

Pantheon Report

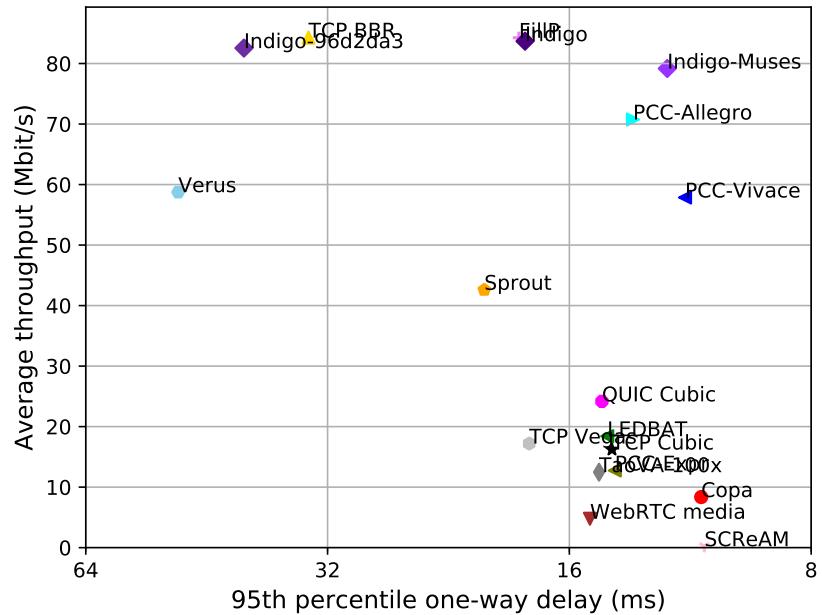
Generated at 2018-10-26 04:44:14 (UTC).
Data path: AWS India 1 on `ens5 (local)` → India on `em1 (remote)`.
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1023-aws
`net.core.default_qdisc = fq`
`net.core.rmem_default = 16777216`
`net.core.rmem_max = 536870912`
`net.core.wmem_default = 16777216`
`net.core.wmem_max = 536870912`
`net.ipv4.tcp_rmem = 4096 16777216 536870912`
`net.ipv4.tcp_wmem = 4096 16777216 536870912`

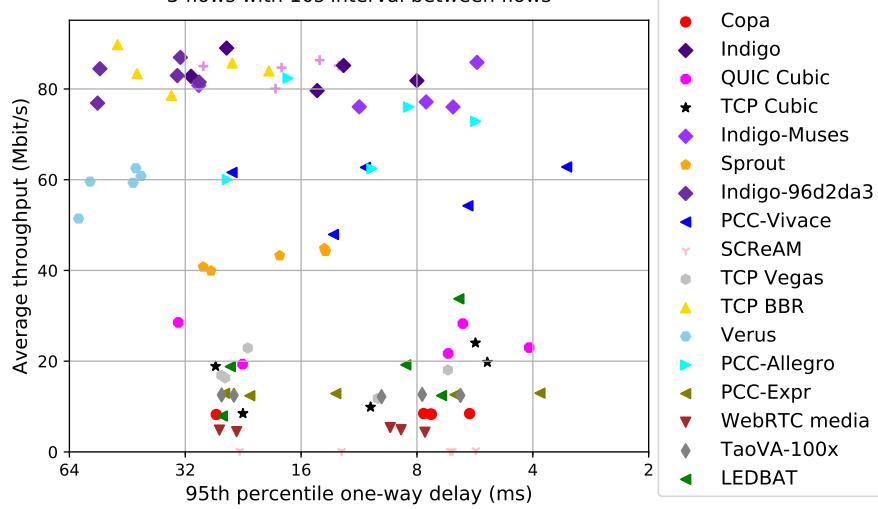
Git summary:
branch: `muses @ 2e19c0464530faa92c63f8217c9971438a26a3be`
`third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6`
`third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4`
`third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d`
`third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95`
`third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf`
`third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a`
`third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd`
`third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1`
`M receiver/src/buffer.h`
`M receiver/src/core.cpp`
`M sender/src/buffer.h`
`M sender/src/core.cpp`
`third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab`
`third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42`
`third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2`
`M src/ScreamClient`
`M src/ScreamServer`
`third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26`
`M src/examples/cellsim.cc`
`M src/examples/sproutbt2.cc`
`M src/network/sproutconn.cc`
`third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494`
`M src/verus.hpp`
`M tools/plot.py`

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

test from AWS India 1 to India, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS India 1 to India, 5 runs of 30s each per scheme
3 flows with 10s interval between flows



↳

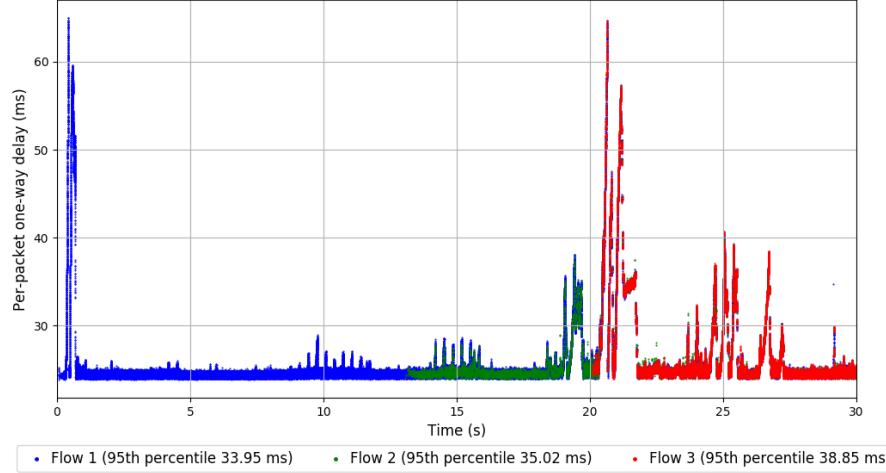
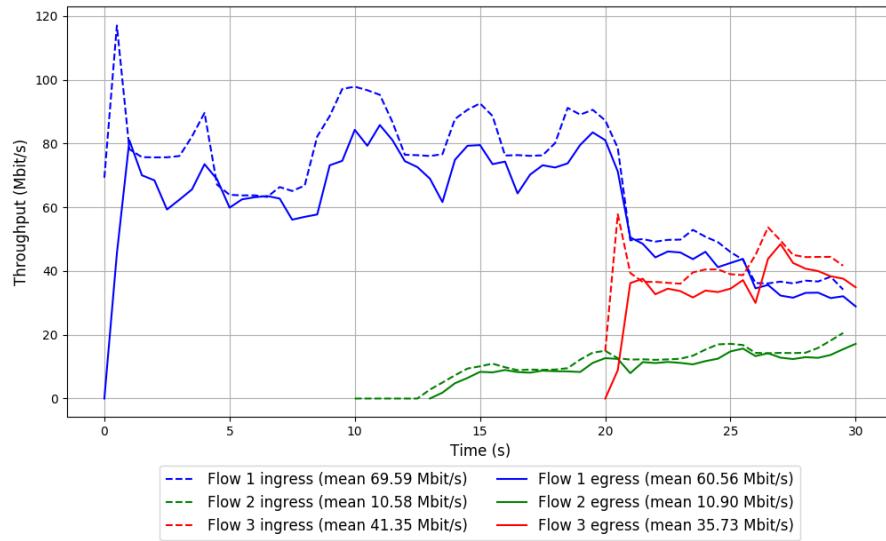
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	52.03	32.34	33.56	31.95	38.10	26.92	12.32	12.50	15.17
Copa	5	0.00	9.80	5.53	10.07	13.03	9.81	98.60	69.28	74.18
TCP Cubic	5	8.38	8.23	7.10	10.21	6.54	13.56	1.25	1.18	1.90
FillP	5	52.07	33.50	29.93	15.91	17.07	14.10	25.20	33.50	36.56
Indigo	5	49.51	35.22	34.65	14.95	15.56	14.97	16.17	21.96	26.70
Indigo-96d2da3	5	58.56	25.77	22.32	41.42	33.76	32.80	45.85	47.79	53.58
LEDBAT	5	9.16	9.04	10.05	14.46	14.15	10.60	2.20	1.94	2.03
Indigo-Muses	5	43.73	42.22	22.37	8.13	12.31	12.07	10.58	12.94	18.50
PCC-Allegro	5	64.15	6.39	7.13	10.95	14.98	13.47	8.90	9.06	8.58
PCC-Expr	5	8.26	4.32	4.90	14.07	14.05	14.04	42.24	30.81	25.02
QUIC Cubic	5	12.11	13.42	9.51	14.57	11.82	10.48	3.53	3.36	5.11
SCReAM	5	0.10	0.13	0.16	6.81	10.82	7.15	1.96	1.14	1.36
Sprout	5	22.75	18.68	22.51	13.24	22.36	13.98	3.94	5.71	4.21
TaoVA-100x	5	6.67	8.31	1.72	14.72	14.12	13.91	87.23	90.62	93.33
TCP Vegas	5	9.52	7.65	7.77	15.68	14.07	20.61	3.12	1.63	2.33
Verus	5	34.83	27.94	20.07	47.44	45.95	46.87	46.17	56.57	37.64
PCC-Vivace	5	39.94	20.94	12.15	6.34	11.91	12.29	7.01	7.12	7.67
WebRTC media	5	2.77	1.55	0.46	8.81	12.45	12.41	1.94	2.23	3.13

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-26 03:03:59
End at: 2018-10-26 03:04:29
Local clock offset: 1.471 ms
Remote clock offset: -5.458 ms

# Below is generated by plot.py at 2018-10-26 04:37:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.57 Mbit/s
95th percentile per-packet one-way delay: 34.759 ms
Loss rate: 13.11%
-- Flow 1:
Average throughput: 60.56 Mbit/s
95th percentile per-packet one-way delay: 33.953 ms
Loss rate: 13.02%
-- Flow 2:
Average throughput: 10.90 Mbit/s
95th percentile per-packet one-way delay: 35.019 ms
Loss rate: 12.69%
-- Flow 3:
Average throughput: 35.73 Mbit/s
95th percentile per-packet one-way delay: 38.847 ms
Loss rate: 13.78%
```

Run 1: Report of TCP BBR — Data Link

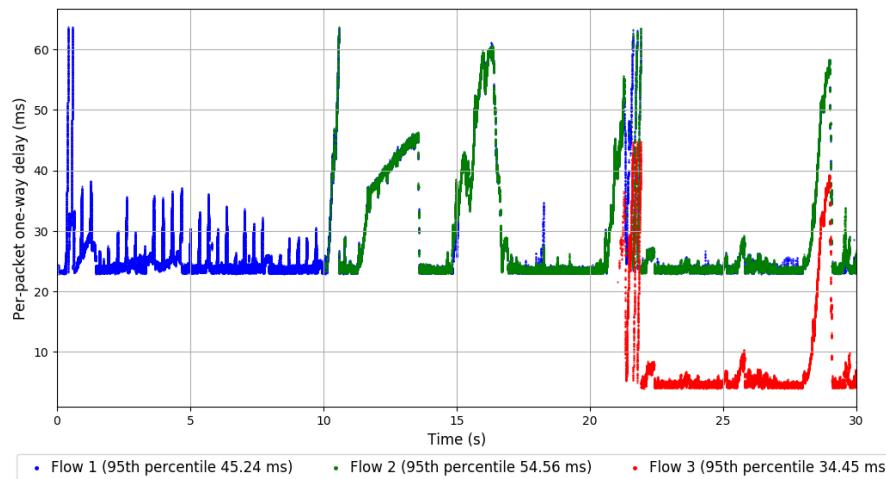
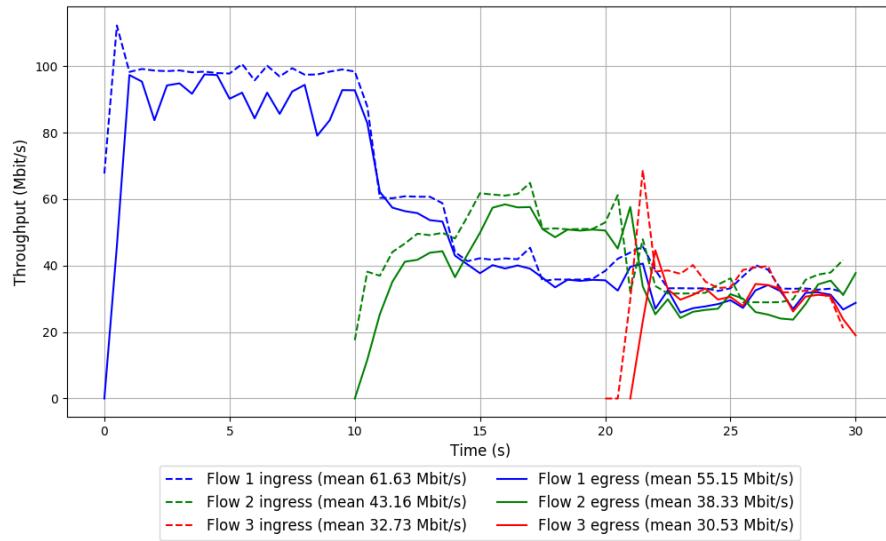


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-26 03:25:13
End at: 2018-10-26 03:25:43
Local clock offset: 3.823 ms
Remote clock offset: -5.152 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.78 Mbit/s
95th percentile per-packet one-way delay: 47.979 ms
Loss rate: 11.39%
-- Flow 1:
Average throughput: 55.15 Mbit/s
95th percentile per-packet one-way delay: 45.238 ms
Loss rate: 10.57%
-- Flow 2:
Average throughput: 38.33 Mbit/s
95th percentile per-packet one-way delay: 54.558 ms
Loss rate: 11.29%
-- Flow 3:
Average throughput: 30.53 Mbit/s
95th percentile per-packet one-way delay: 34.445 ms
Loss rate: 16.31%
```

Run 2: Report of TCP BBR — Data Link

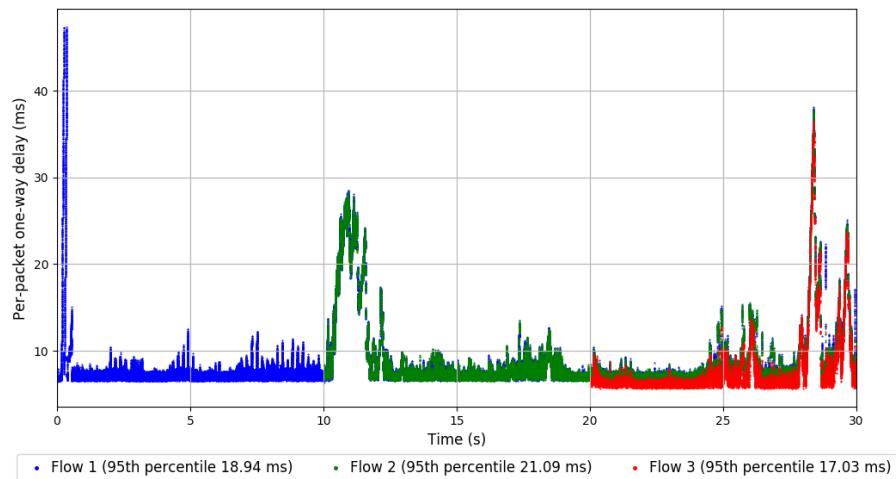
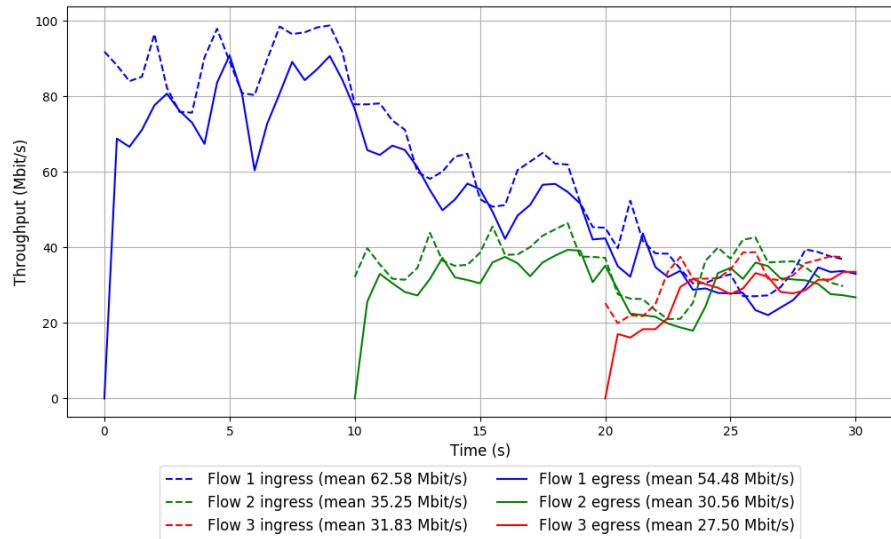


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-26 03:46:29
End at: 2018-10-26 03:46:59
Local clock offset: 0.008 ms
Remote clock offset: -5.987 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.99 Mbit/s
95th percentile per-packet one-way delay: 19.400 ms
Loss rate: 13.10%
-- Flow 1:
Average throughput: 54.48 Mbit/s
95th percentile per-packet one-way delay: 18.944 ms
Loss rate: 12.95%
-- Flow 2:
Average throughput: 30.56 Mbit/s
95th percentile per-packet one-way delay: 21.087 ms
Loss rate: 13.32%
-- Flow 3:
Average throughput: 27.50 Mbit/s
95th percentile per-packet one-way delay: 17.032 ms
Loss rate: 13.57%
```

Run 3: Report of TCP BBR — Data Link

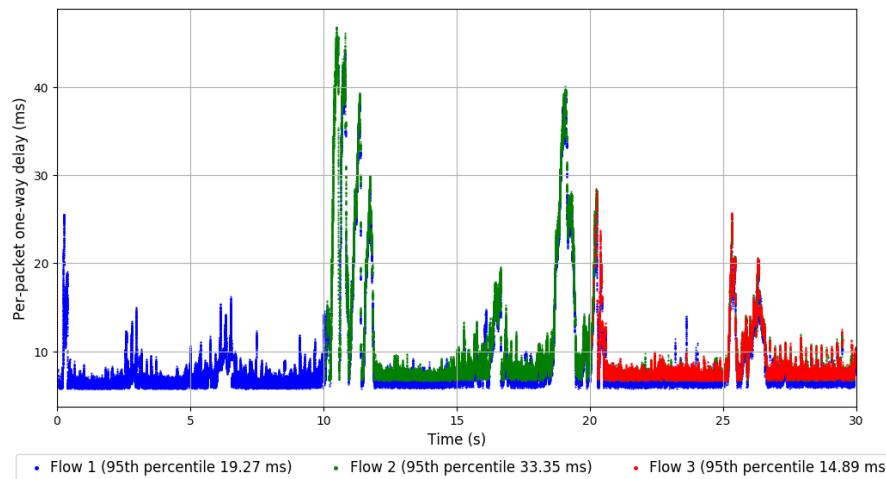
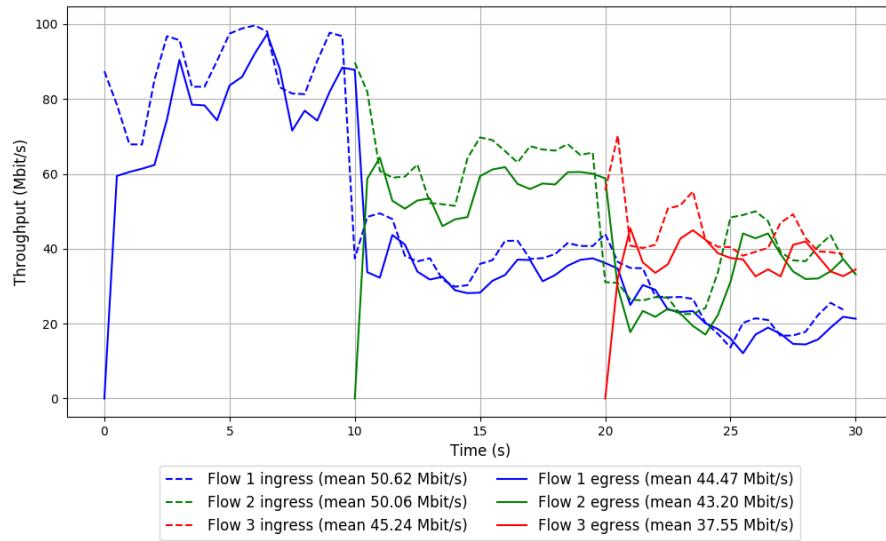


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-26 04:07:37
End at: 2018-10-26 04:08:07
Local clock offset: 0.421 ms
Remote clock offset: -5.604 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.73 Mbit/s
95th percentile per-packet one-way delay: 24.159 ms
Loss rate: 13.41%
-- Flow 1:
Average throughput: 44.47 Mbit/s
95th percentile per-packet one-way delay: 19.267 ms
Loss rate: 12.15%
-- Flow 2:
Average throughput: 43.20 Mbit/s
95th percentile per-packet one-way delay: 33.347 ms
Loss rate: 13.69%
-- Flow 3:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 14.887 ms
Loss rate: 17.01%
```

Run 4: Report of TCP BBR — Data Link

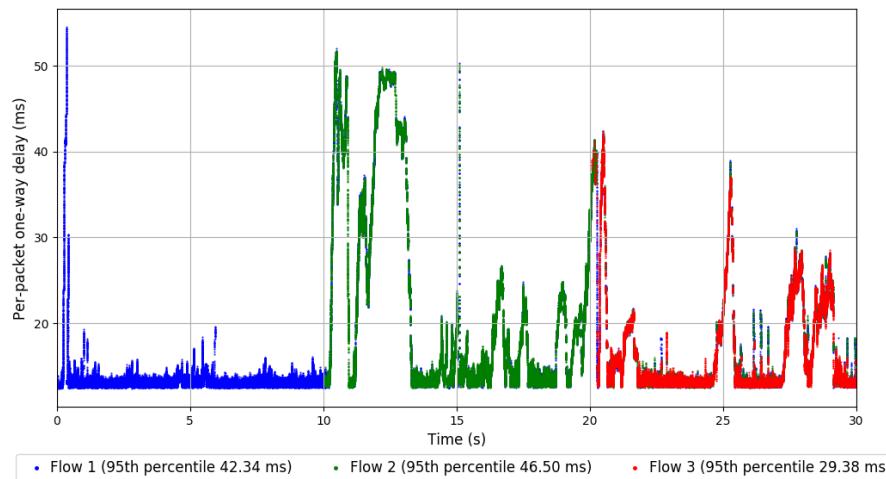
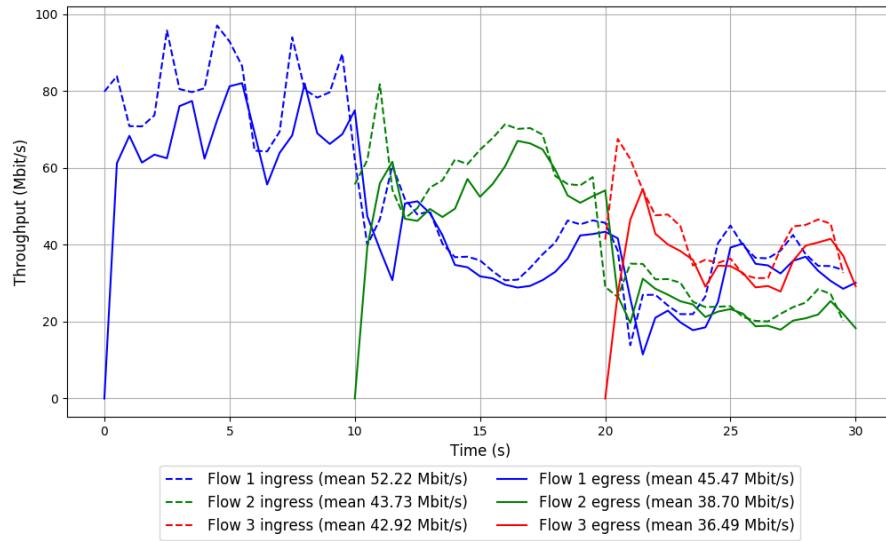


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-26 04:29:04
End at: 2018-10-26 04:29:34
Local clock offset: -0.402 ms
Remote clock offset: -1.065 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.38 Mbit/s
95th percentile per-packet one-way delay: 42.690 ms
Loss rate: 12.83%
-- Flow 1:
Average throughput: 45.47 Mbit/s
95th percentile per-packet one-way delay: 42.339 ms
Loss rate: 12.93%
-- Flow 2:
Average throughput: 38.70 Mbit/s
95th percentile per-packet one-way delay: 46.503 ms
Loss rate: 11.50%
-- Flow 3:
Average throughput: 36.49 Mbit/s
95th percentile per-packet one-way delay: 29.375 ms
Loss rate: 15.19%
```

Run 5: Report of TCP BBR — Data Link

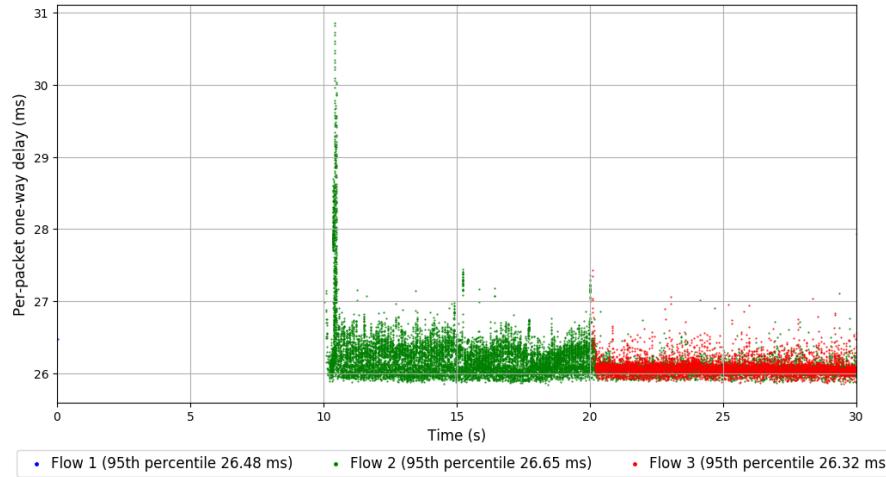
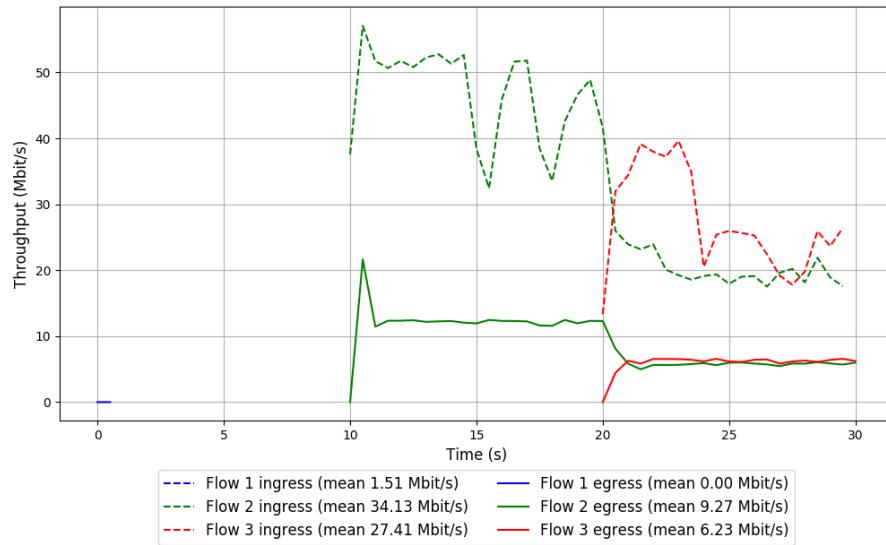


Run 1: Statistics of Copa

```
Start at: 2018-10-26 02:53:27
End at: 2018-10-26 02:53:57
Local clock offset: 0.313 ms
Remote clock offset: -4.129 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 26.581 ms
Loss rate: 74.14%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 26.477 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.27 Mbit/s
95th percentile per-packet one-way delay: 26.647 ms
Loss rate: 72.87%
-- Flow 3:
Average throughput: 6.23 Mbit/s
95th percentile per-packet one-way delay: 26.318 ms
Loss rate: 77.29%
```

Run 1: Report of Copa — Data Link

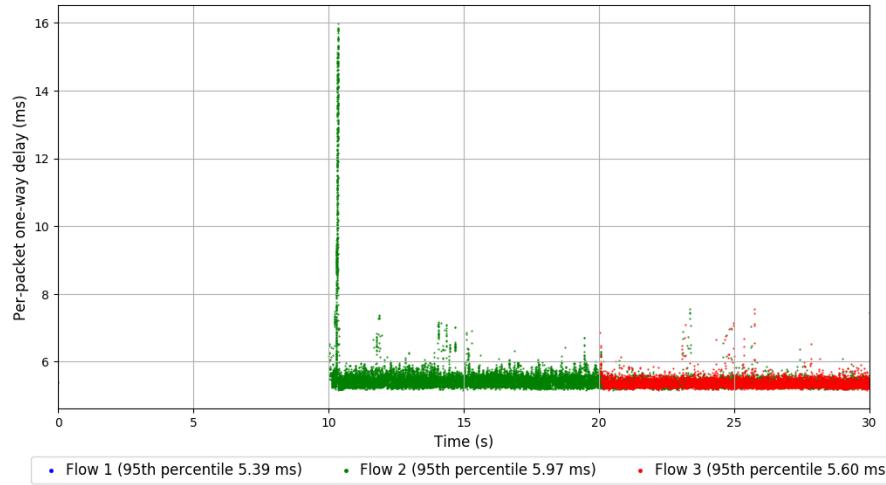
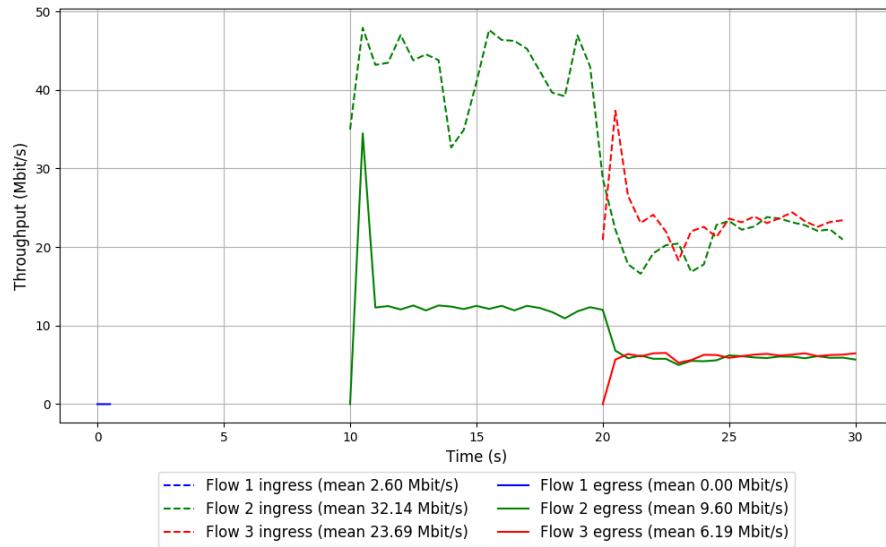


Run 2: Statistics of Copa

```
Start at: 2018-10-26 03:14:43
End at: 2018-10-26 03:15:13
Local clock offset: 2.806 ms
Remote clock offset: -5.441 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.45 Mbit/s
95th percentile per-packet one-way delay: 5.840 ms
Loss rate: 71.15%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5.387 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.60 Mbit/s
95th percentile per-packet one-way delay: 5.966 ms
Loss rate: 70.14%
-- Flow 3:
Average throughput: 6.19 Mbit/s
95th percentile per-packet one-way delay: 5.602 ms
Loss rate: 73.89%
```

Run 2: Report of Copa — Data Link

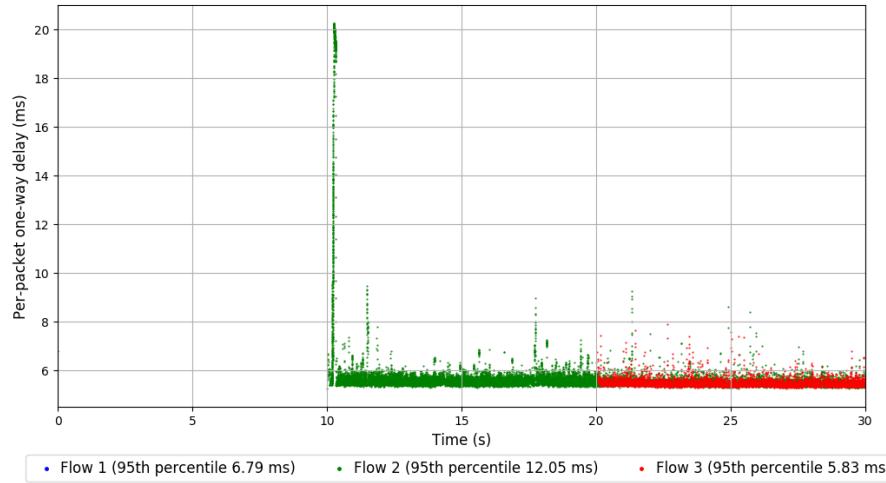
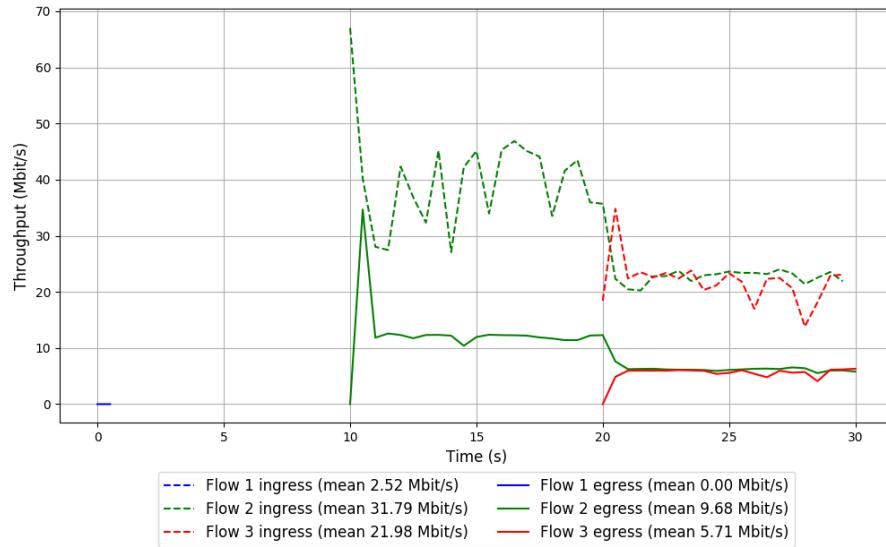


Run 3: Statistics of Copa

```
Start at: 2018-10-26 03:35:48
End at: 2018-10-26 03:36:18
Local clock offset: 3.373 ms
Remote clock offset: -4.536 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.35 Mbit/s
95th percentile per-packet one-way delay: 7.378 ms
Loss rate: 70.69%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6.788 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.68 Mbit/s
95th percentile per-packet one-way delay: 12.046 ms
Loss rate: 69.55%
-- Flow 3:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 5.828 ms
Loss rate: 74.01%
```

Run 3: Report of Copa — Data Link

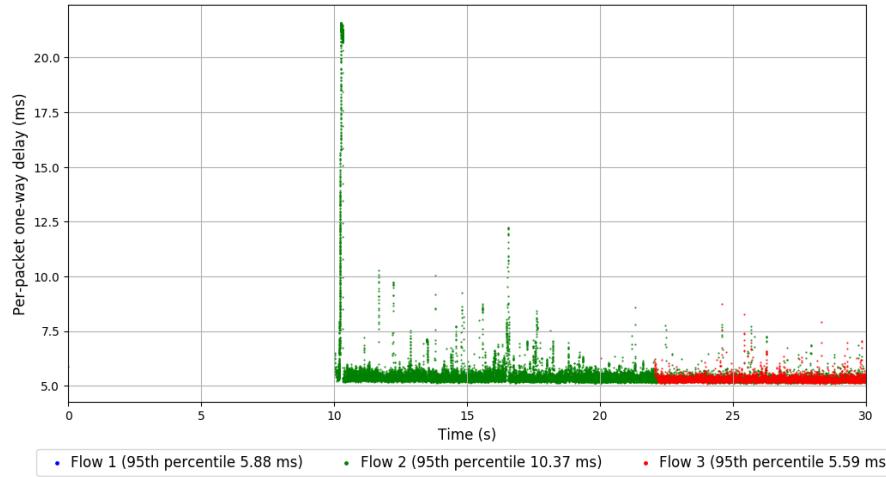
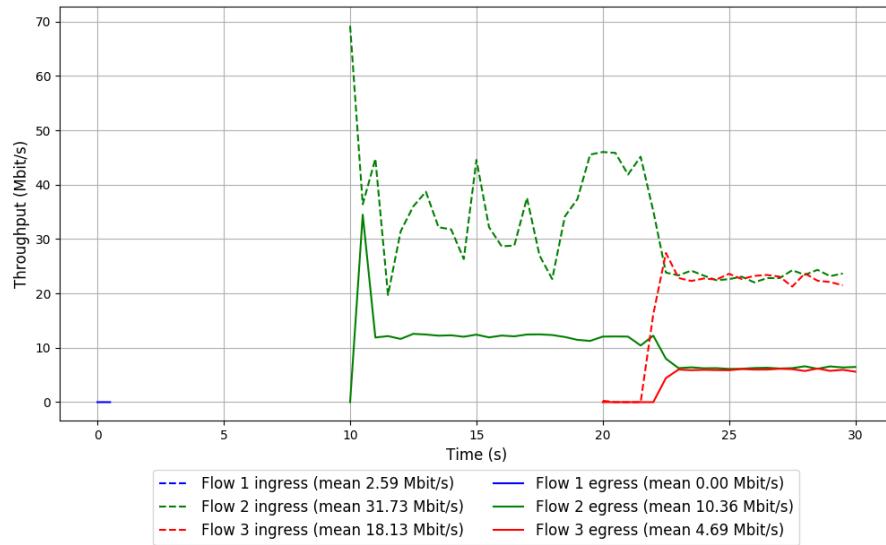


Run 4: Statistics of Copa

```
Start at: 2018-10-26 03:57:06
End at: 2018-10-26 03:57:36
Local clock offset: 2.193 ms
Remote clock offset: -5.003 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.46 Mbit/s
95th percentile per-packet one-way delay: 7.688 ms
Loss rate: 68.87%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5.878 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 10.36 Mbit/s
95th percentile per-packet one-way delay: 10.374 ms
Loss rate: 67.37%
-- Flow 3:
Average throughput: 4.69 Mbit/s
95th percentile per-packet one-way delay: 5.592 ms
Loss rate: 74.10%
```

Run 4: Report of Copa — Data Link

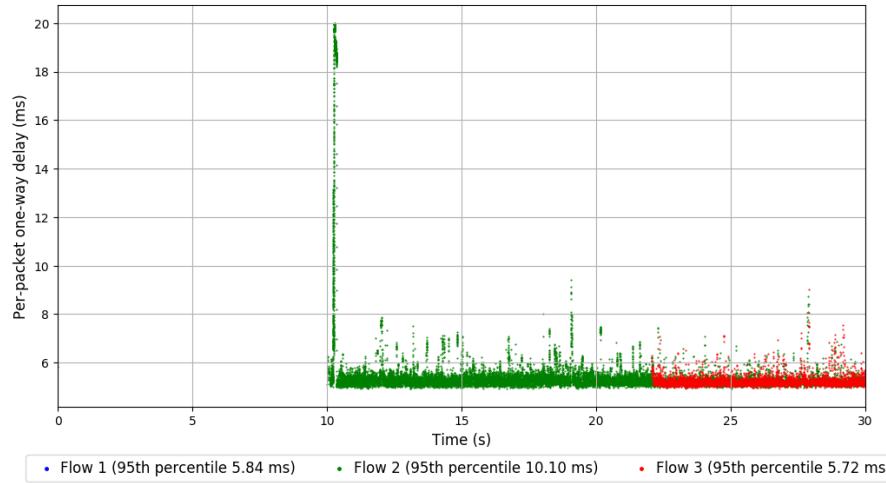
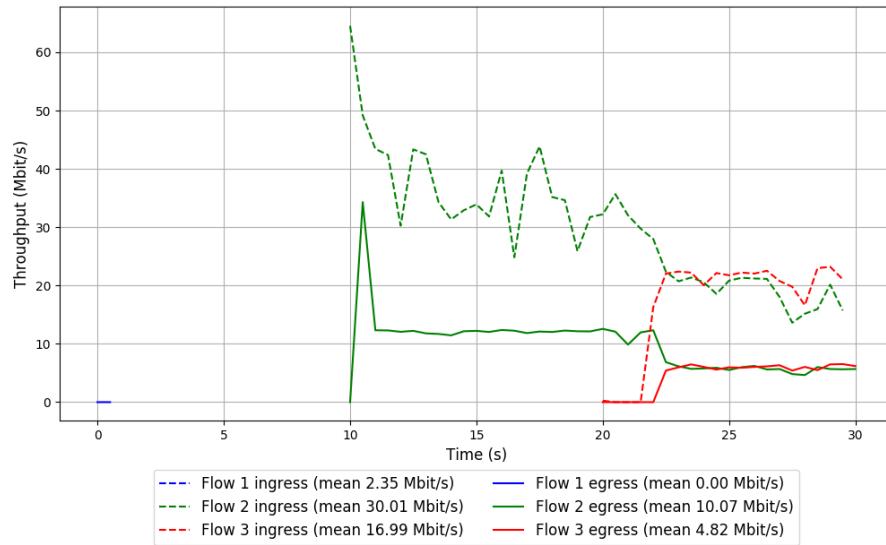


Run 5: Statistics of Copa

```
Start at: 2018-10-26 04:18:30
End at: 2018-10-26 04:19:00
Local clock offset: 2.95 ms
Remote clock offset: -5.071 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.31 Mbit/s
95th percentile per-packet one-way delay: 7.334 ms
Loss rate: 67.59%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5.841 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 10.07 Mbit/s
95th percentile per-packet one-way delay: 10.101 ms
Loss rate: 66.45%
-- Flow 3:
Average throughput: 4.82 Mbit/s
95th percentile per-packet one-way delay: 5.716 ms
Loss rate: 71.63%
```

Run 5: Report of Copa — Data Link

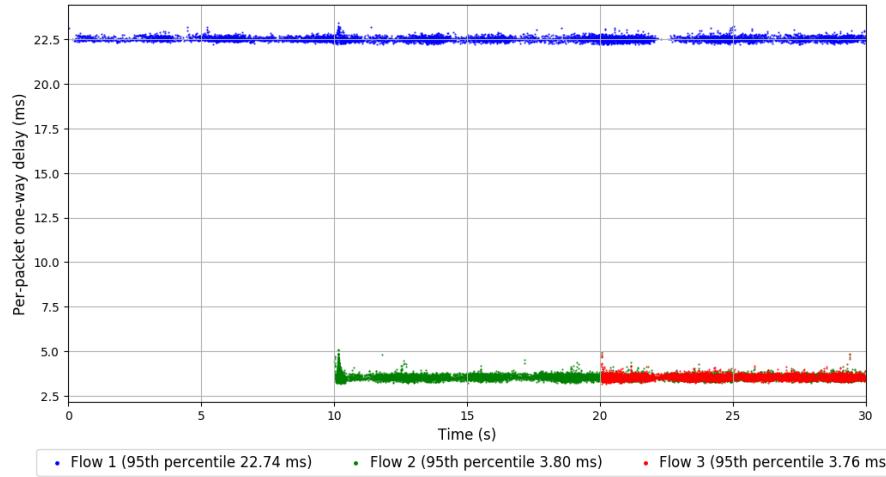
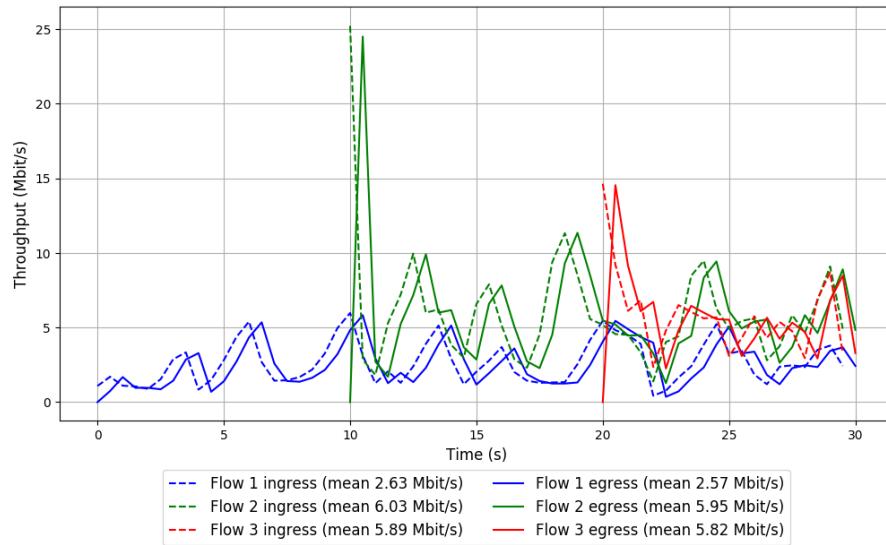


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-26 03:00:31
End at: 2018-10-26 03:01:01
Local clock offset: 3.347 ms
Remote clock offset: -4.981 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.47 Mbit/s
95th percentile per-packet one-way delay: 22.661 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 2.57 Mbit/s
95th percentile per-packet one-way delay: 22.743 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 3.802 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 5.82 Mbit/s
95th percentile per-packet one-way delay: 3.762 ms
Loss rate: 1.08%
```

Run 1: Report of TCP Cubic — Data Link

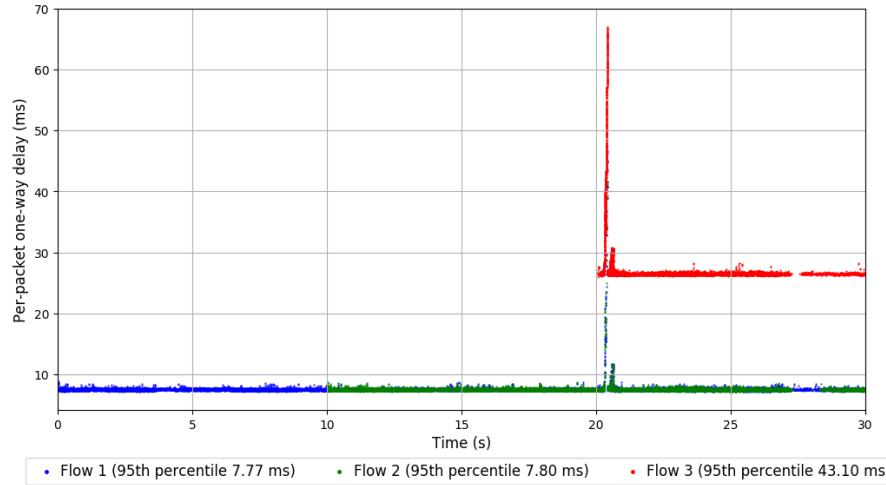
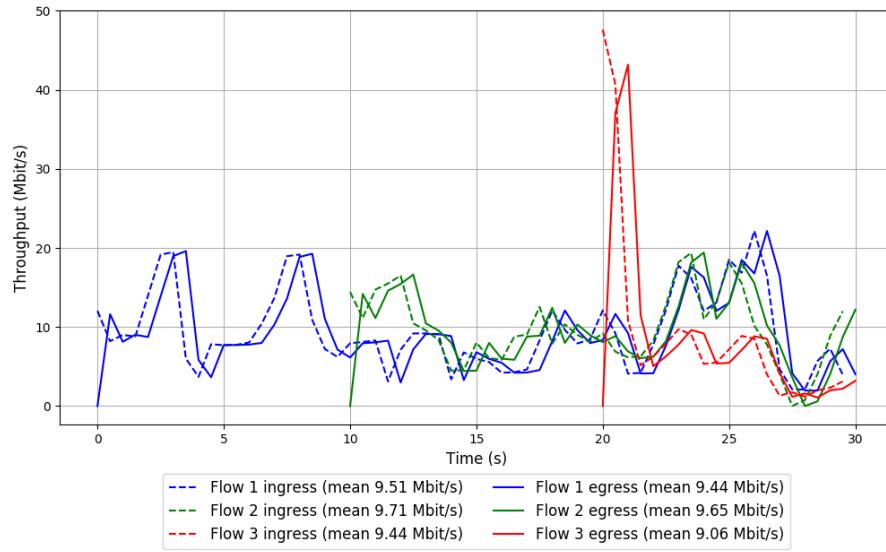


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-26 03:21:42
End at: 2018-10-26 03:22:12
Local clock offset: 0.643 ms
Remote clock offset: -4.959 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.88 Mbit/s
95th percentile per-packet one-way delay: 26.691 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 9.44 Mbit/s
95th percentile per-packet one-way delay: 7.774 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 7.796 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 9.06 Mbit/s
95th percentile per-packet one-way delay: 43.096 ms
Loss rate: 4.21%
```

Run 2: Report of TCP Cubic — Data Link

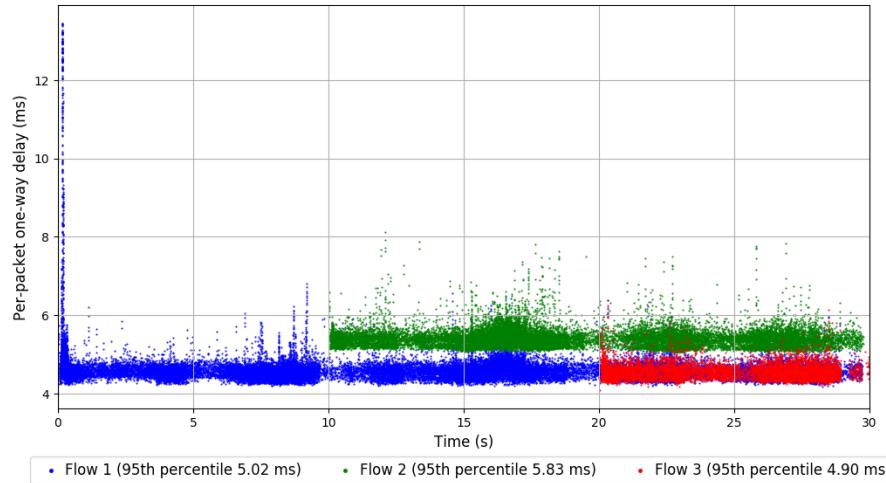
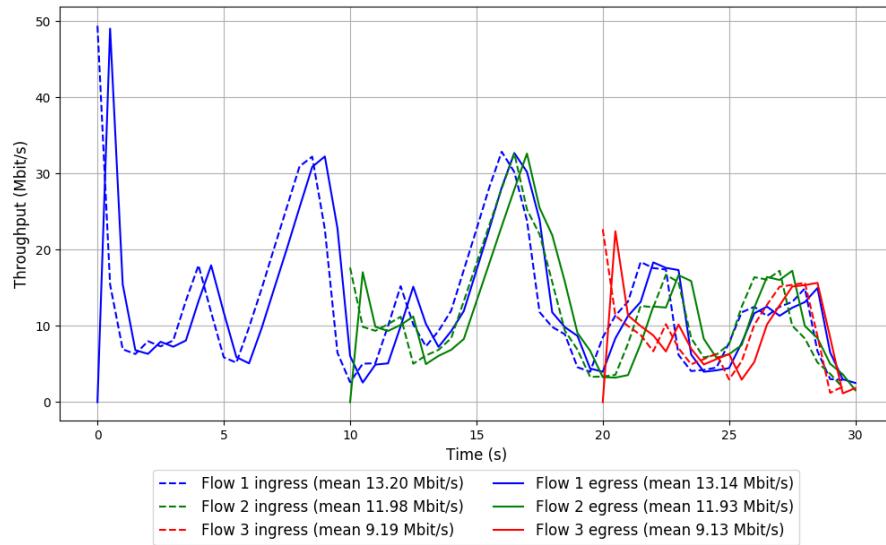


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-26 03:42:59
End at: 2018-10-26 03:43:29
Local clock offset: 1.846 ms
Remote clock offset: -5.715 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.04 Mbit/s
95th percentile per-packet one-way delay: 5.638 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 13.14 Mbit/s
95th percentile per-packet one-way delay: 5.019 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 5.829 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 9.13 Mbit/s
95th percentile per-packet one-way delay: 4.904 ms
Loss rate: 0.62%
```

Run 3: Report of TCP Cubic — Data Link

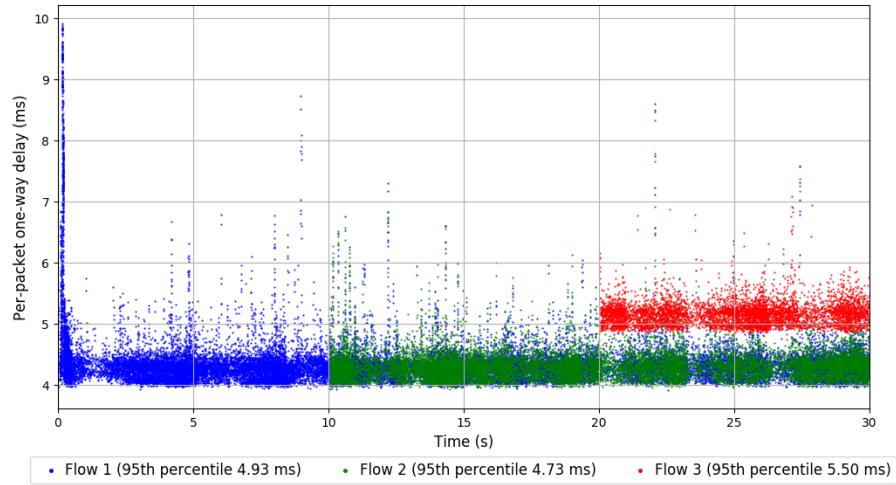
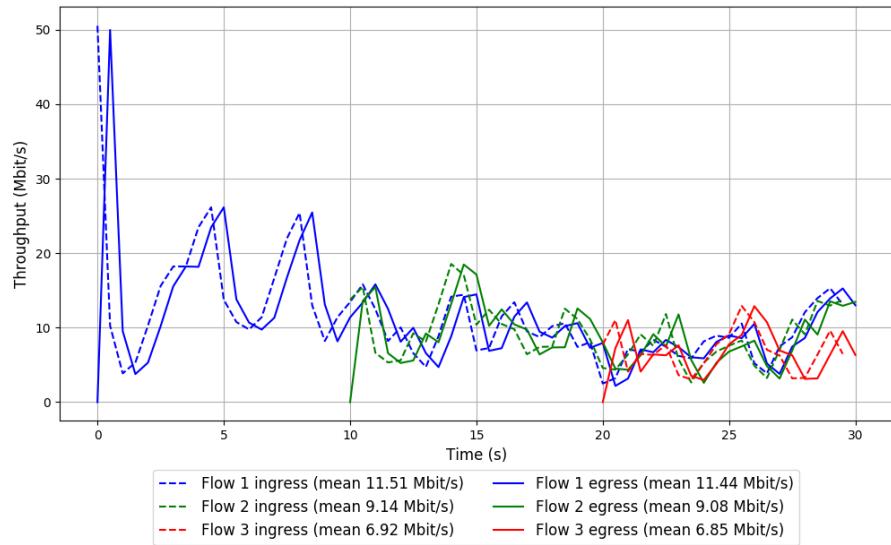


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-26 04:04:07
End at: 2018-10-26 04:04:37
Local clock offset: 2.672 ms
Remote clock offset: -4.996 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.77 Mbit/s
95th percentile per-packet one-way delay: 5.250 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 11.44 Mbit/s
95th percentile per-packet one-way delay: 4.927 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 9.08 Mbit/s
95th percentile per-packet one-way delay: 4.732 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 5.498 ms
Loss rate: 1.08%
```

Run 4: Report of TCP Cubic — Data Link

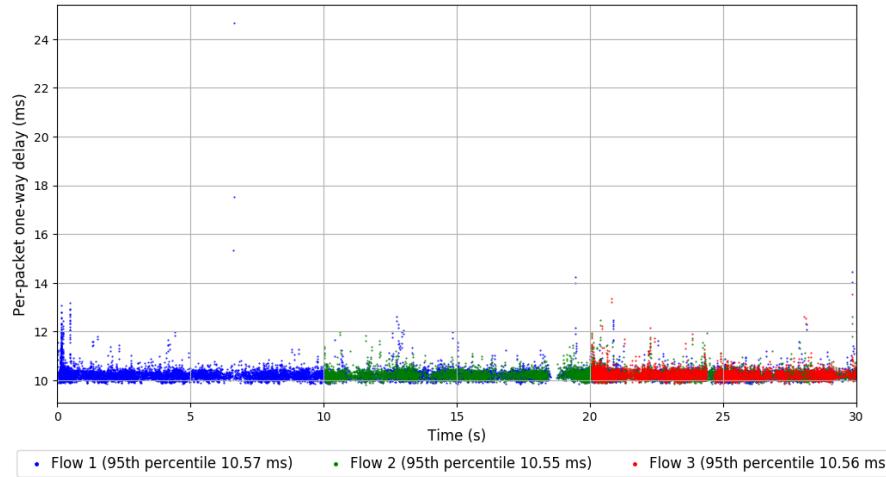
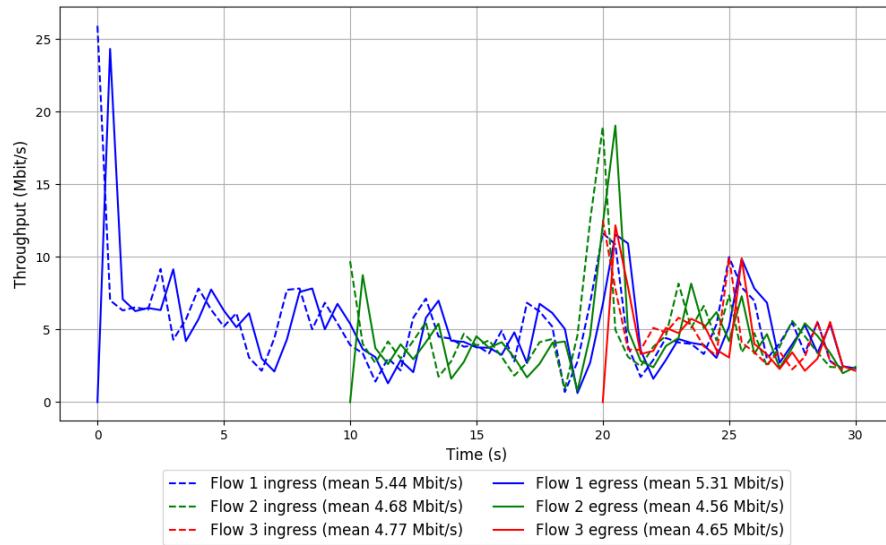


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-26 04:25:33
End at: 2018-10-26 04:26:03
Local clock offset: 1.846 ms
Remote clock offset: -1.358 ms

# Below is generated by plot.py at 2018-10-26 04:38:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.89 Mbit/s
95th percentile per-packet one-way delay: 10.561 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 5.31 Mbit/s
95th percentile per-packet one-way delay: 10.567 ms
Loss rate: 2.25%
-- Flow 2:
Average throughput: 4.56 Mbit/s
95th percentile per-packet one-way delay: 10.555 ms
Loss rate: 2.71%
-- Flow 3:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 10.560 ms
Loss rate: 2.50%
```

Run 5: Report of TCP Cubic — Data Link

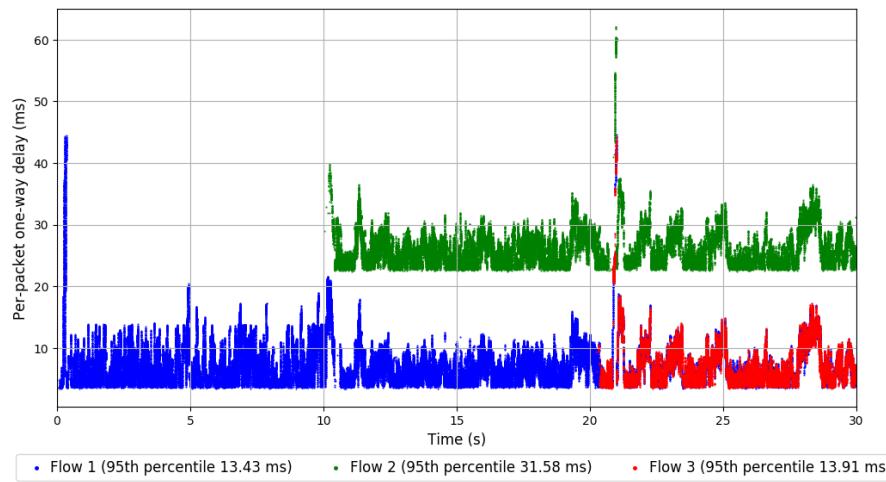
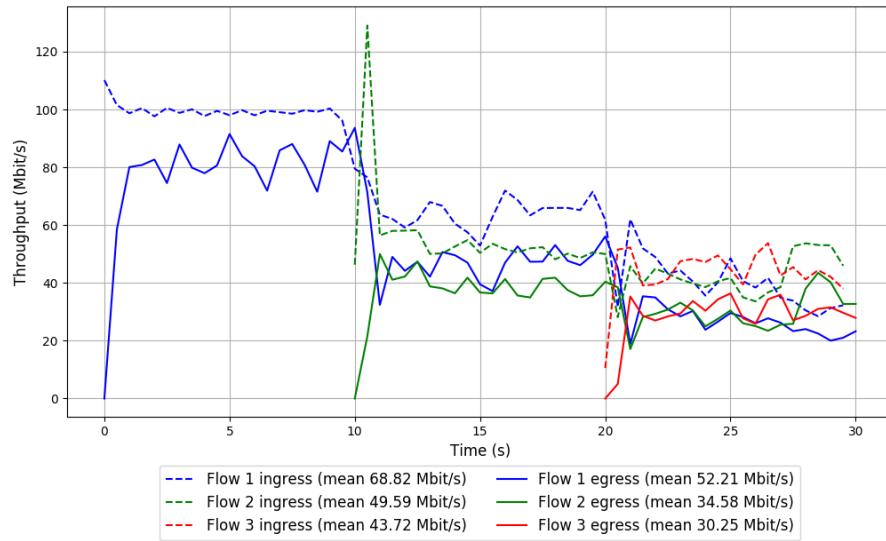


```
Run 1: Statistics of FillP

Start at: 2018-10-26 03:08:59
End at: 2018-10-26 03:09:29
Local clock offset: 3.779 ms
Remote clock offset: -4.755 ms

# Below is generated by plot.py at 2018-10-26 04:38:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.00 Mbit/s
95th percentile per-packet one-way delay: 28.716 ms
Loss rate: 26.90%
-- Flow 1:
Average throughput: 52.21 Mbit/s
95th percentile per-packet one-way delay: 13.434 ms
Loss rate: 24.13%
-- Flow 2:
Average throughput: 34.58 Mbit/s
95th percentile per-packet one-way delay: 31.581 ms
Loss rate: 30.32%
-- Flow 3:
Average throughput: 30.25 Mbit/s
95th percentile per-packet one-way delay: 13.911 ms
Loss rate: 32.24%
```

Run 1: Report of FillP — Data Link

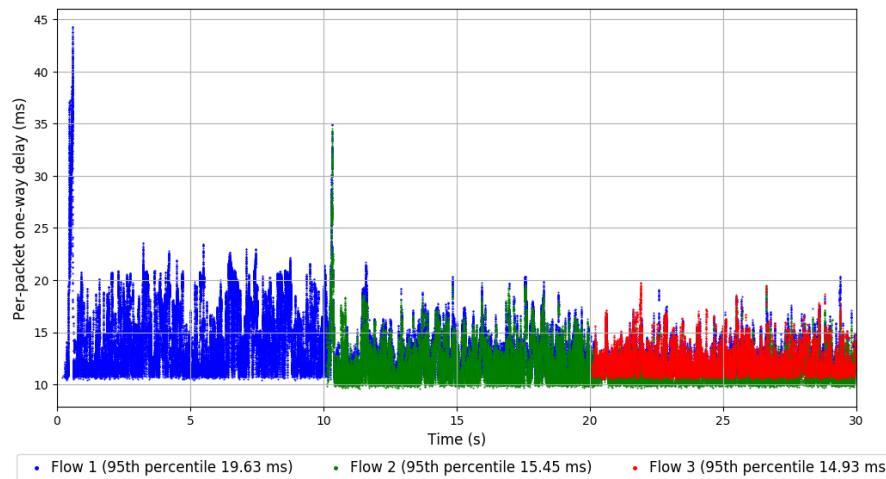
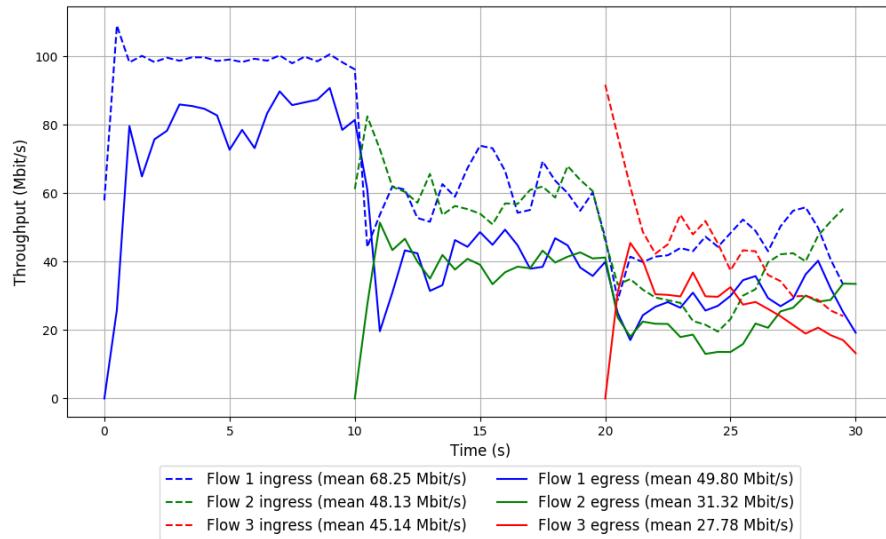


Run 2: Statistics of FillP

```
Start at: 2018-10-26 03:30:05
End at: 2018-10-26 03:30:35
Local clock offset: -2.24 ms
Remote clock offset: -5.404 ms

# Below is generated by plot.py at 2018-10-26 04:38:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.07 Mbit/s
95th percentile per-packet one-way delay: 18.652 ms
Loss rate: 31.01%
-- Flow 1:
Average throughput: 49.80 Mbit/s
95th percentile per-packet one-way delay: 19.628 ms
Loss rate: 27.52%
-- Flow 2:
Average throughput: 31.32 Mbit/s
95th percentile per-packet one-way delay: 15.453 ms
Loss rate: 34.94%
-- Flow 3:
Average throughput: 27.78 Mbit/s
95th percentile per-packet one-way delay: 14.925 ms
Loss rate: 38.48%
```

Run 2: Report of FillP — Data Link

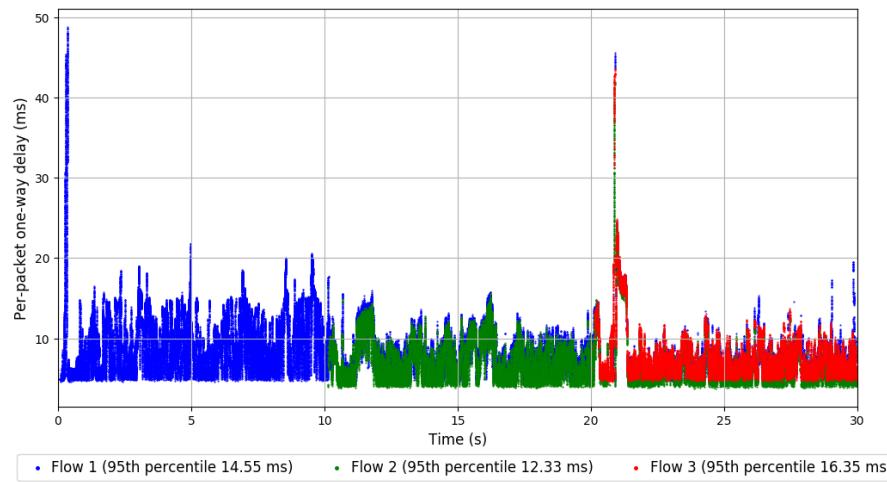
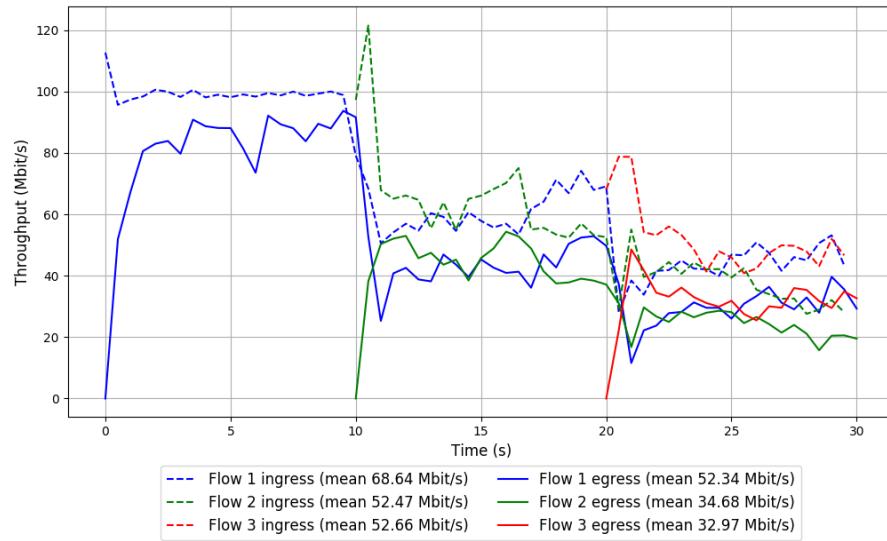


Run 3: Statistics of FillP

```
Start at: 2018-10-26 03:51:22
End at: 2018-10-26 03:51:52
Local clock offset: 2.429 ms
Remote clock offset: -5.107 ms

# Below is generated by plot.py at 2018-10-26 04:38:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.34 Mbit/s
95th percentile per-packet one-way delay: 14.319 ms
Loss rate: 28.65%
-- Flow 1:
Average throughput: 52.34 Mbit/s
95th percentile per-packet one-way delay: 14.553 ms
Loss rate: 23.75%
-- Flow 2:
Average throughput: 34.68 Mbit/s
95th percentile per-packet one-way delay: 12.331 ms
Loss rate: 33.92%
-- Flow 3:
Average throughput: 32.97 Mbit/s
95th percentile per-packet one-way delay: 16.347 ms
Loss rate: 37.39%
```

Run 3: Report of FillP — Data Link

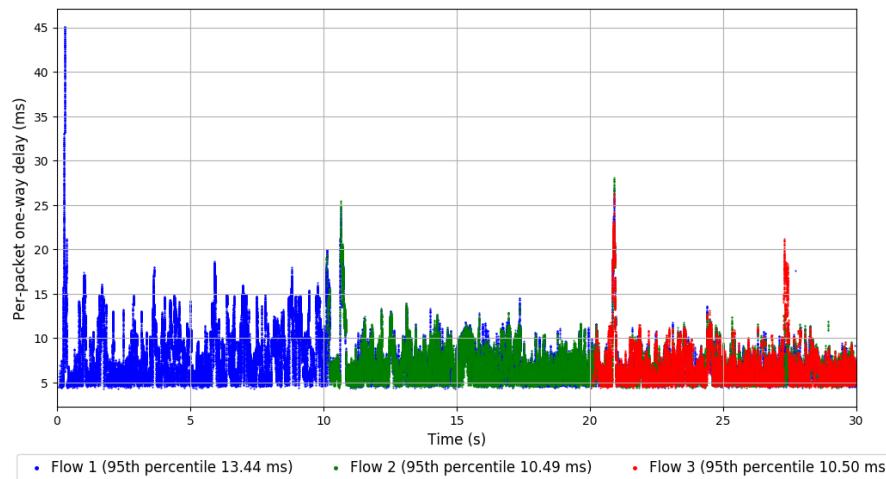
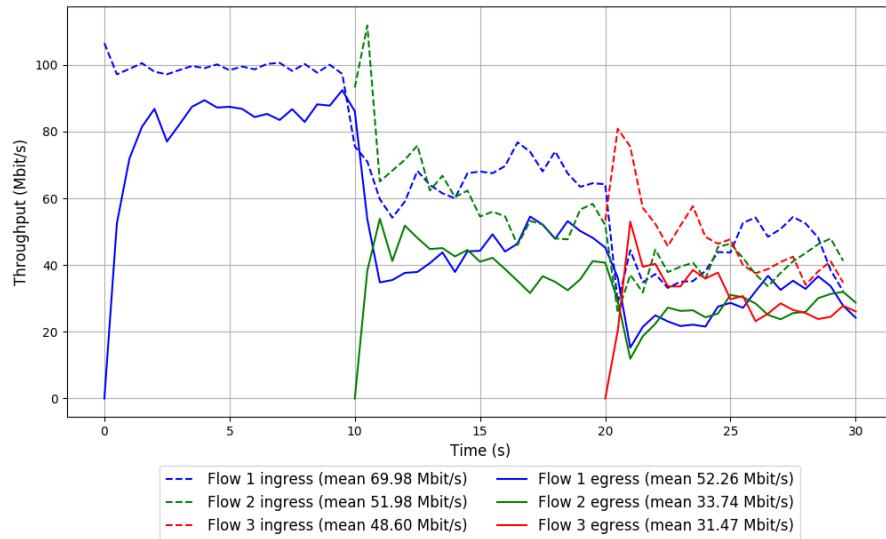


Run 4: Statistics of FillP

```
Start at: 2018-10-26 04:12:42
End at: 2018-10-26 04:13:12
Local clock offset: 2.188 ms
Remote clock offset: -6.067 ms

# Below is generated by plot.py at 2018-10-26 04:39:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.15 Mbit/s
95th percentile per-packet one-way delay: 12.778 ms
Loss rate: 29.44%
-- Flow 1:
Average throughput: 52.26 Mbit/s
95th percentile per-packet one-way delay: 13.437 ms
Loss rate: 25.31%
-- Flow 2:
Average throughput: 33.74 Mbit/s
95th percentile per-packet one-way delay: 10.490 ms
Loss rate: 35.09%
-- Flow 3:
Average throughput: 31.47 Mbit/s
95th percentile per-packet one-way delay: 10.502 ms
Loss rate: 35.25%
```

Run 4: Report of FillP — Data Link

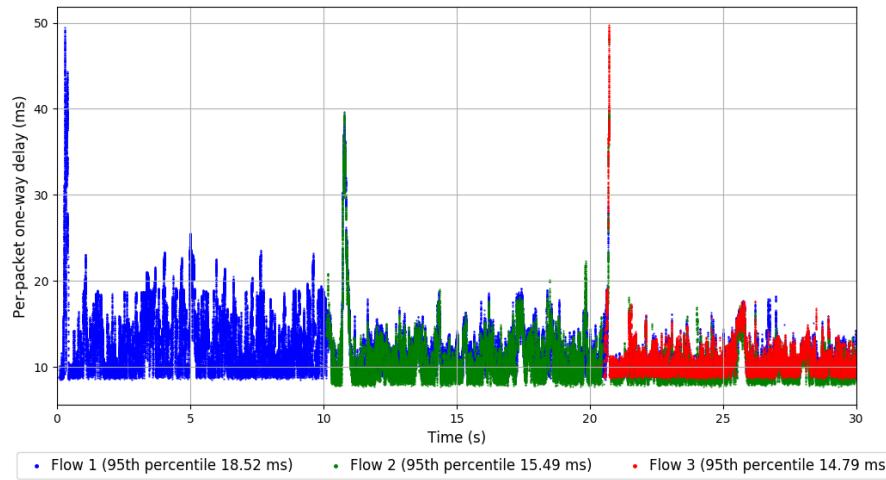
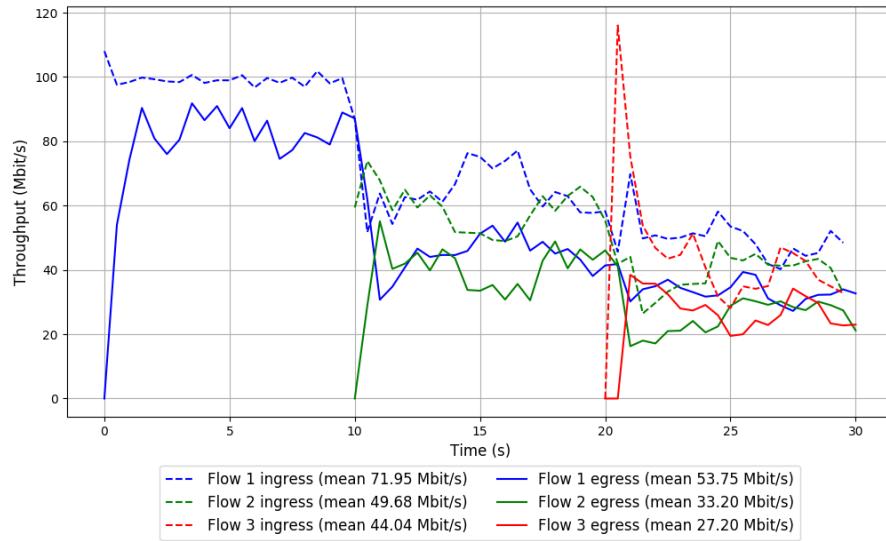


Run 5: Statistics of FillP

```
Start at: 2018-10-26 04:33:53
End at: 2018-10-26 04:34:23
Local clock offset: 3.216 ms
Remote clock offset: -1.521 ms

# Below is generated by plot.py at 2018-10-26 04:39:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.70 Mbit/s
95th percentile per-packet one-way delay: 17.984 ms
Loss rate: 29.21%
-- Flow 1:
Average throughput: 53.75 Mbit/s
95th percentile per-packet one-way delay: 18.516 ms
Loss rate: 25.29%
-- Flow 2:
Average throughput: 33.20 Mbit/s
95th percentile per-packet one-way delay: 15.493 ms
Loss rate: 33.21%
-- Flow 3:
Average throughput: 27.20 Mbit/s
95th percentile per-packet one-way delay: 14.793 ms
Loss rate: 39.46%
```

Run 5: Report of FillP — Data Link

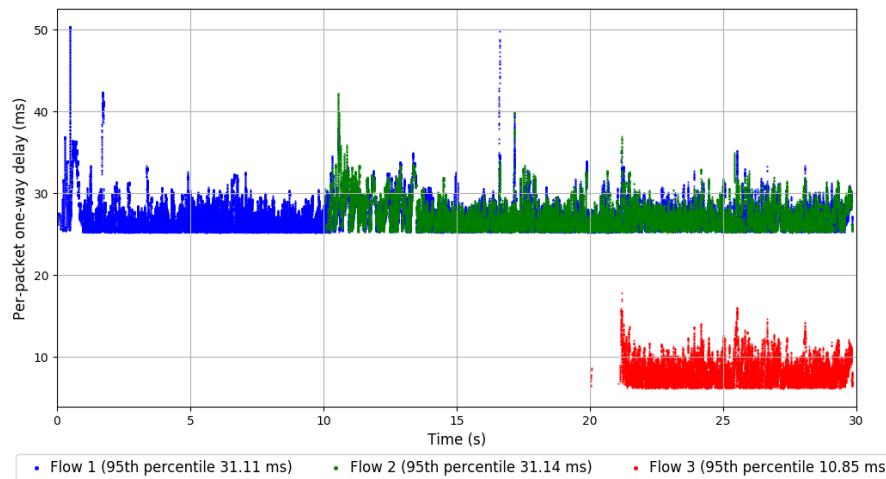
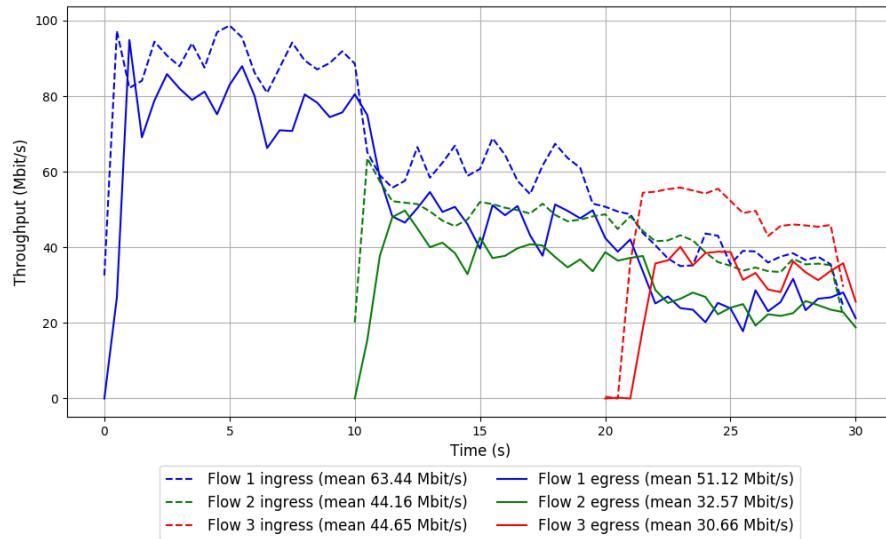


Run 1: Statistics of Indigo

```
Start at: 2018-10-26 03:05:15
End at: 2018-10-26 03:05:46
Local clock offset: 0.971 ms
Remote clock offset: -4.79 ms

# Below is generated by plot.py at 2018-10-26 04:39:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.79 Mbit/s
95th percentile per-packet one-way delay: 30.904 ms
Loss rate: 22.93%
-- Flow 1:
Average throughput: 51.12 Mbit/s
95th percentile per-packet one-way delay: 31.111 ms
Loss rate: 19.46%
-- Flow 2:
Average throughput: 32.57 Mbit/s
95th percentile per-packet one-way delay: 31.143 ms
Loss rate: 26.25%
-- Flow 3:
Average throughput: 30.66 Mbit/s
95th percentile per-packet one-way delay: 10.846 ms
Loss rate: 31.33%
```

Run 1: Report of Indigo — Data Link

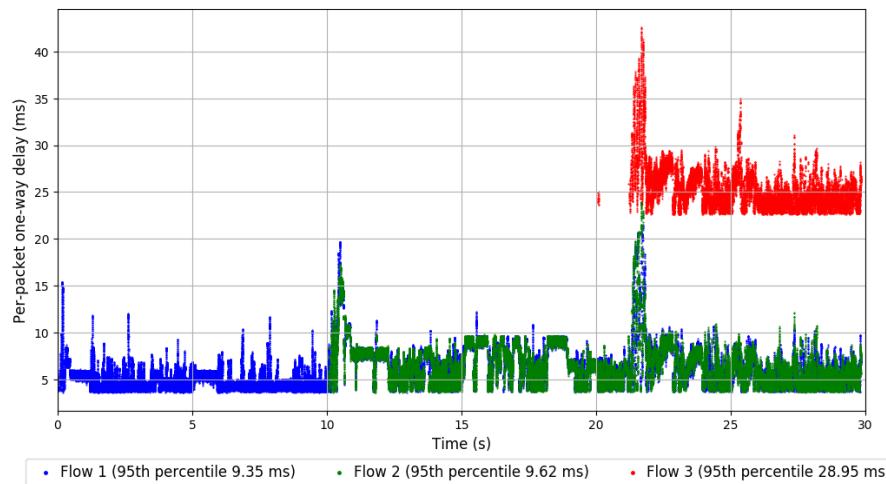
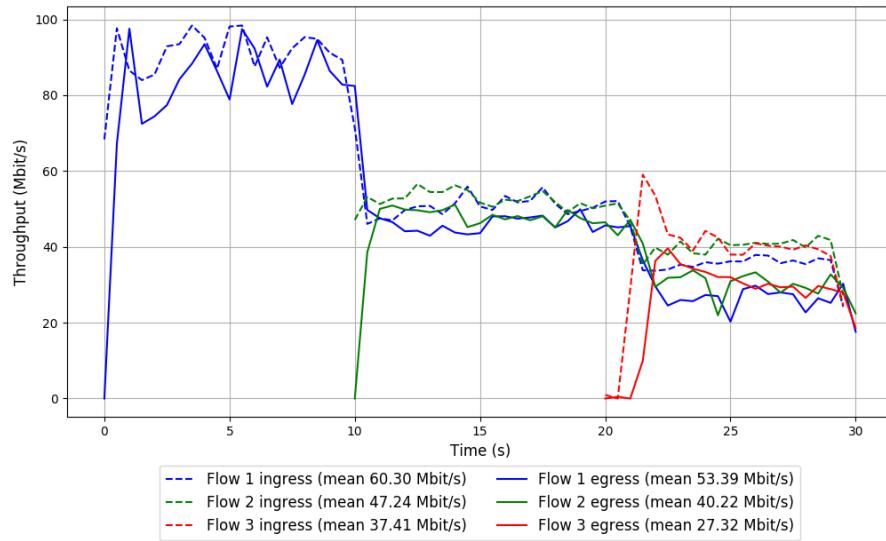


Run 2: Statistics of Indigo

```
Start at: 2018-10-26 03:26:27
End at: 2018-10-26 03:26:57
Local clock offset: 3.86 ms
Remote clock offset: -5.465 ms

# Below is generated by plot.py at 2018-10-26 04:39:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.02 Mbit/s
95th percentile per-packet one-way delay: 24.989 ms
Loss rate: 14.32%
-- Flow 1:
Average throughput: 53.39 Mbit/s
95th percentile per-packet one-way delay: 9.353 ms
Loss rate: 11.45%
-- Flow 2:
Average throughput: 40.22 Mbit/s
95th percentile per-packet one-way delay: 9.619 ms
Loss rate: 14.84%
-- Flow 3:
Average throughput: 27.32 Mbit/s
95th percentile per-packet one-way delay: 28.948 ms
Loss rate: 27.12%
```

Run 2: Report of Indigo — Data Link

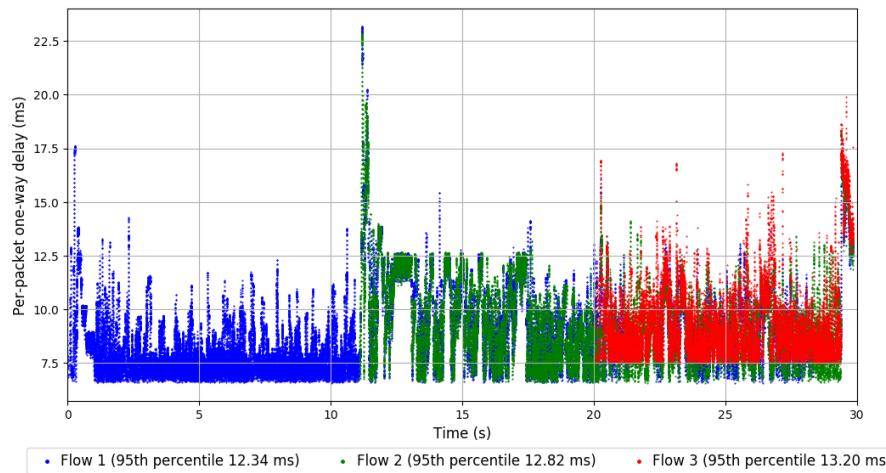
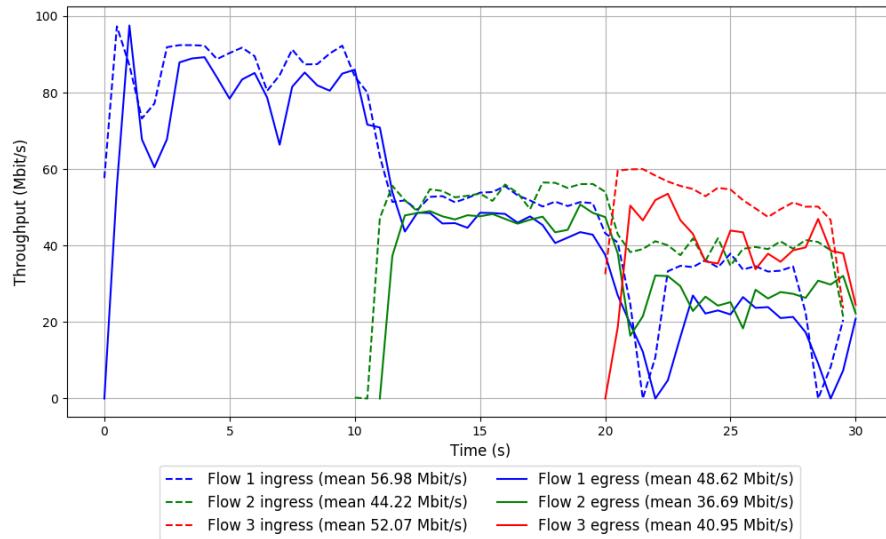


Run 3: Statistics of Indigo

```
Start at: 2018-10-26 03:47:44
End at: 2018-10-26 03:48:14
Local clock offset: -0.367 ms
Remote clock offset: -5.394 ms

# Below is generated by plot.py at 2018-10-26 04:39:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.18 Mbit/s
95th percentile per-packet one-way delay: 12.410 ms
Loss rate: 17.61%
-- Flow 1:
Average throughput: 48.62 Mbit/s
95th percentile per-packet one-way delay: 12.338 ms
Loss rate: 14.65%
-- Flow 2:
Average throughput: 36.69 Mbit/s
95th percentile per-packet one-way delay: 12.818 ms
Loss rate: 21.19%
-- Flow 3:
Average throughput: 40.95 Mbit/s
95th percentile per-packet one-way delay: 13.199 ms
Loss rate: 21.30%
```

Run 3: Report of Indigo — Data Link

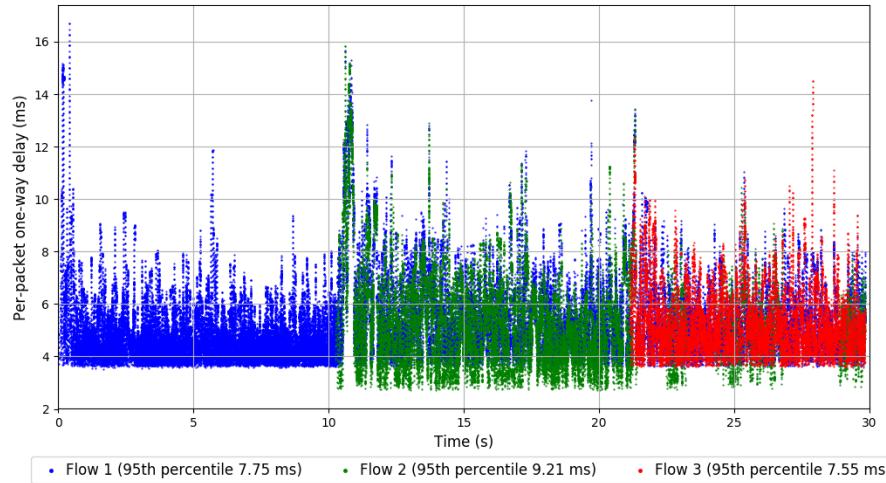
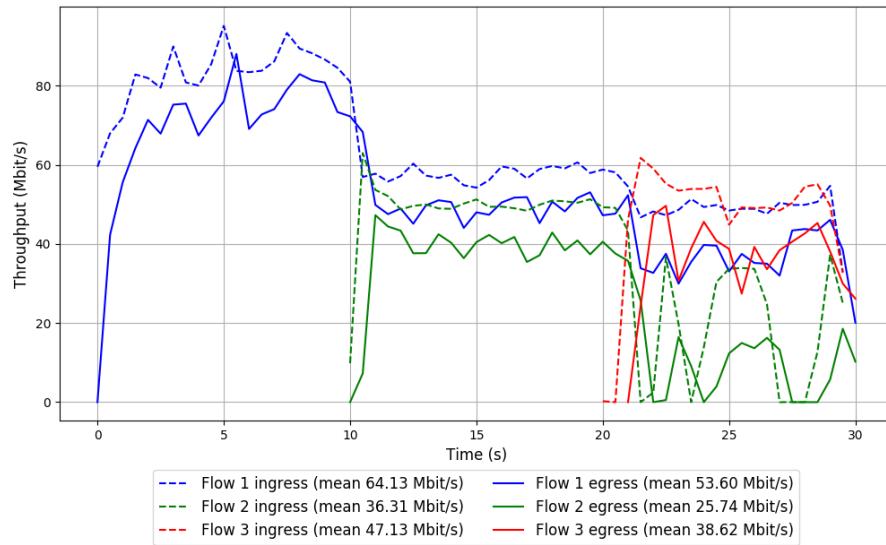


Run 4: Statistics of Indigo

```
Start at: 2018-10-26 04:08:55
End at: 2018-10-26 04:09:25
Local clock offset: 3.105 ms
Remote clock offset: -6.016 ms

# Below is generated by plot.py at 2018-10-26 04:39:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.83 Mbit/s
95th percentile per-packet one-way delay: 8.004 ms
Loss rate: 20.84%
-- Flow 1:
Average throughput: 53.60 Mbit/s
95th percentile per-packet one-way delay: 7.746 ms
Loss rate: 16.41%
-- Flow 2:
Average throughput: 25.74 Mbit/s
95th percentile per-packet one-way delay: 9.207 ms
Loss rate: 29.10%
-- Flow 3:
Average throughput: 38.62 Mbit/s
95th percentile per-packet one-way delay: 7.549 ms
Loss rate: 26.46%
```

Run 4: Report of Indigo — Data Link

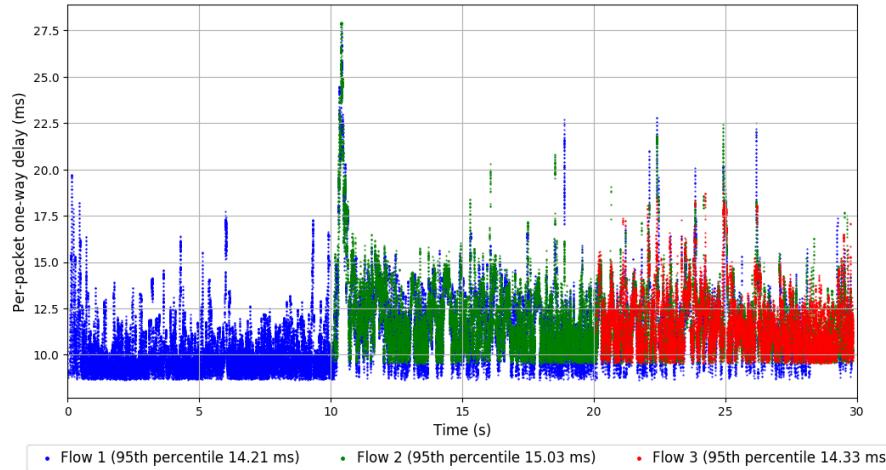
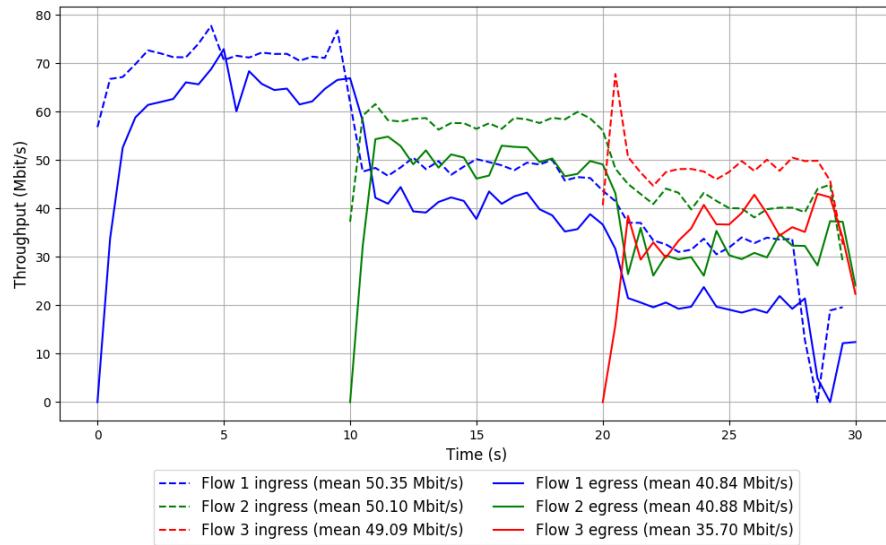


Run 5: Statistics of Indigo

```
Start at: 2018-10-26 04:30:18
End at: 2018-10-26 04:30:48
Local clock offset: 2.98 ms
Remote clock offset: -0.662 ms

# Below is generated by plot.py at 2018-10-26 04:39:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.65 Mbit/s
95th percentile per-packet one-way delay: 14.535 ms
Loss rate: 20.08%
-- Flow 1:
Average throughput: 40.84 Mbit/s
95th percentile per-packet one-way delay: 14.210 ms
Loss rate: 18.88%
-- Flow 2:
Average throughput: 40.88 Mbit/s
95th percentile per-packet one-way delay: 15.033 ms
Loss rate: 18.41%
-- Flow 3:
Average throughput: 35.70 Mbit/s
95th percentile per-packet one-way delay: 14.332 ms
Loss rate: 27.28%
```

Run 5: Report of Indigo — Data Link

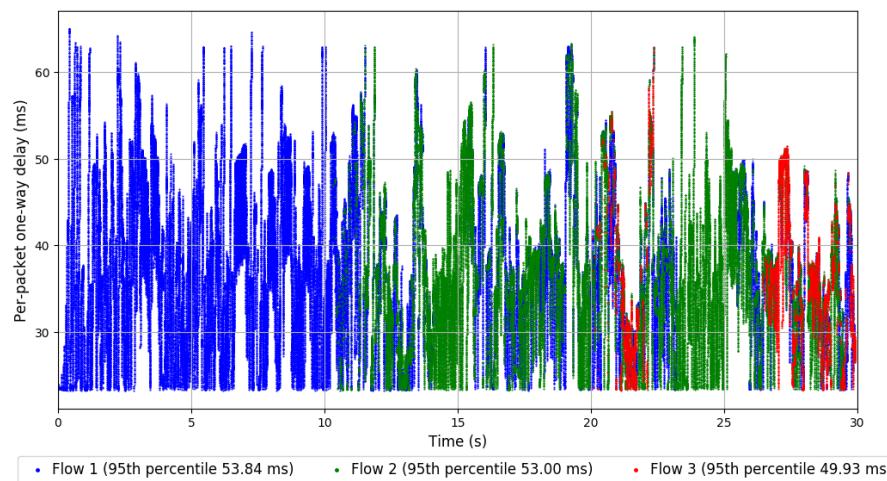
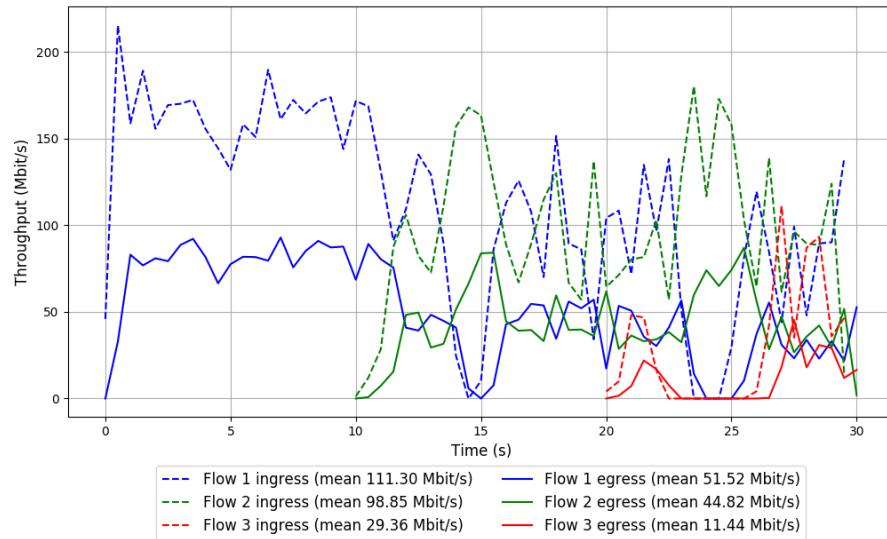


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-26 03:02:46
End at: 2018-10-26 03:03:16
Local clock offset: 2.616 ms
Remote clock offset: -4.829 ms

# Below is generated by plot.py at 2018-10-26 04:40:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.47 Mbit/s
95th percentile per-packet one-way delay: 53.323 ms
Loss rate: 54.48%
-- Flow 1:
Average throughput: 51.52 Mbit/s
95th percentile per-packet one-way delay: 53.842 ms
Loss rate: 53.70%
-- Flow 2:
Average throughput: 44.82 Mbit/s
95th percentile per-packet one-way delay: 52.996 ms
Loss rate: 54.82%
-- Flow 3:
Average throughput: 11.44 Mbit/s
95th percentile per-packet one-way delay: 49.930 ms
Loss rate: 61.10%
```

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

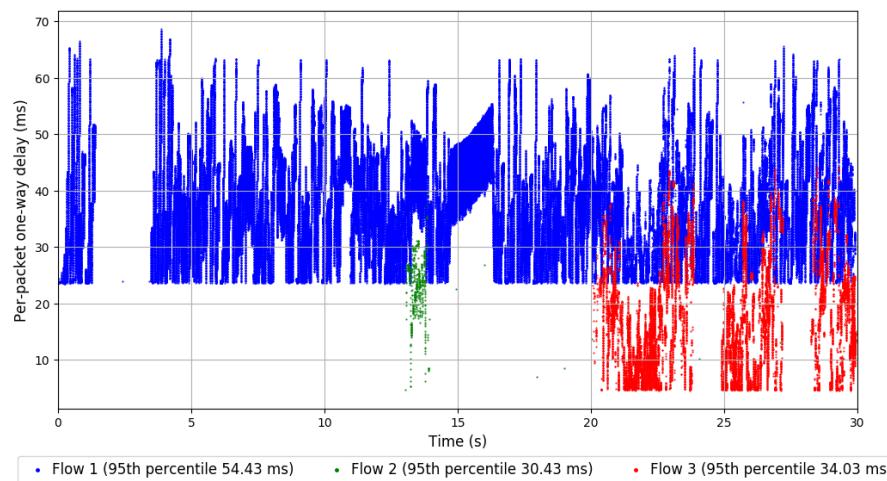
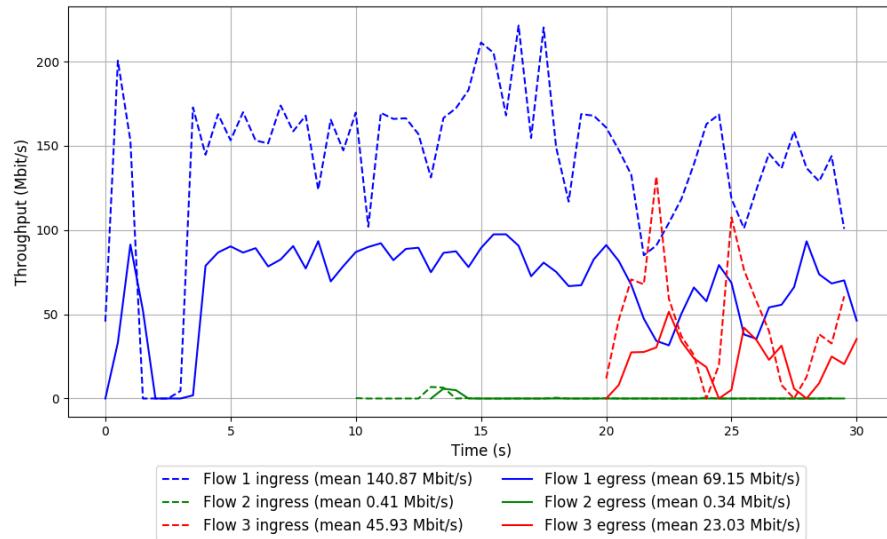


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 03:23:58
End at: 2018-10-26 03:24:28
Local clock offset: 3.224 ms
Remote clock offset: -5.039 ms

# Below is generated by plot.py at 2018-10-26 04:40:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.88 Mbit/s
95th percentile per-packet one-way delay: 54.073 ms
Loss rate: 50.82%
-- Flow 1:
Average throughput: 69.15 Mbit/s
95th percentile per-packet one-way delay: 54.430 ms
Loss rate: 50.95%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 30.426 ms
Loss rate: 29.41%
-- Flow 3:
Average throughput: 23.03 Mbit/s
95th percentile per-packet one-way delay: 34.031 ms
Loss rate: 49.92%
```

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

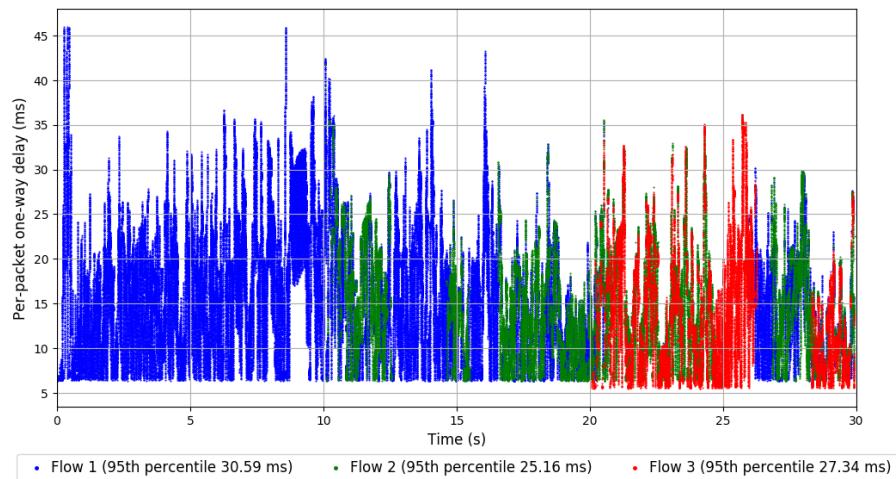
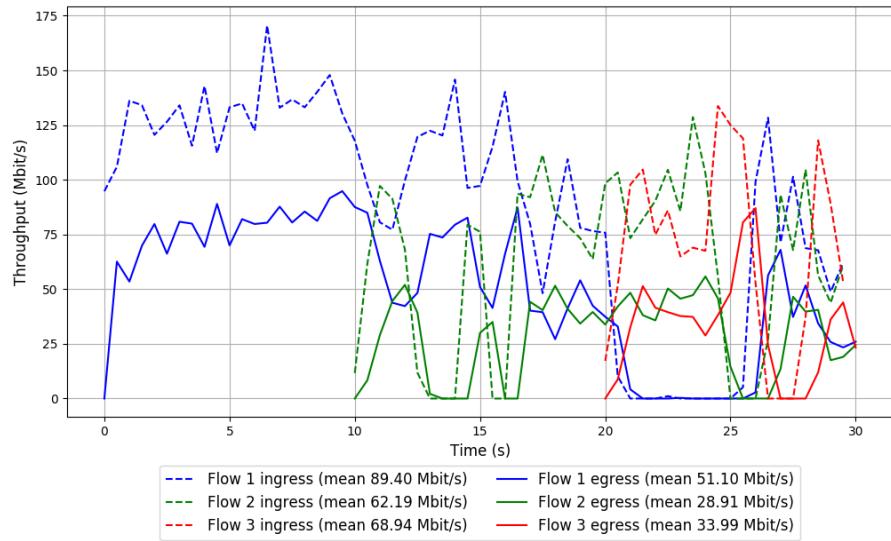


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 03:45:15
End at: 2018-10-26 03:45:45
Local clock offset: 0.273 ms
Remote clock offset: -5.922 ms

# Below is generated by plot.py at 2018-10-26 04:40:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.50 Mbit/s
95th percentile per-packet one-way delay: 29.441 ms
Loss rate: 46.88%
-- Flow 1:
Average throughput: 51.10 Mbit/s
95th percentile per-packet one-way delay: 30.593 ms
Loss rate: 42.84%
-- Flow 2:
Average throughput: 28.91 Mbit/s
95th percentile per-packet one-way delay: 25.155 ms
Loss rate: 53.52%
-- Flow 3:
Average throughput: 33.99 Mbit/s
95th percentile per-packet one-way delay: 27.341 ms
Loss rate: 50.69%
```

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

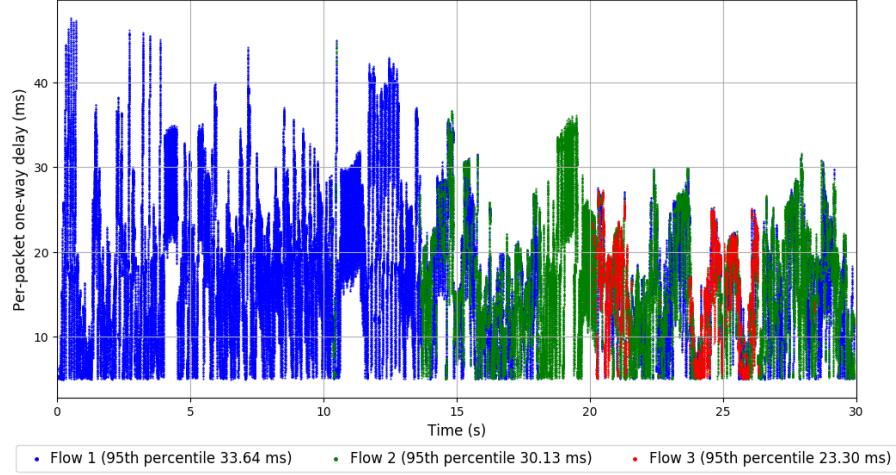
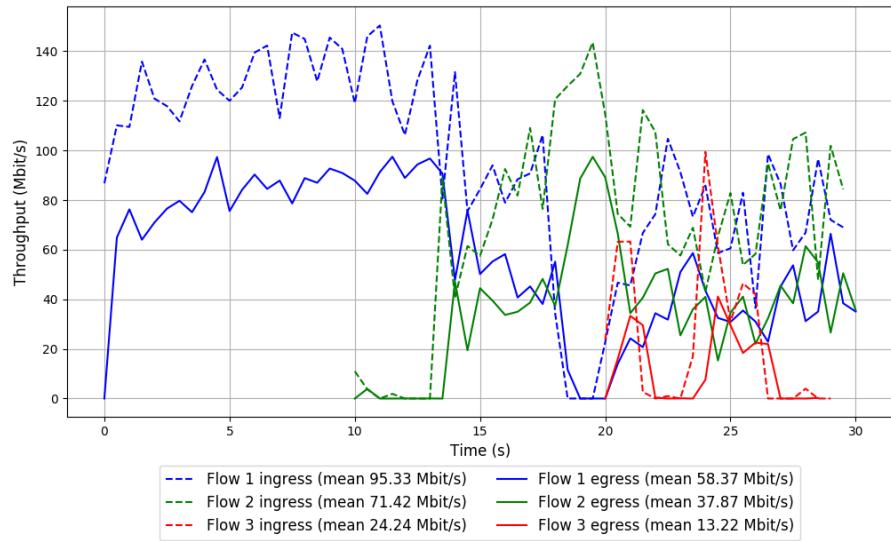


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 04:06:23
End at: 2018-10-26 04:06:53
Local clock offset: 1.885 ms
Remote clock offset: -5.68 ms

# Below is generated by plot.py at 2018-10-26 04:40:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.96 Mbit/s
95th percentile per-packet one-way delay: 32.945 ms
Loss rate: 41.98%
-- Flow 1:
Average throughput: 58.37 Mbit/s
95th percentile per-packet one-way delay: 33.637 ms
Loss rate: 38.76%
-- Flow 2:
Average throughput: 37.87 Mbit/s
95th percentile per-packet one-way delay: 30.127 ms
Loss rate: 46.97%
-- Flow 3:
Average throughput: 13.22 Mbit/s
95th percentile per-packet one-way delay: 23.303 ms
Loss rate: 51.53%
```

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

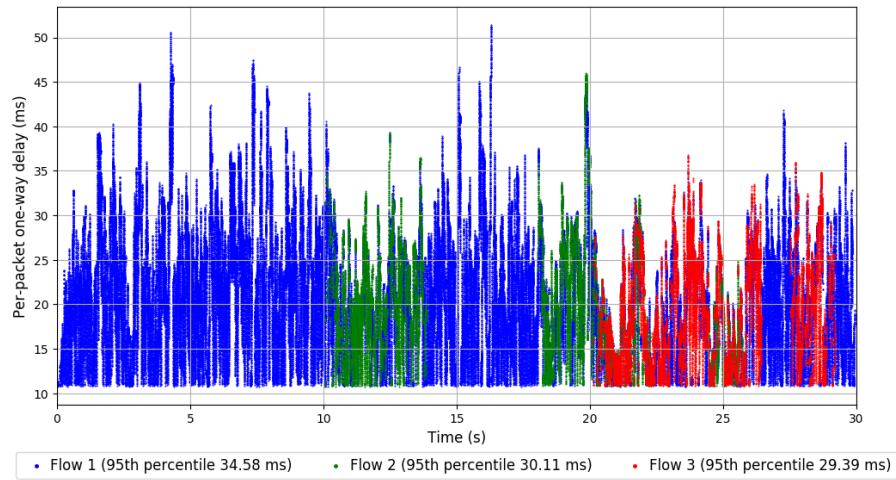
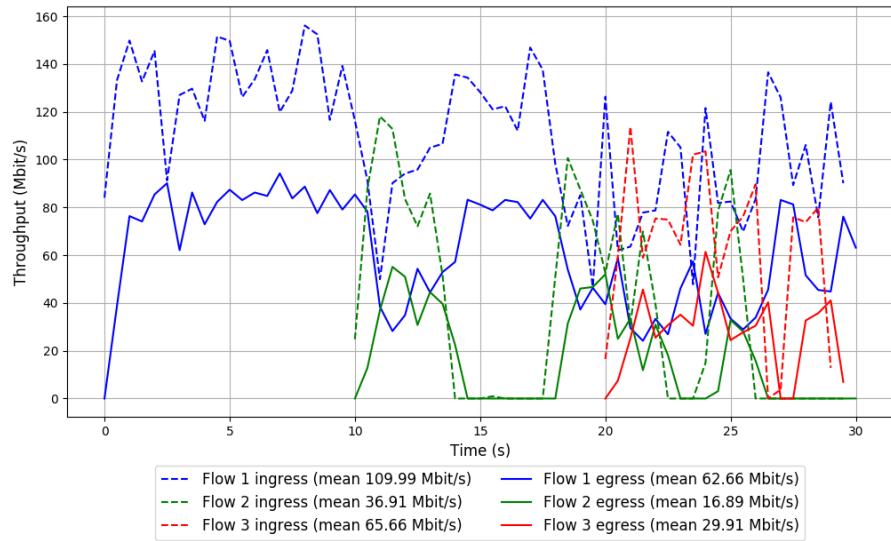


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 04:27:49
End at: 2018-10-26 04:28:19
Local clock offset: 1.503 ms
Remote clock offset: -0.808 ms

# Below is generated by plot.py at 2018-10-26 04:40:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.95 Mbit/s
95th percentile per-packet one-way delay: 33.559 ms
Loss rate: 46.30%
-- Flow 1:
Average throughput: 62.66 Mbit/s
95th percentile per-packet one-way delay: 34.576 ms
Loss rate: 43.01%
-- Flow 2:
Average throughput: 16.89 Mbit/s
95th percentile per-packet one-way delay: 30.111 ms
Loss rate: 54.23%
-- Flow 3:
Average throughput: 29.91 Mbit/s
95th percentile per-packet one-way delay: 29.395 ms
Loss rate: 54.64%
```

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

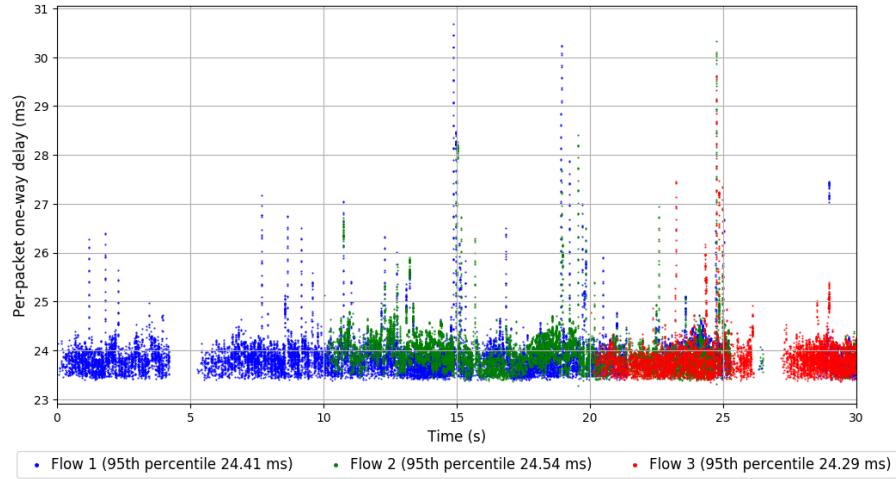
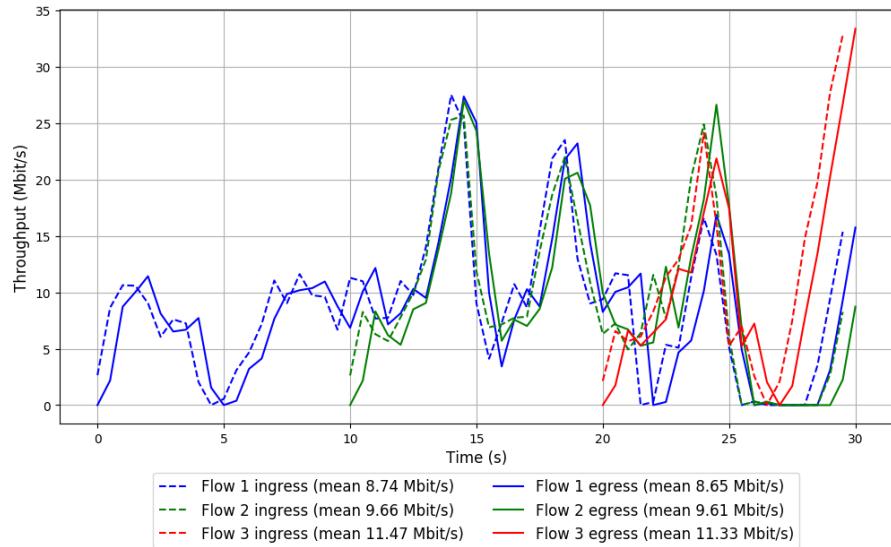


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-10-26 02:50:04
End at: 2018-10-26 02:50:34
Local clock offset: 2.958 ms
Remote clock offset: -3.878 ms

# Below is generated by plot.py at 2018-10-26 04:40:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.81 Mbit/s
95th percentile per-packet one-way delay: 24.441 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 8.65 Mbit/s
95th percentile per-packet one-way delay: 24.405 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 9.61 Mbit/s
95th percentile per-packet one-way delay: 24.544 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 11.33 Mbit/s
95th percentile per-packet one-way delay: 24.289 ms
Loss rate: 1.30%
```

Run 1: Report of LEDBAT — Data Link

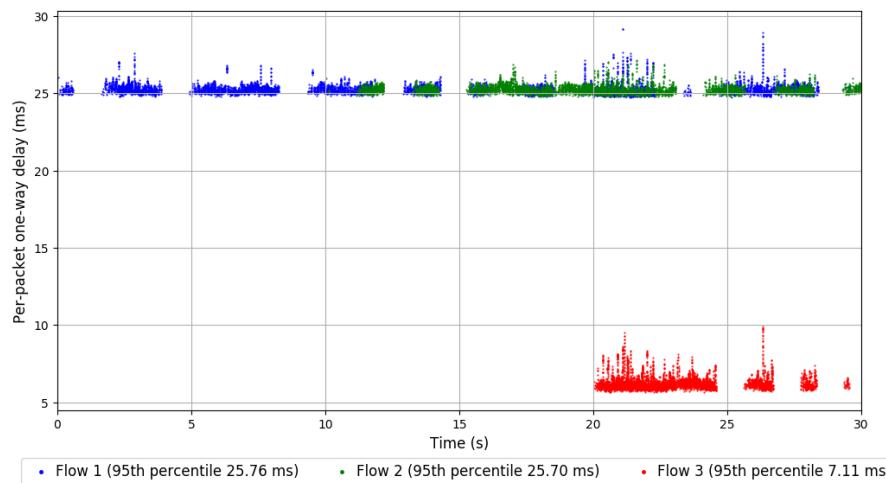
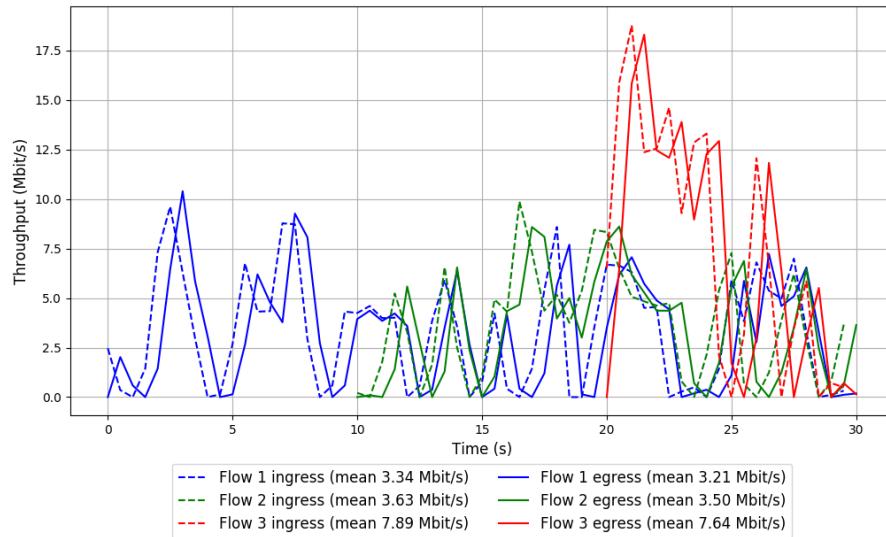


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-26 03:11:17
End at: 2018-10-26 03:11:47
Local clock offset: 1.734 ms
Remote clock offset: -4.866 ms

# Below is generated by plot.py at 2018-10-26 04:40:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 25.647 ms
Loss rate: 3.75%
-- Flow 1:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 25.756 ms
Loss rate: 4.04%
-- Flow 2:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 25.697 ms
Loss rate: 3.66%
-- Flow 3:
Average throughput: 7.64 Mbit/s
95th percentile per-packet one-way delay: 7.109 ms
Loss rate: 3.46%
```

Run 2: Report of LEDBAT — Data Link

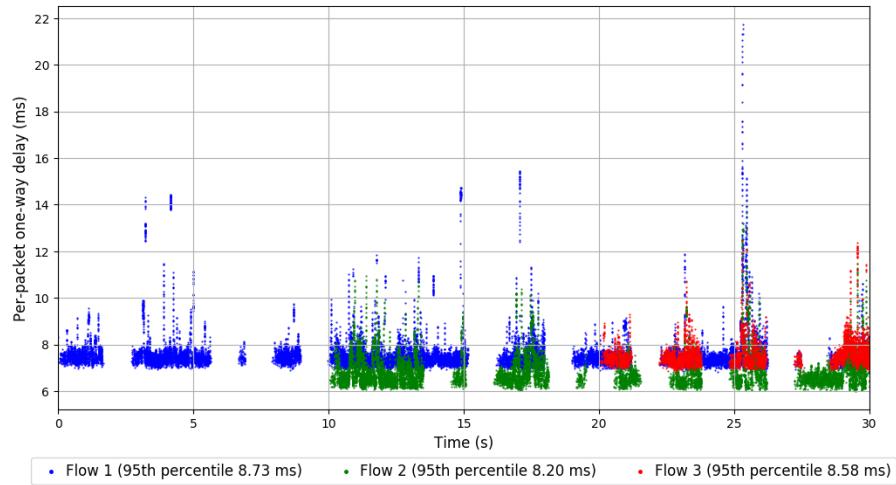
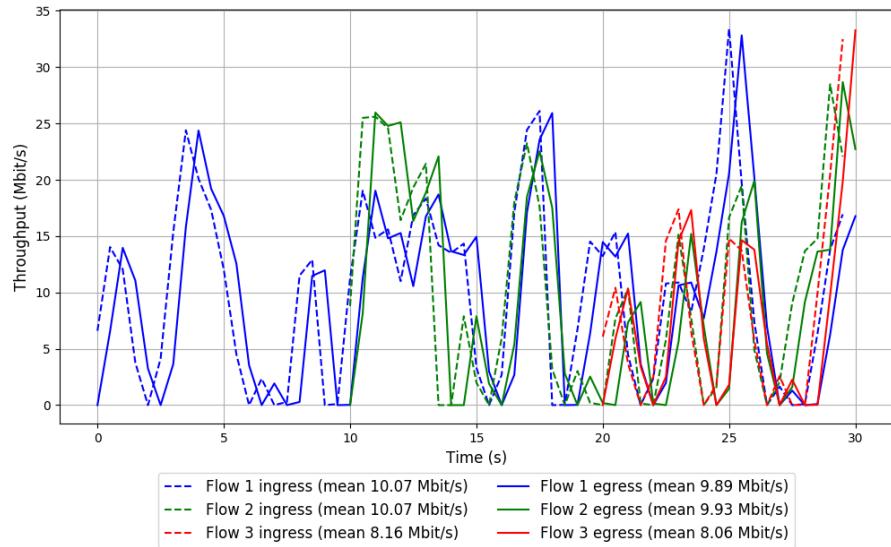


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-26 03:32:23
End at: 2018-10-26 03:32:53
Local clock offset: 0.7 ms
Remote clock offset: -6.02 ms

# Below is generated by plot.py at 2018-10-26 04:40:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.19 Mbit/s
95th percentile per-packet one-way delay: 8.553 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 9.89 Mbit/s
95th percentile per-packet one-way delay: 8.729 ms
Loss rate: 1.81%
-- Flow 2:
Average throughput: 9.93 Mbit/s
95th percentile per-packet one-way delay: 8.199 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 8.578 ms
Loss rate: 1.21%
```

Run 3: Report of LEDBAT — Data Link

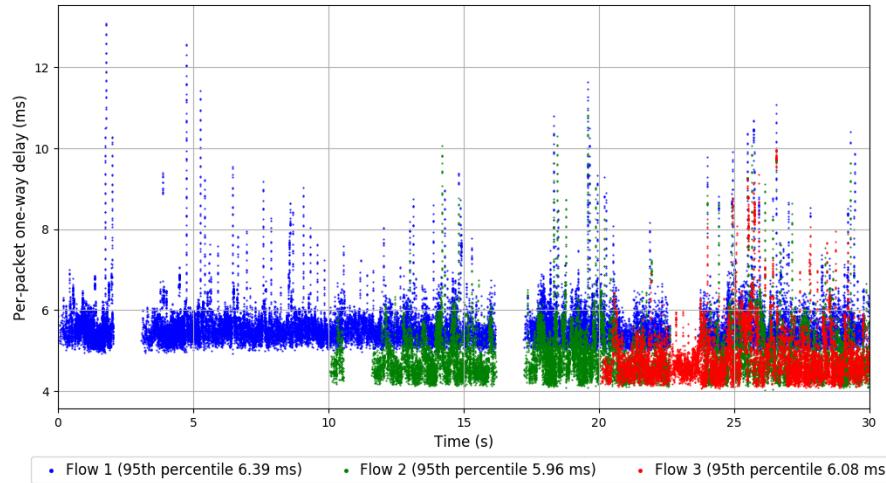
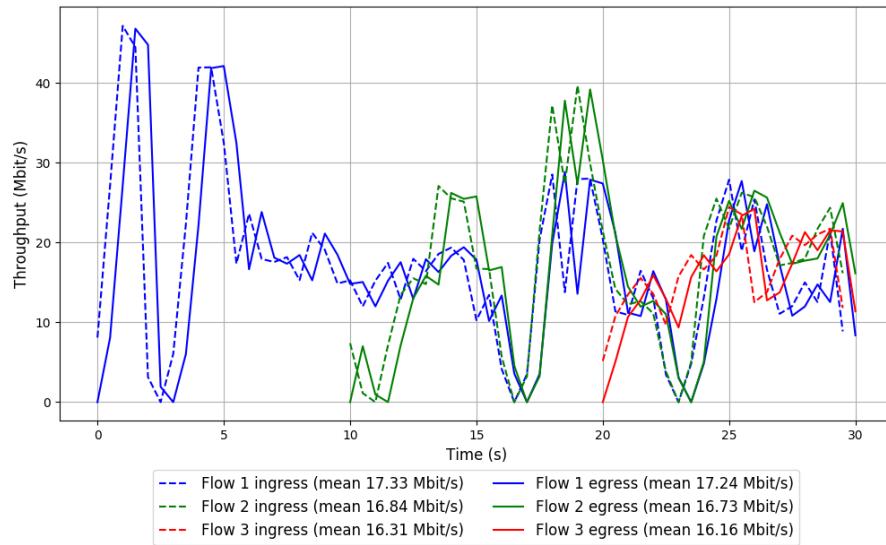


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-26 03:53:40
End at: 2018-10-26 03:54:10
Local clock offset: 1.442 ms
Remote clock offset: -5.925 ms

# Below is generated by plot.py at 2018-10-26 04:40:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.75 Mbit/s
95th percentile per-packet one-way delay: 6.227 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 17.24 Mbit/s
95th percentile per-packet one-way delay: 6.388 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 16.73 Mbit/s
95th percentile per-packet one-way delay: 5.961 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 16.16 Mbit/s
95th percentile per-packet one-way delay: 6.077 ms
Loss rate: 0.87%
```

Run 4: Report of LEDBAT — Data Link

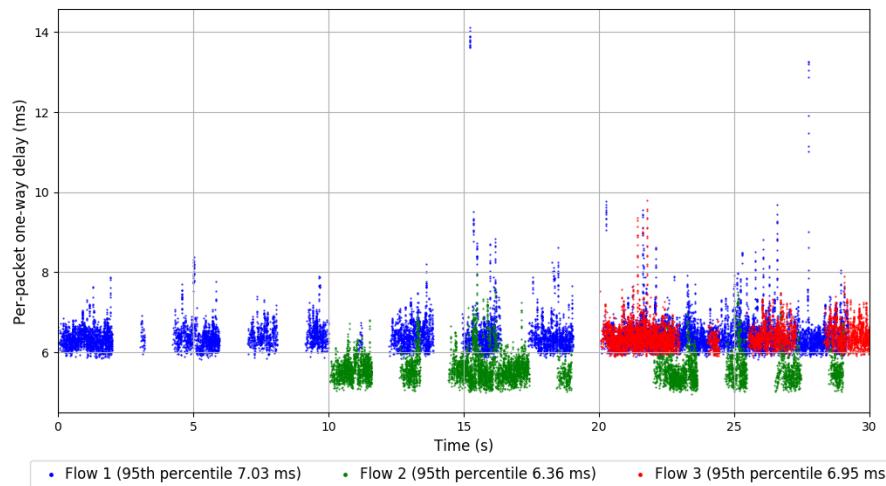
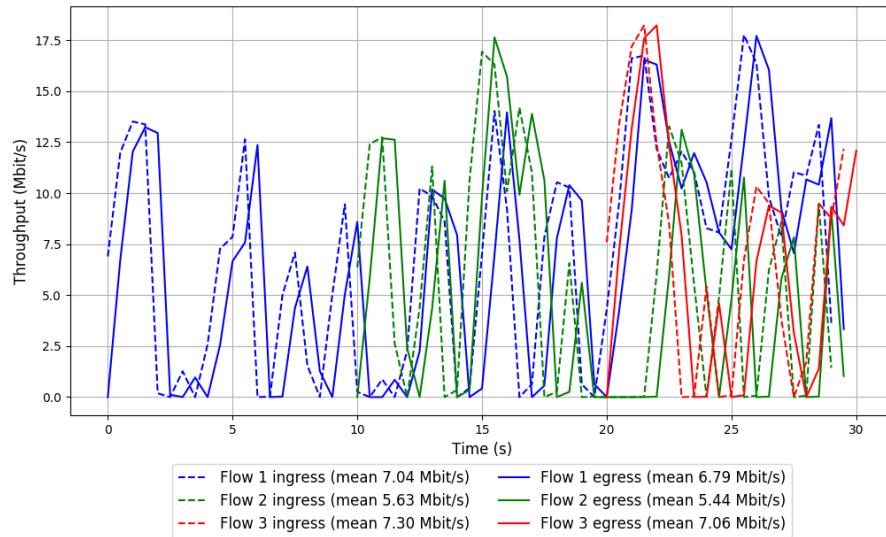


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-26 04:15:03
End at: 2018-10-26 04:15:33
Local clock offset: 0.228 ms
Remote clock offset: -6.826 ms

# Below is generated by plot.py at 2018-10-26 04:40:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.42 Mbit/s
95th percentile per-packet one-way delay: 6.907 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 7.026 ms
Loss rate: 3.42%
-- Flow 2:
Average throughput: 5.44 Mbit/s
95th percentile per-packet one-way delay: 6.357 ms
Loss rate: 3.49%
-- Flow 3:
Average throughput: 7.06 Mbit/s
95th percentile per-packet one-way delay: 6.947 ms
Loss rate: 3.29%
```

Run 5: Report of LEDBAT — Data Link

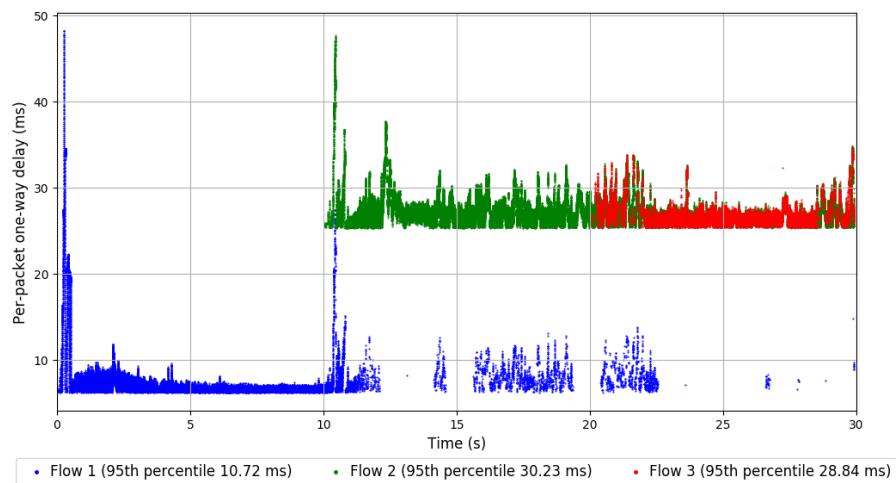
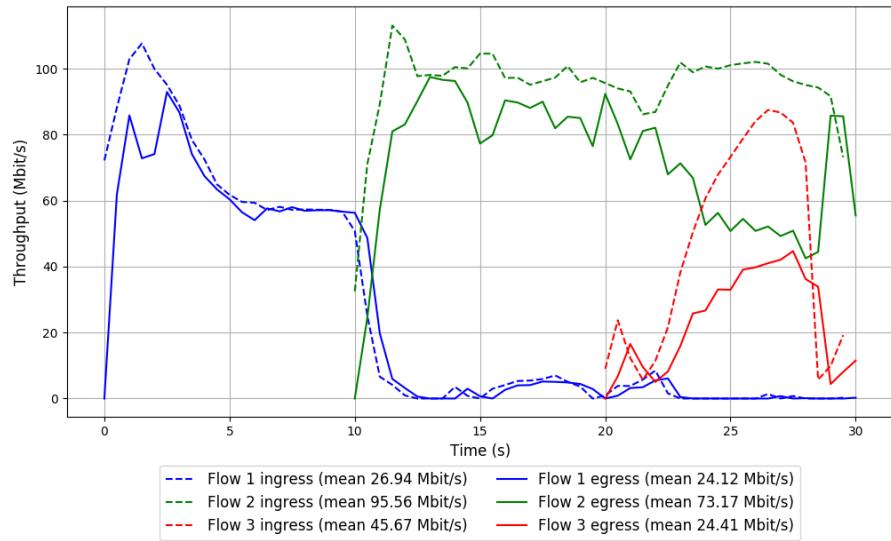


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-26 03:07:46
End at: 2018-10-26 03:08:16
Local clock offset: 0.519 ms
Remote clock offset: -5.309 ms

# Below is generated by plot.py at 2018-10-26 04:41:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.77 Mbit/s
95th percentile per-packet one-way delay: 29.518 ms
Loss rate: 23.46%
-- Flow 1:
Average throughput: 24.12 Mbit/s
95th percentile per-packet one-way delay: 10.725 ms
Loss rate: 10.44%
-- Flow 2:
Average throughput: 73.17 Mbit/s
95th percentile per-packet one-way delay: 30.226 ms
Loss rate: 23.49%
-- Flow 3:
Average throughput: 24.41 Mbit/s
95th percentile per-packet one-way delay: 28.838 ms
Loss rate: 46.60%
```

Run 1: Report of Indigo-Muses — Data Link

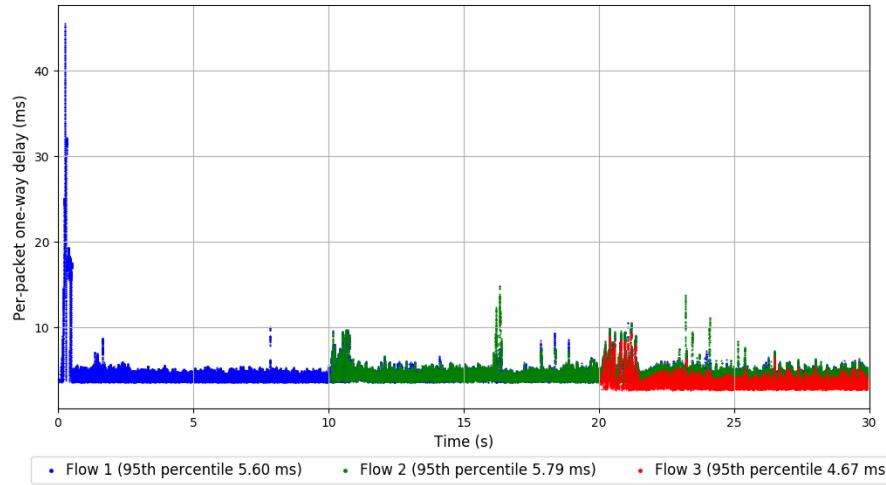
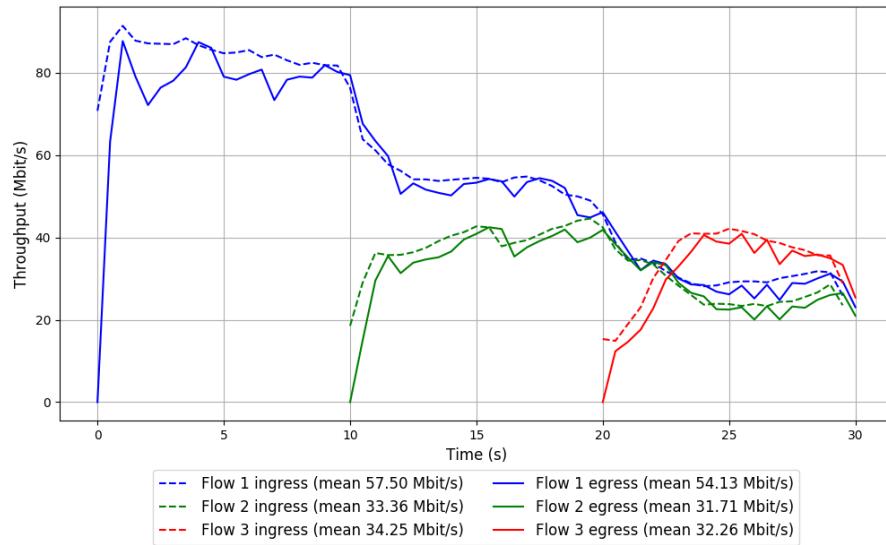


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-26 03:28:51
End at: 2018-10-26 03:29:21
Local clock offset: 2.893 ms
Remote clock offset: -7.35 ms

# Below is generated by plot.py at 2018-10-26 04:41:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.86 Mbit/s
95th percentile per-packet one-way delay: 5.586 ms
Loss rate: 5.63%
-- Flow 1:
Average throughput: 54.13 Mbit/s
95th percentile per-packet one-way delay: 5.596 ms
Loss rate: 5.86%
-- Flow 2:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 5.794 ms
Loss rate: 4.95%
-- Flow 3:
Average throughput: 32.26 Mbit/s
95th percentile per-packet one-way delay: 4.670 ms
Loss rate: 5.80%
```

Run 2: Report of Indigo-Muses — Data Link

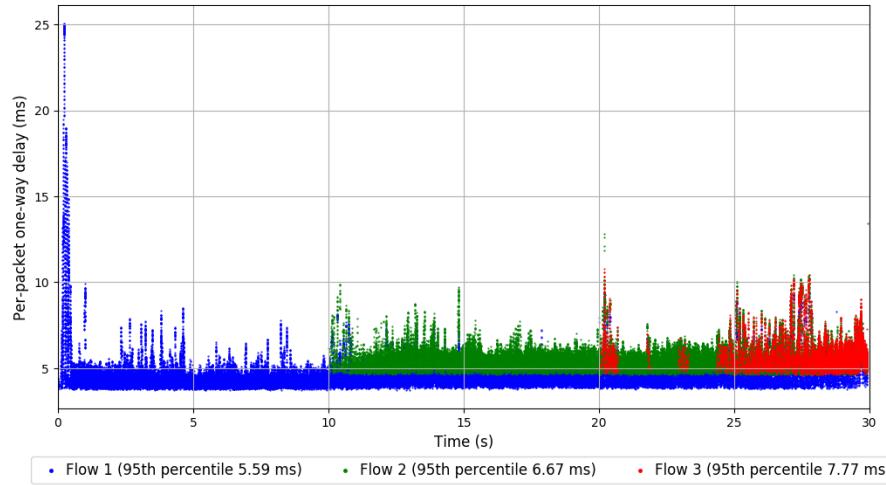
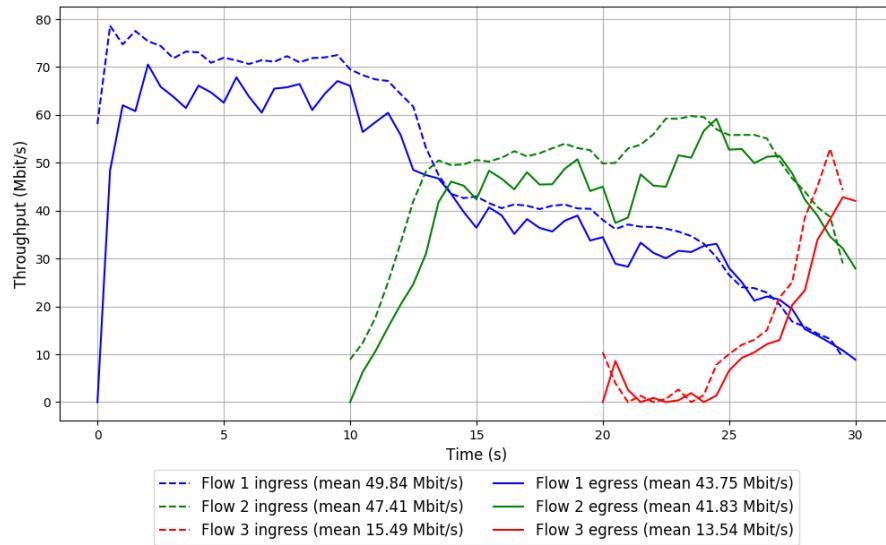


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-26 03:50:09
End at: 2018-10-26 03:50:39
Local clock offset: 1.968 ms
Remote clock offset: -5.796 ms

# Below is generated by plot.py at 2018-10-26 04:41:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.04 Mbit/s
95th percentile per-packet one-way delay: 6.447 ms
Loss rate: 12.07%
-- Flow 1:
Average throughput: 43.75 Mbit/s
95th percentile per-packet one-way delay: 5.592 ms
Loss rate: 12.22%
-- Flow 2:
Average throughput: 41.83 Mbit/s
95th percentile per-packet one-way delay: 6.665 ms
Loss rate: 11.74%
-- Flow 3:
Average throughput: 13.54 Mbit/s
95th percentile per-packet one-way delay: 7.771 ms
Loss rate: 12.56%
```

Run 3: Report of Indigo-Muses — Data Link

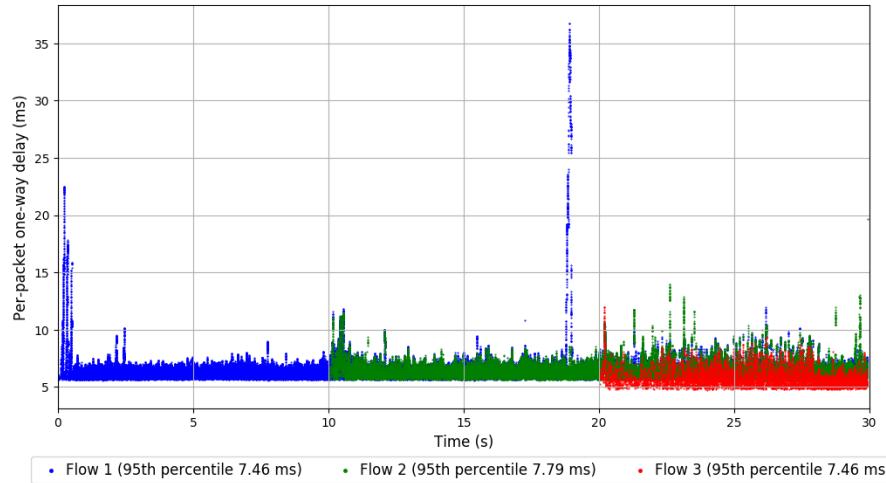
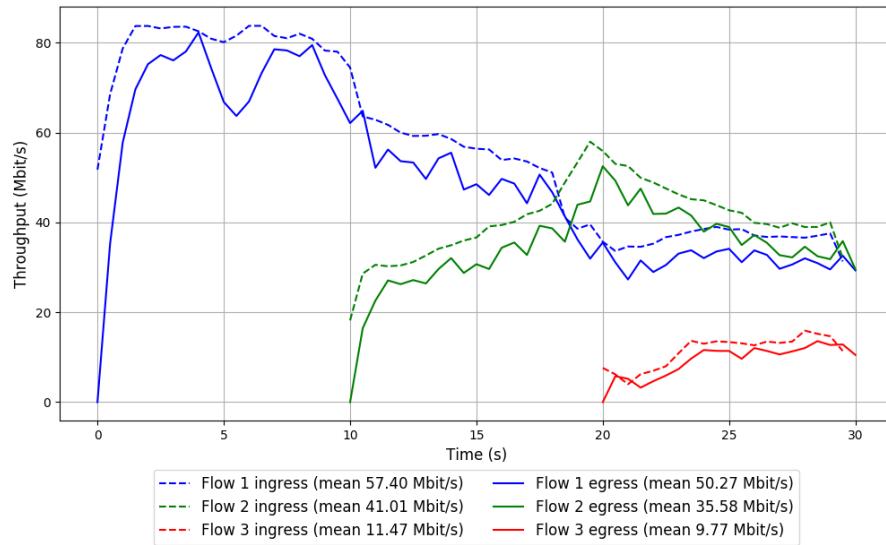


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-26 04:11:31
End at: 2018-10-26 04:12:01
Local clock offset: 0.692 ms
Remote clock offset: -6.528 ms

# Below is generated by plot.py at 2018-10-26 04:41:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.15 Mbit/s
95th percentile per-packet one-way delay: 7.572 ms
Loss rate: 12.76%
-- Flow 1:
Average throughput: 50.27 Mbit/s
95th percentile per-packet one-way delay: 7.458 ms
Loss rate: 12.43%
-- Flow 2:
Average throughput: 35.58 Mbit/s
95th percentile per-packet one-way delay: 7.785 ms
Loss rate: 13.18%
-- Flow 3:
Average throughput: 9.77 Mbit/s
95th percentile per-packet one-way delay: 7.459 ms
Loss rate: 14.82%
```

Run 4: Report of Indigo-Muses — Data Link

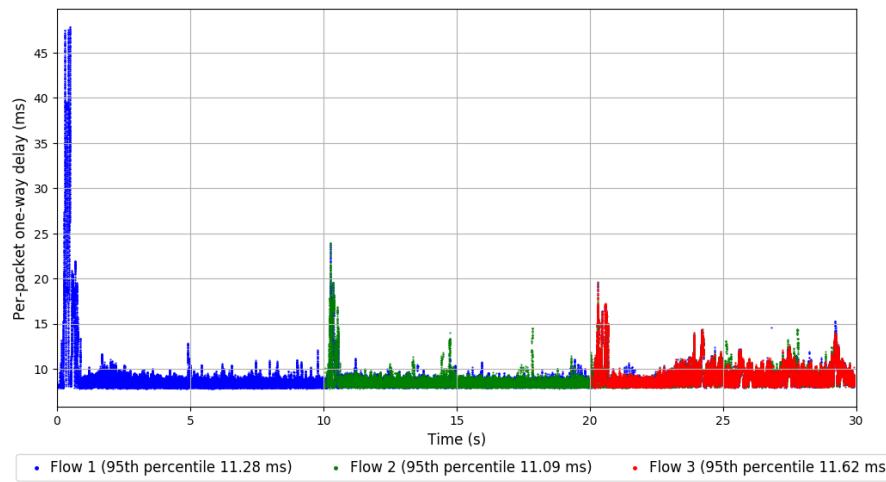
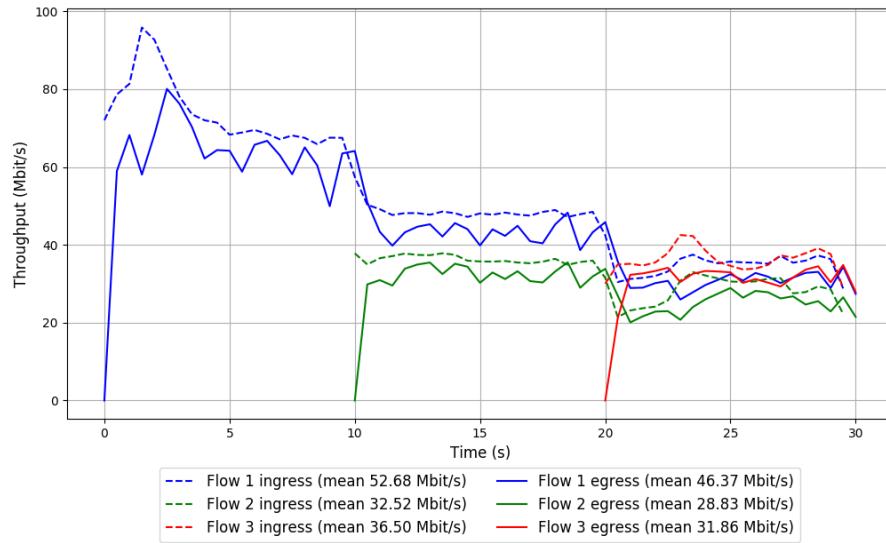


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-26 04:32:42
End at: 2018-10-26 04:33:12
Local clock offset: 3.582 ms
Remote clock offset: -1.886 ms

# Below is generated by plot.py at 2018-10-26 04:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.07 Mbit/s
95th percentile per-packet one-way delay: 11.300 ms
Loss rate: 11.92%
-- Flow 1:
Average throughput: 46.37 Mbit/s
95th percentile per-packet one-way delay: 11.275 ms
Loss rate: 11.97%
-- Flow 2:
Average throughput: 28.83 Mbit/s
95th percentile per-packet one-way delay: 11.087 ms
Loss rate: 11.35%
-- Flow 3:
Average throughput: 31.86 Mbit/s
95th percentile per-packet one-way delay: 11.624 ms
Loss rate: 12.71%
```

Run 5: Report of Indigo-Muses — Data Link

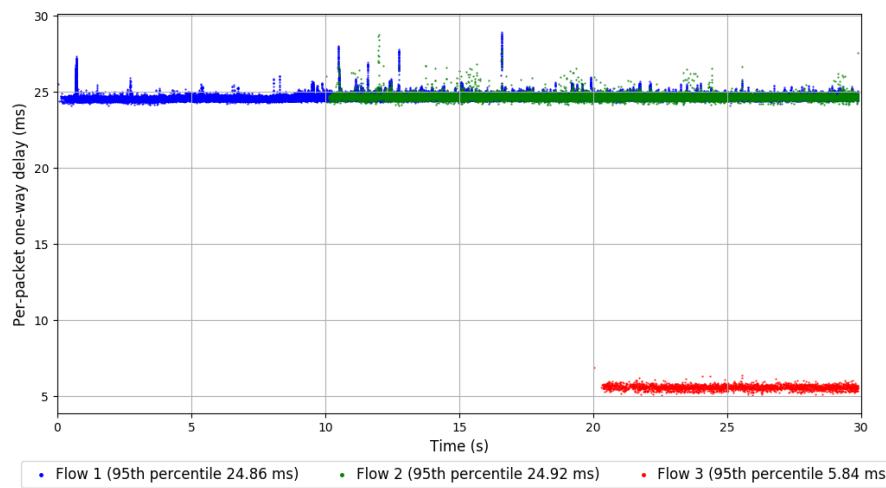
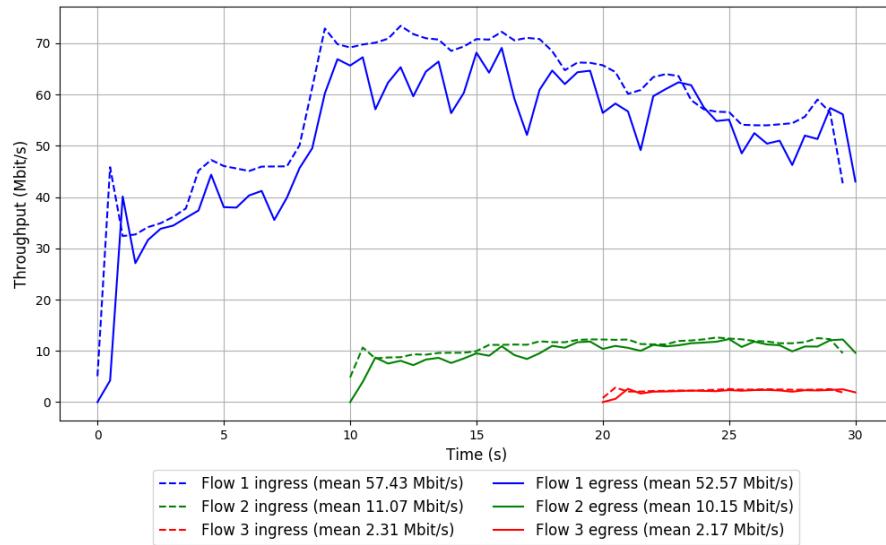


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-10-26 03:06:35
End at: 2018-10-26 03:07:05
Local clock offset: 1.37 ms
Remote clock offset: -5.348 ms

# Below is generated by plot.py at 2018-10-26 04:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.03 Mbit/s
95th percentile per-packet one-way delay: 24.865 ms
Loss rate: 8.48%
-- Flow 1:
Average throughput: 52.57 Mbit/s
95th percentile per-packet one-way delay: 24.857 ms
Loss rate: 8.52%
-- Flow 2:
Average throughput: 10.15 Mbit/s
95th percentile per-packet one-way delay: 24.921 ms
Loss rate: 8.40%
-- Flow 3:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 5.837 ms
Loss rate: 6.20%
```

Run 1: Report of PCC-Allegro — Data Link

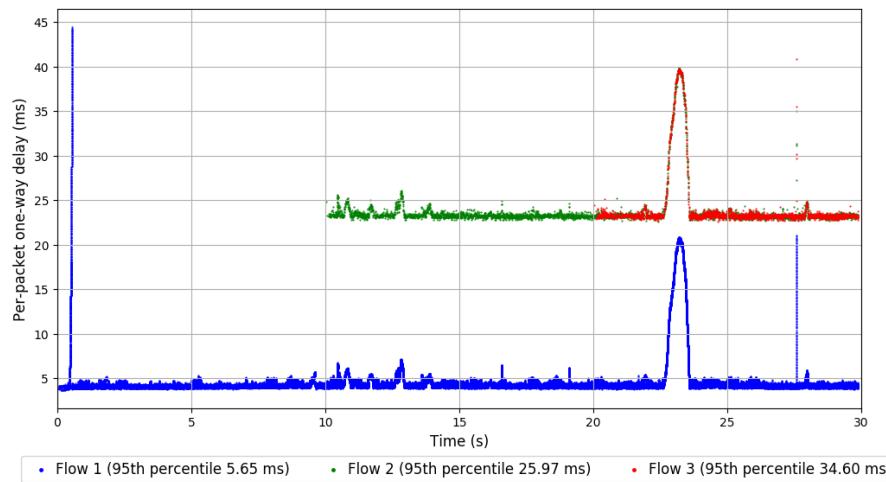
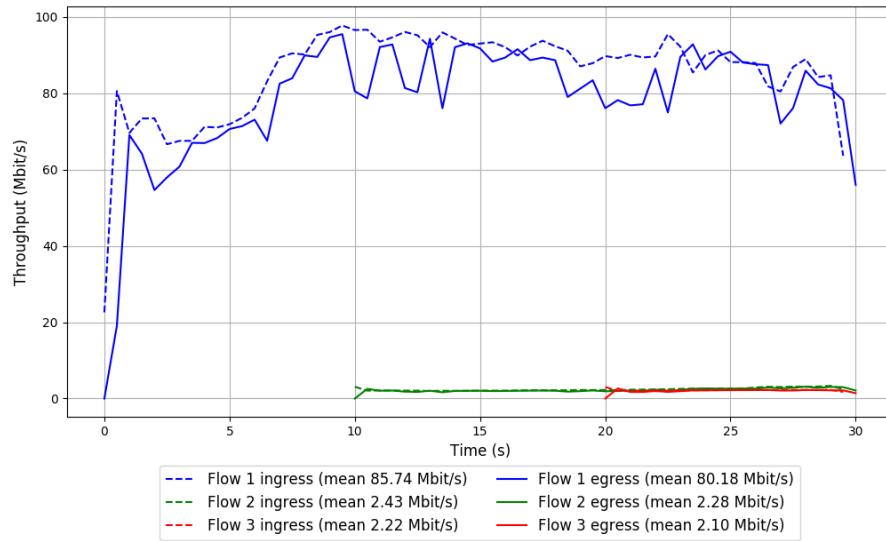


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-26 03:27:41
End at: 2018-10-26 03:28:11
Local clock offset: 3.87 ms
Remote clock offset: -5.23 ms

# Below is generated by plot.py at 2018-10-26 04:41:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.38 Mbit/s
95th percentile per-packet one-way delay: 17.291 ms
Loss rate: 6.48%
-- Flow 1:
Average throughput: 80.18 Mbit/s
95th percentile per-packet one-way delay: 5.651 ms
Loss rate: 6.48%
-- Flow 2:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 25.972 ms
Loss rate: 6.54%
-- Flow 3:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 34.598 ms
Loss rate: 5.57%
```

Run 2: Report of PCC-Allegro — Data Link

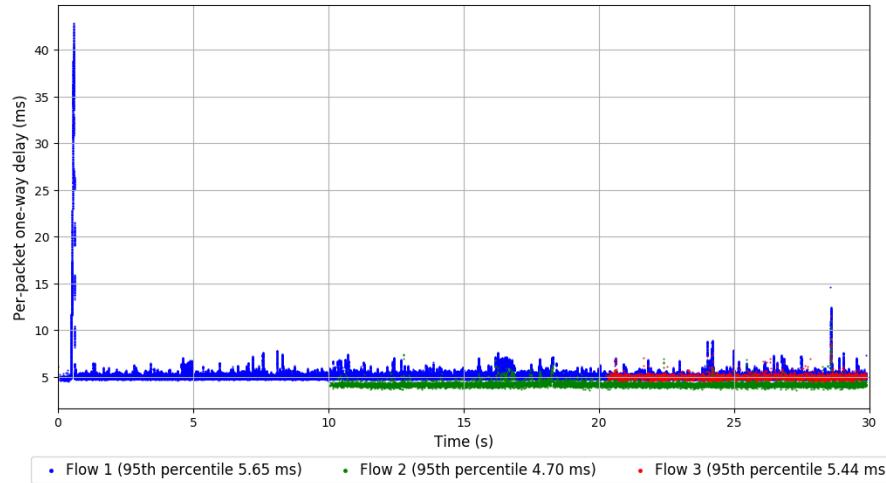
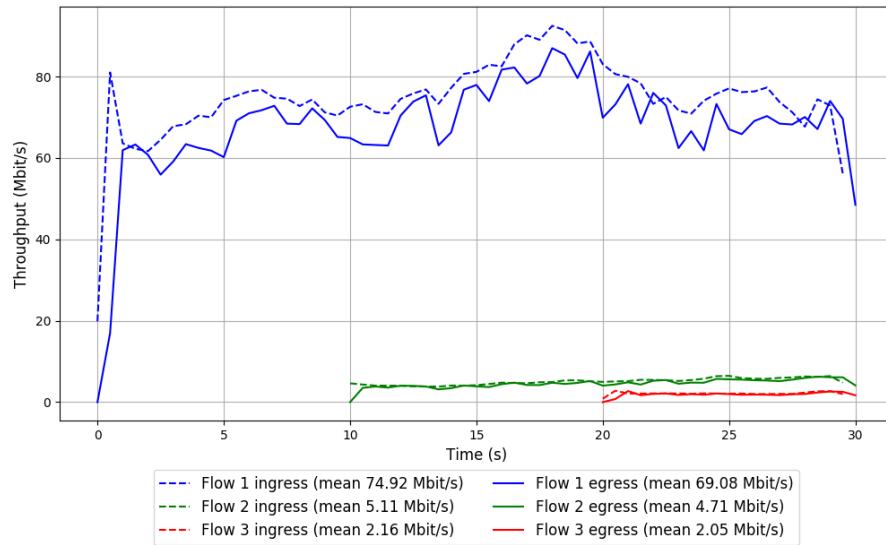


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-26 03:48:57
End at: 2018-10-26 03:49:27
Local clock offset: 1.575 ms
Remote clock offset: -6.172 ms

# Below is generated by plot.py at 2018-10-26 04:41:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.87 Mbit/s
95th percentile per-packet one-way delay: 5.626 ms
Loss rate: 7.80%
-- Flow 1:
Average throughput: 69.08 Mbit/s
95th percentile per-packet one-way delay: 5.653 ms
Loss rate: 7.80%
-- Flow 2:
Average throughput: 4.71 Mbit/s
95th percentile per-packet one-way delay: 4.701 ms
Loss rate: 7.93%
-- Flow 3:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 5.442 ms
Loss rate: 7.64%
```

Run 3: Report of PCC-Allegro — Data Link

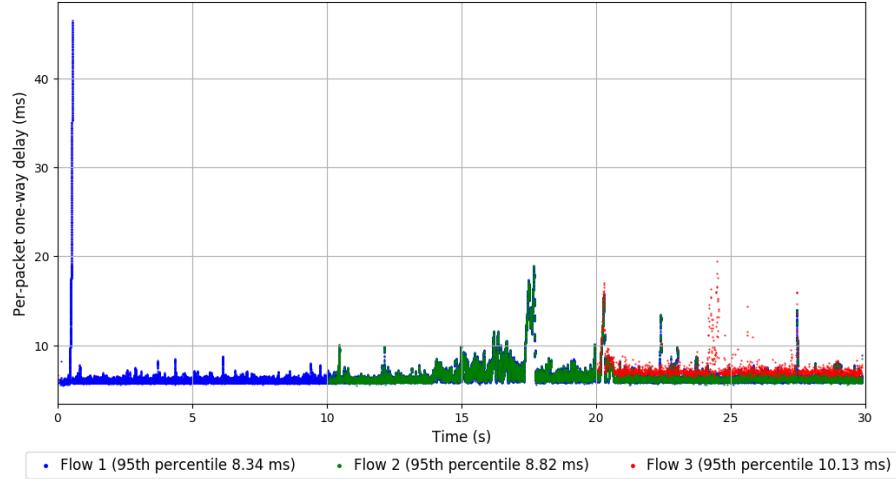
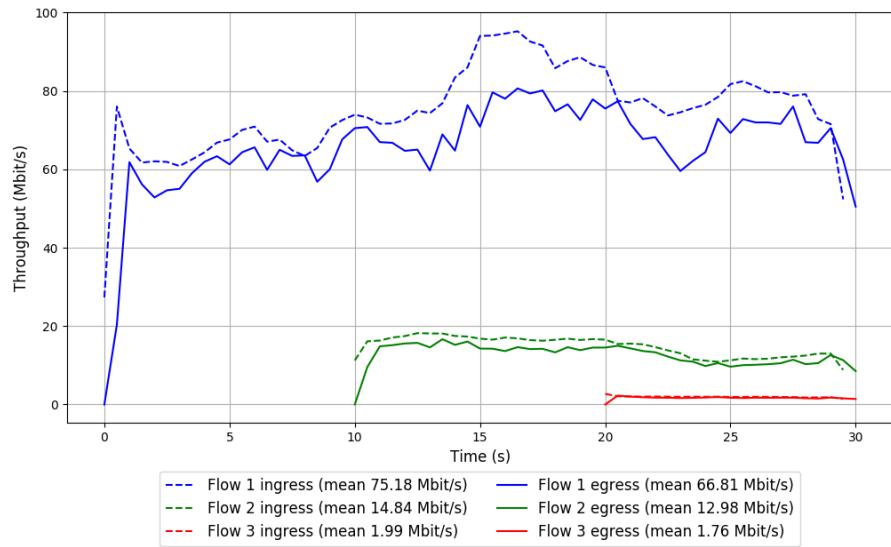


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-26 04:10:14
End at: 2018-10-26 04:10:44
Local clock offset: 0.524 ms
Remote clock offset: -5.701 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.02 Mbit/s
95th percentile per-packet one-way delay: 8.404 ms
Loss rate: 11.30%
-- Flow 1:
Average throughput: 66.81 Mbit/s
95th percentile per-packet one-way delay: 8.335 ms
Loss rate: 11.13%
-- Flow 2:
Average throughput: 12.98 Mbit/s
95th percentile per-packet one-way delay: 8.822 ms
Loss rate: 12.56%
-- Flow 3:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 10.135 ms
Loss rate: 11.65%
```

Run 4: Report of PCC-Allegro — Data Link

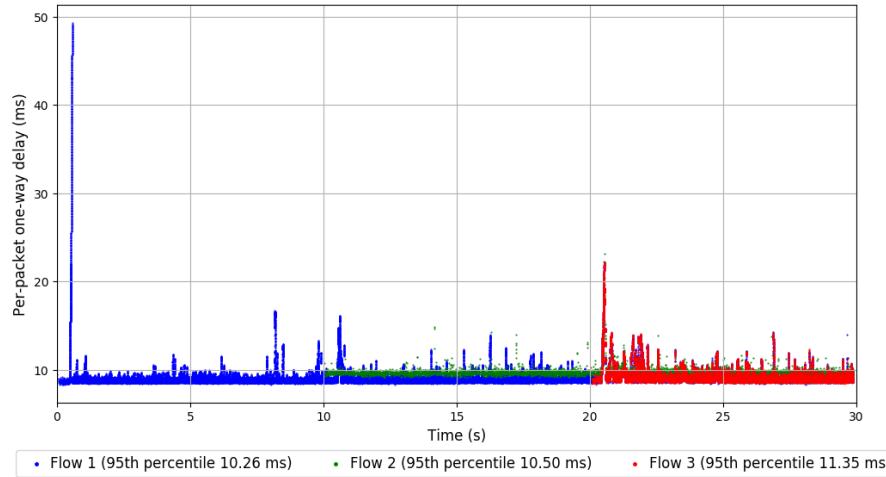
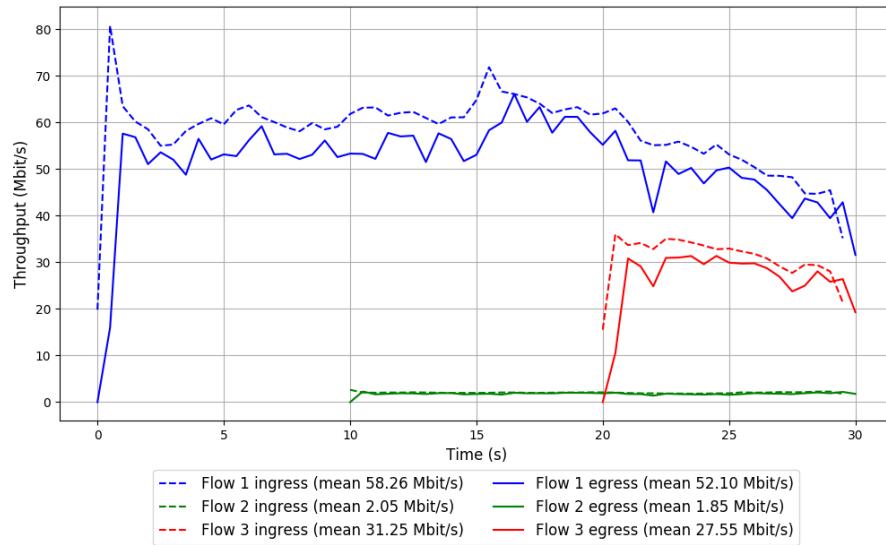


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-26 04:31:32
End at: 2018-10-26 04:32:02
Local clock offset: 2.725 ms
Remote clock offset: -1.181 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.42 Mbit/s
95th percentile per-packet one-way delay: 10.474 ms
Loss rate: 10.75%
-- Flow 1:
Average throughput: 52.10 Mbit/s
95th percentile per-packet one-way delay: 10.262 ms
Loss rate: 10.57%
-- Flow 2:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 10.501 ms
Loss rate: 9.89%
-- Flow 3:
Average throughput: 27.55 Mbit/s
95th percentile per-packet one-way delay: 11.347 ms
Loss rate: 11.84%
```

Run 5: Report of PCC-Allegro — Data Link

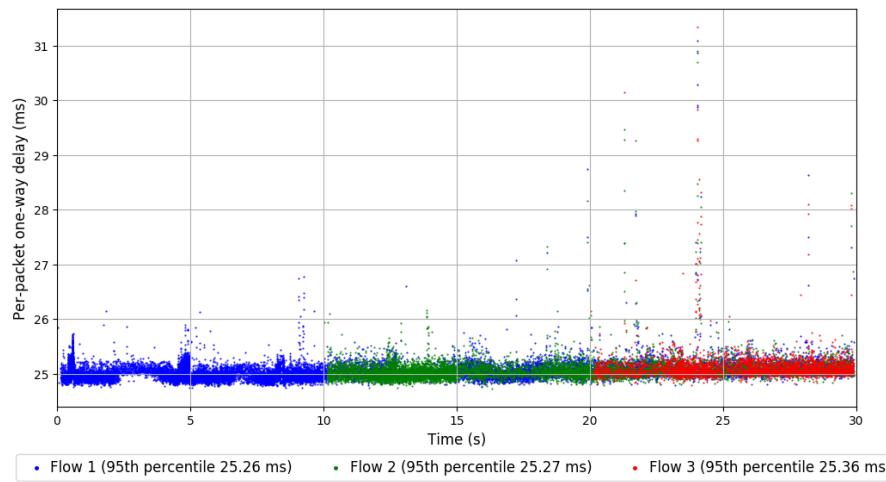
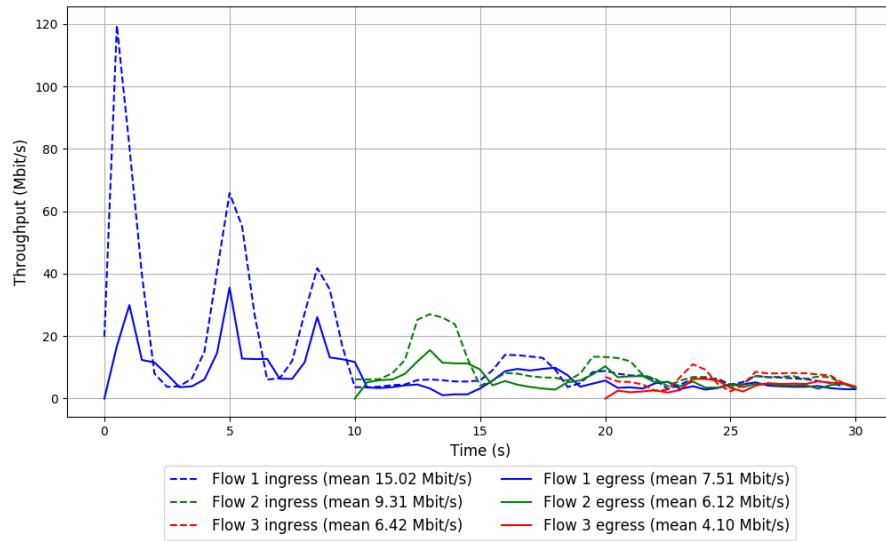


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-10-26 03:01:38
End at: 2018-10-26 03:02:08
Local clock offset: 1.319 ms
Remote clock offset: -4.495 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 25.276 ms
Loss rate: 44.63%
-- Flow 1:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 25.264 ms
Loss rate: 50.03%
-- Flow 2:
Average throughput: 6.12 Mbit/s
95th percentile per-packet one-way delay: 25.270 ms
Loss rate: 34.39%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 25.355 ms
Loss rate: 36.33%
```

Run 1: Report of PCC-Expr — Data Link

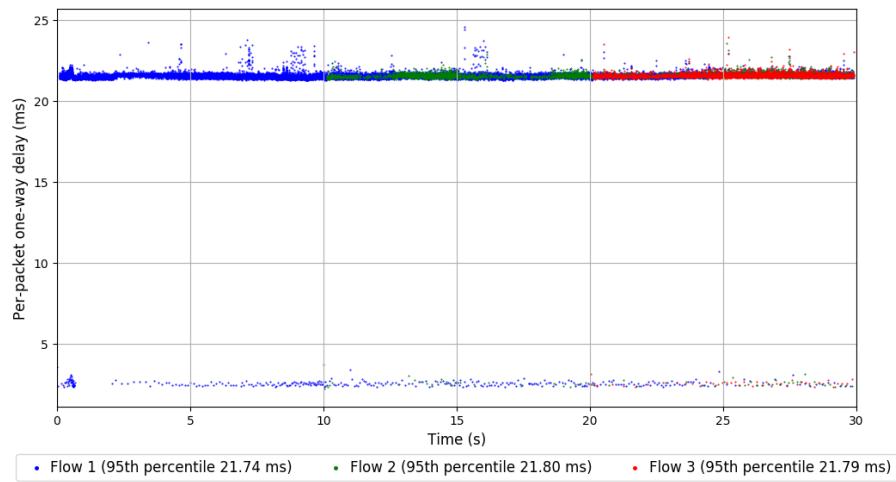
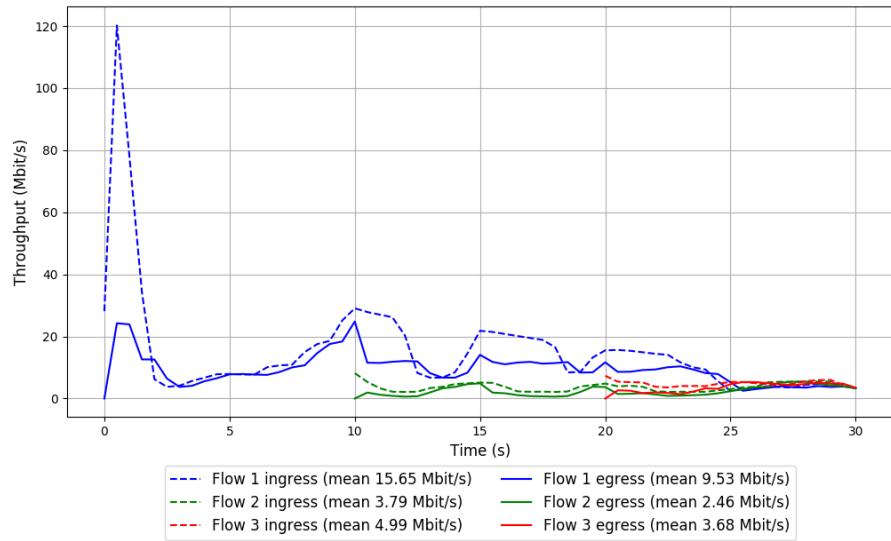


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-26 03:22:51
End at: 2018-10-26 03:23:21
Local clock offset: 4.376 ms
Remote clock offset: -6.123 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.38 Mbit/s
95th percentile per-packet one-way delay: 21.752 ms
Loss rate: 37.53%
-- Flow 1:
Average throughput: 9.53 Mbit/s
95th percentile per-packet one-way delay: 21.736 ms
Loss rate: 39.13%
-- Flow 2:
Average throughput: 2.46 Mbit/s
95th percentile per-packet one-way delay: 21.800 ms
Loss rate: 34.92%
-- Flow 3:
Average throughput: 3.68 Mbit/s
95th percentile per-packet one-way delay: 21.793 ms
Loss rate: 26.27%
```

Run 2: Report of PCC-Expr — Data Link

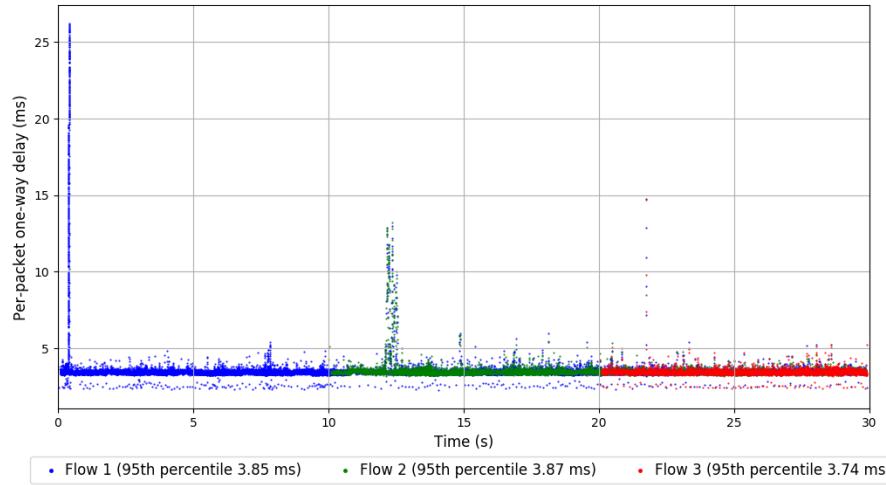
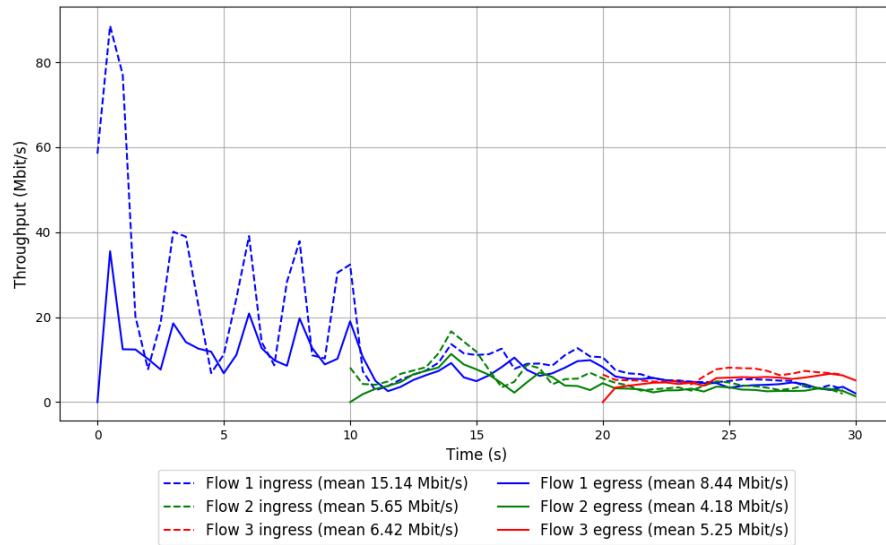


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-26 03:44:08
End at: 2018-10-26 03:44:38
Local clock offset: 3.82 ms
Remote clock offset: -5.56 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 3.833 ms
Loss rate: 38.38%
-- Flow 1:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 3.848 ms
Loss rate: 44.25%
-- Flow 2:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 3.868 ms
Loss rate: 26.11%
-- Flow 3:
Average throughput: 5.25 Mbit/s
95th percentile per-packet one-way delay: 3.743 ms
Loss rate: 18.20%
```

Run 3: Report of PCC-Expr — Data Link

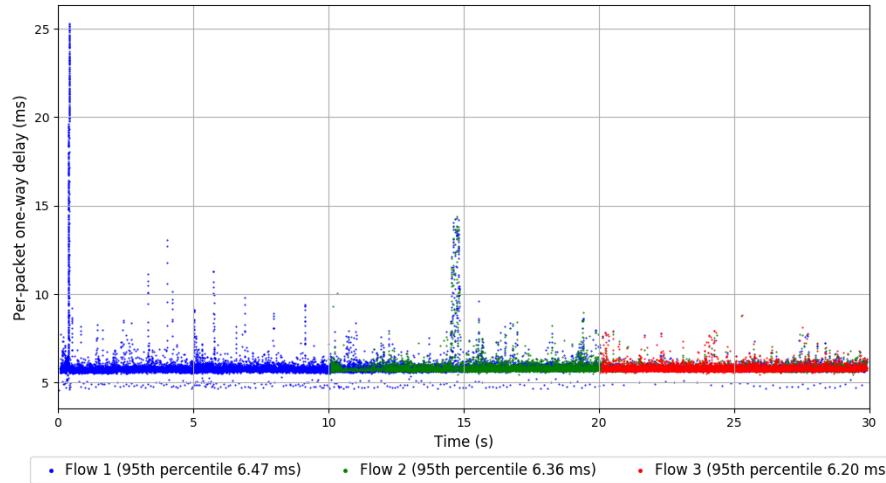
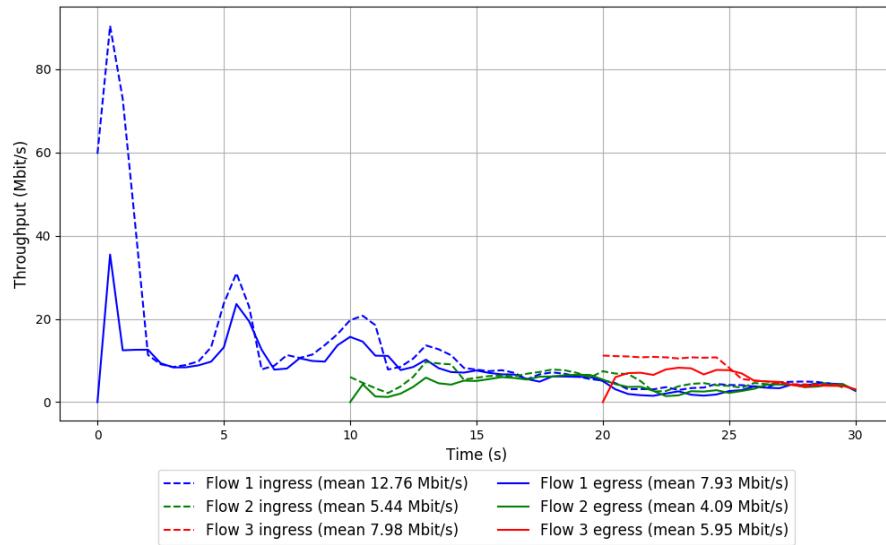


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-26 04:05:15
End at: 2018-10-26 04:05:45
Local clock offset: 1.141 ms
Remote clock offset: -5.874 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 6.373 ms
Loss rate: 33.66%
-- Flow 1:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 6.469 ms
Loss rate: 37.87%
-- Flow 2:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 6.356 ms
Loss rate: 24.82%
-- Flow 3:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 6.199 ms
Loss rate: 25.41%
```

Run 4: Report of PCC-Expr — Data Link

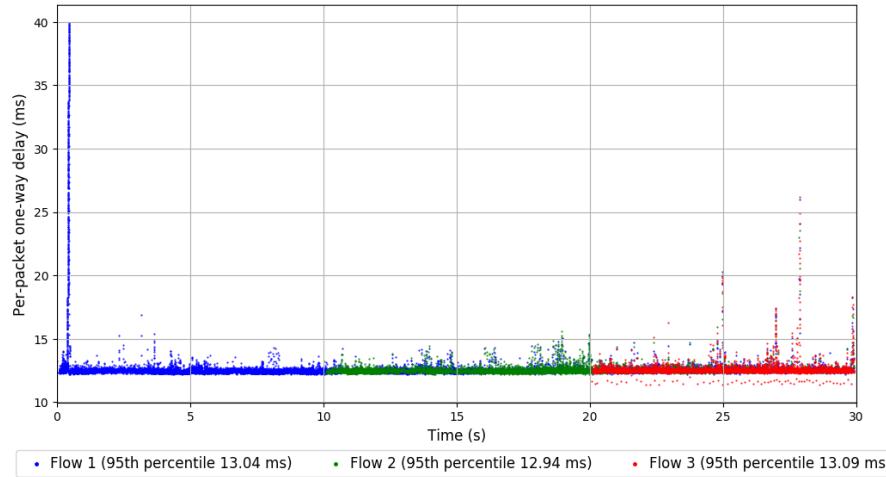
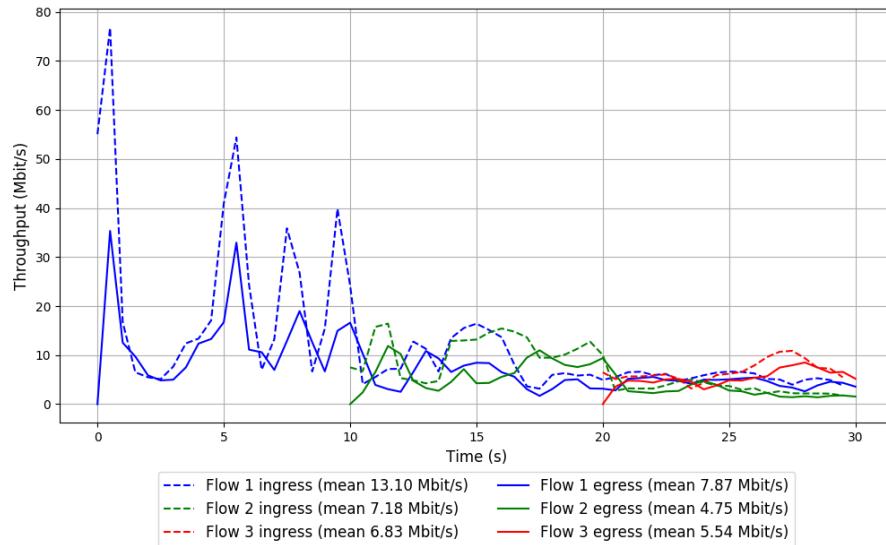


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-26 04:26:41
End at: 2018-10-26 04:27:11
Local clock offset: -0.175 ms
Remote clock offset: -1.03 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.86 Mbit/s
95th percentile per-packet one-way delay: 13.005 ms
Loss rate: 36.13%
-- Flow 1:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 13.036 ms
Loss rate: 39.94%
-- Flow 2:
Average throughput: 4.75 Mbit/s
95th percentile per-packet one-way delay: 12.936 ms
Loss rate: 33.82%
-- Flow 3:
Average throughput: 5.54 Mbit/s
95th percentile per-packet one-way delay: 13.086 ms
Loss rate: 18.87%
```

Run 5: Report of PCC-Expr — Data Link

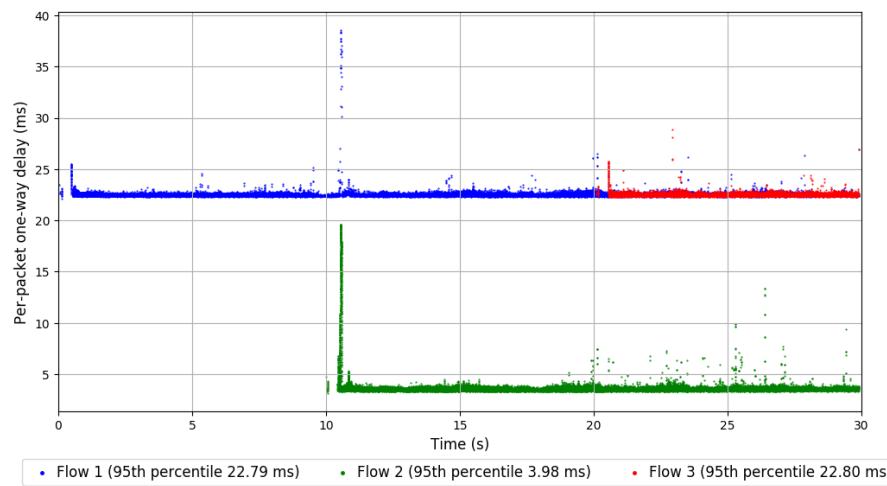
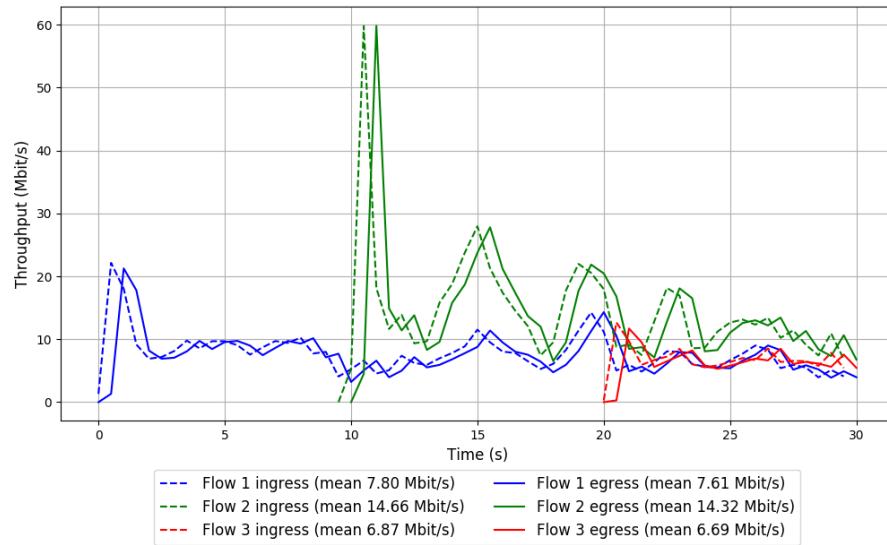


```
Run 1: Statistics of QUIC Cubic
```

```
Start at: 2018-10-26 02:52:19
End at: 2018-10-26 02:52:49
Local clock offset: 3.109 ms
Remote clock offset: -4.828 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.34 Mbit/s
95th percentile per-packet one-way delay: 22.709 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 22.789 ms
Loss rate: 2.54%
-- Flow 2:
Average throughput: 14.32 Mbit/s
95th percentile per-packet one-way delay: 3.982 ms
Loss rate: 2.37%
-- Flow 3:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 22.802 ms
Loss rate: 2.81%
```

Run 1: Report of QUIC Cubic — Data Link

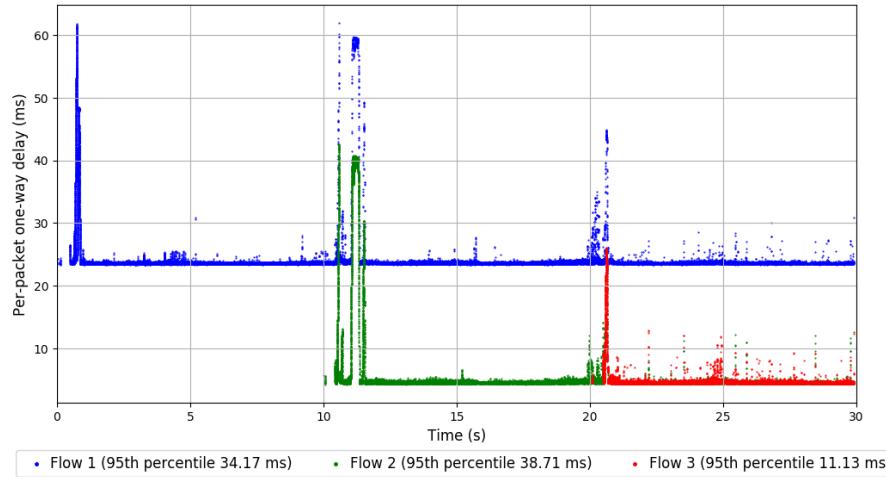
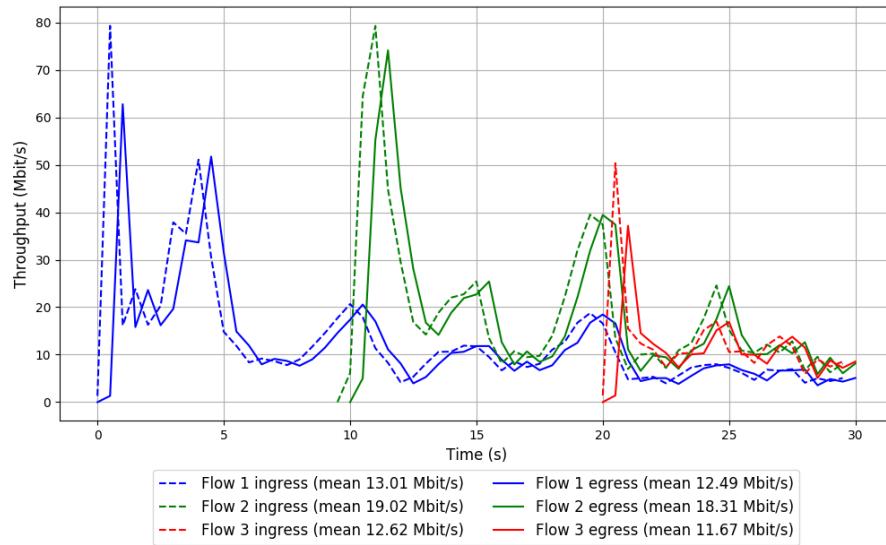


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-26 03:13:33
End at: 2018-10-26 03:14:03
Local clock offset: 3.034 ms
Remote clock offset: -5.006 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.54 Mbit/s
95th percentile per-packet one-way delay: 33.360 ms
Loss rate: 4.38%
-- Flow 1:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 34.166 ms
Loss rate: 4.06%
-- Flow 2:
Average throughput: 18.31 Mbit/s
95th percentile per-packet one-way delay: 38.713 ms
Loss rate: 3.68%
-- Flow 3:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 11.130 ms
Loss rate: 7.48%
```

Run 2: Report of QUIC Cubic — Data Link

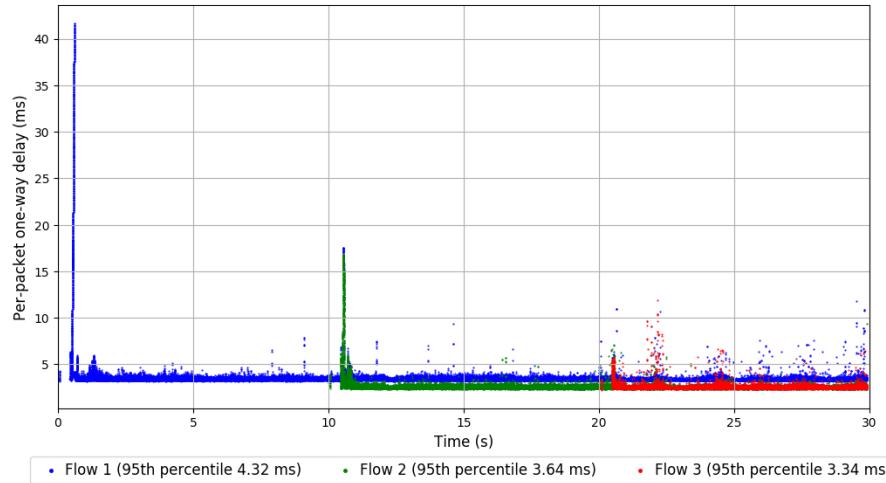
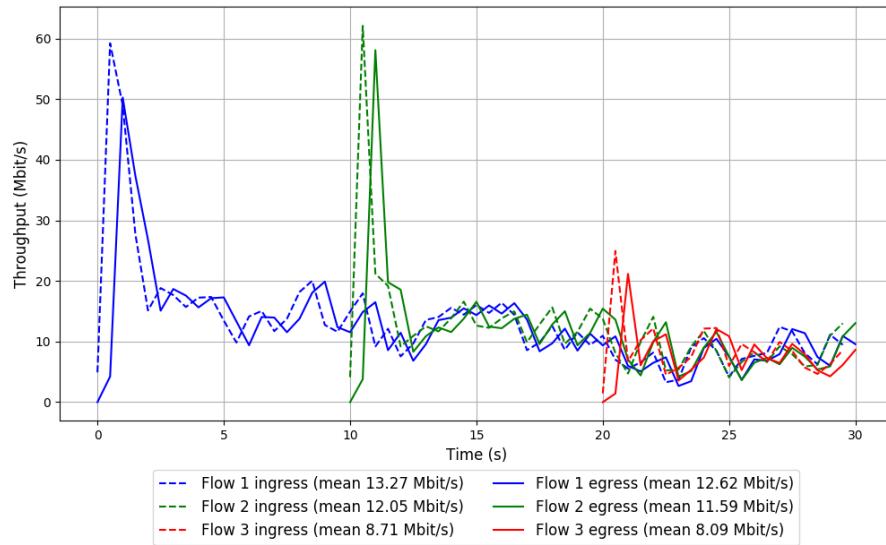


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-26 03:34:39
End at: 2018-10-26 03:35:09
Local clock offset: 4.591 ms
Remote clock offset: -5.478 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.99 Mbit/s
95th percentile per-packet one-way delay: 4.088 ms
Loss rate: 4.82%
-- Flow 1:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 4.315 ms
Loss rate: 4.94%
-- Flow 2:
Average throughput: 11.59 Mbit/s
95th percentile per-packet one-way delay: 3.640 ms
Loss rate: 3.79%
-- Flow 3:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 3.341 ms
Loss rate: 7.10%
```

Run 3: Report of QUIC Cubic — Data Link

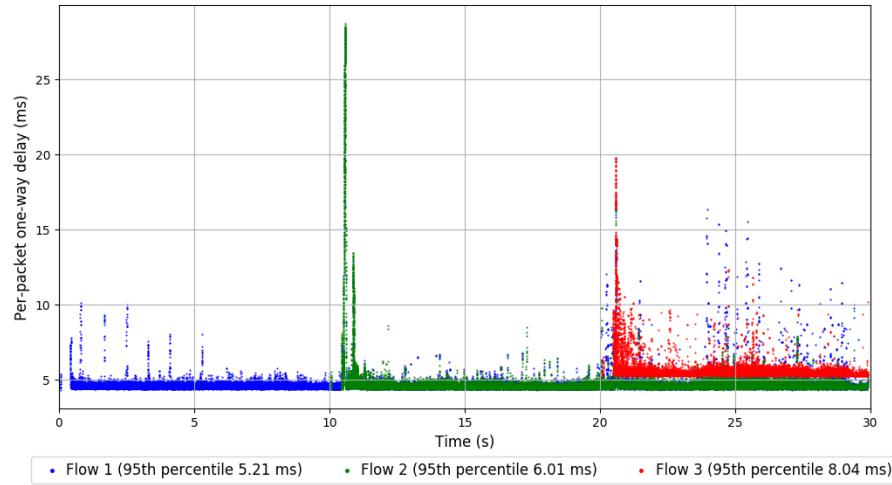
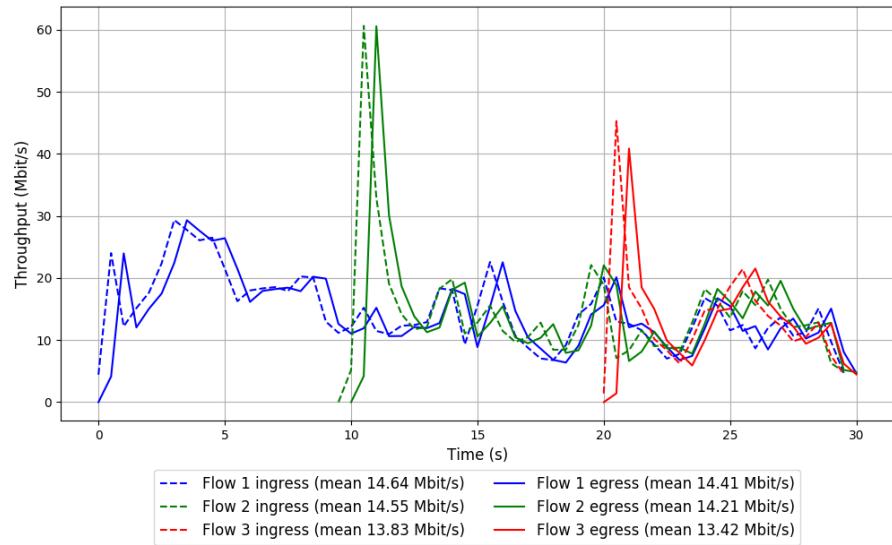


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-26 03:55:55
End at: 2018-10-26 03:56:25
Local clock offset: 1.289 ms
Remote clock offset: -5.743 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.29 Mbit/s
95th percentile per-packet one-way delay: 6.079 ms
Loss rate: 2.05%
-- Flow 1:
Average throughput: 14.41 Mbit/s
95th percentile per-packet one-way delay: 5.206 ms
Loss rate: 1.58%
-- Flow 2:
Average throughput: 14.21 Mbit/s
95th percentile per-packet one-way delay: 6.015 ms
Loss rate: 2.32%
-- Flow 3:
Average throughput: 13.42 Mbit/s
95th percentile per-packet one-way delay: 8.035 ms
Loss rate: 2.96%
```

Run 4: Report of QUIC Cubic — Data Link

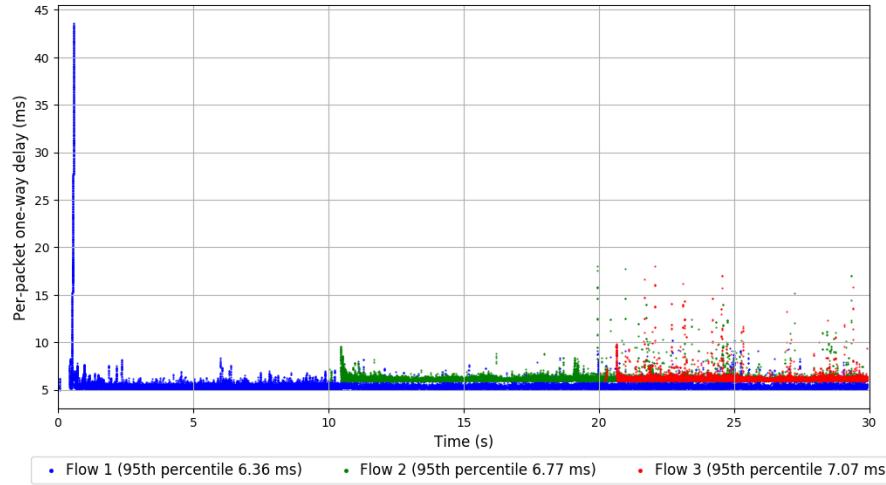
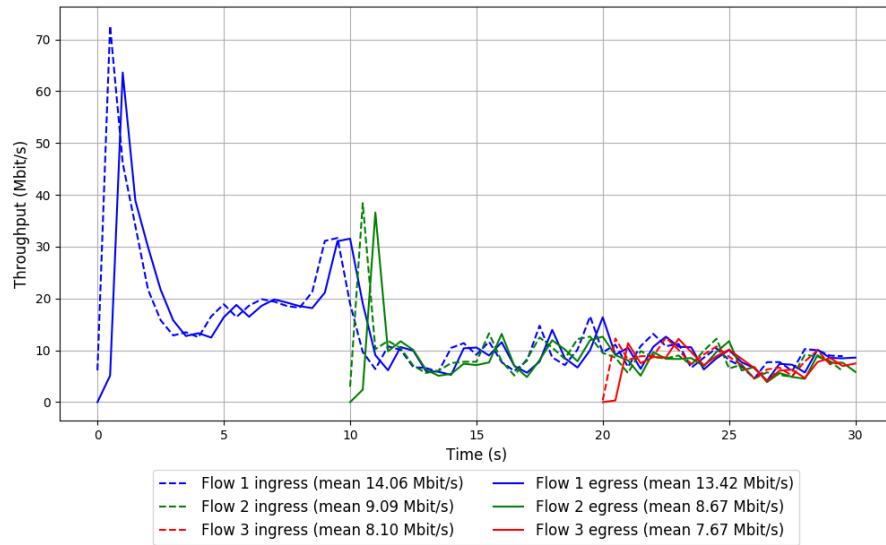


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-26 04:17:21
End at: 2018-10-26 04:17:51
Local clock offset: 0.304 ms
Remote clock offset: -6.694 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.71 Mbit/s
95th percentile per-packet one-way delay: 6.635 ms
Loss rate: 4.65%
-- Flow 1:
Average throughput: 13.42 Mbit/s
95th percentile per-packet one-way delay: 6.362 ms
Loss rate: 4.55%
-- Flow 2:
Average throughput: 8.67 Mbit/s
95th percentile per-packet one-way delay: 6.767 ms
Loss rate: 4.64%
-- Flow 3:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 7.072 ms
Loss rate: 5.20%
```

Run 5: Report of QUIC Cubic — Data Link

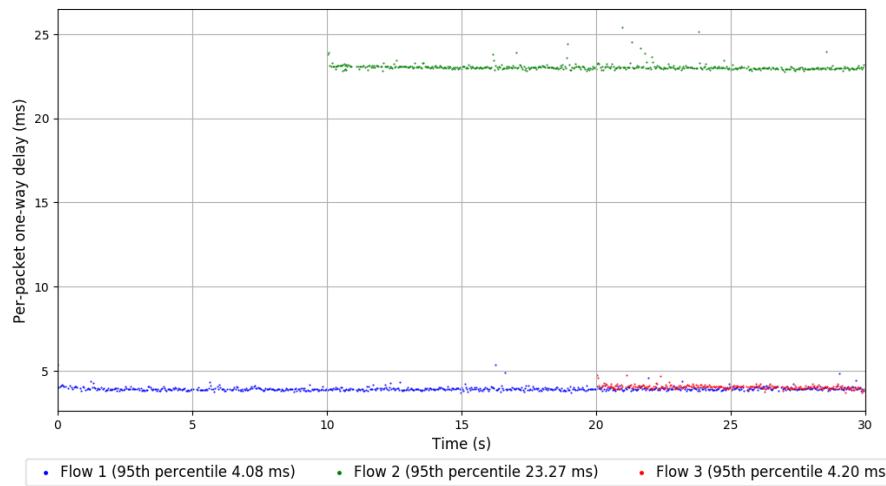
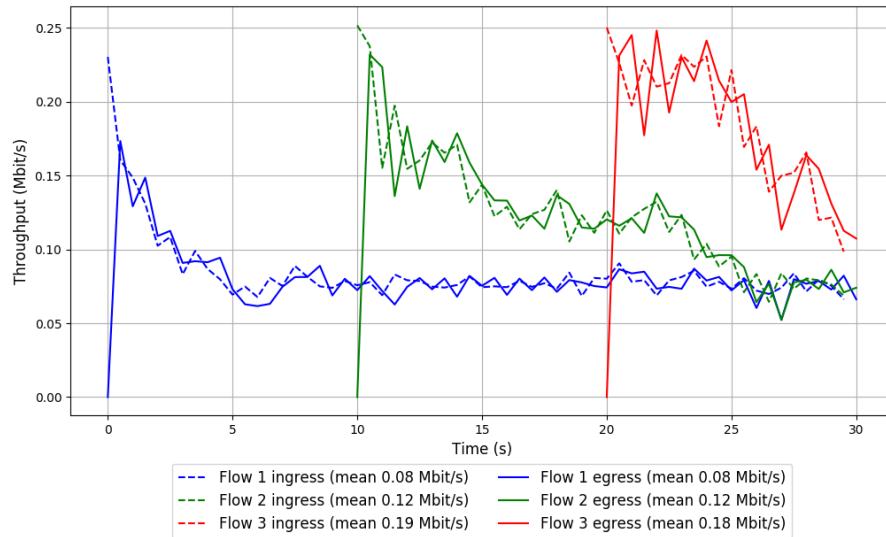


```
Run 1: Statistics of SCReAM

Start at: 2018-10-26 03:10:11
End at: 2018-10-26 03:10:41
Local clock offset: 3.452 ms
Remote clock offset: -4.959 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 23.109 ms
Loss rate: 2.64%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 4.079 ms
Loss rate: 3.64%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 23.266 ms
Loss rate: 2.18%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 4.202 ms
Loss rate: 1.88%
```

Run 1: Report of SCReAM — Data Link

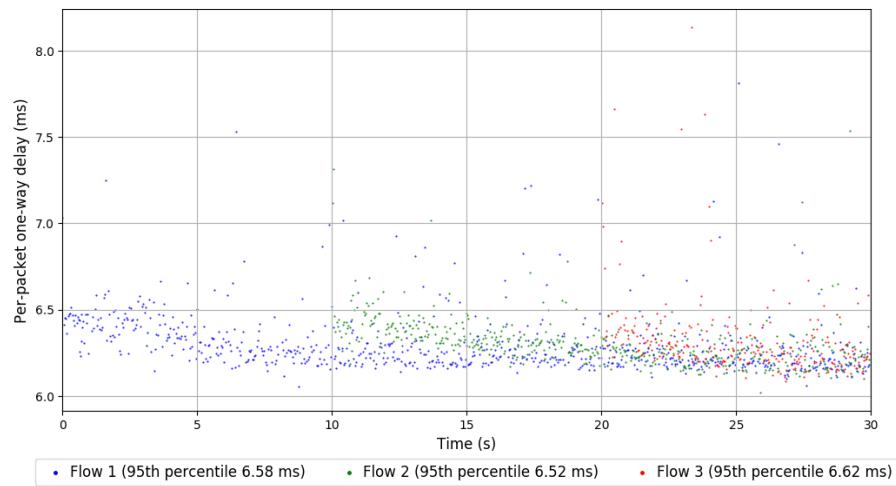
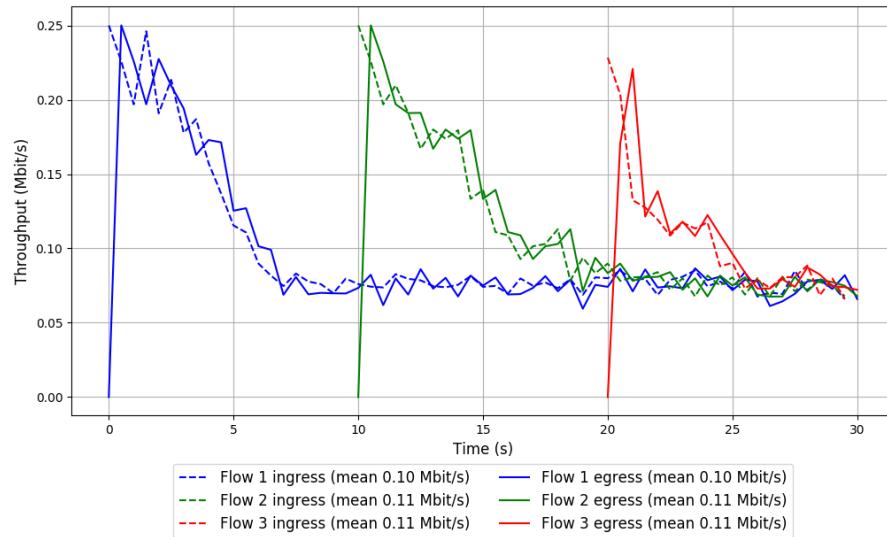


Run 2: Statistics of SCReAM

```
Start at: 2018-10-26 03:31:17
End at: 2018-10-26 03:31:47
Local clock offset: 1.987 ms
Remote clock offset: -5.651 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 6.566 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 6.583 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 6.521 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 6.615 ms
Loss rate: 2.19%
```

Run 2: Report of SCReAM — Data Link

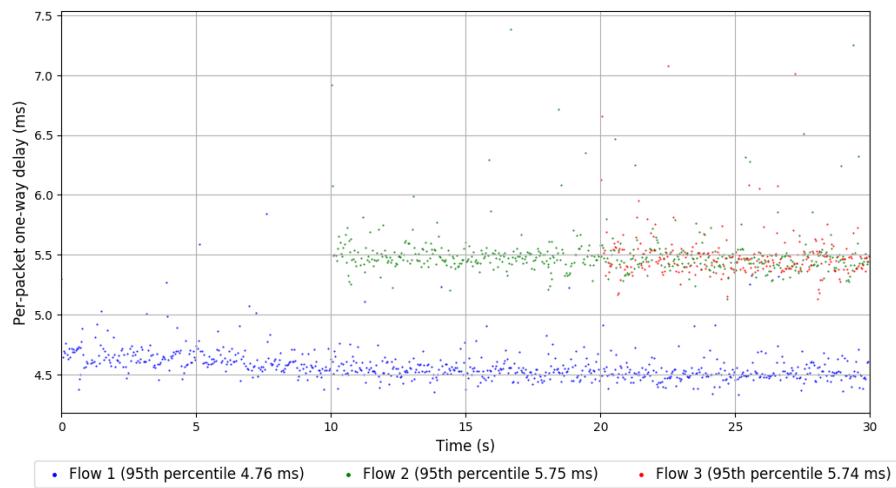
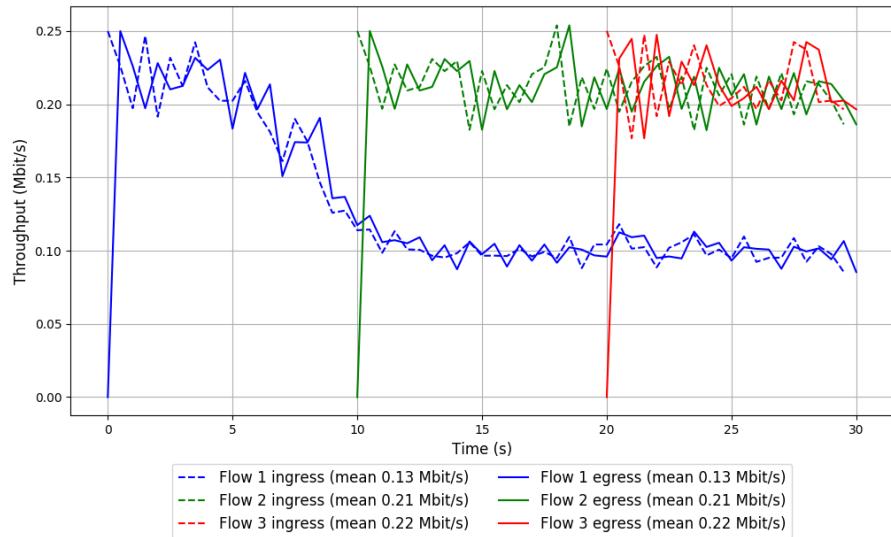


Run 3: Statistics of SCReAM

```
Start at: 2018-10-26 03:52:33
End at: 2018-10-26 03:53:03
Local clock offset: 1.623 ms
Remote clock offset: -5.495 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 5.626 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 4.756 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 5.747 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 5.741 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

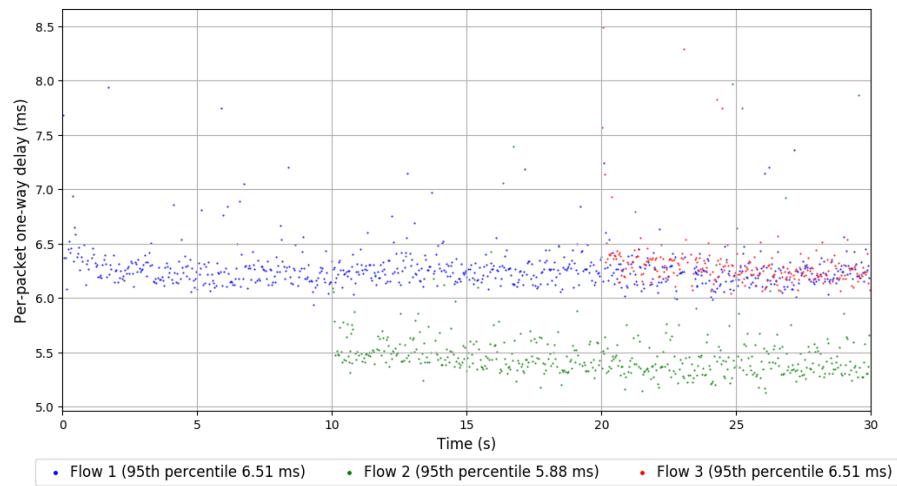
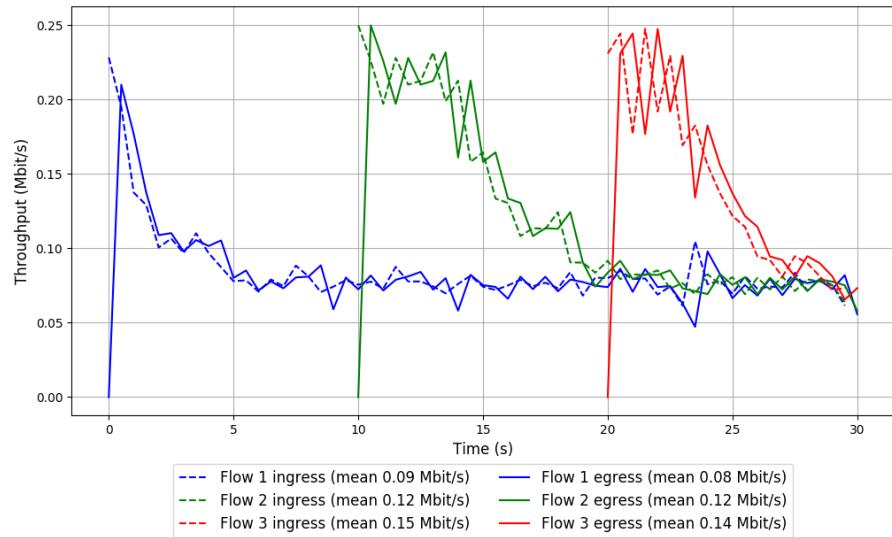


Run 4: Statistics of SCReAM

```
Start at: 2018-10-26 04:13:56
End at: 2018-10-26 04:14:26
Local clock offset: 0.205 ms
Remote clock offset: -6.564 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 6.468 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 6.510 ms
Loss rate: 2.26%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 5.878 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 6.512 ms
Loss rate: 1.45%
```

Run 4: Report of SCReAM — Data Link

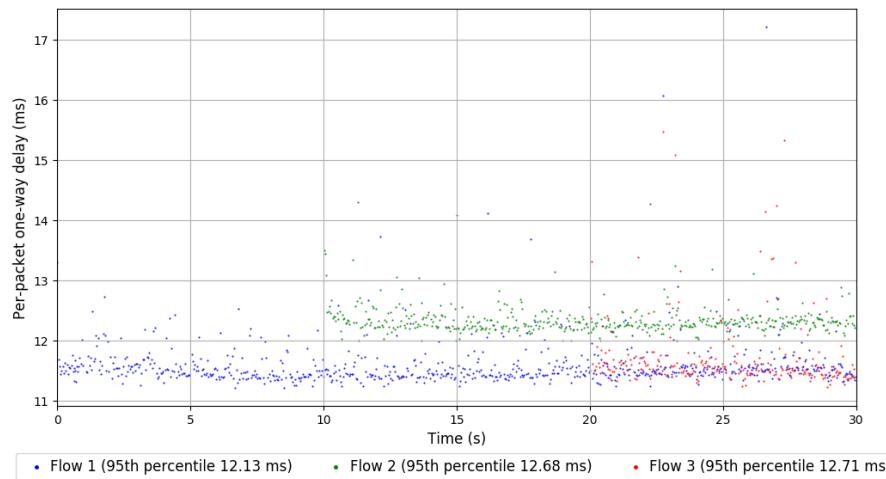
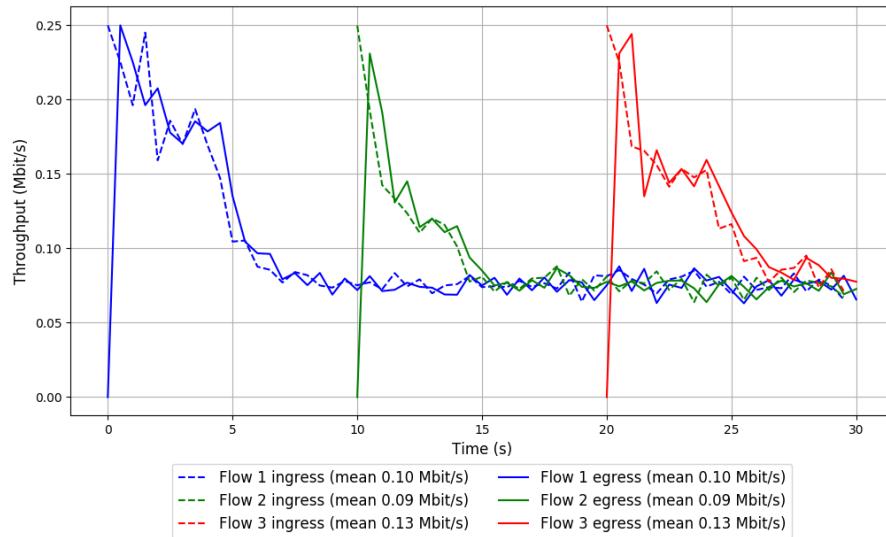


Run 5: Statistics of SCReAM

```
Start at: 2018-10-26 04:35:13
End at: 2018-10-26 04:35:43
Local clock offset: 0.051 ms
Remote clock offset: -1.39 ms

# Below is generated by plot.py at 2018-10-26 04:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 12.557 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 12.130 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 12.679 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 12.705 ms
Loss rate: 1.30%
```

Run 5: Report of SCReAM — Data Link

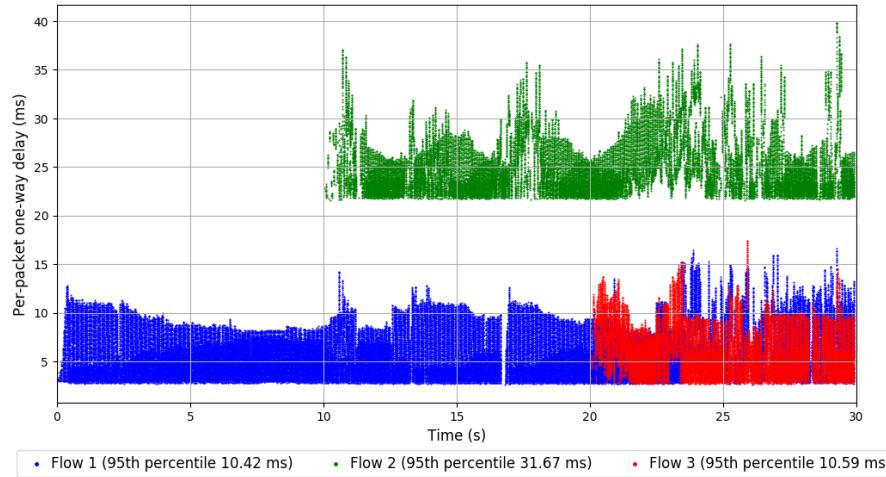
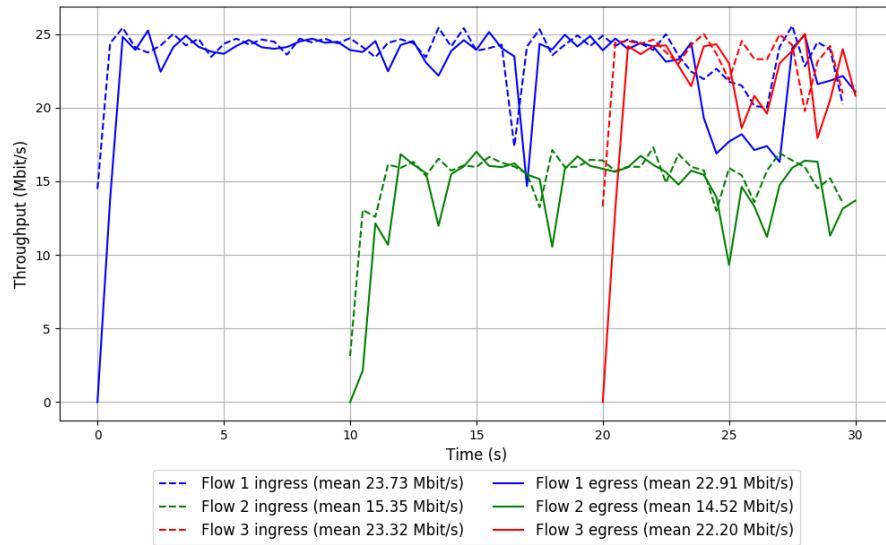


Run 1: Statistics of Sprout

```
Start at: 2018-10-26 02:58:13
End at: 2018-10-26 02:58:43
Local clock offset: 3.75 ms
Remote clock offset: -5.005 ms

# Below is generated by plot.py at 2018-10-26 04:42:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.91 Mbit/s
95th percentile per-packet one-way delay: 27.429 ms
Loss rate: 4.18%
-- Flow 1:
Average throughput: 22.91 Mbit/s
95th percentile per-packet one-way delay: 10.420 ms
Loss rate: 3.45%
-- Flow 2:
Average throughput: 14.52 Mbit/s
95th percentile per-packet one-way delay: 31.671 ms
Loss rate: 5.46%
-- Flow 3:
Average throughput: 22.20 Mbit/s
95th percentile per-packet one-way delay: 10.594 ms
Loss rate: 4.73%
```

Run 1: Report of Sprout — Data Link

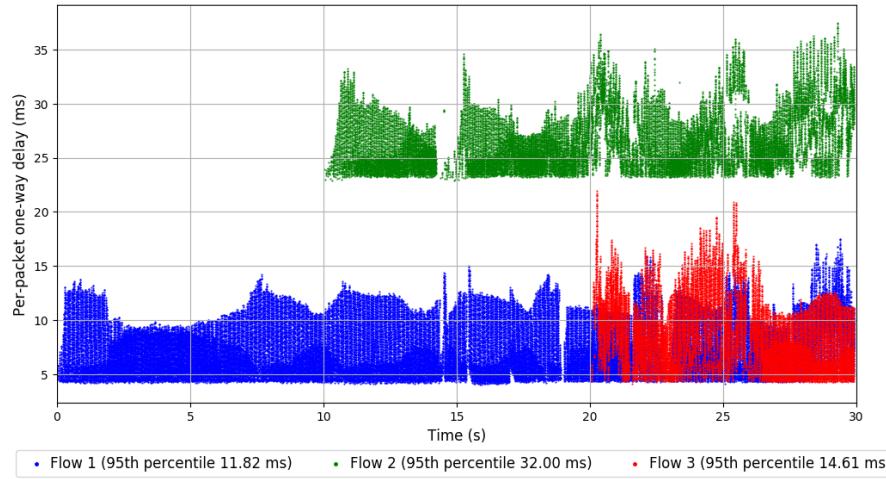
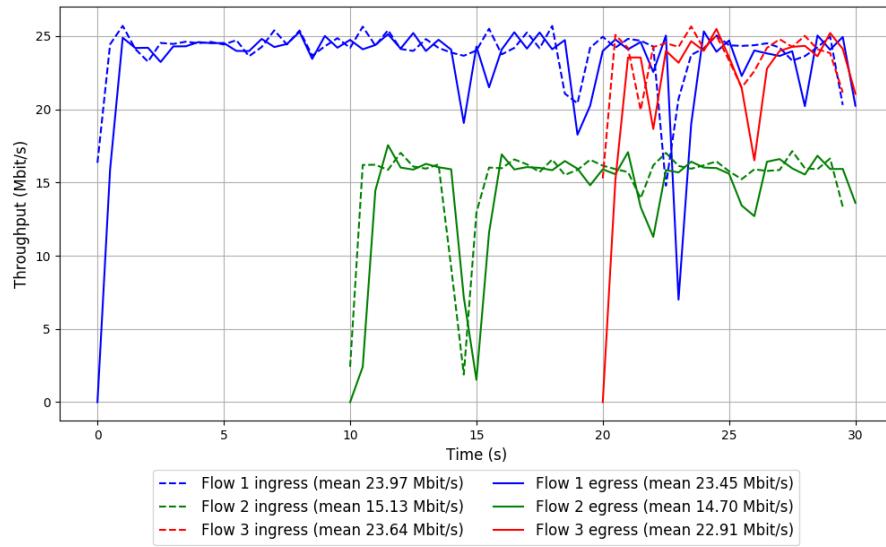


Run 2: Statistics of Sprout

```
Start at: 2018-10-26 03:19:24
End at: 2018-10-26 03:19:54
Local clock offset: 2.874 ms
Remote clock offset: -5.644 ms

# Below is generated by plot.py at 2018-10-26 04:42:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 40.79 Mbit/s
95th percentile per-packet one-way delay: 28.738 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 11.816 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 14.70 Mbit/s
95th percentile per-packet one-way delay: 32.003 ms
Loss rate: 2.96%
-- Flow 3:
Average throughput: 22.91 Mbit/s
95th percentile per-packet one-way delay: 14.611 ms
Loss rate: 3.01%
```

Run 2: Report of Sprout — Data Link

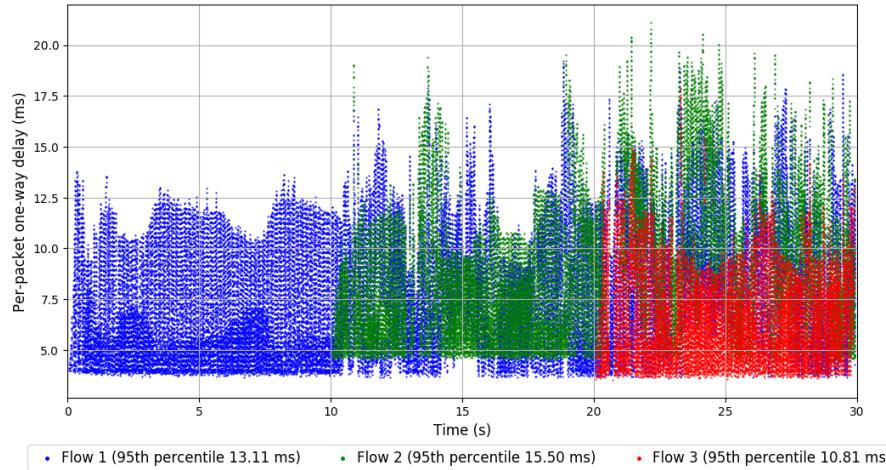
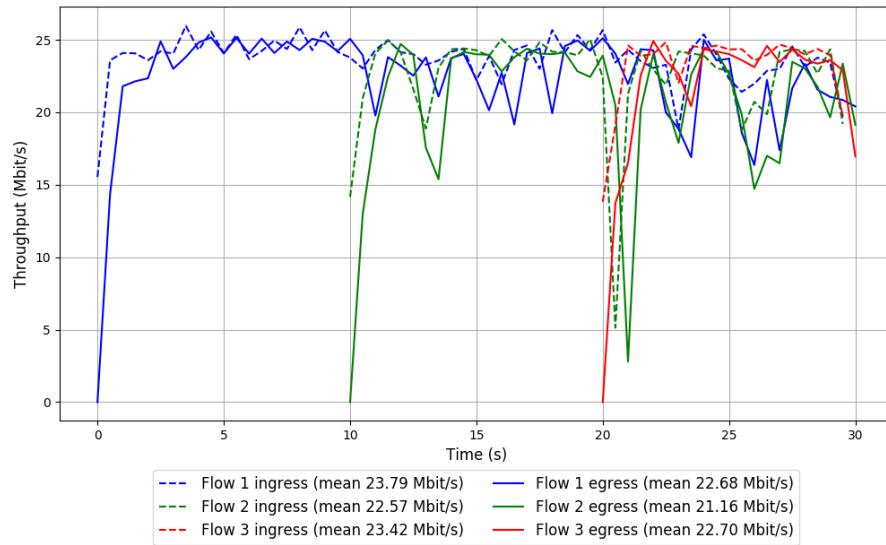


Run 3: Statistics of Sprout

```
Start at: 2018-10-26 03:40:41
End at: 2018-10-26 03:41:11
Local clock offset: 3.303 ms
Remote clock offset: -4.971 ms

# Below is generated by plot.py at 2018-10-26 04:42:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.22 Mbit/s
95th percentile per-packet one-way delay: 13.824 ms
Loss rate: 4.97%
-- Flow 1:
Average throughput: 22.68 Mbit/s
95th percentile per-packet one-way delay: 13.114 ms
Loss rate: 4.62%
-- Flow 2:
Average throughput: 21.16 Mbit/s
95th percentile per-packet one-way delay: 15.500 ms
Loss rate: 6.20%
-- Flow 3:
Average throughput: 22.70 Mbit/s
95th percentile per-packet one-way delay: 10.814 ms
Loss rate: 3.64%
```

Run 3: Report of Sprout — Data Link

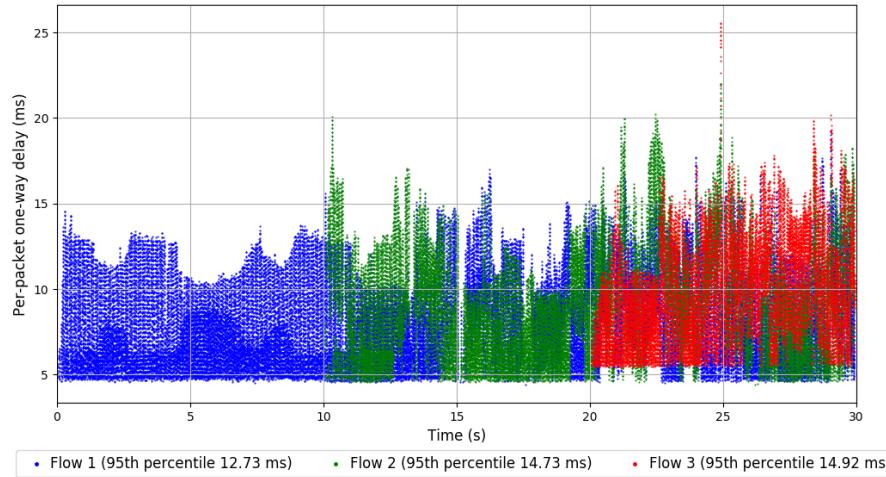
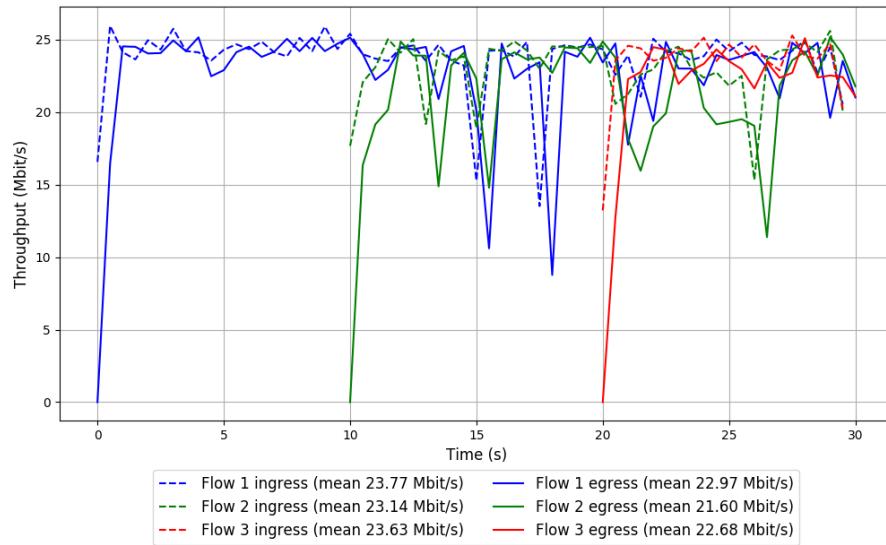


Run 4: Statistics of Sprout

```
Start at: 2018-10-26 04:01:52
End at: 2018-10-26 04:02:22
Local clock offset: 1.784 ms
Remote clock offset: -5.155 ms

# Below is generated by plot.py at 2018-10-26 04:42:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.83 Mbit/s
95th percentile per-packet one-way delay: 13.926 ms
Loss rate: 4.54%
-- Flow 1:
Average throughput: 22.97 Mbit/s
95th percentile per-packet one-way delay: 12.730 ms
Loss rate: 3.38%
-- Flow 2:
Average throughput: 21.60 Mbit/s
95th percentile per-packet one-way delay: 14.729 ms
Loss rate: 6.64%
-- Flow 3:
Average throughput: 22.68 Mbit/s
95th percentile per-packet one-way delay: 14.923 ms
Loss rate: 3.95%
```

Run 4: Report of Sprout — Data Link

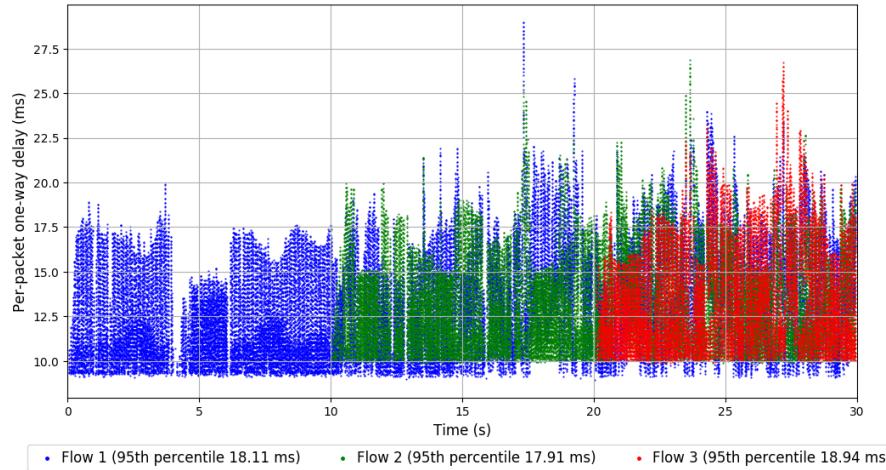
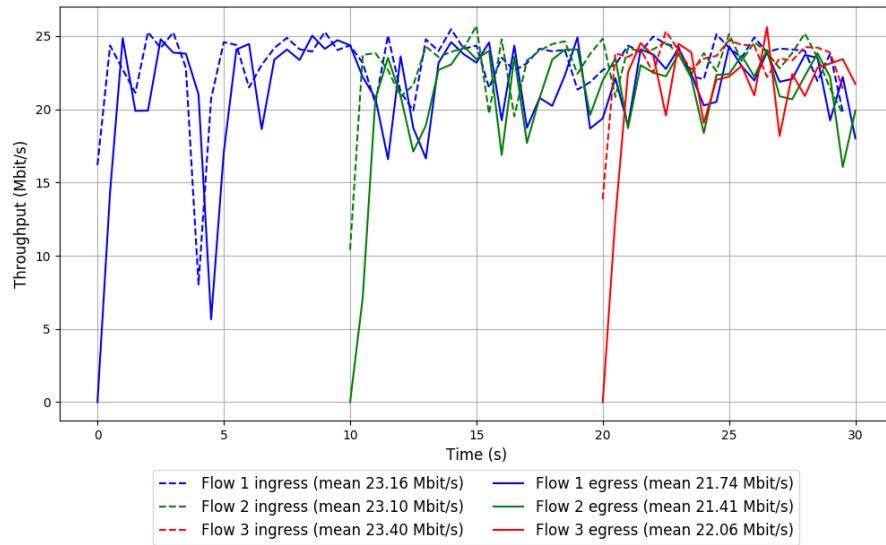


Run 5: Statistics of Sprout

```
Start at: 2018-10-26 04:23:17
End at: 2018-10-26 04:23:47
Local clock offset: 2.197 ms
Remote clock offset: -0.95 ms

# Below is generated by plot.py at 2018-10-26 04:42:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.27 Mbit/s
95th percentile per-packet one-way delay: 18.188 ms
Loss rate: 6.44%
-- Flow 1:
Average throughput: 21.74 Mbit/s
95th percentile per-packet one-way delay: 18.110 ms
Loss rate: 6.09%
-- Flow 2:
Average throughput: 21.41 Mbit/s
95th percentile per-packet one-way delay: 17.911 ms
Loss rate: 7.31%
-- Flow 3:
Average throughput: 22.06 Mbit/s
95th percentile per-packet one-way delay: 18.943 ms
Loss rate: 5.72%
```

Run 5: Report of Sprout — Data Link

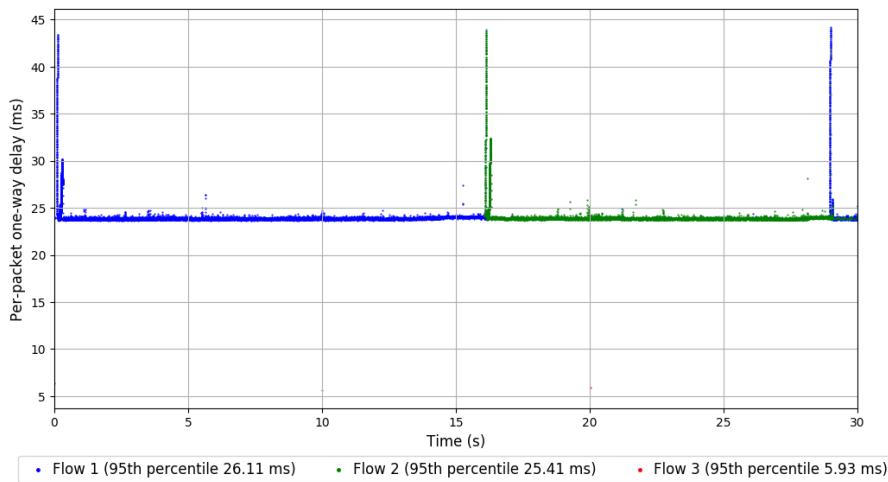
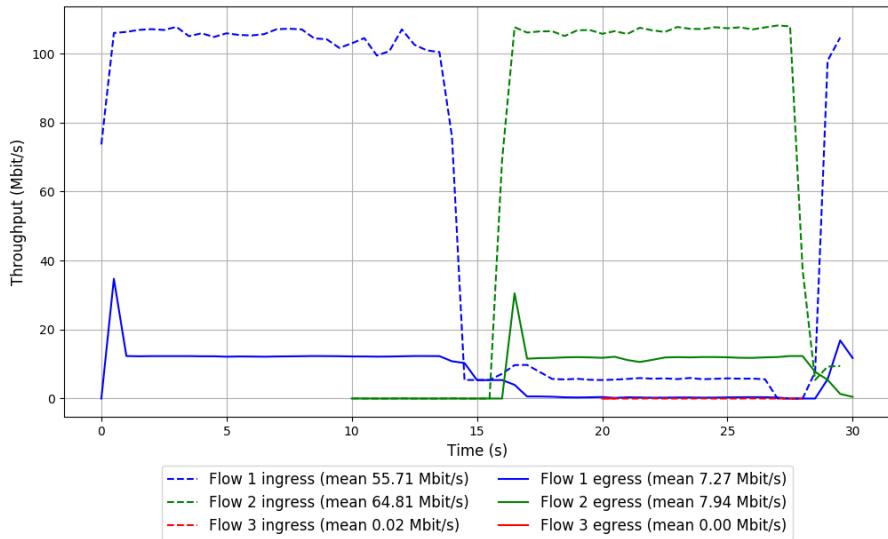


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-26 02:55:48
End at: 2018-10-26 02:56:18
Local clock offset: 2.193 ms
Remote clock offset: -4.518 ms

# Below is generated by plot.py at 2018-10-26 04:42:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.56 Mbit/s
95th percentile per-packet one-way delay: 25.745 ms
Loss rate: 87.30%
-- Flow 1:
Average throughput: 7.27 Mbit/s
95th percentile per-packet one-way delay: 26.114 ms
Loss rate: 86.95%
-- Flow 2:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 25.410 ms
Loss rate: 87.74%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5.928 ms
Loss rate: 99.16%
```

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

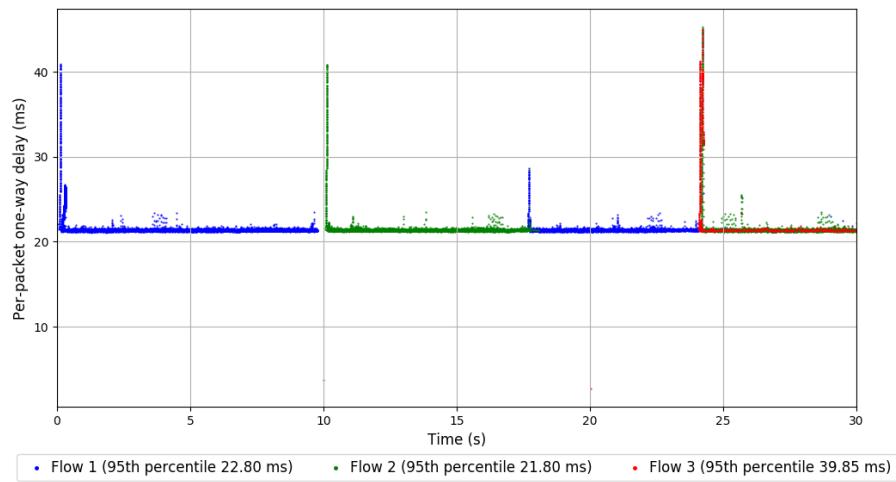
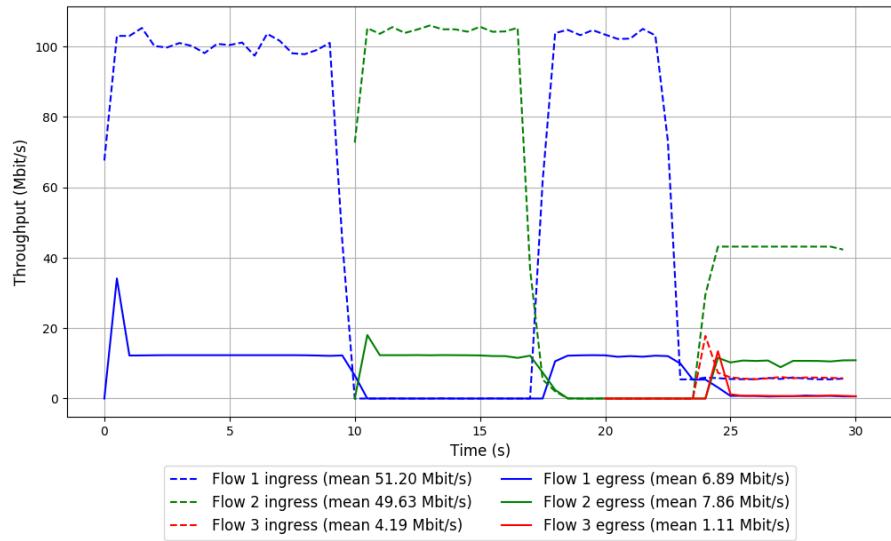


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-26 03:17:04
End at: 2018-10-26 03:17:34
Local clock offset: 4.677 ms
Remote clock offset: -5.86 ms

# Below is generated by plot.py at 2018-10-26 04:42:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 23.924 ms
Loss rate: 85.42%
-- Flow 1:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 22.801 ms
Loss rate: 86.55%
-- Flow 2:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 21.803 ms
Loss rate: 84.16%
-- Flow 3:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 39.853 ms
Loss rate: 73.59%
```

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

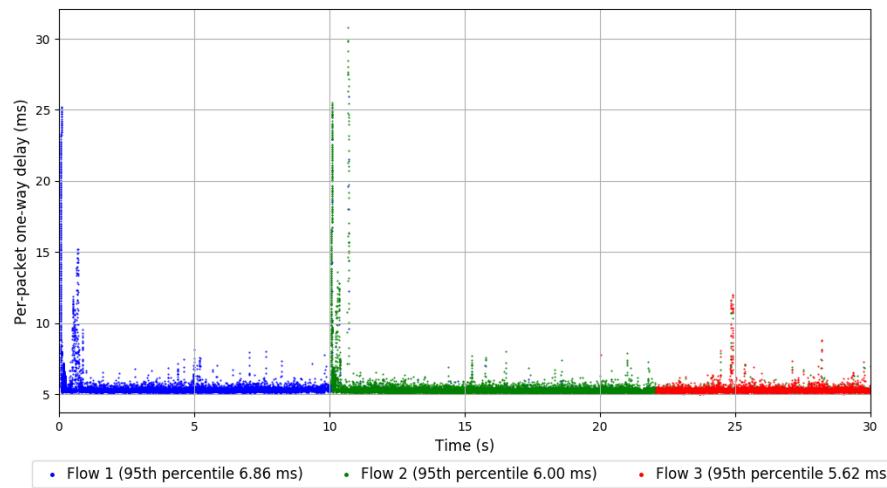
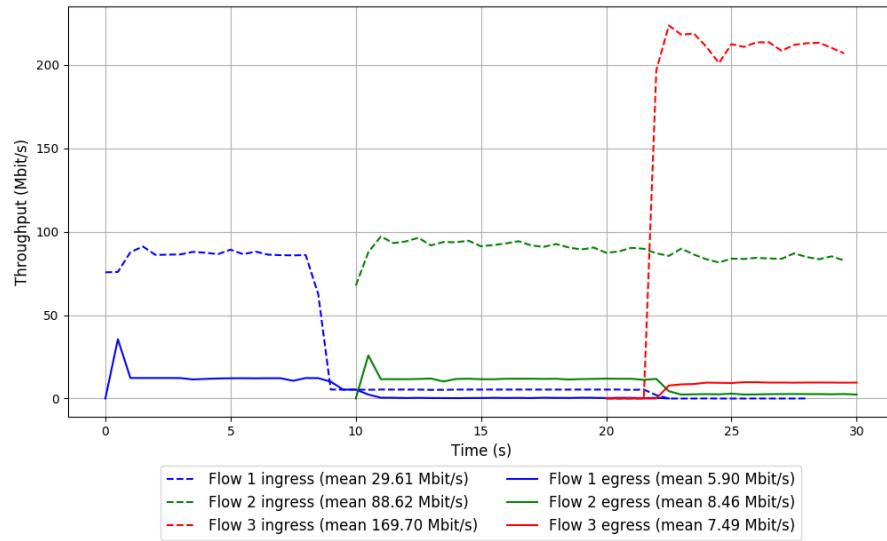


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-26 03:38:14
End at: 2018-10-26 03:38:44
Local clock offset: 2.104 ms
Remote clock offset: -5.759 ms

# Below is generated by plot.py at 2018-10-26 04:42:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.46 Mbit/s
95th percentile per-packet one-way delay: 6.166 ms
Loss rate: 91.30%
-- Flow 1:
Average throughput: 5.90 Mbit/s
95th percentile per-packet one-way delay: 6.858 ms
Loss rate: 84.35%
-- Flow 2:
Average throughput: 8.46 Mbit/s
95th percentile per-packet one-way delay: 5.996 ms
Loss rate: 90.46%
-- Flow 3:
Average throughput: 7.49 Mbit/s
95th percentile per-packet one-way delay: 5.618 ms
Loss rate: 95.59%
```

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

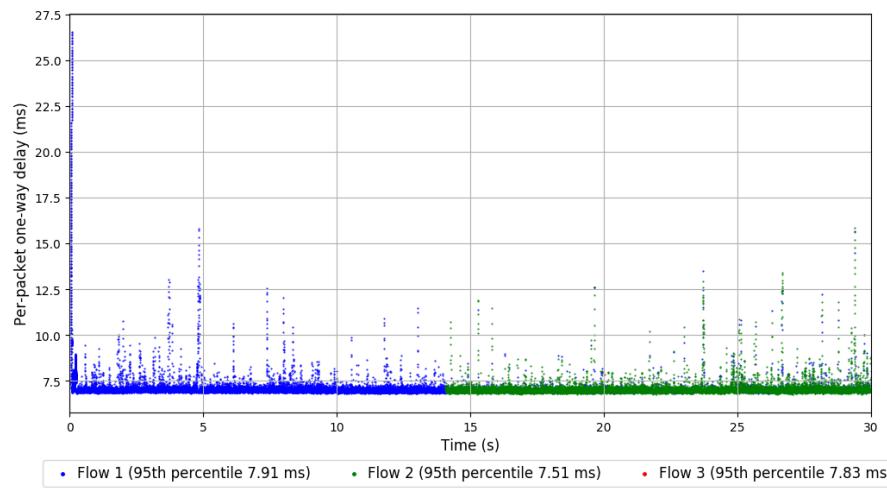
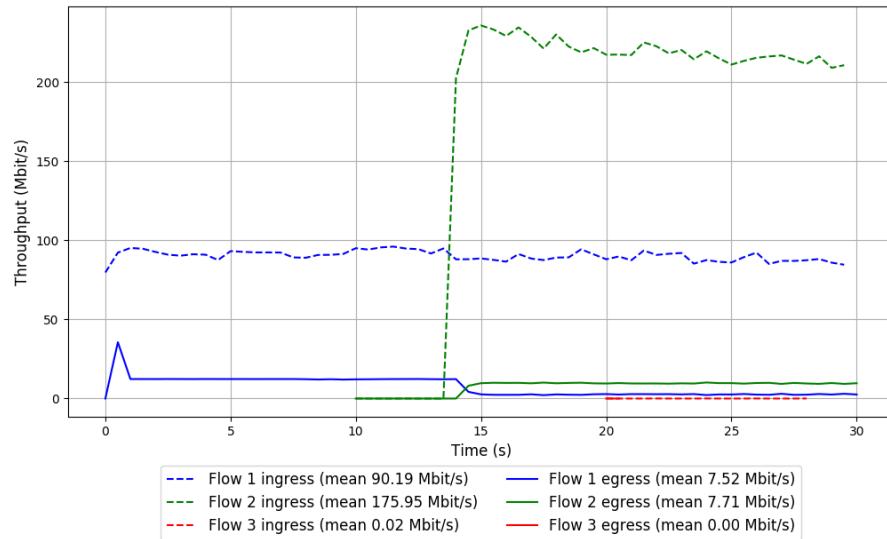


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-26 03:59:28
End at: 2018-10-26 03:59:58
Local clock offset: -0.195 ms
Remote clock offset: -5.659 ms

# Below is generated by plot.py at 2018-10-26 04:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.66 Mbit/s
95th percentile per-packet one-way delay: 7.754 ms
Loss rate: 93.90%
-- Flow 1:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 7.909 ms
Loss rate: 91.66%
-- Flow 2:
Average throughput: 7.71 Mbit/s
95th percentile per-packet one-way delay: 7.511 ms
Loss rate: 95.62%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7.833 ms
Loss rate: 99.16%
```

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

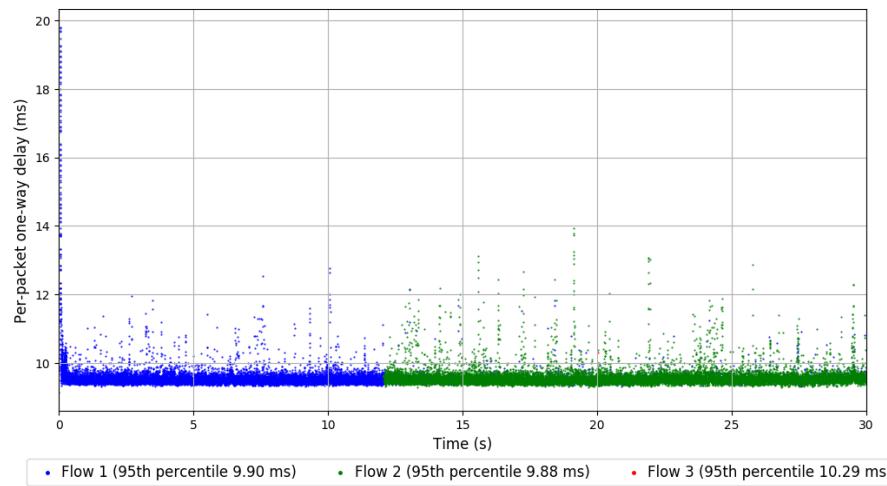
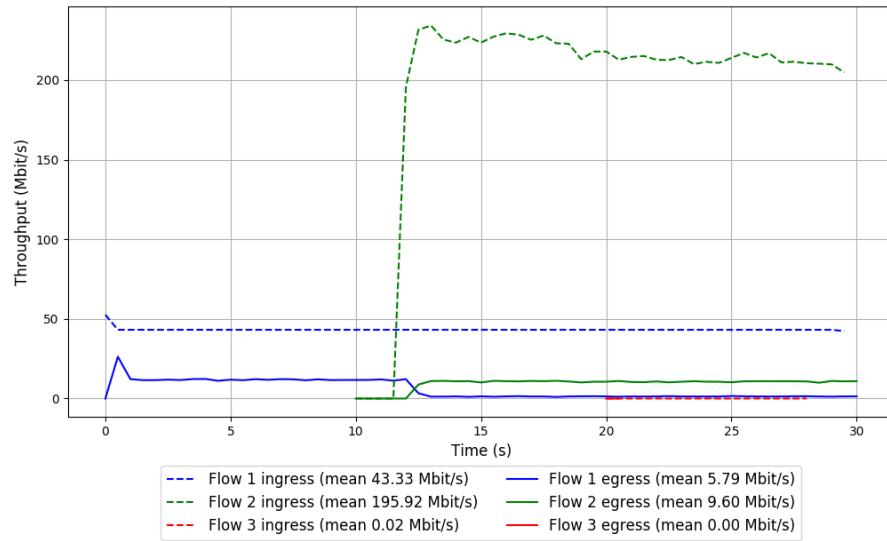


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-26 04:20:52
End at: 2018-10-26 04:21:22
Local clock offset: 2.669 ms
Remote clock offset: -1.019 ms

# Below is generated by plot.py at 2018-10-26 04:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.18 Mbit/s
95th percentile per-packet one-way delay: 9.888 ms
Loss rate: 92.99%
-- Flow 1:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 9.905 ms
Loss rate: 86.65%
-- Flow 2:
Average throughput: 9.60 Mbit/s
95th percentile per-packet one-way delay: 9.875 ms
Loss rate: 95.10%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 10.293 ms
Loss rate: 99.16%
```

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

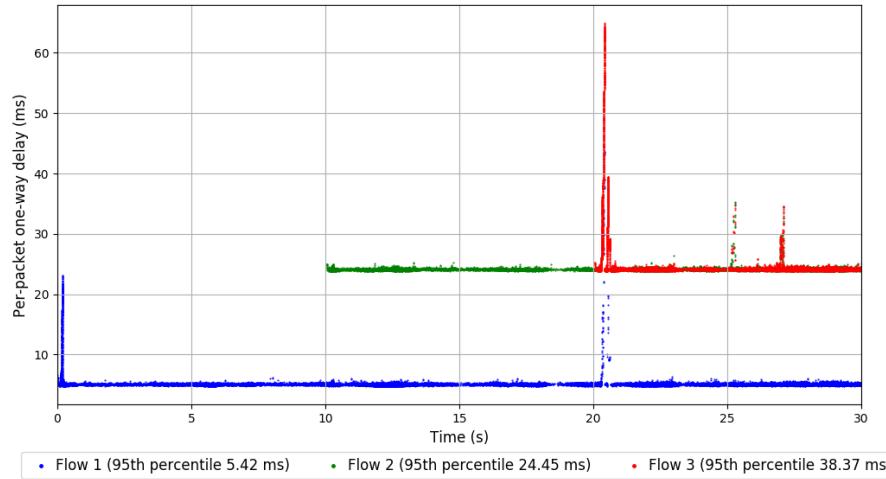
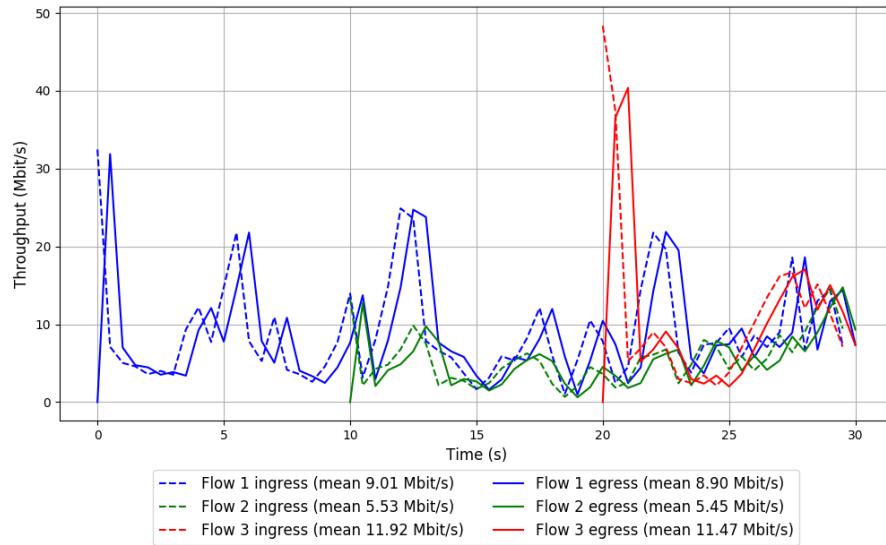


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-26 02:59:23
End at: 2018-10-26 02:59:53
Local clock offset: 2.06 ms
Remote clock offset: -4.65 ms

# Below is generated by plot.py at 2018-10-26 04:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.33 Mbit/s
95th percentile per-packet one-way delay: 25.198 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 8.90 Mbit/s
95th percentile per-packet one-way delay: 5.417 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 5.45 Mbit/s
95th percentile per-packet one-way delay: 24.452 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 38.370 ms
Loss rate: 4.01%
```

Run 1: Report of TCP Vegas — Data Link

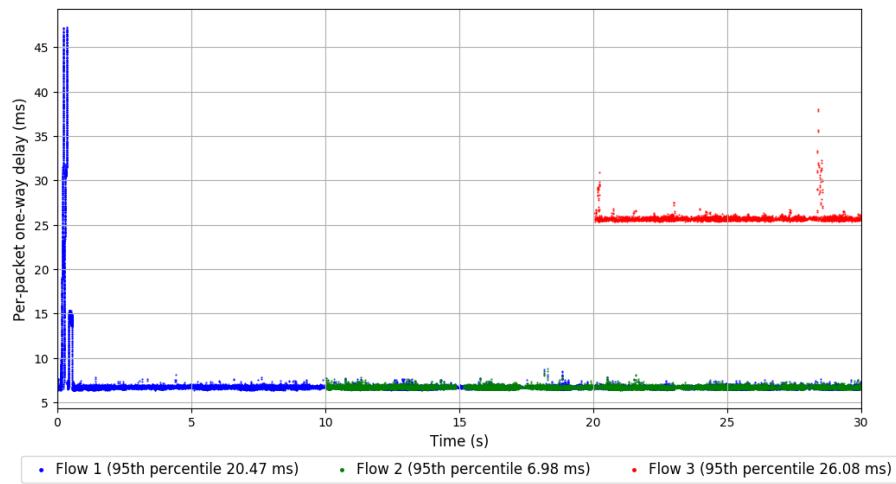
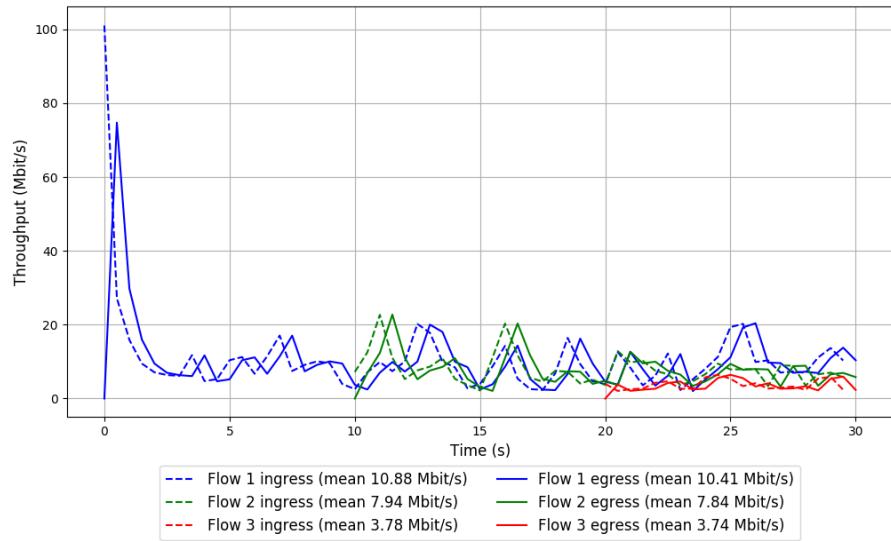


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-26 03:20:34
End at: 2018-10-26 03:21:04
Local clock offset: 0.888 ms
Remote clock offset: -5.461 ms

# Below is generated by plot.py at 2018-10-26 04:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.88 Mbit/s
95th percentile per-packet one-way delay: 25.778 ms
Loss rate: 3.18%
-- Flow 1:
Average throughput: 10.41 Mbit/s
95th percentile per-packet one-way delay: 20.474 ms
Loss rate: 4.33%
-- Flow 2:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 6.977 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 26.077 ms
Loss rate: 1.43%
```

Run 2: Report of TCP Vegas — Data Link

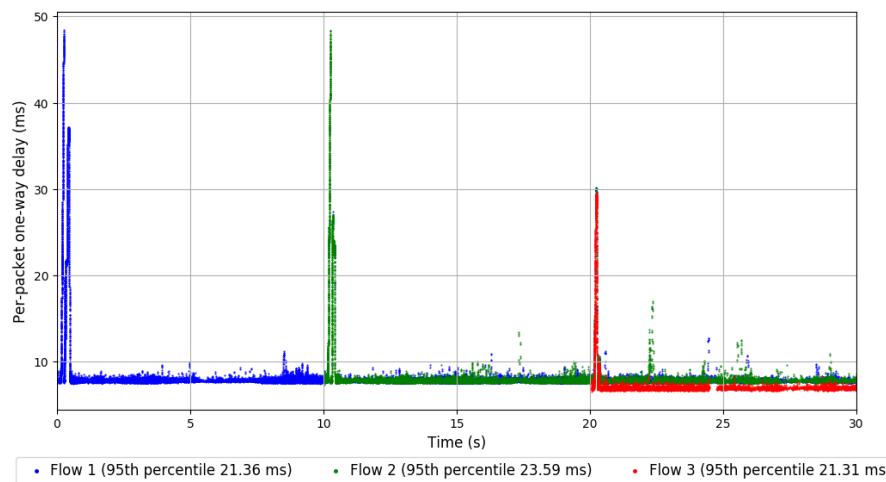
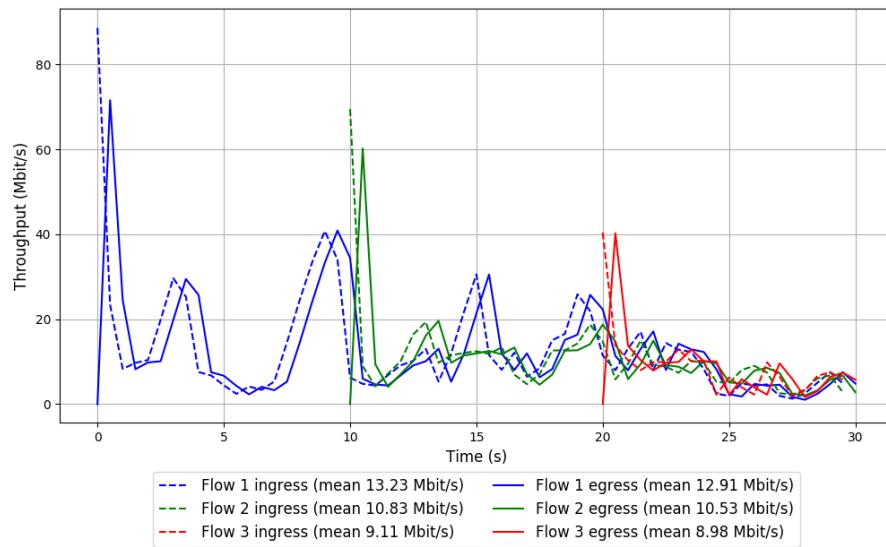


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-26 03:41:50
End at: 2018-10-26 03:42:20
Local clock offset: -0.036 ms
Remote clock offset: -5.242 ms

# Below is generated by plot.py at 2018-10-26 04:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.91 Mbit/s
95th percentile per-packet one-way delay: 22.016 ms
Loss rate: 2.41%
-- Flow 1:
Average throughput: 12.91 Mbit/s
95th percentile per-packet one-way delay: 21.358 ms
Loss rate: 2.45%
-- Flow 2:
Average throughput: 10.53 Mbit/s
95th percentile per-packet one-way delay: 23.590 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 8.98 Mbit/s
95th percentile per-packet one-way delay: 21.306 ms
Loss rate: 1.44%
```

Run 3: Report of TCP Vegas — Data Link

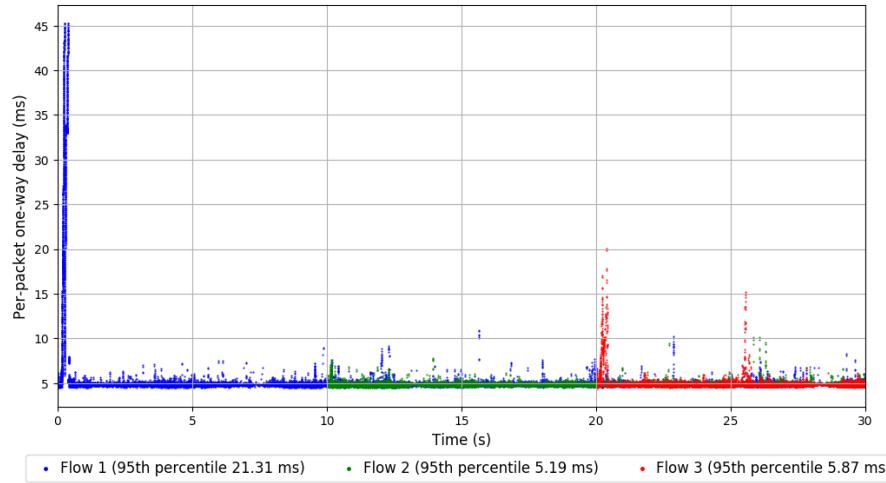
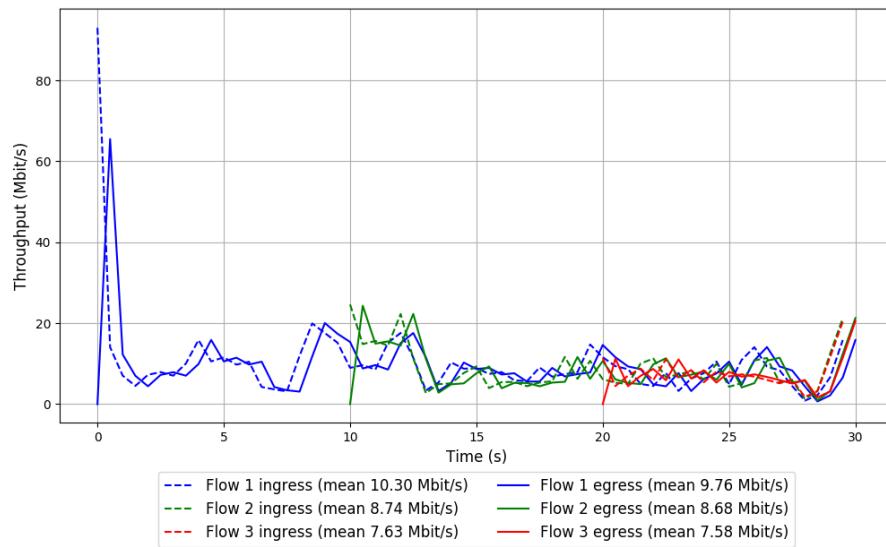


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-26 04:03:00
End at: 2018-10-26 04:03:30
Local clock offset: 2.466 ms
Remote clock offset: -5.429 ms

# Below is generated by plot.py at 2018-10-26 04:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.06 Mbit/s
95th percentile per-packet one-way delay: 6.650 ms
Loss rate: 3.22%
-- Flow 1:
Average throughput: 9.76 Mbit/s
95th percentile per-packet one-way delay: 21.310 ms
Loss rate: 5.28%
-- Flow 2:
Average throughput: 8.68 Mbit/s
95th percentile per-packet one-way delay: 5.192 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 5.865 ms
Loss rate: 0.71%
```

Run 4: Report of TCP Vegas — Data Link

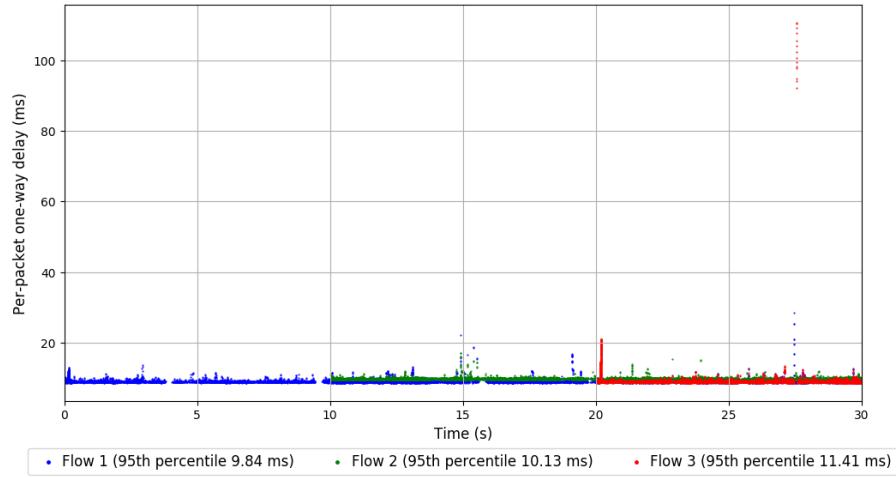
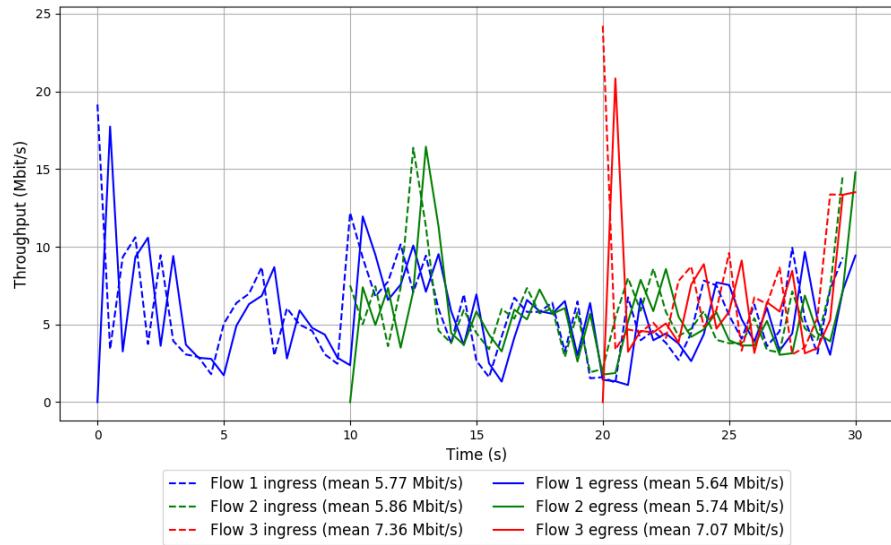


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-26 04:24:25
End at: 2018-10-26 04:24:55
Local clock offset: 2.607 ms
Remote clock offset: -1.035 ms

# Below is generated by plot.py at 2018-10-26 04:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 10.114 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 5.64 Mbit/s
95th percentile per-packet one-way delay: 9.837 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 10.132 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 7.07 Mbit/s
95th percentile per-packet one-way delay: 11.413 ms
Loss rate: 4.06%
```

Run 5: Report of TCP Vegas — Data Link

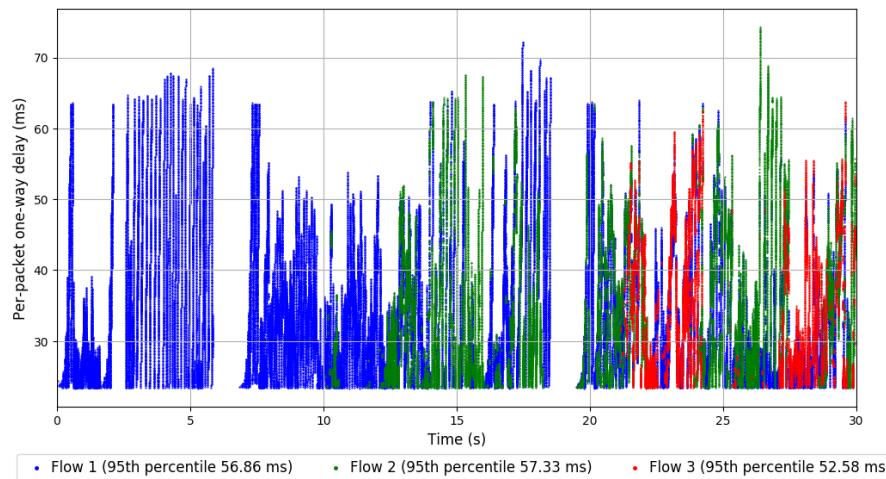
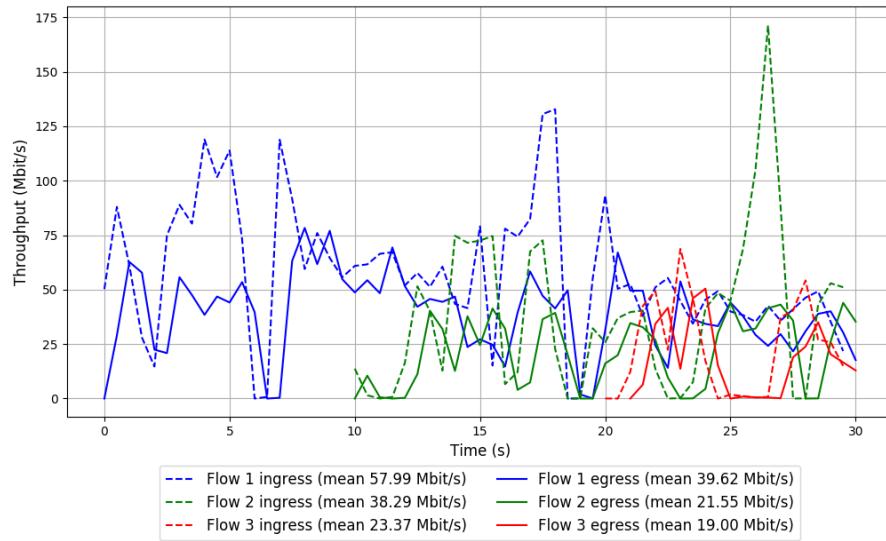


Run 1: Statistics of Verus

```
Start at: 2018-10-26 02:54:35
End at: 2018-10-26 02:55:05
Local clock offset: 2.85 ms
Remote clock offset: -4.128 ms

# Below is generated by plot.py at 2018-10-26 04:43:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.59 Mbit/s
95th percentile per-packet one-way delay: 56.545 ms
Loss rate: 34.63%
-- Flow 1:
Average throughput: 39.62 Mbit/s
95th percentile per-packet one-way delay: 56.862 ms
Loss rate: 31.67%
-- Flow 2:
Average throughput: 21.55 Mbit/s
95th percentile per-packet one-way delay: 57.327 ms
Loss rate: 43.68%
-- Flow 3:
Average throughput: 19.00 Mbit/s
95th percentile per-packet one-way delay: 52.582 ms
Loss rate: 27.09%
```

Run 1: Report of Verus — Data Link

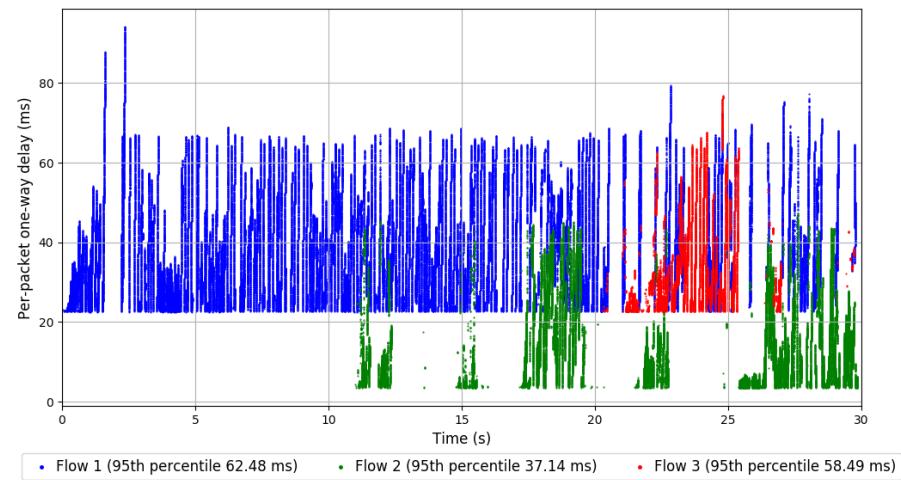
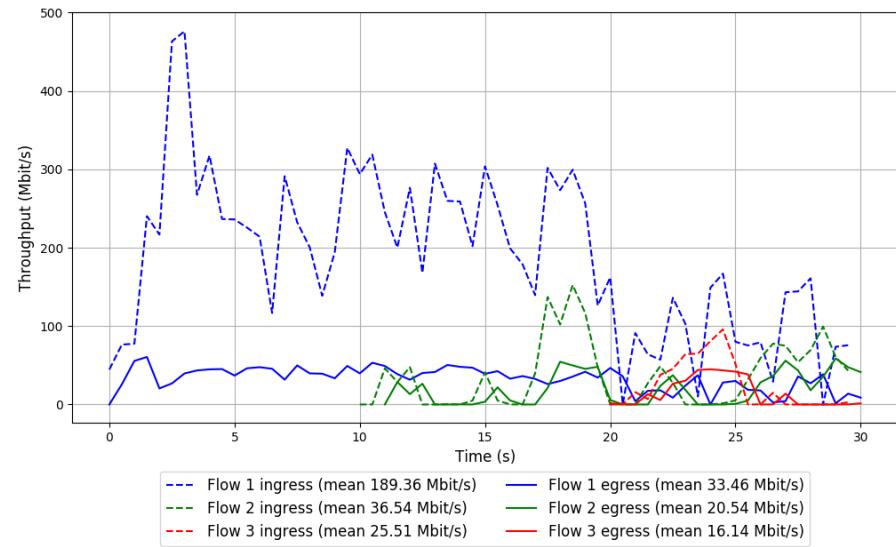


Run 2: Statistics of Verus

```
Start at: 2018-10-26 03:15:51
End at: 2018-10-26 03:16:21
Local clock offset: 4.113 ms
Remote clock offset: -4.968 ms

# Below is generated by plot.py at 2018-10-26 04:44:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.44 Mbit/s
95th percentile per-packet one-way delay: 60.569 ms
Loss rate: 76.73%
-- Flow 1:
Average throughput: 33.46 Mbit/s
95th percentile per-packet one-way delay: 62.480 ms
Loss rate: 82.32%
-- Flow 2:
Average throughput: 20.54 Mbit/s
95th percentile per-packet one-way delay: 37.139 ms
Loss rate: 46.63%
-- Flow 3:
Average throughput: 16.14 Mbit/s
95th percentile per-packet one-way delay: 58.495 ms
Loss rate: 37.00%
```

Run 2: Report of Verus — Data Link

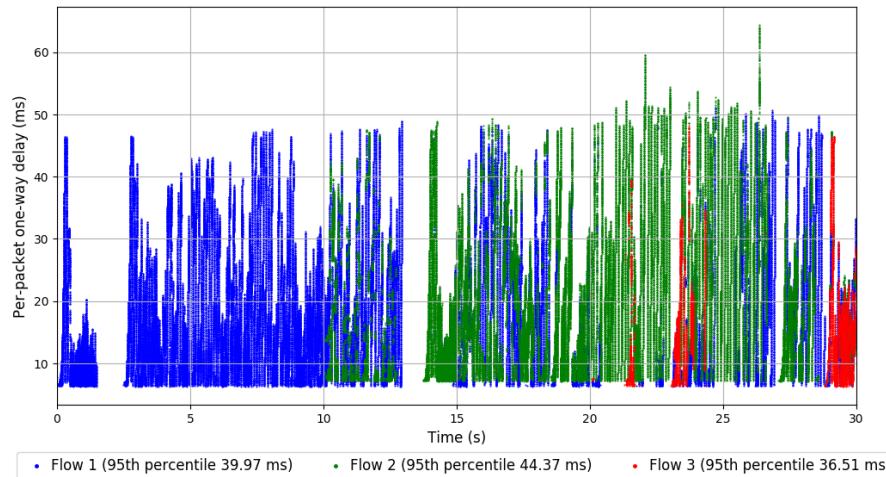
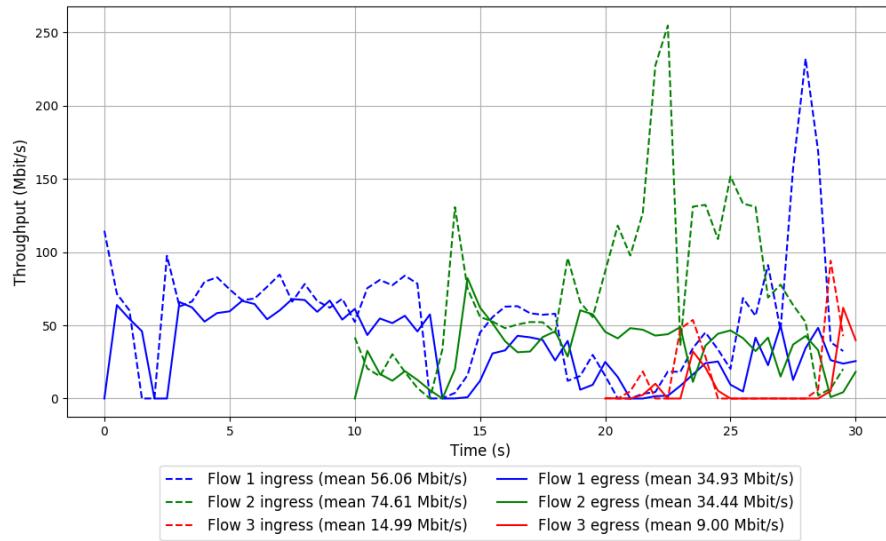


Run 3: Statistics of Verus

```
Start at: 2018-10-26 03:36:55
End at: 2018-10-26 03:37:25
Local clock offset: 0.295 ms
Remote clock offset: -5.623 ms

# Below is generated by plot.py at 2018-10-26 04:44:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.82 Mbit/s
95th percentile per-packet one-way delay: 41.677 ms
Loss rate: 45.00%
-- Flow 1:
Average throughput: 34.93 Mbit/s
95th percentile per-packet one-way delay: 39.971 ms
Loss rate: 37.65%
-- Flow 2:
Average throughput: 34.44 Mbit/s
95th percentile per-packet one-way delay: 44.370 ms
Loss rate: 53.81%
-- Flow 3:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 36.507 ms
Loss rate: 39.93%
```

Run 3: Report of Verus — Data Link

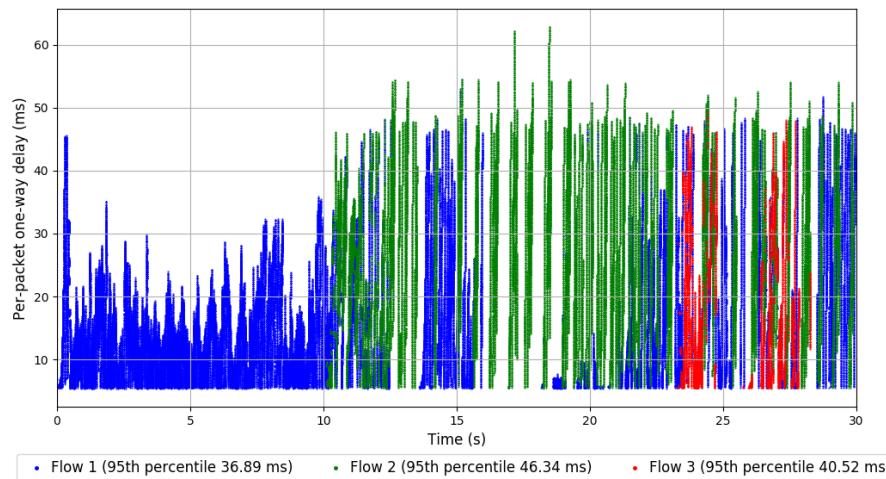
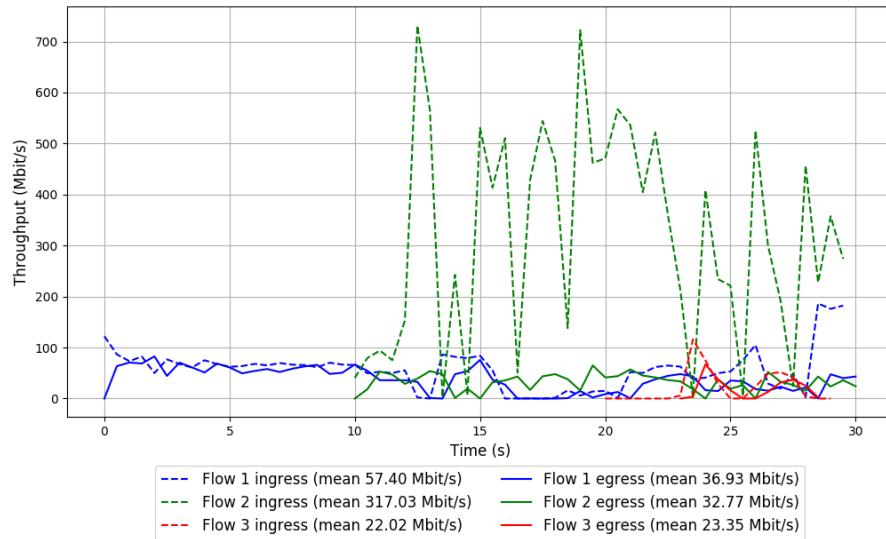


Run 4: Statistics of Verus

```
Start at: 2018-10-26 03:58:14
End at: 2018-10-26 03:58:44
Local clock offset: 0.214 ms
Remote clock offset: -5.848 ms

# Below is generated by plot.py at 2018-10-26 04:44:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.52 Mbit/s
95th percentile per-packet one-way delay: 42.993 ms
Loss rate: 77.15%
-- Flow 1:
Average throughput: 36.93 Mbit/s
95th percentile per-packet one-way delay: 36.890 ms
Loss rate: 35.58%
-- Flow 2:
Average throughput: 32.77 Mbit/s
95th percentile per-packet one-way delay: 46.337 ms
Loss rate: 89.66%
-- Flow 3:
Average throughput: 23.35 Mbit/s
95th percentile per-packet one-way delay: 40.521 ms
Loss rate: 40.94%
```

Run 4: Report of Verus — Data Link

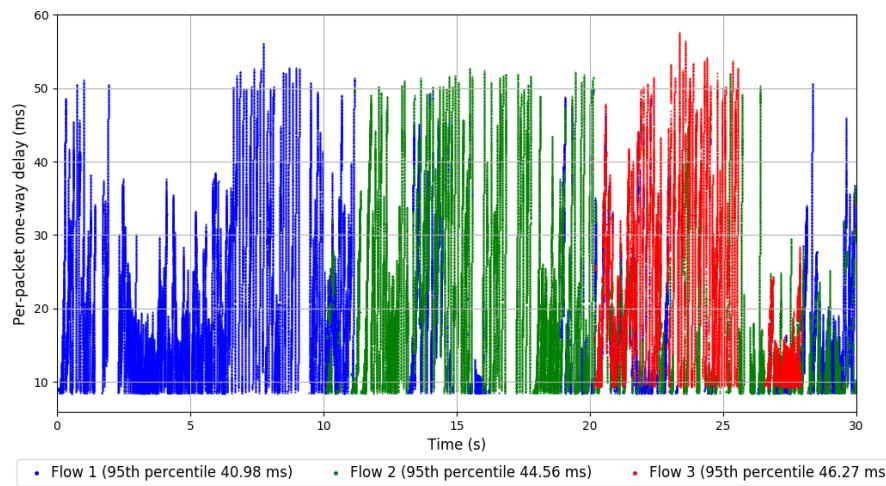
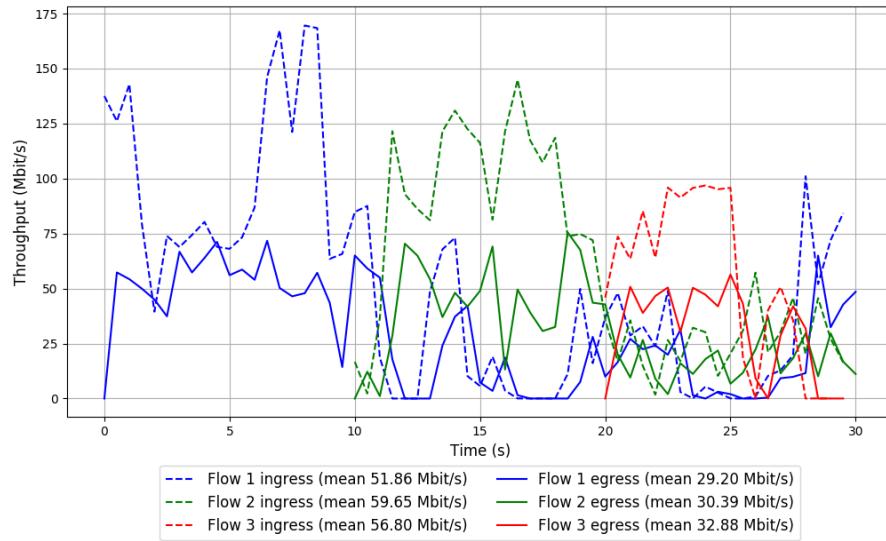


Run 5: Statistics of Verus

```
Start at: 2018-10-26 04:19:39
End at: 2018-10-26 04:20:09
Local clock offset: 2.648 ms
Remote clock offset: -1.102 ms

# Below is generated by plot.py at 2018-10-26 04:44:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.33 Mbit/s
95th percentile per-packet one-way delay: 43.723 ms
Loss rate: 45.55%
-- Flow 1:
Average throughput: 29.20 Mbit/s
95th percentile per-packet one-way delay: 40.985 ms
Loss rate: 43.65%
-- Flow 2:
Average throughput: 30.39 Mbit/s
95th percentile per-packet one-way delay: 44.564 ms
Loss rate: 49.07%
-- Flow 3:
Average throughput: 32.88 Mbit/s
95th percentile per-packet one-way delay: 46.268 ms
Loss rate: 43.22%
```

Run 5: Report of Verus — Data Link

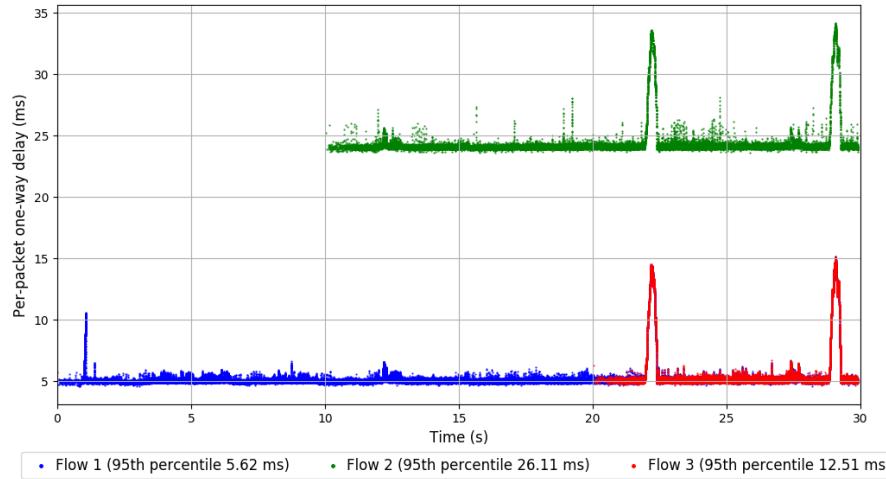
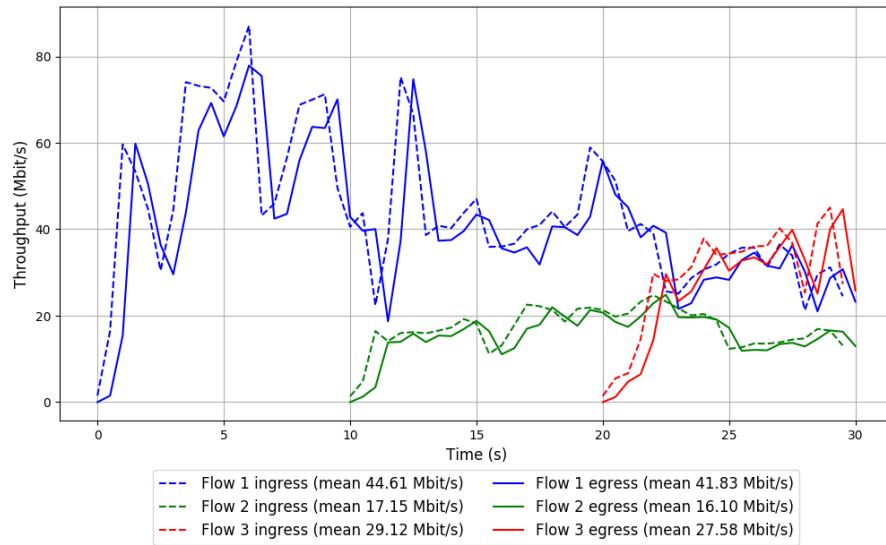


```
Run 1: Statistics of PCC-Vivace

Start at: 2018-10-26 02:56:57
End at: 2018-10-26 02:57:27
Local clock offset: 1.68 ms
Remote clock offset: -4.93 ms

# Below is generated by plot.py at 2018-10-26 04:44:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.60 Mbit/s
95th percentile per-packet one-way delay: 24.189 ms
Loss rate: 6.09%
-- Flow 1:
Average throughput: 41.83 Mbit/s
95th percentile per-packet one-way delay: 5.615 ms
Loss rate: 6.25%
-- Flow 2:
Average throughput: 16.10 Mbit/s
95th percentile per-packet one-way delay: 26.109 ms
Loss rate: 6.14%
-- Flow 3:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 12.505 ms
Loss rate: 5.30%
```

Run 1: Report of PCC-Vivace — Data Link

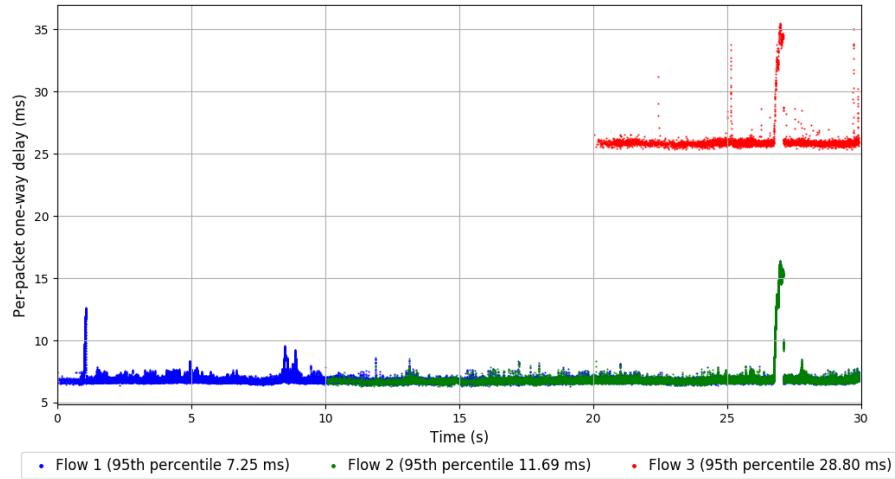
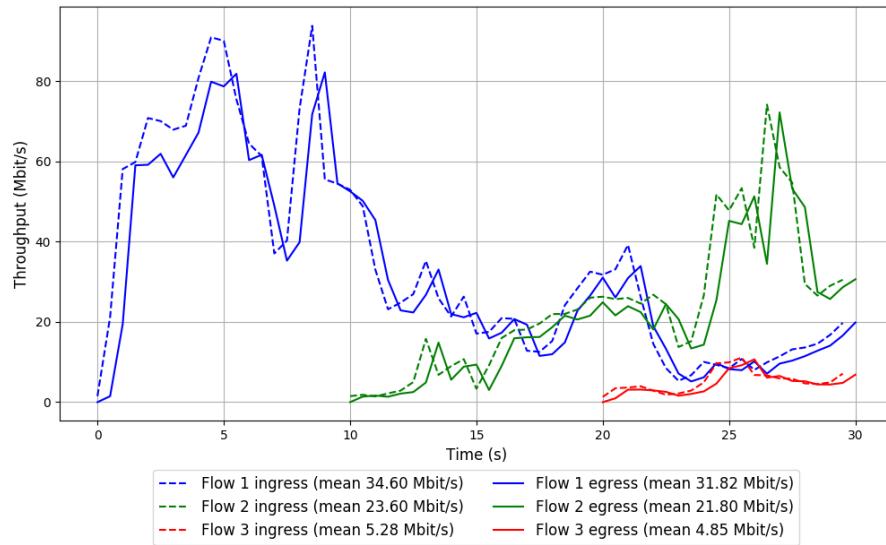


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-26 03:18:12
End at: 2018-10-26 03:18:43
Local clock offset: 1.241 ms
Remote clock offset: -4.828 ms

# Below is generated by plot.py at 2018-10-26 04:44:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.92 Mbit/s
95th percentile per-packet one-way delay: 13.183 ms
Loss rate: 7.91%
-- Flow 1:
Average throughput: 31.82 Mbit/s
95th percentile per-packet one-way delay: 7.251 ms
Loss rate: 8.03%
-- Flow 2:
Average throughput: 21.80 Mbit/s
95th percentile per-packet one-way delay: 11.685 ms
Loss rate: 7.62%
-- Flow 3:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 28.799 ms
Loss rate: 8.27%
```

Run 2: Report of PCC-Vivace — Data Link

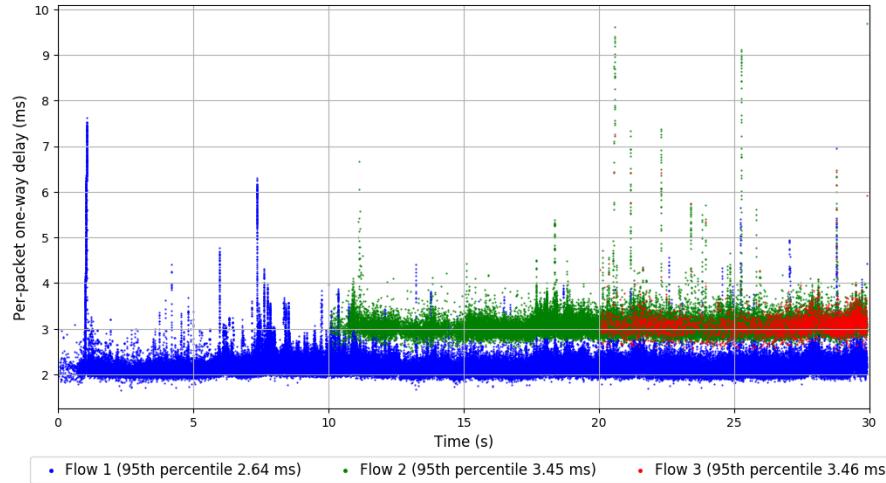
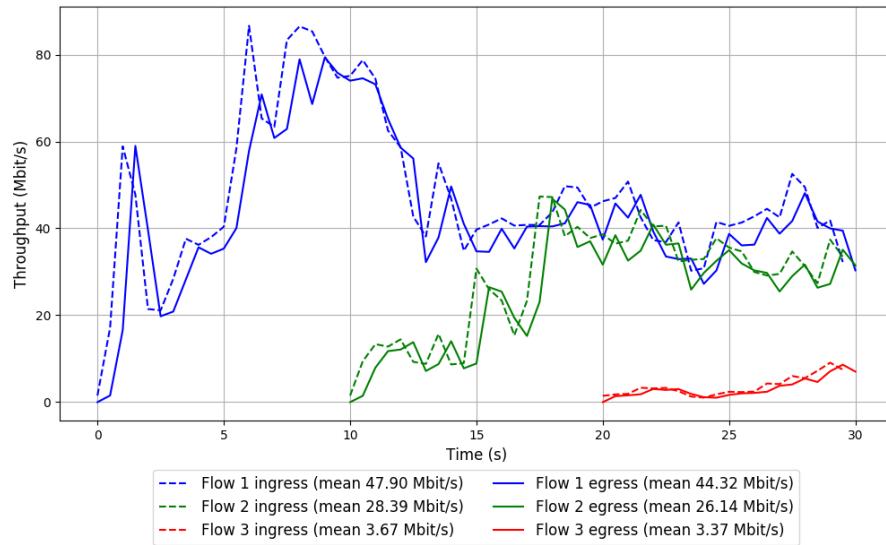


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-26 03:39:24
End at: 2018-10-26 03:39:54
Local clock offset: 3.819 ms
Remote clock offset: -6.291 ms

# Below is generated by plot.py at 2018-10-26 04:44:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.81 Mbit/s
95th percentile per-packet one-way delay: 3.268 ms
Loss rate: 7.61%
-- Flow 1:
Average throughput: 44.32 Mbit/s
95th percentile per-packet one-way delay: 2.640 ms
Loss rate: 7.47%
-- Flow 2:
Average throughput: 26.14 Mbit/s
95th percentile per-packet one-way delay: 3.454 ms
Loss rate: 7.93%
-- Flow 3:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 3.457 ms
Loss rate: 8.11%
```

Run 3: Report of PCC-Vivace — Data Link

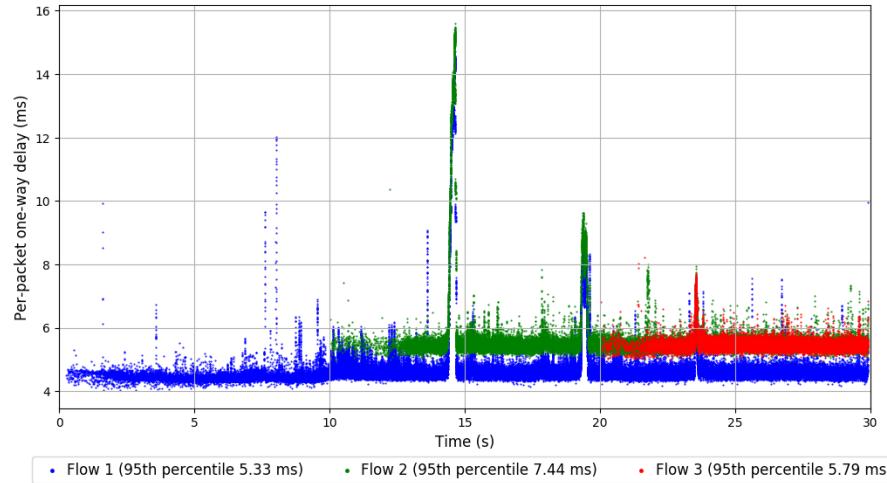
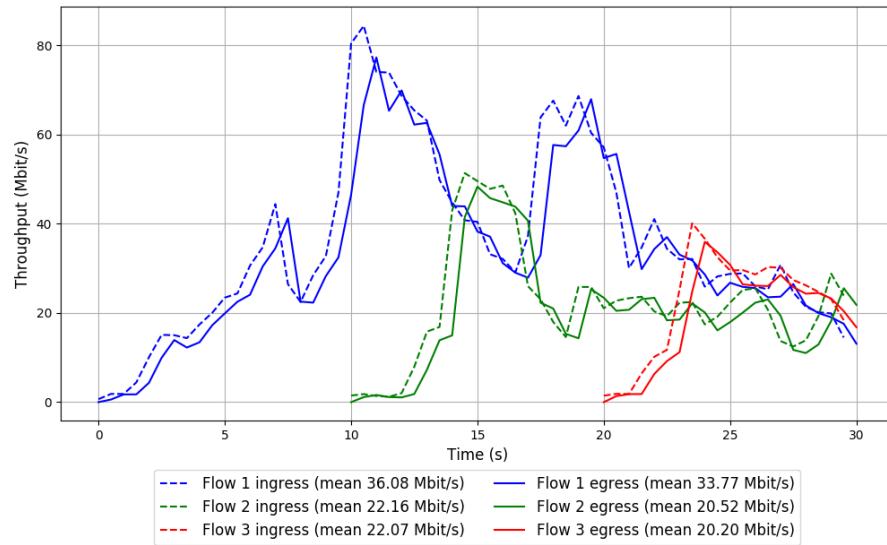


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-26 04:00:38
End at: 2018-10-26 04:01:08
Local clock offset: 1.926 ms
Remote clock offset: -5.171 ms

# Below is generated by plot.py at 2018-10-26 04:44:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.25 Mbit/s
95th percentile per-packet one-way delay: 5.898 ms
Loss rate: 7.43%
-- Flow 1:
Average throughput: 33.77 Mbit/s
95th percentile per-packet one-way delay: 5.325 ms
Loss rate: 7.21%
-- Flow 2:
Average throughput: 20.52 Mbit/s
95th percentile per-packet one-way delay: 7.439 ms
Loss rate: 7.44%
-- Flow 3:
Average throughput: 20.20 Mbit/s
95th percentile per-packet one-way delay: 5.787 ms
Loss rate: 8.49%
```

Run 4: Report of PCC-Vivace — Data Link

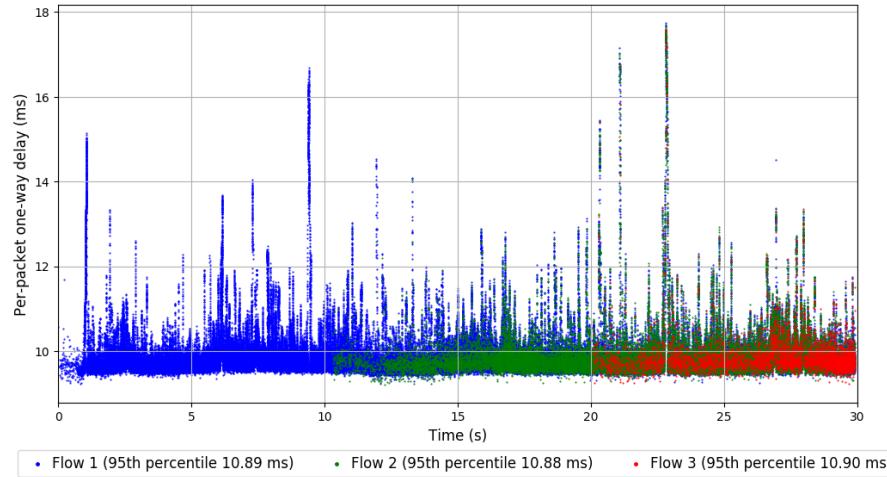
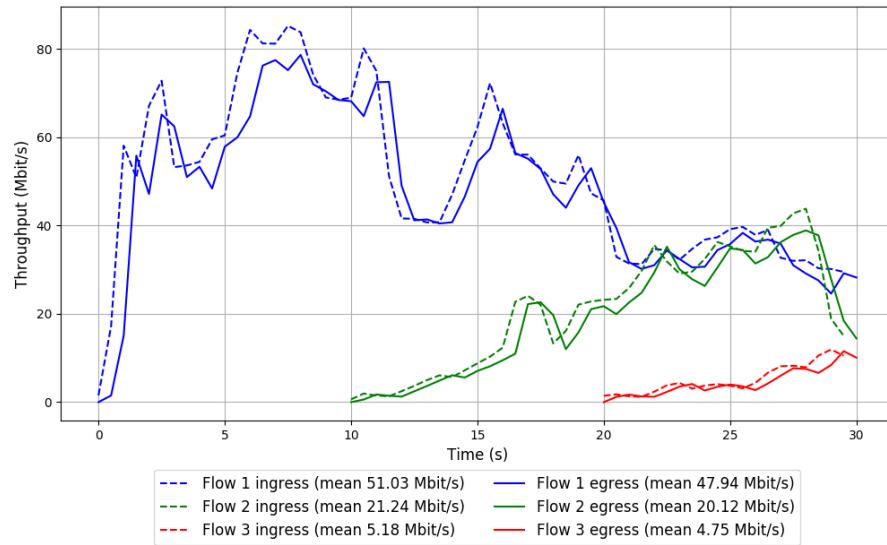


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-26 04:22:02
End at: 2018-10-26 04:22:32
Local clock offset: 1.62 ms
Remote clock offset: -1.157 ms

# Below is generated by plot.py at 2018-10-26 04:44:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.71 Mbit/s
95th percentile per-packet one-way delay: 10.890 ms
Loss rate: 6.21%
-- Flow 1:
Average throughput: 47.94 Mbit/s
95th percentile per-packet one-way delay: 10.893 ms
Loss rate: 6.07%
-- Flow 2:
Average throughput: 20.12 Mbit/s
95th percentile per-packet one-way delay: 10.877 ms
Loss rate: 6.47%
-- Flow 3:
Average throughput: 4.75 Mbit/s
95th percentile per-packet one-way delay: 10.898 ms
Loss rate: 8.20%
```

Run 5: Report of PCC-Vivace — Data Link

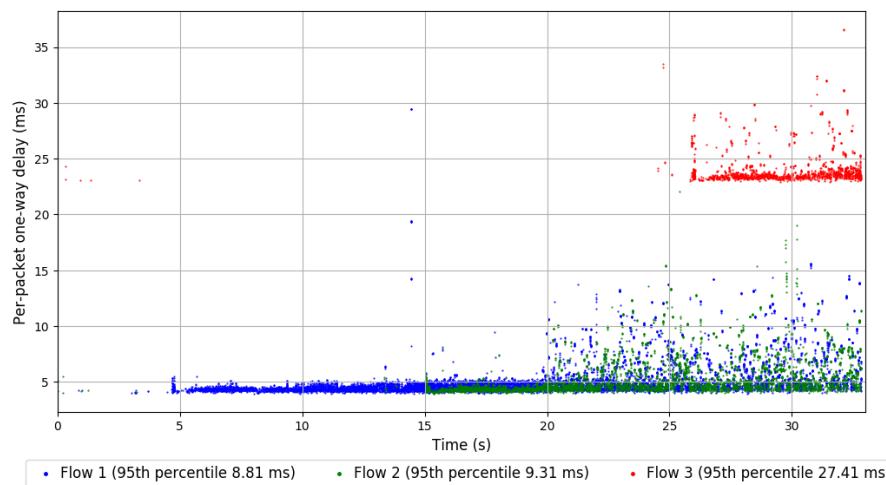
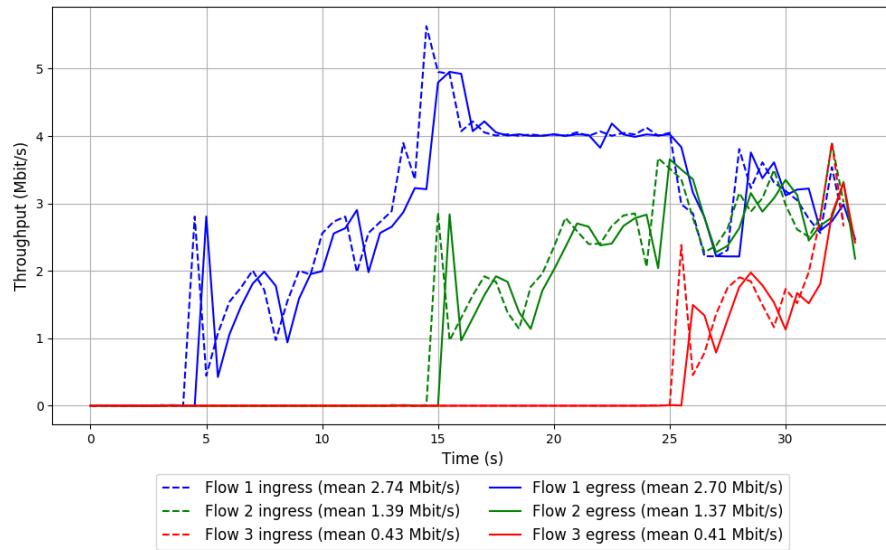


```
Run 1: Statistics of WebRTC media

Start at: 2018-10-26 02:51:12
End at: 2018-10-26 02:51:42
Local clock offset: 3.637 ms
Remote clock offset: -3.499 ms

# Below is generated by plot.py at 2018-10-26 04:44:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 23.529 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 2.70 Mbit/s
95th percentile per-packet one-way delay: 8.815 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 9.315 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 27.414 ms
Loss rate: 3.85%
```

Run 1: Report of WebRTC media — Data Link

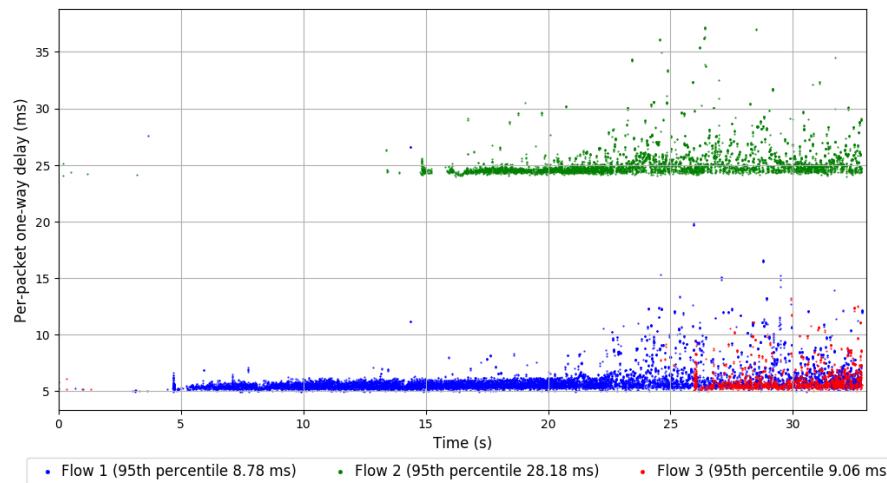
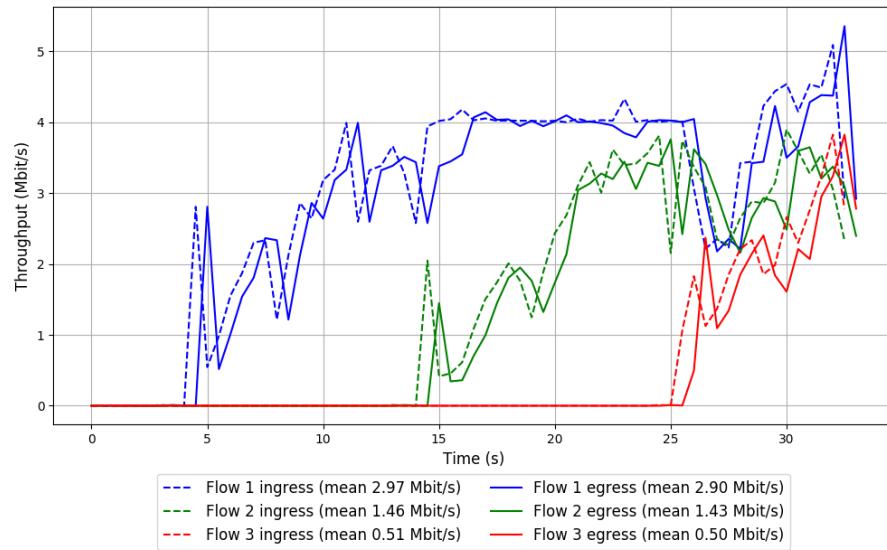


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-26 03:12:25
End at: 2018-10-26 03:12:55
Local clock offset: 1.848 ms
Remote clock offset: -5.319 ms

# Below is generated by plot.py at 2018-10-26 04:44:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 26.083 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 8.780 ms
Loss rate: 2.27%
-- Flow 2:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 28.181 ms
Loss rate: 2.49%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 9.064 ms
Loss rate: 2.90%
```

Run 2: Report of WebRTC media — Data Link

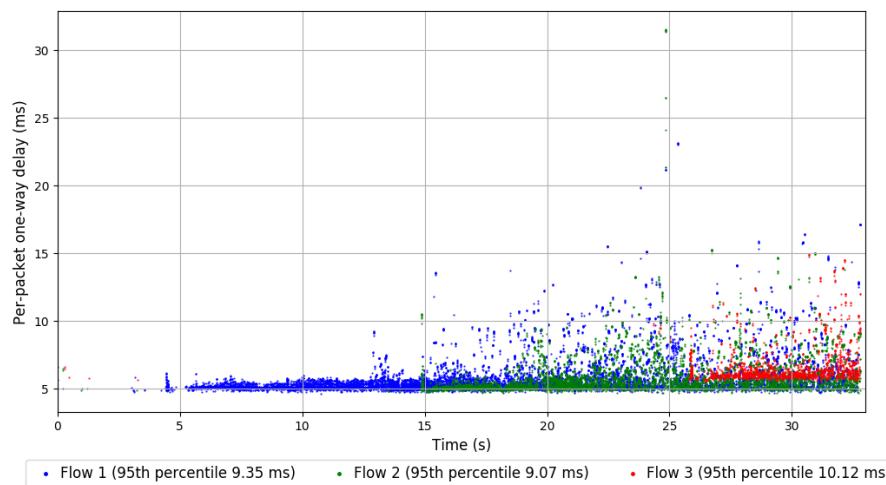
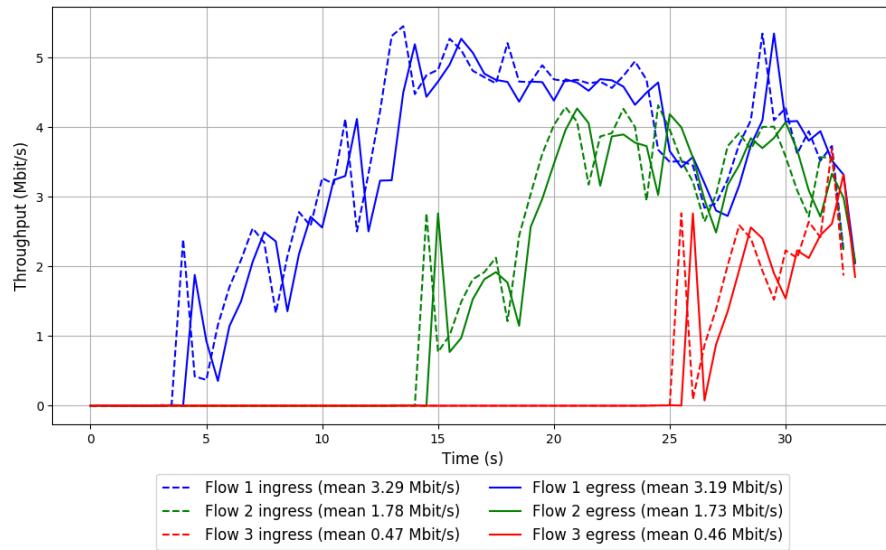


```
Run 3: Statistics of WebRTC media

Start at: 2018-10-26 03:33:32
End at: 2018-10-26 03:34:02
Local clock offset: 2.269 ms
Remote clock offset: -5.48 ms

# Below is generated by plot.py at 2018-10-26 04:44:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 9.385 ms
Loss rate: 2.66%
-- Flow 1:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 9.347 ms
Loss rate: 2.84%
-- Flow 2:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 9.067 ms
Loss rate: 2.57%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 10.124 ms
Loss rate: 1.79%
```

Run 3: Report of WebRTC media — Data Link

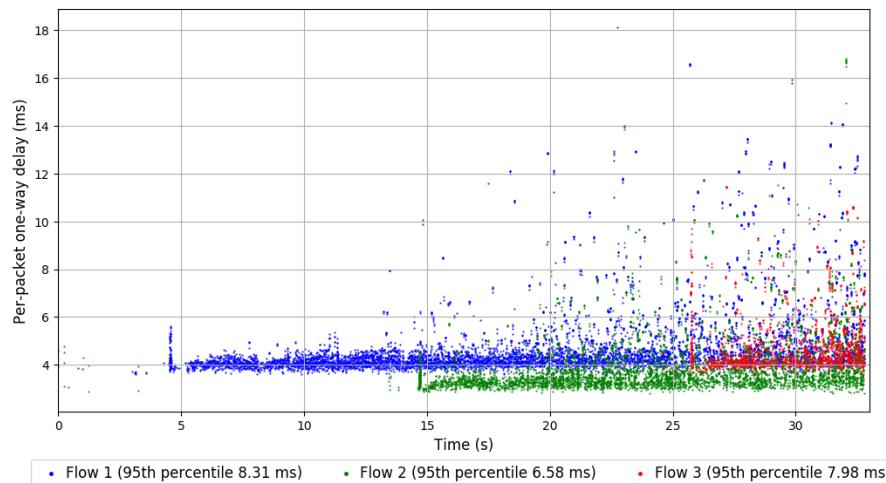
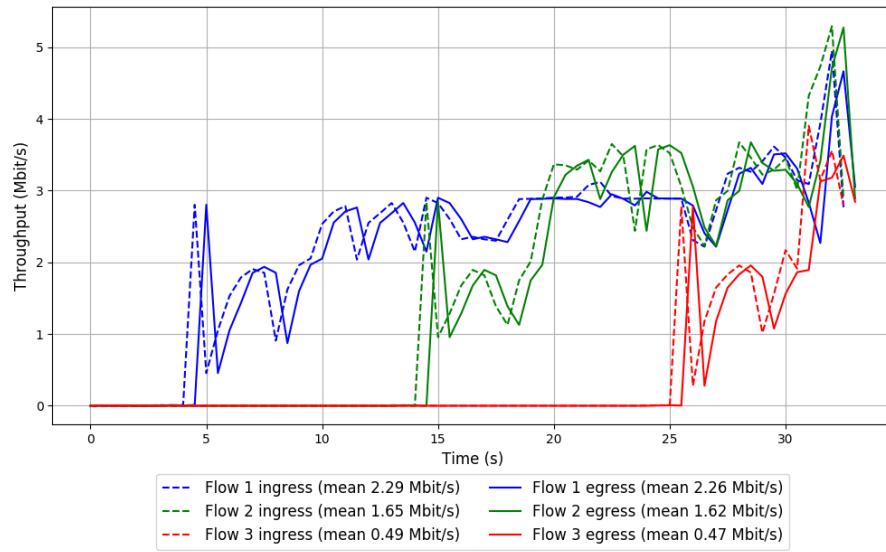


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-26 03:54:49
End at: 2018-10-26 03:55:19
Local clock offset: 2.802 ms
Remote clock offset: -5.692 ms

# Below is generated by plot.py at 2018-10-26 04:44:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 7.626 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 8.313 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 6.585 ms
Loss rate: 1.99%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 7.976 ms
Loss rate: 3.44%
```

Run 4: Report of WebRTC media — Data Link



```
Run 5: Statistics of WebRTC media

Start at: 2018-10-26 04:16:13
End at: 2018-10-26 04:16:43
Local clock offset: 1.724 ms
Remote clock offset: -6.223 ms

# Below is generated by plot.py at 2018-10-26 04:44:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 8.796 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 8.817 ms
Loss rate: 1.63%
-- Flow 2:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 9.086 ms
Loss rate: 2.34%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 7.447 ms
Loss rate: 3.66%
```

Run 5: Report of WebRTC media — Data Link

