

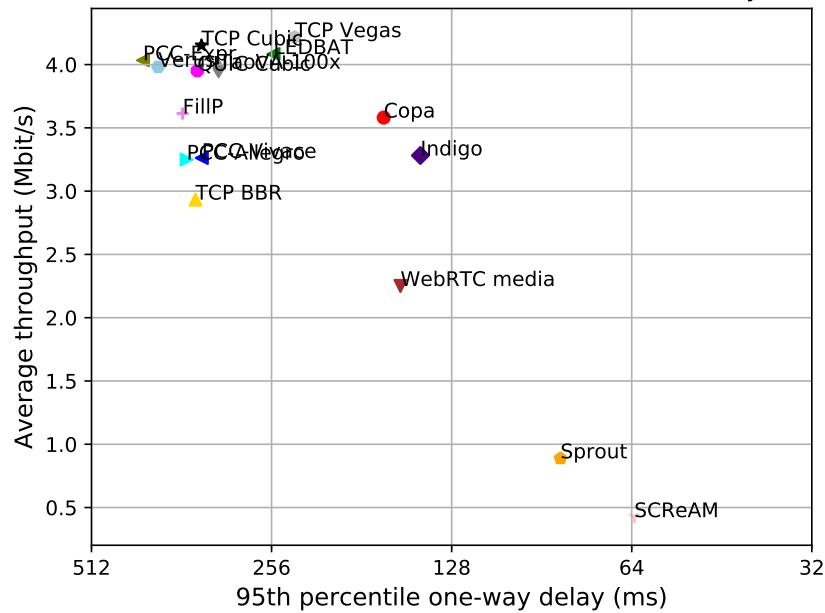
Pantheon Report

Generated at 2018-06-06 02:18:51 (UTC).
Data path: India ppp0 ppp0 (*remote*) → AWS India 1 Ethernet (*local*).
Repeated the test of 16 congestion control schemes 3 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

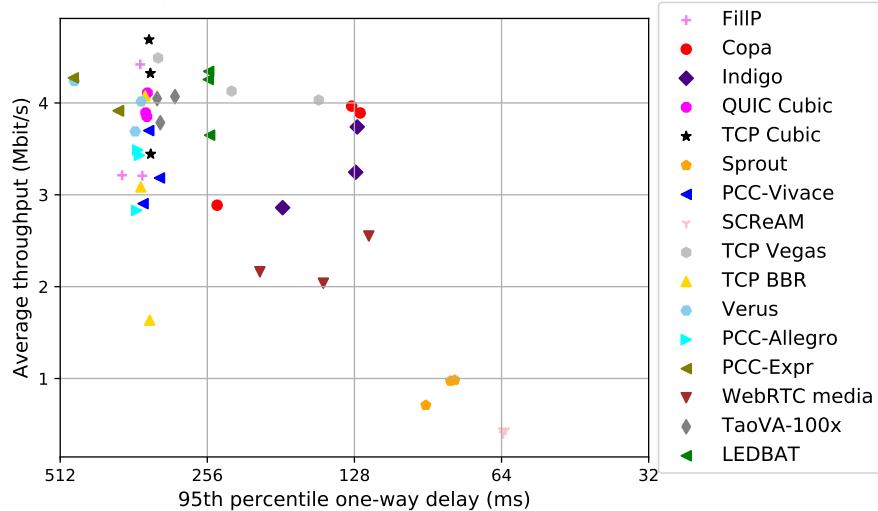
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
NTP offsets were measured against nets.org.sg and have been applied to correct the timestamps in logs.

```
Git summary:  
branch: master @ 227fdf9a3757f17b88537cceed5743a33037a3d2  
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834  
third_party/genericCC @ c7966e494a929986eaa5a9c169a7f381fe1bbbe5  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/libutp @ b3465b942e2826f2b179eab4a906ce6bb7cf3cf  
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39  
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 @ c838669682f0c19f6baf92afc9a596a406d48c1f  
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 India ppp0 to AWS India 1, 3 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from India ppp0 to AWS India 1, 3 runs of 30s each per scheme
3 flows with 10s interval between flows



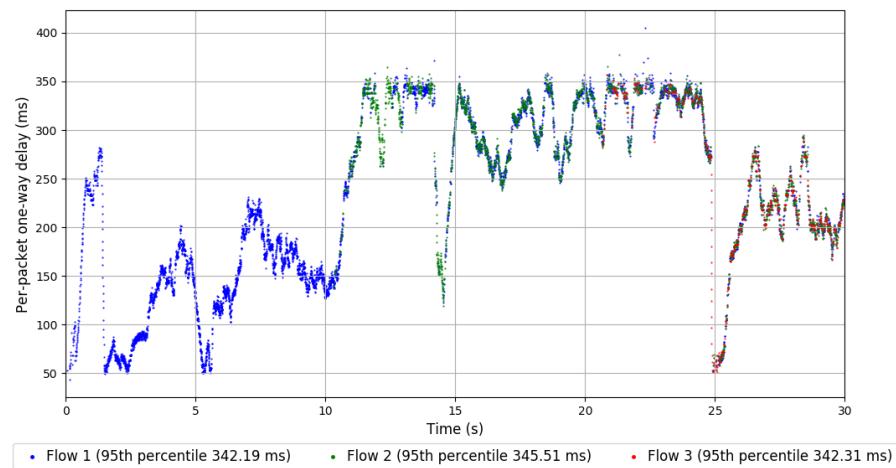
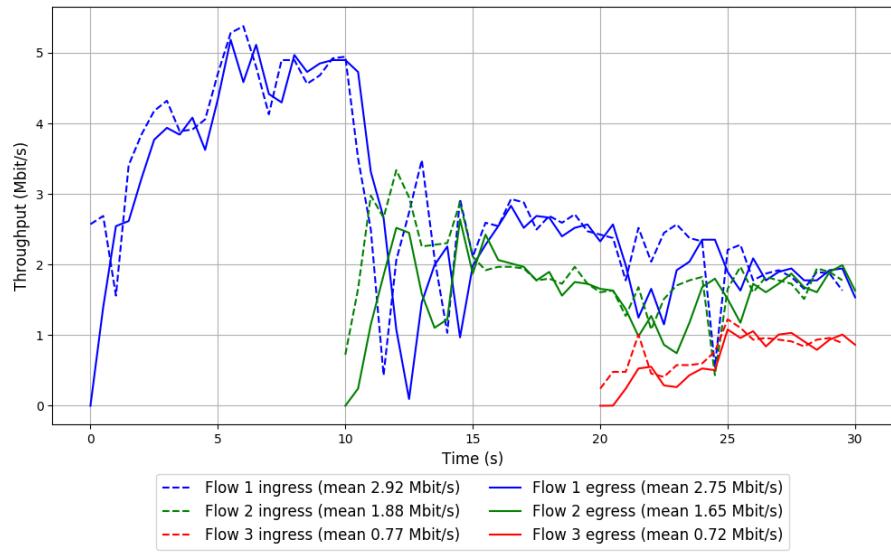
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	1.78	1.49	0.99	340.48	344.96	344.61	8.43	15.18	14.19
Copa		2.11	1.60	1.24	154.27	162.93	188.41	0.33	0.61	1.50
TCP Cubic		2.59	1.93	0.89	333.63	338.26	340.11	1.35	2.14	5.96
FillP		2.21	1.61	1.09	355.54	417.59	349.23	37.73	35.15	29.93
Indigo		1.64	1.65	1.65	119.72	142.69	164.63	0.30	0.92	1.35
LEDBAT		2.63	1.72	0.98	234.22	275.34	286.00	0.10	1.15	2.93
PCC-Allegro		1.69	1.62	1.48	348.25	351.43	710.66	20.08	24.53	64.74
PCC-Expr		2.26	1.78	1.90	356.05	483.54	466.56	43.93	57.75	68.01
QUIC Cubic		2.70	1.31	1.20	340.33	341.45	341.29	3.63	5.01	7.17
SCReAM		0.22	0.21	0.21	63.14	62.22	62.58	0.26	0.37	0.81
Sprout		0.43	0.45	0.51	83.94	83.93	84.00	0.19	0.43	0.39
TaoVA-100x		2.35	1.69	1.50	297.50	334.77	334.33	3.53	8.76	9.66
TCP Vegas		1.88	1.93	3.21	184.30	239.21	247.64	0.20	1.30	3.02
Verus		3.71	0.36	0.15	365.03	406.86	357.83	39.97	61.23	59.02
PCC-Vivace		1.82	1.41	1.55	325.34	336.64	341.79	2.53	4.55	8.35
WebRTC media		1.32	0.63	0.32	157.15	169.54	146.38	0.39	0.66	0.91

Run 1: Statistics of TCP BBR

```
Start at: 2018-06-06 01:27:03
End at: 2018-06-06 01:27:33
Local clock offset: 1.689 ms
Remote clock offset: -7.3 ms

# Below is generated by plot.py at 2018-06-06 02:18:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 343.108 ms
Loss rate: 8.02%
-- Flow 1:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 342.191 ms
Loss rate: 5.77%
-- Flow 2:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 345.511 ms
Loss rate: 12.93%
-- Flow 3:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 342.313 ms
Loss rate: 9.57%
```

Run 1: Report of TCP BBR — Data Link

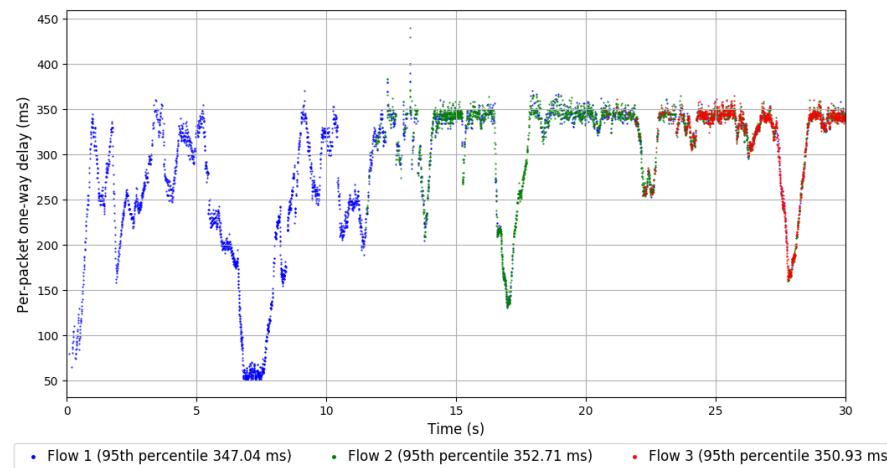
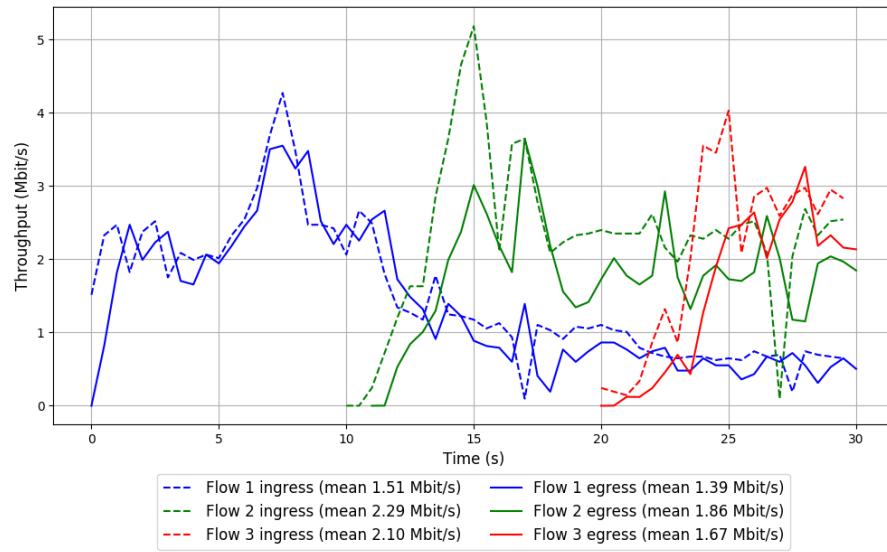


Run 2: Statistics of TCP BBR

```
Start at: 2018-06-06 01:44:30
End at: 2018-06-06 01:45:00
Local clock offset: 2.436 ms
Remote clock offset: -9.17 ms

# Below is generated by plot.py at 2018-06-06 02:18:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 350.224 ms
Loss rate: 17.60%
-- Flow 1:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 347.040 ms
Loss rate: 8.54%
-- Flow 2:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 352.714 ms
Loss rate: 24.12%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 350.932 ms
Loss rate: 22.97%
```

Run 2: Report of TCP BBR — Data Link

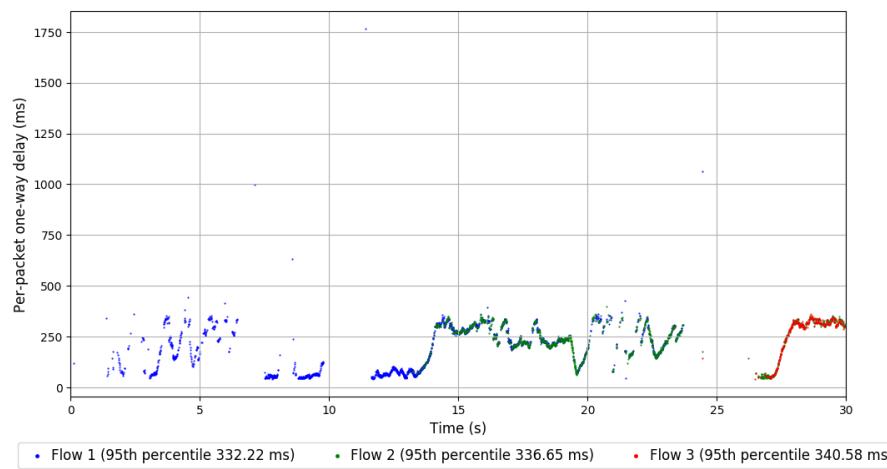
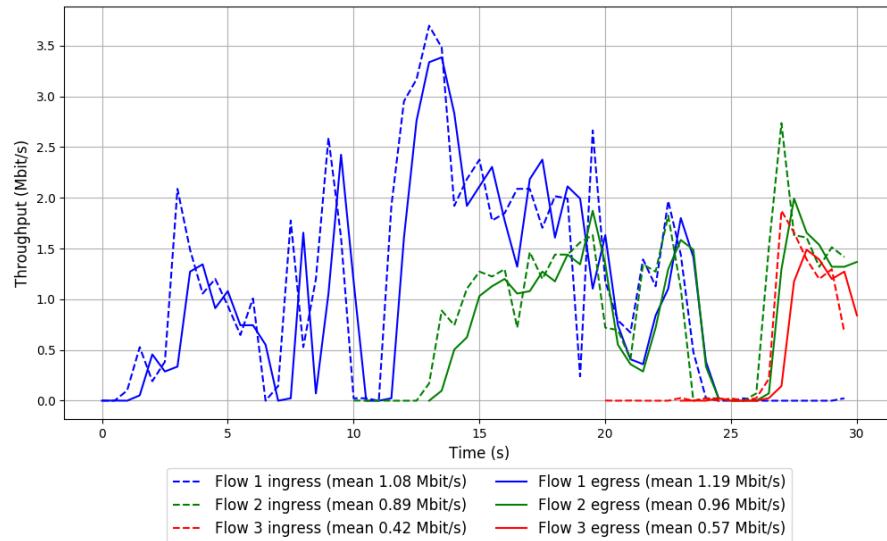


Run 3: Statistics of TCP BBR

```
Start at: 2018-06-06 02:01:59
End at: 2018-06-06 02:02:29
Local clock offset: -4.142 ms
Remote clock offset: 1.977 ms

# Below is generated by plot.py at 2018-06-06 02:18:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 335.819 ms
Loss rate: 10.09%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 332.216 ms
Loss rate: 10.97%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 336.650 ms
Loss rate: 8.49%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 340.576 ms
Loss rate: 10.04%
```

Run 3: Report of TCP BBR — Data Link

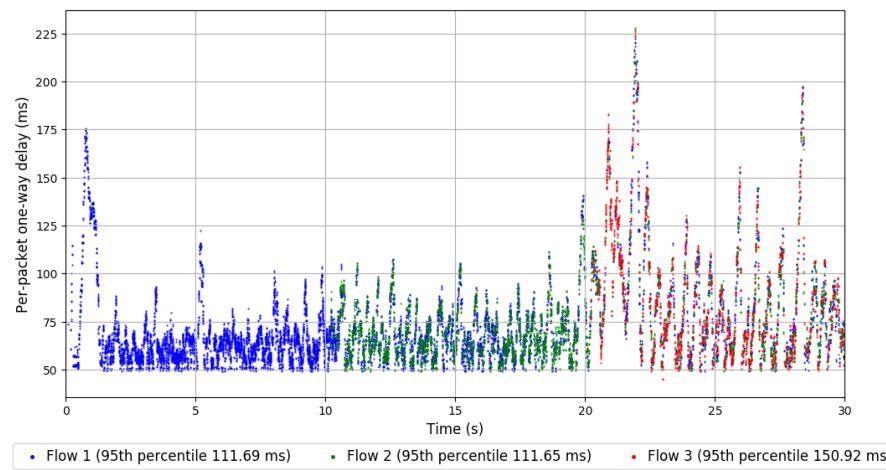
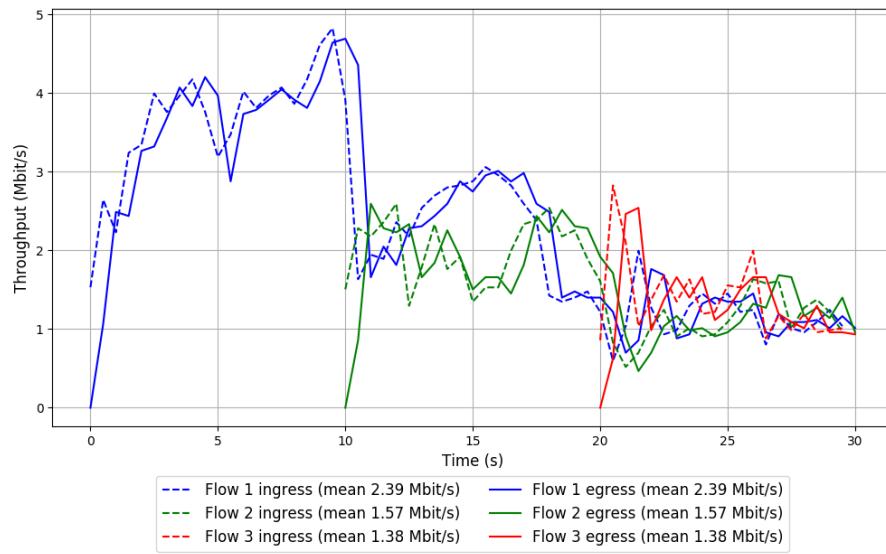


Run 1: Statistics of Copa

```
Start at: 2018-06-06 01:31:24
End at: 2018-06-06 01:31:54
Local clock offset: 1.478 ms
Remote clock offset: -8.139 ms

# Below is generated by plot.py at 2018-06-06 02:18:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 124.595 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 111.685 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 111.647 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 150.923 ms
Loss rate: 0.75%
```

Run 1: Report of Copa — Data Link

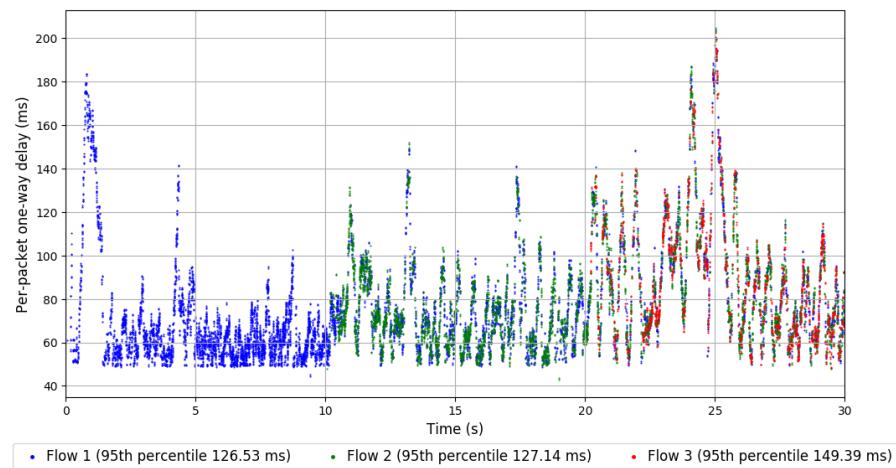
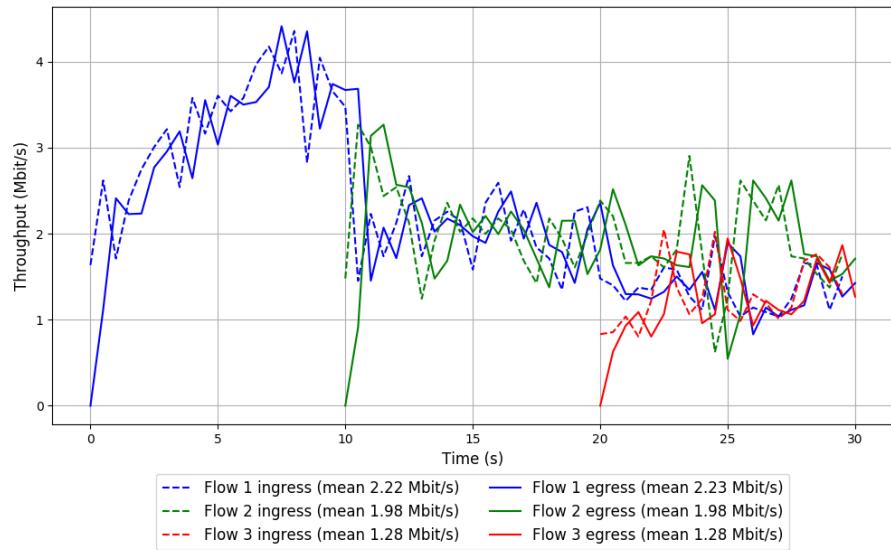


Run 2: Statistics of Copa

```
Start at: 2018-06-06 01:48:52
End at: 2018-06-06 01:49:22
Local clock offset: 0.734 ms
Remote clock offset: -7.072 ms

# Below is generated by plot.py at 2018-06-06 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 129.658 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 126.532 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 127.144 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 149.391 ms
Loss rate: 1.01%
```

Run 2: Report of Copa — Data Link

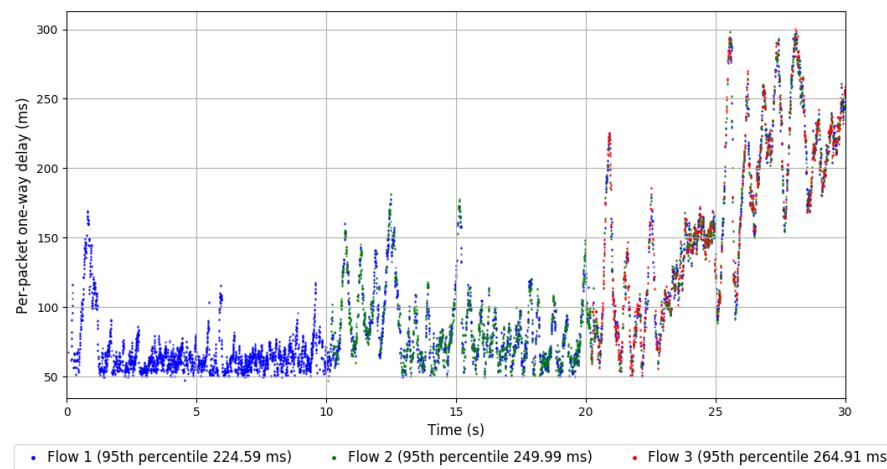
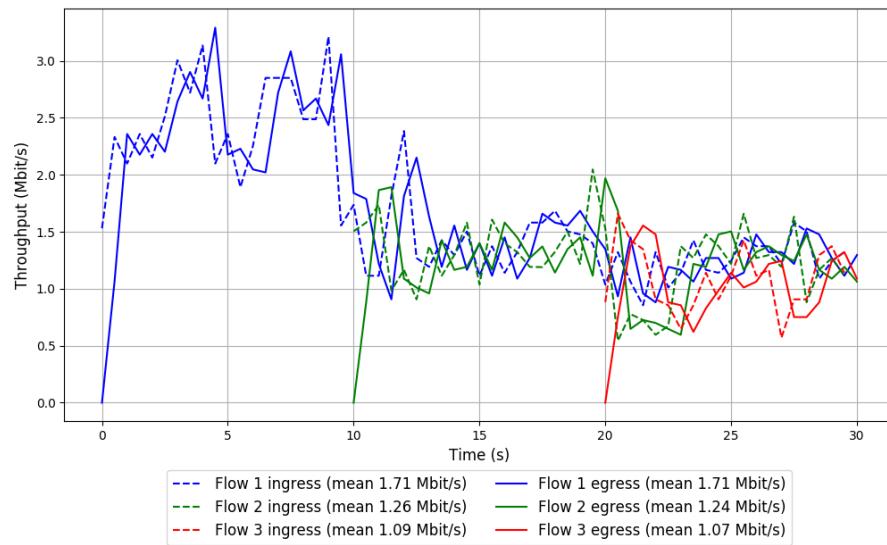


Run 3: Statistics of Copa

```
Start at: 2018-06-06 02:06:20
End at: 2018-06-06 02:06:50
Local clock offset: 1.037 ms
Remote clock offset: 1.913 ms

# Below is generated by plot.py at 2018-06-06 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 244.427 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 224.591 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 249.988 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 264.906 ms
Loss rate: 2.75%
```

Run 3: Report of Copa — Data Link

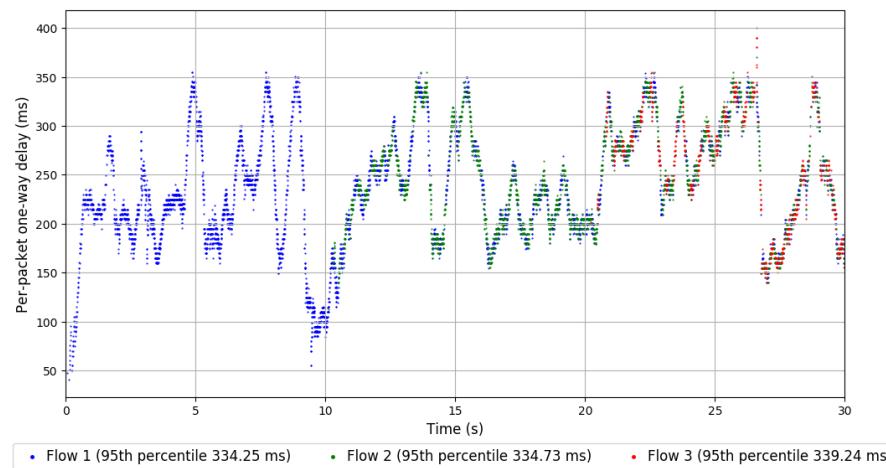
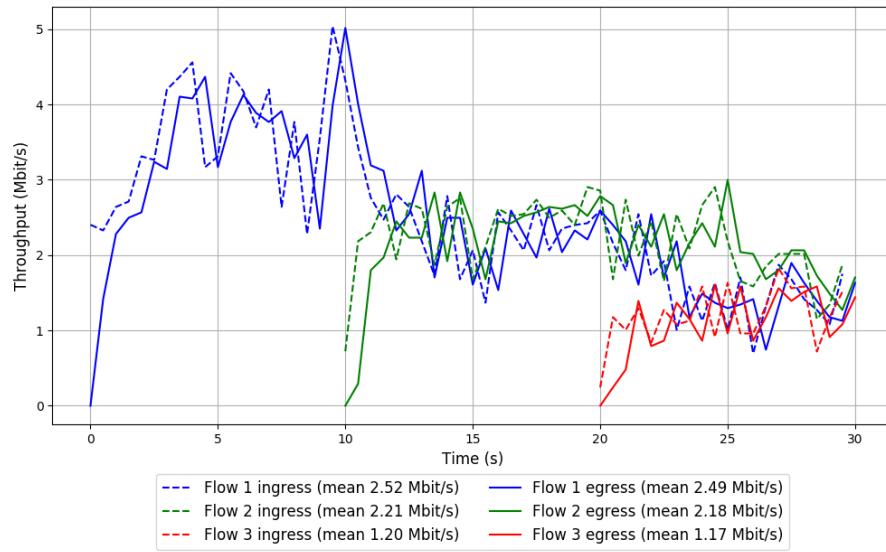


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-06-06 01:33:36
End at: 2018-06-06 01:34:06
Local clock offset: 0.325 ms
Remote clock offset: -8.199 ms

# Below is generated by plot.py at 2018-06-06 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 334.713 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 334.251 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 334.730 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 339.243 ms
Loss rate: 4.04%
```

Run 1: Report of TCP Cubic — Data Link

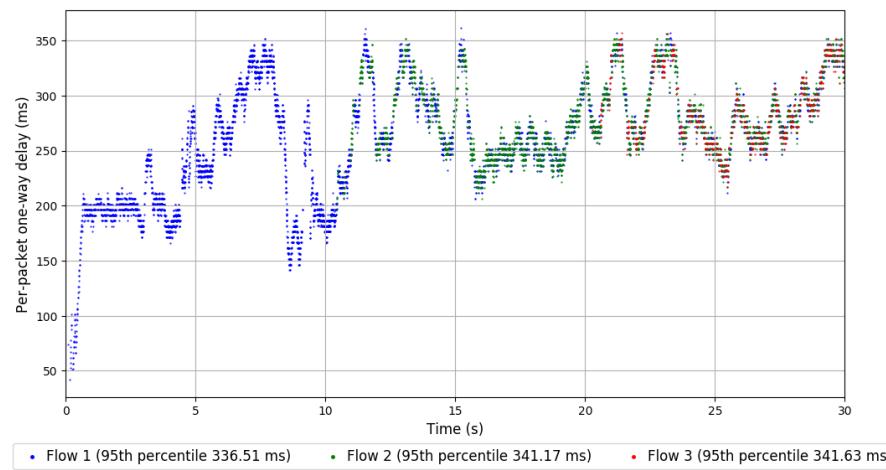
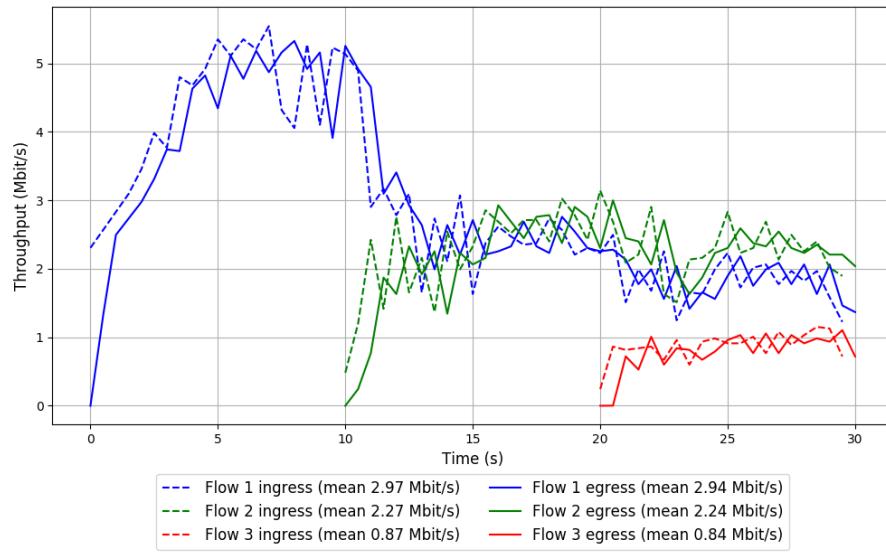


Run 2: Statistics of TCP Cubic

```
Start at: 2018-06-06 01:51:03
End at: 2018-06-06 01:51:33
Local clock offset: 2.926 ms
Remote clock offset: -3.855 ms

# Below is generated by plot.py at 2018-06-06 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.69 Mbit/s
95th percentile per-packet one-way delay: 336.817 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 336.513 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 341.169 ms
Loss rate: 2.12%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 341.629 ms
Loss rate: 6.49%
```

Run 2: Report of TCP Cubic — Data Link

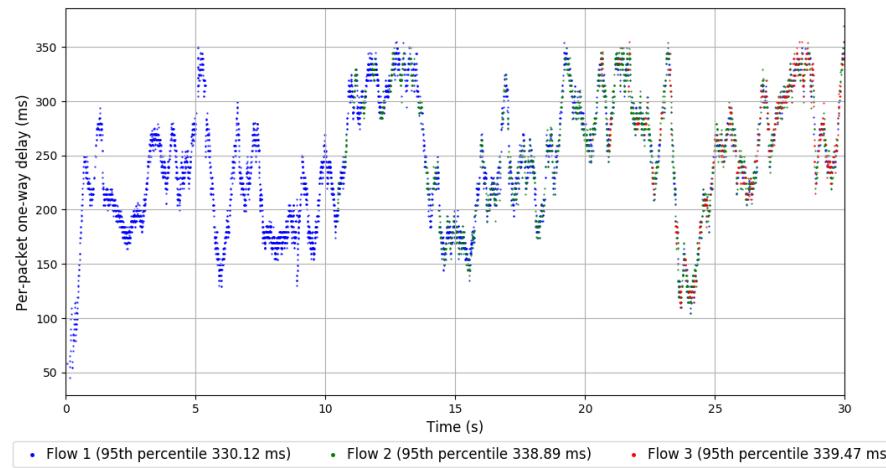
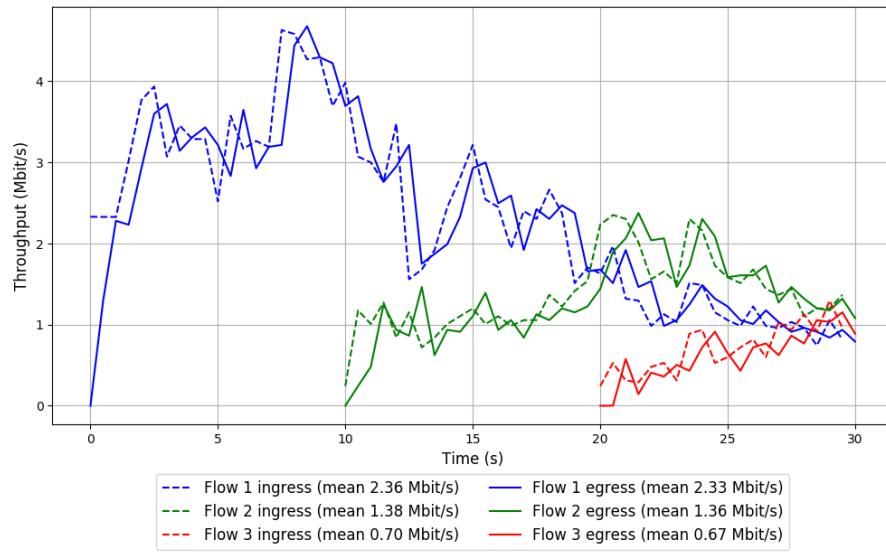


Run 3: Statistics of TCP Cubic

```
Start at: 2018-06-06 02:08:31
End at: 2018-06-06 02:09:01
Local clock offset: -0.633 ms
Remote clock offset: 2.51 ms

# Below is generated by plot.py at 2018-06-06 02:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 334.288 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 330.125 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 338.889 ms
Loss rate: 2.57%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 339.470 ms
Loss rate: 7.35%
```

Run 3: Report of TCP Cubic — Data Link

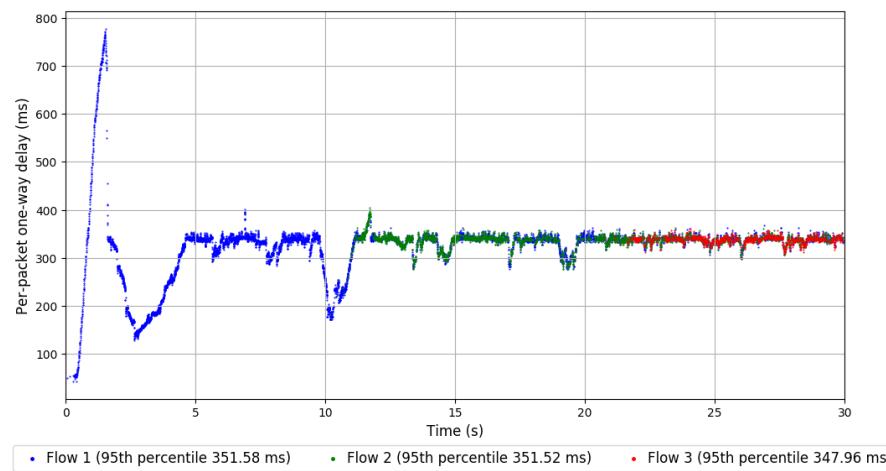
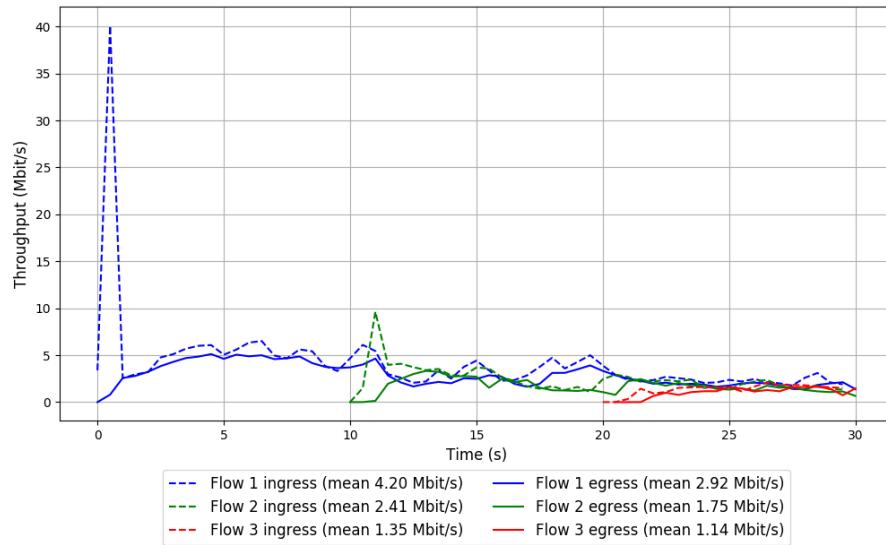


```
Run 1: Statistics of FillP

Start at: 2018-06-06 01:28:08
End at: 2018-06-06 01:28:38
Local clock offset: 1.981 ms
Remote clock offset: -7.676 ms

# Below is generated by plot.py at 2018-06-06 02:18:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 351.131 ms
Loss rate: 29.45%
-- Flow 1:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 351.582 ms
Loss rate: 30.76%
-- Flow 2:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 351.516 ms
Loss rate: 28.16%
-- Flow 3:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 347.962 ms
Loss rate: 21.71%
```

Run 1: Report of FillP — Data Link

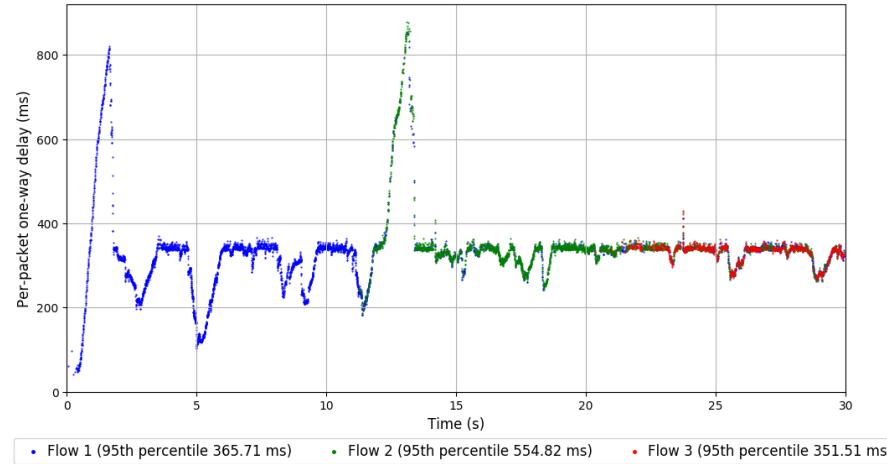
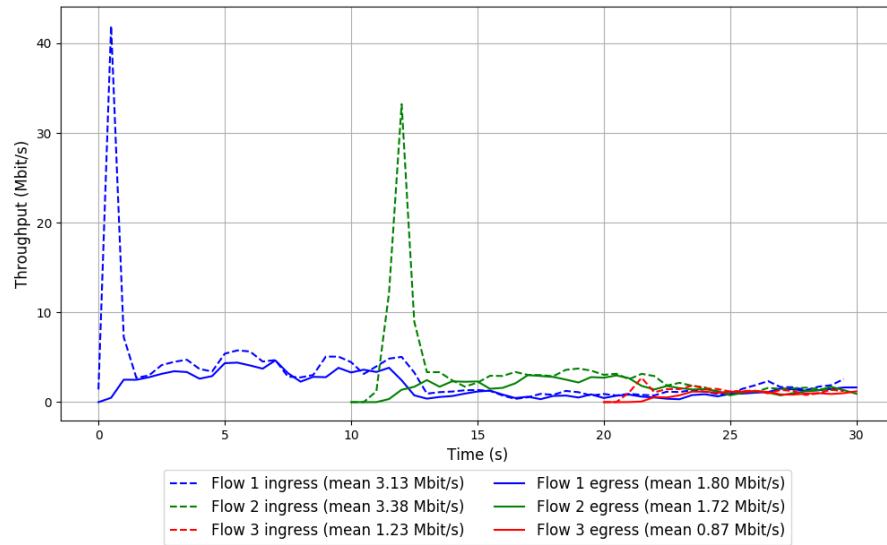


Run 2: Statistics of FillP

```
Start at: 2018-06-06 01:45:36
End at: 2018-06-06 01:46:06
Local clock offset: 1.81 ms
Remote clock offset: -8.259 ms

# Below is generated by plot.py at 2018-06-06 02:18:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 382.491 ms
Loss rate: 44.58%
-- Flow 1:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 365.706 ms
Loss rate: 42.46%
-- Flow 2:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 554.823 ms
Loss rate: 49.96%
-- Flow 3:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 351.506 ms
Loss rate: 31.13%
```

Run 2: Report of FillP — Data Link

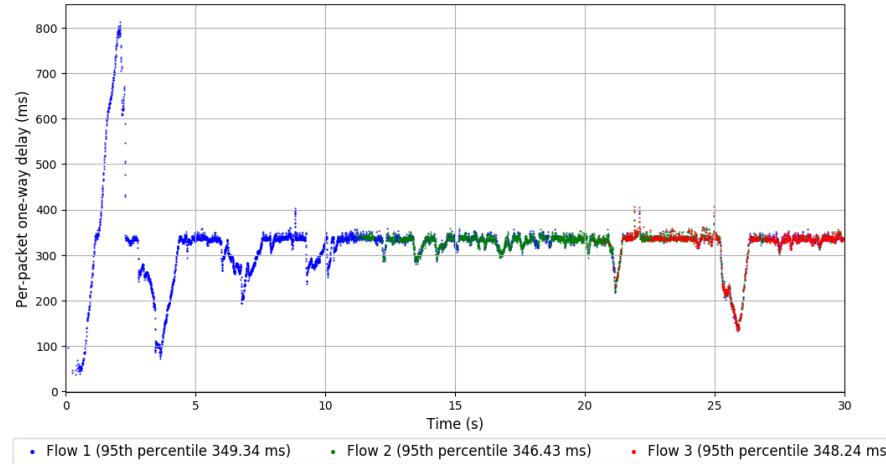
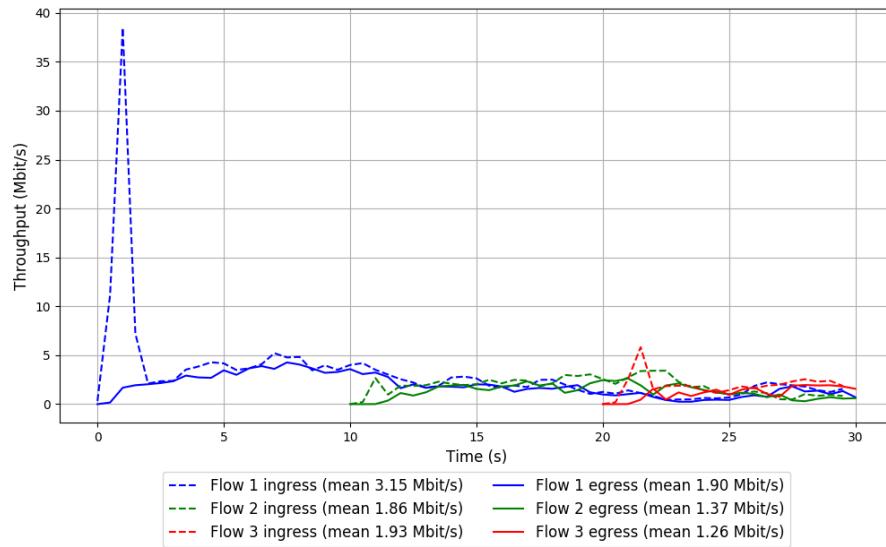


```
Run 3: Statistics of FillP
```

```
Start at: 2018-06-06 02:03:04
End at: 2018-06-06 02:03:34
Local clock offset: -3.09 ms
Remote clock offset: 2.209 ms

# Below is generated by plot.py at 2018-06-06 02:18:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 347.773 ms
Loss rate: 36.48%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 349.336 ms
Loss rate: 39.97%
-- Flow 2:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 346.428 ms
Loss rate: 27.32%
-- Flow 3:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 348.235 ms
Loss rate: 36.94%
```

Run 3: Report of FillP — Data Link

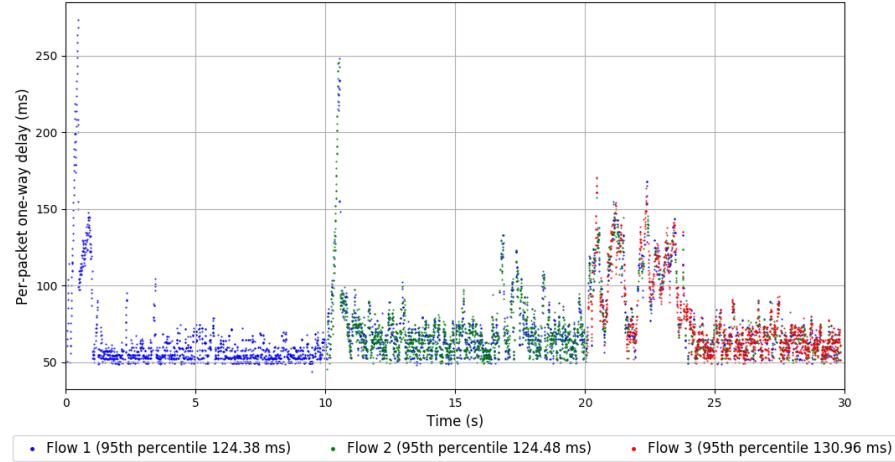
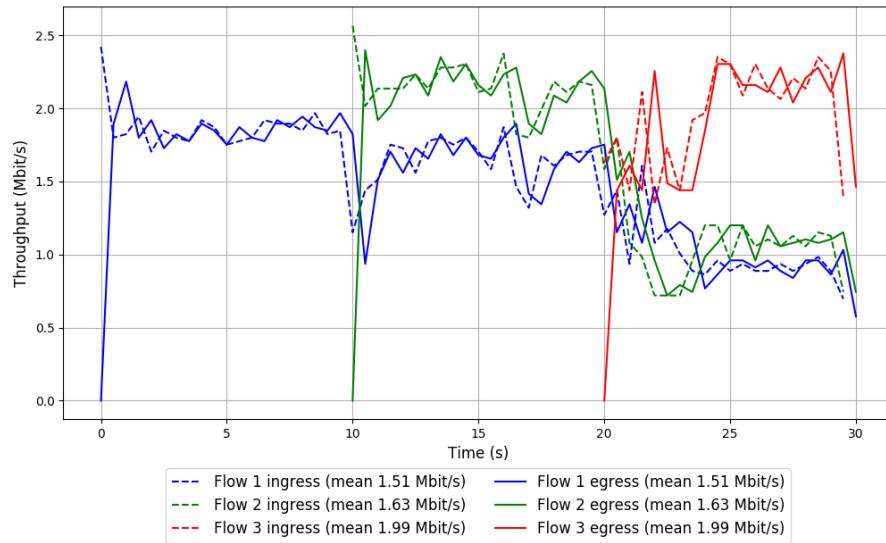


Run 1: Statistics of Indigo

```
Start at: 2018-06-06 01:34:41
End at: 2018-06-06 01:35:11
Local clock offset: 0.841 ms
Remote clock offset: -8.052 ms

# Below is generated by plot.py at 2018-06-06 02:18:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 127.239 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 124.384 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 124.480 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 130.962 ms
Loss rate: 0.55%
```

Run 1: Report of Indigo — Data Link

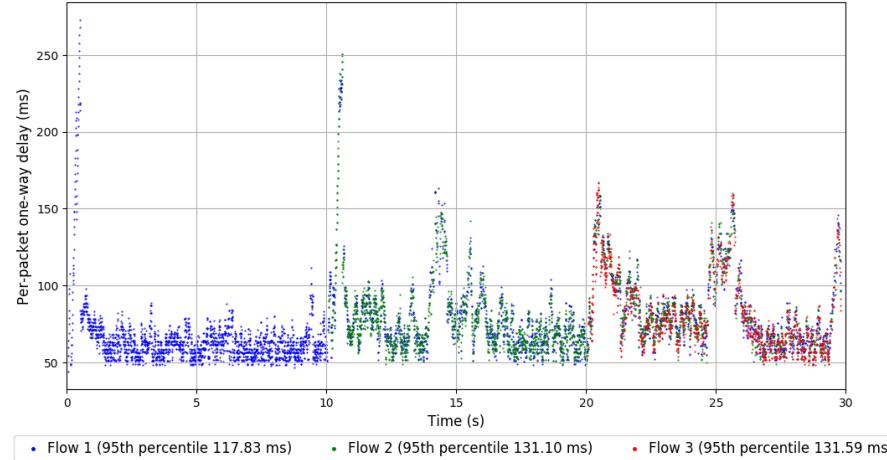
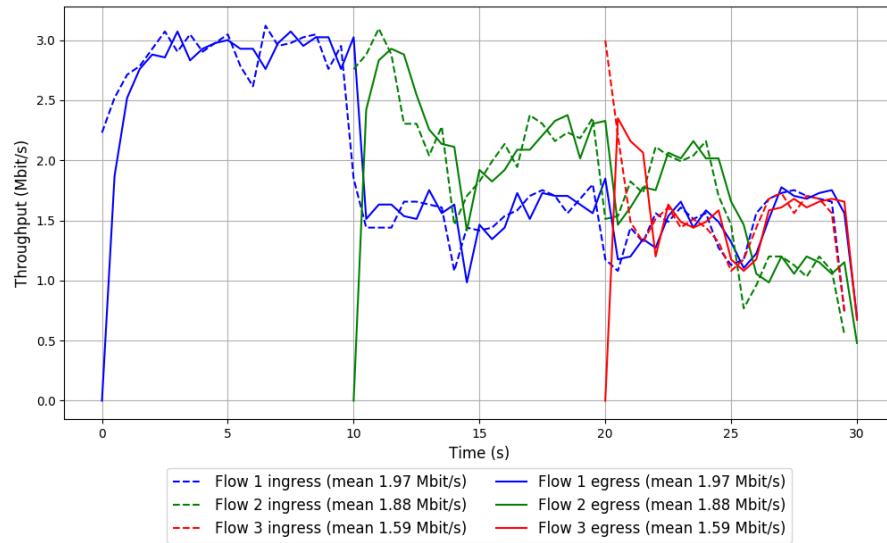


Run 2: Statistics of Indigo

```
Start at: 2018-06-06 01:52:09
End at: 2018-06-06 01:52:39
Local clock offset: 0.091 ms
Remote clock offset: -3.557 ms

# Below is generated by plot.py at 2018-06-06 02:18:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 126.318 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 117.833 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 131.104 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 131.594 ms
Loss rate: 0.69%
```

Run 2: Report of Indigo — Data Link

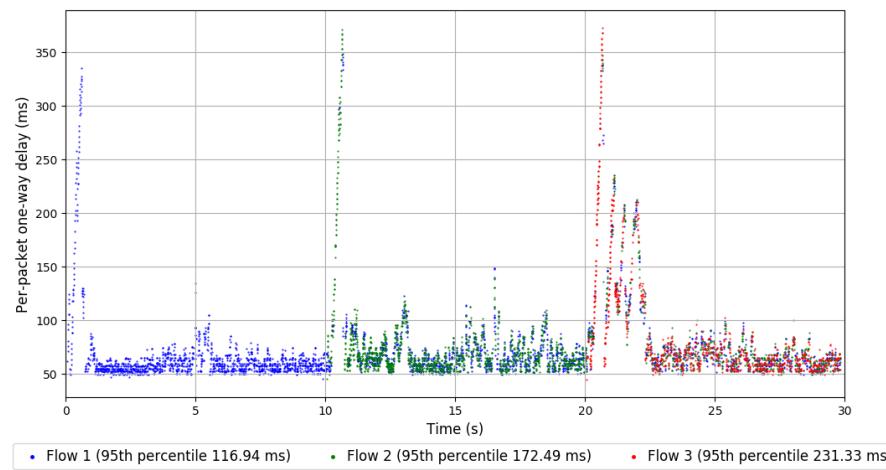
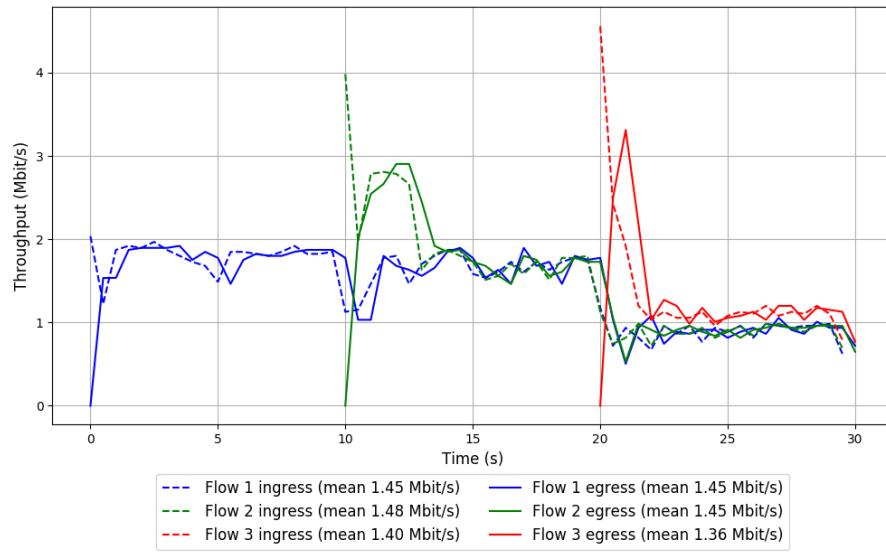


Run 3: Statistics of Indigo

```
Start at: 2018-06-06 02:09:36
End at: 2018-06-06 02:10:06
Local clock offset: 0.237 ms
Remote clock offset: 2.794 ms

# Below is generated by plot.py at 2018-06-06 02:18:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 179.534 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 116.936 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 172.490 ms
Loss rate: 2.29%
-- Flow 3:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 231.328 ms
Loss rate: 2.80%
```

Run 3: Report of Indigo — Data Link

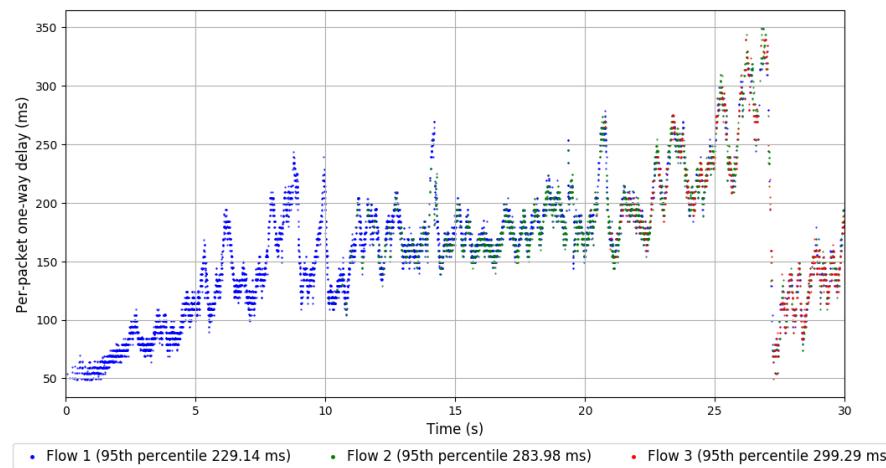
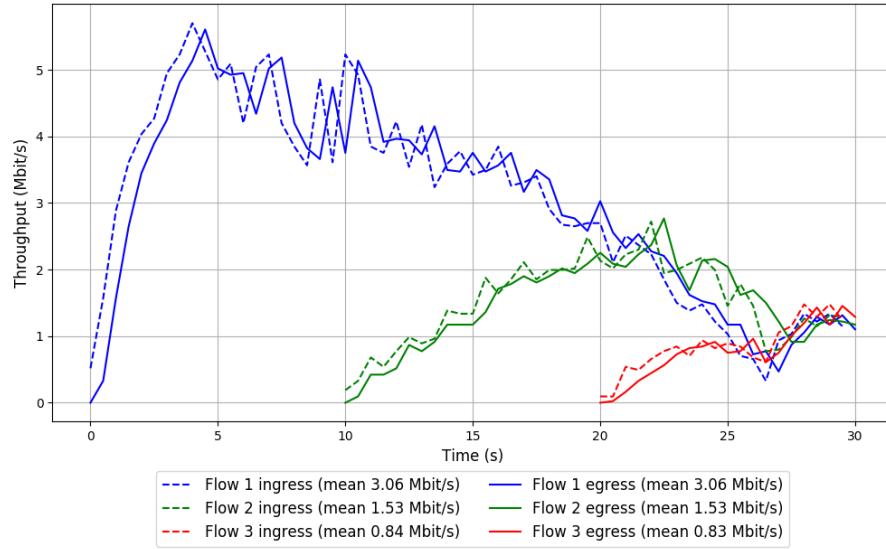


```
Run 1: Statistics of LEDBAT

Start at: 2018-06-06 01:36:52
End at: 2018-06-06 01:37:22
Local clock offset: 0.88 ms
Remote clock offset: -8.014 ms

# Below is generated by plot.py at 2018-06-06 02:18:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 254.365 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 229.137 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 283.977 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 299.291 ms
Loss rate: 2.67%
```

Run 1: Report of LEDBAT — Data Link

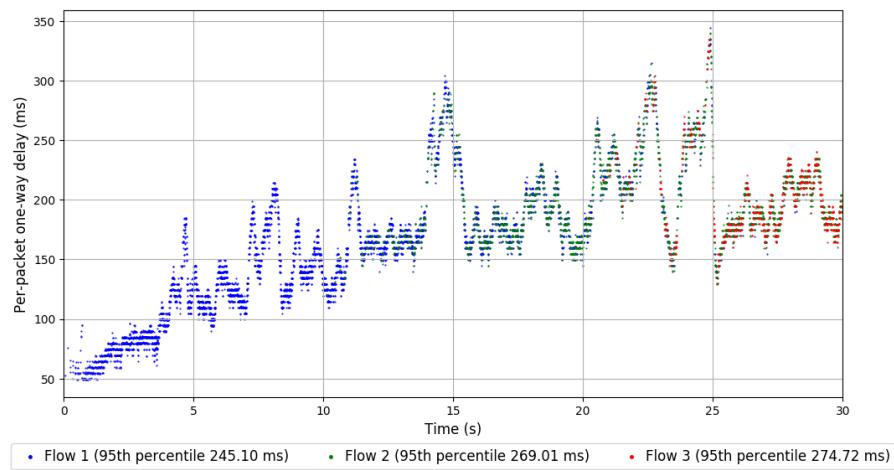
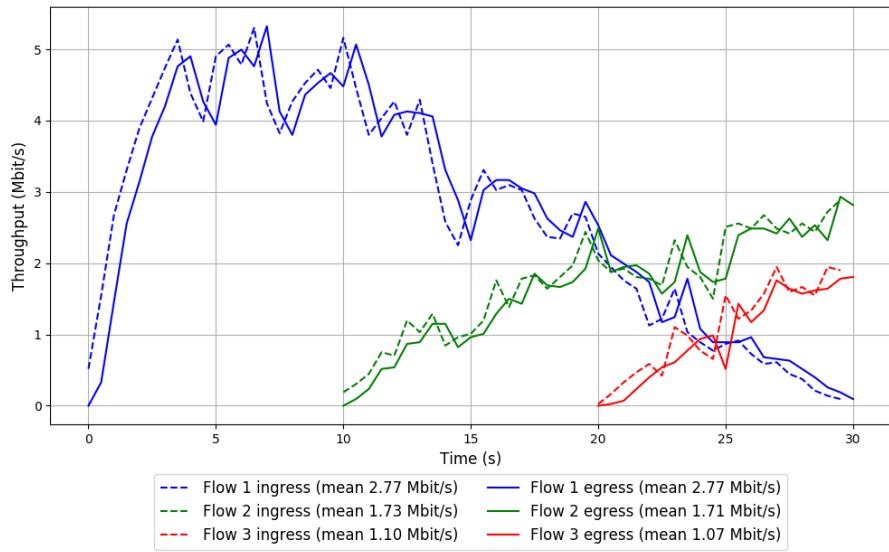


Run 2: Statistics of LEDBAT

```
Start at: 2018-06-06 01:54:20
End at: 2018-06-06 01:54:50
Local clock offset: 1.066 ms
Remote clock offset: -2.427 ms

# Below is generated by plot.py at 2018-06-06 02:18:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.26 Mbit/s
95th percentile per-packet one-way delay: 254.861 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 2.77 Mbit/s
95th percentile per-packet one-way delay: 245.098 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 269.006 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 274.722 ms
Loss rate: 4.31%
```

Run 2: Report of LEDBAT — Data Link

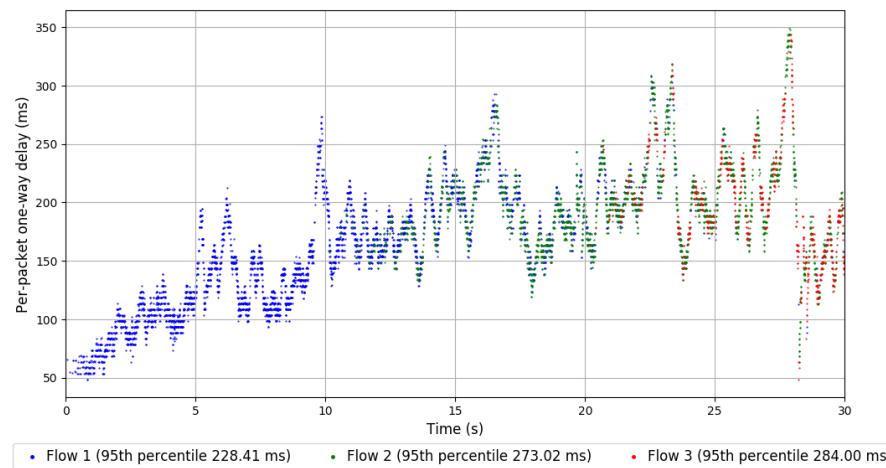
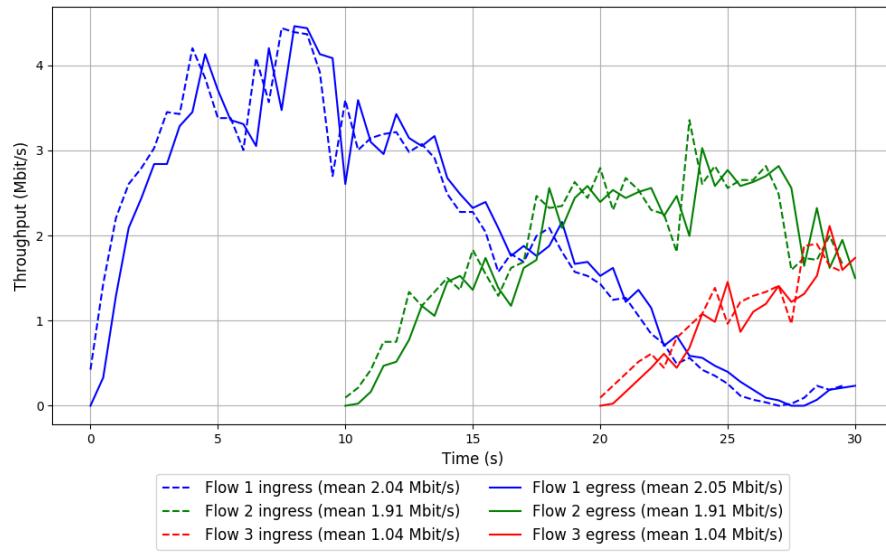


Run 3: Statistics of LEDBAT

```
Start at: 2018-06-06 02:11:48
End at: 2018-06-06 02:12:18
Local clock offset: 0.439 ms
Remote clock offset: 4.25 ms

# Below is generated by plot.py at 2018-06-06 02:18:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 253.245 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 228.413 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 273.024 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 284.002 ms
Loss rate: 1.82%
```

Run 3: Report of LEDBAT — Data Link

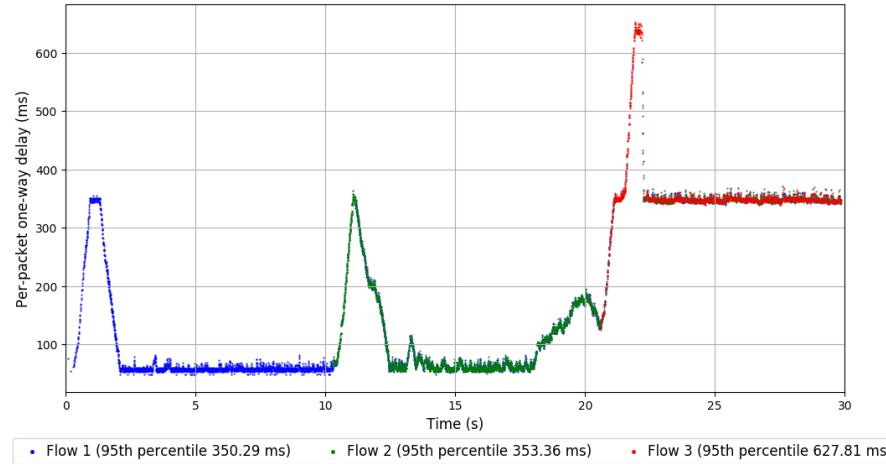
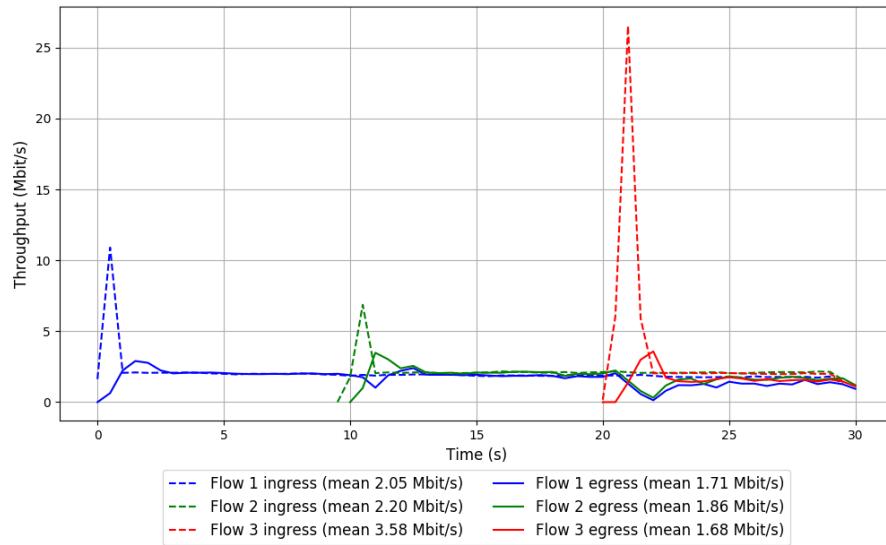


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-06-06 01:42:20
End at: 2018-06-06 01:42:50
Local clock offset: 1.48 ms
Remote clock offset: -8.966 ms

# Below is generated by plot.py at 2018-06-06 02:18:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.49 Mbit/s
95th percentile per-packet one-way delay: 355.428 ms
Loss rate: 25.92%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 350.288 ms
Loss rate: 16.77%
-- Flow 2:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 353.361 ms
Loss rate: 16.16%
-- Flow 3:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 627.812 ms
Loss rate: 53.96%
```

Run 1: Report of PCC-Allegro — Data Link

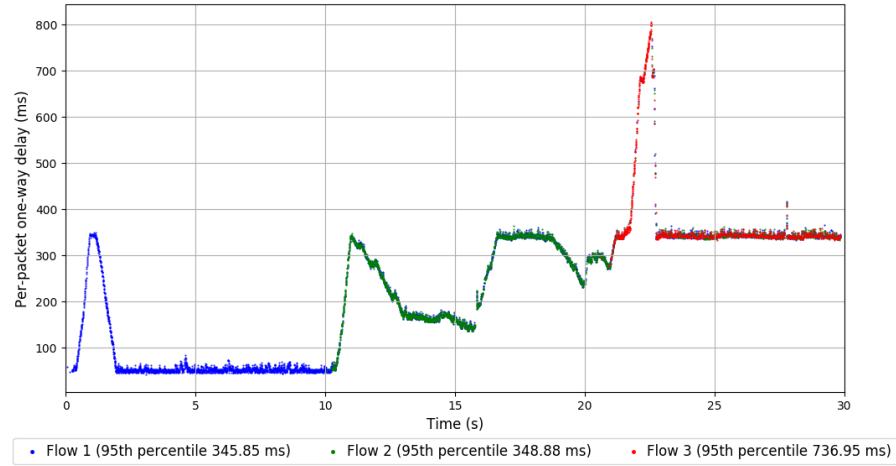
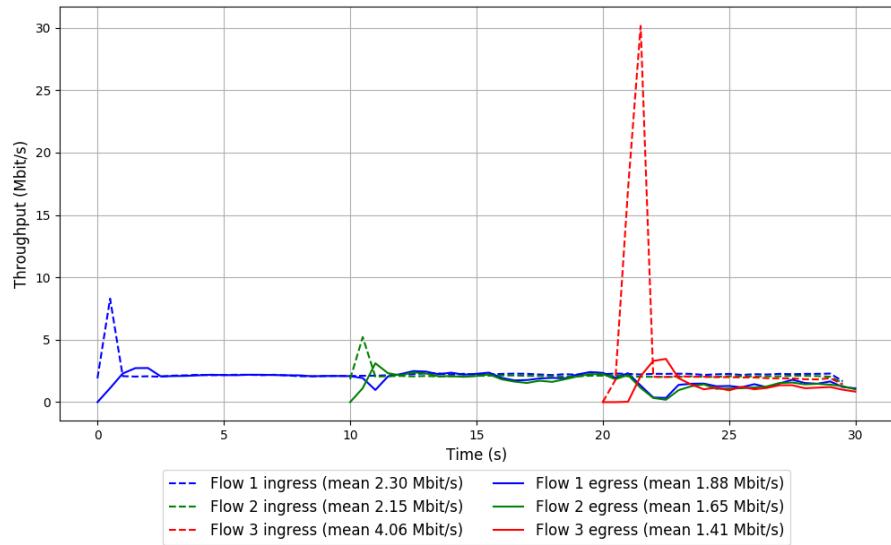


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-06-06 01:59:48
End at: 2018-06-06 02:00:18
Local clock offset: -1.172 ms
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2018-06-06 02:18:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 352.492 ms
Loss rate: 32.47%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 345.850 ms
Loss rate: 18.28%
-- Flow 2:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 348.877 ms
Loss rate: 23.51%
-- Flow 3:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 736.953 ms
Loss rate: 66.44%
```

Run 2: Report of PCC-Allegro — Data Link

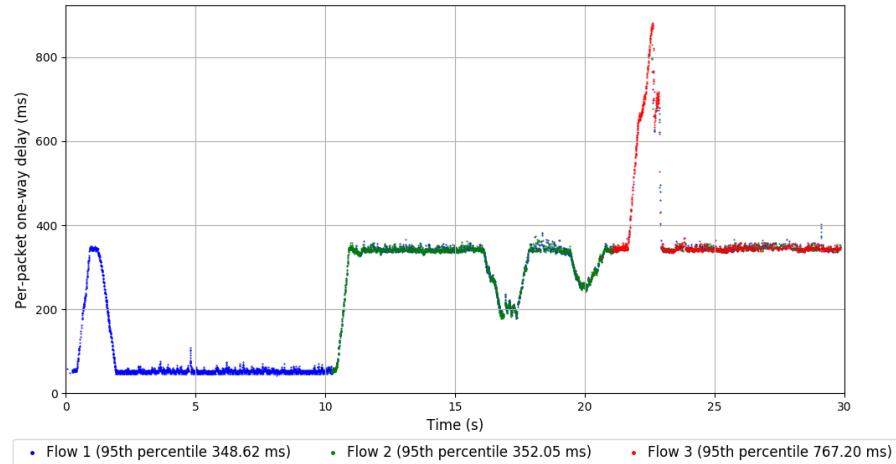
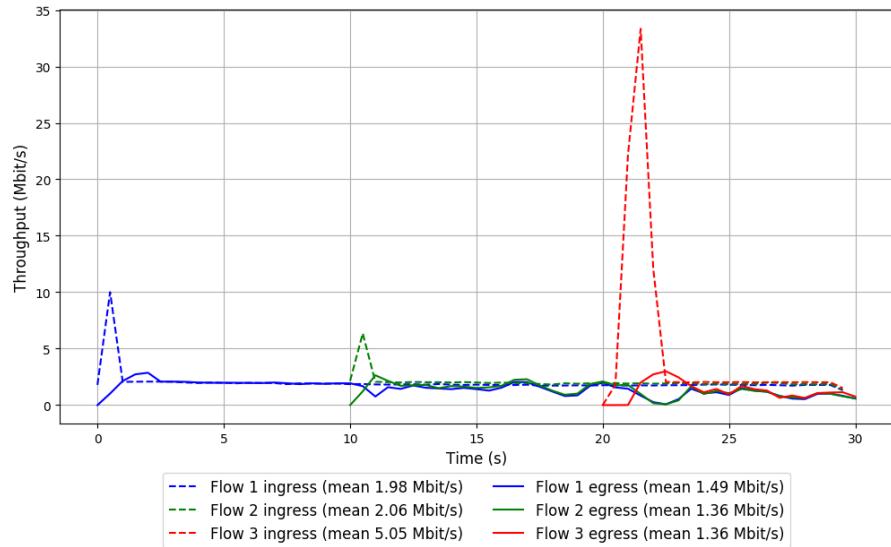


```
Run 3: Statistics of PCC-Allegro
```

```
Start at: 2018-06-06 02:17:15
End at: 2018-06-06 02:17:45
Local clock offset: -0.17 ms
Remote clock offset: 4.776 ms

# Below is generated by plot.py at 2018-06-06 02:18:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.83 Mbit/s
95th percentile per-packet one-way delay: 356.972 ms
Loss rate: 43.71%
-- Flow 1:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 348.616 ms
Loss rate: 25.20%
-- Flow 2:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 352.054 ms
Loss rate: 33.91%
-- Flow 3:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 767.200 ms
Loss rate: 73.83%
```

Run 3: Report of PCC-Allegro — Data Link

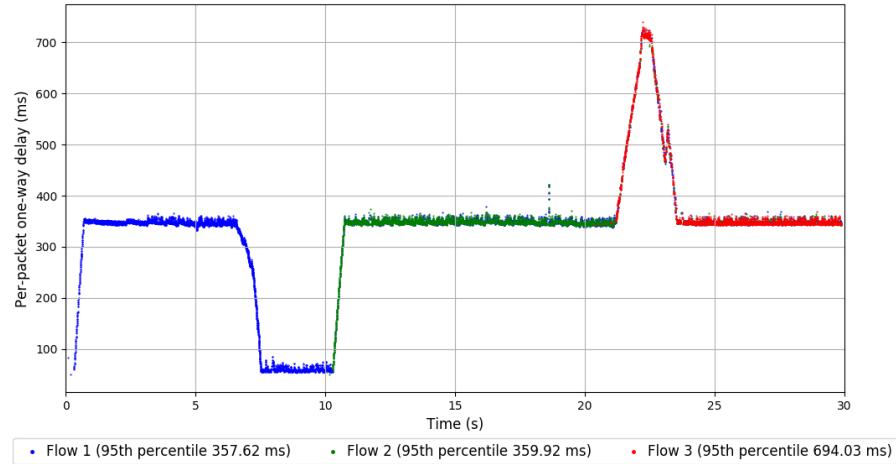
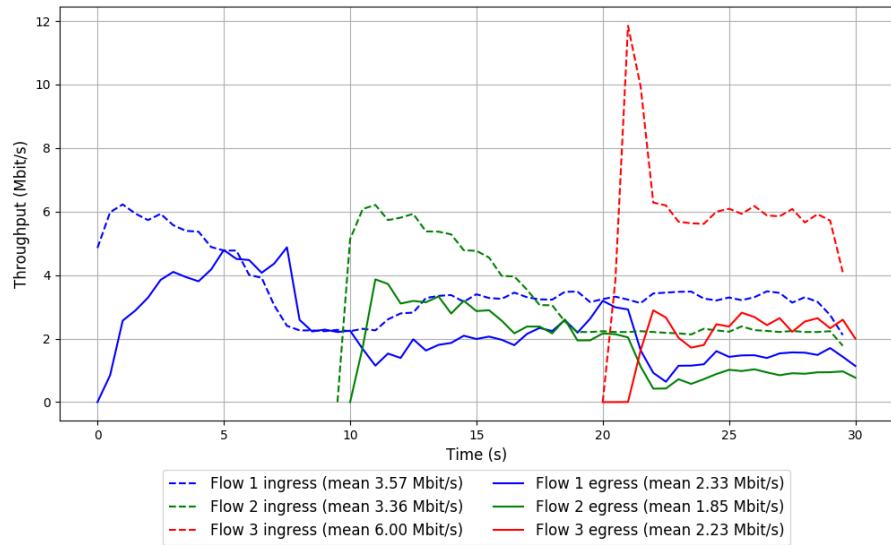


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-06-06 01:40:08
End at: 2018-06-06 01:40:38
Local clock offset: 2.413 ms
Remote clock offset: -7.547 ms

# Below is generated by plot.py at 2018-06-06 02:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 481.460 ms
Loss rate: 45.33%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 357.621 ms
Loss rate: 35.07%
-- Flow 2:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 359.923 ms
Loss rate: 45.06%
-- Flow 3:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 694.027 ms
Loss rate: 64.15%
```

Run 1: Report of PCC-Expr — Data Link

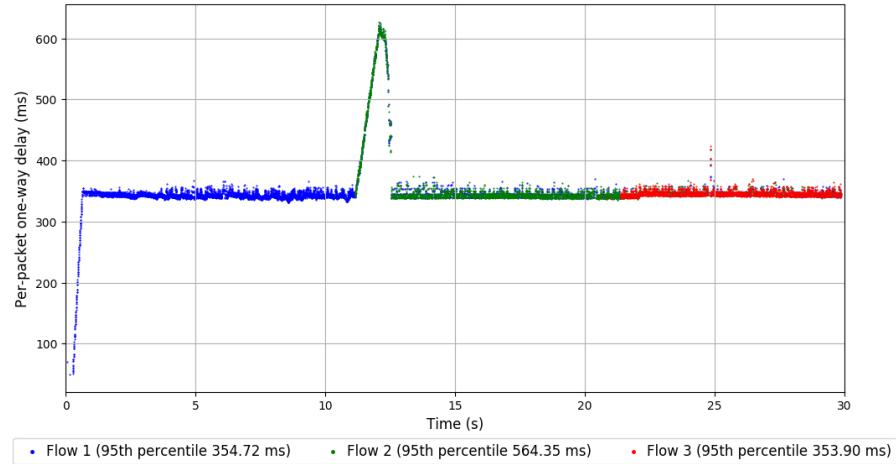
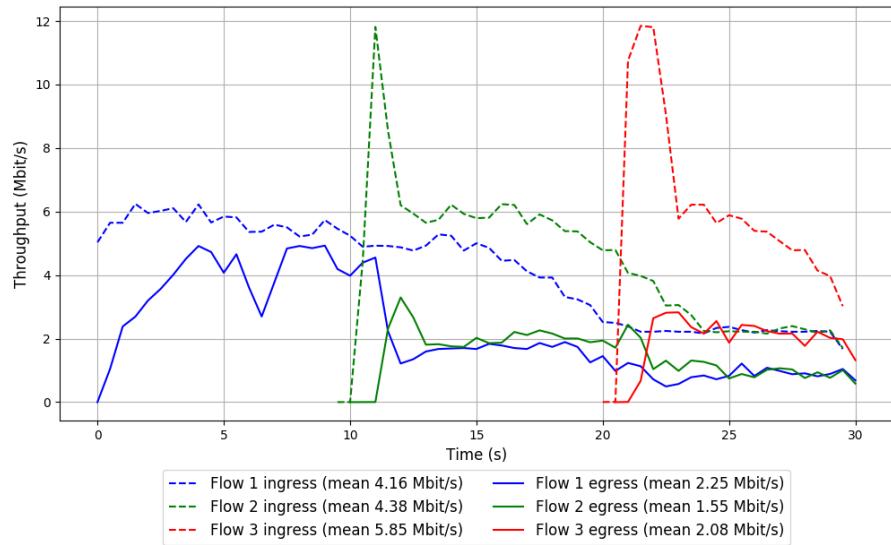


```
Run 2: Statistics of PCC-Expr
```

```
Start at: 2018-06-06 01:57:36
End at: 2018-06-06 01:58:06
Local clock offset: 2.085 ms
Remote clock offset: -0.58 ms

# Below is generated by plot.py at 2018-06-06 02:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 389.738 ms
Loss rate: 56.64%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 354.723 ms
Loss rate: 45.99%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 564.346 ms
Loss rate: 65.23%
-- Flow 3:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 353.903 ms
Loss rate: 66.58%
```

Run 2: Report of PCC-Expr — Data Link

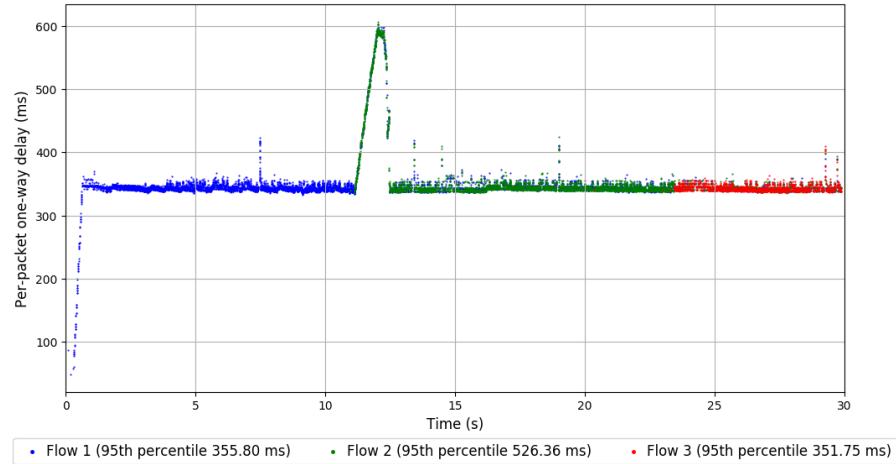
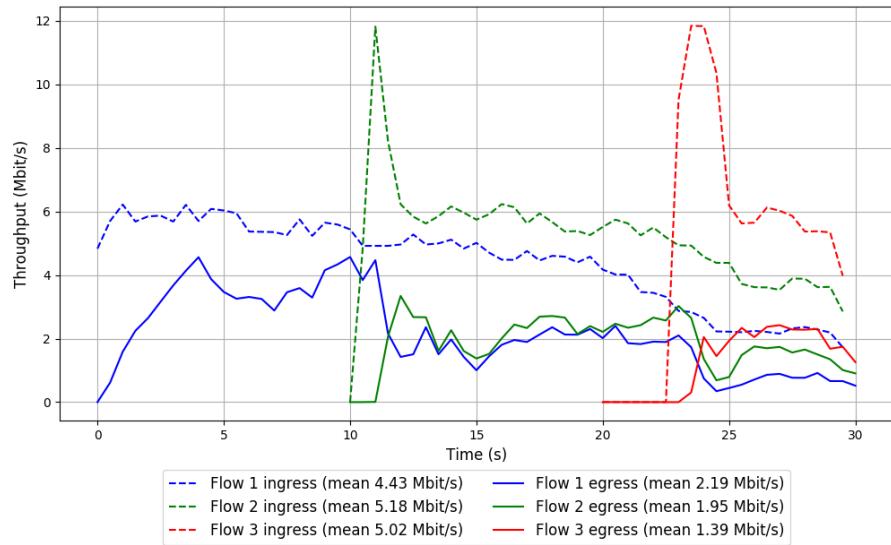


```
Run 3: Statistics of PCC-Expr
```

```
Start at: 2018-06-06 02:15:04
End at: 2018-06-06 02:15:34
Local clock offset: 0.86 ms
Remote clock offset: 4.285 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 388.902 ms
Loss rate: 59.08%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 355.796 ms
Loss rate: 50.73%
-- Flow 2:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 526.360 ms
Loss rate: 62.97%
-- Flow 3:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 351.748 ms
Loss rate: 73.30%
```

Run 3: Report of PCC-Expr — Data Link

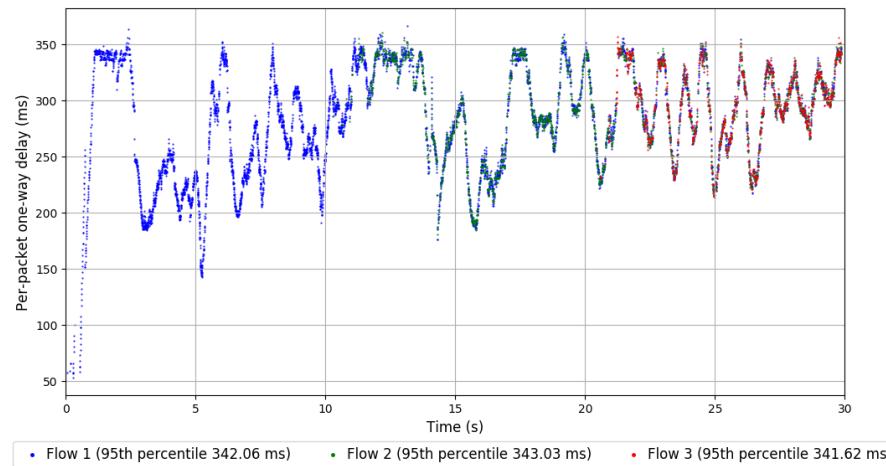
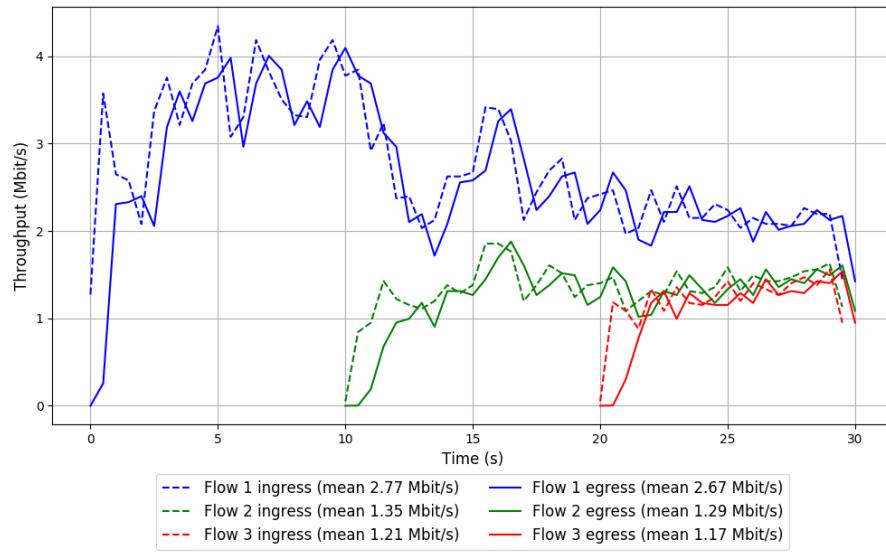


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-06-06 01:32:31
End at: 2018-06-06 01:33:01
Local clock offset: 1.586 ms
Remote clock offset: -8.279 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 342.252 ms
Loss rate: 4.45%
-- Flow 1:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 342.061 ms
Loss rate: 3.86%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 343.028 ms
Loss rate: 5.44%
-- Flow 3:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 341.615 ms
Loss rate: 6.33%
```

Run 1: Report of QUIC Cubic — Data Link

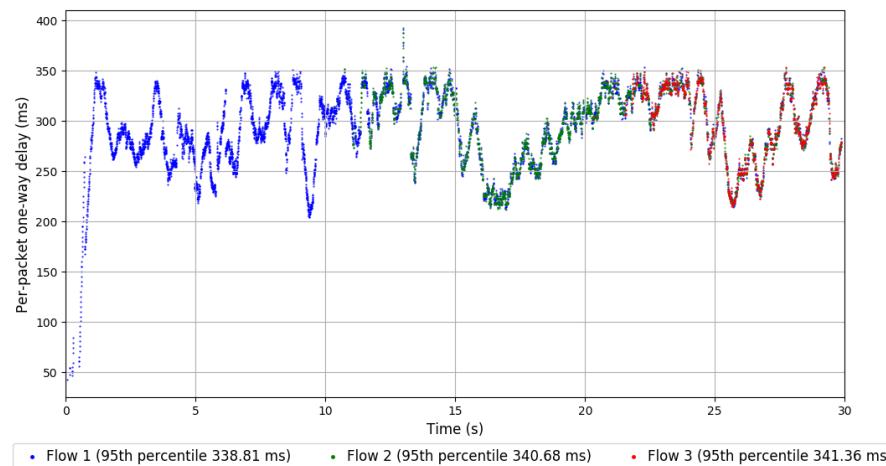
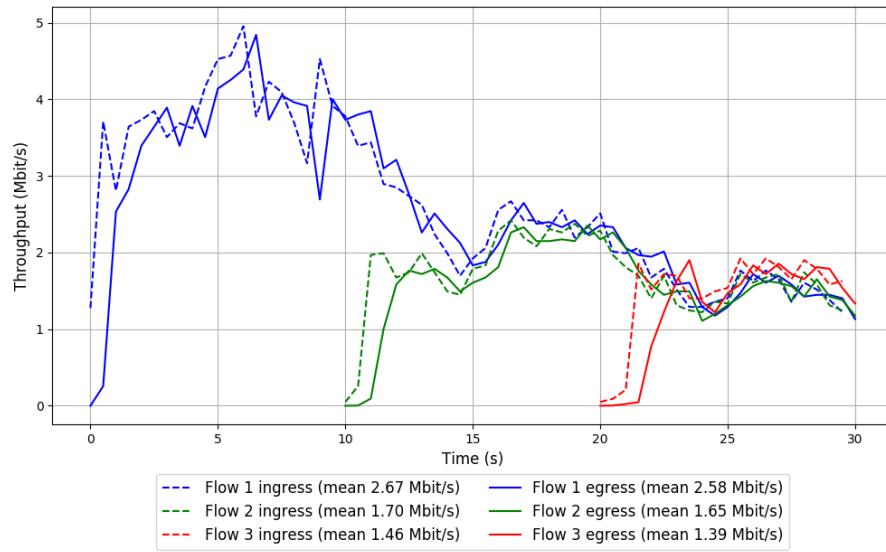


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-06-06 01:49:57
End at: 2018-06-06 01:50:27
Local clock offset: -0.786 ms
Remote clock offset: -4.896 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 339.497 ms
Loss rate: 4.09%
-- Flow 1:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 338.814 ms
Loss rate: 3.22%
-- Flow 2:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 340.681 ms
Loss rate: 4.30%
-- Flow 3:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 341.357 ms
Loss rate: 8.38%
```

Run 2: Report of QUIC Cubic — Data Link

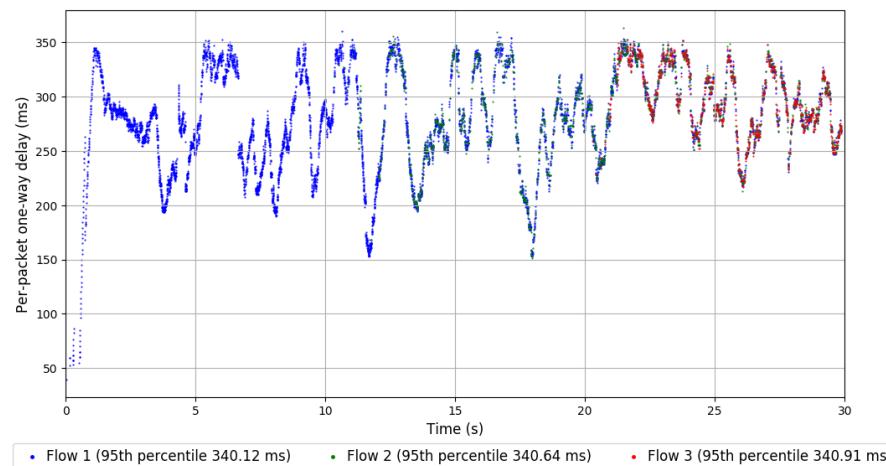
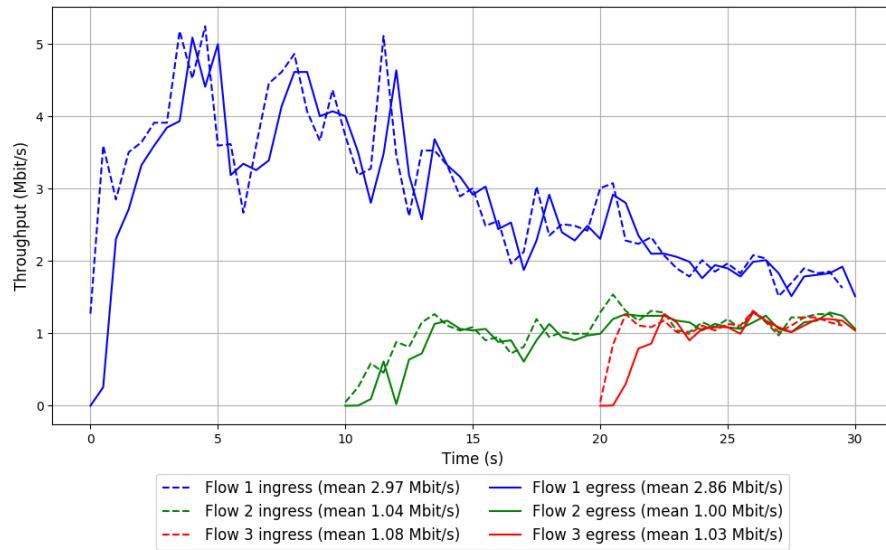


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-06-06 02:07:26
End at: 2018-06-06 02:07:56
Local clock offset: -0.399 ms
Remote clock offset: 3.035 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.85 Mbit/s
95th percentile per-packet one-way delay: 340.330 ms
Loss rate: 4.33%
-- Flow 1:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 340.122 ms
Loss rate: 3.82%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 340.639 ms
Loss rate: 5.28%
-- Flow 3:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 340.908 ms
Loss rate: 6.81%
```

Run 3: Report of QUIC Cubic — Data Link

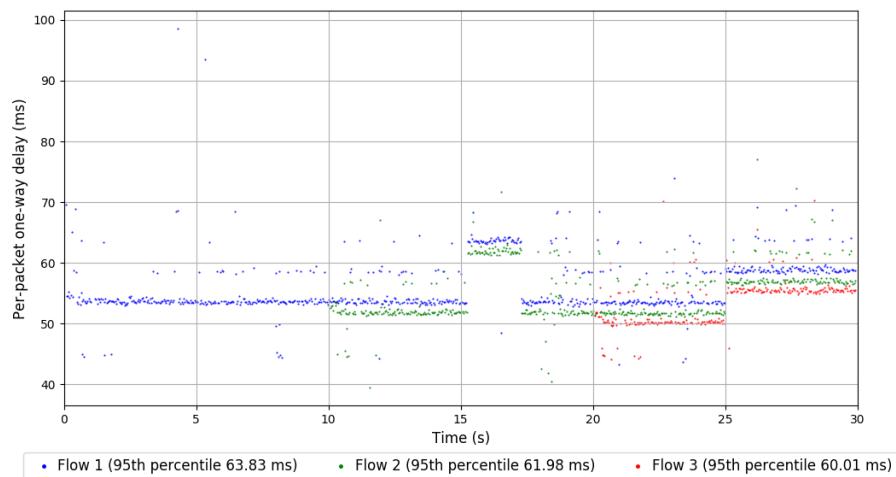
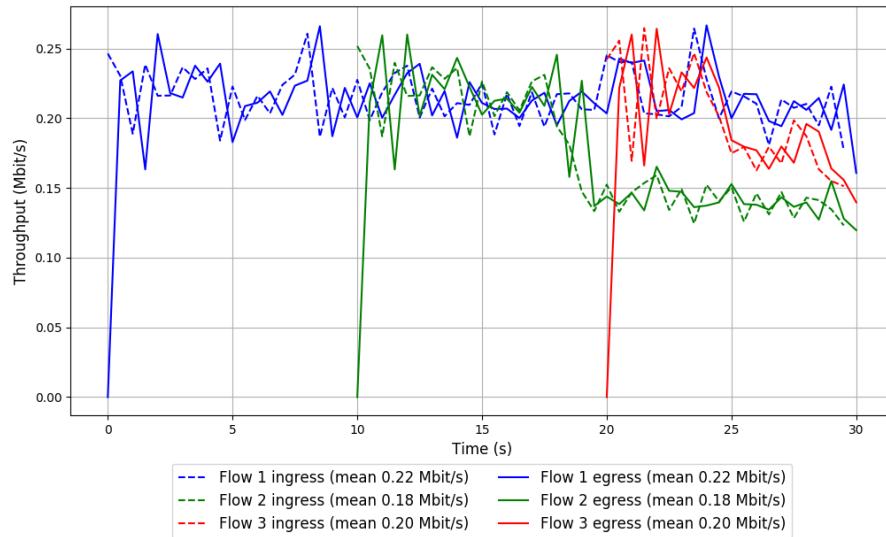


```
Run 1: Statistics of SCReAM

Start at: 2018-06-06 01:39:03
End at: 2018-06-06 01:39:33
Local clock offset: 2.741 ms
Remote clock offset: -8.094 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 63.542 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.827 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 61.984 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 60.012 ms
Loss rate: 1.00%
```

Run 1: Report of SCReAM — Data Link

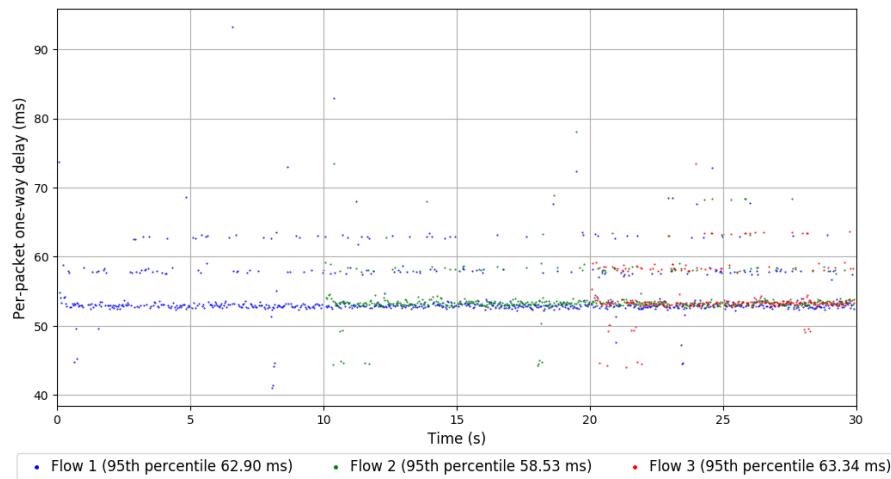
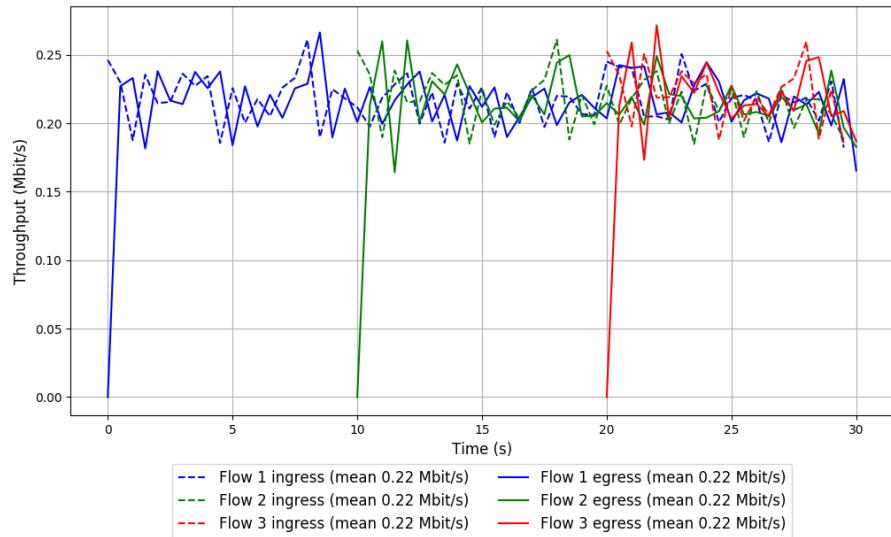


Run 2: Statistics of SCReAM

```
Start at: 2018-06-06 01:56:31
End at: 2018-06-06 01:57:01
Local clock offset: 1.794 ms
Remote clock offset: -1.749 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.850 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.900 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.526 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.343 ms
Loss rate: 0.71%
```

Run 2: Report of SCReAM — Data Link

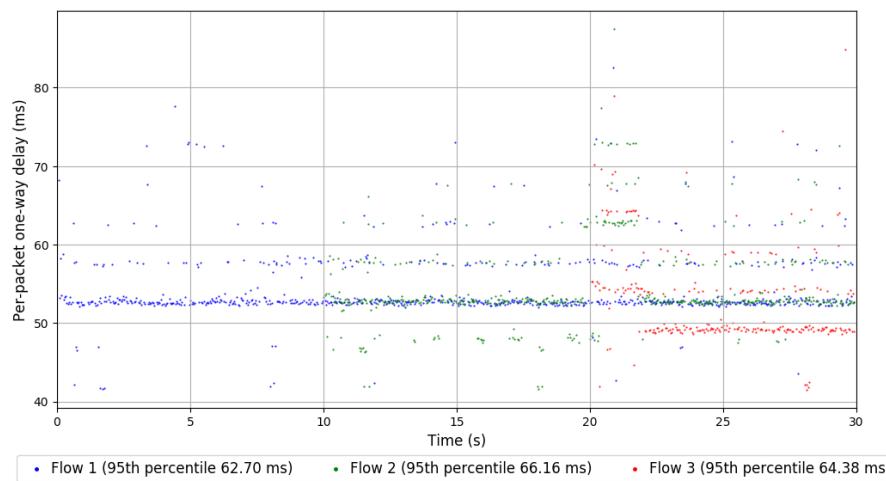
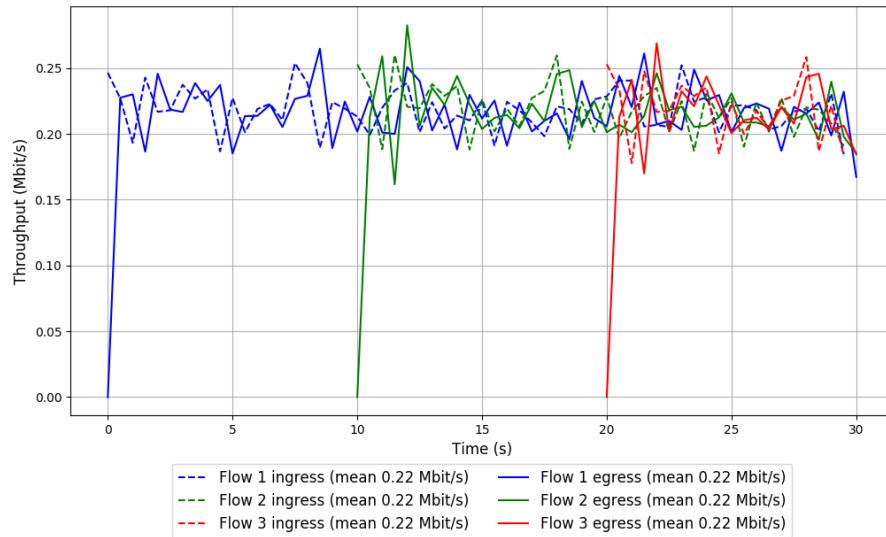


Run 3: Statistics of SCReAM

```
Start at: 2018-06-06 02:13:59
End at: 2018-06-06 02:14:29
Local clock offset: -0.497 ms
Remote clock offset: 4.032 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.774 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.701 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.162 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.378 ms
Loss rate: 0.71%
```

Run 3: Report of SCReAM — Data Link

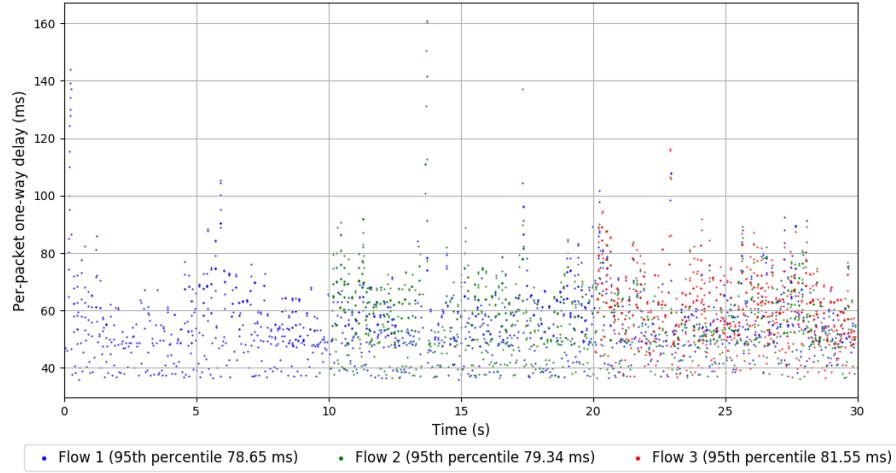
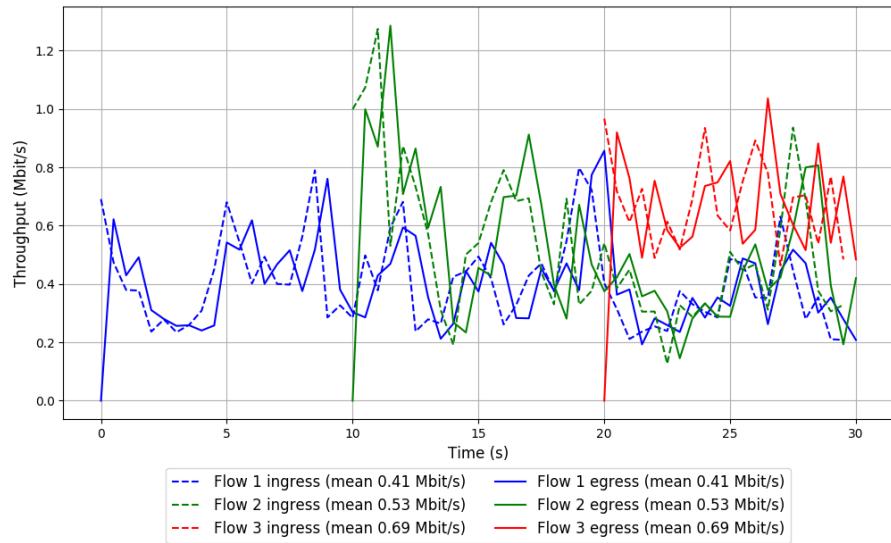


Run 1: Statistics of Sprout

```
Start at: 2018-06-06 01:29:14
End at: 2018-06-06 01:29:44
Local clock offset: -1.129 ms
Remote clock offset: -8.211 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 79.772 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 78.652 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 79.345 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 81.547 ms
Loss rate: 0.01%
```

Run 1: Report of Sprout — Data Link

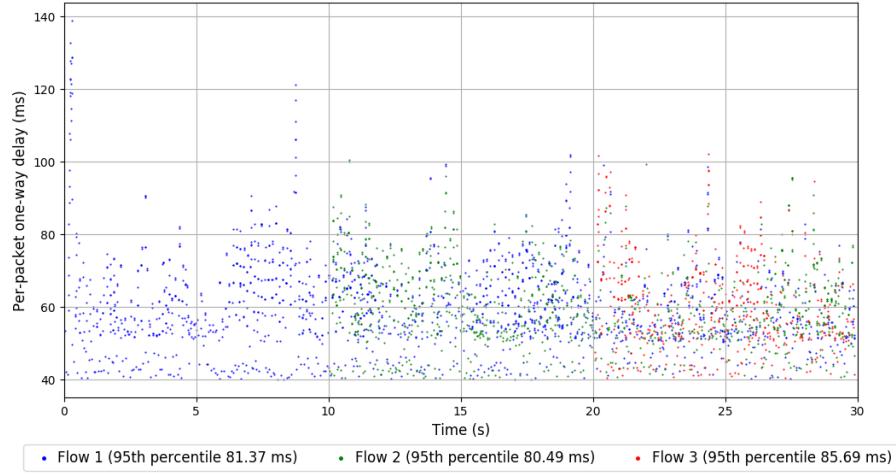
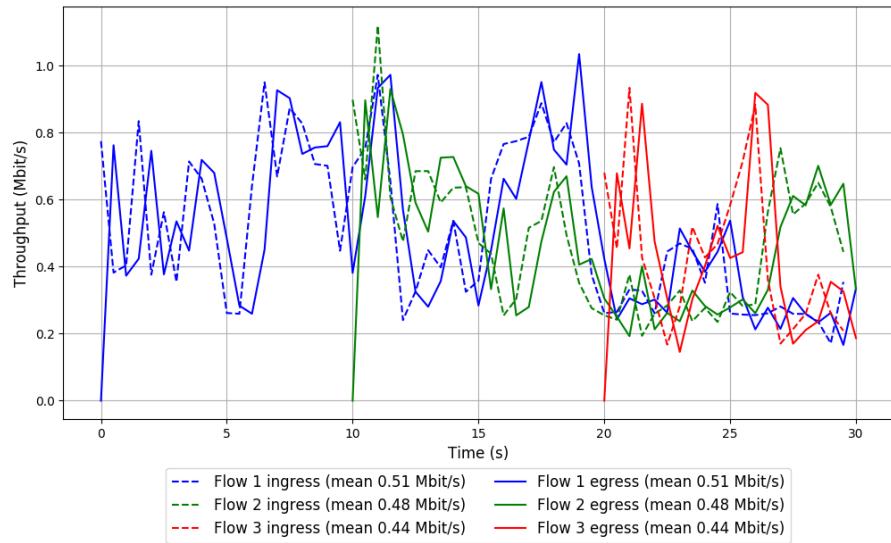


Run 2: Statistics of Sprout

```
Start at: 2018-06-06 01:46:41
End at: 2018-06-06 01:47:11
Local clock offset: 2.269 ms
Remote clock offset: -9.186 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 81.420 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 81.371 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 80.489 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 85.690 ms
Loss rate: 0.27%
```

Run 2: Report of Sprout — Data Link

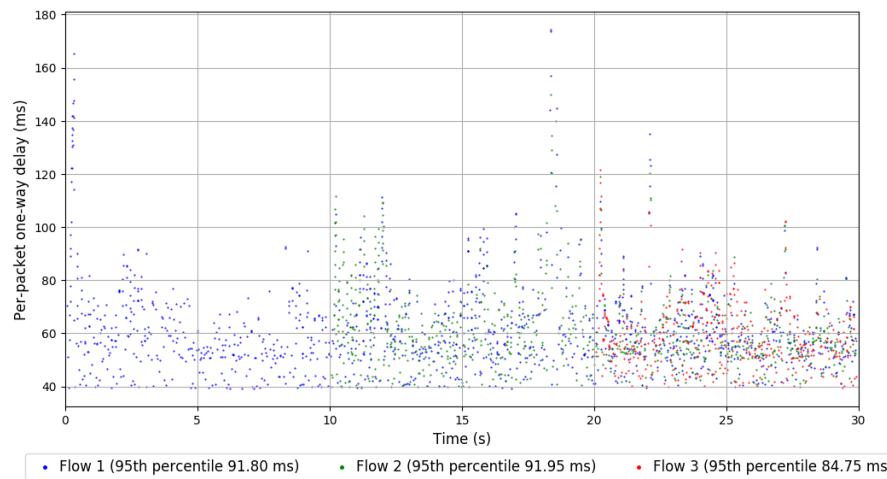
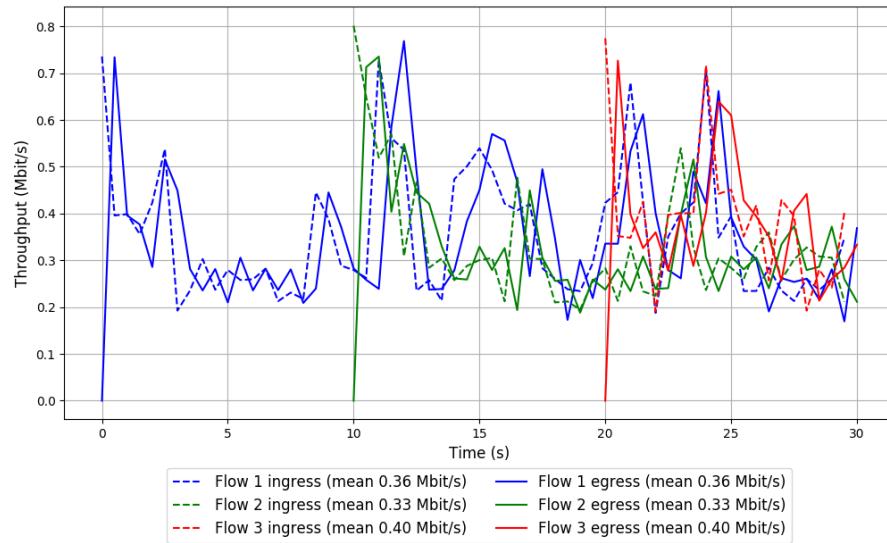


Run 3: Statistics of Sprout

```
Start at: 2018-06-06 02:04:09
End at: 2018-06-06 02:04:39
Local clock offset: 1.977 ms
Remote clock offset: 1.945 ms

# Below is generated by plot.py at 2018-06-06 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 91.439 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 91.803 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 91.955 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 84.751 ms
Loss rate: 0.88%
```

Run 3: Report of Sprout — Data Link

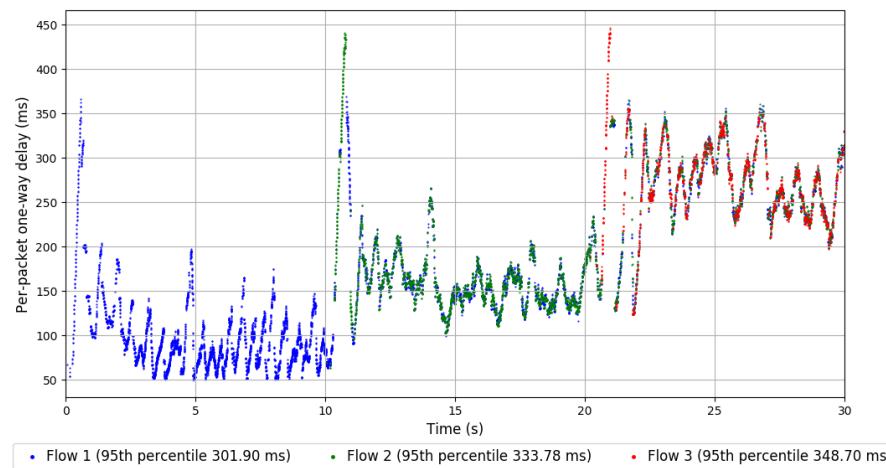
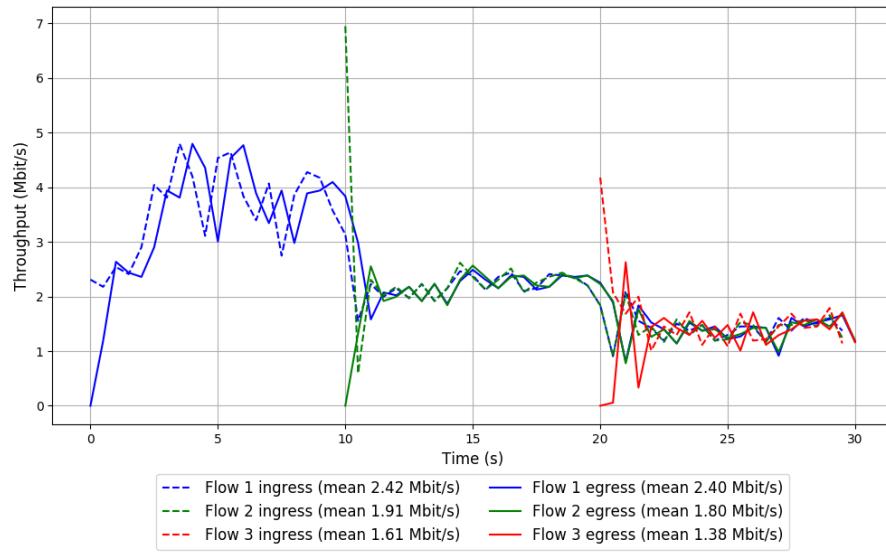


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-06-06 01:30:19
End at: 2018-06-06 01:30:49
Local clock offset: 1.864 ms
Remote clock offset: -8.516 ms

# Below is generated by plot.py at 2018-06-06 02:18:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 324.276 ms
Loss rate: 4.56%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 301.898 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 333.777 ms
Loss rate: 6.18%
-- Flow 3:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 348.697 ms
Loss rate: 15.85%
```

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

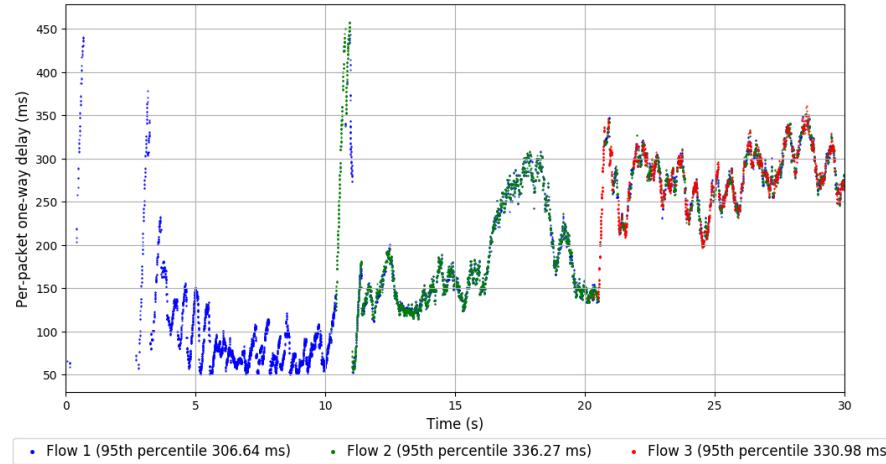
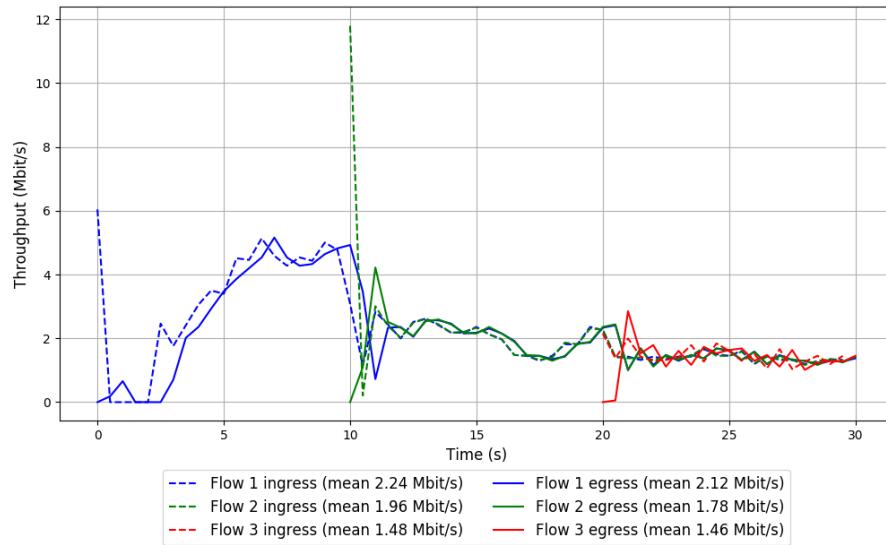


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-06-06 01:47:46
End at: 2018-06-06 01:48:16
Local clock offset: 1.989 ms
Remote clock offset: -8.304 ms

# Below is generated by plot.py at 2018-06-06 02:18:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.79 Mbit/s
95th percentile per-packet one-way delay: 319.459 ms
Loss rate: 6.46%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 306.644 ms
Loss rate: 5.53%
-- Flow 2:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 336.269 ms
Loss rate: 9.31%
-- Flow 3:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 330.976 ms
Loss rate: 3.11%
```

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

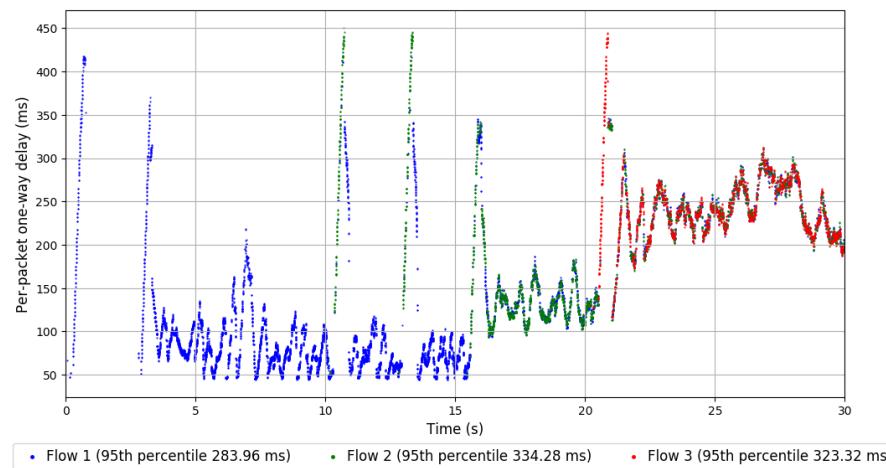
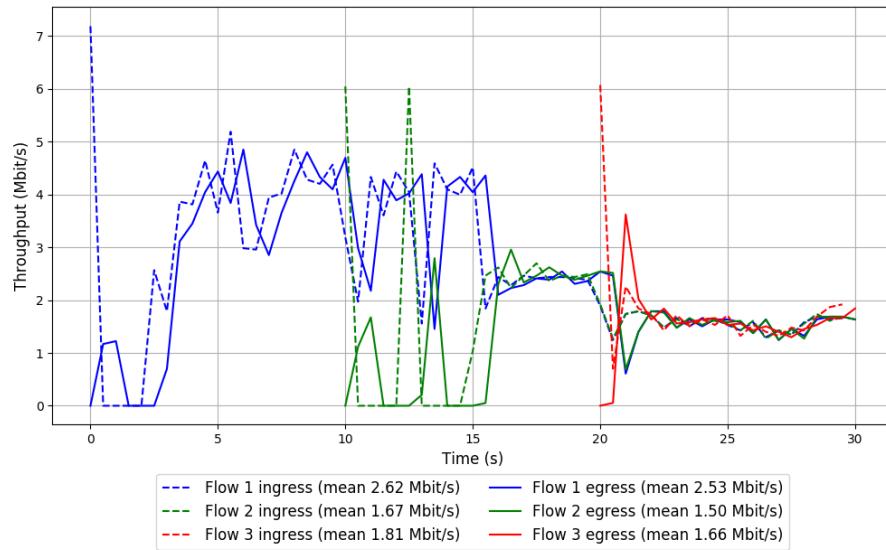


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-06-06 02:05:15
End at: 2018-06-06 02:05:45
Local clock offset: -4.037 ms
Remote clock offset: 1.699 ms

# Below is generated by plot.py at 2018-06-06 02:18:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 298.109 ms
Loss rate: 6.50%
-- Flow 1:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 283.959 ms
Loss rate: 3.86%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 334.278 ms
Loss rate: 10.79%
-- Flow 3:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 323.318 ms
Loss rate: 10.02%
```

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

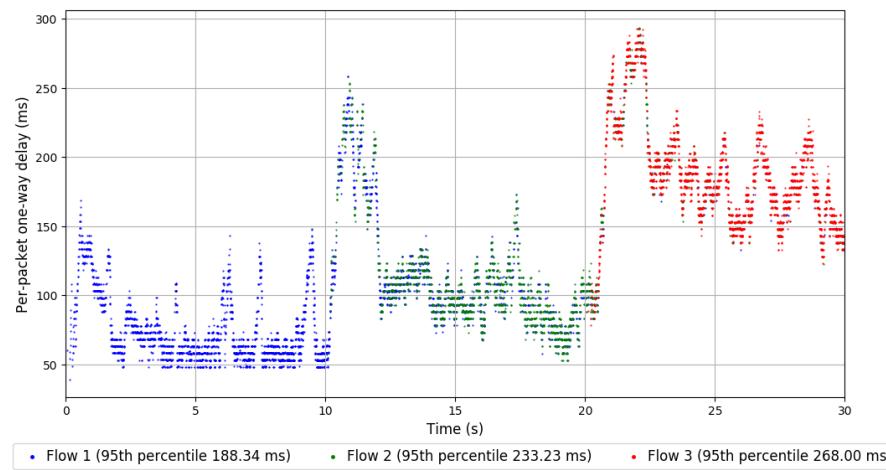
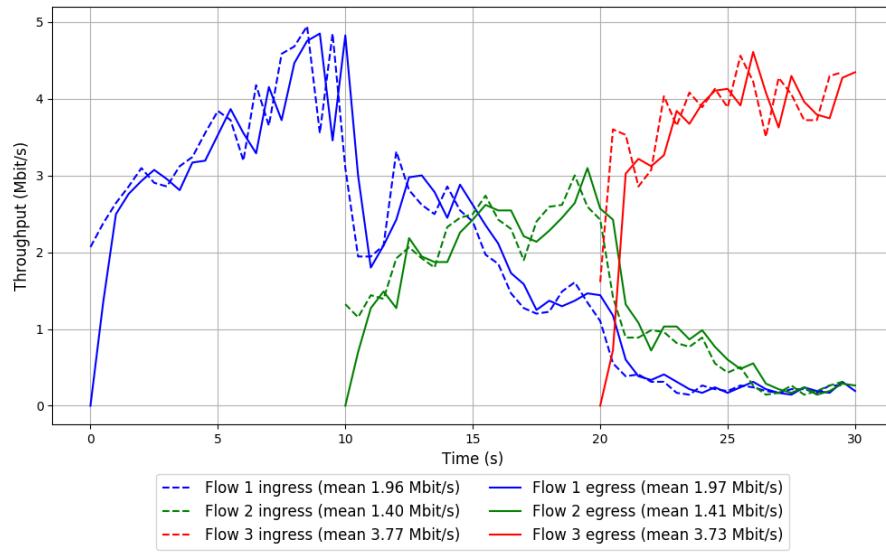


Run 1: Statistics of TCP Vegas

```
Start at: 2018-06-06 01:35:47
End at: 2018-06-06 01:36:17
Local clock offset: -0.772 ms
Remote clock offset: -8.351 ms

# Below is generated by plot.py at 2018-06-06 02:18:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 228.322 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 188.335 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 233.226 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 268.005 ms
Loss rate: 1.82%
```

Run 1: Report of TCP Vegas — Data Link

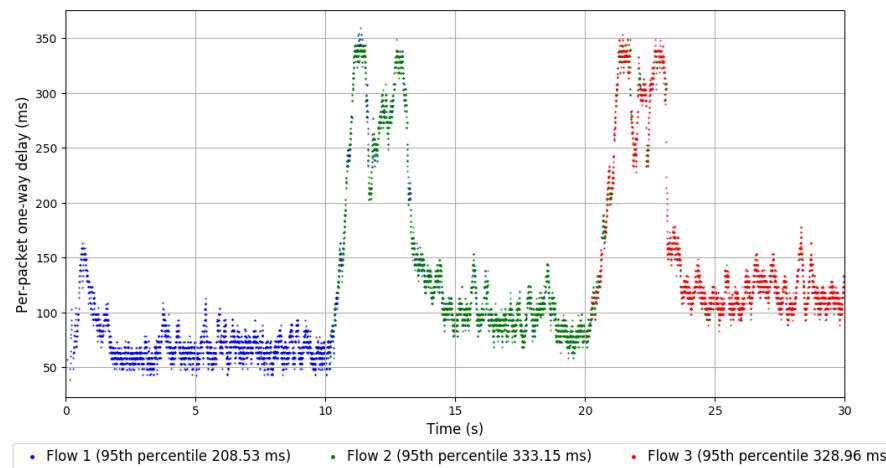
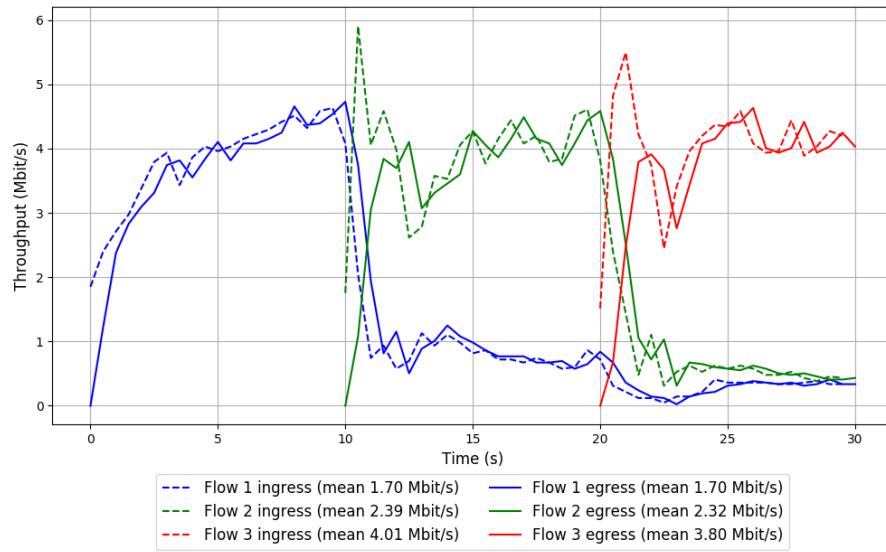


Run 2: Statistics of TCP Vegas

```
Start at: 2018-06-06 01:53:14
End at: 2018-06-06 01:53:44
Local clock offset: -5.758 ms
Remote clock offset: -3.435 ms

# Below is generated by plot.py at 2018-06-06 02:18:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 322.807 ms
Loss rate: 3.12%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 208.525 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 333.148 ms
Loss rate: 3.45%
-- Flow 3:
Average throughput: 3.80 Mbit/s
95th percentile per-packet one-way delay: 328.957 ms
Loss rate: 6.16%
```

Run 2: Report of TCP Vegas — Data Link

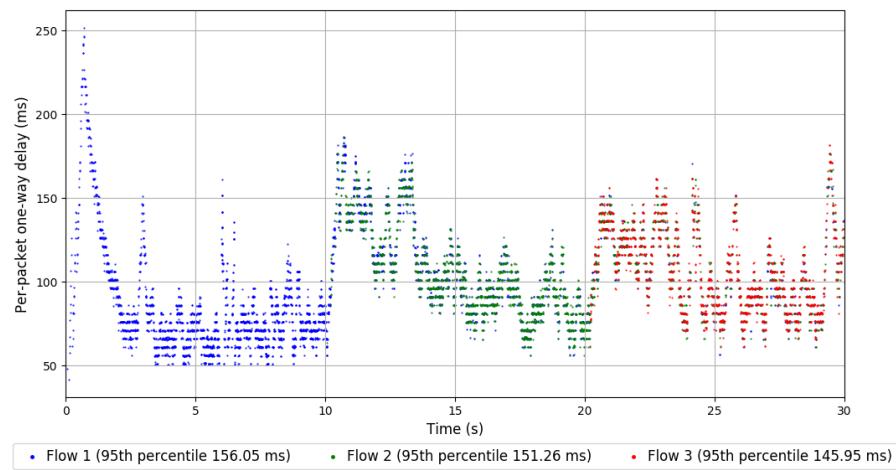
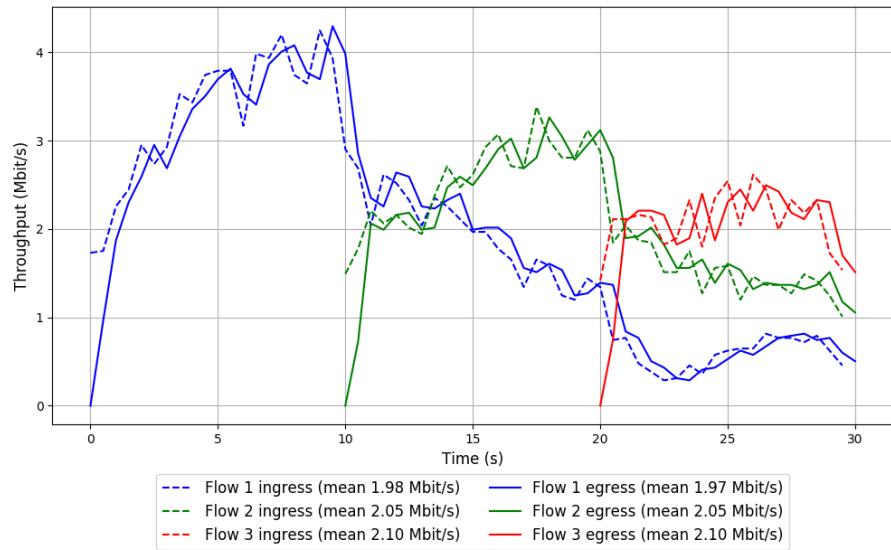


Run 3: Statistics of TCP Vegas

```
Start at: 2018-06-06 02:10:42
End at: 2018-06-06 02:11:12
Local clock offset: -1.946 ms
Remote clock offset: 4.232 ms

# Below is generated by plot.py at 2018-06-06 02:18:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 151.430 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 156.046 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 151.260 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 145.948 ms
Loss rate: 1.09%
```

Run 3: Report of TCP Vegas — Data Link

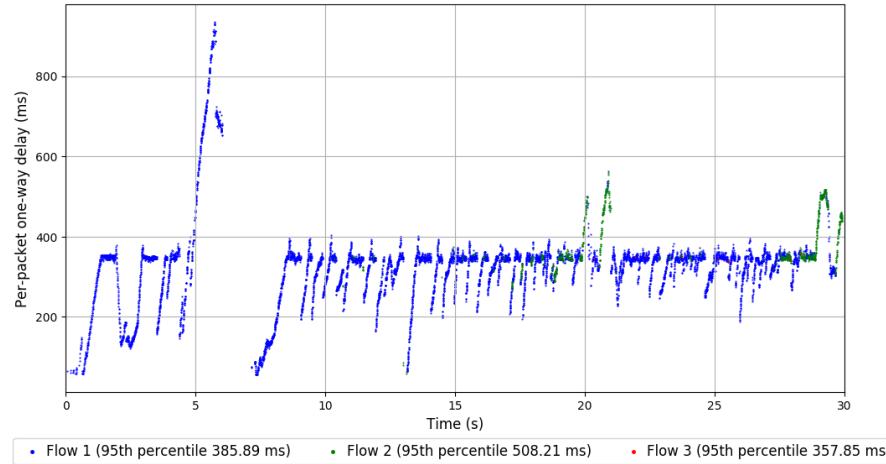
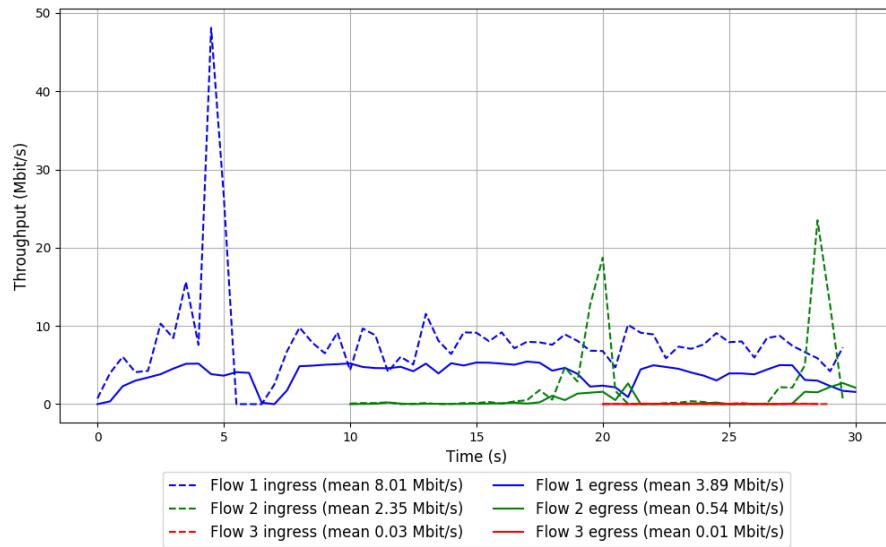


```
Run 1: Statistics of Verus
```

```
Start at: 2018-06-06 01:41:14
End at: 2018-06-06 01:41:44
Local clock offset: 0.819 ms
Remote clock offset: -7.904 ms

# Below is generated by plot.py at 2018-06-06 02:18:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 479.036 ms
Loss rate: 55.82%
-- Flow 1:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 385.888 ms
Loss rate: 51.68%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 508.206 ms
Loss rate: 77.20%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 357.850 ms
Loss rate: 65.38%
```

Run 1: Report of Verus — Data Link

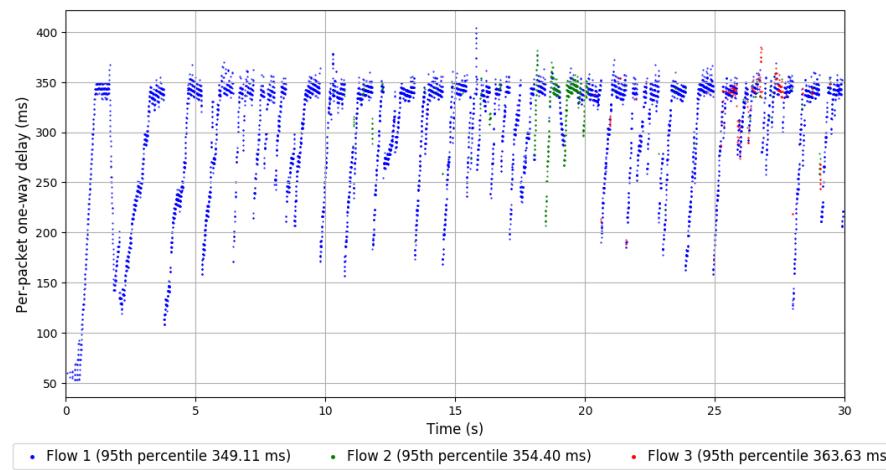
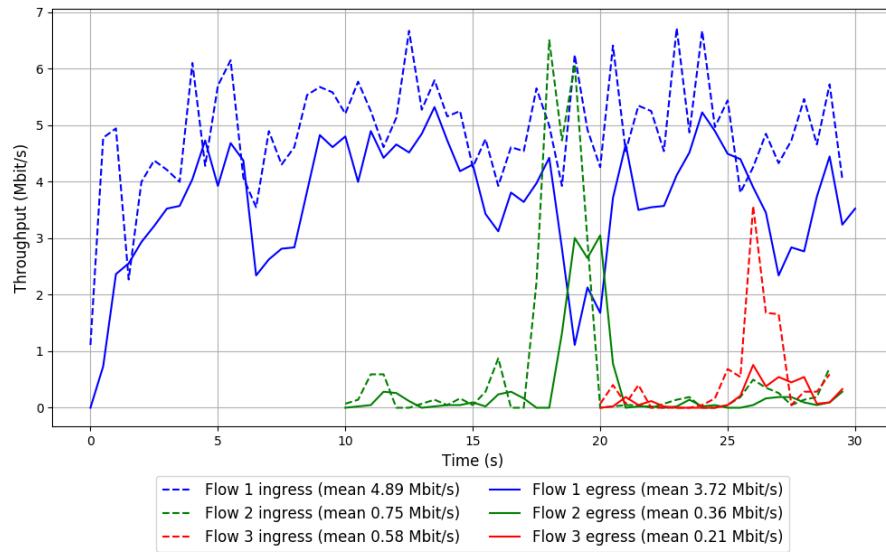


Run 2: Statistics of Verus

```
Start at: 2018-06-06 01:58:42
End at: 2018-06-06 01:59:12
Local clock offset: 1.139 ms
Remote clock offset: 0.031 ms

# Below is generated by plot.py at 2018-06-06 02:18:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 349.662 ms
Loss rate: 27.71%
-- Flow 1:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 349.114 ms
Loss rate: 24.13%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 354.396 ms
Loss rate: 51.33%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 363.627 ms
Loss rate: 63.51%
```

Run 2: Report of Verus — Data Link

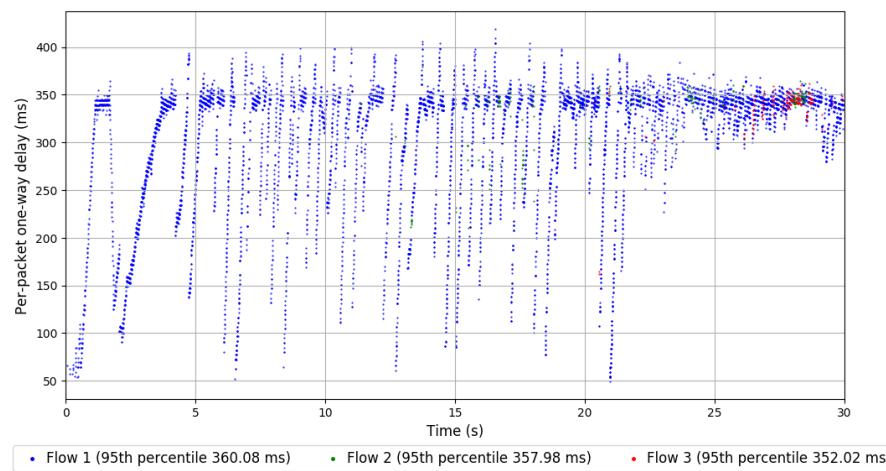
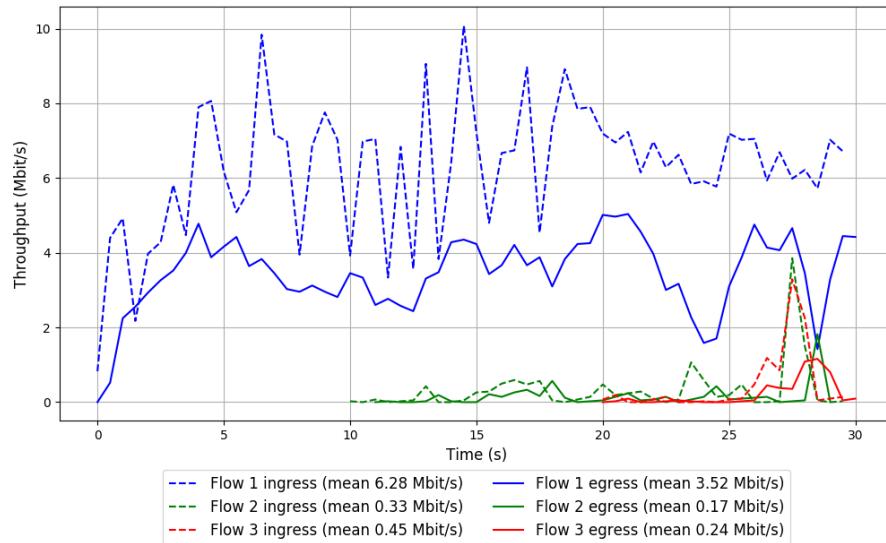


Run 3: Statistics of Verus

```
Start at: 2018-06-06 02:16:10
End at: 2018-06-06 02:16:40
Local clock offset: 2.487 ms
Remote clock offset: 5.545 ms

# Below is generated by plot.py at 2018-06-06 02:18:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 359.684 ms
Loss rate: 44.56%
-- Flow 1:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 360.084 ms
Loss rate: 44.11%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 357.978 ms
Loss rate: 55.17%
-- Flow 3:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 352.024 ms
Loss rate: 48.16%
```

Run 3: Report of Verus — Data Link

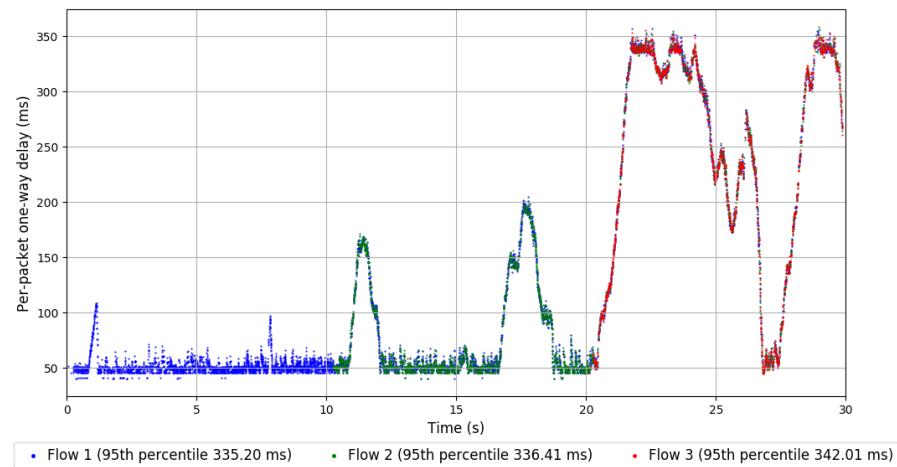
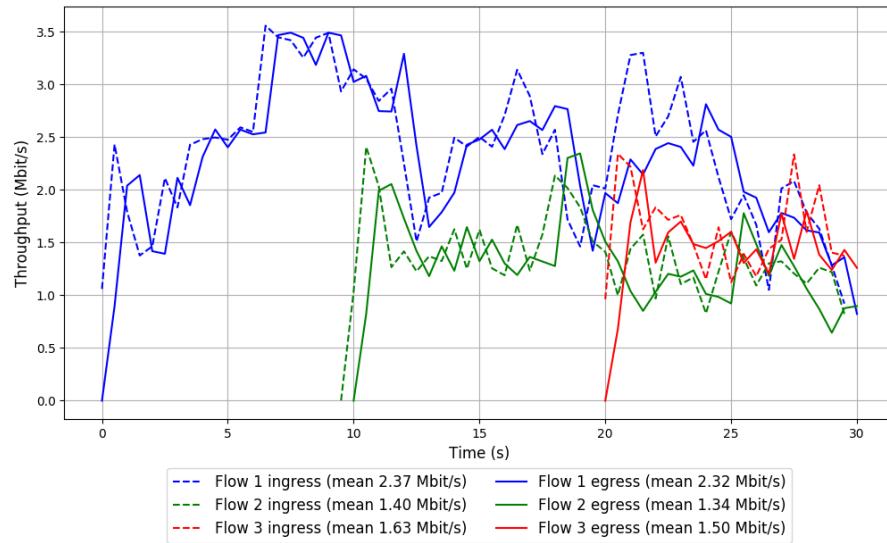


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-06-06 01:25:57
End at: 2018-06-06 01:26:27
Local clock offset: -0.577 ms
Remote clock offset: -7.615 ms

# Below is generated by plot.py at 2018-06-06 02:18:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 337.387 ms
Loss rate: 3.88%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 335.196 ms
Loss rate: 2.62%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 336.412 ms
Loss rate: 4.37%
-- Flow 3:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 342.015 ms
Loss rate: 8.60%
```

Run 1: Report of PCC-Vivace — Data Link

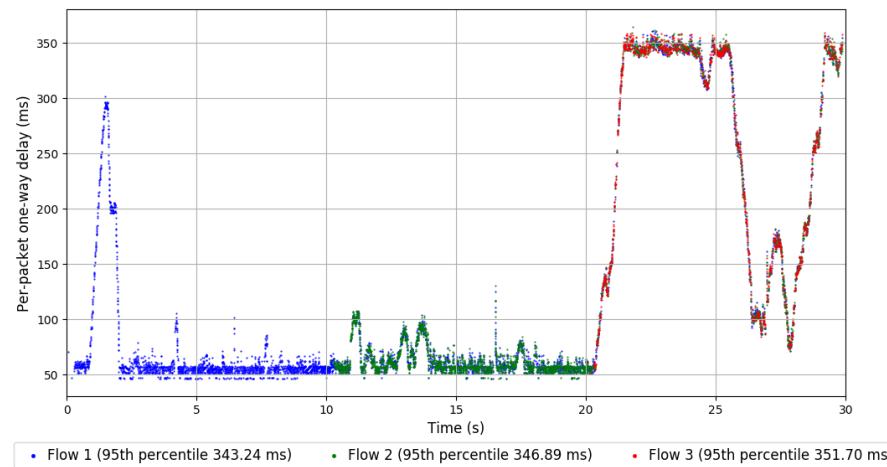
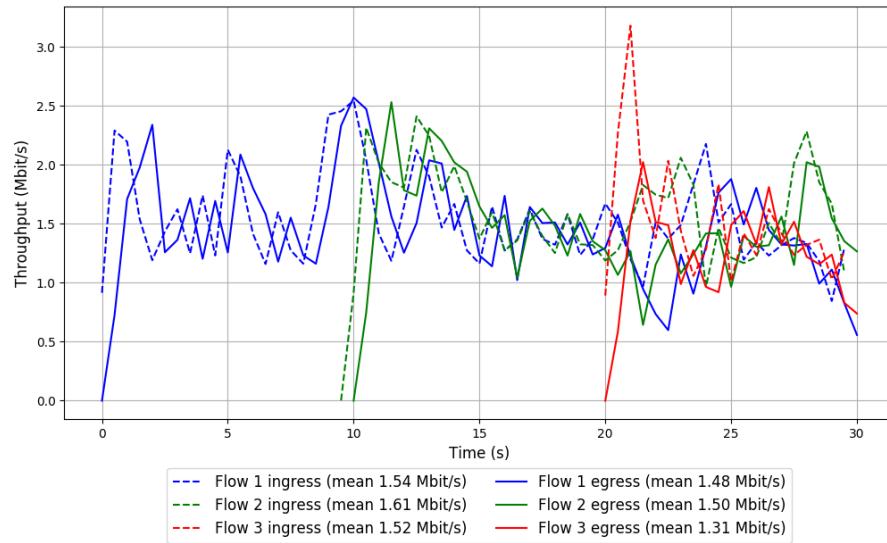


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-06-06 01:43:25
End at: 2018-06-06 01:43:55
Local clock offset: -1.025 ms
Remote clock offset: -9.093 ms

# Below is generated by plot.py at 2018-06-06 02:18:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 346.515 ms
Loss rate: 6.94%
-- Flow 1:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 343.242 ms
Loss rate: 4.23%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 346.886 ms
Loss rate: 7.14%
-- Flow 3:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 351.705 ms
Loss rate: 14.83%
```

Run 2: Report of PCC-Vivace — Data Link

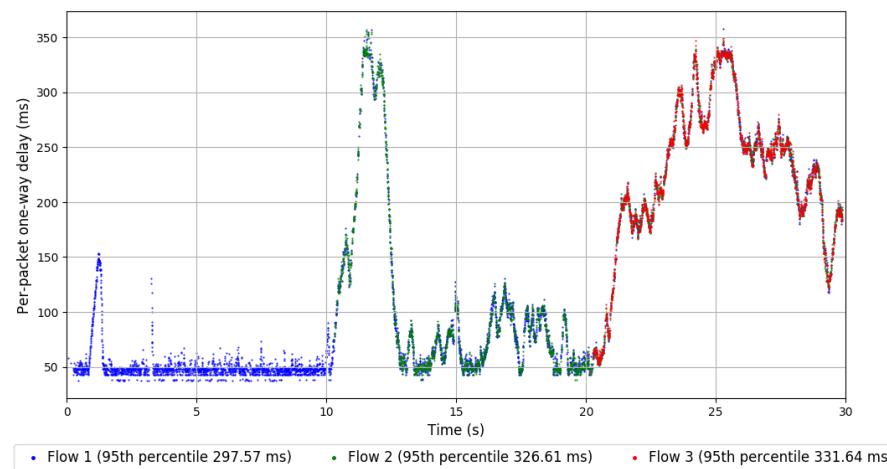
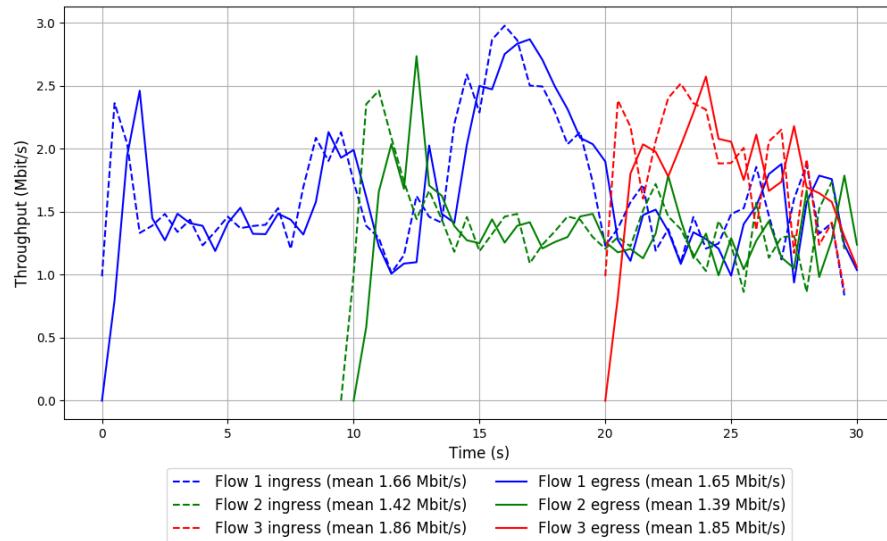


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-06-06 02:00:53
End at: 2018-06-06 02:01:23
Local clock offset: -2.869 ms
Remote clock offset: 1.102 ms

# Below is generated by plot.py at 2018-06-06 02:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 320.768 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 297.570 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 326.609 ms
Loss rate: 2.15%
-- Flow 3:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 331.636 ms
Loss rate: 1.61%
```

Run 3: Report of PCC-Vivace — Data Link

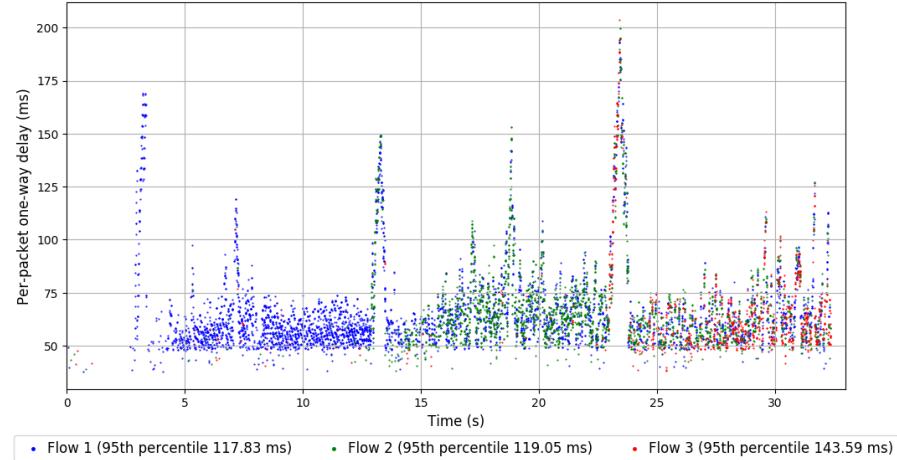
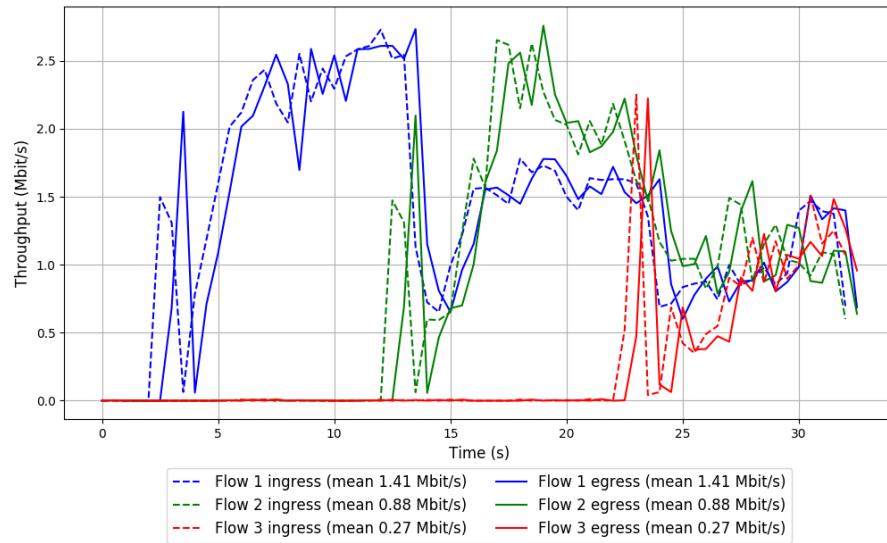


```
Run 1: Statistics of WebRTC media

Start at: 2018-06-06 01:37:58
End at: 2018-06-06 01:38:28
Local clock offset: 0.037 ms
Remote clock offset: -8.685 ms

# Below is generated by plot.py at 2018-06-06 02:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 119.619 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 117.827 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 119.045 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 143.589 ms
Loss rate: 1.24%
```

Run 1: Report of WebRTC media — Data Link

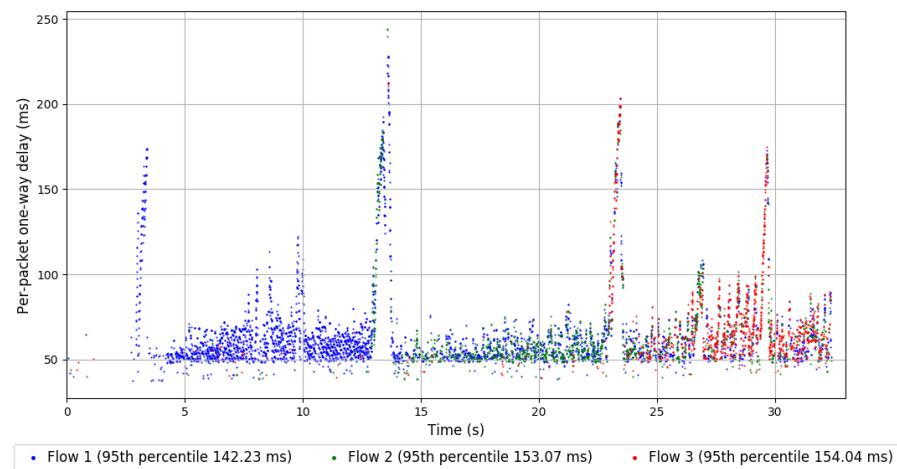
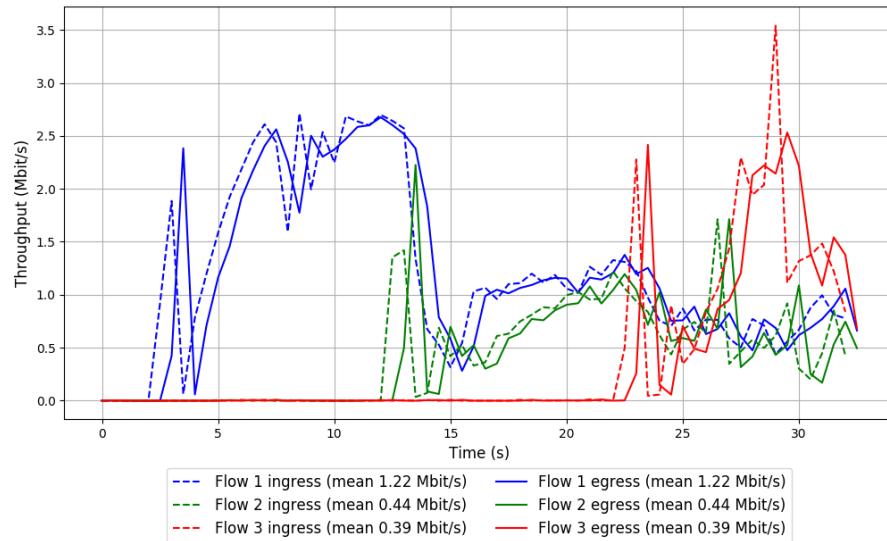


Run 2: Statistics of WebRTC media

```
Start at: 2018-06-06 01:55:25
End at: 2018-06-06 01:55:55
Local clock offset: 1.048 ms
Remote clock offset: -1.186 ms

# Below is generated by plot.py at 2018-06-06 02:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 148.182 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 142.228 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 153.074 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 154.043 ms
Loss rate: 0.92%
```

Run 2: Report of WebRTC media — Data Link



```
Run 3: Statistics of WebRTC media
```

```
Start at: 2018-06-06 02:12:53
End at: 2018-06-06 02:13:23
Local clock offset: -1.794 ms
Remote clock offset: 3.943 ms

# Below is generated by plot.py at 2018-06-06 02:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 199.840 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 211.389 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 236.499 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 141.502 ms
Loss rate: 0.56%
```

Run 3: Report of WebRTC media — Data Link

