

Pantheon Report

Generated at 2018-08-01 07:15:09 (UTC).

Data path: AWS Brazil 2 Ethernet (*local*) → Colombia ppp0 ppp0 (*remote*).

Repeated the test of 17 congestion control schemes 3 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

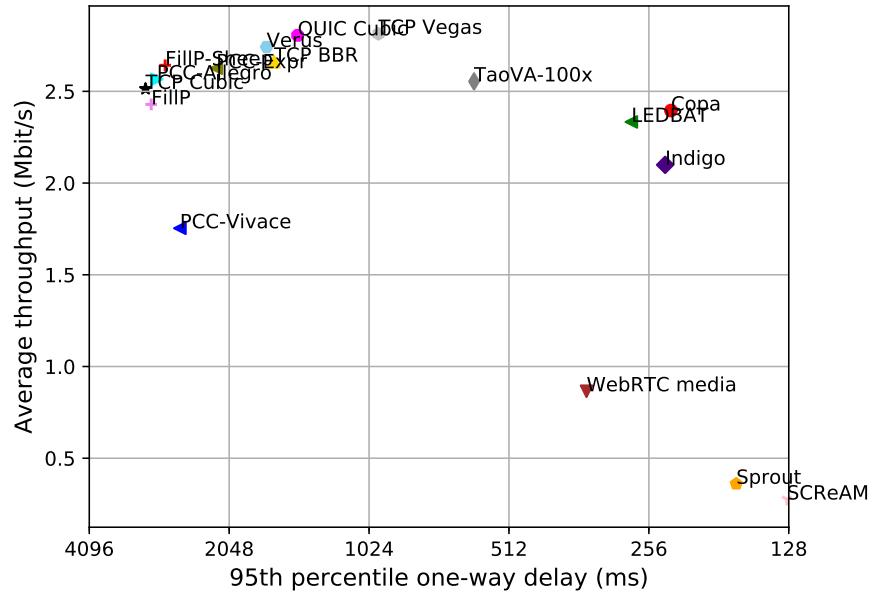
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

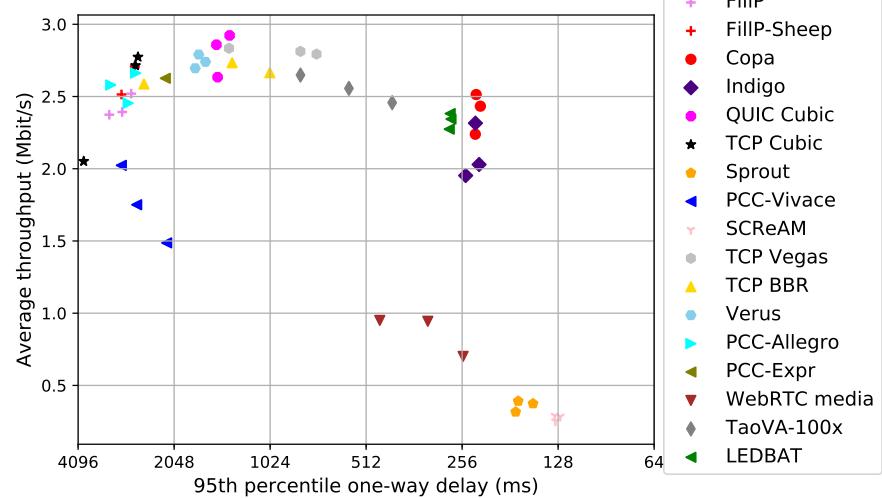
Git summary:

```
branch: master @ 640164b5b17c7c6561fff57729b3b5935d8596ce
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
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 @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS Brazil 2 to Colombia ppp0, 3 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS Brazil 2 to Colombia ppp0, 3 runs of 30s each per scheme
 3 flows with 10s interval between flows



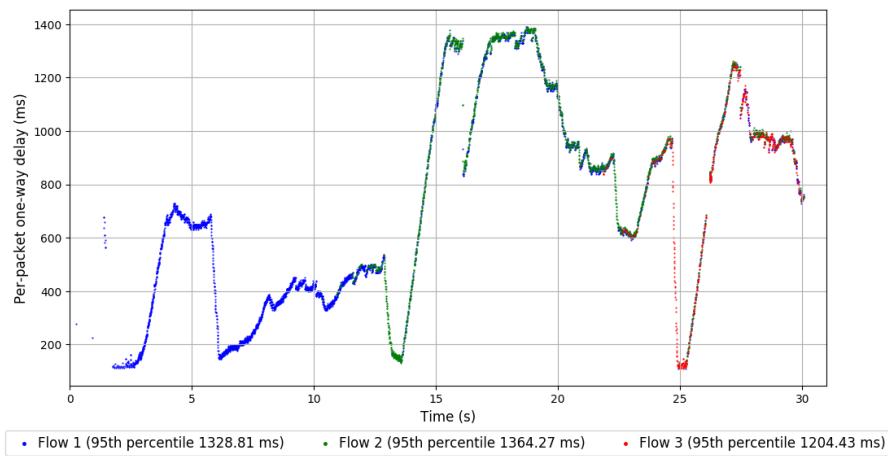
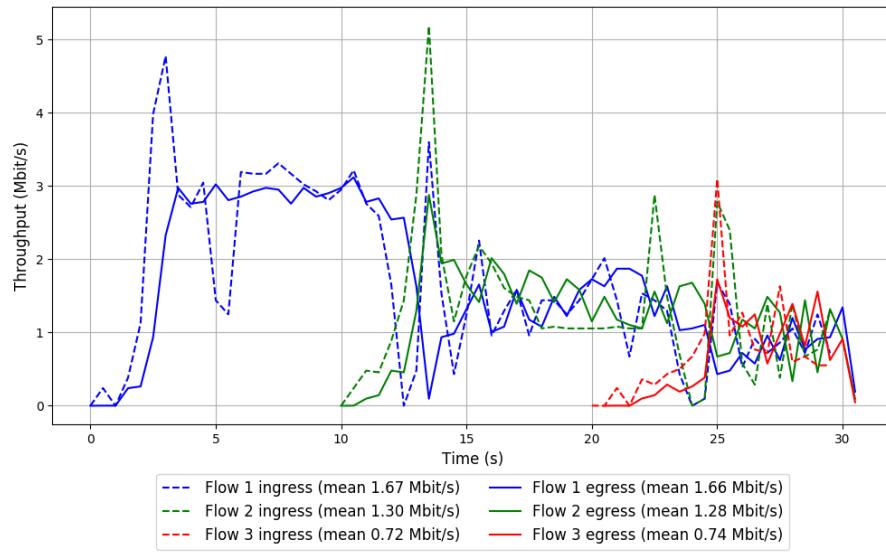
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	1.65	1.28	0.54	1624.93	1670.38	1507.55	1.32	3.35	9.38
Copa		1.44	0.91	1.04	225.73	222.53	240.88	0.15	0.44	1.10
TCP Cubic		2.35	0.23	0.07	3103.18	2984.10	3117.22	14.24	19.76	39.03
FillP		1.89	0.87	0.19	3014.26	2863.96	2676.13	83.76	69.28	68.59
FillP-Sheep		1.71	1.33	0.40	2790.11	2826.49	2845.87	29.87	49.43	87.29
Indigo		1.20	0.90	0.94	232.69	241.76	239.05	0.14	0.43	0.55
LEDBAT		1.88	0.47	0.41	276.05	279.90	298.42	0.61	0.85	2.63
PCC-Allegro		2.22	0.51	0.00	2926.95	2912.58	2940.50	37.94	21.47	9.58
PCC-Expr		2.63	0.00	0.00	2183.15	2130.84	2152.84	53.42	36.23	55.81
QUIC Cubic		2.03	1.00	0.27	1441.74	1478.93	1528.08	3.88	7.11	21.75
SCReAM		0.08	0.19	0.19	128.98	129.24	132.42	0.13	0.19	0.43
Sprout		0.17	0.19	0.20	179.28	162.48	165.28	0.09	0.36	0.61
TaoVA-100x		1.43	1.21	0.97	717.43	539.72	474.38	0.50	0.91	3.49
TCP Vegas		2.23	0.55	0.76	964.66	980.91	988.31	2.08	2.73	10.50
Verus		2.73	0.01	0.01	1701.63	1724.51	1711.26	4.96	6.28	10.00
PCC-Vivace		0.37	1.69	0.80	2343.12	2592.85	2631.85	7.92	12.76	24.90
WebRTC media		0.35	0.39	0.13	266.88	353.13	386.50	0.13	0.33	2.50

Run 1: Statistics of TCP BBR

```
Start at: 2018-08-01 06:31:56
End at: 2018-08-01 06:32:26
Local clock offset: -3.603 ms
Remote clock offset: 3.777 ms

# Below is generated by plot.py at 2018-08-01 07:14:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.73 Mbit/s
95th percentile per-packet one-way delay: 1346.843 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 1328.812 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 1364.266 ms
Loss rate: 3.24%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 1204.434 ms
Loss rate: 5.37%
```

Run 1: Report of TCP BBR — Data Link

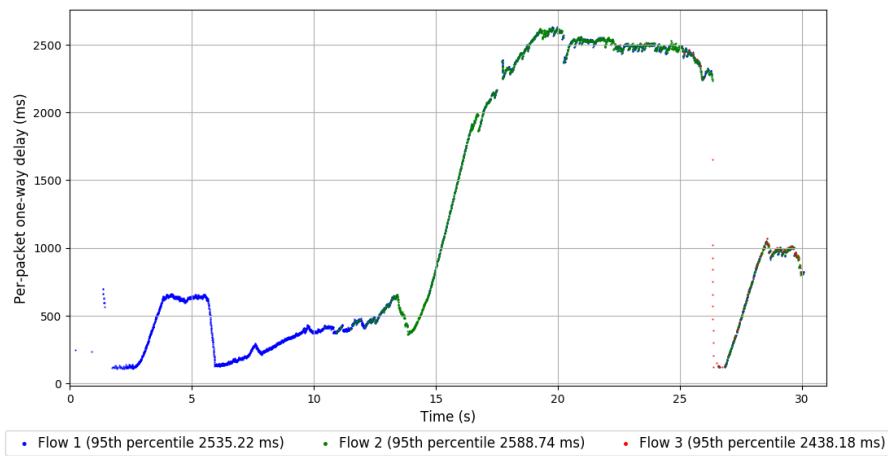
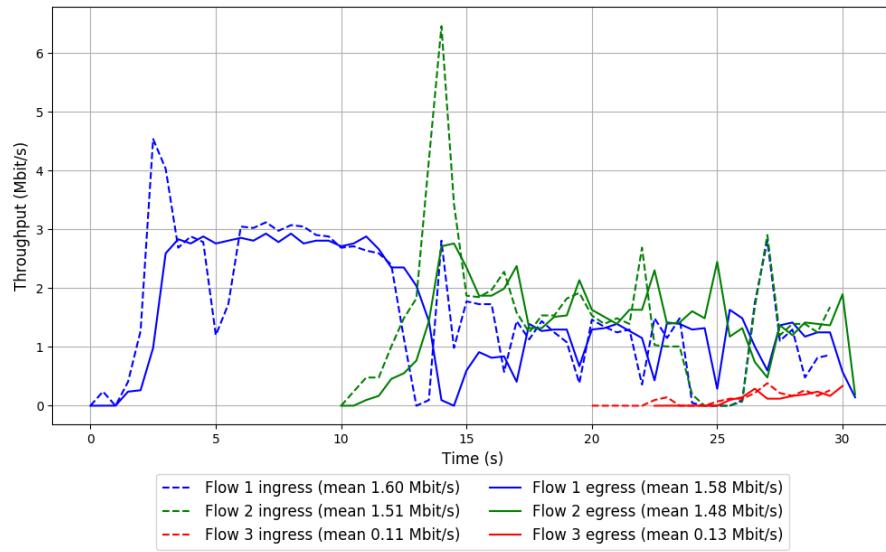


Run 2: Statistics of TCP BBR

```
Start at: 2018-08-01 06:52:14
End at: 2018-08-01 06:52:44
Local clock offset: -3.379 ms
Remote clock offset: 3.927 ms

# Below is generated by plot.py at 2018-08-01 07:14:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.59 Mbit/s
95th percentile per-packet one-way delay: 2545.886 ms
Loss rate: 2.58%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 2535.224 ms
Loss rate: 1.53%
-- Flow 2:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 2588.741 ms
Loss rate: 3.73%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 2438.175 ms
Loss rate: 16.08%
```

Run 2: Report of TCP BBR — Data Link

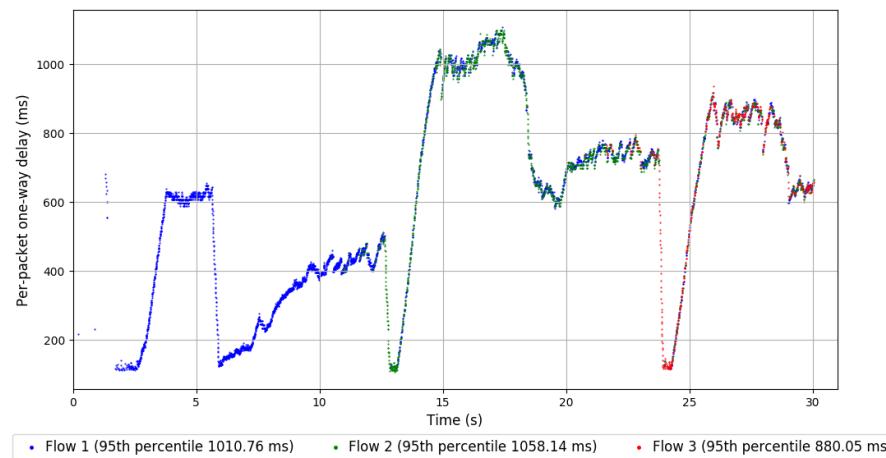
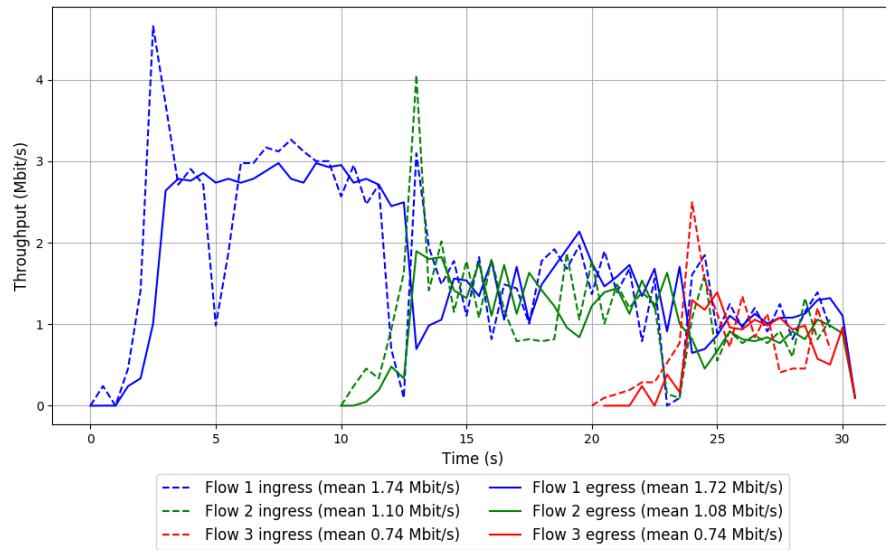


Run 3: Statistics of TCP BBR

```
Start at: 2018-08-01 07:12:32
End at: 2018-08-01 07:13:02
Local clock offset: -4.877 ms
Remote clock offset: 4.341 ms

# Below is generated by plot.py at 2018-08-01 07:14:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 1025.986 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 1010.764 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 1058.143 ms
Loss rate: 3.07%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 880.048 ms
Loss rate: 6.69%
```

Run 3: Report of TCP BBR — Data Link

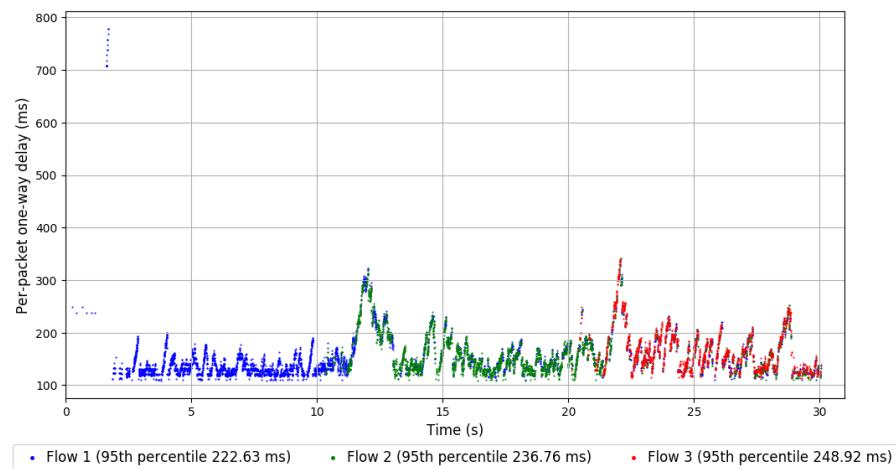
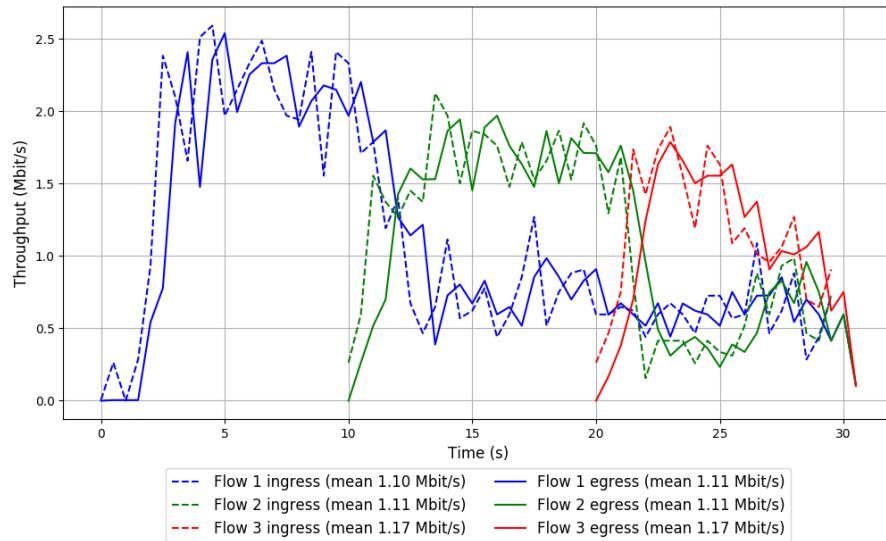


Run 1: Statistics of Copa

```
Start at: 2018-08-01 06:21:11
End at: 2018-08-01 06:21:41
Local clock offset: -3.577 ms
Remote clock offset: 8.497 ms

# Below is generated by plot.py at 2018-08-01 07:14:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 232.718 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 222.634 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 236.760 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 248.922 ms
Loss rate: 0.56%
```

Run 1: Report of Copa — Data Link

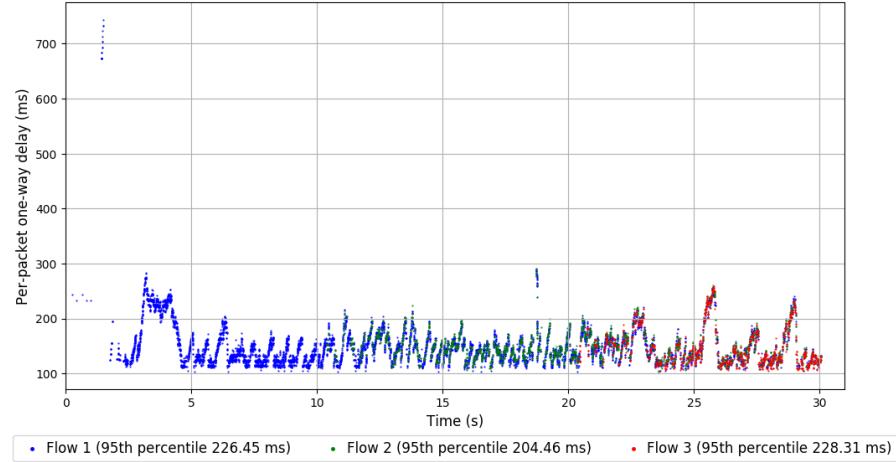
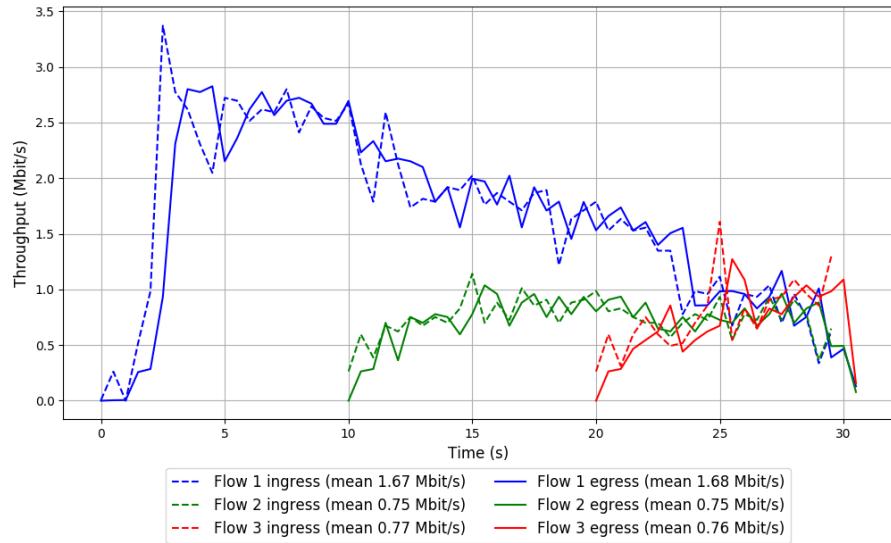


Run 2: Statistics of Copa

```
Start at: 2018-08-01 06:41:29
End at: 2018-08-01 06:41:59
Local clock offset: -3.497 ms
Remote clock offset: 3.916 ms

# Below is generated by plot.py at 2018-08-01 07:14:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 224.382 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 226.454 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 204.461 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 228.309 ms
Loss rate: 1.86%
```

Run 2: Report of Copa — Data Link

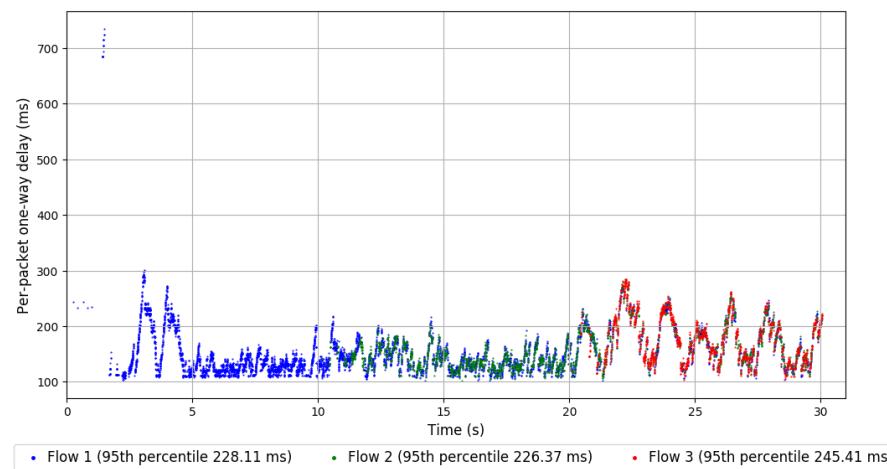
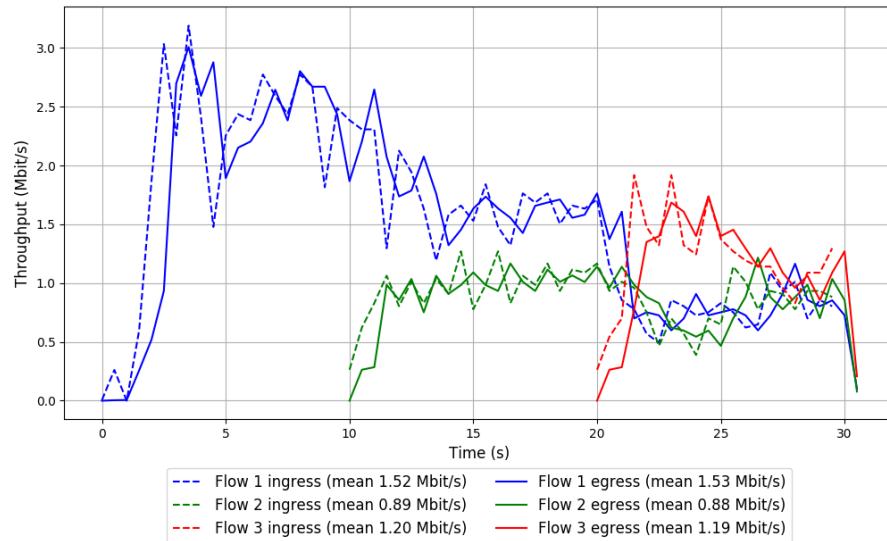


Run 3: Statistics of Copa

```
Start at: 2018-08-01 07:01:47
End at: 2018-08-01 07:02:17
Local clock offset: -4.437 ms
Remote clock offset: 4.352 ms

# Below is generated by plot.py at 2018-08-01 07:14:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 231.278 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 228.106 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 226.369 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 245.415 ms
Loss rate: 0.87%
```

Run 3: Report of Copa — Data Link

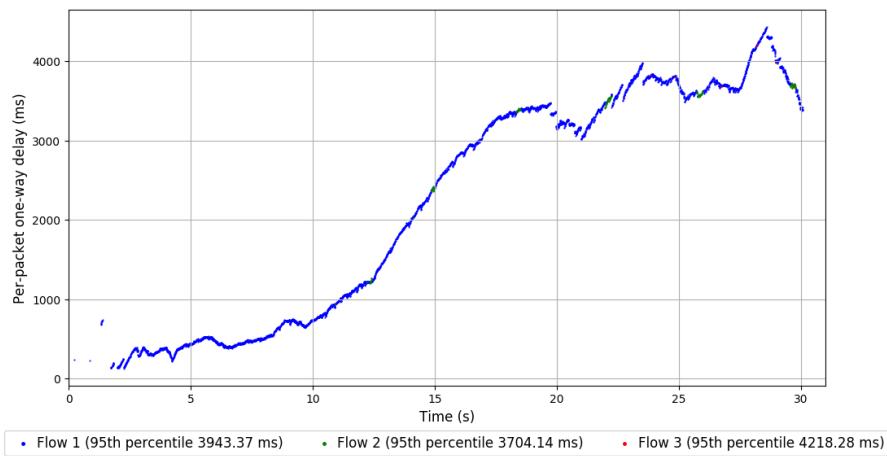
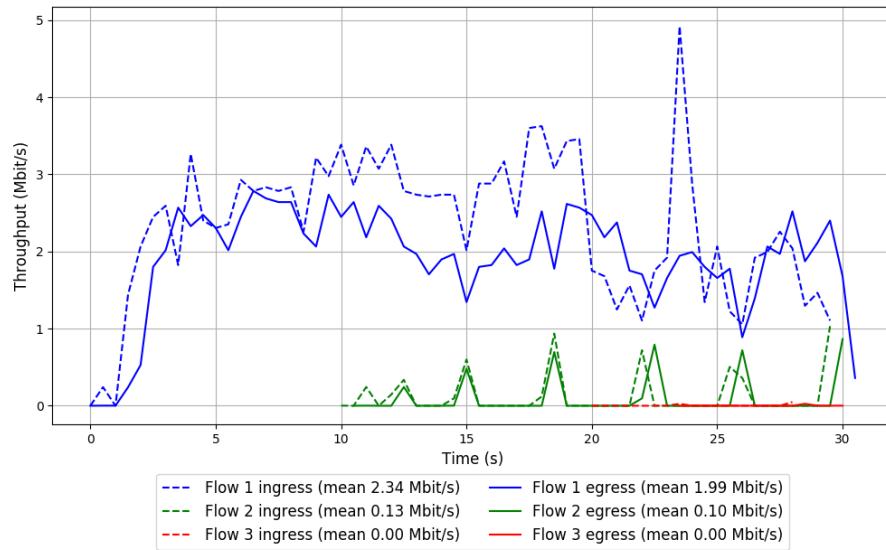


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-08-01 06:15:13
End at: 2018-08-01 06:15:43
Local clock offset: -3.825 ms
Remote clock offset: 3.047 ms

# Below is generated by plot.py at 2018-08-01 07:14:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 3934.304 ms
Loss rate: 15.97%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 3943.371 ms
Loss rate: 15.67%
-- Flow 2:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 3704.143 ms
Loss rate: 23.56%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4218.283 ms
Loss rate: 60.08%
```

Run 1: Report of TCP Cubic — Data Link

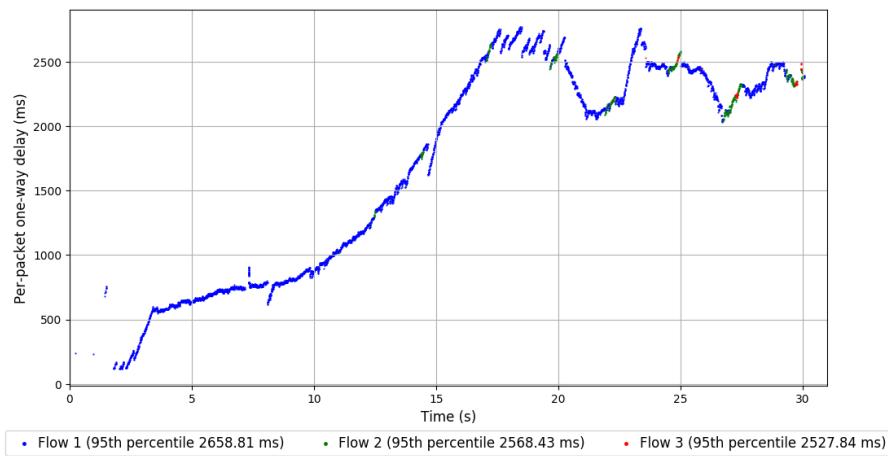
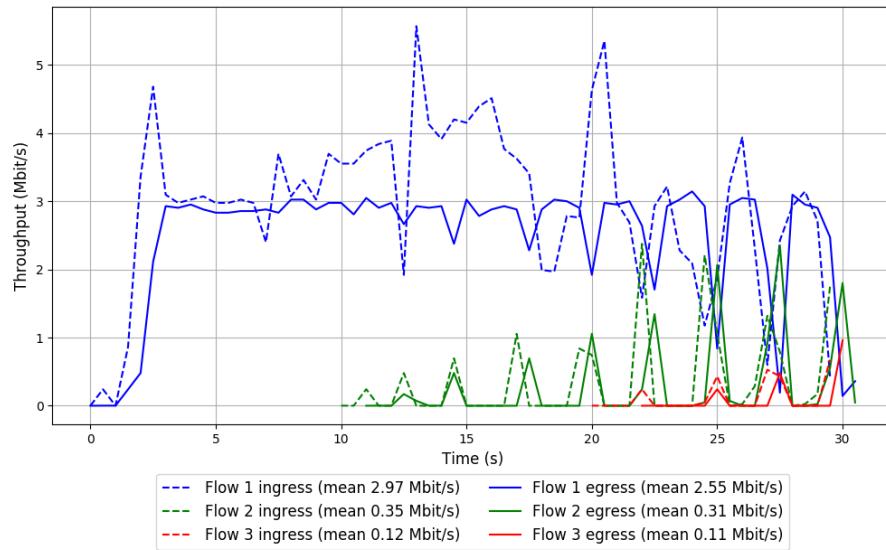


Run 2: Statistics of TCP Cubic

```
Start at: 2018-08-01 06:35:31
End at: 2018-08-01 06:36:01
Local clock offset: -3.576 ms
Remote clock offset: 3.784 ms

# Below is generated by plot.py at 2018-08-01 07:14:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.77 Mbit/s
95th percentile per-packet one-way delay: 2658.093 ms
Loss rate: 14.33%
-- Flow 1:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 2658.810 ms
Loss rate: 14.07%
-- Flow 2:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 2568.429 ms
Loss rate: 15.19%
-- Flow 3:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 2527.839 ms
Loss rate: 28.50%
```

Run 2: Report of TCP Cubic — Data Link

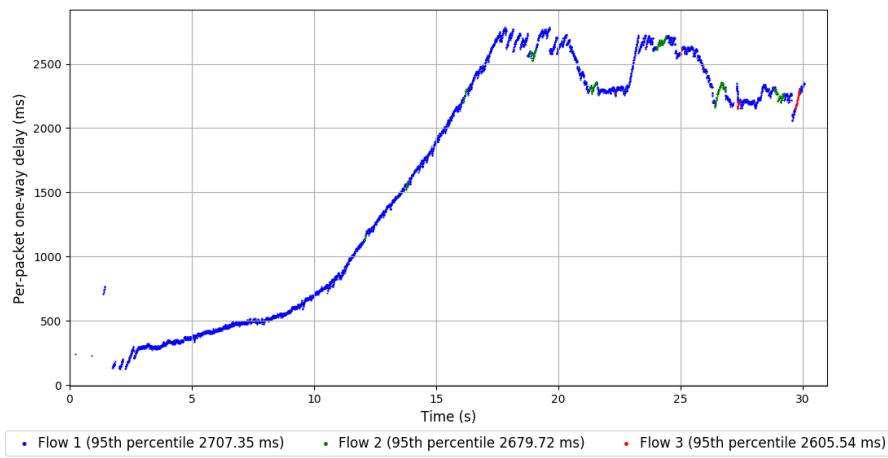
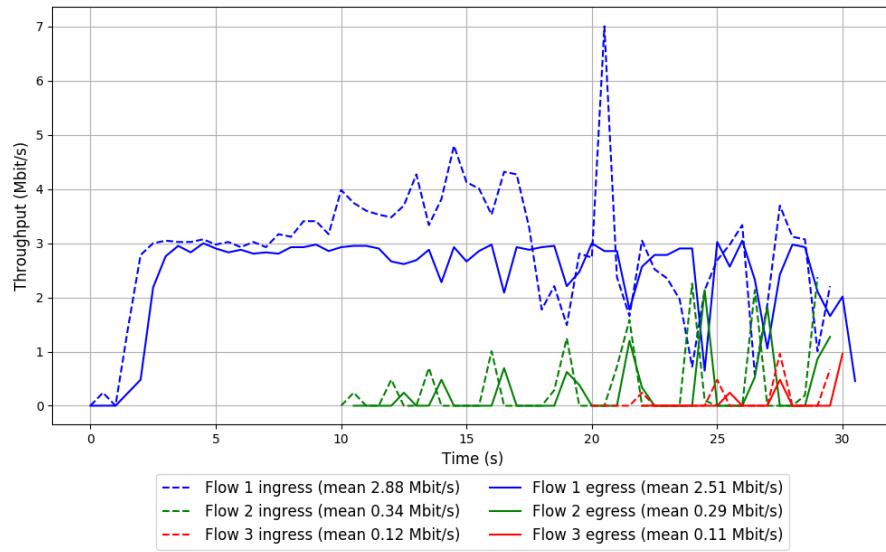


Run 3: Statistics of TCP Cubic

```
Start at: 2018-08-01 06:55:49
End at: 2018-08-01 06:56:19
Local clock offset: -3.854 ms
Remote clock offset: 8.978 ms

# Below is generated by plot.py at 2018-08-01 07:14:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 2706.725 ms
Loss rate: 13.71%
-- Flow 1:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 2707.348 ms
Loss rate: 12.98%
-- Flow 2:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 2679.718 ms
Loss rate: 20.53%
-- Flow 3:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 2605.537 ms
Loss rate: 28.50%
```

Run 3: Report of TCP Cubic — Data Link

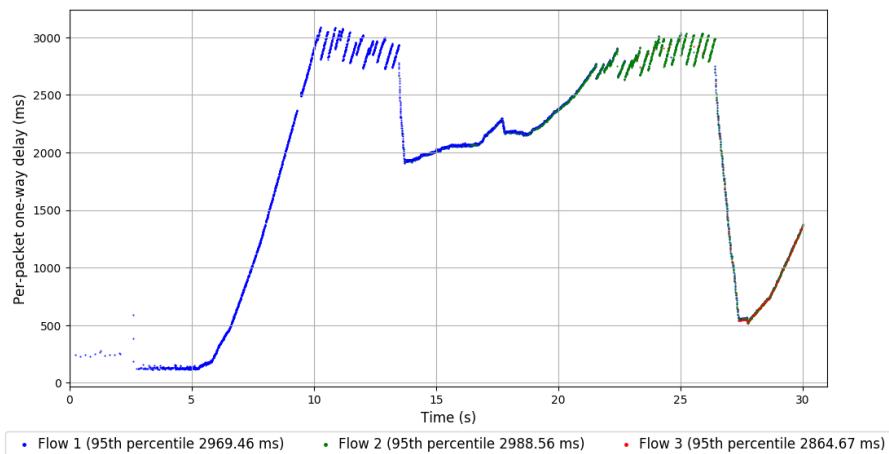
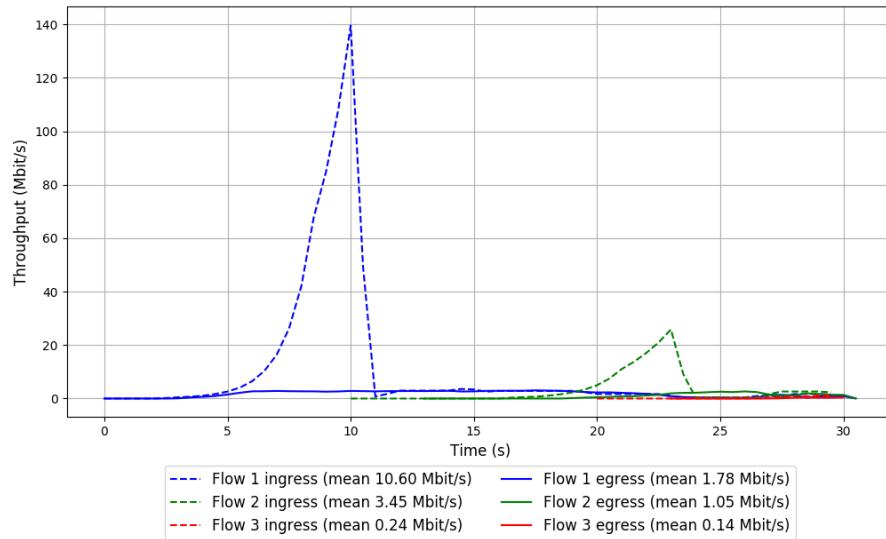


```
Run 1: Statistics of FillP
```

```
Start at: 2018-08-01 06:22:24
End at: 2018-08-01 06:22:54
Local clock offset: -3.551 ms
Remote clock offset: 8.543 ms

# Below is generated by plot.py at 2018-08-01 07:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 2978.995 ms
Loss rate: 81.67%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 2969.462 ms
Loss rate: 83.34%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 2988.557 ms
Loss rate: 74.69%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 2864.670 ms
Loss rate: 59.79%
```

Run 1: Report of FillP — Data Link

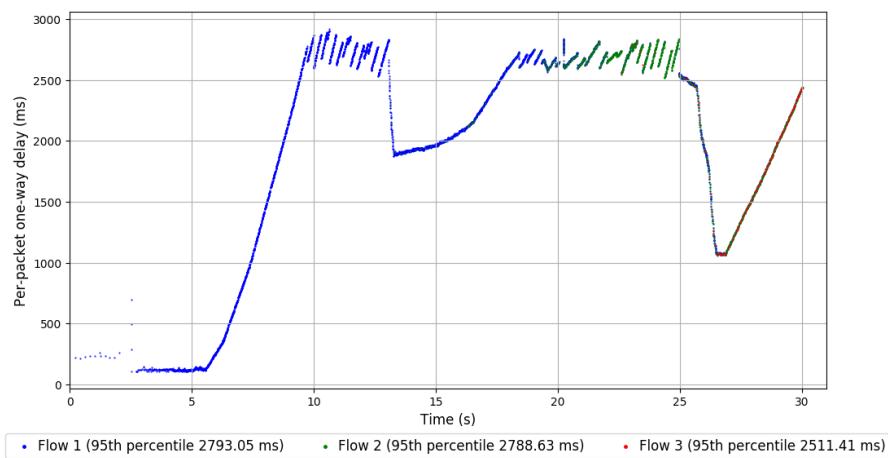
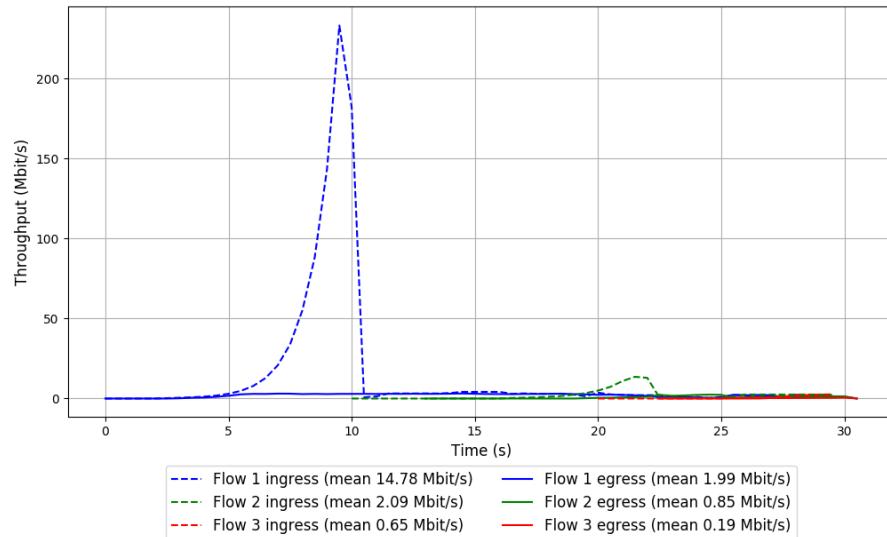


Run 2: Statistics of FillP

```
Start at: 2018-08-01 06:42:41
End at: 2018-08-01 06:43:11
Local clock offset: -3.505 ms
Remote clock offset: 3.859 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.52 Mbit/s
95th percentile per-packet one-way delay: 2791.008 ms
Loss rate: 84.70%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 2793.046 ms
Loss rate: 86.58%
-- Flow 2:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 2788.627 ms
Loss rate: 65.78%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 2511.415 ms
Loss rate: 78.38%
```

Run 2: Report of FillP — Data Link

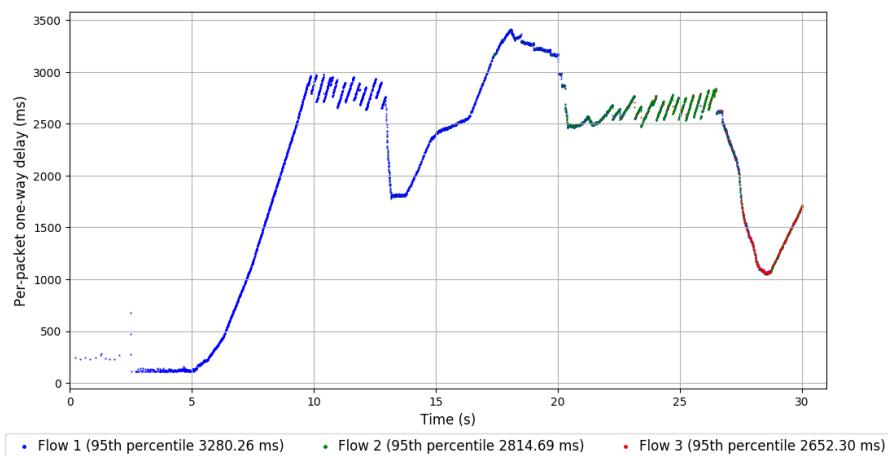
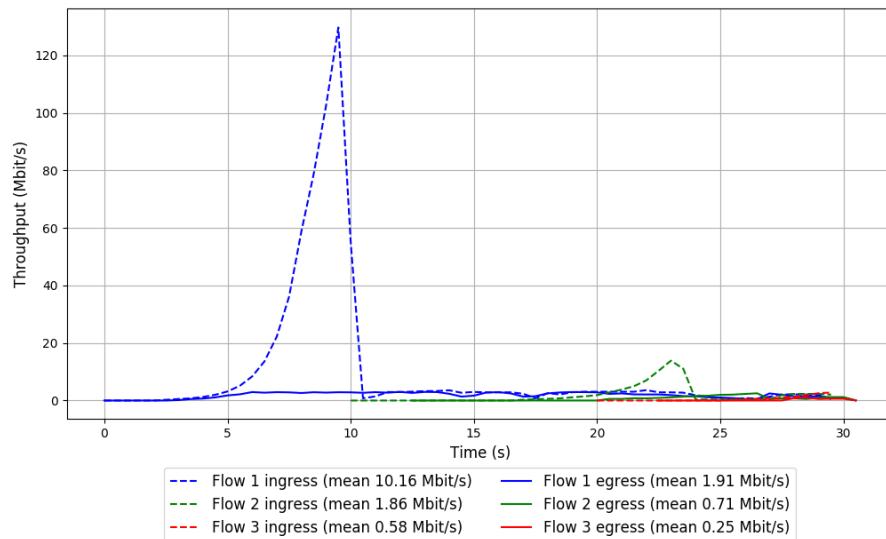


Run 3: Statistics of FillP

```
Start at: 2018-08-01 07:02:59
End at: 2018-08-01 07:03:29
Local clock offset: -4.583 ms
Remote clock offset: 9.172 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 3270.339 ms
Loss rate: 79.63%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 3280.264 ms
Loss rate: 81.35%
-- Flow 2:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 2814.693 ms
Loss rate: 67.37%
-- Flow 3:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 2652.299 ms
Loss rate: 67.59%
```

Run 3: Report of FillP — Data Link

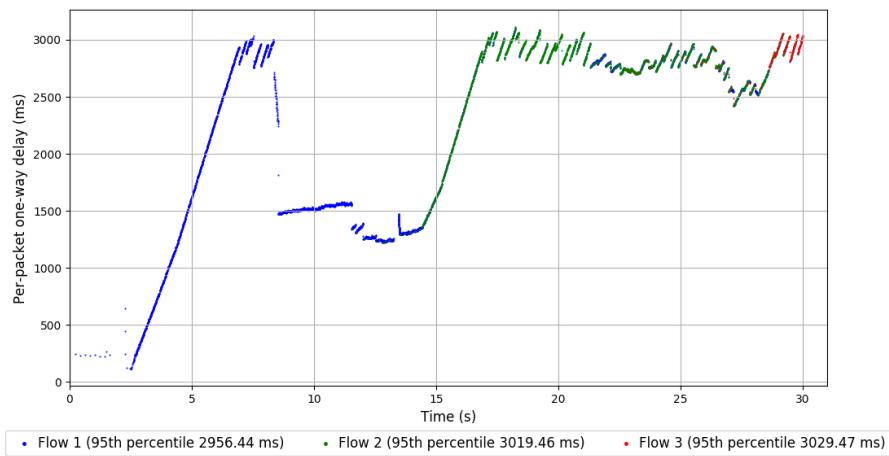
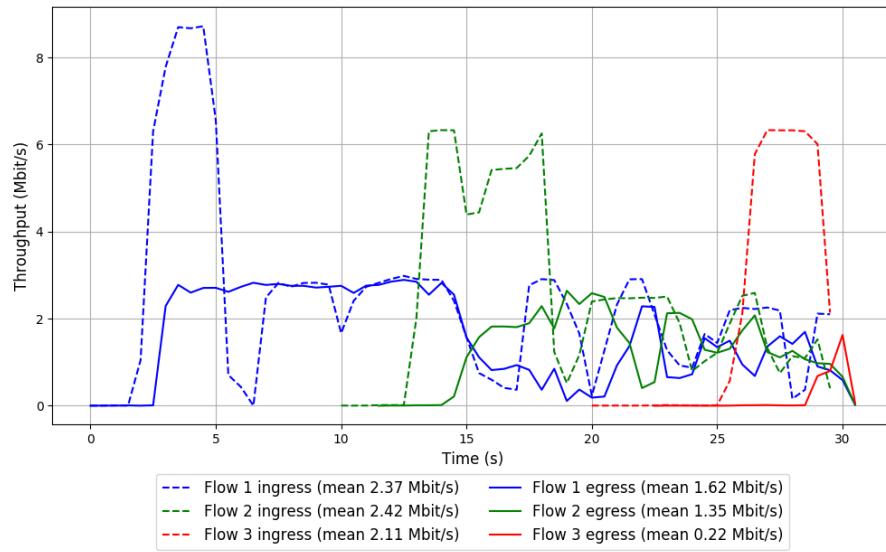


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2018-08-01 06:23:36
End at: 2018-08-01 06:24:06
Local clock offset: -3.545 ms
Remote clock offset: 8.635 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 2994.336 ms
Loss rate: 46.63%
-- Flow 1:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 2956.440 ms
Loss rate: 31.92%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 3019.459 ms
Loss rate: 48.44%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3029.475 ms
Loss rate: 92.25%
```

Run 1: Report of FillP-Sheep — Data Link

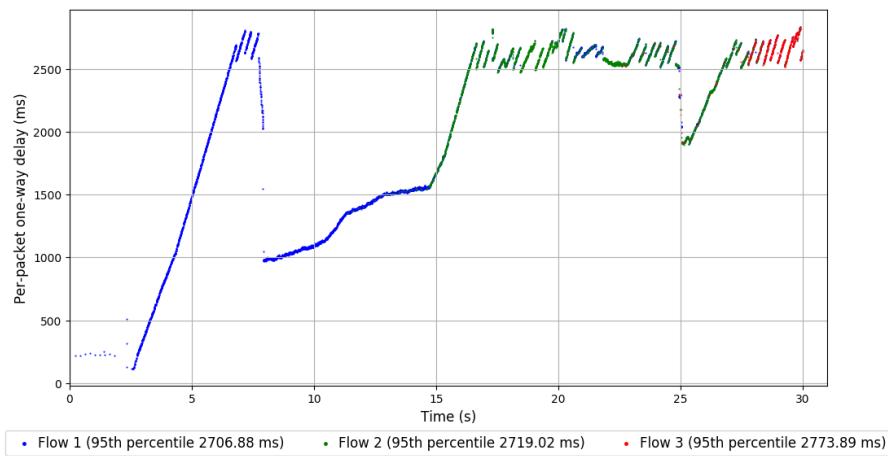
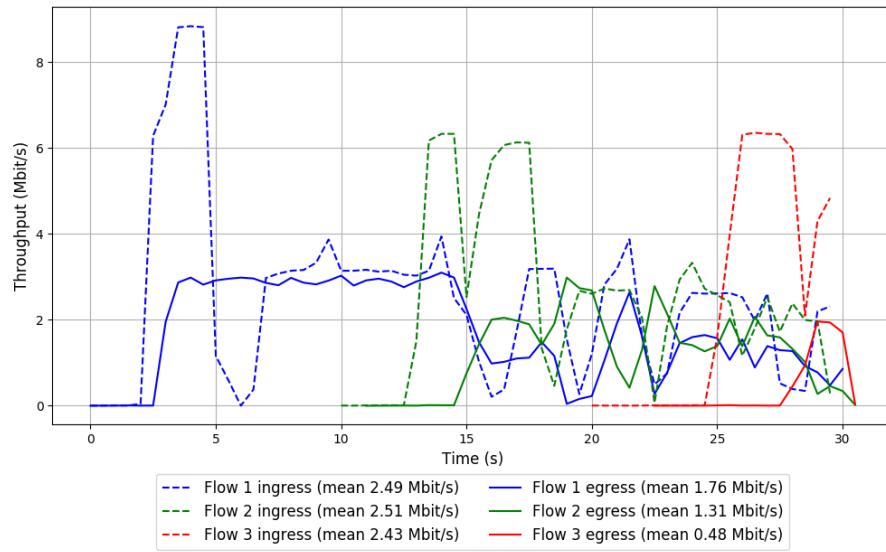


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-08-01 06:43:53
End at: 2018-08-01 06:44:23
Local clock offset: -3.478 ms
Remote clock offset: 8.654 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.70 Mbit/s
95th percentile per-packet one-way delay: 2720.367 ms
Loss rate: 45.85%
-- Flow 1:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 2706.880 ms
Loss rate: 29.57%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 2719.020 ms
Loss rate: 51.16%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 2773.886 ms
Loss rate: 85.27%
```

Run 2: Report of FillP-Sheep — Data Link

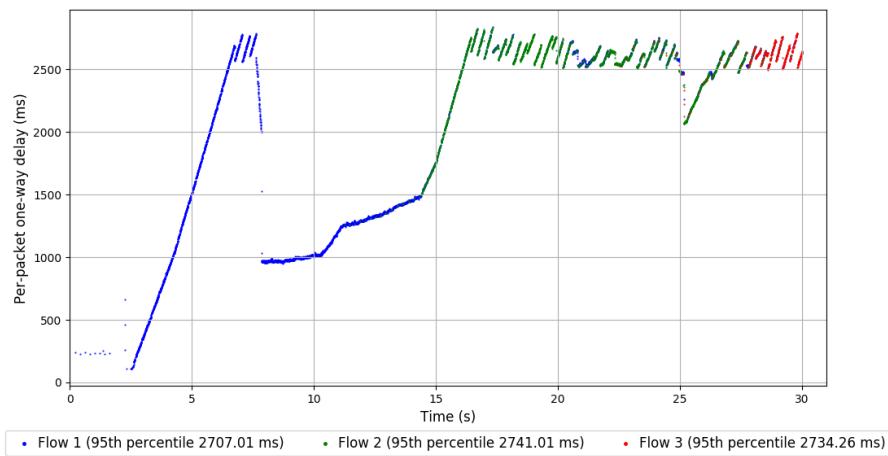
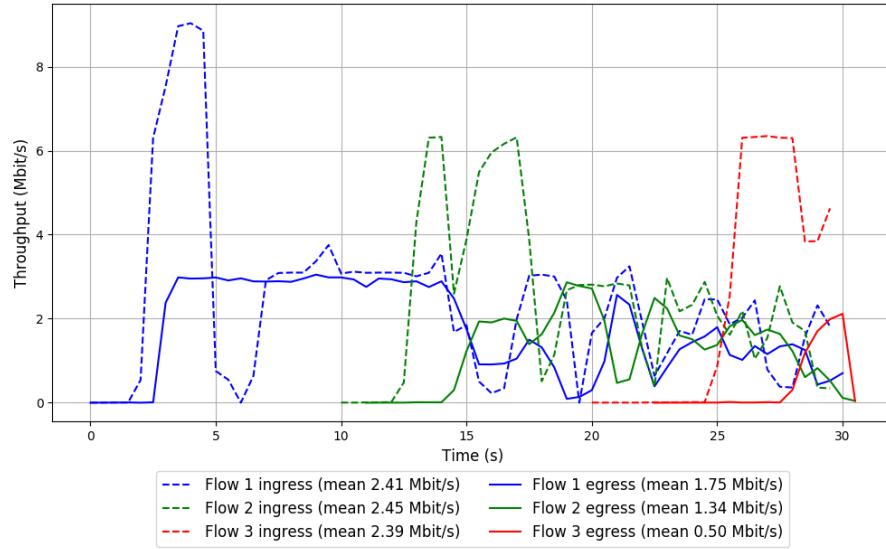


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-08-01 07:04:11
End at: 2018-08-01 07:04:41
Local clock offset: -4.622 ms
Remote clock offset: 4.222 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 2722.060 ms
Loss rate: 44.27%
-- Flow 1:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 2707.005 ms
Loss rate: 28.12%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 2741.006 ms
Loss rate: 48.68%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 2734.261 ms
Loss rate: 84.35%
```

Run 3: Report of FillP-Sheep — Data Link

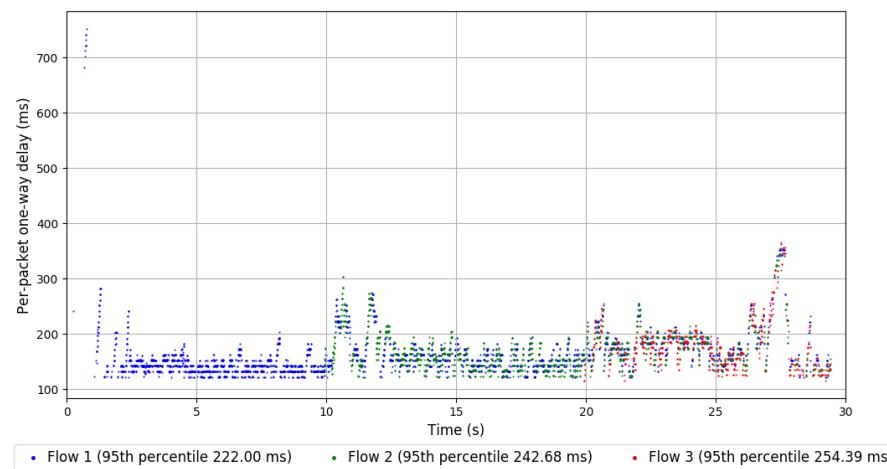
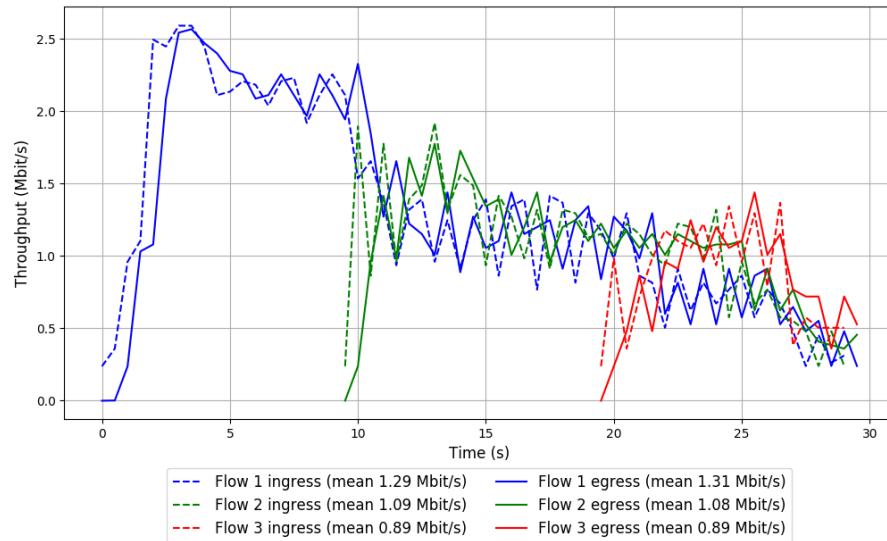


Run 1: Statistics of Indigo

```
Start at: 2018-08-01 06:29:33
End at: 2018-08-01 06:30:03
Local clock offset: -3.599 ms
Remote clock offset: 8.762 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 232.561 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 221.997 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 242.679 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 254.392 ms
Loss rate: 0.56%
```

Run 1: Report of Indigo — Data Link

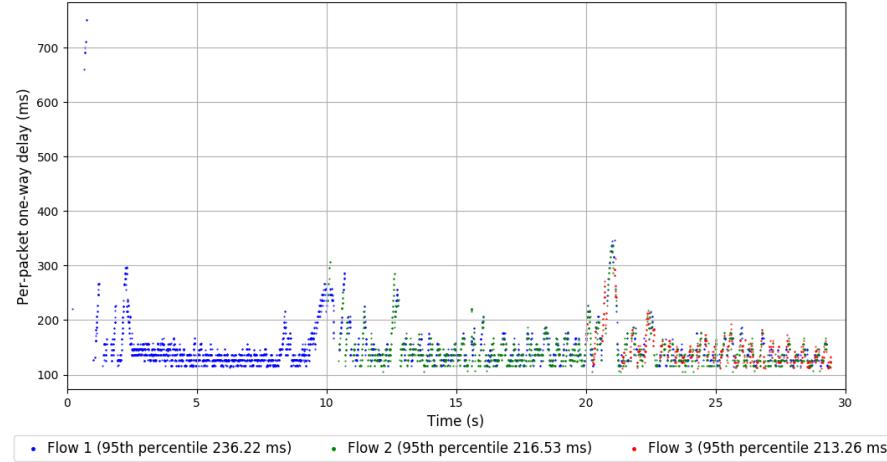
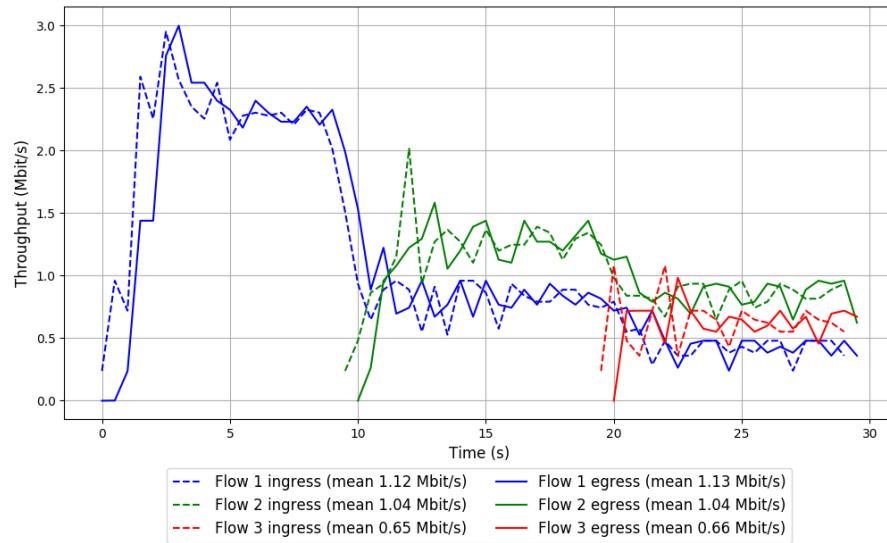


Run 2: Statistics of Indigo

```
Start at: 2018-08-01 06:49:51
End at: 2018-08-01 06:50:21
Local clock offset: -3.408 ms
Remote clock offset: 3.871 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 226.447 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 236.225 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 216.532 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 213.262 ms
Loss rate: 0.38%
```

Run 2: Report of Indigo — Data Link

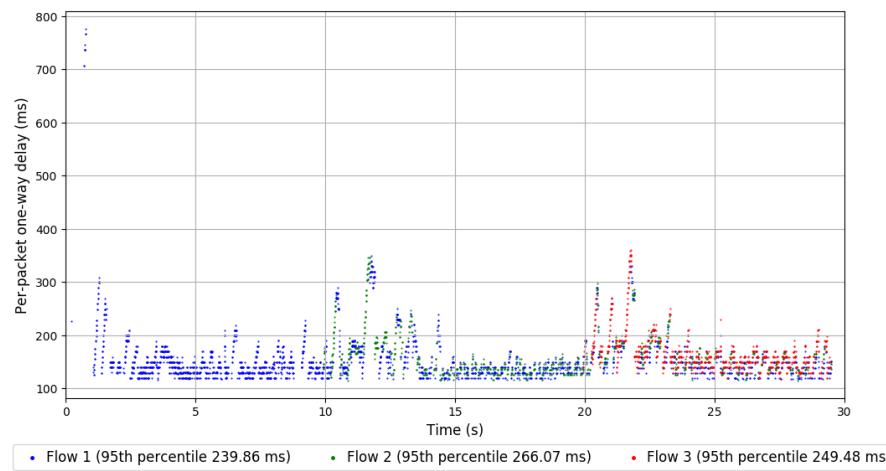
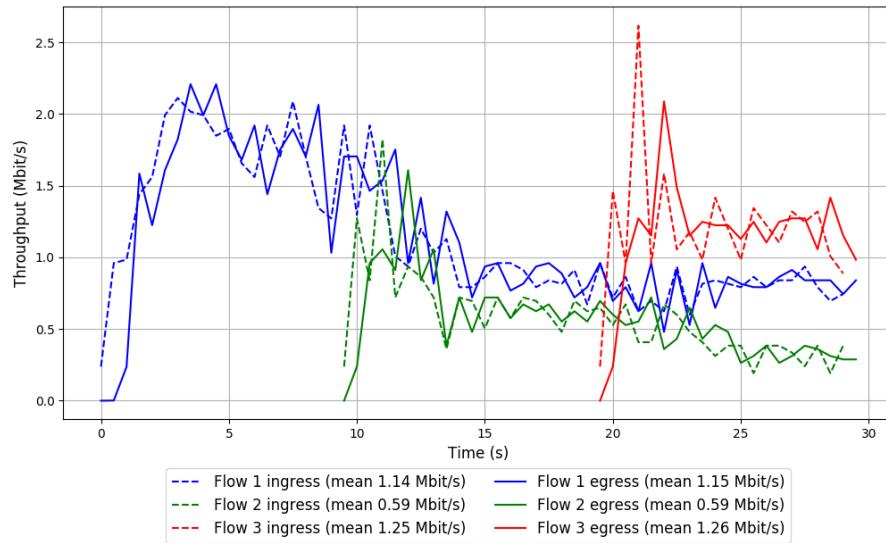


Run 3: Statistics of Indigo

```
Start at: 2018-08-01 07:10:09
End at: 2018-08-01 07:10:39
Local clock offset: -4.866 ms
Remote clock offset: 9.234 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 249.515 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 239.860 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 266.071 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 249.483 ms
Loss rate: 0.70%
```

Run 3: Report of Indigo — Data Link

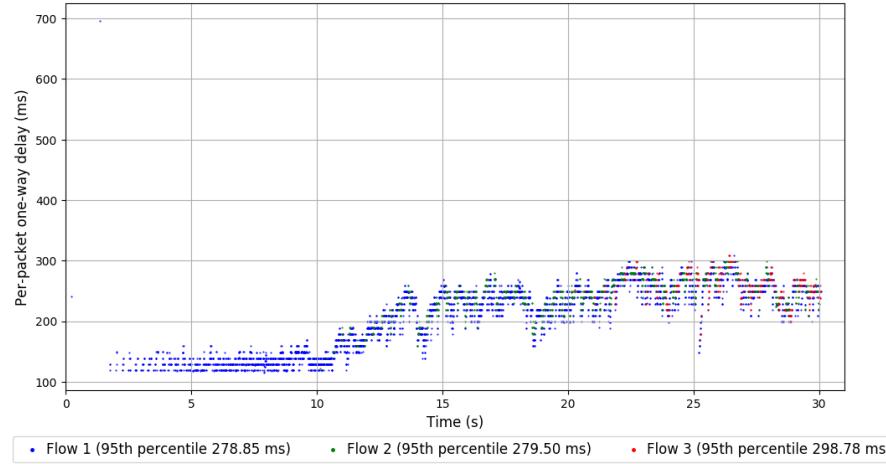
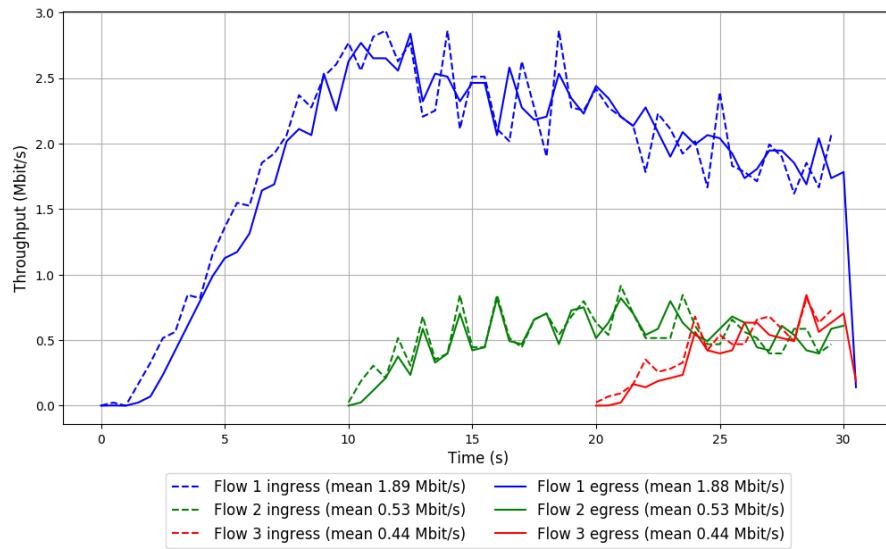


```
Run 1: Statistics of LEDBAT

Start at: 2018-08-01 06:27:10
End at: 2018-08-01 06:27:40
Local clock offset: -3.596 ms
Remote clock offset: 8.731 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 279.096 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 278.845 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 279.495 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 298.776 ms
Loss rate: 2.68%
```

Run 1: Report of LEDBAT — Data Link

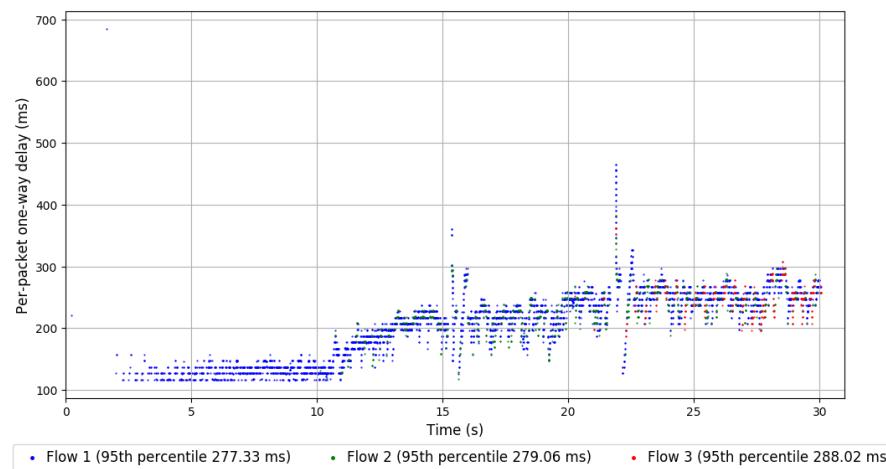
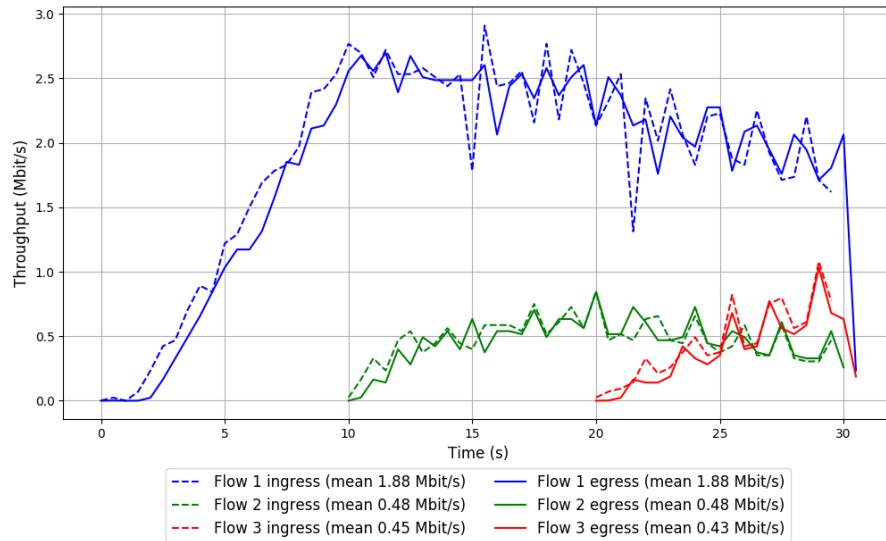


Run 2: Statistics of LEDBAT

```
Start at: 2018-08-01 06:47:27
End at: 2018-08-01 06:47:57
Local clock offset: -3.455 ms
Remote clock offset: 8.797 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 277.534 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 277.331 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 279.063 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 288.017 ms
Loss rate: 5.22%
```

Run 2: Report of LEDBAT — Data Link

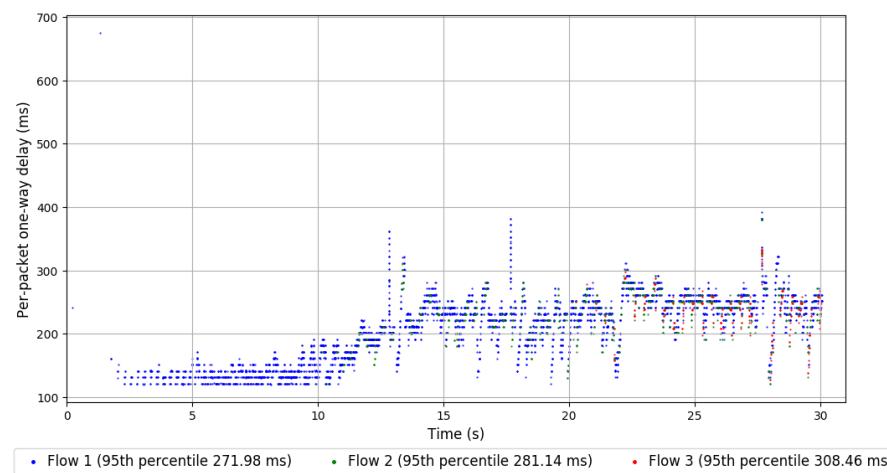
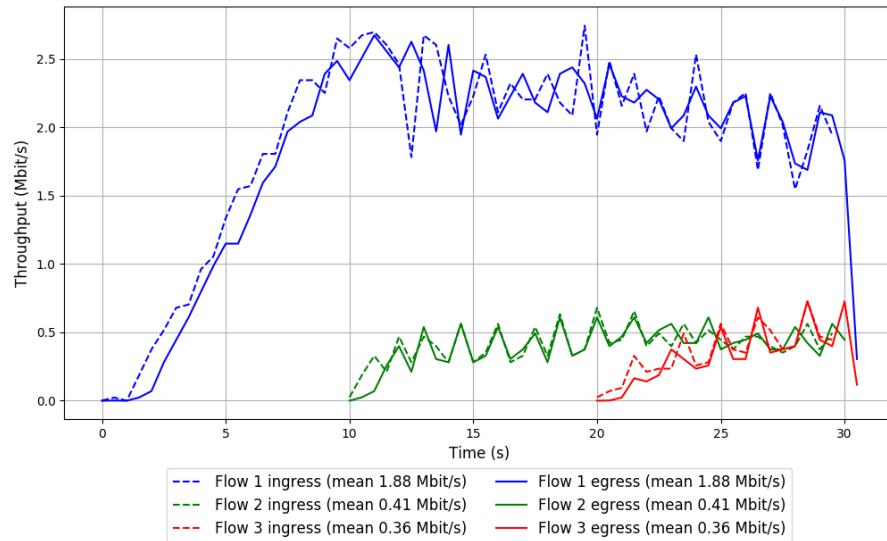


Run 3: Statistics of LEDBAT

```
Start at: 2018-08-01 07:07:46
End at: 2018-08-01 07:08:16
Local clock offset: -4.724 ms
Remote clock offset: 9.252 ms

# Below is generated by plot.py at 2018-08-01 07:14:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 281.035 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 271.978 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 281.142 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 308.461 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

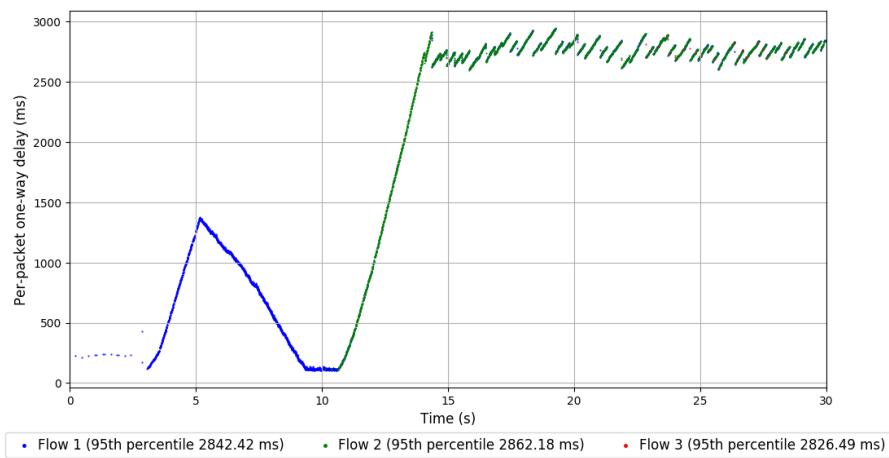
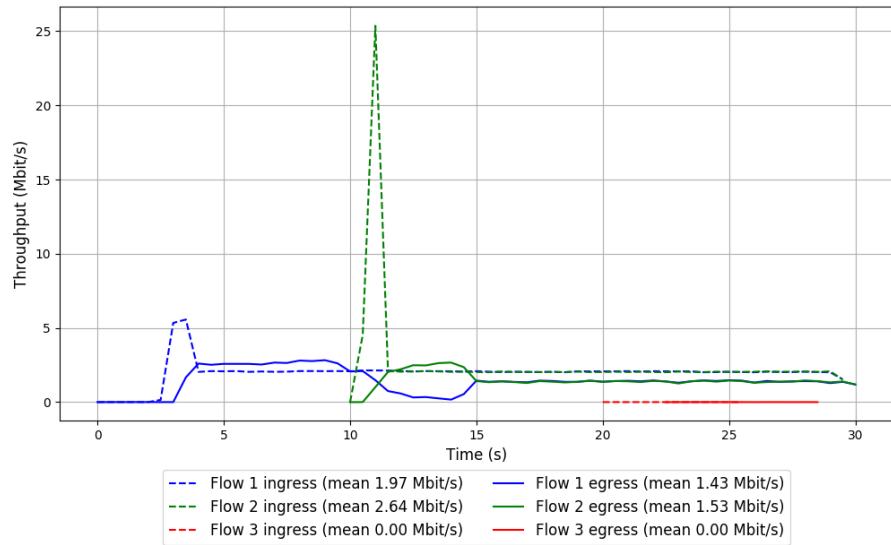


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-08-01 06:14:01
End at: 2018-08-01 06:14:31
Local clock offset: -3.942 ms
Remote clock offset: 3.185 ms

# Below is generated by plot.py at 2018-08-01 07:14:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 2852.969 ms
Loss rate: 34.62%
-- Flow 1:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 2842.424 ms
Loss rate: 27.75%
-- Flow 2:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 2862.179 ms
Loss rate: 42.35%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2826.489 ms
Loss rate: 4.40%
```

Run 1: Report of PCC-Allegro — Data Link

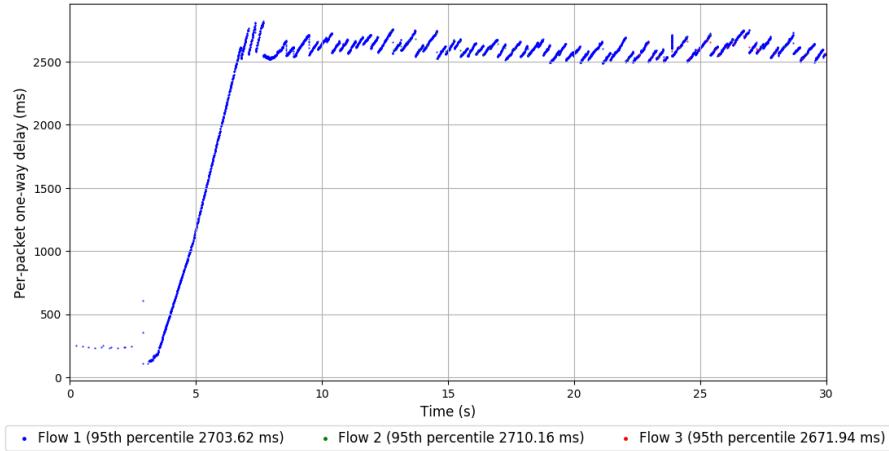
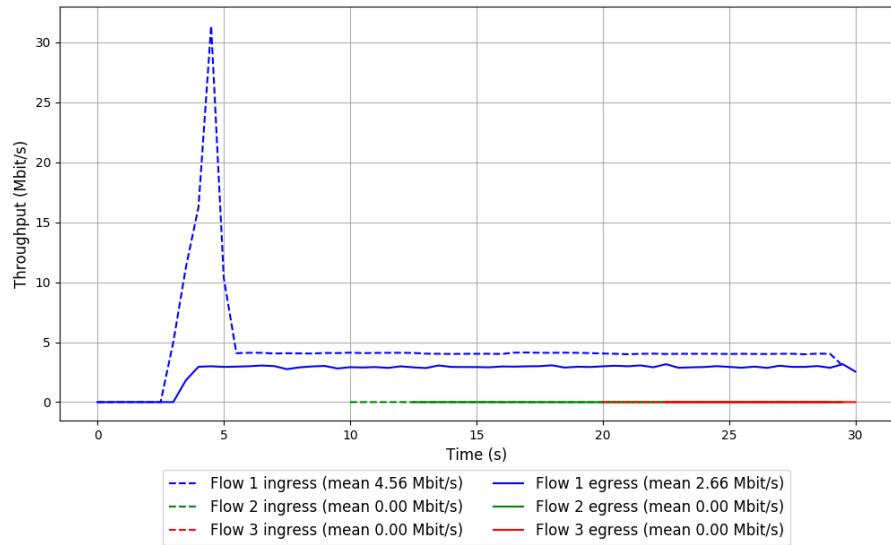


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-08-01 06:34:19
End at: 2018-08-01 06:34:49
Local clock offset: -3.587 ms
Remote clock offset: 3.853 ms

# Below is generated by plot.py at 2018-08-01 07:14:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 2703.623 ms
Loss rate: 41.95%
-- Flow 1:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 2703.623 ms
Loss rate: 41.97%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2710.158 ms
Loss rate: 11.29%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2671.937 ms
Loss rate: 7.67%
```

Run 2: Report of PCC-Allegro — Data Link

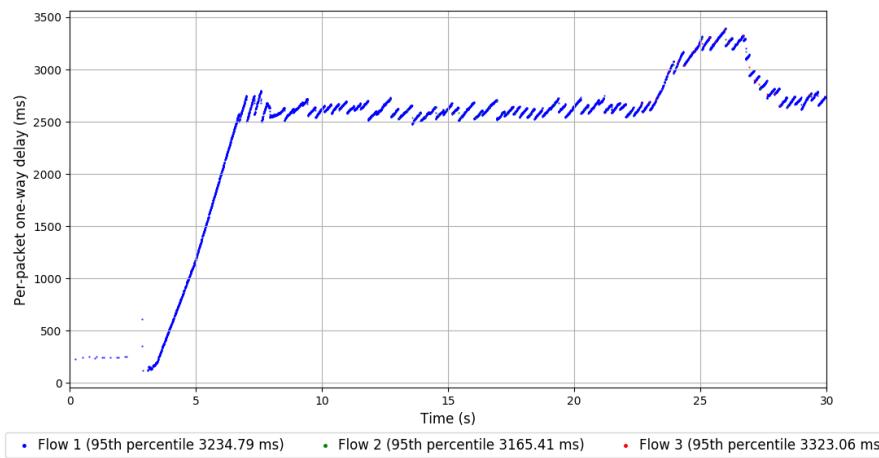
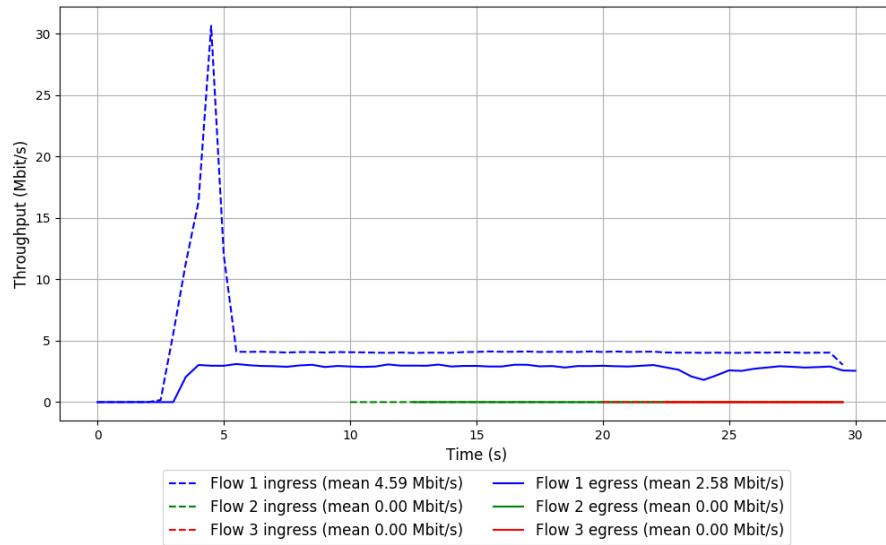


```
Run 3: Statistics of PCC-Allegro
```

```
Start at: 2018-08-01 06:54:37
End at: 2018-08-01 06:55:07
Local clock offset: -3.761 ms
Remote clock offset: 8.931 ms

# Below is generated by plot.py at 2018-08-01 07:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 3235.858 ms
Loss rate: 44.10%
-- Flow 1:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 3234.792 ms
Loss rate: 44.11%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3165.408 ms
Loss rate: 10.76%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3323.062 ms
Loss rate: 16.67%
```

Run 3: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

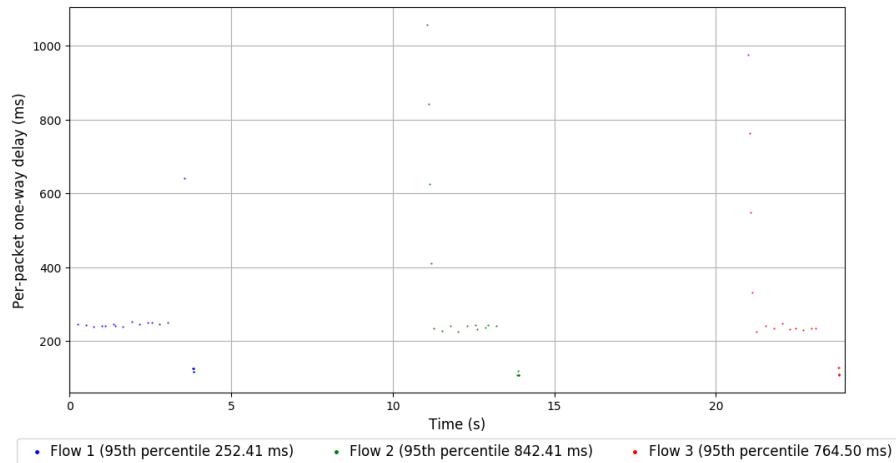
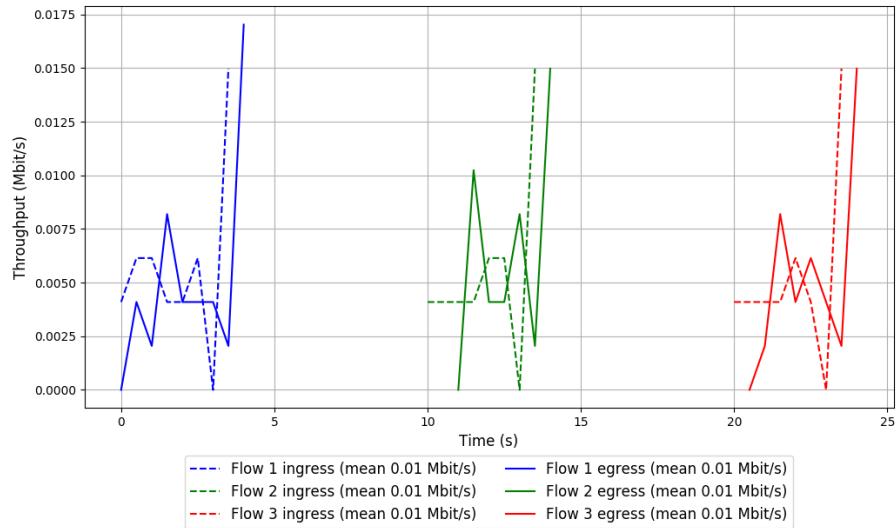
Start at: 2018-08-01 06:24:47

End at: 2018-08-01 06:25:17

Local clock offset: -3.635 ms

Remote clock offset: 3.664 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

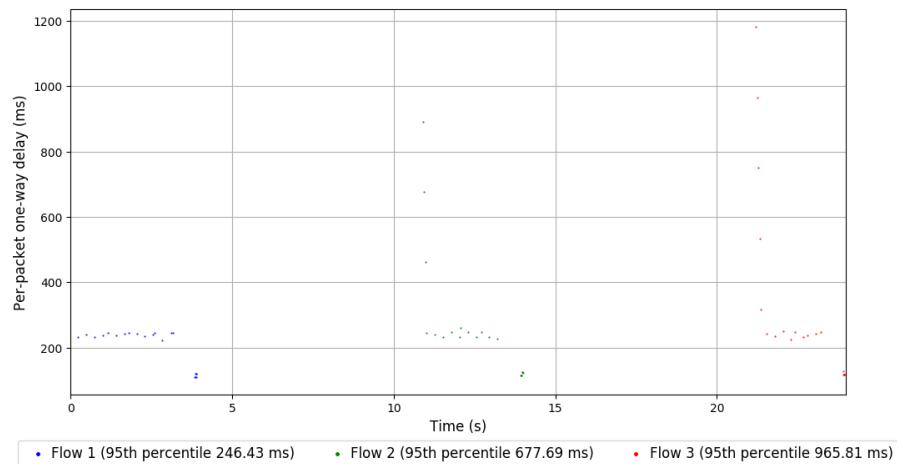
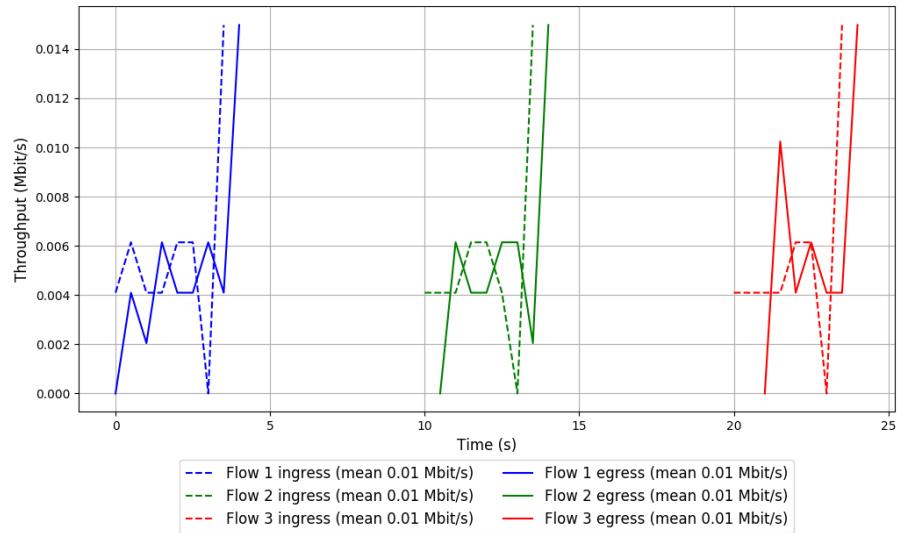
Start at: 2018-08-01 06:45:05

End at: 2018-08-01 06:45:35

Local clock offset: -3.532 ms

Remote clock offset: 8.761 ms

Run 2: Report of PCC-Expr — Data Link

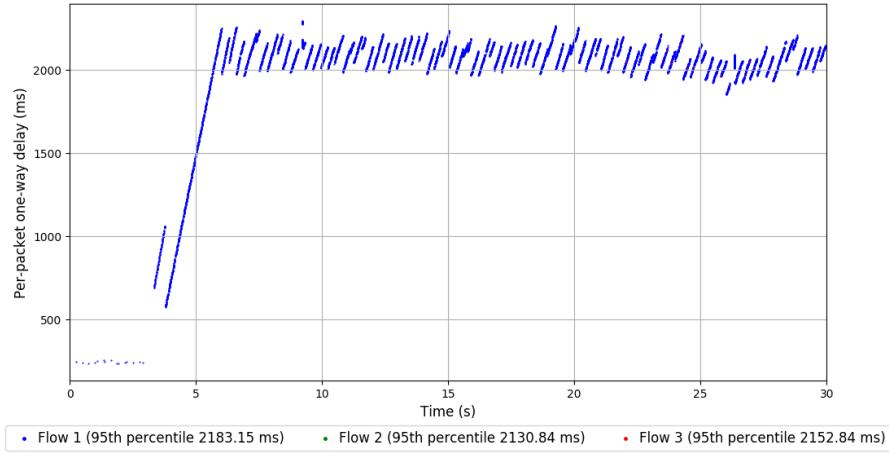
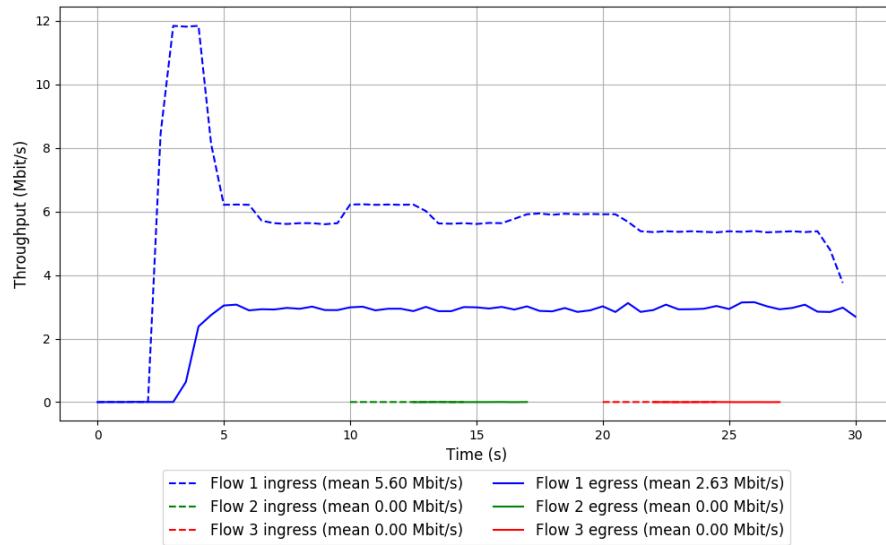


Run 3: Statistics of PCC-Expr

```
Start at: 2018-08-01 07:05:23
End at: 2018-08-01 07:05:53
Local clock offset: -4.64 ms
Remote clock offset: 4.413 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.63 Mbit/s
95th percentile per-packet one-way delay: 2183.118 ms
Loss rate: 53.42%
-- Flow 1:
Average throughput: 2.63 Mbit/s
95th percentile per-packet one-way delay: 2183.147 ms
Loss rate: 53.42%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2130.839 ms
Loss rate: 36.23%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2152.845 ms
Loss rate: 55.81%
```

Run 3: Report of PCC-Expr — Data Link

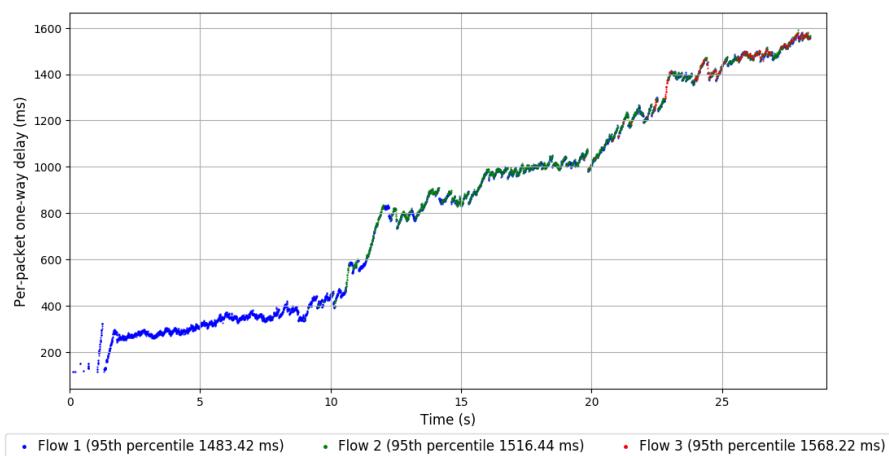
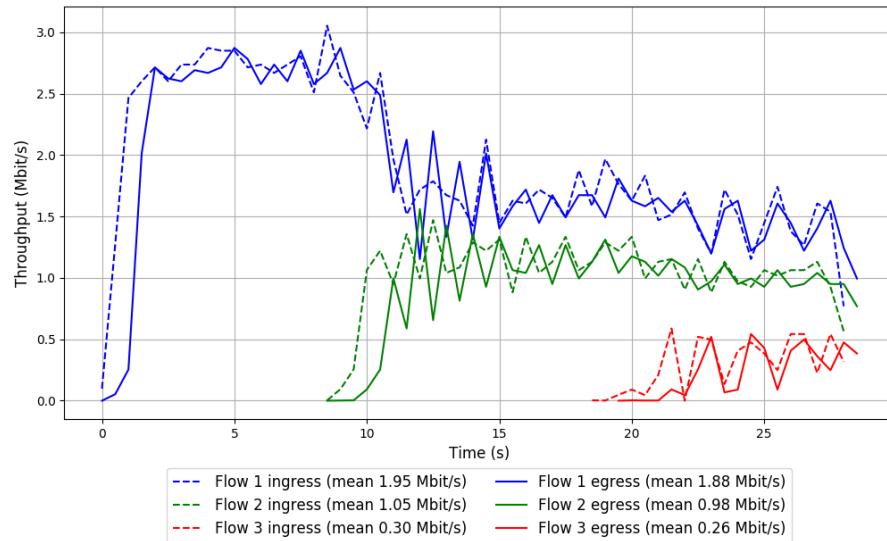


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-08-01 06:17:36
End at: 2018-08-01 06:18:06
Local clock offset: -3.695 ms
Remote clock offset: 8.167 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.63 Mbit/s
95th percentile per-packet one-way delay: 1495.851 ms
Loss rate: 5.54%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 1483.421 ms
Loss rate: 3.95%
-- Flow 2:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 1516.441 ms
Loss rate: 7.41%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 1568.217 ms
Loss rate: 22.51%
```

Run 1: Report of QUIC Cubic — Data Link

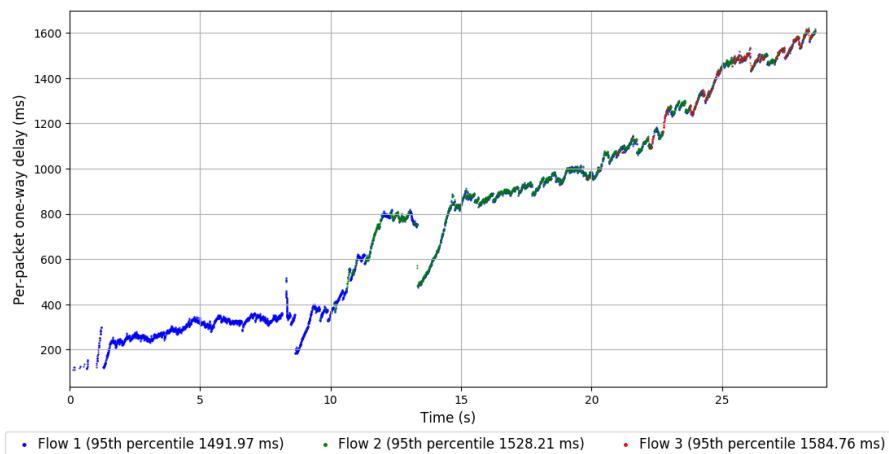
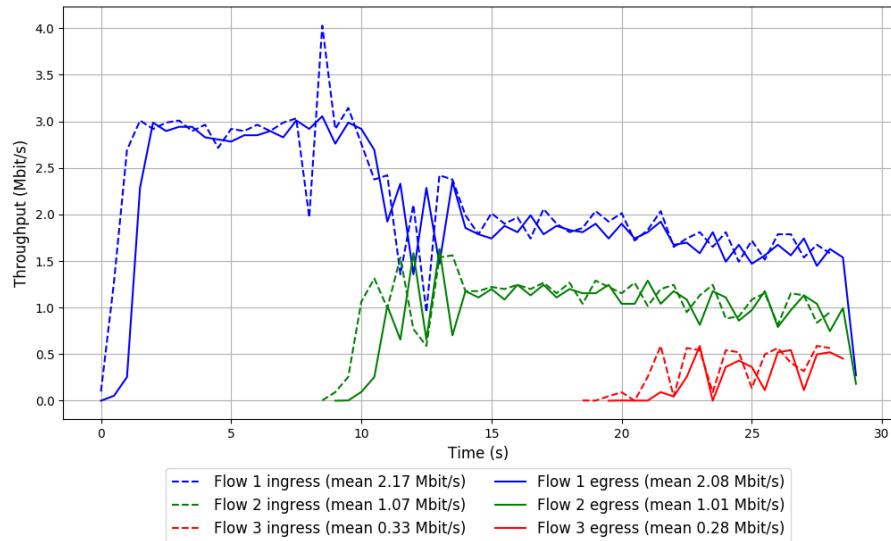


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-08-01 06:37:54
End at: 2018-08-01 06:38:24
Local clock offset: -3.56 ms
Remote clock offset: 8.812 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 1508.844 ms
Loss rate: 5.48%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 1491.969 ms
Loss rate: 4.01%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 1528.208 ms
Loss rate: 7.11%
-- Flow 3:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 1584.755 ms
Loss rate: 23.08%
```

Run 2: Report of QUIC Cubic — Data Link

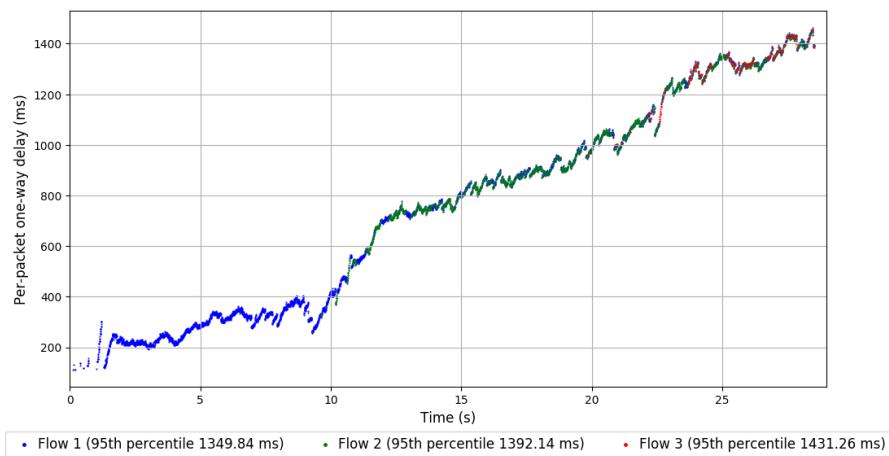
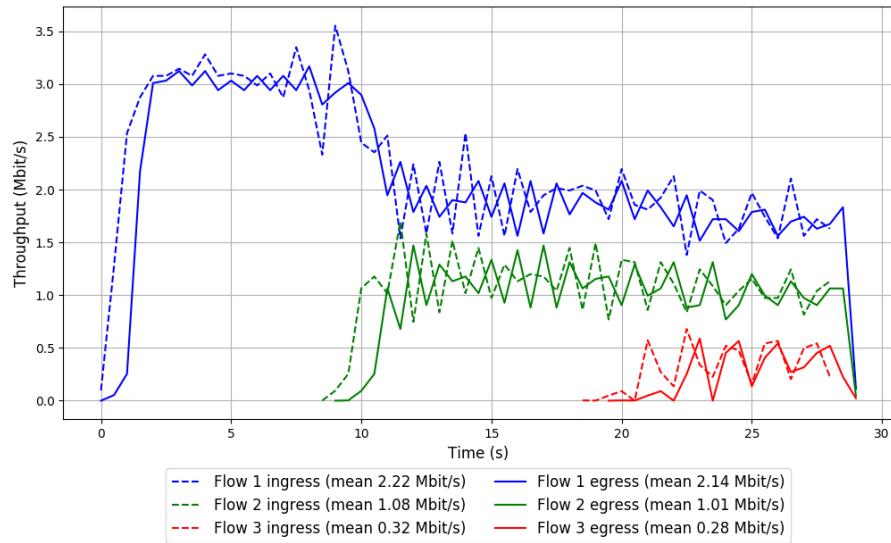


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-08-01 06:58:12
End at: 2018-08-01 06:58:42
Local clock offset: -4.129 ms
Remote clock offset: 9.128 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 1371.608 ms
Loss rate: 4.98%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 1349.841 ms
Loss rate: 3.67%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 1392.142 ms
Loss rate: 6.81%
-- Flow 3:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 1431.264 ms
Loss rate: 19.66%
```

Run 3: Report of QUIC Cubic — Data Link

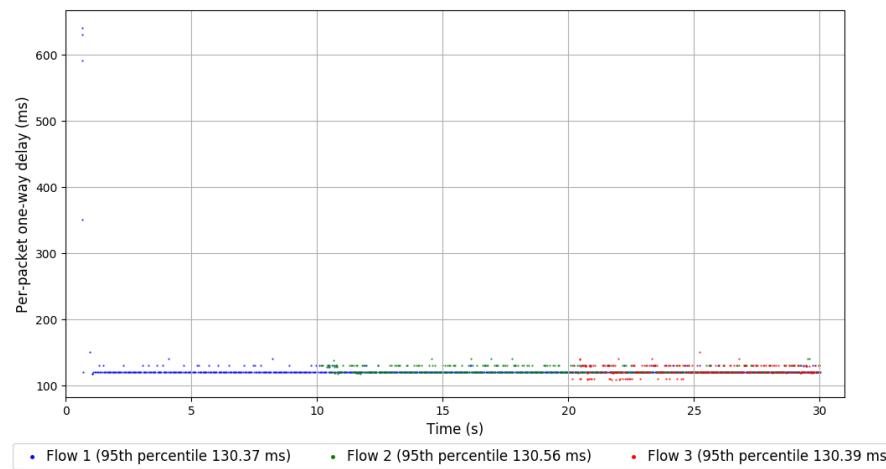
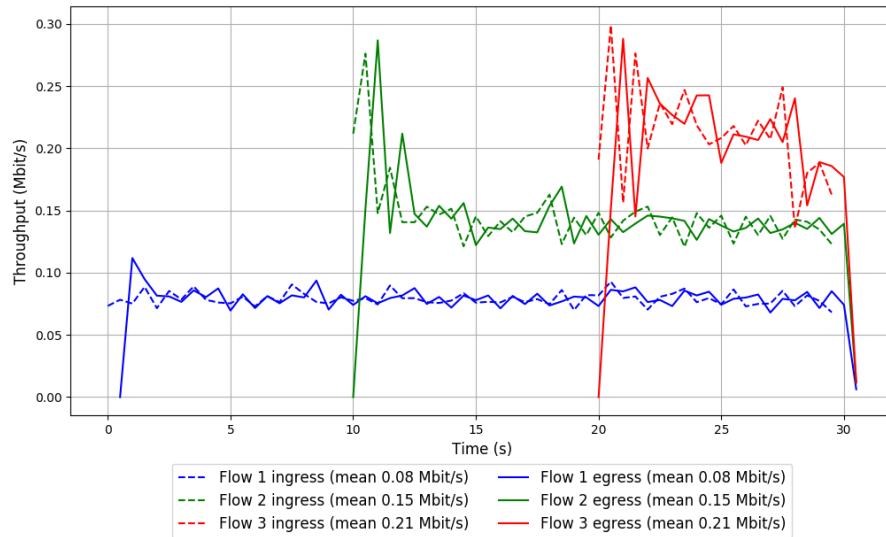


```
Run 1: Statistics of SCReAM
```

```
Start at: 2018-08-01 06:25:59
End at: 2018-08-01 06:26:29
Local clock offset: -3.583 ms
Remote clock offset: 8.54 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 130.506 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 130.365 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 130.563 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 130.388 ms
Loss rate: 0.26%
```

Run 1: Report of SCReAM — Data Link

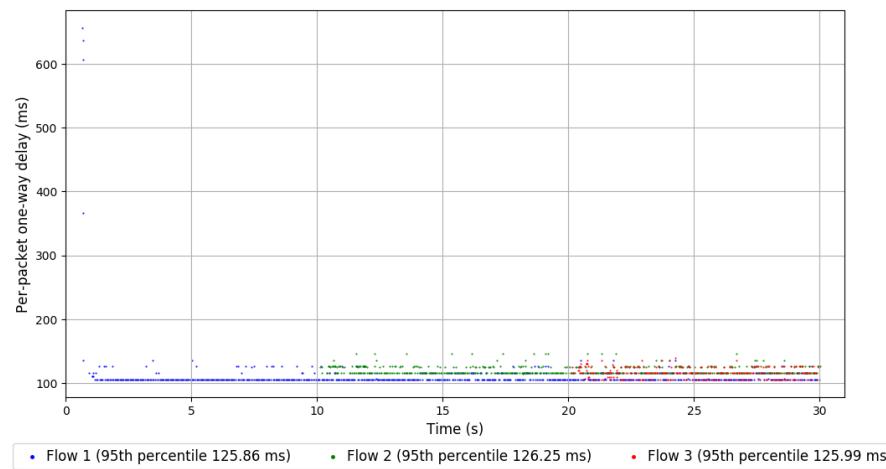
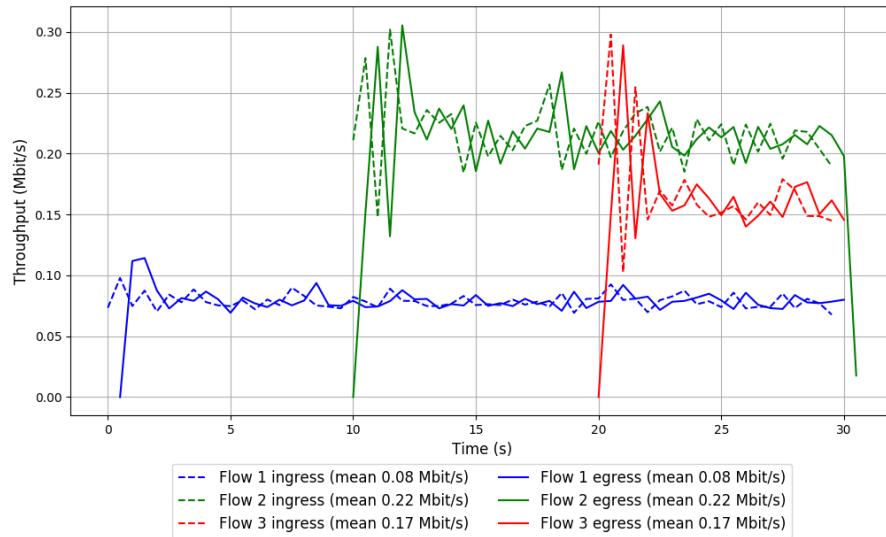


Run 2: Statistics of SCReAM

```
Start at: 2018-08-01 06:46:16
End at: 2018-08-01 06:46:46
Local clock offset: -3.531 ms
Remote clock offset: 3.936 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 126.000 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 125.855 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 126.245 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 125.994 ms
Loss rate: 0.67%
```

Run 2: Report of SCReAM — Data Link

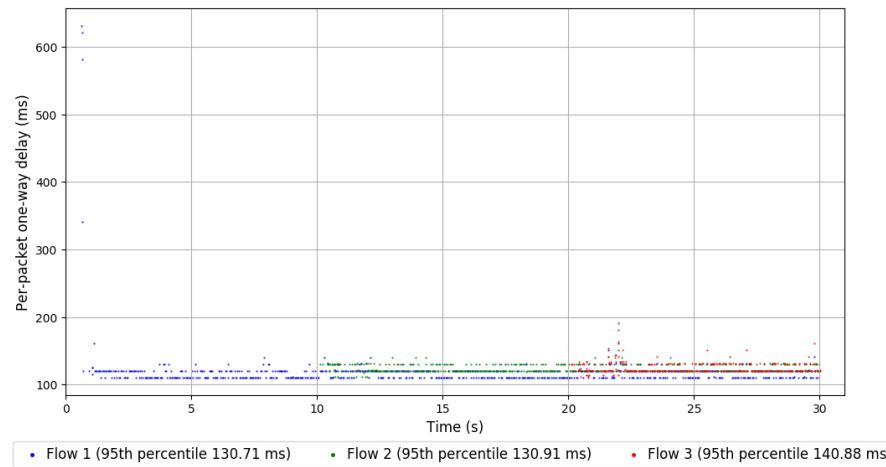
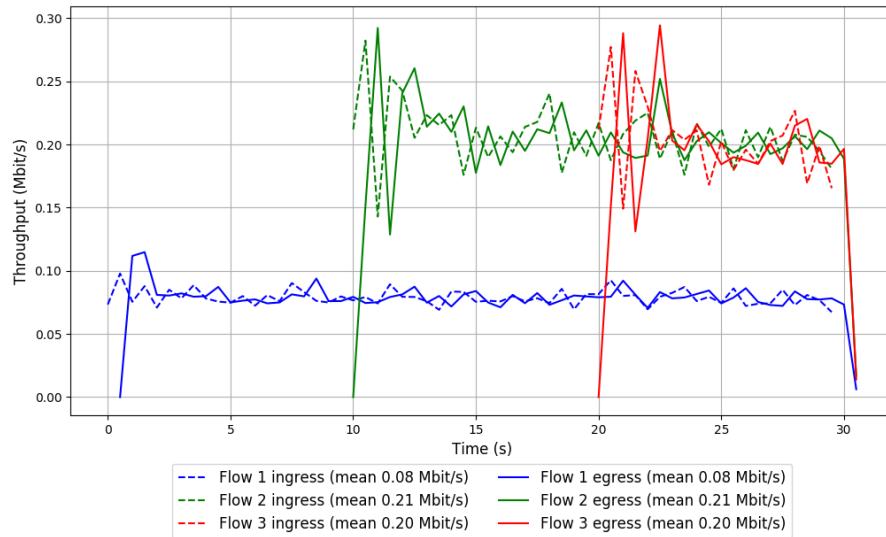


Run 3: Statistics of SCReAM

```
Start at: 2018-08-01 07:06:35
End at: 2018-08-01 07:07:05
Local clock offset: -4.675 ms
Remote clock offset: 9.312 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 131.005 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 130.708 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 130.911 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 140.882 ms
Loss rate: 0.35%
```

Run 3: Report of SCReAM — Data Link

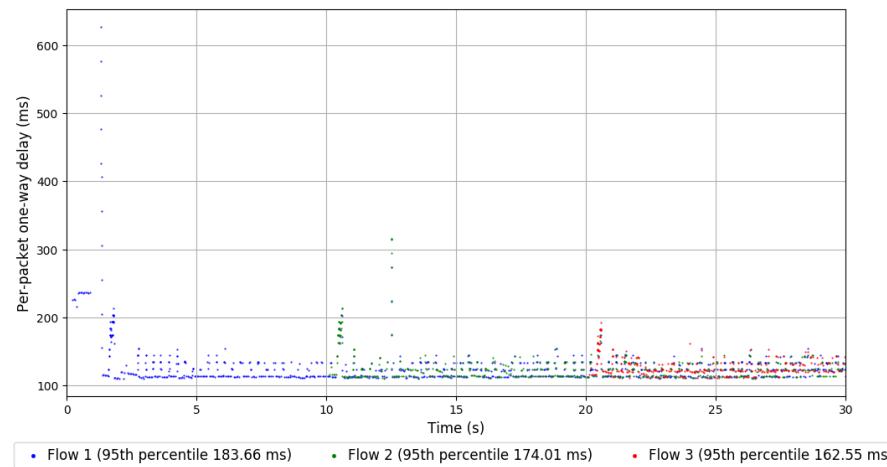
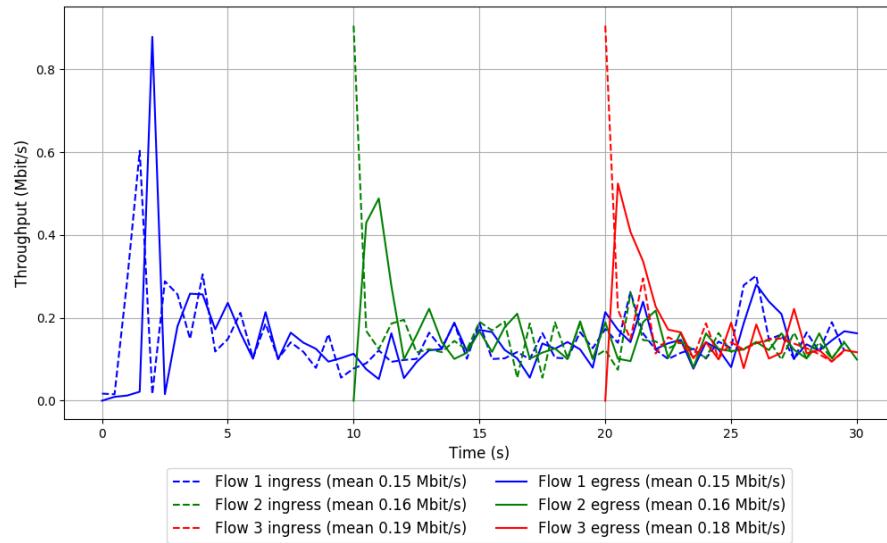


Run 1: Statistics of Sprout

```
Start at: 2018-08-01 06:16:25
End at: 2018-08-01 06:16:55
Local clock offset: -3.775 ms
Remote clock offset: 8.02 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 173.888 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 183.663 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 174.010 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 162.548 ms
Loss rate: 0.65%
```

Run 1: Report of Sprout — Data Link

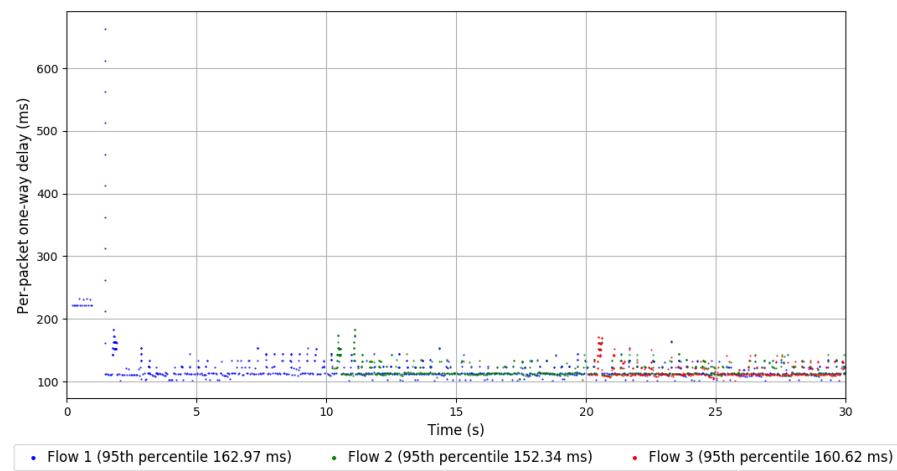
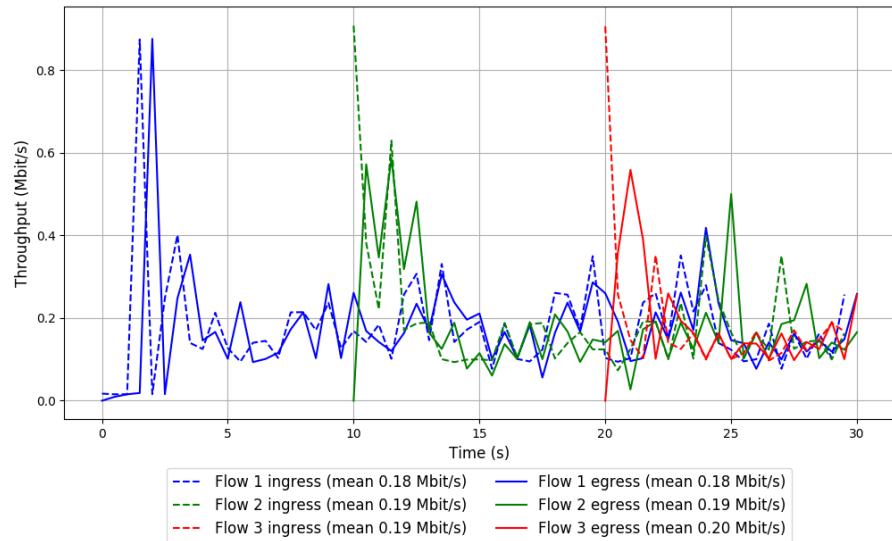


Run 2: Statistics of Sprout

```
Start at: 2018-08-01 06:36:43
End at: 2018-08-01 06:37:13
Local clock offset: -3.615 ms
Remote clock offset: 3.908 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 153.448 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 162.973 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 152.343 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 160.623 ms
Loss rate: 0.04%
```

Run 2: Report of Sprout — Data Link

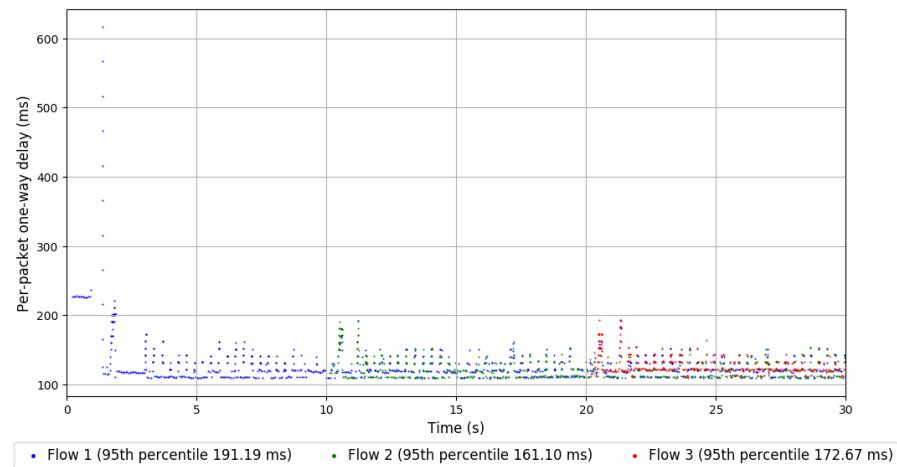
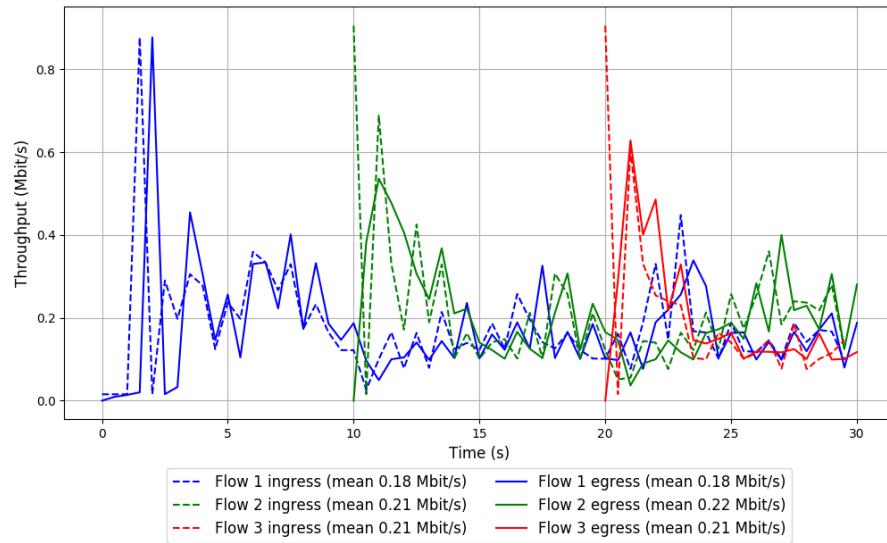


Run 3: Statistics of Sprout

```
Start at: 2018-08-01 06:57:00
End at: 2018-08-01 06:57:30
Local clock offset: -4.053 ms
Remote clock offset: 9.037 ms

# Below is generated by plot.py at 2018-08-01 07:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 170.779 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 191.195 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 161.099 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 172.672 ms
Loss rate: 1.15%
```

Run 3: Report of Sprout — Data Link

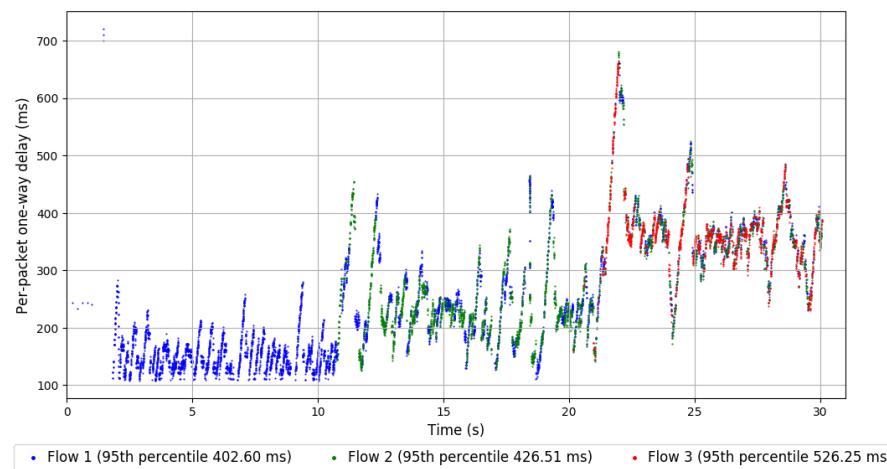
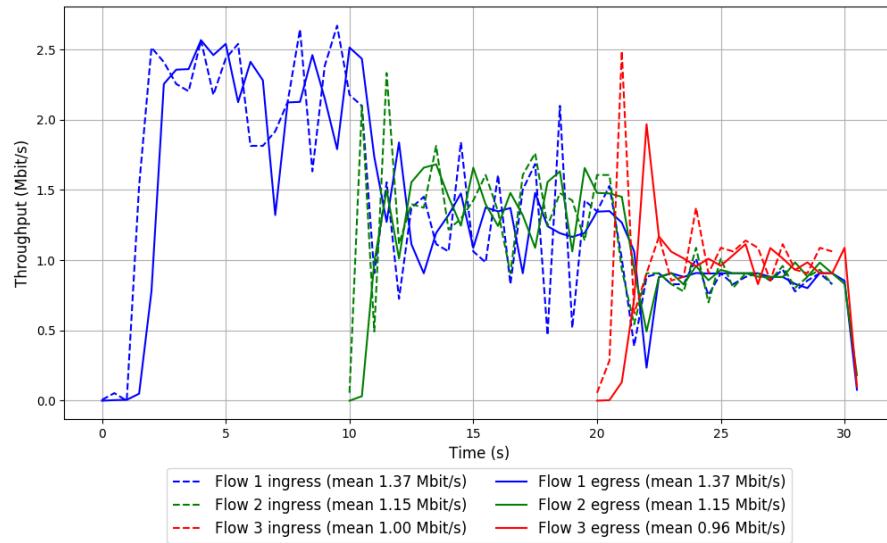


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-08-01 06:18:48
End at: 2018-08-01 06:19:18
Local clock offset: -3.716 ms
Remote clock offset: 3.43 ms

# Below is generated by plot.py at 2018-08-01 07:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.46 Mbit/s
95th percentile per-packet one-way delay: 424.148 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 402.599 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 426.509 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 526.246 ms
Loss rate: 4.43%
```

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

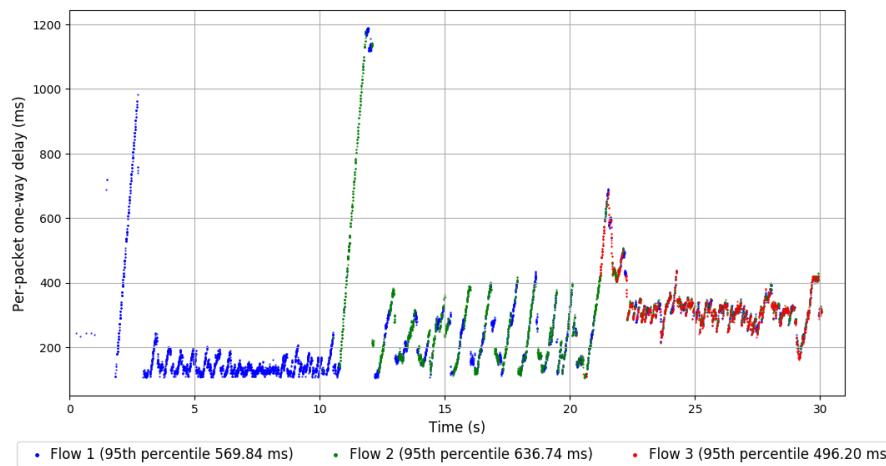
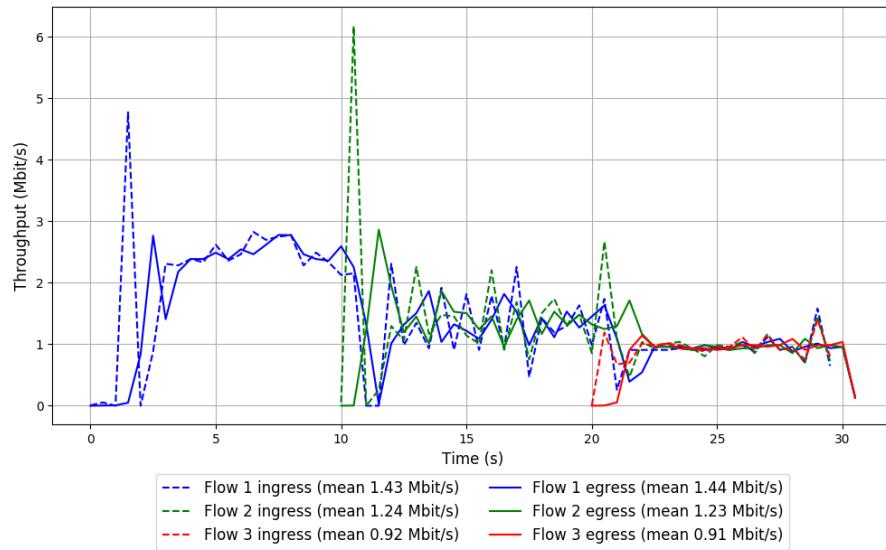


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-08-01 06:39:06
End at: 2018-08-01 06:39:36
Local clock offset: -3.546 ms
Remote clock offset: 3.861 ms

# Below is generated by plot.py at 2018-08-01 07:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 579.663 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 569.841 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 636.739 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 496.200 ms
Loss rate: 2.70%
```

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

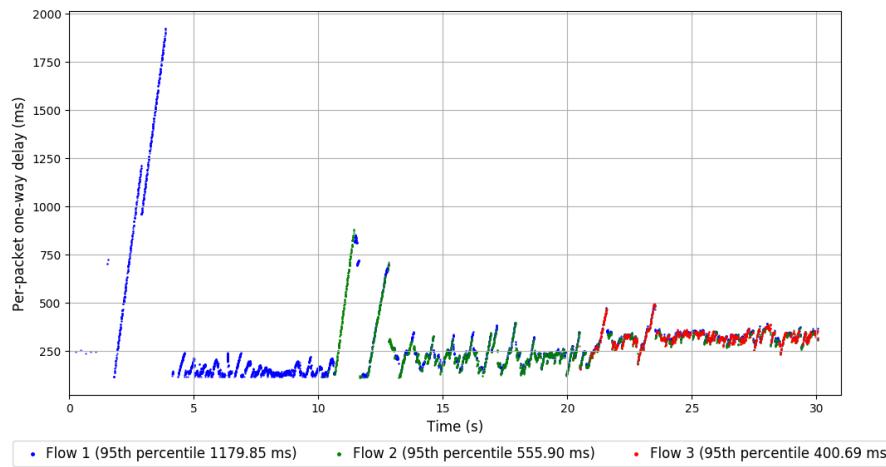
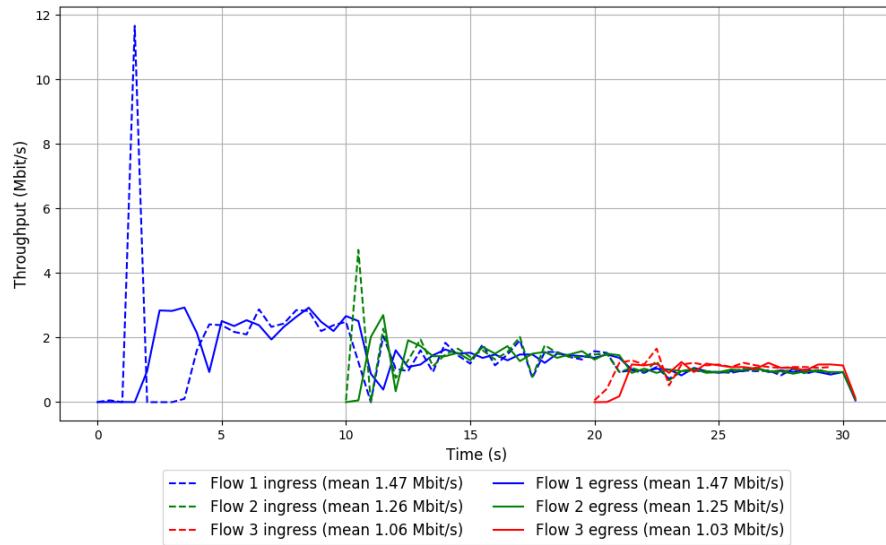


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-08-01 06:59:23
End at: 2018-08-01 06:59:53
Local clock offset: -4.258 ms
Remote clock offset: 9.191 ms

# Below is generated by plot.py at 2018-08-01 07:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 822.386 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 1179.849 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 555.897 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 400.694 ms
Loss rate: 3.33%
```

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

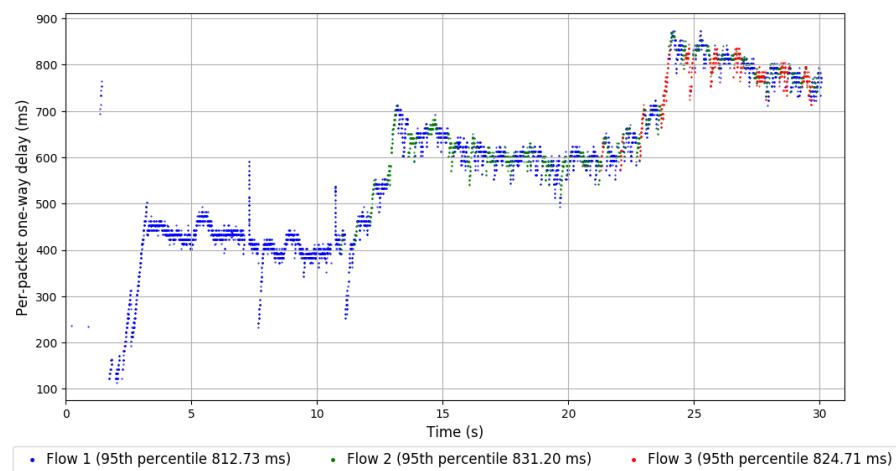
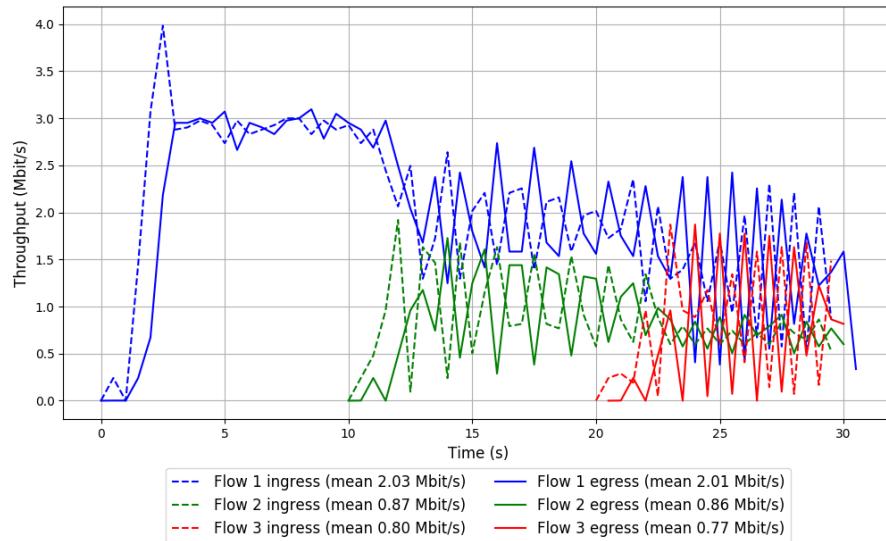


Run 1: Statistics of TCP Vegas

```
Start at: 2018-08-01 06:28:21
End at: 2018-08-01 06:28:51
Local clock offset: -3.588 ms
Remote clock offset: 3.873 ms

# Below is generated by plot.py at 2018-08-01 07:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 822.659 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 812.728 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 831.196 ms
Loss rate: 2.99%
-- Flow 3:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 824.710 ms
Loss rate: 10.52%
```

Run 1: Report of TCP Vegas — Data Link

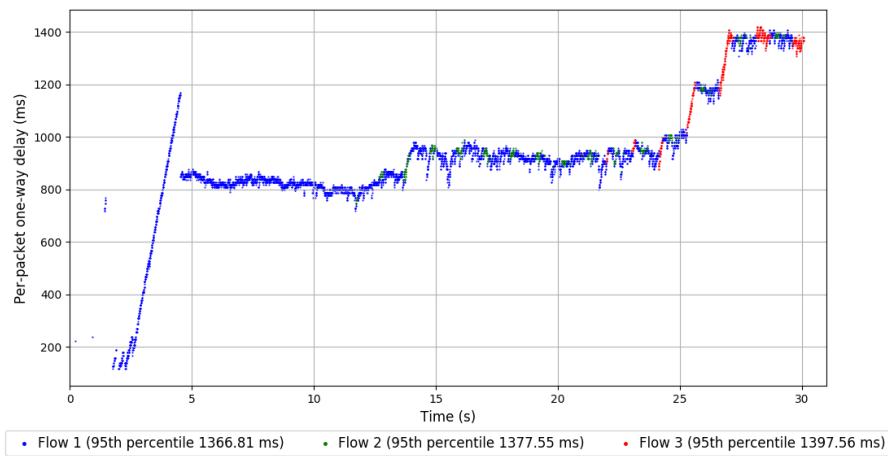
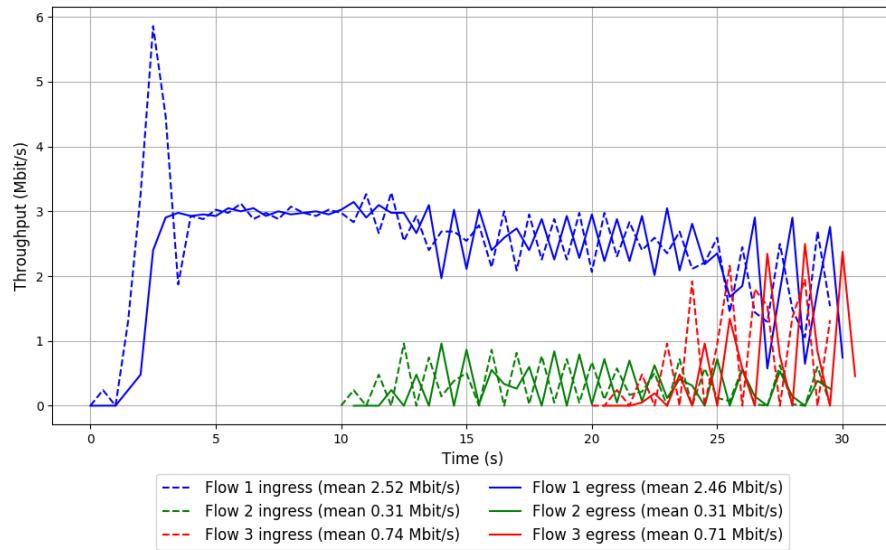


Run 2: Statistics of TCP Vegas

```
Start at: 2018-08-01 06:48:39
End at: 2018-08-01 06:49:09
Local clock offset: -3.439 ms
Remote clock offset: 8.615 ms

# Below is generated by plot.py at 2018-08-01 07:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.83 Mbit/s
95th percentile per-packet one-way delay: 1377.362 ms
Loss rate: 4.36%
-- Flow 1:
Average throughput: 2.46 Mbit/s
95th percentile per-packet one-way delay: 1366.812 ms
Loss rate: 3.52%
-- Flow 2:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 1377.551 ms
Loss rate: 5.06%
-- Flow 3:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 1397.562 ms
Loss rate: 12.26%
```

Run 2: Report of TCP Vegas — Data Link

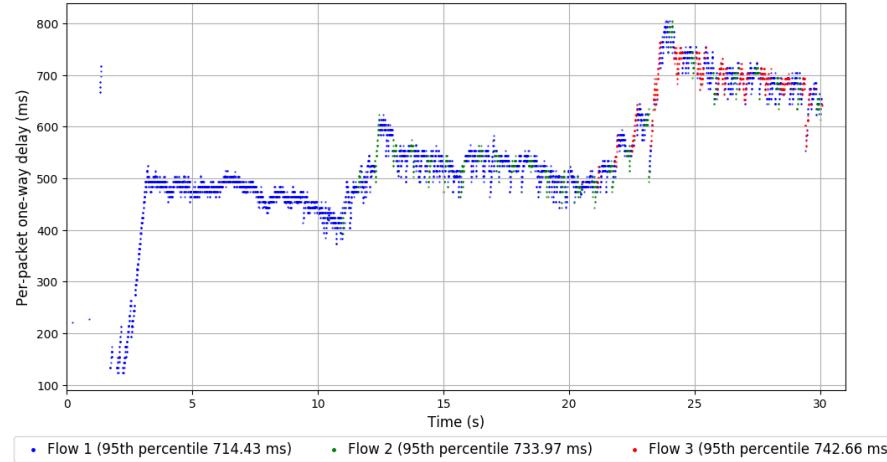
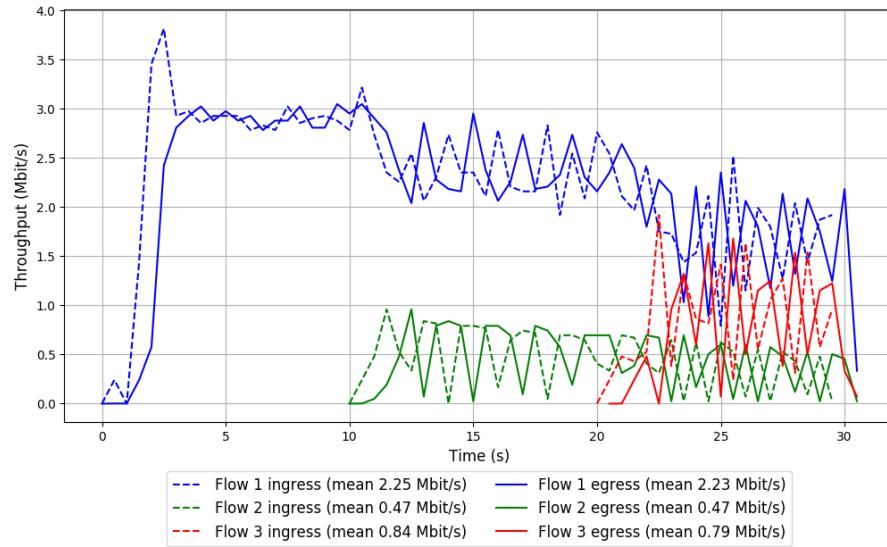


Run 3: Statistics of TCP Vegas

```
Start at: 2018-08-01 07:08:57
End at: 2018-08-01 07:09:27
Local clock offset: -4.774 ms
Remote clock offset: 9.345 ms

# Below is generated by plot.py at 2018-08-01 07:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 732.299 ms
Loss rate: 2.05%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 714.428 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 733.973 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 742.664 ms
Loss rate: 8.71%
```

Run 3: Report of TCP Vegas — Data Link

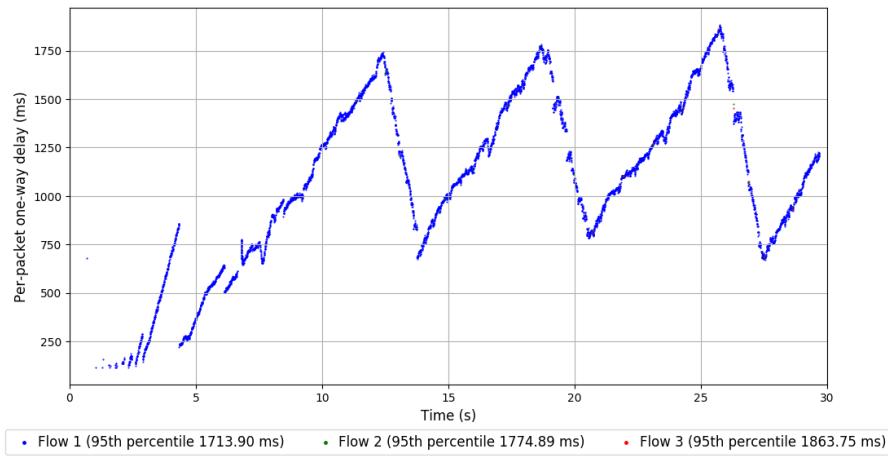
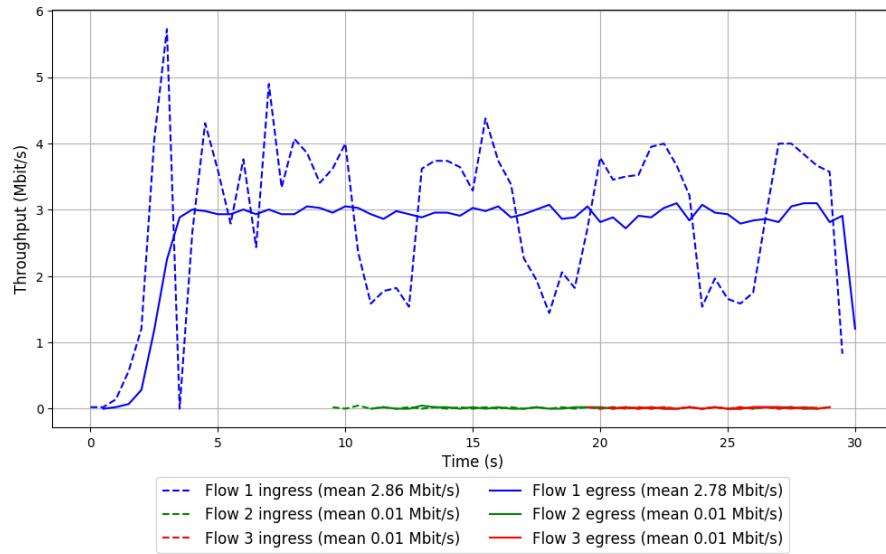


Run 1: Statistics of Verus

```
Start at: 2018-08-01 06:33:08
End at: 2018-08-01 06:33:38
Local clock offset: -3.593 ms
Remote clock offset: 3.95 ms

# Below is generated by plot.py at 2018-08-01 07:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 1713.962 ms
Loss rate: 4.98%
-- Flow 1:
Average throughput: 2.78 Mbit/s
95th percentile per-packet one-way delay: 1713.902 ms
Loss rate: 4.98%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1774.895 ms
Loss rate: 4.76%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1863.746 ms
Loss rate: 10.00%
```

Run 1: Report of Verus — Data Link

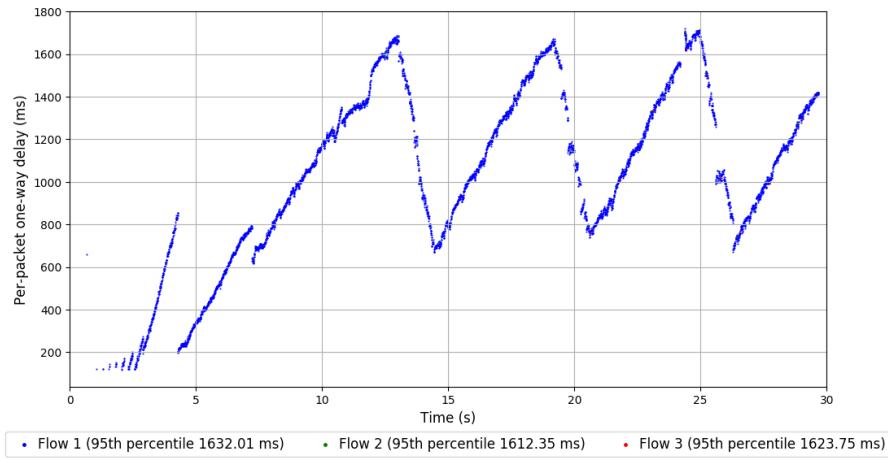
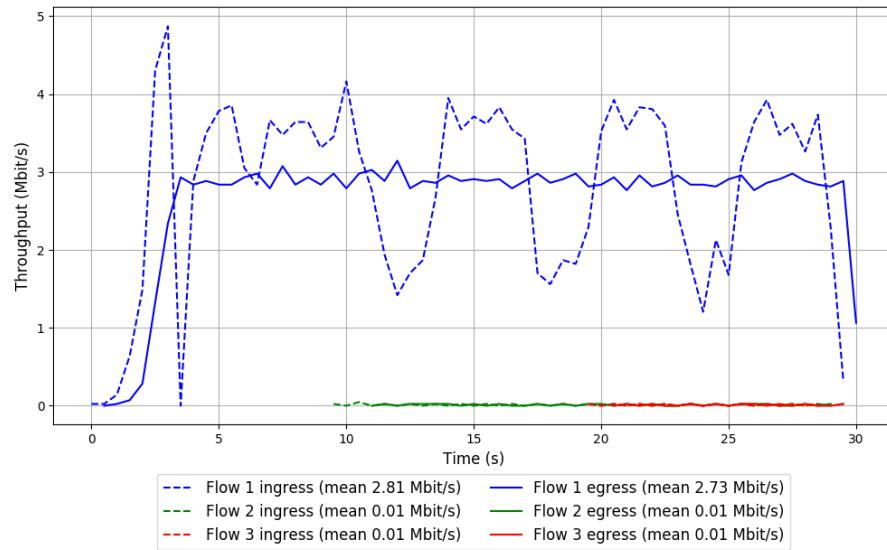


Run 2: Statistics of Verus

```
Start at: 2018-08-01 06:53:25
End at: 2018-08-01 06:53:55
Local clock offset: -3.584 ms
Remote clock offset: 8.914 ms

# Below is generated by plot.py at 2018-08-01 07:15:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 1632.006 ms
Loss rate: 4.73%
-- Flow 1:
Average throughput: 2.73 Mbit/s
95th percentile per-packet one-way delay: 1632.006 ms
Loss rate: 4.71%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1612.345 ms
Loss rate: 9.09%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1623.746 ms
Loss rate: 10.00%
```

Run 2: Report of Verus — Data Link

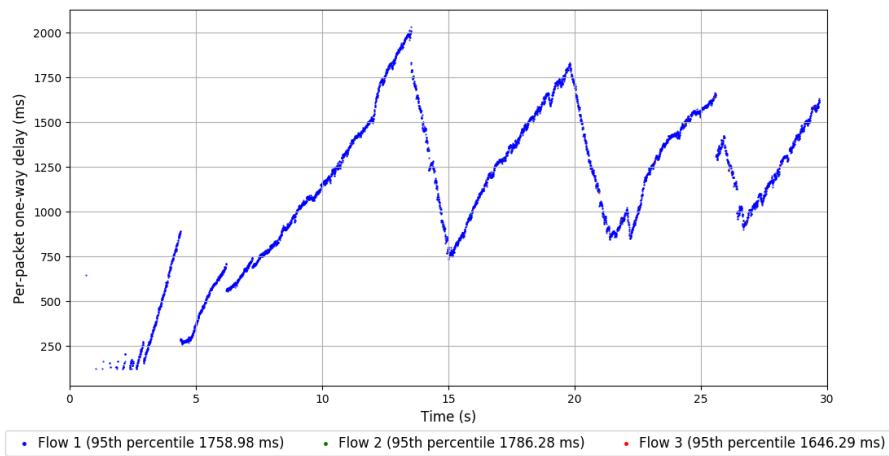
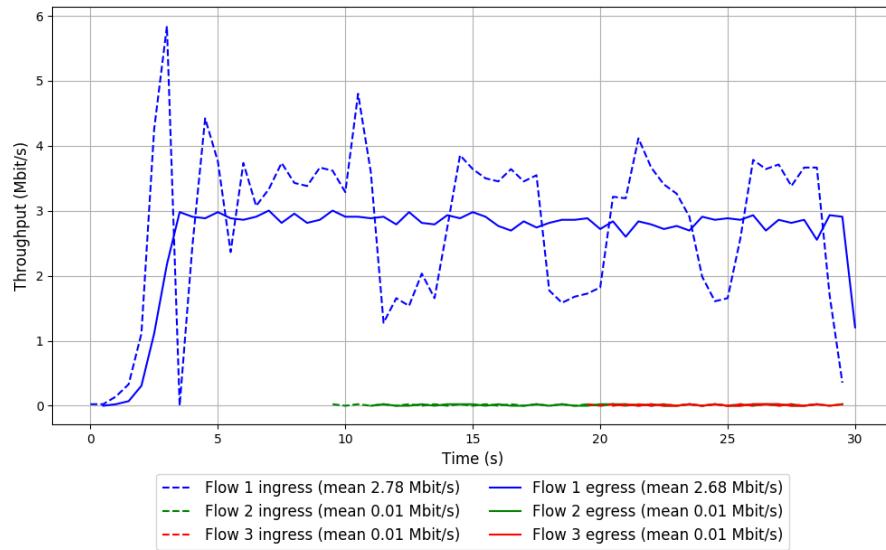


Run 3: Statistics of Verus

```
Start at: 2018-08-01 07:13:43
End at: 2018-08-01 07:14:13
Local clock offset: -4.897 ms
Remote clock offset: 9.364 ms

# Below is generated by plot.py at 2018-08-01 07:15:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.70 Mbit/s
95th percentile per-packet one-way delay: 1759.029 ms
Loss rate: 5.18%
-- Flow 1:
Average throughput: 2.68 Mbit/s
95th percentile per-packet one-way delay: 1758.979 ms
Loss rate: 5.18%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1786.278 ms
Loss rate: 5.00%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1646.289 ms
Loss rate: 10.00%
```

Run 3: Report of Verus — Data Link

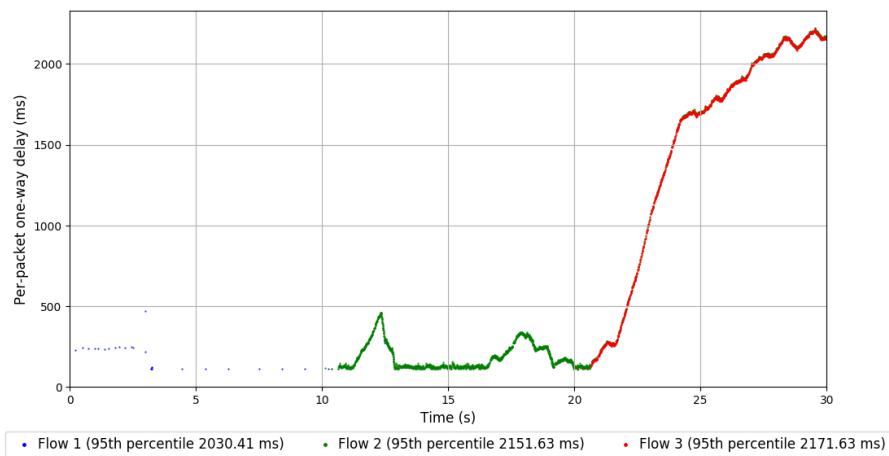
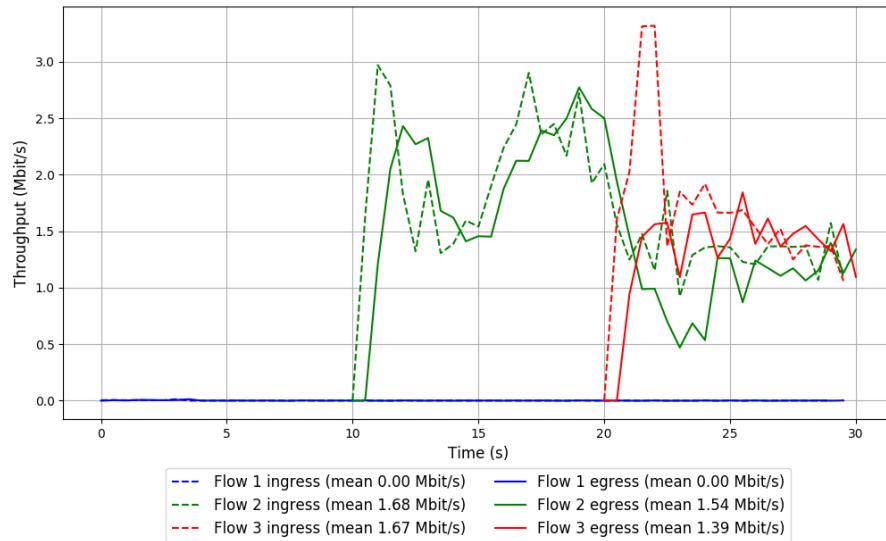


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-08-01 06:20:00
End at: 2018-08-01 06:20:30
Local clock offset: -3.687 ms
Remote clock offset: 3.559 ms

# Below is generated by plot.py at 2018-08-01 07:15:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 2161.313 ms
Loss rate: 11.42%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2030.412 ms
Loss rate: 4.41%
-- Flow 2:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 2151.627 ms
Loss rate: 8.50%
-- Flow 3:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 2171.631 ms
Loss rate: 17.34%
```

Run 1: Report of PCC-Vivace — Data Link

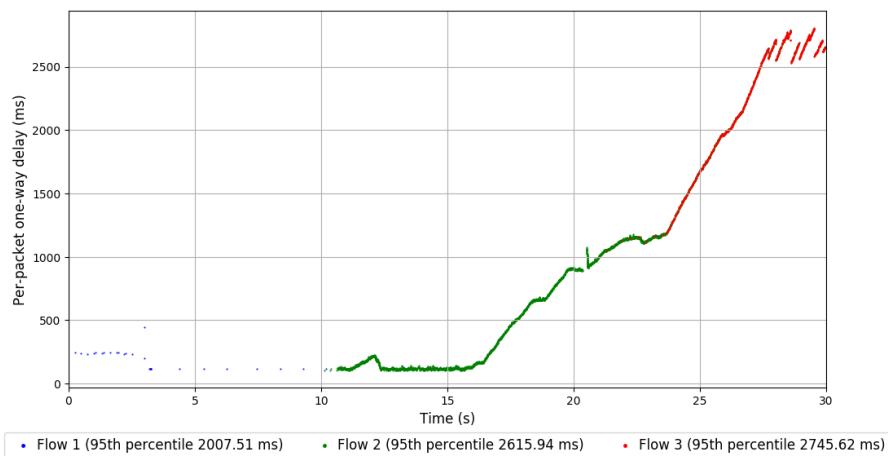
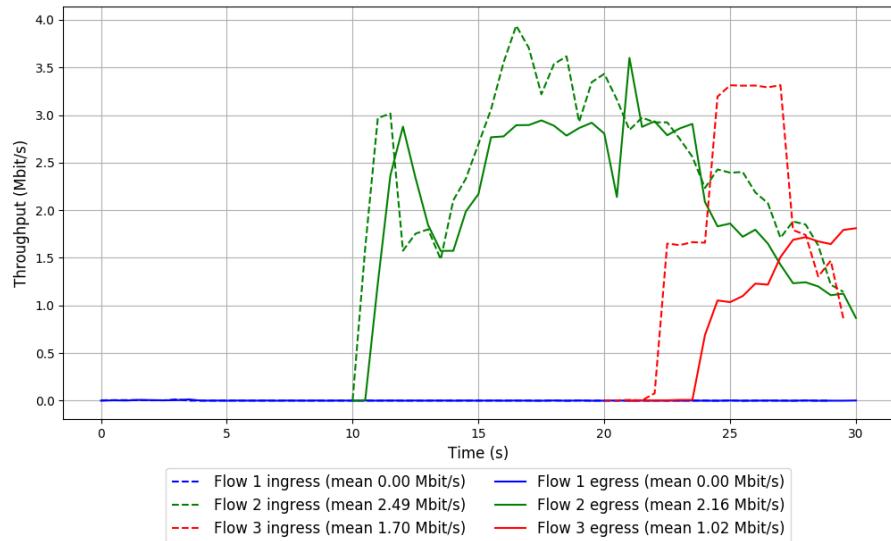


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-08-01 06:40:18
End at: 2018-08-01 06:40:48
Local clock offset: -3.533 ms
Remote clock offset: 3.864 ms

# Below is generated by plot.py at 2018-08-01 07:15:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 2683.944 ms
Loss rate: 21.58%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2007.505 ms
Loss rate: 6.45%
-- Flow 2:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 2615.940 ms
Loss rate: 13.34%
-- Flow 3:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 2745.624 ms
Loss rate: 45.87%
```

Run 2: Report of PCC-Vivace — Data Link

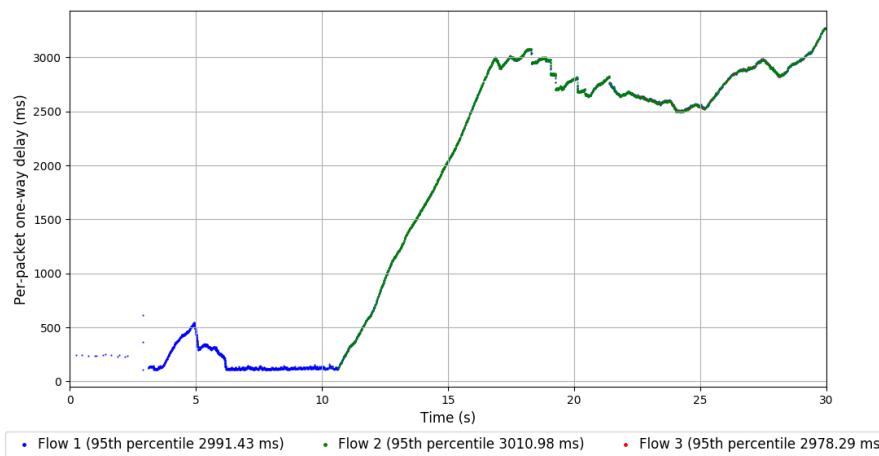
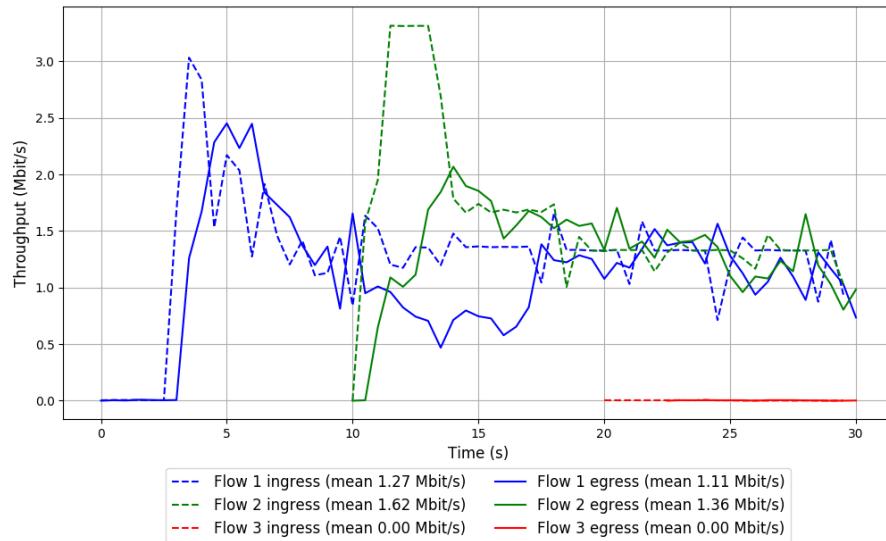


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-08-01 07:00:35
End at: 2018-08-01 07:01:05
Local clock offset: -4.348 ms
Remote clock offset: 4.274 ms

# Below is generated by plot.py at 2018-08-01 07:15:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 2998.561 ms
Loss rate: 14.52%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 2991.431 ms
Loss rate: 12.89%
-- Flow 2:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 3010.976 ms
Loss rate: 16.44%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2978.292 ms
Loss rate: 11.49%
```

Run 3: Report of PCC-Vivace — Data Link

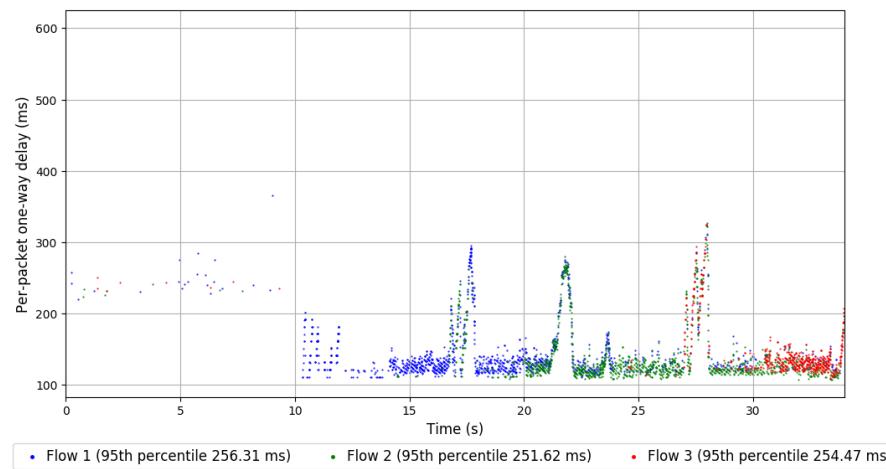
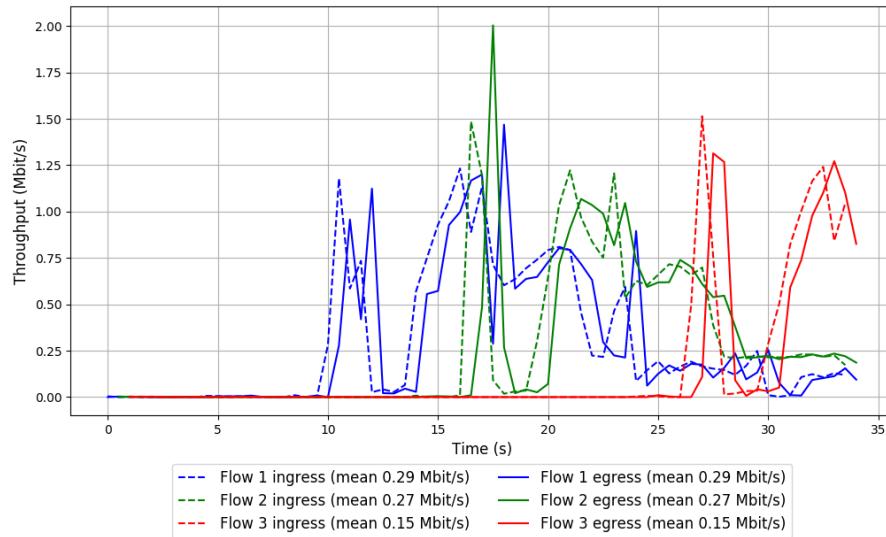


```
Run 1: Statistics of WebRTC media
```

```
Start at: 2018-08-01 06:30:44
End at: 2018-08-01 06:31:14
Local clock offset: -3.594 ms
Remote clock offset: 3.822 ms

# Below is generated by plot.py at 2018-08-01 07:15:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 254.200 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 256.311 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 251.620 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 254.468 ms
Loss rate: 2.61%
```

Run 1: Report of WebRTC media — Data Link

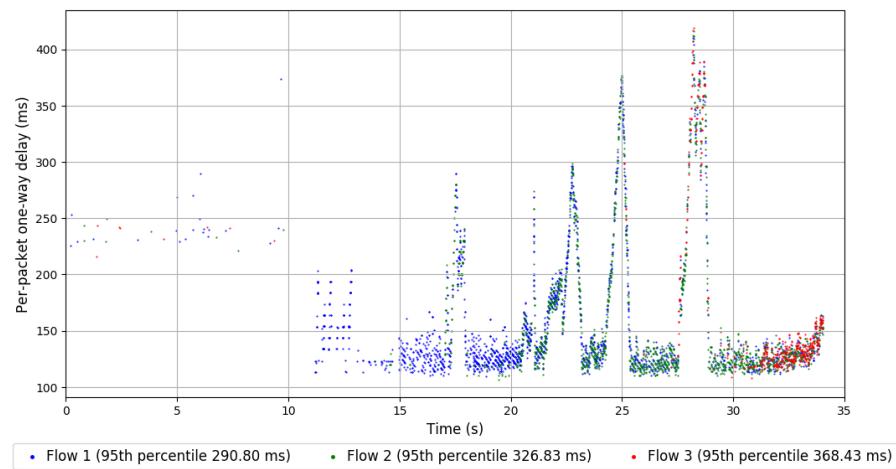
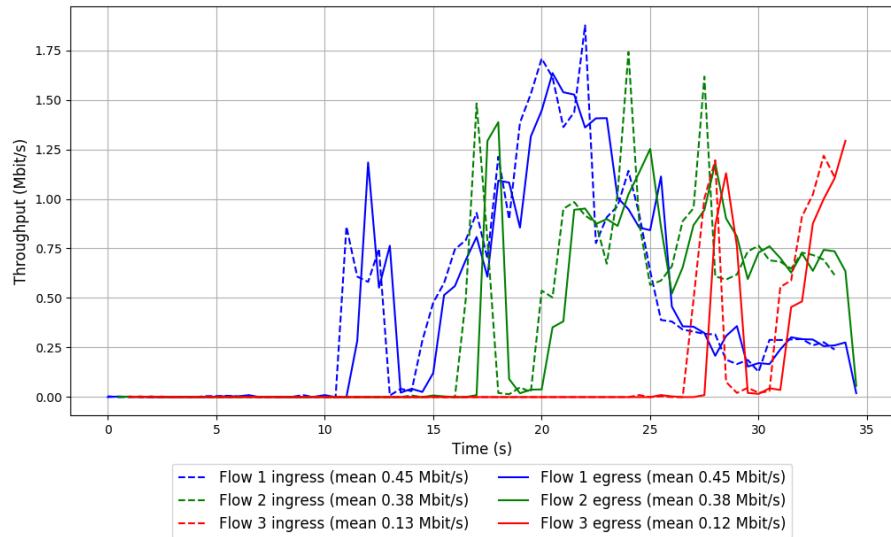


```
Run 2: Statistics of WebRTC media

Start at: 2018-08-01 06:51:02
End at: 2018-08-01 06:51:32
Local clock offset: -3.406 ms
Remote clock offset: 8.902 ms

# Below is generated by plot.py at 2018-08-01 07:15:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 327.914 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 290.802 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 326.832 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 368.433 ms
Loss rate: 2.39%
```

Run 2: Report of WebRTC media — Data Link



```
Run 3: Statistics of WebRTC media

Start at: 2018-08-01 07:11:21
End at: 2018-08-01 07:11:51
Local clock offset: -4.855 ms
Remote clock offset: 9.305 ms

# Below is generated by plot.py at 2018-08-01 07:15:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 463.900 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 253.512 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 480.926 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 536.598 ms
Loss rate: 2.49%
```

Run 3: Report of WebRTC media — Data Link

