

Pantheon Report

Generated at 2019-04-24 02:28:09 (UTC).
Data path: AWS India 1 on `ens5 (local)` → India on `em1 (remote)`.
Repeated the test of 21 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:

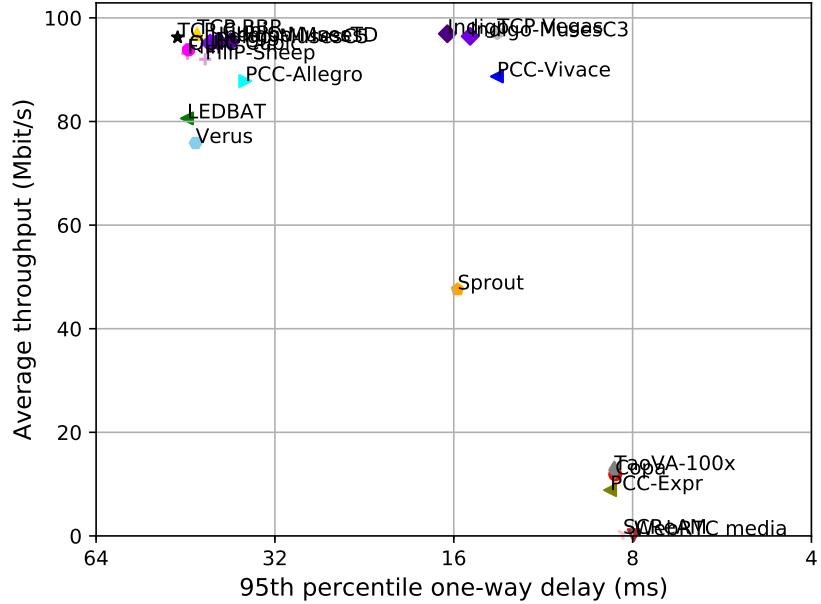
```
Linux 4.15.0-1034-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

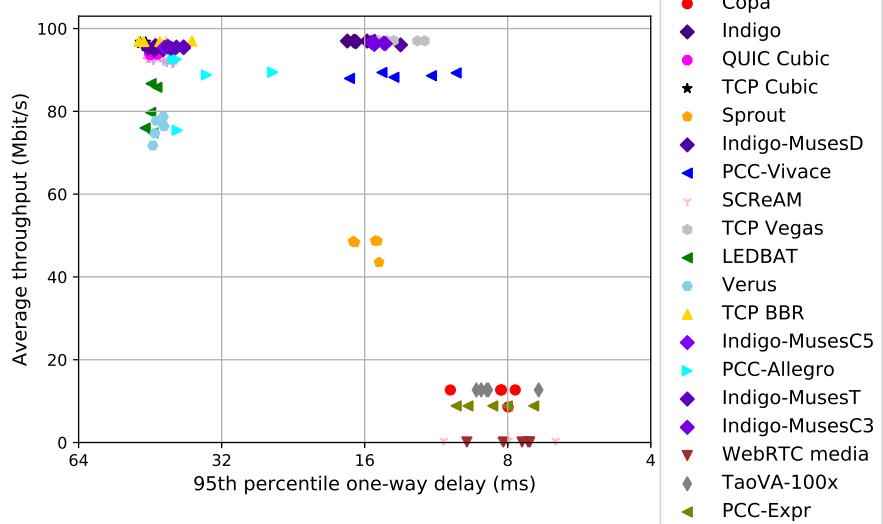
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
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



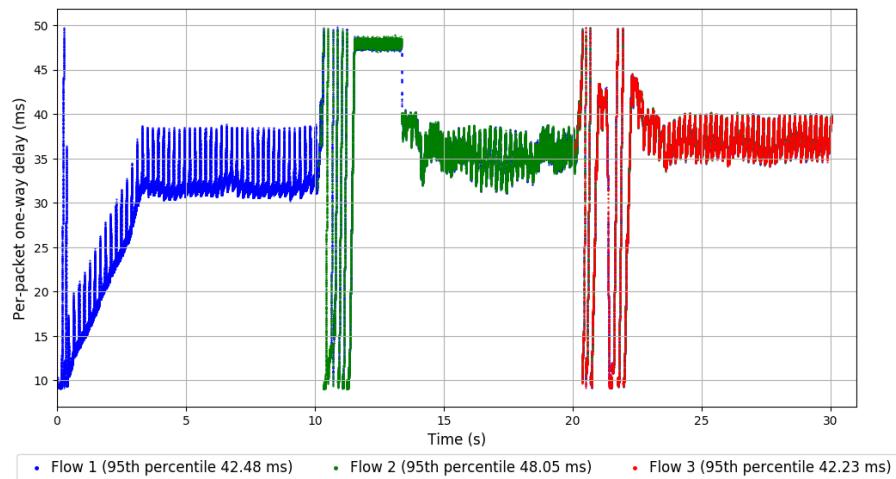
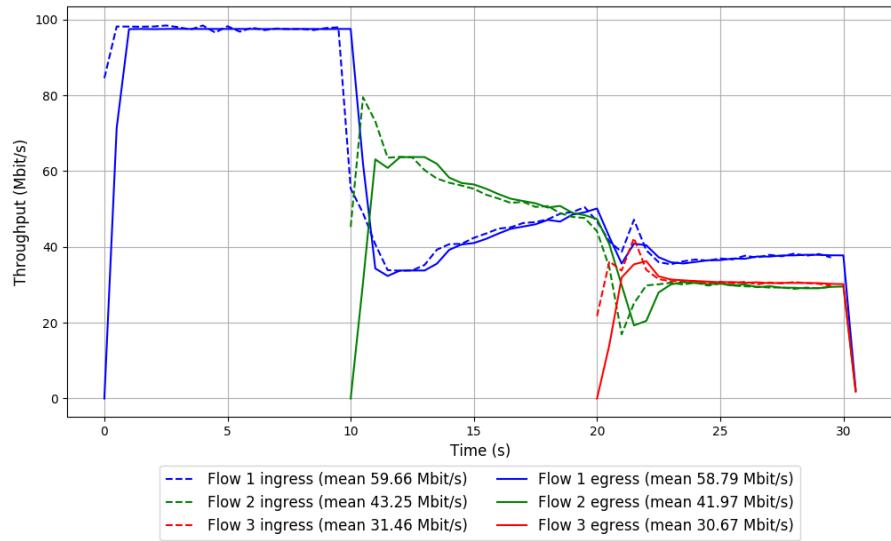
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	52.58	47.80	37.60	41.34	44.02	41.42	1.31	2.66	2.40
Copa	5	7.09	7.08	0.51	9.06	8.69	8.30	73.47	73.13	90.85
TCP Cubic	5	69.08	27.85	26.03	46.85	45.93	46.52	0.80	0.78	0.85
FillP	5	56.99	41.25	26.42	43.39	45.85	46.62	29.43	46.95	58.78
FillP-Sheep	5	53.61	39.48	37.30	38.77	43.24	44.94	4.20	8.90	14.80
Indigo	5	56.14	39.34	44.92	16.26	16.80	18.44	0.01	0.00	0.00
Indigo-MusesC3	5	47.42	55.75	42.13	14.51	15.26	14.69	0.00	0.00	0.00
Indigo-MusesC5	5	59.14	43.25	25.74	37.11	42.18	45.53	3.50	10.21	23.12
Indigo-MusesD	5	68.74	33.11	16.96	33.45	38.35	39.25	4.29	8.48	11.93
Indigo-MusesT	5	61.34	38.75	29.41	36.30	41.50	43.27	3.36	7.85	18.53
LEDBAT	5	50.01	35.22	22.20	44.92	45.15	45.02	0.41	0.60	0.87
PCC-Allegro	5	71.68	14.25	20.10	35.63	36.49	34.87	9.31	3.37	5.04
PCC-Expr	5	0.08	10.01	6.61	7.81	8.74	8.72	85.71	45.68	28.78
QUIC Cubic	5	69.92	26.84	18.64	44.55	45.08	44.97	1.70	2.21	2.73
SCReAM	5	0.21	0.21	0.22	8.29	7.65	7.64	0.00	0.00	0.00
Sprout	5	24.45	24.33	24.03	15.68	15.96	15.64	0.00	0.03	0.00
TaoVA-100x	5	9.34	6.65	3.87	8.56	8.18	10.64	85.89	76.55	78.37
TCP Vegas	5	53.34	44.47	42.41	14.14	11.56	11.19	0.61	0.00	0.00
Verus	5	48.87	30.06	25.08	43.01	44.60	42.86	26.60	42.61	30.45
PCC-Vivace	5	60.33	32.61	20.21	12.50	14.43	14.27	0.00	0.00	0.00
WebRTC media	5	0.05	0.05	0.05	7.35	7.39	8.17	0.00	0.00	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2019-04-24 00:30:50
End at: 2019-04-24 00:31:20
Local clock offset: -0.008 ms
Remote clock offset: 5.714 ms

# Below is generated by plot.py at 2019-04-24 02:17:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.92 Mbit/s
95th percentile per-packet one-way delay: 47.753 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 58.79 Mbit/s
95th percentile per-packet one-way delay: 42.485 ms
Loss rate: 1.35%
-- Flow 2:
Average throughput: 41.97 Mbit/s
95th percentile per-packet one-way delay: 48.055 ms
Loss rate: 2.92%
-- Flow 3:
Average throughput: 30.67 Mbit/s
95th percentile per-packet one-way delay: 42.234 ms
Loss rate: 2.49%
```

Run 1: Report of TCP BBR — Data Link

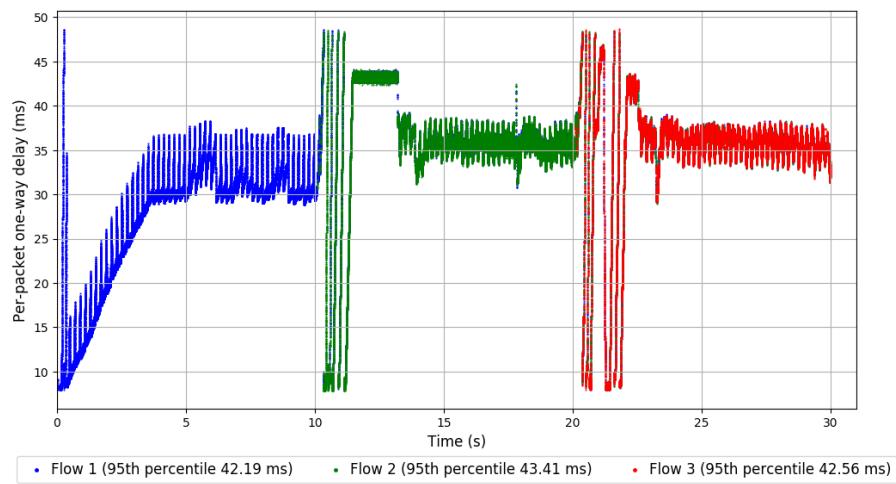
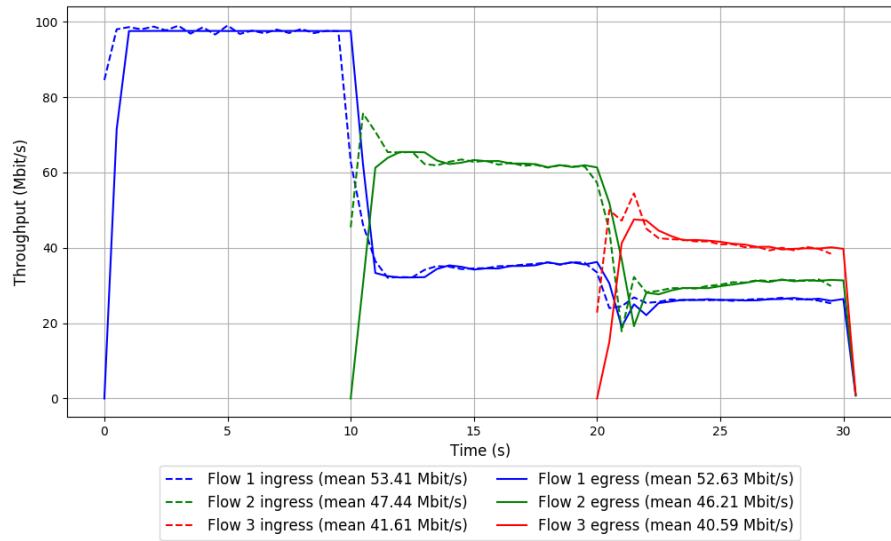


Run 2: Statistics of TCP BBR

```
Start at: 2019-04-24 00:55:31
End at: 2019-04-24 00:56:01
Local clock offset: 0.79 ms
Remote clock offset: 3.231 ms

# Below is generated by plot.py at 2019-04-24 02:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.86 Mbit/s
95th percentile per-packet one-way delay: 43.177 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 52.63 Mbit/s
95th percentile per-packet one-way delay: 42.190 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 46.21 Mbit/s
95th percentile per-packet one-way delay: 43.409 ms
Loss rate: 2.59%
-- Flow 3:
Average throughput: 40.59 Mbit/s
95th percentile per-packet one-way delay: 42.559 ms
Loss rate: 2.47%
```

Run 2: Report of TCP BBR — Data Link

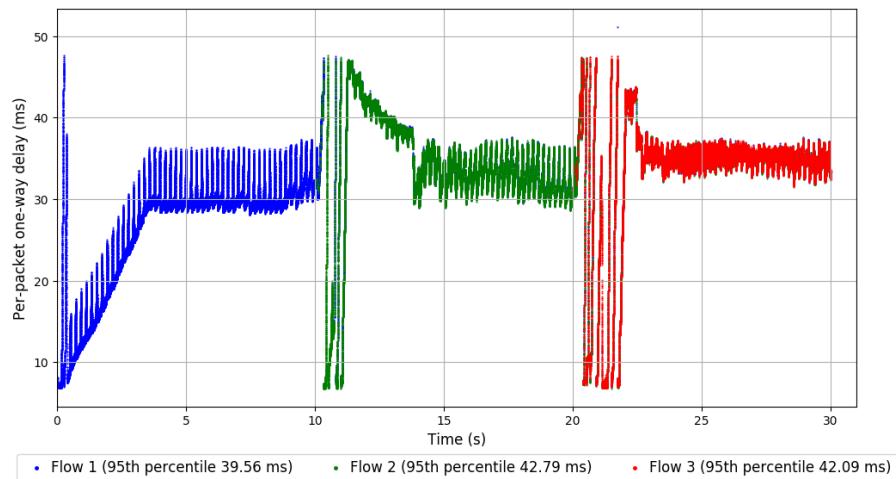
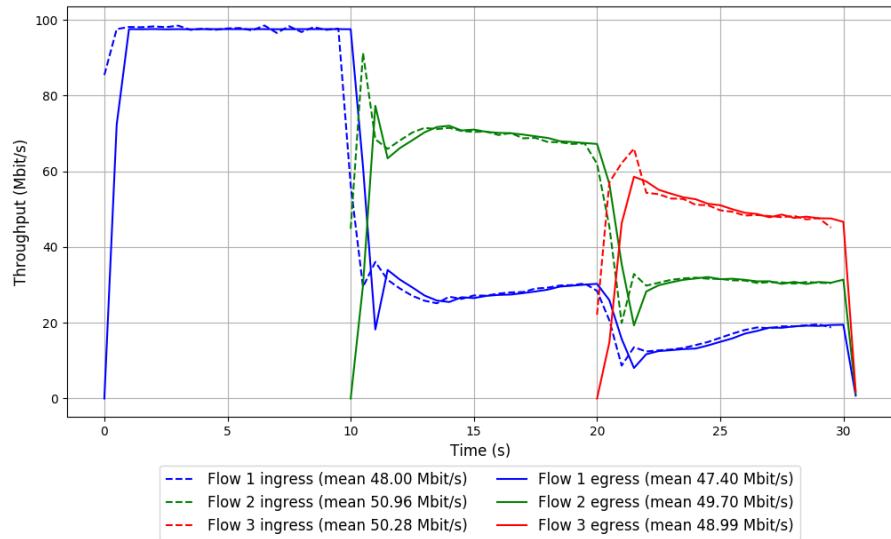


Run 3: Statistics of TCP BBR

```
Start at: 2019-04-24 01:20:07
End at: 2019-04-24 01:20:37
Local clock offset: 0.57 ms
Remote clock offset: 1.598 ms

# Below is generated by plot.py at 2019-04-24 02:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.79 Mbit/s
95th percentile per-packet one-way delay: 41.796 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 47.40 Mbit/s
95th percentile per-packet one-way delay: 39.562 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 49.70 Mbit/s
95th percentile per-packet one-way delay: 42.793 ms
Loss rate: 2.46%
-- Flow 3:
Average throughput: 48.99 Mbit/s
95th percentile per-packet one-way delay: 42.092 ms
Loss rate: 2.54%
```

Run 3: Report of TCP BBR — Data Link

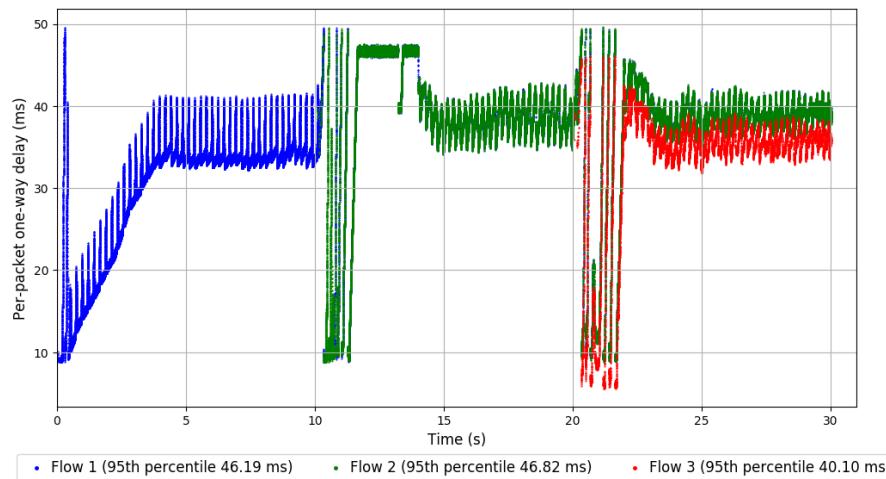
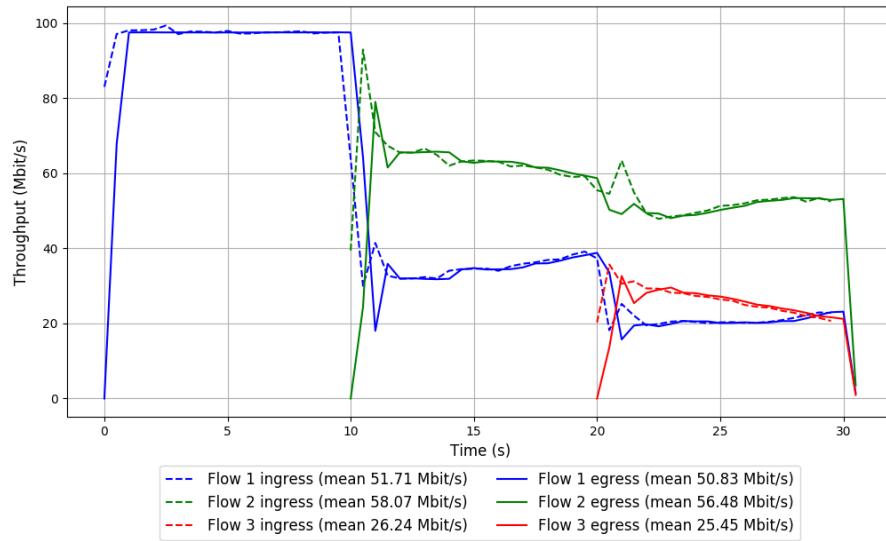


Run 4: Statistics of TCP BBR

```
Start at: 2019-04-24 01:45:01
End at: 2019-04-24 01:45:31
Local clock offset: 0.244 ms
Remote clock offset: -0.312 ms

# Below is generated by plot.py at 2019-04-24 02:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 46.666 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 50.83 Mbit/s
95th percentile per-packet one-way delay: 46.194 ms
Loss rate: 1.61%
-- Flow 2:
Average throughput: 56.48 Mbit/s
95th percentile per-packet one-way delay: 46.818 ms
Loss rate: 2.72%
-- Flow 3:
Average throughput: 25.45 Mbit/s
95th percentile per-packet one-way delay: 40.101 ms
Loss rate: 3.04%
```

Run 4: Report of TCP BBR — Data Link

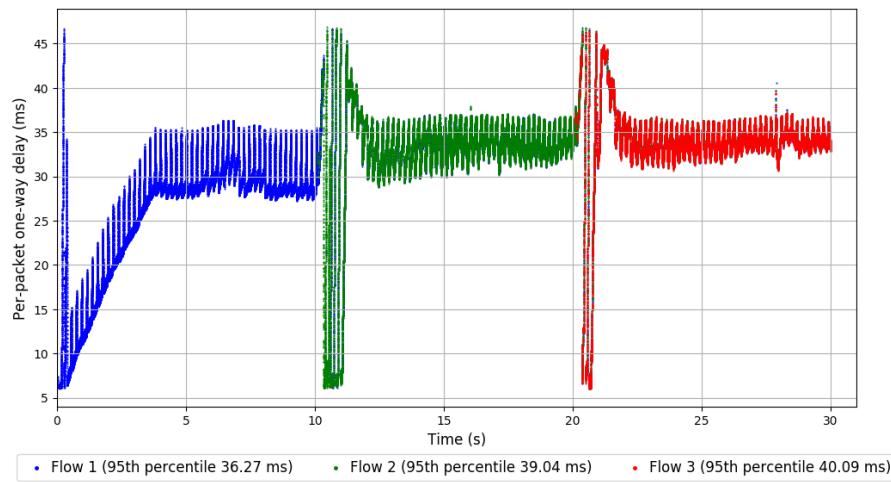
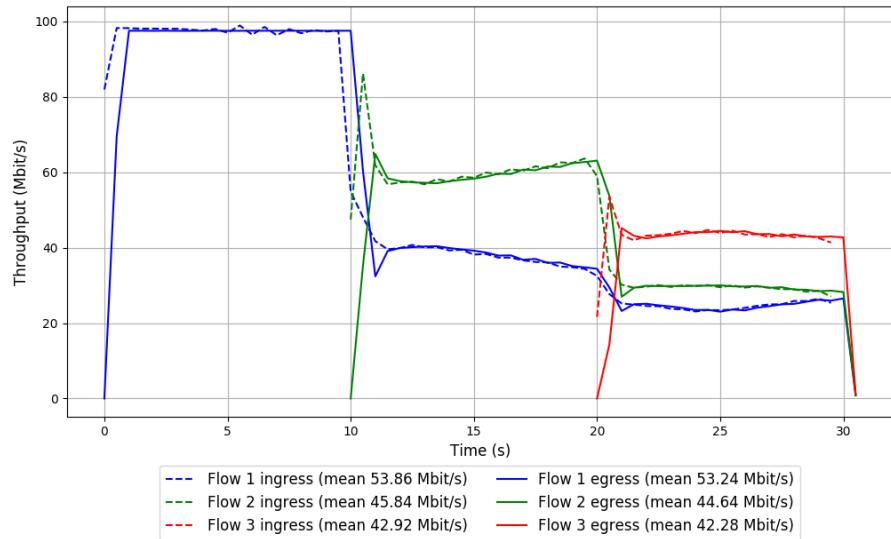


Run 5: Statistics of TCP BBR

```
Start at: 2019-04-24 02:10:00
End at: 2019-04-24 02:10:30
Local clock offset: 0.358 ms
Remote clock offset: -1.48 ms

# Below is generated by plot.py at 2019-04-24 02:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.01 Mbit/s
95th percentile per-packet one-way delay: 36.963 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 53.24 Mbit/s
95th percentile per-packet one-way delay: 36.273 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 44.64 Mbit/s
95th percentile per-packet one-way delay: 39.036 ms
Loss rate: 2.59%
-- Flow 3:
Average throughput: 42.28 Mbit/s
95th percentile per-packet one-way delay: 40.094 ms
Loss rate: 1.48%
```

Run 5: Report of TCP BBR — Data Link

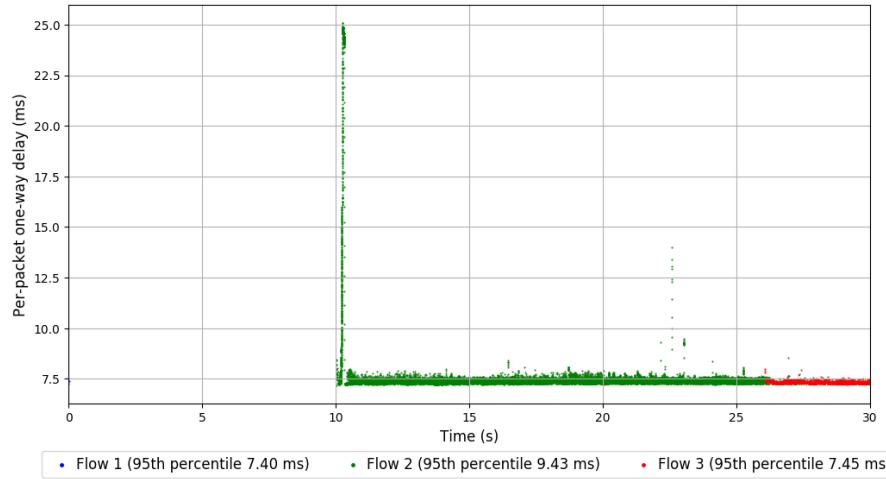
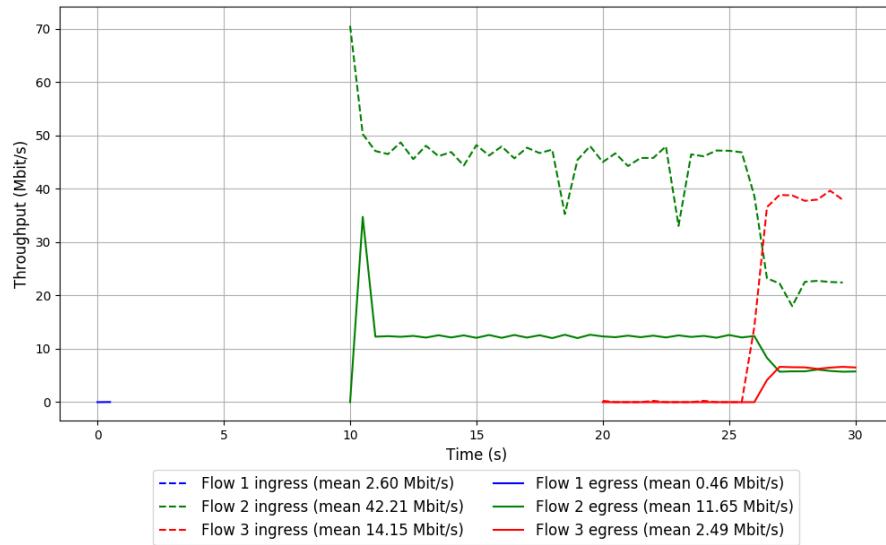


Run 1: Statistics of Copa

```
Start at: 2019-04-24 00:10:59
End at: 2019-04-24 00:11:29
Local clock offset: 0.366 ms
Remote clock offset: 5.87 ms

# Below is generated by plot.py at 2019-04-24 02:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 7.986 ms
Loss rate: 73.83%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 7.402 ms
Loss rate: 82.17%
-- Flow 2:
Average throughput: 11.65 Mbit/s
95th percentile per-packet one-way delay: 9.431 ms
Loss rate: 72.40%
-- Flow 3:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 7.448 ms
Loss rate: 82.41%
```

Run 1: Report of Copa — Data Link

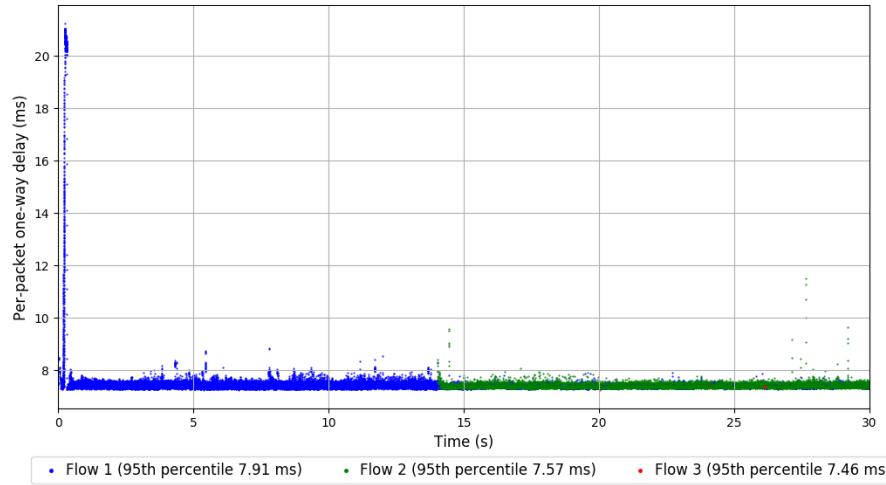
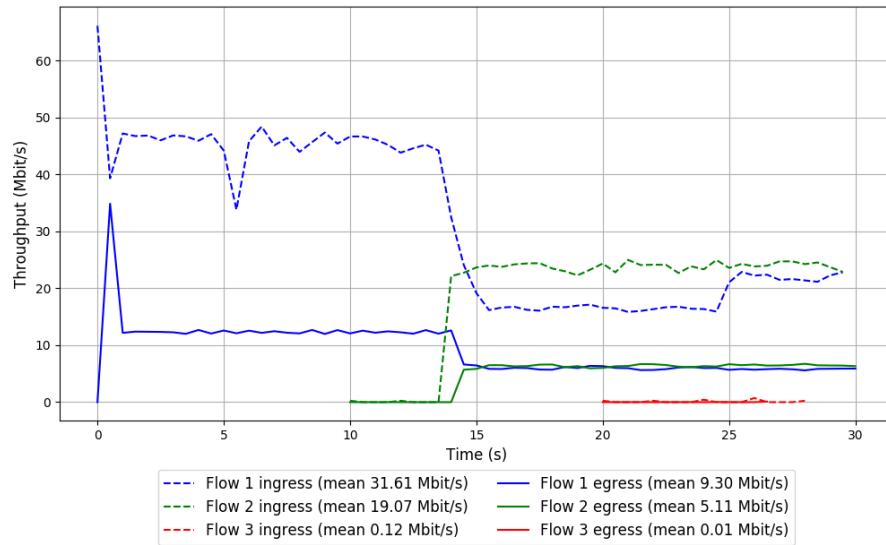


Run 2: Statistics of Copa

```
Start at: 2019-04-24 00:35:33
End at: 2019-04-24 00:36:03
Local clock offset: 0.766 ms
Remote clock offset: 4.433 ms

# Below is generated by plot.py at 2019-04-24 02:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 7.714 ms
Loss rate: 71.36%
-- Flow 1:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 7.905 ms
Loss rate: 70.58%
-- Flow 2:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 7.565 ms
Loss rate: 73.24%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 7.458 ms
Loss rate: 93.49%
```

Run 2: Report of Copa — Data Link

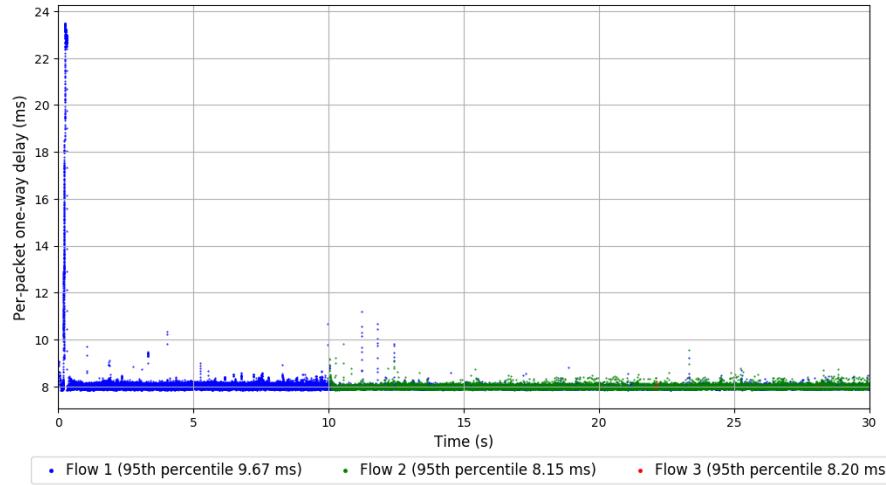
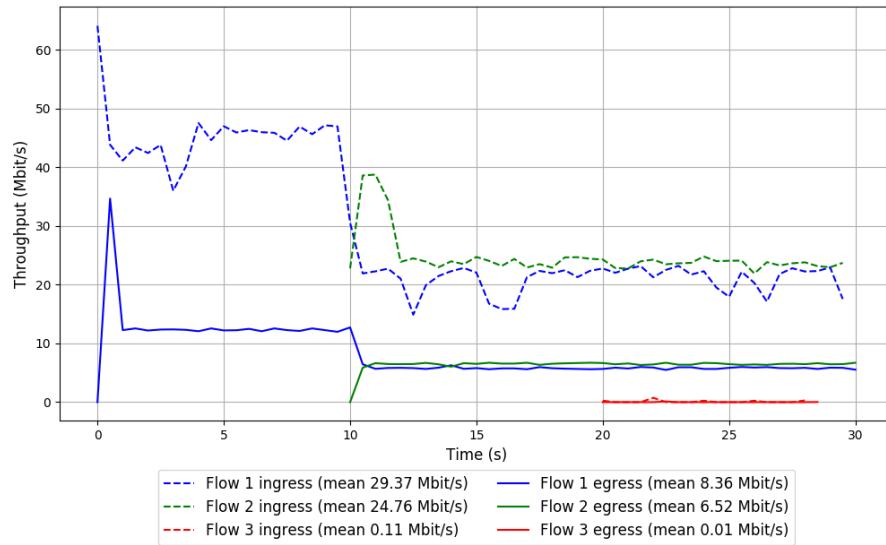


Run 3: Statistics of Copa

```
Start at: 2019-04-24 01:00:12
End at: 2019-04-24 01:00:42
Local clock offset: 0.394 ms
Remote clock offset: 2.488 ms

# Below is generated by plot.py at 2019-04-24 02:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 8.279 ms
Loss rate: 72.32%
-- Flow 1:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 9.674 ms
Loss rate: 71.54%
-- Flow 2:
Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 8.147 ms
Loss rate: 73.67%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 8.195 ms
Loss rate: 91.67%
```

Run 3: Report of Copa — Data Link

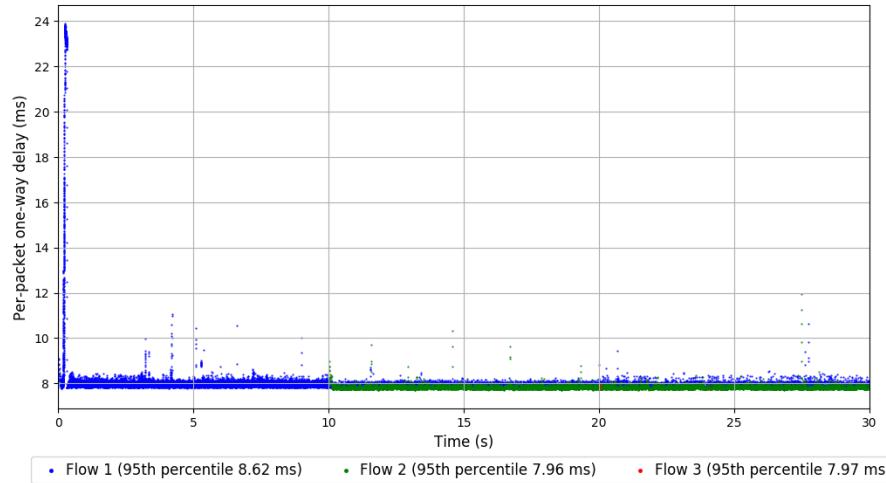
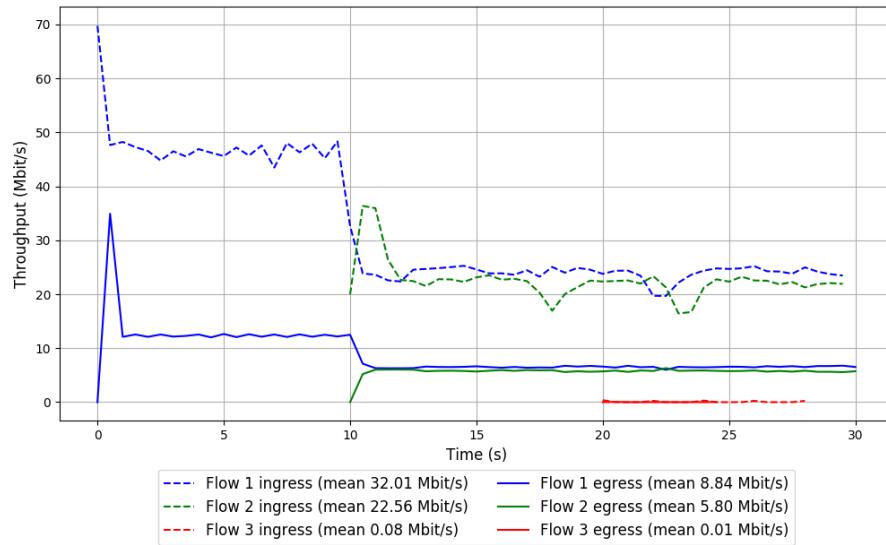


Run 4: Statistics of Copa

```
Start at: 2019-04-24 01:24:50
End at: 2019-04-24 01:25:20
Local clock offset: -0.195 ms
Remote clock offset: 1.953 ms

# Below is generated by plot.py at 2019-04-24 02:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 8.244 ms
Loss rate: 73.01%
-- Flow 1:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 8.616 ms
Loss rate: 72.39%
-- Flow 2:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 7.964 ms
Loss rate: 74.31%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 7.971 ms
Loss rate: 94.60%
```

Run 4: Report of Copa — Data Link

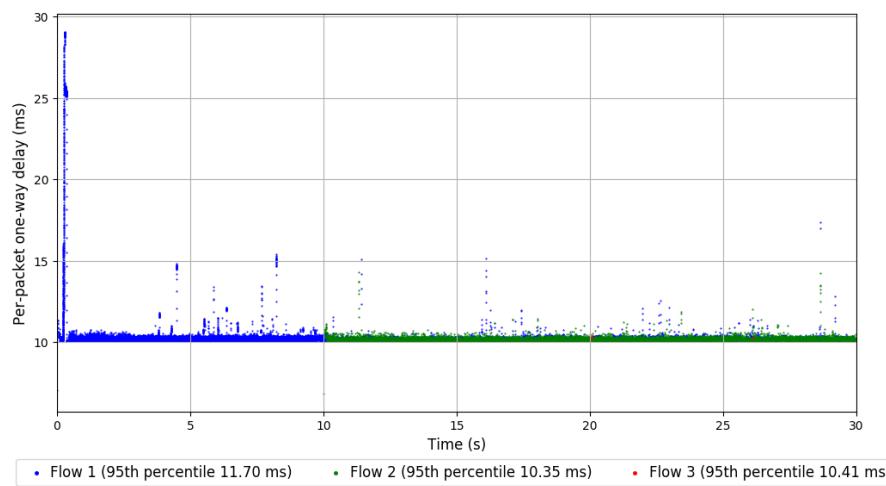
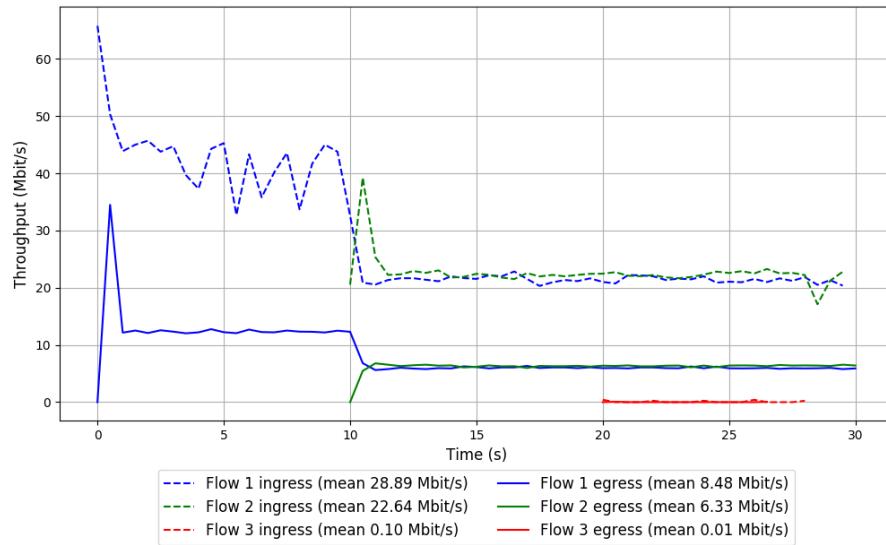


Run 5: Statistics of Copa

```
Start at: 2019-04-24 01:49:55
End at: 2019-04-24 01:50:25
Local clock offset: -0.002 ms
Remote clock offset: 0.239 ms

# Below is generated by plot.py at 2019-04-24 02:17:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.69 Mbit/s
95th percentile per-packet one-way delay: 10.561 ms
Loss rate: 71.15%
-- Flow 1:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 11.696 ms
Loss rate: 70.66%
-- Flow 2:
Average throughput: 6.33 Mbit/s
95th percentile per-packet one-way delay: 10.354 ms
Loss rate: 72.03%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 10.409 ms
Loss rate: 92.07%
```

Run 5: Report of Copa — Data Link

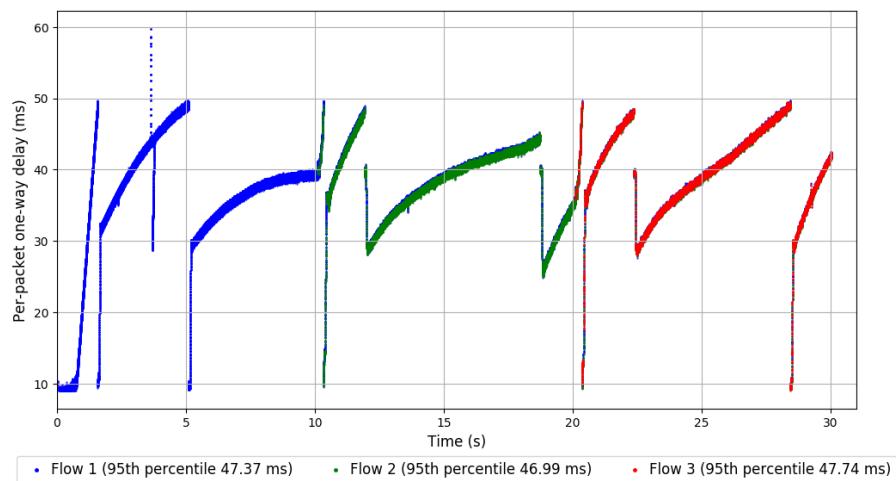
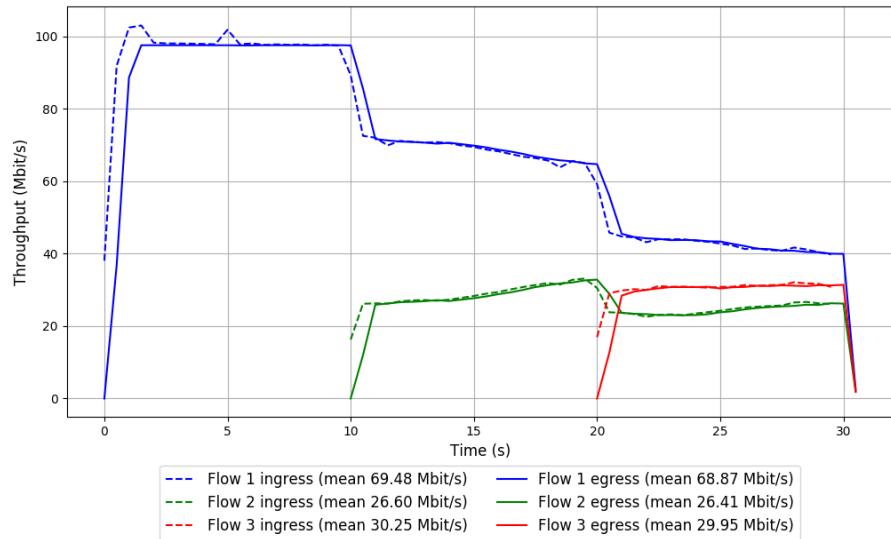


Run 1: Statistics of TCP Cubic

```
Start at: 2019-04-24 00:27:24
End at: 2019-04-24 00:27:54
Local clock offset: -0.478 ms
Remote clock offset: 5.285 ms

# Below is generated by plot.py at 2019-04-24 02:17:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.39 Mbit/s
95th percentile per-packet one-way delay: 47.375 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 68.87 Mbit/s
95th percentile per-packet one-way delay: 47.370 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 26.41 Mbit/s
95th percentile per-packet one-way delay: 46.993 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 47.737 ms
Loss rate: 0.95%
```

Run 1: Report of TCP Cubic — Data Link

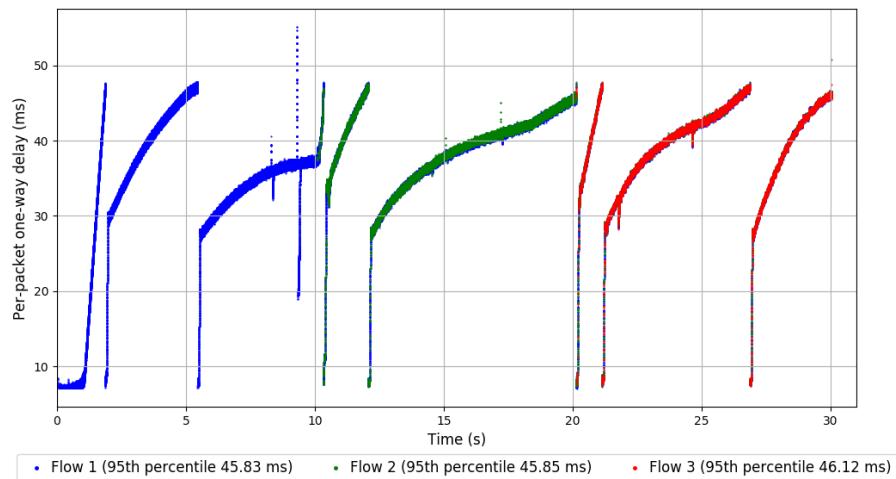
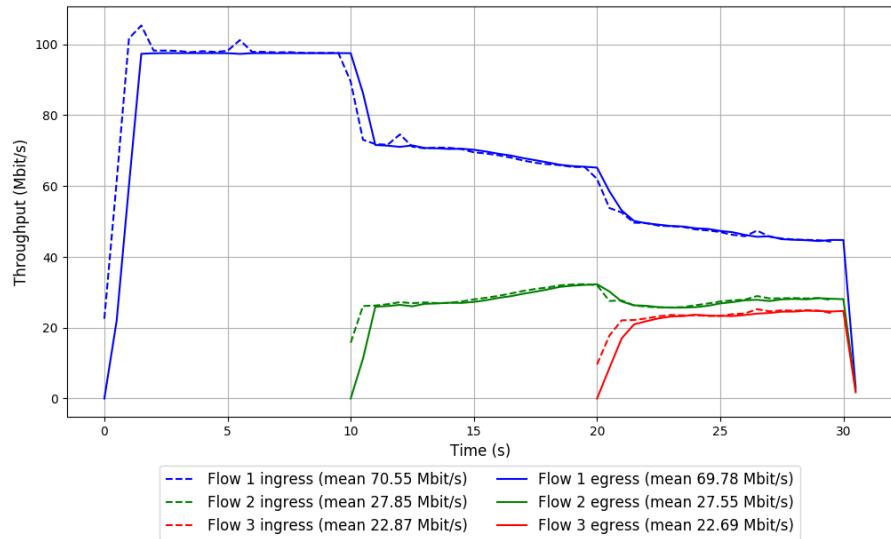


Run 2: Statistics of TCP Cubic

```
Start at: 2019-04-24 00:52:05
End at: 2019-04-24 00:52:35
Local clock offset: 0.546 ms
Remote clock offset: 2.459 ms

# Below is generated by plot.py at 2019-04-24 02:17:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 45.850 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 69.78 Mbit/s
95th percentile per-packet one-way delay: 45.825 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 27.55 Mbit/s
95th percentile per-packet one-way delay: 45.849 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 22.69 Mbit/s
95th percentile per-packet one-way delay: 46.124 ms
Loss rate: 0.78%
```

Run 2: Report of TCP Cubic — Data Link

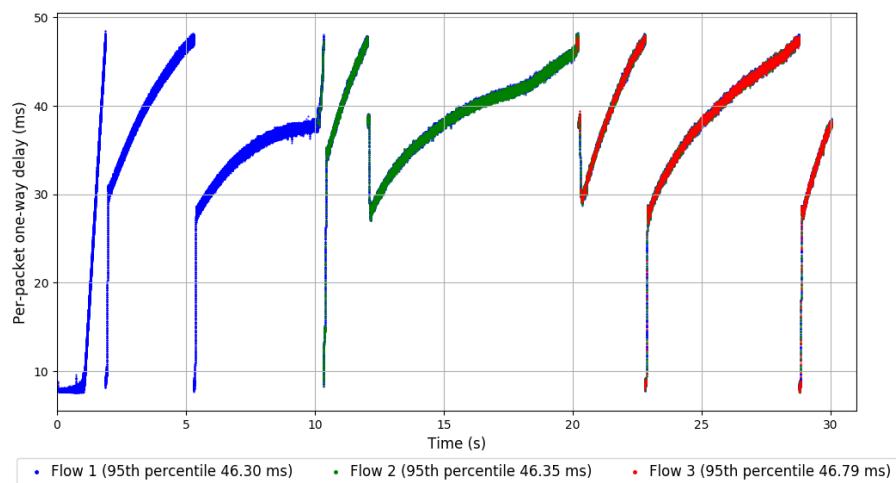
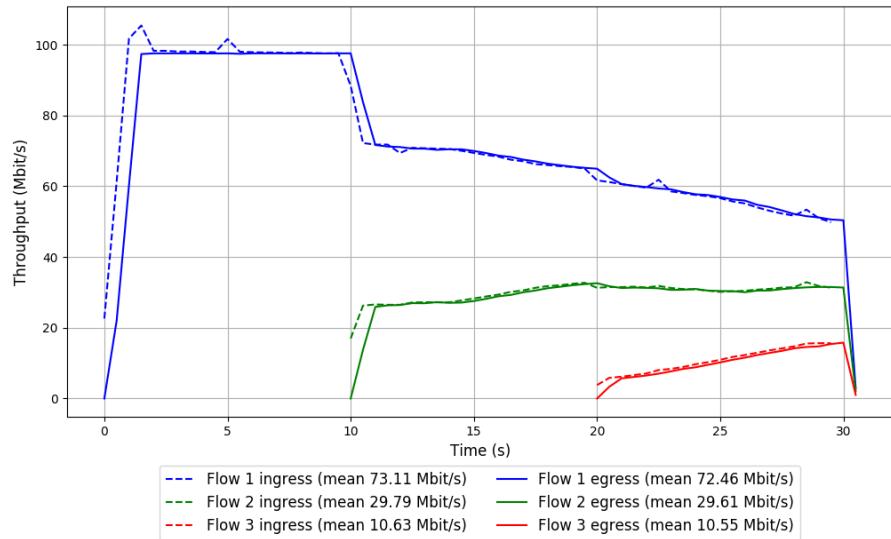


Run 3: Statistics of TCP Cubic

```
Start at: 2019-04-24 01:16:38
End at: 2019-04-24 01:17:08
Local clock offset: 1.031 ms
Remote clock offset: 2.608 ms

# Below is generated by plot.py at 2019-04-24 02:17:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 46.347 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 72.46 Mbit/s
95th percentile per-packet one-way delay: 46.299 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 29.61 Mbit/s
95th percentile per-packet one-way delay: 46.349 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 10.55 Mbit/s
95th percentile per-packet one-way delay: 46.790 ms
Loss rate: 0.92%
```

Run 3: Report of TCP Cubic — Data Link

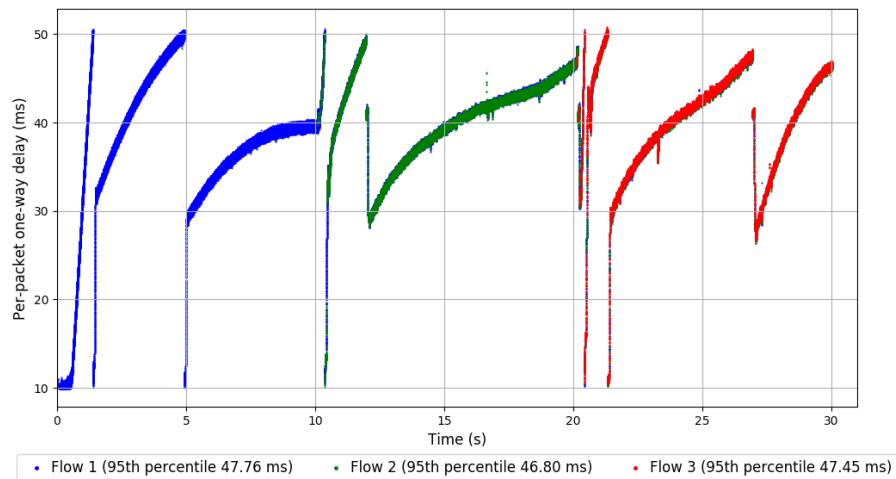
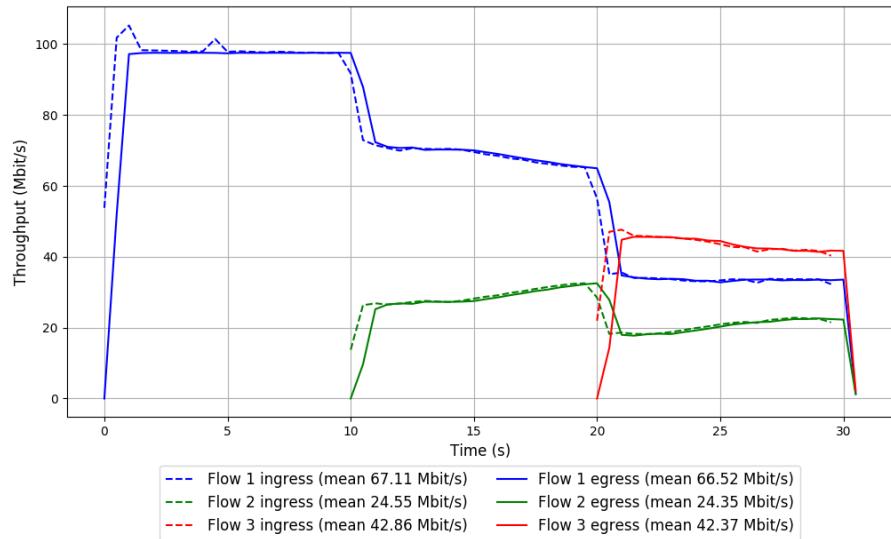


Run 4: Statistics of TCP Cubic

```
Start at: 2019-04-24 01:41:33
End at: 2019-04-24 01:42:03
Local clock offset: -0.535 ms
Remote clock offset: 0.134 ms

# Below is generated by plot.py at 2019-04-24 02:18:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.78 Mbit/s
95th percentile per-packet one-way delay: 47.499 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 66.52 Mbit/s
95th percentile per-packet one-way delay: 47.757 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 24.35 Mbit/s
95th percentile per-packet one-way delay: 46.802 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 42.37 Mbit/s
95th percentile per-packet one-way delay: 47.445 ms
Loss rate: 1.15%
```

Run 4: Report of TCP Cubic — Data Link

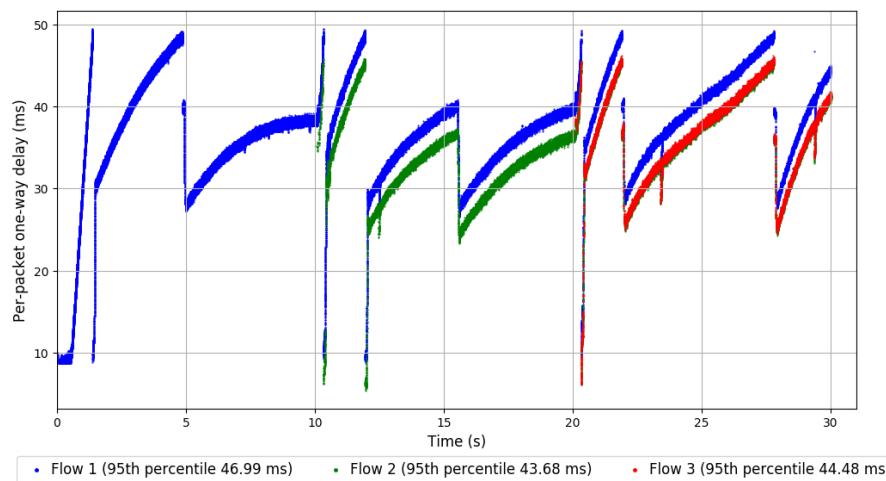
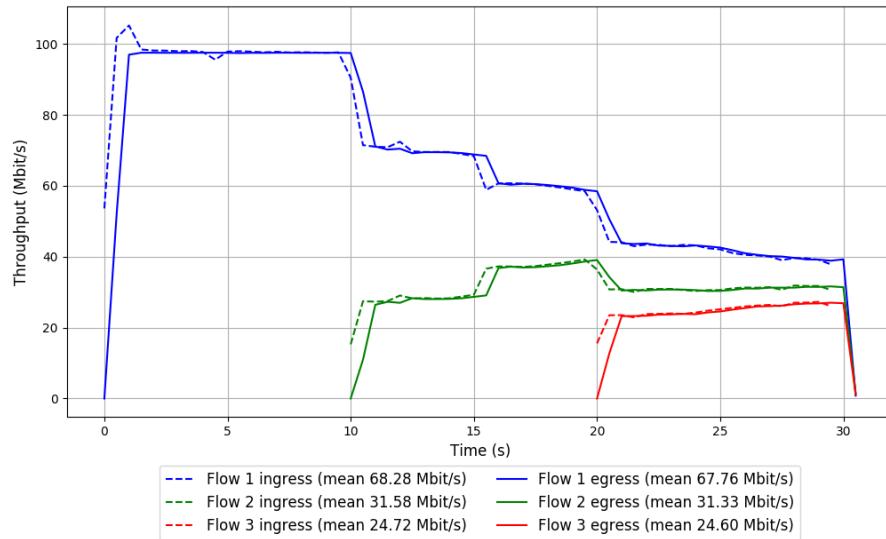


Run 5: Statistics of TCP Cubic

```
Start at: 2019-04-24 02:06:34
End at: 2019-04-24 02:07:04
Local clock offset: 0.003 ms
Remote clock offset: -2.103 ms

# Below is generated by plot.py at 2019-04-24 02:18:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.77 Mbit/s
95th percentile per-packet one-way delay: 46.228 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 67.76 Mbit/s
95th percentile per-packet one-way delay: 46.993 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 31.33 Mbit/s
95th percentile per-packet one-way delay: 43.680 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 24.60 Mbit/s
95th percentile per-packet one-way delay: 44.482 ms
Loss rate: 0.44%
```

Run 5: Report of TCP Cubic — Data Link

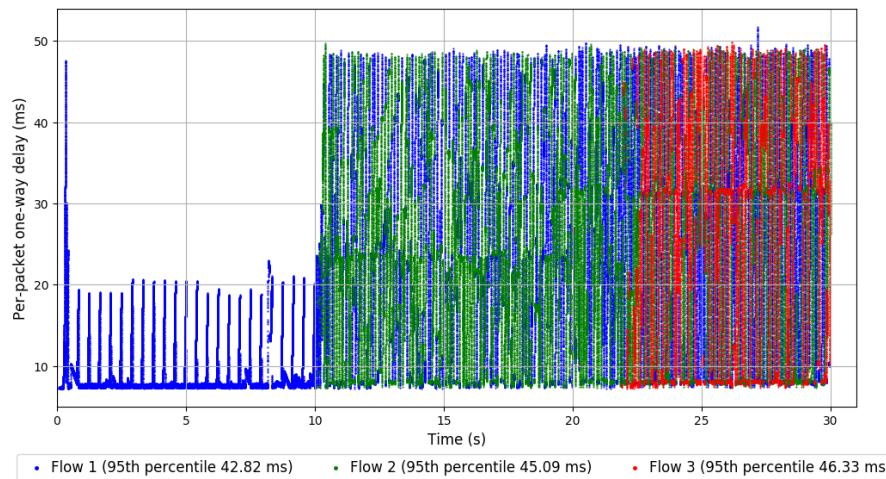
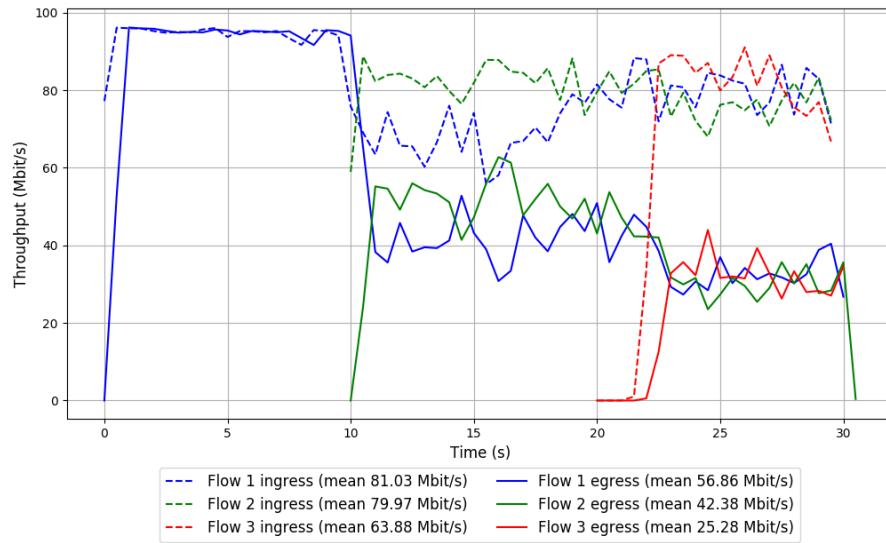


```
Run 1: Statistics of FillP

Start at: 2019-04-24 00:21:31
End at: 2019-04-24 00:22:01
Local clock offset: 0.038 ms
Remote clock offset: 4.689 ms

# Below is generated by plot.py at 2019-04-24 02:18:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.39 Mbit/s
95th percentile per-packet one-way delay: 44.389 ms
Loss rate: 39.84%
-- Flow 1:
Average throughput: 56.86 Mbit/s
95th percentile per-packet one-way delay: 42.816 ms
Loss rate: 29.82%
-- Flow 2:
Average throughput: 42.38 Mbit/s
95th percentile per-packet one-way delay: 45.089 ms
Loss rate: 46.91%
-- Flow 3:
Average throughput: 25.28 Mbit/s
95th percentile per-packet one-way delay: 46.328 ms
Loss rate: 60.40%
```

Run 1: Report of FillP — Data Link

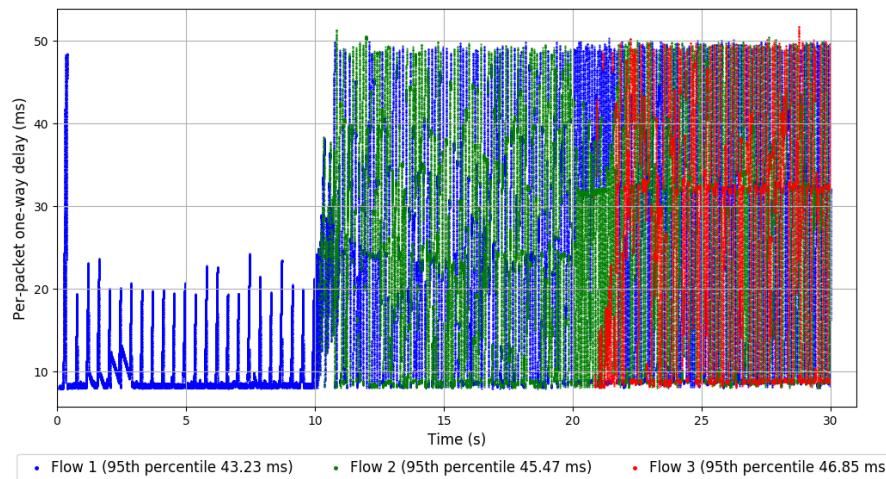
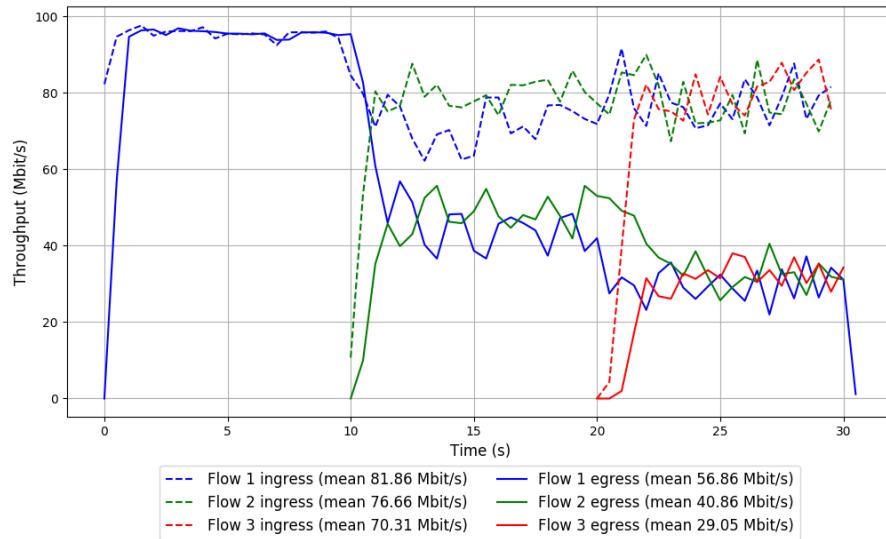


Run 2: Statistics of FillP

```
Start at: 2019-04-24 00:46:13
End at: 2019-04-24 00:46:43
Local clock offset: 0.144 ms
Remote clock offset: 3.789 ms

# Below is generated by plot.py at 2019-04-24 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.45 Mbit/s
95th percentile per-packet one-way delay: 44.727 ms
Loss rate: 40.13%
-- Flow 1:
Average throughput: 56.86 Mbit/s
95th percentile per-packet one-way delay: 43.234 ms
Loss rate: 30.48%
-- Flow 2:
Average throughput: 40.86 Mbit/s
95th percentile per-packet one-way delay: 45.470 ms
Loss rate: 46.73%
-- Flow 3:
Average throughput: 29.05 Mbit/s
95th percentile per-packet one-way delay: 46.853 ms
Loss rate: 59.57%
```

Run 2: Report of FillP — Data Link

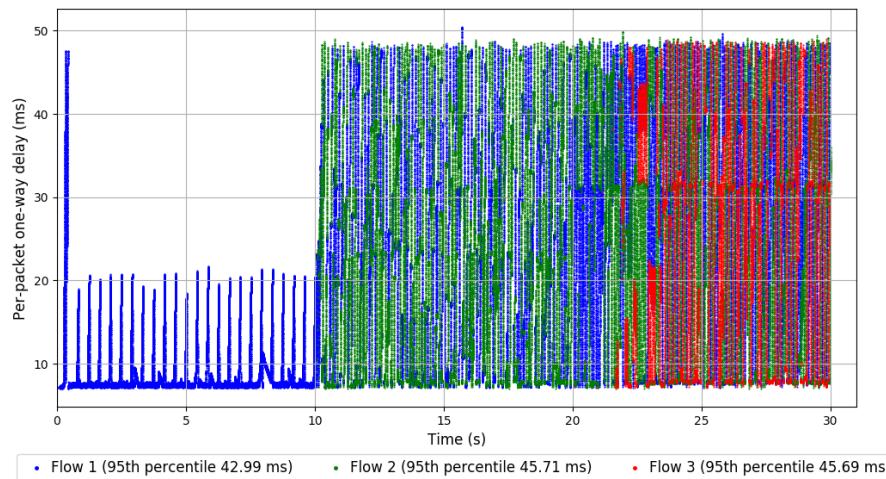
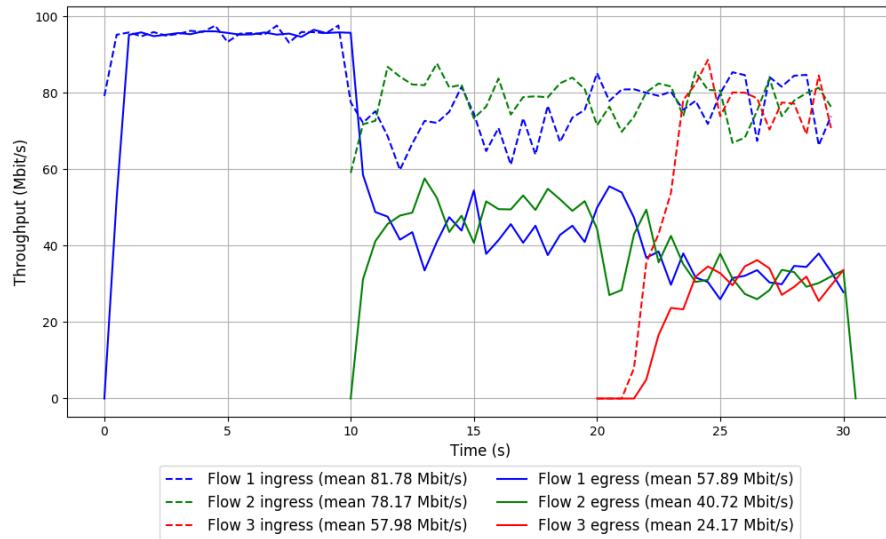


Run 3: Statistics of FillP

```
Start at: 2019-04-24 01:10:48
End at: 2019-04-24 01:11:18
Local clock offset: 1.788 ms
Remote clock offset: 2.951 ms

# Below is generated by plot.py at 2019-04-24 02:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 44.378 ms
Loss rate: 39.22%
-- Flow 1:
Average throughput: 57.89 Mbit/s
95th percentile per-packet one-way delay: 42.986 ms
Loss rate: 29.22%
-- Flow 2:
Average throughput: 40.72 Mbit/s
95th percentile per-packet one-way delay: 45.713 ms
Loss rate: 47.86%
-- Flow 3:
Average throughput: 24.17 Mbit/s
95th percentile per-packet one-way delay: 45.694 ms
Loss rate: 58.37%
```

Run 3: Report of FillP — Data Link

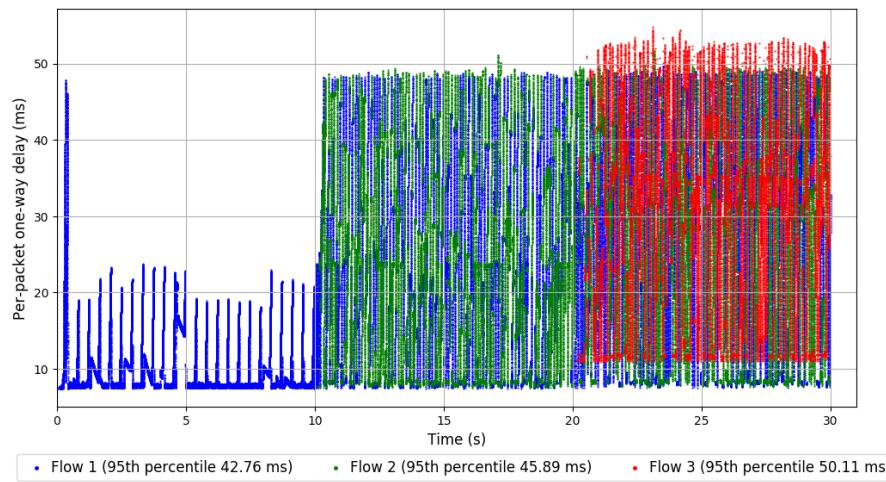
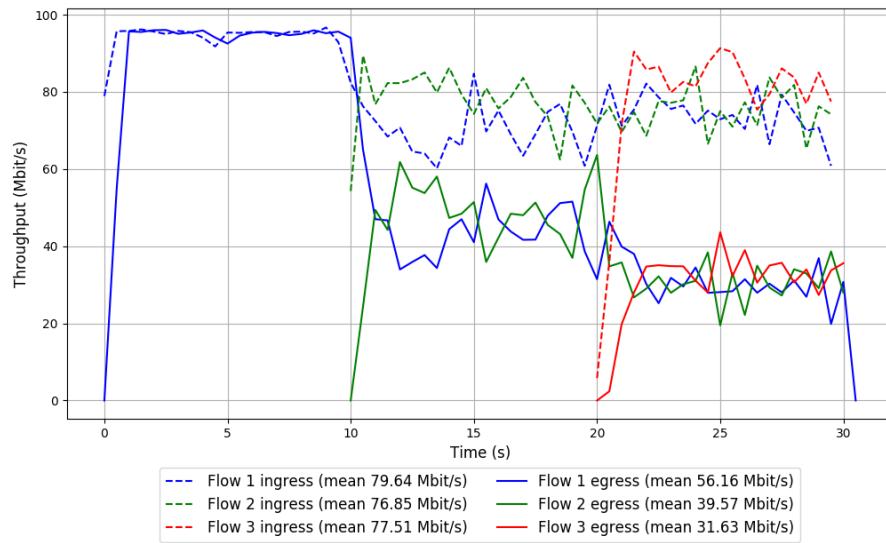


Run 4: Statistics of FillP

```
Start at: 2019-04-24 01:35:40
End at: 2019-04-24 01:36:10
Local clock offset: -0.945 ms
Remote clock offset: 0.89 ms

# Below is generated by plot.py at 2019-04-24 02:18:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.91 Mbit/s
95th percentile per-packet one-way delay: 45.359 ms
Loss rate: 40.54%
-- Flow 1:
Average throughput: 56.16 Mbit/s
95th percentile per-packet one-way delay: 42.764 ms
Loss rate: 29.41%
-- Flow 2:
Average throughput: 39.57 Mbit/s
95th percentile per-packet one-way delay: 45.892 ms
Loss rate: 48.51%
-- Flow 3:
Average throughput: 31.63 Mbit/s
95th percentile per-packet one-way delay: 50.109 ms
Loss rate: 59.26%
```

Run 4: Report of FillP — Data Link

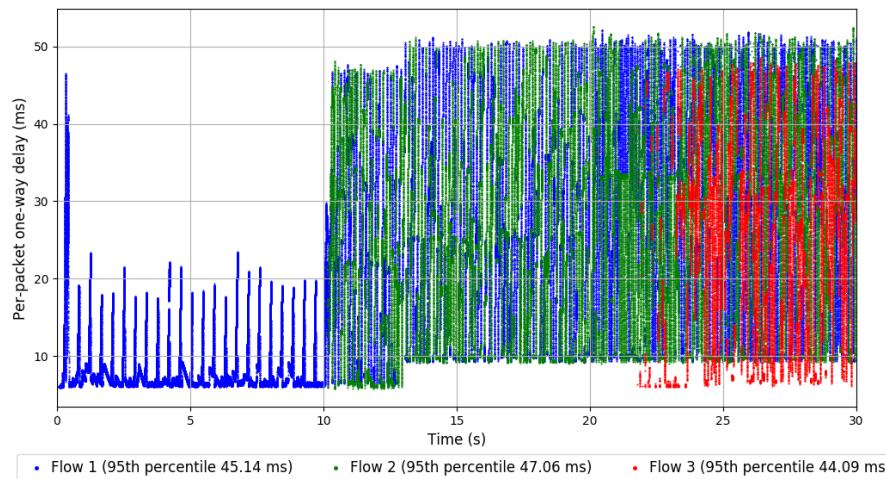
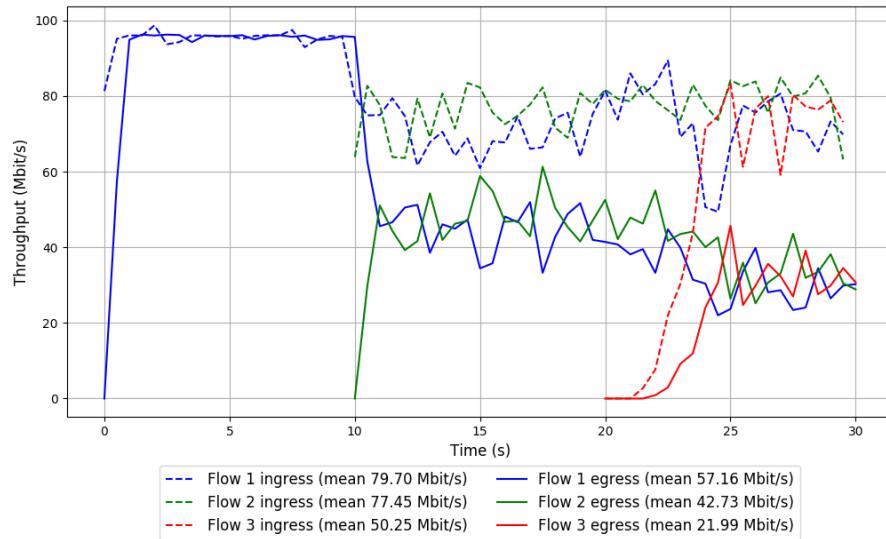


```
Run 5: Statistics of FillP
```

```
Start at: 2019-04-24 02:00:40
End at: 2019-04-24 02:01:10
Local clock offset: 0.913 ms
Remote clock offset: -0.266 ms

# Below is generated by plot.py at 2019-04-24 02:19:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.87 Mbit/s
95th percentile per-packet one-way delay: 45.791 ms
Loss rate: 37.12%
-- Flow 1:
Average throughput: 57.16 Mbit/s
95th percentile per-packet one-way delay: 45.144 ms
Loss rate: 28.20%
-- Flow 2:
Average throughput: 42.73 Mbit/s
95th percentile per-packet one-way delay: 47.065 ms
Loss rate: 44.73%
-- Flow 3:
Average throughput: 21.99 Mbit/s
95th percentile per-packet one-way delay: 44.094 ms
Loss rate: 56.28%
```

Run 5: Report of FillP — Data Link

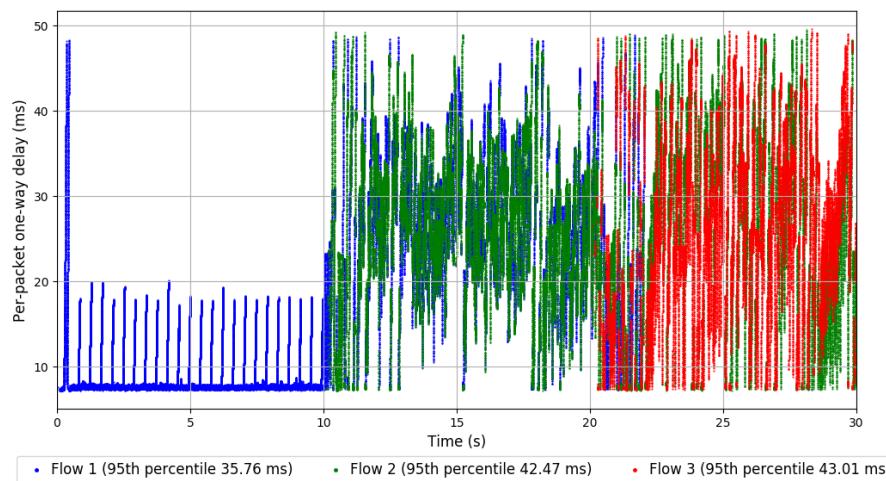
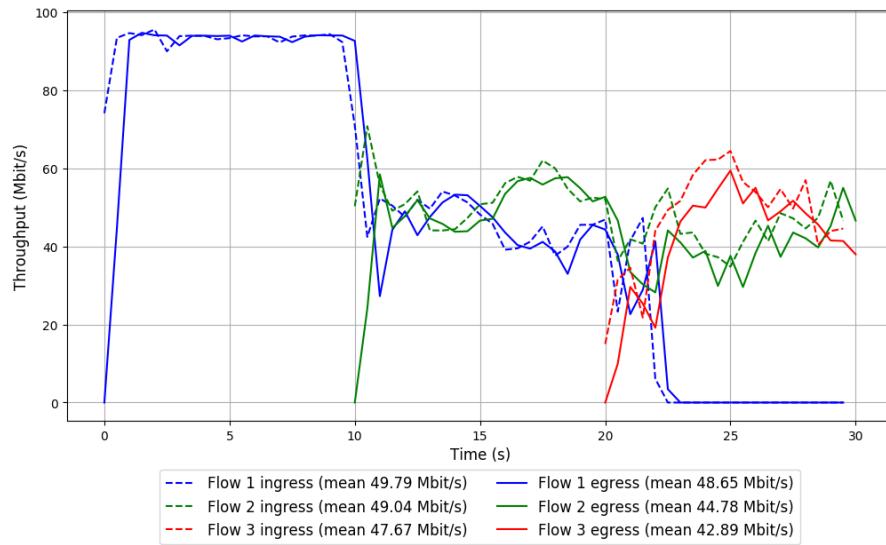


Run 1: Statistics of FillP-Sheep

```
Start at: 2019-04-24 00:19:07
End at: 2019-04-24 00:19:37
Local clock offset: 0.36 ms
Remote clock offset: 5.182 ms

# Below is generated by plot.py at 2019-04-24 02:19:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.59 Mbit/s
95th percentile per-packet one-way delay: 40.606 ms
Loss rate: 6.46%
-- Flow 1:
Average throughput: 48.65 Mbit/s
95th percentile per-packet one-way delay: 35.758 ms
Loss rate: 3.89%
-- Flow 2:
Average throughput: 44.78 Mbit/s
95th percentile per-packet one-way delay: 42.469 ms
Loss rate: 8.61%
-- Flow 3:
Average throughput: 42.89 Mbit/s
95th percentile per-packet one-way delay: 43.013 ms
Loss rate: 10.06%
```

Run 1: Report of FillP-Sheep — Data Link

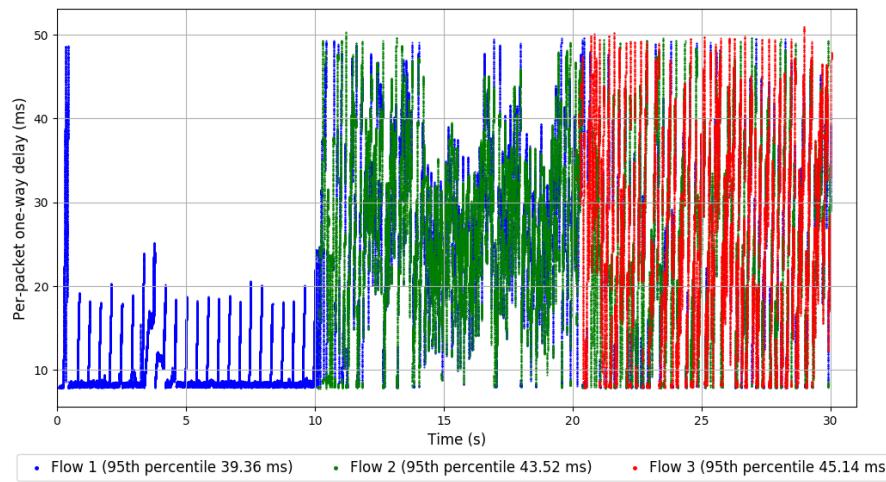
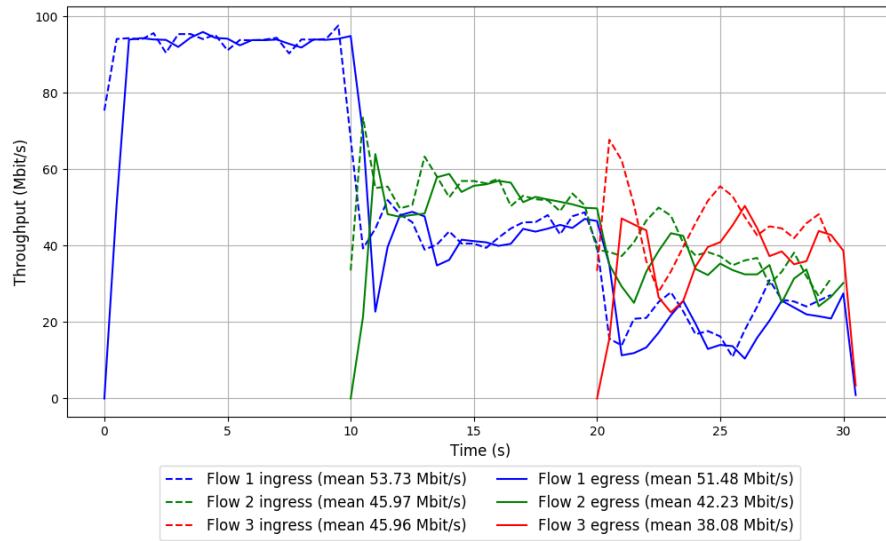


Run 2: Statistics of FillP-Sheep

```
Start at: 2019-04-24 00:43:49
End at: 2019-04-24 00:44:19
Local clock offset: 0.192 ms
Remote clock offset: 4.006 ms

# Below is generated by plot.py at 2019-04-24 02:19:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.17 Mbit/s
95th percentile per-packet one-way delay: 42.380 ms
Loss rate: 7.31%
-- Flow 1:
Average throughput: 51.48 Mbit/s
95th percentile per-packet one-way delay: 39.364 ms
Loss rate: 4.12%
-- Flow 2:
Average throughput: 42.23 Mbit/s
95th percentile per-packet one-way delay: 43.525 ms
Loss rate: 8.07%
-- Flow 3:
Average throughput: 38.08 Mbit/s
95th percentile per-packet one-way delay: 45.136 ms
Loss rate: 17.05%
```

Run 2: Report of FillP-Sheep — Data Link

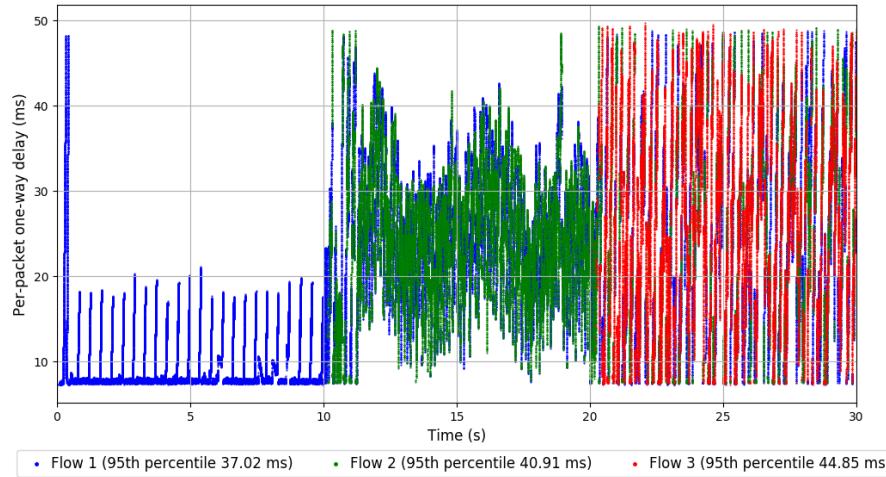
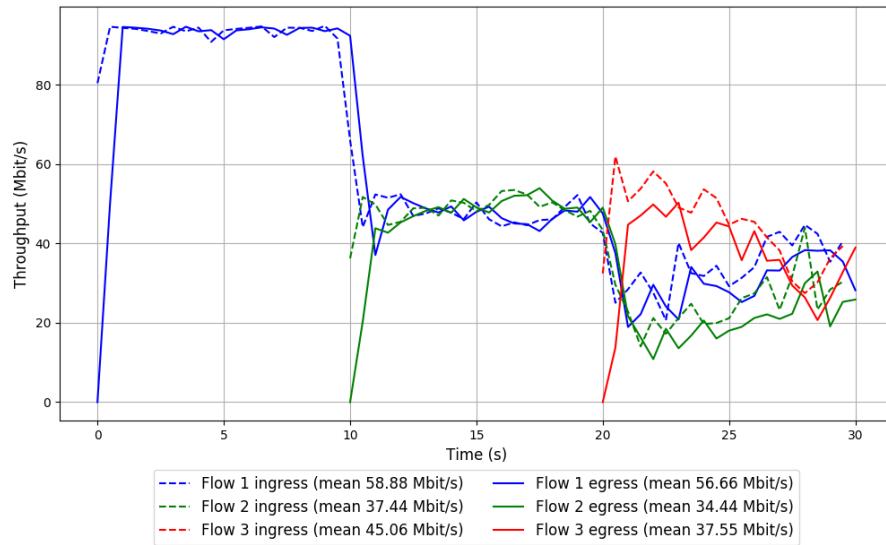


Run 3: Statistics of FillP-Sheep

```
Start at: 2019-04-24 01:08:27
End at: 2019-04-24 01:08:57
Local clock offset: 1.831 ms
Remote clock offset: 3.369 ms

# Below is generated by plot.py at 2019-04-24 02:19:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.99 Mbit/s
95th percentile per-packet one-way delay: 40.349 ms
Loss rate: 6.77%
-- Flow 1:
Average throughput: 56.66 Mbit/s
95th percentile per-packet one-way delay: 37.020 ms
Loss rate: 3.78%
-- Flow 2:
Average throughput: 34.44 Mbit/s
95th percentile per-packet one-way delay: 40.915 ms
Loss rate: 8.04%
-- Flow 3:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 44.848 ms
Loss rate: 16.48%
```

Run 3: Report of FillP-Sheep — Data Link

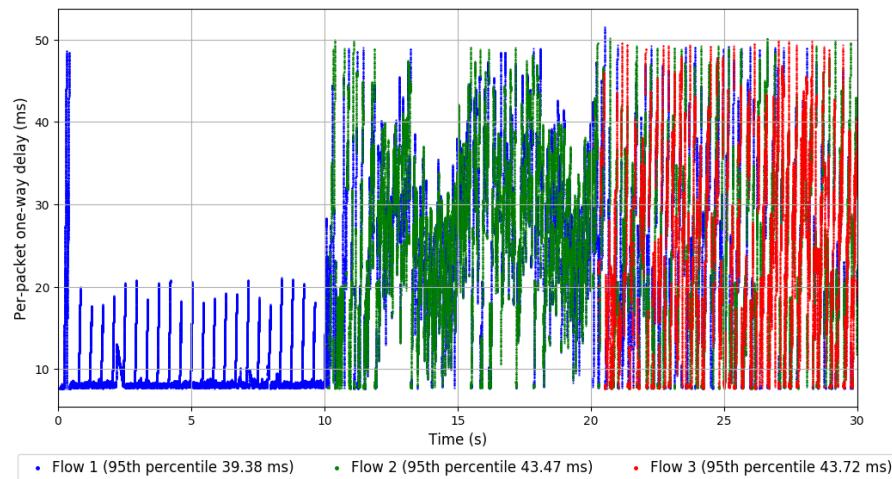
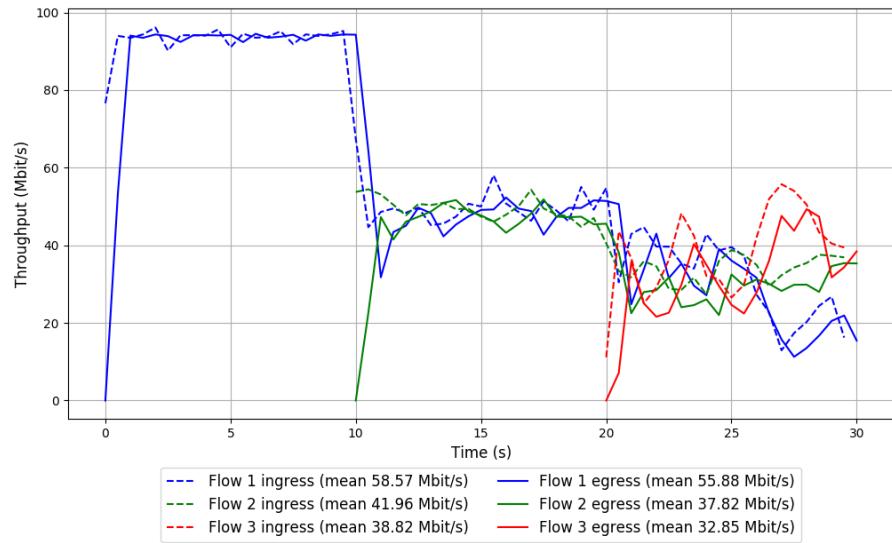


Run 4: Statistics of FillP-Sheep

```
Start at: 2019-04-24 01:33:13
End at: 2019-04-24 01:33:43
Local clock offset: -0.228 ms
Remote clock offset: 1.785 ms

# Below is generated by plot.py at 2019-04-24 02:19:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.87 Mbit/s
95th percentile per-packet one-way delay: 41.736 ms
Loss rate: 7.47%
-- Flow 1:
Average throughput: 55.88 Mbit/s
95th percentile per-packet one-way delay: 39.377 ms
Loss rate: 4.57%
-- Flow 2:
Average throughput: 37.82 Mbit/s
95th percentile per-packet one-way delay: 43.472 ms
Loss rate: 9.83%
-- Flow 3:
Average throughput: 32.85 Mbit/s
95th percentile per-packet one-way delay: 43.723 ms
Loss rate: 15.52%
```

Run 4: Report of FillP-Sheep — Data Link

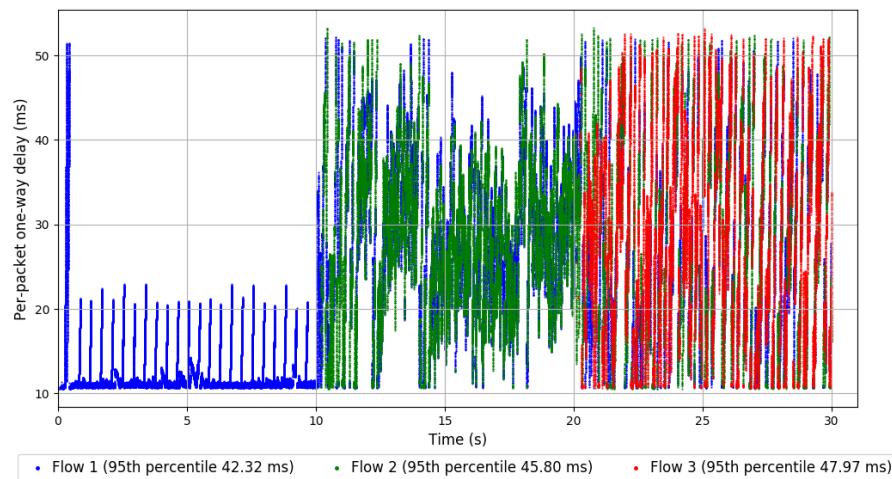
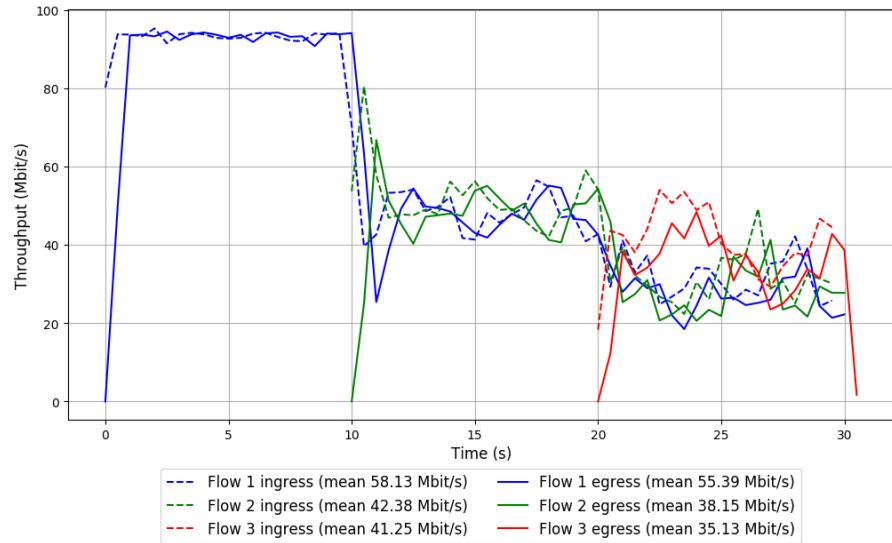


Run 5: Statistics of FillP-Sheep

```
Start at: 2019-04-24 01:58:13
End at: 2019-04-24 01:58:43
Local clock offset: -0.885 ms
Remote clock offset: -0.505 ms

# Below is generated by plot.py at 2019-04-24 02:20:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.38 Mbit/s
95th percentile per-packet one-way delay: 44.566 ms
Loss rate: 7.55%
-- Flow 1:
Average throughput: 55.39 Mbit/s
95th percentile per-packet one-way delay: 42.318 ms
Loss rate: 4.65%
-- Flow 2:
Average throughput: 38.15 Mbit/s
95th percentile per-packet one-way delay: 45.797 ms
Loss rate: 9.95%
-- Flow 3:
Average throughput: 35.13 Mbit/s
95th percentile per-packet one-way delay: 47.972 ms
Loss rate: 14.89%
```

Run 5: Report of FillP-Sheep — Data Link

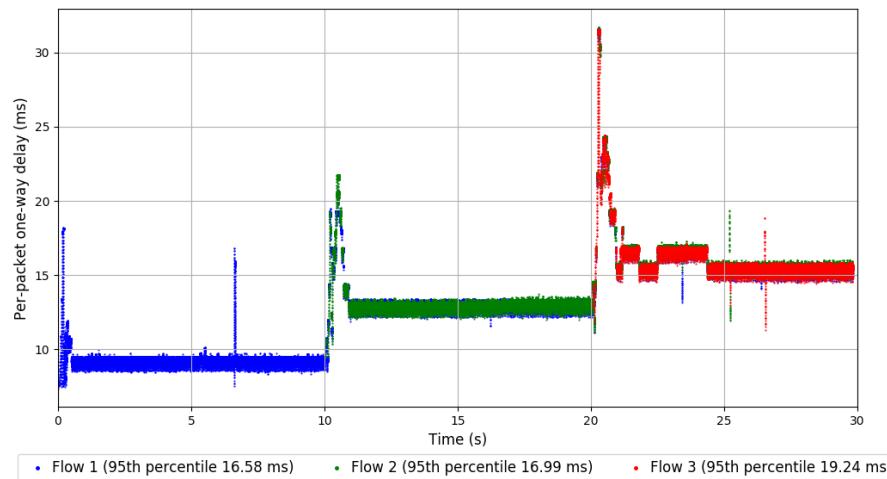
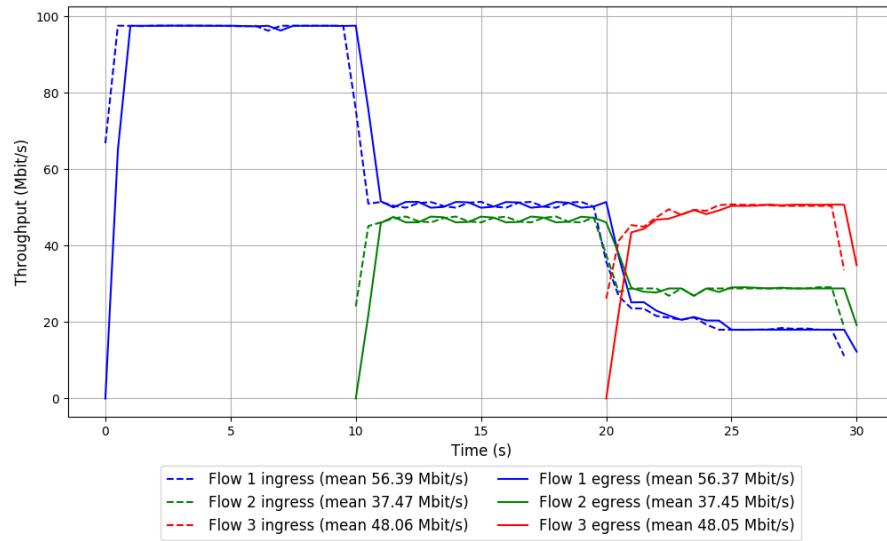


Run 1: Statistics of Indigo

```
Start at: 2019-04-24 00:17:55
End at: 2019-04-24 00:18:25
Local clock offset: -0.298 ms
Remote clock offset: 4.786 ms

# Below is generated by plot.py at 2019-04-24 02:20:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.97 Mbit/s
95th percentile per-packet one-way delay: 16.845 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.37 Mbit/s
95th percentile per-packet one-way delay: 16.577 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.45 Mbit/s
95th percentile per-packet one-way delay: 16.991 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.05 Mbit/s
95th percentile per-packet one-way delay: 19.240 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

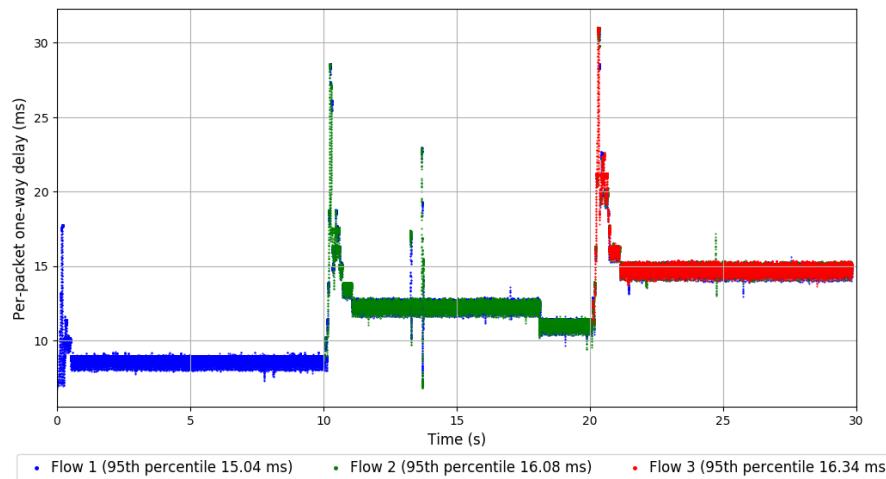
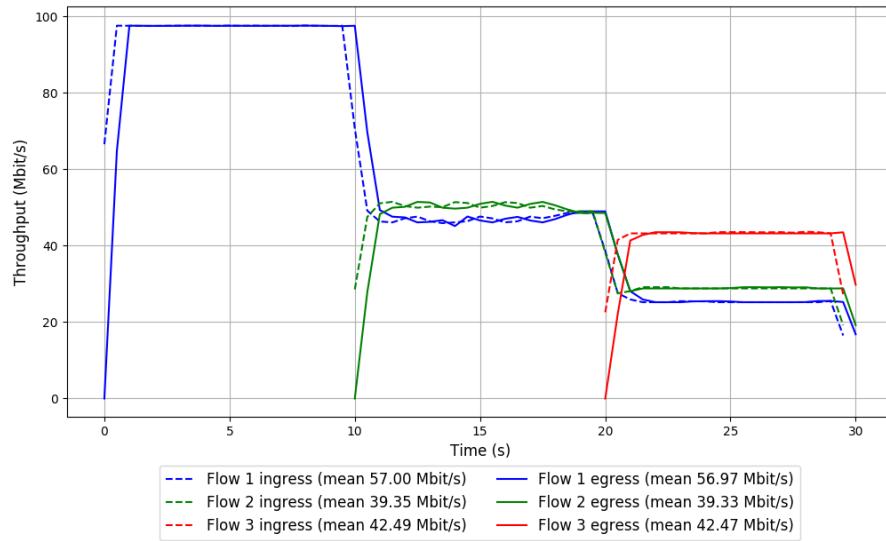


Run 2: Statistics of Indigo

```
Start at: 2019-04-24 00:42:33
End at: 2019-04-24 00:43:03
Local clock offset: 0.878 ms
Remote clock offset: 3.822 ms

# Below is generated by plot.py at 2019-04-24 02:20:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.92 Mbit/s
95th percentile per-packet one-way delay: 15.258 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 56.97 Mbit/s
95th percentile per-packet one-way delay: 15.038 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 39.33 Mbit/s
95th percentile per-packet one-way delay: 16.077 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 42.47 Mbit/s
95th percentile per-packet one-way delay: 16.335 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo — Data Link

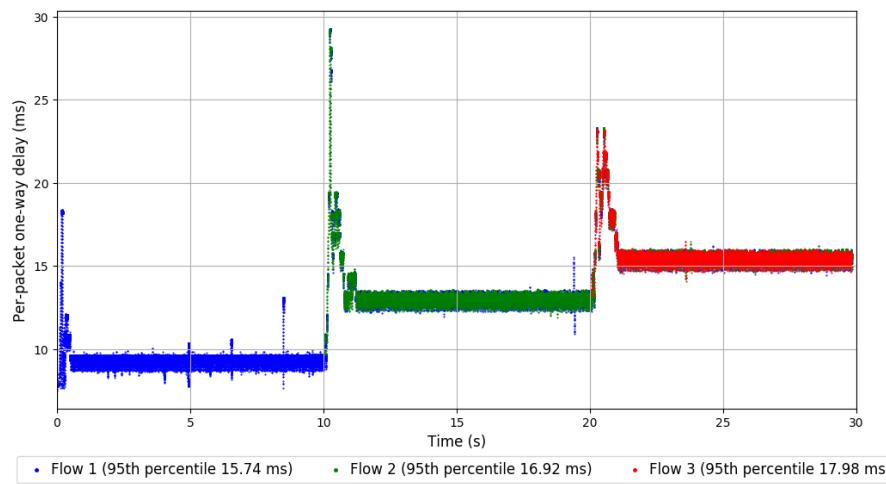
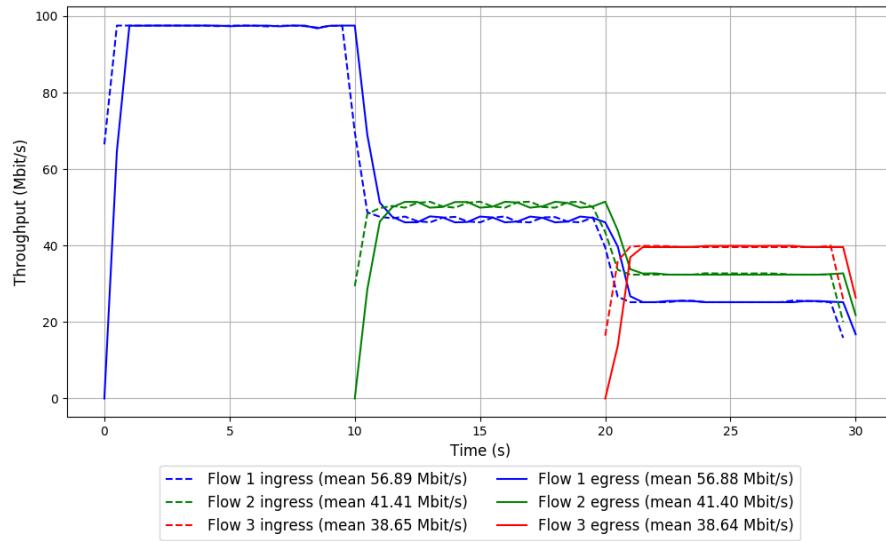


Run 3: Statistics of Indigo

```
Start at: 2019-04-24 01:07:14
End at: 2019-04-24 01:07:44
Local clock offset: 1.883 ms
Remote clock offset: 3.52 ms

# Below is generated by plot.py at 2019-04-24 02:20:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.98 Mbit/s
95th percentile per-packet one-way delay: 15.813 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.88 Mbit/s
95th percentile per-packet one-way delay: 15.742 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.40 Mbit/s
95th percentile per-packet one-way delay: 16.923 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.64 Mbit/s
95th percentile per-packet one-way delay: 17.977 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo — Data Link

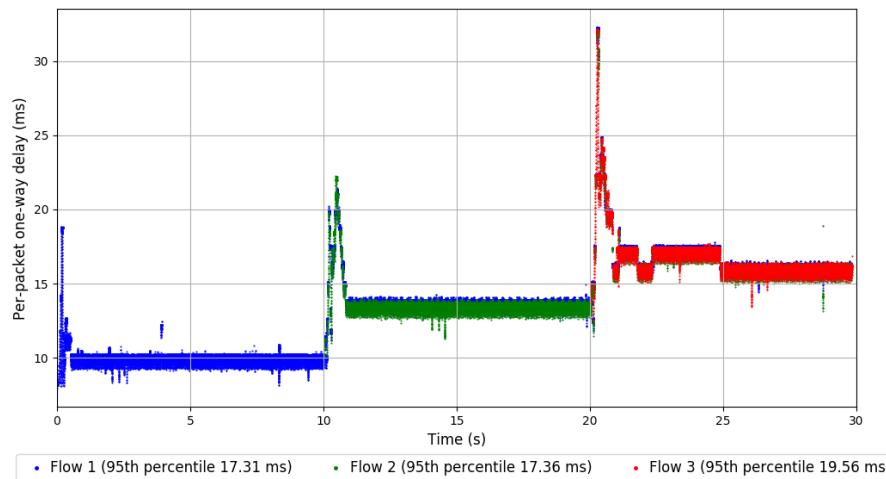
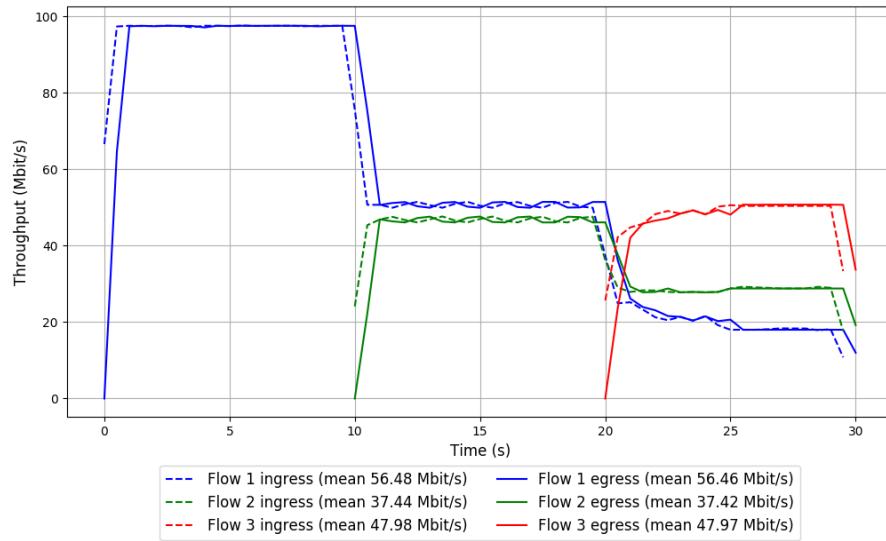


Run 4: Statistics of Indigo

```
Start at: 2019-04-24 01:31:57
End at: 2019-04-24 01:32:27
Local clock offset: -0.329 ms
Remote clock offset: 1.994 ms

# Below is generated by plot.py at 2019-04-24 02:20:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.98 Mbit/s
95th percentile per-packet one-way delay: 17.404 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.46 Mbit/s
95th percentile per-packet one-way delay: 17.308 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.42 Mbit/s
95th percentile per-packet one-way delay: 17.358 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 47.97 Mbit/s
95th percentile per-packet one-way delay: 19.563 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo — Data Link

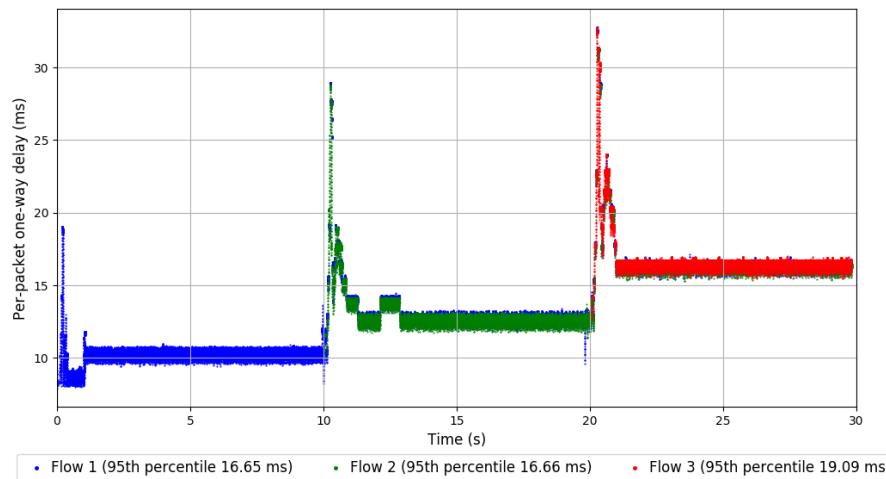
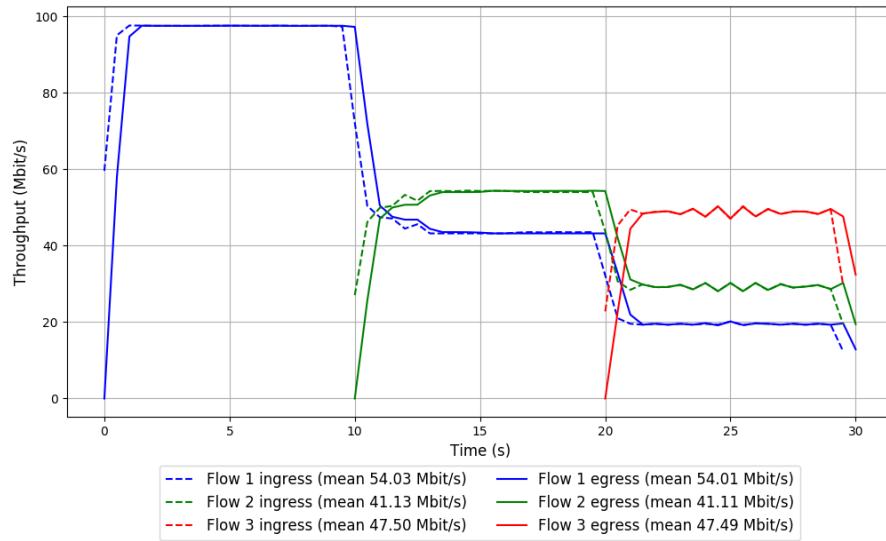


Run 5: Statistics of Indigo

```
Start at: 2019-04-24 01:56:59
End at: 2019-04-24 01:57:29
Local clock offset: 0.514 ms
Remote clock offset: -1.859 ms

# Below is generated by plot.py at 2019-04-24 02:20:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.82 Mbit/s
95th percentile per-packet one-way delay: 16.693 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.01 Mbit/s
95th percentile per-packet one-way delay: 16.652 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.11 Mbit/s
95th percentile per-packet one-way delay: 16.657 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 47.49 Mbit/s
95th percentile per-packet one-way delay: 19.095 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link

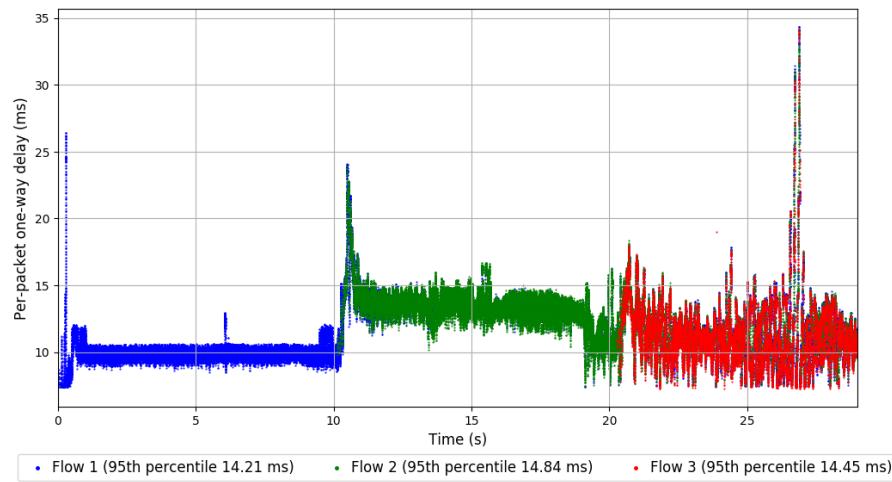
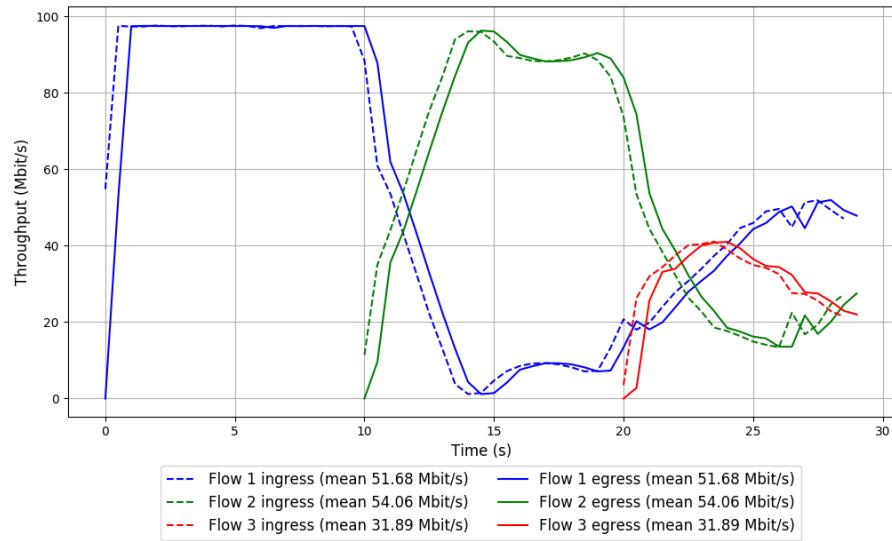


Run 1: Statistics of Indigo-MusesC3

```
Start at: 2019-04-24 00:14:27
End at: 2019-04-24 00:14:57
Local clock offset: -0.137 ms
Remote clock offset: 5.321 ms

# Below is generated by plot.py at 2019-04-24 02:20:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.49 Mbit/s
95th percentile per-packet one-way delay: 14.591 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.68 Mbit/s
95th percentile per-packet one-way delay: 14.214 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 54.06 Mbit/s
95th percentile per-packet one-way delay: 14.843 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.89 Mbit/s
95th percentile per-packet one-way delay: 14.446 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-MusesC3 — Data Link

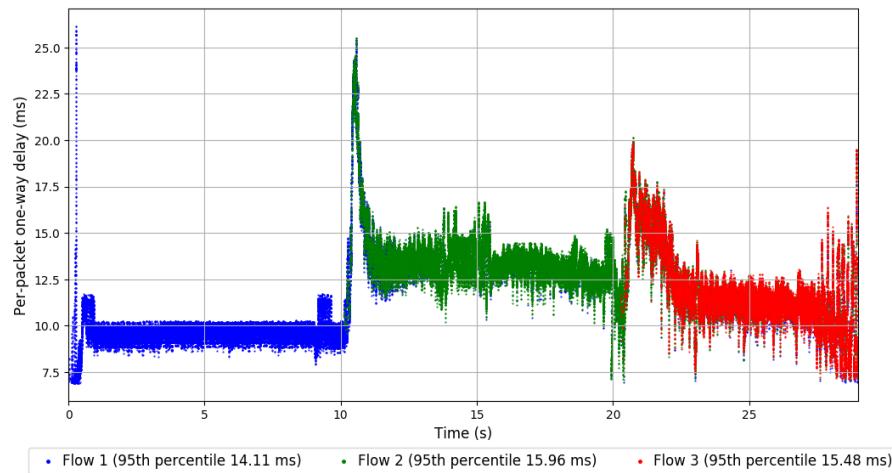
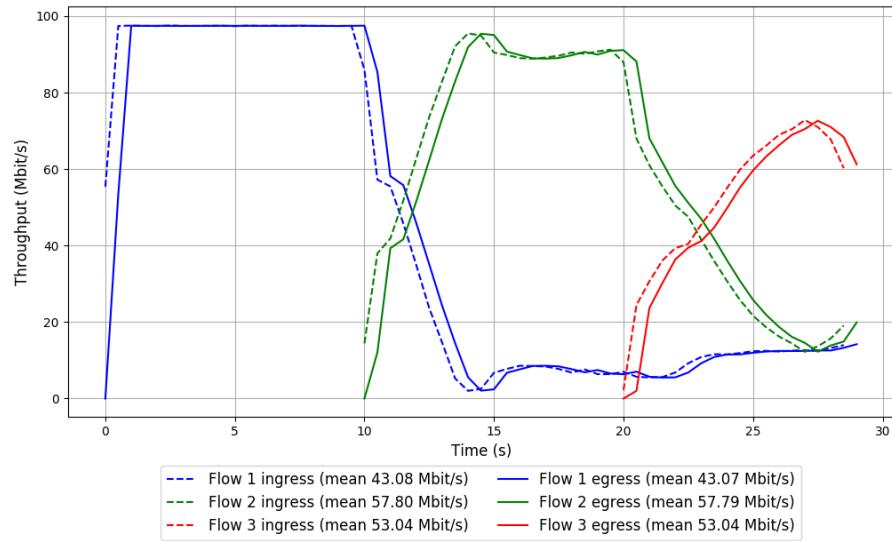


Run 2: Statistics of Indigo-MusesC3

```
Start at: 2019-04-24 00:39:03
End at: 2019-04-24 00:39:33
Local clock offset: 0.351 ms
Remote clock offset: 3.657 ms

# Below is generated by plot.py at 2019-04-24 02:20:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.67 Mbit/s
95th percentile per-packet one-way delay: 15.478 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.07 Mbit/s
95th percentile per-packet one-way delay: 14.113 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 57.79 Mbit/s
95th percentile per-packet one-way delay: 15.962 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 53.04 Mbit/s
95th percentile per-packet one-way delay: 15.477 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo-MusesC3 — Data Link

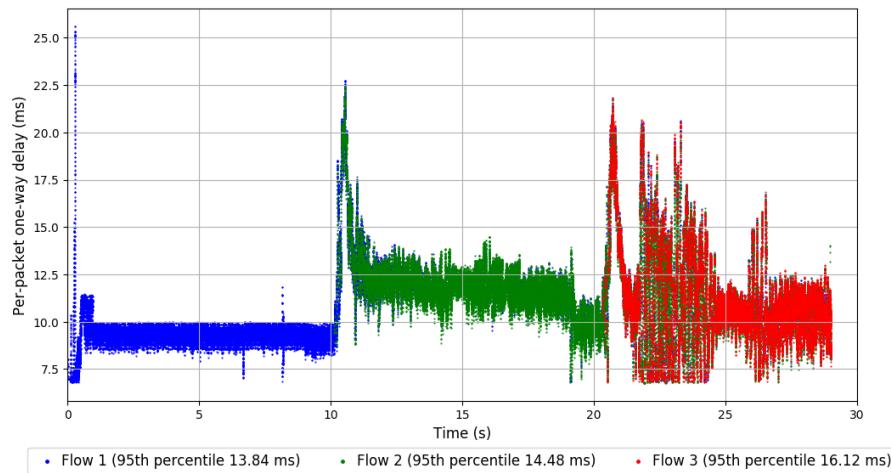
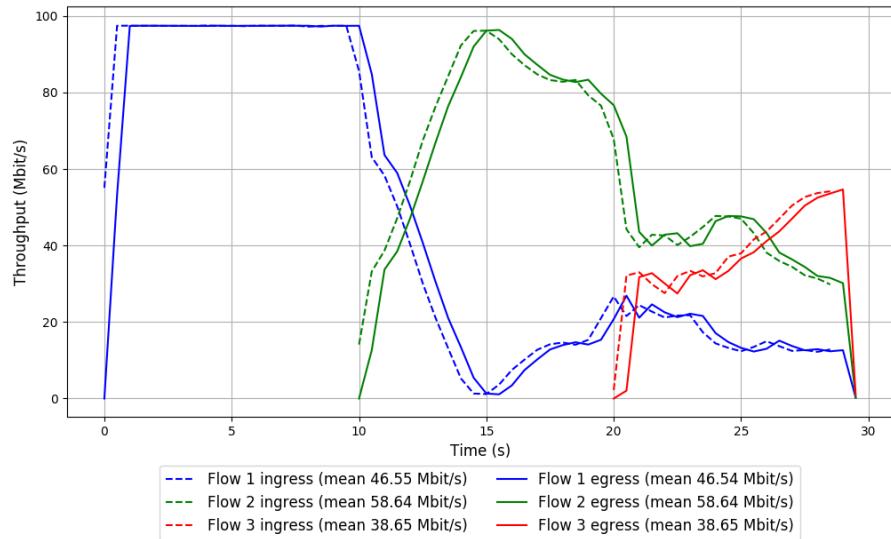


Run 3: Statistics of Indigo-MusesC3

```
Start at: 2019-04-24 01:03:42
End at: 2019-04-24 01:04:12
Local clock offset: 1.496 ms
Remote clock offset: 2.381 ms

# Below is generated by plot.py at 2019-04-24 02:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.35 Mbit/s
95th percentile per-packet one-way delay: 14.483 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.54 Mbit/s
95th percentile per-packet one-way delay: 13.841 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 58.64 Mbit/s
95th percentile per-packet one-way delay: 14.476 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.65 Mbit/s
95th percentile per-packet one-way delay: 16.119 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo-MusesC3 — Data Link

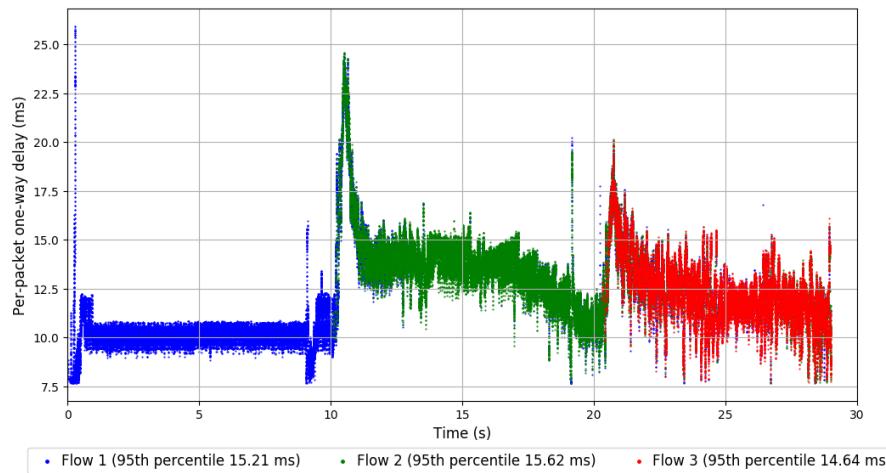
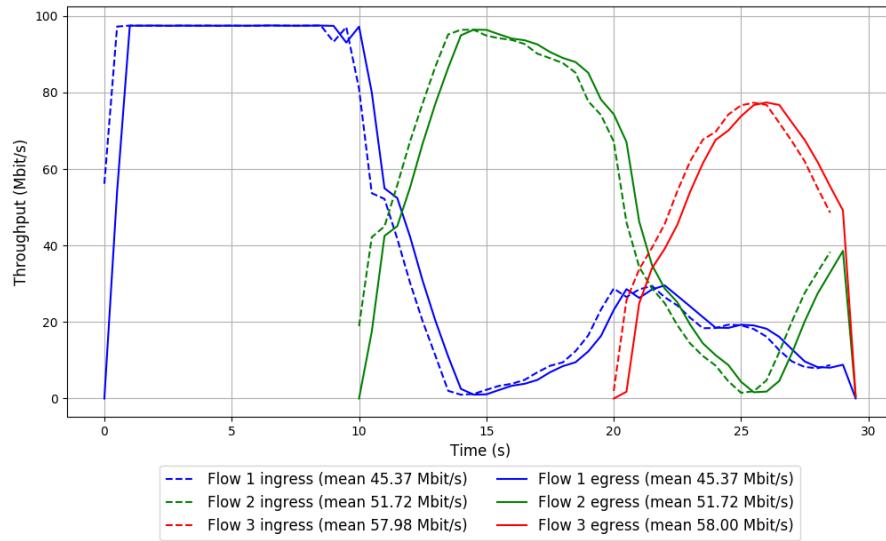


Run 4: Statistics of Indigo-MusesC3

```
Start at: 2019-04-24 01:28:23
End at: 2019-04-24 01:28:53
Local clock offset: -0.381 ms
Remote clock offset: 1.62 ms

# Below is generated by plot.py at 2019-04-24 02:21:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.55 Mbit/s
95th percentile per-packet one-way delay: 15.252 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.37 Mbit/s
95th percentile per-packet one-way delay: 15.211 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.72 Mbit/s
95th percentile per-packet one-way delay: 15.618 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 58.00 Mbit/s
95th percentile per-packet one-way delay: 14.643 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo-MusesC3 — Data Link

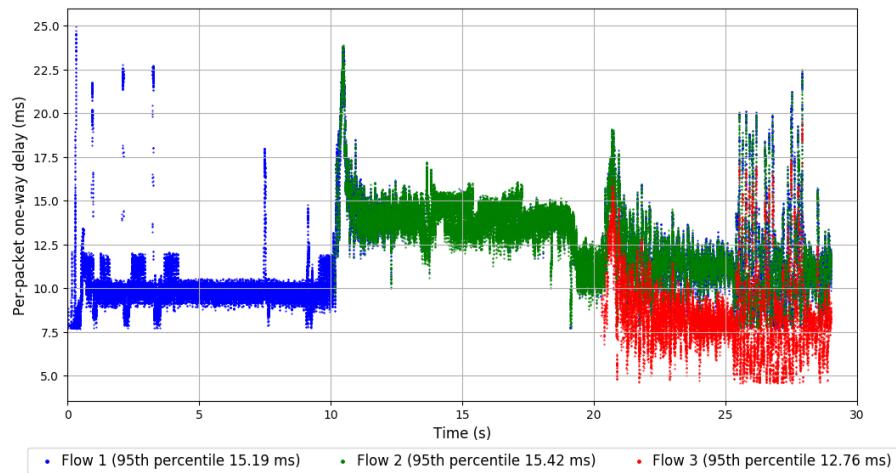
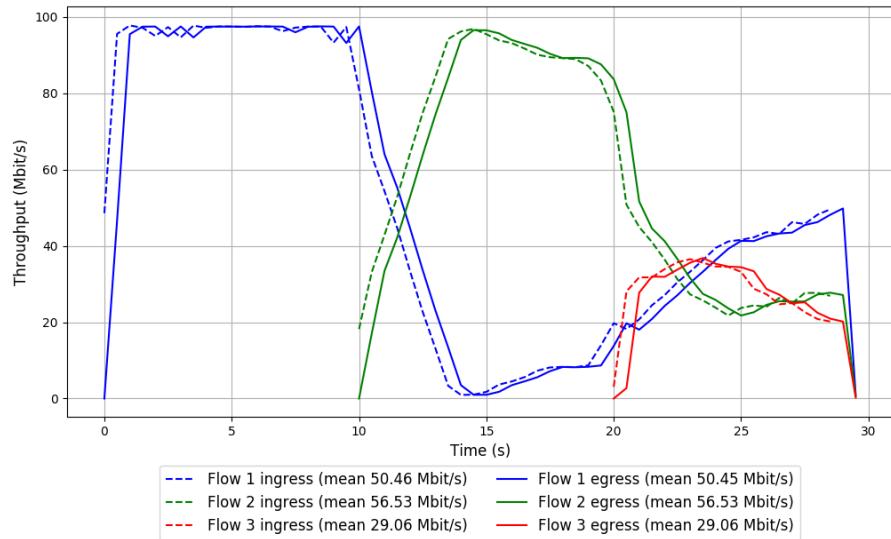


Run 5: Statistics of Indigo-MusesC3

```
Start at: 2019-04-24 01:53:28
End at: 2019-04-24 01:53:58
Local clock offset: 0.475 ms
Remote clock offset: -1.87 ms

# Below is generated by plot.py at 2019-04-24 02:21:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.17 Mbit/s
95th percentile per-packet one-way delay: 15.266 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.45 Mbit/s
95th percentile per-packet one-way delay: 15.186 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 56.53 Mbit/s
95th percentile per-packet one-way delay: 15.416 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.06 Mbit/s
95th percentile per-packet one-way delay: 12.759 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo-MusesC3 — Data Link

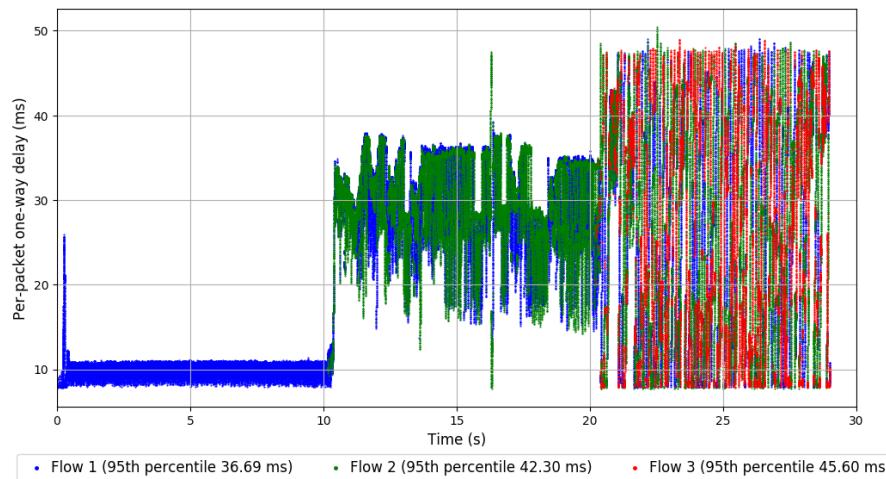
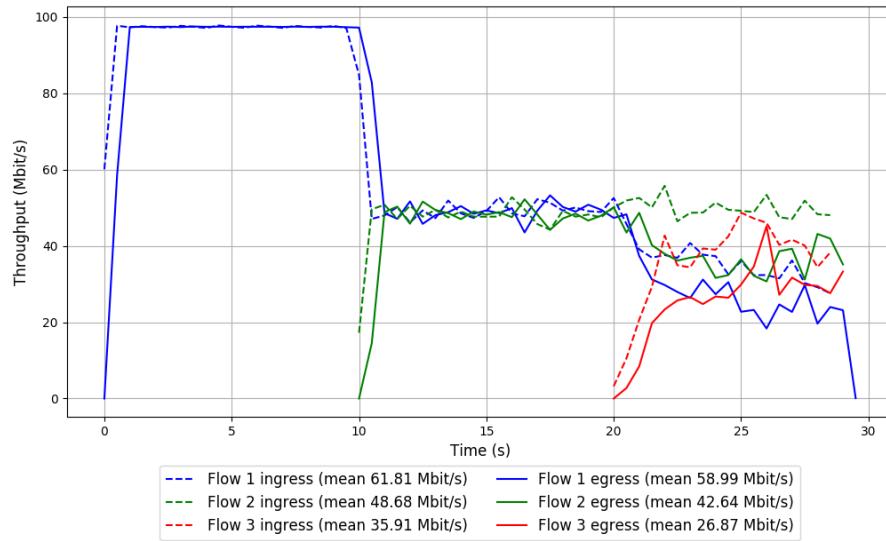


Run 1: Statistics of Indigo-MusesC5

```
Start at: 2019-04-24 00:13:16
End at: 2019-04-24 00:13:46
Local clock offset: -0.395 ms
Remote clock offset: 5.607 ms

# Below is generated by plot.py at 2019-04-24 02:21:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.89 Mbit/s
95th percentile per-packet one-way delay: 40.752 ms
Loss rate: 9.11%
-- Flow 1:
Average throughput: 58.99 Mbit/s
95th percentile per-packet one-way delay: 36.687 ms
Loss rate: 4.56%
-- Flow 2:
Average throughput: 42.64 Mbit/s
95th percentile per-packet one-way delay: 42.295 ms
Loss rate: 12.42%
-- Flow 3:
Average throughput: 26.87 Mbit/s
95th percentile per-packet one-way delay: 45.597 ms
Loss rate: 25.27%
```

Run 1: Report of Indigo-MusesC5 — Data Link

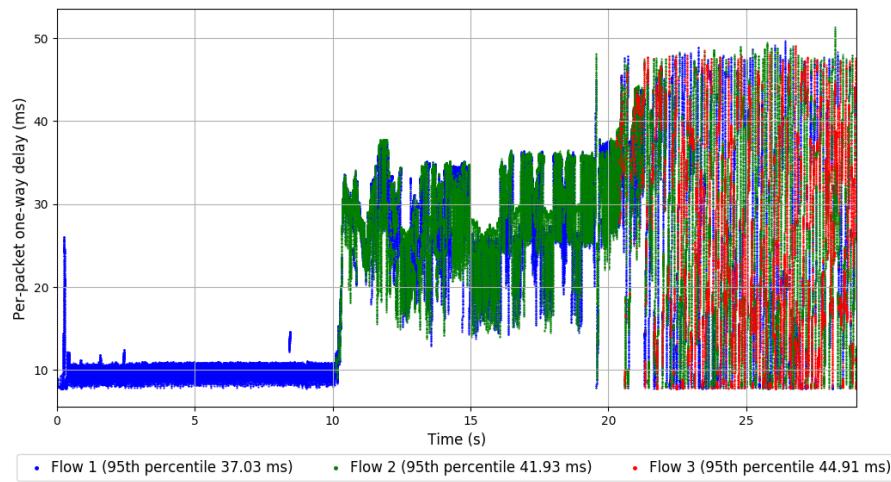
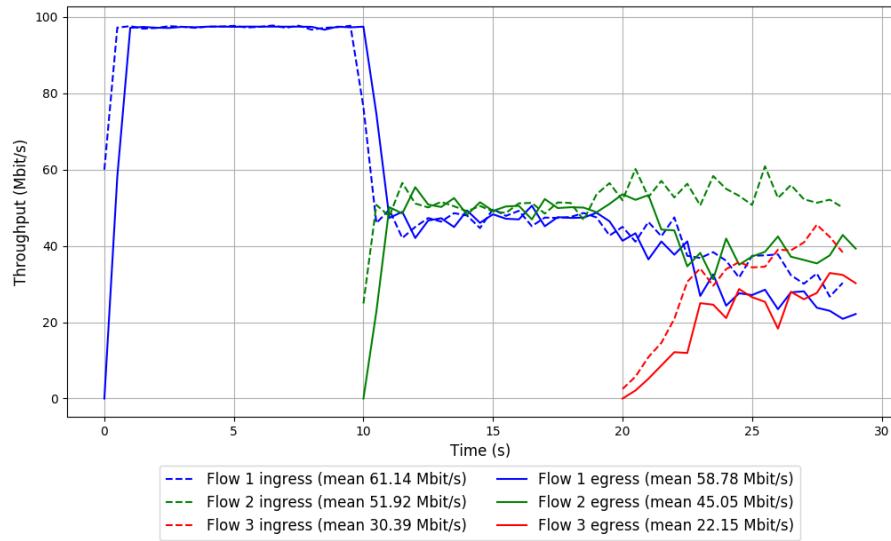


Run 2: Statistics of Indigo-MusesC5

```
Start at: 2019-04-24 00:37:52
End at: 2019-04-24 00:38:22
Local clock offset: 0.279 ms
Remote clock offset: 4.358 ms

# Below is generated by plot.py at 2019-04-24 02:21:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.86 Mbit/s
95th percentile per-packet one-way delay: 40.560 ms
Loss rate: 8.98%
-- Flow 1:
Average throughput: 58.78 Mbit/s
95th percentile per-packet one-way delay: 37.026 ms
Loss rate: 3.86%
-- Flow 2:
Average throughput: 45.05 Mbit/s
95th percentile per-packet one-way delay: 41.932 ms
Loss rate: 13.24%
-- Flow 3:
Average throughput: 22.15 Mbit/s
95th percentile per-packet one-way delay: 44.907 ms
Loss rate: 27.34%
```

Run 2: Report of Indigo-MusesC5 — Data Link

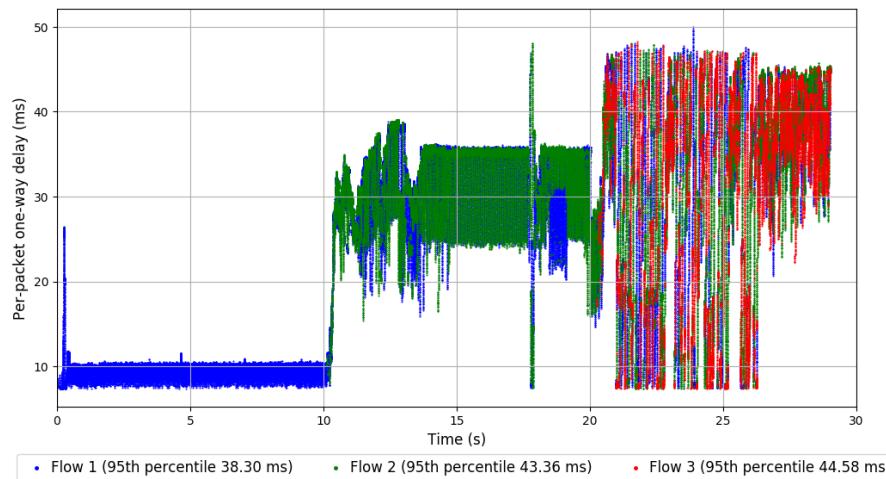
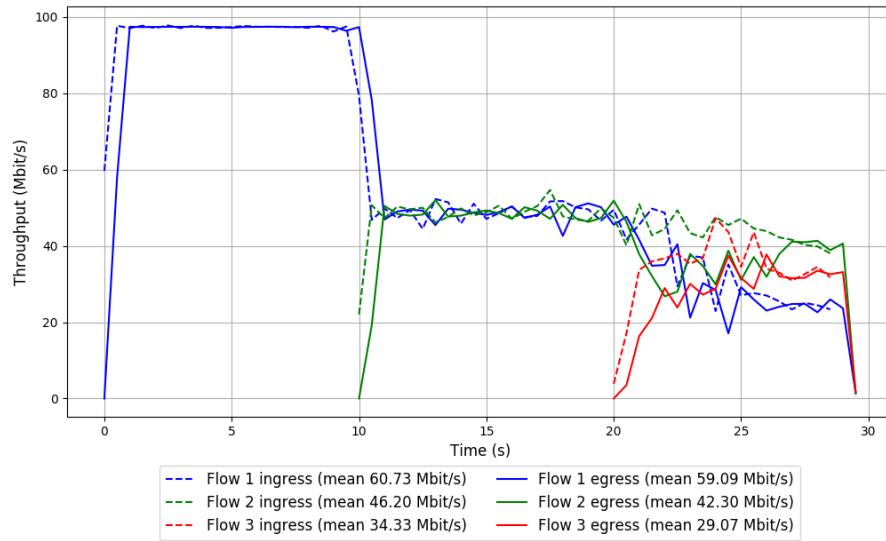


Run 3: Statistics of Indigo-MusesC5

```
Start at: 2019-04-24 01:02:31
End at: 2019-04-24 01:03:01
Local clock offset: 1.381 ms
Remote clock offset: 2.937 ms

# Below is generated by plot.py at 2019-04-24 02:21:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.49 Mbit/s
95th percentile per-packet one-way delay: 42.203 ms
Loss rate: 5.56%
-- Flow 1:
Average throughput: 59.09 Mbit/s
95th percentile per-packet one-way delay: 38.300 ms
Loss rate: 2.57%
-- Flow 2:
Average throughput: 42.30 Mbit/s
95th percentile per-packet one-way delay: 43.356 ms
Loss rate: 8.26%
-- Flow 3:
Average throughput: 29.07 Mbit/s
95th percentile per-packet one-way delay: 44.577 ms
Loss rate: 15.17%
```

Run 3: Report of Indigo-MusesC5 — Data Link

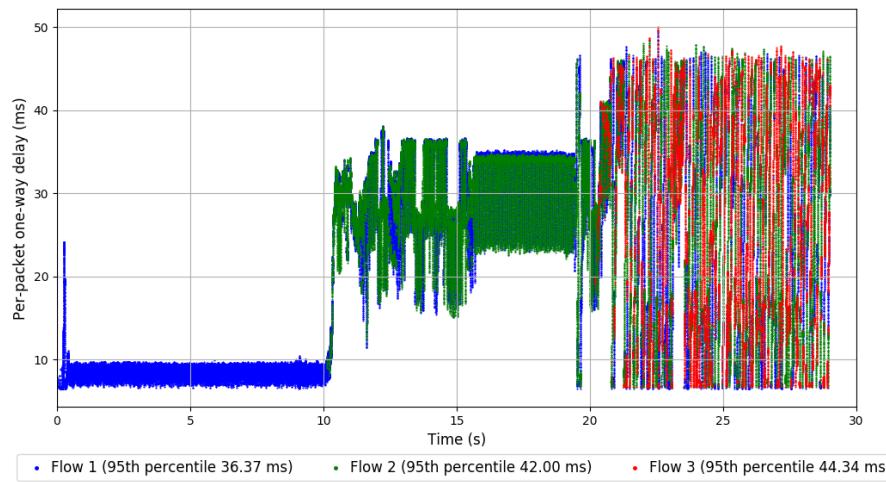
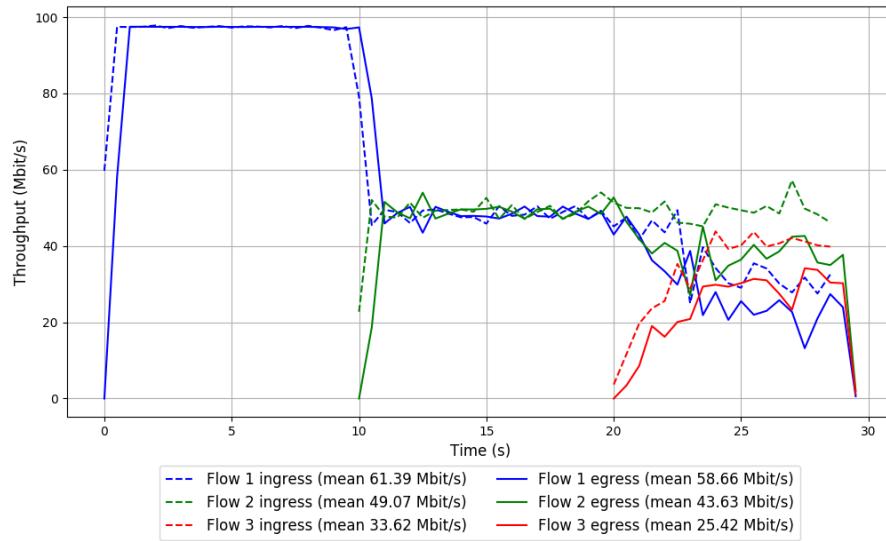


Run 4: Statistics of Indigo-MusesC5

```
Start at: 2019-04-24 01:27:11
End at: 2019-04-24 01:27:41
Local clock offset: 0.378 ms
Remote clock offset: 1.339 ms

# Below is generated by plot.py at 2019-04-24 02:21:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.81 Mbit/s
95th percentile per-packet one-way delay: 40.559 ms
Loss rate: 8.42%
-- Flow 1:
Average throughput: 58.66 Mbit/s
95th percentile per-packet one-way delay: 36.365 ms
Loss rate: 4.40%
-- Flow 2:
Average throughput: 43.63 Mbit/s
95th percentile per-packet one-way delay: 41.997 ms
Loss rate: 10.98%
-- Flow 3:
Average throughput: 25.42 Mbit/s
95th percentile per-packet one-way delay: 44.341 ms
Loss rate: 24.46%
```

Run 4: Report of Indigo-MusesC5 — Data Link

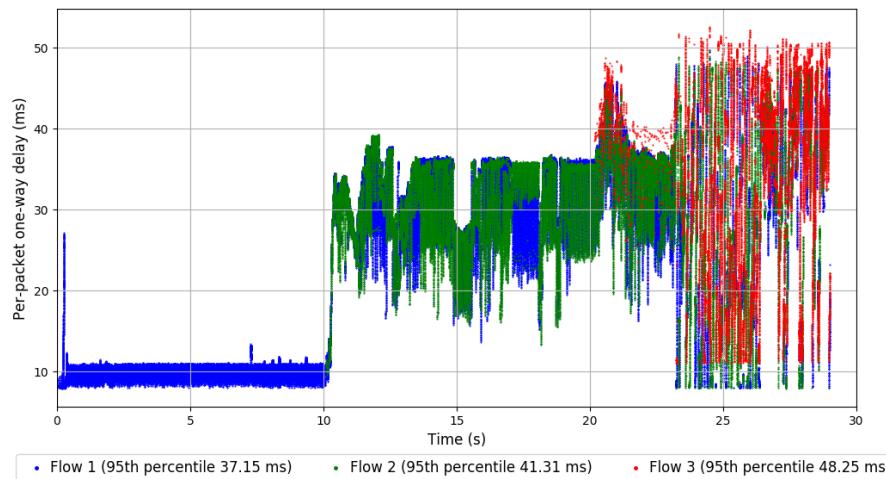
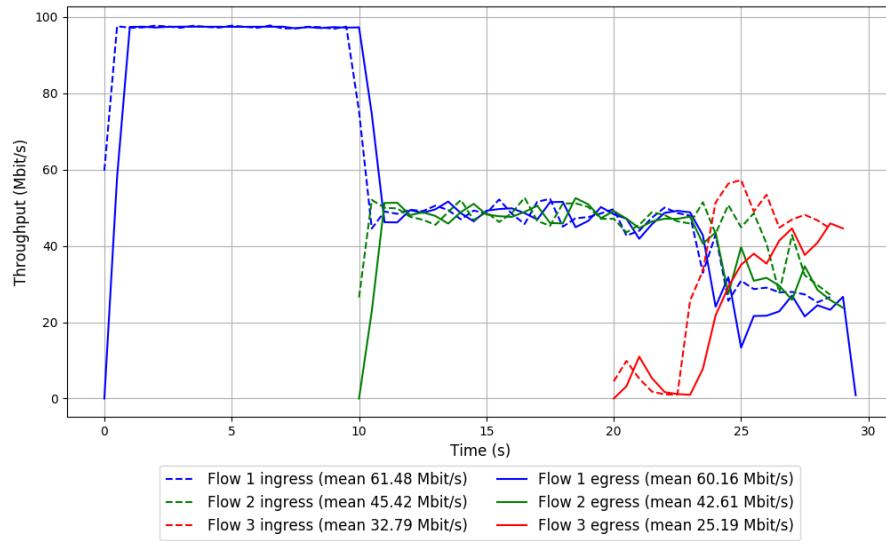


Run 5: Statistics of Indigo-MusesC5

```
Start at: 2019-04-24 01:52:16
End at: 2019-04-24 01:52:46
Local clock offset: -0.291 ms
Remote clock offset: 0.811 ms

# Below is generated by plot.py at 2019-04-24 02:22:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.64 Mbit/s
95th percentile per-packet one-way delay: 41.589 ms
Loss rate: 5.39%
-- Flow 1:
Average throughput: 60.16 Mbit/s
95th percentile per-packet one-way delay: 37.149 ms
Loss rate: 2.09%
-- Flow 2:
Average throughput: 42.61 Mbit/s
95th percentile per-packet one-way delay: 41.314 ms
Loss rate: 6.16%
-- Flow 3:
Average throughput: 25.19 Mbit/s
95th percentile per-packet one-way delay: 48.251 ms
Loss rate: 23.36%
```

Run 5: Report of Indigo-MusesC5 — Data Link

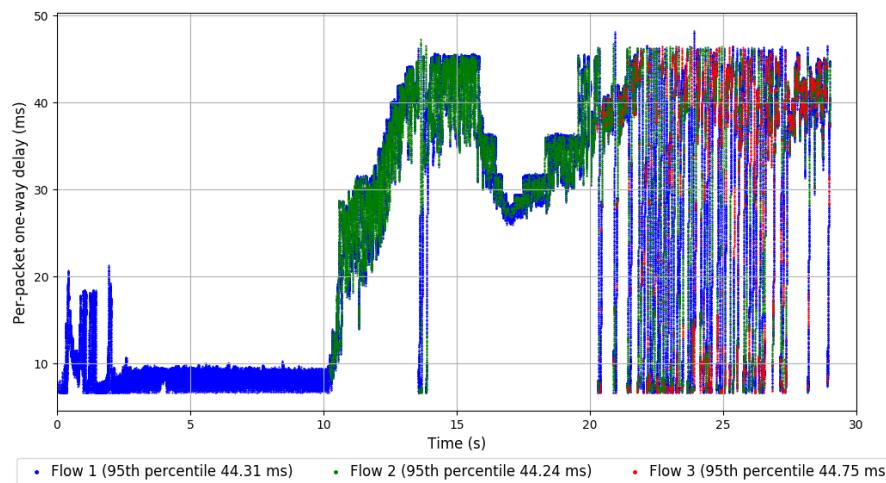
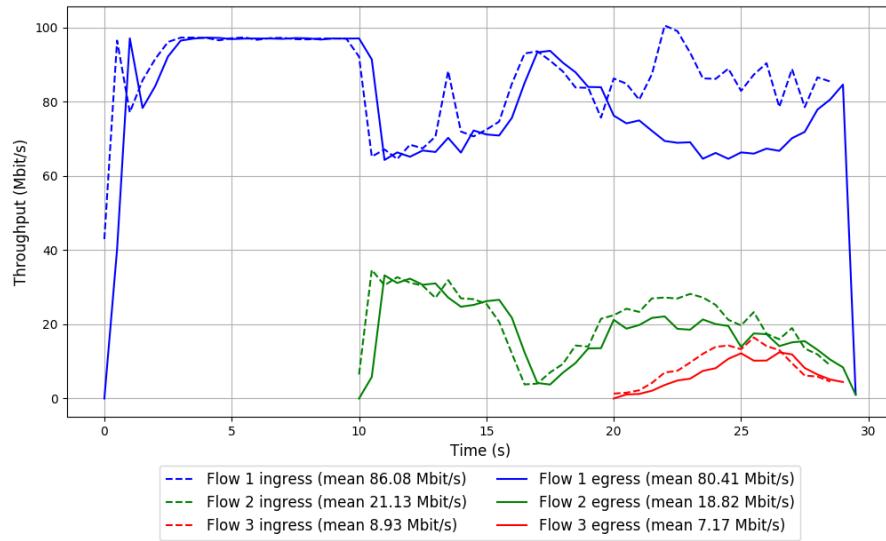


Run 1: Statistics of Indigo-MusesD

```
Start at: 2019-04-24 00:12:06
End at: 2019-04-24 00:12:36
Local clock offset: 0.541 ms
Remote clock offset: 5.368 ms

# Below is generated by plot.py at 2019-04-24 02:22:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.79 Mbit/s
95th percentile per-packet one-way delay: 44.316 ms
Loss rate: 7.39%
-- Flow 1:
Average throughput: 80.41 Mbit/s
95th percentile per-packet one-way delay: 44.310 ms
Loss rate: 6.46%
-- Flow 2:
Average throughput: 18.82 Mbit/s
95th percentile per-packet one-way delay: 44.241 ms
Loss rate: 10.75%
-- Flow 3:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 44.747 ms
Loss rate: 19.77%
```

Run 1: Report of Indigo-MusesD — Data Link

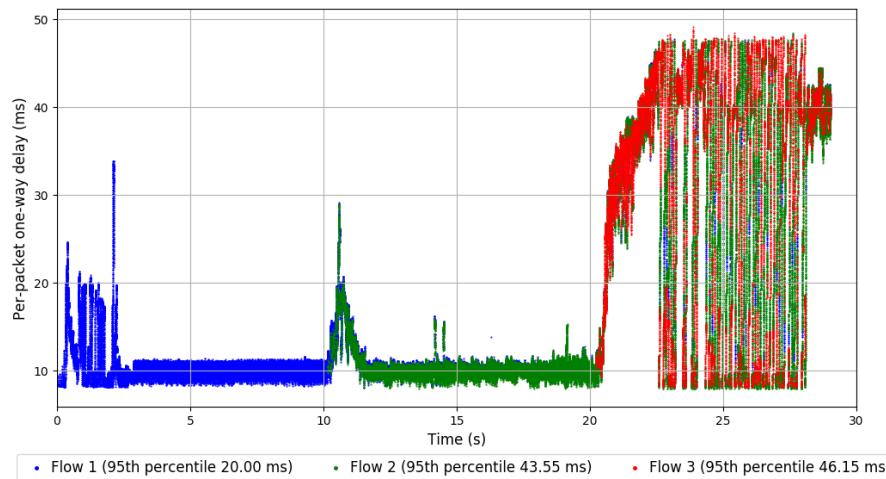
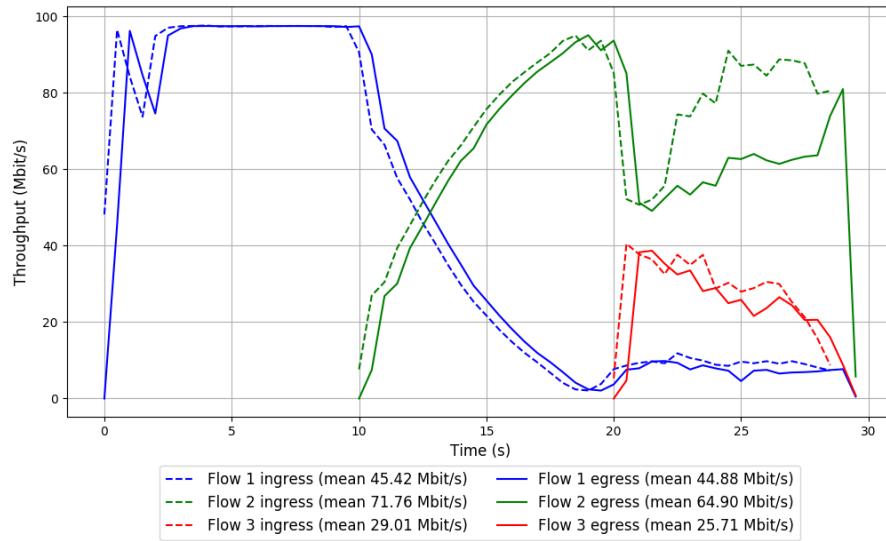


Run 2: Statistics of Indigo-MusesD

```
Start at: 2019-04-24 00:36:41
End at: 2019-04-24 00:37:11
Local clock offset: 0.109 ms
Remote clock offset: 4.575 ms

# Below is generated by plot.py at 2019-04-24 02:22:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.94 Mbit/s
95th percentile per-packet one-way delay: 42.478 ms
Loss rate: 5.81%
-- Flow 1:
Average throughput: 44.88 Mbit/s
95th percentile per-packet one-way delay: 19.999 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 64.90 Mbit/s
95th percentile per-packet one-way delay: 43.551 ms
Loss rate: 9.43%
-- Flow 3:
Average throughput: 25.71 Mbit/s
95th percentile per-packet one-way delay: 46.147 ms
Loss rate: 11.05%
```

Run 2: Report of Indigo-MusesD — Data Link

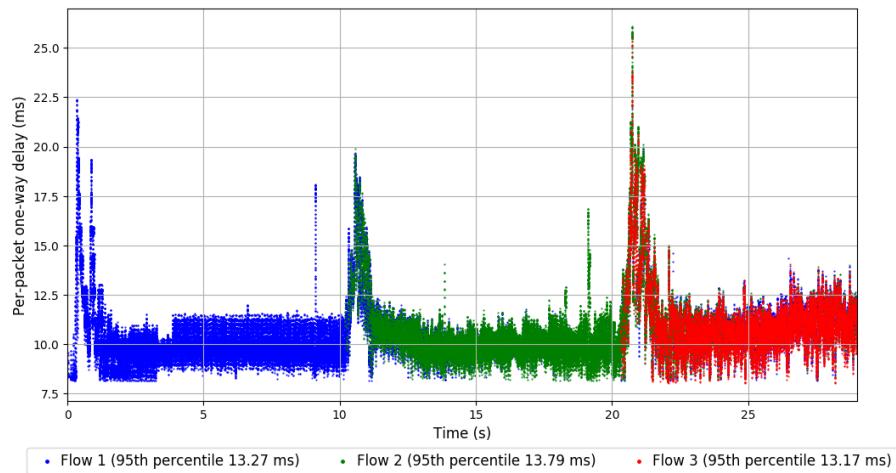
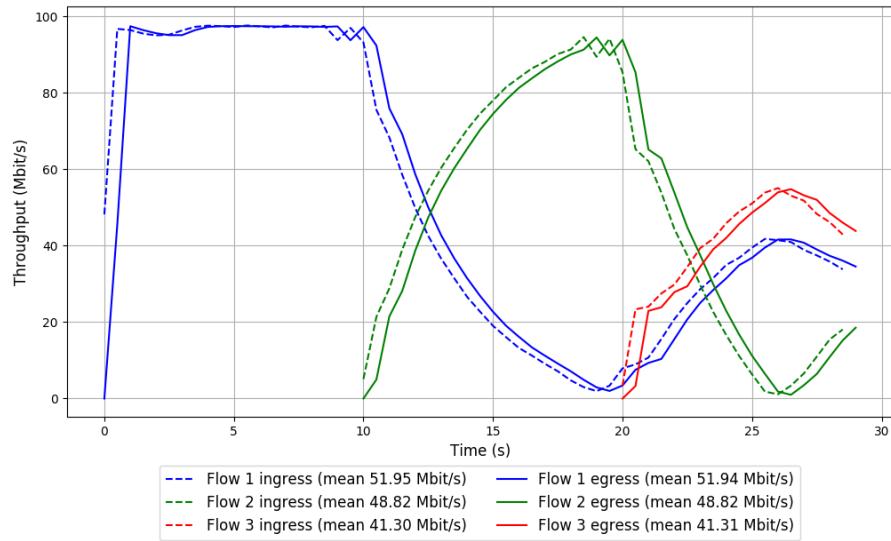


Run 3: Statistics of Indigo-MusesD

```
Start at: 2019-04-24 01:01:20
End at: 2019-04-24 01:01:50
Local clock offset: 0.963 ms
Remote clock offset: 3.337 ms

# Below is generated by plot.py at 2019-04-24 02:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.06 Mbit/s
95th percentile per-packet one-way delay: 13.446 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.94 Mbit/s
95th percentile per-packet one-way delay: 13.267 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 48.82 Mbit/s
95th percentile per-packet one-way delay: 13.787 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 41.31 Mbit/s
95th percentile per-packet one-way delay: 13.166 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo-MusesD — Data Link

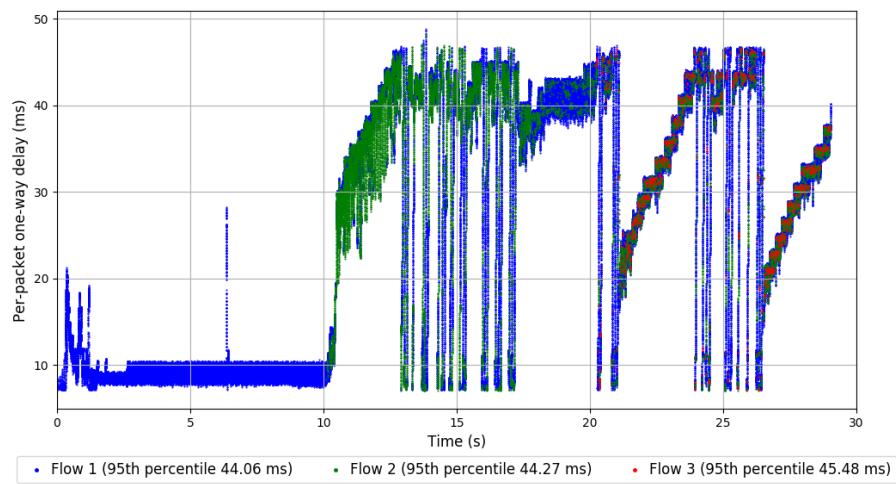
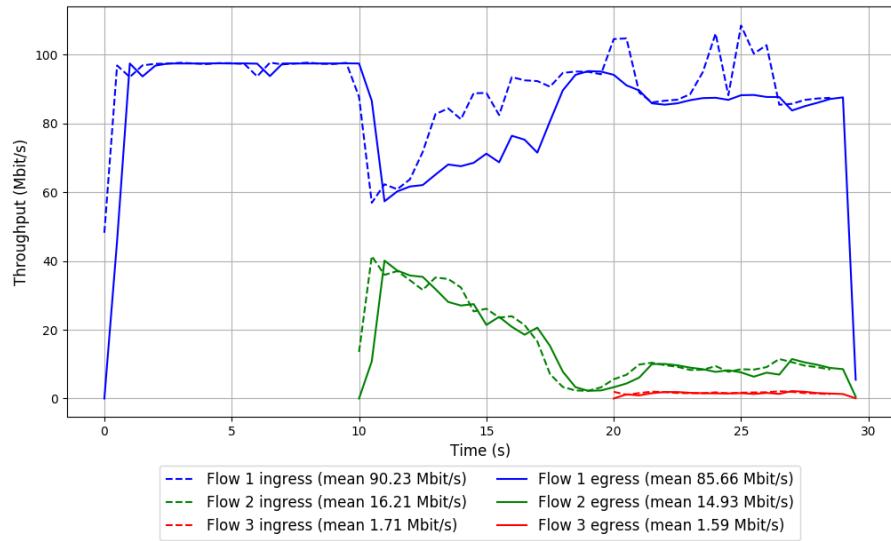


Run 4: Statistics of Indigo-MusesD

```
Start at: 2019-04-24 01:25:58
End at: 2019-04-24 01:26:28
Local clock offset: 0.27 ms
Remote clock offset: 1.727 ms

# Below is generated by plot.py at 2019-04-24 02:22:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.89 Mbit/s
95th percentile per-packet one-way delay: 44.086 ms
Loss rate: 5.25%
-- Flow 1:
Average throughput: 85.66 Mbit/s
95th percentile per-packet one-way delay: 44.059 ms
Loss rate: 4.95%
-- Flow 2:
Average throughput: 14.93 Mbit/s
95th percentile per-packet one-way delay: 44.265 ms
Loss rate: 7.69%
-- Flow 3:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 45.480 ms
Loss rate: 7.18%
```

Run 4: Report of Indigo-MusesD — Data Link

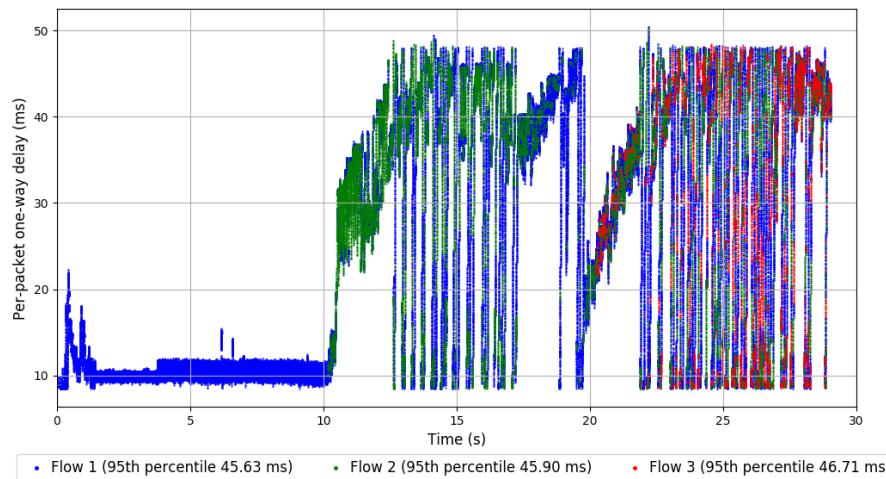
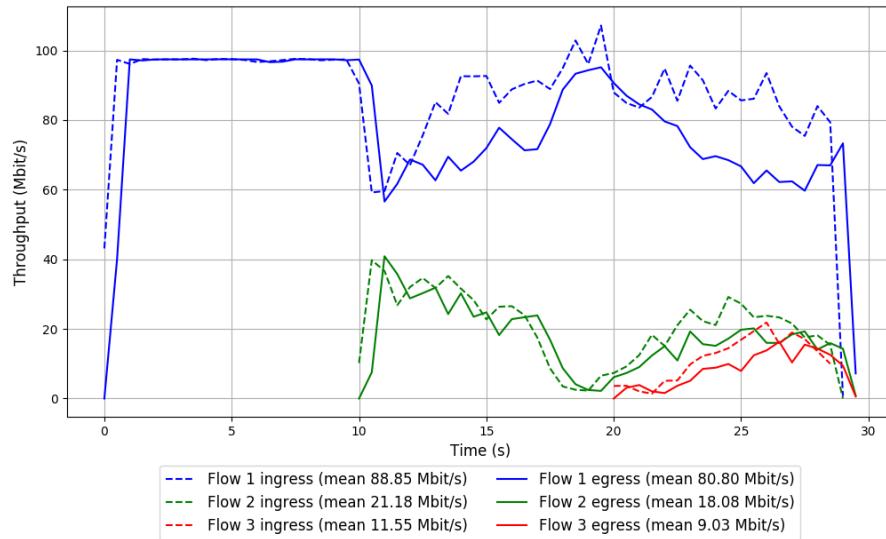


Run 5: Statistics of Indigo-MusesD

```
Start at: 2019-04-24 01:51:03
End at: 2019-04-24 01:51:33
Local clock offset: -0.956 ms
Remote clock offset: 0.798 ms

# Below is generated by plot.py at 2019-04-24 02:22:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.32 Mbit/s
95th percentile per-packet one-way delay: 45.701 ms
Loss rate: 10.10%
-- Flow 1:
Average throughput: 80.80 Mbit/s
95th percentile per-packet one-way delay: 45.629 ms
Loss rate: 8.95%
-- Flow 2:
Average throughput: 18.08 Mbit/s
95th percentile per-packet one-way delay: 45.896 ms
Loss rate: 14.52%
-- Flow 3:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 46.709 ms
Loss rate: 21.63%
```

Run 5: Report of Indigo-MusesD — Data Link

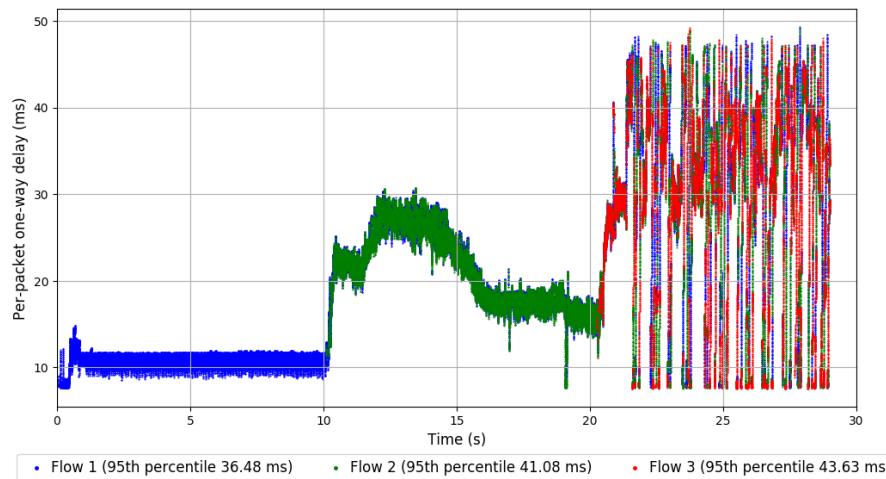
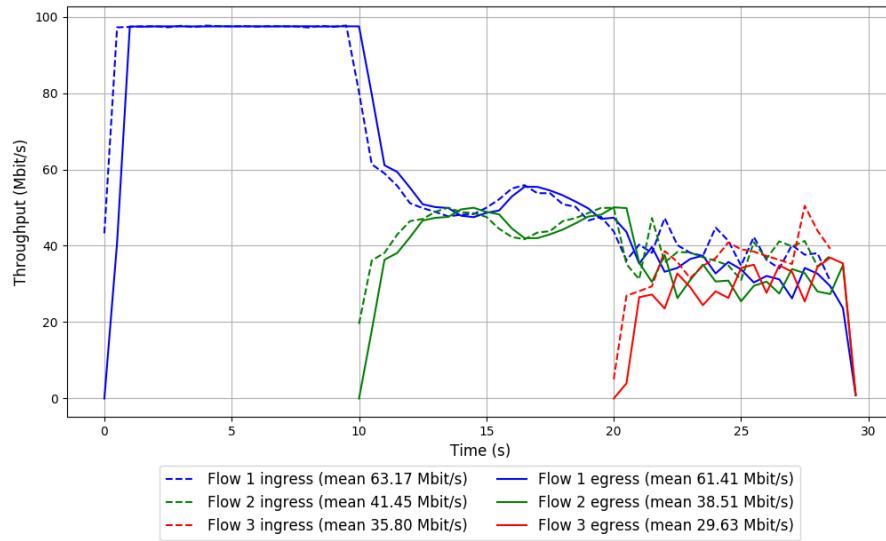


Run 1: Statistics of Indigo-MusesT

```
Start at: 2019-04-24 00:32:02
End at: 2019-04-24 00:32:32
Local clock offset: -0.265 ms
Remote clock offset: 3.891 ms

# Below is generated by plot.py at 2019-04-24 02:22:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 39.837 ms
Loss rate: 5.42%
-- Flow 1:
Average throughput: 61.41 Mbit/s
95th percentile per-packet one-way delay: 36.481 ms
Loss rate: 2.73%
-- Flow 2:
Average throughput: 38.51 Mbit/s
95th percentile per-packet one-way delay: 41.083 ms
Loss rate: 7.01%
-- Flow 3:
Average throughput: 29.63 Mbit/s
95th percentile per-packet one-way delay: 43.631 ms
Loss rate: 17.12%
```

Run 1: Report of Indigo-MusesT — Data Link

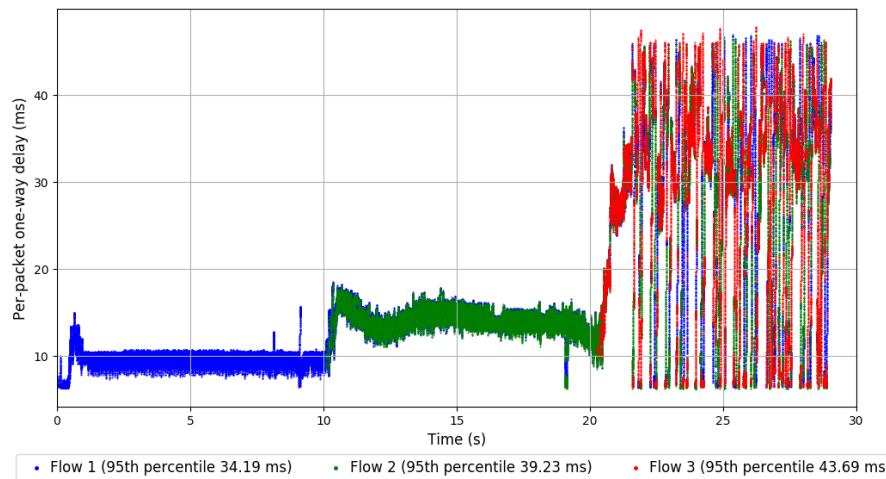
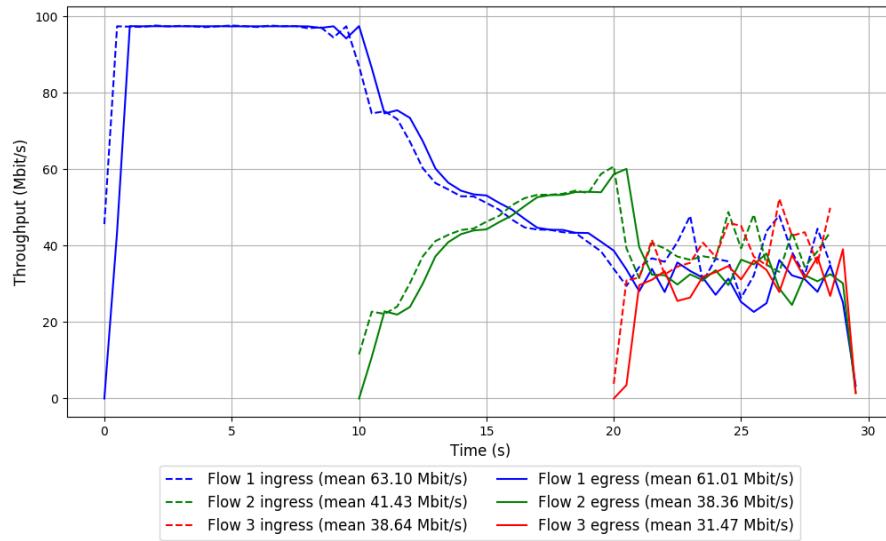


Run 2: Statistics of Indigo-MusesT

```
Start at: 2019-04-24 00:56:42
End at: 2019-04-24 00:57:12
Local clock offset: 1.19 ms
Remote clock offset: 2.103 ms

# Below is generated by plot.py at 2019-04-24 02:23:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 38.483 ms
Loss rate: 6.01%
-- Flow 1:
Average throughput: 61.01 Mbit/s
95th percentile per-packet one-way delay: 34.191 ms
Loss rate: 3.20%
-- Flow 2:
Average throughput: 38.36 Mbit/s
95th percentile per-packet one-way delay: 39.230 ms
Loss rate: 7.26%
-- Flow 3:
Average throughput: 31.47 Mbit/s
95th percentile per-packet one-way delay: 43.690 ms
Loss rate: 18.32%
```

Run 2: Report of Indigo-MusesT — Data Link

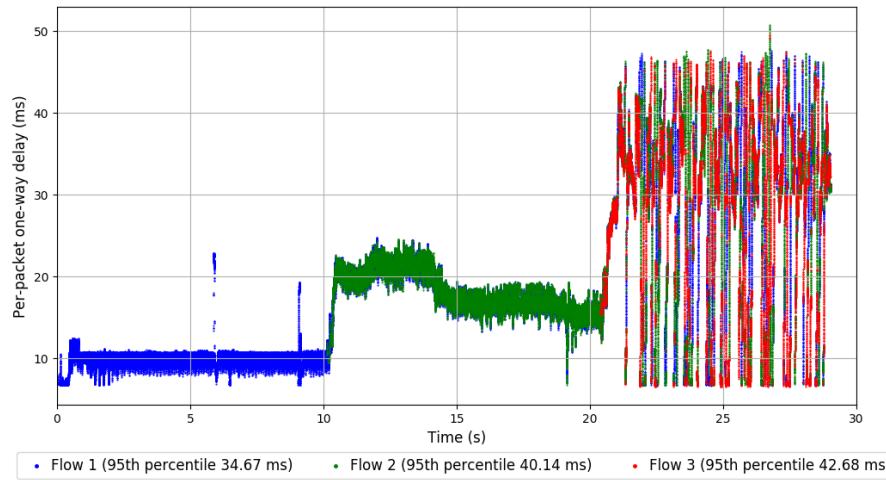
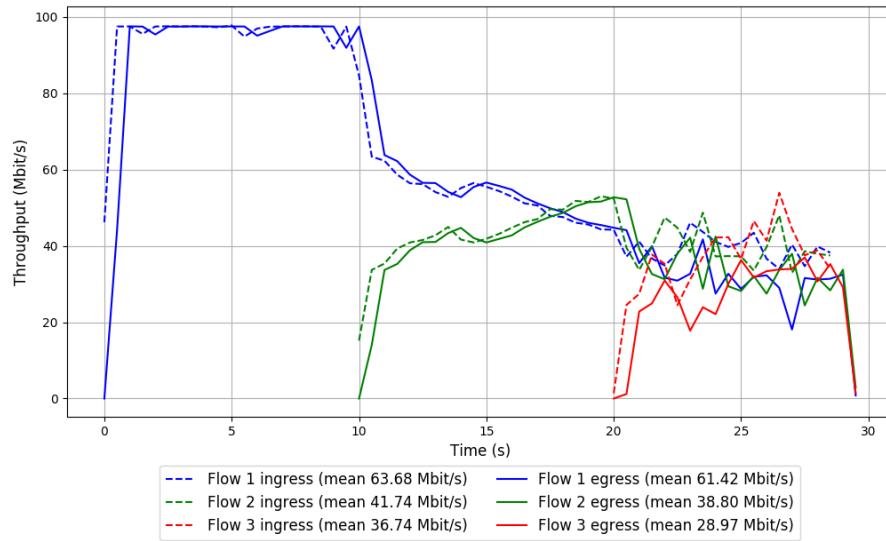


Run 3: Statistics of Indigo-MusesT

```
Start at: 2019-04-24 01:21:18
End at: 2019-04-24 01:21:48
Local clock offset: 0.882 ms
Remote clock offset: 1.885 ms

# Below is generated by plot.py at 2019-04-24 02:23:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.39 Mbit/s
95th percentile per-packet one-way delay: 38.475 ms
Loss rate: 6.29%
-- Flow 1:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 34.674 ms
Loss rate: 3.47%
-- Flow 2:
Average throughput: 38.80 Mbit/s
95th percentile per-packet one-way delay: 40.143 ms
Loss rate: 6.95%
-- Flow 3:
Average throughput: 28.97 Mbit/s
95th percentile per-packet one-way delay: 42.679 ms
Loss rate: 21.02%
```

Run 3: Report of Indigo-MusesT — Data Link

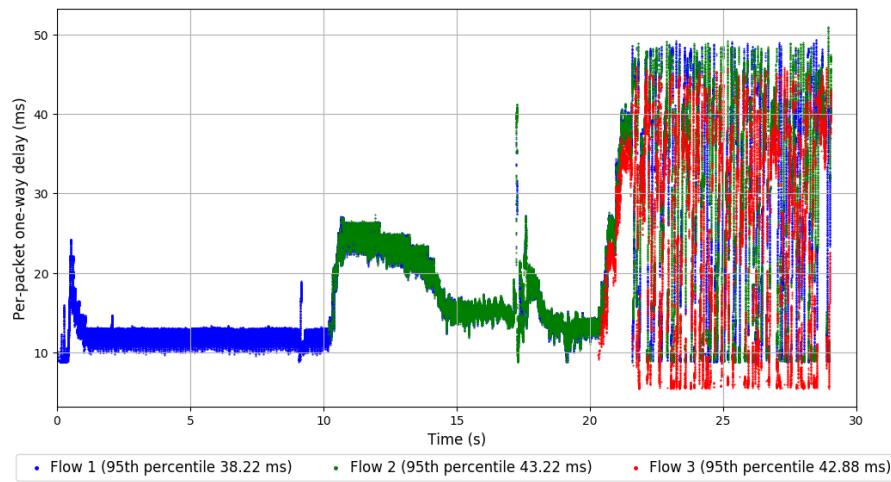
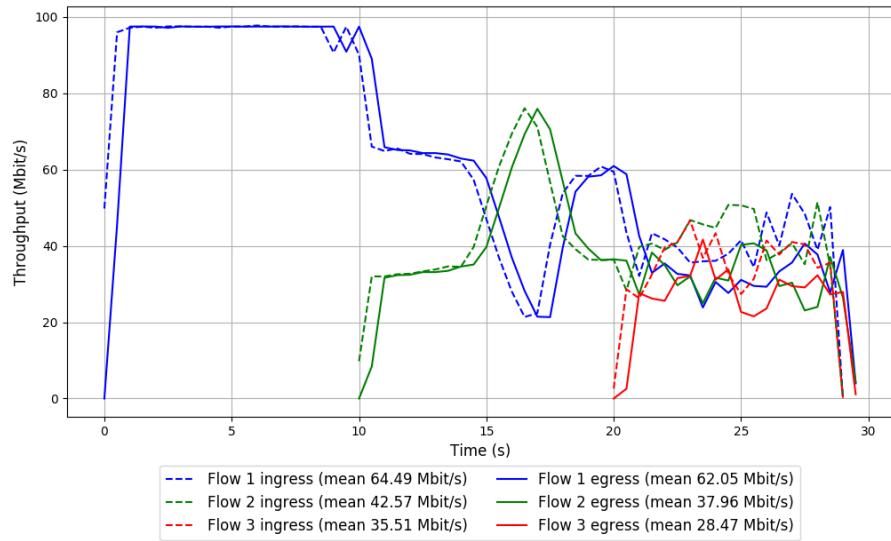


Run 4: Statistics of Indigo-MusesT

```
Start at: 2019-04-24 01:46:12
End at: 2019-04-24 01:46:42
Local clock offset: -0.266 ms
Remote clock offset: -1.024 ms

# Below is generated by plot.py at 2019-04-24 02:23:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.27 Mbit/s
95th percentile per-packet one-way delay: 40.902 ms
Loss rate: 7.22%
-- Flow 1:
Average throughput: 62.05 Mbit/s
95th percentile per-packet one-way delay: 38.218 ms
Loss rate: 3.71%
-- Flow 2:
Average throughput: 37.96 Mbit/s
95th percentile per-packet one-way delay: 43.223 ms
Loss rate: 10.67%
-- Flow 3:
Average throughput: 28.47 Mbit/s
95th percentile per-packet one-way delay: 42.875 ms
Loss rate: 19.51%
```

Run 4: Report of Indigo-MusesT — Data Link

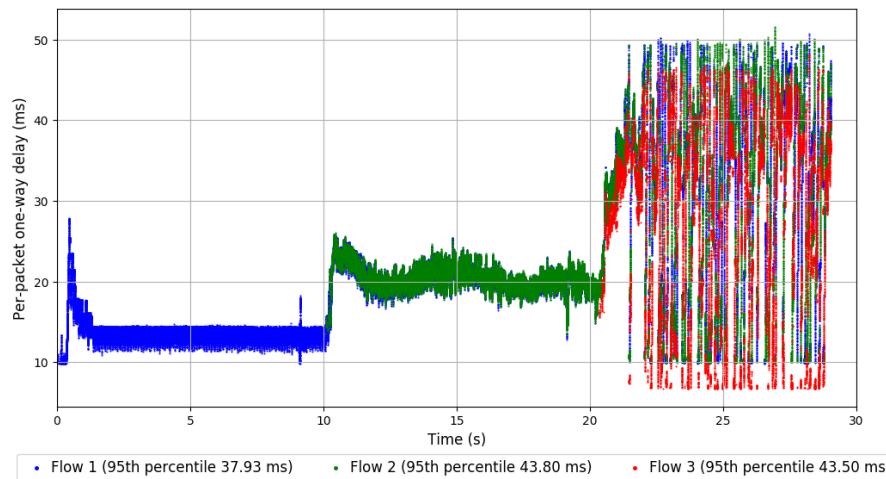
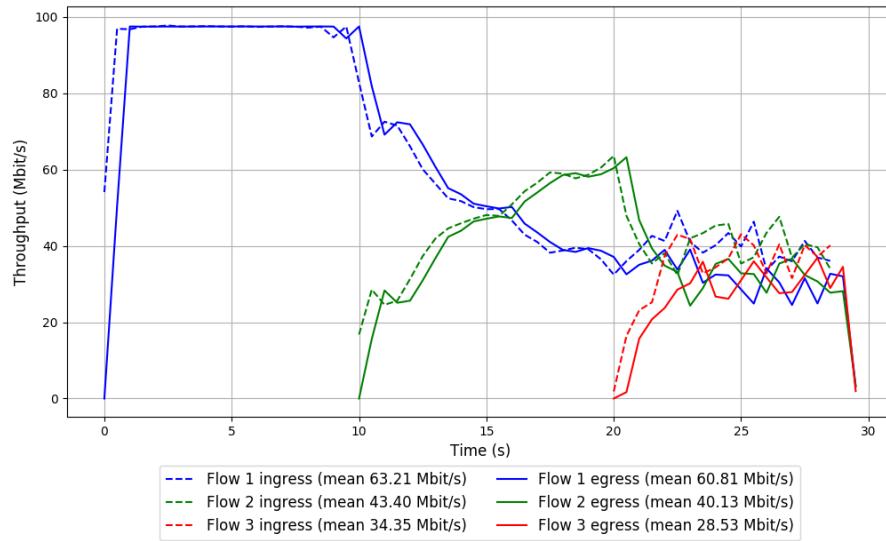


Run 5: Statistics of Indigo-MusesT

```
Start at: 2019-04-24 02:11:11
End at: 2019-04-24 02:11:41
Local clock offset: 0.532 ms
Remote clock offset: -0.725 ms

# Below is generated by plot.py at 2019-04-24 02:23:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 41.468 ms
Loss rate: 6.02%
-- Flow 1:
Average throughput: 60.81 Mbit/s
95th percentile per-packet one-way delay: 37.932 ms
Loss rate: 3.67%
-- Flow 2:
Average throughput: 40.13 Mbit/s
95th percentile per-packet one-way delay: 43.804 ms
Loss rate: 7.37%
-- Flow 3:
Average throughput: 28.53 Mbit/s
95th percentile per-packet one-way delay: 43.500 ms
Loss rate: 16.70%
```

Run 5: Report of Indigo-MusesT — Data Link

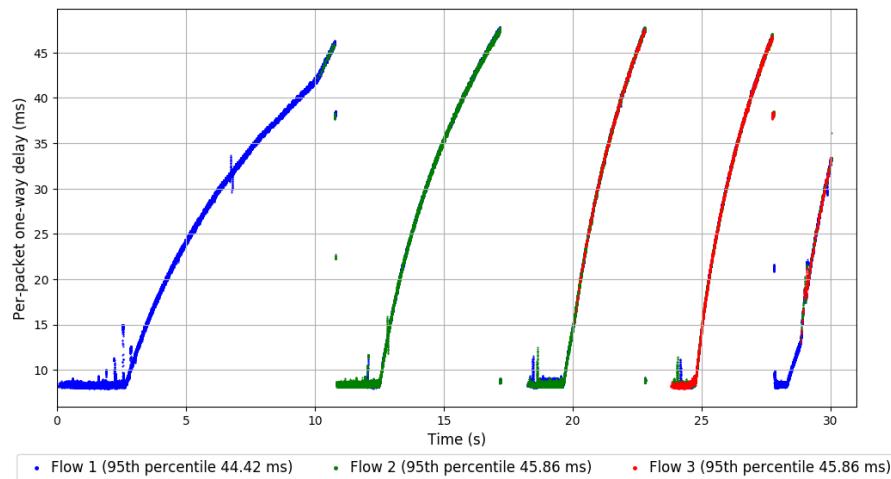
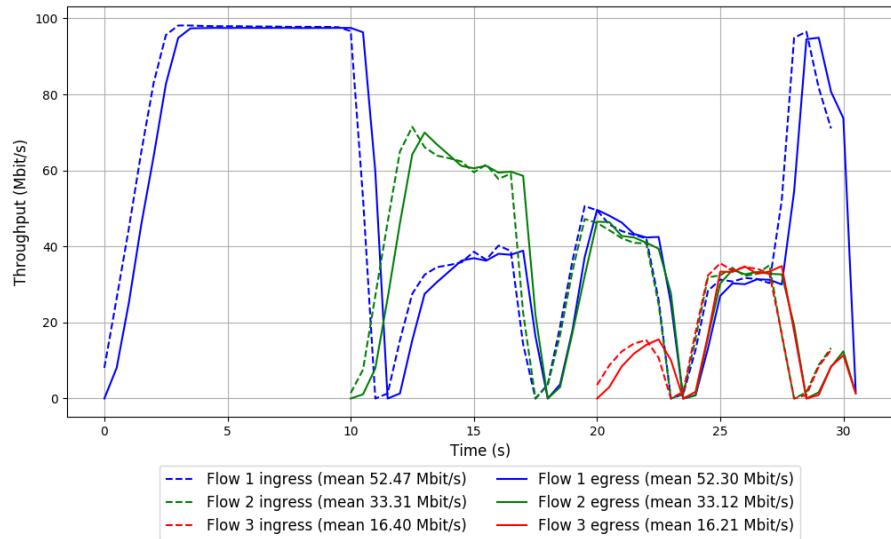


Run 1: Statistics of LEDBAT

```
Start at: 2019-04-24 00:22:43
End at: 2019-04-24 00:23:13
Local clock offset: 0.183 ms
Remote clock offset: 5.421 ms

# Below is generated by plot.py at 2019-04-24 02:23:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.73 Mbit/s
95th percentile per-packet one-way delay: 45.131 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 52.30 Mbit/s
95th percentile per-packet one-way delay: 44.424 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 33.12 Mbit/s
95th percentile per-packet one-way delay: 45.858 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 16.21 Mbit/s
95th percentile per-packet one-way delay: 45.857 ms
Loss rate: 0.99%
```

Run 1: Report of LEDBAT — Data Link

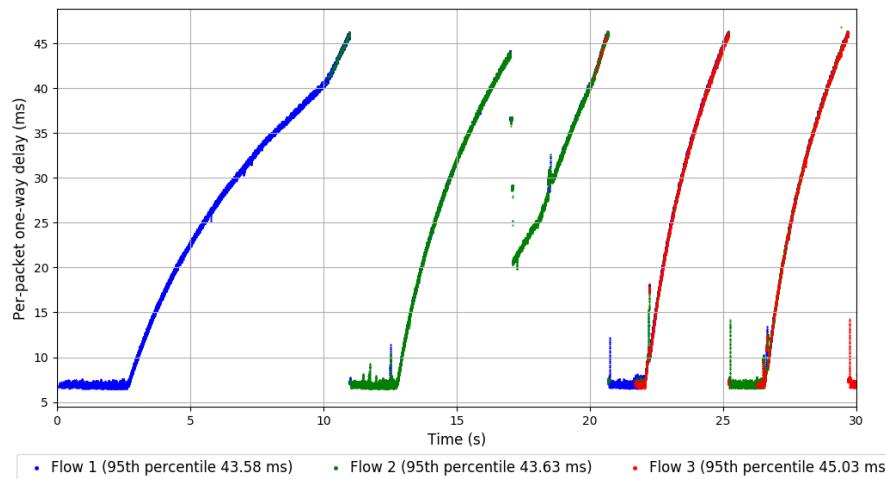
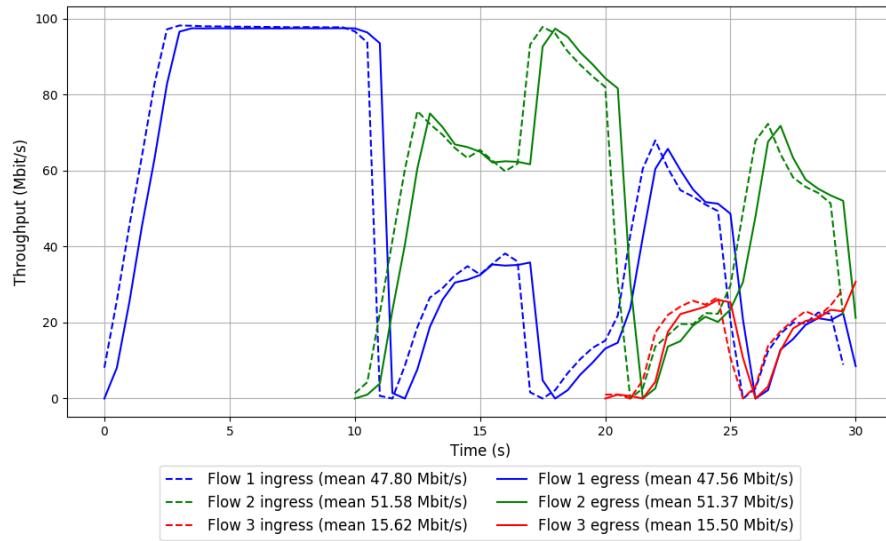


Run 2: Statistics of LEDBAT

```
Start at: 2019-04-24 00:47:24
End at: 2019-04-24 00:47:54
Local clock offset: 1.053 ms
Remote clock offset: 2.99 ms

# Below is generated by plot.py at 2019-04-24 02:23:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.81 Mbit/s
95th percentile per-packet one-way delay: 43.784 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 47.56 Mbit/s
95th percentile per-packet one-way delay: 43.576 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 51.37 Mbit/s
95th percentile per-packet one-way delay: 43.634 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 15.50 Mbit/s
95th percentile per-packet one-way delay: 45.033 ms
Loss rate: 1.04%
```

Run 2: Report of LEDBAT — Data Link

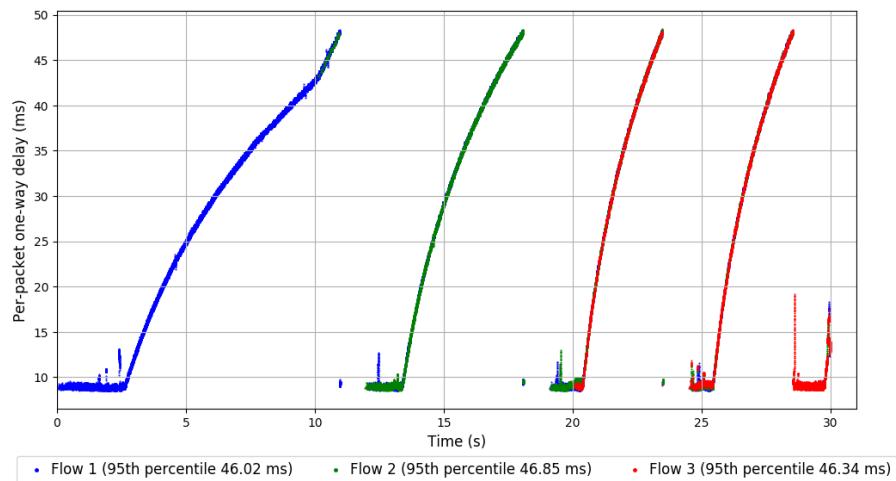
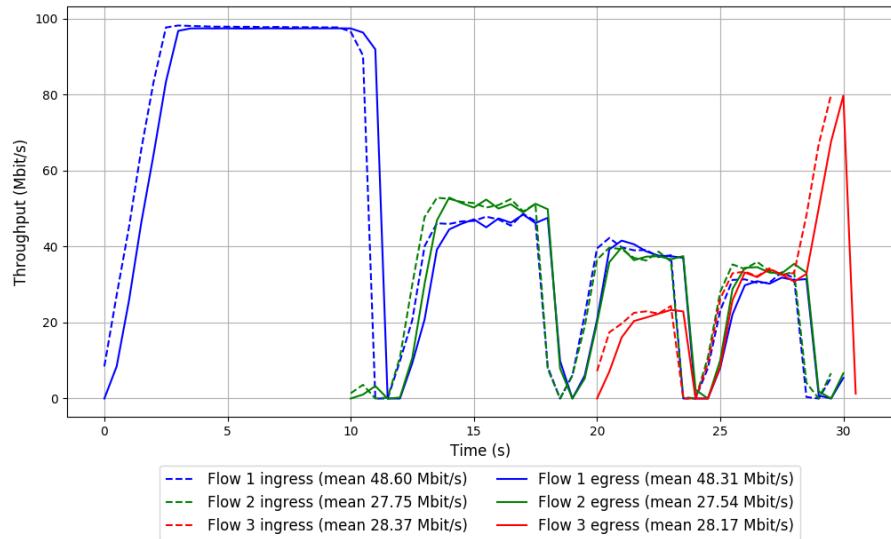


Run 3: Statistics of LEDBAT

```
Start at: 2019-04-24 01:11:59
End at: 2019-04-24 01:12:29
Local clock offset: 1.621 ms
Remote clock offset: 4.051 ms

# Below is generated by plot.py at 2019-04-24 02:23:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.97 Mbit/s
95th percentile per-packet one-way delay: 46.364 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 48.31 Mbit/s
95th percentile per-packet one-way delay: 46.019 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 27.54 Mbit/s
95th percentile per-packet one-way delay: 46.851 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 28.17 Mbit/s
95th percentile per-packet one-way delay: 46.340 ms
Loss rate: 0.65%
```

Run 3: Report of LEDBAT — Data Link

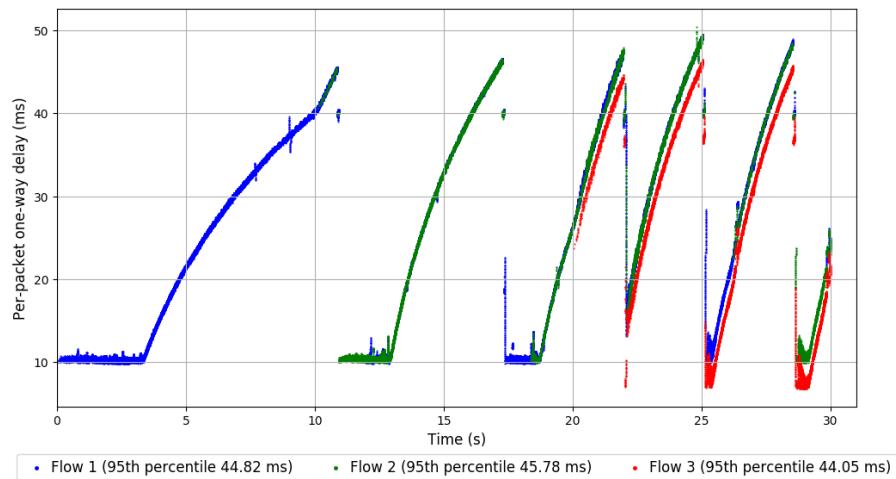
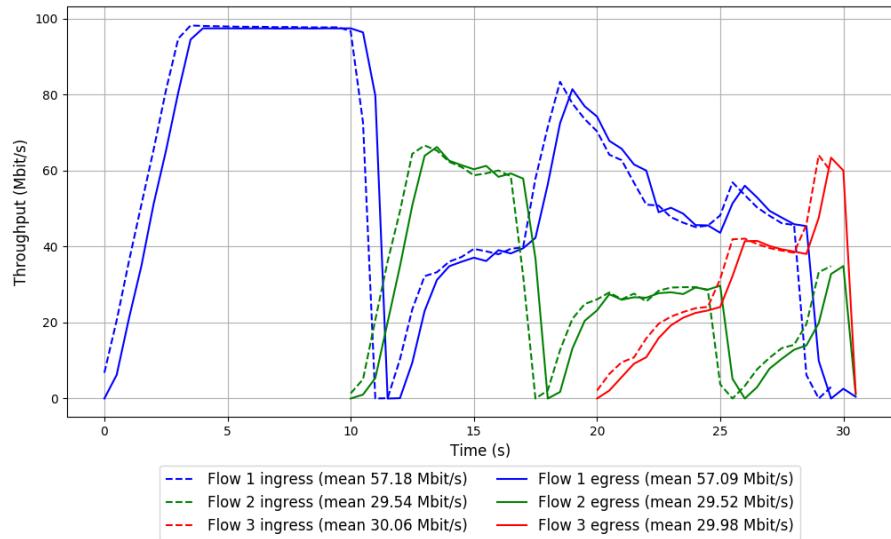


Run 4: Statistics of LEDBAT

```
Start at: 2019-04-24 01:36:51
End at: 2019-04-24 01:37:21
Local clock offset: -0.236 ms
Remote clock offset: 0.646 ms

# Below is generated by plot.py at 2019-04-24 02:24:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.69 Mbit/s
95th percentile per-packet one-way delay: 45.041 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 57.09 Mbit/s
95th percentile per-packet one-way delay: 44.824 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 29.52 Mbit/s
95th percentile per-packet one-way delay: 45.779 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 29.98 Mbit/s
95th percentile per-packet one-way delay: 44.050 ms
Loss rate: 0.27%
```

Run 4: Report of LEDBAT — Data Link

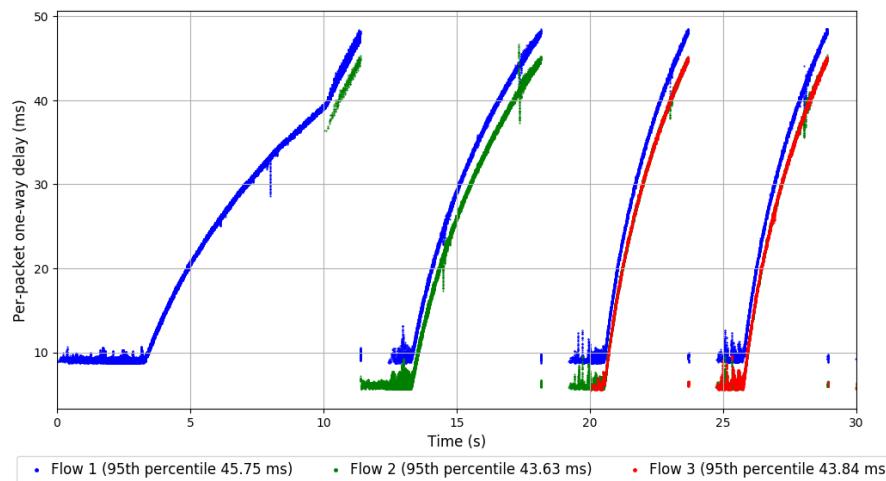
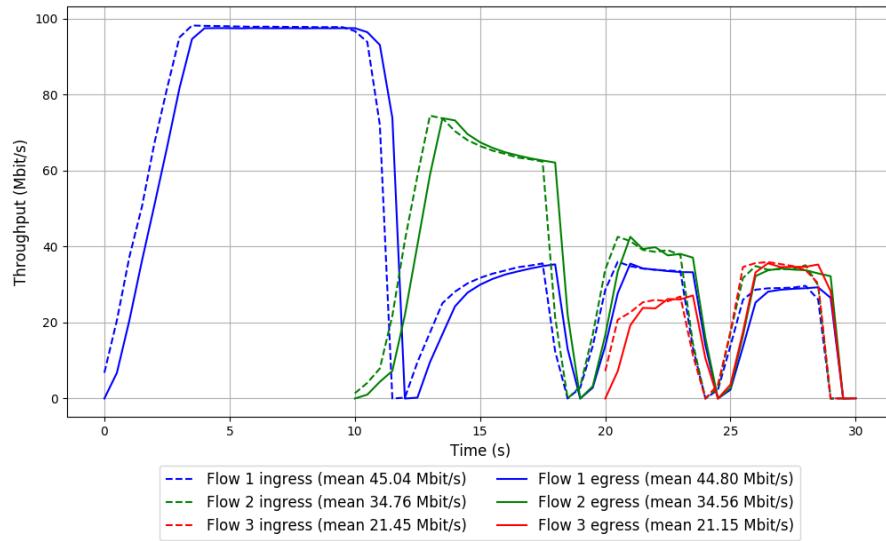


Run 5: Statistics of LEDBAT

```
Start at: 2019-04-24 02:01:53
End at: 2019-04-24 02:02:23
Local clock offset: -0.354 ms
Remote clock offset: -2.122 ms

# Below is generated by plot.py at 2019-04-24 02:24:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.79 Mbit/s
95th percentile per-packet one-way delay: 44.624 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 44.80 Mbit/s
95th percentile per-packet one-way delay: 45.751 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 34.56 Mbit/s
95th percentile per-packet one-way delay: 43.634 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 21.15 Mbit/s
95th percentile per-packet one-way delay: 43.844 ms
Loss rate: 1.40%
```

Run 5: Report of LEDBAT — Data Link

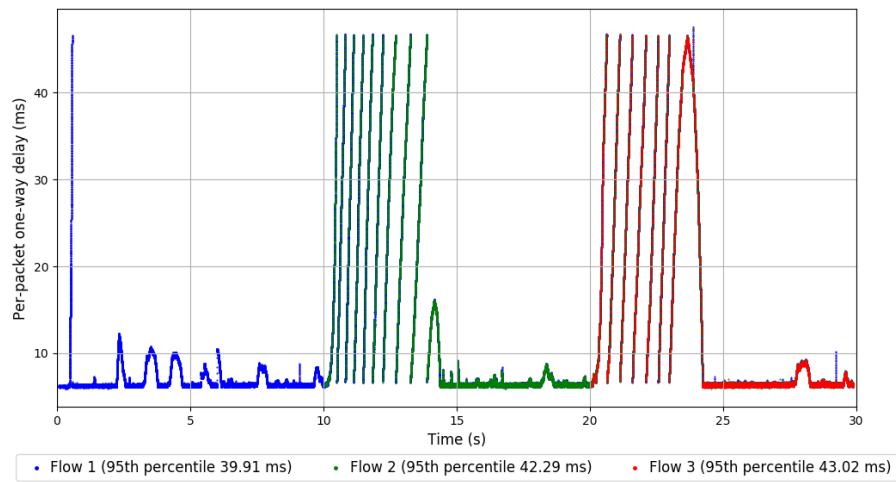
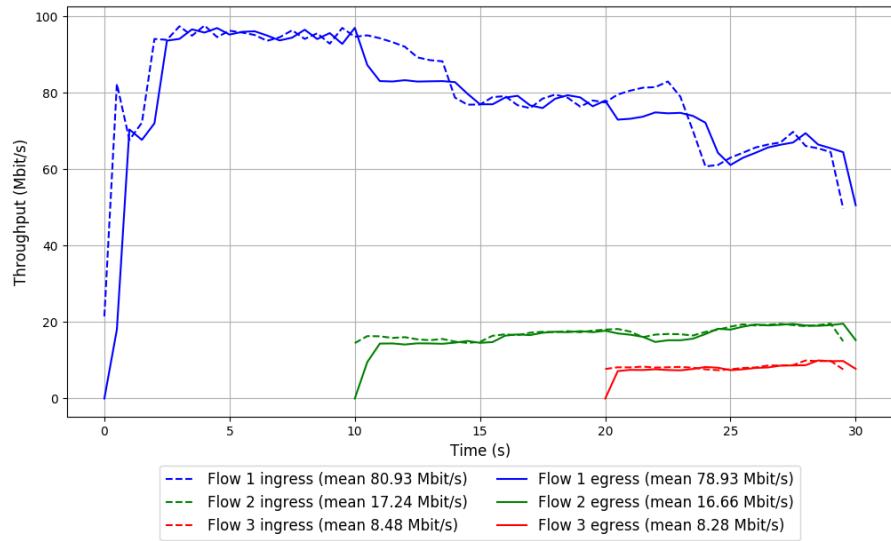


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2019-04-24 00:23:55
End at: 2019-04-24 00:24:25
Local clock offset: 0.993 ms
Remote clock offset: 4.133 ms

# Below is generated by plot.py at 2019-04-24 02:24:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 40.512 ms
Loss rate: 2.57%
-- Flow 1:
Average throughput: 78.93 Mbit/s
95th percentile per-packet one-way delay: 39.905 ms
Loss rate: 2.47%
-- Flow 2:
Average throughput: 16.66 Mbit/s
95th percentile per-packet one-way delay: 42.290 ms
Loss rate: 3.35%
-- Flow 3:
Average throughput: 8.28 Mbit/s
95th percentile per-packet one-way delay: 43.024 ms
Loss rate: 2.34%
```

Run 1: Report of PCC-Allegro — Data Link

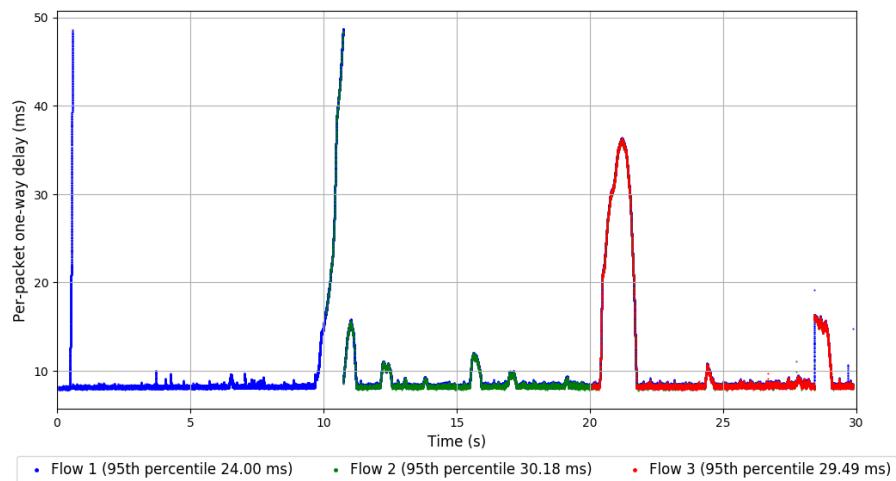
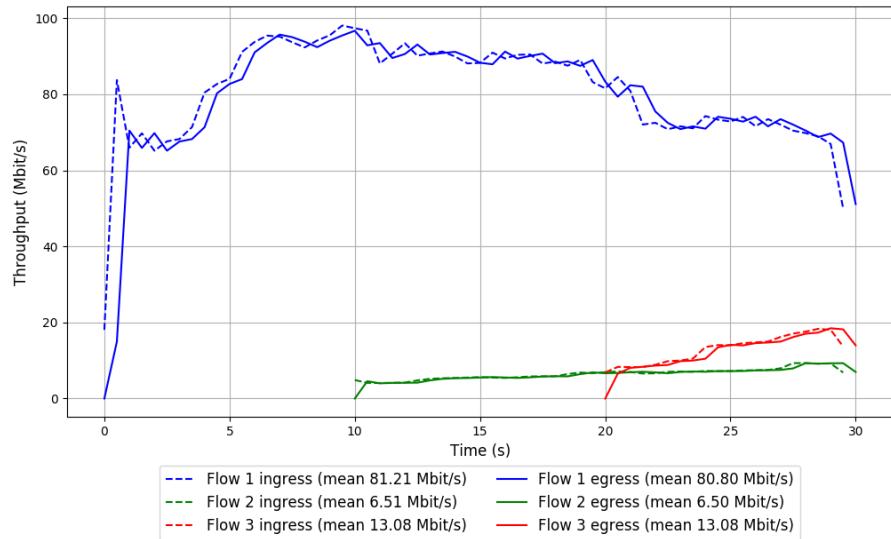


Run 2: Statistics of PCC-Allegro

```
Start at: 2019-04-24 00:48:37
End at: 2019-04-24 00:49:07
Local clock offset: 0.984 ms
Remote clock offset: 4.168 ms

# Below is generated by plot.py at 2019-04-24 02:24:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.44 Mbit/s
95th percentile per-packet one-way delay: 24.979 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 80.80 Mbit/s
95th percentile per-packet one-way delay: 24.001 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 30.179 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 13.08 Mbit/s
95th percentile per-packet one-way delay: 29.494 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Allegro — Data Link

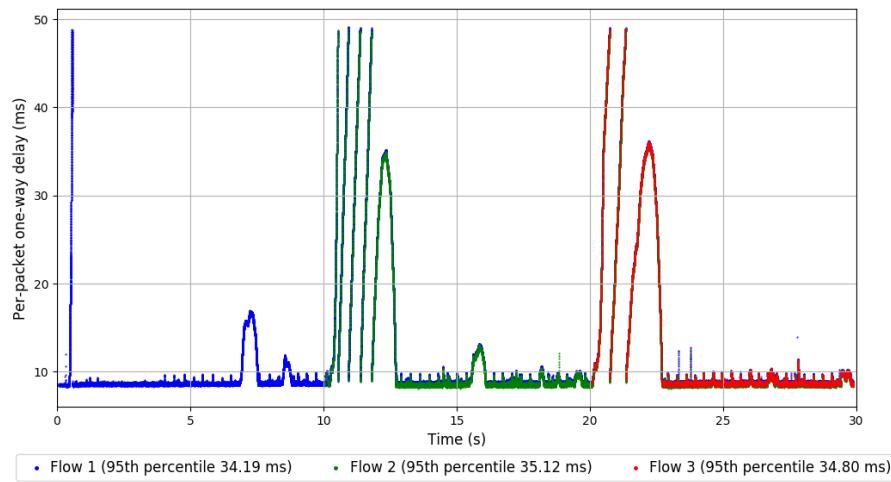
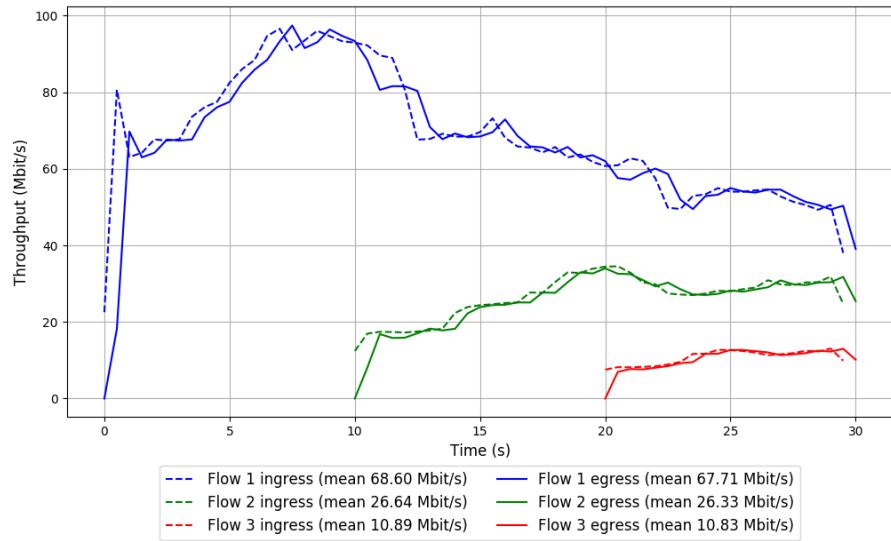


Run 3: Statistics of PCC-Allegro

```
Start at: 2019-04-24 01:13:11
End at: 2019-04-24 01:13:41
Local clock offset: 0.689 ms
Remote clock offset: 2.894 ms

# Below is generated by plot.py at 2019-04-24 02:24:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.79 Mbit/s
95th percentile per-packet one-way delay: 34.437 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 67.71 Mbit/s
95th percentile per-packet one-way delay: 34.193 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 26.33 Mbit/s
95th percentile per-packet one-way delay: 35.125 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 10.83 Mbit/s
95th percentile per-packet one-way delay: 34.802 ms
Loss rate: 0.61%
```

Run 3: Report of PCC-Allegro — Data Link

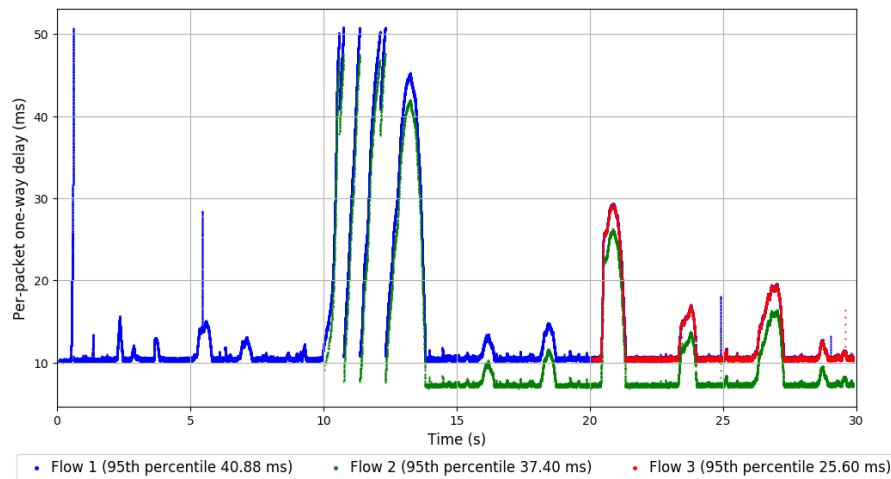
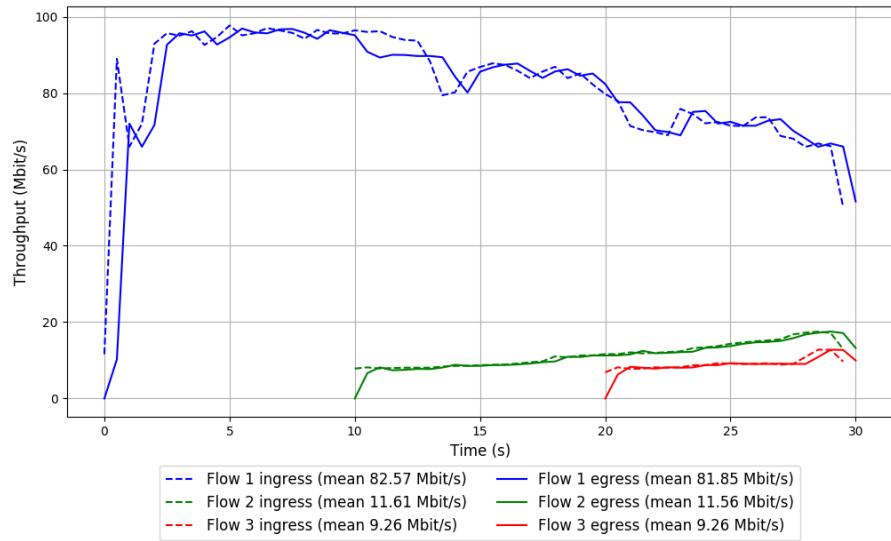


Run 4: Statistics of PCC-Allegro

```
Start at: 2019-04-24 01:38:04
End at: 2019-04-24 01:38:34
Local clock offset: -0.275 ms
Remote clock offset: 0.769 ms

# Below is generated by plot.py at 2019-04-24 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.59 Mbit/s
95th percentile per-packet one-way delay: 39.857 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 81.85 Mbit/s
95th percentile per-packet one-way delay: 40.883 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 11.56 Mbit/s
95th percentile per-packet one-way delay: 37.395 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 9.26 Mbit/s
95th percentile per-packet one-way delay: 25.600 ms
Loss rate: 0.00%
```

Run 4: Report of PCC-Allegro — Data Link

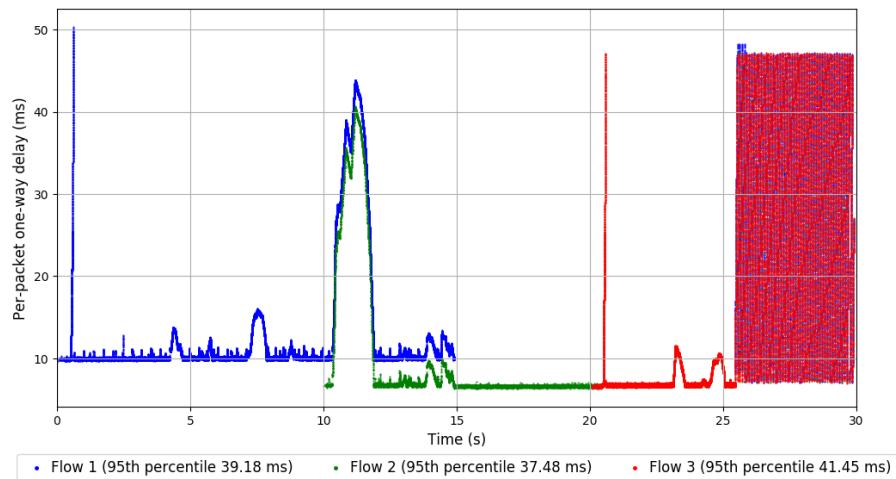
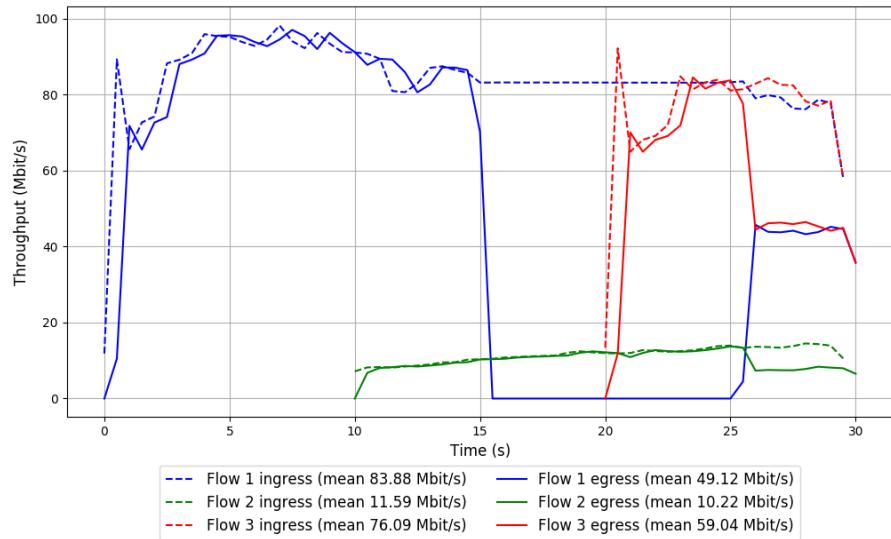


Run 5: Statistics of PCC-Allegro

```
Start at: 2019-04-24 02:03:06
End at: 2019-04-24 02:03:36
Local clock offset: 0.249 ms
Remote clock offset: -0.684 ms

# Below is generated by plot.py at 2019-04-24 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.42 Mbit/s
95th percentile per-packet one-way delay: 39.707 ms
Loss rate: 35.33%
-- Flow 1:
Average throughput: 49.12 Mbit/s
95th percentile per-packet one-way delay: 39.180 ms
Loss rate: 41.41%
-- Flow 2:
Average throughput: 10.22 Mbit/s
95th percentile per-packet one-way delay: 37.476 ms
Loss rate: 11.77%
-- Flow 3:
Average throughput: 59.04 Mbit/s
95th percentile per-packet one-way delay: 41.446 ms
Loss rate: 22.25%
```

Run 5: Report of PCC-Allegro — Data Link

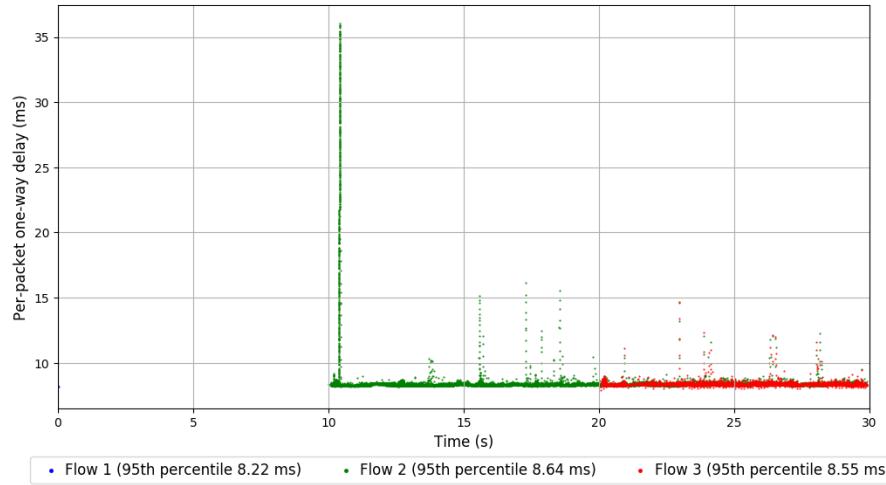
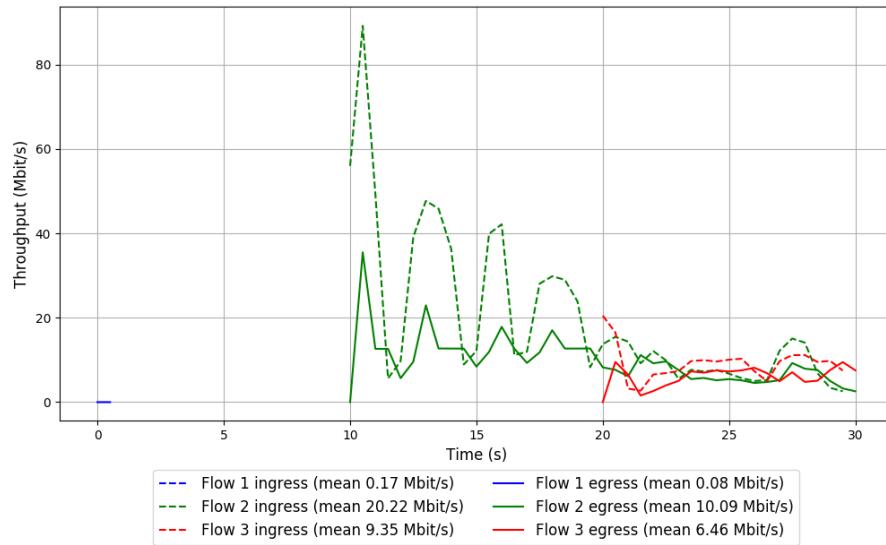


Run 1: Statistics of PCC-Expr

```
Start at: 2019-04-24 00:29:43
End at: 2019-04-24 00:30:13
Local clock offset: -0.67 ms
Remote clock offset: 4.229 ms

# Below is generated by plot.py at 2019-04-24 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 8.602 ms
Loss rate: 46.53%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 8.217 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.09 Mbit/s
95th percentile per-packet one-way delay: 8.641 ms
Loss rate: 50.11%
-- Flow 3:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 8.551 ms
Loss rate: 30.92%
```

Run 1: Report of PCC-Expr — Data Link

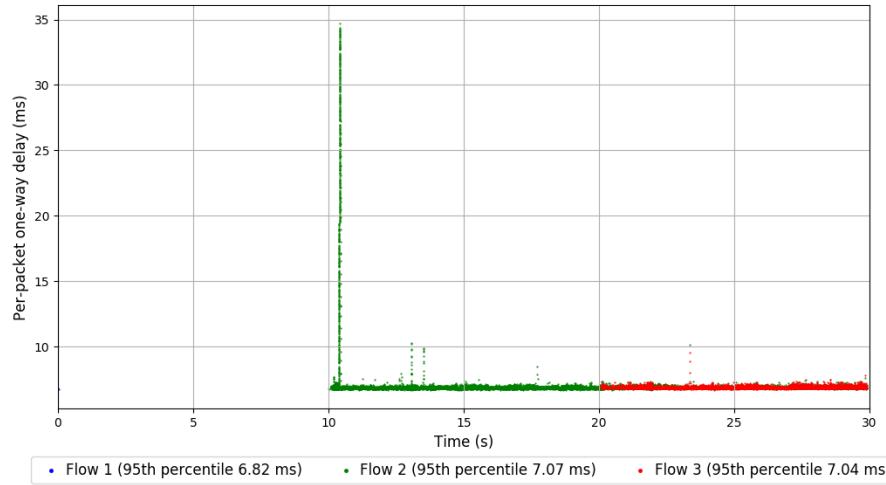
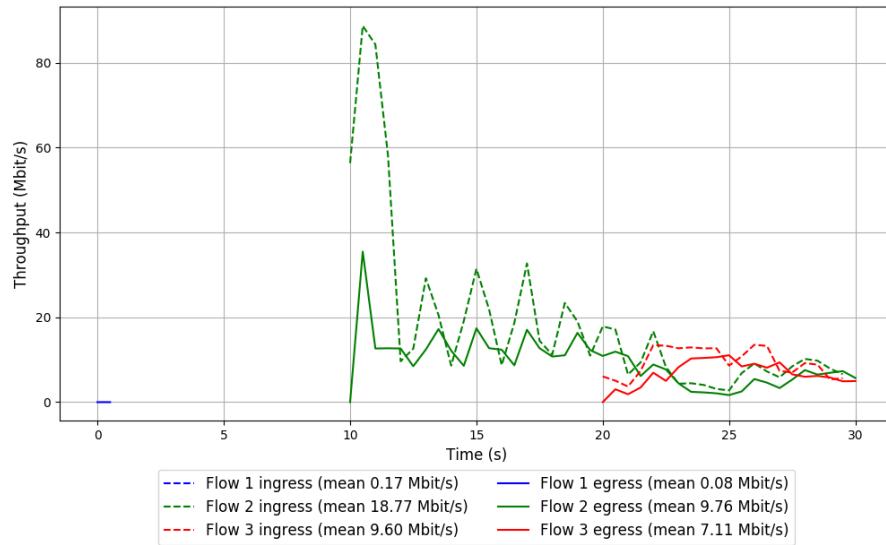


Run 2: Statistics of PCC-Expr

```
Start at: 2019-04-24 00:54:24
End at: 2019-04-24 00:54:54
Local clock offset: 0.589 ms
Remote clock offset: 1.959 ms

# Below is generated by plot.py at 2019-04-24 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 7.054 ms
Loss rate: 43.52%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 6.820 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.76 Mbit/s
95th percentile per-packet one-way delay: 7.070 ms
Loss rate: 47.98%
-- Flow 3:
Average throughput: 7.11 Mbit/s
95th percentile per-packet one-way delay: 7.035 ms
Loss rate: 25.97%
```

Run 2: Report of PCC-Expr — Data Link

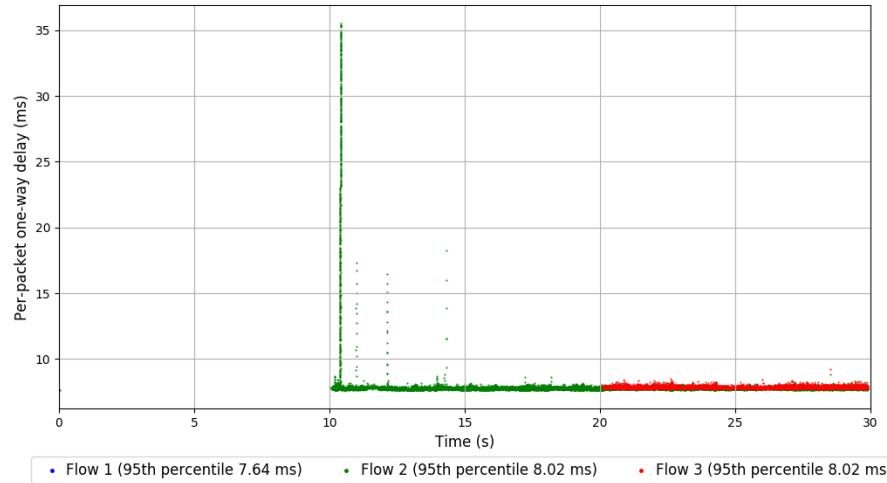
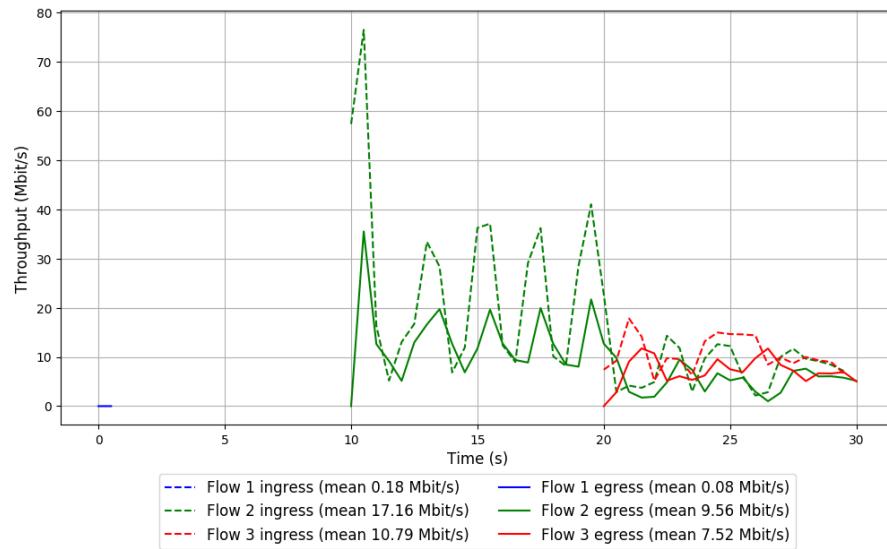


Run 3: Statistics of PCC-Expr

```
Start at: 2019-04-24 01:19:00
End at: 2019-04-24 01:19:30
Local clock offset: 0.962 ms
Remote clock offset: 2.87 ms

# Below is generated by plot.py at 2019-04-24 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 8.017 ms
Loss rate: 40.98%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 7.636 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 8.017 ms
Loss rate: 44.30%
-- Flow 3:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 8.017 ms
Loss rate: 30.32%
```

Run 3: Report of PCC-Expr — Data Link

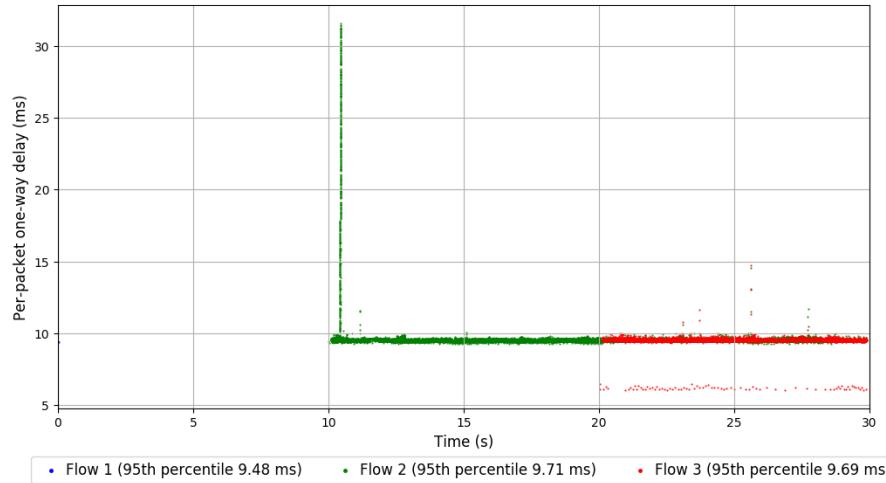
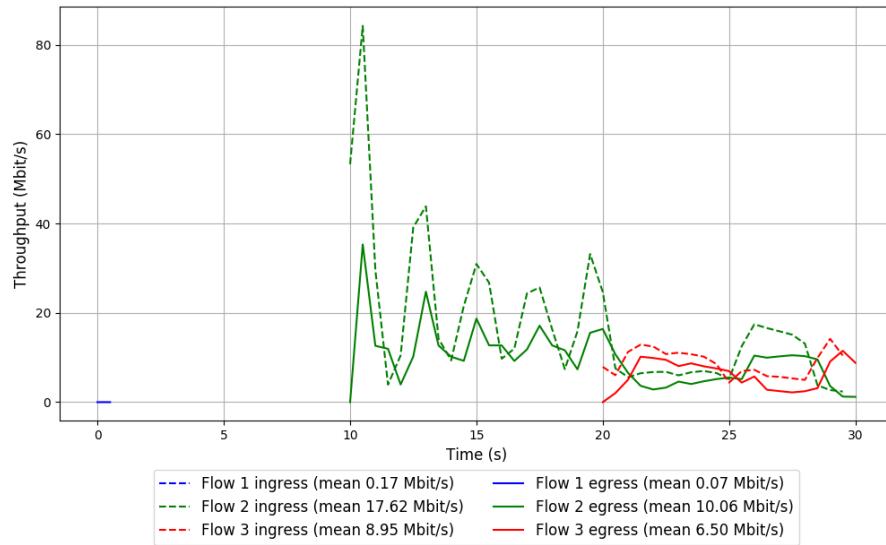


Run 4: Statistics of PCC-Expr

```
Start at: 2019-04-24 01:43:54
End at: 2019-04-24 01:44:24
Local clock offset: -0.745 ms
Remote clock offset: -0.707 ms

# Below is generated by plot.py at 2019-04-24 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 9.700 ms
Loss rate: 39.77%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 9.481 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 9.705 ms
Loss rate: 42.90%
-- Flow 3:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 9.687 ms
Loss rate: 27.35%
```

Run 4: Report of PCC-Expr — Data Link

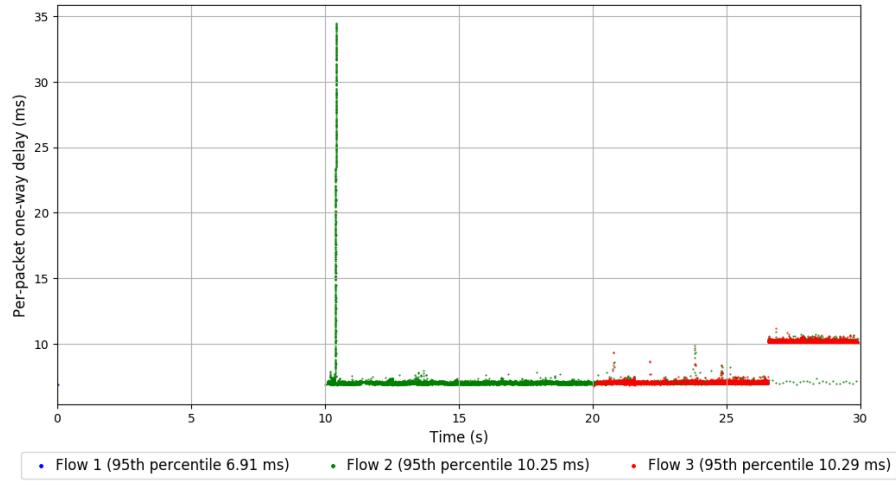
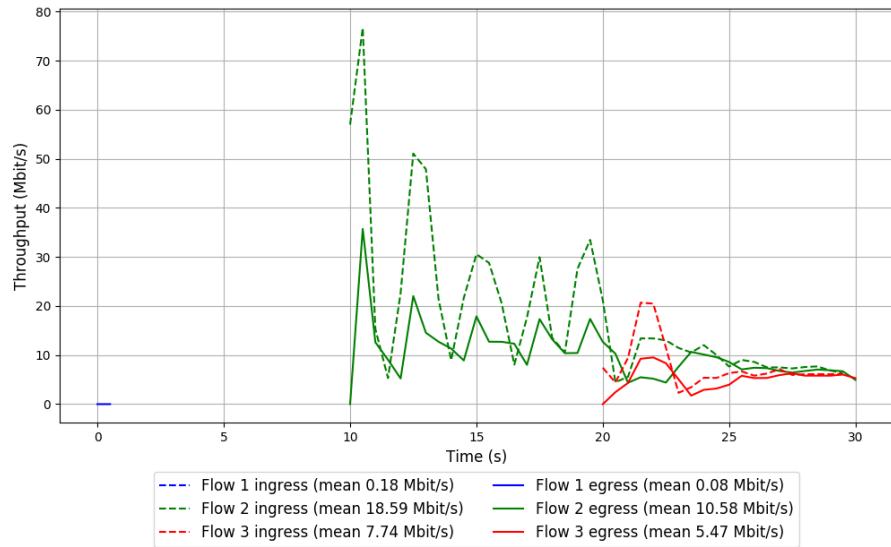


Run 5: Statistics of PCC-Expr

```
Start at: 2019-04-24 02:08:53
End at: 2019-04-24 02:09:23
Local clock offset: -0.293 ms
Remote clock offset: -1.192 ms

# Below is generated by plot.py at 2019-04-24 02:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 10.270 ms
Loss rate: 40.75%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 6.913 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.58 Mbit/s
95th percentile per-packet one-way delay: 10.252 ms
Loss rate: 43.11%
-- Flow 3:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 10.288 ms
Loss rate: 29.33%
```

Run 5: Report of PCC-Expr — Data Link

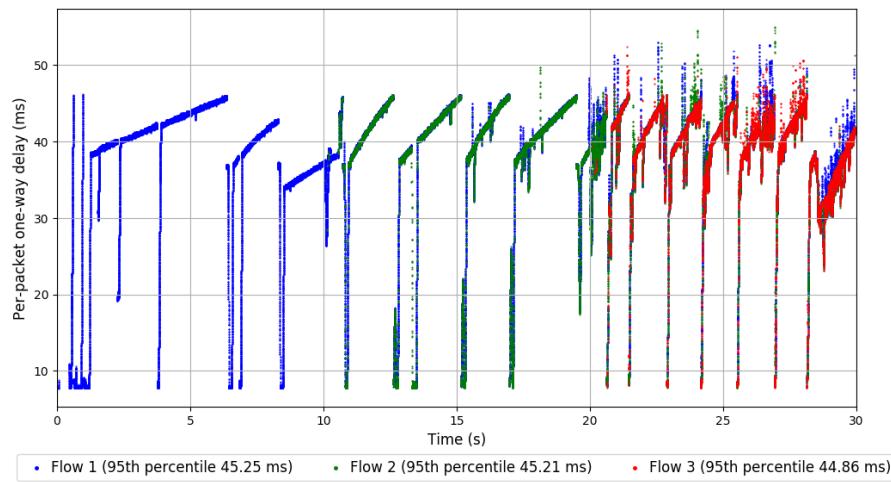
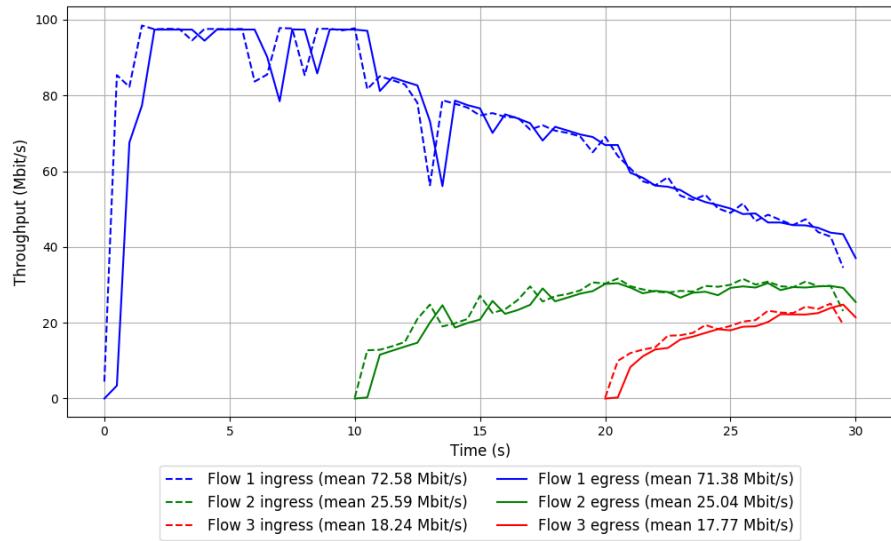


```
Run 1: Statistics of QUIC Cubic

Start at: 2019-04-24 00:26:13
End at: 2019-04-24 00:26:43
Local clock offset: 0.276 ms
Remote clock offset: 4.965 ms

# Below is generated by plot.py at 2019-04-24 02:25:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.81 Mbit/s
95th percentile per-packet one-way delay: 45.213 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 71.38 Mbit/s
95th percentile per-packet one-way delay: 45.247 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 25.04 Mbit/s
95th percentile per-packet one-way delay: 45.213 ms
Loss rate: 2.07%
-- Flow 3:
Average throughput: 17.77 Mbit/s
95th percentile per-packet one-way delay: 44.864 ms
Loss rate: 2.52%
```

Run 1: Report of QUIC Cubic — Data Link

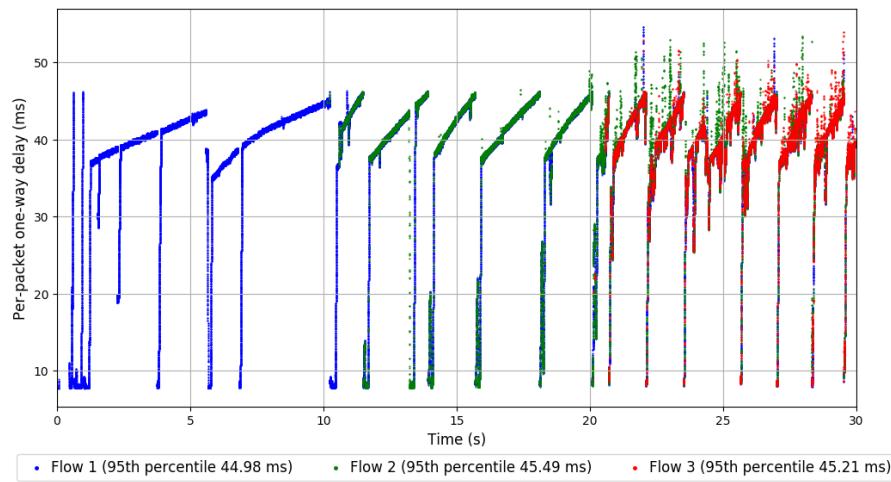
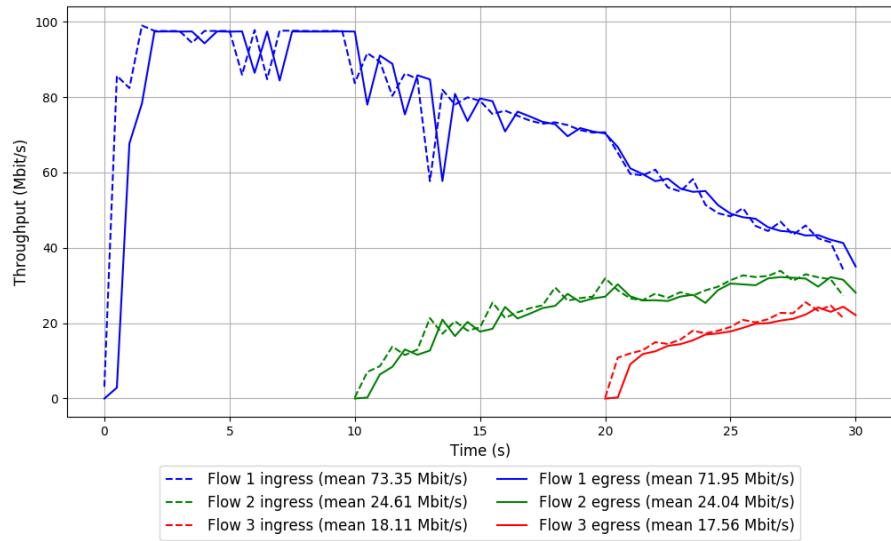


Run 2: Statistics of QUIC Cubic

```
Start at: 2019-04-24 00:50:53
End at: 2019-04-24 00:51:23
Local clock offset: 0.84 ms
Remote clock offset: 3.684 ms

# Below is generated by plot.py at 2019-04-24 02:25:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.66 Mbit/s
95th percentile per-packet one-way delay: 45.117 ms
Loss rate: 1.96%
-- Flow 1:
Average throughput: 71.95 Mbit/s
95th percentile per-packet one-way delay: 44.985 ms
Loss rate: 1.81%
-- Flow 2:
Average throughput: 24.04 Mbit/s
95th percentile per-packet one-way delay: 45.495 ms
Loss rate: 2.34%
-- Flow 3:
Average throughput: 17.56 Mbit/s
95th percentile per-packet one-way delay: 45.208 ms
Loss rate: 2.71%
```

Run 2: Report of QUIC Cubic — Data Link

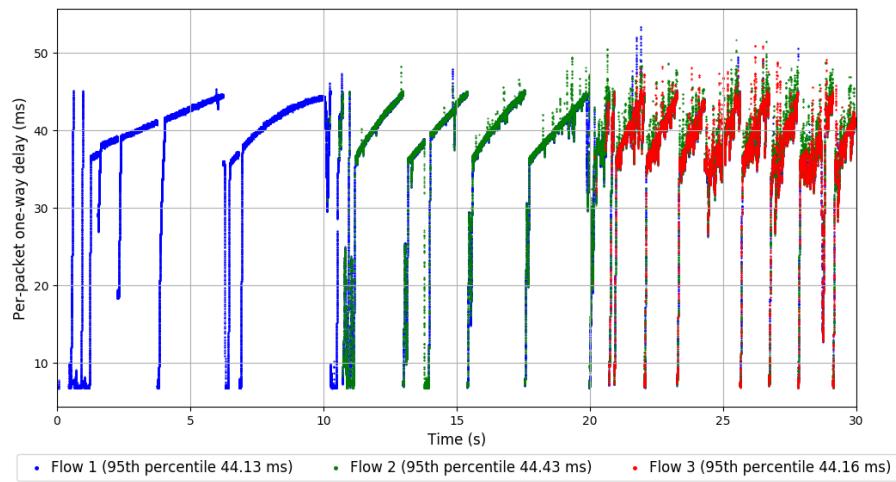
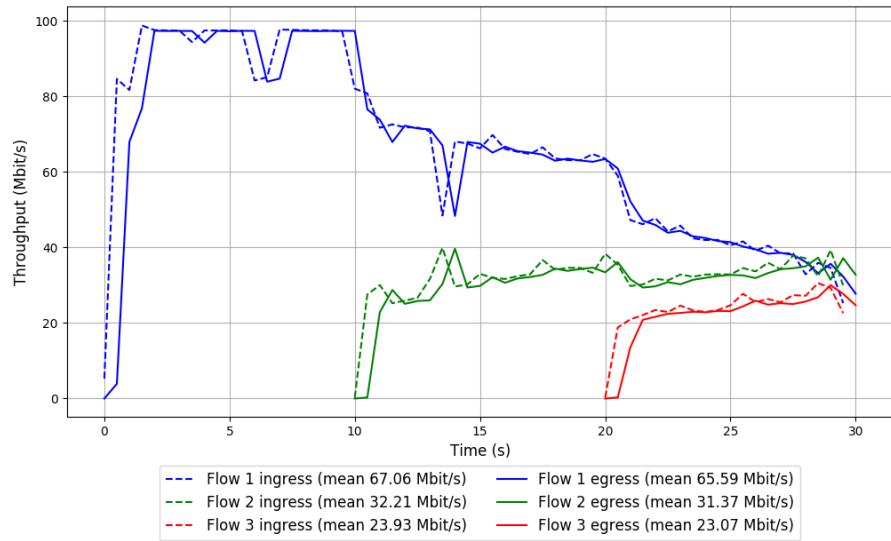


Run 3: Statistics of QUIC Cubic

```
Start at: 2019-04-24 01:15:27
End at: 2019-04-24 01:15:57
Local clock offset: 1.324 ms
Remote clock offset: 1.998 ms

# Below is generated by plot.py at 2019-04-24 02:25:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.97 Mbit/s
95th percentile per-packet one-way delay: 44.212 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 65.59 Mbit/s
95th percentile per-packet one-way delay: 44.132 ms
Loss rate: 2.08%
-- Flow 2:
Average throughput: 31.37 Mbit/s
95th percentile per-packet one-way delay: 44.432 ms
Loss rate: 2.59%
-- Flow 3:
Average throughput: 23.07 Mbit/s
95th percentile per-packet one-way delay: 44.165 ms
Loss rate: 3.36%
```

Run 3: Report of QUIC Cubic — Data Link

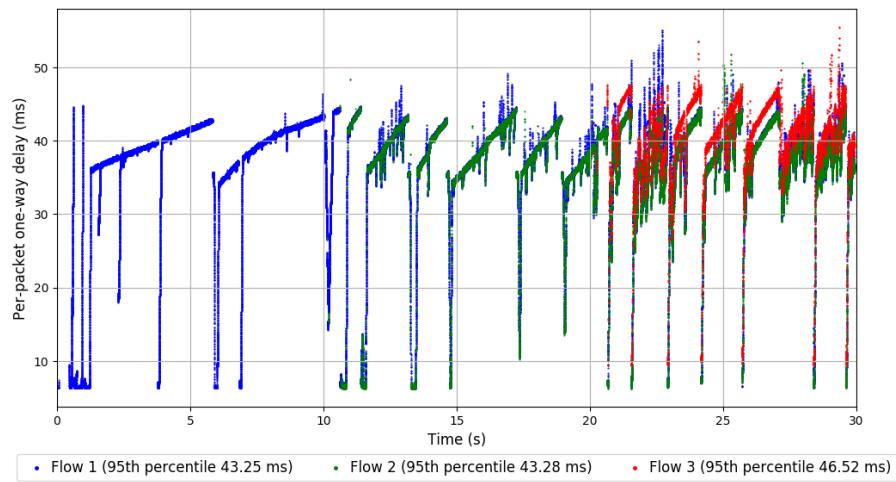
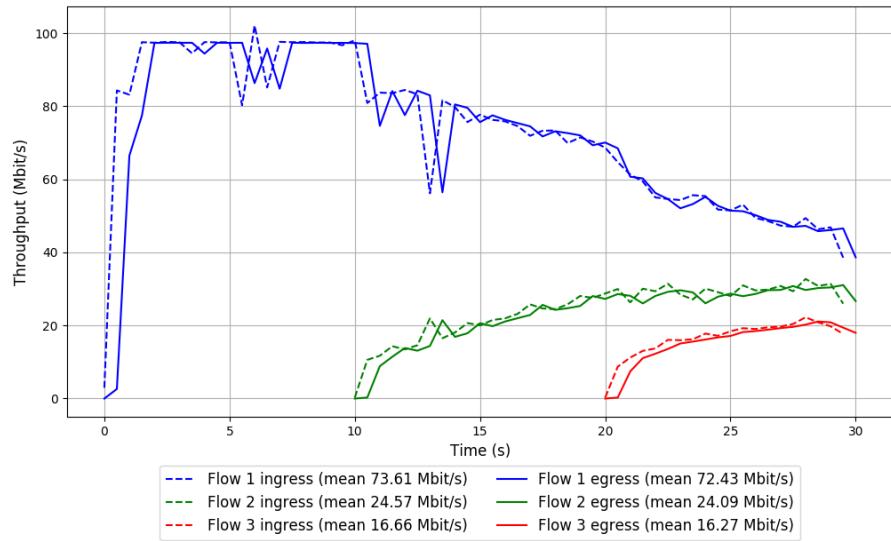


Run 4: Statistics of QUIC Cubic

```
Start at: 2019-04-24 01:40:21
End at: 2019-04-24 01:40:51
Local clock offset: -0.495 ms
Remote clock offset: -0.241 ms

# Below is generated by plot.py at 2019-04-24 02:25:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.74 Mbit/s
95th percentile per-packet one-way delay: 43.628 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 72.43 Mbit/s
95th percentile per-packet one-way delay: 43.252 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 24.09 Mbit/s
95th percentile per-packet one-way delay: 43.281 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 16.27 Mbit/s
95th percentile per-packet one-way delay: 46.517 ms
Loss rate: 2.39%
```

Run 4: Report of QUIC Cubic — Data Link

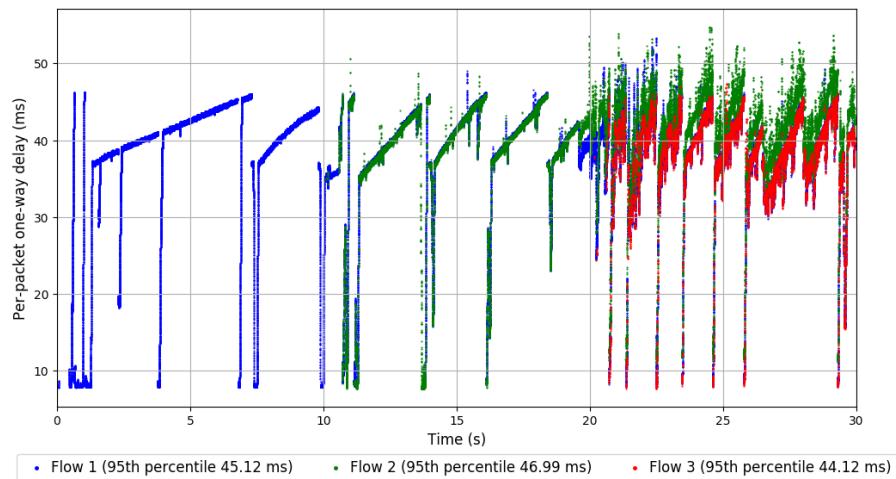
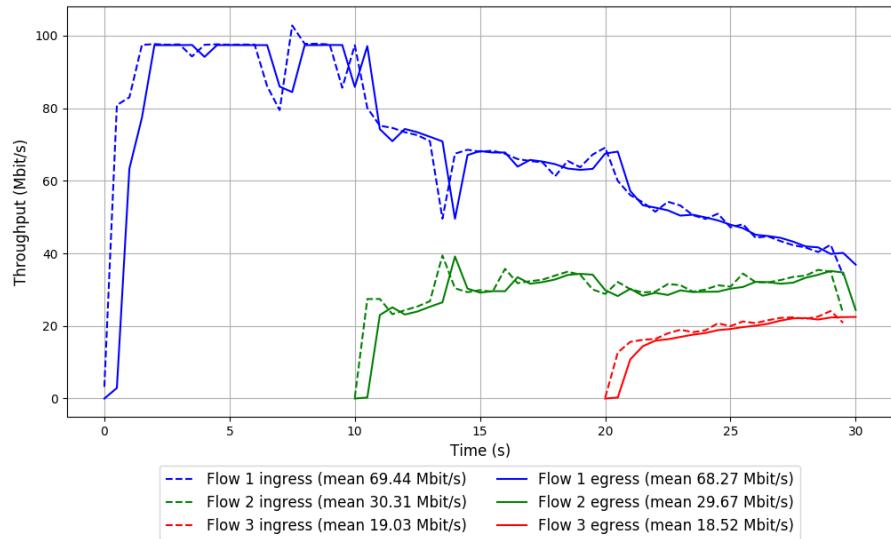


Run 5: Statistics of QUIC Cubic

```
Start at: 2019-04-24 02:05:22
End at: 2019-04-24 02:05:52
Local clock offset: -0.751 ms
Remote clock offset: -0.453 ms

# Below is generated by plot.py at 2019-04-24 02:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.06 Mbit/s
95th percentile per-packet one-way delay: 45.432 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 68.27 Mbit/s
95th percentile per-packet one-way delay: 45.116 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 29.67 Mbit/s
95th percentile per-packet one-way delay: 46.992 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 18.52 Mbit/s
95th percentile per-packet one-way delay: 44.115 ms
Loss rate: 2.69%
```

Run 5: Report of QUIC Cubic — Data Link

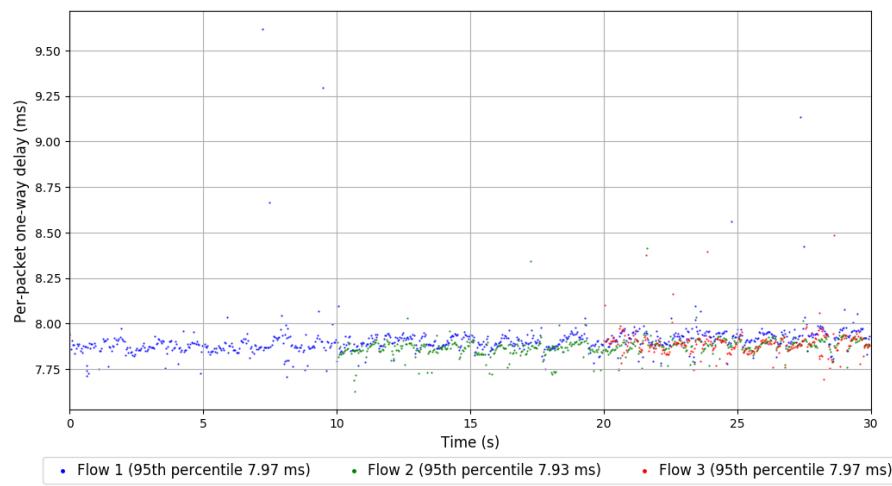
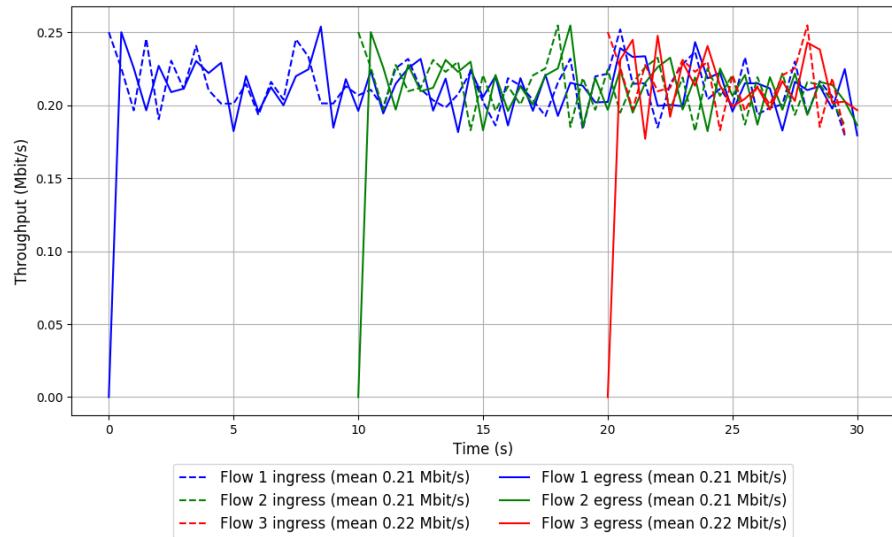


Run 1: Statistics of SCReAM

```
Start at: 2019-04-24 00:16:49
End at: 2019-04-24 00:17:19
Local clock offset: 0.181 ms
Remote clock offset: 5.656 ms

# Below is generated by plot.py at 2019-04-24 02:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 7.965 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 7.973 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 7.927 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 7.970 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

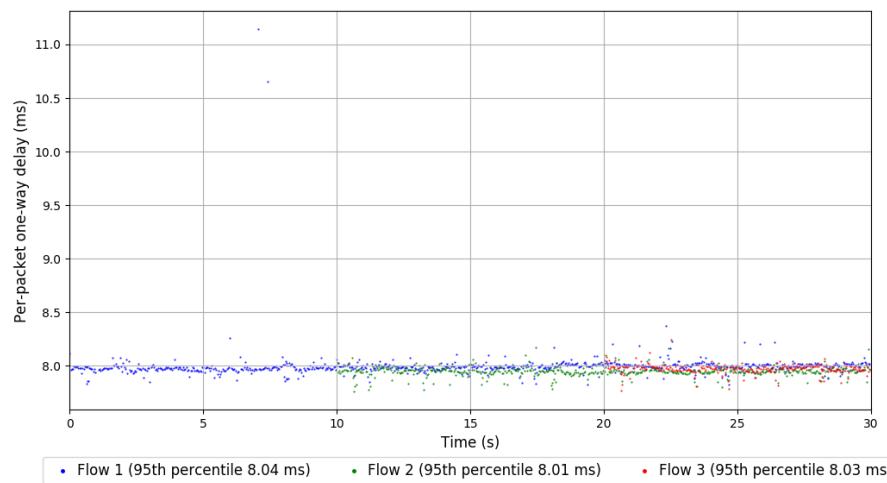
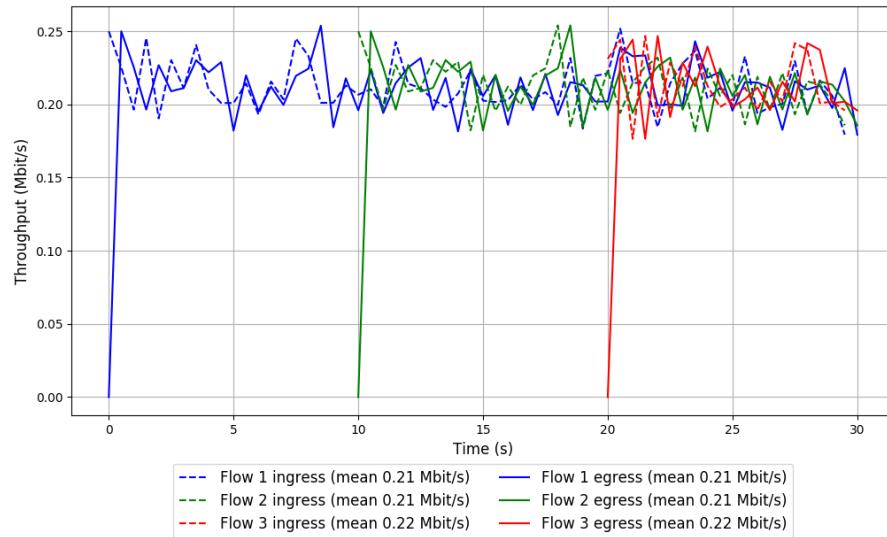


Run 2: Statistics of SCReAM

```
Start at: 2019-04-24 00:41:27
End at: 2019-04-24 00:41:57
Local clock offset: 0.45 ms
Remote clock offset: 4.31 ms

# Below is generated by plot.py at 2019-04-24 02:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 8.035 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 8.045 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 8.013 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 8.027 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

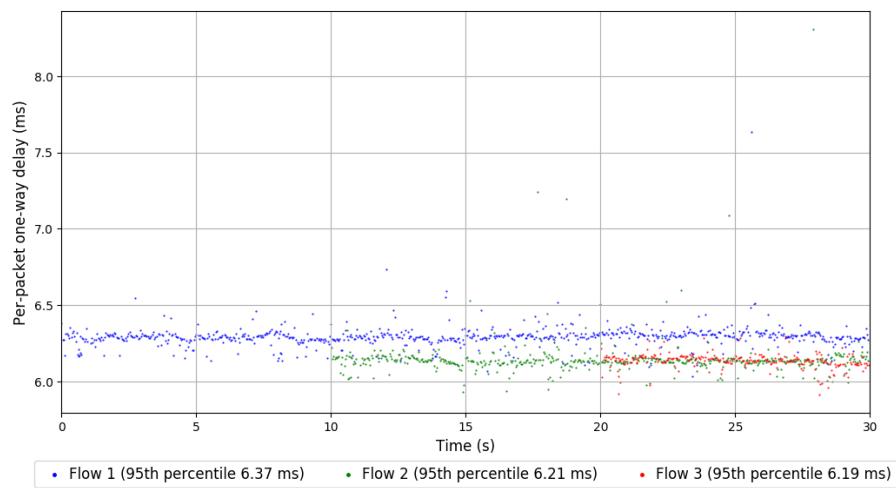
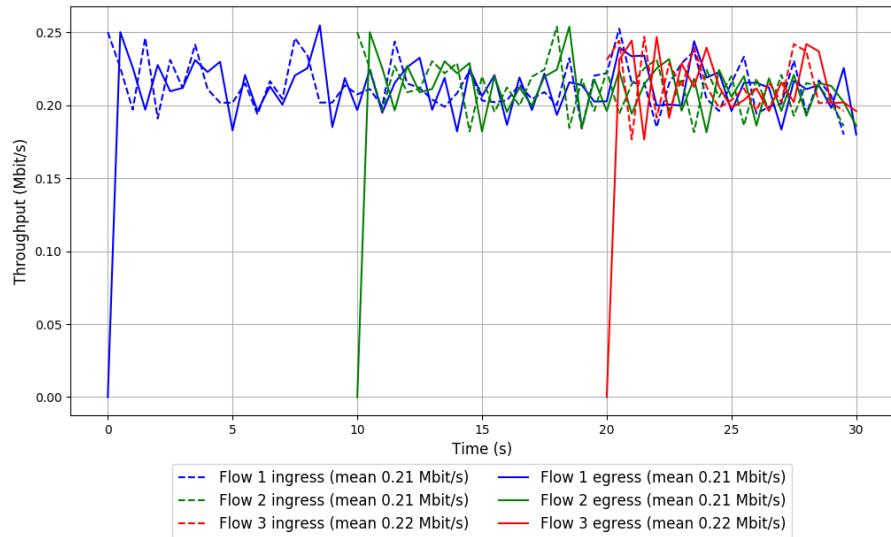


Run 3: Statistics of SCReAM

```
Start at: 2019-04-24 01:06:08
End at: 2019-04-24 01:06:38
Local clock offset: 1.539 ms
Remote clock offset: 1.692 ms

# Below is generated by plot.py at 2019-04-24 02:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 6.343 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 6.372 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 6.213 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 6.194 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

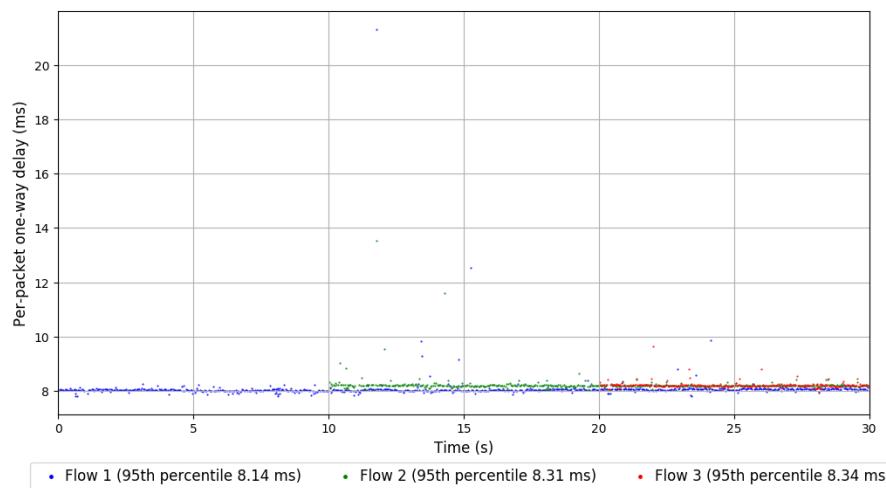
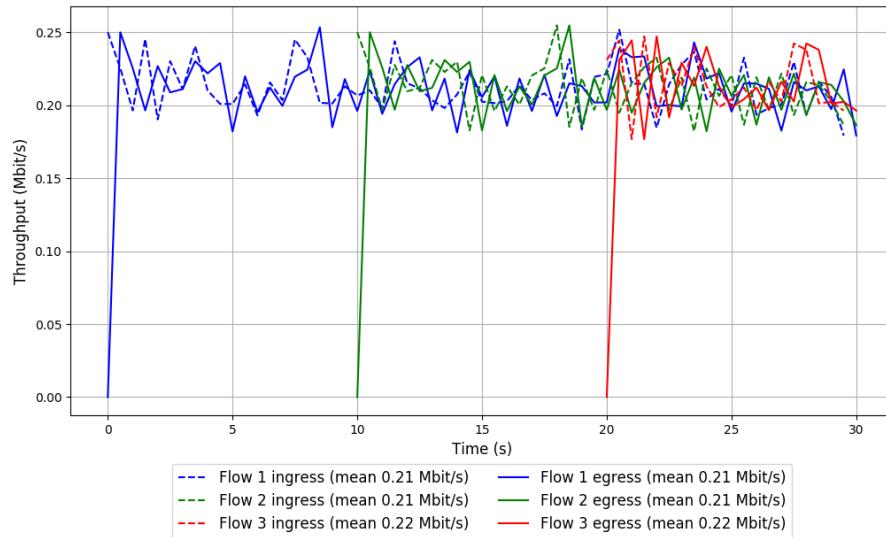


Run 4: Statistics of SCReAM

```
Start at: 2019-04-24 01:30:50
End at: 2019-04-24 01:31:20
Local clock offset: -0.239 ms
Remote clock offset: 2.097 ms

# Below is generated by plot.py at 2019-04-24 02:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 8.262 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 8.145 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 8.315 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 8.344 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

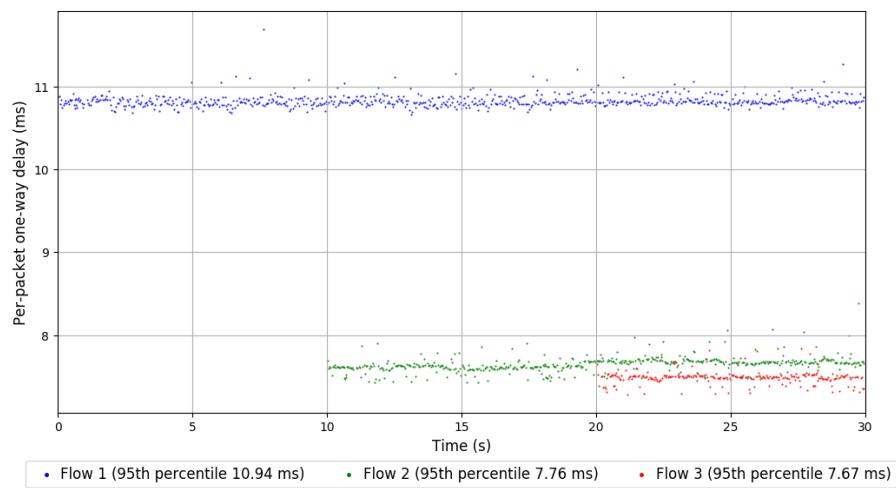
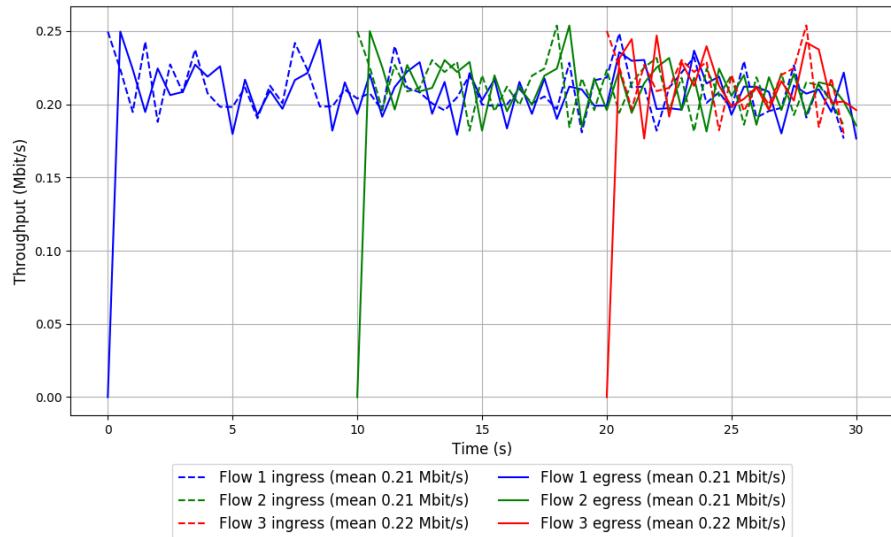


Run 5: Statistics of SCReAM

```
Start at: 2019-04-24 01:55:53
End at: 2019-04-24 01:56:23
Local clock offset: -0.376 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2019-04-24 02:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 10.908 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 10.940 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 7.764 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 7.665 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

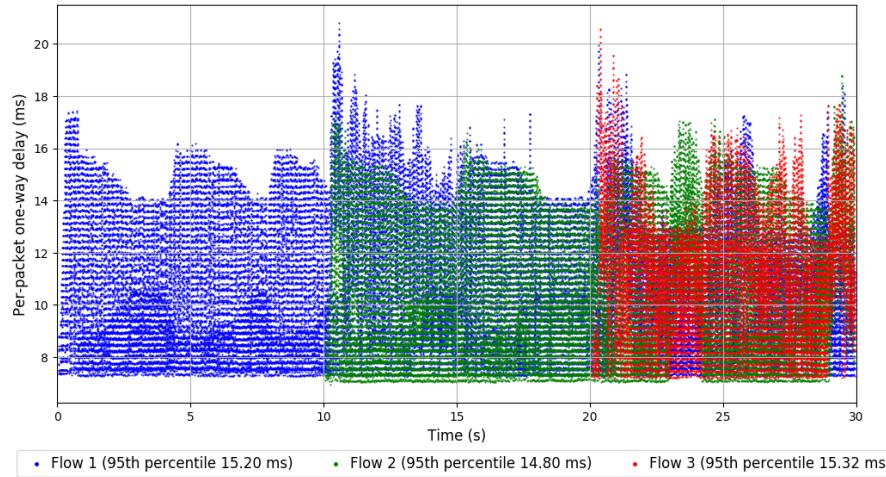
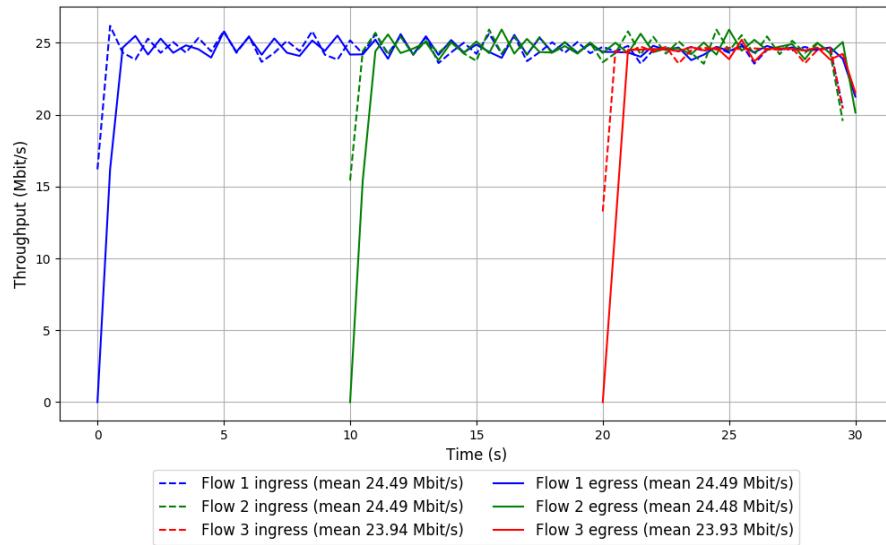


Run 1: Statistics of Sprout

```
Start at: 2019-04-24 00:28:35
End at: 2019-04-24 00:29:05
Local clock offset: 0.051 ms
Remote clock offset: 3.987 ms

# Below is generated by plot.py at 2019-04-24 02:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.68 Mbit/s
95th percentile per-packet one-way delay: 15.036 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.49 Mbit/s
95th percentile per-packet one-way delay: 15.197 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.48 Mbit/s
95th percentile per-packet one-way delay: 14.798 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.93 Mbit/s
95th percentile per-packet one-way delay: 15.323 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

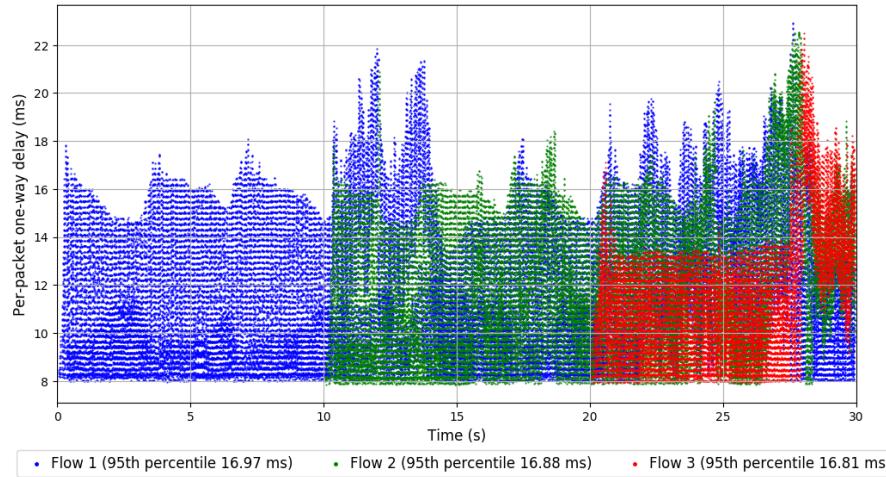
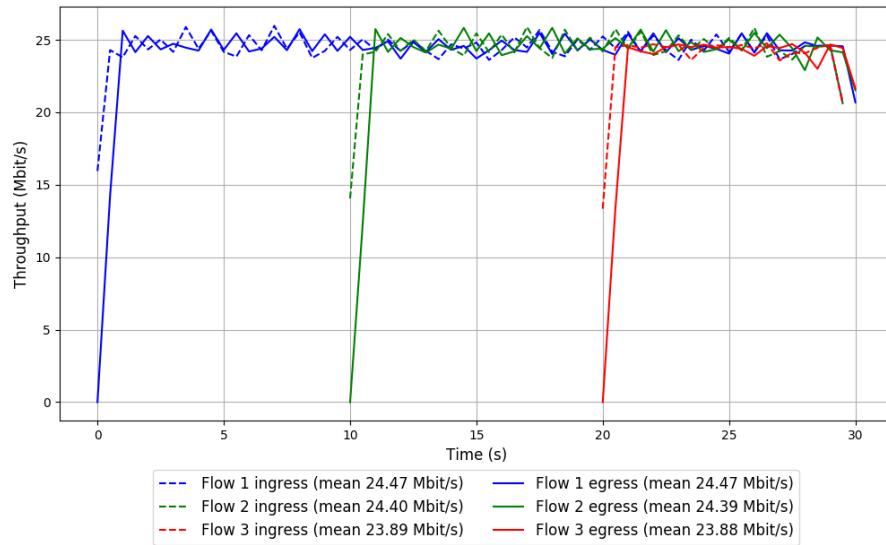


Run 2: Statistics of Sprout

```
Start at: 2019-04-24 00:53:16
End at: 2019-04-24 00:53:46
Local clock offset: 0.436 ms
Remote clock offset: 3.122 ms

# Below is generated by plot.py at 2019-04-24 02:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.60 Mbit/s
95th percentile per-packet one-way delay: 16.920 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.47 Mbit/s
95th percentile per-packet one-way delay: 16.971 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 16.877 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.88 Mbit/s
95th percentile per-packet one-way delay: 16.813 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

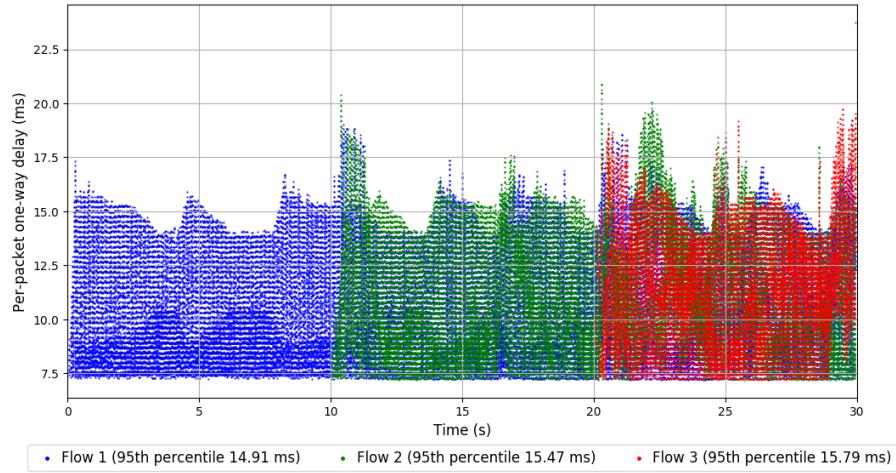
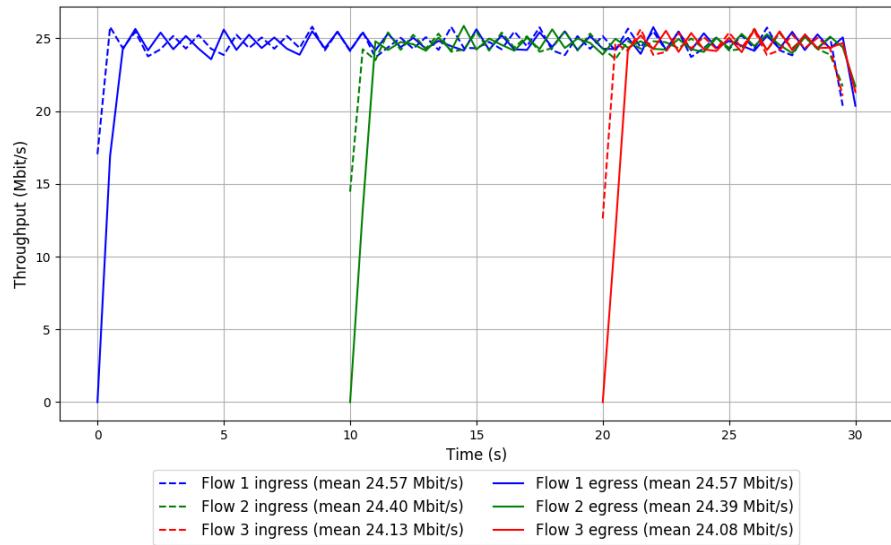


Run 3: Statistics of Sprout

```
Start at: 2019-04-24 01:17:52
End at: 2019-04-24 01:18:22
Local clock offset: 1.411 ms
Remote clock offset: 2.759 ms

# Below is generated by plot.py at 2019-04-24 02:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.75 Mbit/s
95th percentile per-packet one-way delay: 15.201 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.57 Mbit/s
95th percentile per-packet one-way delay: 14.912 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 15.468 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.08 Mbit/s
95th percentile per-packet one-way delay: 15.790 ms
Loss rate: 0.01%
```

Run 3: Report of Sprout — Data Link

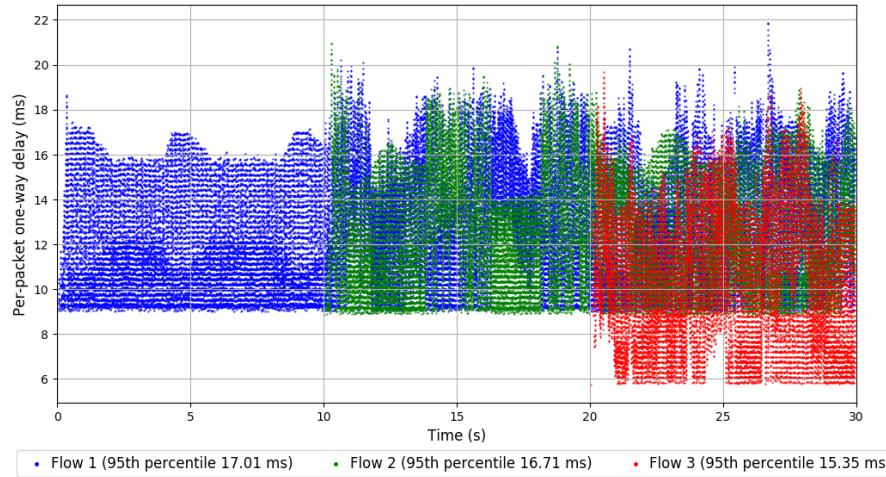
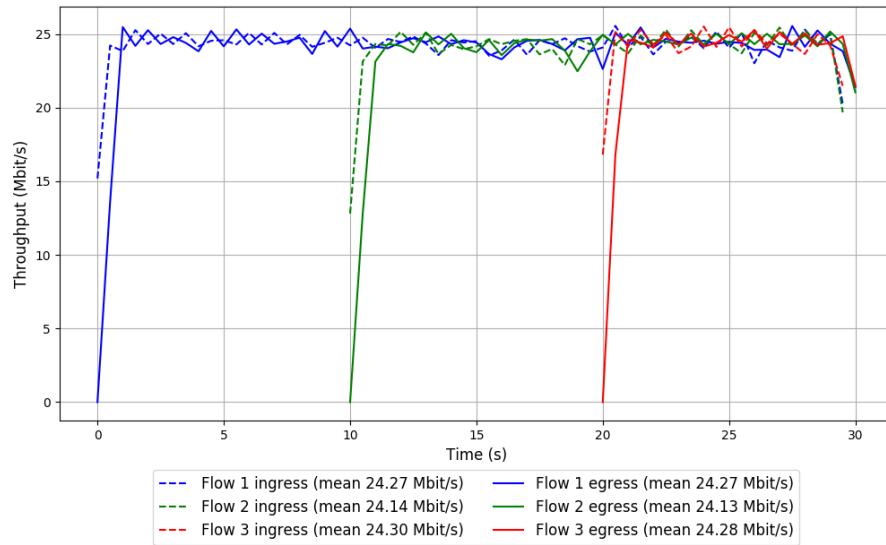


Run 4: Statistics of Sprout

```
Start at: 2019-04-24 01:42:45
End at: 2019-04-24 01:43:15
Local clock offset: -0.559 ms
Remote clock offset: -0.945 ms

# Below is generated by plot.py at 2019-04-24 02:25:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.35 Mbit/s
95th percentile per-packet one-way delay: 16.772 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.27 Mbit/s
95th percentile per-packet one-way delay: 17.011 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.13 Mbit/s
95th percentile per-packet one-way delay: 16.714 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.28 Mbit/s
95th percentile per-packet one-way delay: 15.346 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

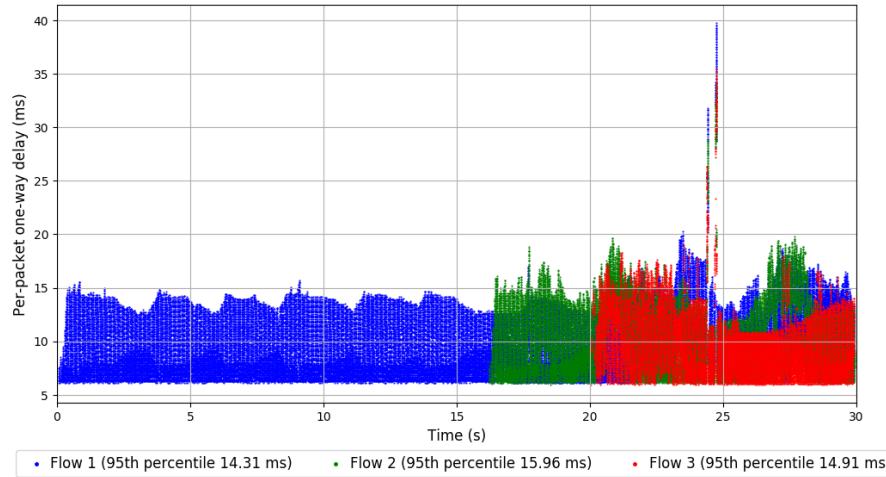
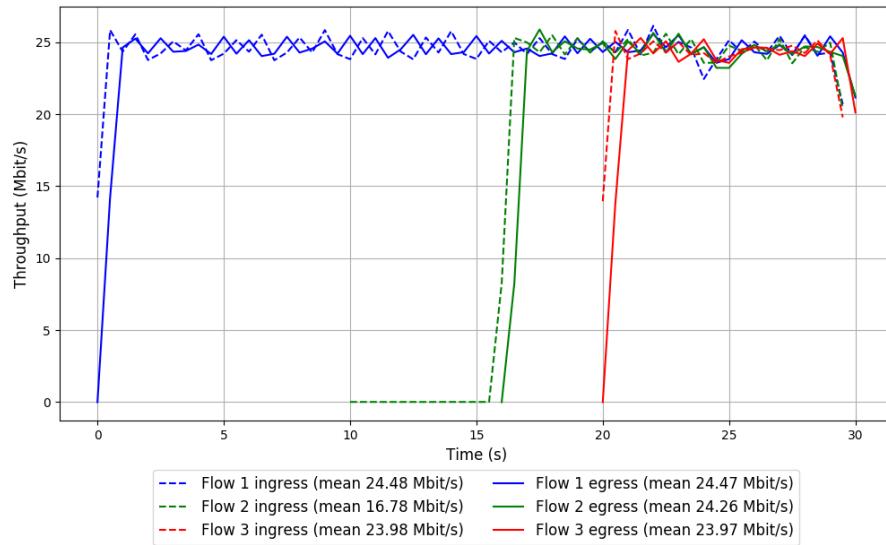


Run 5: Statistics of Sprout

```
Start at: 2019-04-24 02:07:45
End at: 2019-04-24 02:08:15
Local clock offset: 0.391 ms
Remote clock offset: -1.231 ms

# Below is generated by plot.py at 2019-04-24 02:25:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.53 Mbit/s
95th percentile per-packet one-way delay: 14.920 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 24.47 Mbit/s
95th percentile per-packet one-way delay: 14.313 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.26 Mbit/s
95th percentile per-packet one-way delay: 15.957 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 23.97 Mbit/s
95th percentile per-packet one-way delay: 14.911 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

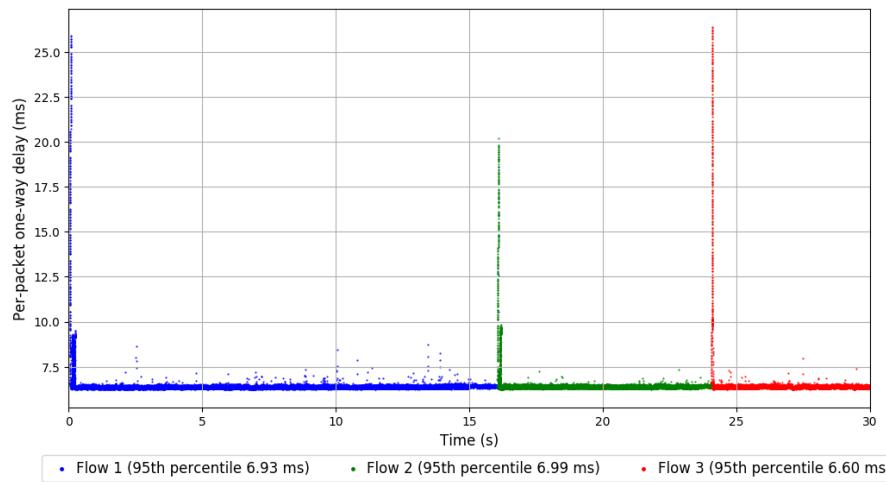
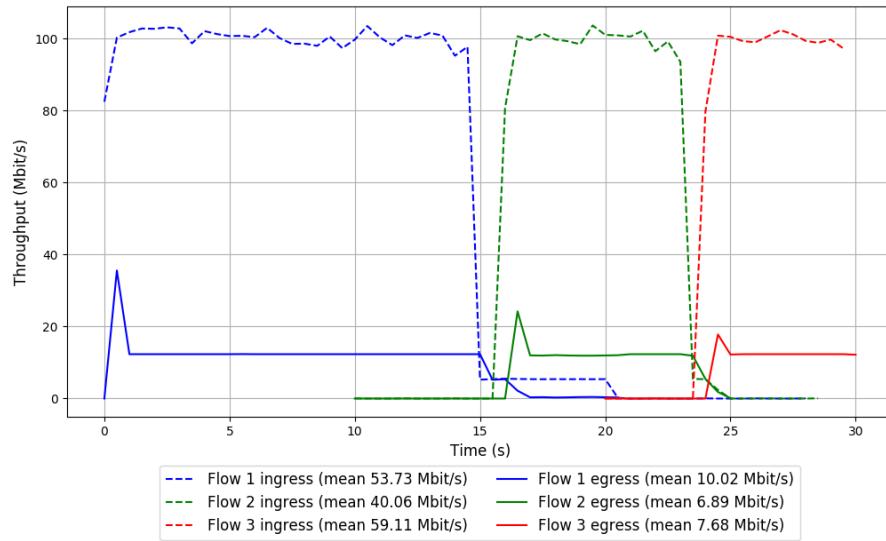


Run 1: Statistics of TaoVA-100x

```
Start at: 2019-04-24 00:34:25
End at: 2019-04-24 00:34:55
Local clock offset: -3.682 ms
Remote clock offset: -0.992 ms

# Below is generated by plot.py at 2019-04-24 02:25:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 6.886 ms
Loss rate: 86.68%
-- Flow 1:
Average throughput: 10.02 Mbit/s
95th percentile per-packet one-way delay: 6.926 ms
Loss rate: 86.62%
-- Flow 2:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 6.987 ms
Loss rate: 86.53%
-- Flow 3:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: 6.597 ms
Loss rate: 87.01%
```

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

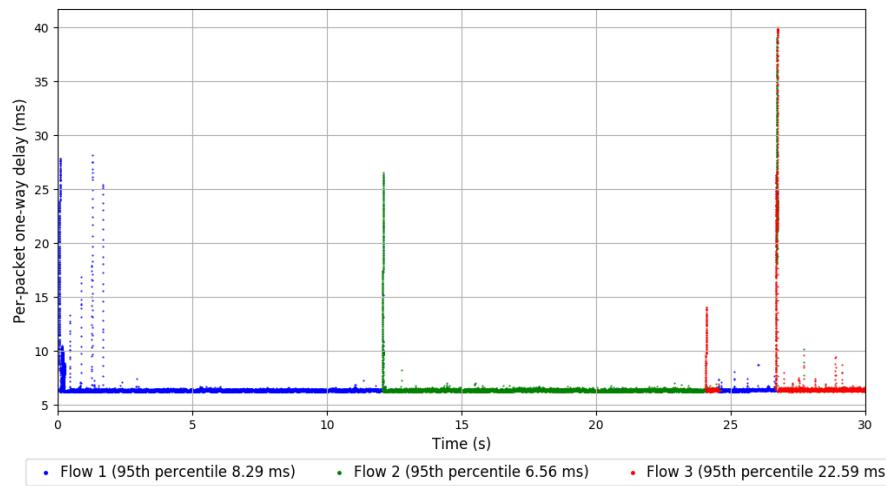
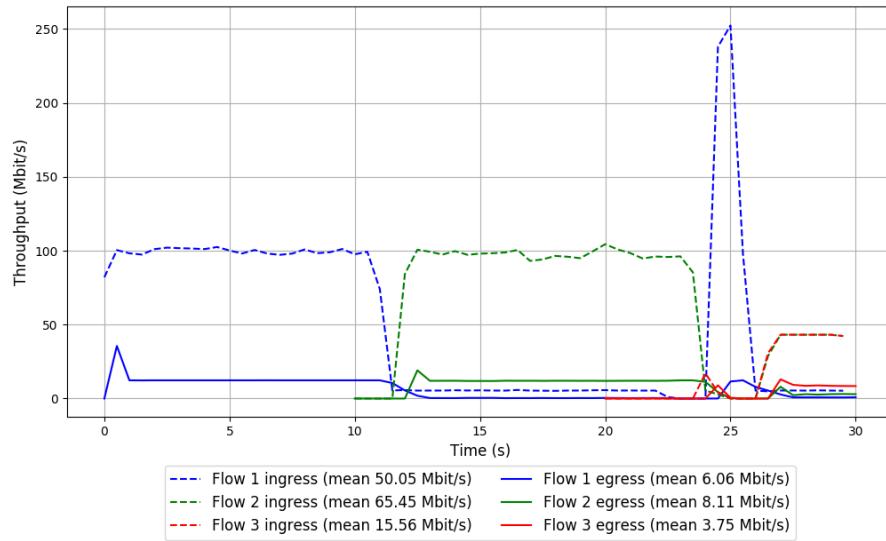


Run 2: Statistics of TaoVA-100x

```
Start at: 2019-04-24 00:59:04
End at: 2019-04-24 00:59:34
Local clock offset: 1.795 ms
Remote clock offset: 2.344 ms

# Below is generated by plot.py at 2019-04-24 02:25:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 8.791 ms
Loss rate: 87.14%
-- Flow 1:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 8.293 ms
Loss rate: 87.89%
-- Flow 2:
Average throughput: 8.11 Mbit/s
95th percentile per-packet one-way delay: 6.562 ms
Loss rate: 87.60%
-- Flow 3:
Average throughput: 3.75 Mbit/s
95th percentile per-packet one-way delay: 22.595 ms
Loss rate: 75.90%
```

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

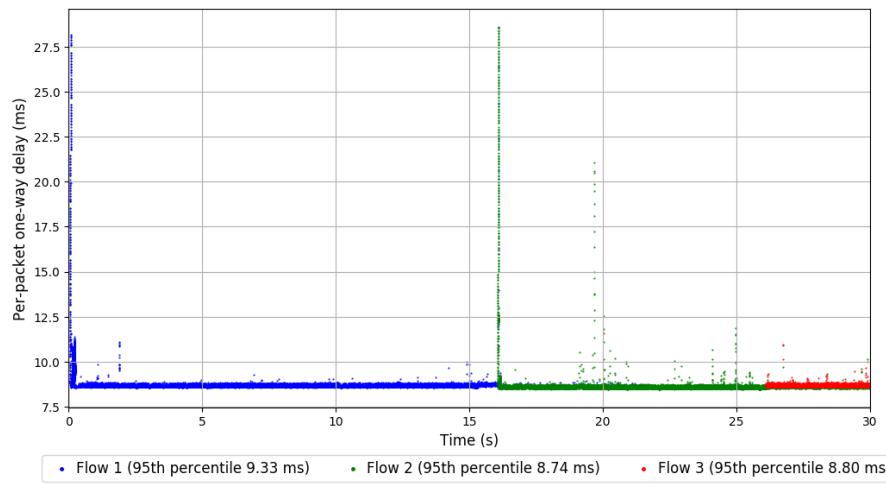
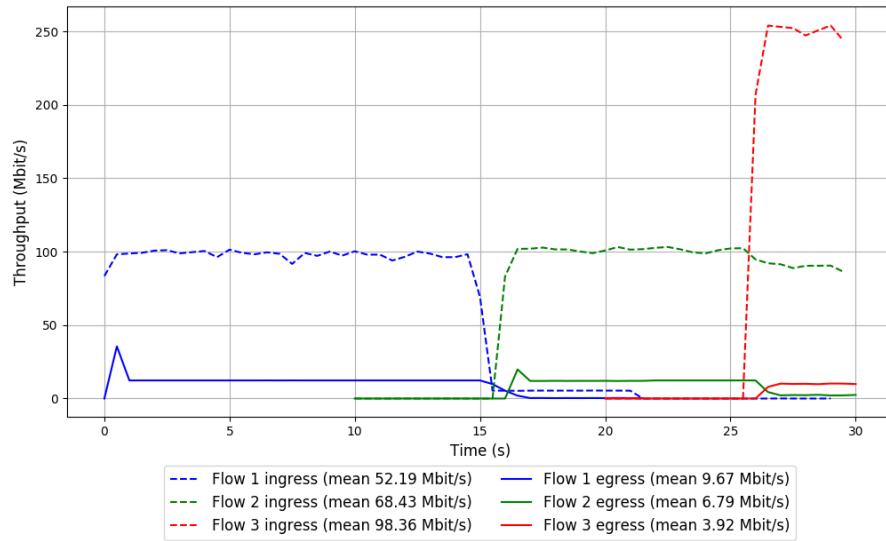


Run 3: Statistics of TaoVA-100x

```
Start at: 2019-04-24 01:23:41
End at: 2019-04-24 01:24:11
Local clock offset: -0.268 ms
Remote clock offset: 2.625 ms

# Below is generated by plot.py at 2019-04-24 02:26:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 8.859 ms
Loss rate: 90.18%
-- Flow 1:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 9.327 ms
Loss rate: 86.53%
-- Flow 2:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 8.739 ms
Loss rate: 90.08%
-- Flow 3:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 8.798 ms
Loss rate: 96.02%
```

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

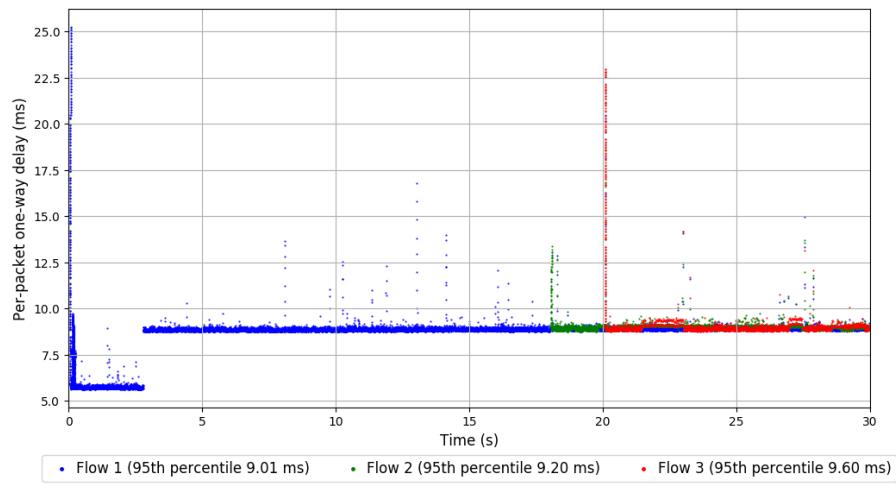
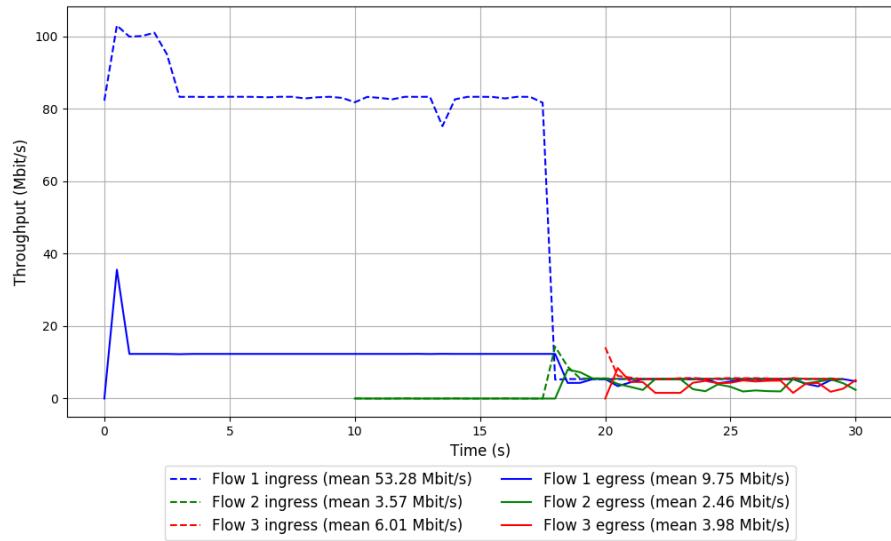


Run 4: Statistics of TaoVA-100x

```
Start at: 2019-04-24 01:48:47
End at: 2019-04-24 01:49:17
Local clock offset: -4.35 ms
Remote clock offset: -5.268 ms

# Below is generated by plot.py at 2019-04-24 02:26:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 9.098 ms
Loss rate: 77.95%
-- Flow 1:
Average throughput: 9.75 Mbit/s
95th percentile per-packet one-way delay: 9.012 ms
Loss rate: 81.70%
-- Flow 2:
Average throughput: 2.46 Mbit/s
95th percentile per-packet one-way delay: 9.195 ms
Loss rate: 31.17%
-- Flow 3:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 9.602 ms
Loss rate: 33.77%
```

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

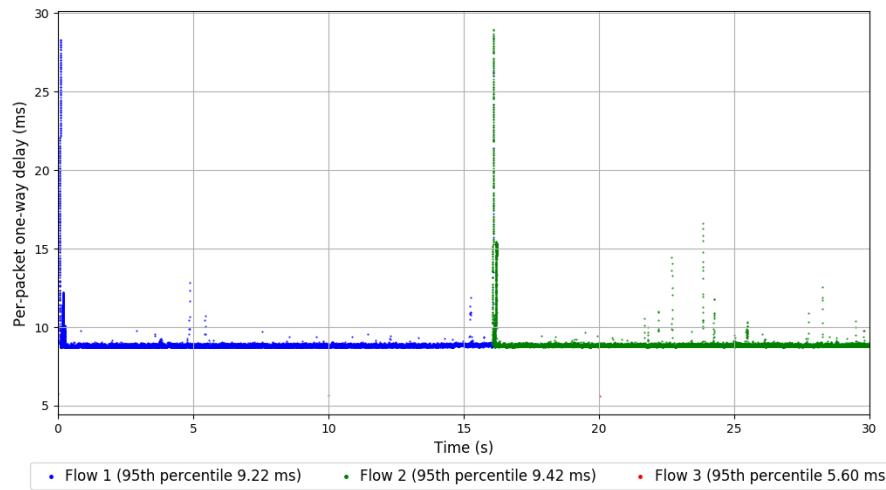
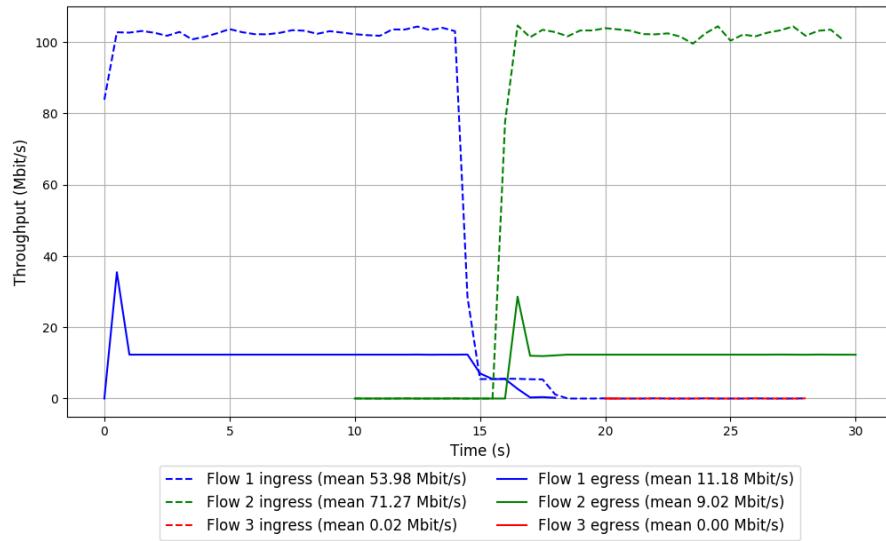


Run 5: Statistics of TaoVA-100x

```
Start at: 2019-04-24 02:13:33
End at: 2019-04-24 02:14:03
Local clock offset: -0.113 ms
Remote clock offset: -2.695 ms

# Below is generated by plot.py at 2019-04-24 02:26:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 9.310 ms
Loss rate: 87.01%
-- Flow 1:
Average throughput: 11.18 Mbit/s
95th percentile per-packet one-way delay: 9.222 ms
Loss rate: 86.70%
-- Flow 2:
Average throughput: 9.02 Mbit/s
95th percentile per-packet one-way delay: 9.420 ms
Loss rate: 87.35%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5.597 ms
Loss rate: 99.16%
```

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

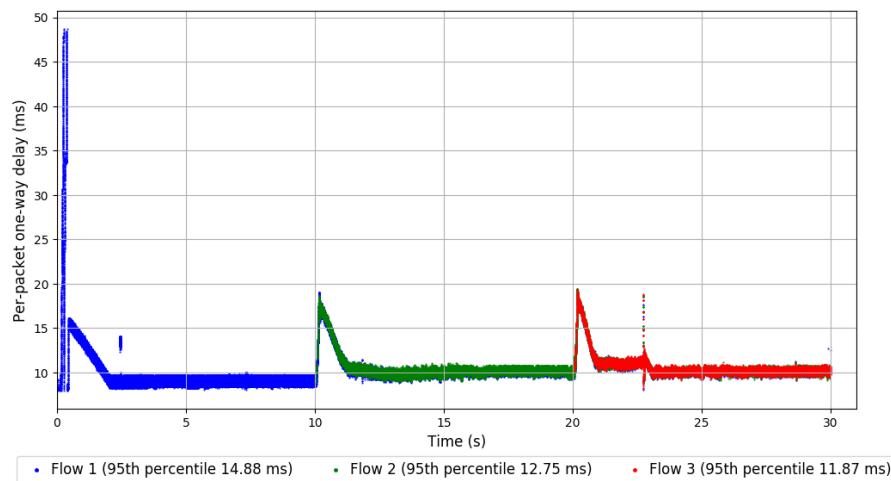
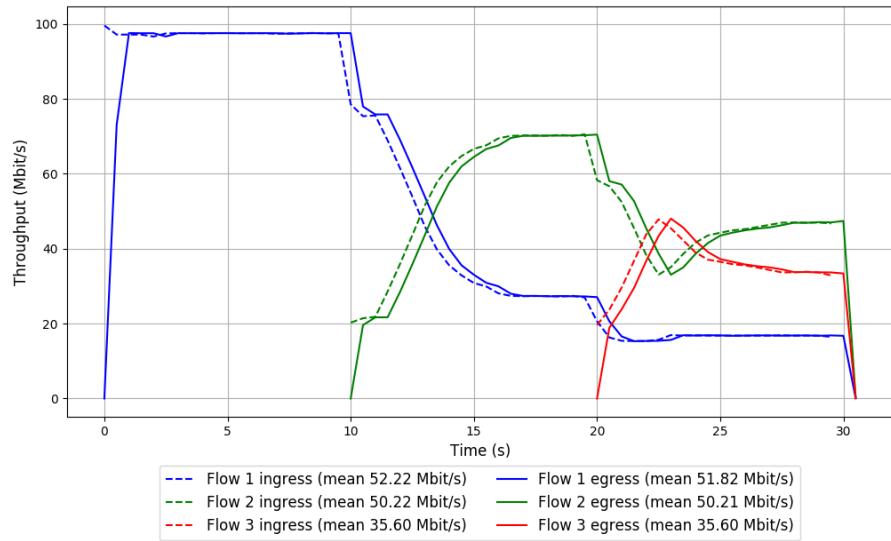


Run 1: Statistics of TCP Vegas

```
Start at: 2019-04-24 00:33:14
End at: 2019-04-24 00:33:44
Local clock offset: 0.47 ms
Remote clock offset: 5.086 ms

# Below is generated by plot.py at 2019-04-24 02:26:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.11 Mbit/s
95th percentile per-packet one-way delay: 14.368 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 51.82 Mbit/s
95th percentile per-packet one-way delay: 14.878 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 50.21 Mbit/s
95th percentile per-packet one-way delay: 12.751 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.60 Mbit/s
95th percentile per-packet one-way delay: 11.872 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

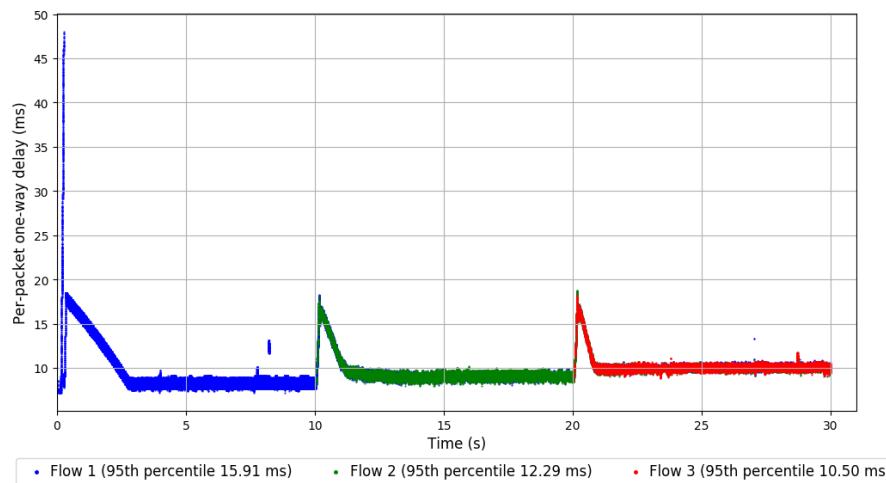
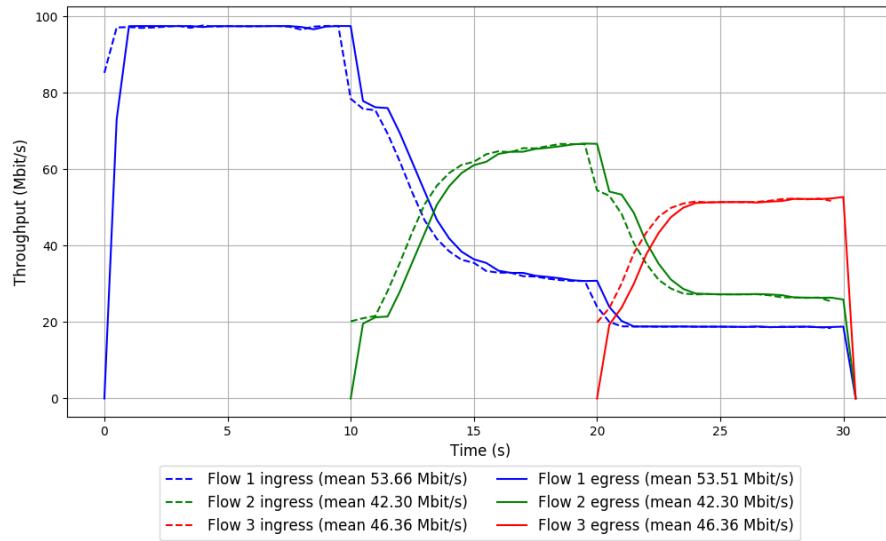


Run 2: Statistics of TCP Vegas

```
Start at: 2019-04-24 00:57:53
End at: 2019-04-24 00:58:23
Local clock offset: 1.568 ms
Remote clock offset: 3.131 ms

# Below is generated by plot.py at 2019-04-24 02:26:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.11 Mbit/s
95th percentile per-packet one-way delay: 14.986 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 53.51 Mbit/s
95th percentile per-packet one-way delay: 15.911 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 42.30 Mbit/s
95th percentile per-packet one-way delay: 12.287 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.36 Mbit/s
95th percentile per-packet one-way delay: 10.497 ms
Loss rate: 0.00%
```

Run 2: Report of TCP Vegas — Data Link

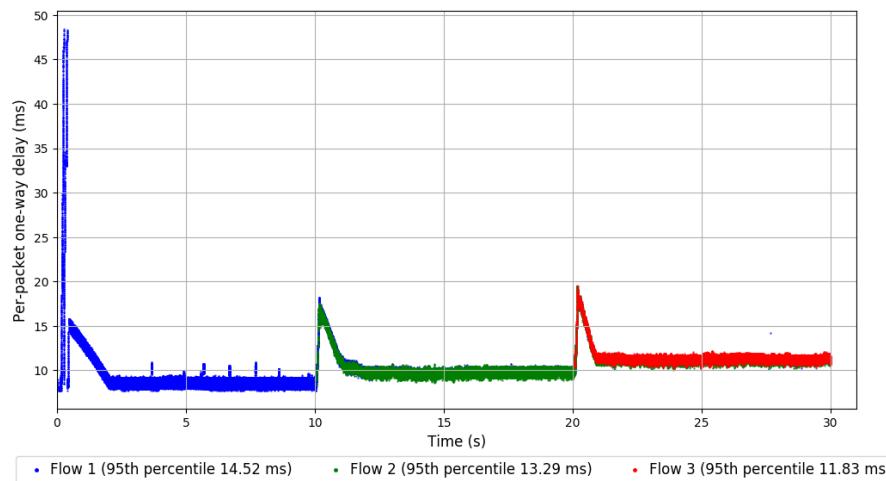
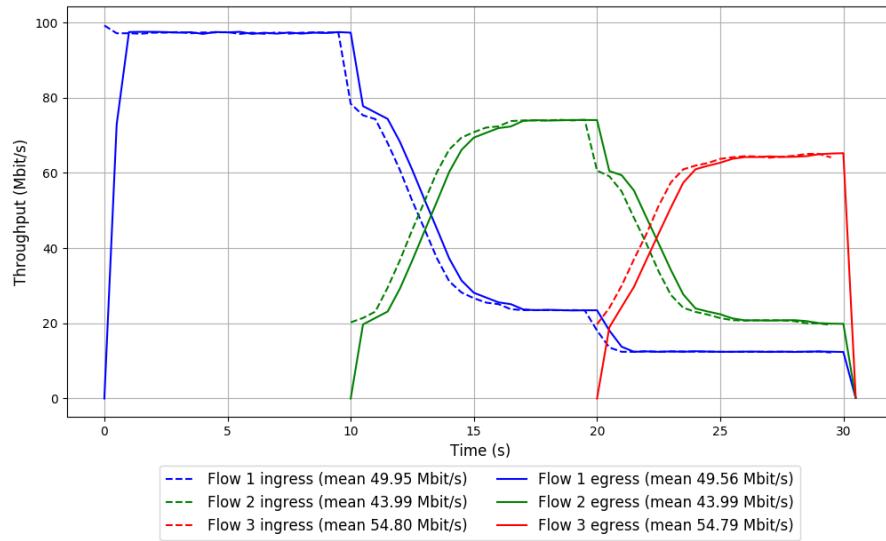


Run 3: Statistics of TCP Vegas

```
Start at: 2019-04-24 01:22:29
End at: 2019-04-24 01:22:59
Local clock offset: 0.772 ms
Remote clock offset: 2.76 ms

# Below is generated by plot.py at 2019-04-24 02:26:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.08 Mbit/s
95th percentile per-packet one-way delay: 13.893 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 49.56 Mbit/s
95th percentile per-packet one-way delay: 14.519 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 43.99 Mbit/s
95th percentile per-packet one-way delay: 13.286 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 54.79 Mbit/s
95th percentile per-packet one-way delay: 11.826 ms
Loss rate: 0.00%
```

Run 3: Report of TCP Vegas — Data Link

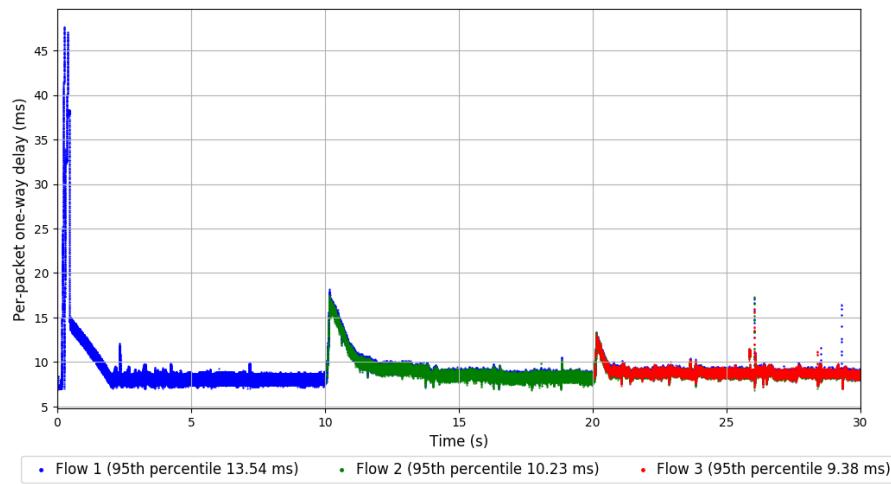
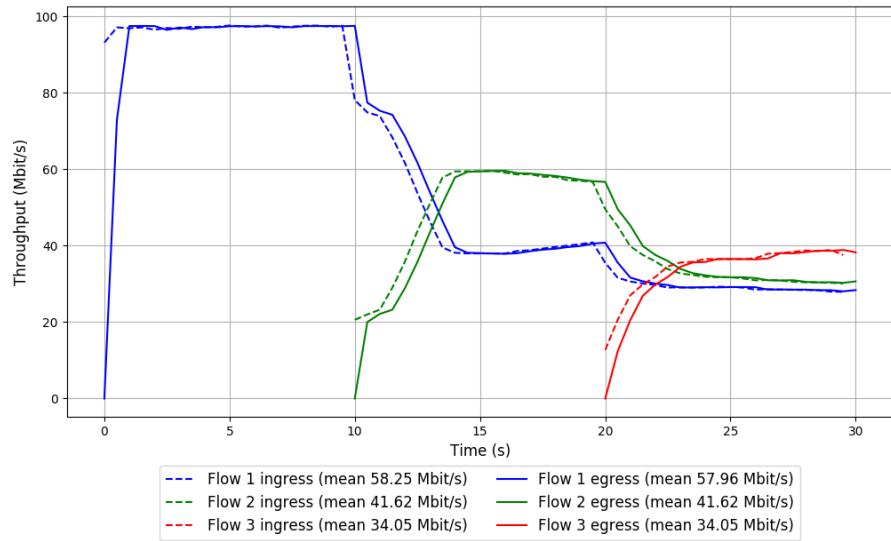


Run 4: Statistics of TCP Vegas

```
Start at: 2019-04-24 01:47:35
End at: 2019-04-24 01:48:05
Local clock offset: 0.531 ms
Remote clock offset: 0.998 ms

# Below is generated by plot.py at 2019-04-24 02:27:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.01 Mbit/s
95th percentile per-packet one-way delay: 12.400 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 57.96 Mbit/s
95th percentile per-packet one-way delay: 13.535 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 41.62 Mbit/s
95th percentile per-packet one-way delay: 10.234 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.05 Mbit/s
95th percentile per-packet one-way delay: 9.384 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link

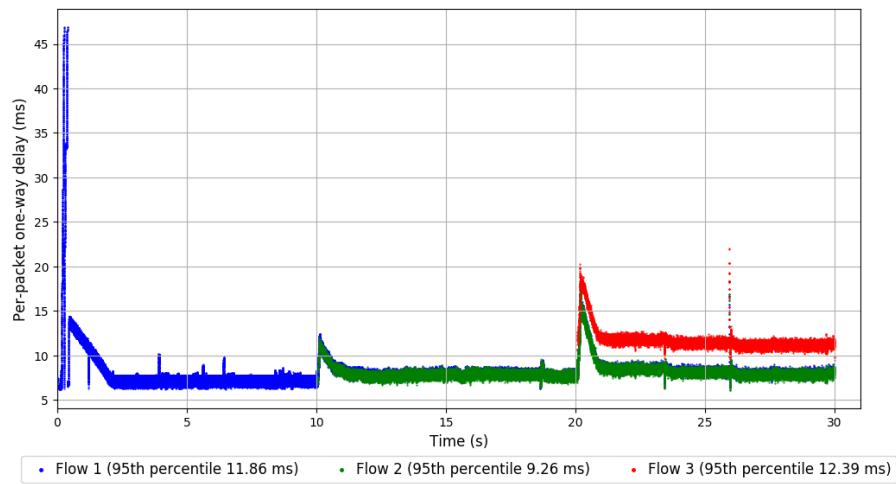
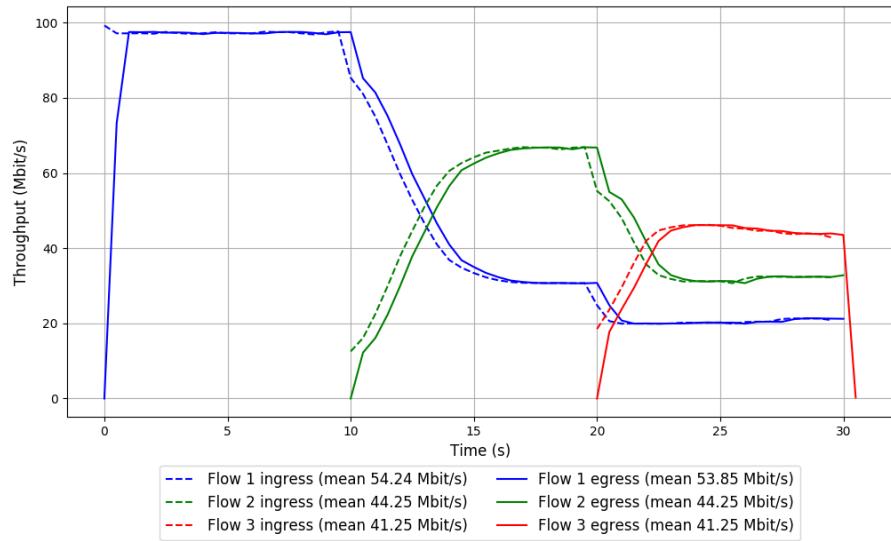


Run 5: Statistics of TCP Vegas

```
Start at: 2019-04-24 02:12:22
End at: 2019-04-24 02:12:52
Local clock offset: 0.183 ms
Remote clock offset: -1.704 ms

# Below is generated by plot.py at 2019-04-24 02:27:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.03 Mbit/s
95th percentile per-packet one-way delay: 11.962 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 53.85 Mbit/s
95th percentile per-packet one-way delay: 11.863 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 44.25 Mbit/s
95th percentile per-packet one-way delay: 9.257 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 41.25 Mbit/s
95th percentile per-packet one-way delay: 12.391 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Vegas — Data Link

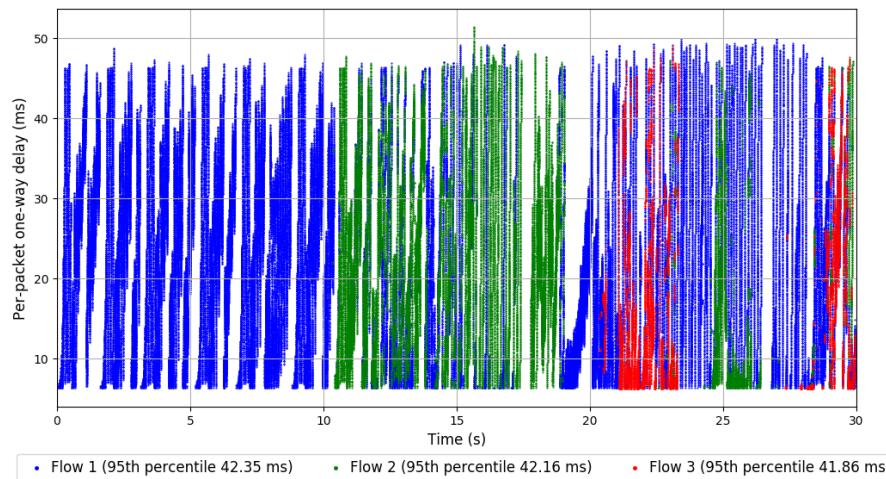
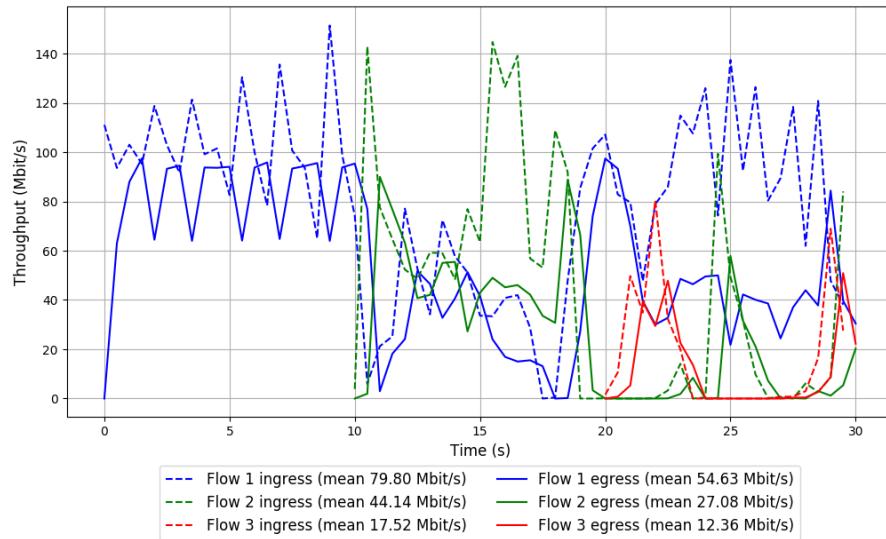


Run 1: Statistics of Verus

```
Start at: 2019-04-24 00:20:18
End at: 2019-04-24 00:20:48
Local clock offset: -0.207 ms
Remote clock offset: 3.529 ms

# Below is generated by plot.py at 2019-04-24 02:27:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.39 Mbit/s
95th percentile per-packet one-way delay: 42.292 ms
Loss rate: 33.24%
-- Flow 1:
Average throughput: 54.63 Mbit/s
95th percentile per-packet one-way delay: 42.348 ms
Loss rate: 31.53%
-- Flow 2:
Average throughput: 27.08 Mbit/s
95th percentile per-packet one-way delay: 42.164 ms
Loss rate: 38.71%
-- Flow 3:
Average throughput: 12.36 Mbit/s
95th percentile per-packet one-way delay: 41.863 ms
Loss rate: 29.61%
```

Run 1: Report of Verus — Data Link

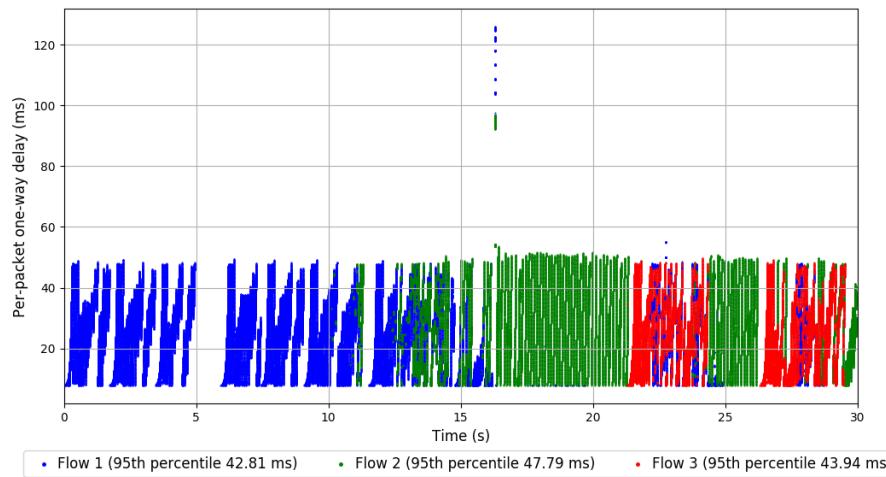
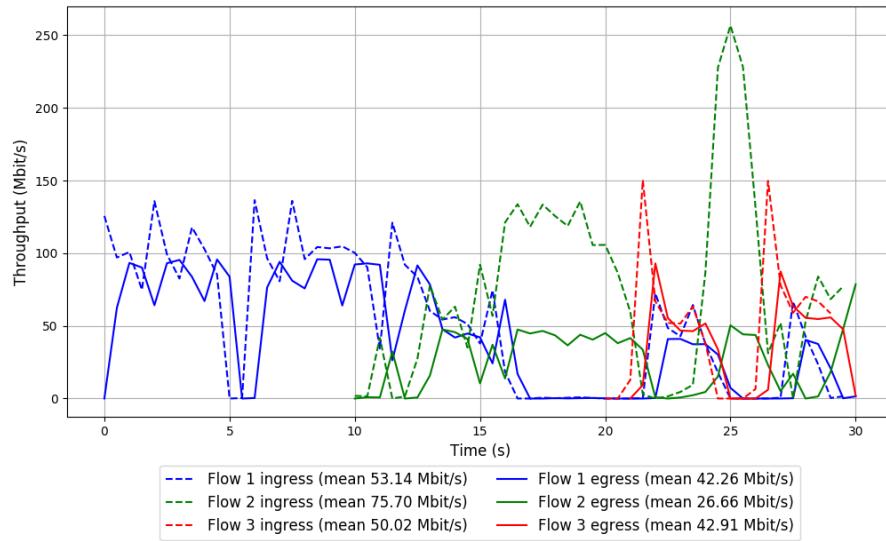


Run 2: Statistics of Verus

```
Start at: 2019-04-24 00:45:00
End at: 2019-04-24 00:45:30
Local clock offset: 0.249 ms
Remote clock offset: 3.85 ms

# Below is generated by plot.py at 2019-04-24 02:27:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.76 Mbit/s
95th percentile per-packet one-way delay: 44.677 ms
Loss rate: 39.57%
-- Flow 1:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 42.810 ms
Loss rate: 20.40%
-- Flow 2:
Average throughput: 26.66 Mbit/s
95th percentile per-packet one-way delay: 47.789 ms
Loss rate: 64.77%
-- Flow 3:
Average throughput: 42.91 Mbit/s
95th percentile per-packet one-way delay: 43.939 ms
Loss rate: 23.25%
```

Run 2: Report of Verus — Data Link

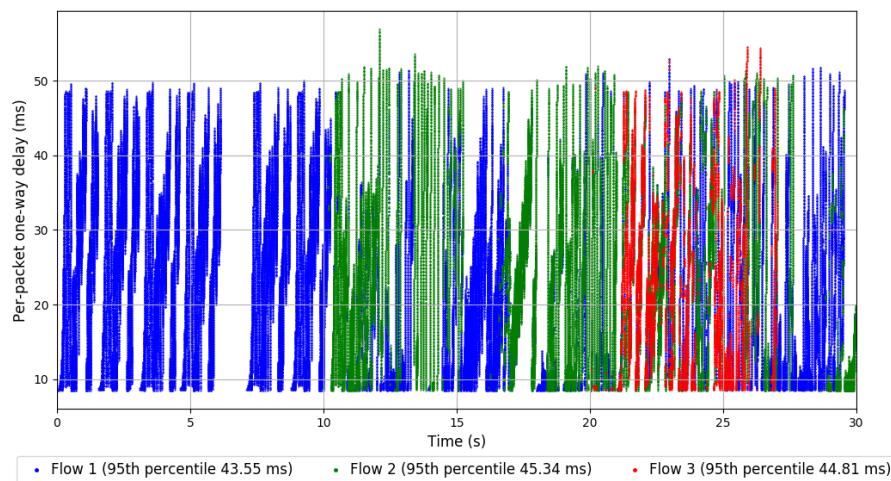
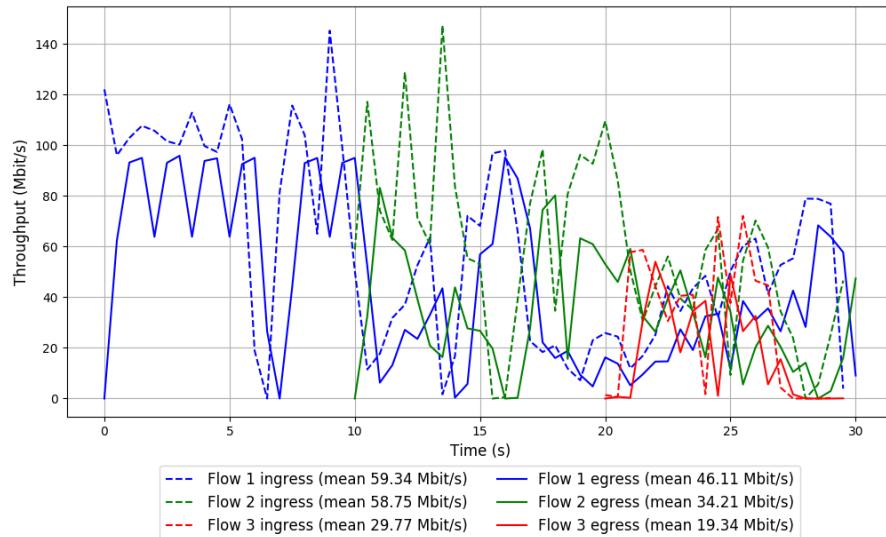


Run 3: Statistics of Verus

```
Start at: 2019-04-24 01:09:37
End at: 2019-04-24 01:10:07
Local clock offset: 0.63 ms
Remote clock offset: 3.074 ms

# Below is generated by plot.py at 2019-04-24 02:27:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.68 Mbit/s
95th percentile per-packet one-way delay: 44.220 ms
Loss rate: 30.61%
-- Flow 1:
Average throughput: 46.11 Mbit/s
95th percentile per-packet one-way delay: 43.553 ms
Loss rate: 22.26%
-- Flow 2:
Average throughput: 34.21 Mbit/s
95th percentile per-packet one-way delay: 45.338 ms
Loss rate: 41.83%
-- Flow 3:
Average throughput: 19.34 Mbit/s
95th percentile per-packet one-way delay: 44.814 ms
Loss rate: 36.83%
```

Run 3: Report of Verus — Data Link

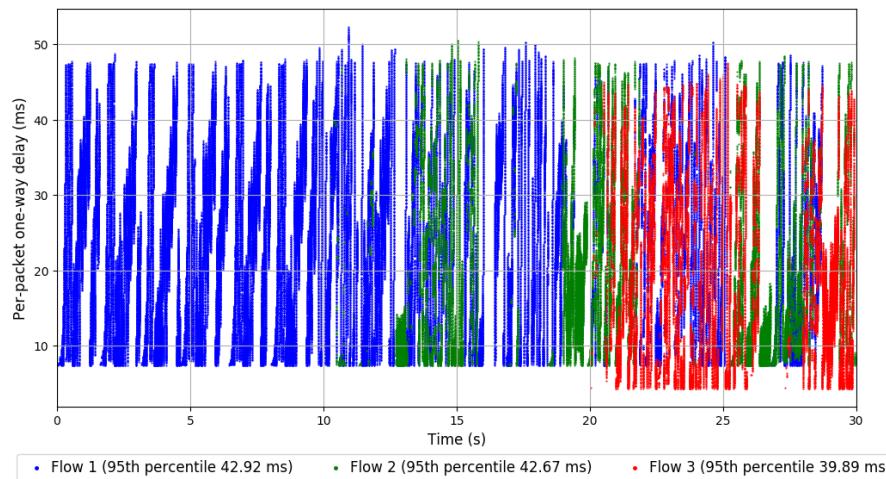
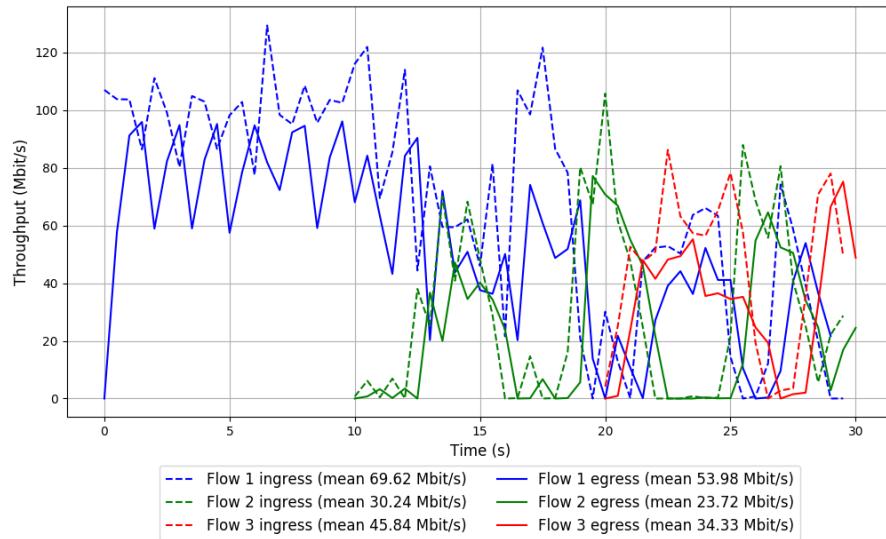


Run 4: Statistics of Verus

```
Start at: 2019-04-24 01:34:24
End at: 2019-04-24 01:34:54
Local clock offset: 0.423 ms
Remote clock offset: -1.097 ms

# Below is generated by plot.py at 2019-04-24 02:27:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.66 Mbit/s
95th percentile per-packet one-way delay: 42.465 ms
Loss rate: 24.34%
-- Flow 1:
Average throughput: 53.98 Mbit/s
95th percentile per-packet one-way delay: 42.919 ms
Loss rate: 25.00%
-- Flow 2:
Average throughput: 23.72 Mbit/s
95th percentile per-packet one-way delay: 42.671 ms
Loss rate: 21.67%
-- Flow 3:
Average throughput: 34.33 Mbit/s
95th percentile per-packet one-way delay: 39.891 ms
Loss rate: 24.83%
```

Run 4: Report of Verus — Data Link

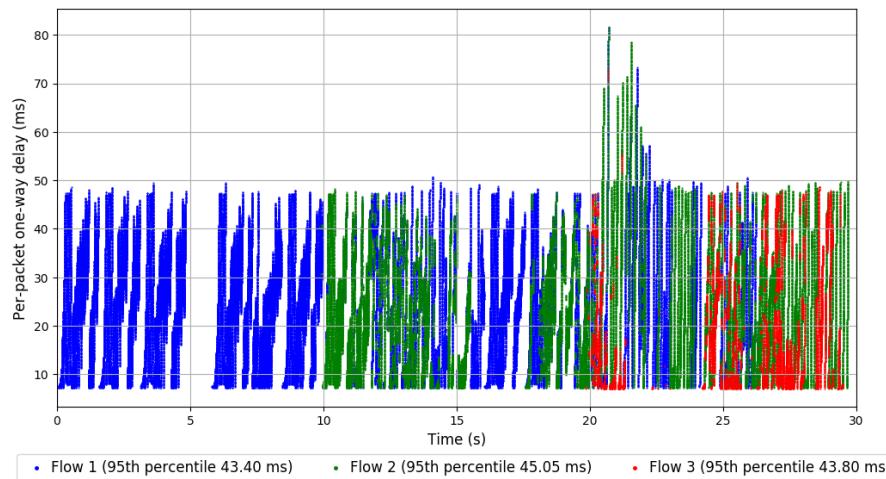
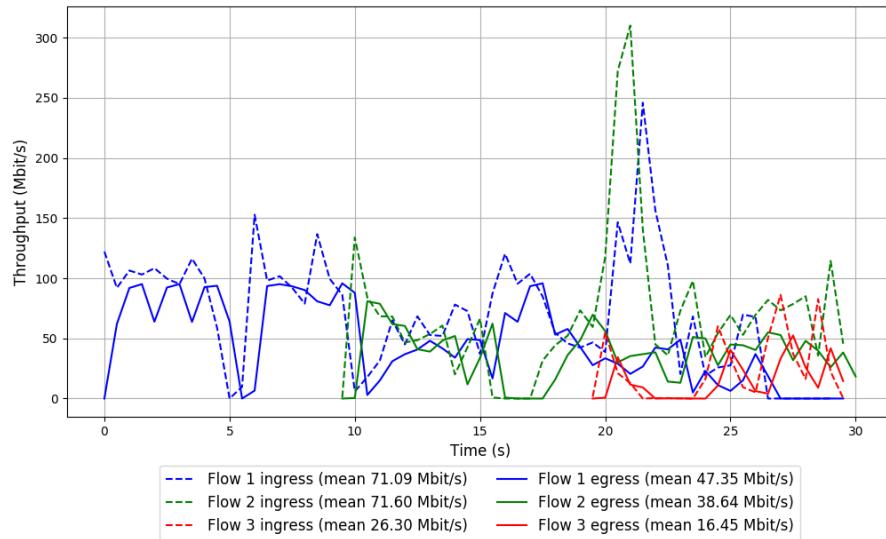


Run 5: Statistics of Verus

```
Start at: 2019-04-24 01:59:28
End at: 2019-04-24 01:59:58
Local clock offset: -0.119 ms
Remote clock offset: -0.19 ms

# Below is generated by plot.py at 2019-04-24 02:28:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.75 Mbit/s
95th percentile per-packet one-way delay: 43.922 ms
Loss rate: 38.70%
-- Flow 1:
Average throughput: 47.35 Mbit/s
95th percentile per-packet one-way delay: 43.403 ms
Loss rate: 33.80%
-- Flow 2:
Average throughput: 38.64 Mbit/s
95th percentile per-packet one-way delay: 45.055 ms
Loss rate: 46.08%
-- Flow 3:
Average throughput: 16.45 Mbit/s
95th percentile per-packet one-way delay: 43.802 ms
Loss rate: 37.71%
```

Run 5: Report of Verus — Data Link

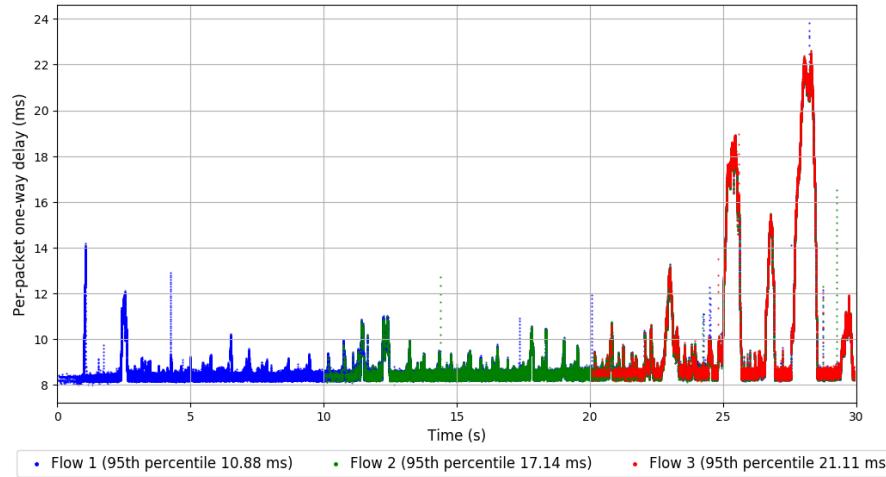
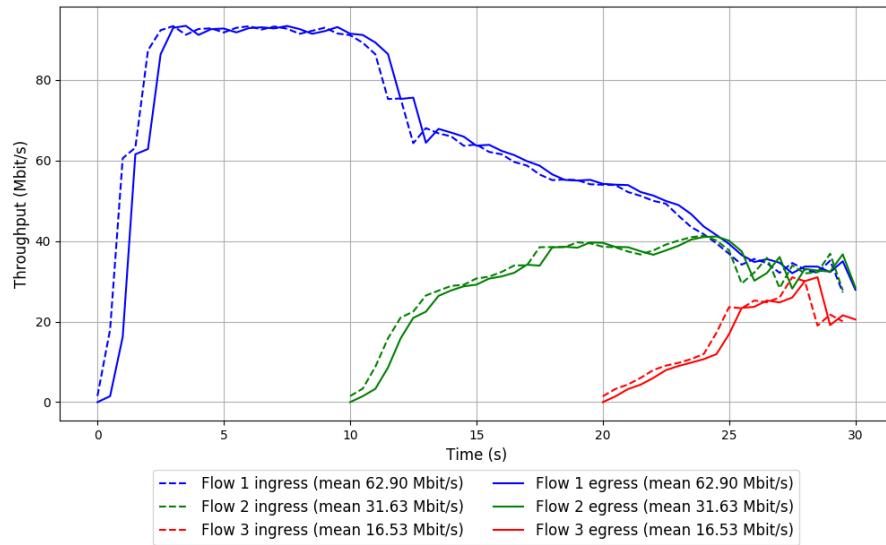


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2019-04-24 00:15:37
End at: 2019-04-24 00:16:07
Local clock offset: -0.506 ms
Remote clock offset: 5.571 ms

# Below is generated by plot.py at 2019-04-24 02:28:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.40 Mbit/s
95th percentile per-packet one-way delay: 14.716 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.90 Mbit/s
95th percentile per-packet one-way delay: 10.877 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 31.63 Mbit/s
95th percentile per-packet one-way delay: 17.138 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.53 Mbit/s
95th percentile per-packet one-way delay: 21.106 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

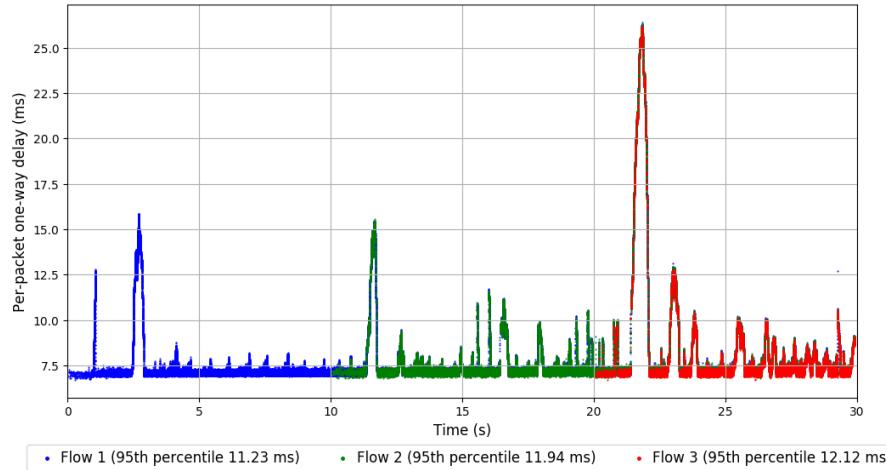
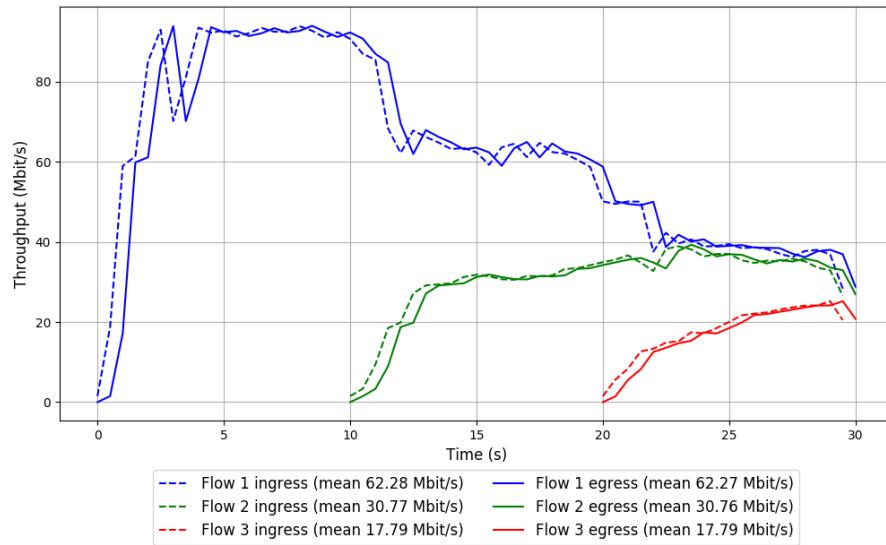


Run 2: Statistics of PCC-Vivace

```
Start at: 2019-04-24 00:40:14
End at: 2019-04-24 00:40:44
Local clock offset: 0.788 ms
Remote clock offset: 3.866 ms

# Below is generated by plot.py at 2019-04-24 02:28:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.61 Mbit/s
95th percentile per-packet one-way delay: 11.578 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.27 Mbit/s
95th percentile per-packet one-way delay: 11.228 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 30.76 Mbit/s
95th percentile per-packet one-way delay: 11.939 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.79 Mbit/s
95th percentile per-packet one-way delay: 12.118 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Vivace — Data Link

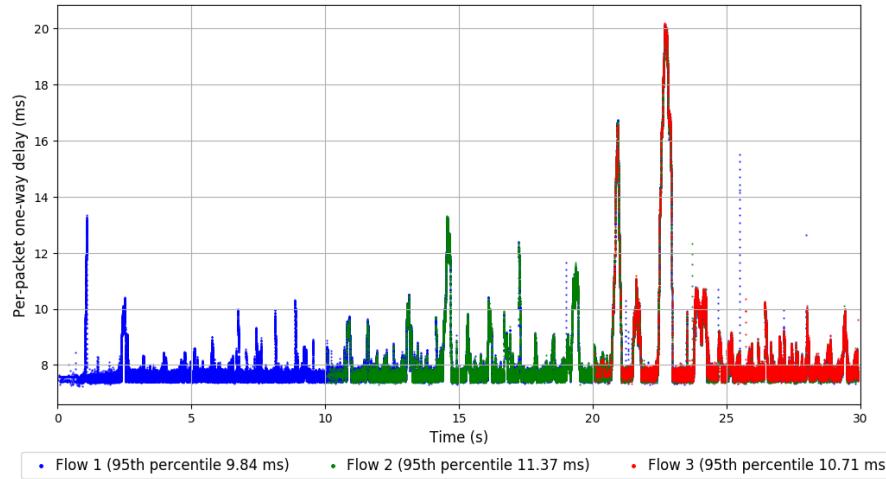
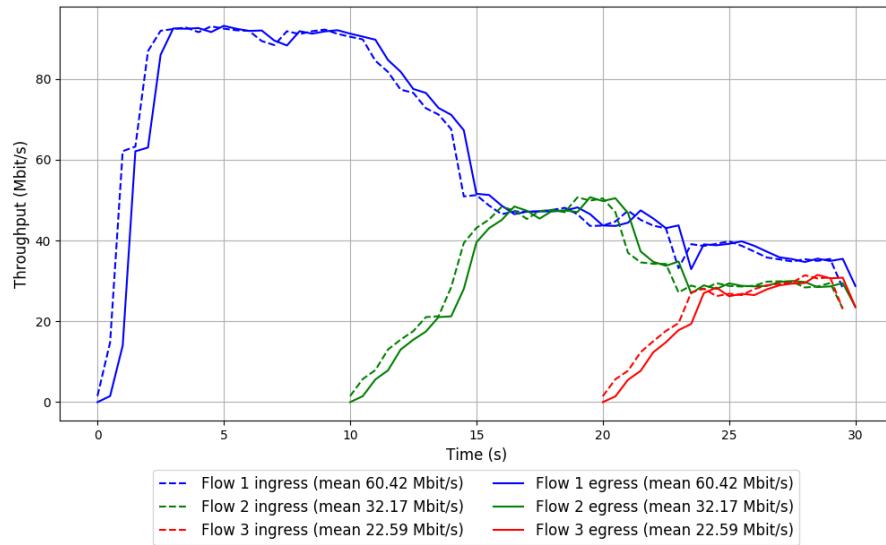


Run 3: Statistics of PCC-Vivace

```
Start at: 2019-04-24 01:04:54
End at: 2019-04-24 01:05:24
Local clock offset: 1.863 ms
Remote clock offset: 3.315 ms

# Below is generated by plot.py at 2019-04-24 02:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.27 Mbit/s
95th percentile per-packet one-way delay: 10.272 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.42 Mbit/s
95th percentile per-packet one-way delay: 9.840 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.17 Mbit/s
95th percentile per-packet one-way delay: 11.374 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 22.59 Mbit/s
95th percentile per-packet one-way delay: 10.714 ms
Loss rate: 0.00%
```

Run 3: Report of PCC-Vivace — Data Link

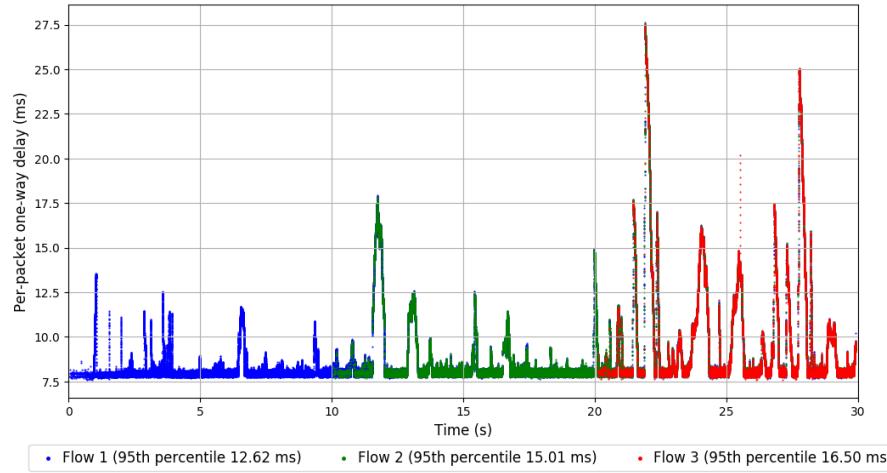
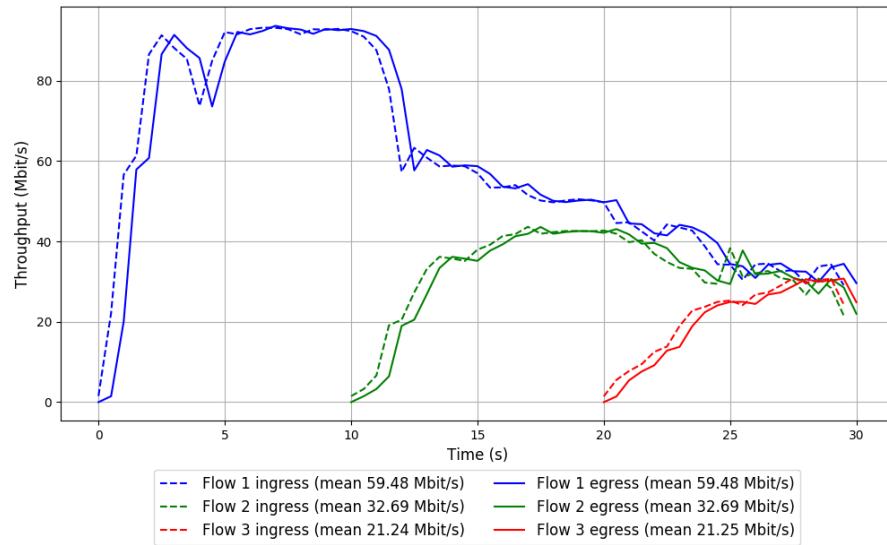


Run 4: Statistics of PCC-Vivace

```
Start at: 2019-04-24 01:29:37
End at: 2019-04-24 01:30:07
Local clock offset: -0.573 ms
Remote clock offset: 1.469 ms

# Below is generated by plot.py at 2019-04-24 02:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.23 Mbit/s
95th percentile per-packet one-way delay: 13.887 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.48 Mbit/s
95th percentile per-packet one-way delay: 12.617 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.69 Mbit/s
95th percentile per-packet one-way delay: 15.007 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.25 Mbit/s
95th percentile per-packet one-way delay: 16.497 ms
Loss rate: 0.00%
```

Run 4: Report of PCC-Vivace — Data Link

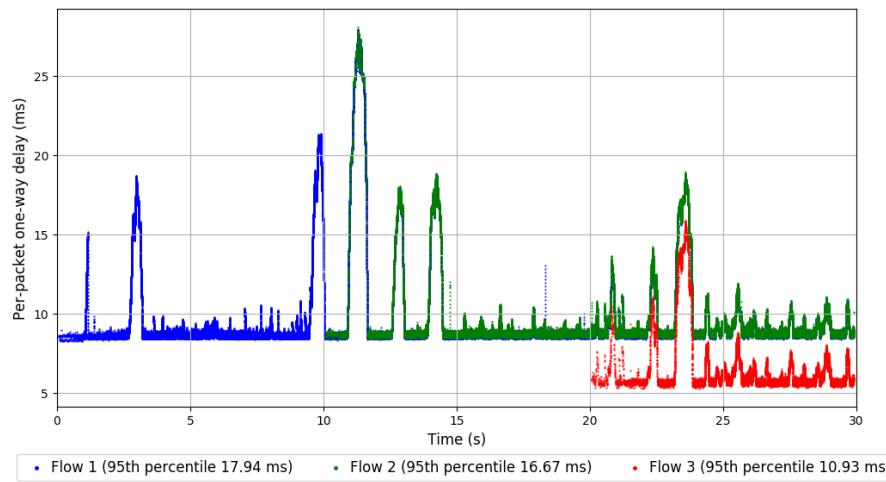
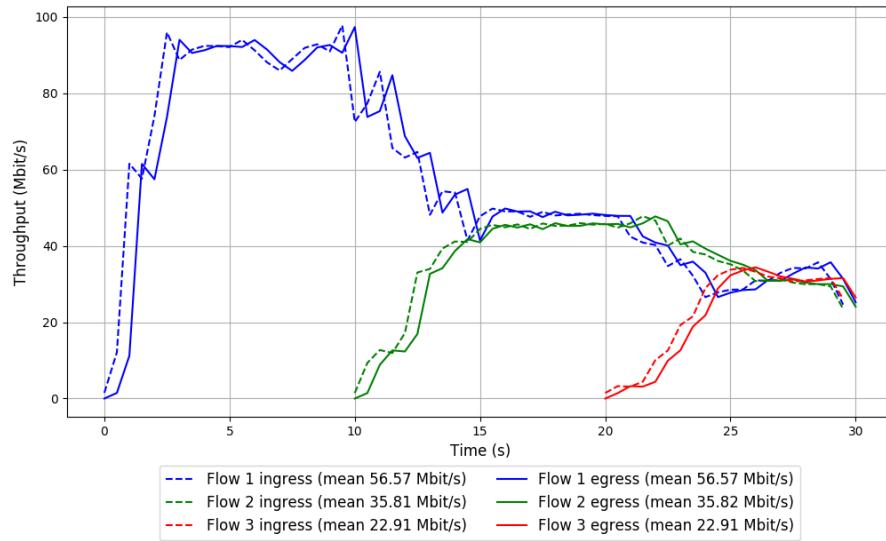


Run 5: Statistics of PCC-Vivace

```
Start at: 2019-04-24 01:54:40
End at: 2019-04-24 01:55:10
Local clock offset: 0.804 ms
Remote clock offset: -0.815 ms

# Below is generated by plot.py at 2019-04-24 02:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.95 Mbit/s
95th percentile per-packet one-way delay: 17.223 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.57 Mbit/s
95th percentile per-packet one-way delay: 17.940 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.82 Mbit/s
95th percentile per-packet one-way delay: 16.673 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 22.91 Mbit/s
95th percentile per-packet one-way delay: 10.928 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

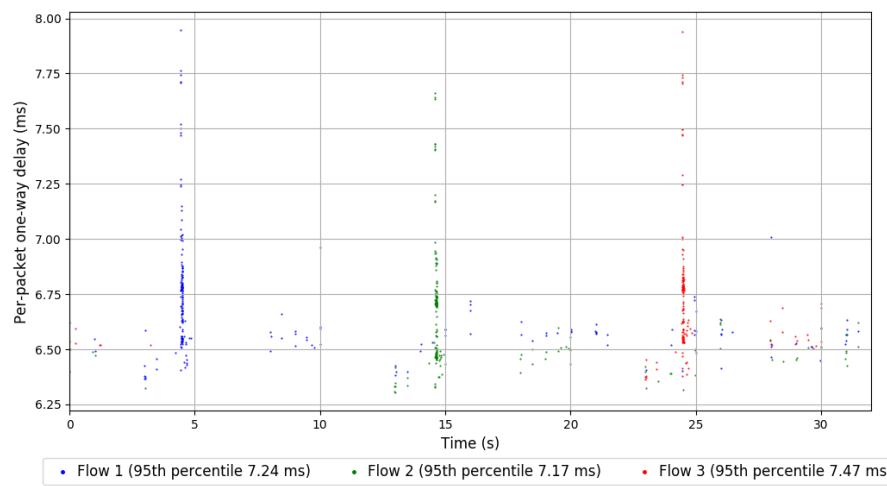
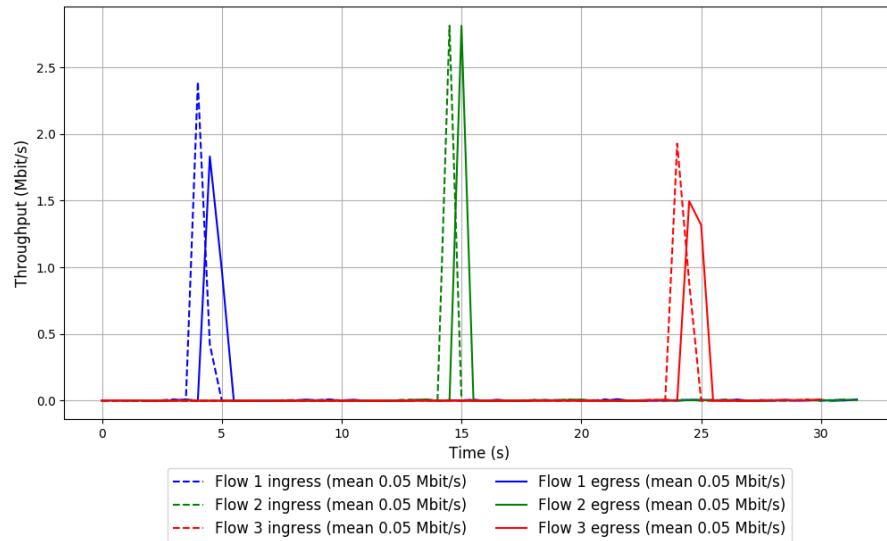


Run 1: Statistics of WebRTC media

```
Start at: 2019-04-24 00:25:06
End at: 2019-04-24 00:25:36
Local clock offset: 0.241 ms
Remote clock offset: 3.672 ms

# Below is generated by plot.py at 2019-04-24 02:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 7.246 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.238 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.170 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.468 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

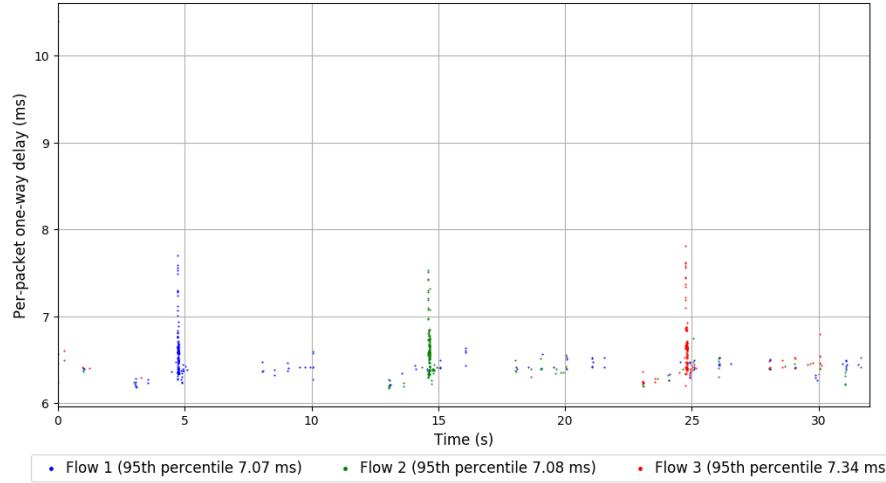
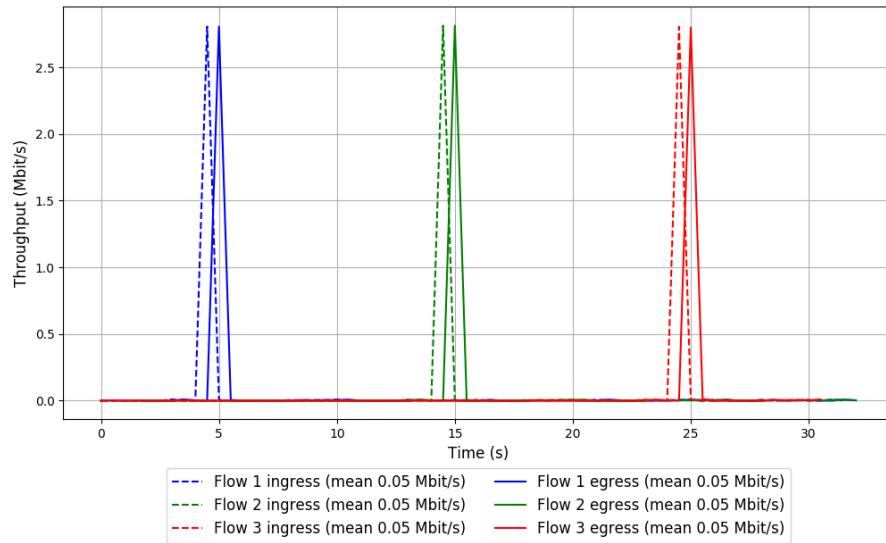


Run 2: Statistics of WebRTC media

```
Start at: 2019-04-24 00:49:47
End at: 2019-04-24 00:50:17
Local clock offset: 1.15 ms
Remote clock offset: 2.645 ms

# Below is generated by plot.py at 2019-04-24 02:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 7.190 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.074 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.084 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.341 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

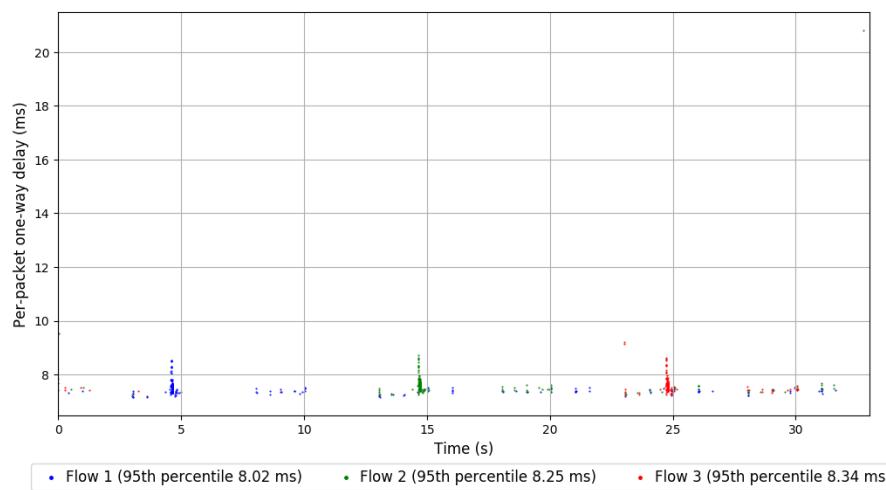
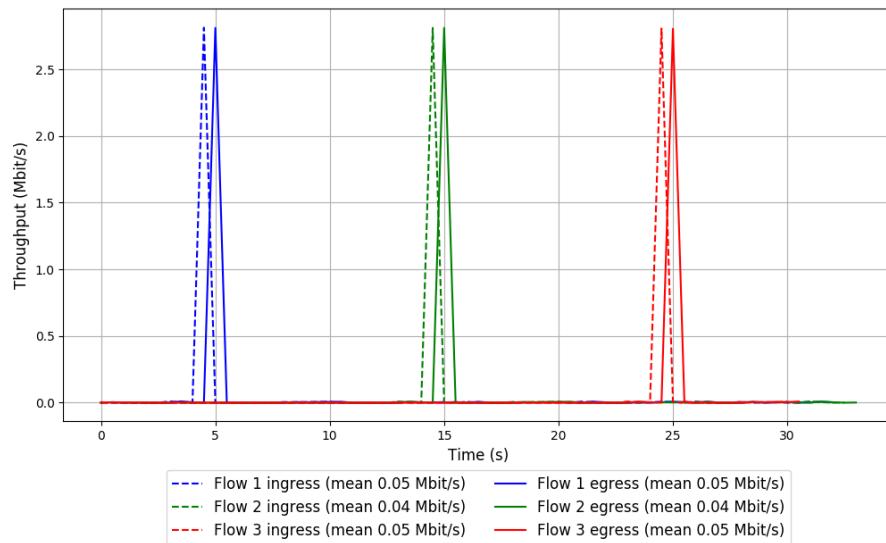


Run 3: Statistics of WebRTC media

```
Start at: 2019-04-24 01:14:21
End at: 2019-04-24 01:14:51
Local clock offset: 1.444 ms
Remote clock offset: 2.624 ms

# Below is generated by plot.py at 2019-04-24 02:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 8.171 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 8.023 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 8.250 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 8.335 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

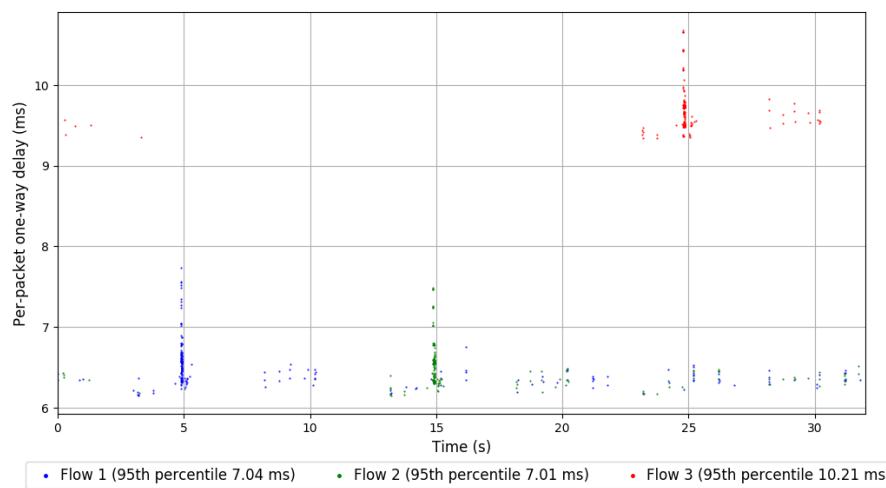
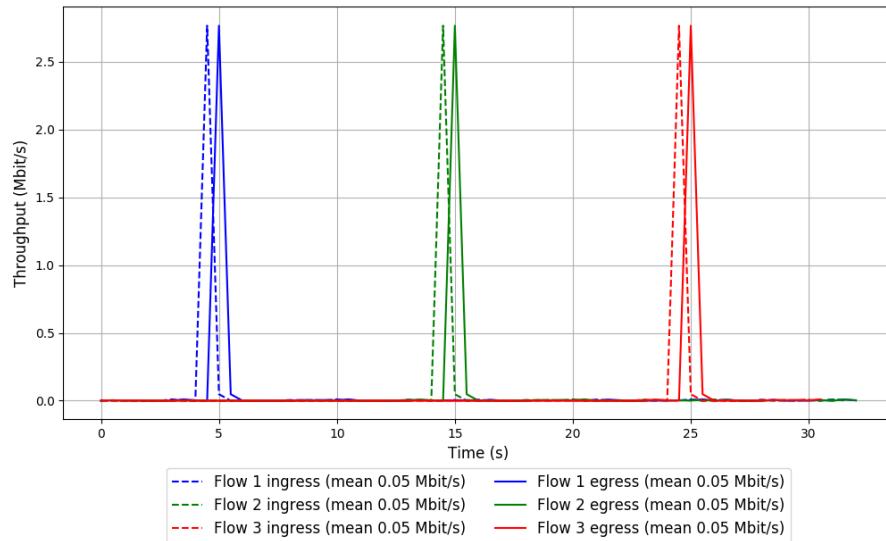


Run 4: Statistics of WebRTC media

```
Start at: 2019-04-24 01:39:15
End at: 2019-04-24 01:39:45
Local clock offset: 0.37 ms
Remote clock offset: 0.713 ms

# Below is generated by plot.py at 2019-04-24 02:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 9.750 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.036 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.012 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 10.207 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2019-04-24 02:04:16
End at: 2019-04-24 02:04:46
Local clock offset: 0.046 ms
Remote clock offset: -0.749 ms

# Below is generated by plot.py at 2019-04-24 02:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 7.462 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.375 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.448 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 7.486 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

