

Pantheon Report

Generated at 2018-07-03 17:51:45 (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.

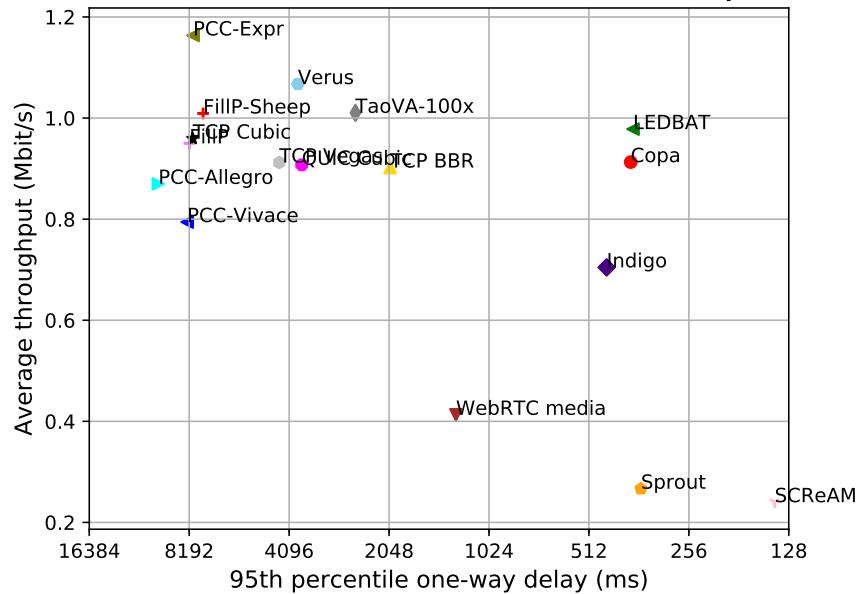
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

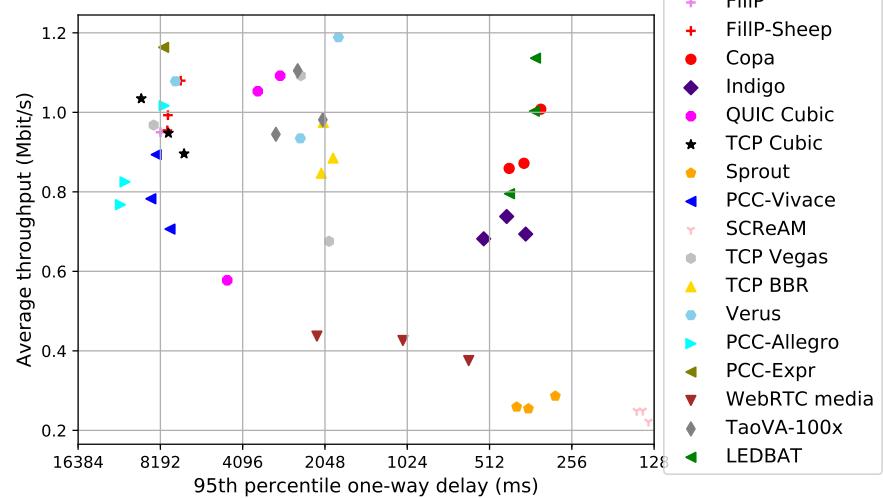
Git summary:

```
branch: master @ 9250dbeec7fb57193cdff1ba8c440b4e16ab30f0
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 37162fe9af85249aeccac061c93e75640ef710b5
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



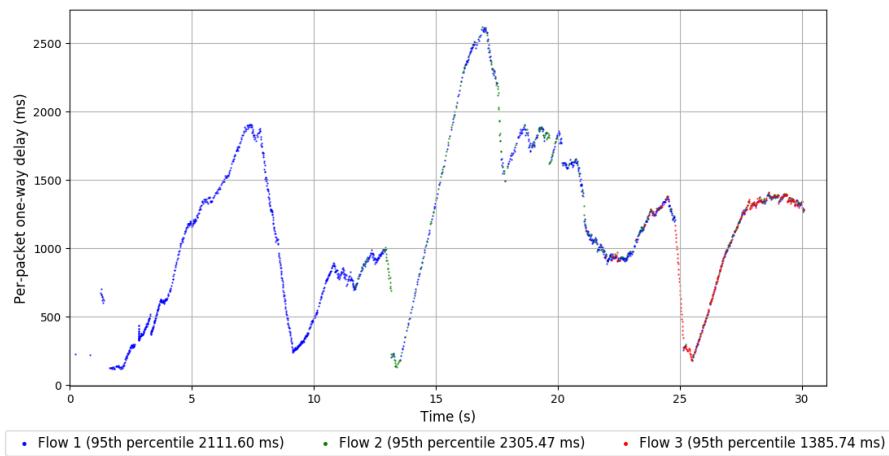
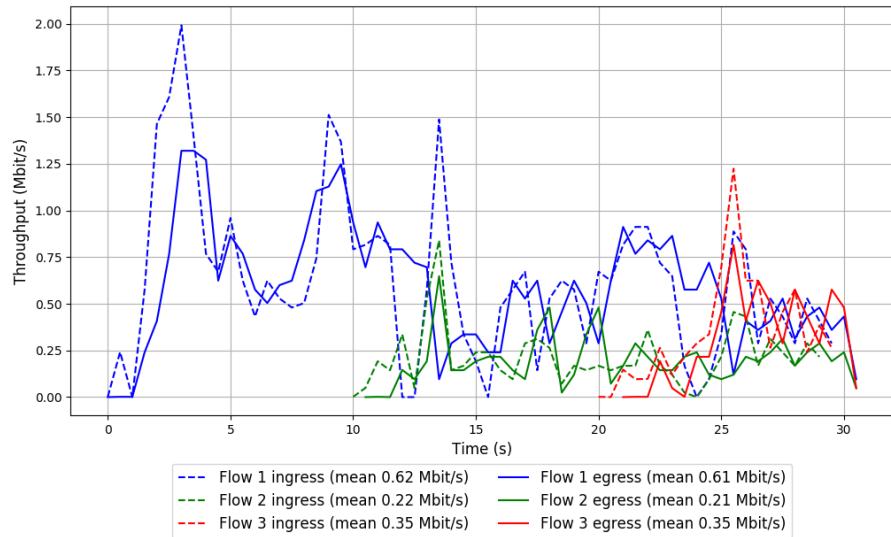
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	0.61	0.34	0.24	1968.00	2190.25	1929.07	3.09	5.62	16.22
Copa		0.52	0.40	0.37	390.24	379.14	367.09	0.32	0.87	1.65
TCP Cubic		0.95	0.03	0.00	8003.41	6209.07	8822.07	25.72	49.73	85.56
FillP		0.95	0.00	0.00	8184.16	7935.30	6920.07	96.41	26.29	81.25
FillP-Sheep		1.01	0.01	0.00	7449.39	7008.53	6937.12	24.55	0.77	81.85
Indigo		0.41	0.28	0.34	441.42	477.13	421.14	0.06	0.30	1.14
LEDBAT		0.66	0.33	0.29	383.88	413.47	377.69	0.43	2.04	2.48
PCC-Allegro		0.87	0.00	0.00	10148.48	8518.71	8270.36	82.48	6.76	64.20
PCC-Expr		1.16	0.00	0.00	7973.56	7082.88	5722.99	81.19	45.42	80.84
QUIC Cubic		0.74	0.25	0.04	3616.80	3859.25	3807.99	9.31	25.87	39.67
SCReAM		0.08	0.14	0.19	133.47	148.54	146.45	0.09	0.18	0.34
Sprout		0.13	0.14	0.14	350.84	352.13	373.38	0.01	0.11	0.33
TaoVA-100x		0.58	0.45	0.41	1701.94	3042.09	1883.93	2.24	3.78	9.91
TCP Vegas		0.73	0.25	0.13	4275.86	4511.56	4081.23	12.89	25.13	53.56
Verus		0.91	0.27	0.02	3999.53	2066.30	1954.50	6.89	7.49	10.34
PCC-Vivace		0.56	0.35	0.00	8224.13	8335.86	8139.01	30.82	18.40	65.32
WebRTC media		0.20	0.15	0.07	1062.10	1405.02	1225.37	0.02	0.06	0.43

Run 1: Statistics of TCP BBR

```
Start at: 2018-07-03 17:08:13
End at: 2018-07-03 17:08:43
Local clock offset: -3.046 ms
Remote clock offset: 5.522 ms

# Below is generated by plot.py at 2018-07-03 17:51:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 2111.604 ms
Loss rate: 3.83%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 2111.604 ms
Loss rate: 2.51%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 2305.470 ms
Loss rate: 4.03%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 1385.743 ms
Loss rate: 10.75%
```

Run 1: Report of TCP BBR — Data Link

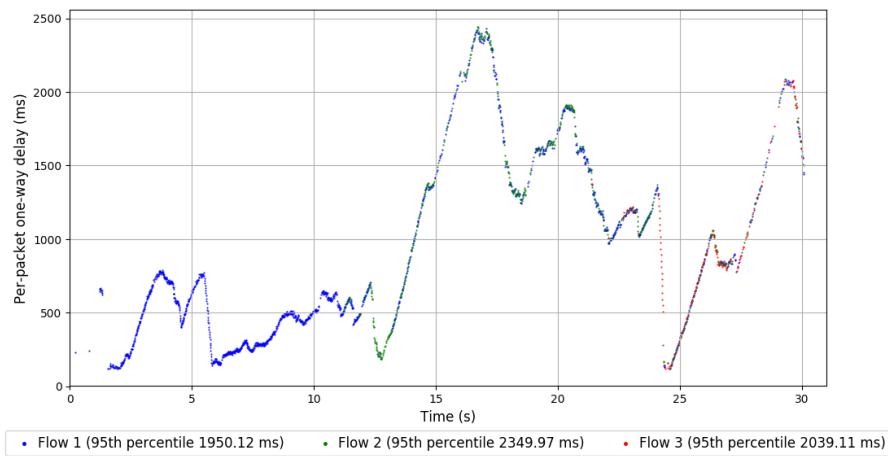
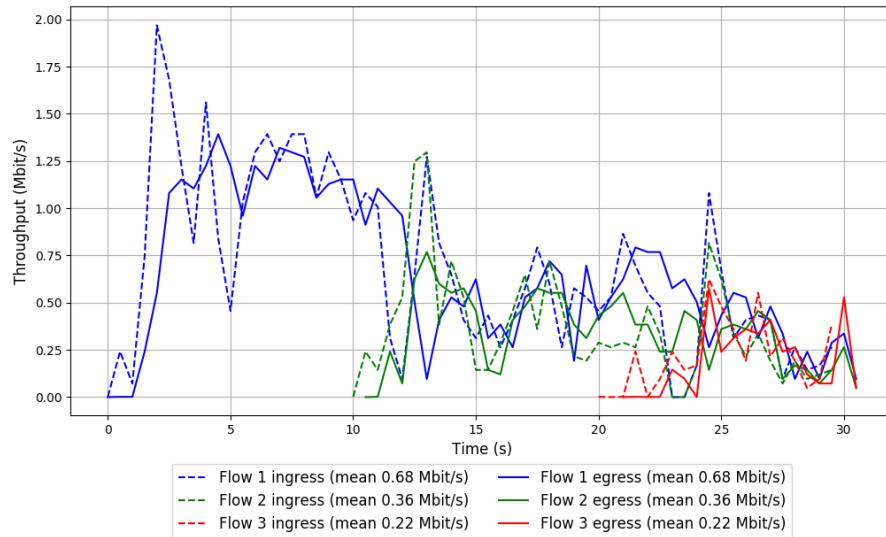


Run 2: Statistics of TCP BBR

```
Start at: 2018-07-03 17:28:40
End at: 2018-07-03 17:29:10
Local clock offset: -3.173 ms
Remote clock offset: 5.469 ms

# Below is generated by plot.py at 2018-07-03 17:51:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 2076.604 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 1950.122 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 2349.975 ms
Loss rate: 2.17%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2039.106 ms
Loss rate: 12.14%
```

Run 2: Report of TCP BBR — Data Link

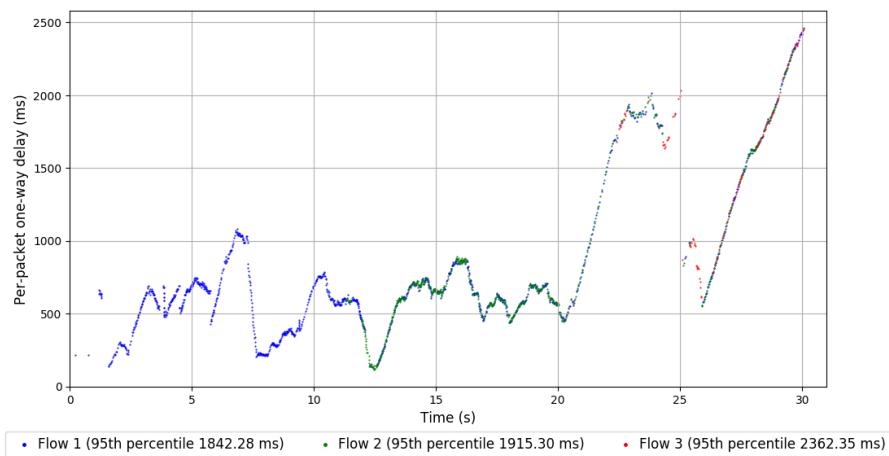
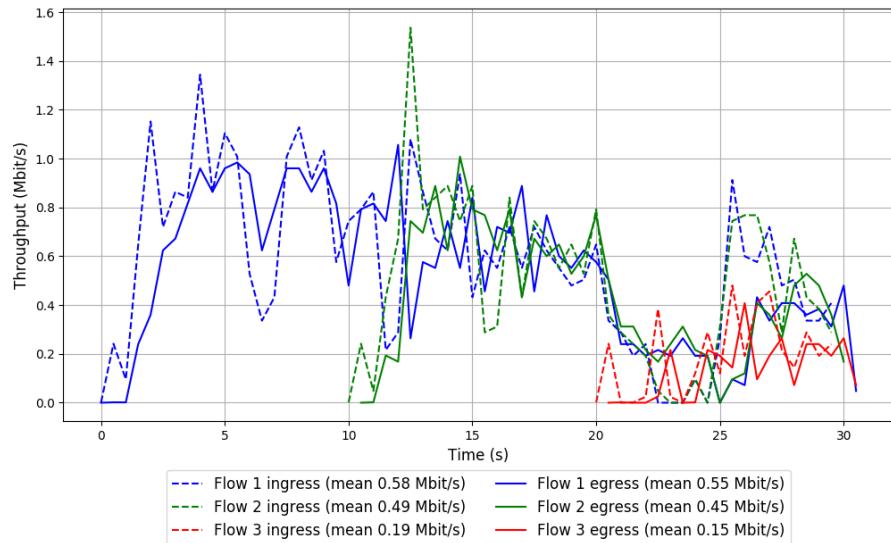


Run 3: Statistics of TCP BBR

```
Start at: 2018-07-03 17:49:13
End at: 2018-07-03 17:49:43
Local clock offset: -2.814 ms
Remote clock offset: 10.644 ms

# Below is generated by plot.py at 2018-07-03 17:51:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 1912.032 ms
Loss rate: 8.56%
-- Flow 1:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 1842.279 ms
Loss rate: 5.48%
-- Flow 2:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 1915.297 ms
Loss rate: 10.67%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 2362.350 ms
Loss rate: 25.76%
```

Run 3: Report of TCP BBR — Data Link

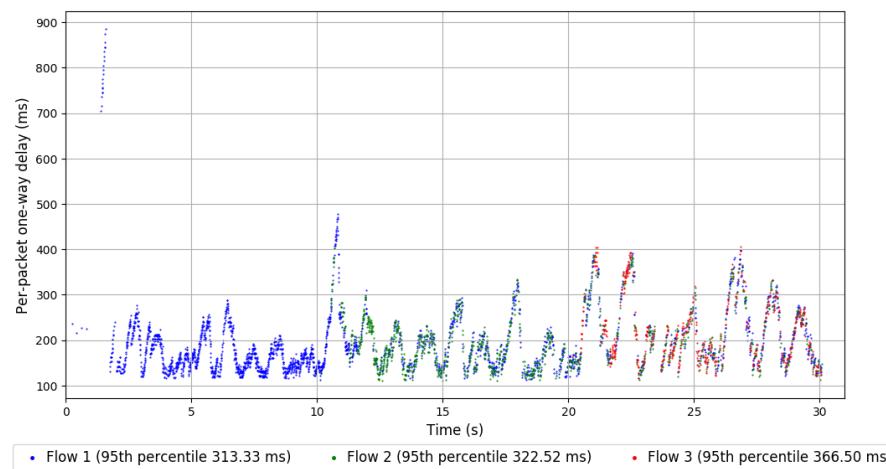
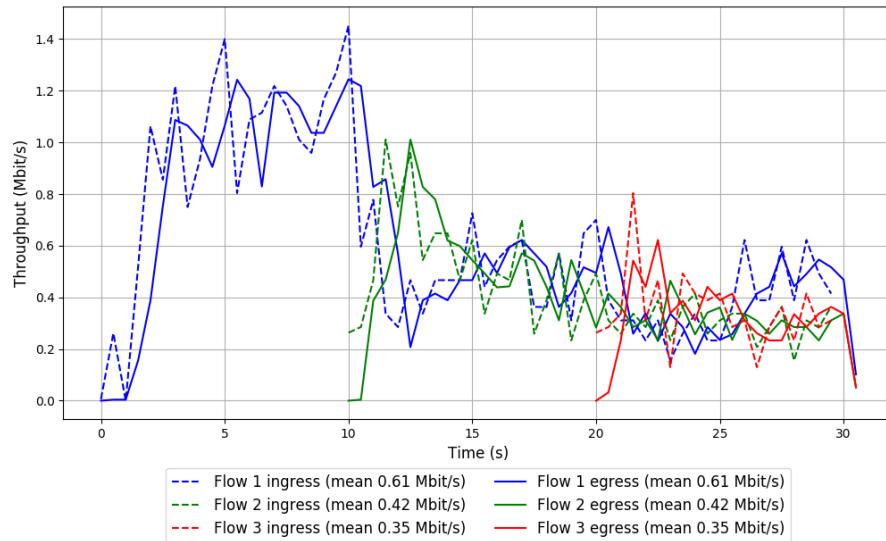


Run 1: Statistics of Copa

```
Start at: 2018-07-03 16:51:17
End at: 2018-07-03 16:51:47
Local clock offset: -2.916 ms
Remote clock offset: 8.69 ms

# Below is generated by plot.py at 2018-07-03 17:51:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 332.490 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 313.331 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 322.519 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 366.498 ms
Loss rate: 0.37%
```

Run 1: Report of Copa — Data Link

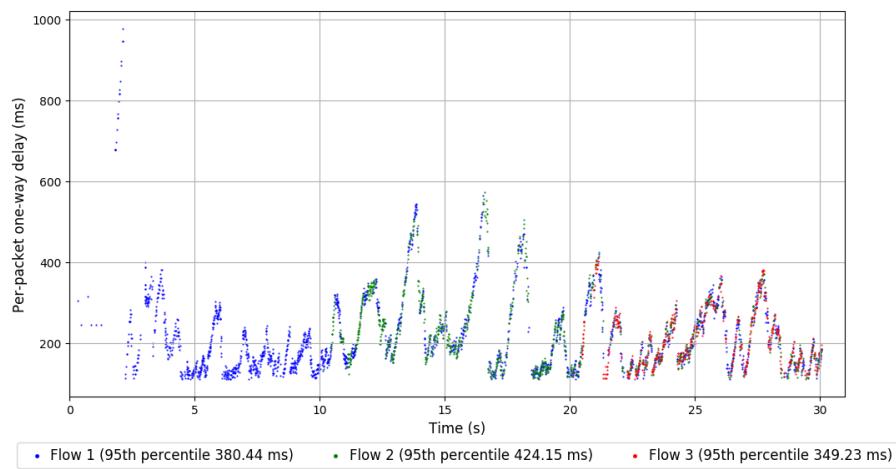
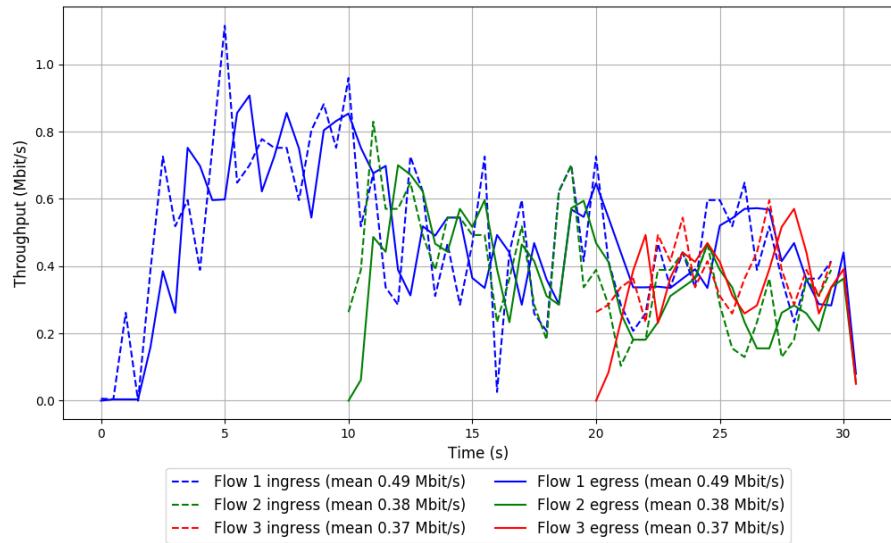


Run 2: Statistics of Copa

```
Start at: 2018-07-03 17:11:52
End at: 2018-07-03 17:12:22
Local clock offset: -3.059 ms
Remote clock offset: 5.959 ms

# Below is generated by plot.py at 2018-07-03 17:51:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 383.075 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 380.439 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 424.146 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 349.231 ms
Loss rate: 1.39%
```

Run 2: Report of Copa — Data Link

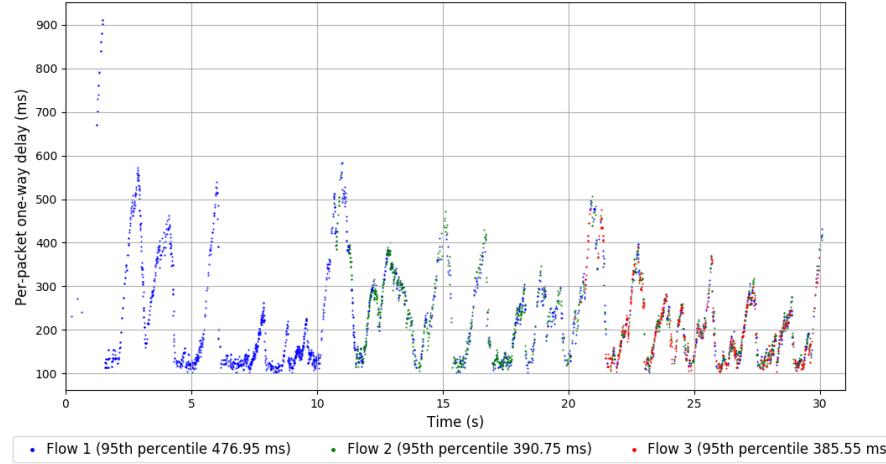
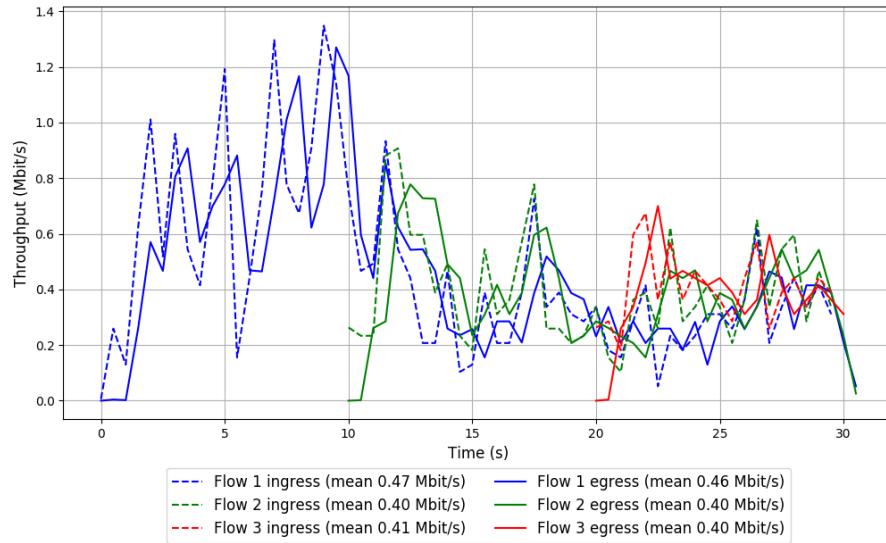


Run 3: Statistics of Copa

```
Start at: 2018-07-03 17:32:18
End at: 2018-07-03 17:32:48
Local clock offset: -3.202 ms
Remote clock offset: 1.787 ms

# Below is generated by plot.py at 2018-07-03 17:51:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 433.966 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 476.949 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 390.753 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 385.552 ms
Loss rate: 3.20%
```

Run 3: Report of Copa — Data Link

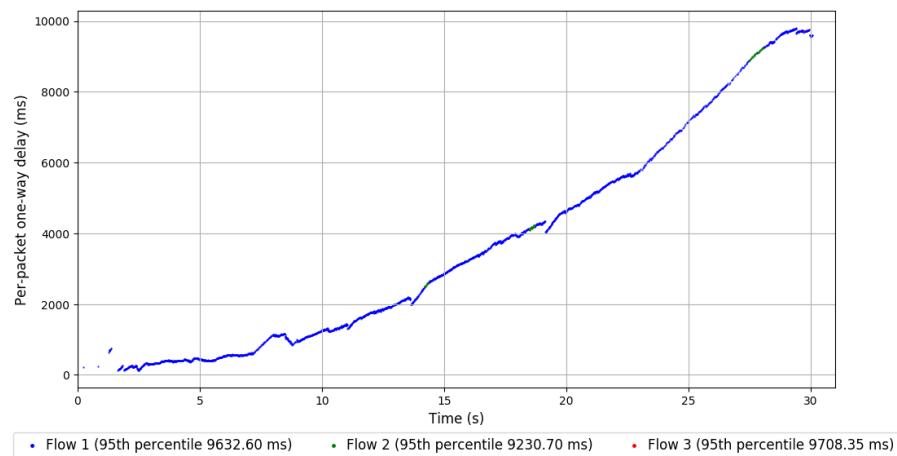
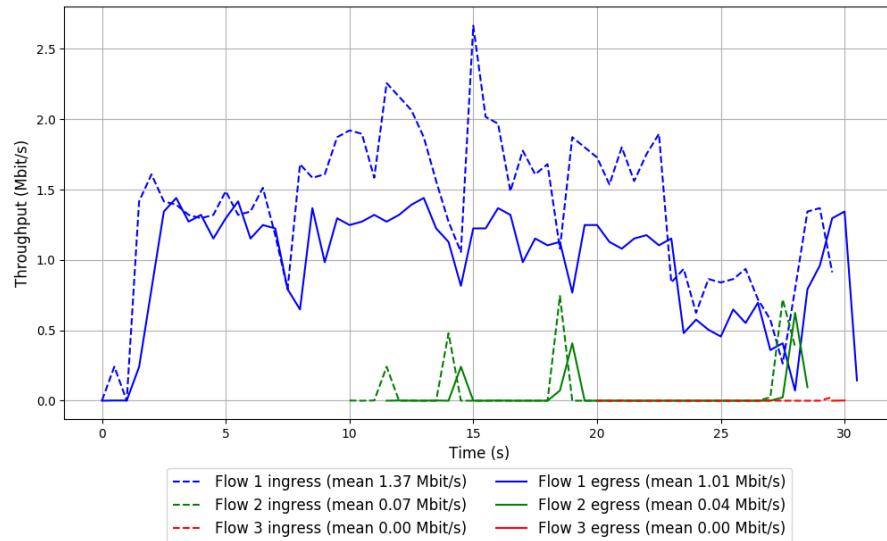


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-07-03 17:02:10
End at: 2018-07-03 17:02:40
Local clock offset: -3.065 ms
Remote clock offset: 6.798 ms

# Below is generated by plot.py at 2018-07-03 17:51:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 9622.454 ms
Loss rate: 27.16%
-- Flow 1:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 9632.605 ms
Loss rate: 26.62%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 9230.705 ms
Loss rate: 43.42%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9708.349 ms
Loss rate: 95.13%
```

Run 1: Report of TCP Cubic — Data Link

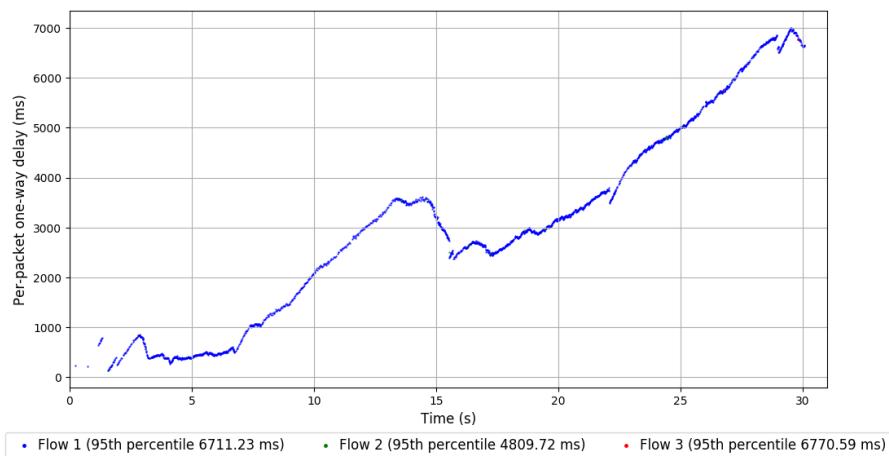
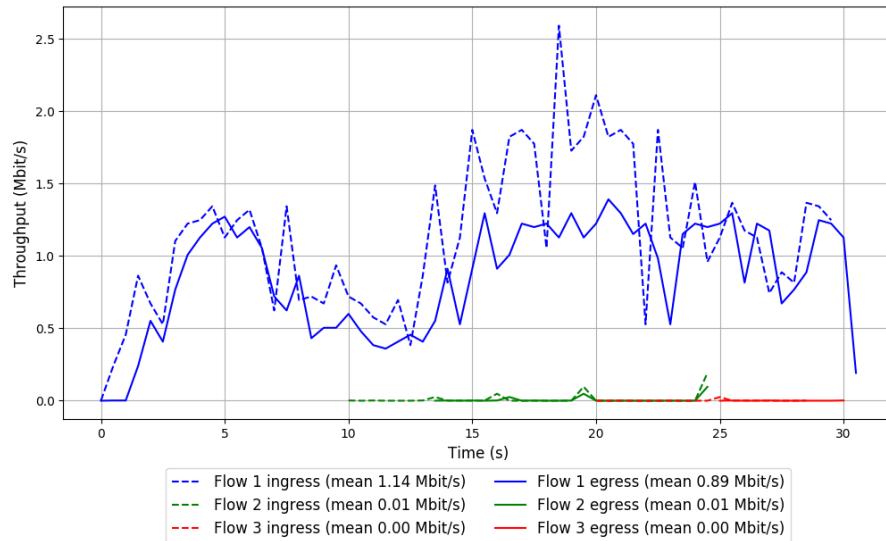


Run 2: Statistics of TCP Cubic

```
Start at: 2018-07-03 17:22:40
End at: 2018-07-03 17:23:10
Local clock offset: -3.141 ms
Remote clock offset: 6.492 ms

# Below is generated by plot.py at 2018-07-03 17:51:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 6711.231 ms
Loss rate: 22.43%
-- Flow 1:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 6711.231 ms
Loss rate: 22.24%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 4809.718 ms
Loss rate: 52.06%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6770.590 ms
Loss rate: 86.54%
```

Run 2: Report of TCP Cubic — Data Link

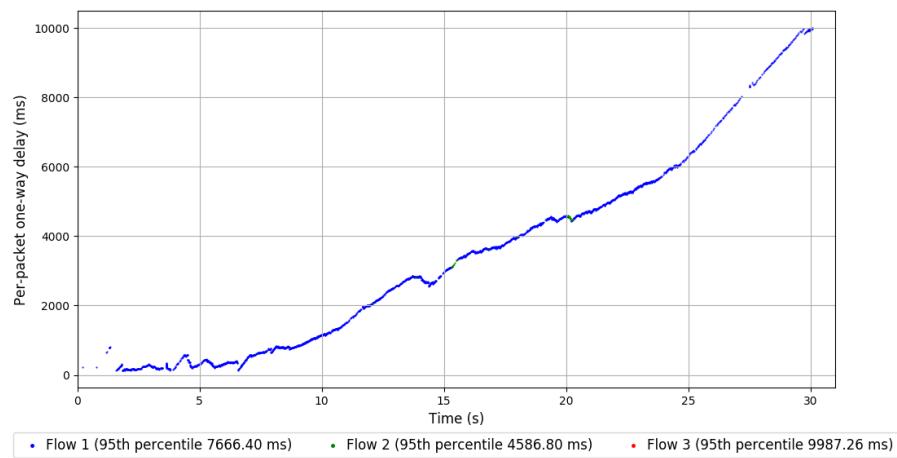
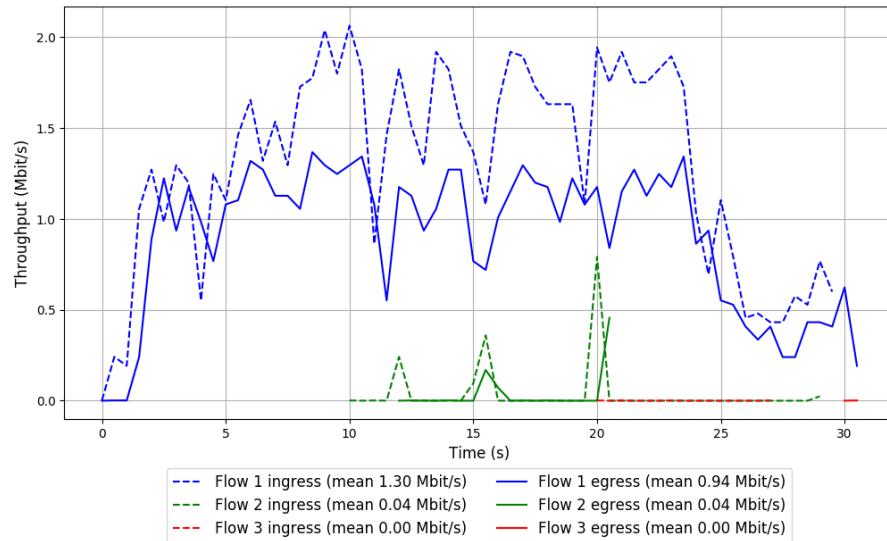


Run 3: Statistics of TCP Cubic

```
Start at: 2018-07-03 17:43:13
End at: 2018-07-03 17:43:43
Local clock offset: -3.075 ms
Remote clock offset: 5.609 ms

# Below is generated by plot.py at 2018-07-03 17:51:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 7656.409 ms
Loss rate: 28.79%
-- Flow 1:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 7666.402 ms
Loss rate: 28.30%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 4586.796 ms
Loss rate: 53.71%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9987.256 ms
Loss rate: 75.00%
```

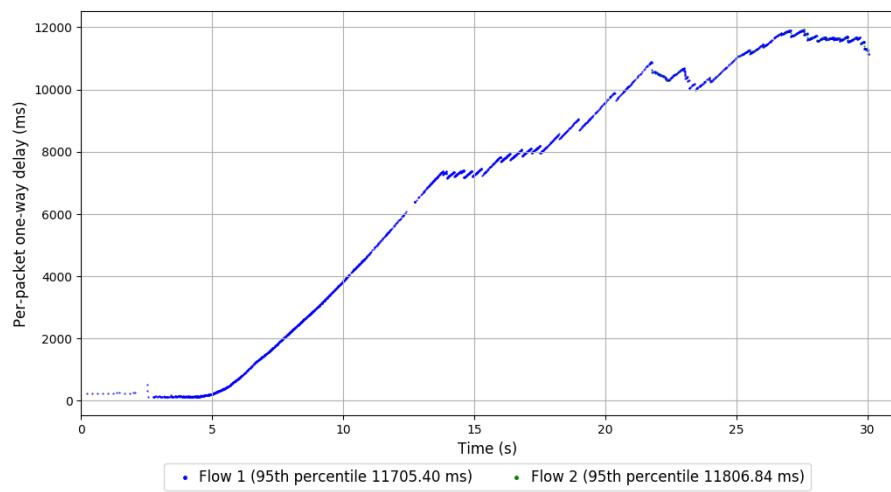
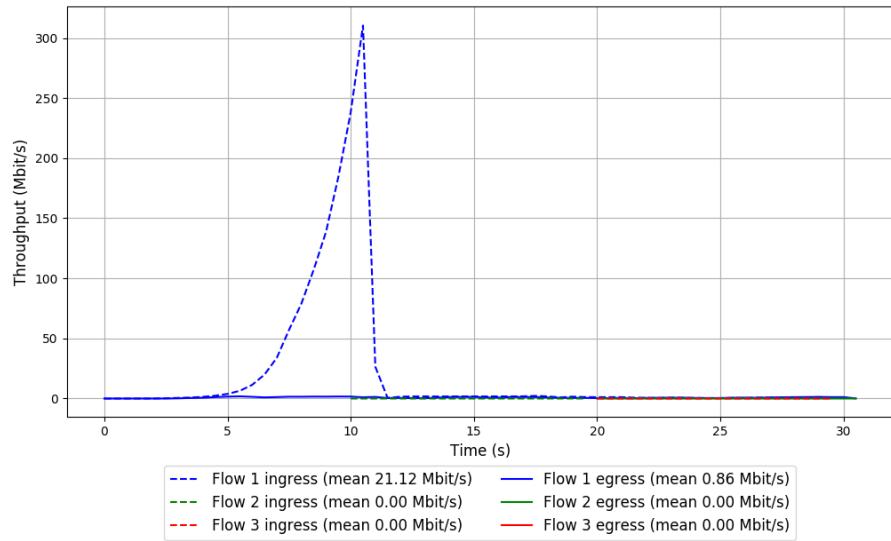
Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-07-03 17:09:25
End at: 2018-07-03 17:09:55
Local clock offset: -3.057 ms
Remote clock offset: 5.619 ms

Run 1: Report of FillP — Data Link

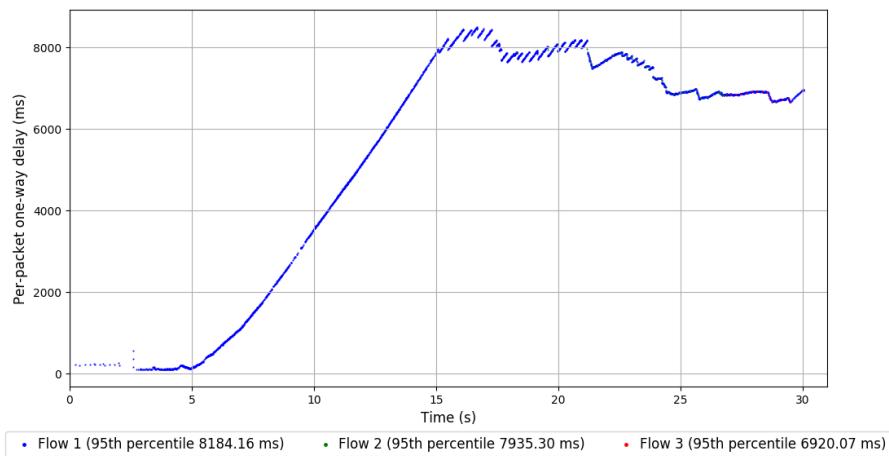
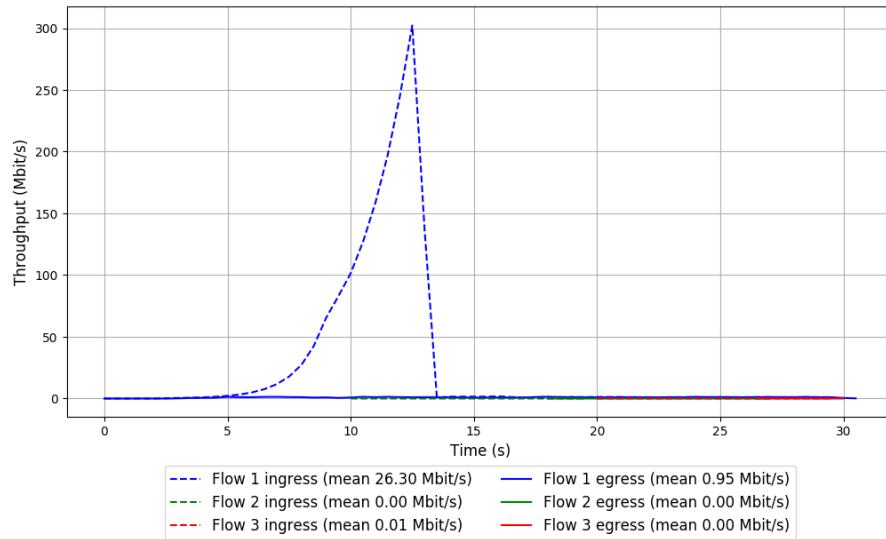


Run 2: Statistics of FillP

```
Start at: 2018-07-03 17:29:52
End at: 2018-07-03 17:30:22
Local clock offset: -3.167 ms
Remote clock offset: 1.805 ms

# Below is generated by plot.py at 2018-07-03 17:51:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 8182.704 ms
Loss rate: 96.41%
-- Flow 1:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 8184.157 ms
Loss rate: 96.41%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7935.304 ms
Loss rate: 26.29%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6920.073 ms
Loss rate: 81.25%
```

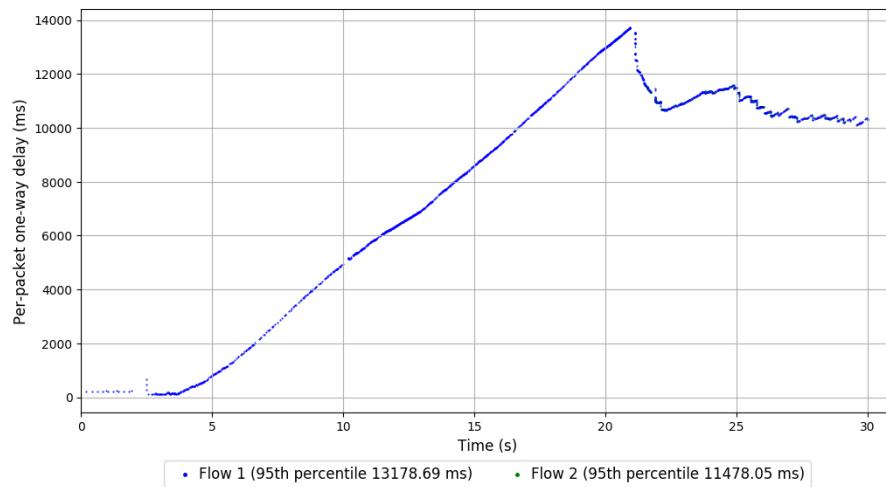
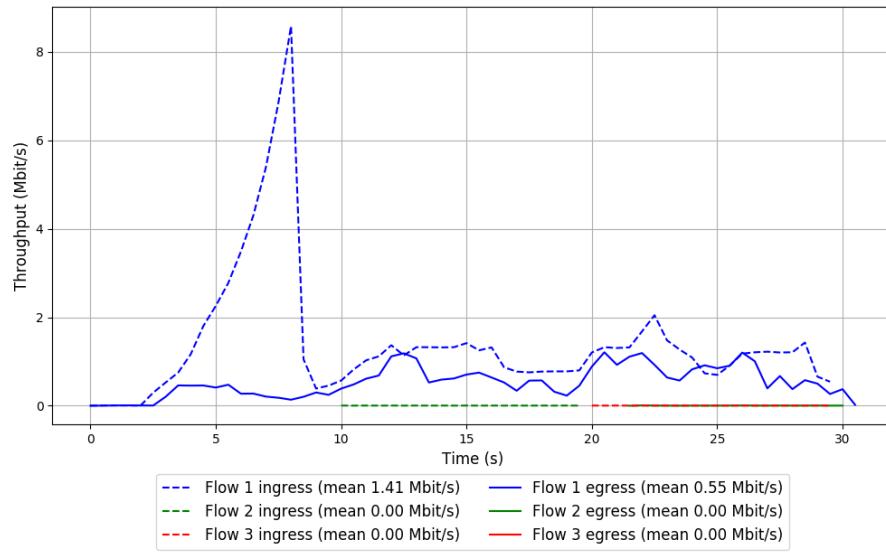
Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-07-03 17:50:25
End at: 2018-07-03 17:50:55
Local clock offset: -2.764 ms
Remote clock offset: 10.834 ms

Run 3: Report of FillP — Data Link

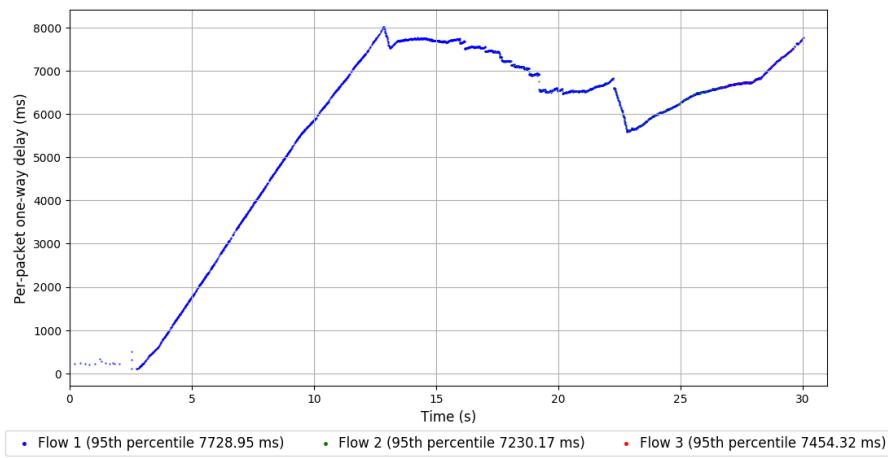
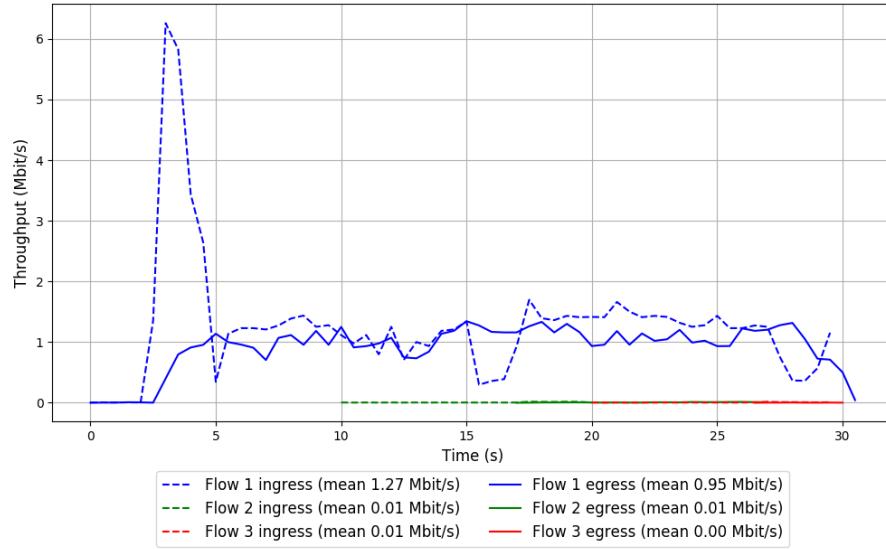


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2018-07-03 16:52:29
End at: 2018-07-03 16:52:59
Local clock offset: -2.909 ms
Remote clock offset: 4.174 ms

# Below is generated by plot.py at 2018-07-03 17:51:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 7727.890 ms
Loss rate: 25.31%
-- Flow 1:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 7728.953 ms
Loss rate: 25.26%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 7230.169 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7454.325 ms
Loss rate: 84.33%
```

Run 1: Report of FillP-Sheep — Data Link

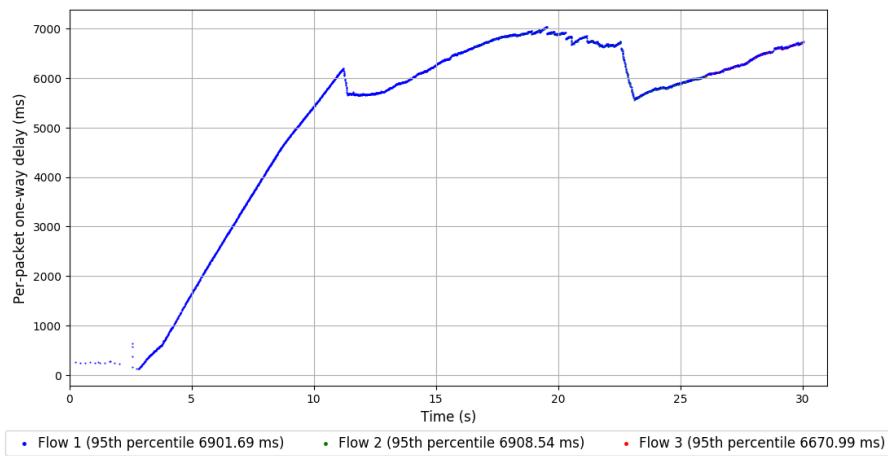
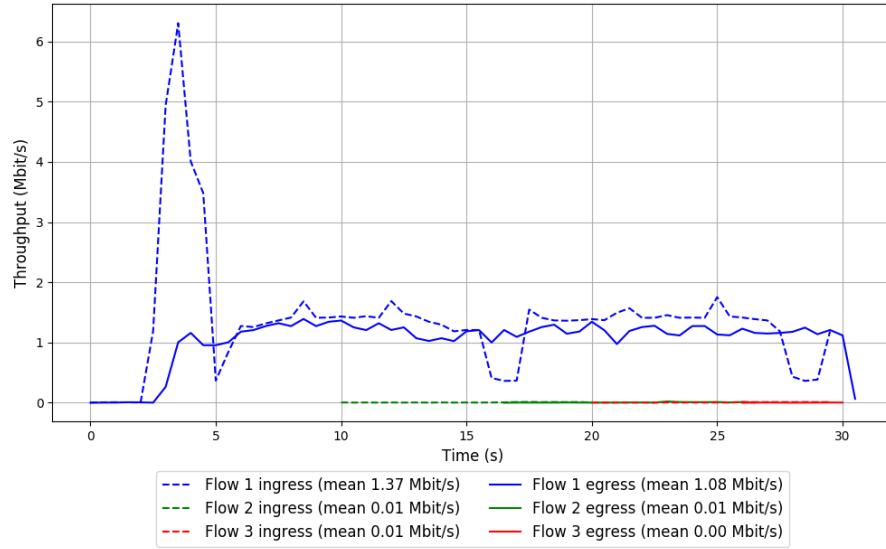


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-07-03 17:13:04
End at: 2018-07-03 17:13:34
Local clock offset: -3.077 ms
Remote clock offset: 5.715 ms

# Below is generated by plot.py at 2018-07-03 17:51:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 6901.693 ms
Loss rate: 22.10%
-- Flow 1:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 6901.693 ms
Loss rate: 22.04%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 6908.540 ms
Loss rate: 2.32%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6670.992 ms
Loss rate: 80.61%
```

Run 2: Report of FillP-Sheep — Data Link

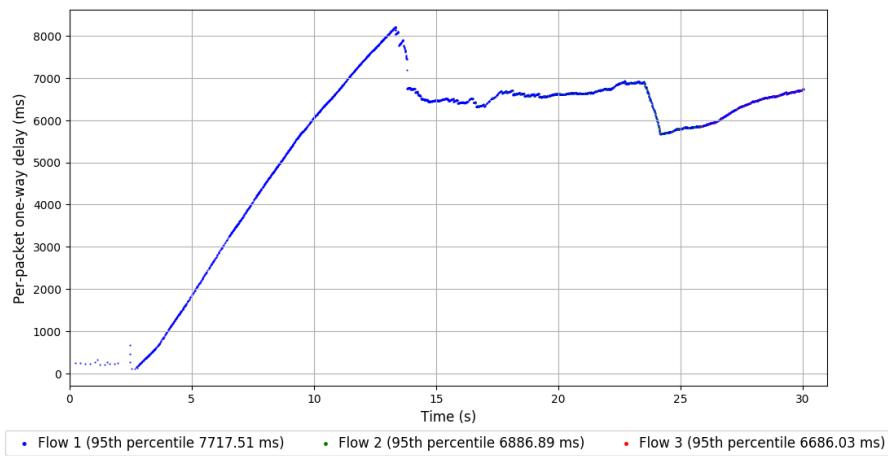
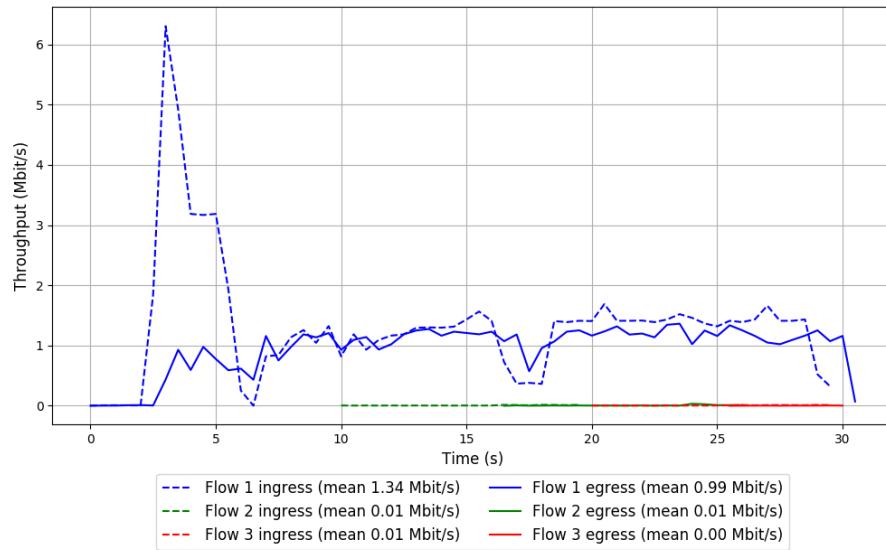


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-07-03 17:33:32
End at: 2018-07-03 17:34:02
Local clock offset: -3.215 ms
Remote clock offset: 1.684 ms

# Below is generated by plot.py at 2018-07-03 17:51:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 7687.736 ms
Loss rate: 26.40%
-- Flow 1:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 7717.512 ms
Loss rate: 26.36%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 6886.889 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6686.028 ms
Loss rate: 80.61%
```

Run 3: Report of FillP-Sheep — Data Link

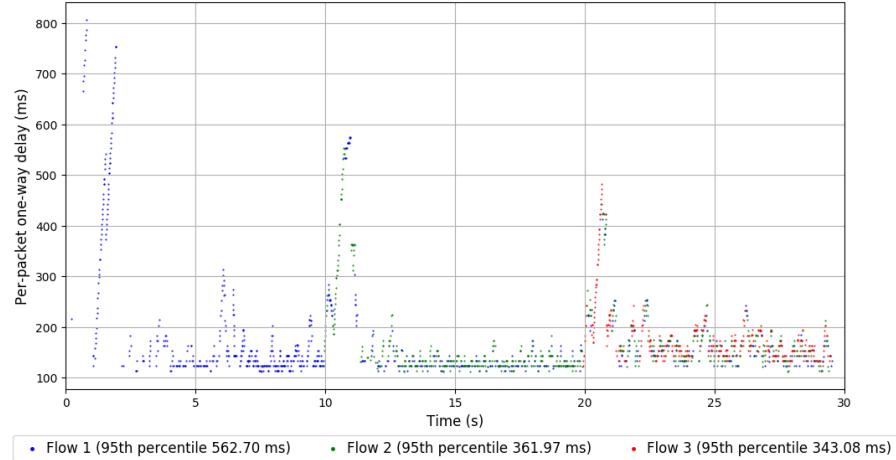
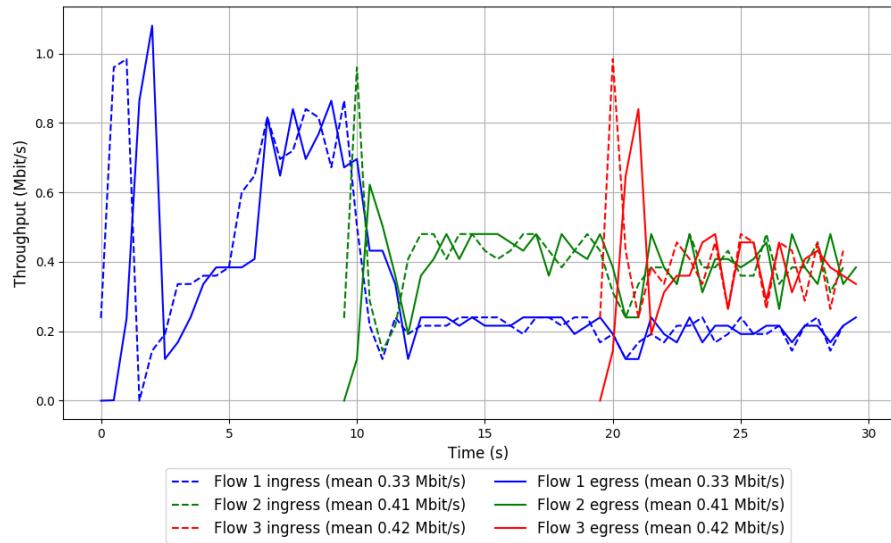


Run 1: Statistics of Indigo

```
Start at: 2018-07-03 16:54:55
End at: 2018-07-03 16:55:25
Local clock offset: -3.009 ms
Remote clock offset: 3.75 ms

# Below is generated by plot.py at 2018-07-03 17:51:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 443.093 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 562.695 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 361.973 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 343.082 ms
Loss rate: 1.49%
```

Run 1: Report of Indigo — Data Link

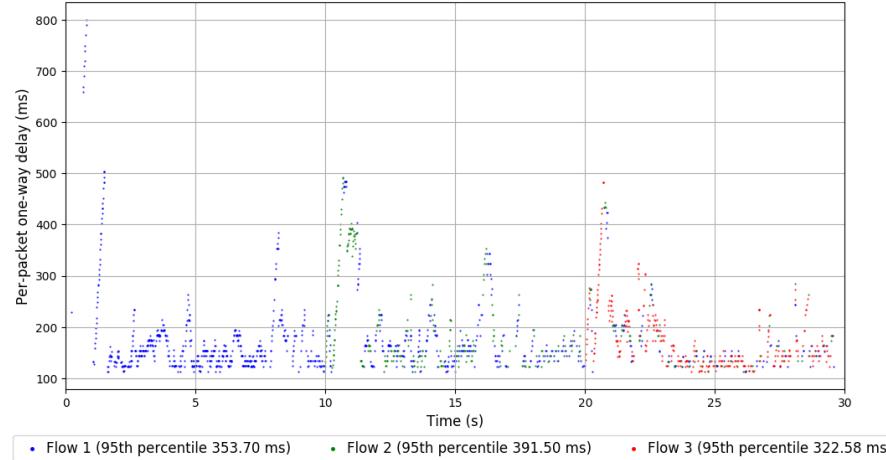
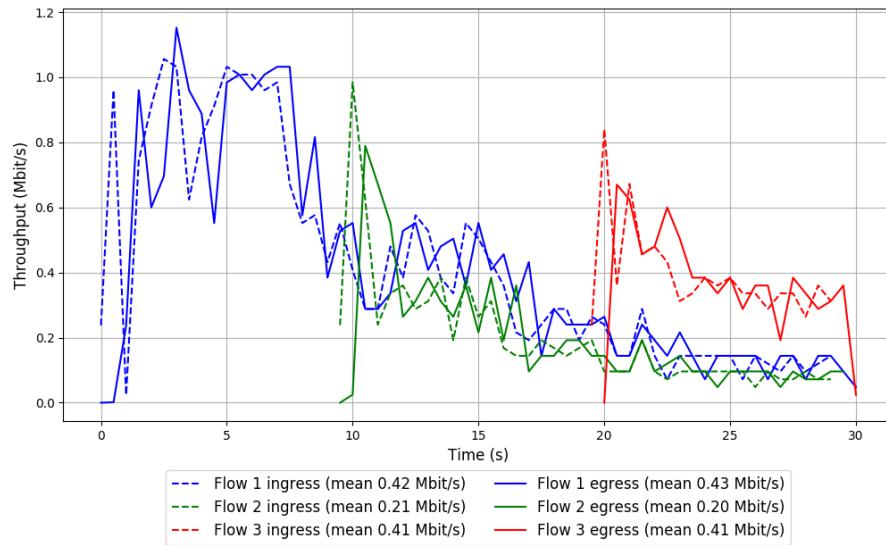


Run 2: Statistics of Indigo

```
Start at: 2018-07-03 17:15:28
End at: 2018-07-03 17:15:58
Local clock offset: -3.095 ms
Remote clock offset: 6.417 ms

# Below is generated by plot.py at 2018-07-03 17:51:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 377.584 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 353.701 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 391.504 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 322.582 ms
Loss rate: 1.23%
```

Run 2: Report of Indigo — Data Link

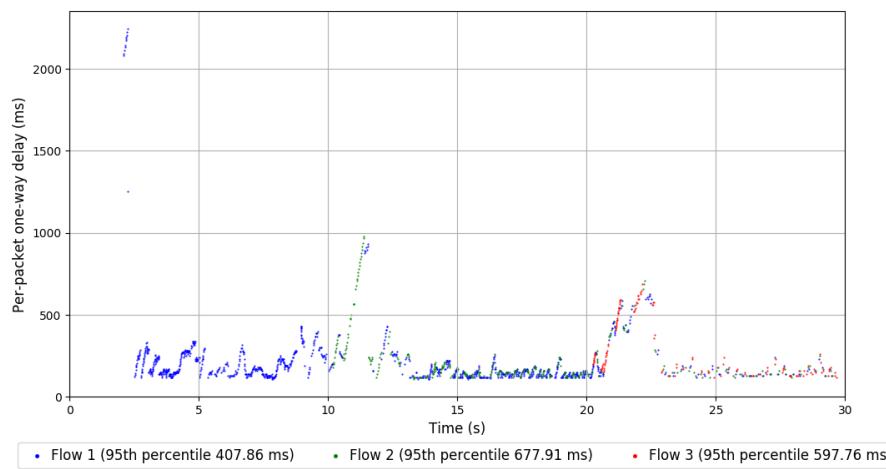
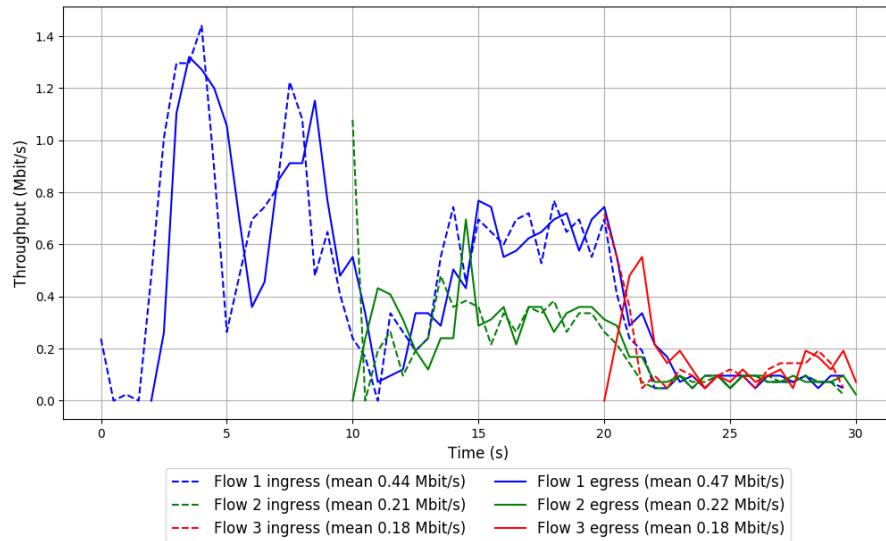


Run 3: Statistics of Indigo

```
Start at: 2018-07-03 17:35:56
End at: 2018-07-03 17:36:26
Local clock offset: -3.212 ms
Remote clock offset: 1.895 ms

# Below is generated by plot.py at 2018-07-03 17:51:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 537.776 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 407.857 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 677.913 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 597.765 ms
Loss rate: 0.71%
```

Run 3: Report of Indigo — Data Link

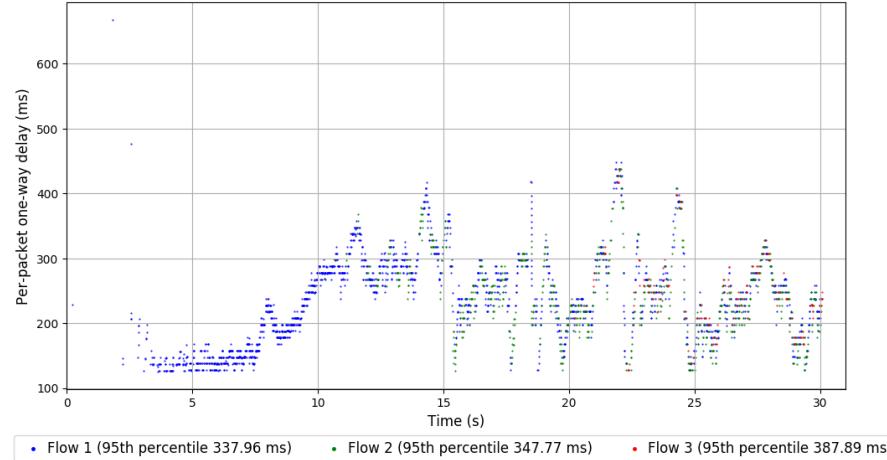
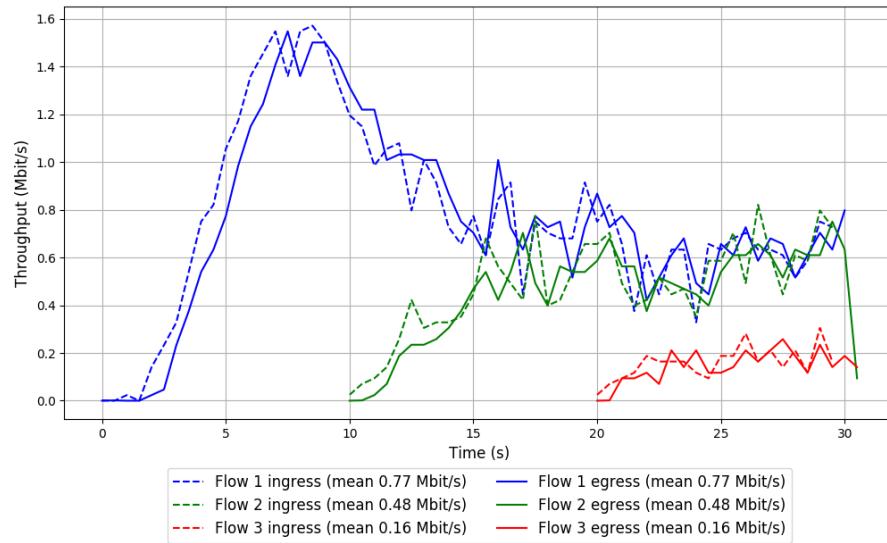


```
Run 1: Statistics of LEDBAT

Start at: 2018-07-03 17:07:01
End at: 2018-07-03 17:07:31
Local clock offset: -3.097 ms
Remote clock offset: 5.711 ms

# Below is generated by plot.py at 2018-07-03 17:51:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 347.677 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 337.964 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 347.770 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 387.894 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

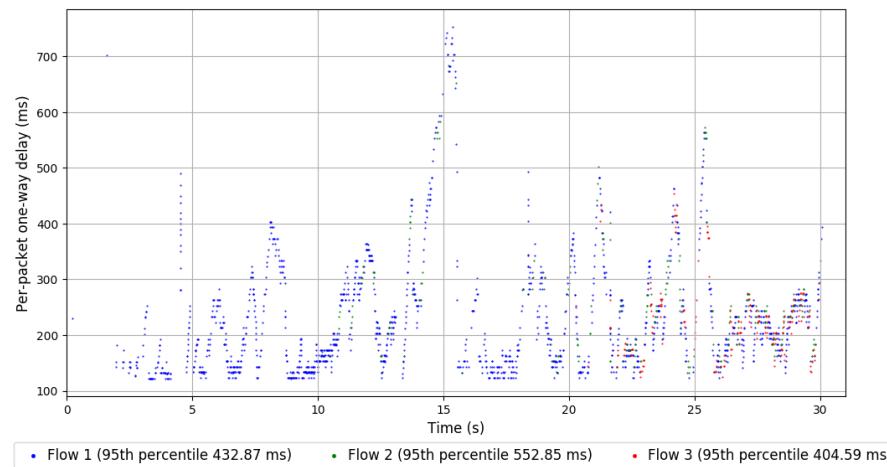
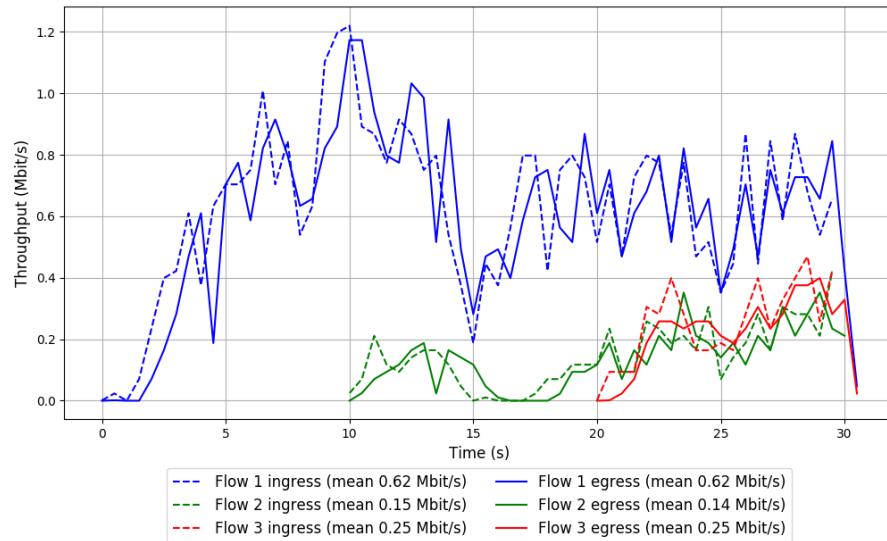


Run 2: Statistics of LEDBAT

```
Start at: 2018-07-03 17:27:28
End at: 2018-07-03 17:27:58
Local clock offset: -3.889 ms
Remote clock offset: 6.212 ms

# Below is generated by plot.py at 2018-07-03 17:51:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 432.866 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 432.866 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 552.847 ms
Loss rate: 4.04%
-- Flow 3:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 404.587 ms
Loss rate: 4.67%
```

Run 2: Report of LEDBAT — Data Link

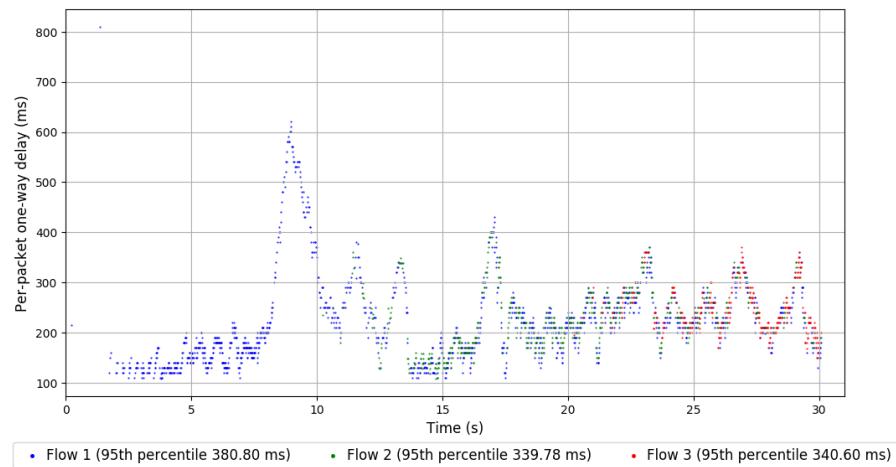
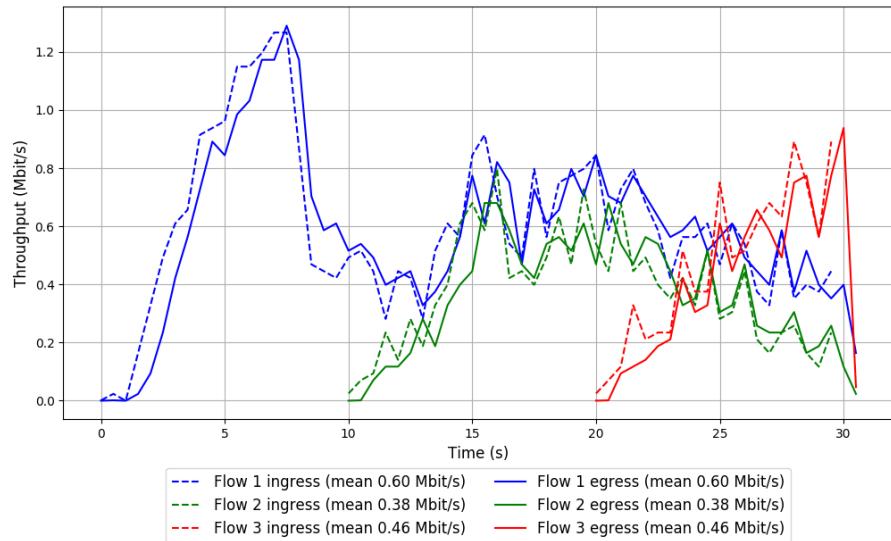


Run 3: Statistics of LEDBAT

```
Start at: 2018-07-03 17:48:01
End at: 2018-07-03 17:48:31
Local clock offset: -2.83 ms
Remote clock offset: 6.105 ms

# Below is generated by plot.py at 2018-07-03 17:51:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 350.813 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 380.803 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 339.780 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 340.596 ms
Loss rate: 2.78%
```

Run 3: Report of LEDBAT — Data Link

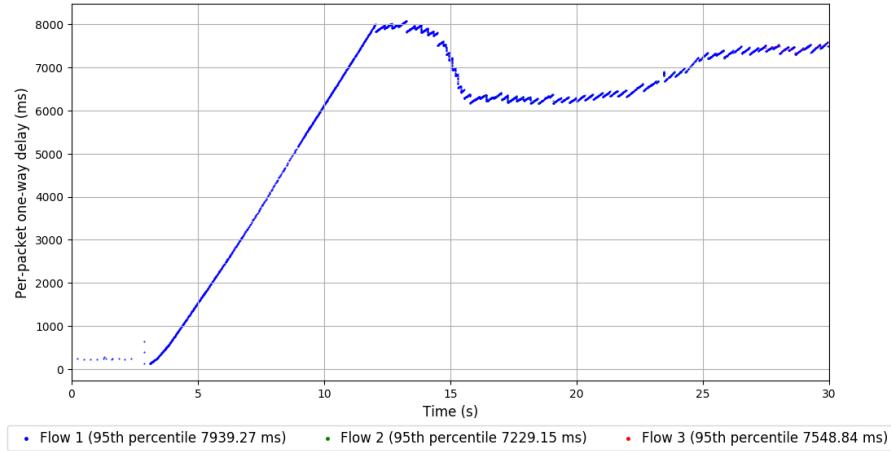
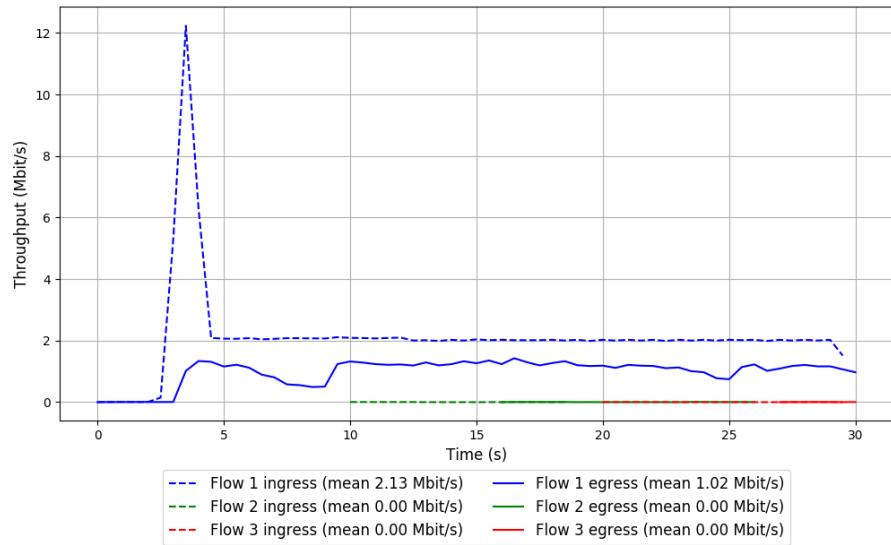


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-07-03 17:04:37
End at: 2018-07-03 17:05:07
Local clock offset: -3.07 ms
Remote clock offset: 2.213 ms

# Below is generated by plot.py at 2018-07-03 17:51:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 7939.233 ms
Loss rate: 52.54%
-- Flow 1:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 7939.267 ms
Loss rate: 52.56%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7229.151 ms
Loss rate: 4.60%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7548.838 ms
Loss rate: 58.62%
```

Run 1: Report of PCC-Allegro — Data Link

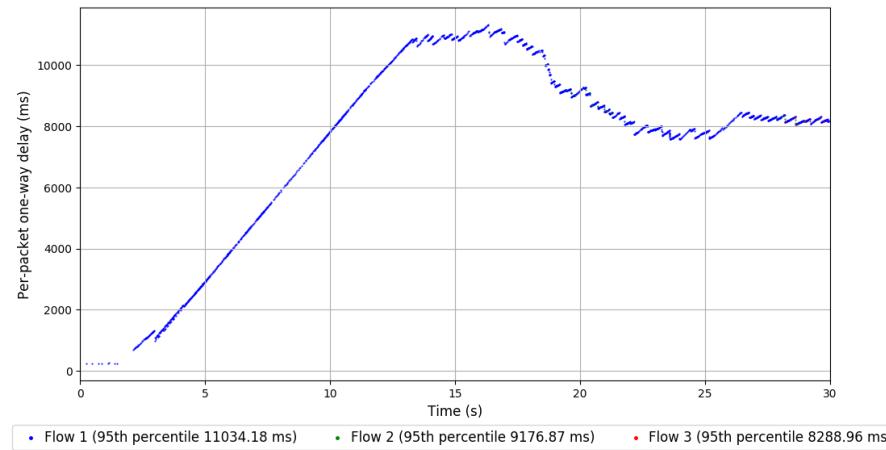
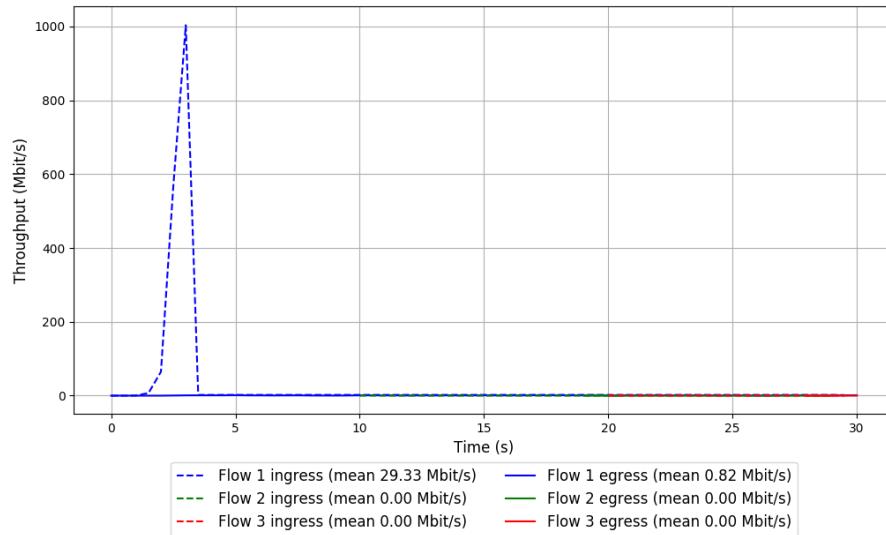


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-07-03 17:25:04
End at: 2018-07-03 17:25:34
Local clock offset: -3.16 ms
Remote clock offset: 5.986 ms

# Below is generated by plot.py at 2018-07-03 17:51:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 11033.079 ms
Loss rate: 97.20%
-- Flow 1:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 11034.184 ms
Loss rate: 97.21%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9176.871 ms
Loss rate: 9.74%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8288.959 ms
Loss rate: 65.91%
```

Run 2: Report of PCC-Allegro — Data Link

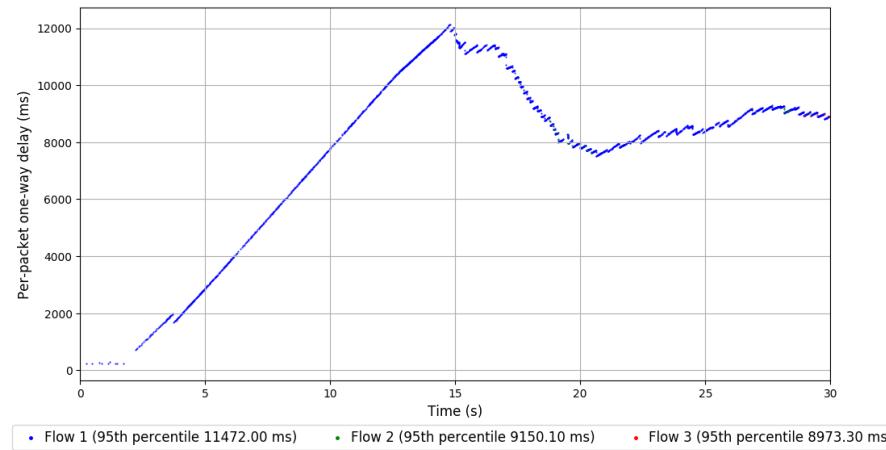
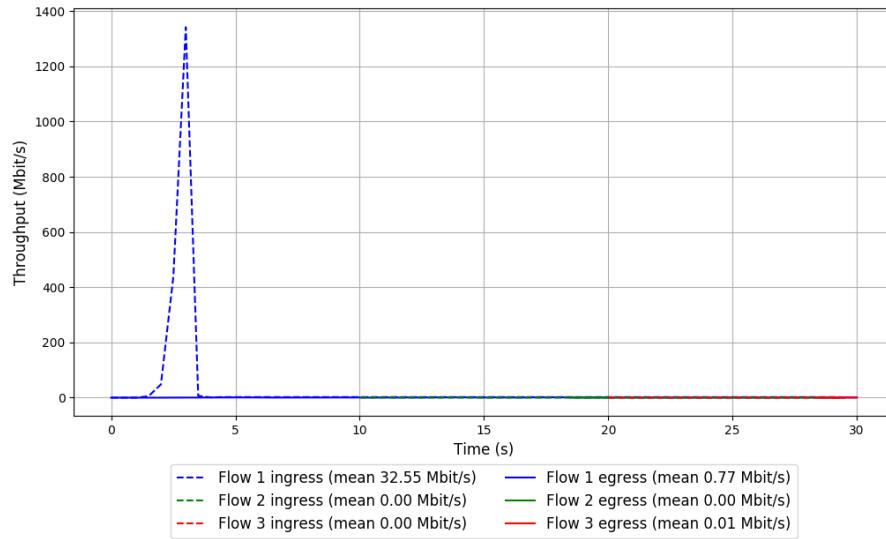


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-07-03 17:45:37
End at: 2018-07-03 17:46:07
Local clock offset: -2.927 ms
Remote clock offset: 4.237 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 11469.239 ms
Loss rate: 97.65%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 11471.998 ms
Loss rate: 97.66%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9150.097 ms
Loss rate: 5.94%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 8973.298 ms
Loss rate: 68.06%
```

Run 3: Report of PCC-Allegro — Data Link

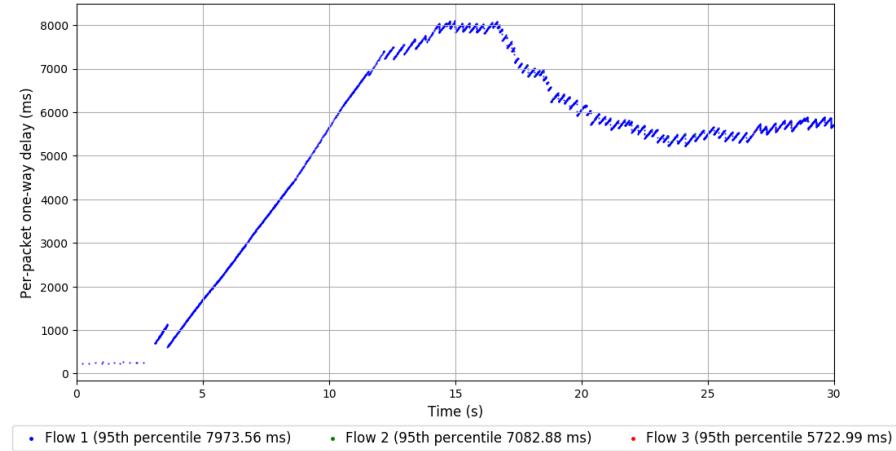
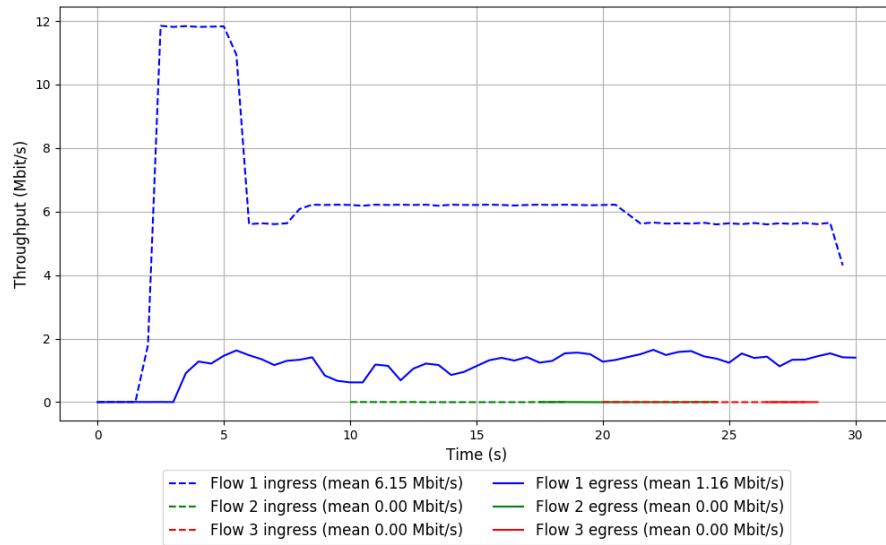


Run 1: Statistics of PCC-Expr

```
Start at: 2018-07-03 17:05:49
End at: 2018-07-03 17:06:19
Local clock offset: -3.014 ms
Remote clock offset: 5.902 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 7973.486 ms
Loss rate: 81.19%
-- Flow 1:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 7973.562 ms
Loss rate: 81.19%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7082.880 ms
Loss rate: 45.42%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5722.995 ms
Loss rate: 80.84%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

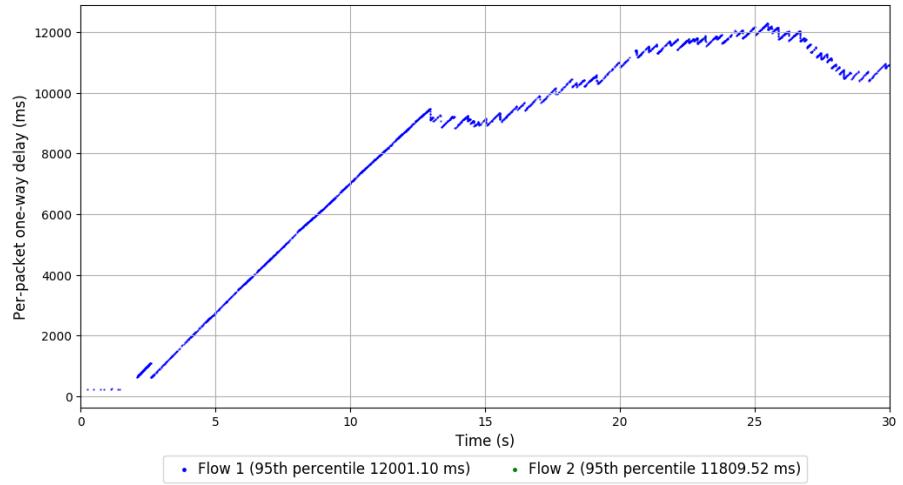
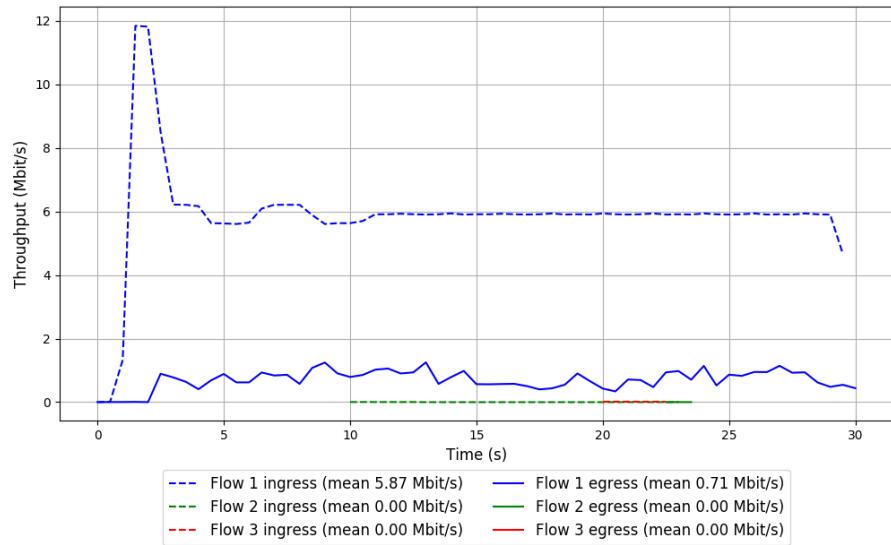
Start at: 2018-07-03 17:26:16

End at: 2018-07-03 17:26:46

Local clock offset: -3.16 ms

Remote clock offset: 5.992 ms

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

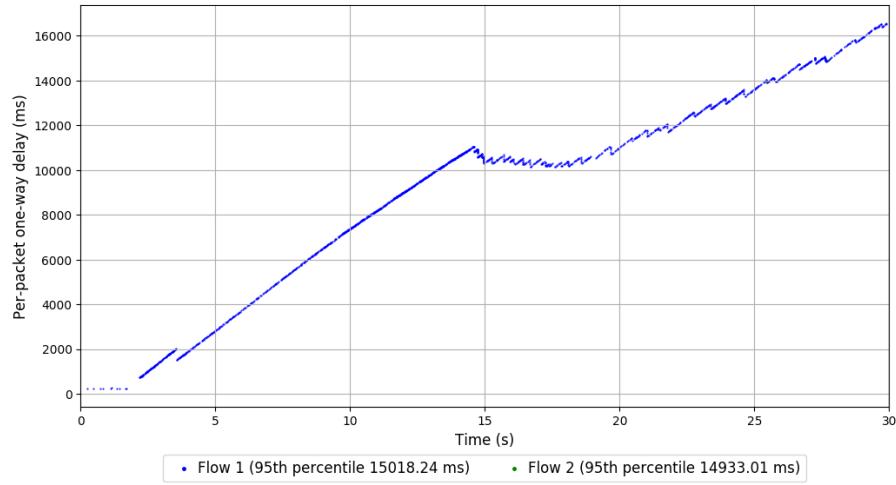
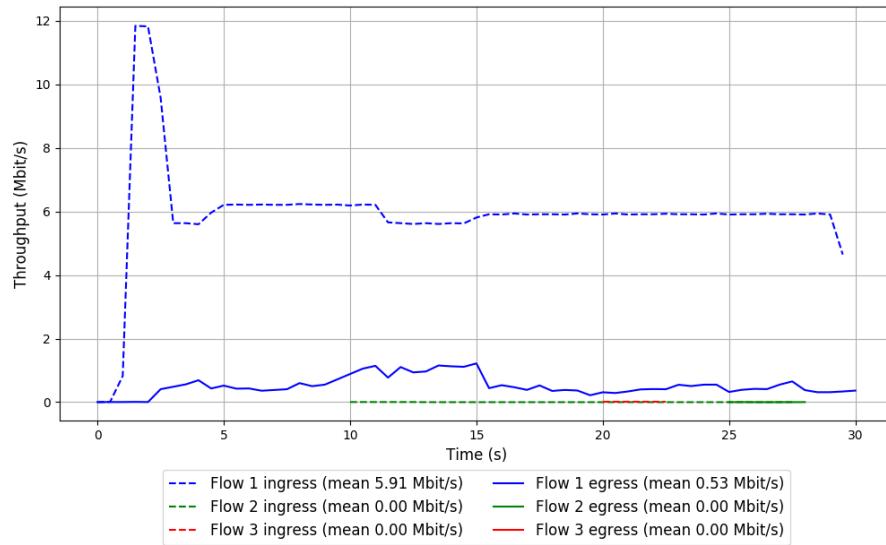
Start at: 2018-07-03 17:46:50

End at: 2018-07-03 17:47:20

Local clock offset: -2.894 ms

Remote clock offset: 8.616 ms

Run 3: Report of PCC-Expr — Data Link

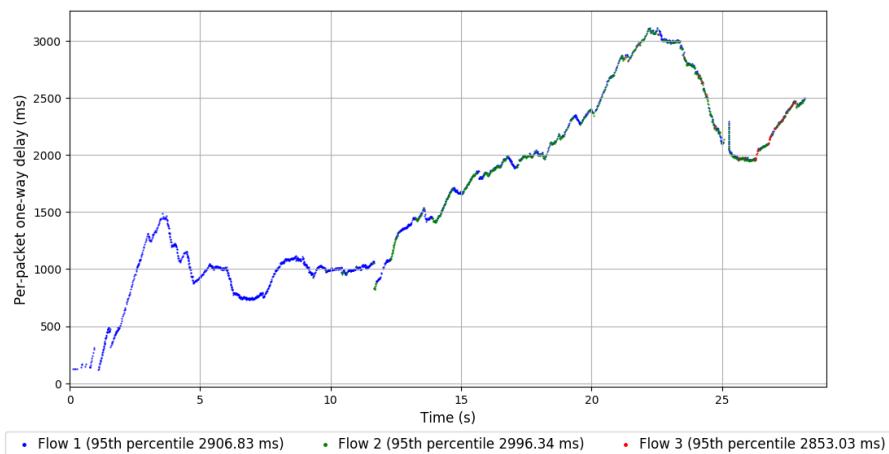
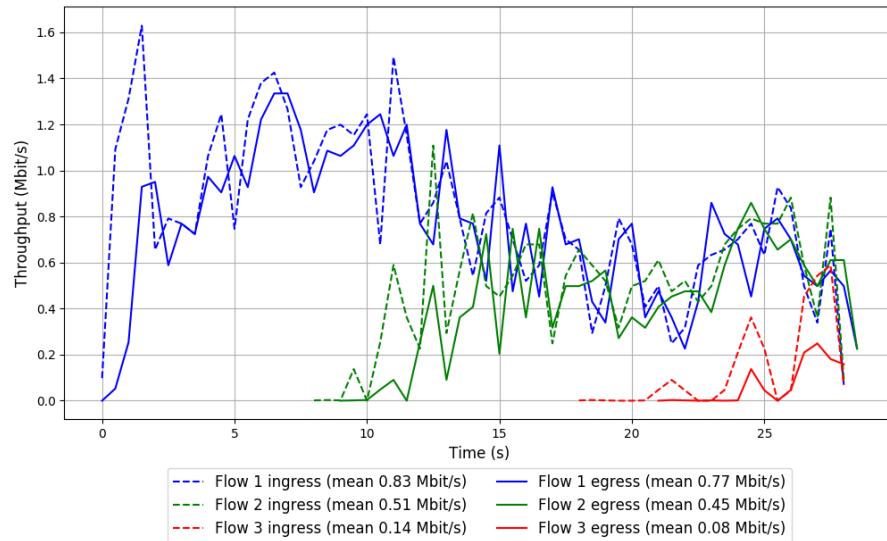


```
Run 1: Statistics of QUIC Cubic
```

```
Start at: 2018-07-03 16:56:07
End at: 2018-07-03 16:56:37
Local clock offset: -2.953 ms
Remote clock offset: 3.916 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 2986.539 ms
Loss rate: 11.68%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 2906.832 ms
Loss rate: 6.73%
-- Flow 2:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 2996.345 ms
Loss rate: 16.24%
-- Flow 3:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 2853.029 ms
Loss rate: 62.13%
```

Run 1: Report of QUIC Cubic — Data Link

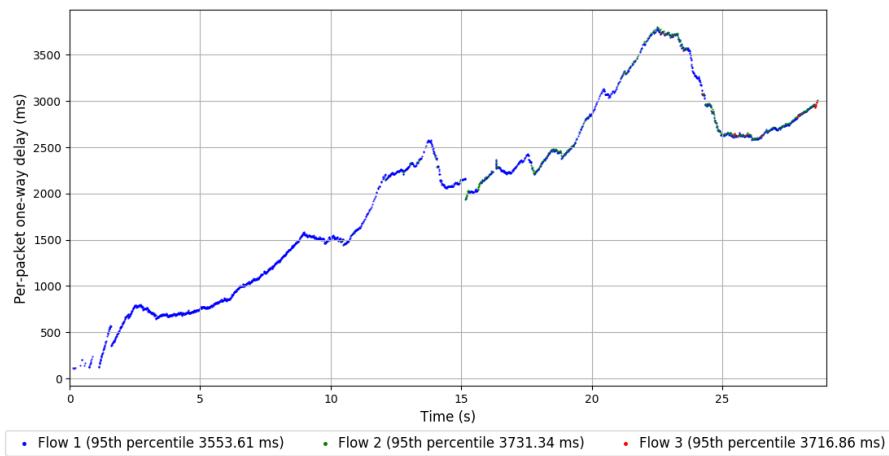
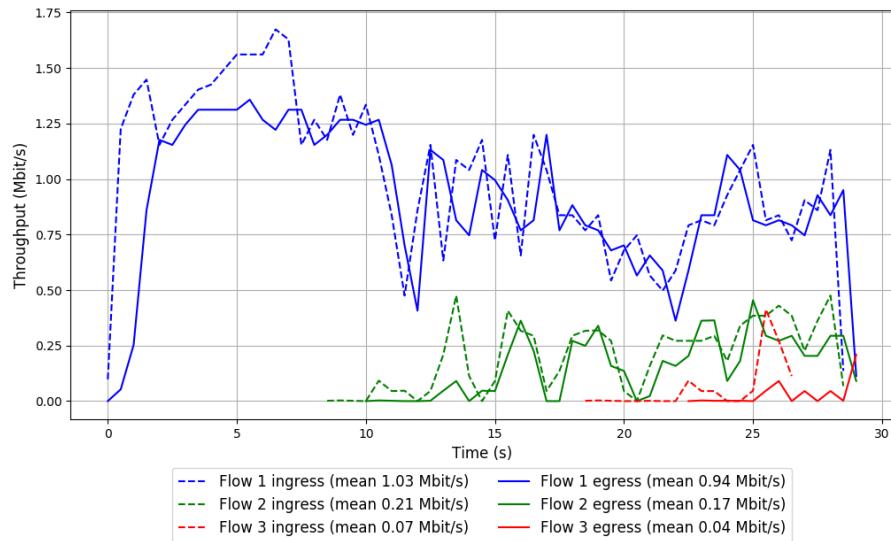


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-07-03 17:16:39
End at: 2018-07-03 17:17:09
Local clock offset: -3.094 ms
Remote clock offset: 6.486 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 3606.573 ms
Loss rate: 11.70%
-- Flow 1:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 3553.605 ms
Loss rate: 8.79%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 3731.343 ms
Loss rate: 26.50%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 3716.863 ms
Loss rate: 56.88%
```

Run 2: Report of QUIC Cubic — Data Link

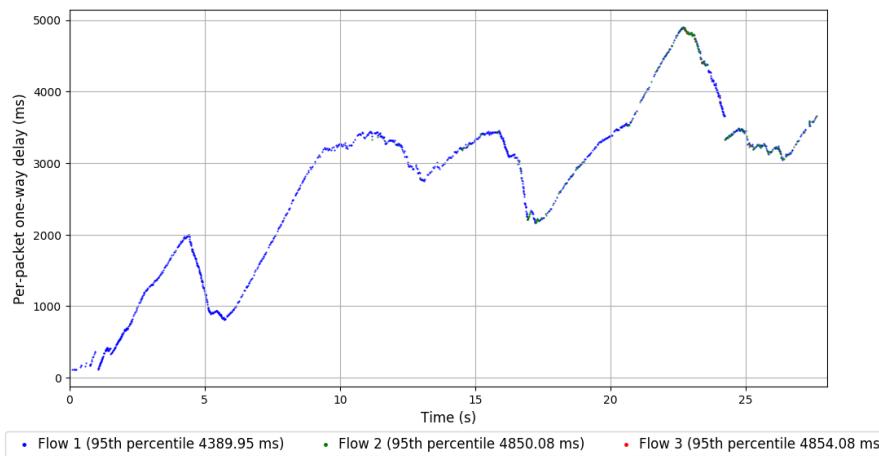
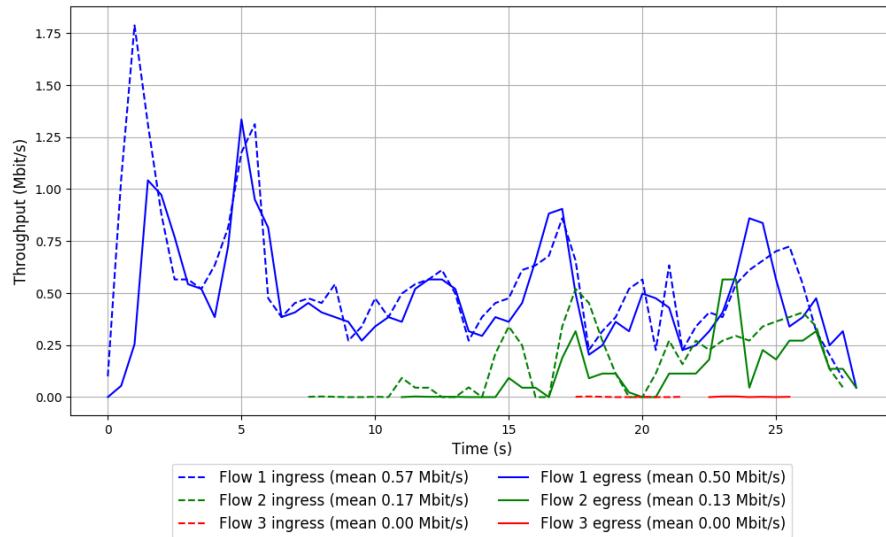


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-07-03 17:37:09
End at: 2018-07-03 17:37:39
Local clock offset: -3.229 ms
Remote clock offset: 4.893 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 4665.329 ms
Loss rate: 16.34%
-- Flow 1:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 4389.954 ms
Loss rate: 12.42%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 4850.077 ms
Loss rate: 34.88%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4854.083 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

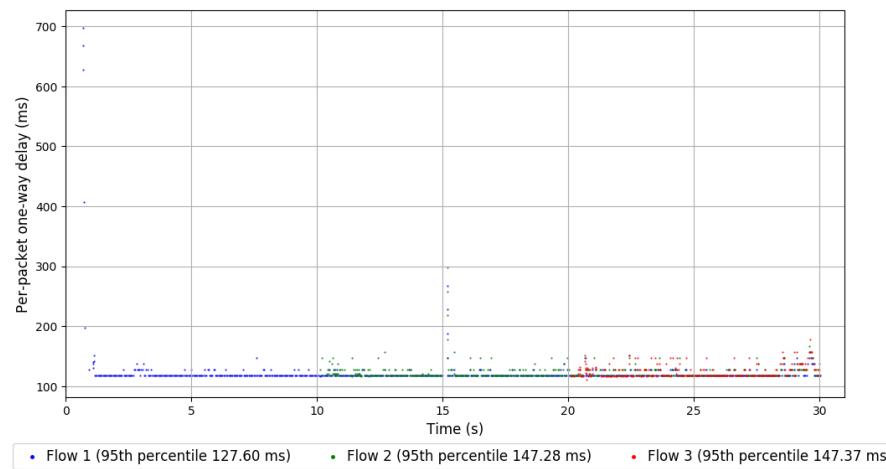
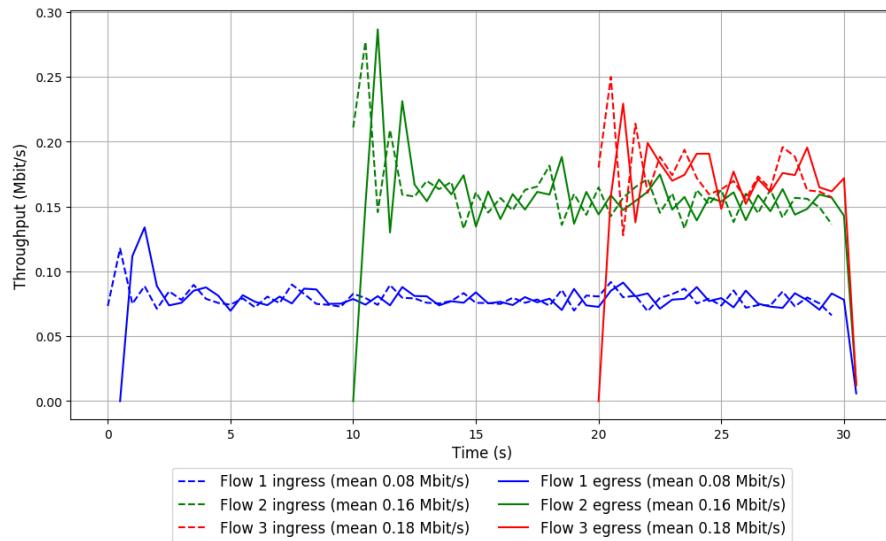


```
Run 1: Statistics of SCReAM

Start at: 2018-07-03 16:53:44
End at: 2018-07-03 16:54:14
Local clock offset: -2.929 ms
Remote clock offset: 7.425 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 140.889 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 127.602 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 147.278 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 147.373 ms
Loss rate: 0.35%
```

Run 1: Report of SCReAM — Data Link

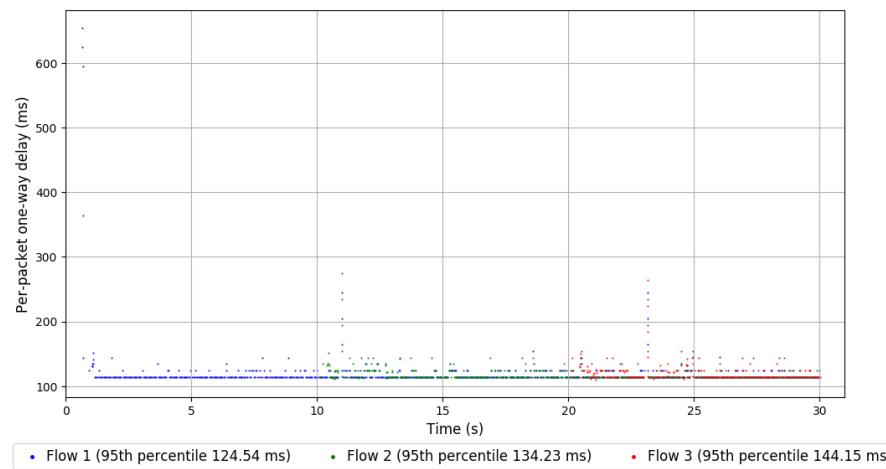
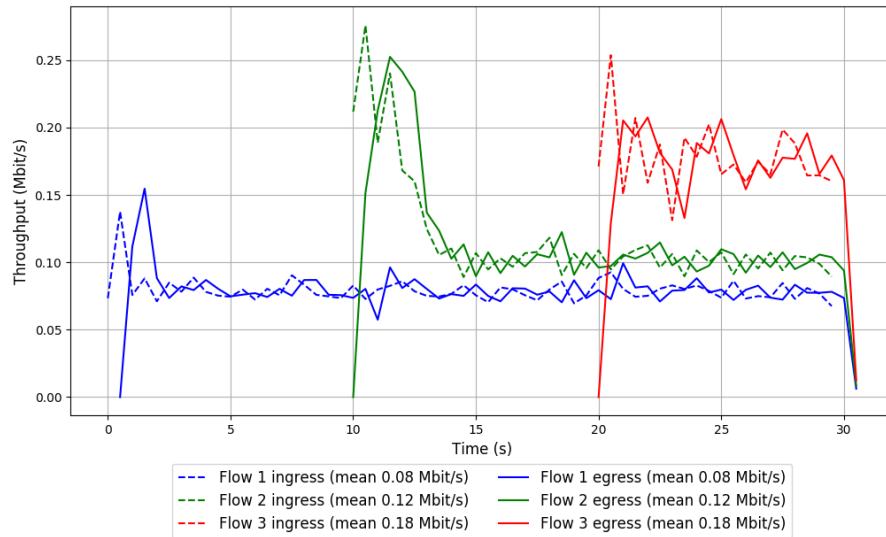


Run 2: Statistics of SCReAM

```
Start at: 2018-07-03 17:14:16
End at: 2018-07-03 17:14:46
Local clock offset: -3.148 ms
Remote clock offset: 2.537 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 134.259 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 124.536 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 134.234 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 144.147 ms
Loss rate: 0.35%
```

Run 2: Report of SCReAM — Data Link

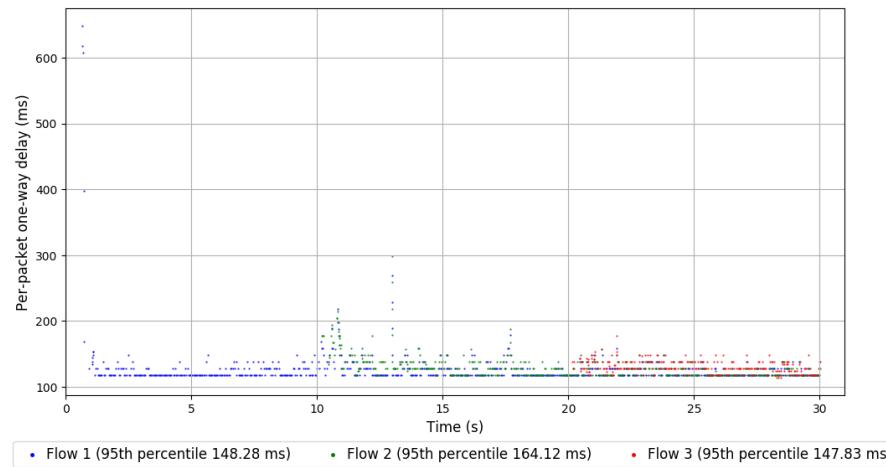
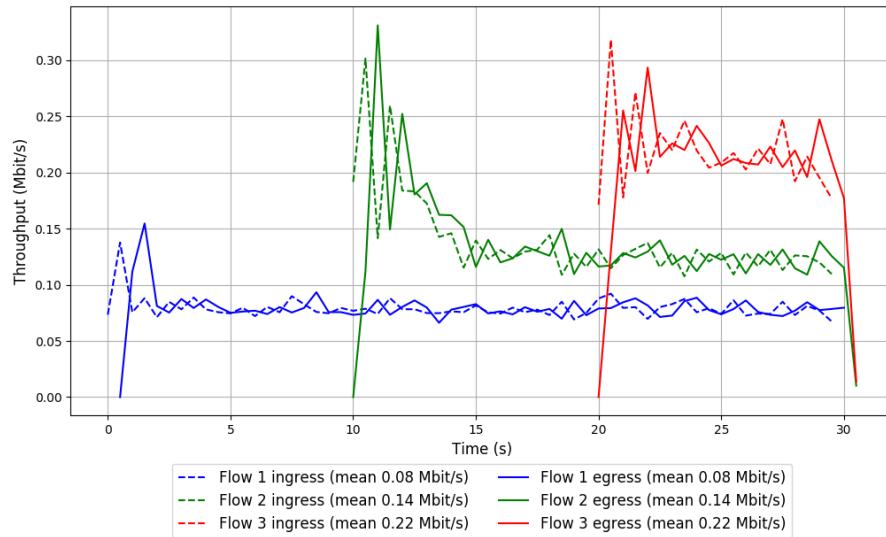


Run 3: Statistics of SCReAM

```
Start at: 2018-07-03 17:34:44
End at: 2018-07-03 17:35:14
Local clock offset: -3.225 ms
Remote clock offset: 5.501 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 148.281 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 148.281 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 164.123 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 147.829 ms
Loss rate: 0.32%
```

Run 3: Report of SCReAM — Data Link

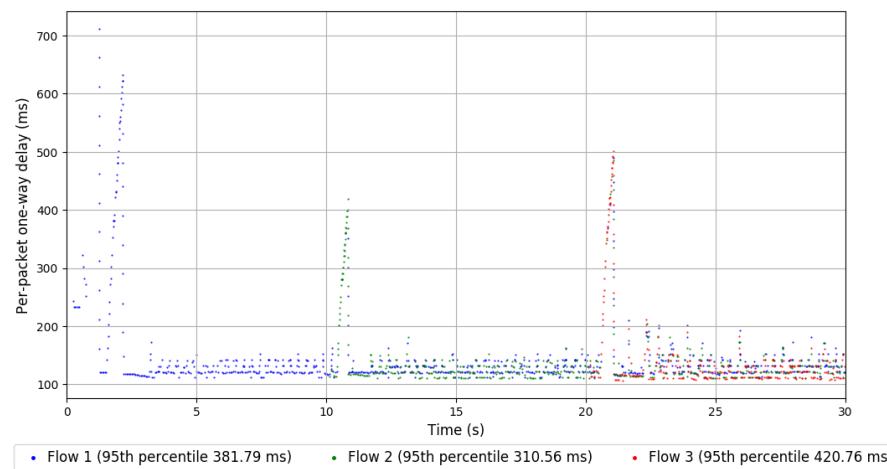
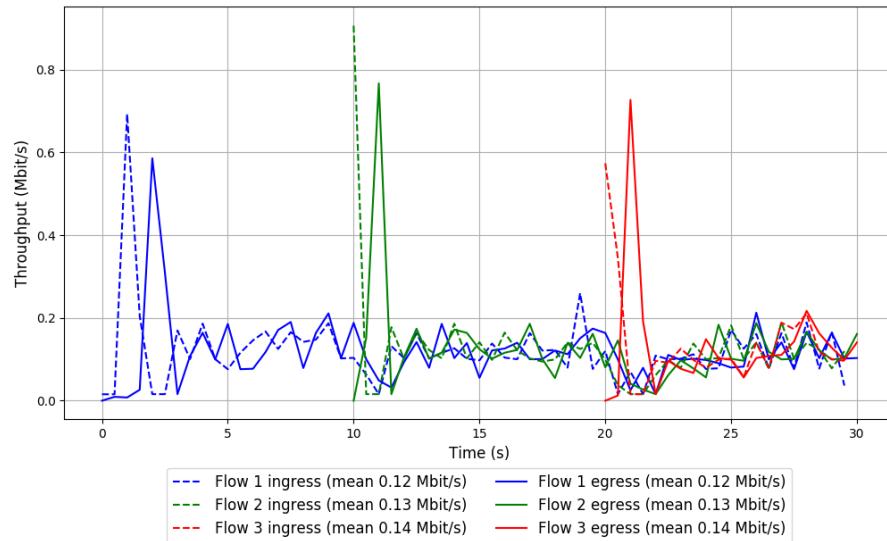


Run 1: Statistics of Sprout

```
Start at: 2018-07-03 17:03:24
End at: 2018-07-03 17:03:54
Local clock offset: -2.983 ms
Remote clock offset: 6.665 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 368.964 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 381.791 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 310.565 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 420.763 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

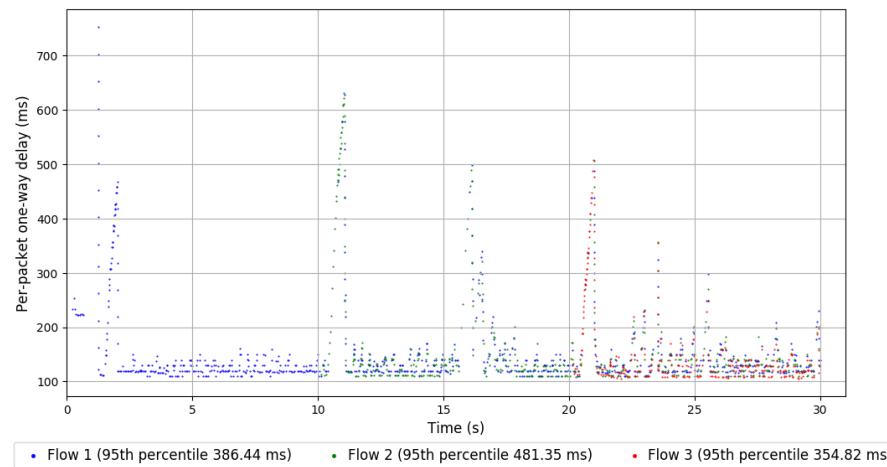
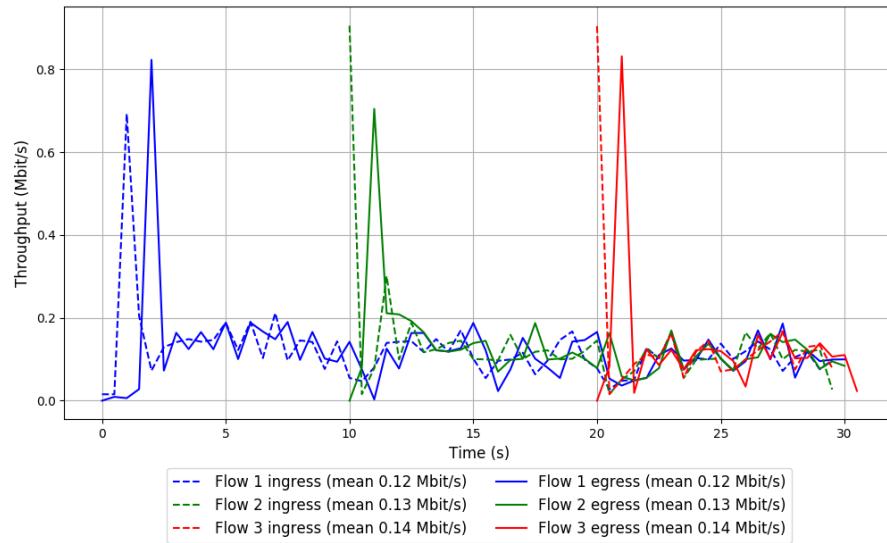


Run 2: Statistics of Sprout

```
Start at: 2018-07-03 17:23:52
End at: 2018-07-03 17:24:22
Local clock offset: -3.139 ms
Remote clock offset: 6.145 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 407.427 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 386.445 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 481.351 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 354.823 ms
Loss rate: 0.15%
```

Run 2: Report of Sprout — Data Link

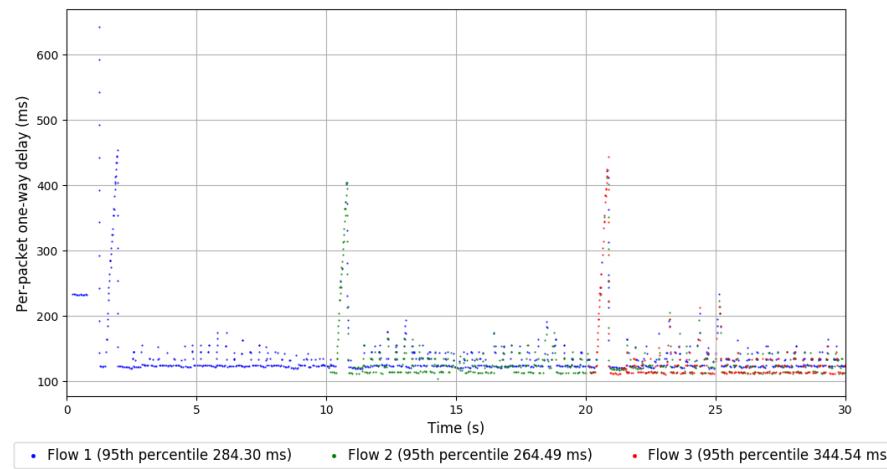
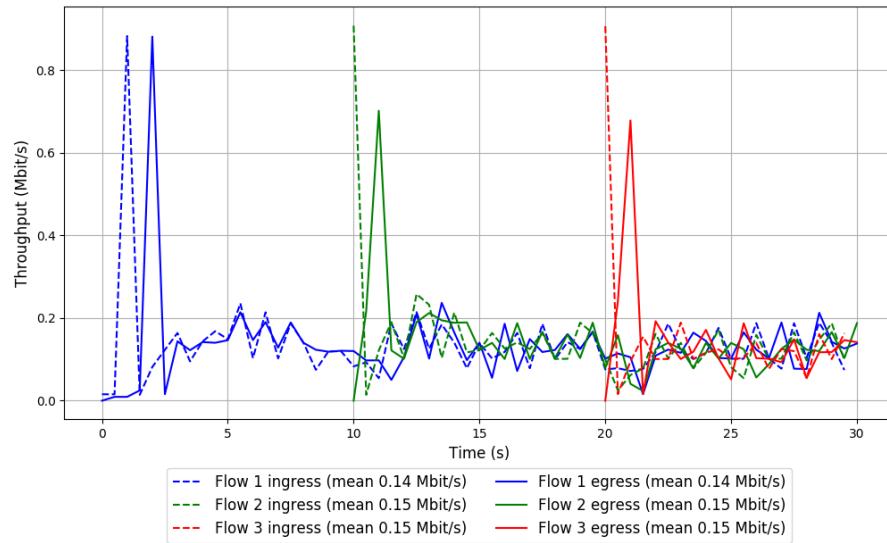


Run 3: Statistics of Sprout

```
Start at: 2018-07-03 17:44:25
End at: 2018-07-03 17:44:55
Local clock offset: -3.06 ms
Remote clock offset: 7.302 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 294.125 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 284.296 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 264.488 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 344.540 ms
Loss rate: 0.83%
```

Run 3: Report of Sprout — Data Link

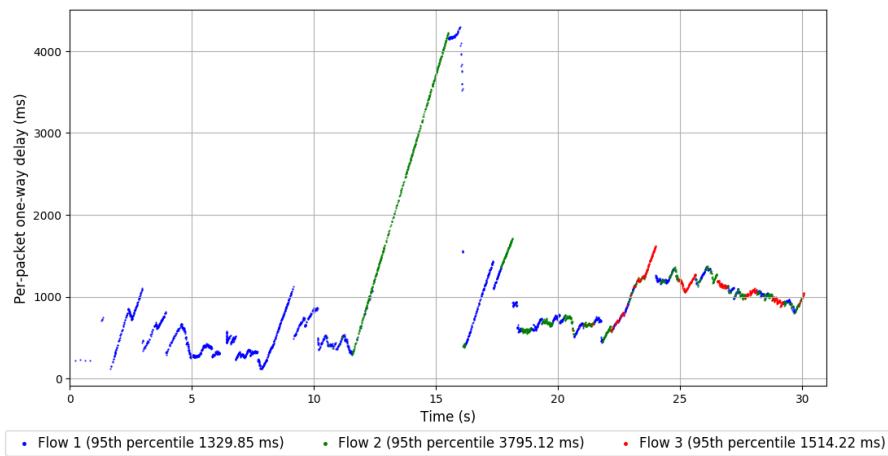
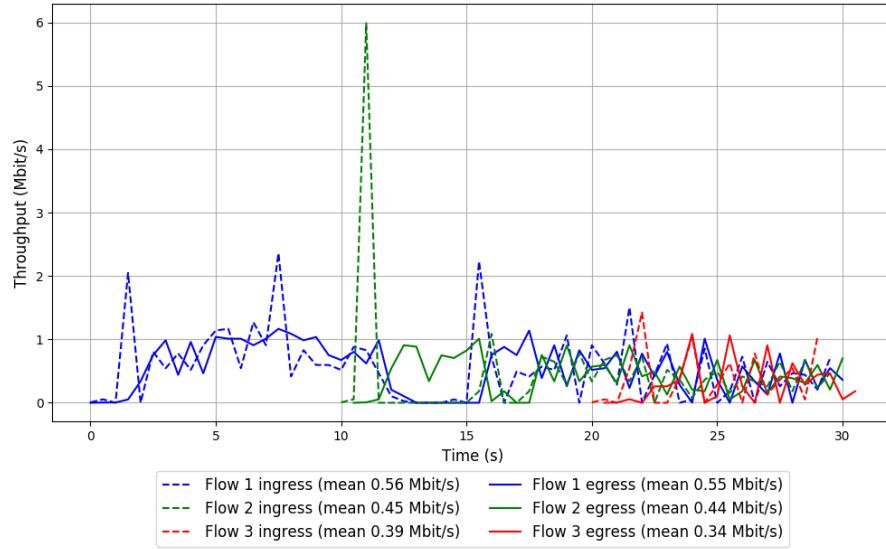


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-07-03 16:57:20
End at: 2018-07-03 16:57:50
Local clock offset: -2.944 ms
Remote clock offset: 7.51 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 3096.647 ms
Loss rate: 4.10%
-- Flow 1:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 1329.846 ms
Loss rate: 2.70%
-- Flow 2:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 3795.118 ms
Loss rate: 3.61%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 1514.224 ms
Loss rate: 11.75%
```

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

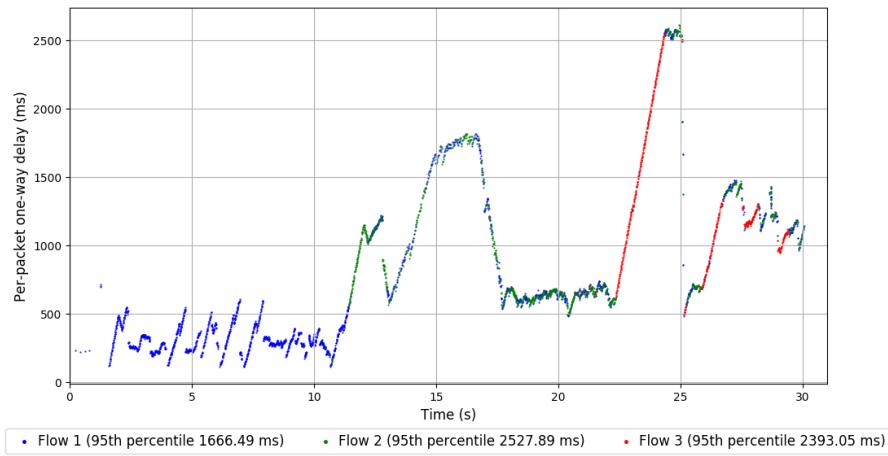
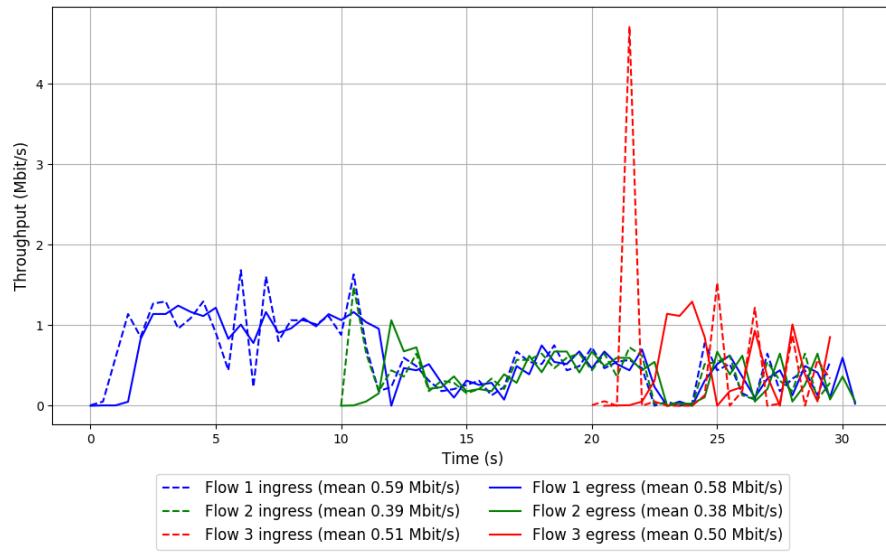


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-07-03 17:17:52
End at: 2018-07-03 17:18:22
Local clock offset: -3.103 ms
Remote clock offset: 2.529 ms

# Below is generated by plot.py at 2018-07-03 17:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 2084.945 ms
Loss rate: 3.83%
-- Flow 1:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1666.491 ms
Loss rate: 2.05%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 2527.887 ms
Loss rate: 4.43%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 2393.045 ms
Loss rate: 9.35%
```

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

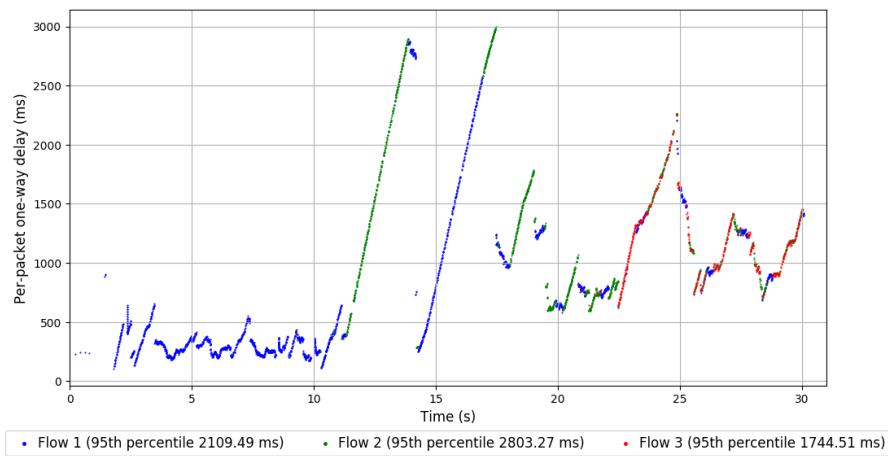
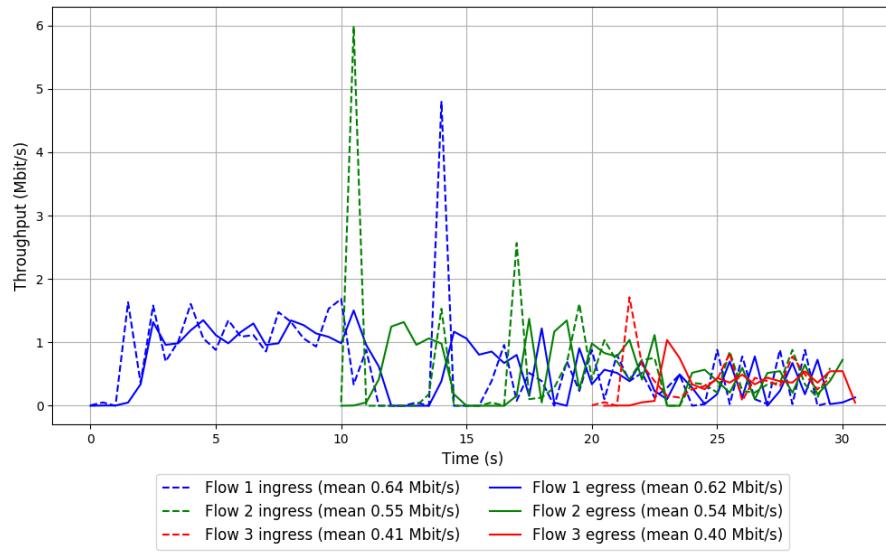


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-07-03 17:38:25
End at: 2018-07-03 17:38:55
Local clock offset: -3.22 ms
Remote clock offset: 1.319 ms

# Below is generated by plot.py at 2018-07-03 17:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 2576.777 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 2109.494 ms
Loss rate: 1.98%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 2803.270 ms
Loss rate: 3.29%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 1744.508 ms
Loss rate: 8.64%
```

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

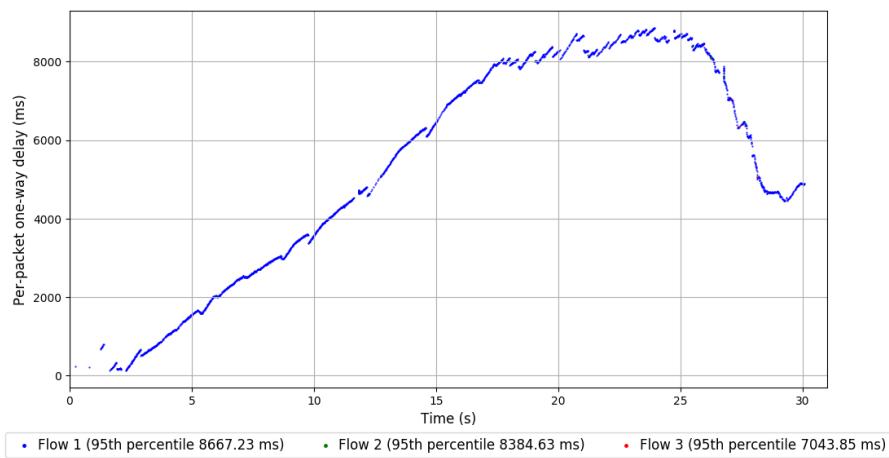
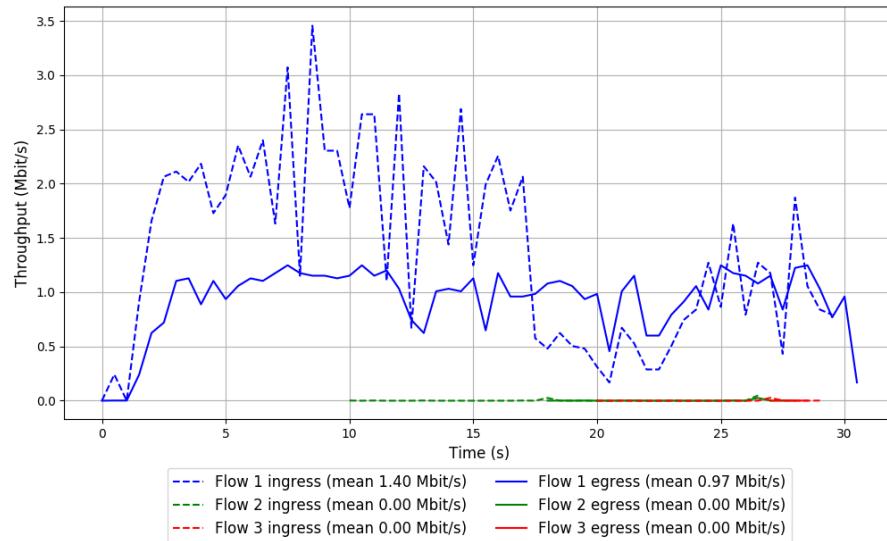


Run 1: Statistics of TCP Vegas

```
Start at: 2018-07-03 16:58:32
End at: 2018-07-03 16:59:02
Local clock offset: -2.952 ms
Remote clock offset: 3.066 ms

# Below is generated by plot.py at 2018-07-03 17:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 8667.161 ms
Loss rate: 31.17%
-- Flow 1:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 8667.233 ms
Loss rate: 31.12%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8384.630 ms
Loss rate: 58.98%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7043.850 ms
Loss rate: 87.12%
```

Run 1: Report of TCP Vegas — Data Link

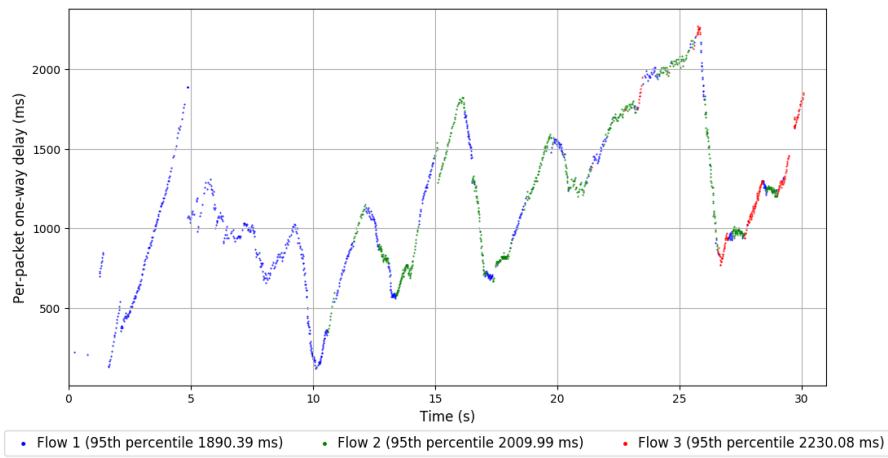
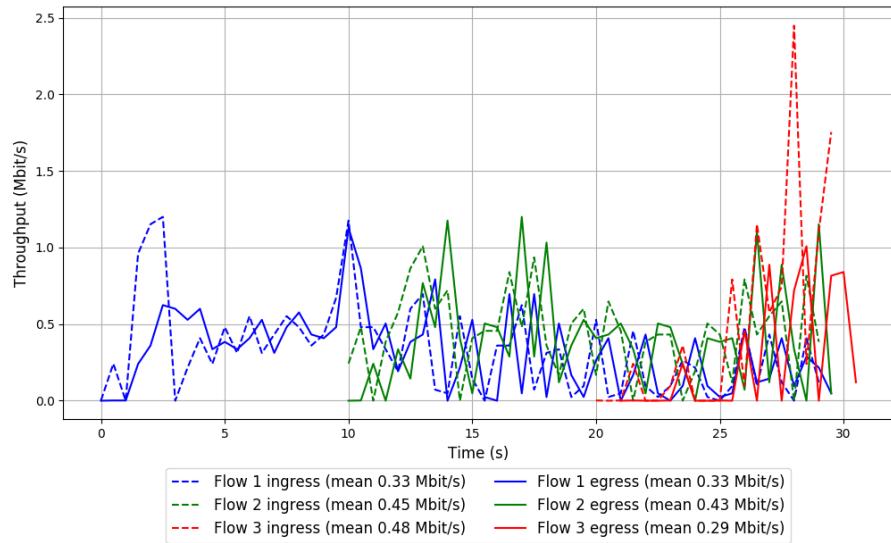


Run 2: Statistics of TCP Vegas

```
Start at: 2018-07-03 17:19:04
End at: 2018-07-03 17:19:34
Local clock offset: -3.096 ms
Remote clock offset: 2.618 ms

# Below is generated by plot.py at 2018-07-03 17:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 1979.915 ms
Loss rate: 13.40%
-- Flow 1:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 1890.387 ms
Loss rate: 2.71%
-- Flow 2:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2009.993 ms
Loss rate: 6.87%
-- Flow 3:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 2230.079 ms
Loss rate: 46.98%
```

Run 2: Report of TCP Vegas — Data Link

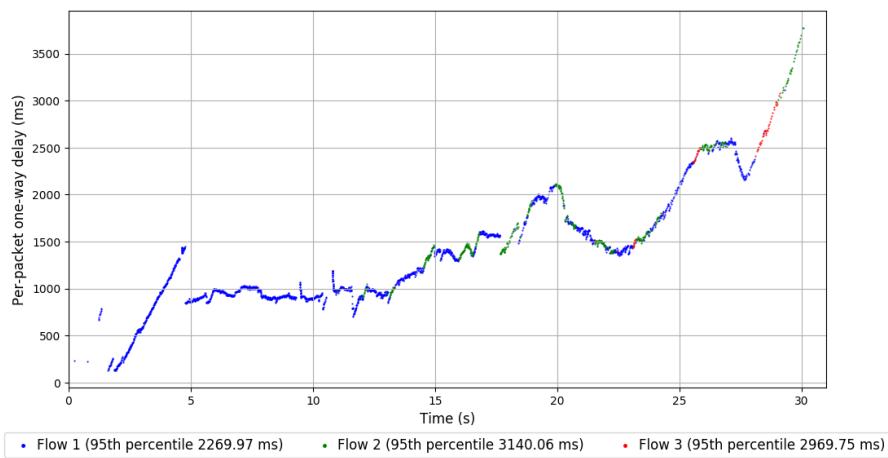
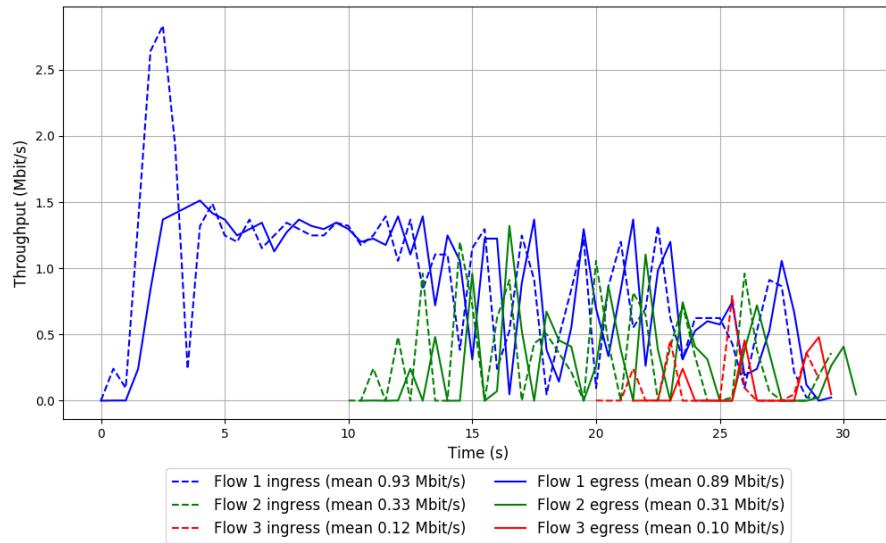


Run 3: Statistics of TCP Vegas

```
Start at: 2018-07-03 17:39:37
End at: 2018-07-03 17:40:07
Local clock offset: -3.255 ms
Remote clock offset: 1.345 ms

# Below is generated by plot.py at 2018-07-03 17:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 2510.250 ms
Loss rate: 6.41%
-- Flow 1:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 2269.974 ms
Loss rate: 4.85%
-- Flow 2:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 3140.059 ms
Loss rate: 9.55%
-- Flow 3:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 2969.754 ms
Loss rate: 26.59%
```

Run 3: Report of TCP Vegas — Data Link

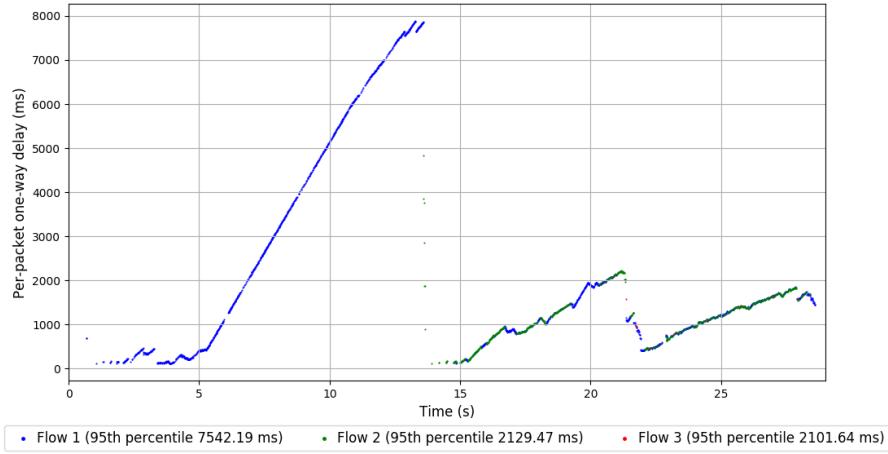
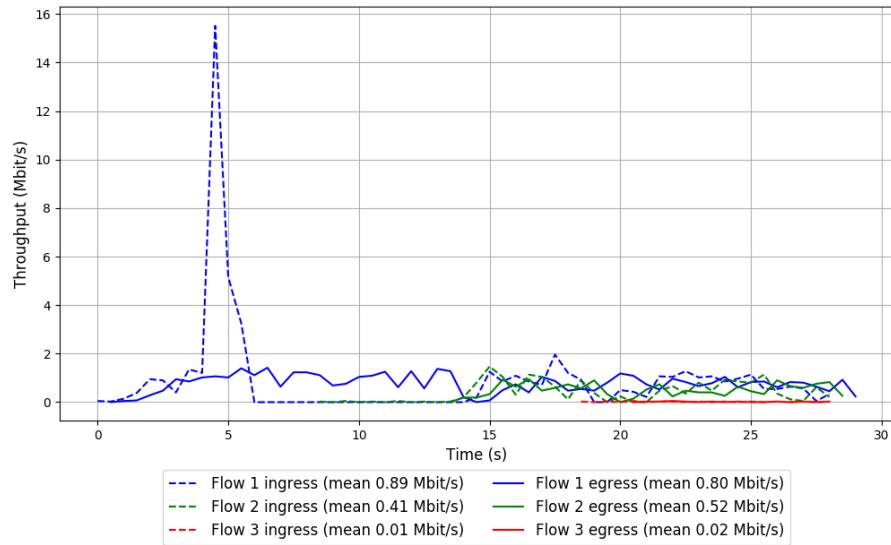


Run 1: Statistics of Verus

```
Start at: 2018-07-03 16:50:05
End at: 2018-07-03 16:50:35
Local clock offset: -2.881 ms
Remote clock offset: 4.851 ms

# Below is generated by plot.py at 2018-07-03 17:51:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 7218.235 ms
Loss rate: 10.32%
-- Flow 1:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 7542.193 ms
Loss rate: 11.88%
-- Flow 2:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 2129.468 ms
Loss rate: 5.38%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 2101.635 ms
Loss rate: 16.67%
```

Run 1: Report of Verus — Data Link

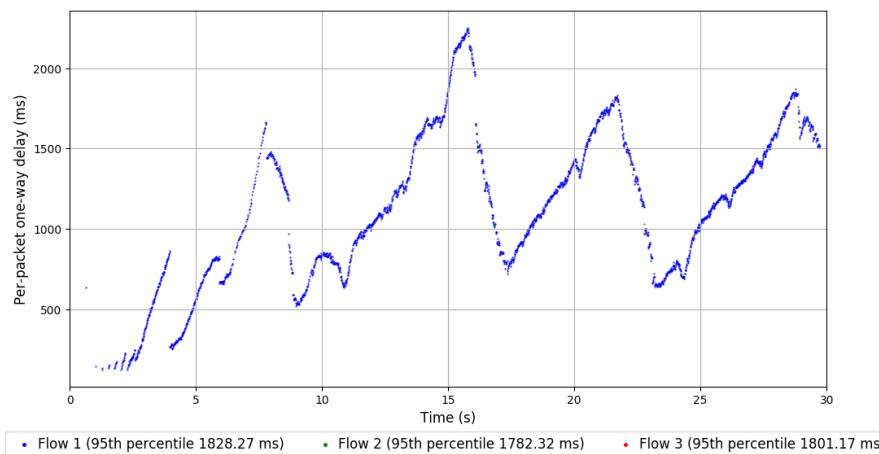
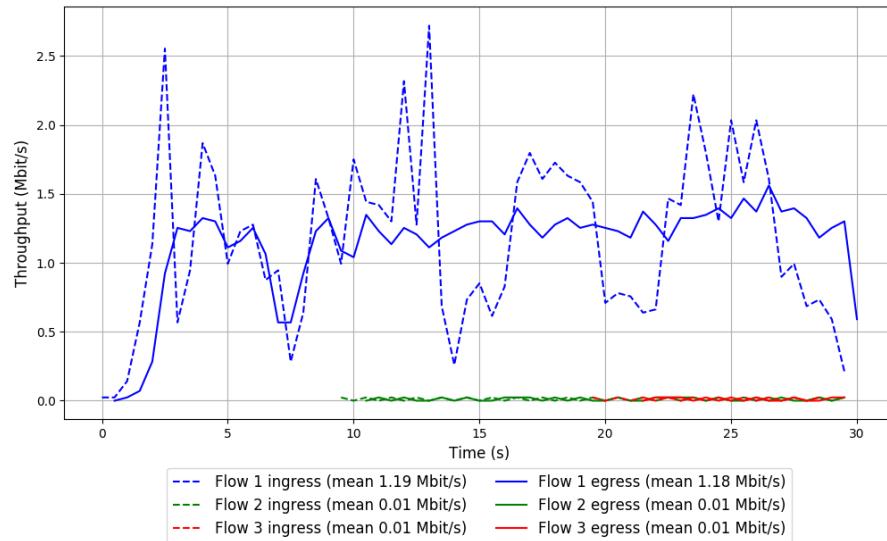


Run 2: Statistics of Verus

```
Start at: 2018-07-03 17:10:40
End at: 2018-07-03 17:11:10
Local clock offset: -3.053 ms
Remote clock offset: 5.775 ms

# Below is generated by plot.py at 2018-07-03 17:51:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 1828.274 ms
Loss rate: 2.66%
-- Flow 1:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 1828.274 ms
Loss rate: 2.59%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1782.324 ms
Loss rate: 9.52%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1801.167 ms
Loss rate: 10.00%
```

Run 2: Report of Verus — Data Link

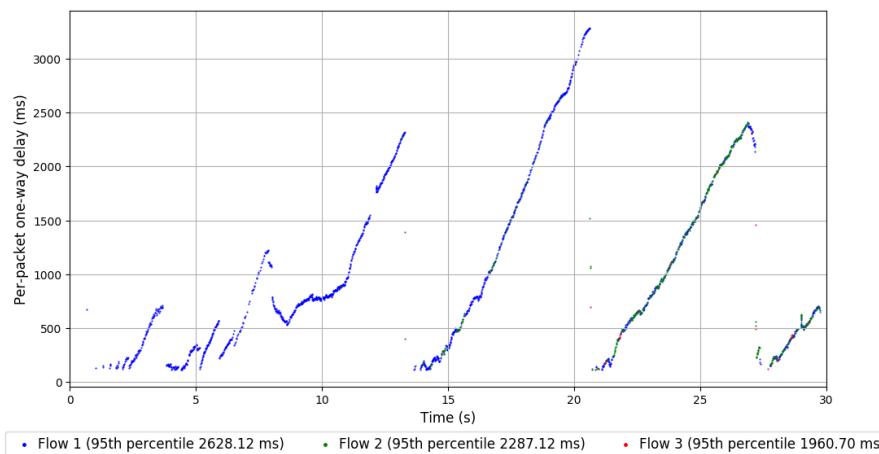
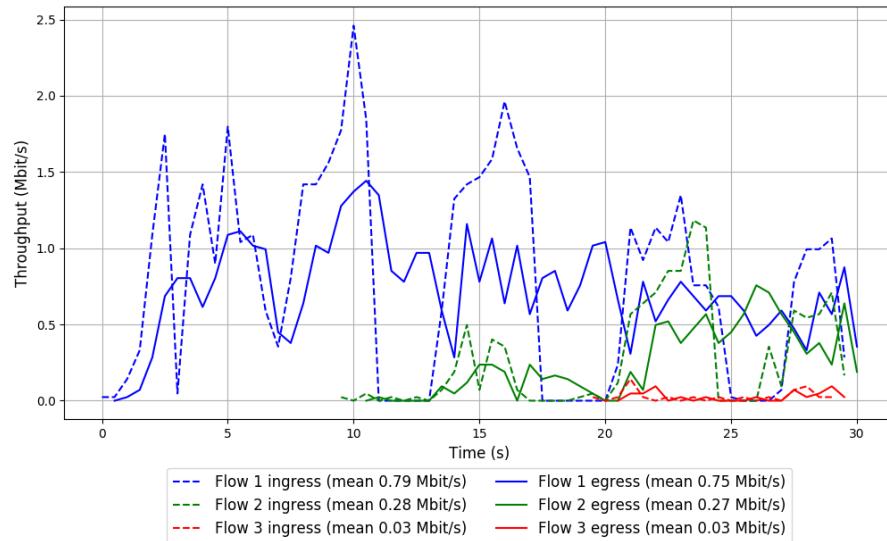


Run 3: Statistics of Verus

```
Start at: 2018-07-03 17:31:05
End at: 2018-07-03 17:31:35
Local clock offset: -3.18 ms
Remote clock offset: 1.821 ms

# Below is generated by plot.py at 2018-07-03 17:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 2520.119 ms
Loss rate: 6.44%
-- Flow 1:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 2628.122 ms
Loss rate: 6.19%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 2287.116 ms
Loss rate: 7.58%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 1960.698 ms
Loss rate: 4.35%
```

Run 3: Report of Verus — Data Link

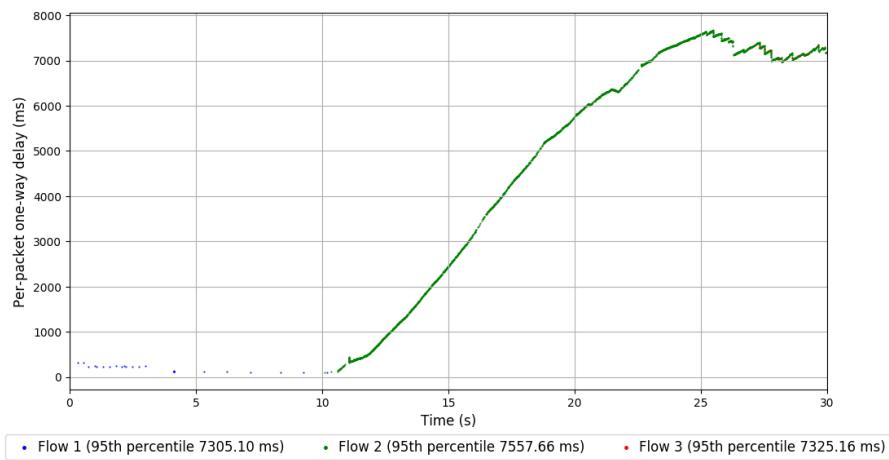
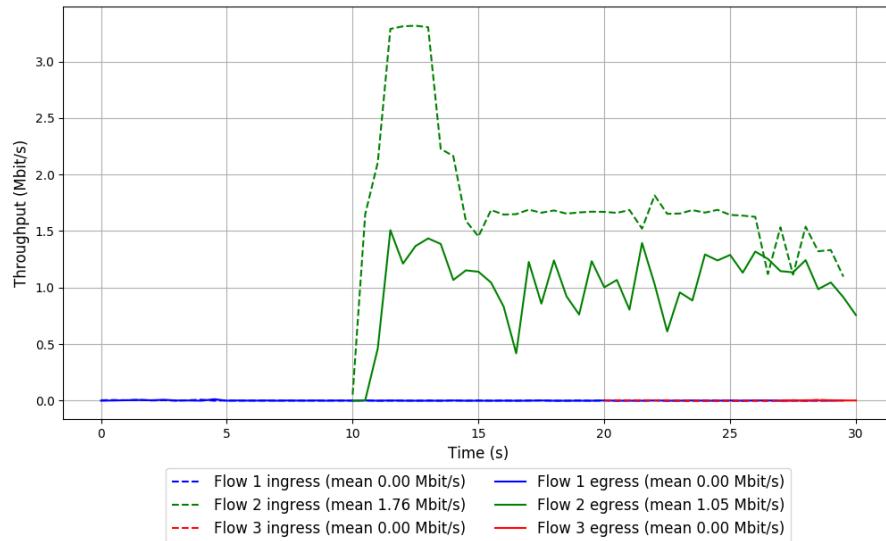


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-07-03 16:59:46
End at: 2018-07-03 17:00:16
Local clock offset: -2.977 ms
Remote clock offset: 2.871 ms

# Below is generated by plot.py at 2018-07-03 17:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 7556.617 ms
Loss rate: 40.39%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7305.101 ms
Loss rate: 15.62%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 7557.656 ms
Loss rate: 40.41%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7325.163 ms
Loss rate: 58.62%
```

Run 1: Report of PCC-Vivace — Data Link

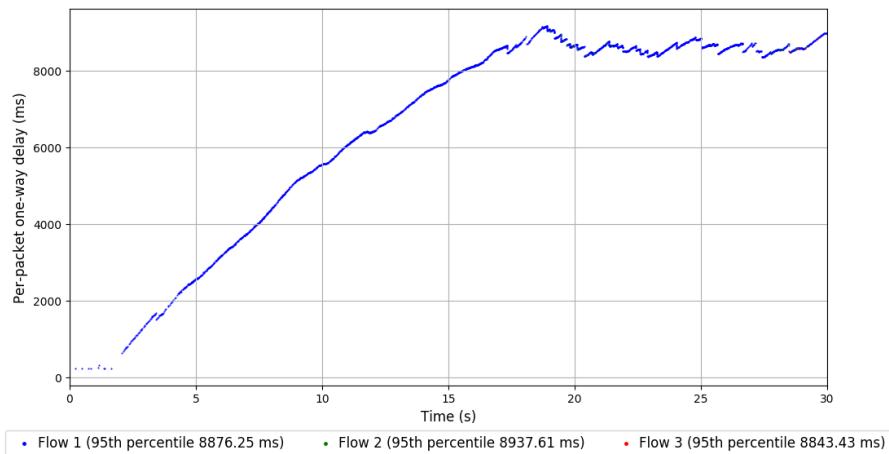
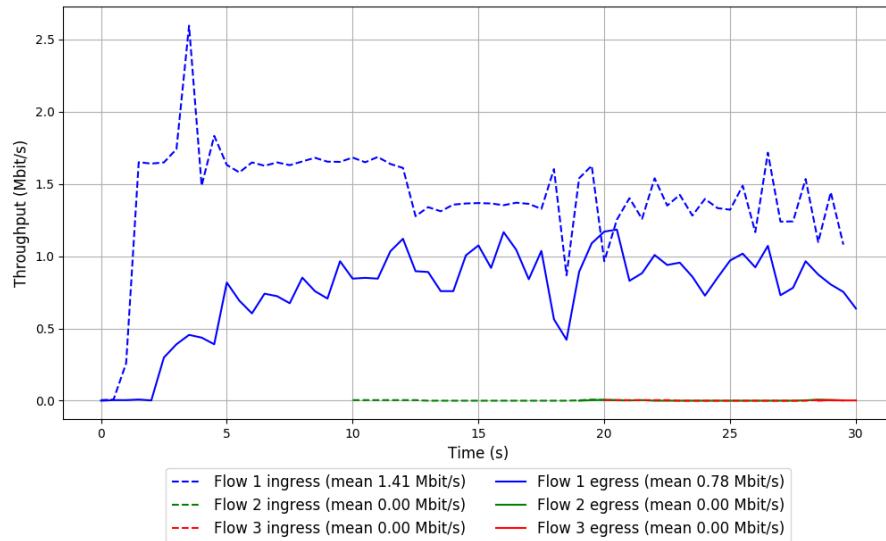


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-07-03 17:20:16
End at: 2018-07-03 17:20:46
Local clock offset: -3.114 ms
Remote clock offset: 6.186 ms

# Below is generated by plot.py at 2018-07-03 17:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 8878.340 ms
Loss rate: 44.96%
-- Flow 1:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 8876.252 ms
Loss rate: 44.96%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8937.606 ms
Loss rate: 14.80%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8843.431 ms
Loss rate: 76.30%
```

Run 2: Report of PCC-Vivace — Data Link

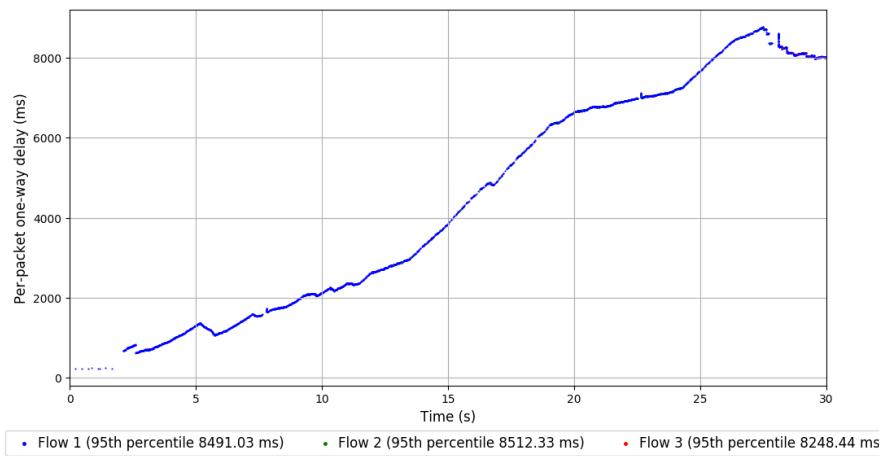
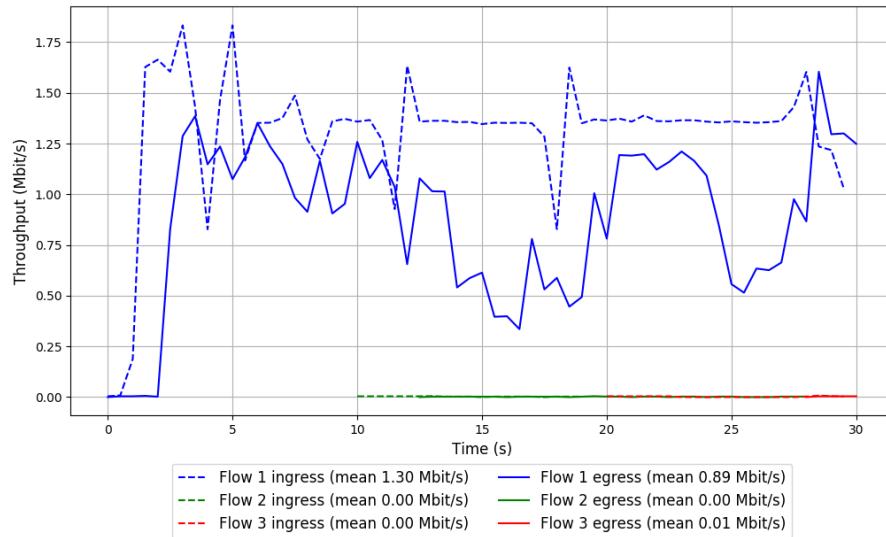


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-07-03 17:40:49
End at: 2018-07-03 17:41:19
Local clock offset: -3.229 ms
Remote clock offset: 4.851 ms

# Below is generated by plot.py at 2018-07-03 17:51:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 8491.034 ms
Loss rate: 31.86%
-- Flow 1:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 8491.034 ms
Loss rate: 31.87%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8512.331 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 8248.442 ms
Loss rate: 61.04%
```

Run 3: Report of PCC-Vivace — Data Link

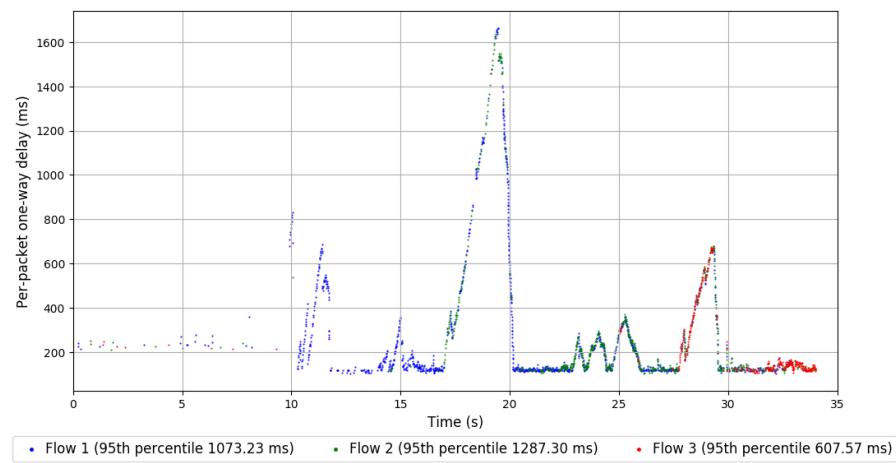
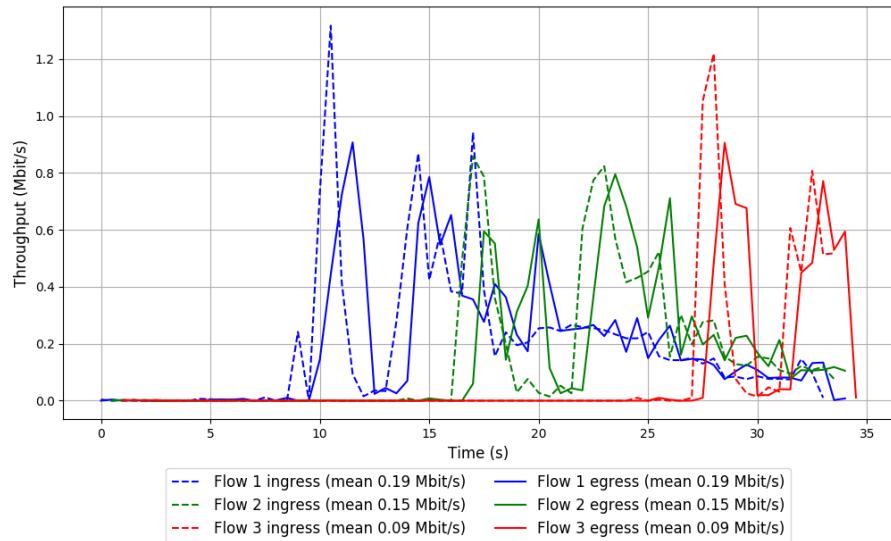


```
Run 1: Statistics of WebRTC media

Start at: 2018-07-03 17:00:58
End at: 2018-07-03 17:01:28
Local clock offset: -2.979 ms
Remote clock offset: 6.256 ms

# Below is generated by plot.py at 2018-07-03 17:51:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1061.915 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1073.235 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1287.297 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 607.567 ms
Loss rate: 0.97%
```

Run 1: Report of WebRTC media — Data Link

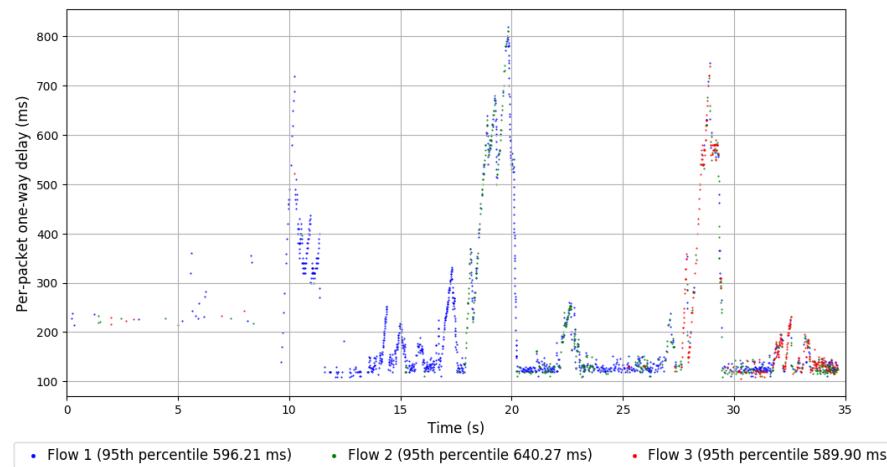
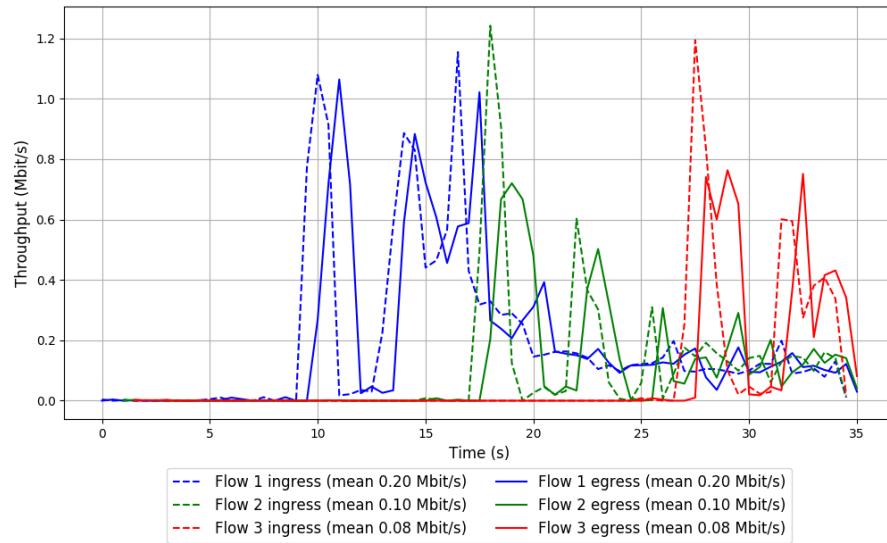


Run 2: Statistics of WebRTC media

```
Start at: 2018-07-03 17:21:29
End at: 2018-07-03 17:21:59
Local clock offset: -3.116 ms
Remote clock offset: 6.222 ms

# Below is generated by plot.py at 2018-07-03 17:51:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 610.315 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 596.213 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 640.269 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 589.903 ms
Loss rate: 0.32%
```

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

```
Start at: 2018-07-03 17:42:02
End at: 2018-07-03 17:42:32
Local clock offset: -3.127 ms
Remote clock offset: 1.11 ms

# Below is generated by plot.py at 2018-07-03 17:51:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2191.382 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 1516.851 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 2287.506 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 2478.643 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

