

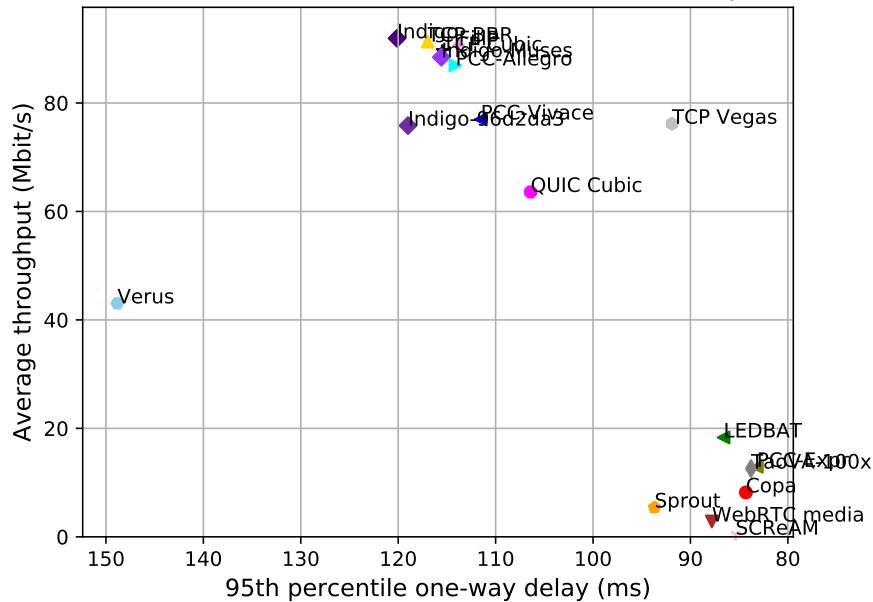
Pantheon Report

Generated at 2018-11-15 06:51:05 (UTC).
Data path: AWS Brazil 2 on `ens5` (*local*) → Colombia on `p4p1` (*remote*).
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

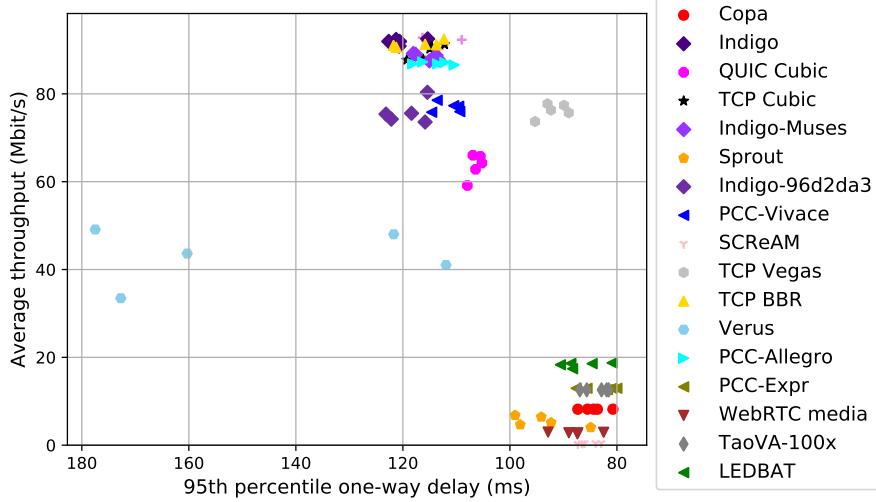
```
System info:  
Linux 4.15.0-1023-aws  
net.core.default_qdisc = fq  
net.core.rmem_default = 16777216  
net.core.rmem_max = 536870912  
net.core.wmem_default = 16777216  
net.core.wmem_max = 536870912  
net.ipv4.tcp_rmem = 4096 16777216 536870912  
net.ipv4.tcp_wmem = 4096 16777216 536870912  
  
Git summary:  
branch: muses @ 794ca3866981572cb73700a276691acf79c60f2b  
third_party/fillp @ d6da1459332fceef56963885d7eba17e6a32d4519  
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95  
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf  
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a  
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd  
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1  
M receiver/src/buffer.h  
M receiver/src/core.cpp  
M sender/src/buffer.h  
M sender/src/core.cpp  
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab  
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42  
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2  
M src/ScreamClient  
M src/ScreamServer  
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26  
M src/examples/cellsim.cc  
M src/examples/sproutbt2.cc  
M src/network/sproutconn.cc  
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494  
M src/verus.hpp  
M tools/plot.py
```

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

test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows



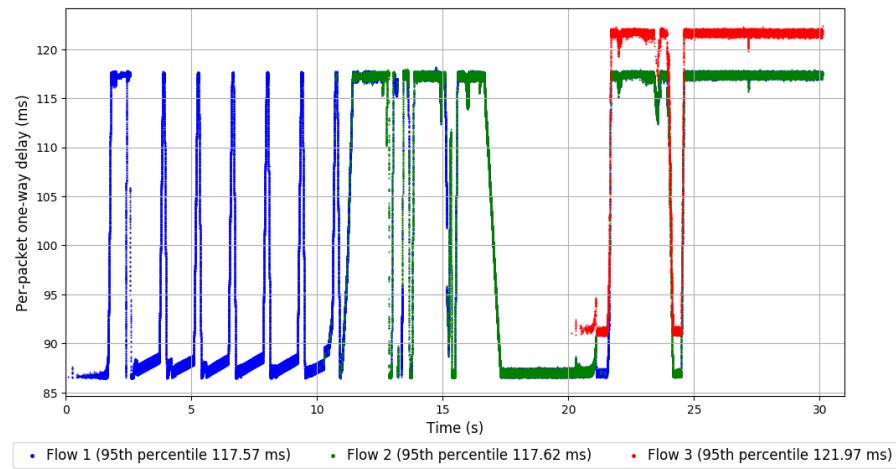
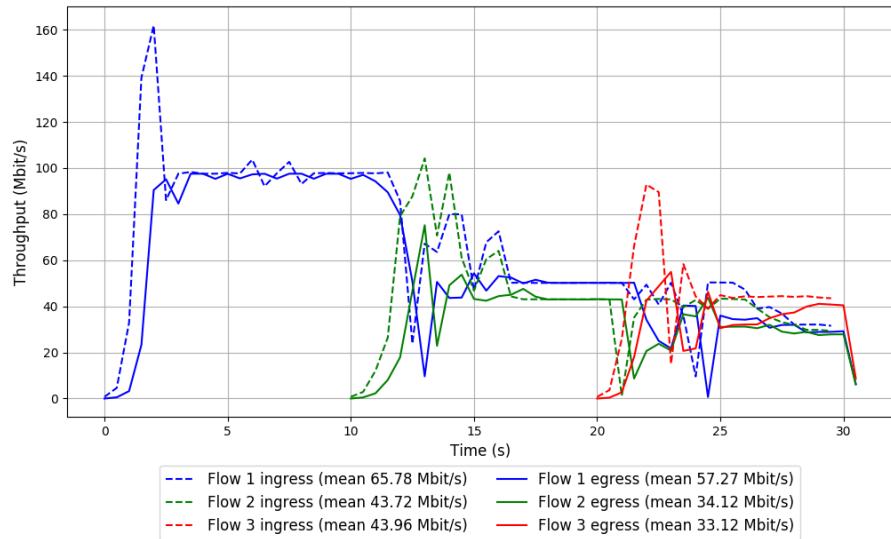
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	55.77	38.83	29.65	114.06	116.21	115.55	12.70	20.37	24.03
Copa	5	0.00	10.22	4.19	82.84	84.56	82.25	98.68	75.05	84.41
TCP Cubic	5	71.53	19.84	14.55	116.26	110.44	104.09	1.15	0.14	0.18
FillP	5	50.69	44.94	30.32	110.51	111.85	113.22	14.31	25.22	20.63
Indigo	5	63.72	26.03	34.62	117.68	116.93	117.18	13.54	33.42	68.79
Indigo-96d2da3	5	46.69	32.41	23.70	119.18	118.36	117.64	57.26	60.33	60.39
LEDBAT	5	11.90	7.79	3.76	84.77	84.99	86.23	0.03	0.00	0.08
Indigo-Muses	5	70.41	19.30	16.06	116.57	112.52	112.60	3.92	1.03	2.20
PCC-Allegro	5	79.84	8.06	5.23	114.08	115.17	114.31	2.36	3.17	3.70
PCC-Expr	5	7.47	6.48	3.37	82.52	82.54	82.21	56.59	27.10	36.74
QUIC Cubic	5	47.81	19.23	9.28	106.77	105.76	97.25	0.73	0.28	0.27
SCReAM	5	0.20	0.19	0.22	84.35	84.52	85.04	0.00	0.00	0.00
Sprout	5	2.69	2.70	2.82	91.21	92.80	92.99	0.00	0.01	0.00
TaoVA-100x	5	7.99	4.66	4.53	89.26	82.96	82.96	34.06	31.99	61.80
TCP Vegas	5	49.59	20.85	38.18	91.30	95.25	91.18	0.94	0.55	1.31
Verus	5	23.62	19.95	20.87	147.10	124.64	127.37	39.30	35.13	37.83
PCC-Vivace	5	64.12	15.59	7.49	111.54	111.42	109.51	0.28	0.53	0.17
WebRTC media	5	1.70	0.93	0.21	85.65	87.51	85.36	0.02	0.04	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2018-11-15 05:05:32
End at: 2018-11-15 05:06:02
Local clock offset: -6.34 ms
Remote clock offset: 9.456 ms

# Below is generated by plot.py at 2018-11-15 06:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.04 Mbit/s
95th percentile per-packet one-way delay: 121.753 ms
Loss rate: 16.80%
-- Flow 1:
Average throughput: 57.27 Mbit/s
95th percentile per-packet one-way delay: 117.567 ms
Loss rate: 12.86%
-- Flow 2:
Average throughput: 34.12 Mbit/s
95th percentile per-packet one-way delay: 117.622 ms
Loss rate: 21.85%
-- Flow 3:
Average throughput: 33.12 Mbit/s
95th percentile per-packet one-way delay: 121.970 ms
Loss rate: 24.46%
```

Run 1: Report of TCP BBR — Data Link

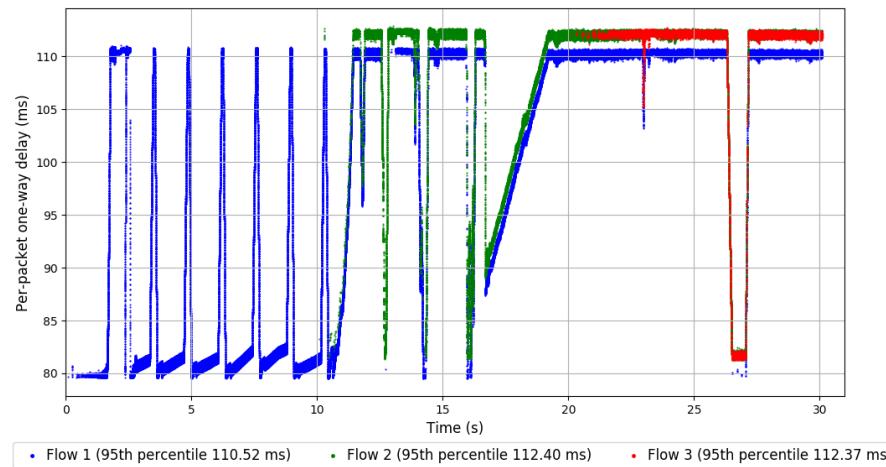
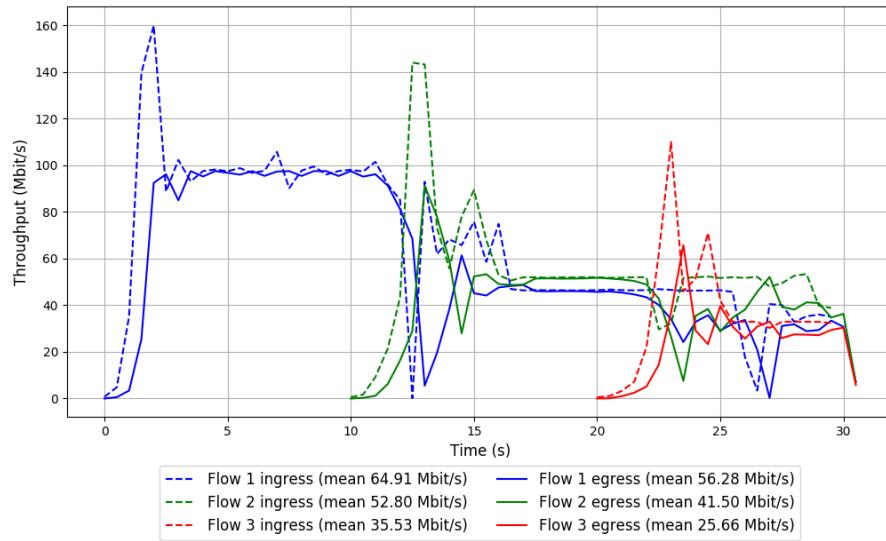


Run 2: Statistics of TCP BBR

```
Start at: 2018-11-15 05:28:30
End at: 2018-11-15 05:29:00
Local clock offset: -4.607 ms
Remote clock offset: 4.692 ms

# Below is generated by plot.py at 2018-11-15 06:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.47 Mbit/s
95th percentile per-packet one-way delay: 112.322 ms
Loss rate: 17.29%
-- Flow 1:
Average throughput: 56.28 Mbit/s
95th percentile per-packet one-way delay: 110.521 ms
Loss rate: 13.20%
-- Flow 2:
Average throughput: 41.50 Mbit/s
95th percentile per-packet one-way delay: 112.401 ms
Loss rate: 21.30%
-- Flow 3:
Average throughput: 25.66 Mbit/s
95th percentile per-packet one-way delay: 112.366 ms
Loss rate: 27.81%
```

Run 2: Report of TCP BBR — Data Link

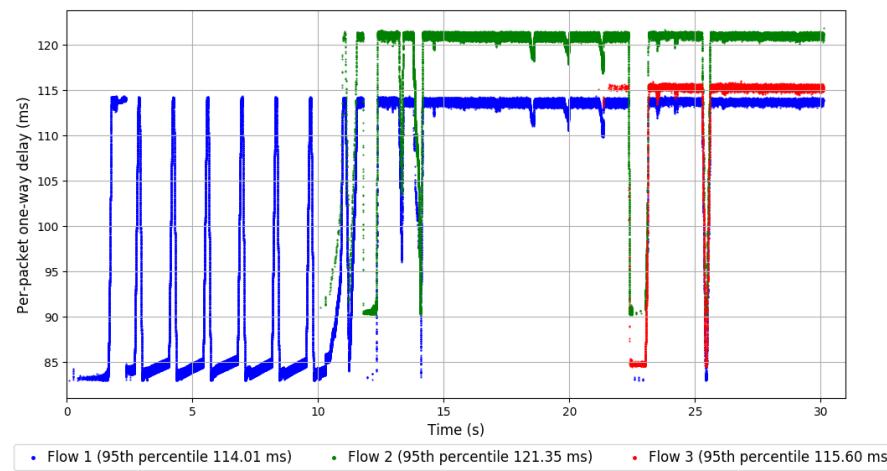
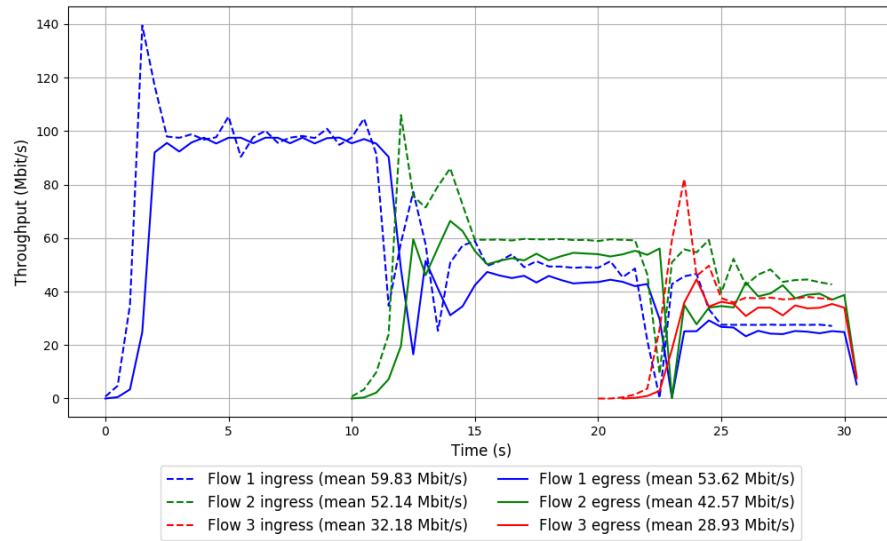


Run 3: Statistics of TCP BBR

```
Start at: 2018-11-15 05:51:16
End at: 2018-11-15 05:51:46
Local clock offset: -7.615 ms
Remote clock offset: 8.501 ms

# Below is generated by plot.py at 2018-11-15 06:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.61 Mbit/s
95th percentile per-packet one-way delay: 121.243 ms
Loss rate: 13.82%
-- Flow 1:
Average throughput: 53.62 Mbit/s
95th percentile per-packet one-way delay: 114.009 ms
Loss rate: 10.28%
-- Flow 2:
Average throughput: 42.57 Mbit/s
95th percentile per-packet one-way delay: 121.353 ms
Loss rate: 18.24%
-- Flow 3:
Average throughput: 28.93 Mbit/s
95th percentile per-packet one-way delay: 115.597 ms
Loss rate: 19.29%
```

Run 3: Report of TCP BBR — Data Link

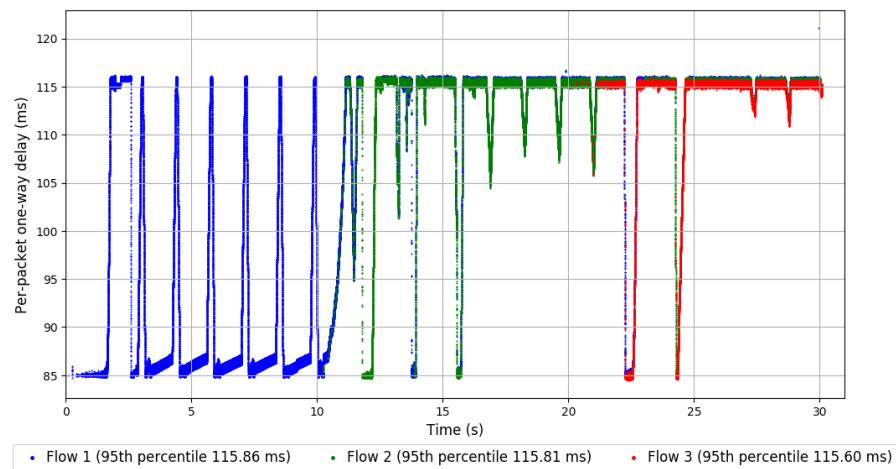
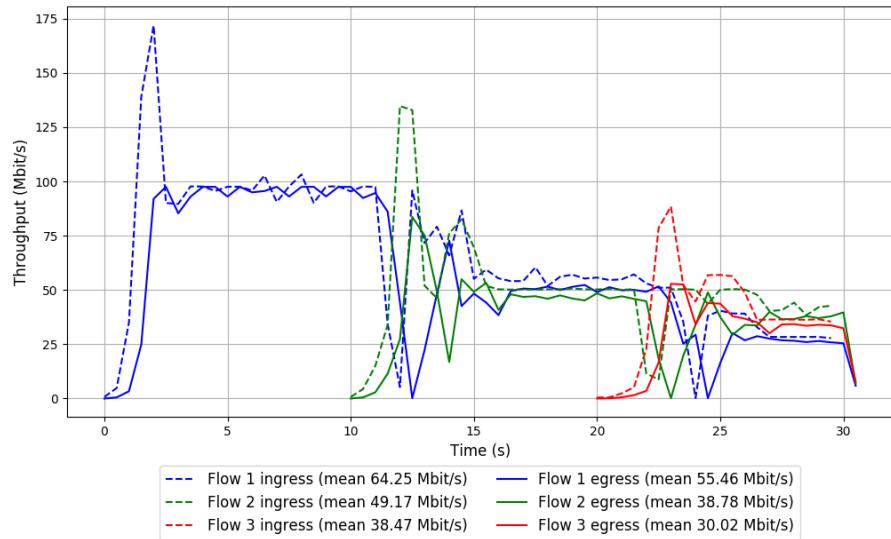


Run 4: Statistics of TCP BBR

```
Start at: 2018-11-15 06:14:05
End at: 2018-11-15 06:14:35
Local clock offset: -8.529 ms
Remote clock offset: 9.375 ms

# Below is generated by plot.py at 2018-11-15 06:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.30 Mbit/s
95th percentile per-packet one-way delay: 115.835 ms
Loss rate: 16.79%
-- Flow 1:
Average throughput: 55.46 Mbit/s
95th percentile per-packet one-way delay: 115.861 ms
Loss rate: 13.60%
-- Flow 2:
Average throughput: 38.78 Mbit/s
95th percentile per-packet one-way delay: 115.810 ms
Loss rate: 21.01%
-- Flow 3:
Average throughput: 30.02 Mbit/s
95th percentile per-packet one-way delay: 115.596 ms
Loss rate: 21.98%
```

Run 4: Report of TCP BBR — Data Link

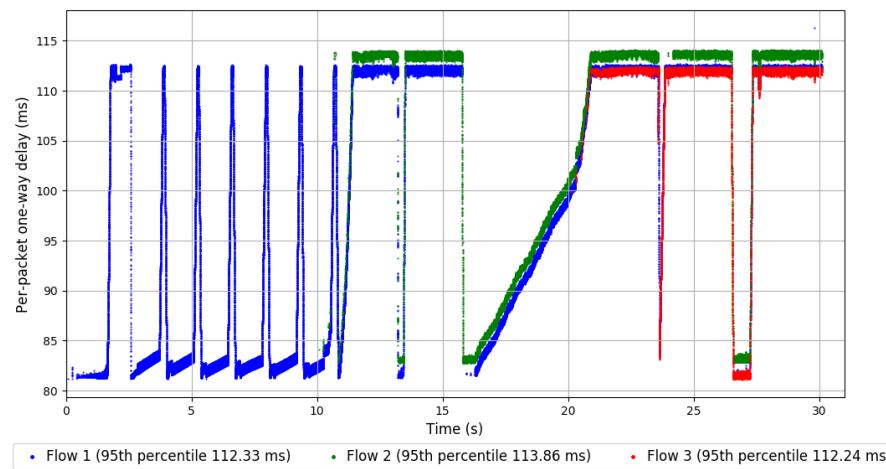
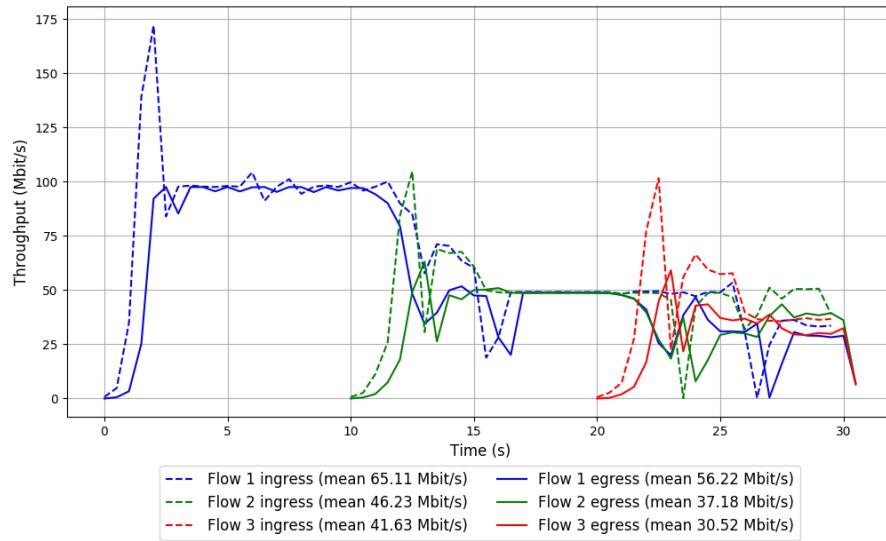


Run 5: Statistics of TCP BBR

```
Start at: 2018-11-15 06:36:52
End at: 2018-11-15 06:37:22
Local clock offset: -3.219 ms
Remote clock offset: 5.464 ms

# Below is generated by plot.py at 2018-11-15 06:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.17 Mbit/s
95th percentile per-packet one-way delay: 113.728 ms
Loss rate: 16.86%
-- Flow 1:
Average throughput: 56.22 Mbit/s
95th percentile per-packet one-way delay: 112.334 ms
Loss rate: 13.57%
-- Flow 2:
Average throughput: 37.18 Mbit/s
95th percentile per-packet one-way delay: 113.865 ms
Loss rate: 19.45%
-- Flow 3:
Average throughput: 30.52 Mbit/s
95th percentile per-packet one-way delay: 112.237 ms
Loss rate: 26.59%
```

Run 5: Report of TCP BBR — Data Link

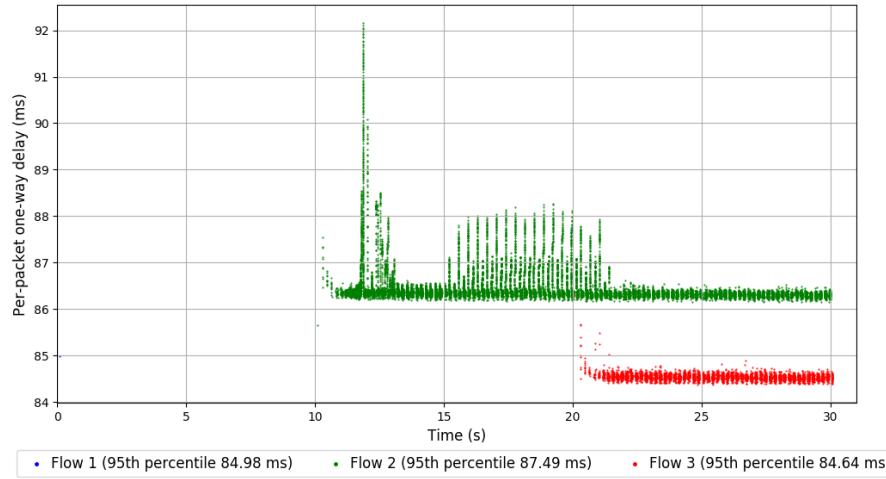
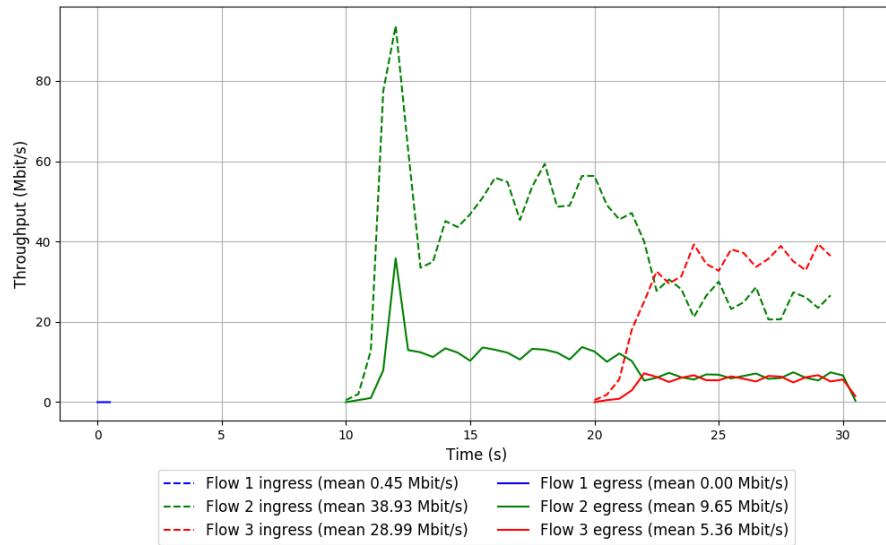


Run 1: Statistics of Copa

```
Start at: 2018-11-15 04:51:43
End at: 2018-11-15 04:52:13
Local clock offset: -11.449 ms
Remote clock offset: 9.524 ms

# Below is generated by plot.py at 2018-11-15 06:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 87.307 ms
Loss rate: 76.92%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 84.981 ms
Loss rate: 98.80%
-- Flow 2:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 87.486 ms
Loss rate: 75.20%
-- Flow 3:
Average throughput: 5.36 Mbit/s
95th percentile per-packet one-way delay: 84.642 ms
Loss rate: 81.52%
```

Run 1: Report of Copa — Data Link

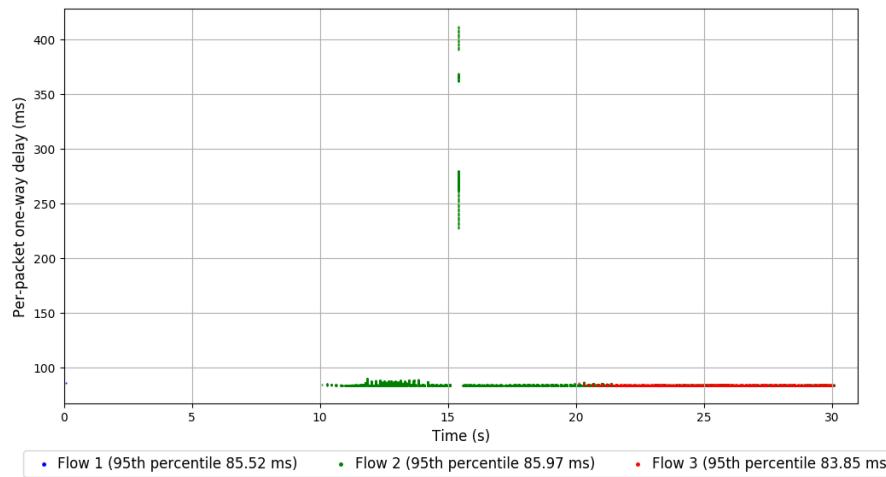
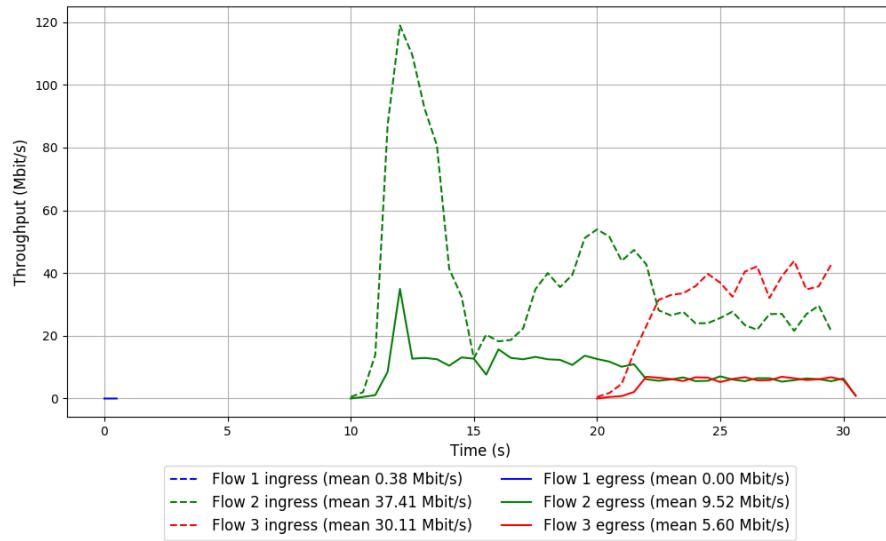


Run 2: Statistics of Copa

```
Start at: 2018-11-15 05:14:29
End at: 2018-11-15 05:14:59
Local clock offset: -4.453 ms
Remote clock offset: 8.478 ms

# Below is generated by plot.py at 2018-11-15 06:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.20 Mbit/s
95th percentile per-packet one-way delay: 85.482 ms
Loss rate: 76.51%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 85.524 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.52 Mbit/s
95th percentile per-packet one-way delay: 85.966 ms
Loss rate: 74.55%
-- Flow 3:
Average throughput: 5.60 Mbit/s
95th percentile per-packet one-way delay: 83.850 ms
Loss rate: 81.40%
```

Run 2: Report of Copa — Data Link

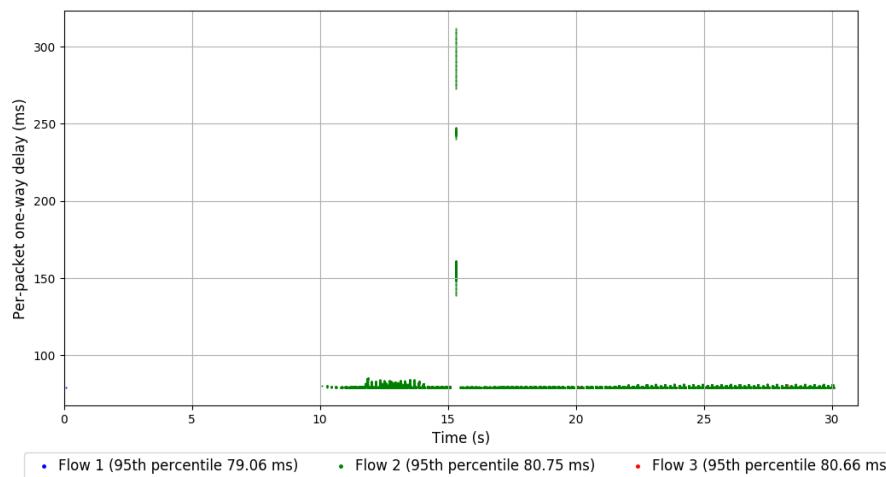
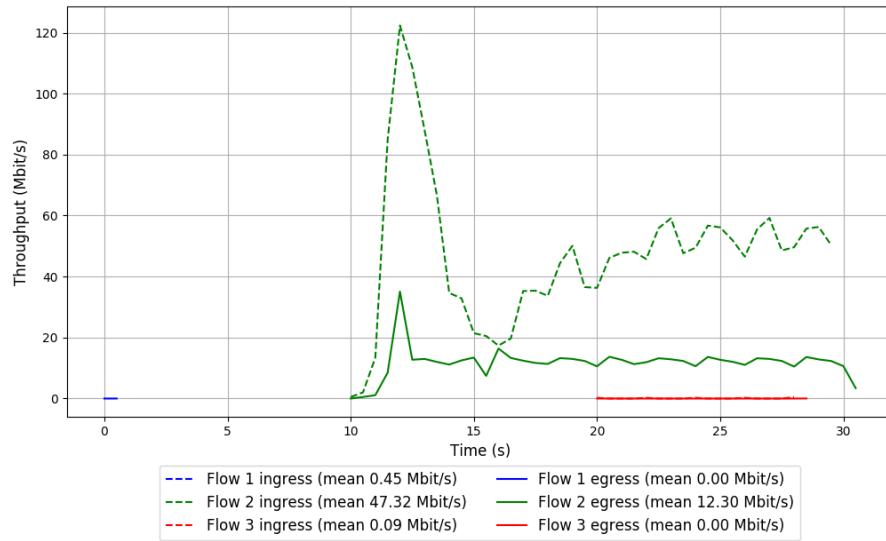


Run 3: Statistics of Copa

```
Start at: 2018-11-15 05:37:28
End at: 2018-11-15 05:37:58
Local clock offset: -5.942 ms
Remote clock offset: 4.709 ms

# Below is generated by plot.py at 2018-11-15 06:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.20 Mbit/s
95th percentile per-packet one-way delay: 80.751 ms
Loss rate: 74.03%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 79.064 ms
Loss rate: 98.80%
-- Flow 2:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 80.752 ms
Loss rate: 74.01%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 80.662 ms
Loss rate: 98.16%
```

Run 3: Report of Copa — Data Link

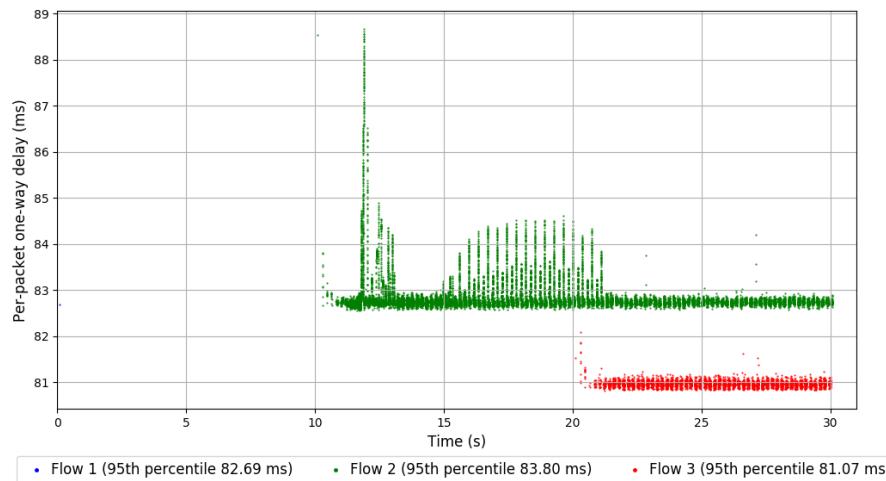
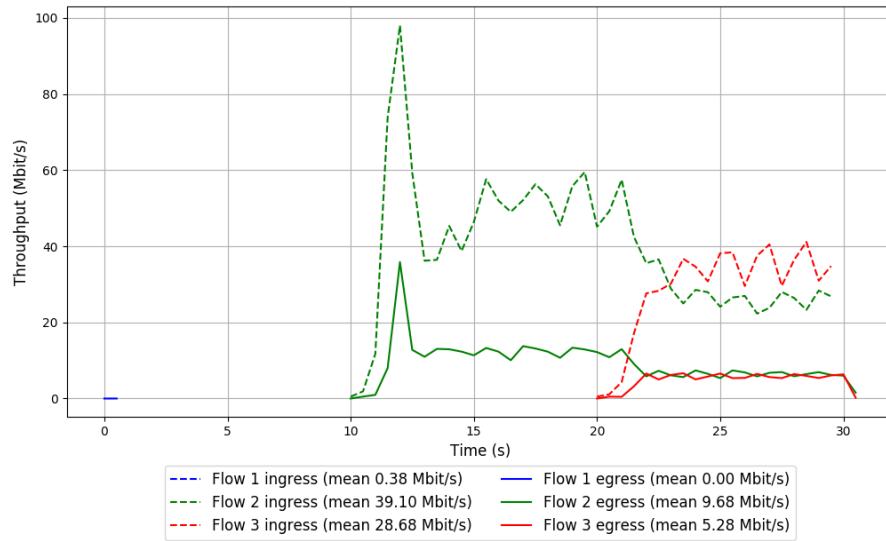


Run 4: Statistics of Copa

```
Start at: 2018-11-15 06:00:14
End at: 2018-11-15 06:00:44
Local clock offset: -8.566 ms
Remote clock offset: 5.761 ms

# Below is generated by plot.py at 2018-11-15 06:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 83.655 ms
Loss rate: 76.95%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 82.686 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.68 Mbit/s
95th percentile per-packet one-way delay: 83.804 ms
Loss rate: 75.27%
-- Flow 3:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 81.068 ms
Loss rate: 81.59%
```

Run 4: Report of Copa — Data Link

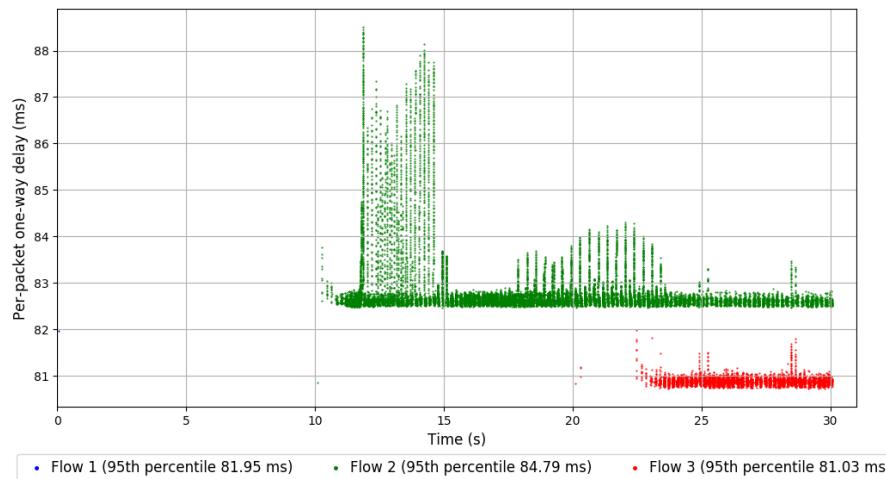
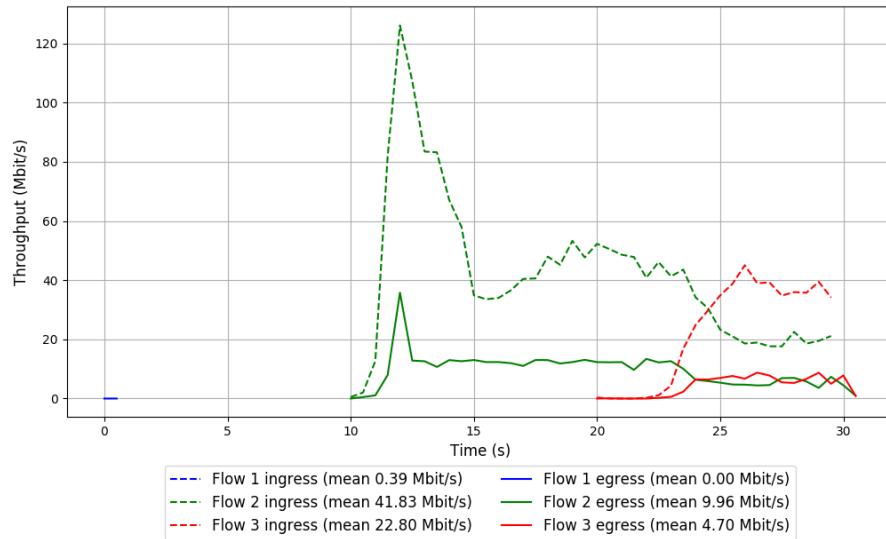


Run 5: Statistics of Copa

```
Start at: 2018-11-15 06:23:02
End at: 2018-11-15 06:23:32
Local clock offset: -8.906 ms
Remote clock offset: 5.563 ms

# Below is generated by plot.py at 2018-11-15 06:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 84.356 ms
Loss rate: 76.88%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 81.955 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 84.788 ms
Loss rate: 76.20%
-- Flow 3:
Average throughput: 4.70 Mbit/s
95th percentile per-packet one-way delay: 81.025 ms
Loss rate: 79.39%
```

Run 5: Report of Copa — Data Link

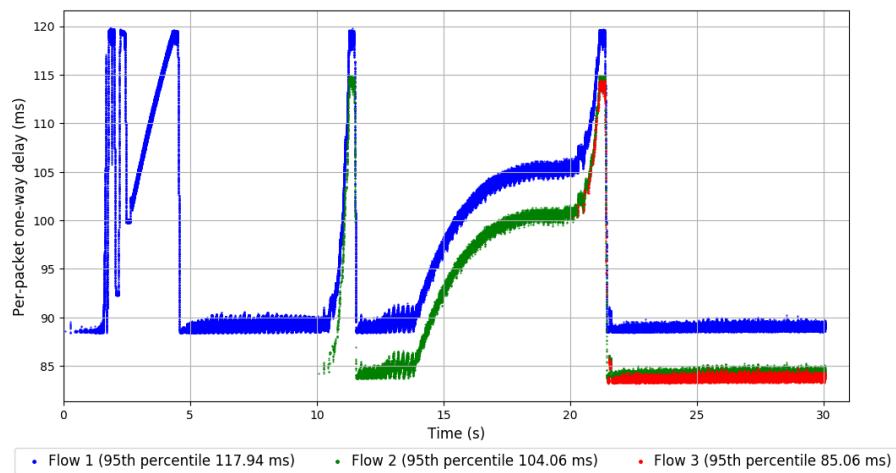
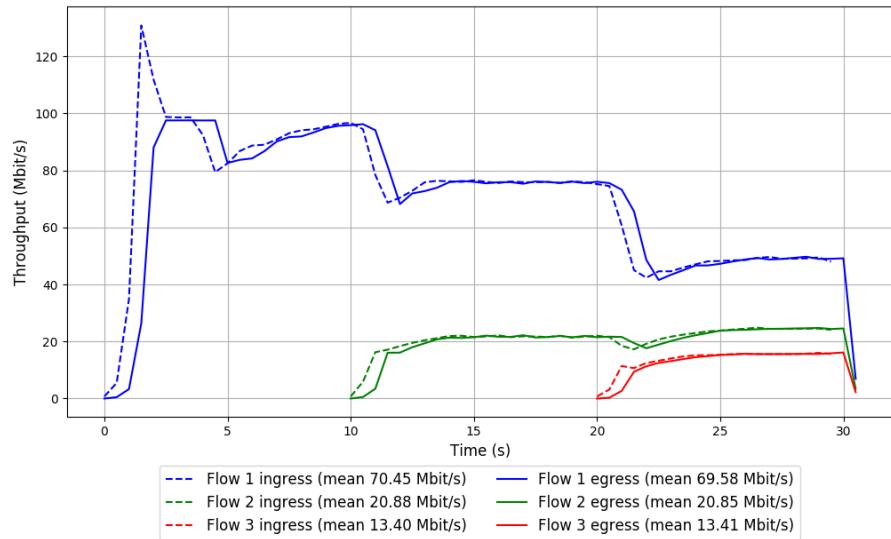


```
Run 1: Statistics of TCP Cubic

Start at: 2018-11-15 05:06:50
End at: 2018-11-15 05:07:20
Local clock offset: -5.918 ms
Remote clock offset: 5.72 ms

# Below is generated by plot.py at 2018-11-15 06:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.92 Mbit/s
95th percentile per-packet one-way delay: 116.267 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 69.58 Mbit/s
95th percentile per-packet one-way delay: 117.938 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 20.85 Mbit/s
95th percentile per-packet one-way delay: 104.057 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 13.41 Mbit/s
95th percentile per-packet one-way delay: 85.059 ms
Loss rate: 0.14%
```

Run 1: Report of TCP Cubic — Data Link

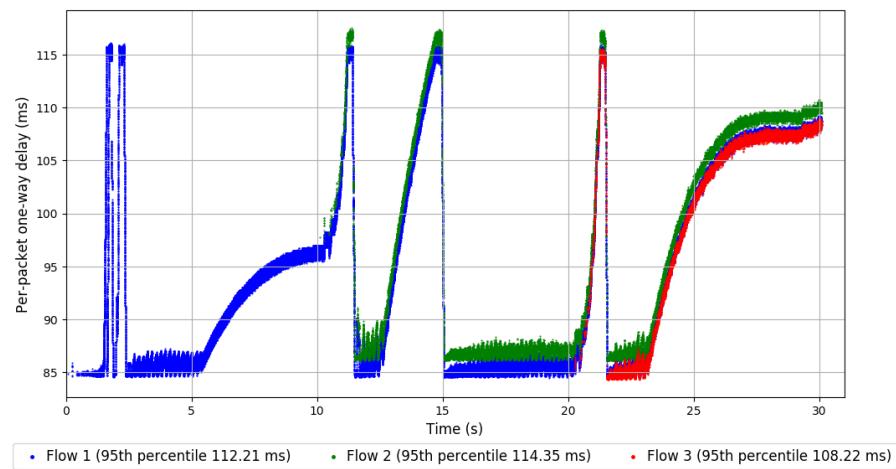
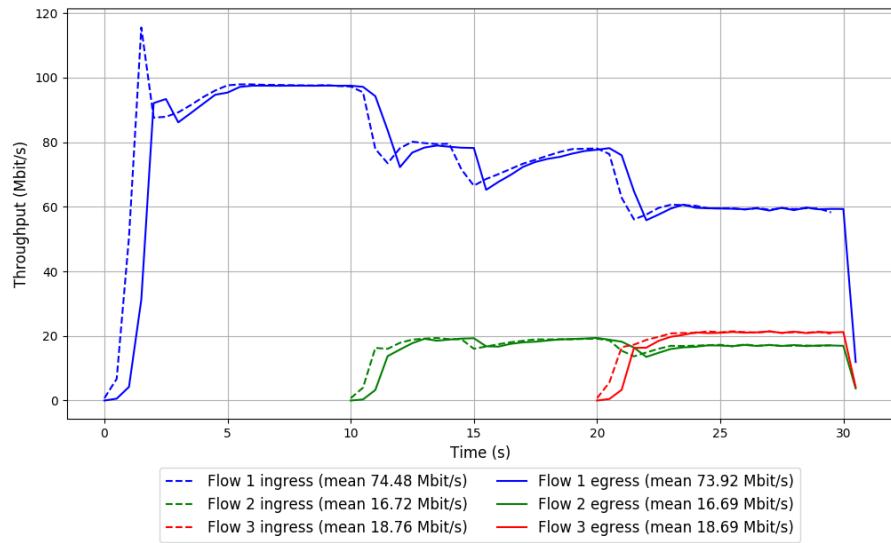


Run 2: Statistics of TCP Cubic

```
Start at: 2018-11-15 05:29:48
End at: 2018-11-15 05:30:18
Local clock offset: -4.952 ms
Remote clock offset: 9.532 ms

# Below is generated by plot.py at 2018-11-15 06:44:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.26 Mbit/s
95th percentile per-packet one-way delay: 112.223 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 73.92 Mbit/s
95th percentile per-packet one-way delay: 112.214 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 16.69 Mbit/s
95th percentile per-packet one-way delay: 114.346 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 18.69 Mbit/s
95th percentile per-packet one-way delay: 108.225 ms
Loss rate: 0.11%
```

Run 2: Report of TCP Cubic — Data Link

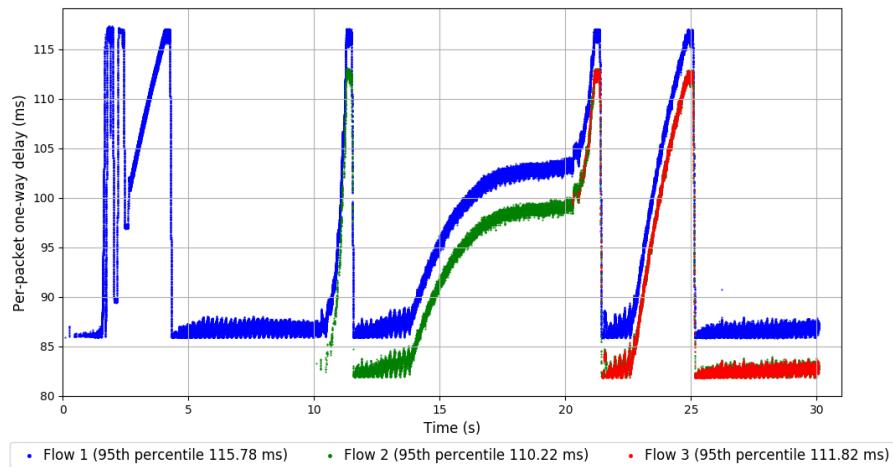
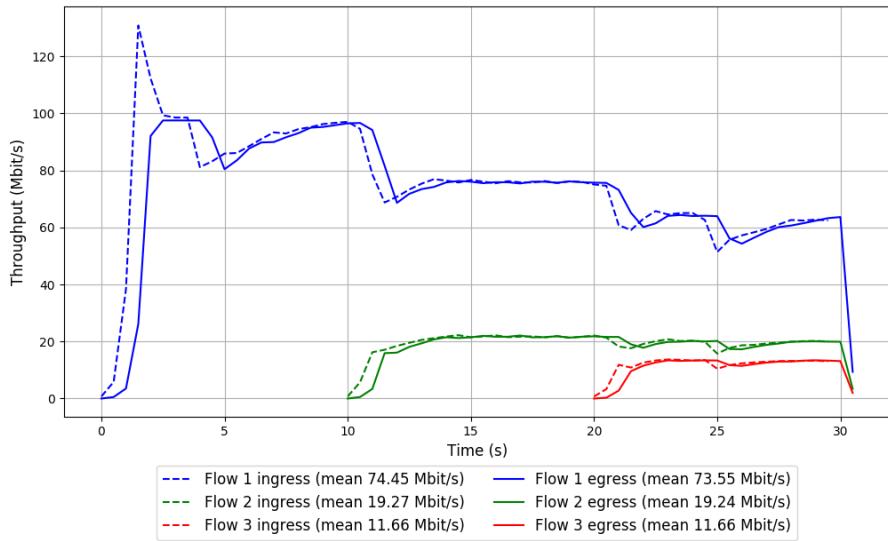


Run 3: Statistics of TCP Cubic

```
Start at: 2018-11-15 05:52:35
End at: 2018-11-15 05:53:05
Local clock offset: -7.788 ms
Remote clock offset: 5.832 ms

# Below is generated by plot.py at 2018-11-15 06:44:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.25 Mbit/s
95th percentile per-packet one-way delay: 114.958 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 73.55 Mbit/s
95th percentile per-packet one-way delay: 115.778 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 19.24 Mbit/s
95th percentile per-packet one-way delay: 110.222 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 111.823 ms
Loss rate: 0.19%
```

Run 3: Report of TCP Cubic — Data Link

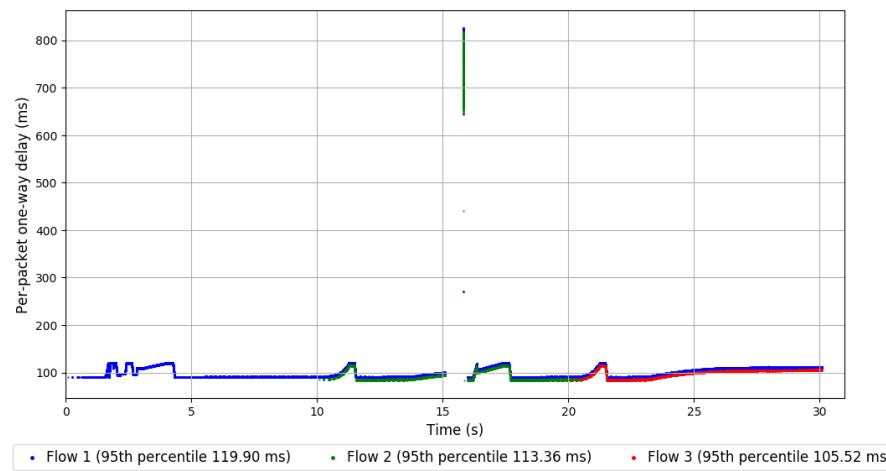
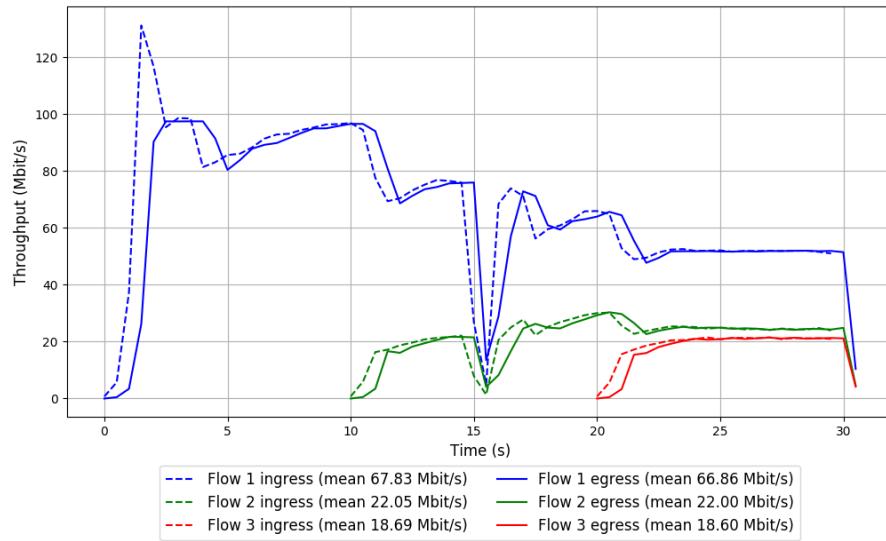


Run 4: Statistics of TCP Cubic

```
Start at: 2018-11-15 06:15:24
End at: 2018-11-15 06:15:54
Local clock offset: -7.802 ms
Remote clock offset: 9.245 ms

# Below is generated by plot.py at 2018-11-15 06:44:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.72 Mbit/s
95th percentile per-packet one-way delay: 119.277 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 66.86 Mbit/s
95th percentile per-packet one-way delay: 119.897 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 113.363 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 18.60 Mbit/s
95th percentile per-packet one-way delay: 105.520 ms
Loss rate: 0.25%
```

Run 4: Report of TCP Cubic — Data Link

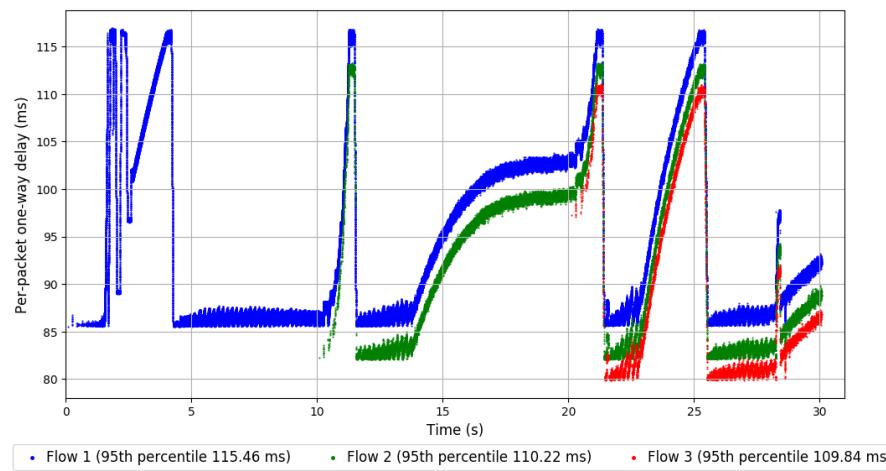
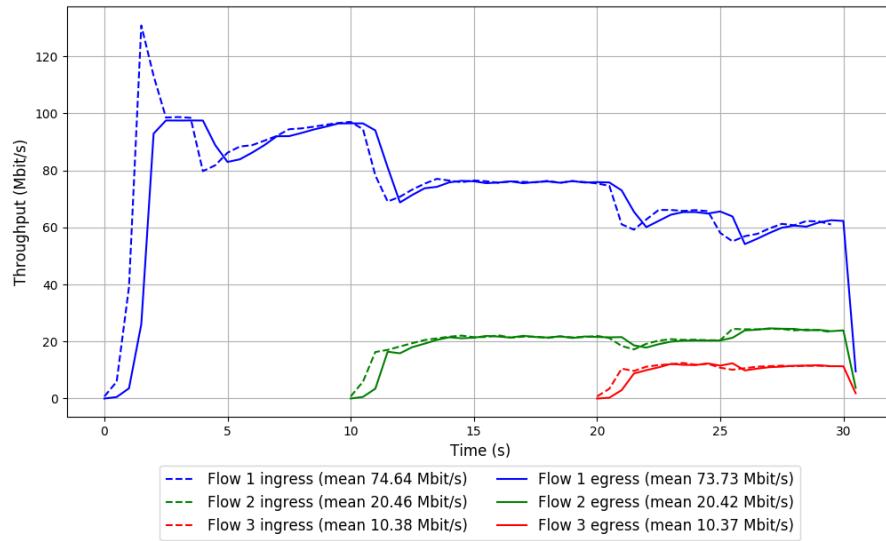


Run 5: Statistics of TCP Cubic

```
Start at: 2018-11-15 06:38:10
End at: 2018-11-15 06:38:40
Local clock offset: -2.75 ms
Remote clock offset: 4.319 ms

# Below is generated by plot.py at 2018-11-15 06:44:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.79 Mbit/s
95th percentile per-packet one-way delay: 114.619 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 73.73 Mbit/s
95th percentile per-packet one-way delay: 115.464 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 20.42 Mbit/s
95th percentile per-packet one-way delay: 110.216 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 10.37 Mbit/s
95th percentile per-packet one-way delay: 109.836 ms
Loss rate: 0.21%
```

Run 5: Report of TCP Cubic — Data Link

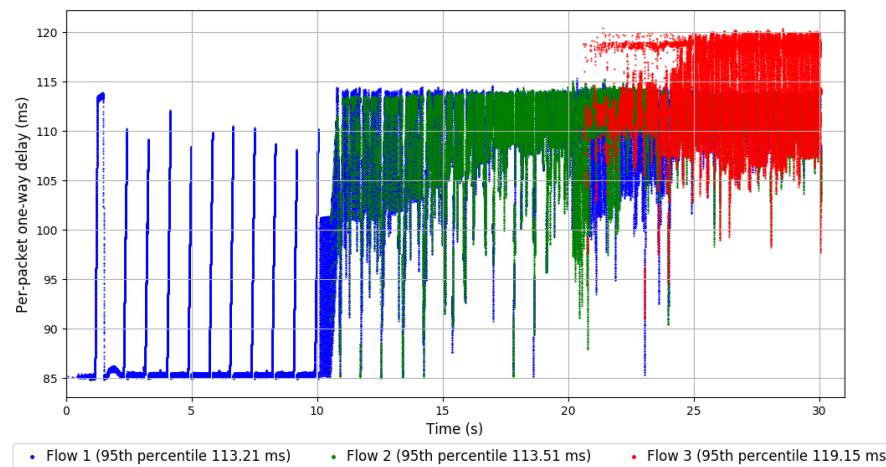
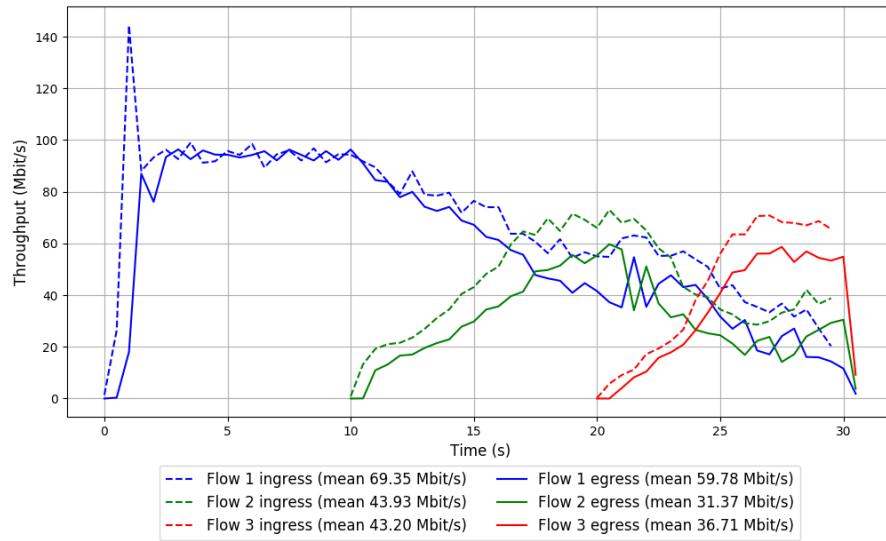


```
Run 1: Statistics of FillP

Start at: 2018-11-15 05:04:14
End at: 2018-11-15 05:04:44
Local clock offset: -6.848 ms
Remote clock offset: 9.573 ms

# Below is generated by plot.py at 2018-11-15 06:45:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.80 Mbit/s
95th percentile per-packet one-way delay: 116.334 ms
Loss rate: 17.74%
-- Flow 1:
Average throughput: 59.78 Mbit/s
95th percentile per-packet one-way delay: 113.211 ms
Loss rate: 13.75%
-- Flow 2:
Average throughput: 31.37 Mbit/s
95th percentile per-packet one-way delay: 113.509 ms
Loss rate: 28.54%
-- Flow 3:
Average throughput: 36.71 Mbit/s
95th percentile per-packet one-way delay: 119.146 ms
Loss rate: 15.01%
```

Run 1: Report of FillP — Data Link

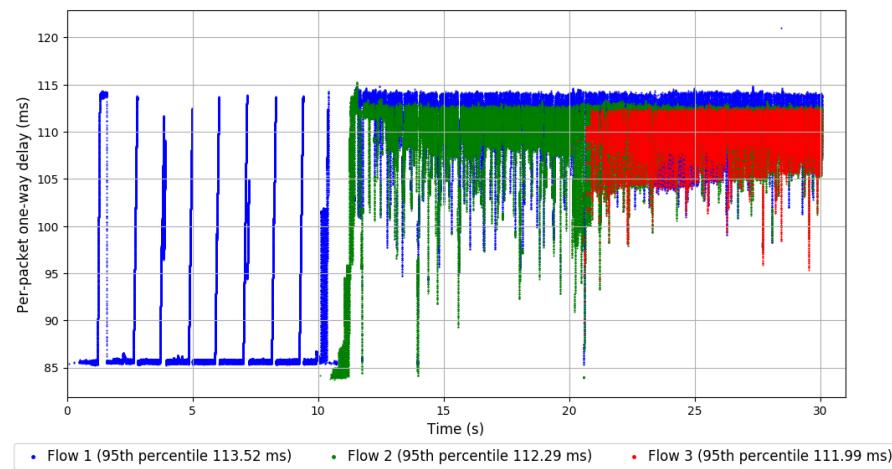
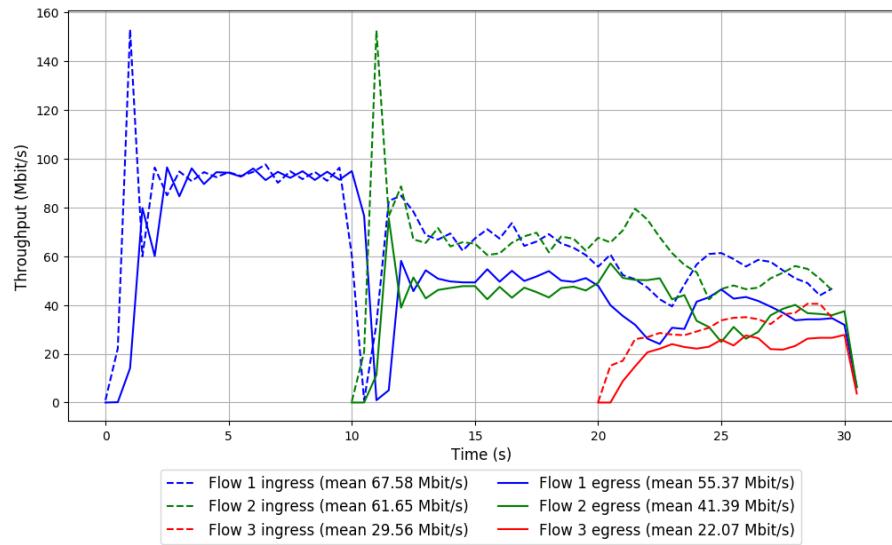


Run 2: Statistics of FillP

```
Start at: 2018-11-15 05:27:11
End at: 2018-11-15 05:27:41
Local clock offset: -3.426 ms
Remote clock offset: 9.523 ms

# Below is generated by plot.py at 2018-11-15 06:45:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.24 Mbit/s
95th percentile per-packet one-way delay: 113.270 ms
Loss rate: 23.74%
-- Flow 1:
Average throughput: 55.37 Mbit/s
95th percentile per-packet one-way delay: 113.519 ms
Loss rate: 18.01%
-- Flow 2:
Average throughput: 41.39 Mbit/s
95th percentile per-packet one-way delay: 112.294 ms
Loss rate: 32.78%
-- Flow 3:
Average throughput: 22.07 Mbit/s
95th percentile per-packet one-way delay: 111.986 ms
Loss rate: 25.35%
```

Run 2: Report of FillP — Data Link

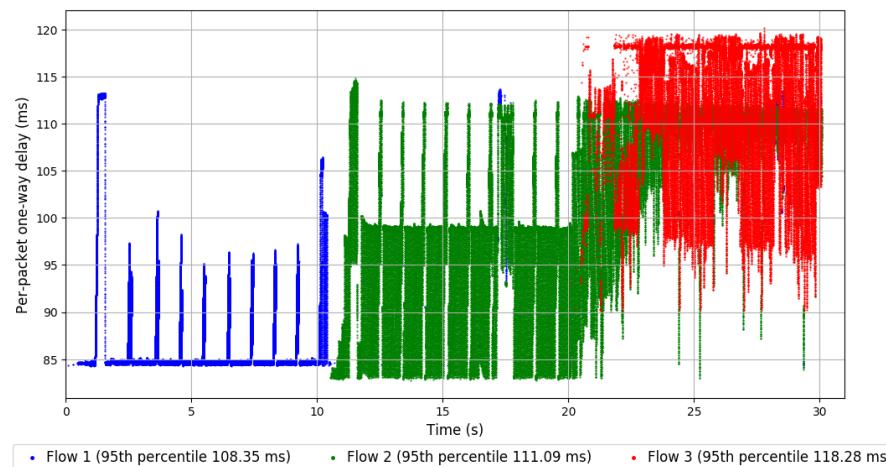
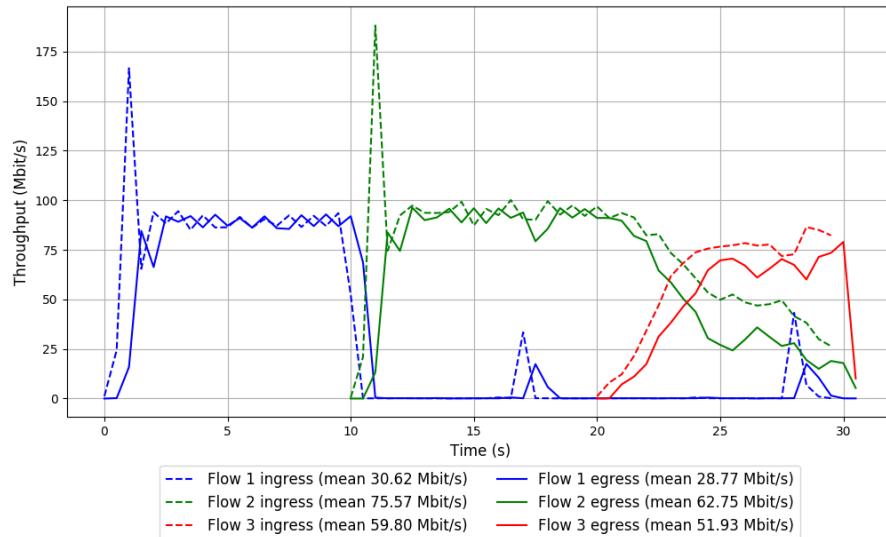


Run 3: Statistics of FillP

```
Start at: 2018-11-15 05:49:59
End at: 2018-11-15 05:50:29
Local clock offset: -7.481 ms
Remote clock offset: 8.469 ms

# Below is generated by plot.py at 2018-11-15 06:45:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.80 Mbit/s
95th percentile per-packet one-way delay: 115.961 ms
Loss rate: 12.79%
-- Flow 1:
Average throughput: 28.77 Mbit/s
95th percentile per-packet one-way delay: 108.352 ms
Loss rate: 5.93%
-- Flow 2:
Average throughput: 62.75 Mbit/s
95th percentile per-packet one-way delay: 111.093 ms
Loss rate: 16.90%
-- Flow 3:
Average throughput: 51.93 Mbit/s
95th percentile per-packet one-way delay: 118.282 ms
Loss rate: 12.94%
```

Run 3: Report of FillP — Data Link

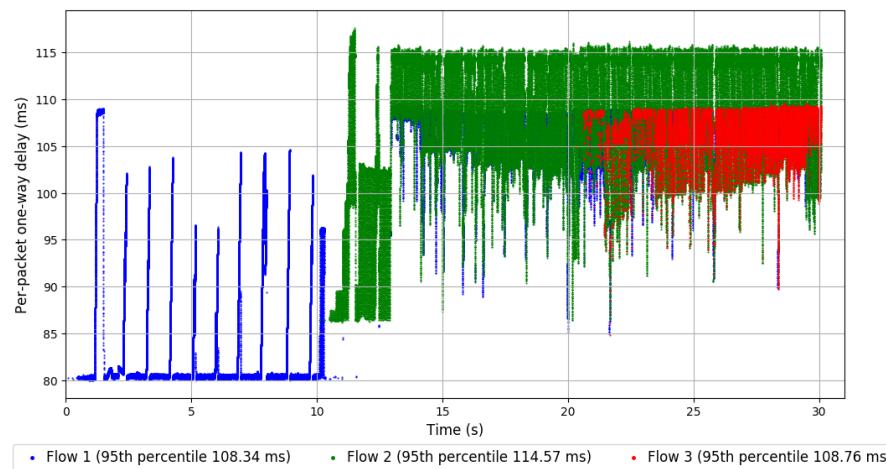
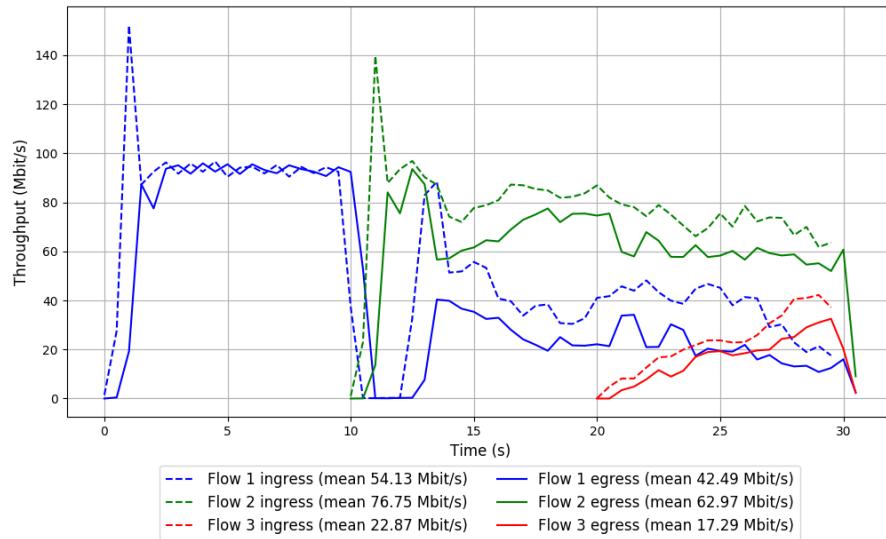


Run 4: Statistics of FillP

```
Start at: 2018-11-15 06:12:47
End at: 2018-11-15 06:13:17
Local clock offset: -7.723 ms
Remote clock offset: 4.571 ms

# Below is generated by plot.py at 2018-11-15 06:45:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.11 Mbit/s
95th percentile per-packet one-way delay: 114.392 ms
Loss rate: 20.01%
-- Flow 1:
Average throughput: 42.49 Mbit/s
95th percentile per-packet one-way delay: 108.345 ms
Loss rate: 21.45%
-- Flow 2:
Average throughput: 62.97 Mbit/s
95th percentile per-packet one-way delay: 114.568 ms
Loss rate: 17.83%
-- Flow 3:
Average throughput: 17.29 Mbit/s
95th percentile per-packet one-way delay: 108.763 ms
Loss rate: 24.41%
```

Run 4: Report of FillP — Data Link

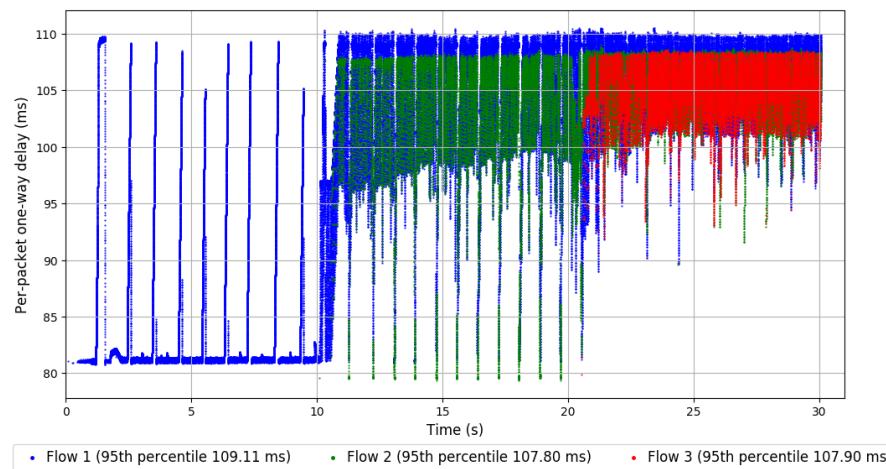
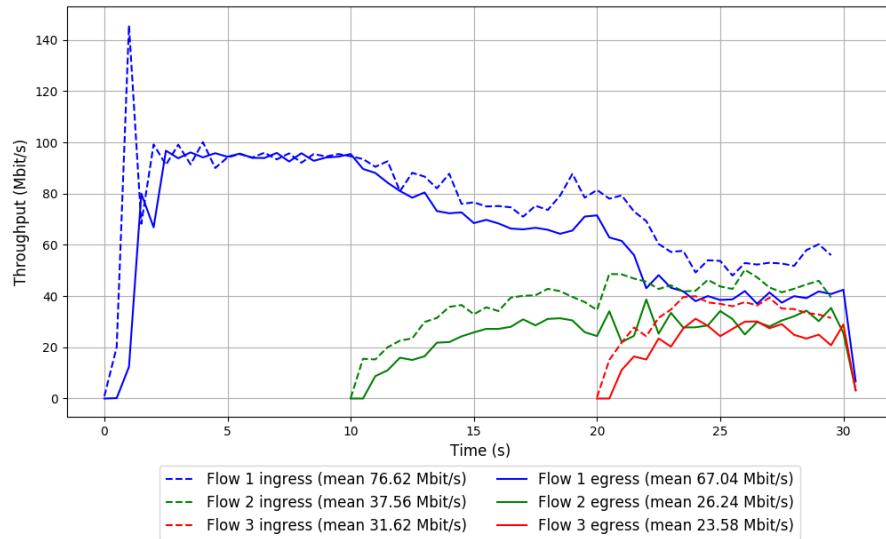


Run 5: Statistics of FillP

```
Start at: 2018-11-15 06:35:34
End at: 2018-11-15 06:36:04
Local clock offset: -2.886 ms
Remote clock offset: 4.495 ms

# Below is generated by plot.py at 2018-11-15 06:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.31 Mbit/s
95th percentile per-packet one-way delay: 109.014 ms
Loss rate: 17.57%
-- Flow 1:
Average throughput: 67.04 Mbit/s
95th percentile per-packet one-way delay: 109.114 ms
Loss rate: 12.42%
-- Flow 2:
Average throughput: 26.24 Mbit/s
95th percentile per-packet one-way delay: 107.796 ms
Loss rate: 30.06%
-- Flow 3:
Average throughput: 23.58 Mbit/s
95th percentile per-packet one-way delay: 107.899 ms
Loss rate: 25.42%
```

Run 5: Report of FillP — Data Link

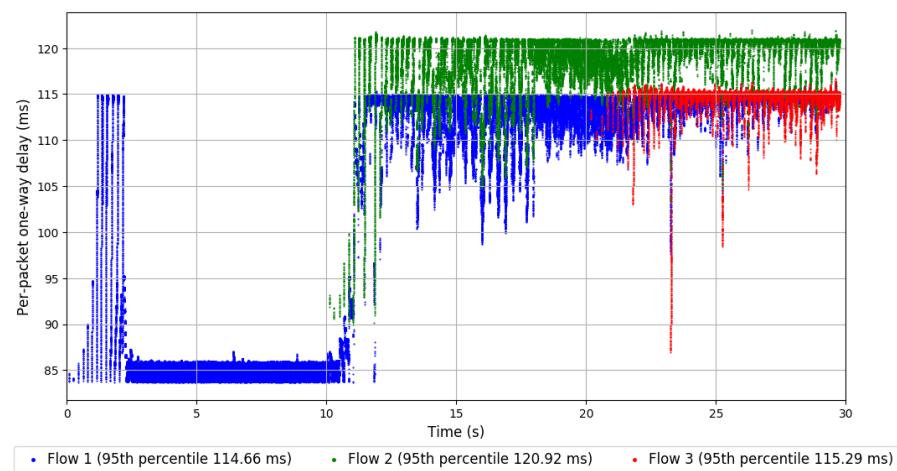
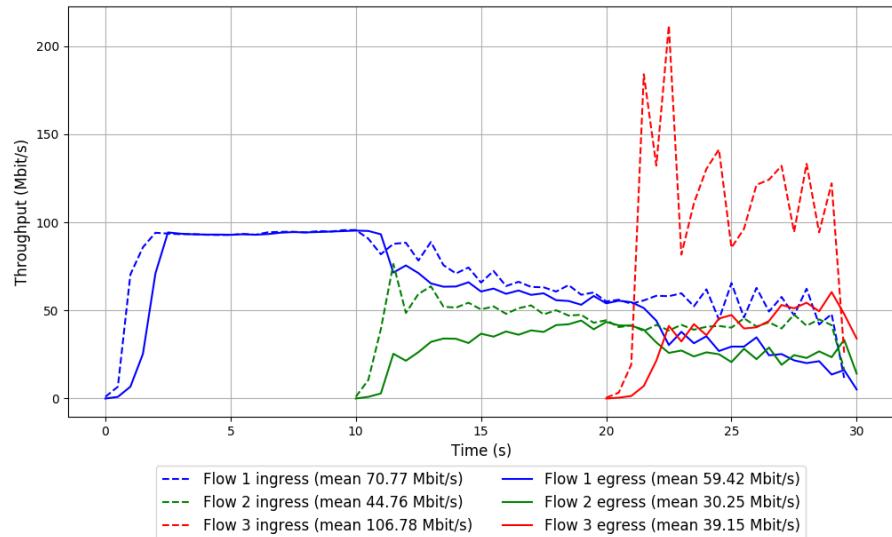


Run 1: Statistics of Indigo

```
Start at: 2018-11-15 04:47:56
End at: 2018-11-15 04:48:26
Local clock offset: -10.204 ms
Remote clock offset: 9.564 ms

# Below is generated by plot.py at 2018-11-15 06:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.94 Mbit/s
95th percentile per-packet one-way delay: 120.614 ms
Loss rate: 31.68%
-- Flow 1:
Average throughput: 59.42 Mbit/s
95th percentile per-packet one-way delay: 114.663 ms
Loss rate: 15.95%
-- Flow 2:
Average throughput: 30.25 Mbit/s
95th percentile per-packet one-way delay: 120.920 ms
Loss rate: 32.32%
-- Flow 3:
Average throughput: 39.15 Mbit/s
95th percentile per-packet one-way delay: 115.290 ms
Loss rate: 63.33%
```

Run 1: Report of Indigo — Data Link

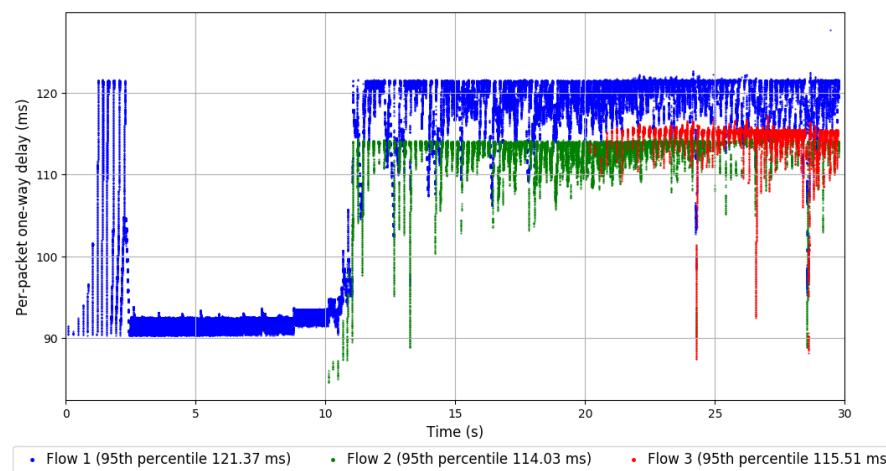
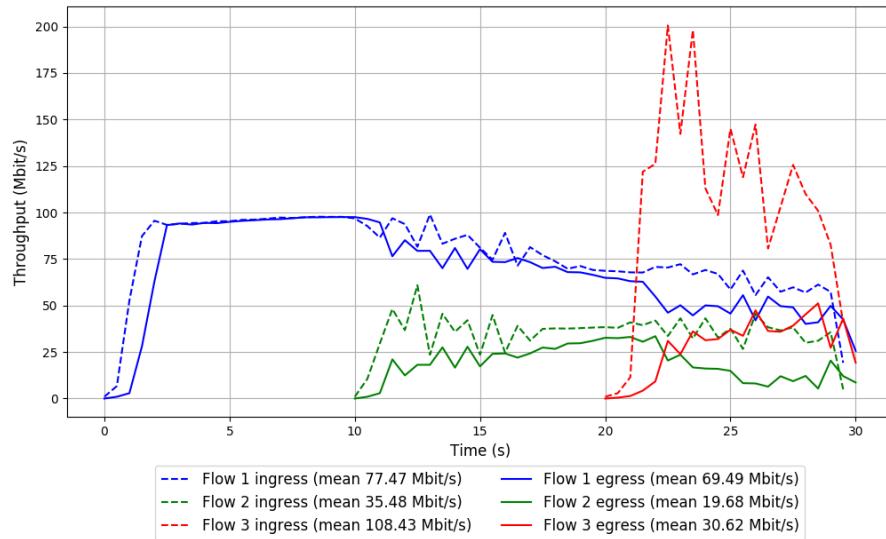


Run 2: Statistics of Indigo

```
Start at: 2018-11-15 05:10:42
End at: 2018-11-15 05:11:12
Local clock offset: -4.225 ms
Remote clock offset: 8.454 ms

# Below is generated by plot.py at 2018-11-15 06:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.38 Mbit/s
95th percentile per-packet one-way delay: 121.274 ms
Loss rate: 31.95%
-- Flow 1:
Average throughput: 69.49 Mbit/s
95th percentile per-packet one-way delay: 121.374 ms
Loss rate: 10.22%
-- Flow 2:
Average throughput: 19.68 Mbit/s
95th percentile per-packet one-way delay: 114.030 ms
Loss rate: 44.45%
-- Flow 3:
Average throughput: 30.62 Mbit/s
95th percentile per-packet one-way delay: 115.511 ms
Loss rate: 71.75%
```

Run 2: Report of Indigo — Data Link

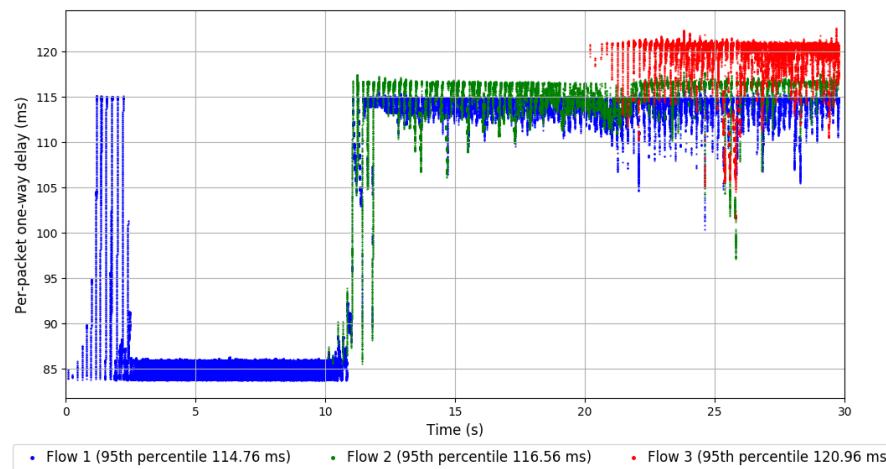
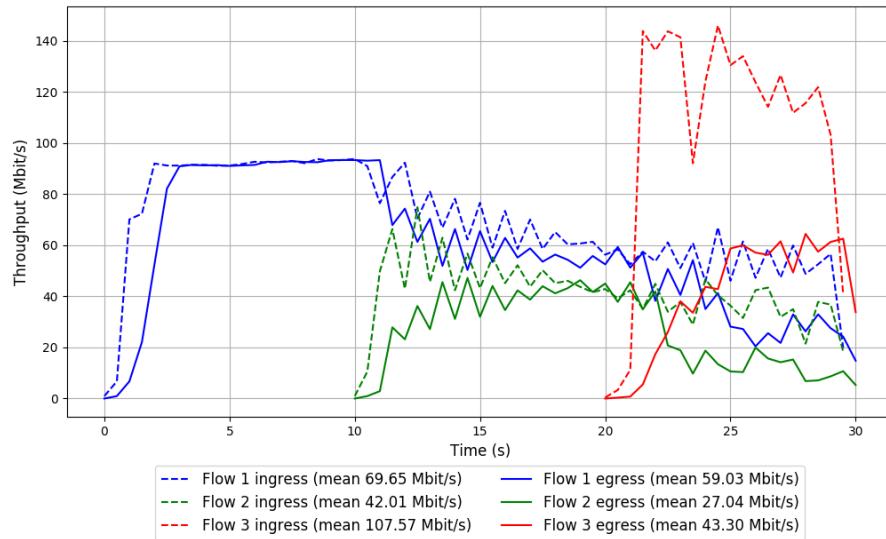


Run 3: Statistics of Indigo

```
Start at: 2018-11-15 05:33:41
End at: 2018-11-15 05:34:11
Local clock offset: -5.196 ms
Remote clock offset: 9.604 ms

# Below is generated by plot.py at 2018-11-15 06:46:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.88 Mbit/s
95th percentile per-packet one-way delay: 120.700 ms
Loss rate: 31.18%
-- Flow 1:
Average throughput: 59.03 Mbit/s
95th percentile per-packet one-way delay: 114.764 ms
Loss rate: 15.16%
-- Flow 2:
Average throughput: 27.04 Mbit/s
95th percentile per-packet one-way delay: 116.564 ms
Loss rate: 35.54%
-- Flow 3:
Average throughput: 43.30 Mbit/s
95th percentile per-packet one-way delay: 120.960 ms
Loss rate: 59.77%
```

Run 3: Report of Indigo — Data Link

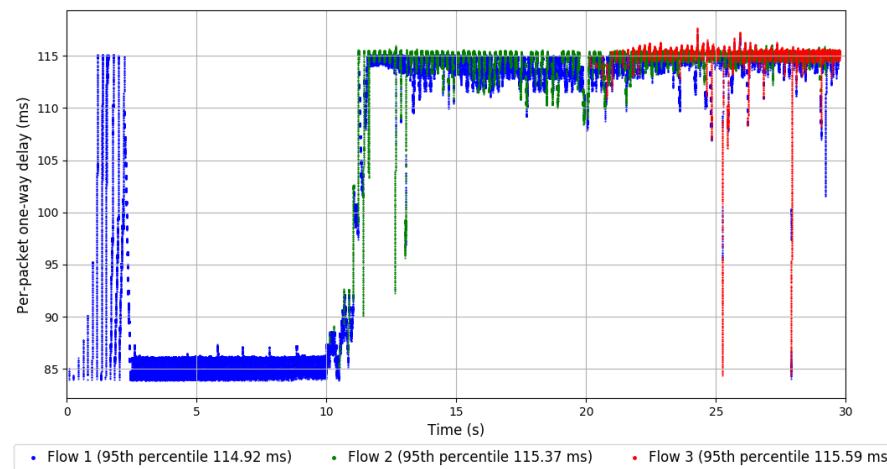
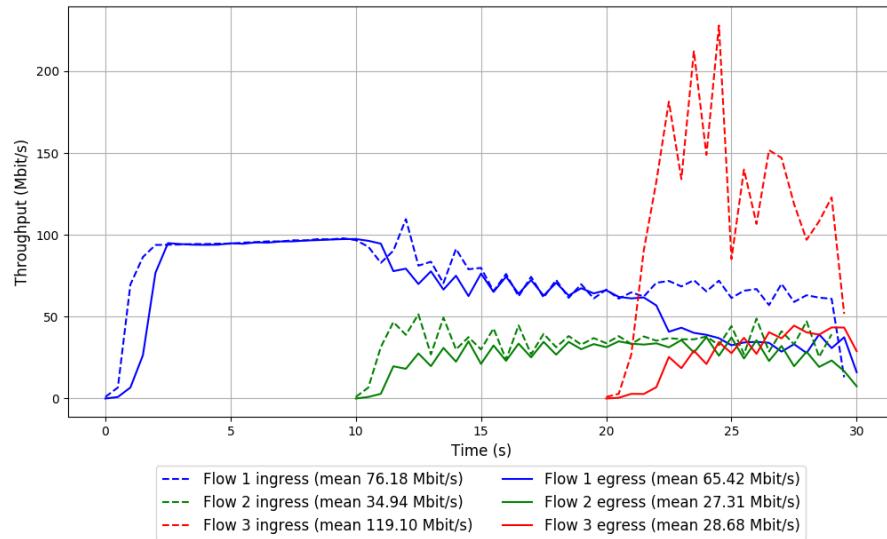


Run 4: Statistics of Indigo

```
Start at: 2018-11-15 05:56:27
End at: 2018-11-15 05:56:57
Local clock offset: -8.076 ms
Remote clock offset: 9.698 ms

# Below is generated by plot.py at 2018-11-15 06:46:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.52 Mbit/s
95th percentile per-packet one-way delay: 115.366 ms
Loss rate: 32.67%
-- Flow 1:
Average throughput: 65.42 Mbit/s
95th percentile per-packet one-way delay: 114.924 ms
Loss rate: 14.04%
-- Flow 2:
Average throughput: 27.31 Mbit/s
95th percentile per-packet one-way delay: 115.372 ms
Loss rate: 21.72%
-- Flow 3:
Average throughput: 28.68 Mbit/s
95th percentile per-packet one-way delay: 115.586 ms
Loss rate: 75.92%
```

Run 4: Report of Indigo — Data Link

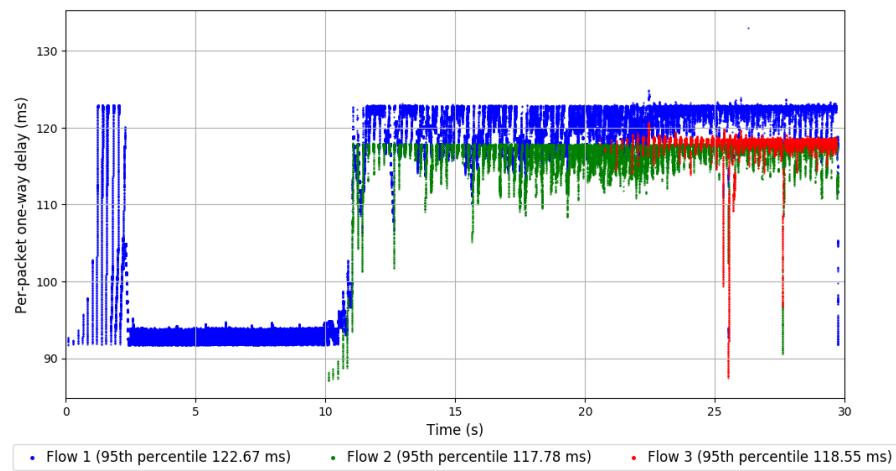
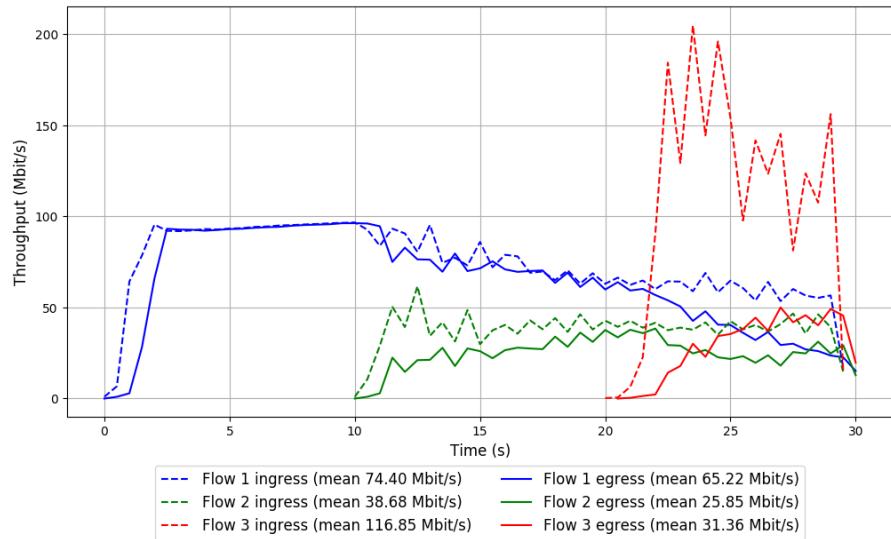


Run 5: Statistics of Indigo

```
Start at: 2018-11-15 06:19:16
End at: 2018-11-15 06:19:46
Local clock offset: -8.796 ms
Remote clock offset: 10.443 ms

# Below is generated by plot.py at 2018-11-15 06:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.95 Mbit/s
95th percentile per-packet one-way delay: 122.644 ms
Loss rate: 32.30%
-- Flow 1:
Average throughput: 65.22 Mbit/s
95th percentile per-packet one-way delay: 122.671 ms
Loss rate: 12.34%
-- Flow 2:
Average throughput: 25.85 Mbit/s
95th percentile per-packet one-way delay: 117.784 ms
Loss rate: 33.07%
-- Flow 3:
Average throughput: 31.36 Mbit/s
95th percentile per-packet one-way delay: 118.546 ms
Loss rate: 73.16%
```

Run 5: Report of Indigo — Data Link

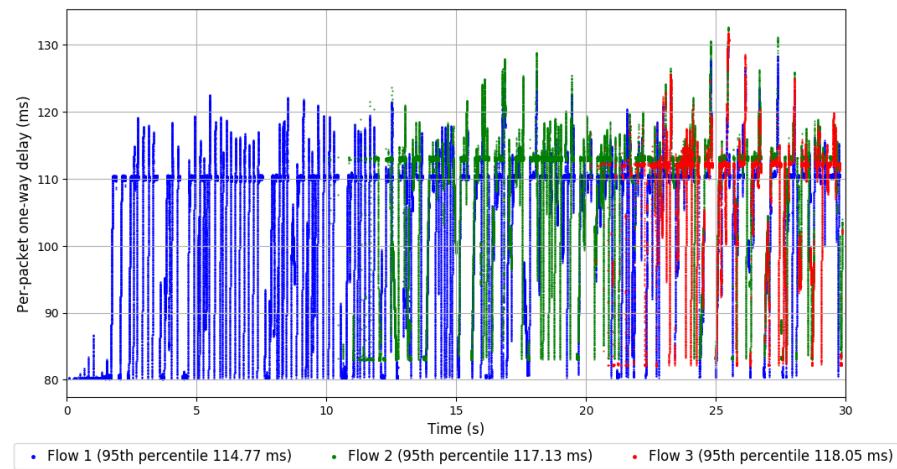
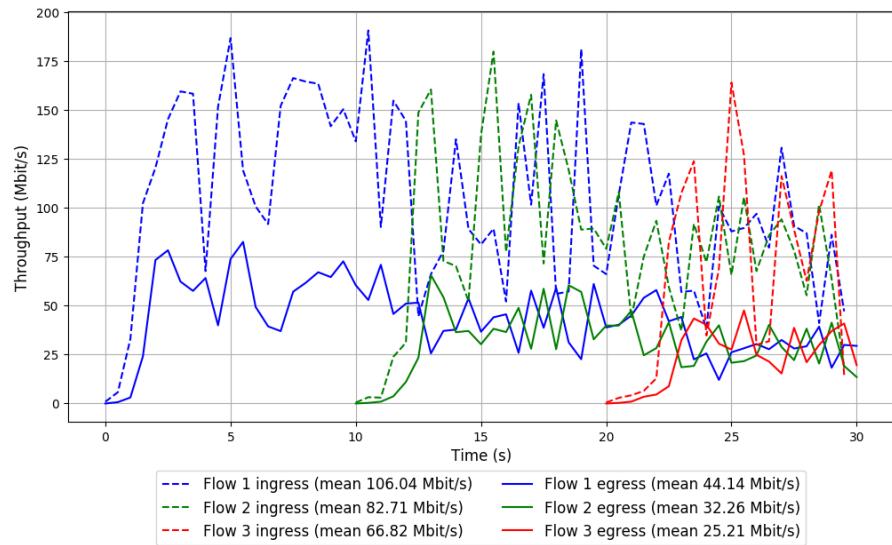


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-11-15 05:01:38
End at: 2018-11-15 05:02:08
Local clock offset: -8.3 ms
Remote clock offset: 4.694 ms

# Below is generated by plot.py at 2018-11-15 06:46:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.59 Mbit/s
95th percentile per-packet one-way delay: 115.847 ms
Loss rate: 59.61%
-- Flow 1:
Average throughput: 44.14 Mbit/s
95th percentile per-packet one-way delay: 114.773 ms
Loss rate: 58.33%
-- Flow 2:
Average throughput: 32.26 Mbit/s
95th percentile per-packet one-way delay: 117.129 ms
Loss rate: 61.01%
-- Flow 3:
Average throughput: 25.21 Mbit/s
95th percentile per-packet one-way delay: 118.049 ms
Loss rate: 62.31%
```

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

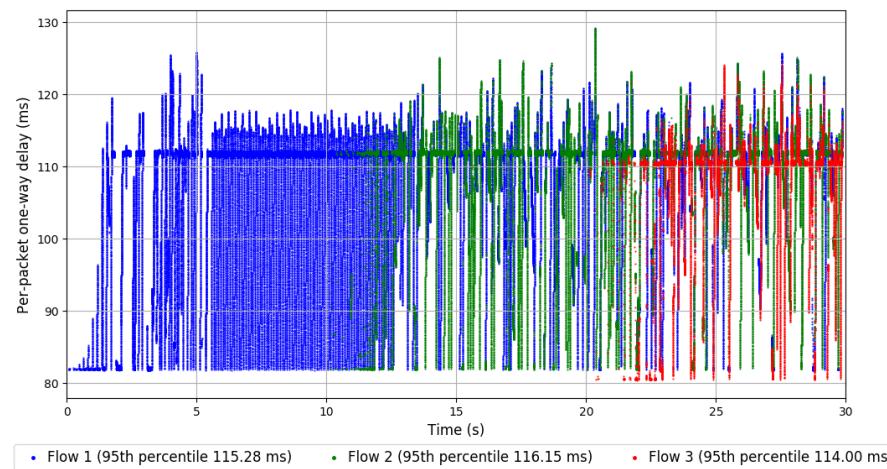
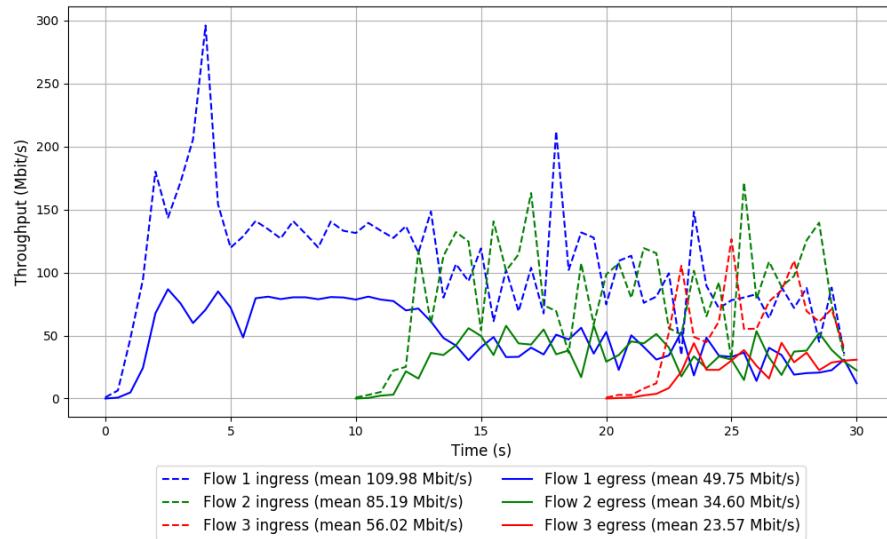


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-11-15 05:24:34
End at: 2018-11-15 05:25:04
Local clock offset: -3.233 ms
Remote clock offset: 5.818 ms

# Below is generated by plot.py at 2018-11-15 06:46:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.36 Mbit/s
95th percentile per-packet one-way delay: 115.416 ms
Loss rate: 56.46%
-- Flow 1:
Average throughput: 49.75 Mbit/s
95th percentile per-packet one-way delay: 115.280 ms
Loss rate: 54.73%
-- Flow 2:
Average throughput: 34.60 Mbit/s
95th percentile per-packet one-way delay: 116.149 ms
Loss rate: 59.36%
-- Flow 3:
Average throughput: 23.57 Mbit/s
95th percentile per-packet one-way delay: 113.997 ms
Loss rate: 57.92%
```

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

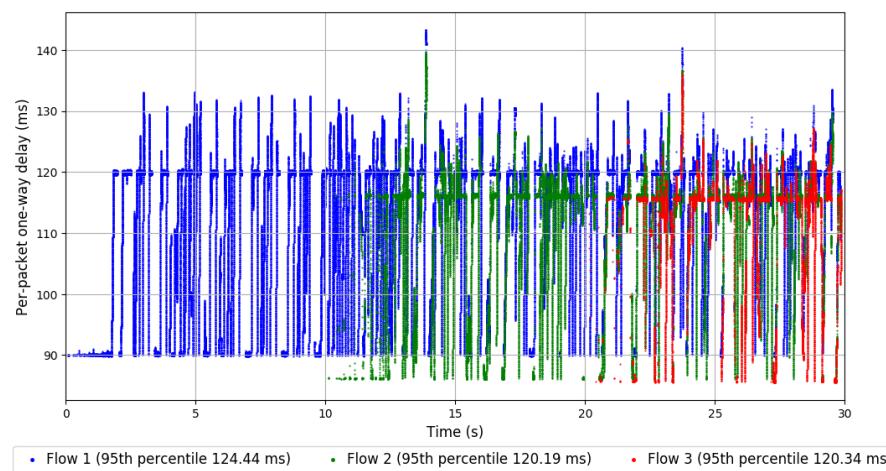
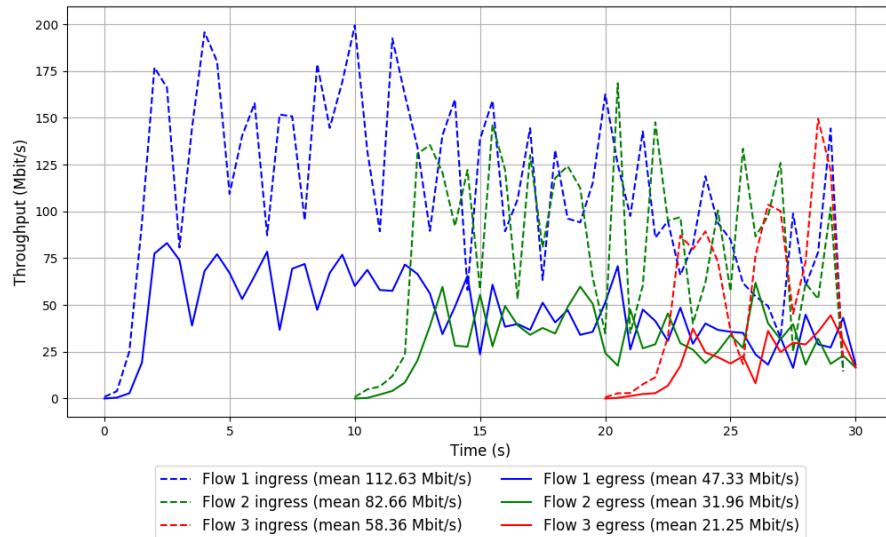


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-11-15 05:47:23
End at: 2018-11-15 05:47:53
Local clock offset: -7.297 ms
Remote clock offset: 9.497 ms

# Below is generated by plot.py at 2018-11-15 06:46:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.39 Mbit/s
95th percentile per-packet one-way delay: 123.155 ms
Loss rate: 59.51%
-- Flow 1:
Average throughput: 47.33 Mbit/s
95th percentile per-packet one-way delay: 124.444 ms
Loss rate: 57.95%
-- Flow 2:
Average throughput: 31.96 Mbit/s
95th percentile per-packet one-way delay: 120.186 ms
Loss rate: 61.29%
-- Flow 3:
Average throughput: 21.25 Mbit/s
95th percentile per-packet one-way delay: 120.340 ms
Loss rate: 63.61%
```

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

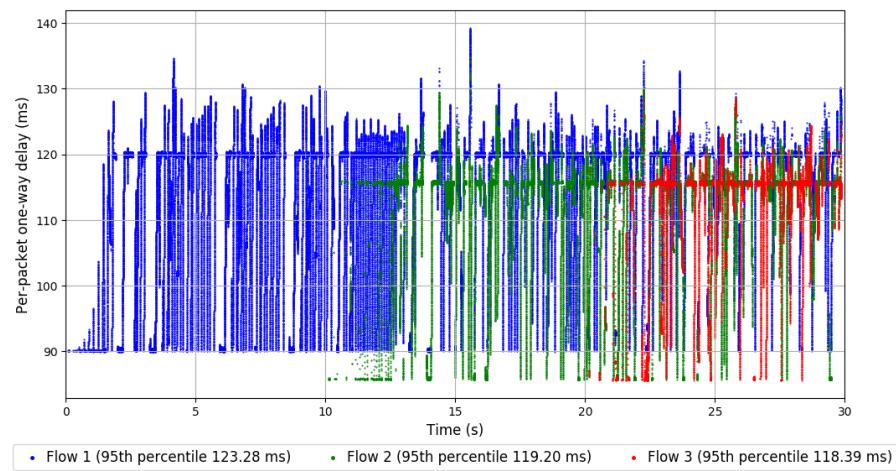
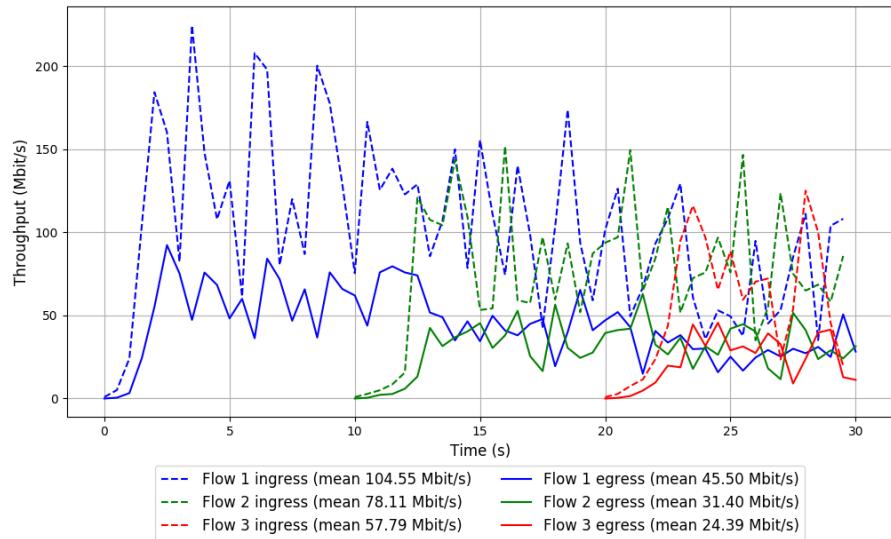


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-11-15 06:10:11
End at: 2018-11-15 06:10:41
Local clock offset: -7.663 ms
Remote clock offset: 9.604 ms

# Below is generated by plot.py at 2018-11-15 06:46:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.24 Mbit/s
95th percentile per-packet one-way delay: 122.169 ms
Loss rate: 57.54%
-- Flow 1:
Average throughput: 45.50 Mbit/s
95th percentile per-packet one-way delay: 123.277 ms
Loss rate: 56.43%
-- Flow 2:
Average throughput: 31.40 Mbit/s
95th percentile per-packet one-way delay: 119.196 ms
Loss rate: 59.72%
-- Flow 3:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 118.385 ms
Loss rate: 57.68%
```

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

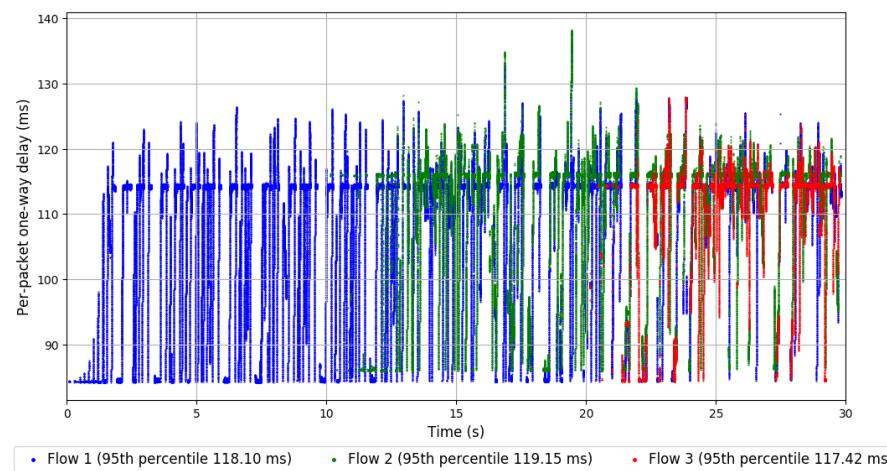
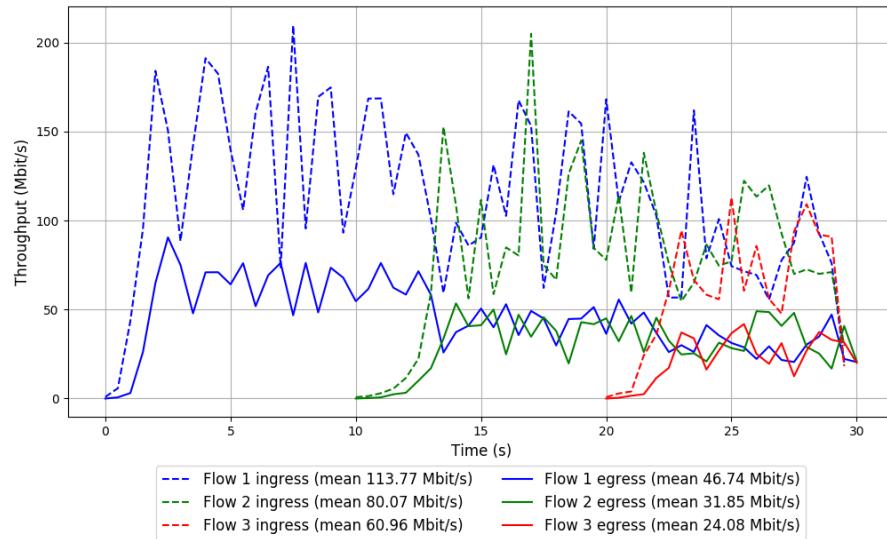


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-11-15 06:32:59
End at: 2018-11-15 06:33:29
Local clock offset: -4.075 ms
Remote clock offset: 9.32 ms

# Below is generated by plot.py at 2018-11-15 06:47:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.58 Mbit/s
95th percentile per-packet one-way delay: 118.388 ms
Loss rate: 59.44%
-- Flow 1:
Average throughput: 46.74 Mbit/s
95th percentile per-packet one-way delay: 118.103 ms
Loss rate: 58.88%
-- Flow 2:
Average throughput: 31.85 Mbit/s
95th percentile per-packet one-way delay: 119.150 ms
Loss rate: 60.25%
-- Flow 3:
Average throughput: 24.08 Mbit/s
95th percentile per-packet one-way delay: 117.418 ms
Loss rate: 60.44%
```

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

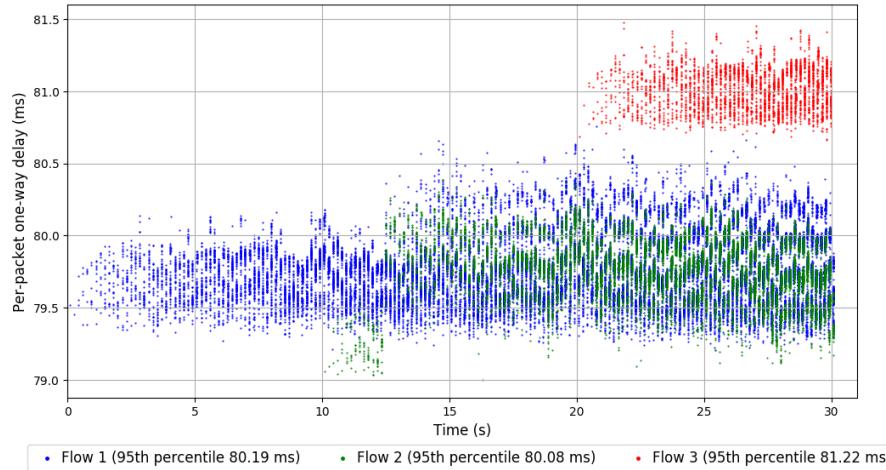
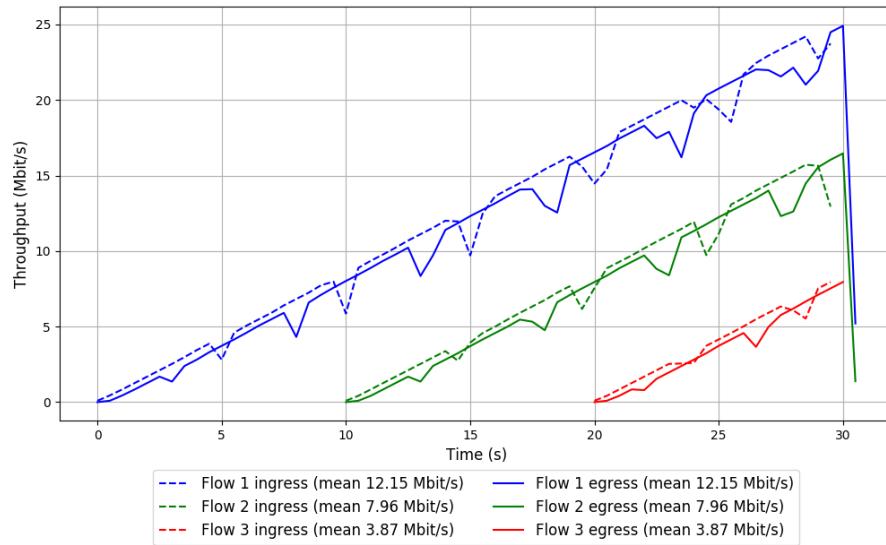


Run 1: Statistics of LEDBAT

```
Start at: 2018-11-15 04:50:29
End at: 2018-11-15 04:50:59
Local clock offset: -10.579 ms
Remote clock offset: 4.757 ms

# Below is generated by plot.py at 2018-11-15 06:47:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.73 Mbit/s
95th percentile per-packet one-way delay: 80.905 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.15 Mbit/s
95th percentile per-packet one-way delay: 80.191 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 80.076 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 81.216 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

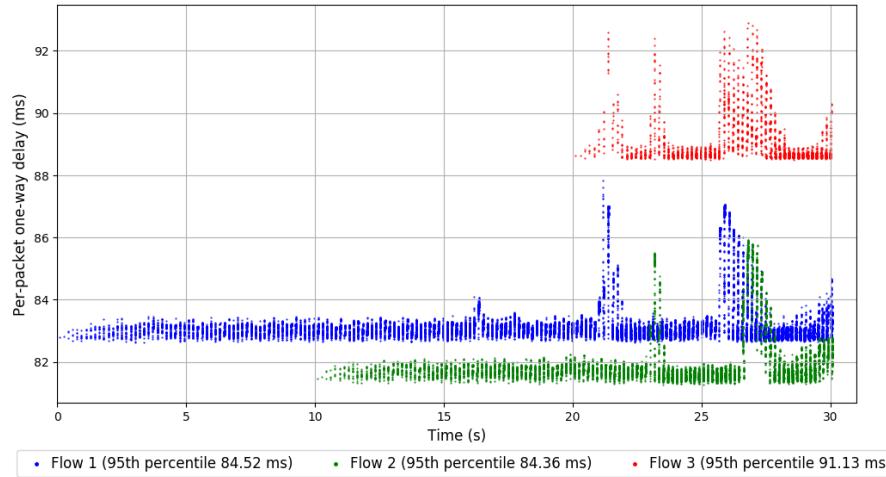
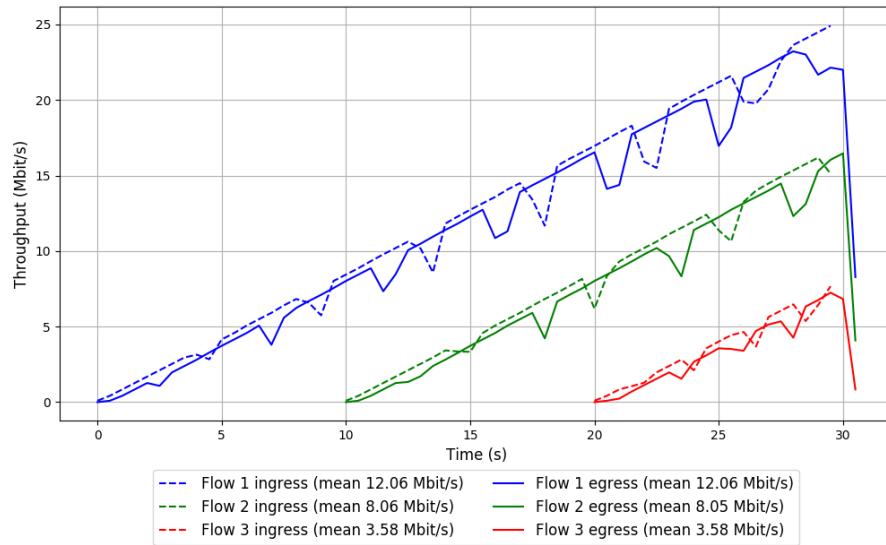


Run 2: Statistics of LEDBAT

```
Start at: 2018-11-15 05:13:15
End at: 2018-11-15 05:13:45
Local clock offset: -4.602 ms
Remote clock offset: 5.879 ms

# Below is generated by plot.py at 2018-11-15 06:47:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.61 Mbit/s
95th percentile per-packet one-way delay: 88.613 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.06 Mbit/s
95th percentile per-packet one-way delay: 84.523 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.05 Mbit/s
95th percentile per-packet one-way delay: 84.360 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 91.126 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

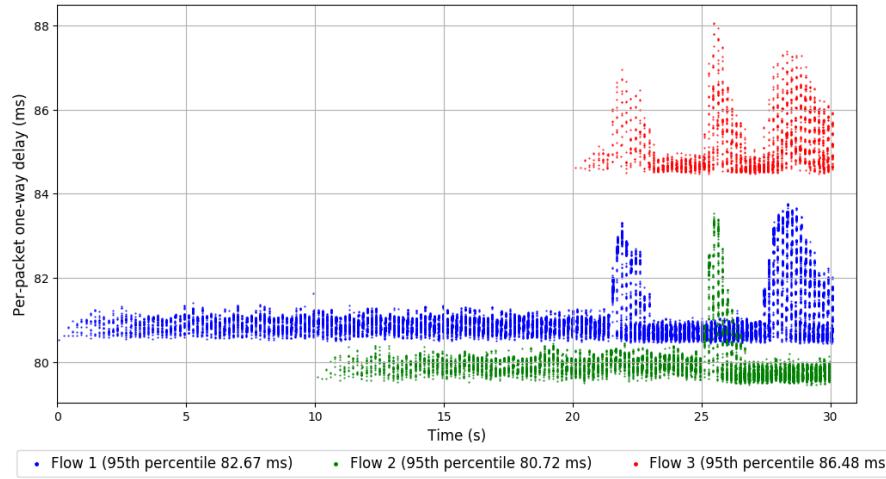
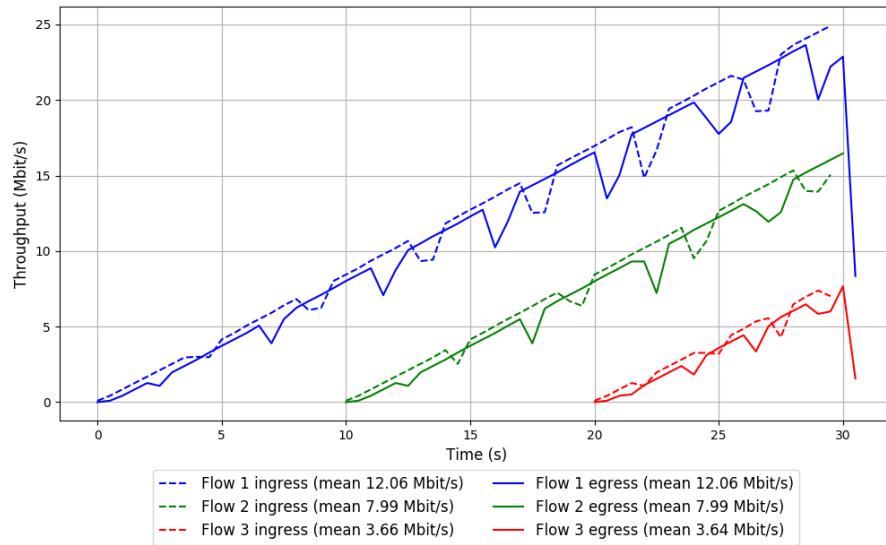


Run 3: Statistics of LEDBAT

```
Start at: 2018-11-15 05:36:13
End at: 2018-11-15 05:36:43
Local clock offset: -5.758 ms
Remote clock offset: 4.559 ms

# Below is generated by plot.py at 2018-11-15 06:47:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.57 Mbit/s
95th percentile per-packet one-way delay: 84.643 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 12.06 Mbit/s
95th percentile per-packet one-way delay: 82.669 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 80.722 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 86.480 ms
Loss rate: 0.39%
```

Run 3: Report of LEDBAT — Data Link

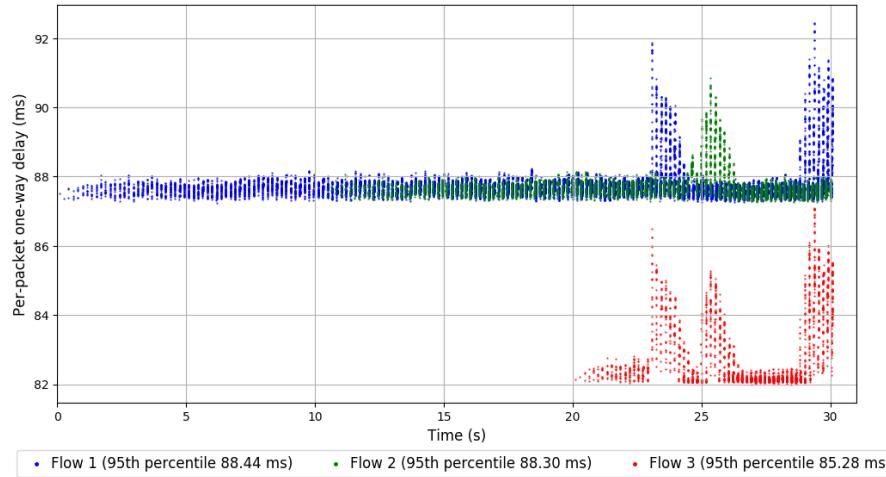
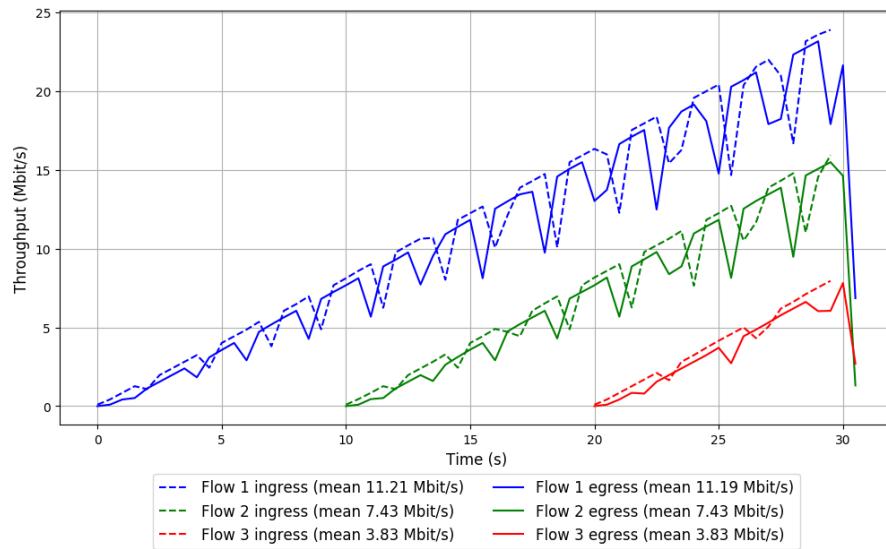


Run 4: Statistics of LEDBAT

```
Start at: 2018-11-15 05:59:00
End at: 2018-11-15 05:59:30
Local clock offset: -8.655 ms
Remote clock offset: 4.711 ms

# Below is generated by plot.py at 2018-11-15 06:47:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.40 Mbit/s
95th percentile per-packet one-way delay: 88.289 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 11.19 Mbit/s
95th percentile per-packet one-way delay: 88.435 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 7.43 Mbit/s
95th percentile per-packet one-way delay: 88.301 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 85.285 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link

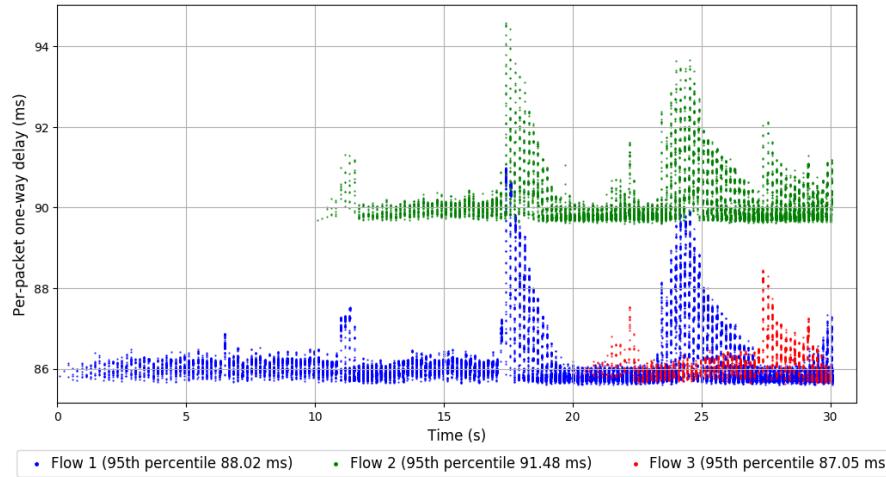
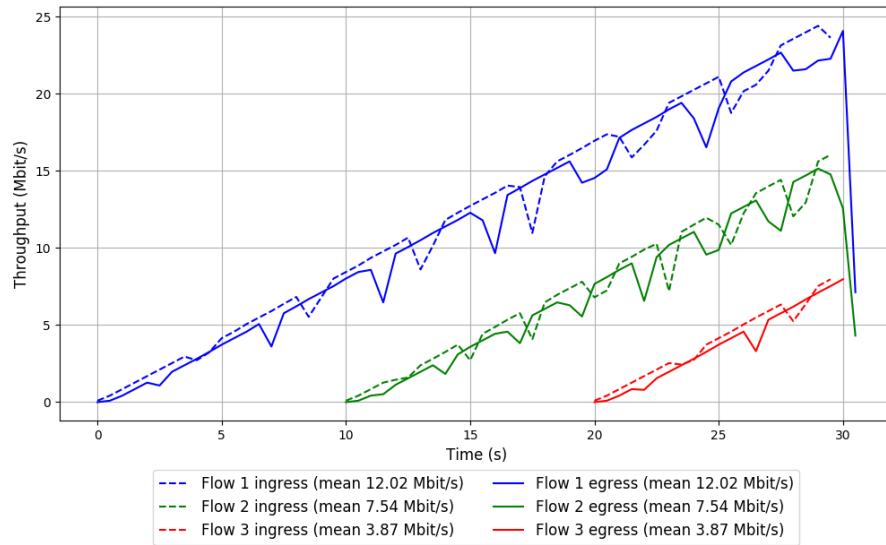


Run 5: Statistics of LEDBAT

```
Start at: 2018-11-15 06:21:48
End at: 2018-11-15 06:22:18
Local clock offset: -8.136 ms
Remote clock offset: 9.442 ms

# Below is generated by plot.py at 2018-11-15 06:47:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.31 Mbit/s
95th percentile per-packet one-way delay: 90.565 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.02 Mbit/s
95th percentile per-packet one-way delay: 88.015 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 91.480 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 87.050 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

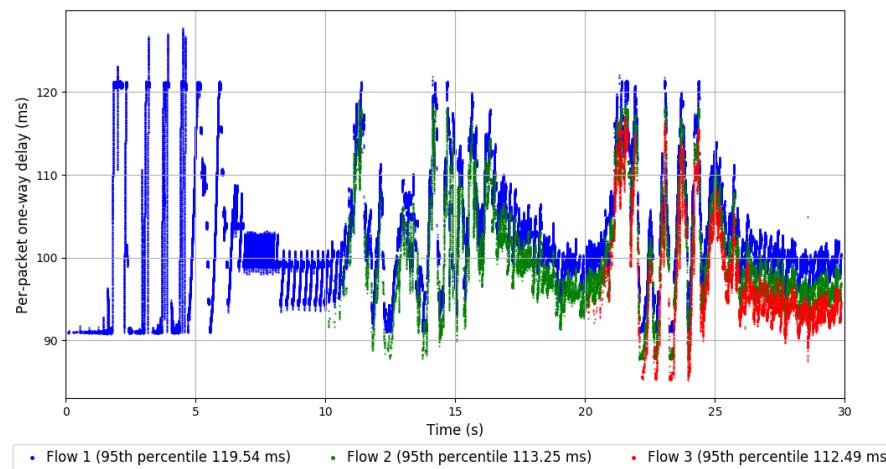
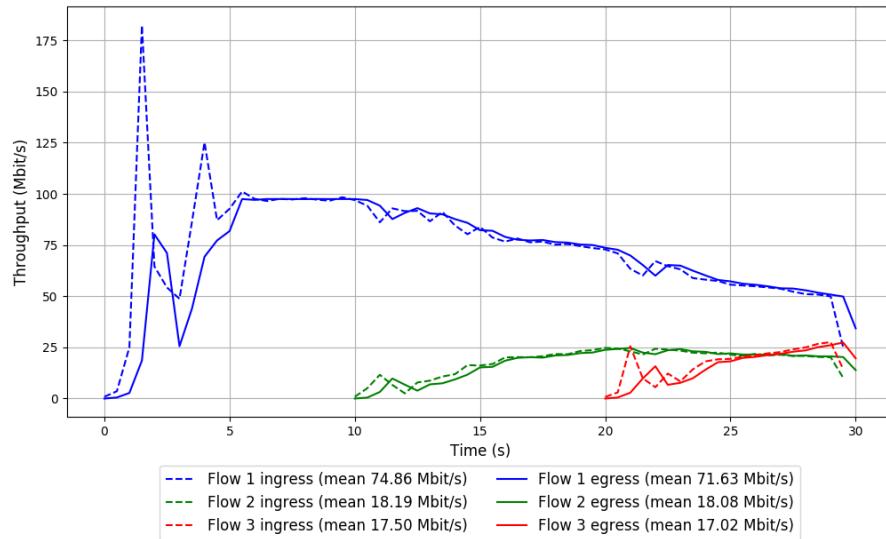


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-11-15 05:02:56
End at: 2018-11-15 05:03:26
Local clock offset: -7.462 ms
Remote clock offset: 9.547 ms

# Below is generated by plot.py at 2018-11-15 06:47:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.18 Mbit/s
95th percentile per-packet one-way delay: 118.052 ms
Loss rate: 3.72%
-- Flow 1:
Average throughput: 71.63 Mbit/s
95th percentile per-packet one-way delay: 119.541 ms
Loss rate: 4.30%
-- Flow 2:
Average throughput: 18.08 Mbit/s
95th percentile per-packet one-way delay: 113.250 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 17.02 Mbit/s
95th percentile per-packet one-way delay: 112.493 ms
Loss rate: 2.70%
```

Run 1: Report of Indigo-Muses — Data Link

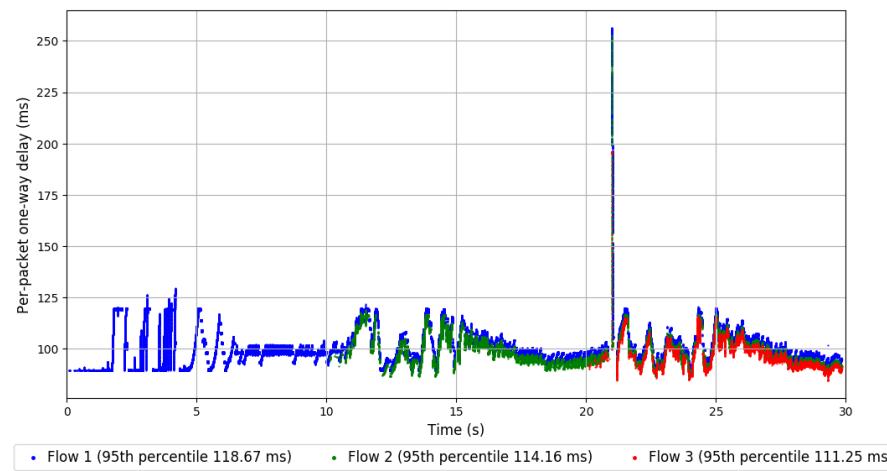
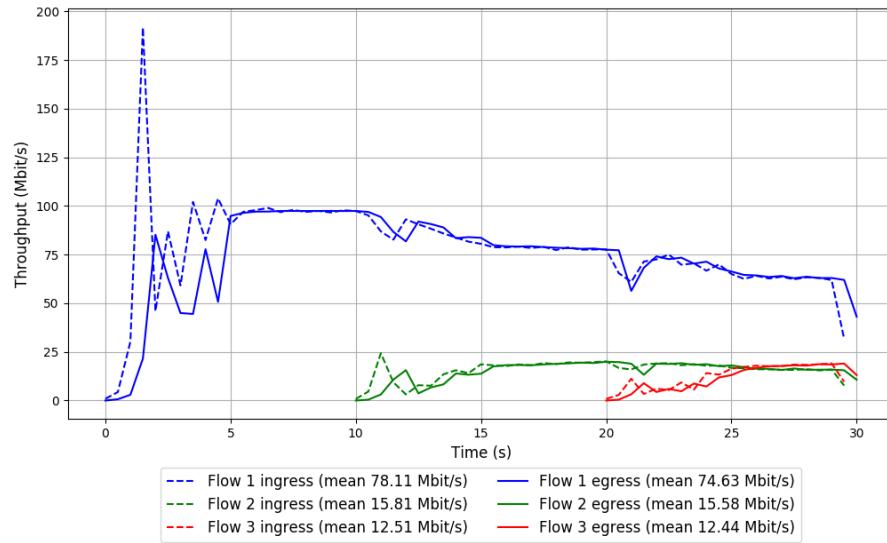


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-11-15 05:25:54
End at: 2018-11-15 05:26:24
Local clock offset: -4.009 ms
Remote clock offset: 8.433 ms

# Below is generated by plot.py at 2018-11-15 06:47:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.01 Mbit/s
95th percentile per-packet one-way delay: 117.634 ms
Loss rate: 3.95%
-- Flow 1:
Average throughput: 74.63 Mbit/s
95th percentile per-packet one-way delay: 118.669 ms
Loss rate: 4.46%
-- Flow 2:
Average throughput: 15.58 Mbit/s
95th percentile per-packet one-way delay: 114.164 ms
Loss rate: 1.45%
-- Flow 3:
Average throughput: 12.44 Mbit/s
95th percentile per-packet one-way delay: 111.252 ms
Loss rate: 0.52%
```

Run 2: Report of Indigo-Muses — Data Link

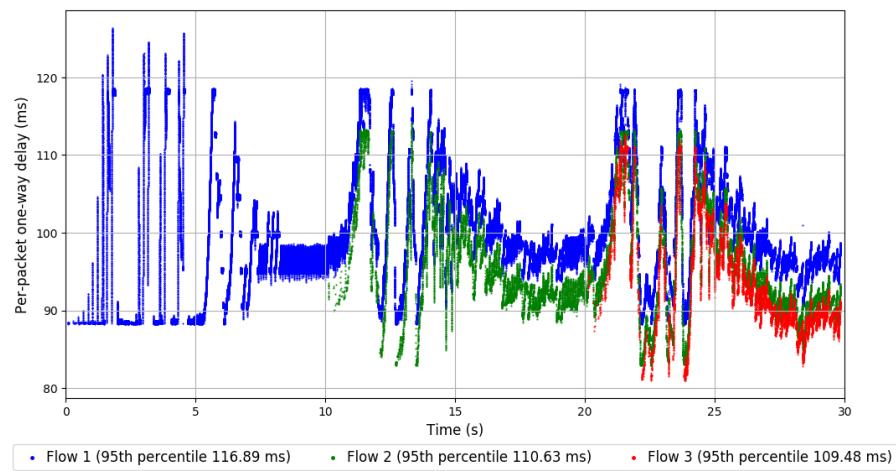
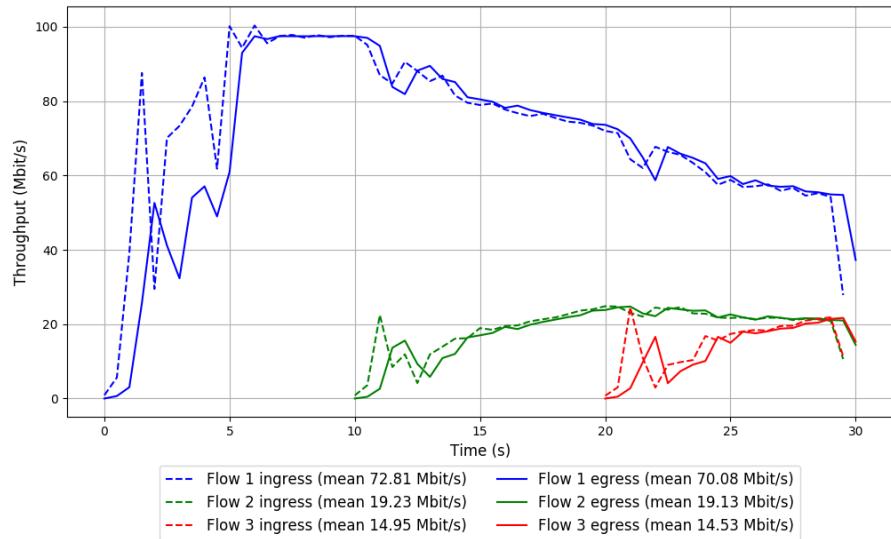


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-11-15 05:48:42
End at: 2018-11-15 05:49:12
Local clock offset: -8.112 ms
Remote clock offset: 5.705 ms

# Below is generated by plot.py at 2018-11-15 06:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.51 Mbit/s
95th percentile per-packet one-way delay: 115.038 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 70.08 Mbit/s
95th percentile per-packet one-way delay: 116.888 ms
Loss rate: 3.74%
-- Flow 2:
Average throughput: 19.13 Mbit/s
95th percentile per-packet one-way delay: 110.629 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 14.53 Mbit/s
95th percentile per-packet one-way delay: 109.476 ms
Loss rate: 2.85%
```

Run 3: Report of Indigo-Muses — Data Link

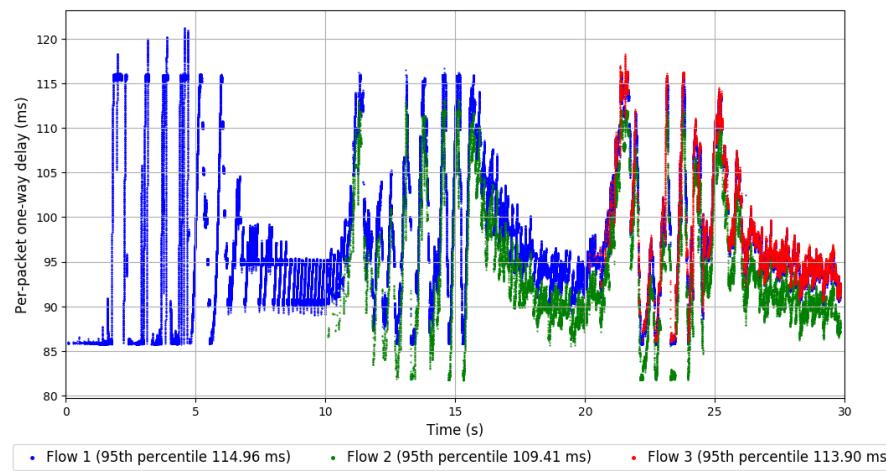
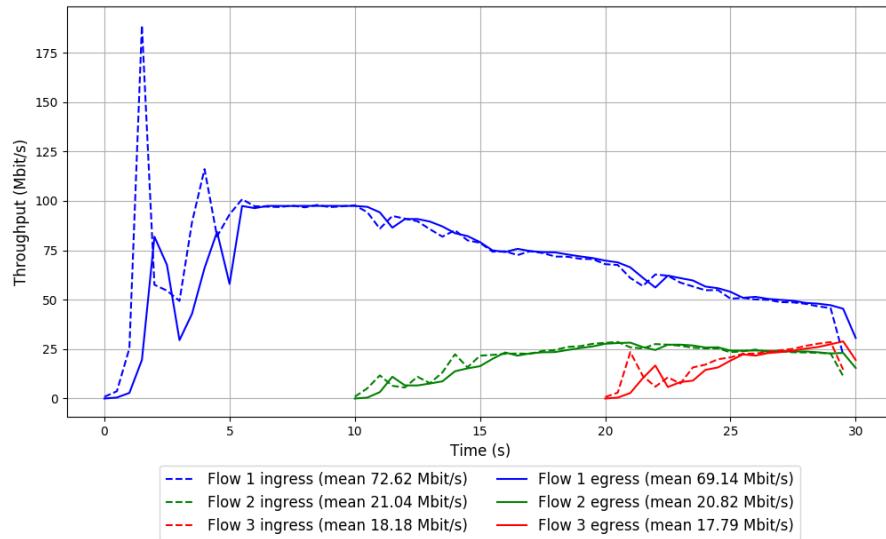


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-11-15 06:11:30
End at: 2018-11-15 06:12:00
Local clock offset: -7.691 ms
Remote clock offset: 5.652 ms

# Below is generated by plot.py at 2018-11-15 06:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.75 Mbit/s
95th percentile per-packet one-way delay: 113.792 ms
Loss rate: 4.05%
-- Flow 1:
Average throughput: 69.14 Mbit/s
95th percentile per-packet one-way delay: 114.958 ms
Loss rate: 4.79%
-- Flow 2:
Average throughput: 20.82 Mbit/s
95th percentile per-packet one-way delay: 109.413 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 17.79 Mbit/s
95th percentile per-packet one-way delay: 113.898 ms
Loss rate: 2.25%
```

Run 4: Report of Indigo-Muses — Data Link

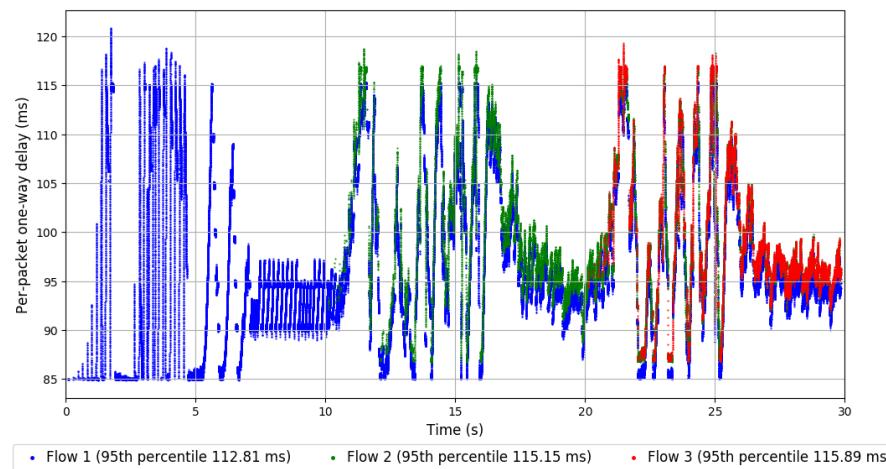
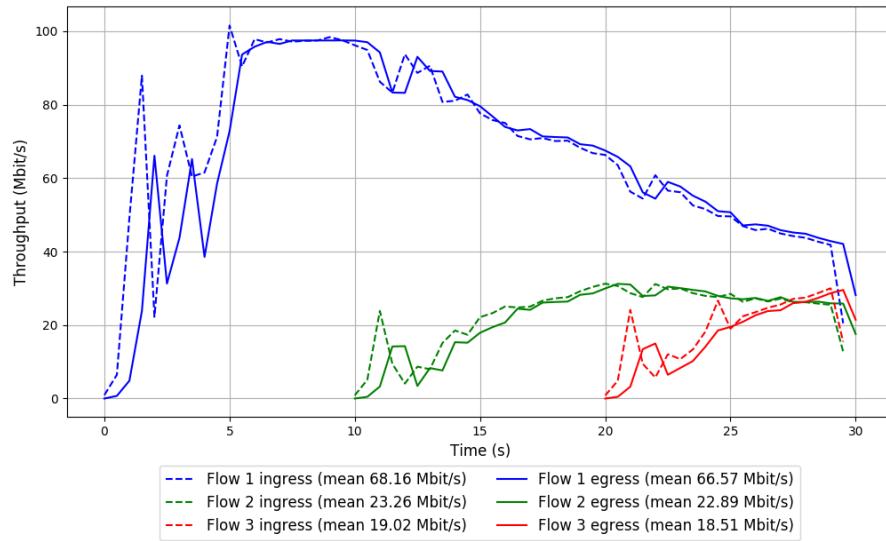


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-11-15 06:34:17
End at: 2018-11-15 06:34:47
Local clock offset: -4.213 ms
Remote clock offset: 9.293 ms

# Below is generated by plot.py at 2018-11-15 06:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.79 Mbit/s
95th percentile per-packet one-way delay: 113.337 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 66.57 Mbit/s
95th percentile per-packet one-way delay: 112.811 ms
Loss rate: 2.32%
-- Flow 2:
Average throughput: 22.89 Mbit/s
95th percentile per-packet one-way delay: 115.151 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 18.51 Mbit/s
95th percentile per-packet one-way delay: 115.895 ms
Loss rate: 2.69%
```

Run 5: Report of Indigo-Muses — Data Link

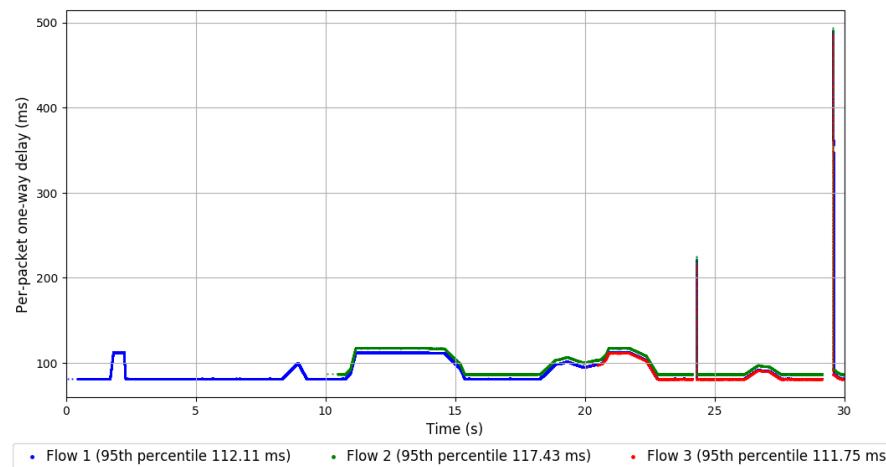
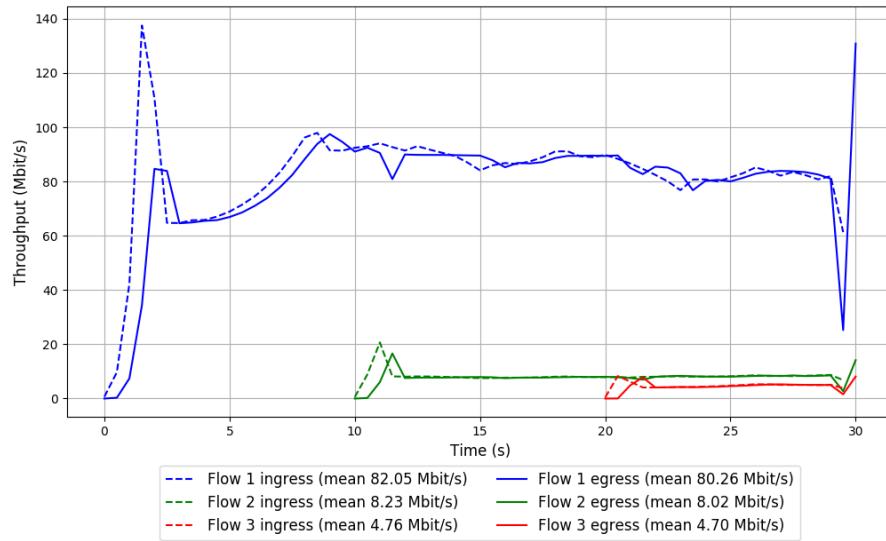


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-11-15 04:52:57
End at: 2018-11-15 04:53:27
Local clock offset: -10.94 ms
Remote clock offset: 4.604 ms

# Below is generated by plot.py at 2018-11-15 06:47:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.14 Mbit/s
95th percentile per-packet one-way delay: 112.160 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 80.26 Mbit/s
95th percentile per-packet one-way delay: 112.112 ms
Loss rate: 2.17%
-- Flow 2:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 117.428 ms
Loss rate: 2.58%
-- Flow 3:
Average throughput: 4.70 Mbit/s
95th percentile per-packet one-way delay: 111.754 ms
Loss rate: 1.50%
```

Run 1: Report of PCC-Allegro — Data Link

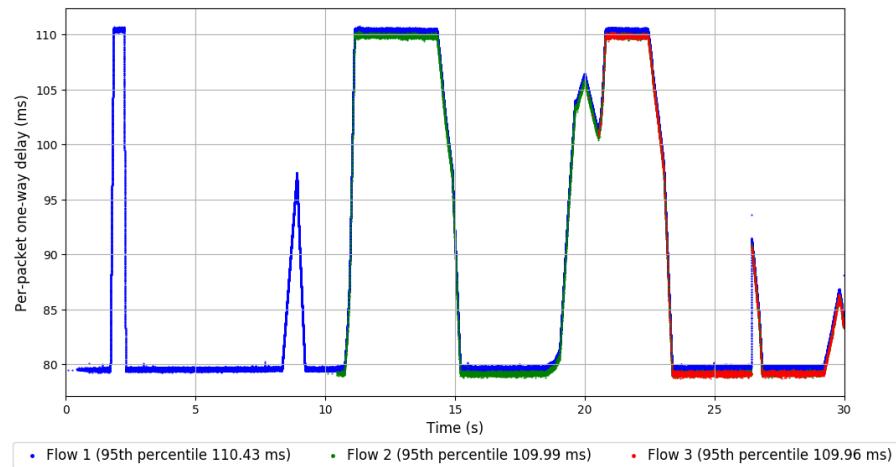
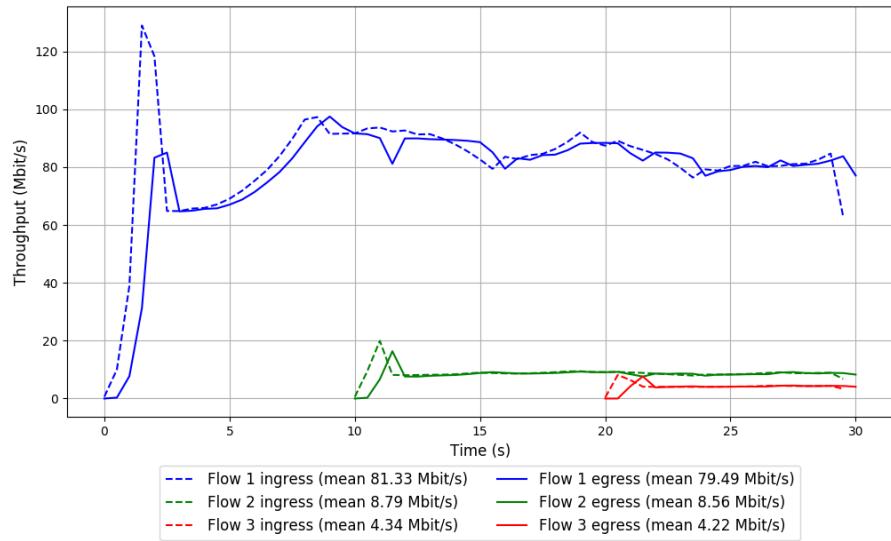


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-11-15 05:15:42
End at: 2018-11-15 05:16:12
Local clock offset: -3.569 ms
Remote clock offset: 4.593 ms

# Below is generated by plot.py at 2018-11-15 06:48:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.57 Mbit/s
95th percentile per-packet one-way delay: 110.426 ms
Loss rate: 2.27%
-- Flow 1:
Average throughput: 79.49 Mbit/s
95th percentile per-packet one-way delay: 110.434 ms
Loss rate: 2.24%
-- Flow 2:
Average throughput: 8.56 Mbit/s
95th percentile per-packet one-way delay: 109.988 ms
Loss rate: 2.59%
-- Flow 3:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 109.960 ms
Loss rate: 2.90%
```

Run 2: Report of PCC-Allegro — Data Link

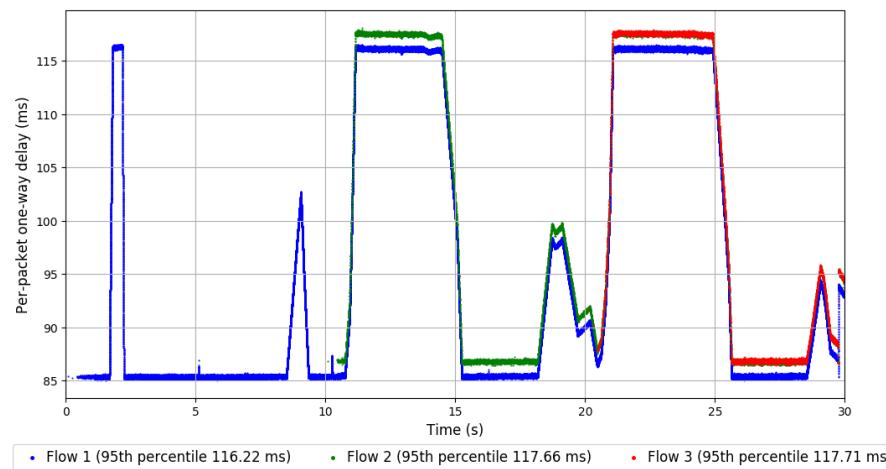
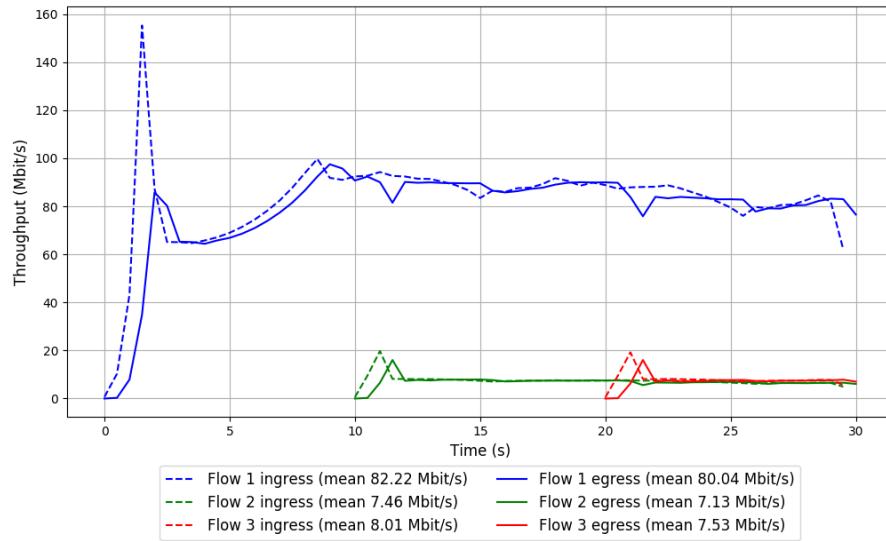


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-11-15 05:38:41
End at: 2018-11-15 05:39:11
Local clock offset: -6.123 ms
Remote clock offset: 10.708 ms

# Below is generated by plot.py at 2018-11-15 06:48:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.27 Mbit/s
95th percentile per-packet one-way delay: 116.291 ms
Loss rate: 2.82%
-- Flow 1:
Average throughput: 80.04 Mbit/s
95th percentile per-packet one-way delay: 116.222 ms
Loss rate: 2.62%
-- Flow 2:
Average throughput: 7.13 Mbit/s
95th percentile per-packet one-way delay: 117.655 ms
Loss rate: 4.37%
-- Flow 3:
Average throughput: 7.53 Mbit/s
95th percentile per-packet one-way delay: 117.711 ms
Loss rate: 5.99%
```

Run 3: Report of PCC-Allegro — Data Link

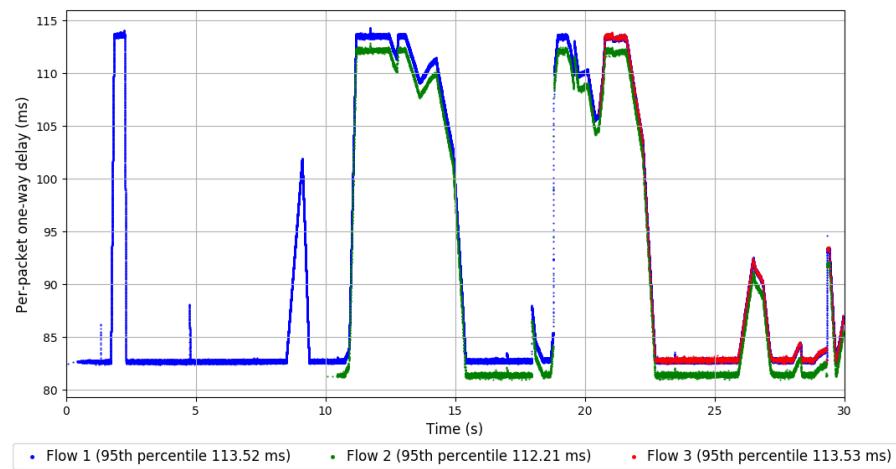
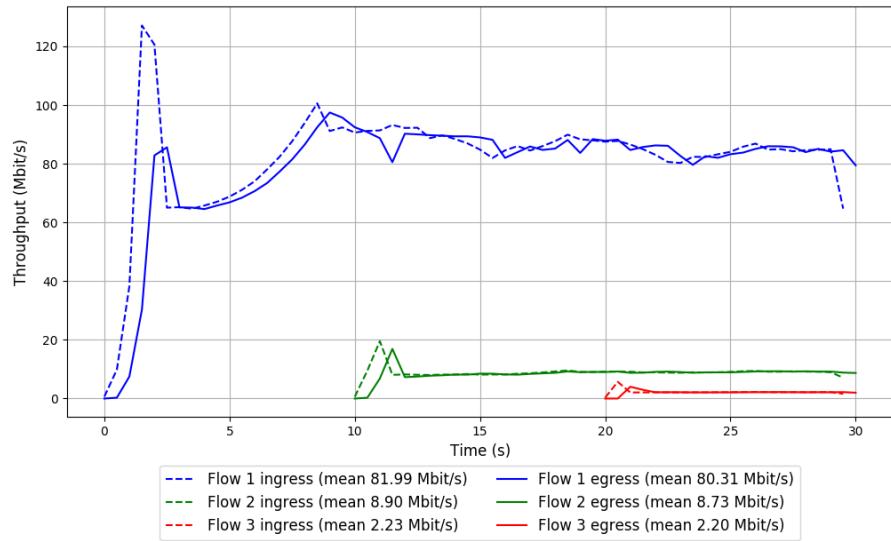


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-11-15 06:01:28
End at: 2018-11-15 06:01:58
Local clock offset: -8.516 ms
Remote clock offset: 5.84 ms

# Below is generated by plot.py at 2018-11-15 06:48:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.84 Mbit/s
95th percentile per-packet one-way delay: 113.514 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 80.31 Mbit/s
95th percentile per-packet one-way delay: 113.523 ms
Loss rate: 2.03%
-- Flow 2:
Average throughput: 8.73 Mbit/s
95th percentile per-packet one-way delay: 112.206 ms
Loss rate: 1.86%
-- Flow 3:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 113.535 ms
Loss rate: 1.40%
```

Run 4: Report of PCC-Allegro — Data Link

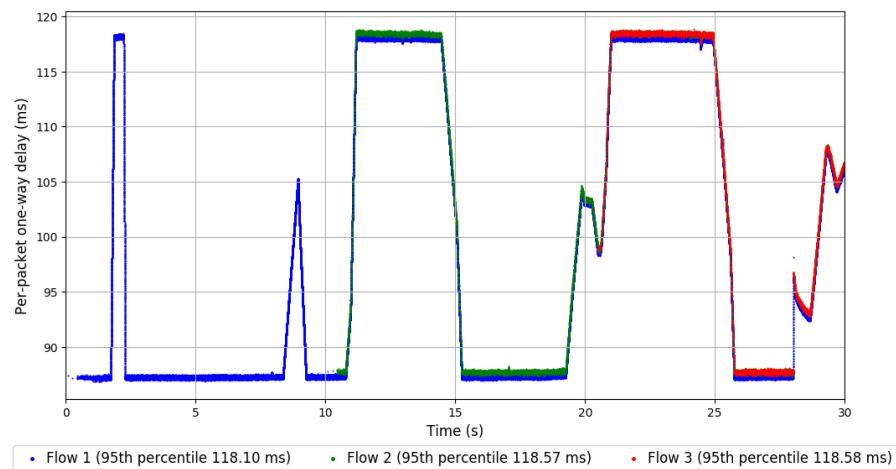
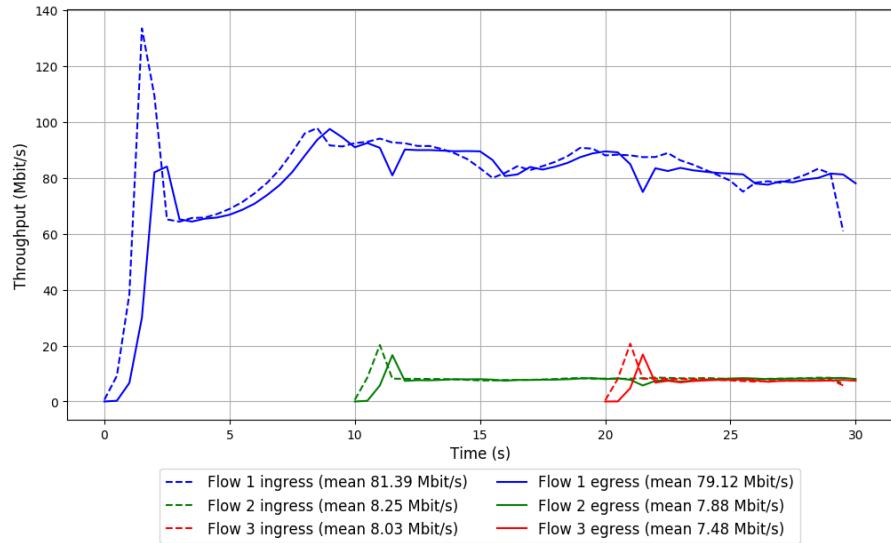


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-11-15 06:24:16
End at: 2018-11-15 06:24:46
Local clock offset: -9.032 ms
Remote clock offset: 10.501 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.83 Mbit/s
95th percentile per-packet one-way delay: 118.164 ms
Loss rate: 2.95%
-- Flow 1:
Average throughput: 79.12 Mbit/s
95th percentile per-packet one-way delay: 118.098 ms
Loss rate: 2.72%
-- Flow 2:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 118.571 ms
Loss rate: 4.45%
-- Flow 3:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 118.579 ms
Loss rate: 6.72%
```

Run 5: Report of PCC-Allegro — Data Link

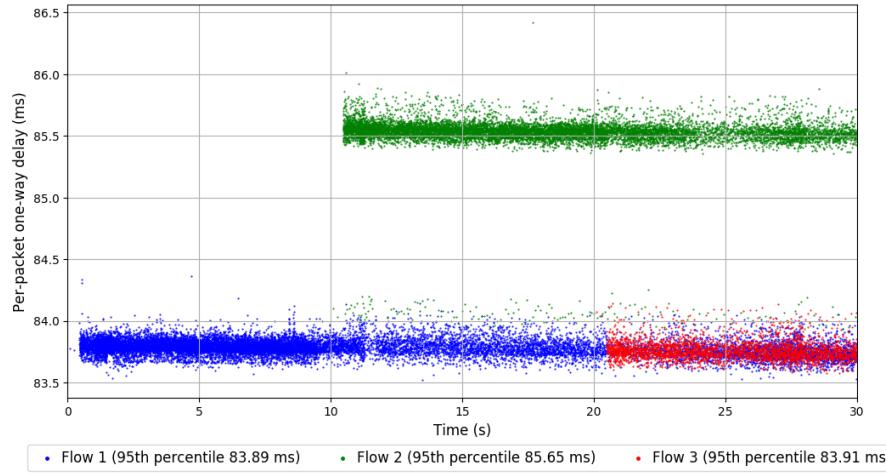
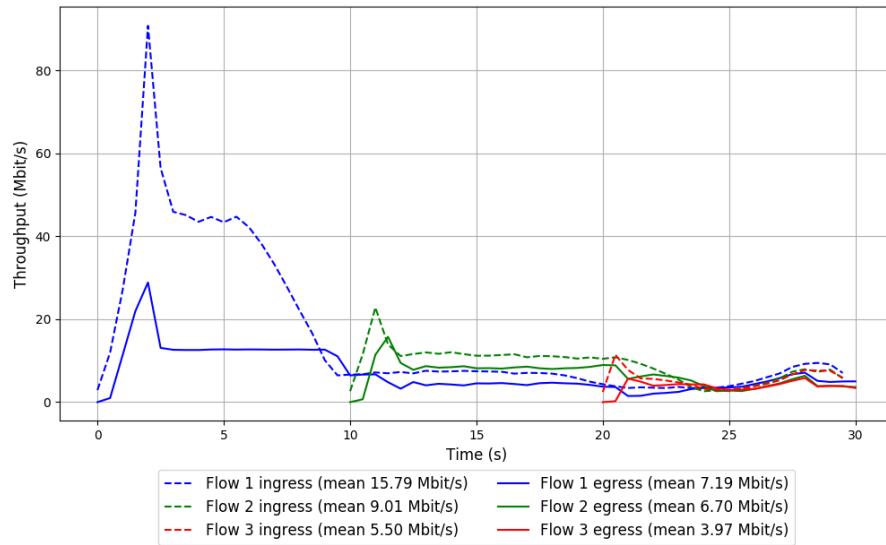


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-11-15 04:55:26
End at: 2018-11-15 04:55:56
Local clock offset: -11.289 ms
Remote clock offset: 9.469 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 85.591 ms
Loss rate: 45.10%
-- Flow 1:
Average throughput: 7.19 Mbit/s
95th percentile per-packet one-way delay: 83.893 ms
Loss rate: 54.47%
-- Flow 2:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 85.650 ms
Loss rate: 25.68%
-- Flow 3:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 83.909 ms
Loss rate: 27.79%
```

Run 1: Report of PCC-Expr — Data Link

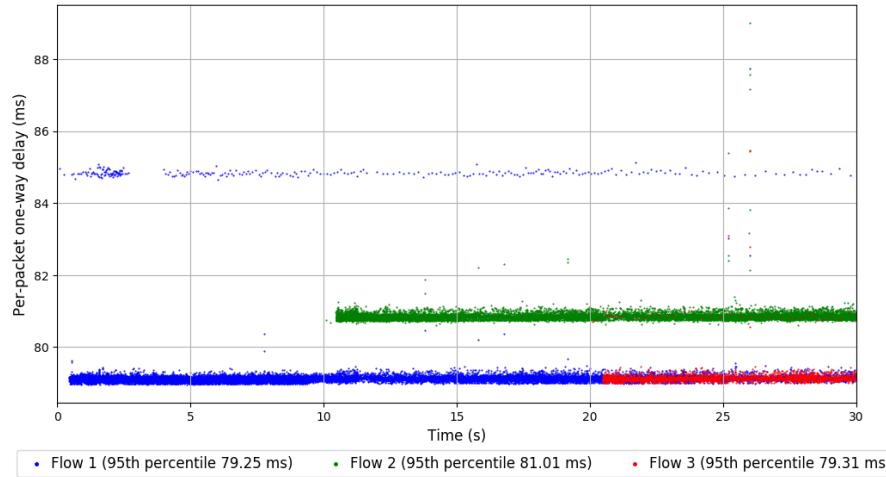
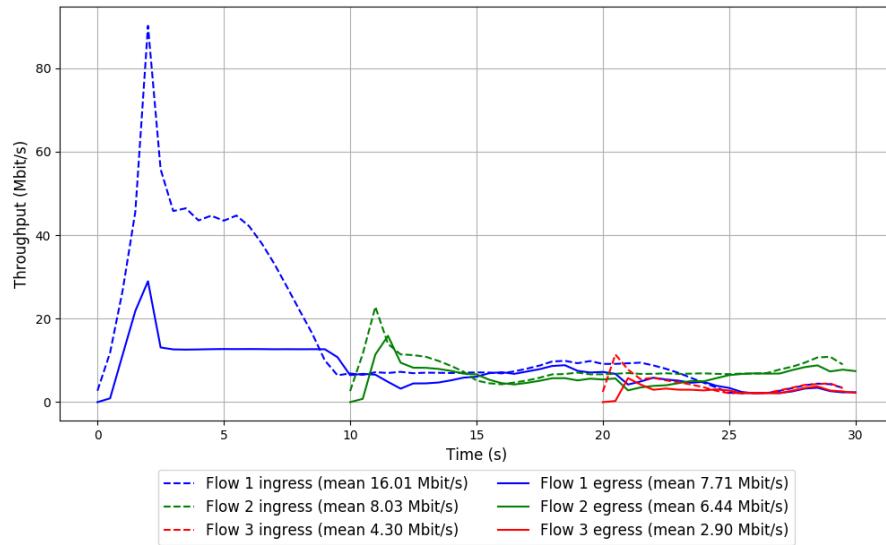


Run 2: Statistics of PCC-Expr

```
Start at: 2018-11-15 05:18:12
End at: 2018-11-15 05:18:42
Local clock offset: -3.388 ms
Remote clock offset: 4.671 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 80.945 ms
Loss rate: 43.12%
-- Flow 1:
Average throughput: 7.71 Mbit/s
95th percentile per-packet one-way delay: 79.254 ms
Loss rate: 51.86%
-- Flow 2:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 81.011 ms
Loss rate: 19.73%
-- Flow 3:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 79.305 ms
Loss rate: 32.56%
```

Run 2: Report of PCC-Expr — Data Link

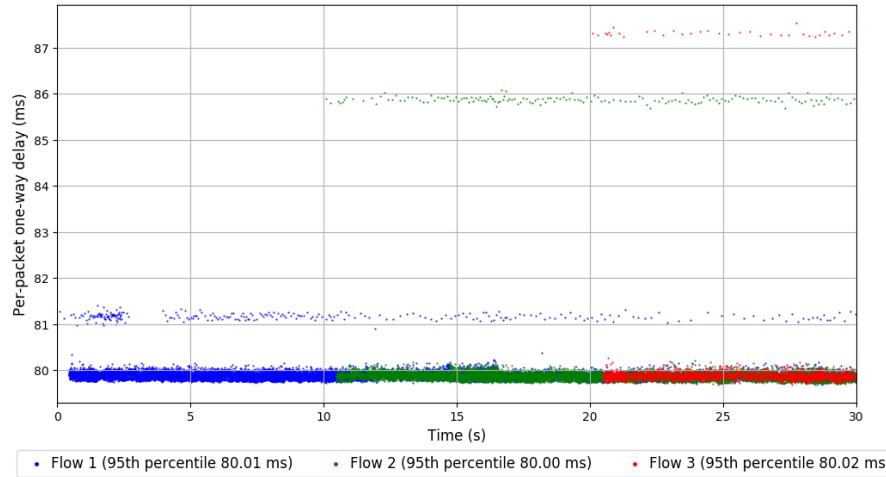
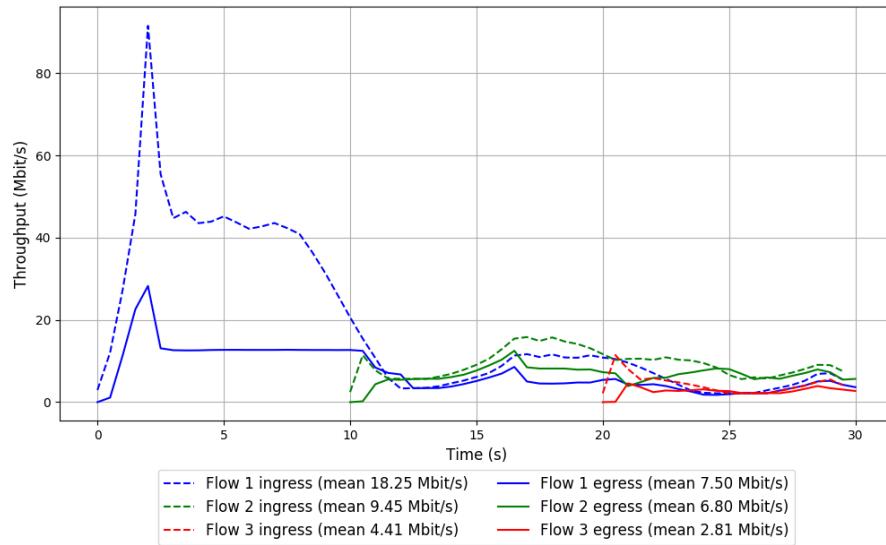


Run 3: Statistics of PCC-Expr

```
Start at: 2018-11-15 05:41:10
End at: 2018-11-15 05:41:40
Local clock offset: -7.262 ms
Remote clock offset: 4.75 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 80.006 ms
Loss rate: 50.15%
-- Flow 1:
Average throughput: 7.50 Mbit/s
95th percentile per-packet one-way delay: 80.006 ms
Loss rate: 58.88%
-- Flow 2:
Average throughput: 6.80 Mbit/s
95th percentile per-packet one-way delay: 80.001 ms
Loss rate: 28.00%
-- Flow 3:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 80.023 ms
Loss rate: 36.41%
```

Run 3: Report of PCC-Expr — Data Link

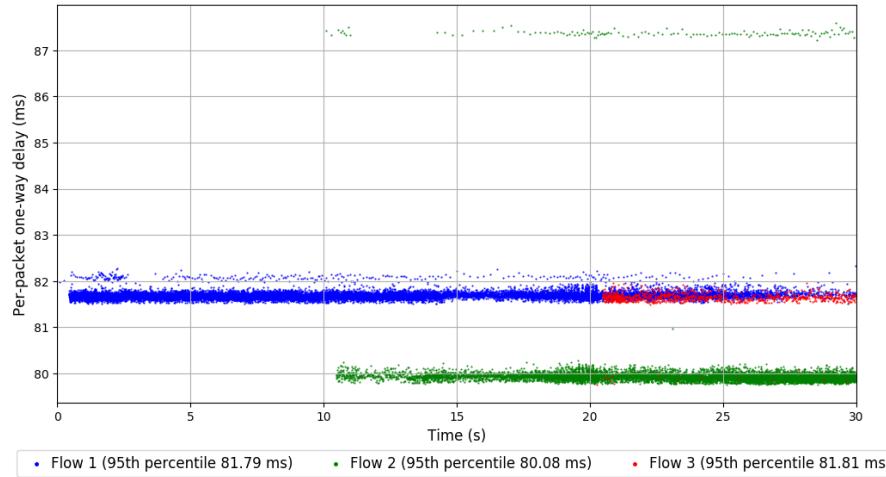
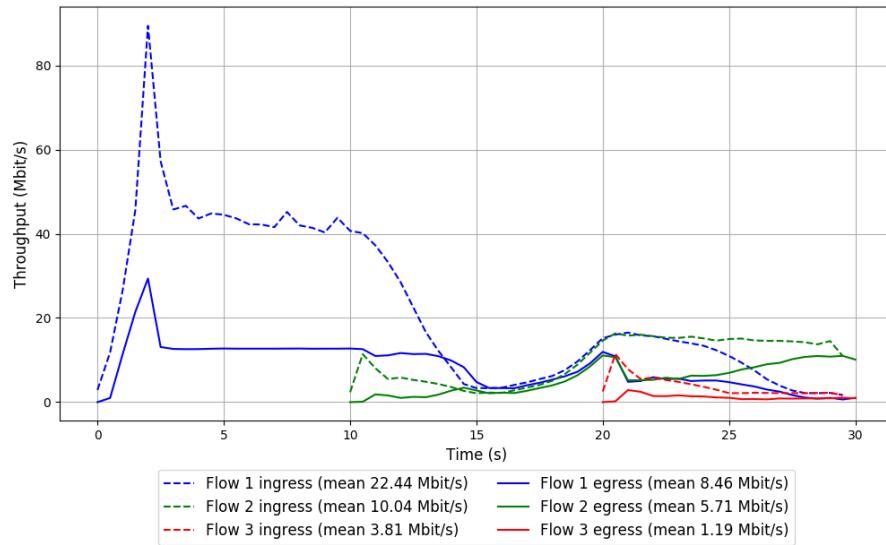


Run 4: Statistics of PCC-Expr

```
Start at: 2018-11-15 06:03:57
End at: 2018-11-15 06:04:27
Local clock offset: -8.414 ms
Remote clock offset: 4.726 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.65 Mbit/s
95th percentile per-packet one-way delay: 81.778 ms
Loss rate: 58.37%
-- Flow 1:
Average throughput: 8.46 Mbit/s
95th percentile per-packet one-way delay: 81.794 ms
Loss rate: 62.31%
-- Flow 2:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 80.078 ms
Loss rate: 43.14%
-- Flow 3:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 81.805 ms
Loss rate: 68.88%
```

Run 4: Report of PCC-Expr — Data Link

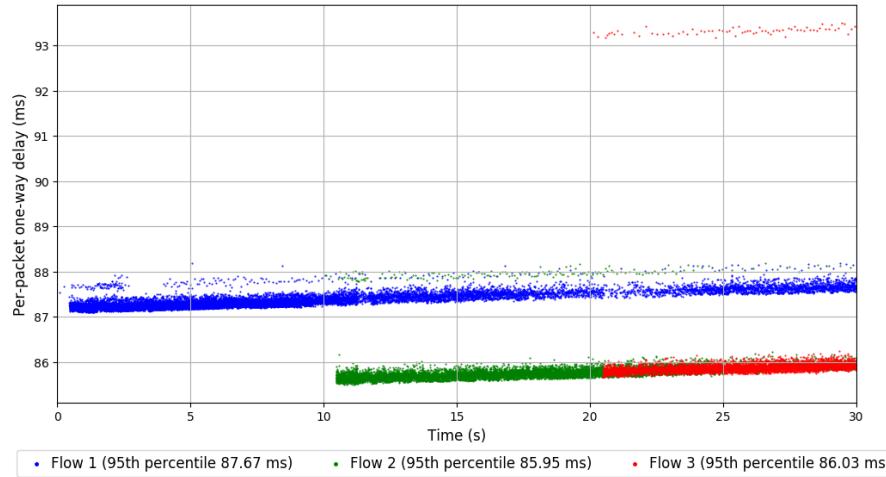
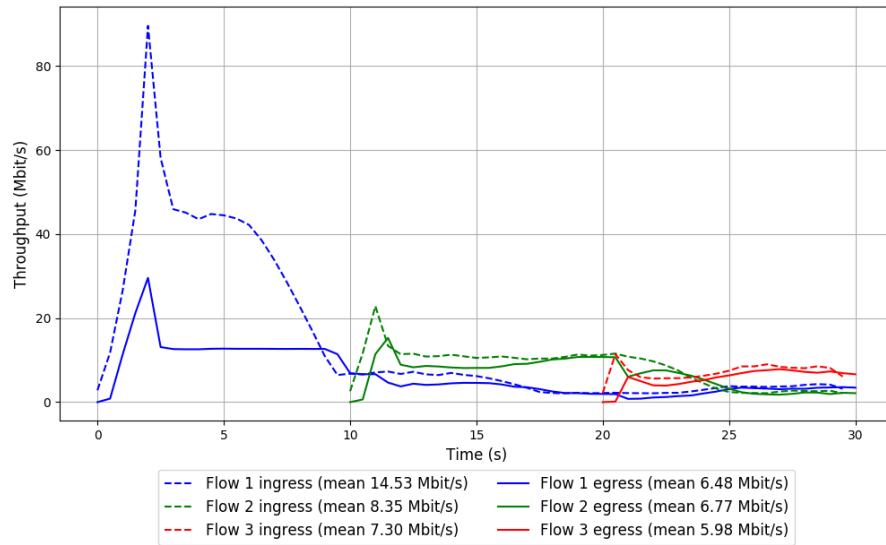


Run 5: Statistics of PCC-Expr

```
Start at: 2018-11-15 06:26:45
End at: 2018-11-15 06:27:15
Local clock offset: -8.334 ms
Remote clock offset: 10.469 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 87.625 ms
Loss rate: 42.41%
-- Flow 1:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 87.673 ms
Loss rate: 55.42%
-- Flow 2:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 85.948 ms
Loss rate: 18.93%
-- Flow 3:
Average throughput: 5.98 Mbit/s
95th percentile per-packet one-way delay: 86.030 ms
Loss rate: 18.05%
```

Run 5: Report of PCC-Expr — Data Link

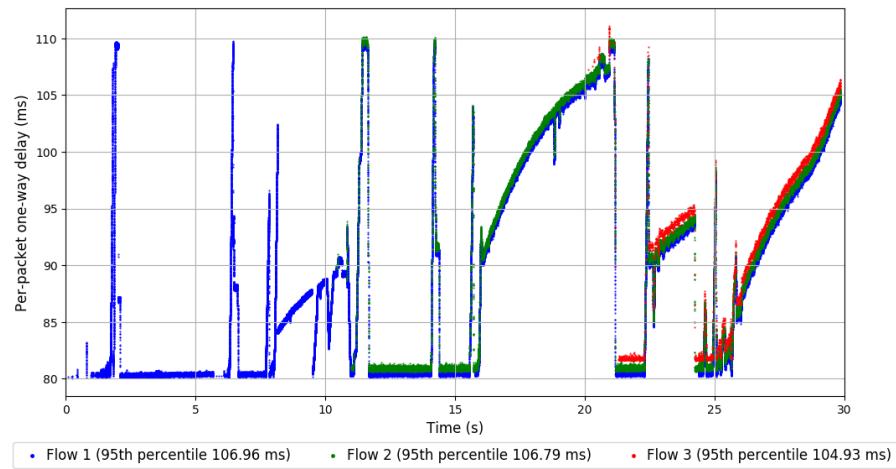
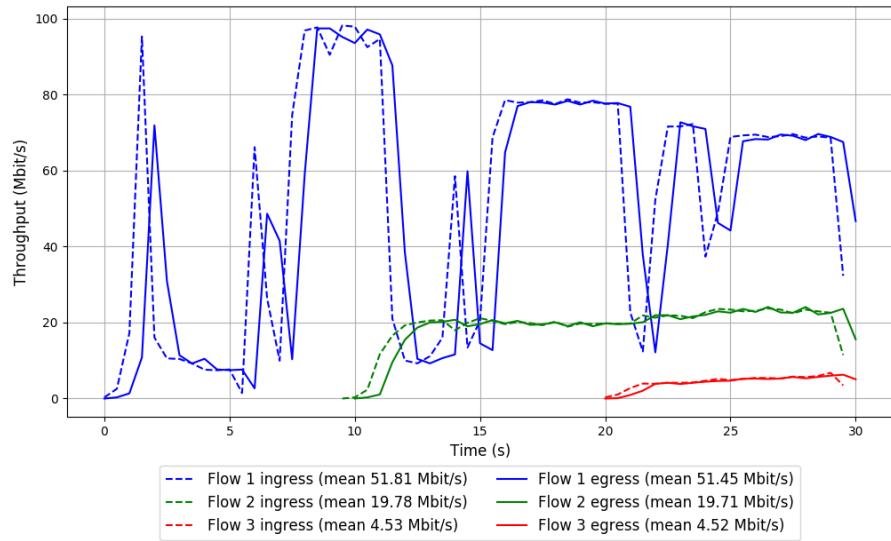


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-11-15 05:08:07
End at: 2018-11-15 05:08:37
Local clock offset: -5.559 ms
Remote clock offset: 4.664 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.01 Mbit/s
95th percentile per-packet one-way delay: 106.922 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 51.45 Mbit/s
95th percentile per-packet one-way delay: 106.958 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 19.71 Mbit/s
95th percentile per-packet one-way delay: 106.787 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 4.52 Mbit/s
95th percentile per-packet one-way delay: 104.929 ms
Loss rate: 0.39%
```

Run 1: Report of QUIC Cubic — Data Link

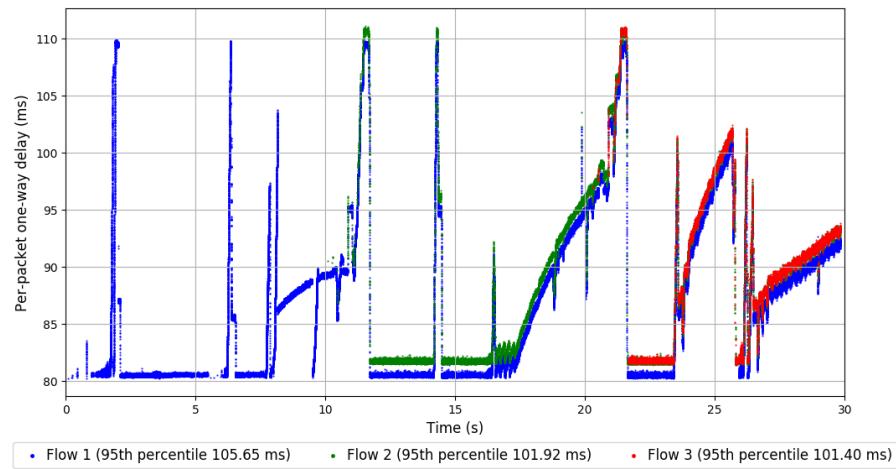
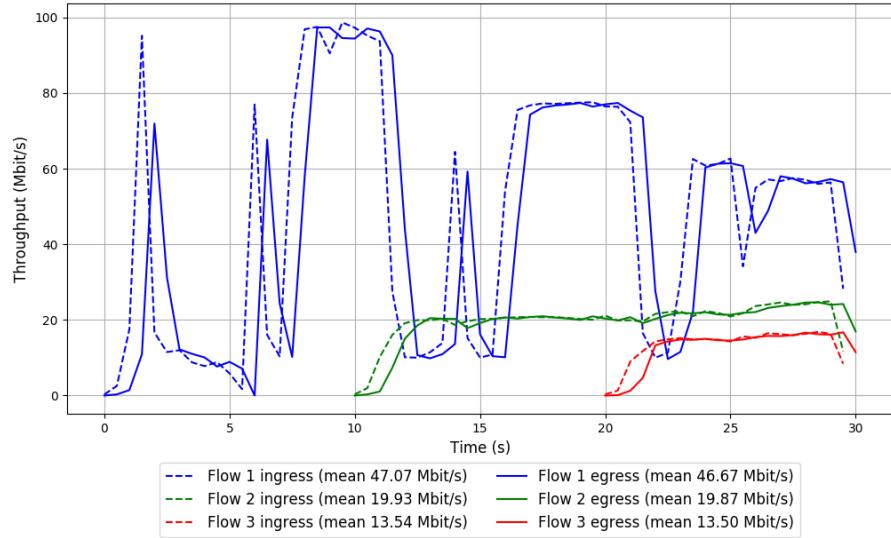


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-11-15 05:31:06
End at: 2018-11-15 05:31:36
Local clock offset: -4.563 ms
Remote clock offset: 5.765 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.25 Mbit/s
95th percentile per-packet one-way delay: 105.224 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 46.67 Mbit/s
95th percentile per-packet one-way delay: 105.646 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 19.87 Mbit/s
95th percentile per-packet one-way delay: 101.922 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 13.50 Mbit/s
95th percentile per-packet one-way delay: 101.399 ms
Loss rate: 0.35%
```

Run 2: Report of QUIC Cubic — Data Link

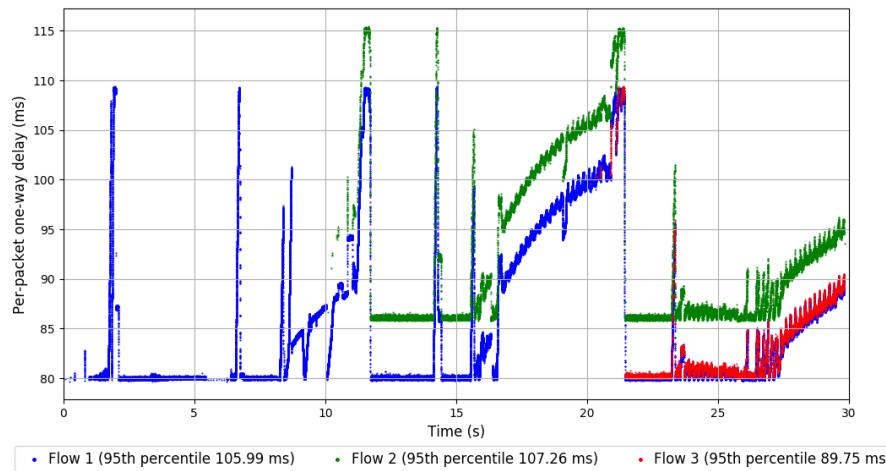
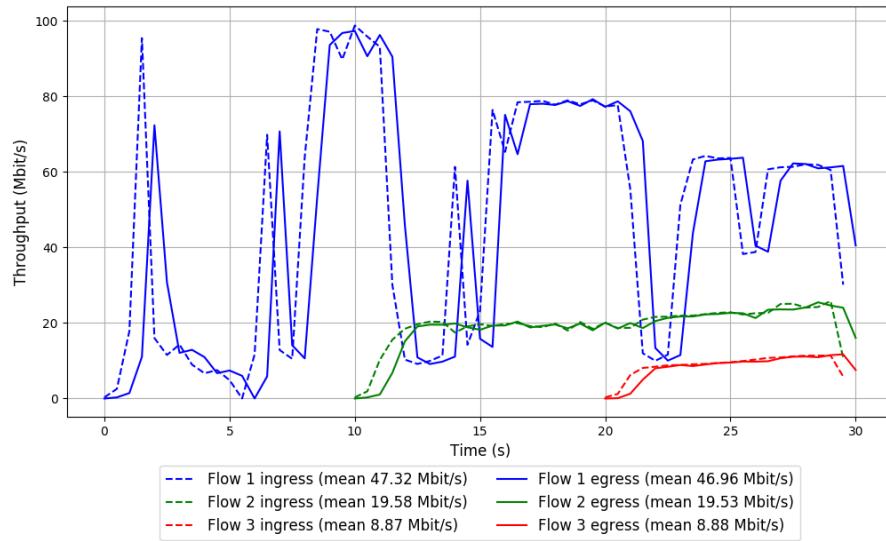


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-11-15 05:53:52
End at: 2018-11-15 05:54:22
Local clock offset: -8.689 ms
Remote clock offset: 4.755 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.81 Mbit/s
95th percentile per-packet one-way delay: 106.426 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 46.96 Mbit/s
95th percentile per-packet one-way delay: 105.988 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 19.53 Mbit/s
95th percentile per-packet one-way delay: 107.262 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 8.88 Mbit/s
95th percentile per-packet one-way delay: 89.746 ms
Loss rate: 0.04%
```

Run 3: Report of QUIC Cubic — Data Link

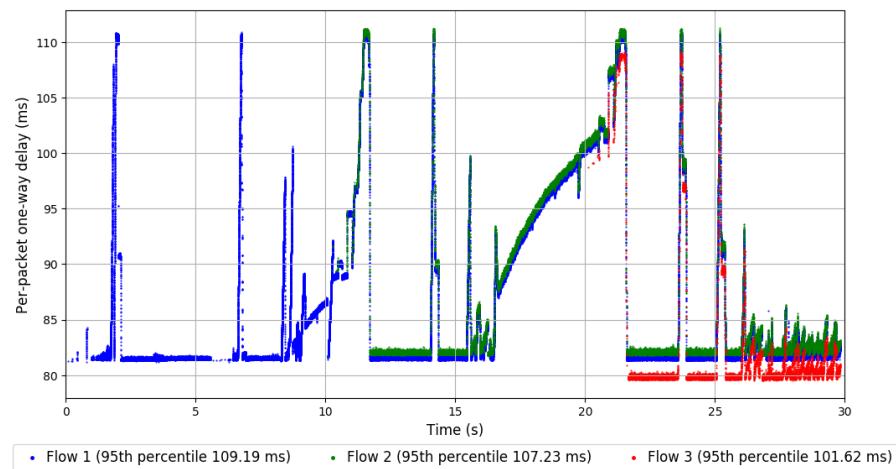
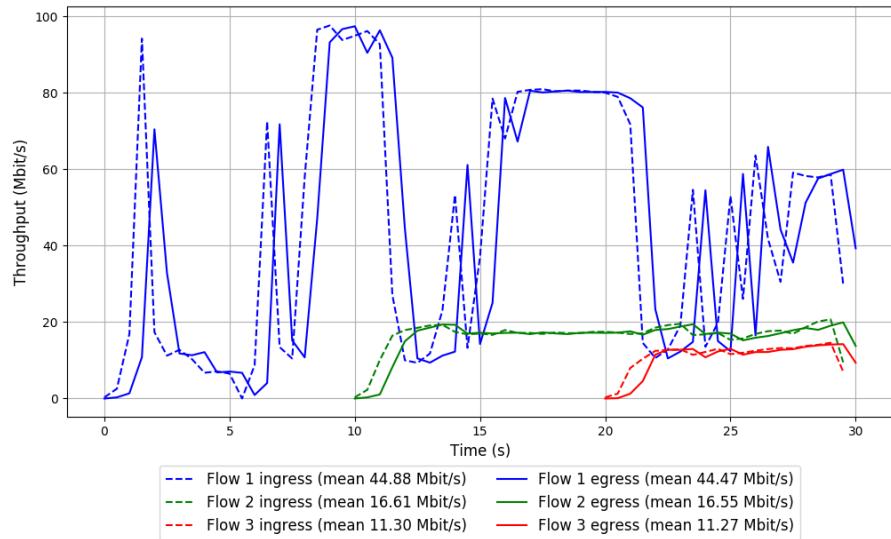


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-11-15 06:16:41
End at: 2018-11-15 06:17:11
Local clock offset: -8.605 ms
Remote clock offset: 4.478 ms

# Below is generated by plot.py at 2018-11-15 06:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.13 Mbit/s
95th percentile per-packet one-way delay: 107.949 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 44.47 Mbit/s
95th percentile per-packet one-way delay: 109.189 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 16.55 Mbit/s
95th percentile per-packet one-way delay: 107.228 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 11.27 Mbit/s
95th percentile per-packet one-way delay: 101.624 ms
Loss rate: 0.42%
```

Run 4: Report of QUIC Cubic — Data Link

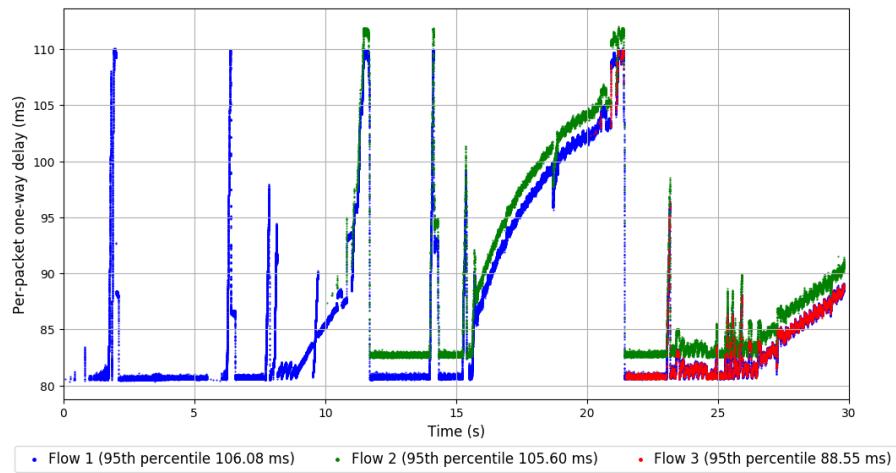
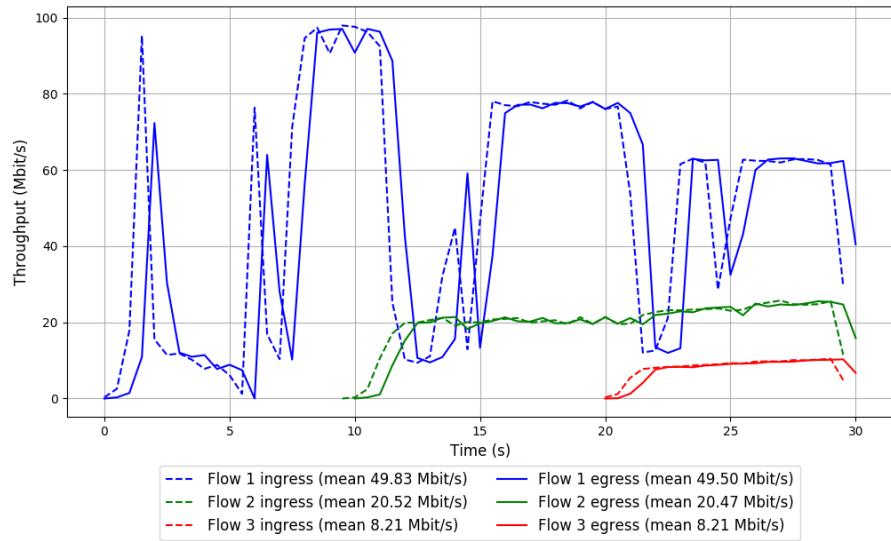


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-11-15 06:39:28
End at: 2018-11-15 06:39:58
Local clock offset: -1.695 ms
Remote clock offset: 5.487 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.77 Mbit/s
95th percentile per-packet one-way delay: 105.516 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 49.50 Mbit/s
95th percentile per-packet one-way delay: 106.081 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 20.47 Mbit/s
95th percentile per-packet one-way delay: 105.598 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 88.545 ms
Loss rate: 0.13%
```

Run 5: Report of QUIC Cubic — Data Link

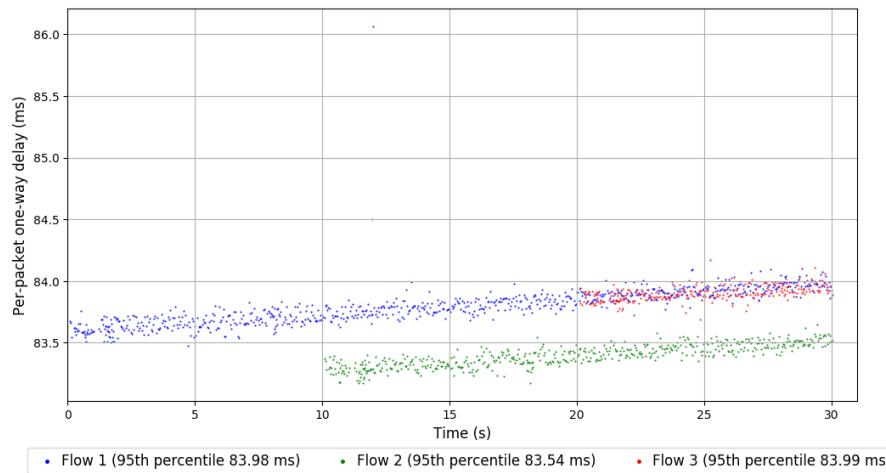
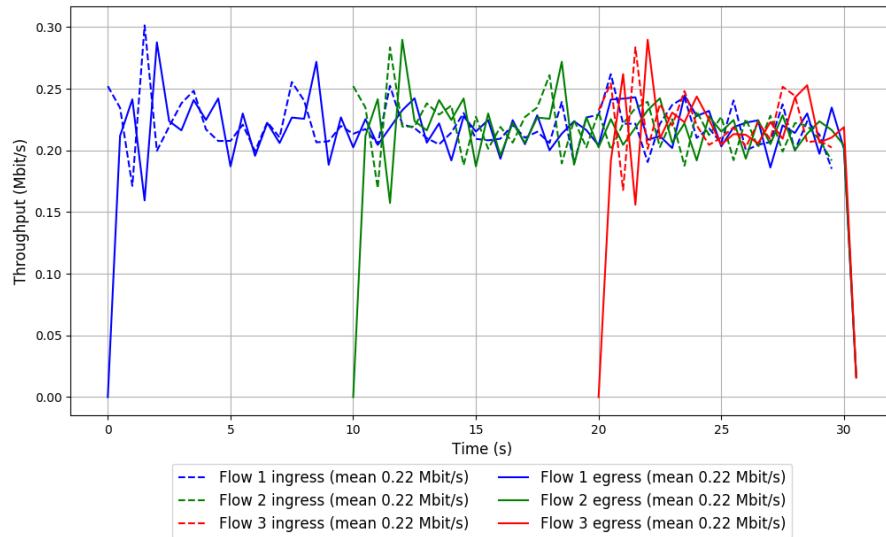


```
Run 1: Statistics of SCReAM

Start at: 2018-11-15 04:59:12
End at: 2018-11-15 04:59:42
Local clock offset: -9.212 ms
Remote clock offset: 8.374 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 83.975 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.984 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.537 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.994 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

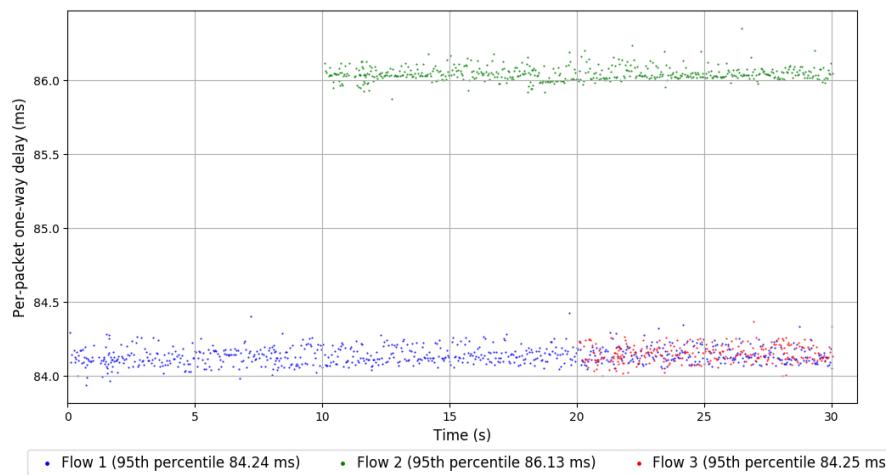
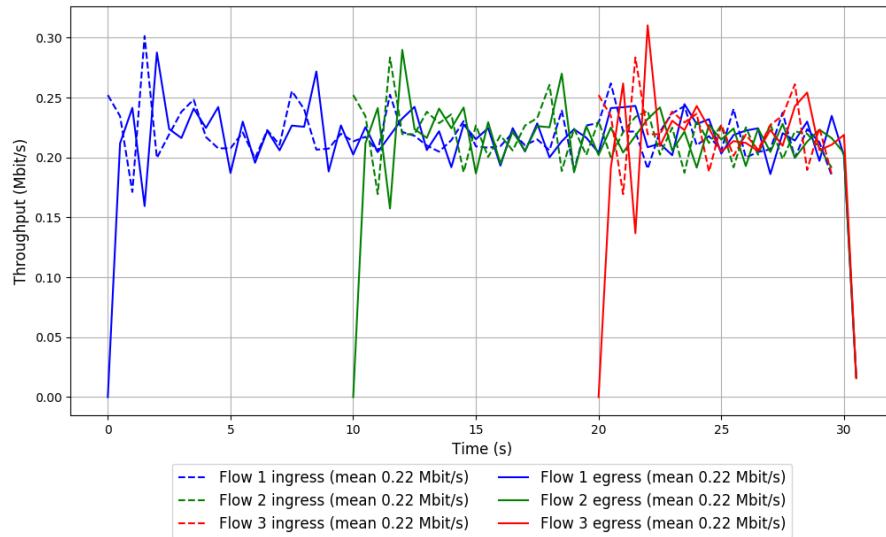


Run 2: Statistics of SCReAM

```
Start at: 2018-11-15 05:22:08
End at: 2018-11-15 05:22:38
Local clock offset: -3.27 ms
Remote clock offset: 9.384 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.086 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.240 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.127 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.246 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

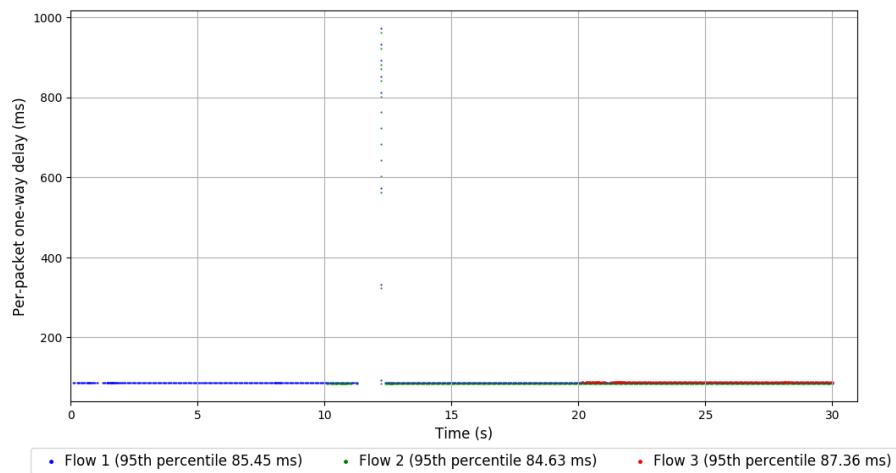
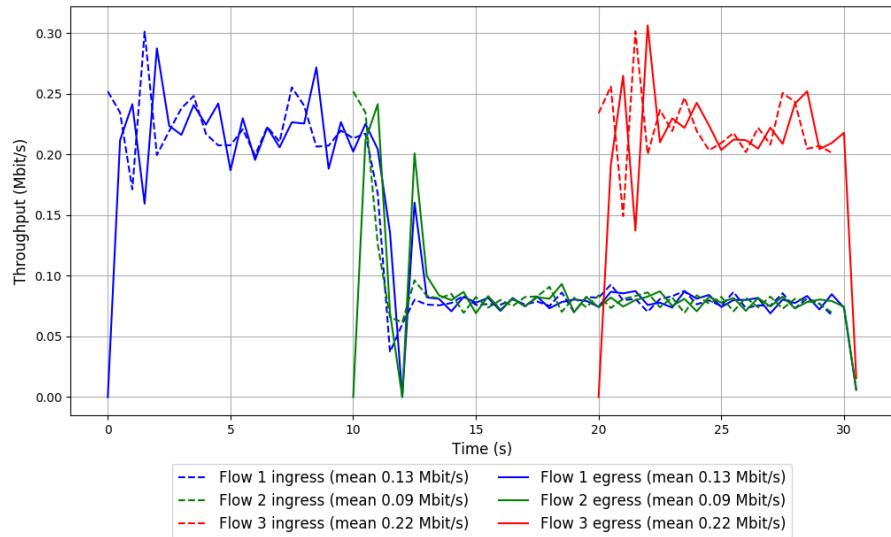


Run 3: Statistics of SCReAM

```
Start at: 2018-11-15 05:44:57
End at: 2018-11-15 05:45:27
Local clock offset: -7.72 ms
Remote clock offset: 9.444 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 87.317 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 85.453 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 84.626 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.358 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

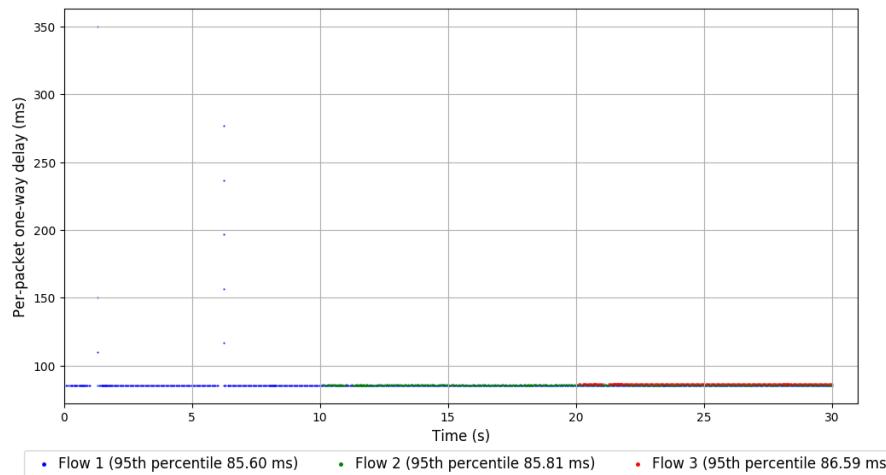
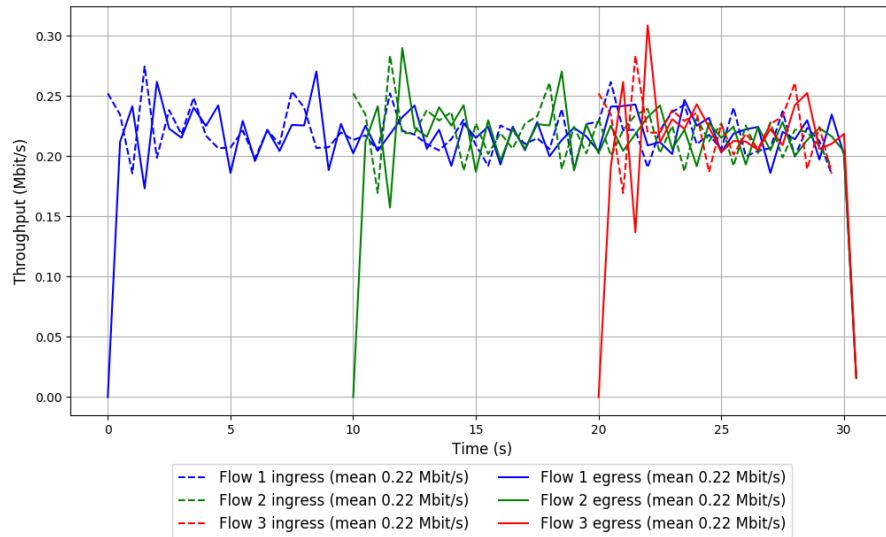


Run 4: Statistics of SCReAM

```
Start at: 2018-11-15 06:07:45
End at: 2018-11-15 06:08:15
Local clock offset: -8.375 ms
Remote clock offset: 9.584 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.525 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.602 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.814 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.588 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

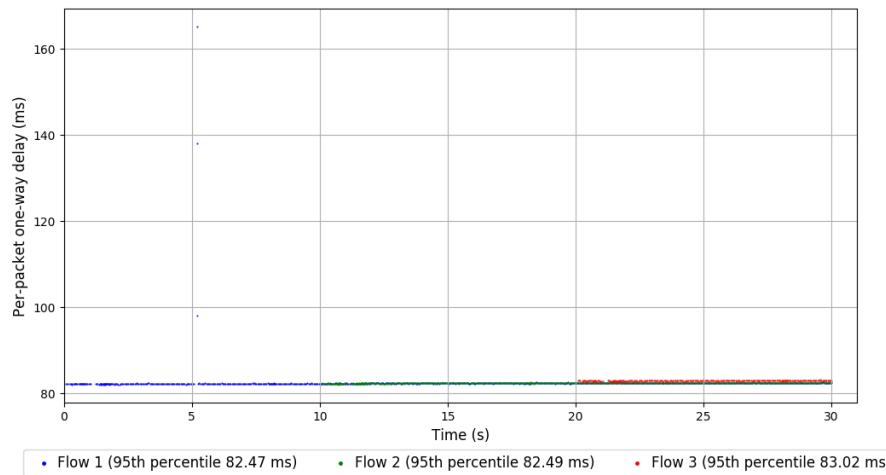
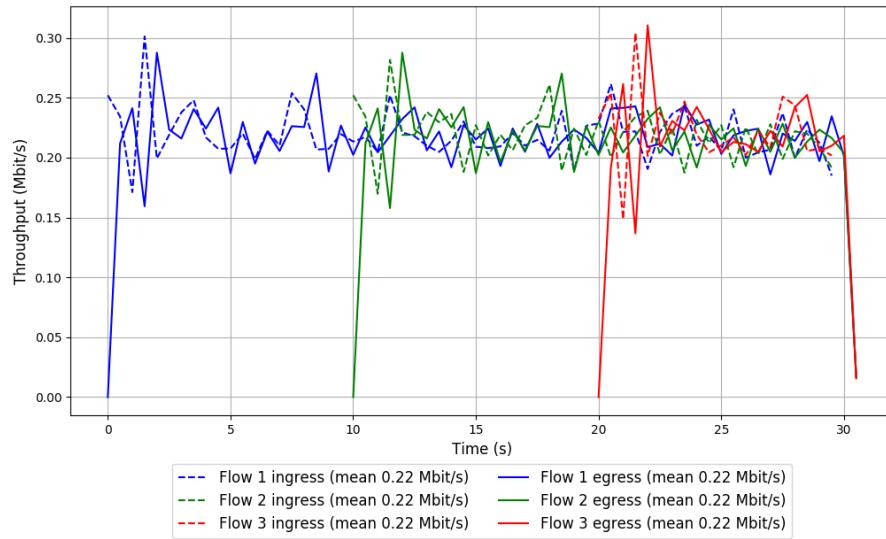


Run 5: Statistics of SCReAM

```
Start at: 2018-11-15 06:30:31
End at: 2018-11-15 06:31:01
Local clock offset: -5.376 ms
Remote clock offset: 5.526 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 82.955 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.467 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.489 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.016 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

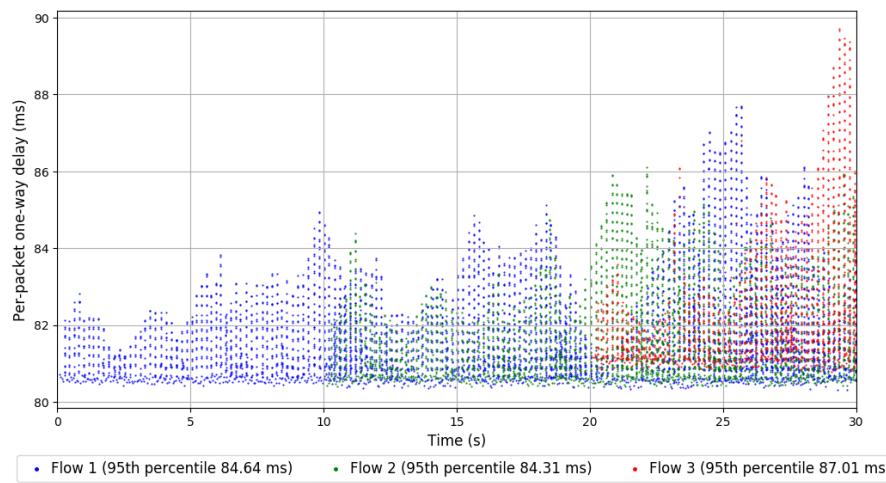
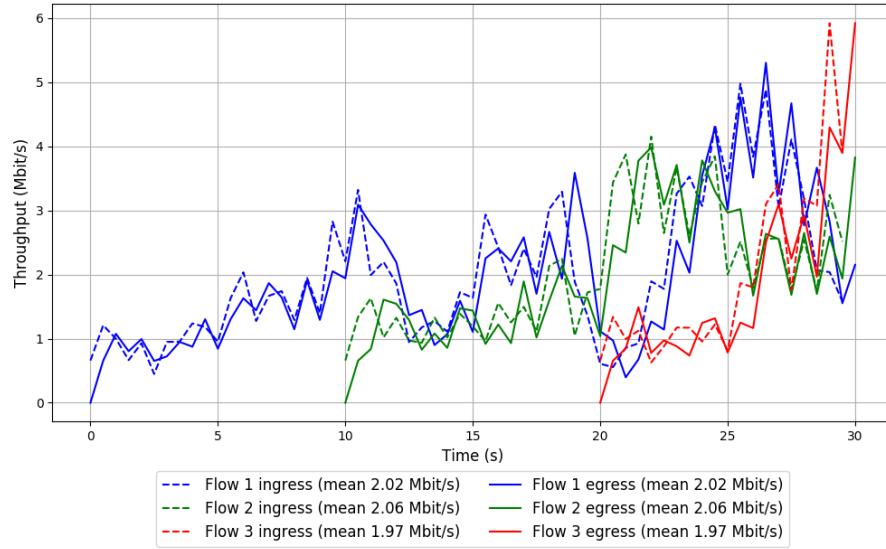


Run 1: Statistics of Sprout

```
Start at: 2018-11-15 04:49:16
End at: 2018-11-15 04:49:46
Local clock offset: -10.359 ms
Remote clock offset: 4.629 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 84.899 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 84.635 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 84.314 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 87.011 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

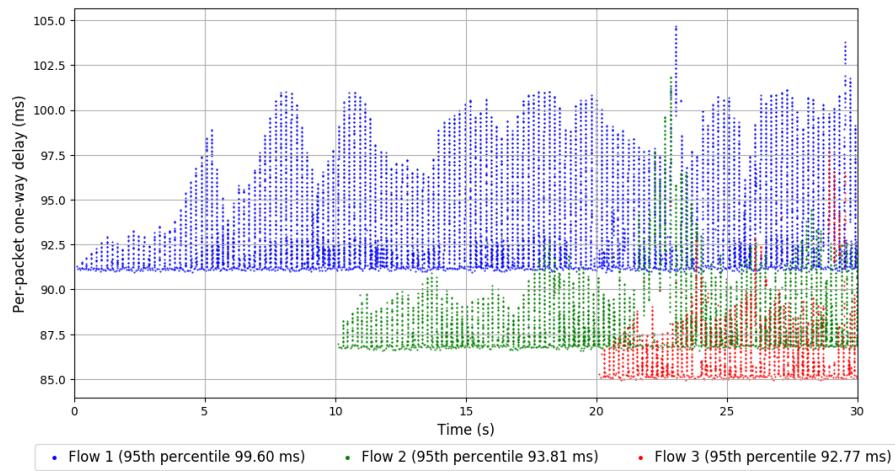
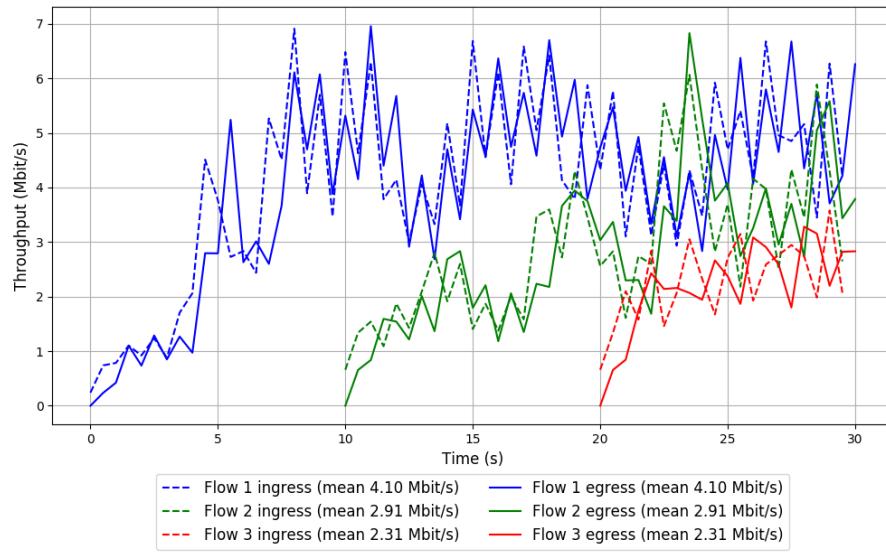


Run 2: Statistics of Sprout

```
Start at: 2018-11-15 05:12:02
End at: 2018-11-15 05:12:32
Local clock offset: -4.018 ms
Remote clock offset: 10.696 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 99.029 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 99.601 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 93.805 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 92.771 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

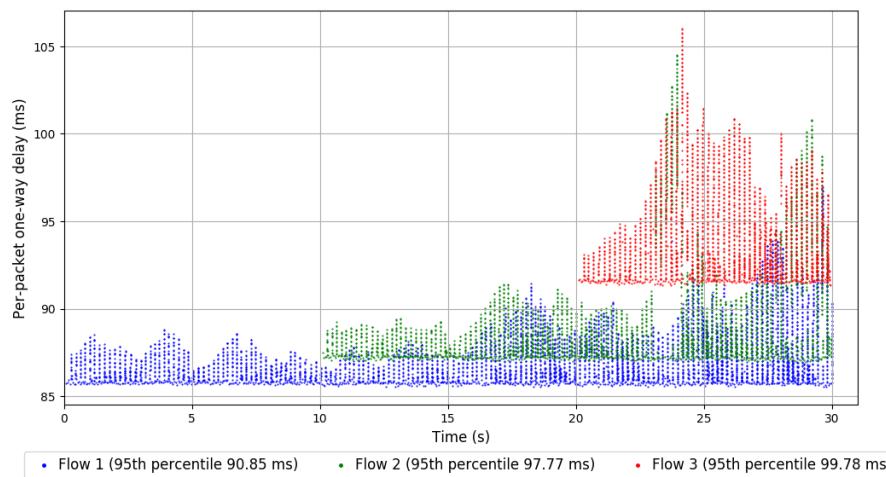
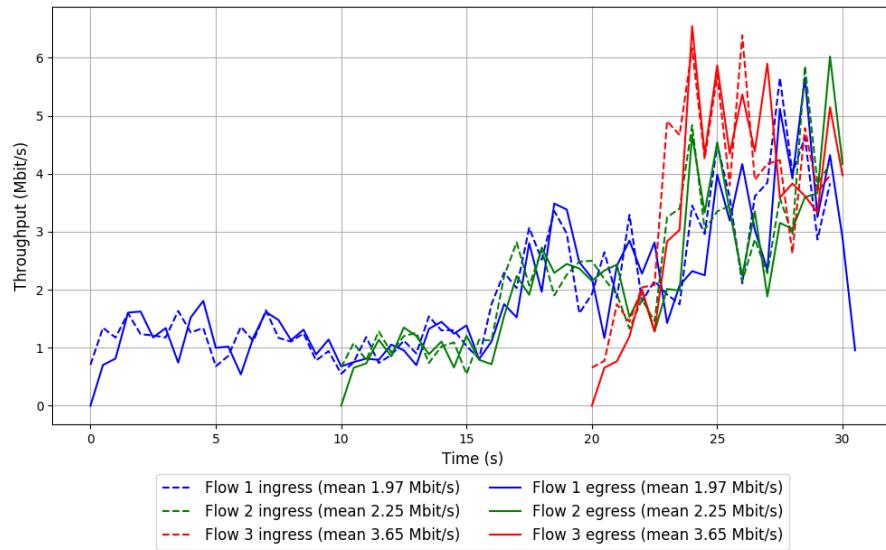


Run 3: Statistics of Sprout

```
Start at: 2018-11-15 05:35:00
End at: 2018-11-15 05:35:30
Local clock offset: -6.25 ms
Remote clock offset: 10.624 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.67 Mbit/s
95th percentile per-packet one-way delay: 98.063 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 90.847 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 97.772 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 99.778 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

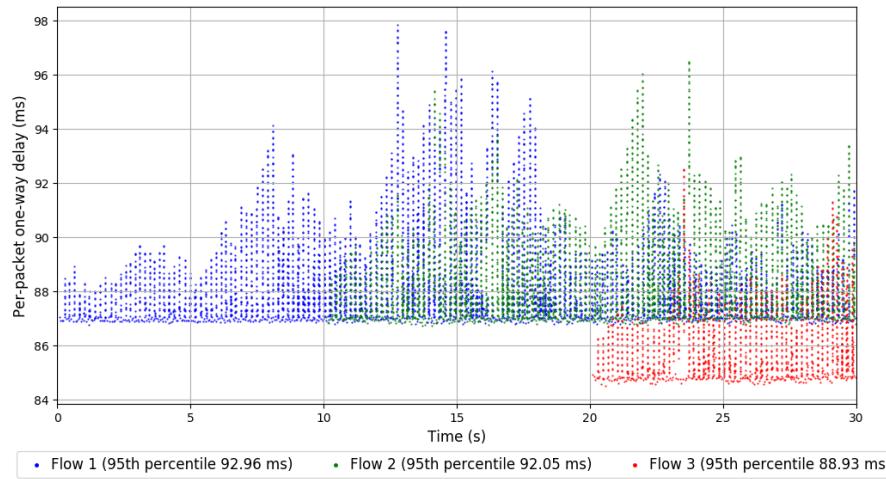
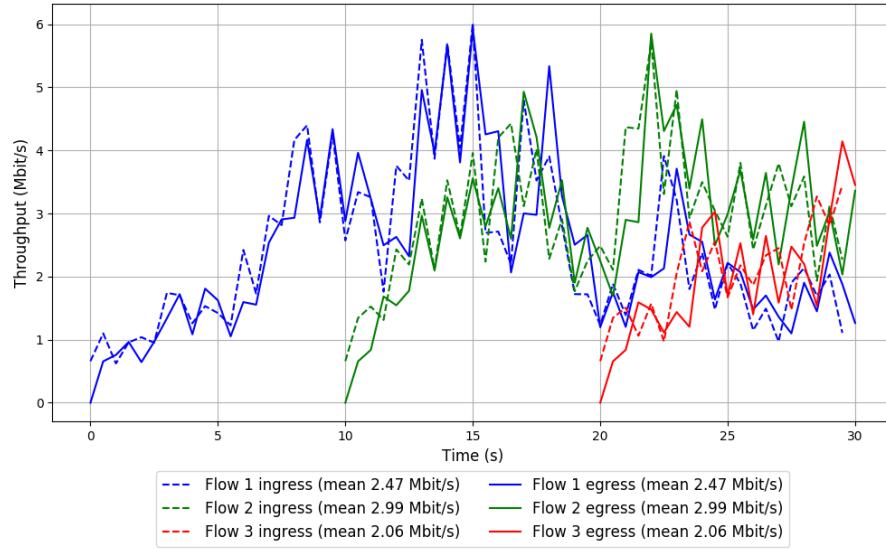


Run 4: Statistics of Sprout

```
Start at: 2018-11-15 05:57:47
End at: 2018-11-15 05:58:17
Local clock offset: -8.825 ms
Remote clock offset: 9.593 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.13 Mbit/s
95th percentile per-packet one-way delay: 92.302 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 92.964 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 92.047 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 88.928 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

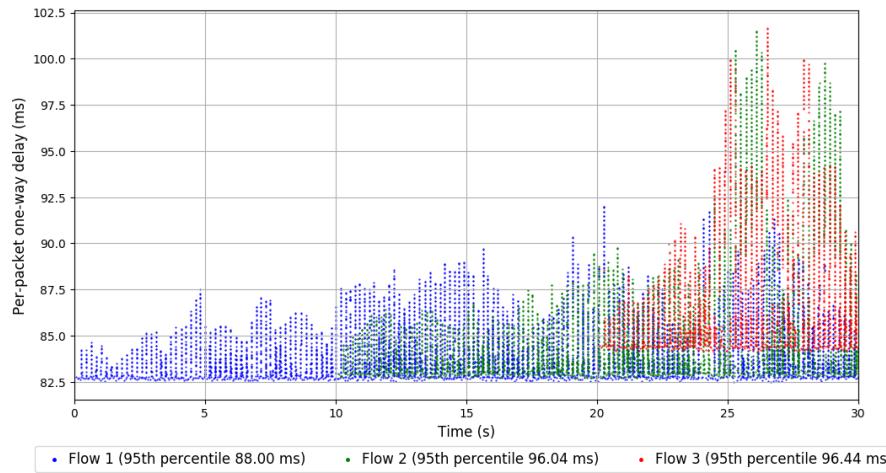
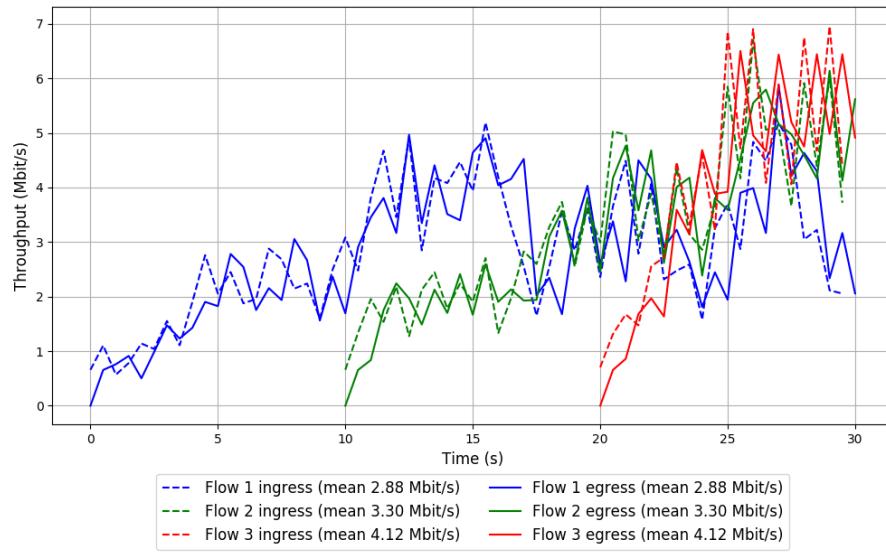


Run 5: Statistics of Sprout

```
Start at: 2018-11-15 06:20:35
End at: 2018-11-15 06:21:05
Local clock offset: -8.01 ms
Remote clock offset: 8.29 ms

# Below is generated by plot.py at 2018-11-15 06:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 94.140 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 88.004 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 96.044 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 96.439 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

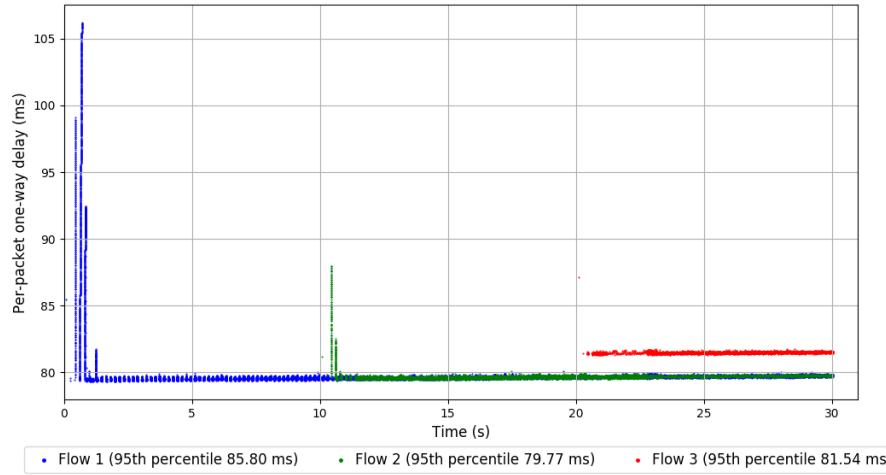
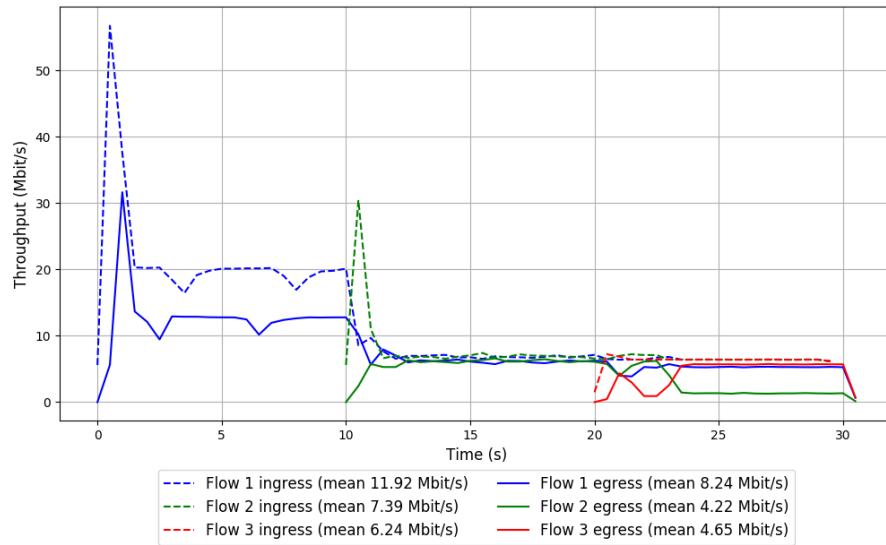


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-11-15 05:00:24
End at: 2018-11-15 05:00:54
Local clock offset: -8.35 ms
Remote clock offset: 4.612 ms

# Below is generated by plot.py at 2018-11-15 06:49:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 81.548 ms
Loss rate: 33.42%
-- Flow 1:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 85.801 ms
Loss rate: 30.85%
-- Flow 2:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 79.766 ms
Loss rate: 42.95%
-- Flow 3:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 81.543 ms
Loss rate: 25.58%
```

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

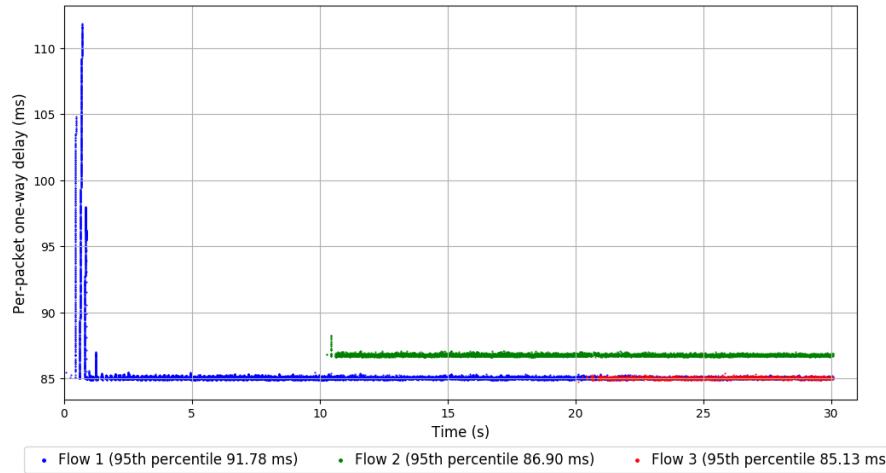
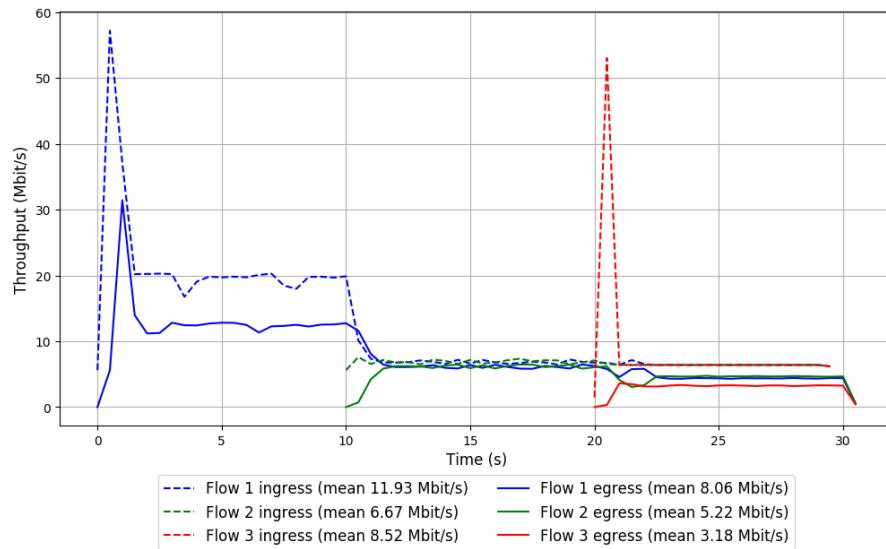


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-11-15 05:23:21
End at: 2018-11-15 05:23:51
Local clock offset: -3.251 ms
Remote clock offset: 10.581 ms

# Below is generated by plot.py at 2018-11-15 06:49:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 86.928 ms
Loss rate: 34.40%
-- Flow 1:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 91.785 ms
Loss rate: 32.40%
-- Flow 2:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 86.900 ms
Loss rate: 21.73%
-- Flow 3:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 85.132 ms
Loss rate: 62.73%
```

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

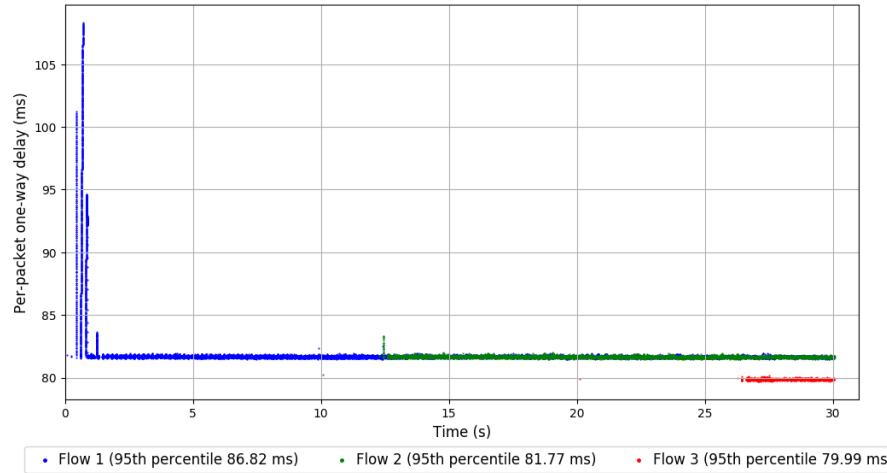
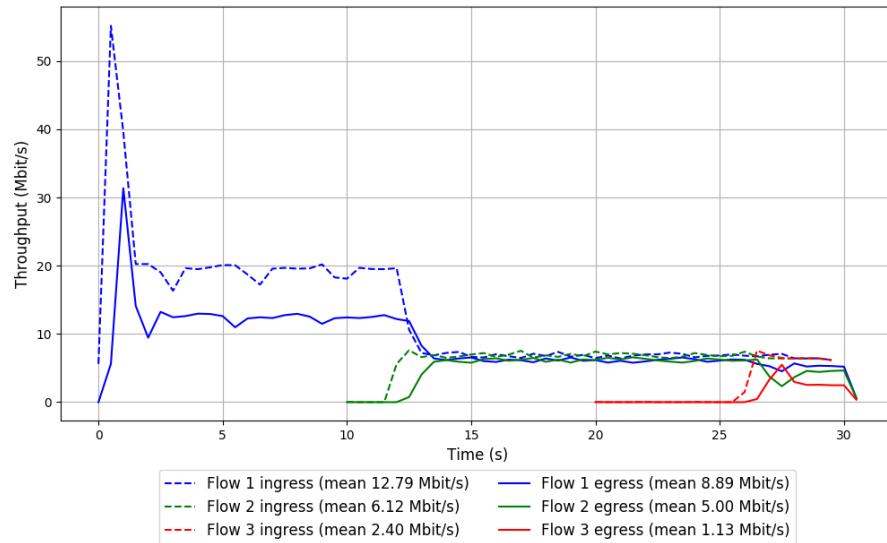


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-11-15 05:46:10
End at: 2018-11-15 05:46:40
Local clock offset: -7.917 ms
Remote clock offset: 4.693 ms

# Below is generated by plot.py at 2018-11-15 06:49:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 81.922 ms
Loss rate: 28.73%
-- Flow 1:
Average throughput: 8.89 Mbit/s
95th percentile per-packet one-way delay: 86.821 ms
Loss rate: 30.54%
-- Flow 2:
Average throughput: 5.00 Mbit/s
95th percentile per-packet one-way delay: 81.773 ms
Loss rate: 18.31%
-- Flow 3:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 79.988 ms
Loss rate: 52.81%
```

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

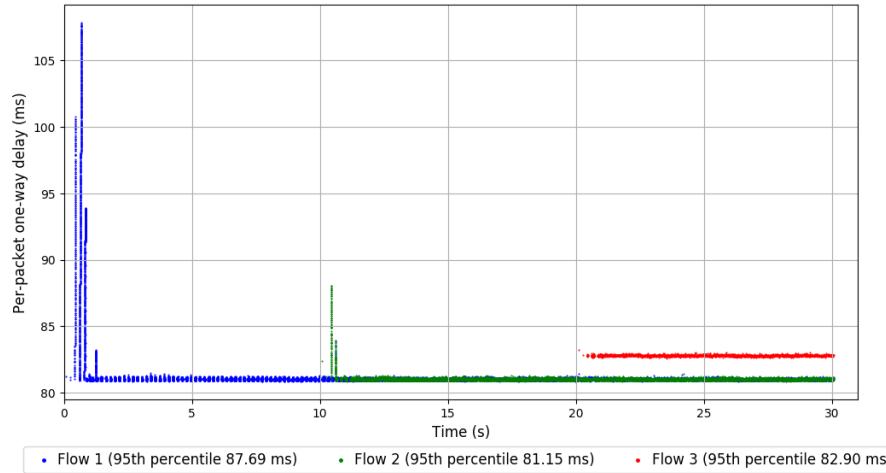
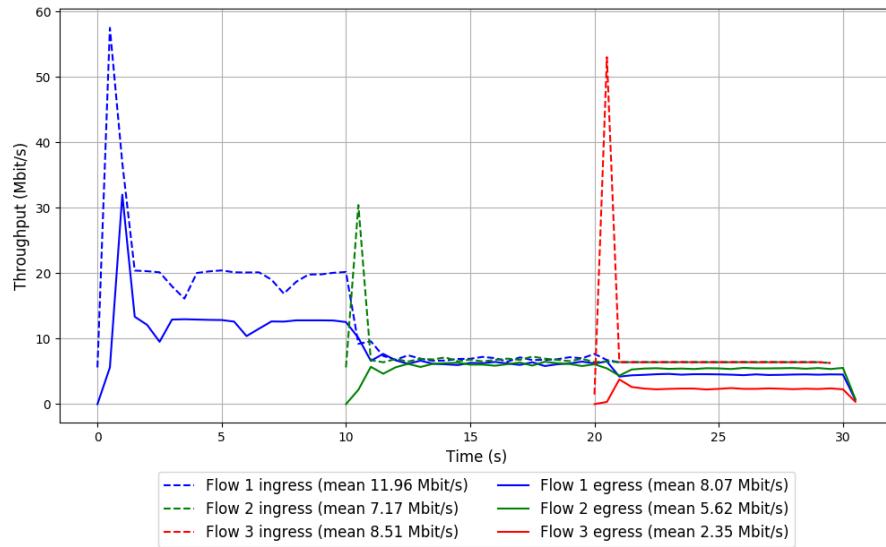


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-11-15 06:08:58
End at: 2018-11-15 06:09:28
Local clock offset: -8.396 ms
Remote clock offset: 5.838 ms

# Below is generated by plot.py at 2018-11-15 06:49:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 82.878 ms
Loss rate: 35.63%
-- Flow 1:
Average throughput: 8.07 Mbit/s
95th percentile per-packet one-way delay: 87.694 ms
Loss rate: 32.53%
-- Flow 2:
Average throughput: 5.62 Mbit/s
95th percentile per-packet one-way delay: 81.147 ms
Loss rate: 21.65%
-- Flow 3:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 82.899 ms
Loss rate: 72.36%
```

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

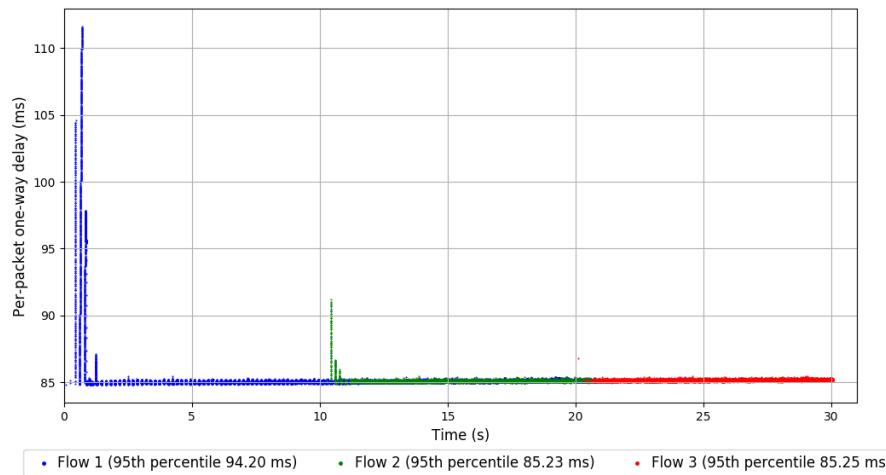
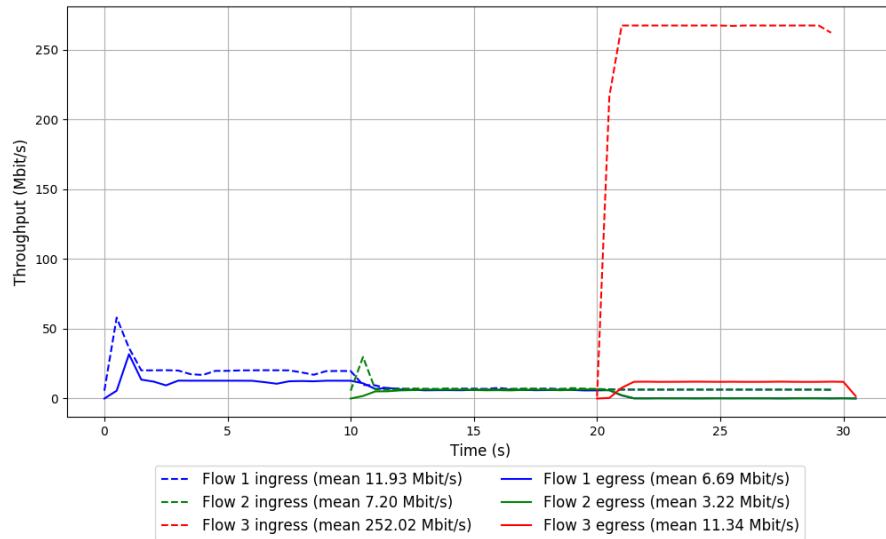


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-11-15 06:31:44
End at: 2018-11-15 06:32:14
Local clock offset: -5.35 ms
Remote clock offset: 9.324 ms

# Below is generated by plot.py at 2018-11-15 06:49:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 85.645 ms
Loss rate: 87.47%
-- Flow 1:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 94.196 ms
Loss rate: 43.97%
-- Flow 2:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 85.233 ms
Loss rate: 55.32%
-- Flow 3:
Average throughput: 11.34 Mbit/s
95th percentile per-packet one-way delay: 85.247 ms
Loss rate: 95.50%
```

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

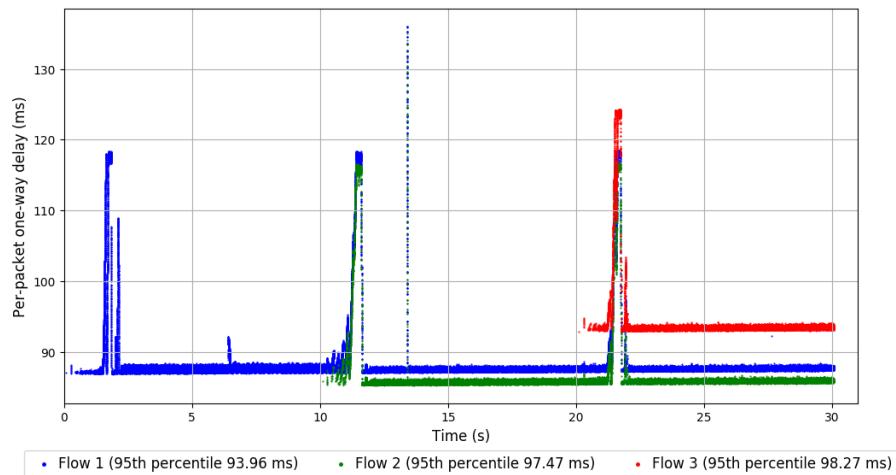
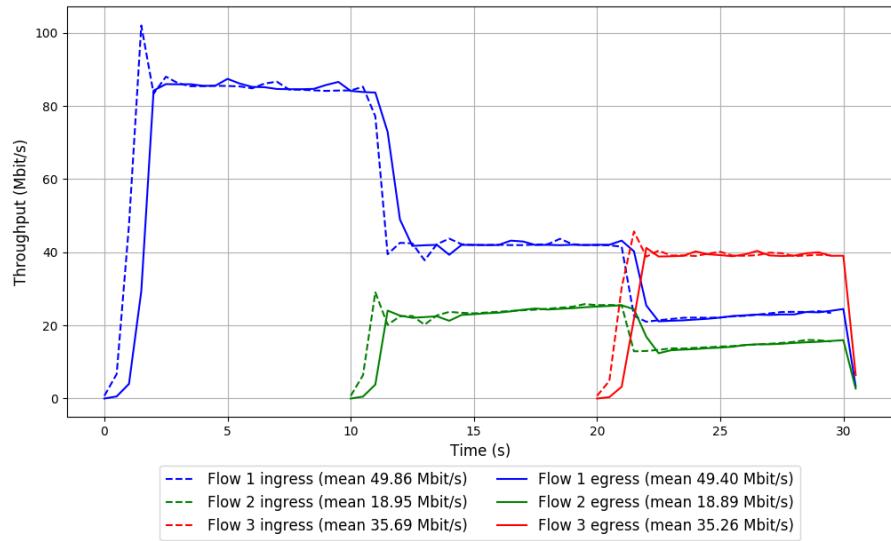


Run 1: Statistics of TCP Vegas

```
Start at: 2018-11-15 04:57:55
End at: 2018-11-15 04:58:25
Local clock offset: -10.315 ms
Remote clock offset: 10.525 ms

# Below is generated by plot.py at 2018-11-15 06:49:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.69 Mbit/s
95th percentile per-packet one-way delay: 95.299 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 49.40 Mbit/s
95th percentile per-packet one-way delay: 93.961 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 18.89 Mbit/s
95th percentile per-packet one-way delay: 97.471 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 35.26 Mbit/s
95th percentile per-packet one-way delay: 98.272 ms
Loss rate: 1.26%
```

Run 1: Report of TCP Vegas — Data Link

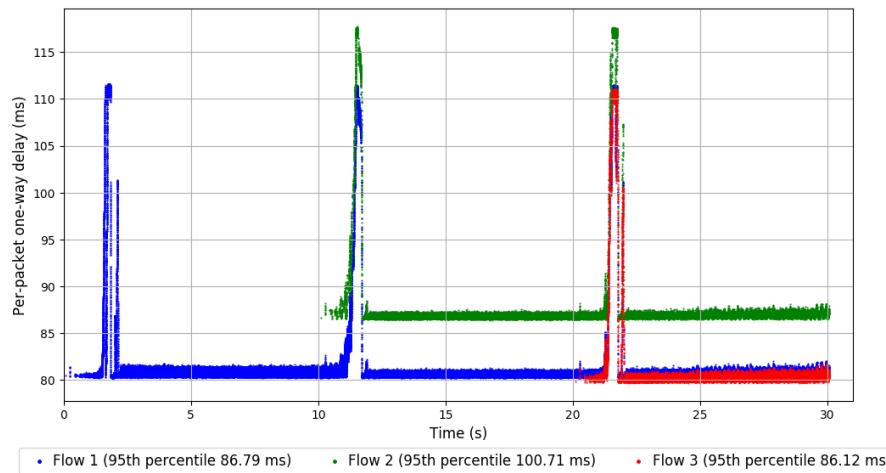
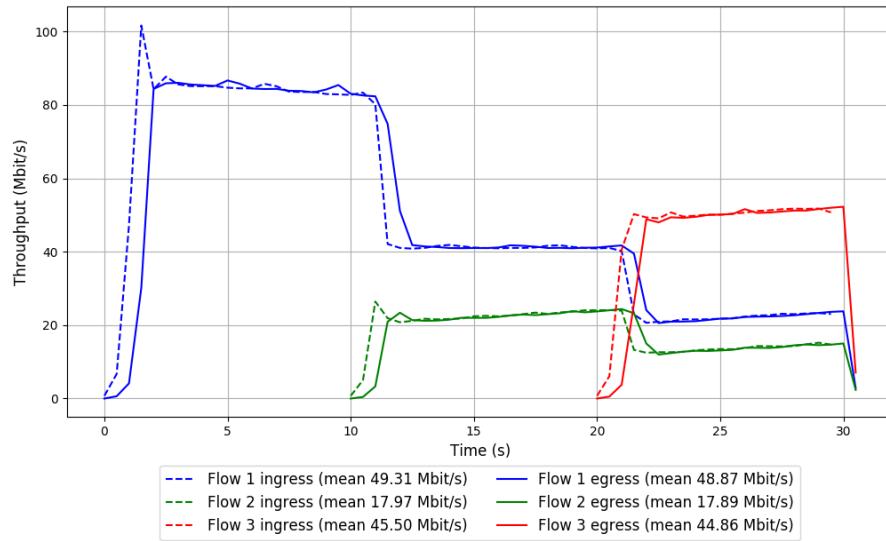


Run 2: Statistics of TCP Vegas

```
Start at: 2018-11-15 05:20:50
End at: 2018-11-15 05:21:20
Local clock offset: -3.362 ms
Remote clock offset: 4.572 ms

# Below is generated by plot.py at 2018-11-15 06:50:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.70 Mbit/s
95th percentile per-packet one-way delay: 88.999 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 48.87 Mbit/s
95th percentile per-packet one-way delay: 86.788 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 17.89 Mbit/s
95th percentile per-packet one-way delay: 100.707 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 44.86 Mbit/s
95th percentile per-packet one-way delay: 86.124 ms
Loss rate: 1.38%
```

Run 2: Report of TCP Vegas — Data Link

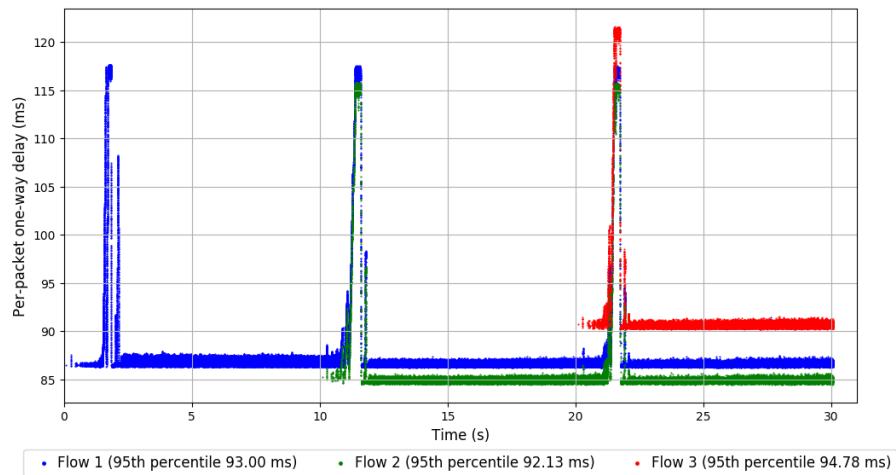
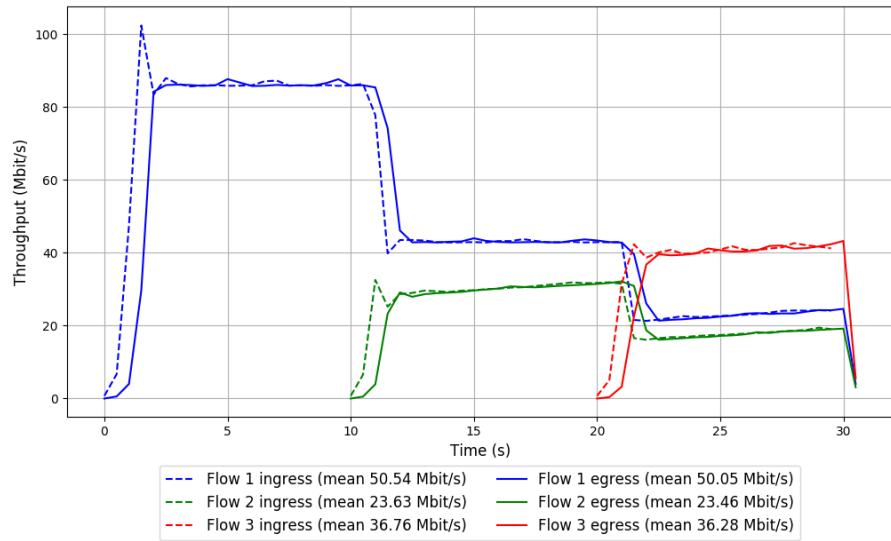


Run 3: Statistics of TCP Vegas

```
Start at: 2018-11-15 05:43:40
End at: 2018-11-15 05:44:10
Local clock offset: -7.578 ms
Remote clock offset: 9.561 ms

# Below is generated by plot.py at 2018-11-15 06:50:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.73 Mbit/s
95th percentile per-packet one-way delay: 92.973 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 93.004 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 23.46 Mbit/s
95th percentile per-packet one-way delay: 92.129 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 36.28 Mbit/s
95th percentile per-packet one-way delay: 94.776 ms
Loss rate: 1.34%
```

Run 3: Report of TCP Vegas — Data Link

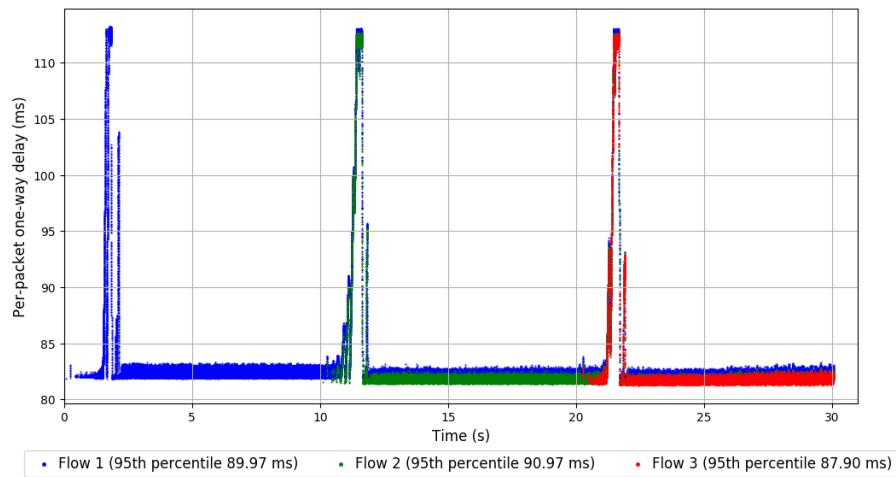
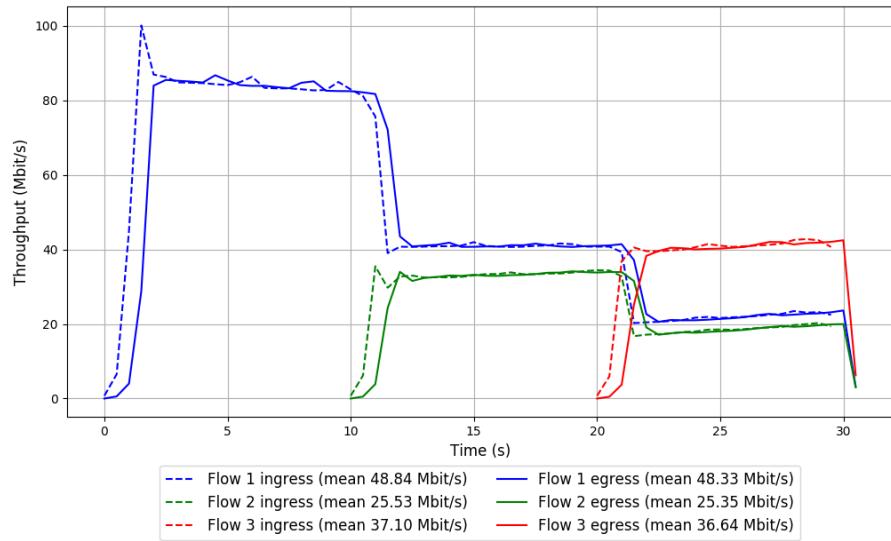


Run 4: Statistics of TCP Vegas

```
Start at: 2018-11-15 06:06:28
End at: 2018-11-15 06:06:58
Local clock offset: -8.379 ms
Remote clock offset: 4.637 ms

# Below is generated by plot.py at 2018-11-15 06:50:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.40 Mbit/s
95th percentile per-packet one-way delay: 89.890 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 48.33 Mbit/s
95th percentile per-packet one-way delay: 89.973 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 25.35 Mbit/s
95th percentile per-packet one-way delay: 90.965 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 36.64 Mbit/s
95th percentile per-packet one-way delay: 87.897 ms
Loss rate: 1.24%
```

Run 4: Report of TCP Vegas — Data Link

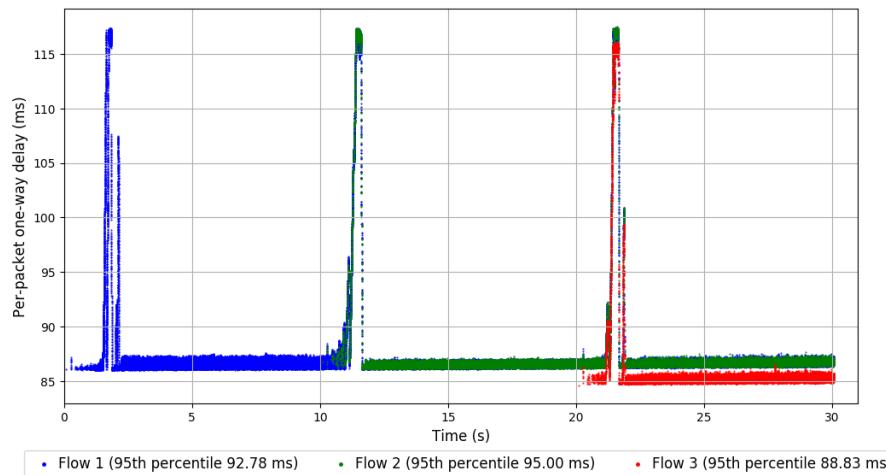
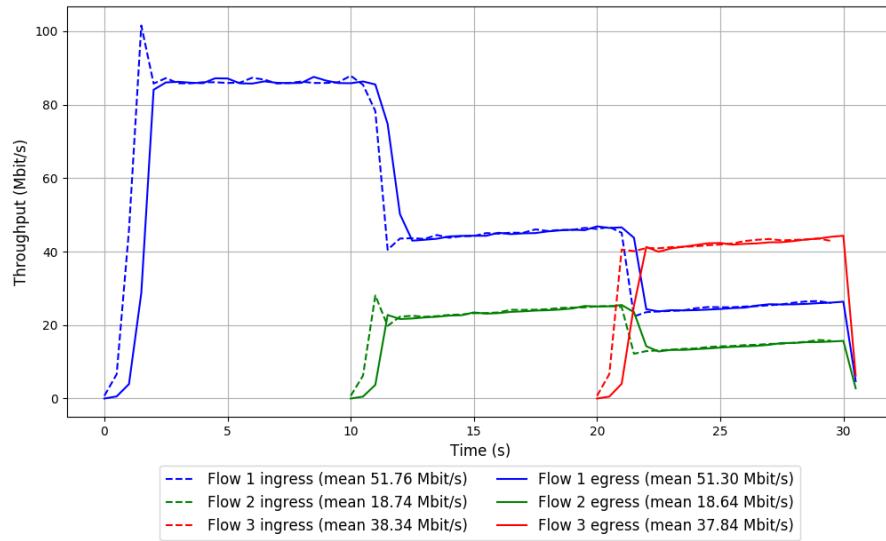


Run 5: Statistics of TCP Vegas

```
Start at: 2018-11-15 06:29:15
End at: 2018-11-15 06:29:45
Local clock offset: -6.248 ms
Remote clock offset: 9.395 ms

# Below is generated by plot.py at 2018-11-15 06:50:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.31 Mbit/s
95th percentile per-packet one-way delay: 92.324 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 51.30 Mbit/s
95th percentile per-packet one-way delay: 92.780 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 18.64 Mbit/s
95th percentile per-packet one-way delay: 94.998 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 37.84 Mbit/s
95th percentile per-packet one-way delay: 88.830 ms
Loss rate: 1.31%
```

Run 5: Report of TCP Vegas — Data Link

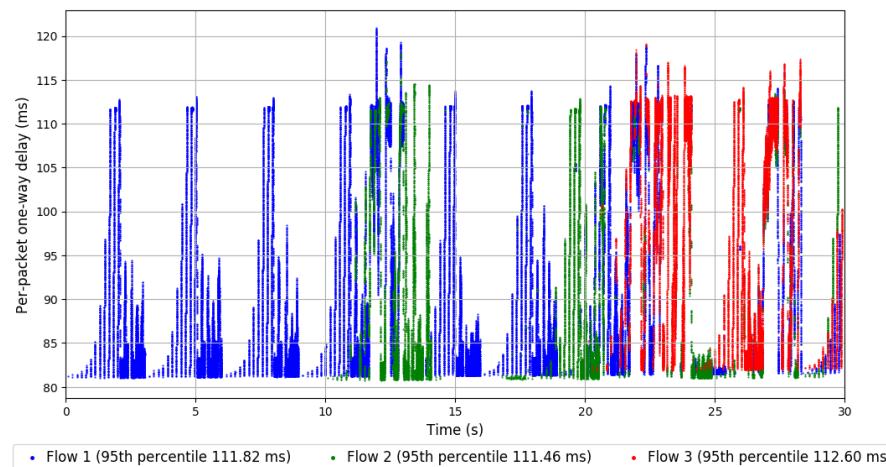
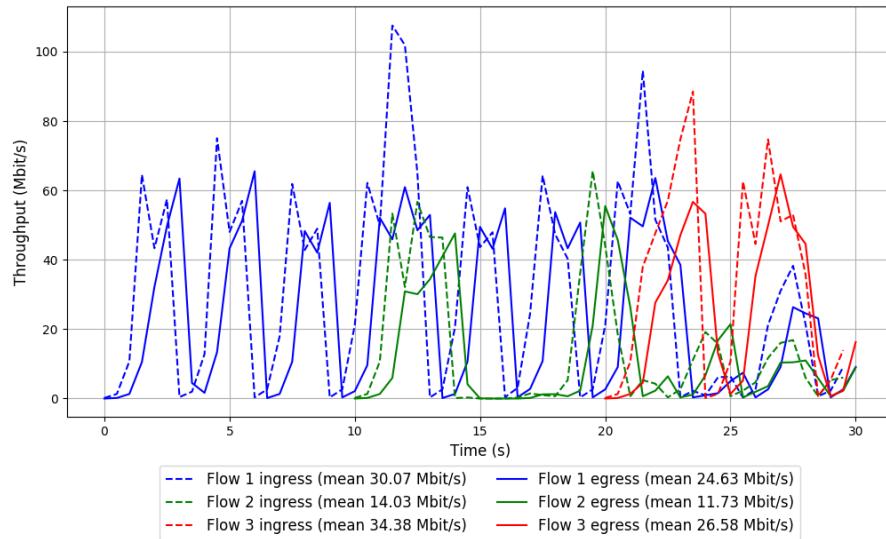


Run 1: Statistics of Verus

```
Start at: 2018-11-15 04:56:40
End at: 2018-11-15 04:57:10
Local clock offset: -11.535 ms
Remote clock offset: 4.663 ms

# Below is generated by plot.py at 2018-11-15 06:50:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.01 Mbit/s
95th percentile per-packet one-way delay: 111.938 ms
Loss rate: 18.73%
-- Flow 1:
Average throughput: 24.63 Mbit/s
95th percentile per-packet one-way delay: 111.824 ms
Loss rate: 18.04%
-- Flow 2:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 111.464 ms
Loss rate: 16.25%
-- Flow 3:
Average throughput: 26.58 Mbit/s
95th percentile per-packet one-way delay: 112.599 ms
Loss rate: 22.60%
```

Run 1: Report of Verus — Data Link

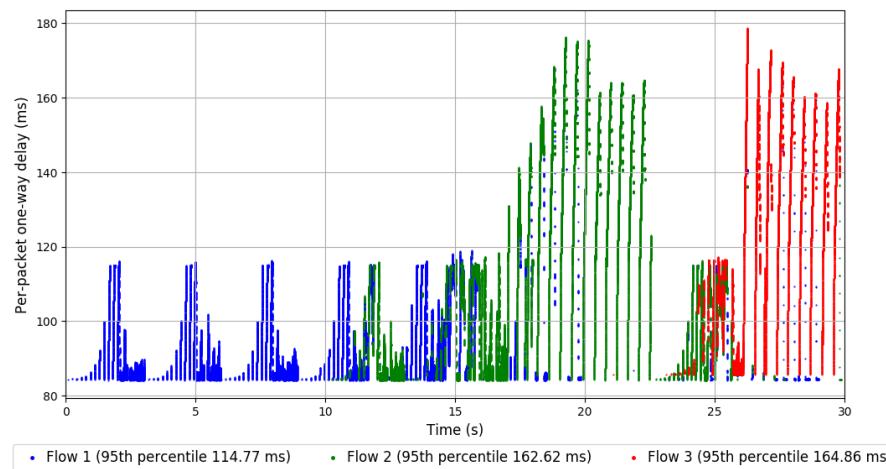
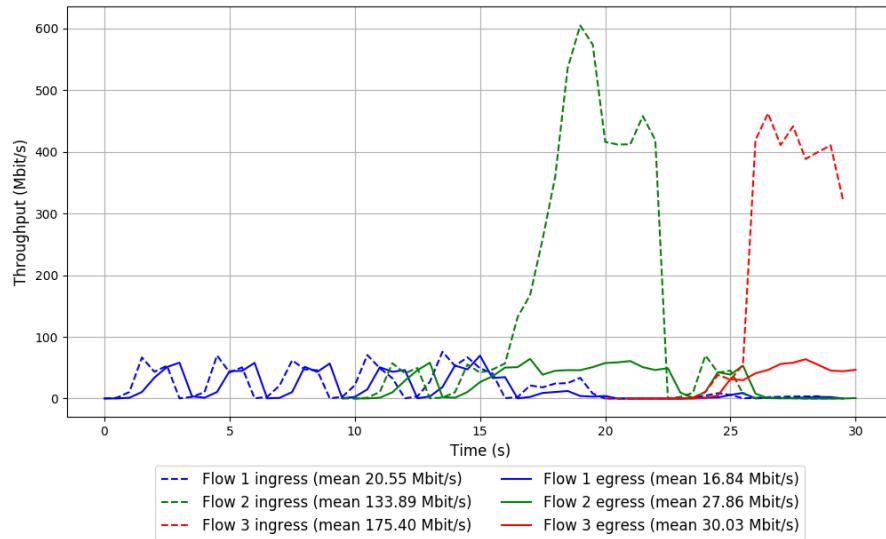


Run 2: Statistics of Verus

```
Start at: 2018-11-15 05:19:26
End at: 2018-11-15 05:19:56
Local clock offset: -3.349 ms
Remote clock offset: 9.539 ms

# Below is generated by plot.py at 2018-11-15 06:50:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.64 Mbit/s
95th percentile per-packet one-way delay: 160.305 ms
Loss rate: 73.69%
-- Flow 1:
Average throughput: 16.84 Mbit/s
95th percentile per-packet one-way delay: 114.774 ms
Loss rate: 18.54%
-- Flow 2:
Average throughput: 27.86 Mbit/s
95th percentile per-packet one-way delay: 162.623 ms
Loss rate: 79.19%
-- Flow 3:
Average throughput: 30.03 Mbit/s
95th percentile per-packet one-way delay: 164.862 ms
Loss rate: 84.56%
```

Run 2: Report of Verus — Data Link

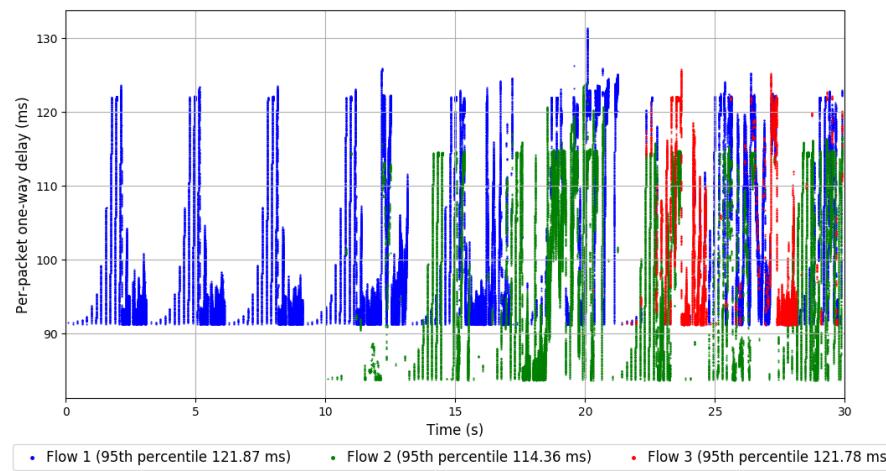
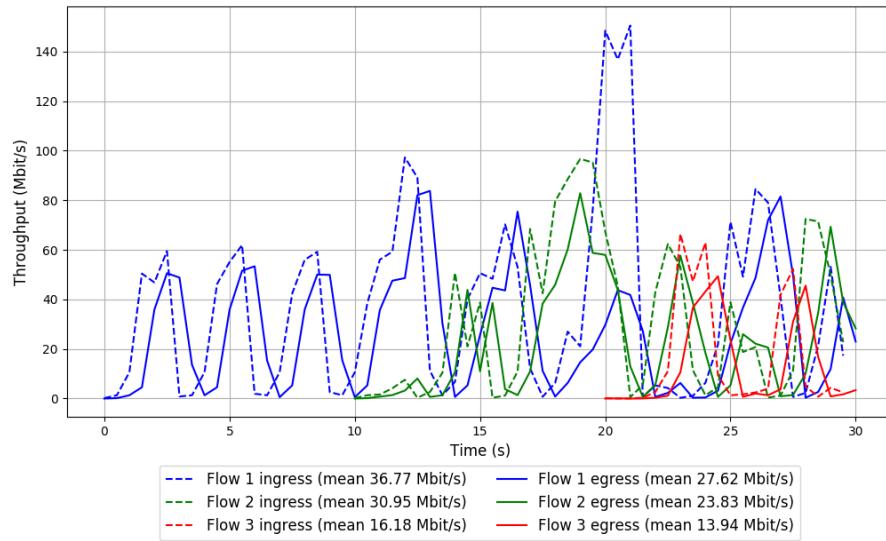


Run 3: Statistics of Verus

```
Start at: 2018-11-15 05:42:24
End at: 2018-11-15 05:42:54
Local clock offset: -6.636 ms
Remote clock offset: 9.557 ms

# Below is generated by plot.py at 2018-11-15 06:50:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.03 Mbit/s
95th percentile per-packet one-way delay: 121.708 ms
Loss rate: 23.28%
-- Flow 1:
Average throughput: 27.62 Mbit/s
95th percentile per-packet one-way delay: 121.867 ms
Loss rate: 24.84%
-- Flow 2:
Average throughput: 23.83 Mbit/s
95th percentile per-packet one-way delay: 114.357 ms
Loss rate: 22.89%
-- Flow 3:
Average throughput: 13.94 Mbit/s
95th percentile per-packet one-way delay: 121.784 ms
Loss rate: 13.94%
```

Run 3: Report of Verus — Data Link

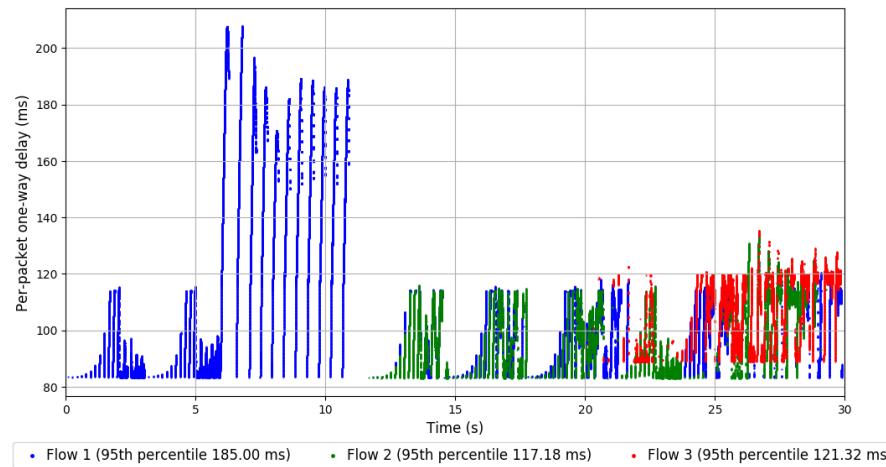
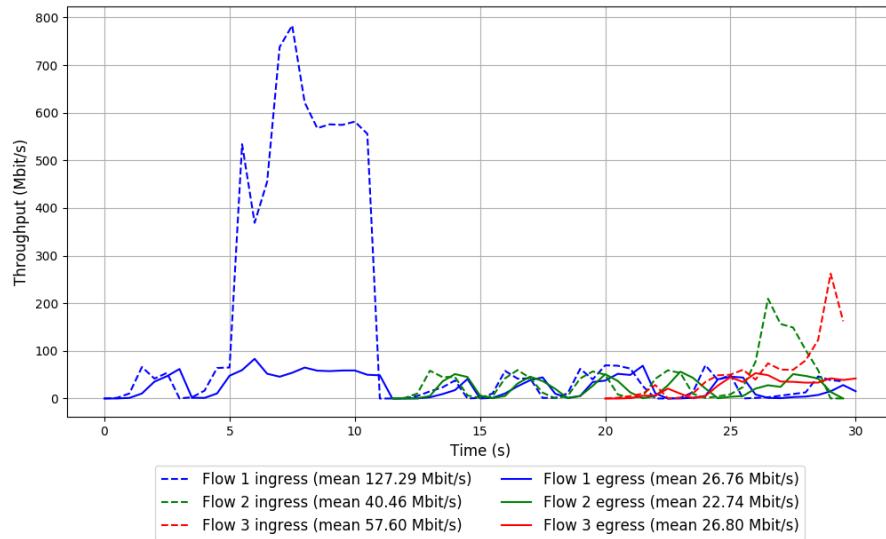


Run 4: Statistics of Verus

```
Start at: 2018-11-15 06:05:10
End at: 2018-11-15 06:05:40
Local clock offset: -7.634 ms
Remote clock offset: 8.566 ms

# Below is generated by plot.py at 2018-11-15 06:50:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.11 Mbit/s
95th percentile per-packet one-way delay: 177.487 ms
Loss rate: 71.19%
-- Flow 1:
Average throughput: 26.76 Mbit/s
95th percentile per-packet one-way delay: 184.996 ms
Loss rate: 78.97%
-- Flow 2:
Average throughput: 22.74 Mbit/s
95th percentile per-packet one-way delay: 117.176 ms
Loss rate: 44.34%
-- Flow 3:
Average throughput: 26.80 Mbit/s
95th percentile per-packet one-way delay: 121.317 ms
Loss rate: 53.34%
```

Run 4: Report of Verus — Data Link

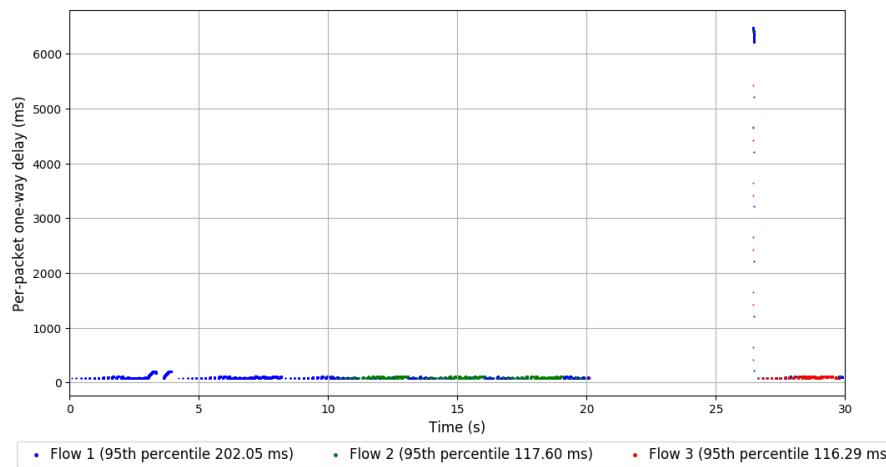
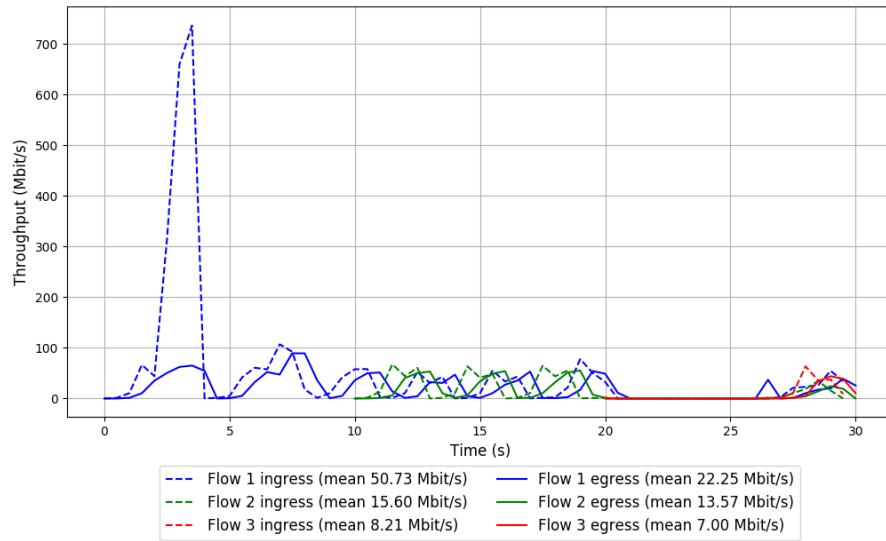


Run 5: Statistics of Verus

```
Start at: 2018-11-15 06:27:59
End at: 2018-11-15 06:28:29
Local clock offset: -7.982 ms
Remote clock offset: 9.496 ms

# Below is generated by plot.py at 2018-11-15 06:50:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.47 Mbit/s
95th percentile per-packet one-way delay: 172.716 ms
Loss rate: 47.43%
-- Flow 1:
Average throughput: 22.25 Mbit/s
95th percentile per-packet one-way delay: 202.046 ms
Loss rate: 56.13%
-- Flow 2:
Average throughput: 13.57 Mbit/s
95th percentile per-packet one-way delay: 117.602 ms
Loss rate: 12.98%
-- Flow 3:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 116.291 ms
Loss rate: 14.70%
```

Run 5: Report of Verus — Data Link

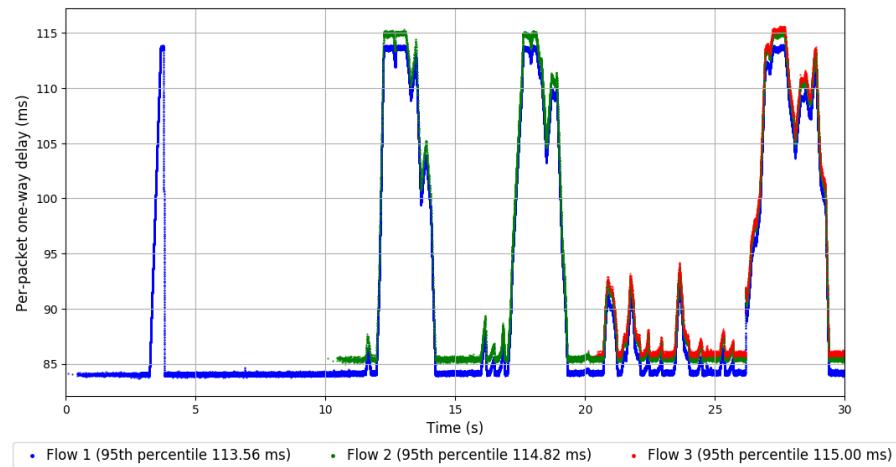
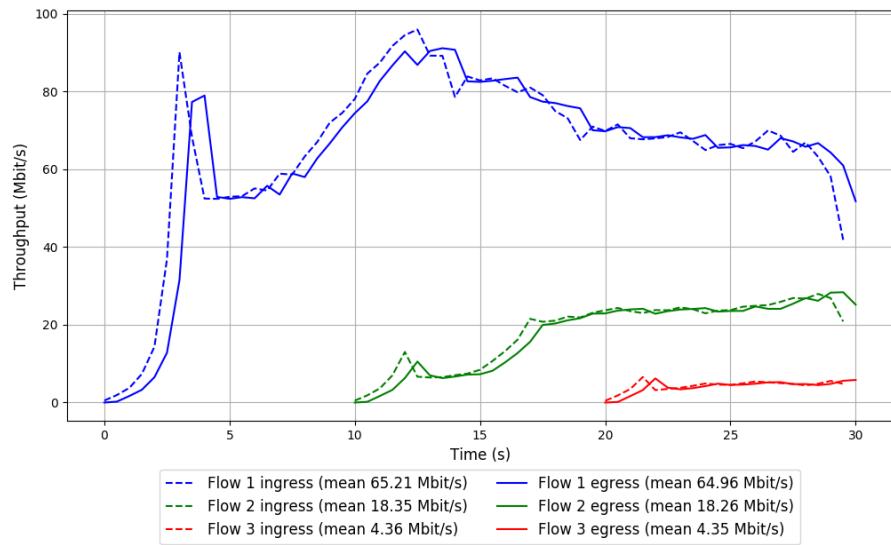


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-11-15 05:09:24
End at: 2018-11-15 05:09:54
Local clock offset: -4.541 ms
Remote clock offset: 9.449 ms

# Below is generated by plot.py at 2018-11-15 06:51:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.54 Mbit/s
95th percentile per-packet one-way delay: 113.598 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 64.96 Mbit/s
95th percentile per-packet one-way delay: 113.564 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 18.26 Mbit/s
95th percentile per-packet one-way delay: 114.822 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 114.997 ms
Loss rate: 0.35%
```

Run 1: Report of PCC-Vivace — Data Link

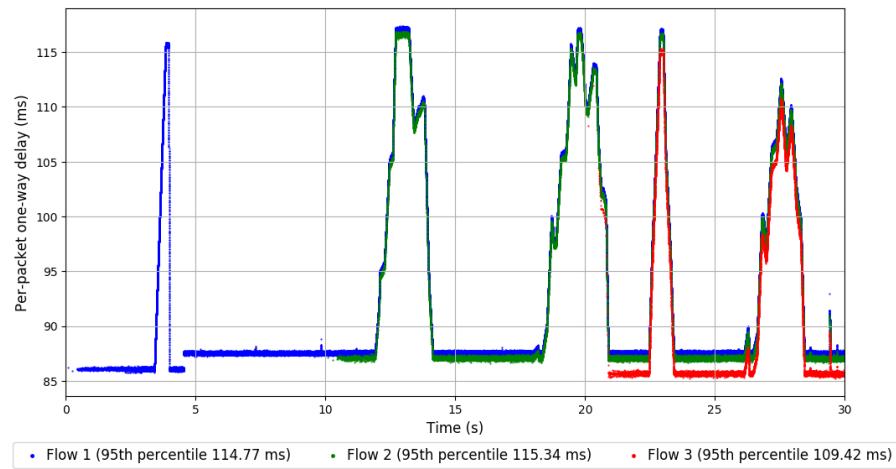
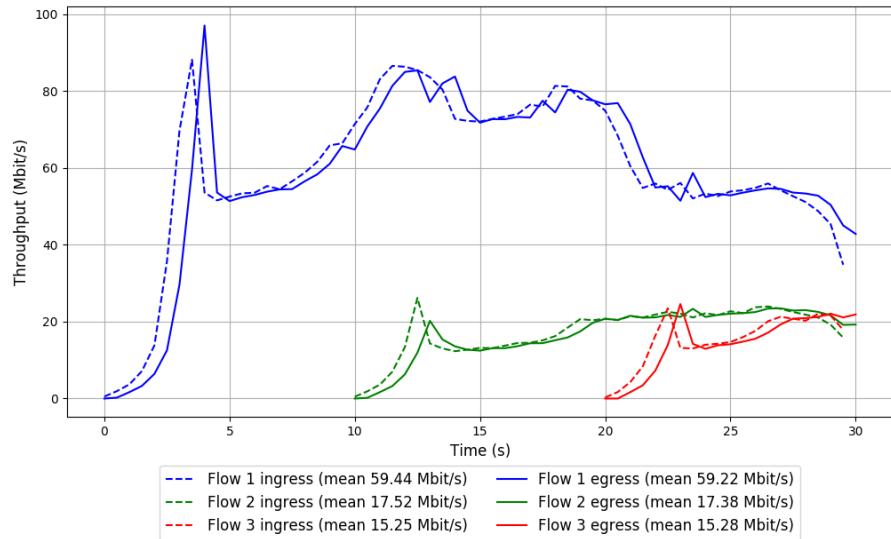


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-11-15 05:32:23
End at: 2018-11-15 05:32:53
Local clock offset: -5.677 ms
Remote clock offset: 10.705 ms

# Below is generated by plot.py at 2018-11-15 06:51:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 114.623 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 59.22 Mbit/s
95th percentile per-packet one-way delay: 114.765 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 17.38 Mbit/s
95th percentile per-packet one-way delay: 115.345 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 15.28 Mbit/s
95th percentile per-packet one-way delay: 109.420 ms
Loss rate: 0.08%
```

Run 2: Report of PCC-Vivace — Data Link

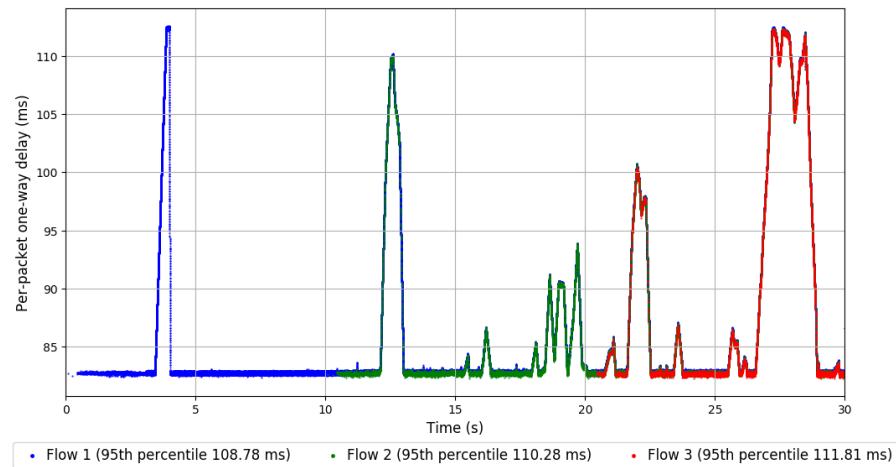
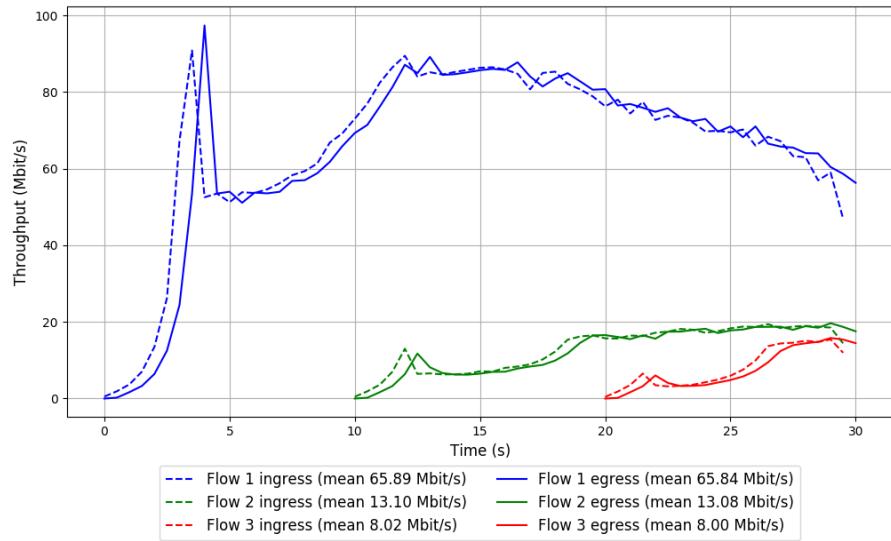


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-11-15 05:55:09
End at: 2018-11-15 05:55:39
Local clock offset: -8.741 ms
Remote clock offset: 5.85 ms

# Below is generated by plot.py at 2018-11-15 06:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.18 Mbit/s
95th percentile per-packet one-way delay: 109.569 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 65.84 Mbit/s
95th percentile per-packet one-way delay: 108.777 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 13.08 Mbit/s
95th percentile per-packet one-way delay: 110.285 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 111.809 ms
Loss rate: 0.27%
```

Run 3: Report of PCC-Vivace — Data Link

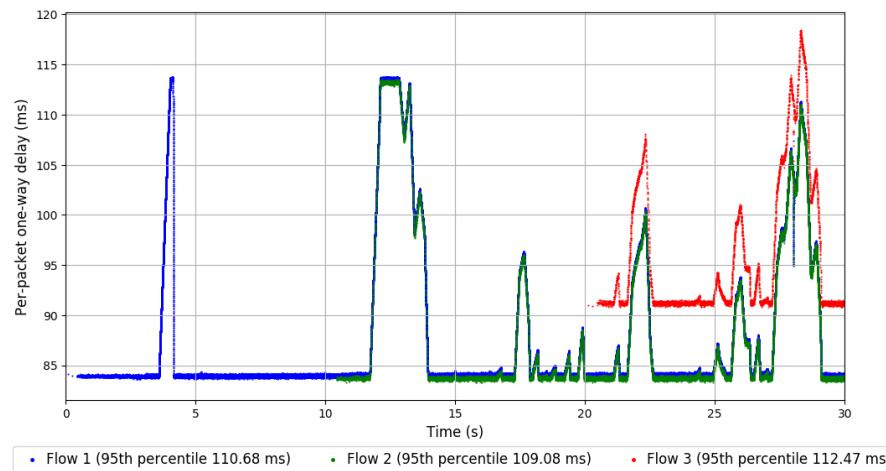
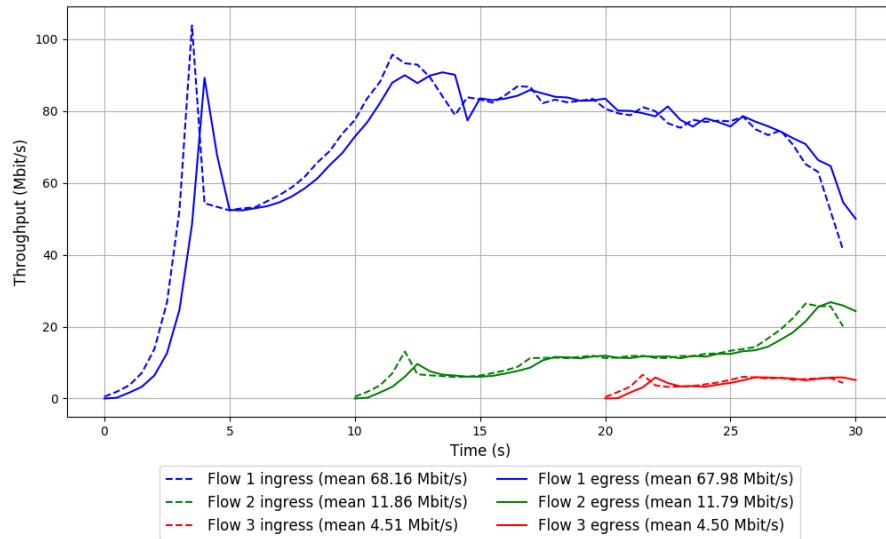


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-11-15 06:17:57
End at: 2018-11-15 06:18:27
Local clock offset: -8.653 ms
Remote clock offset: 8.369 ms

# Below is generated by plot.py at 2018-11-15 06:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.31 Mbit/s
95th percentile per-packet one-way delay: 110.503 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 67.98 Mbit/s
95th percentile per-packet one-way delay: 110.679 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 109.085 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 112.475 ms
Loss rate: 0.08%
```

Run 4: Report of PCC-Vivace — Data Link

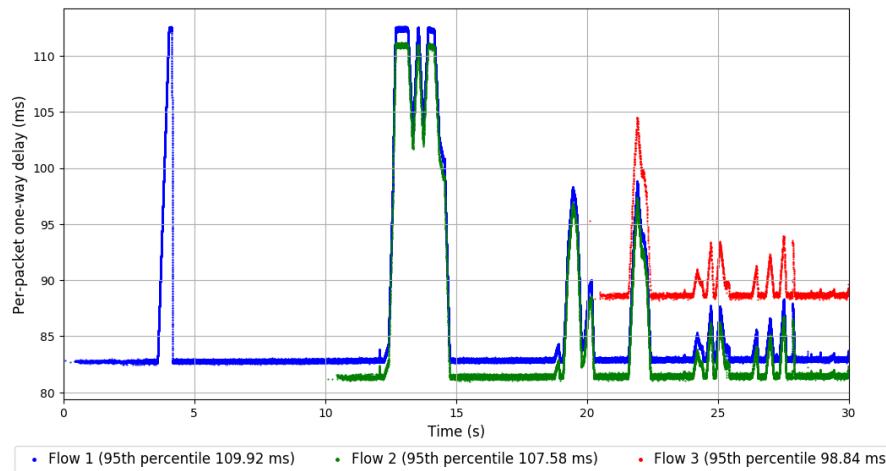
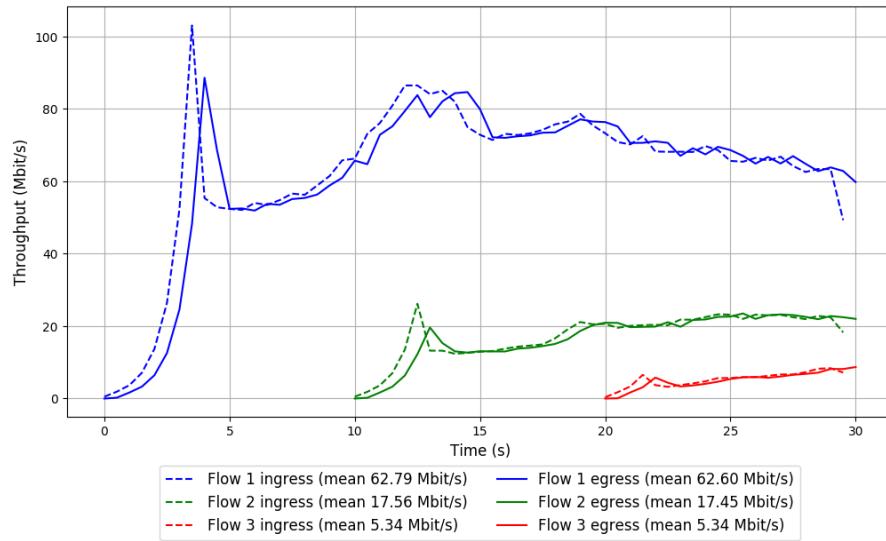


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-11-15 06:40:44
End at: 2018-11-15 06:41:14
Local clock offset: -2.117 ms
Remote clock offset: 5.421 ms

# Below is generated by plot.py at 2018-11-15 06:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.96 Mbit/s
95th percentile per-packet one-way delay: 109.370 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 62.60 Mbit/s
95th percentile per-packet one-way delay: 109.916 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 17.45 Mbit/s
95th percentile per-packet one-way delay: 107.583 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 5.34 Mbit/s
95th percentile per-packet one-way delay: 98.843 ms
Loss rate: 0.09%
```

Run 5: Report of PCC-Vivace — Data Link

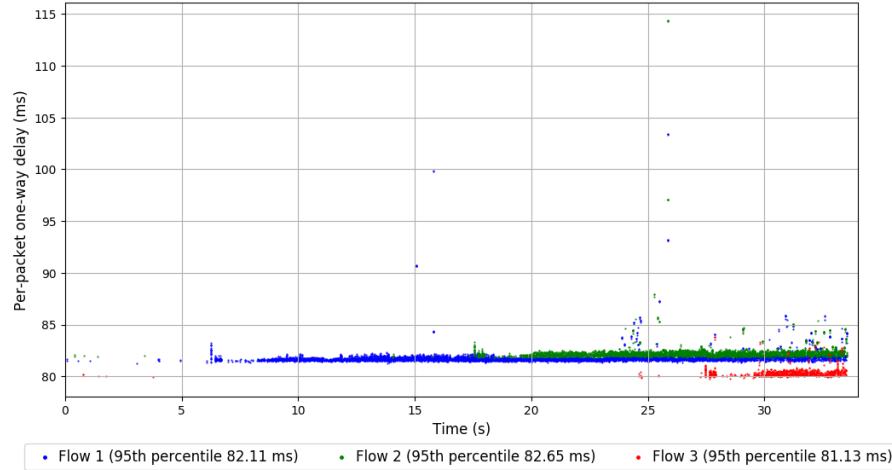
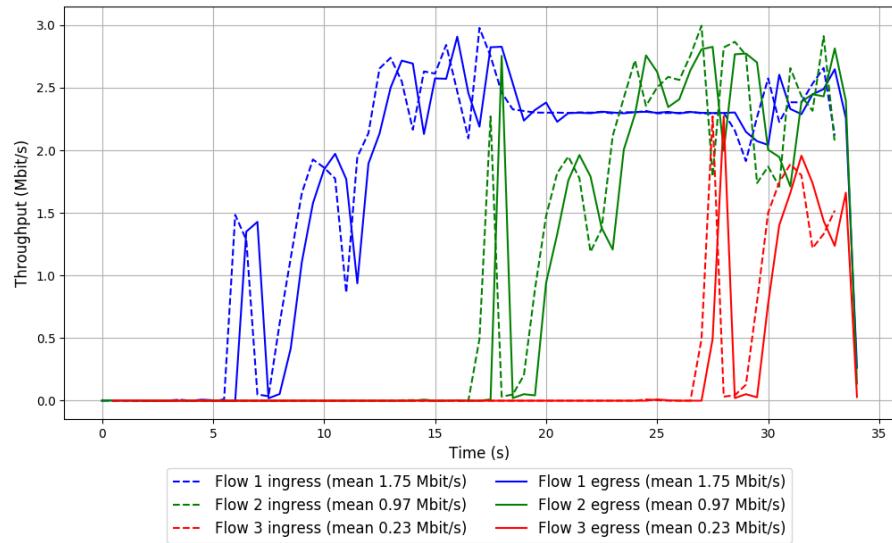


```
Run 1: Statistics of WebRTC media

Start at: 2018-11-15 04:54:13
End at: 2018-11-15 04:54:43
Local clock offset: -11.829 ms
Remote clock offset: 4.701 ms

# Below is generated by plot.py at 2018-11-15 06:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 82.484 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 82.110 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 82.647 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 81.134 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

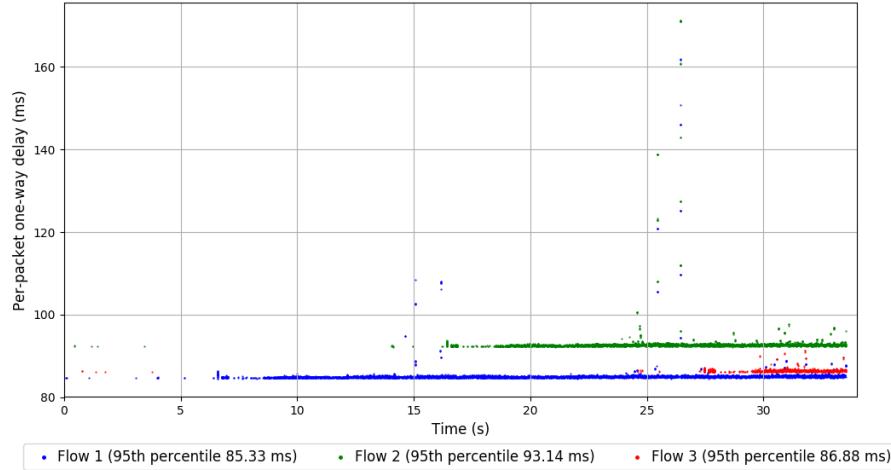
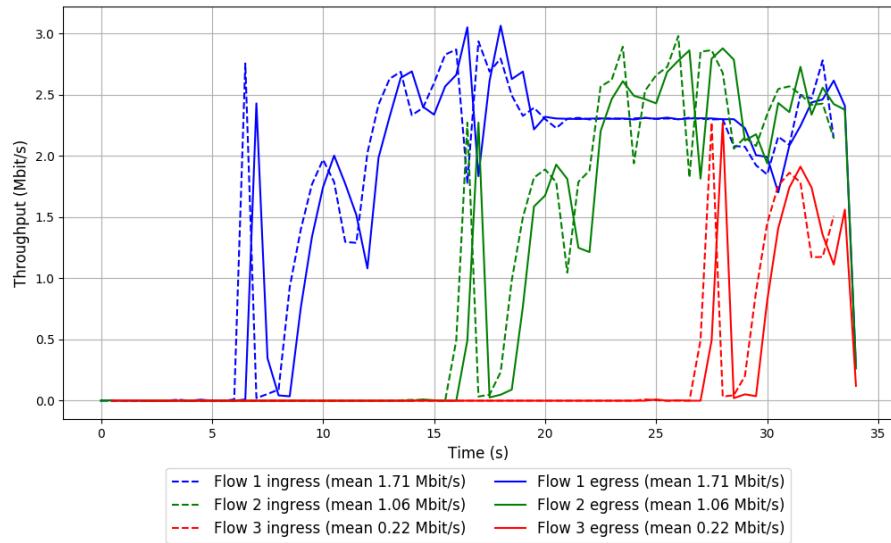


```
Run 2: Statistics of WebRTC media

Start at: 2018-11-15 05:16:58
End at: 2018-11-15 05:17:28
Local clock offset: -4.229 ms
Remote clock offset: 9.58 ms

# Below is generated by plot.py at 2018-11-15 06:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 92.860 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 85.325 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 93.137 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.878 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

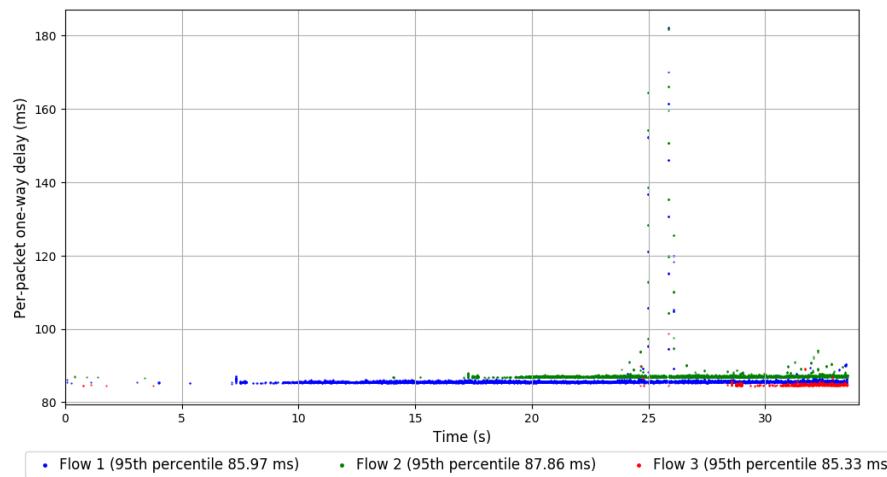
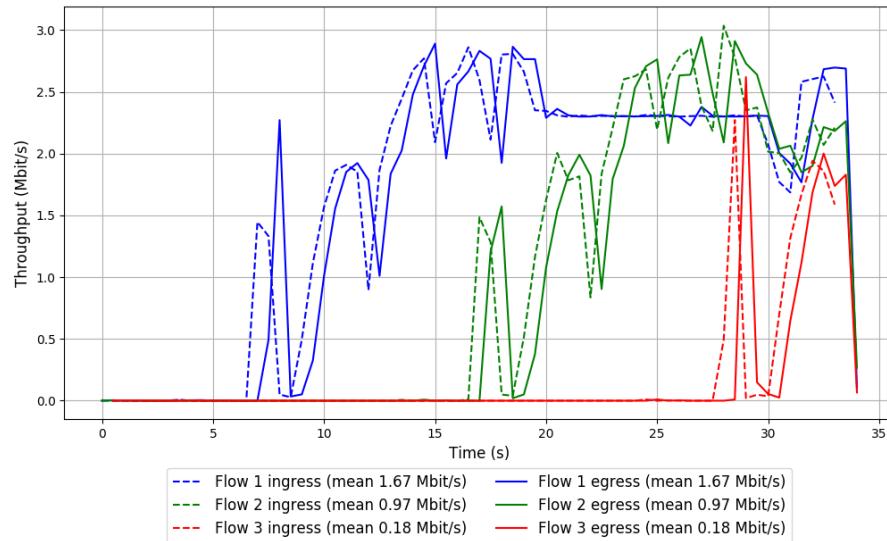


Run 3: Statistics of WebRTC media

```
Start at: 2018-11-15 05:39:57
End at: 2018-11-15 05:40:27
Local clock offset: -7.063 ms
Remote clock offset: 9.49 ms

# Below is generated by plot.py at 2018-11-15 06:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 87.304 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 85.971 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 87.862 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 85.328 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

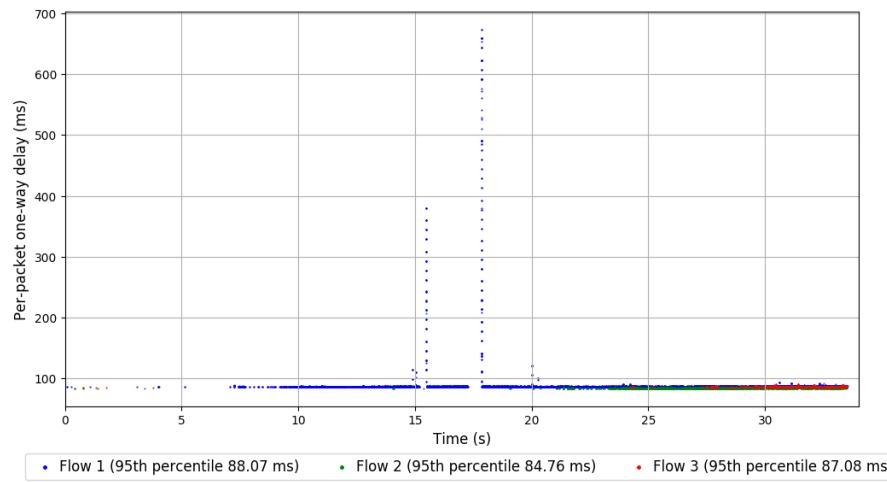
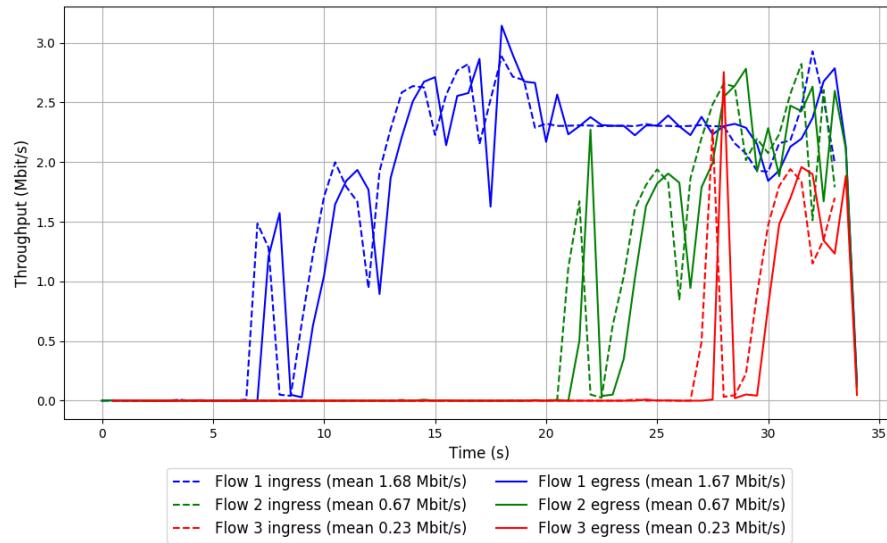


Run 4: Statistics of WebRTC media

```
Start at: 2018-11-15 06:02:44
End at: 2018-11-15 06:03:14
Local clock offset: -7.678 ms
Remote clock offset: 9.495 ms

# Below is generated by plot.py at 2018-11-15 06:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 87.390 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 88.069 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 84.756 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 87.085 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



```
Run 5: Statistics of WebRTC media

Start at: 2018-11-15 06:25:32
End at: 2018-11-15 06:26:02
Local clock offset: -9.013 ms
Remote clock offset: 10.413 ms

# Below is generated by plot.py at 2018-11-15 06:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 88.983 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 86.778 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 89.139 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 86.357 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

