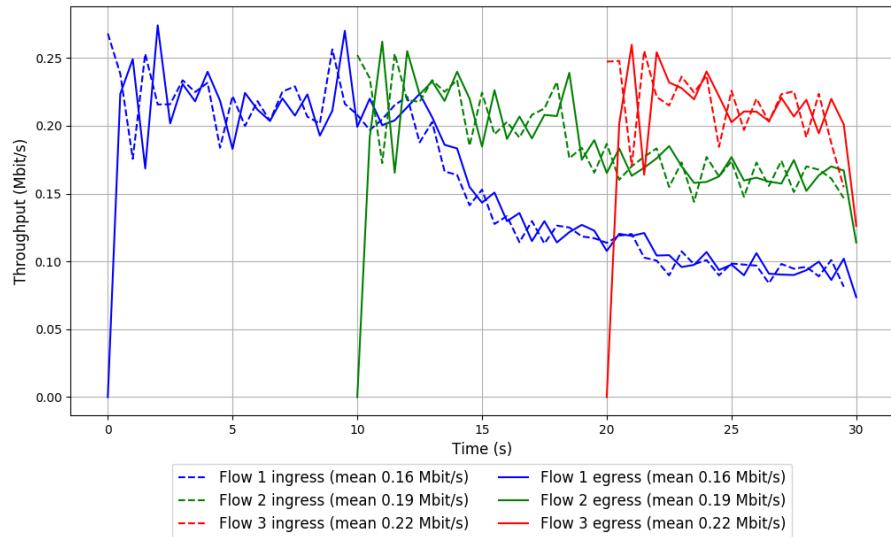


```
Run 1: Statistics of SCReAM
```

```
Start at: 2018-10-26 09:56:28
End at: 2018-10-26 09:56:58
Local clock offset: -1.968 ms
Remote clock offset: 20.47 ms

# Below is generated by plot.py at 2018-10-26 11:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 94.870 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 94.988 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 95.926 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.435 ms
Loss rate: 1.29%
```

Run 1: Report of SCReAM — Data Link

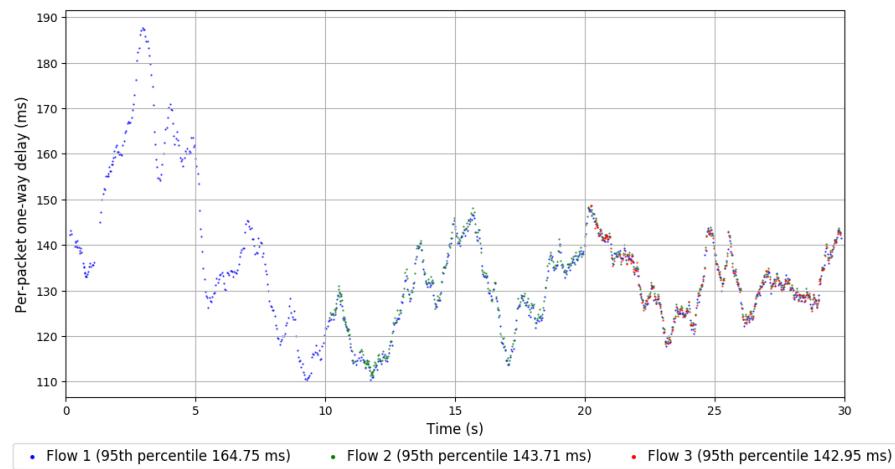
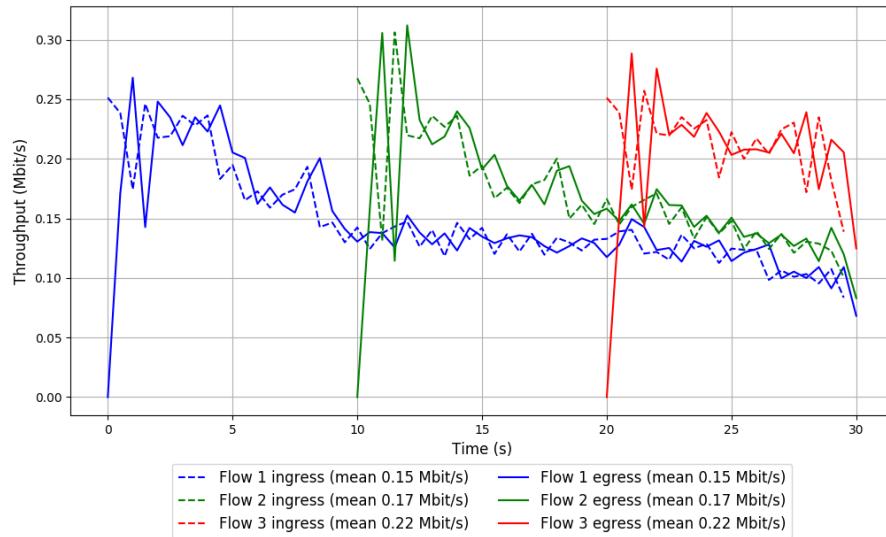


Run 2: Statistics of SCReAM

```
Start at: 2018-10-26 10:21:04
End at: 2018-10-26 10:21:34
Local clock offset: -1.425 ms
Remote clock offset: 6.128 ms

# Below is generated by plot.py at 2018-10-26 11:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 157.749 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 164.755 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 143.706 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 142.947 ms
Loss rate: 1.60%
```

Run 2: Report of SCReAM — Data Link

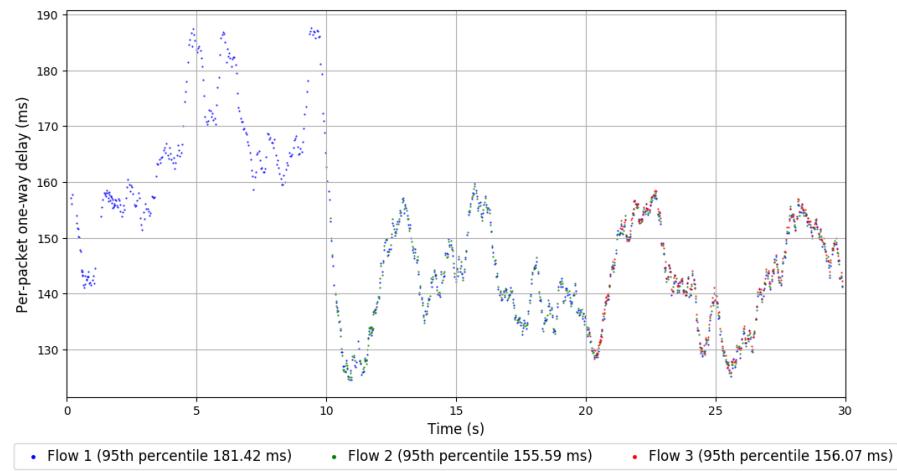
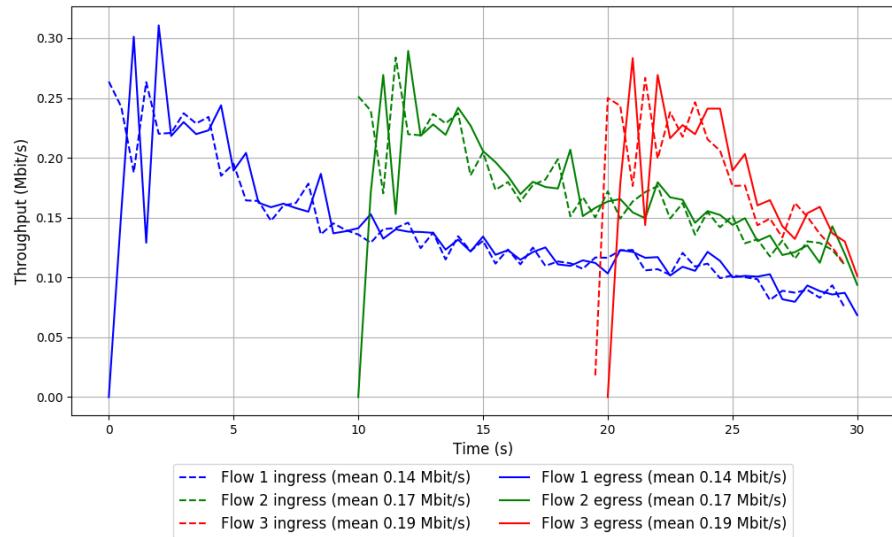


Run 3: Statistics of SCReAM

```
Start at: 2018-10-26 10:46:21
End at: 2018-10-26 10:46:51
Local clock offset: -1.114 ms
Remote clock offset: 28.124 ms

# Below is generated by plot.py at 2018-10-26 11:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 170.136 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 181.417 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 155.592 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 156.067 ms
Loss rate: 1.32%
```

Run 3: Report of SCReAM — Data Link

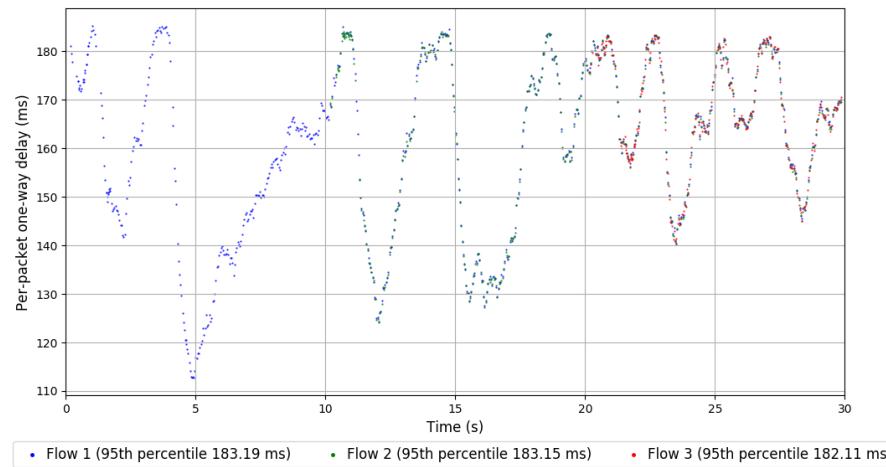
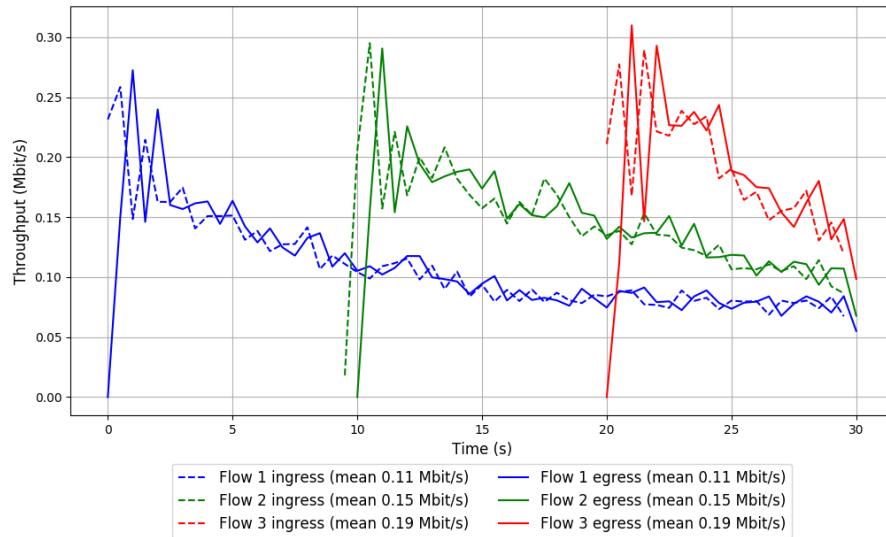


Run 4: Statistics of SCReAM

```
Start at: 2018-10-26 11:11:35
End at: 2018-10-26 11:12:05
Local clock offset: 1.204 ms
Remote clock offset: 11.151 ms

# Below is generated by plot.py at 2018-10-26 11:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 183.025 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 183.189 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 183.152 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 182.114 ms
Loss rate: 1.68%
```

Run 4: Report of SCReAM — Data Link

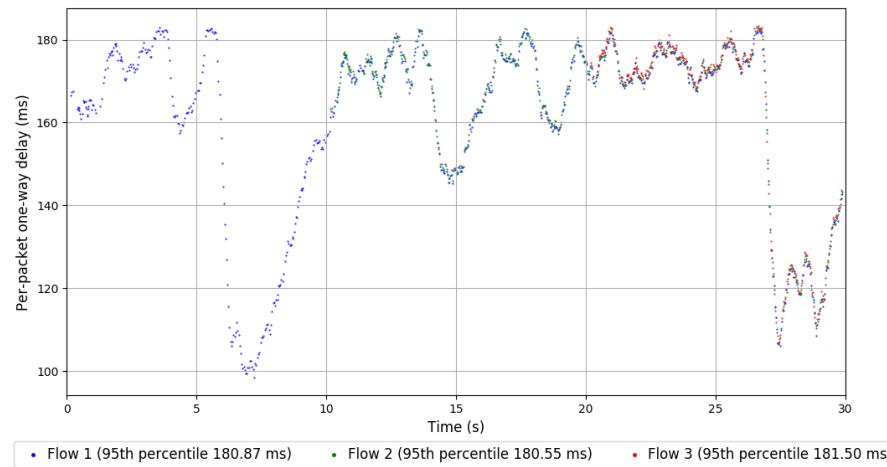
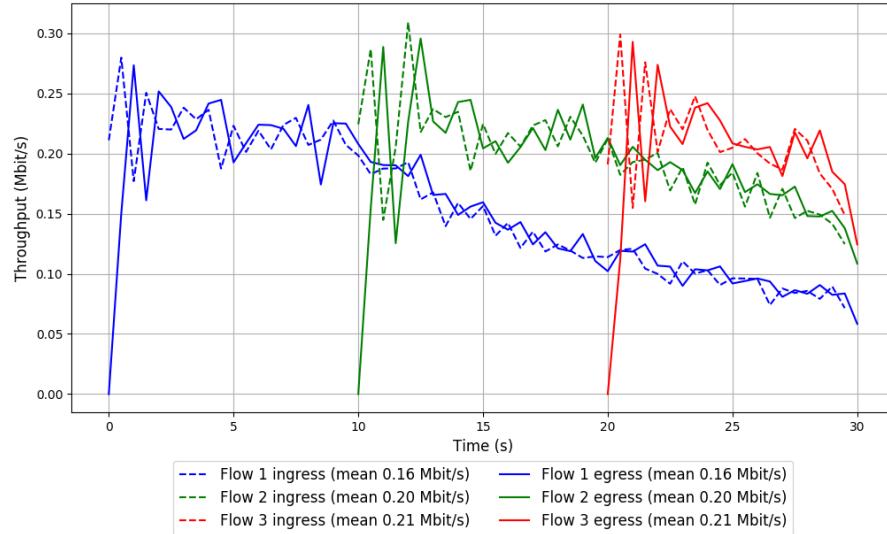


Run 5: Statistics of SCReAM

```
Start at: 2018-10-26 11:37:48
End at: 2018-10-26 11:38:19
Local clock offset: 0.675 ms
Remote clock offset: -29.28 ms

# Below is generated by plot.py at 2018-10-26 11:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 180.823 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 180.867 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 180.546 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 181.500 ms
Loss rate: 1.91%
```

Run 5: Report of SCReAM — Data Link

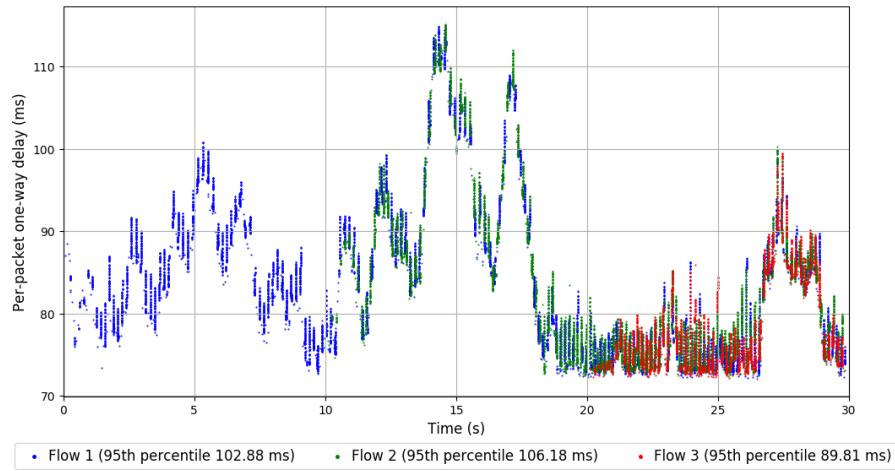
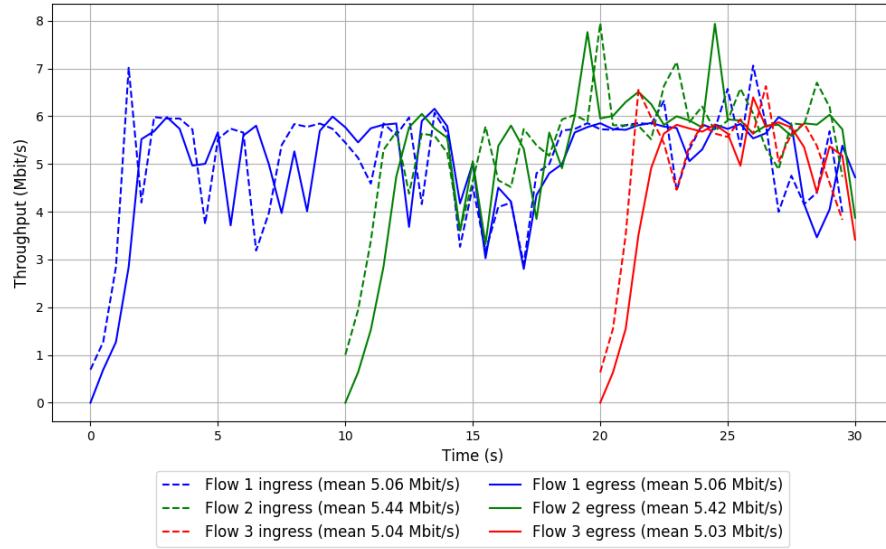


Run 1: Statistics of Sprout

```
Start at: 2018-10-26 09:44:49
End at: 2018-10-26 09:45:19
Local clock offset: -1.649 ms
Remote clock offset: 15.6 ms

# Below is generated by plot.py at 2018-10-26 11:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.29 Mbit/s
95th percentile per-packet one-way delay: 103.010 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 102.880 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 5.42 Mbit/s
95th percentile per-packet one-way delay: 106.181 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 89.807 ms
Loss rate: 1.64%
```

Run 1: Report of Sprout — Data Link

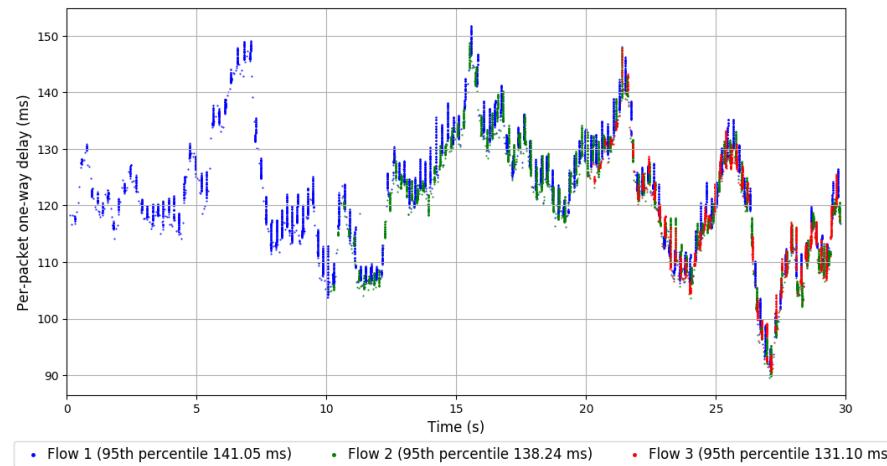
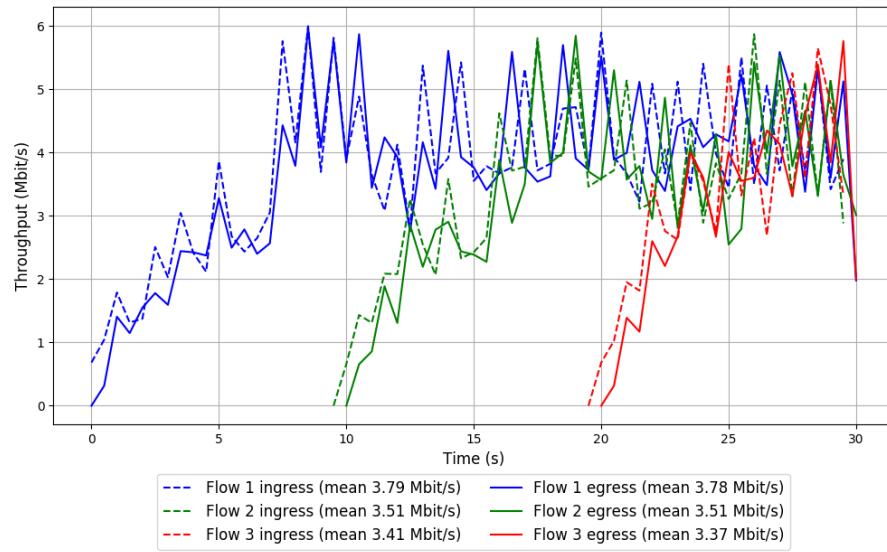


Run 2: Statistics of Sprout

```
Start at: 2018-10-26 10:08:45
End at: 2018-10-26 10:09:15
Local clock offset: -1.532 ms
Remote clock offset: 8.481 ms

# Below is generated by plot.py at 2018-10-26 11:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.20 Mbit/s
95th percentile per-packet one-way delay: 138.853 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 141.048 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 3.51 Mbit/s
95th percentile per-packet one-way delay: 138.241 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 131.100 ms
Loss rate: 3.17%
```

Run 2: Report of Sprout — Data Link

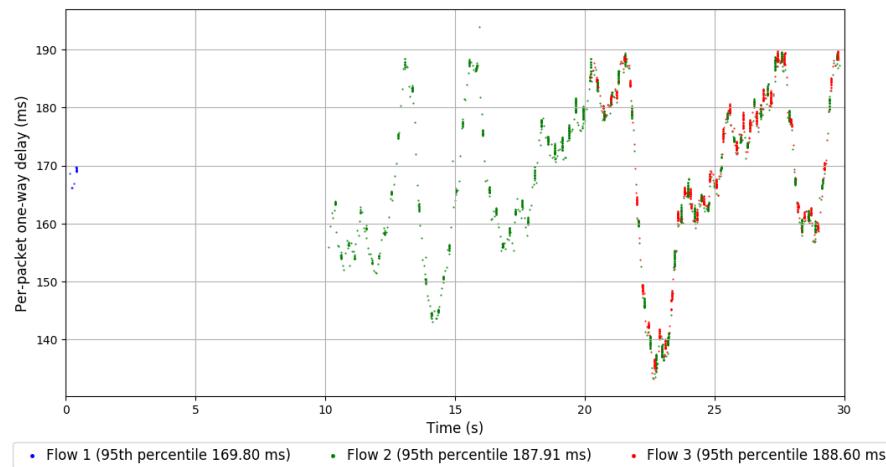
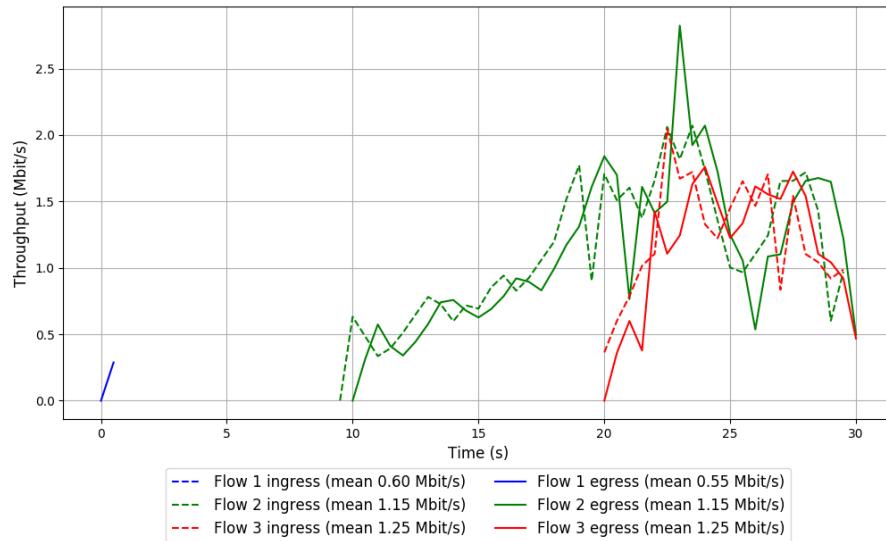


Run 3: Statistics of Sprout

```
Start at: 2018-10-26 10:33:51
End at: 2018-10-26 10:34:21
Local clock offset: -1.483 ms
Remote clock offset: 10.896 ms

# Below is generated by plot.py at 2018-10-26 11:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 188.199 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 169.803 ms
Loss rate: 7.69%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 187.908 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 188.597 ms
Loss rate: 2.13%
```

Run 3: Report of Sprout — Data Link

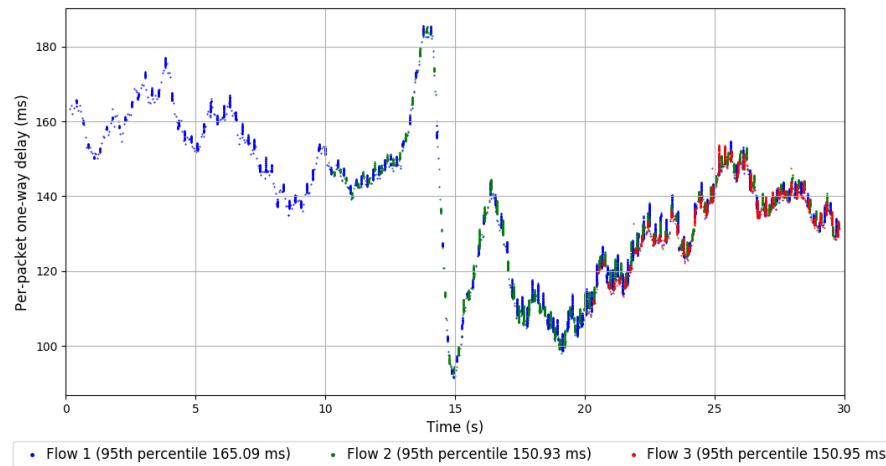
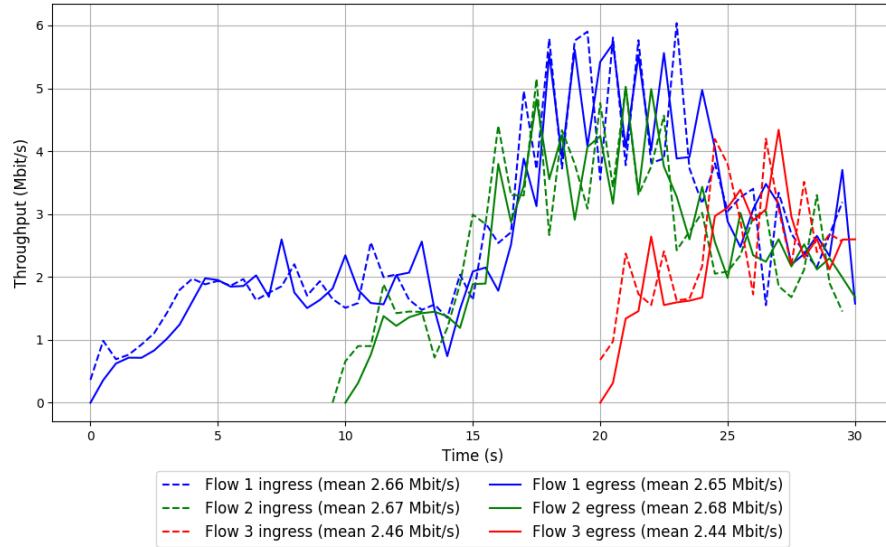


Run 4: Statistics of Sprout

```
Start at: 2018-10-26 10:59:06
End at: 2018-10-26 10:59:36
Local clock offset: -1.336 ms
Remote clock offset: 38.411 ms

# Below is generated by plot.py at 2018-10-26 11:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 160.801 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 165.091 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 2.68 Mbit/s
95th percentile per-packet one-way delay: 150.926 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 150.947 ms
Loss rate: 2.56%
```

Run 4: Report of Sprout — Data Link

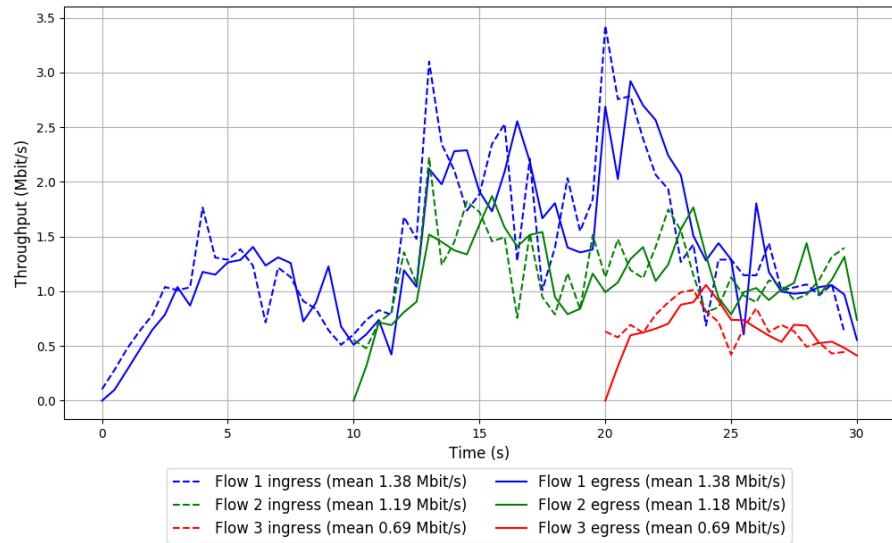


Run 5: Statistics of Sprout

```
Start at: 2018-10-26 11:24:42
End at: 2018-10-26 11:25:12
Local clock offset: 2.199 ms
Remote clock offset: -15.843 ms

# Below is generated by plot.py at 2018-10-26 11:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 181.558 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 181.423 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 181.992 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 181.123 ms
Loss rate: 2.06%
```

Run 5: Report of Sprout — Data Link

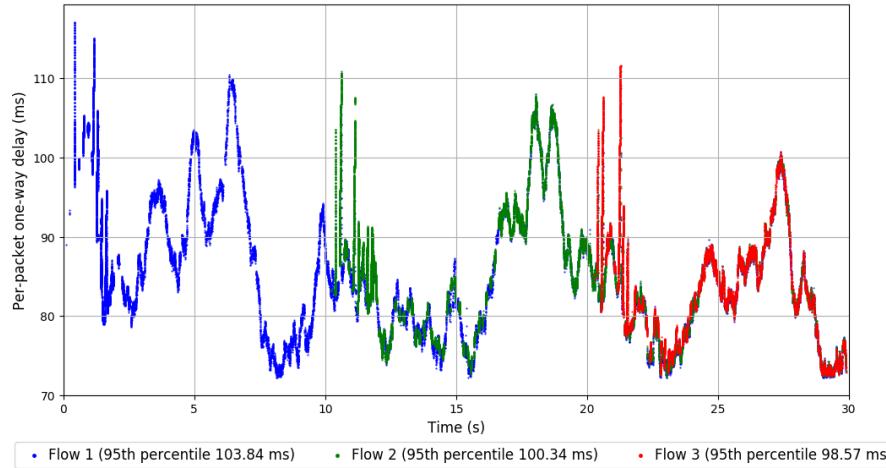
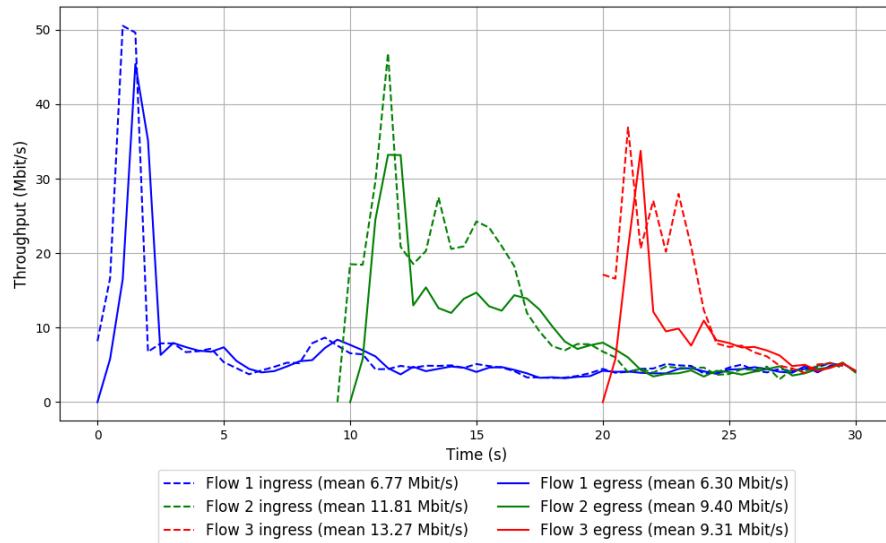


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-26 09:52:34
End at: 2018-10-26 09:53:04
Local clock offset: -2.053 ms
Remote clock offset: 13.162 ms

# Below is generated by plot.py at 2018-10-26 11:44:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.61 Mbit/s
95th percentile per-packet one-way delay: 102.822 ms
Loss rate: 18.45%
-- Flow 1:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 103.837 ms
Loss rate: 7.42%
-- Flow 2:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 100.337 ms
Loss rate: 21.01%
-- Flow 3:
Average throughput: 9.31 Mbit/s
95th percentile per-packet one-way delay: 98.572 ms
Loss rate: 30.84%
```

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

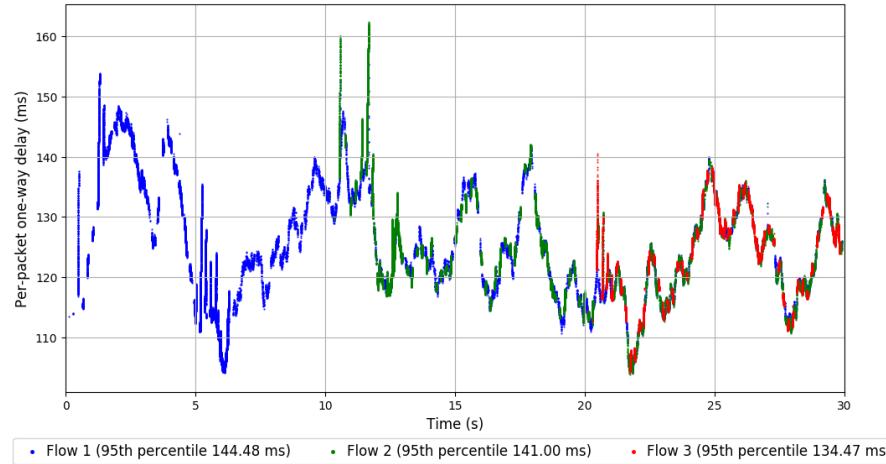
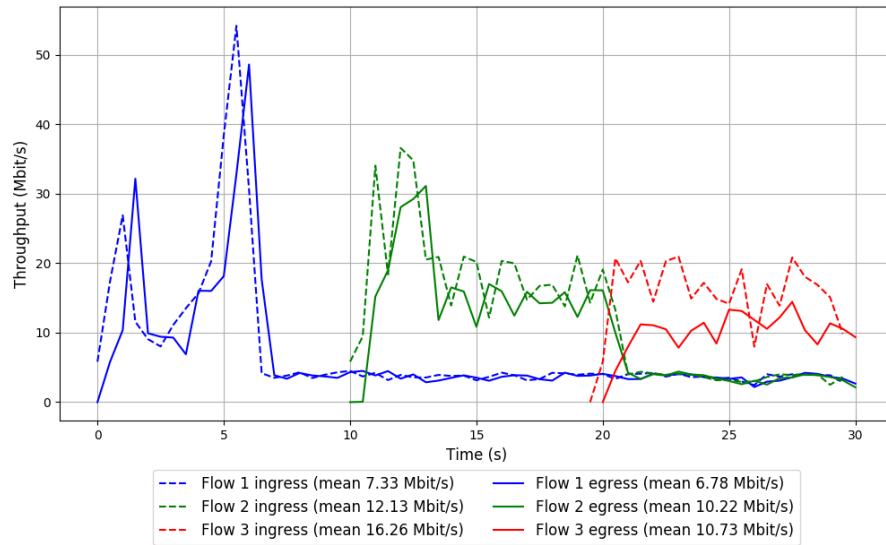


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-26 10:16:56
End at: 2018-10-26 10:17:26
Local clock offset: -1.636 ms
Remote clock offset: 6.574 ms

# Below is generated by plot.py at 2018-10-26 11:44:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.06 Mbit/s
95th percentile per-packet one-way delay: 142.043 ms
Loss rate: 18.21%
-- Flow 1:
Average throughput: 6.78 Mbit/s
95th percentile per-packet one-way delay: 144.478 ms
Loss rate: 8.05%
-- Flow 2:
Average throughput: 10.22 Mbit/s
95th percentile per-packet one-way delay: 141.002 ms
Loss rate: 16.52%
-- Flow 3:
Average throughput: 10.73 Mbit/s
95th percentile per-packet one-way delay: 134.474 ms
Loss rate: 34.71%
```

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

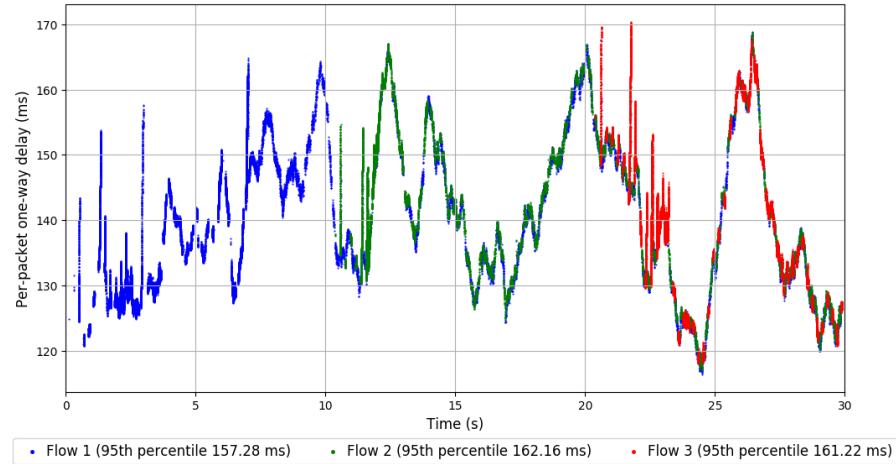
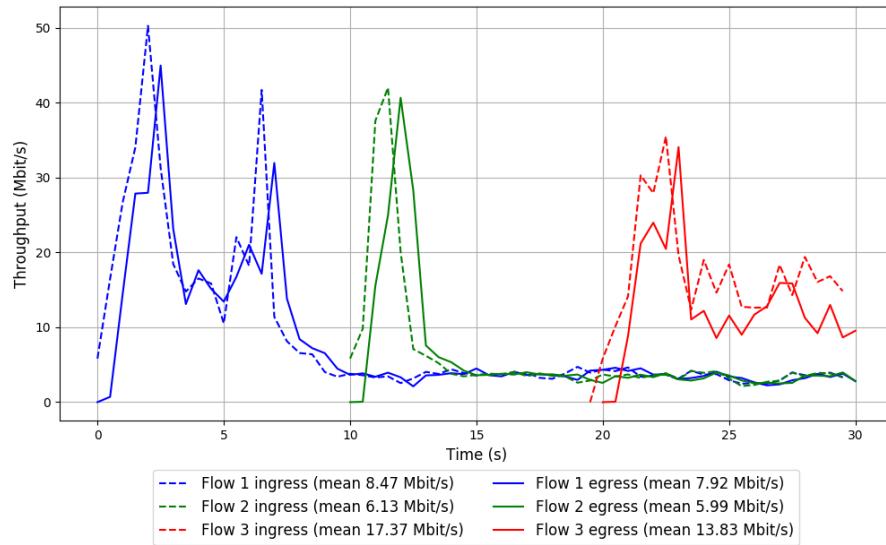


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-26 10:42:10
End at: 2018-10-26 10:42:40
Local clock offset: -1.328 ms
Remote clock offset: 26.367 ms

# Below is generated by plot.py at 2018-10-26 11:44:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.40 Mbit/s
95th percentile per-packet one-way delay: 160.667 ms
Loss rate: 11.00%
-- Flow 1:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 157.277 ms
Loss rate: 7.09%
-- Flow 2:
Average throughput: 5.99 Mbit/s
95th percentile per-packet one-way delay: 162.161 ms
Loss rate: 3.29%
-- Flow 3:
Average throughput: 13.83 Mbit/s
95th percentile per-packet one-way delay: 161.219 ms
Loss rate: 22.17%
```

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

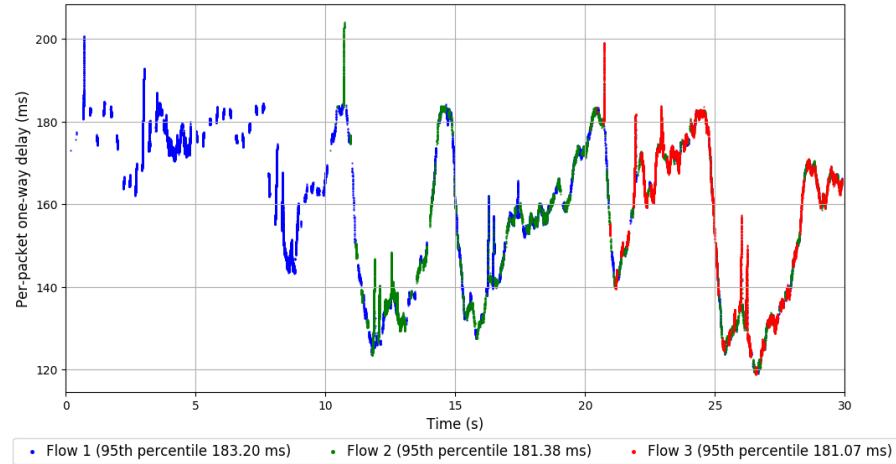
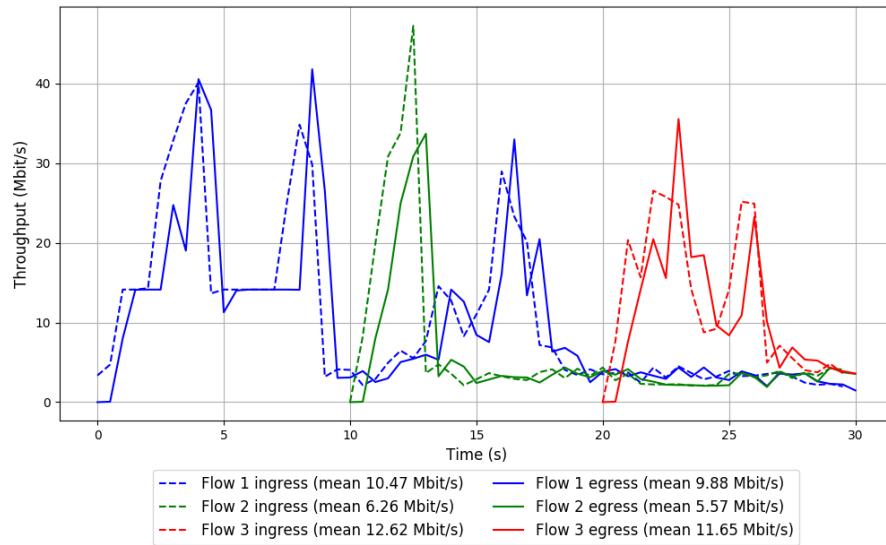


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-26 11:07:20
End at: 2018-10-26 11:07:50
Local clock offset: 0.285 ms
Remote clock offset: 30.128 ms

# Below is generated by plot.py at 2018-10-26 11:44:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.38 Mbit/s
95th percentile per-packet one-way delay: 182.816 ms
Loss rate: 8.44%
-- Flow 1:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 183.197 ms
Loss rate: 6.37%
-- Flow 2:
Average throughput: 5.57 Mbit/s
95th percentile per-packet one-way delay: 181.379 ms
Loss rate: 12.04%
-- Flow 3:
Average throughput: 11.65 Mbit/s
95th percentile per-packet one-way delay: 181.074 ms
Loss rate: 10.02%
```

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

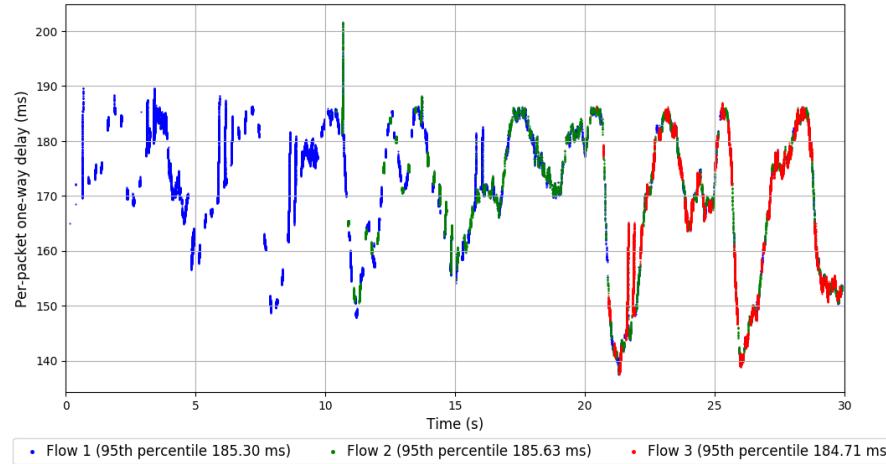
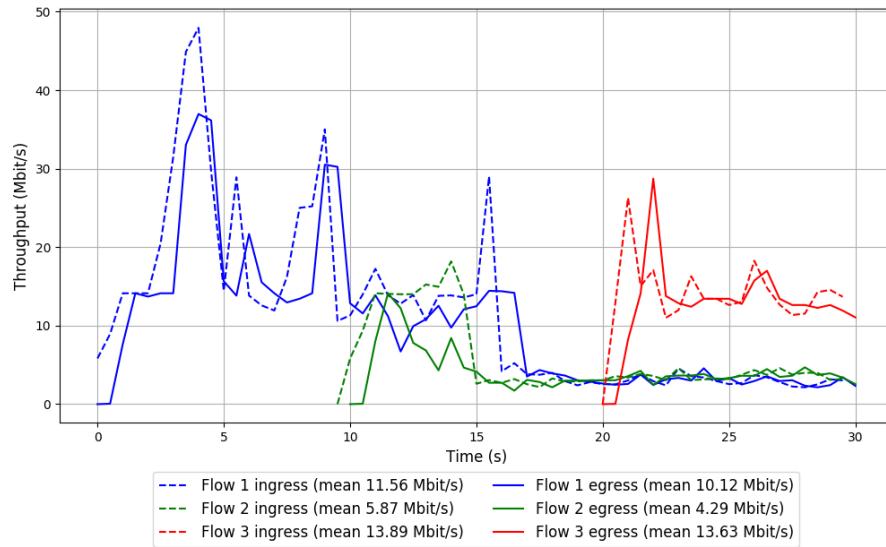


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-26 11:33:07
End at: 2018-10-26 11:33:37
Local clock offset: 2.127 ms
Remote clock offset: -27.685 ms

# Below is generated by plot.py at 2018-10-26 11:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.38 Mbit/s
95th percentile per-packet one-way delay: 185.284 ms
Loss rate: 13.93%
-- Flow 1:
Average throughput: 10.12 Mbit/s
95th percentile per-packet one-way delay: 185.303 ms
Loss rate: 13.07%
-- Flow 2:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 185.634 ms
Loss rate: 27.72%
-- Flow 3:
Average throughput: 13.63 Mbit/s
95th percentile per-packet one-way delay: 184.708 ms
Loss rate: 4.34%
```

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

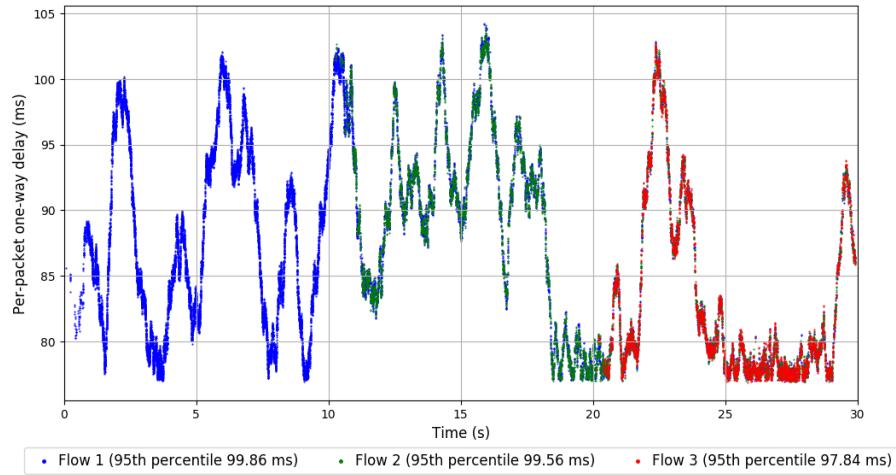
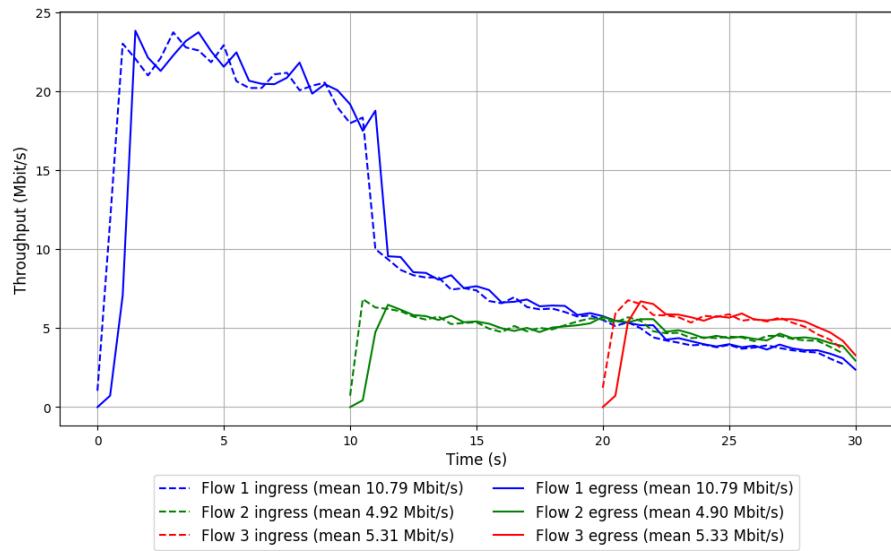


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-26 09:53:54
End at: 2018-10-26 09:54:24
Local clock offset: -1.846 ms
Remote clock offset: 8.883 ms

# Below is generated by plot.py at 2018-10-26 11:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.79 Mbit/s
95th percentile per-packet one-way delay: 99.695 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 10.79 Mbit/s
95th percentile per-packet one-way delay: 99.857 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 4.90 Mbit/s
95th percentile per-packet one-way delay: 99.556 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 5.33 Mbit/s
95th percentile per-packet one-way delay: 97.836 ms
Loss rate: 1.07%
```

Run 1: Report of TCP Vegas — Data Link

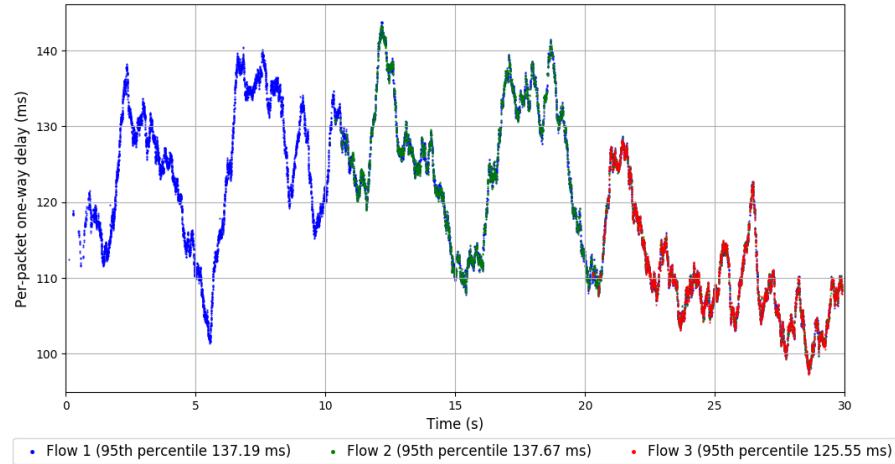
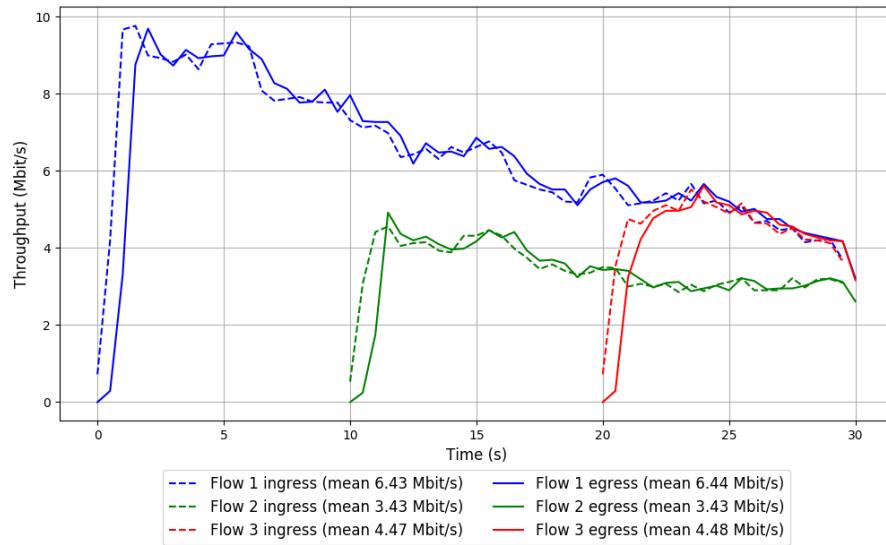


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-26 10:18:22
End at: 2018-10-26 10:18:52
Local clock offset: -1.546 ms
Remote clock offset: 15.168 ms

# Below is generated by plot.py at 2018-10-26 11:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.19 Mbit/s
95th percentile per-packet one-way delay: 136.831 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 137.188 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 137.668 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 125.549 ms
Loss rate: 1.51%
```

Run 2: Report of TCP Vegas — Data Link

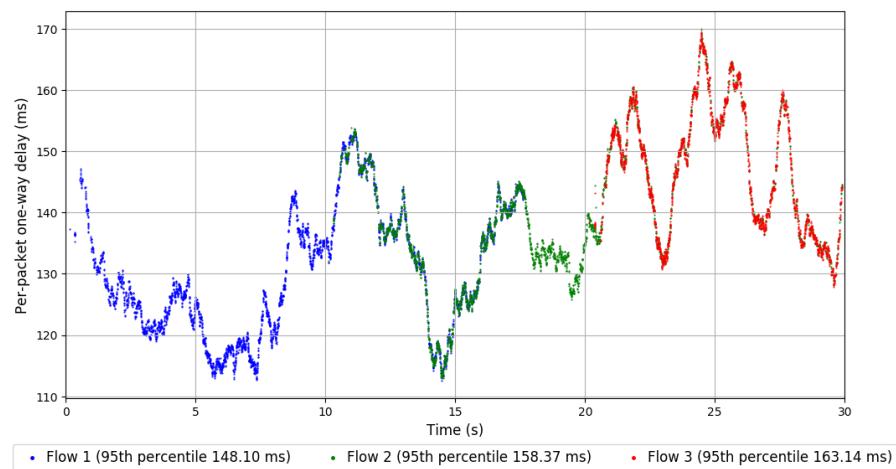
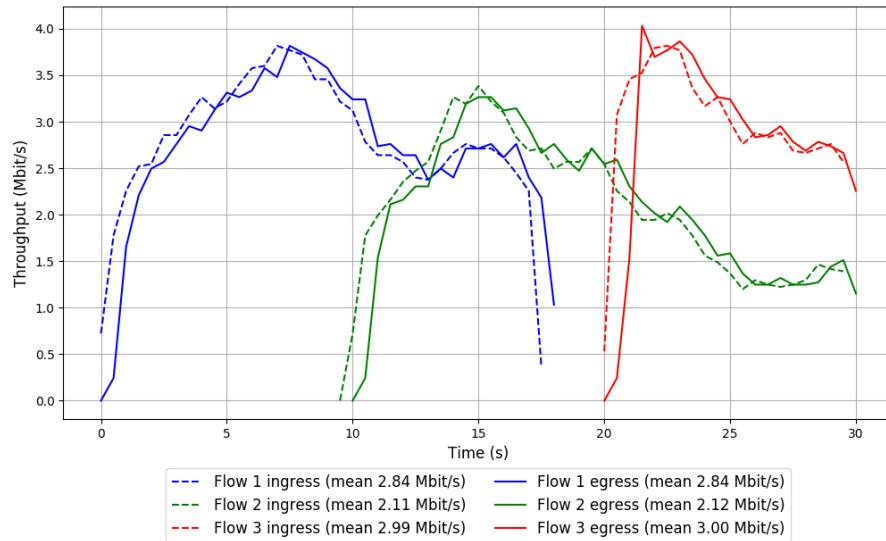


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-26 10:43:34
End at: 2018-10-26 10:44:04
Local clock offset: -1.265 ms
Remote clock offset: 30.555 ms

# Below is generated by plot.py at 2018-10-26 11:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 158.774 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 148.104 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 158.366 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 163.139 ms
Loss rate: 1.86%
```

Run 3: Report of TCP Vegas — Data Link

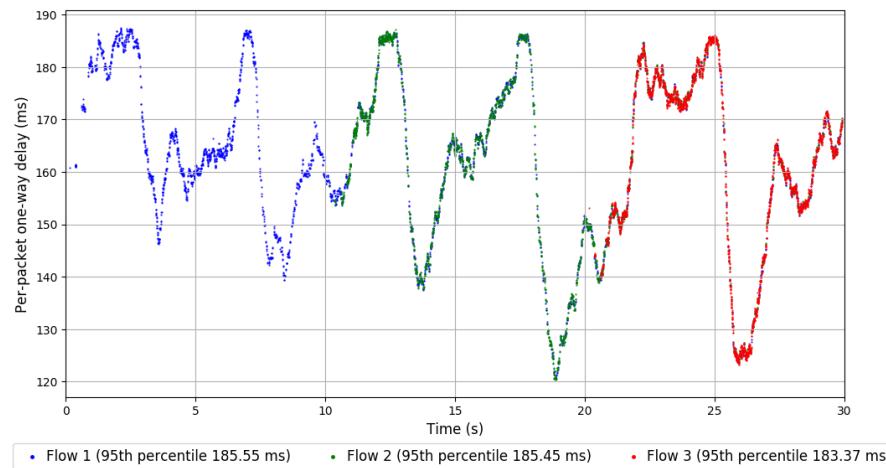
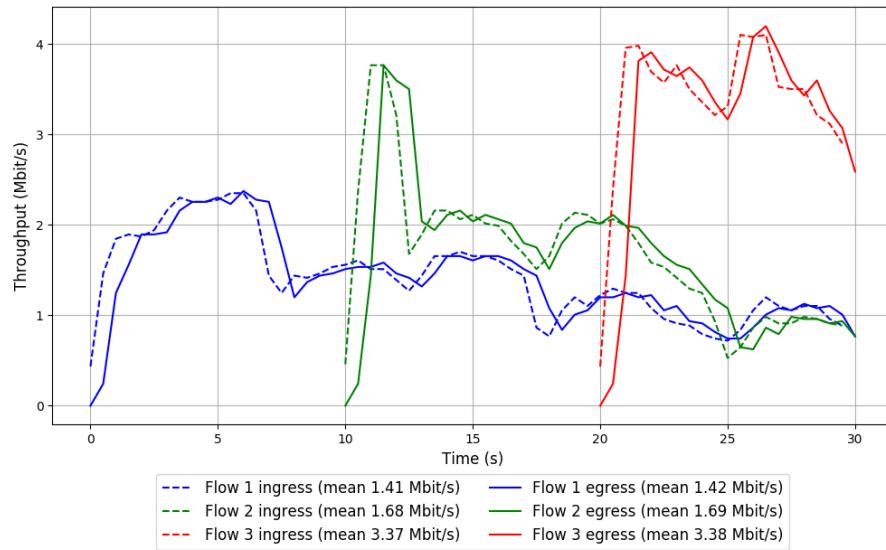


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-26 11:08:49
End at: 2018-10-26 11:09:19
Local clock offset: 0.709 ms
Remote clock offset: 20.684 ms

# Below is generated by plot.py at 2018-10-26 11:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 185.217 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 185.551 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 185.452 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 3.38 Mbit/s
95th percentile per-packet one-way delay: 183.374 ms
Loss rate: 2.10%
```

Run 4: Report of TCP Vegas — Data Link

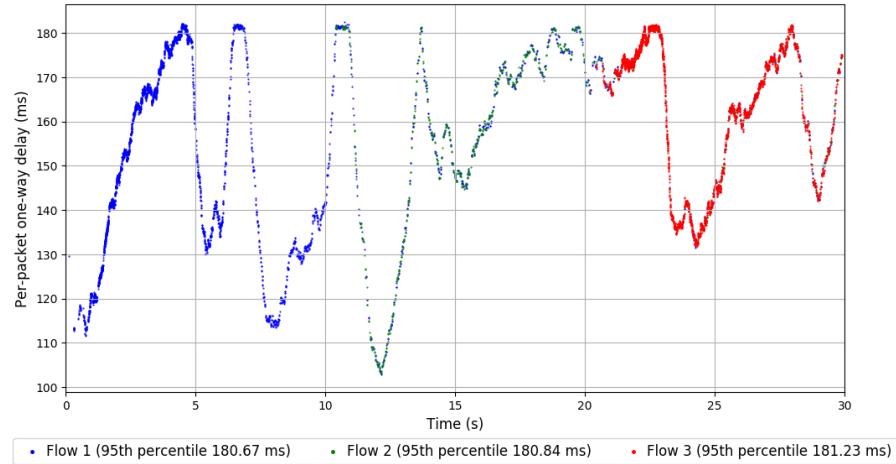
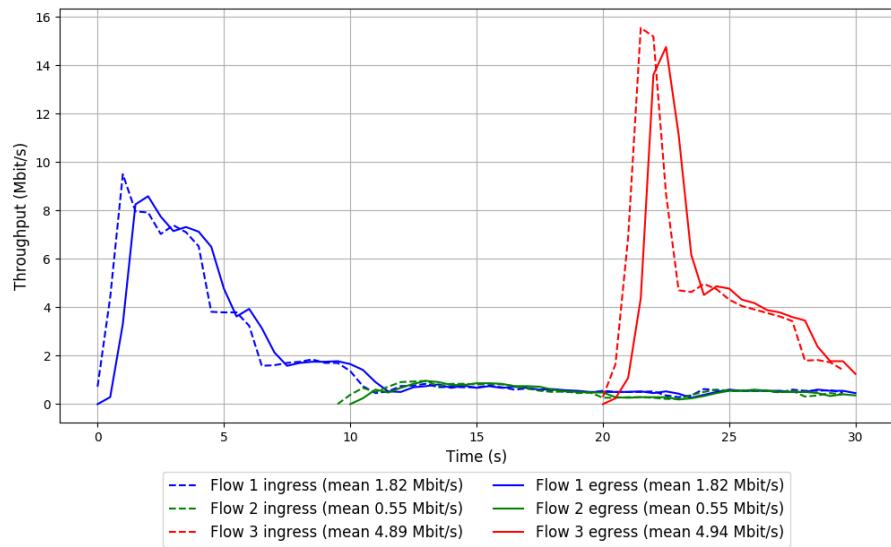


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-26 11:34:57
End at: 2018-10-26 11:35:27
Local clock offset: 1.439 ms
Remote clock offset: -25.0 ms

# Below is generated by plot.py at 2018-10-26 11:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.79 Mbit/s
95th percentile per-packet one-way delay: 181.076 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 180.672 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 180.837 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 4.94 Mbit/s
95th percentile per-packet one-way delay: 181.231 ms
Loss rate: 1.31%
```

Run 5: Report of TCP Vegas — Data Link

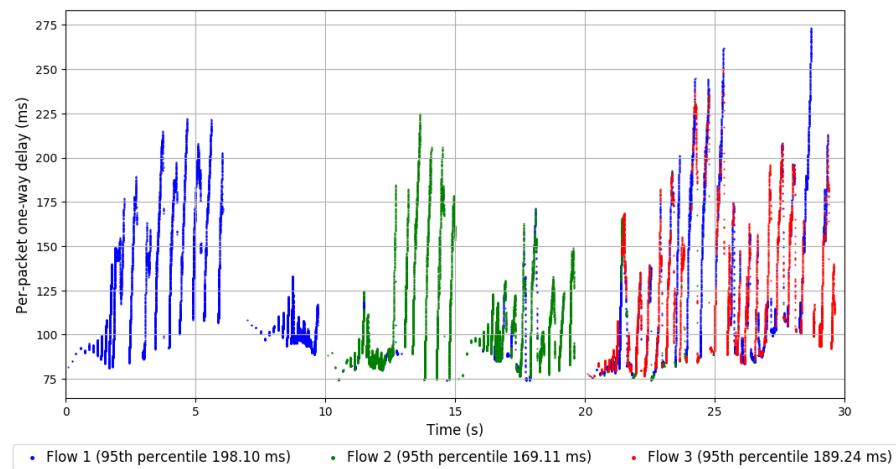
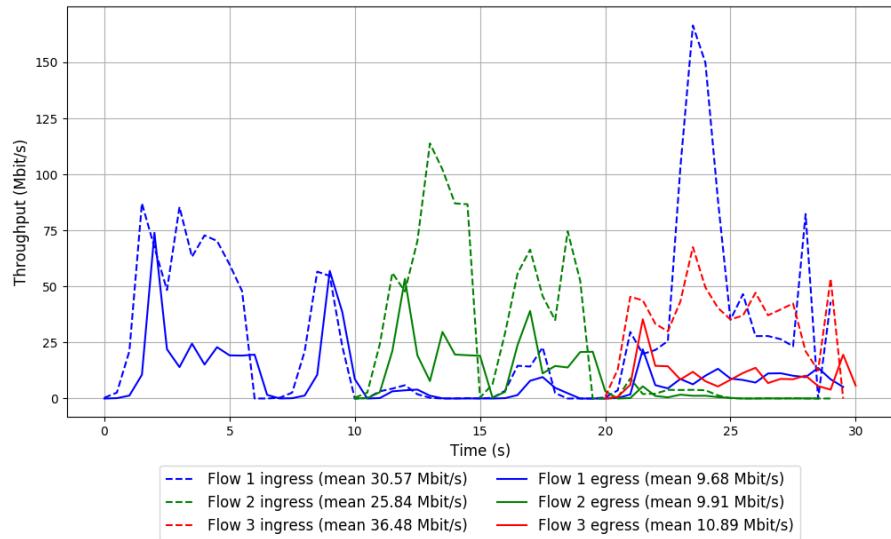


Run 1: Statistics of Verus

```
Start at: 2018-10-26 09:46:04
End at: 2018-10-26 09:46:34
Local clock offset: -1.811 ms
Remote clock offset: 13.447 ms

# Below is generated by plot.py at 2018-10-26 11:44:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.14 Mbit/s
95th percentile per-packet one-way delay: 190.010 ms
Loss rate: 67.36%
-- Flow 1:
Average throughput: 9.68 Mbit/s
95th percentile per-packet one-way delay: 198.099 ms
Loss rate: 68.20%
-- Flow 2:
Average throughput: 9.91 Mbit/s
95th percentile per-packet one-way delay: 169.106 ms
Loss rate: 63.98%
-- Flow 3:
Average throughput: 10.89 Mbit/s
95th percentile per-packet one-way delay: 189.240 ms
Loss rate: 70.05%
```

Run 1: Report of Verus — Data Link

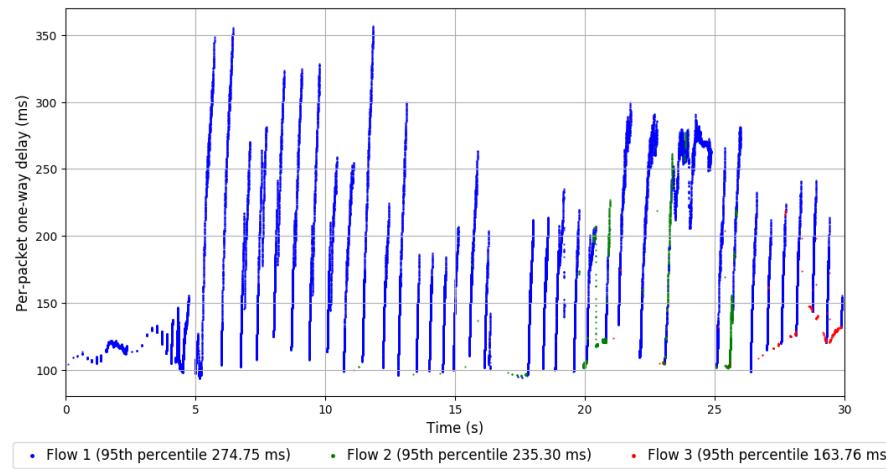
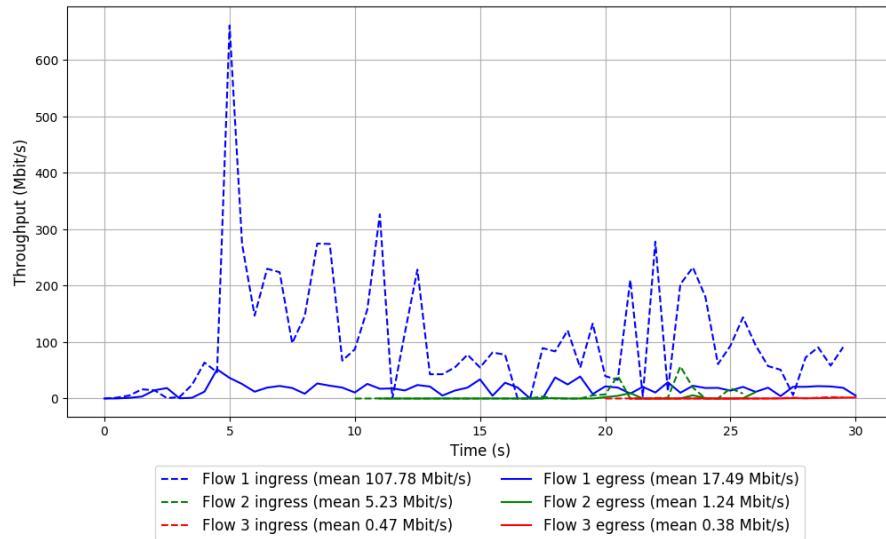


Run 2: Statistics of Verus

```
Start at: 2018-10-26 10:10:03
End at: 2018-10-26 10:10:33
Local clock offset: -1.377 ms
Remote clock offset: 12.949 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.22 Mbit/s
95th percentile per-packet one-way delay: 274.125 ms
Loss rate: 83.54%
-- Flow 1:
Average throughput: 17.49 Mbit/s
95th percentile per-packet one-way delay: 274.752 ms
Loss rate: 83.77%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 235.298 ms
Loss rate: 77.64%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 163.760 ms
Loss rate: 29.97%
```

Run 2: Report of Verus — Data Link

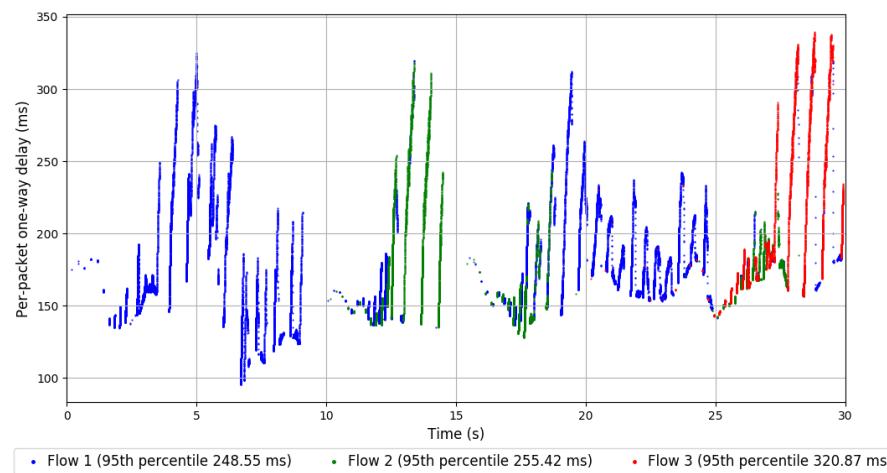
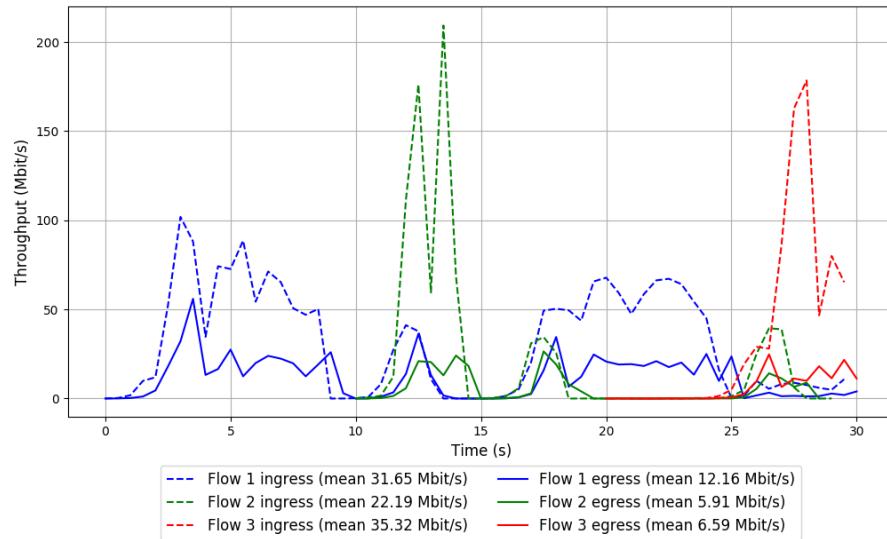


Run 3: Statistics of Verus

```
Start at: 2018-10-26 10:35:10
End at: 2018-10-26 10:35:40
Local clock offset: -1.438 ms
Remote clock offset: 19.196 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.89 Mbit/s
95th percentile per-packet one-way delay: 267.113 ms
Loss rate: 69.20%
-- Flow 1:
Average throughput: 12.16 Mbit/s
95th percentile per-packet one-way delay: 248.550 ms
Loss rate: 61.91%
-- Flow 2:
Average throughput: 5.91 Mbit/s
95th percentile per-packet one-way delay: 255.417 ms
Loss rate: 75.05%
-- Flow 3:
Average throughput: 6.59 Mbit/s
95th percentile per-packet one-way delay: 320.873 ms
Loss rate: 81.78%
```

Run 3: Report of Verus — Data Link

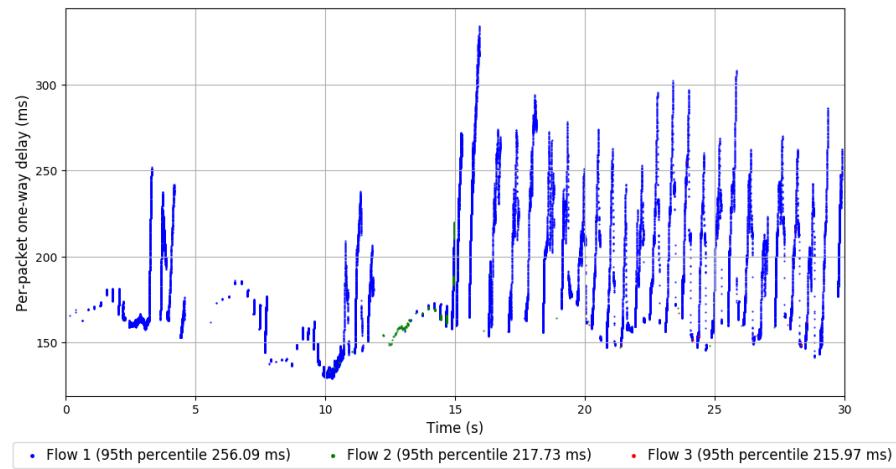
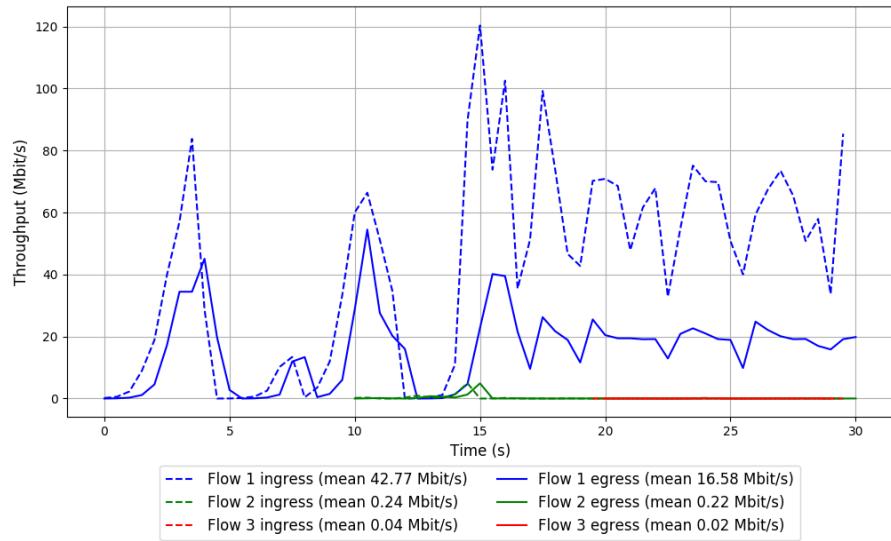


Run 4: Statistics of Verus

```
Start at: 2018-10-26 11:00:25
End at: 2018-10-26 11:00:55
Local clock offset: -1.19 ms
Remote clock offset: 37.165 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.73 Mbit/s
95th percentile per-packet one-way delay: 255.921 ms
Loss rate: 61.16%
-- Flow 1:
Average throughput: 16.58 Mbit/s
95th percentile per-packet one-way delay: 256.094 ms
Loss rate: 61.36%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 217.734 ms
Loss rate: 8.68%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 215.975 ms
Loss rate: 58.82%
```

Run 4: Report of Verus — Data Link

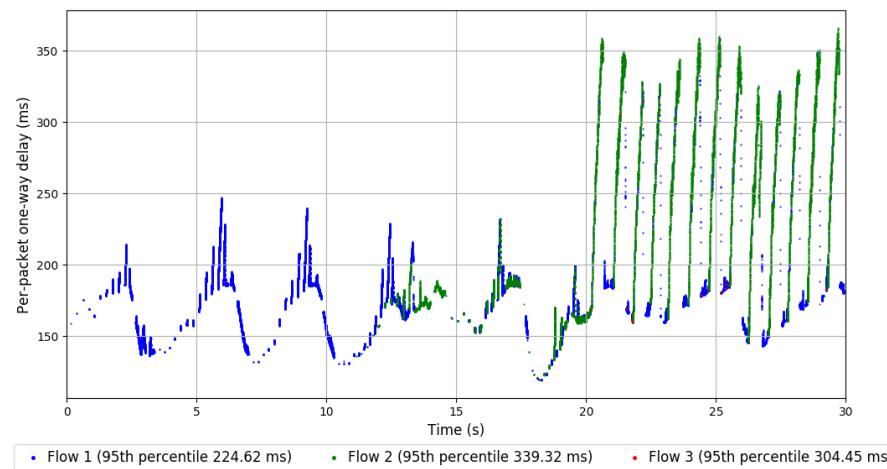
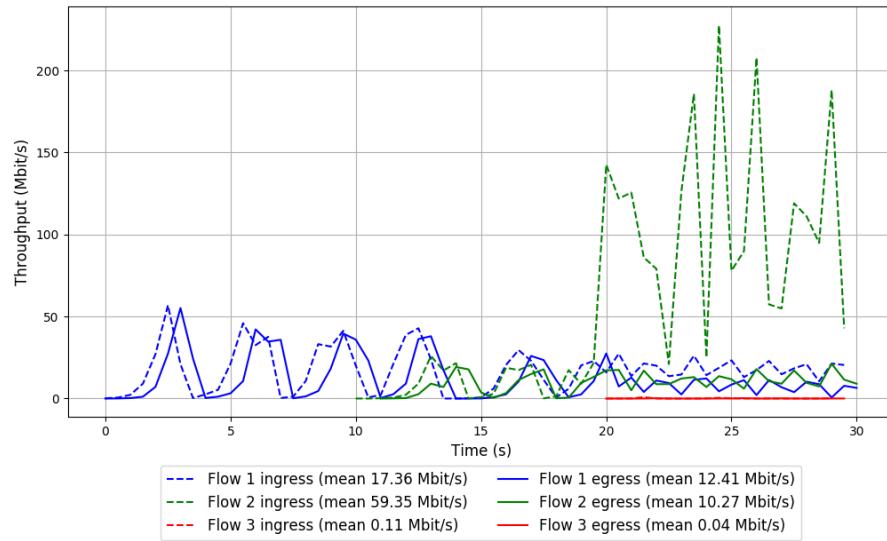


Run 5: Statistics of Verus

```
Start at: 2018-10-26 11:26:03
End at: 2018-10-26 11:26:33
Local clock offset: 2.485 ms
Remote clock offset: -20.095 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.85 Mbit/s
95th percentile per-packet one-way delay: 316.269 ms
Loss rate: 67.13%
-- Flow 1:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 224.616 ms
Loss rate: 28.98%
-- Flow 2:
Average throughput: 10.27 Mbit/s
95th percentile per-packet one-way delay: 339.320 ms
Loss rate: 83.87%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 304.451 ms
Loss rate: 62.35%
```

Run 5: Report of Verus — Data Link

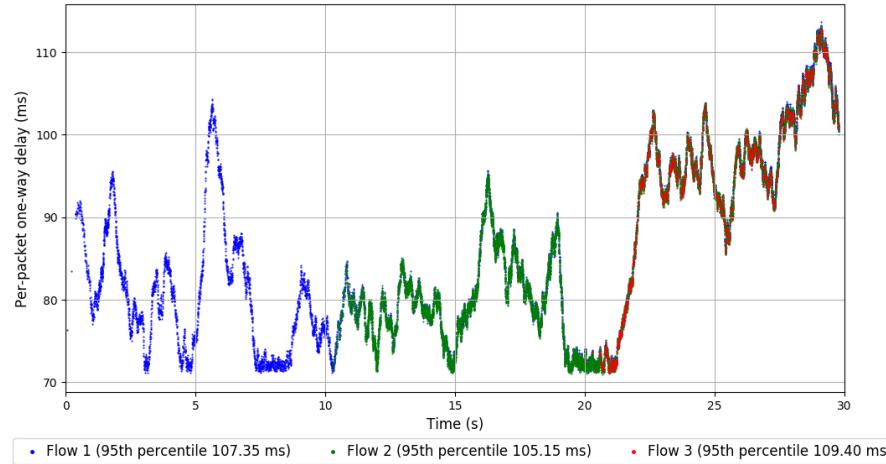
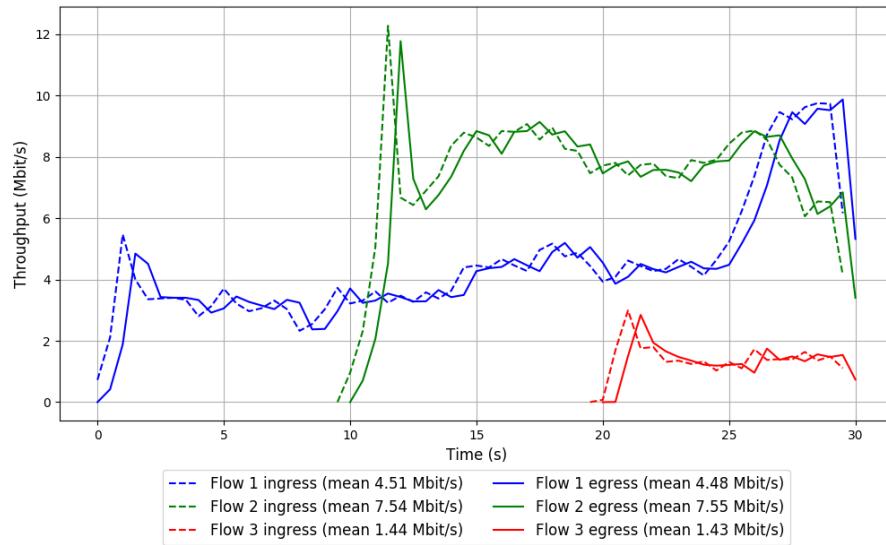


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-10-26 09:50:00
End at: 2018-10-26 09:50:30
Local clock offset: -1.842 ms
Remote clock offset: 15.035 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.97 Mbit/s
95th percentile per-packet one-way delay: 106.886 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 107.352 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 7.55 Mbit/s
95th percentile per-packet one-way delay: 105.151 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 109.403 ms
Loss rate: 2.14%
```

Run 1: Report of PCC-Vivace — Data Link

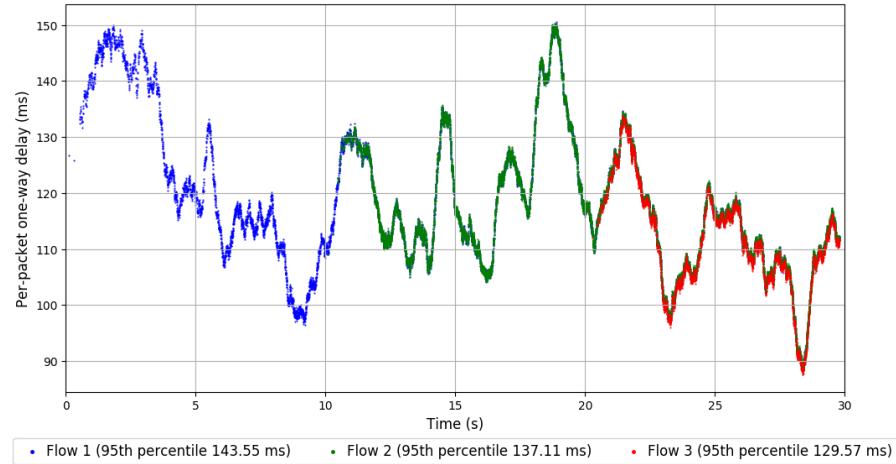
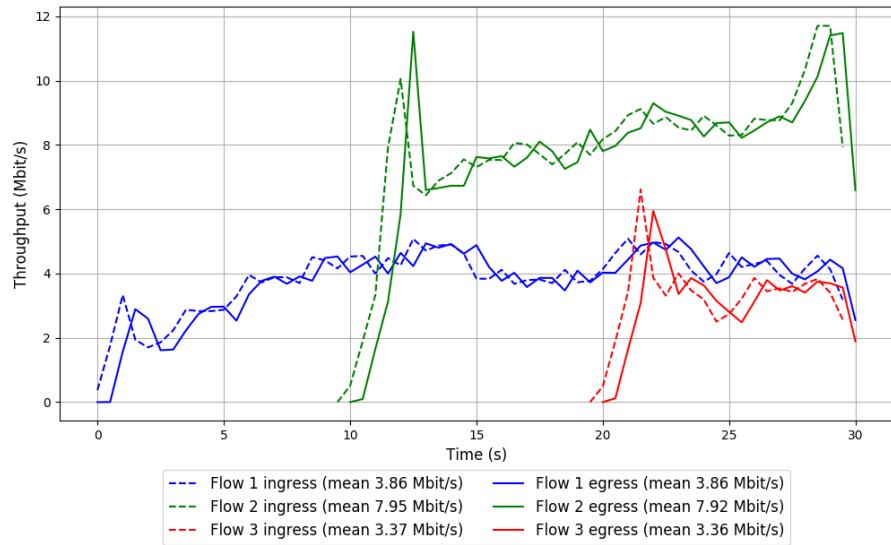


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-26 10:14:14
End at: 2018-10-26 10:14:44
Local clock offset: -1.39 ms
Remote clock offset: 13.092 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.22 Mbit/s
95th percentile per-packet one-way delay: 140.349 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 143.551 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 137.113 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 129.570 ms
Loss rate: 2.06%
```

Run 2: Report of PCC-Vivace — Data Link

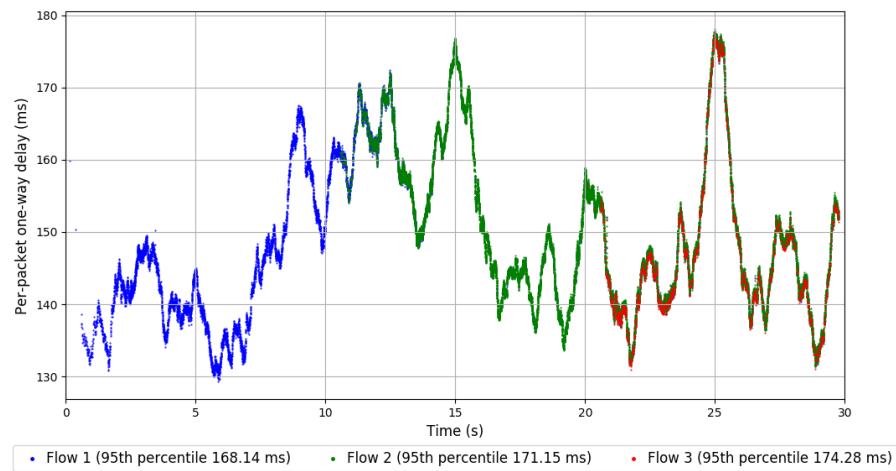
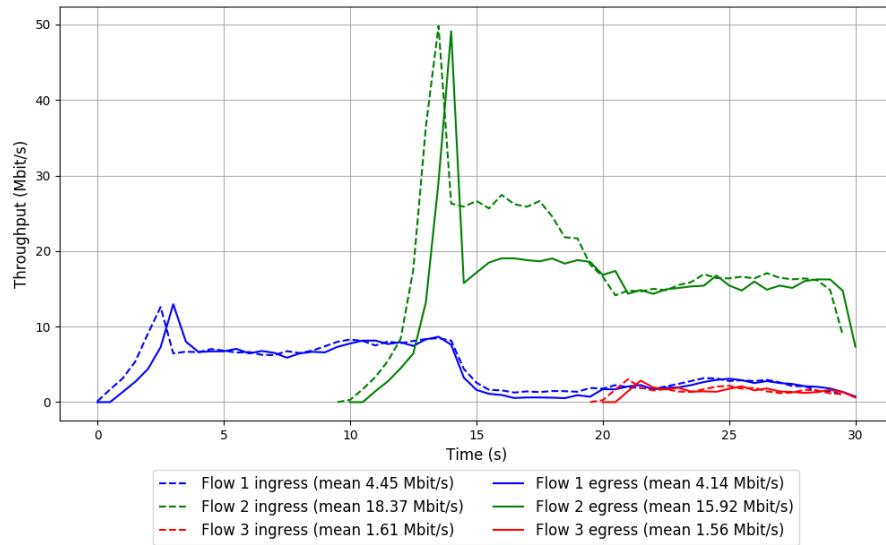


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-26 10:39:23
End at: 2018-10-26 10:39:53
Local clock offset: -1.086 ms
Remote clock offset: 31.927 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.22 Mbit/s
95th percentile per-packet one-way delay: 169.727 ms
Loss rate: 12.28%
-- Flow 1:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 168.138 ms
Loss rate: 7.64%
-- Flow 2:
Average throughput: 15.92 Mbit/s
95th percentile per-packet one-way delay: 171.153 ms
Loss rate: 14.27%
-- Flow 3:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 174.275 ms
Loss rate: 5.26%
```

Run 3: Report of PCC-Vivace — Data Link

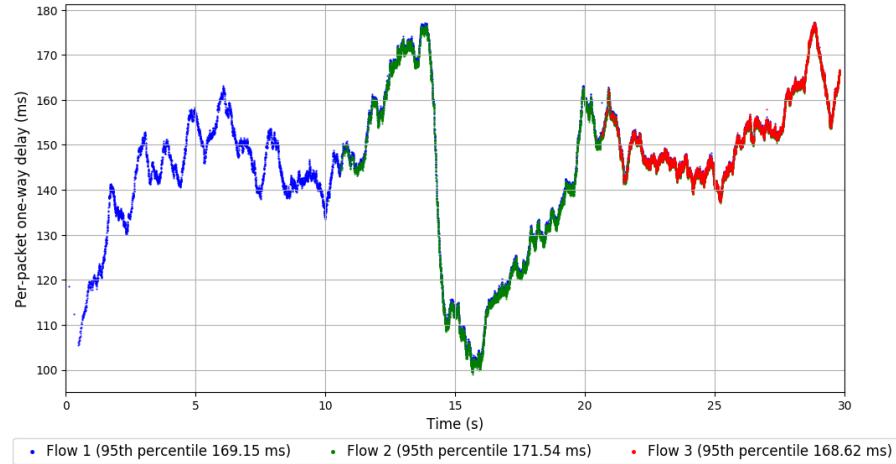
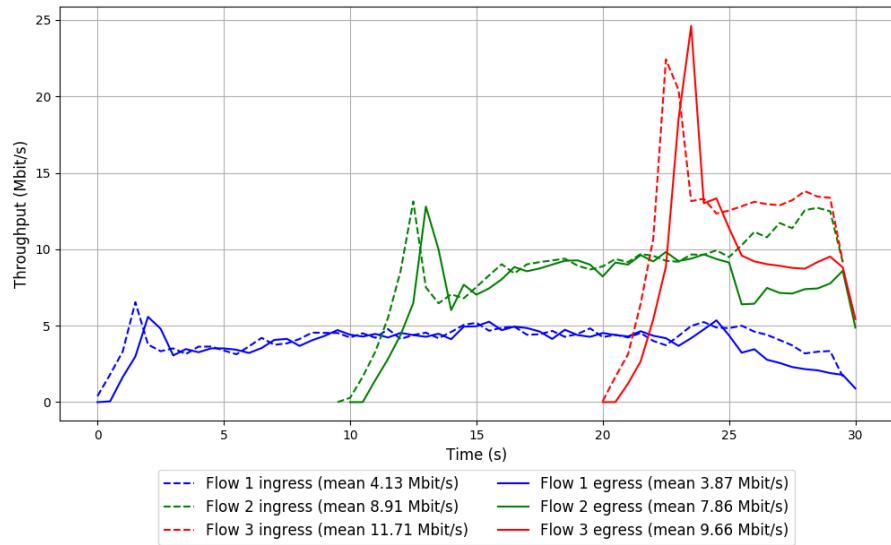


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-26 11:04:33
End at: 2018-10-26 11:05:03
Local clock offset: -0.346 ms
Remote clock offset: 46.683 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 170.874 ms
Loss rate: 12.80%
-- Flow 1:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 169.154 ms
Loss rate: 6.86%
-- Flow 2:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 171.536 ms
Loss rate: 12.66%
-- Flow 3:
Average throughput: 9.66 Mbit/s
95th percentile per-packet one-way delay: 168.624 ms
Loss rate: 19.37%
```

Run 4: Report of PCC-Vivace — Data Link

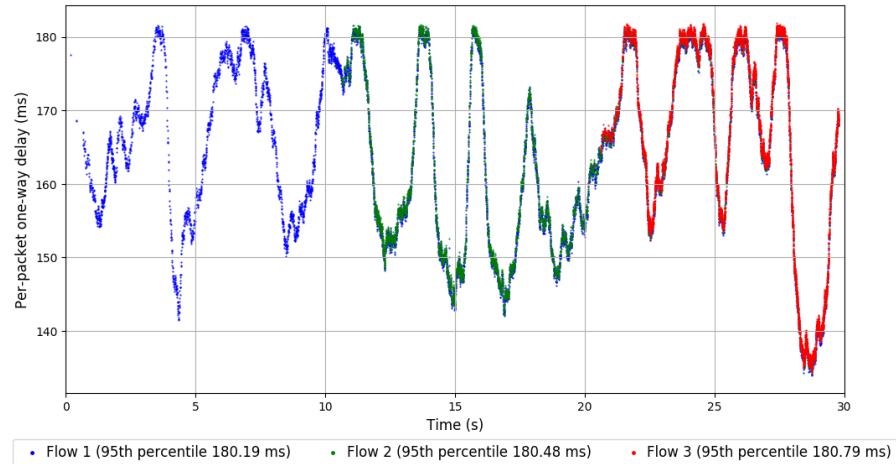
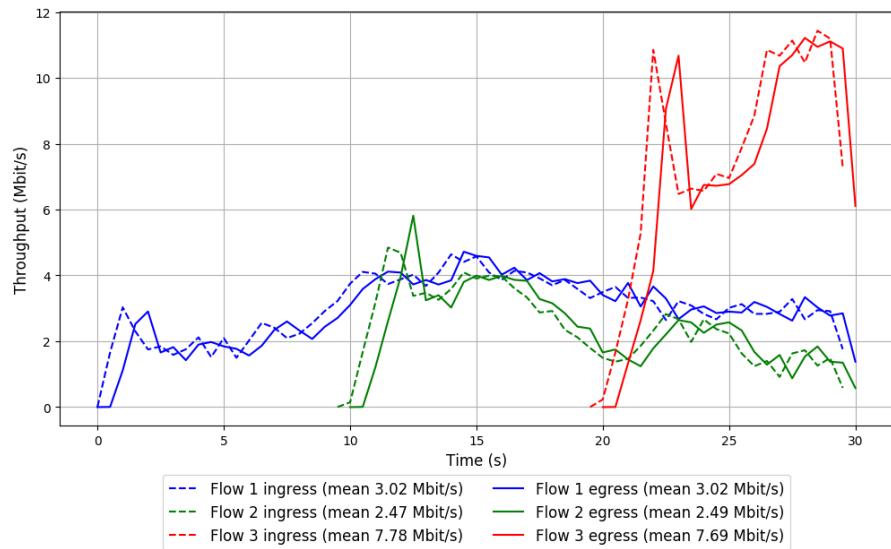


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-26 11:30:20
End at: 2018-10-26 11:30:50
Local clock offset: 2.522 ms
Remote clock offset: -20.705 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.18 Mbit/s
95th percentile per-packet one-way delay: 180.504 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 180.194 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 180.481 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 7.69 Mbit/s
95th percentile per-packet one-way delay: 180.793 ms
Loss rate: 3.30%
```

Run 5: Report of PCC-Vivace — Data Link

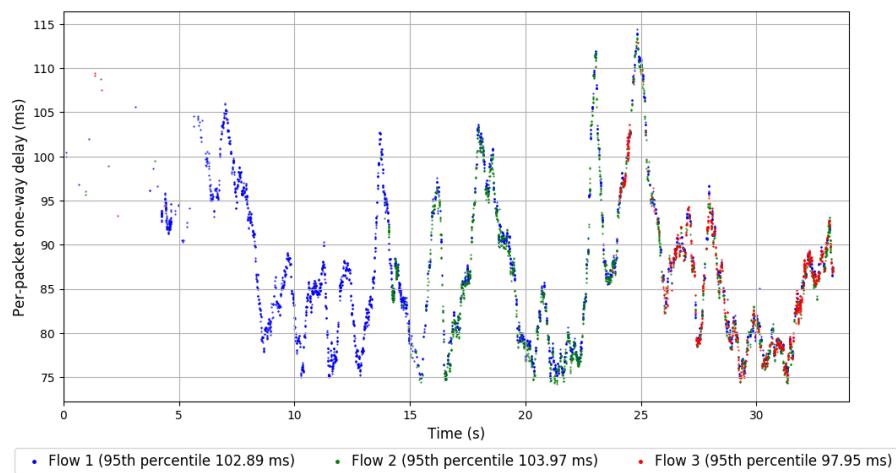
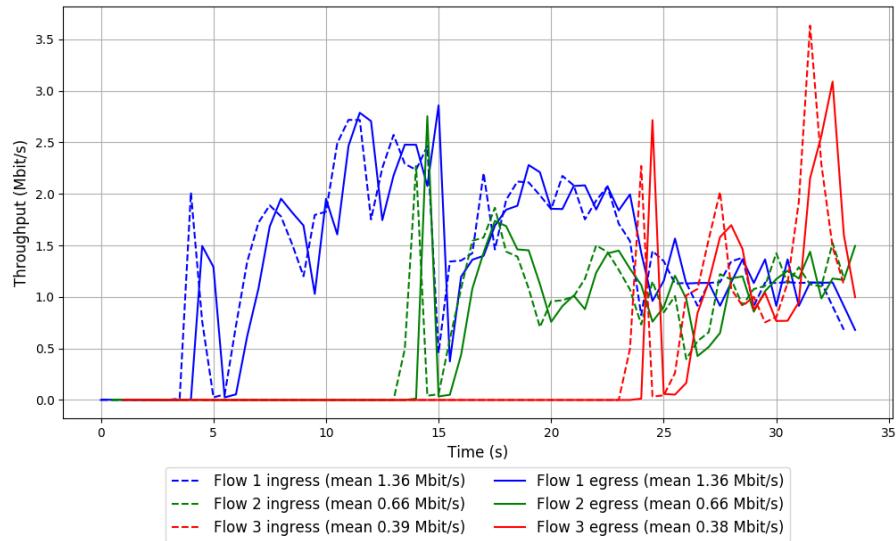


Run 1: Statistics of WebRTC media

```
Start at: 2018-10-26 09:47:27
End at: 2018-10-26 09:47:57
Local clock offset: -1.898 ms
Remote clock offset: 12.602 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 102.575 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 102.894 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 103.971 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 97.954 ms
Loss rate: 1.49%
```

Run 1: Report of WebRTC media — Data Link

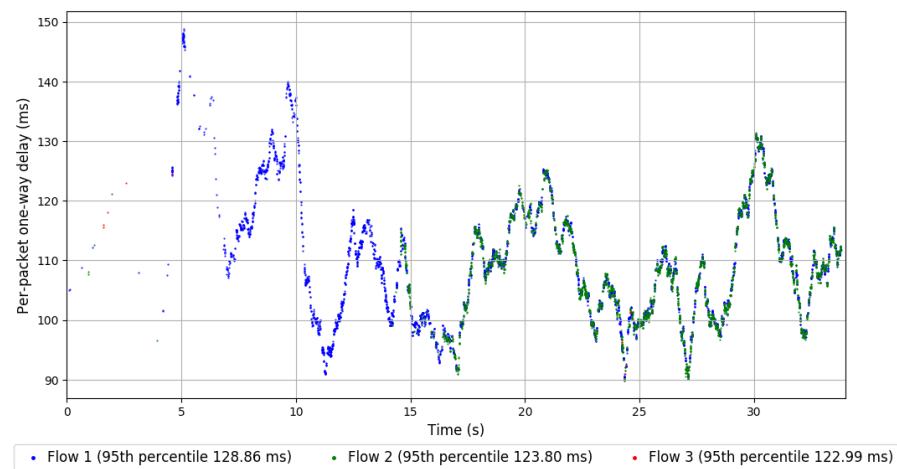
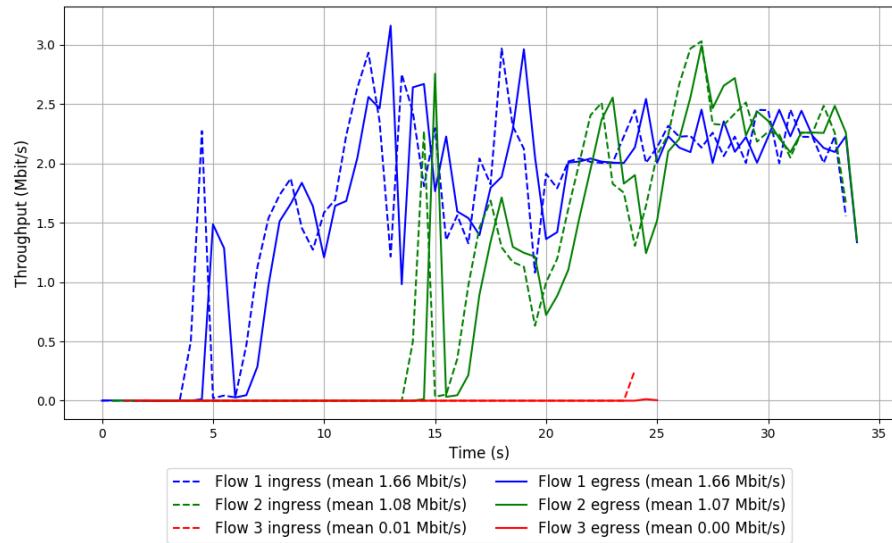


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-26 10:11:36
End at: 2018-10-26 10:12:06
Local clock offset: -1.48 ms
Remote clock offset: 7.566 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.70 Mbit/s
95th percentile per-packet one-way delay: 126.388 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 128.862 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 123.802 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 122.986 ms
Loss rate: 90.59%
```

Run 2: Report of WebRTC media — Data Link

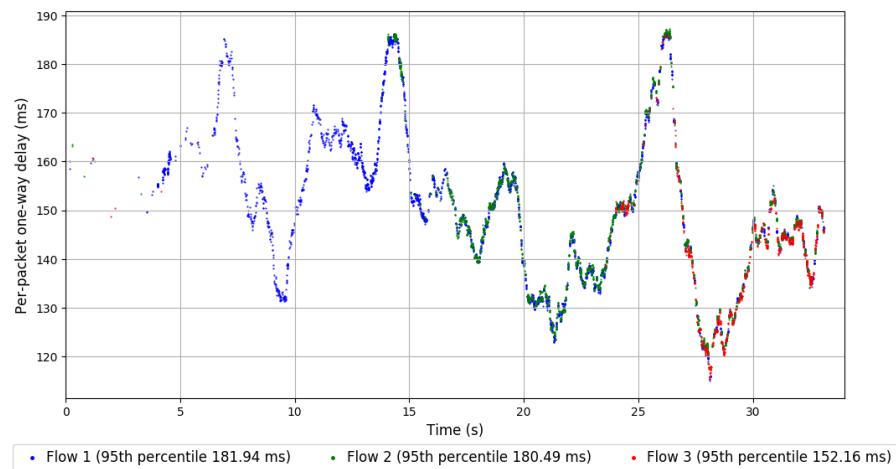
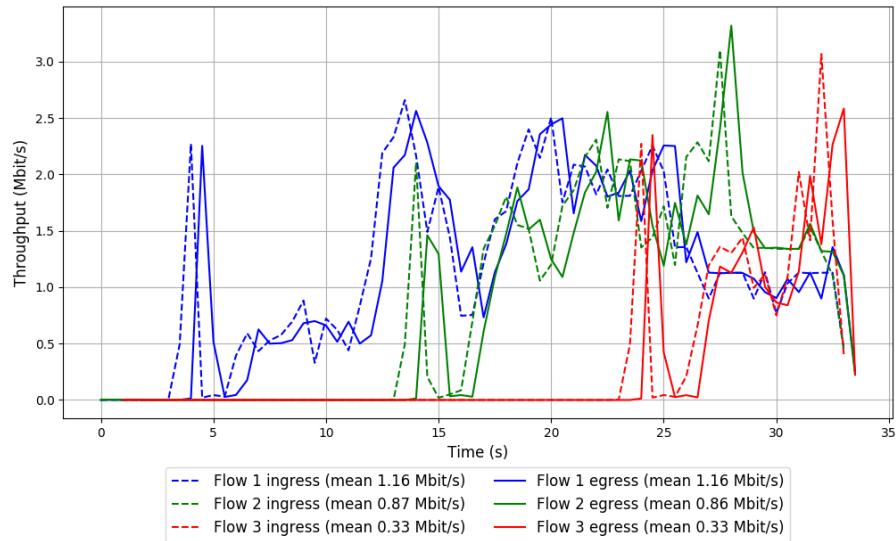


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-26 10:36:40
End at: 2018-10-26 10:37:10
Local clock offset: -1.497 ms
Remote clock offset: 18.366 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 180.361 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 181.935 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 180.485 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 152.158 ms
Loss rate: 2.00%
```

Run 3: Report of WebRTC media — Data Link

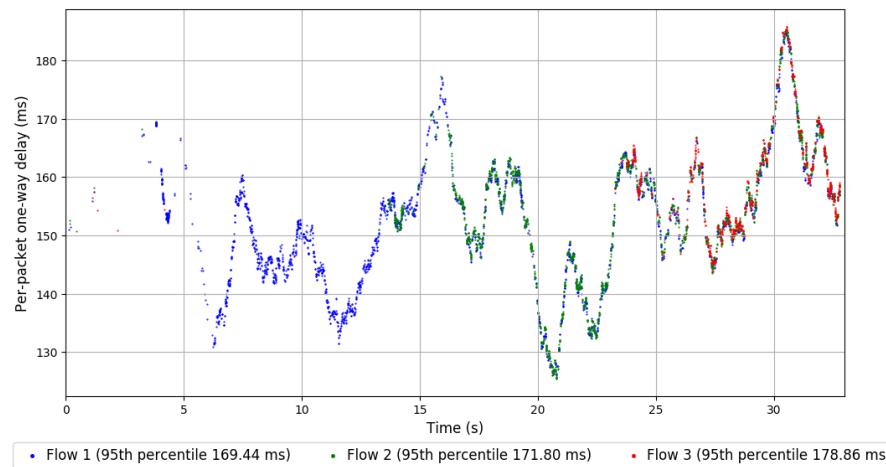
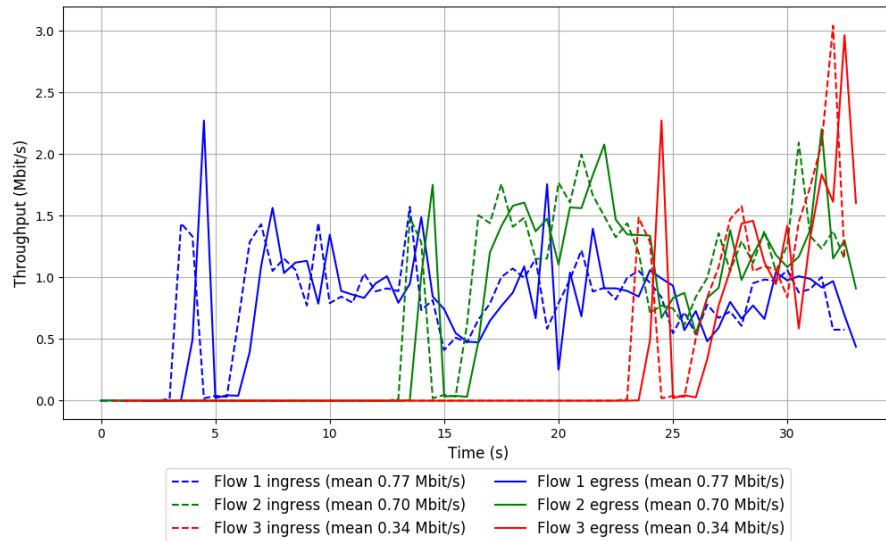


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-26 11:01:52
End at: 2018-10-26 11:02:22
Local clock offset: -1.208 ms
Remote clock offset: 35.932 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 172.856 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 169.436 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 171.803 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 178.863 ms
Loss rate: 2.45%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-26 11:27:37
End at: 2018-10-26 11:28:07
Local clock offset: 2.429 ms
Remote clock offset: -18.823 ms

# Below is generated by plot.py at 2018-10-26 11:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 181.698 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 182.284 ms
Loss rate: 91.07%
-- Flow 2:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 181.585 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 182.068 ms
Loss rate: 3.32%
```

Run 5: Report of WebRTC media — Data Link

