

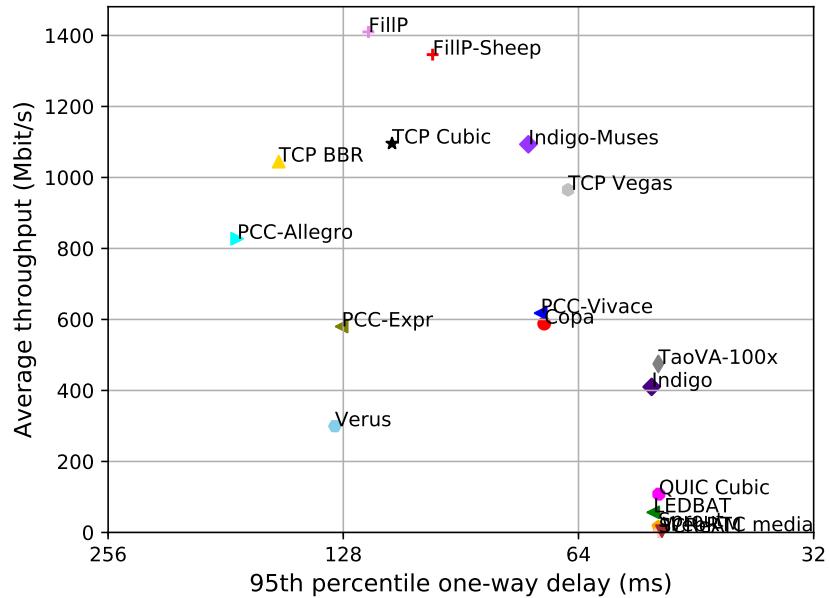
## Pantheon Report

Generated at 2018-09-12 01:53:54 (UTC).  
Data path: GCE Iowa on `ens4` (*remote*) → GCE London on `ens4` (*local*).  
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 `time.google.com` and have been applied to correct the timestamps in logs.

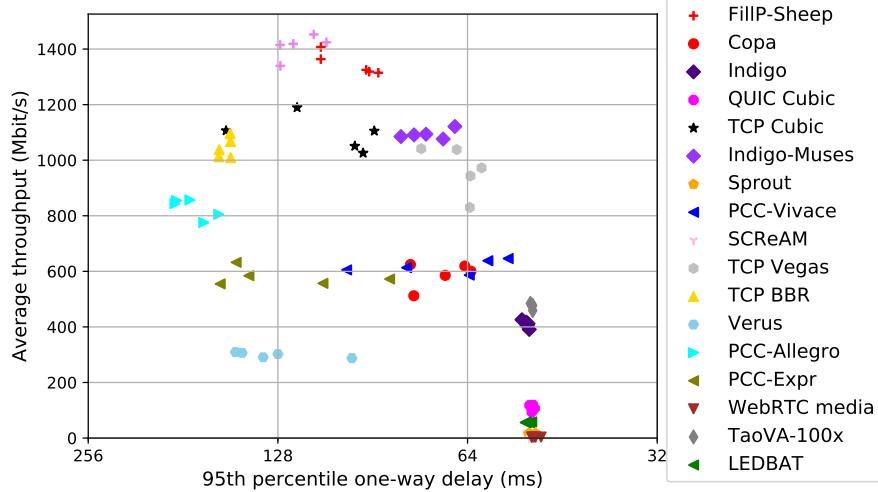
```
System info:  
Linux 4.15.0-1018-gcp  
net.core.default_qdisc = fq  
net.core.rmem_default = 16777216  
net.core.rmem_max = 536870912  
net.core.wmem_default = 16777216  
net.core.wmem_max = 536870912  
net.ipv4.tcp_rmem = 4096 16777216 536870912  
net.ipv4.tcp_wmem = 4096 16777216 536870912  
net.ipv4.tcp_mem = 190986 254651 381972  
  
Git summary:  
branch: muses @ f30bceca2aec2ef14a3cf71e25642f4a30905a03  
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834  
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe  
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/libutp @ b3465b942e2826f2b179eab4a906ce6bb7cf3cf  
third_party/muses @ 65ac1b19bbfed0c6349ae986009b4fa8643c40a  
third_party/pantheon-tunnel @ cbfce6db5ff5740dafe1771f813cd646339e1952  
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 GCE Iowa to GCE London, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE Iowa to GCE London, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows



↳

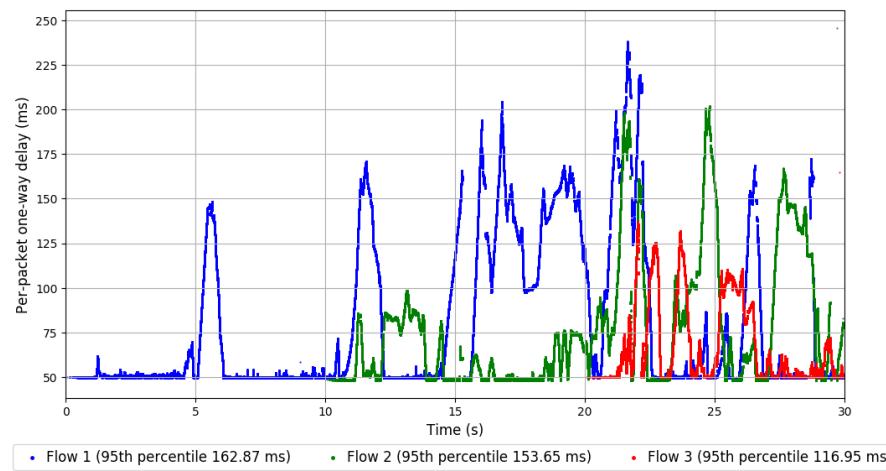
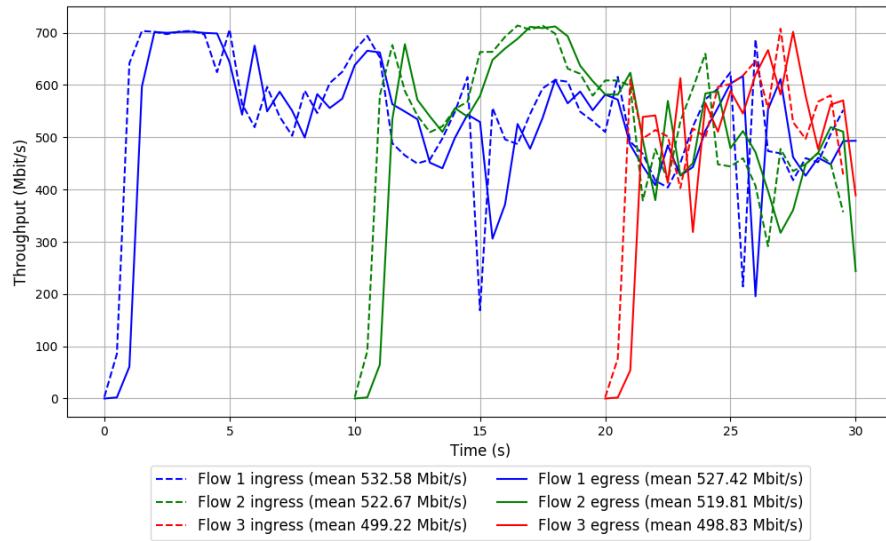
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	548.40	514.84	465.47	158.34	148.05	118.50	1.13	1.05	1.50
Copa	5	315.49	281.53	259.10	62.25	71.26	84.75	0.29	0.42	1.07
TCP Cubic	5	568.44	553.34	481.92	94.26	101.40	92.31	0.35	0.57	1.28
FillP	5	751.44	706.02	574.95	120.98	117.06	79.02	2.66	2.22	2.14
FillP-Sheep	5	725.04	664.93	545.13	101.96	95.97	71.69	0.64	0.67	1.29
Indigo	5	217.90	202.43	175.62	51.39	51.34	51.32	0.36	0.54	1.20
LEDBAT	5	36.37	24.48	11.95	51.08	50.96	50.96	0.53	1.01	2.04
Indigo-Muses	5	601.41	531.28	426.48	73.92	75.68	72.36	0.31	0.39	1.31
PCC-Allegro	5	451.54	409.29	318.55	148.73	174.51	131.18	2.64	4.87	2.87
PCC-Expr	5	321.51	277.04	227.98	115.38	115.55	81.99	1.34	4.18	1.35
QUIC Cubic	5	66.82	51.39	19.02	50.13	50.32	50.07	0.41	0.69	1.54
SCReAM	5	0.22	0.22	0.22	50.11	50.24	50.05	0.31	0.61	1.09
Sprout	5	8.23	8.14	7.81	49.90	50.40	50.01	0.42	0.64	1.33
TaoVA-100x	5	241.90	243.94	214.78	50.32	49.98	50.34	0.36	0.49	1.05
TCP Vegas	5	480.60	515.46	429.34	63.62	65.51	70.65	0.31	0.50	1.01
Verus	5	164.97	155.00	95.25	134.49	113.96	113.41	0.66	0.86	2.20
PCC-Vivace	5	357.23	333.53	119.98	71.07	78.70	56.28	0.35	0.53	1.31
WebRTC media	5	1.87	1.21	0.49	49.54	49.64	49.98	0.45	0.65	1.19

Run 1: Statistics of TCP BBR

```
Start at: 2018-09-11 20:41:36
End at: 2018-09-11 20:42:06
Local clock offset: -0.469 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-09-11 23:31:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1037.84 Mbit/s
95th percentile per-packet one-way delay: 158.565 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 527.42 Mbit/s
95th percentile per-packet one-way delay: 162.874 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 519.81 Mbit/s
95th percentile per-packet one-way delay: 153.654 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 498.83 Mbit/s
95th percentile per-packet one-way delay: 116.953 ms
Loss rate: 1.10%
```

## Run 1: Report of TCP BBR — Data Link

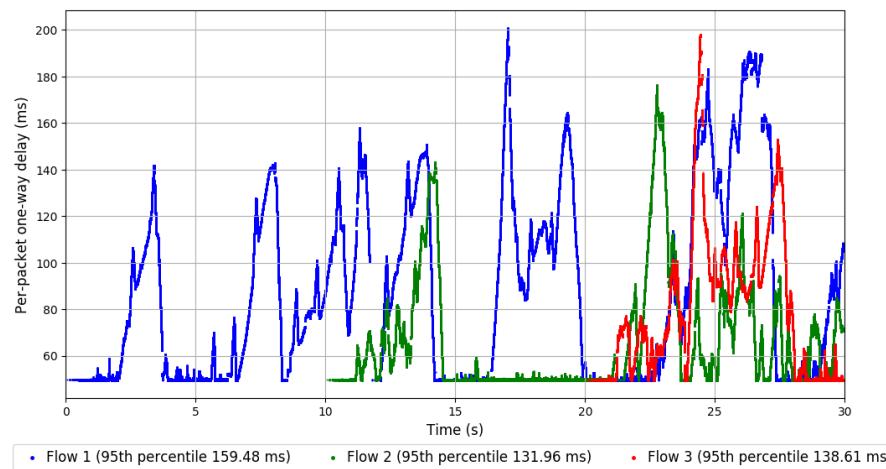
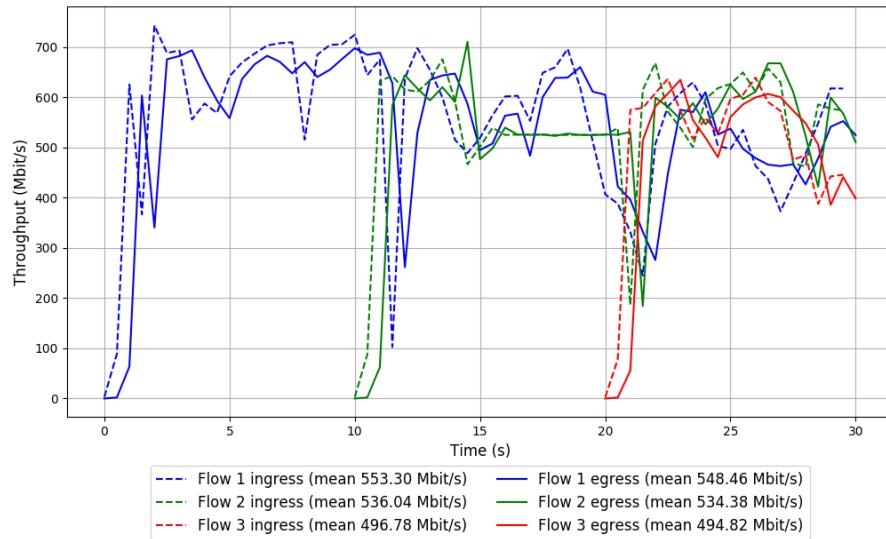


Run 2: Statistics of TCP BBR

```
Start at: 2018-09-11 21:13:33
End at: 2018-09-11 21:14:03
Local clock offset: -0.087 ms
Remote clock offset: -0.191 ms

# Below is generated by plot.py at 2018-09-11 23:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1067.26 Mbit/s
95th percentile per-packet one-way delay: 152.184 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 548.46 Mbit/s
95th percentile per-packet one-way delay: 159.478 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 534.38 Mbit/s
95th percentile per-packet one-way delay: 131.957 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 494.82 Mbit/s
95th percentile per-packet one-way delay: 138.609 ms
Loss rate: 1.40%
```

## Run 2: Report of TCP BBR — Data Link

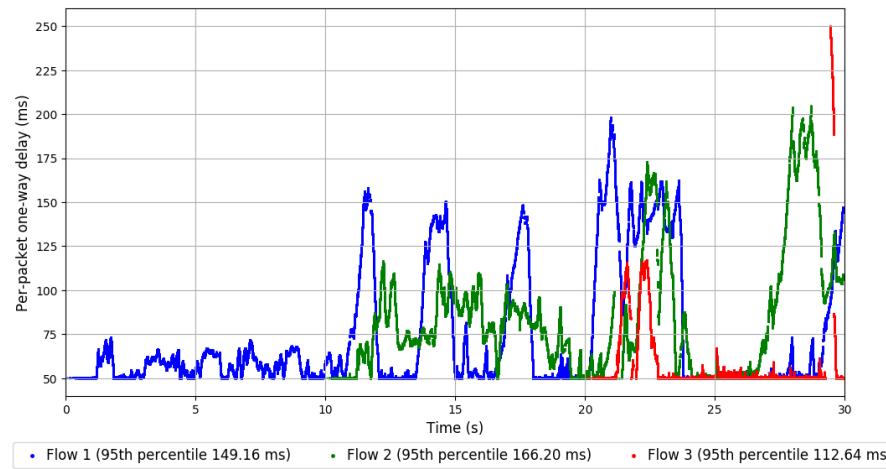
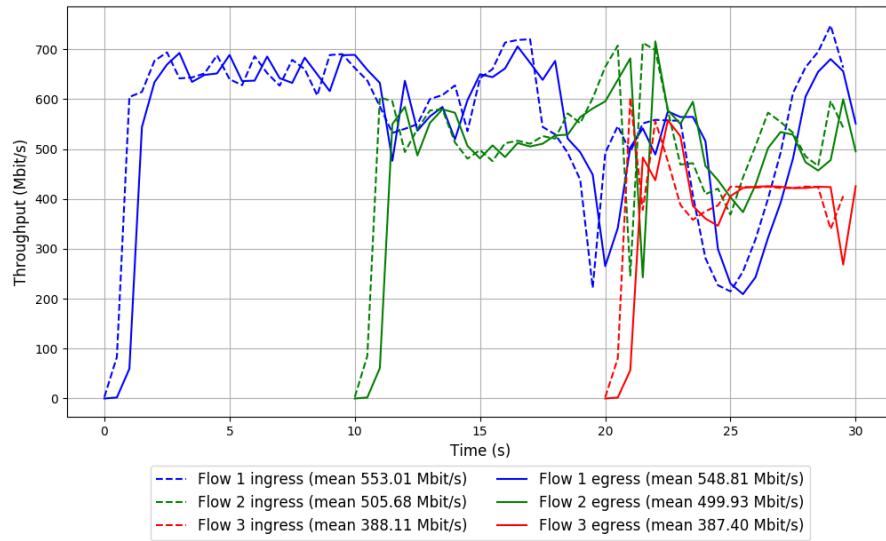


Run 3: Statistics of TCP BBR

```
Start at: 2018-09-11 21:45:34
End at: 2018-09-11 21:46:04
Local clock offset: -0.069 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2018-09-11 23:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1009.31 Mbit/s
95th percentile per-packet one-way delay: 152.083 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 548.81 Mbit/s
95th percentile per-packet one-way delay: 149.158 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 499.93 Mbit/s
95th percentile per-packet one-way delay: 166.202 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 387.40 Mbit/s
95th percentile per-packet one-way delay: 112.645 ms
Loss rate: 1.22%
```

### Run 3: Report of TCP BBR — Data Link

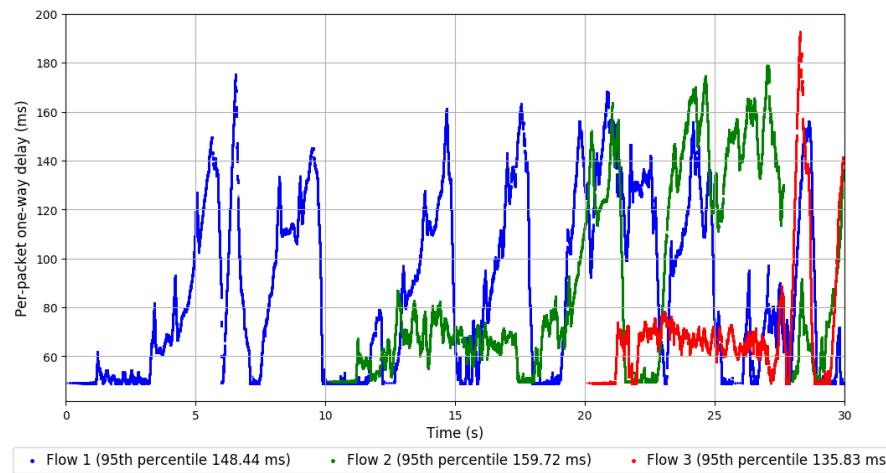
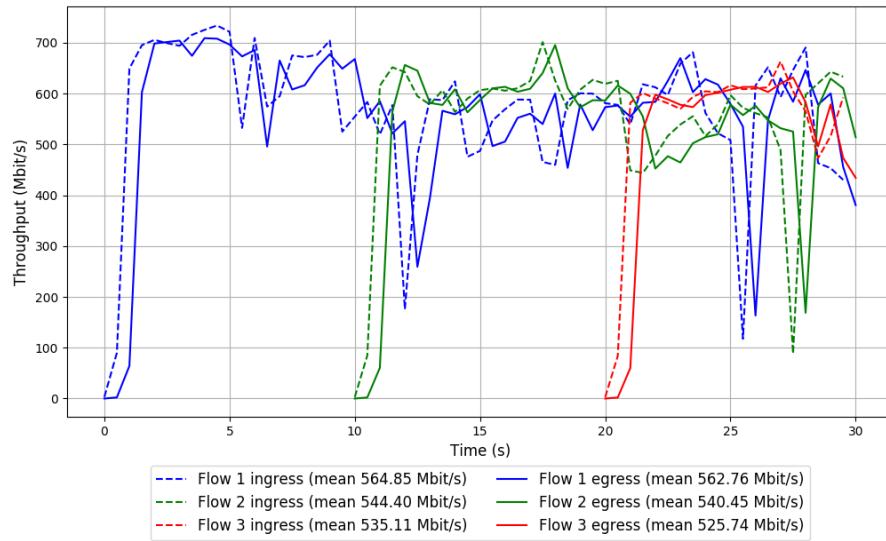


Run 4: Statistics of TCP BBR

```
Start at: 2018-09-11 22:17:21
End at: 2018-09-11 22:17:51
Local clock offset: -0.476 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2018-09-11 23:32:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1095.96 Mbit/s
95th percentile per-packet one-way delay: 152.411 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 562.76 Mbit/s
95th percentile per-packet one-way delay: 148.438 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 540.45 Mbit/s
95th percentile per-packet one-way delay: 159.718 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 525.74 Mbit/s
95th percentile per-packet one-way delay: 135.826 ms
Loss rate: 2.75%
```

## Run 4: Report of TCP BBR — Data Link

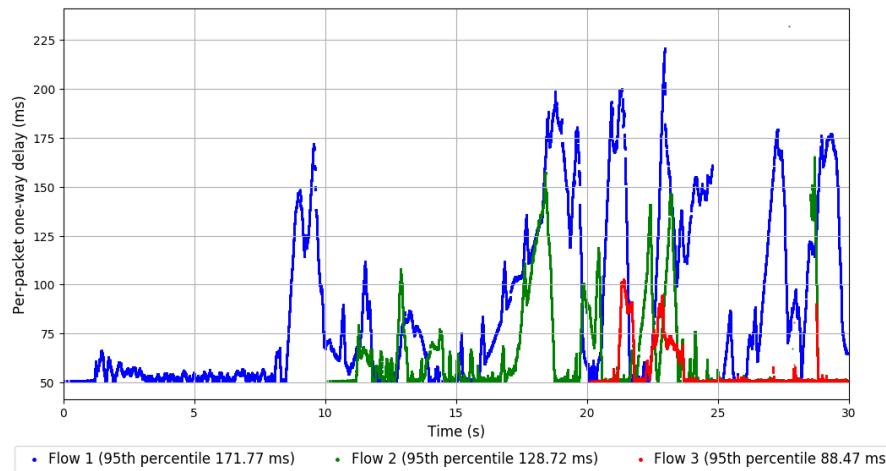
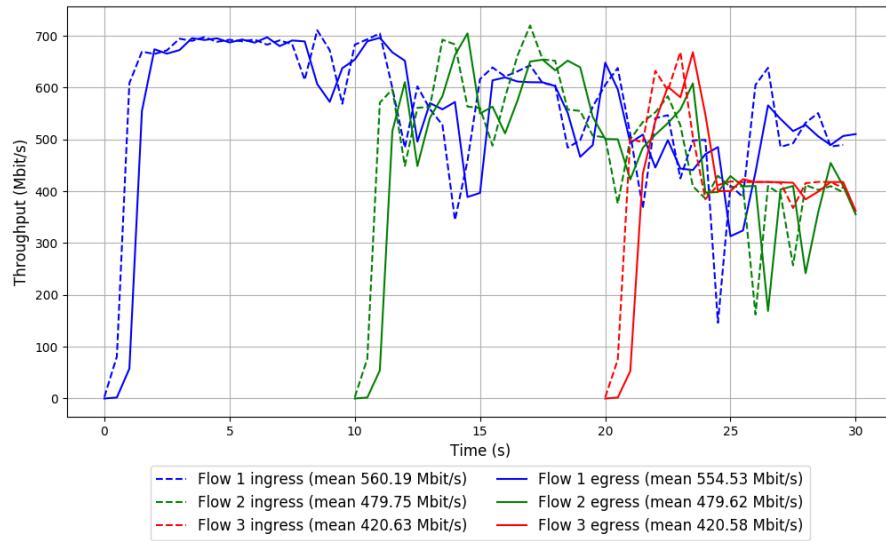


Run 5: Statistics of TCP BBR

```
Start at: 2018-09-11 22:49:29
End at: 2018-09-11 22:49:59
Local clock offset: -0.04 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2018-09-11 23:32:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1012.34 Mbit/s
95th percentile per-packet one-way delay: 158.830 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 554.53 Mbit/s
95th percentile per-packet one-way delay: 171.774 ms
Loss rate: 1.35%
-- Flow 2:
Average throughput: 479.62 Mbit/s
95th percentile per-packet one-way delay: 128.716 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 420.58 Mbit/s
95th percentile per-packet one-way delay: 88.468 ms
Loss rate: 1.03%
```

### Run 5: Report of TCP BBR — Data Link

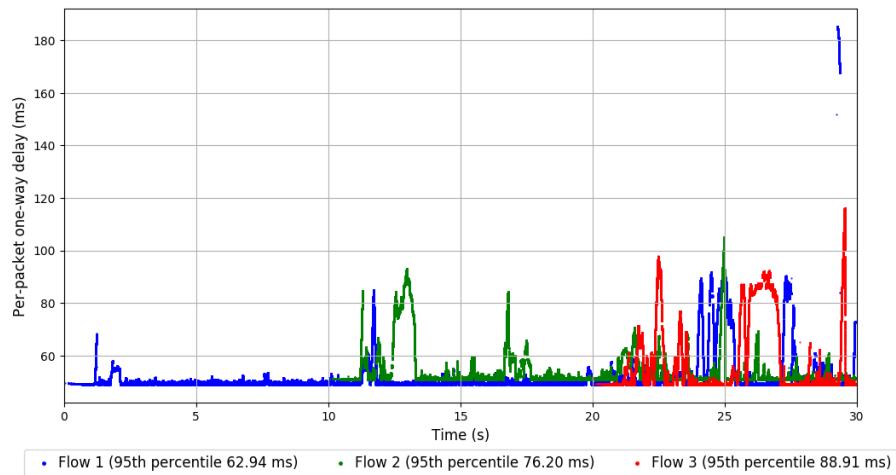
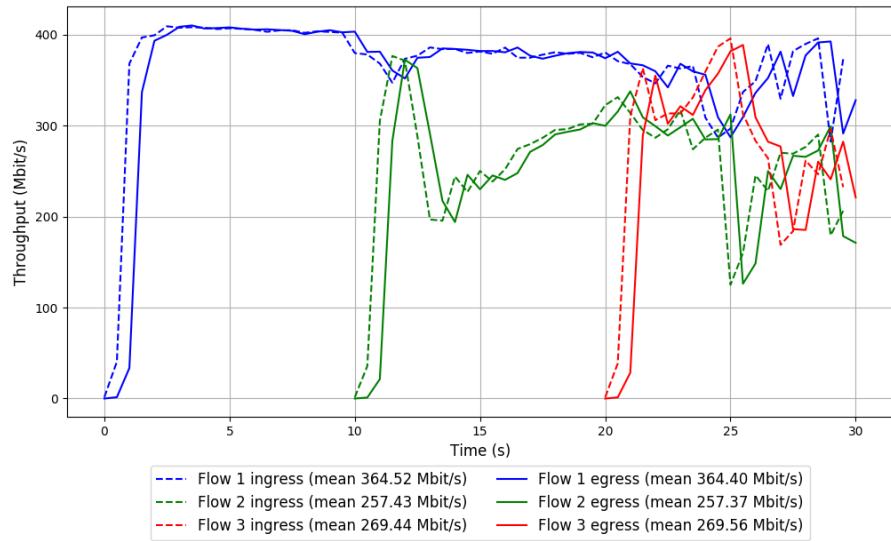


Run 1: Statistics of Copa

```
Start at: 2018-09-11 20:38:18
End at: 2018-09-11 20:38:48
Local clock offset: 0.236 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-09-11 23:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 624.52 Mbit/s
95th percentile per-packet one-way delay: 78.857 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 364.40 Mbit/s
95th percentile per-packet one-way delay: 62.944 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 257.37 Mbit/s
95th percentile per-packet one-way delay: 76.200 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 269.56 Mbit/s
95th percentile per-packet one-way delay: 88.907 ms
Loss rate: 0.93%
```

Run 1: Report of Copa — Data Link

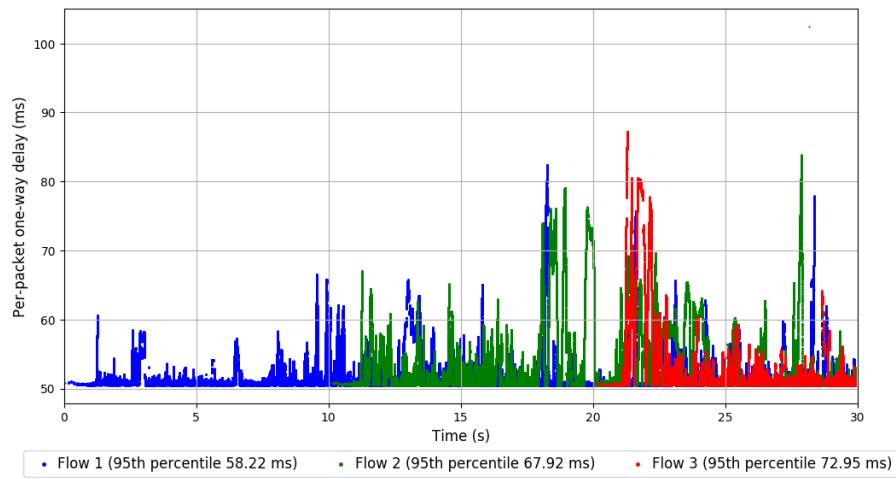
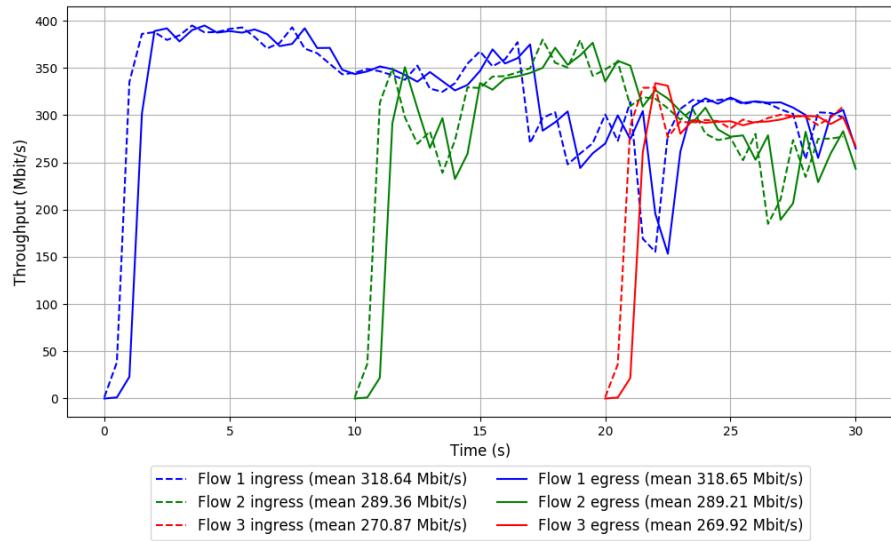


Run 2: Statistics of Copa

```
Start at: 2018-09-11 21:10:16
End at: 2018-09-11 21:10:46
Local clock offset: -0.068 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2018-09-11 23:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 600.11 Mbit/s
95th percentile per-packet one-way delay: 63.200 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 318.65 Mbit/s
95th percentile per-packet one-way delay: 58.218 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 289.21 Mbit/s
95th percentile per-packet one-way delay: 67.920 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 269.92 Mbit/s
95th percentile per-packet one-way delay: 72.950 ms
Loss rate: 1.36%
```

## Run 2: Report of Copa — Data Link

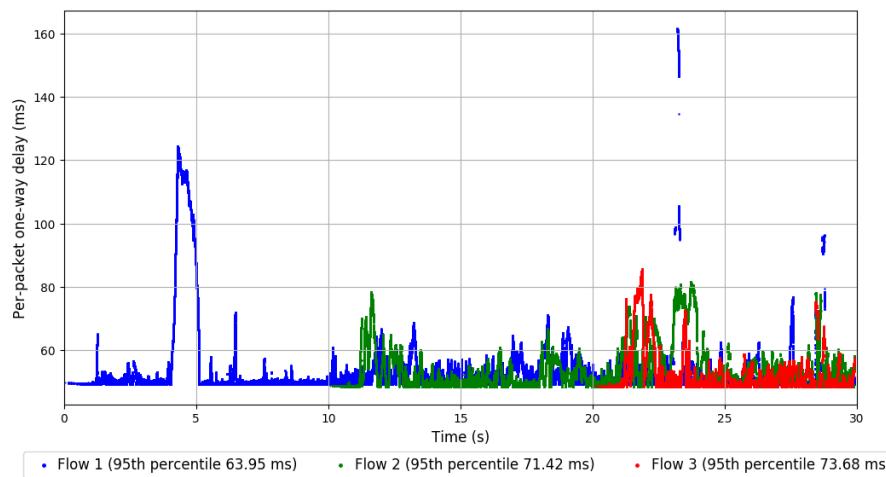
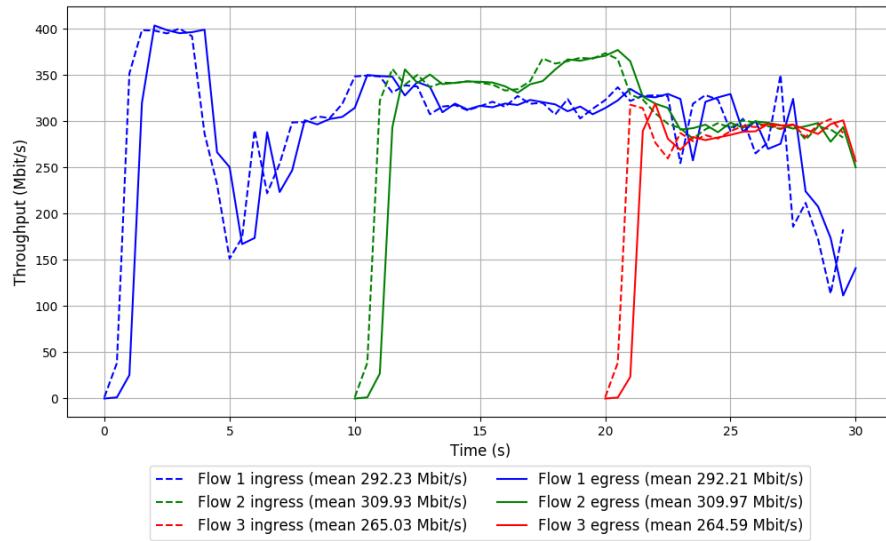


Run 3: Statistics of Copa

```
Start at: 2018-09-11 21:42:17
End at: 2018-09-11 21:42:47
Local clock offset: -0.075 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2018-09-11 23:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 585.56 Mbit/s
95th percentile per-packet one-way delay: 69.440 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 292.21 Mbit/s
95th percentile per-packet one-way delay: 63.946 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 309.97 Mbit/s
95th percentile per-packet one-way delay: 71.425 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 264.59 Mbit/s
95th percentile per-packet one-way delay: 73.677 ms
Loss rate: 1.15%
```

### Run 3: Report of Copa — Data Link

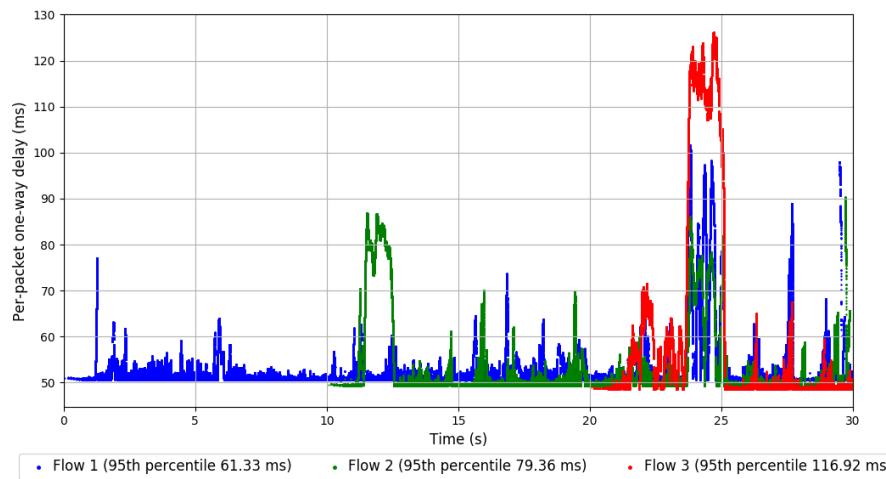
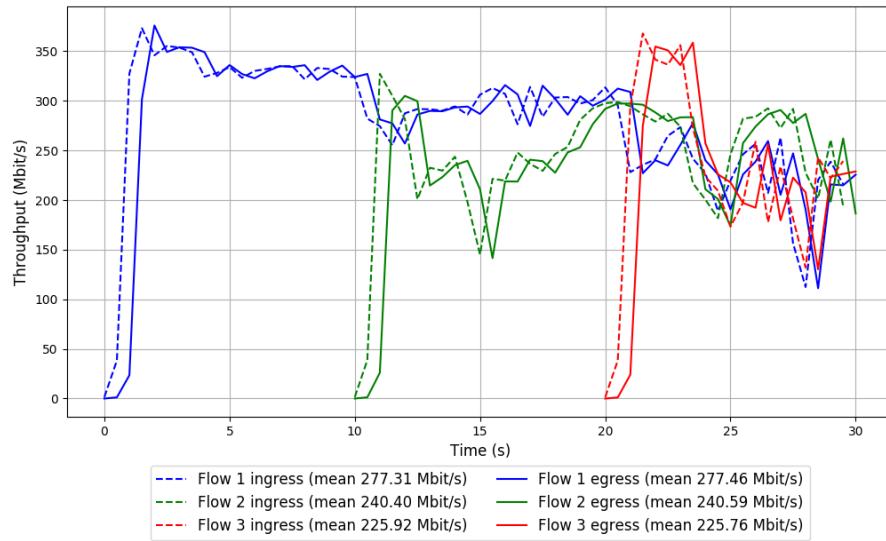


Run 4: Statistics of Copa

```
Start at: 2018-09-11 22:14:11
End at: 2018-09-11 22:14:41
Local clock offset: -0.09 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2018-09-11 23:47:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 512.20 Mbit/s
95th percentile per-packet one-way delay: 77.897 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 277.46 Mbit/s
95th percentile per-packet one-way delay: 61.331 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 240.59 Mbit/s
95th percentile per-packet one-way delay: 79.357 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 225.76 Mbit/s
95th percentile per-packet one-way delay: 116.923 ms
Loss rate: 0.78%
```

Run 4: Report of Copa — Data Link

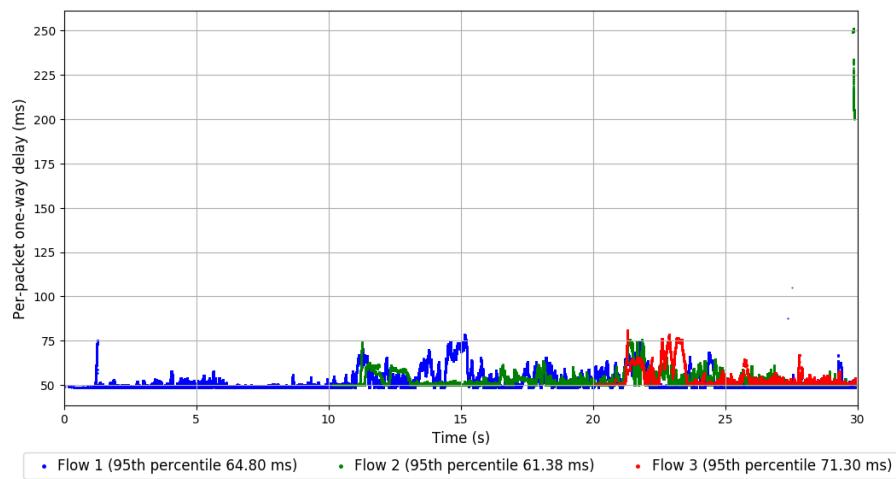
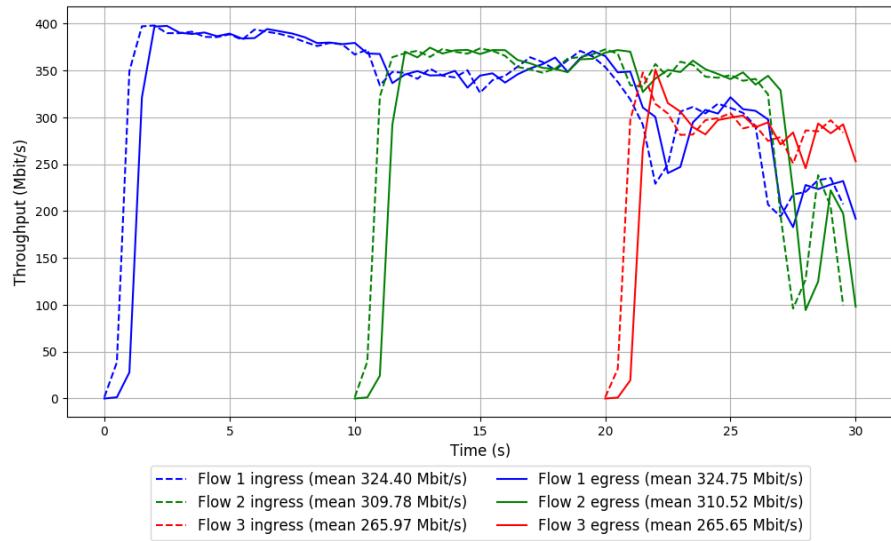


Run 5: Statistics of Copa

```
Start at: 2018-09-11 22:46:10
End at: 2018-09-11 22:46:40
Local clock offset: -0.105 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-09-11 23:50:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 618.89 Mbit/s
95th percentile per-packet one-way delay: 64.634 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 324.75 Mbit/s
95th percentile per-packet one-way delay: 64.802 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 310.52 Mbit/s
95th percentile per-packet one-way delay: 61.378 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 265.65 Mbit/s
95th percentile per-packet one-way delay: 71.297 ms
Loss rate: 1.14%
```

## Run 5: Report of Copa — Data Link

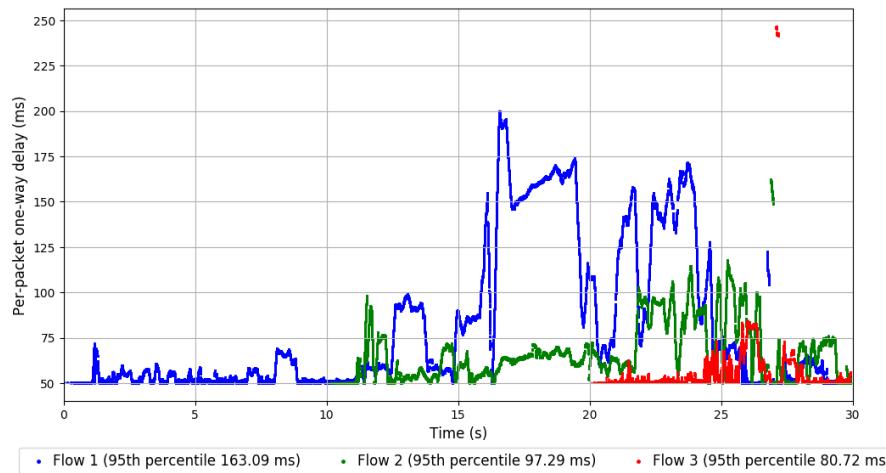
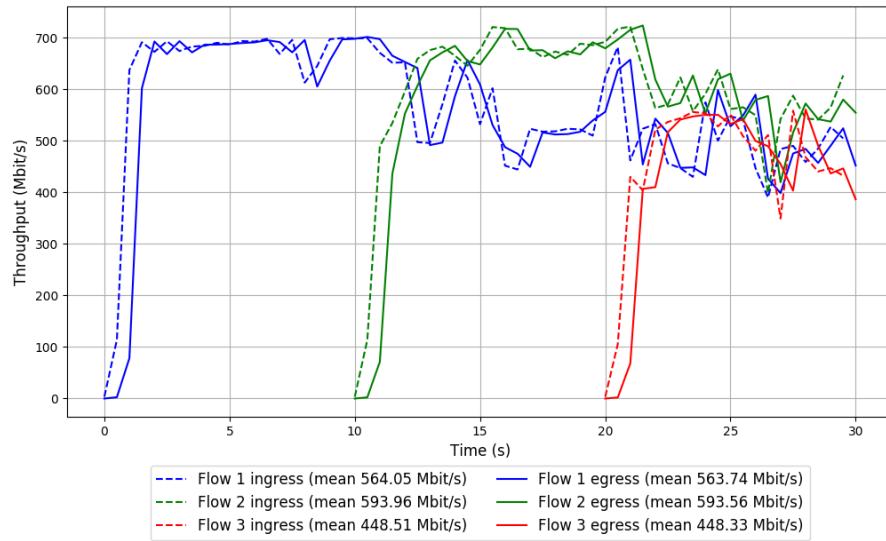


```
Run 1: Statistics of TCP Cubic

Start at: 2018-09-11 20:31:23
End at: 2018-09-11 20:31:53
Local clock offset: -0.086 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2018-09-11 23:50:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1106.42 Mbit/s
95th percentile per-packet one-way delay: 154.686 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 563.74 Mbit/s
95th percentile per-packet one-way delay: 163.094 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 593.56 Mbit/s
95th percentile per-packet one-way delay: 97.289 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 448.33 Mbit/s
95th percentile per-packet one-way delay: 80.719 ms
Loss rate: 1.05%
```

### Run 1: Report of TCP Cubic — Data Link

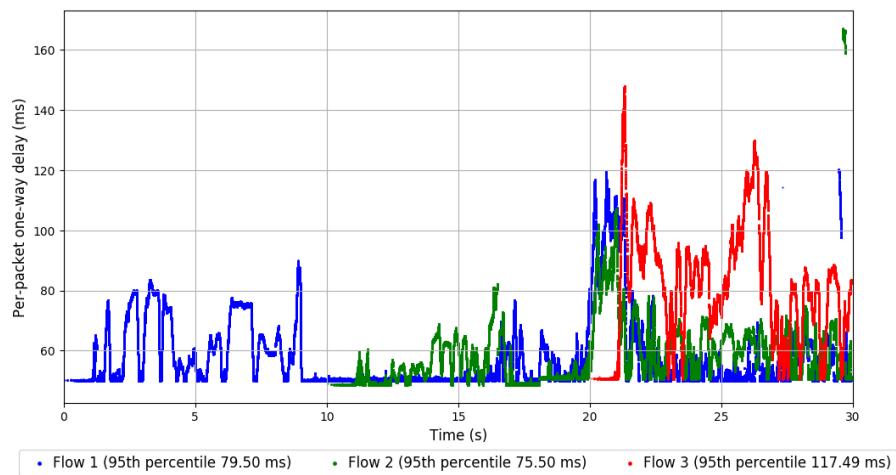
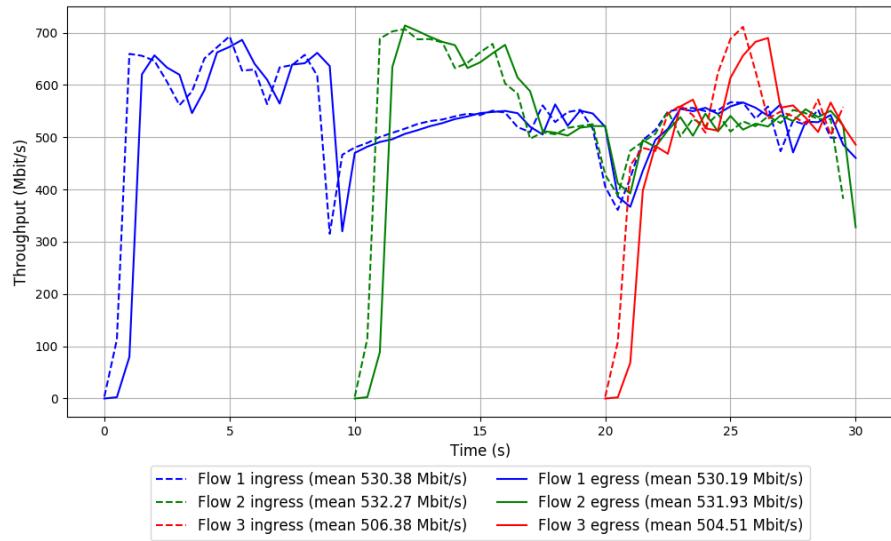


Run 2: Statistics of TCP Cubic

```
Start at: 2018-09-11 21:03:15
End at: 2018-09-11 21:03:45
Local clock offset: -0.087 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-09-11 23:50:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1050.70 Mbit/s
95th percentile per-packet one-way delay: 96.636 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 530.19 Mbit/s
95th percentile per-packet one-way delay: 79.502 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 531.93 Mbit/s
95th percentile per-packet one-way delay: 75.495 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 504.51 Mbit/s
95th percentile per-packet one-way delay: 117.494 ms
Loss rate: 1.38%
```

## Run 2: Report of TCP Cubic — Data Link

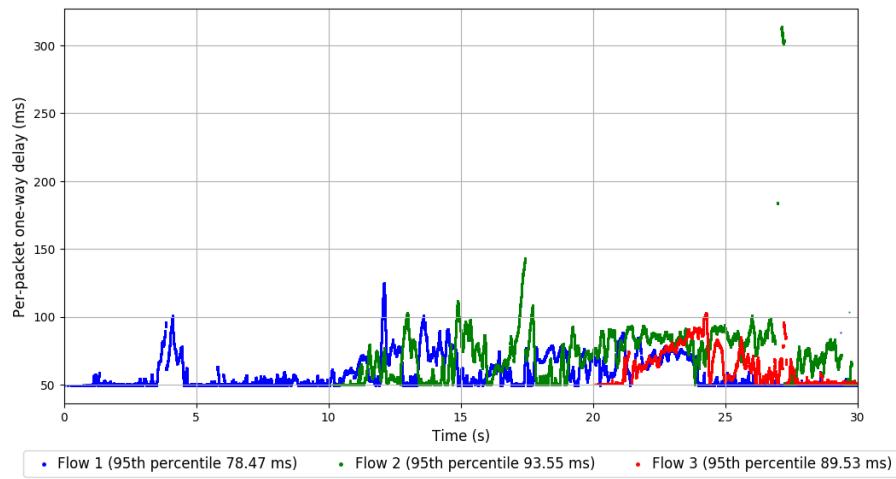
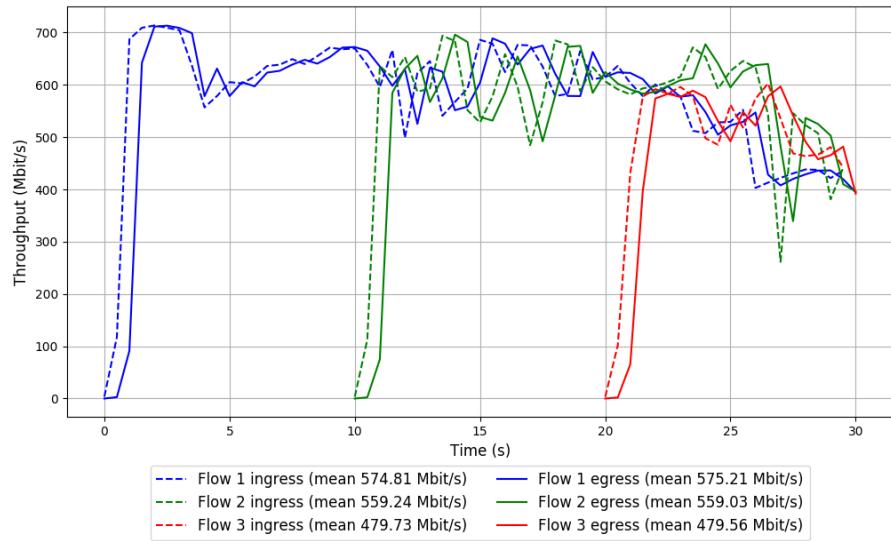


Run 3: Statistics of TCP Cubic

```
Start at: 2018-09-11 21:35:11
End at: 2018-09-11 21:35:41
Local clock offset: -0.073 ms
Remote clock offset: -0.002 ms

# Below is generated by plot.py at 2018-09-11 23:51:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1105.19 Mbit/s
95th percentile per-packet one-way delay: 89.985 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 575.21 Mbit/s
95th percentile per-packet one-way delay: 78.466 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 559.03 Mbit/s
95th percentile per-packet one-way delay: 93.549 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 479.56 Mbit/s
95th percentile per-packet one-way delay: 89.525 ms
Loss rate: 1.05%
```

### Run 3: Report of TCP Cubic — Data Link

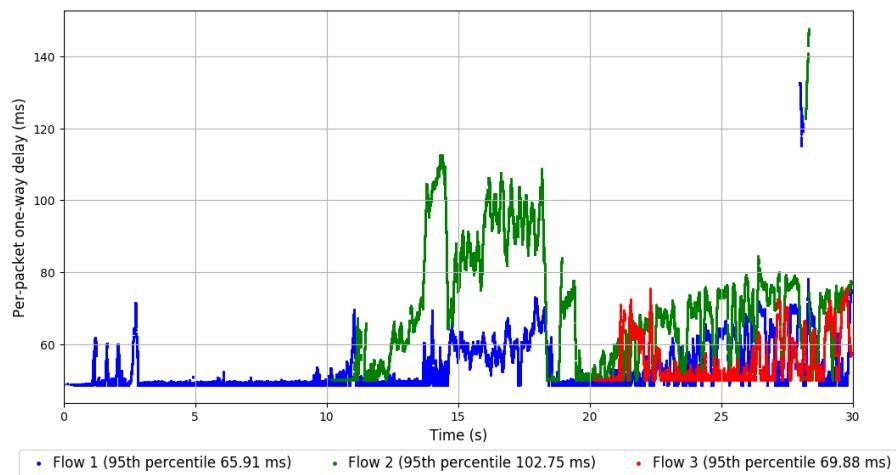
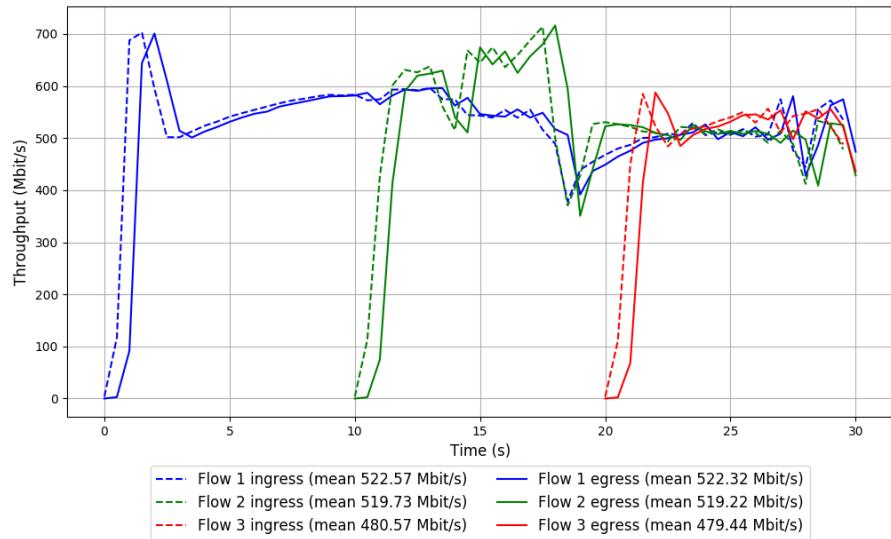


Run 4: Statistics of TCP Cubic

```
Start at: 2018-09-11 22:07:14
End at: 2018-09-11 22:07:44
Local clock offset: -0.077 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-09-11 23:51:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1025.88 Mbit/s
95th percentile per-packet one-way delay: 93.747 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 522.32 Mbit/s
95th percentile per-packet one-way delay: 65.911 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 519.22 Mbit/s
95th percentile per-packet one-way delay: 102.746 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 479.44 Mbit/s
95th percentile per-packet one-way delay: 69.879 ms
Loss rate: 1.24%
```

### Run 4: Report of TCP Cubic — Data Link

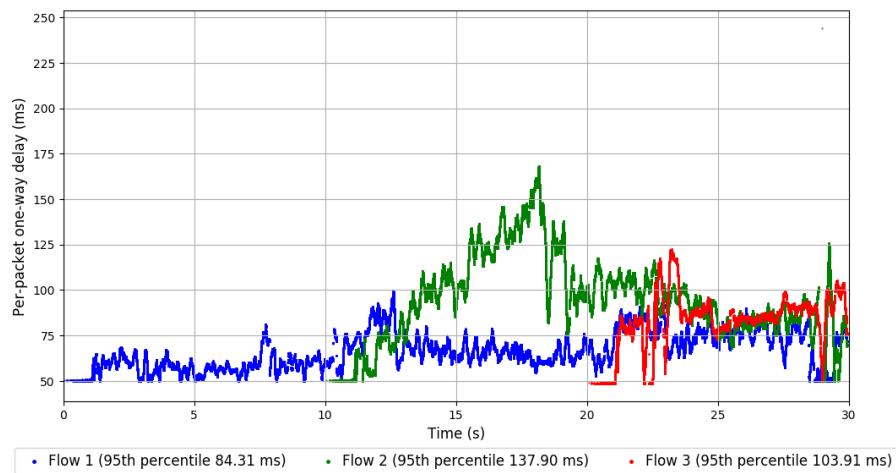
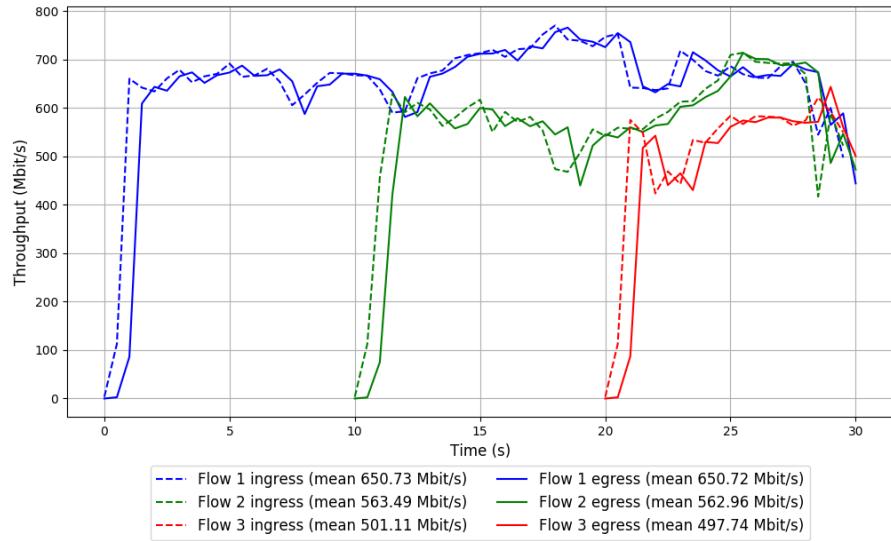


Run 5: Statistics of TCP Cubic

```
Start at: 2018-09-11 22:39:07
End at: 2018-09-11 22:39:37
Local clock offset: -0.16 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2018-09-11 23:53:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1189.48 Mbit/s
95th percentile per-packet one-way delay: 119.328 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 650.72 Mbit/s
95th percentile per-packet one-way delay: 84.305 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 562.96 Mbit/s
95th percentile per-packet one-way delay: 137.901 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 497.74 Mbit/s
95th percentile per-packet one-way delay: 103.914 ms
Loss rate: 1.66%
```

### Run 5: Report of TCP Cubic — Data Link

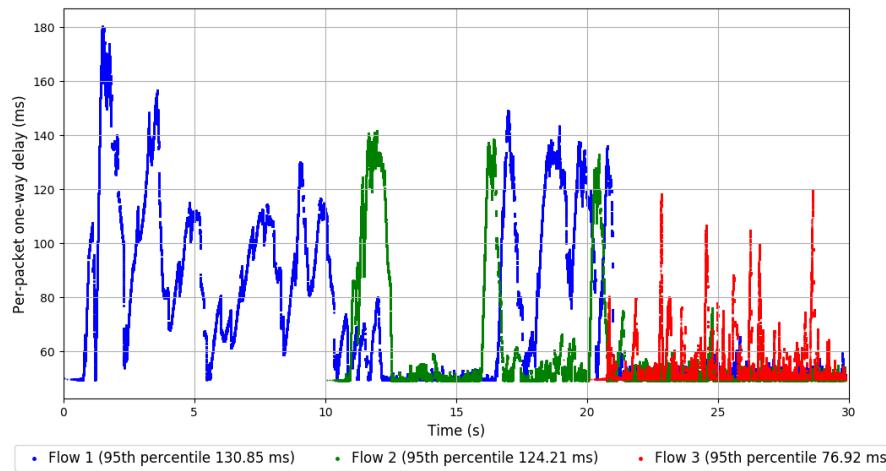
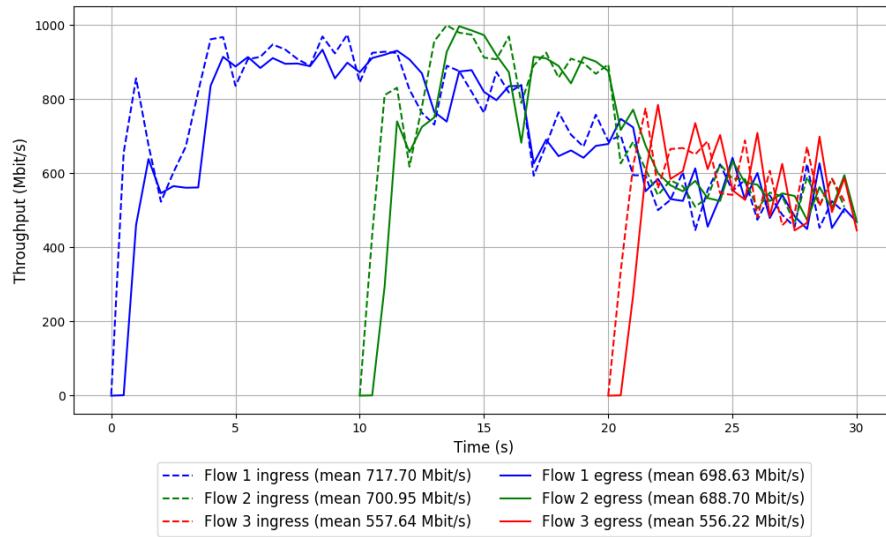


```
Run 1: Statistics of FillP

Start at: 2018-09-11 20:26:15
End at: 2018-09-11 20:26:45
Local clock offset: -0.115 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-09-12 00:00:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1339.37 Mbit/s
95th percentile per-packet one-way delay: 126.861 ms
Loss rate: 2.49%
-- Flow 1:
Average throughput: 698.63 Mbit/s
95th percentile per-packet one-way delay: 130.849 ms
Loss rate: 2.98%
-- Flow 2:
Average throughput: 688.70 Mbit/s
95th percentile per-packet one-way delay: 124.208 ms
Loss rate: 2.23%
-- Flow 3:
Average throughput: 556.22 Mbit/s
95th percentile per-packet one-way delay: 76.920 ms
Loss rate: 1.27%
```

## Run 1: Report of FillP — Data Link

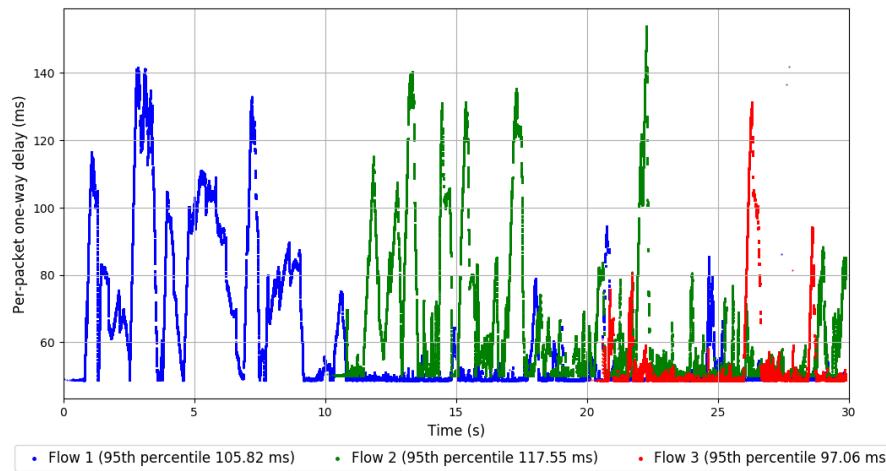
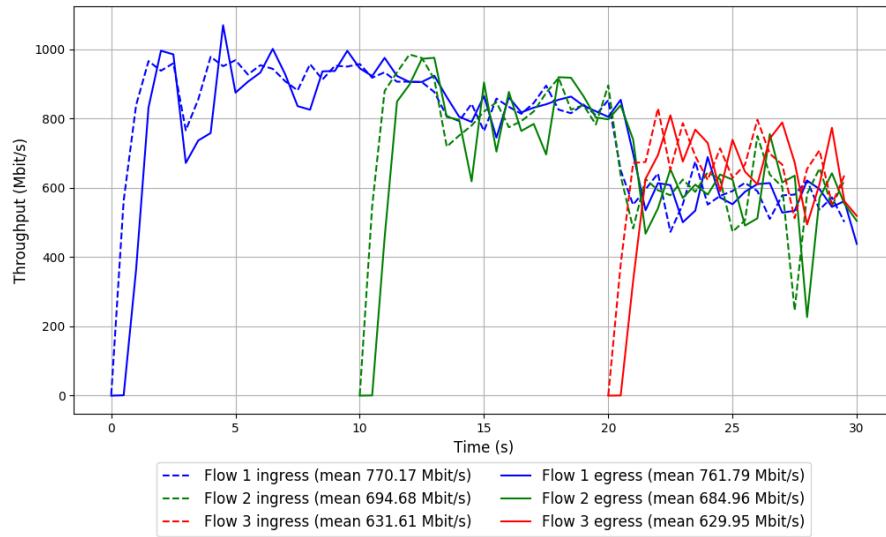


Run 2: Statistics of FillP

```
Start at: 2018-09-11 20:58:05
End at: 2018-09-11 20:58:35
Local clock offset: -0.105 ms
Remote clock offset: -0.128 ms

# Below is generated by plot.py at 2018-09-12 00:16:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1424.24 Mbit/s
95th percentile per-packet one-way delay: 107.191 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 761.79 Mbit/s
95th percentile per-packet one-way delay: 105.822 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 684.96 Mbit/s
95th percentile per-packet one-way delay: 117.545 ms
Loss rate: 1.88%
-- Flow 3:
Average throughput: 629.95 Mbit/s
95th percentile per-packet one-way delay: 97.063 ms
Loss rate: 1.28%
```

## Run 2: Report of FillP — Data Link

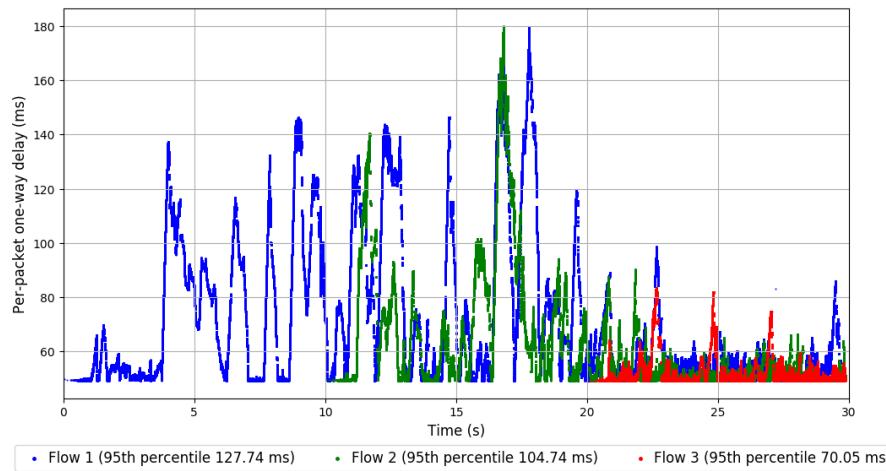
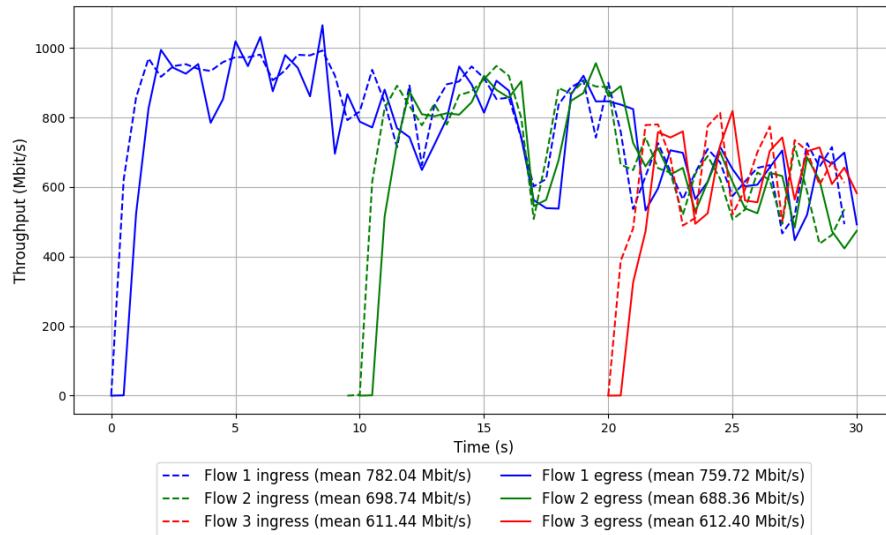


Run 3: Statistics of FillP

```
Start at: 2018-09-11 21:29:59
End at: 2018-09-11 21:30:29
Local clock offset: -0.032 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2018-09-12 00:19:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1418.62 Mbit/s
95th percentile per-packet one-way delay: 121.003 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 759.72 Mbit/s
95th percentile per-packet one-way delay: 127.741 ms
Loss rate: 3.16%
-- Flow 2:
Average throughput: 688.36 Mbit/s
95th percentile per-packet one-way delay: 104.743 ms
Loss rate: 1.99%
-- Flow 3:
Average throughput: 612.40 Mbit/s
95th percentile per-packet one-way delay: 70.046 ms
Loss rate: 0.95%
```

### Run 3: Report of FillP — Data Link

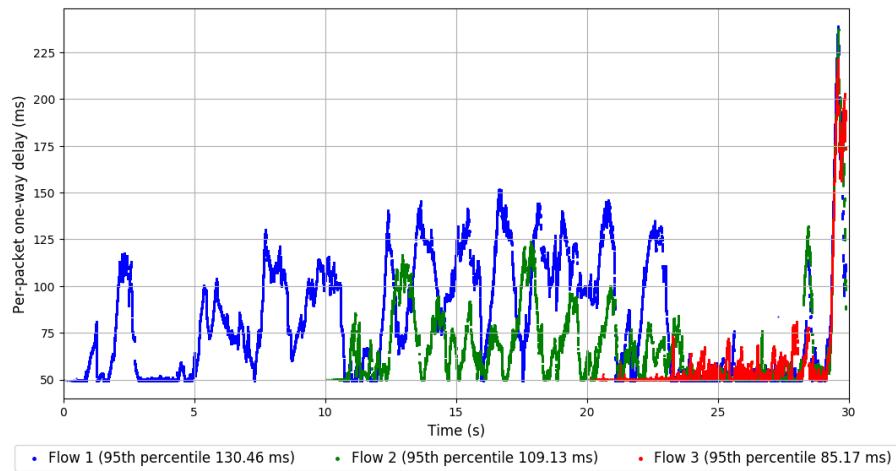
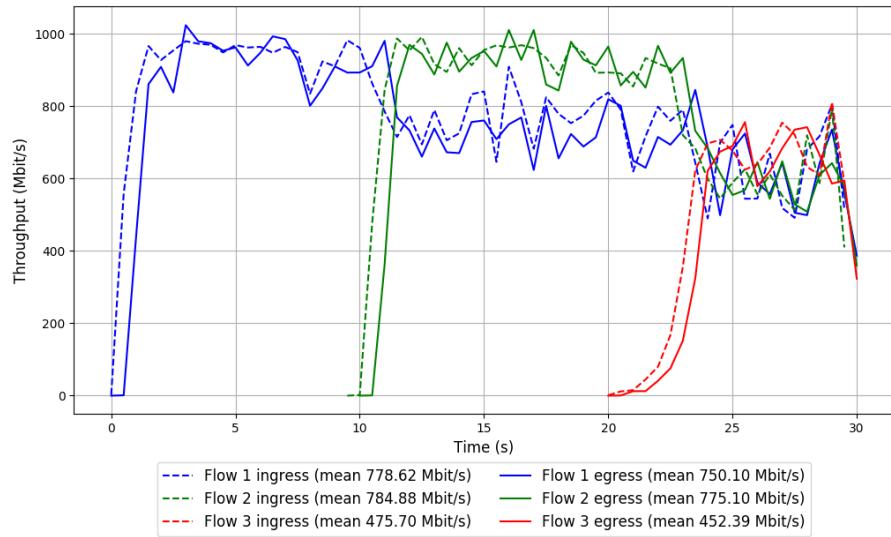


Run 4: Statistics of FillP

```
Start at: 2018-09-11 22:02:02
End at: 2018-09-11 22:02:32
Local clock offset: -0.058 ms
Remote clock offset: 0.032 ms

# Below is generated by plot.py at 2018-09-12 00:19:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1414.59 Mbit/s
95th percentile per-packet one-way delay: 126.942 ms
Loss rate: 3.39%
-- Flow 1:
Average throughput: 750.10 Mbit/s
95th percentile per-packet one-way delay: 130.462 ms
Loss rate: 3.99%
-- Flow 2:
Average throughput: 775.10 Mbit/s
95th percentile per-packet one-way delay: 109.128 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 452.39 Mbit/s
95th percentile per-packet one-way delay: 85.165 ms
Loss rate: 5.89%
```

## Run 4: Report of FillP — Data Link

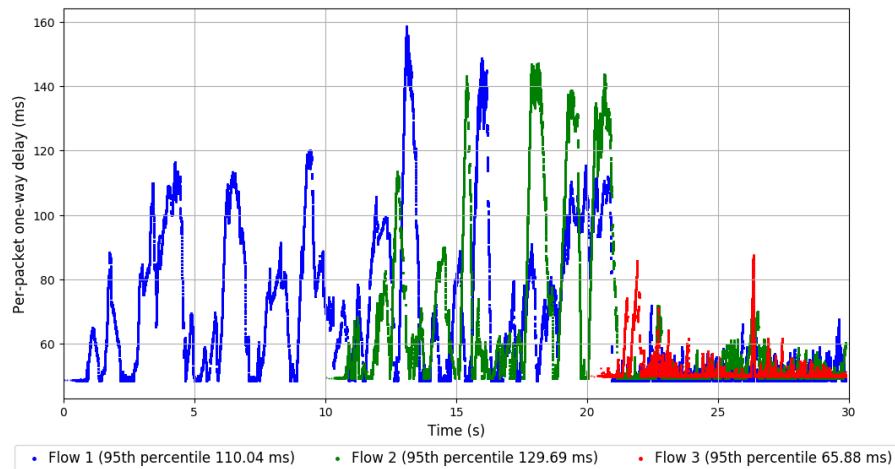
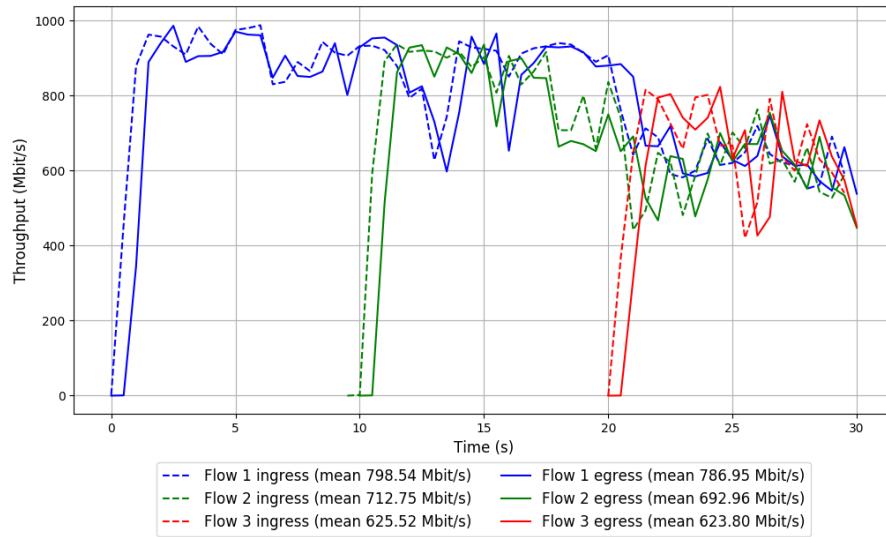


Run 5: Statistics of FillP

```
Start at: 2018-09-11 22:33:53
End at: 2018-09-11 22:34:23
Local clock offset: -0.151 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-09-12 00:20:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1452.63 Mbit/s
95th percentile per-packet one-way delay: 112.280 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 786.95 Mbit/s
95th percentile per-packet one-way delay: 110.044 ms
Loss rate: 1.77%
-- Flow 2:
Average throughput: 692.96 Mbit/s
95th percentile per-packet one-way delay: 129.685 ms
Loss rate: 3.27%
-- Flow 3:
Average throughput: 623.80 Mbit/s
95th percentile per-packet one-way delay: 65.884 ms
Loss rate: 1.29%
```

## Run 5: Report of FillP — Data Link

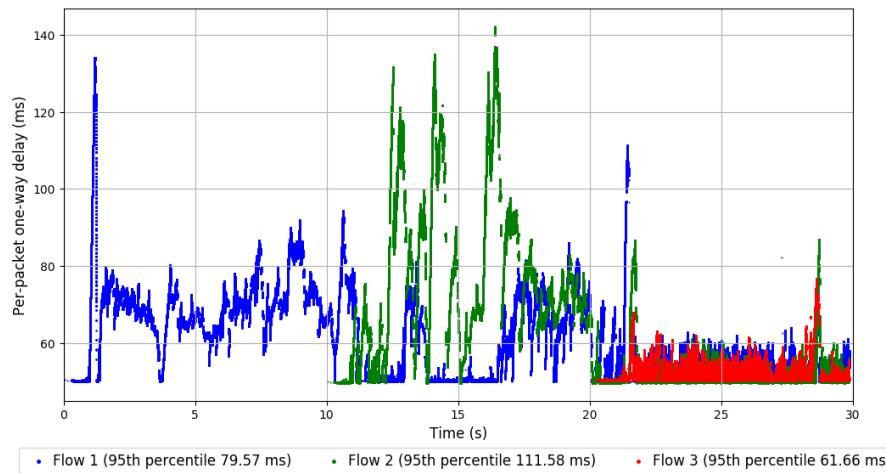
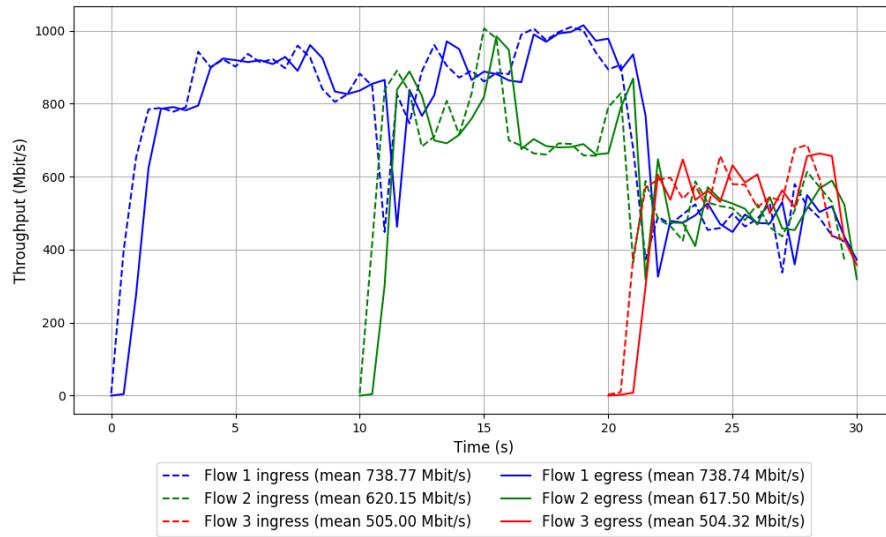


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2018-09-11 20:18:13
End at: 2018-09-11 20:18:43
Local clock offset: -0.108 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2018-09-12 00:20:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1314.79 Mbit/s
95th percentile per-packet one-way delay: 88.673 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 738.74 Mbit/s
95th percentile per-packet one-way delay: 79.569 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 617.50 Mbit/s
95th percentile per-packet one-way delay: 111.585 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 504.32 Mbit/s
95th percentile per-packet one-way delay: 61.663 ms
Loss rate: 1.15%
```

## Run 1: Report of FillP-Sheep — Data Link

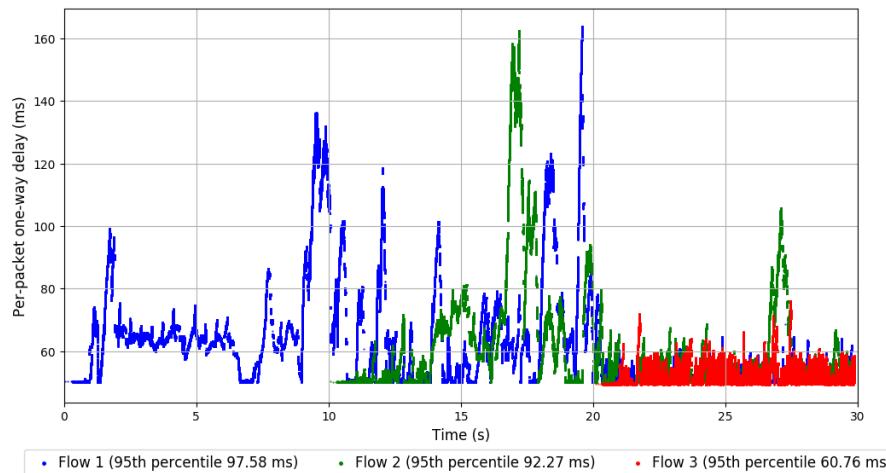
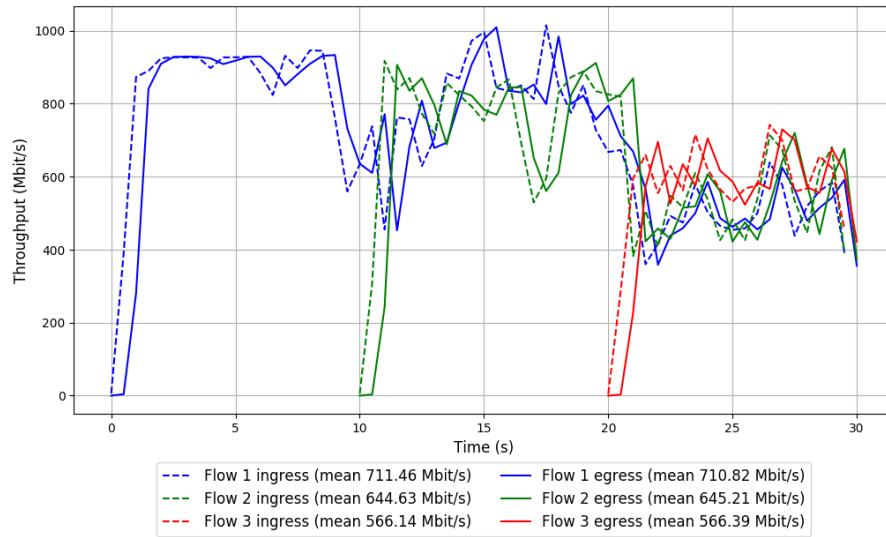


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-09-11 20:50:00
End at: 2018-09-11 20:50:30
Local clock offset: -0.109 ms
Remote clock offset: -0.138 ms

# Below is generated by plot.py at 2018-09-12 00:20:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1325.18 Mbit/s
95th percentile per-packet one-way delay: 92.699 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 710.82 Mbit/s
95th percentile per-packet one-way delay: 97.581 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 645.21 Mbit/s
95th percentile per-packet one-way delay: 92.273 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 566.39 Mbit/s
95th percentile per-packet one-way delay: 60.760 ms
Loss rate: 0.81%
```

## Run 2: Report of FillP-Sheep — Data Link

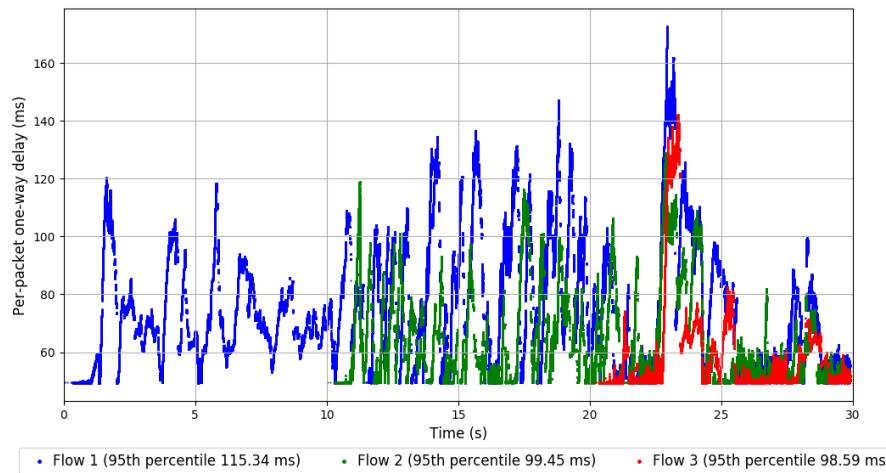
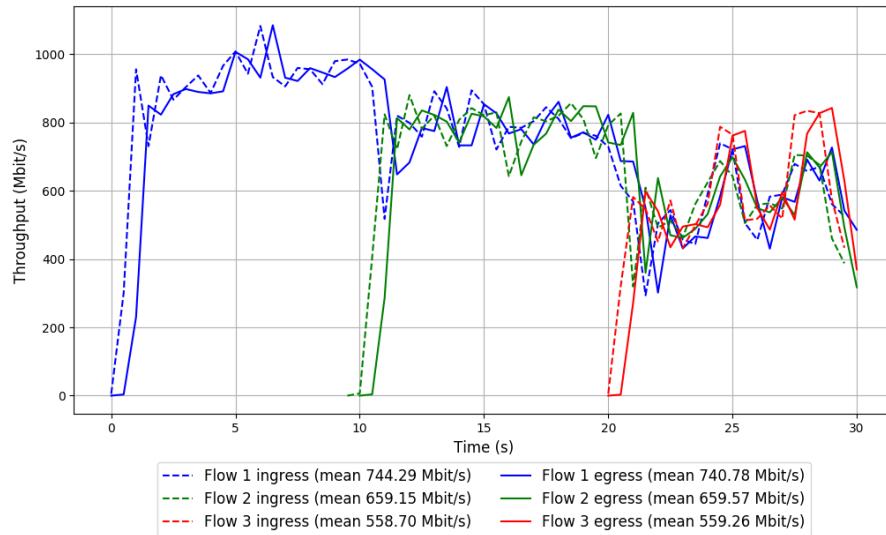


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-09-11 21:21:50
End at: 2018-09-11 21:22:20
Local clock offset: -0.075 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2018-09-12 00:21:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1363.75 Mbit/s
95th percentile per-packet one-way delay: 109.406 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 740.78 Mbit/s
95th percentile per-packet one-way delay: 115.342 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 659.57 Mbit/s
95th percentile per-packet one-way delay: 99.451 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 559.26 Mbit/s
95th percentile per-packet one-way delay: 98.589 ms
Loss rate: 0.91%
```

### Run 3: Report of FillP-Sheep — Data Link

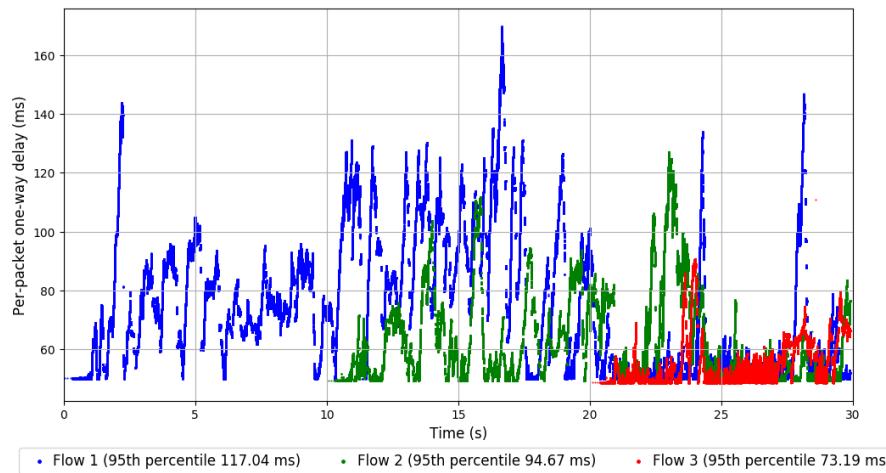
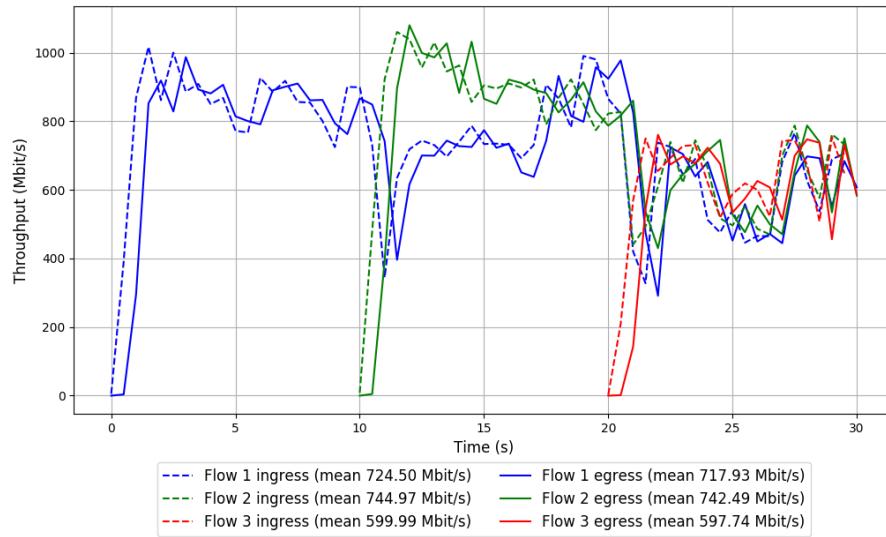


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-09-11 21:53:52
End at: 2018-09-11 21:54:22
Local clock offset: -0.081 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2018-09-12 00:33:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1407.44 Mbit/s
95th percentile per-packet one-way delay: 109.395 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 717.93 Mbit/s
95th percentile per-packet one-way delay: 117.039 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 742.49 Mbit/s
95th percentile per-packet one-way delay: 94.666 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 597.74 Mbit/s
95th percentile per-packet one-way delay: 73.192 ms
Loss rate: 1.41%
```

Run 4: Report of FillP-Sheep — Data Link

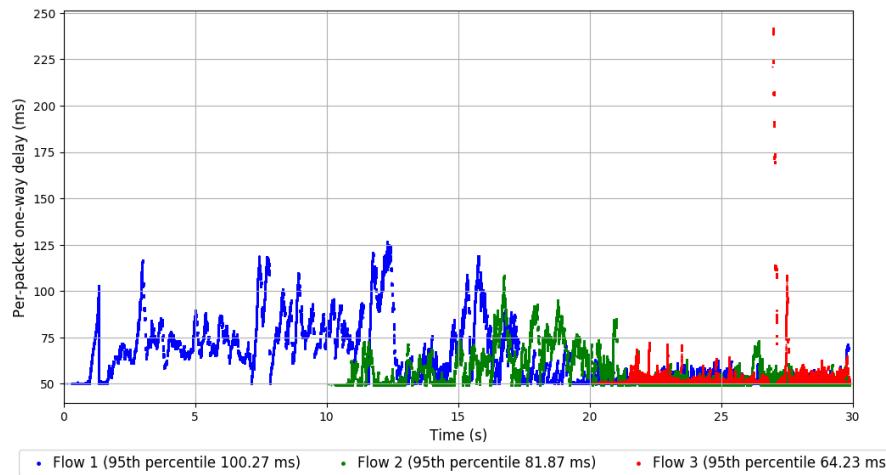
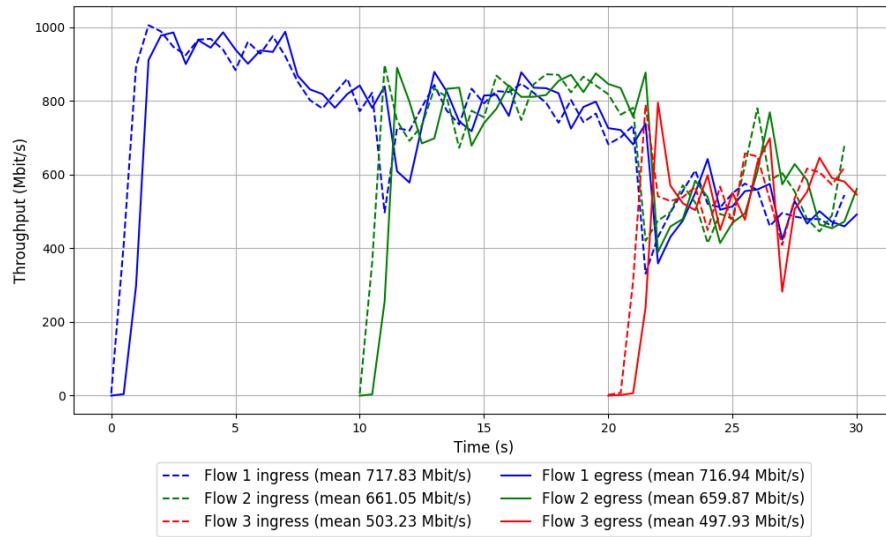


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-09-11 22:25:45
End at: 2018-09-11 22:26:15
Local clock offset: -0.15 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1318.71 Mbit/s
95th percentile per-packet one-way delay: 91.673 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 716.94 Mbit/s
95th percentile per-packet one-way delay: 100.268 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 659.87 Mbit/s
95th percentile per-packet one-way delay: 81.873 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 497.93 Mbit/s
95th percentile per-packet one-way delay: 64.232 ms
Loss rate: 2.15%
```

Run 5: Report of FillP-Sheep — Data Link

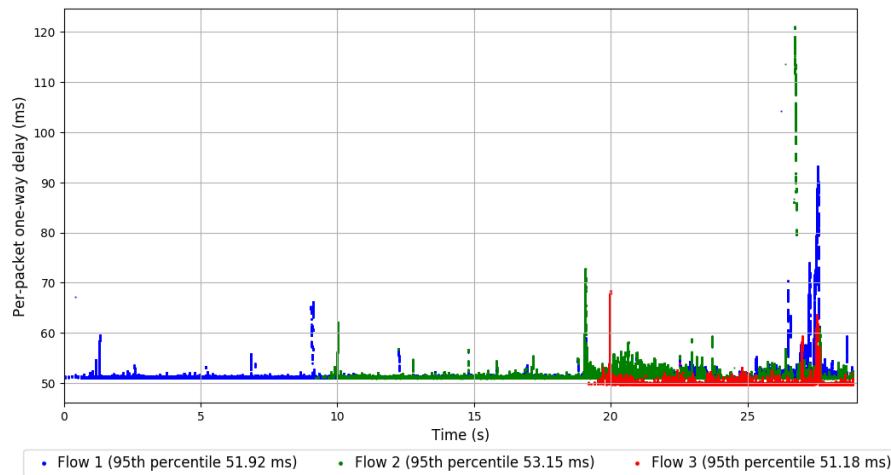
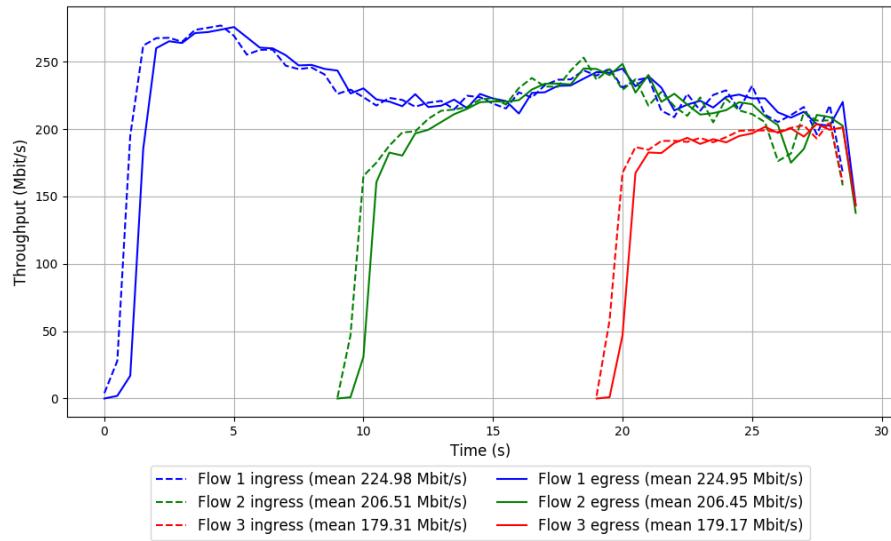


Run 1: Statistics of Indigo

```
Start at: 2018-09-11 20:33:28
End at: 2018-09-11 20:33:58
Local clock offset: 0.256 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 425.93 Mbit/s
95th percentile per-packet one-way delay: 52.459 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 224.95 Mbit/s
95th percentile per-packet one-way delay: 51.917 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 206.45 Mbit/s
95th percentile per-packet one-way delay: 53.145 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 179.17 Mbit/s
95th percentile per-packet one-way delay: 51.177 ms
Loss rate: 1.10%
```

## Run 1: Report of Indigo — Data Link

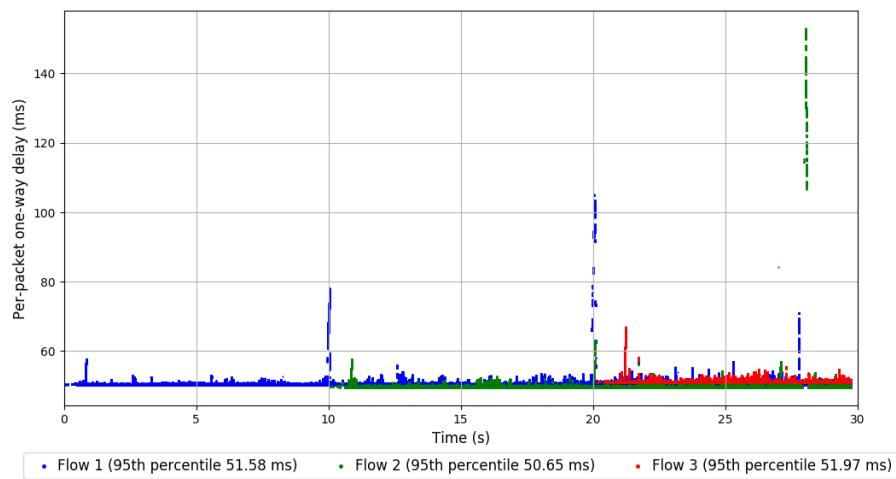
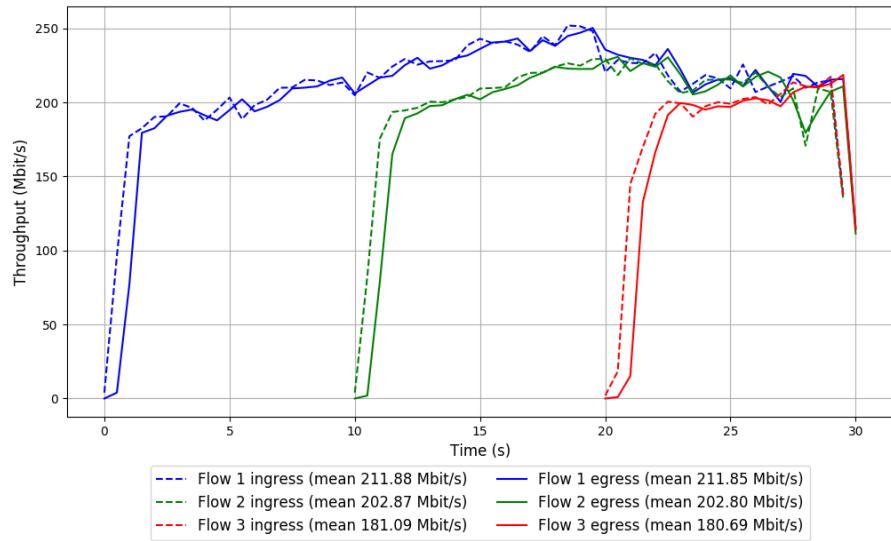


Run 2: Statistics of Indigo

```
Start at: 2018-09-11 21:05:17
End at: 2018-09-11 21:05:47
Local clock offset: -0.05 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 404.61 Mbit/s
95th percentile per-packet one-way delay: 51.478 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 211.85 Mbit/s
95th percentile per-packet one-way delay: 51.581 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 202.80 Mbit/s
95th percentile per-packet one-way delay: 50.645 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 180.69 Mbit/s
95th percentile per-packet one-way delay: 51.970 ms
Loss rate: 1.27%
```

## Run 2: Report of Indigo — Data Link

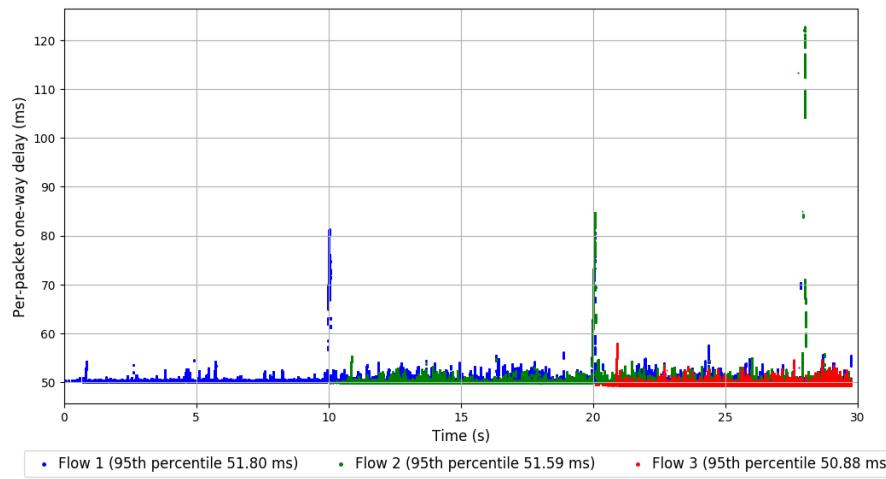
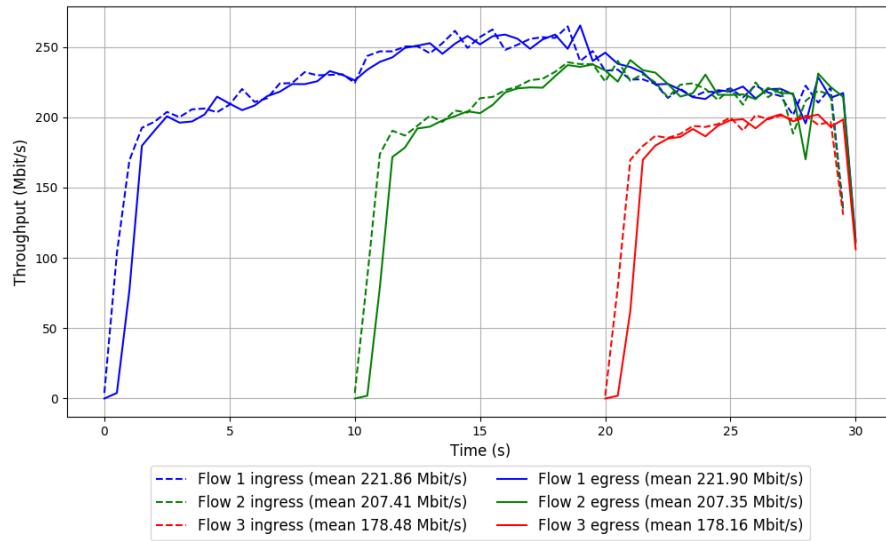


Run 3: Statistics of Indigo

```
Start at: 2018-09-11 21:37:16
End at: 2018-09-11 21:37:46
Local clock offset: -0.065 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 417.24 Mbit/s
95th percentile per-packet one-way delay: 51.634 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 221.90 Mbit/s
95th percentile per-packet one-way delay: 51.799 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 207.35 Mbit/s
95th percentile per-packet one-way delay: 51.589 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 178.16 Mbit/s
95th percentile per-packet one-way delay: 50.878 ms
Loss rate: 1.22%
```

### Run 3: Report of Indigo — Data Link

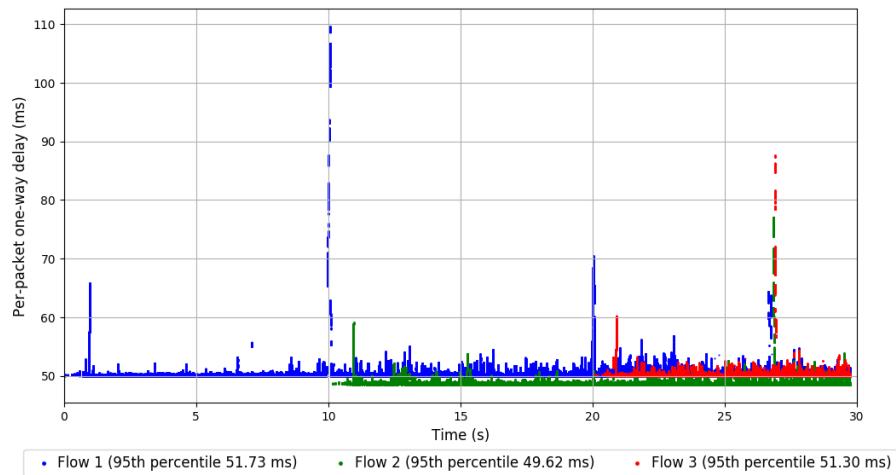
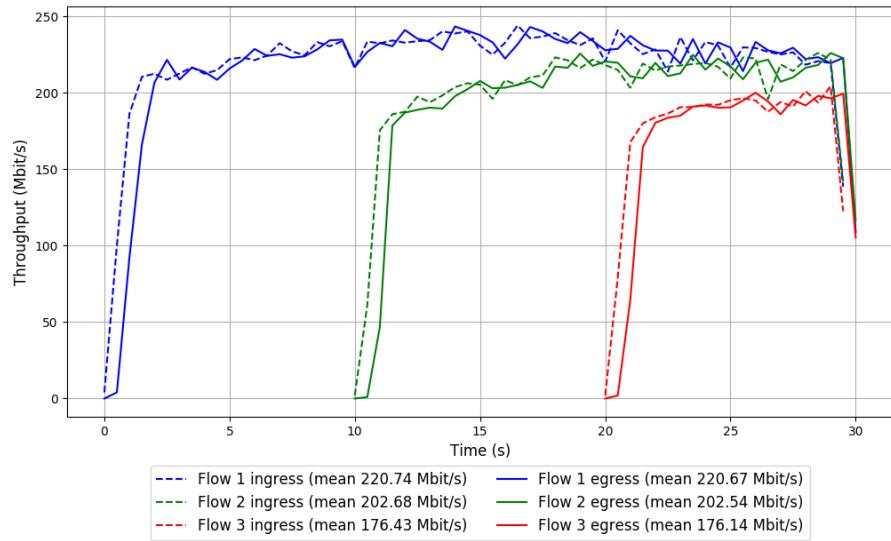


Run 4: Statistics of Indigo

```
Start at: 2018-09-11 22:09:15
End at: 2018-09-11 22:09:45
Local clock offset: -0.13 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.49 Mbit/s
95th percentile per-packet one-way delay: 51.295 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 220.67 Mbit/s
95th percentile per-packet one-way delay: 51.735 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 202.54 Mbit/s
95th percentile per-packet one-way delay: 49.619 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 176.14 Mbit/s
95th percentile per-packet one-way delay: 51.295 ms
Loss rate: 1.18%
```

## Run 4: Report of Indigo — Data Link

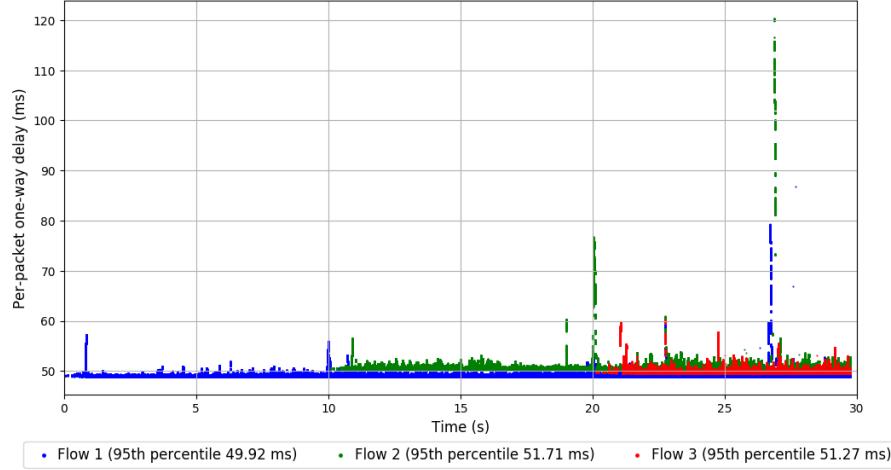
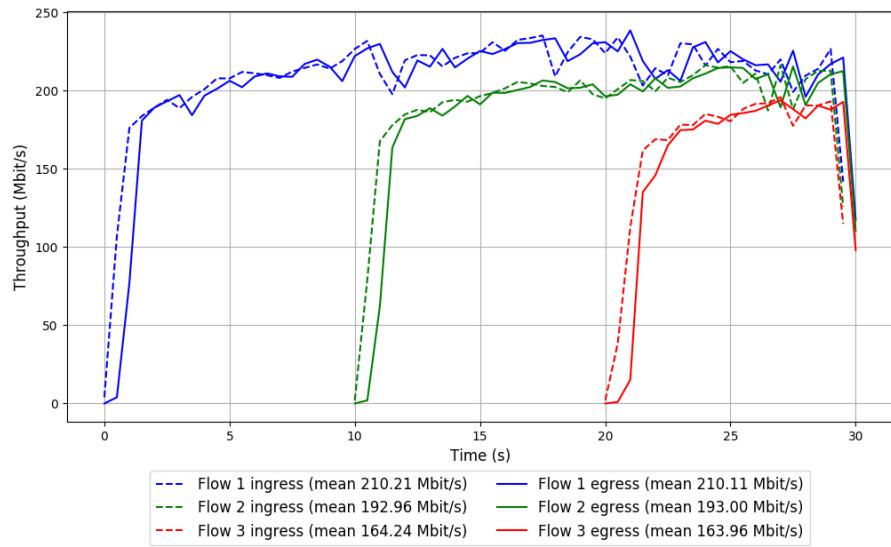


Run 5: Statistics of Indigo

```
Start at: 2018-09-11 22:41:17
End at: 2018-09-11 22:41:47
Local clock offset: 0.229 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.91 Mbit/s
95th percentile per-packet one-way delay: 51.078 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 210.11 Mbit/s
95th percentile per-packet one-way delay: 49.923 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 193.00 Mbit/s
95th percentile per-packet one-way delay: 51.711 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 163.96 Mbit/s
95th percentile per-packet one-way delay: 51.273 ms
Loss rate: 1.21%
```

## Run 5: Report of Indigo — Data Link

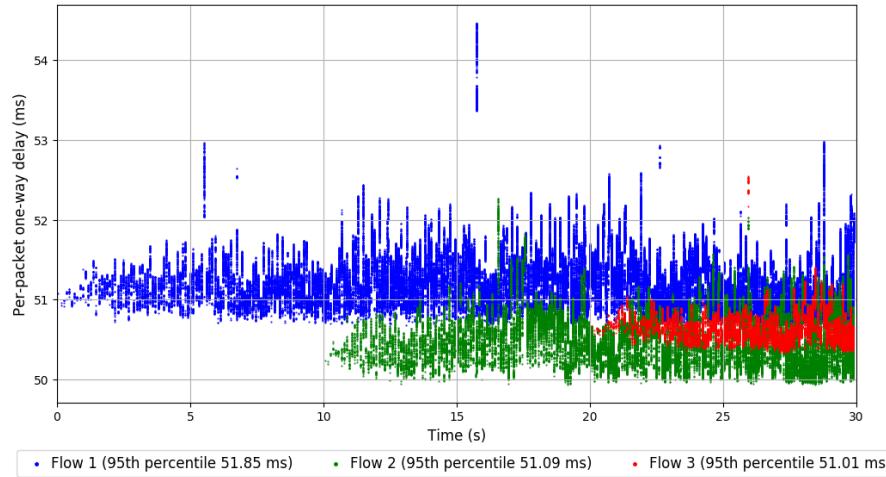
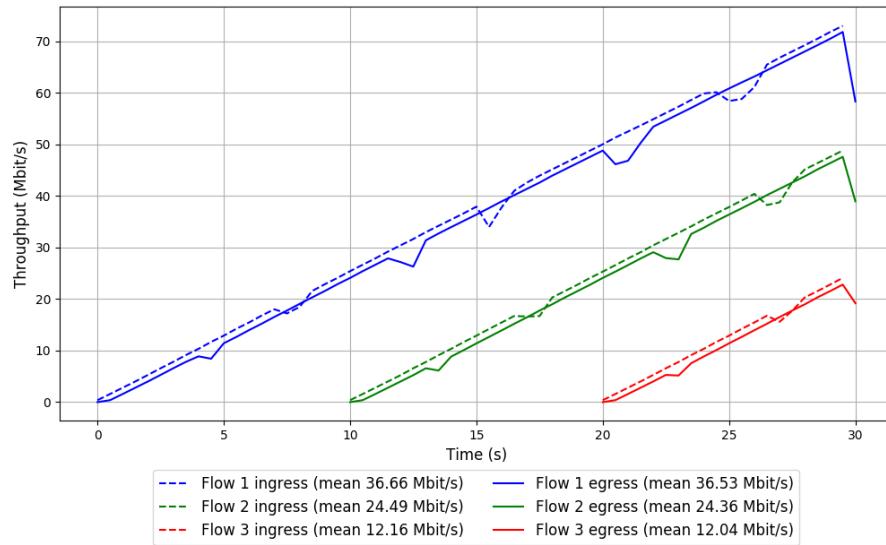


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-09-11 20:21:30
End at: 2018-09-11 20:22:00
Local clock offset: 0.216 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.68 Mbit/s
95th percentile per-packet one-way delay: 51.734 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 36.53 Mbit/s
95th percentile per-packet one-way delay: 51.853 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 24.36 Mbit/s
95th percentile per-packet one-way delay: 51.092 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 12.04 Mbit/s
95th percentile per-packet one-way delay: 51.011 ms
Loss rate: 2.04%
```

Run 1: Report of LEDBAT — Data Link

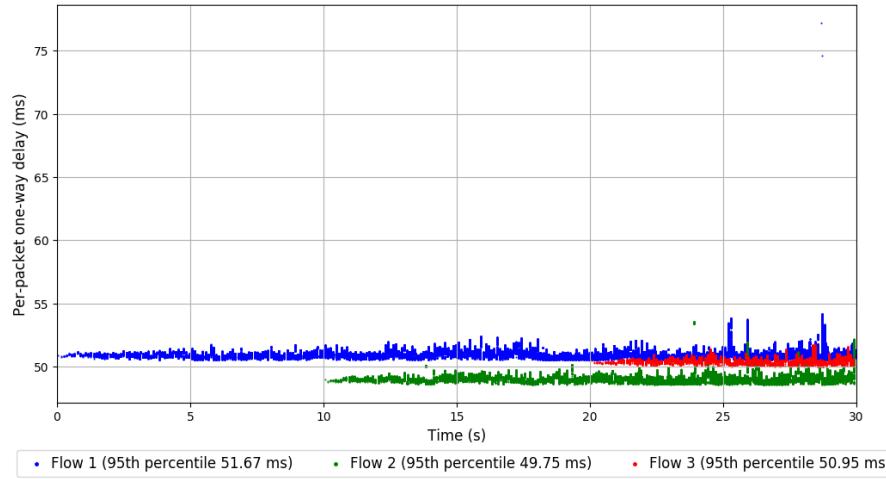
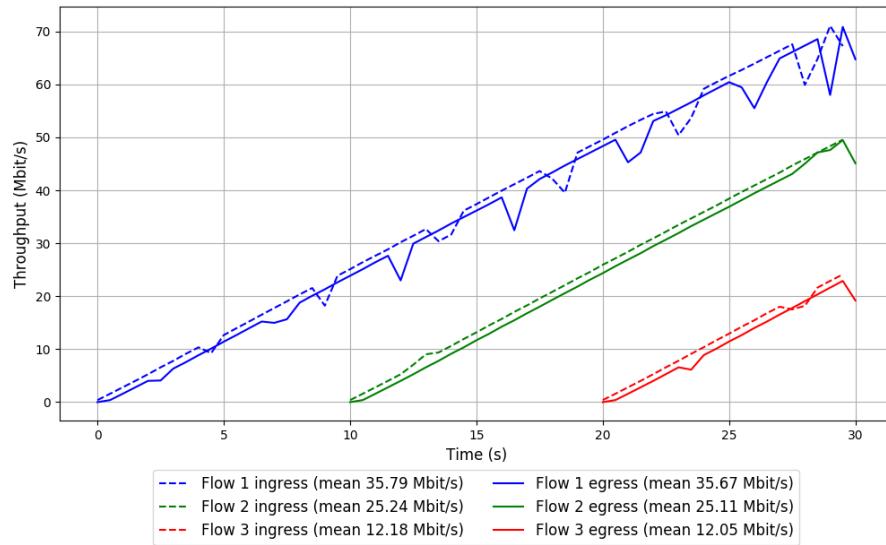


Run 2: Statistics of LEDBAT

```
Start at: 2018-09-11 20:53:20
End at: 2018-09-11 20:53:50
Local clock offset: -0.112 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.31 Mbit/s
95th percentile per-packet one-way delay: 51.512 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 35.67 Mbit/s
95th percentile per-packet one-way delay: 51.666 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 25.11 Mbit/s
95th percentile per-packet one-way delay: 49.749 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 50.953 ms
Loss rate: 2.04%
```

## Run 2: Report of LEDBAT — Data Link

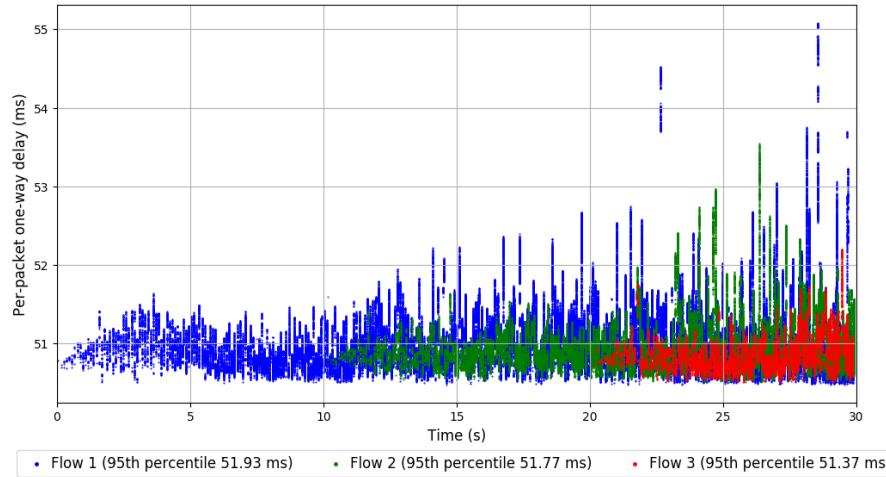
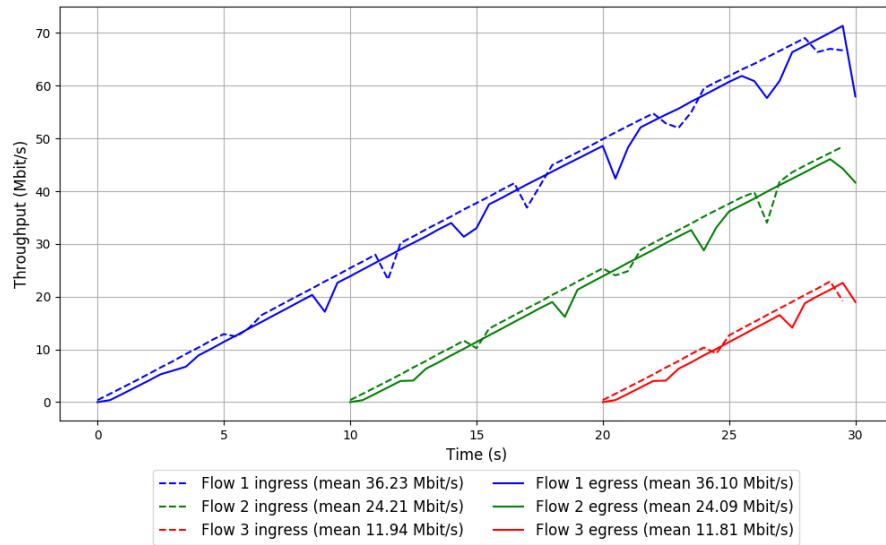


```
Run 3: Statistics of LEDBAT
```

```
Start at: 2018-09-11 21:25:12
End at: 2018-09-11 21:25:42
Local clock offset: 0.269 ms
Remote clock offset: 0.334 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.94 Mbit/s
95th percentile per-packet one-way delay: 51.846 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 36.10 Mbit/s
95th percentile per-packet one-way delay: 51.931 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 24.09 Mbit/s
95th percentile per-packet one-way delay: 51.773 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 51.366 ms
Loss rate: 2.06%
```

### Run 3: Report of LEDBAT — Data Link

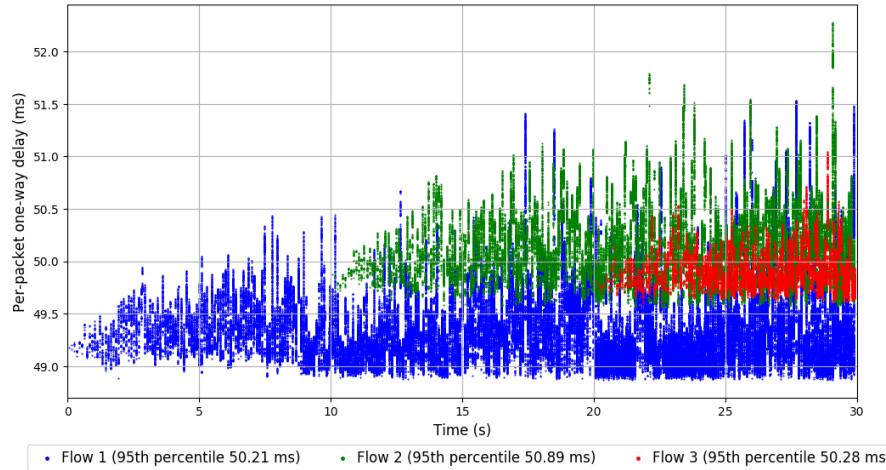
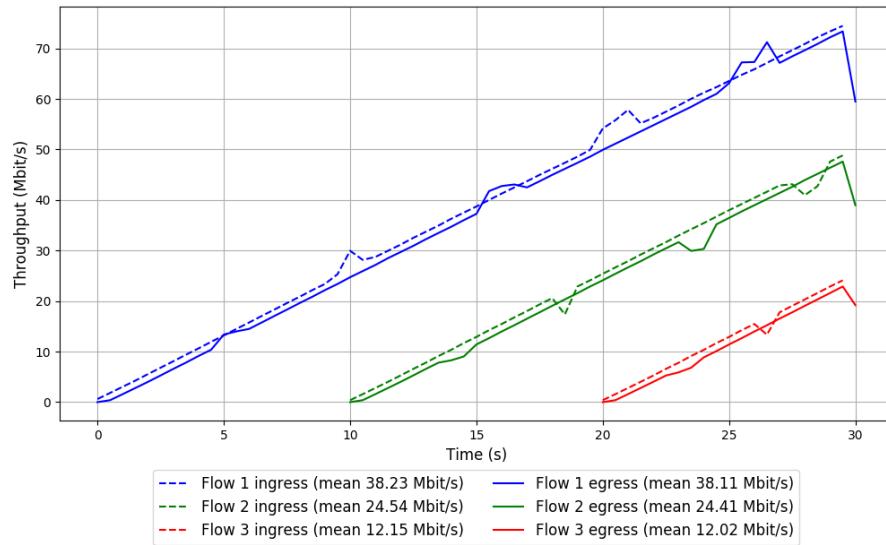


Run 4: Statistics of LEDBAT

```
Start at: 2018-09-11 21:57:15
End at: 2018-09-11 21:57:45
Local clock offset: -0.429 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.24 Mbit/s
95th percentile per-packet one-way delay: 50.627 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 38.11 Mbit/s
95th percentile per-packet one-way delay: 50.206 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 24.41 Mbit/s
95th percentile per-packet one-way delay: 50.892 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 12.02 Mbit/s
95th percentile per-packet one-way delay: 50.282 ms
Loss rate: 2.04%
```

Run 4: Report of LEDBAT — Data Link

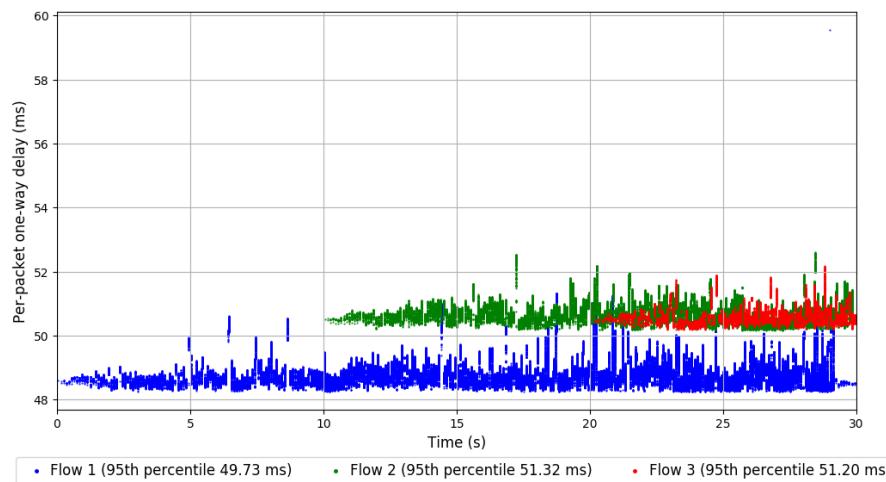
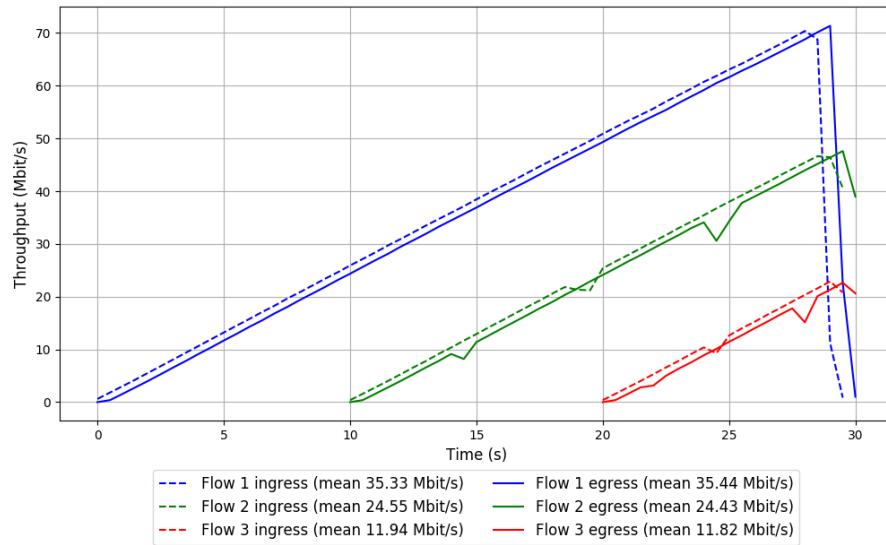


Run 5: Statistics of LEDBAT

```
Start at: 2018-09-11 22:29:04
End at: 2018-09-11 22:29:34
Local clock offset: -0.469 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-09-12 00:45:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.52 Mbit/s
95th percentile per-packet one-way delay: 51.005 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 35.44 Mbit/s
95th percentile per-packet one-way delay: 49.725 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.43 Mbit/s
95th percentile per-packet one-way delay: 51.317 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 51.197 ms
Loss rate: 2.04%
```

Run 5: Report of LEDBAT — Data Link

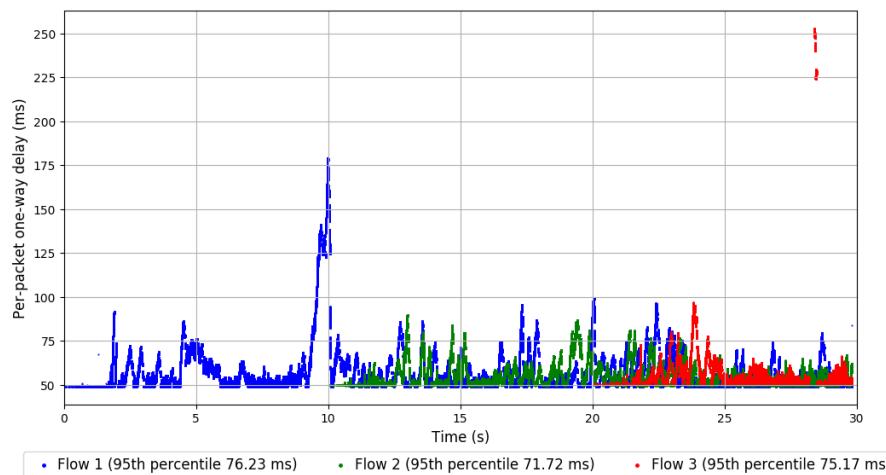
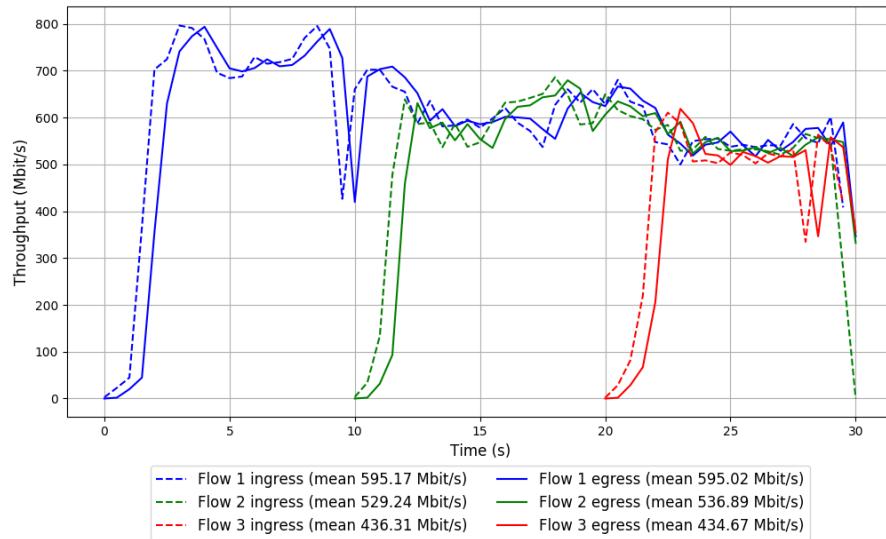


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-09-11 20:45:49
End at: 2018-09-11 20:46:19
Local clock offset: 0.263 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-09-12 00:50:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1093.53 Mbit/s
95th percentile per-packet one-way delay: 74.501 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 595.02 Mbit/s
95th percentile per-packet one-way delay: 76.227 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 536.89 Mbit/s
95th percentile per-packet one-way delay: 71.723 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 434.67 Mbit/s
95th percentile per-packet one-way delay: 75.170 ms
Loss rate: 1.40%
```

## Run 1: Report of Indigo-Muses — Data Link

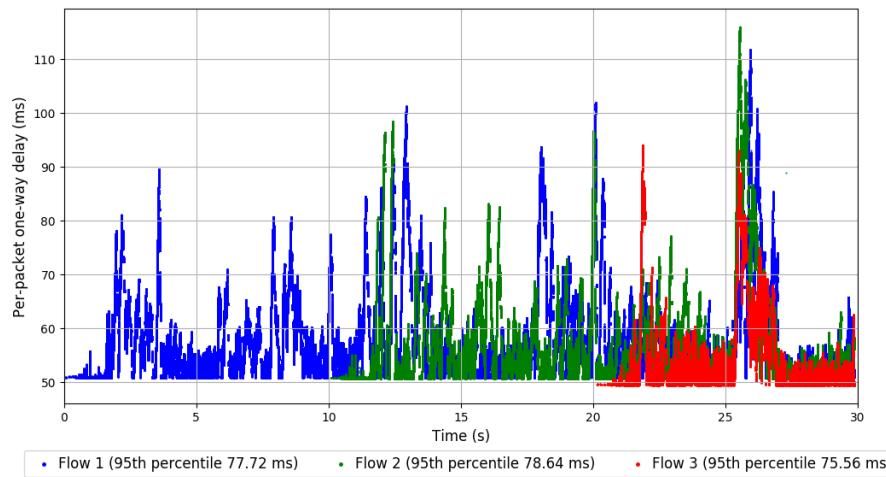
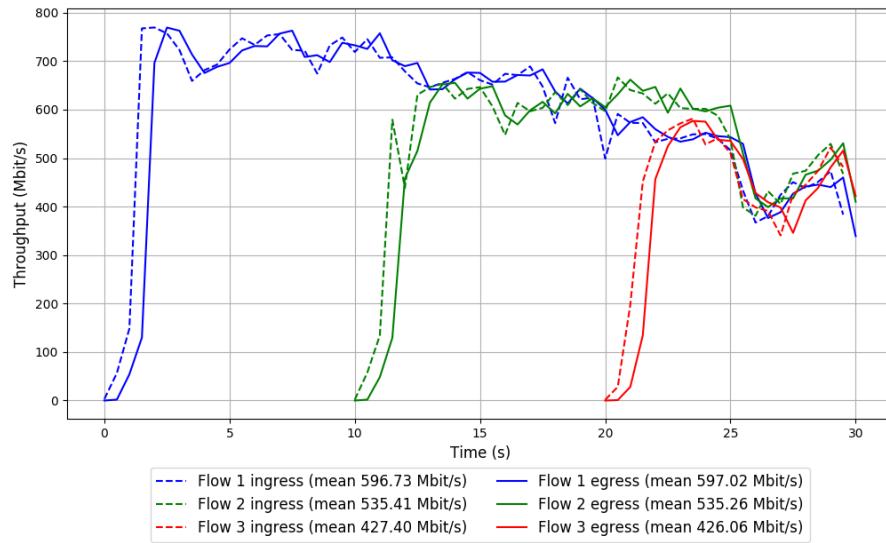


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-09-11 21:17:45
End at: 2018-09-11 21:18:15
Local clock offset: -0.011 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2018-09-12 00:50:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1091.08 Mbit/s
95th percentile per-packet one-way delay: 77.825 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 597.02 Mbit/s
95th percentile per-packet one-way delay: 77.716 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 535.26 Mbit/s
95th percentile per-packet one-way delay: 78.636 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 426.06 Mbit/s
95th percentile per-packet one-way delay: 75.563 ms
Loss rate: 1.35%
```

## Run 2: Report of Indigo-Muses — Data Link

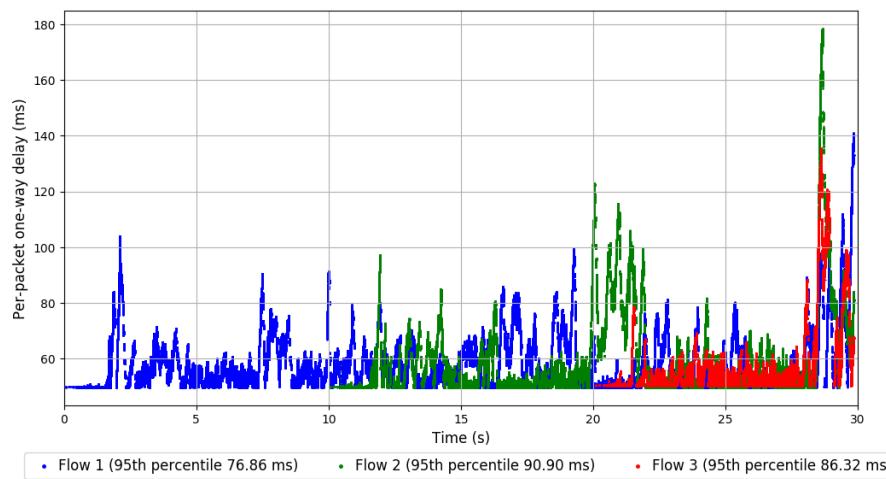
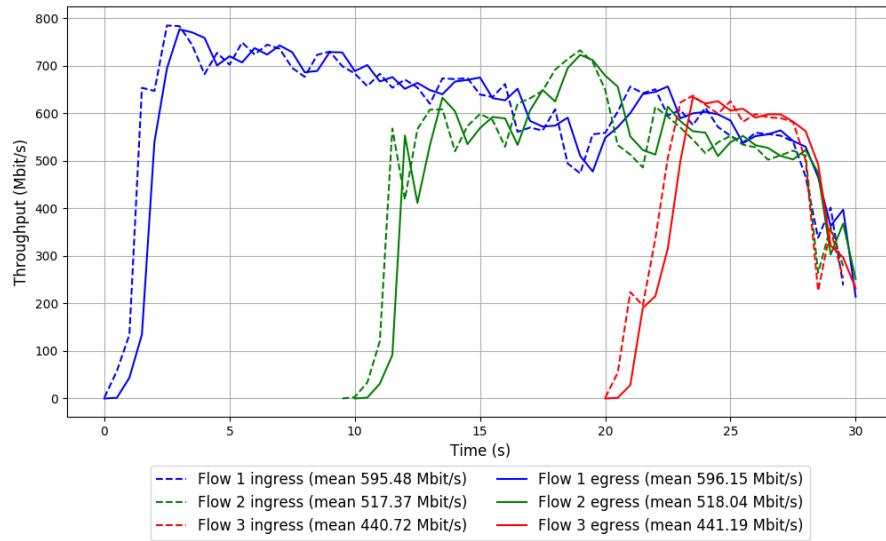


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-09-11 21:49:45
End at: 2018-09-11 21:50:15
Local clock offset: 0.242 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2018-09-12 00:51:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1085.07 Mbit/s
95th percentile per-packet one-way delay: 81.632 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 596.15 Mbit/s
95th percentile per-packet one-way delay: 76.857 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 518.04 Mbit/s
95th percentile per-packet one-way delay: 90.899 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 441.19 Mbit/s
95th percentile per-packet one-way delay: 86.316 ms
Loss rate: 0.92%
```

### Run 3: Report of Indigo-Muses — Data Link

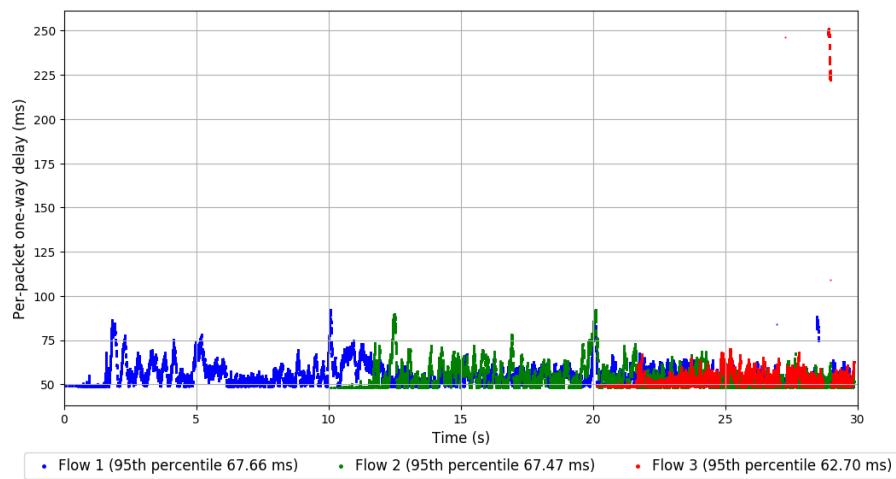
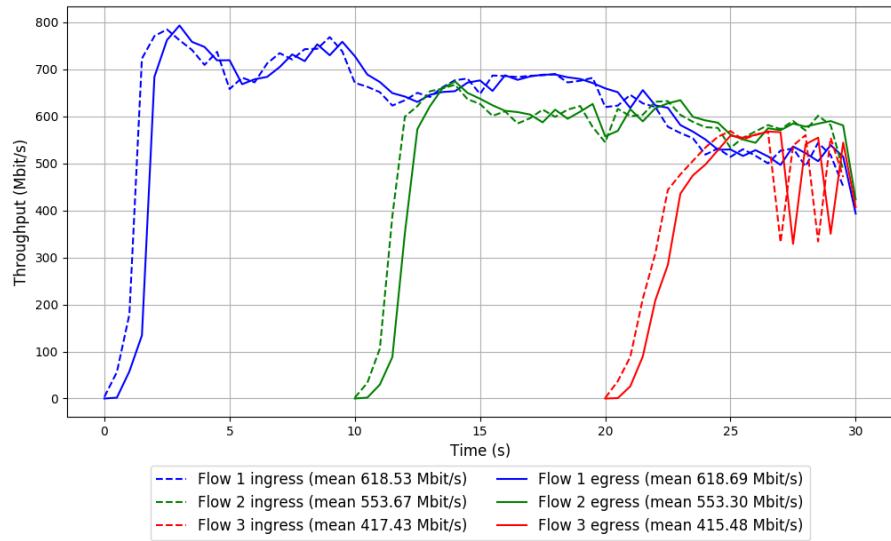


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-09-11 22:21:37
End at: 2018-09-11 22:22:07
Local clock offset: -0.462 ms
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2018-09-12 00:52:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1121.28 Mbit/s
95th percentile per-packet one-way delay: 67.038 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 618.69 Mbit/s
95th percentile per-packet one-way delay: 67.655 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 553.30 Mbit/s
95th percentile per-packet one-way delay: 67.475 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 415.48 Mbit/s
95th percentile per-packet one-way delay: 62.698 ms
Loss rate: 1.48%
```

## Run 4: Report of Indigo-Muses — Data Link

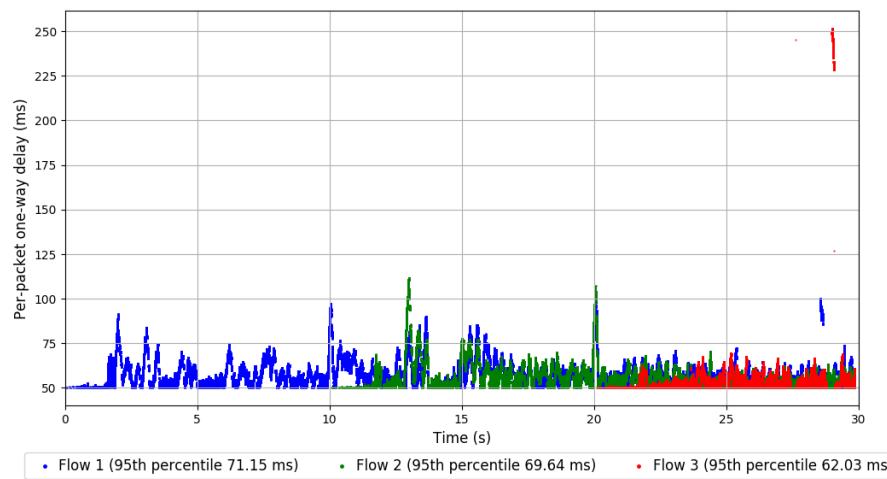
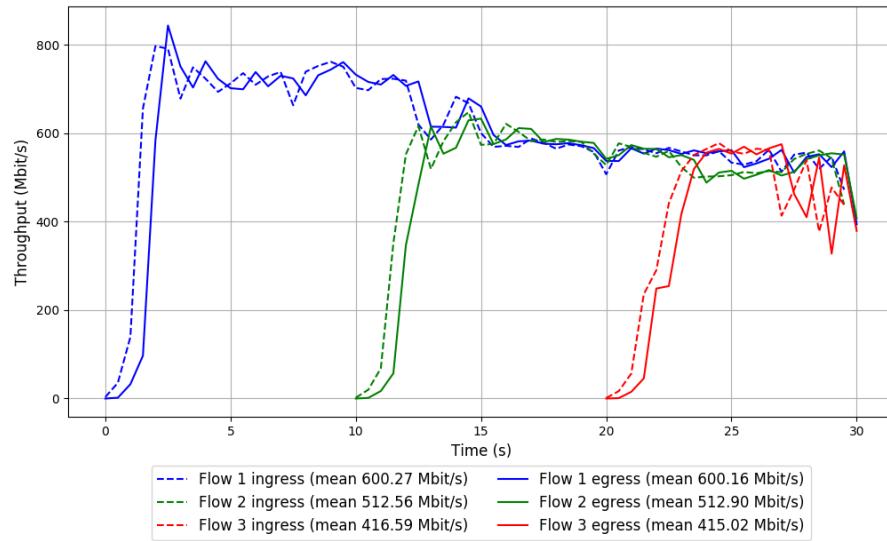


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-09-11 22:53:36
End at: 2018-09-11 22:54:06
Local clock offset: -0.058 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-09-12 00:52:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1076.20 Mbit/s
95th percentile per-packet one-way delay: 69.968 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 600.16 Mbit/s
95th percentile per-packet one-way delay: 71.152 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 512.90 Mbit/s
95th percentile per-packet one-way delay: 69.644 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 415.02 Mbit/s
95th percentile per-packet one-way delay: 62.030 ms
Loss rate: 1.41%
```

Run 5: Report of Indigo-Muses — Data Link

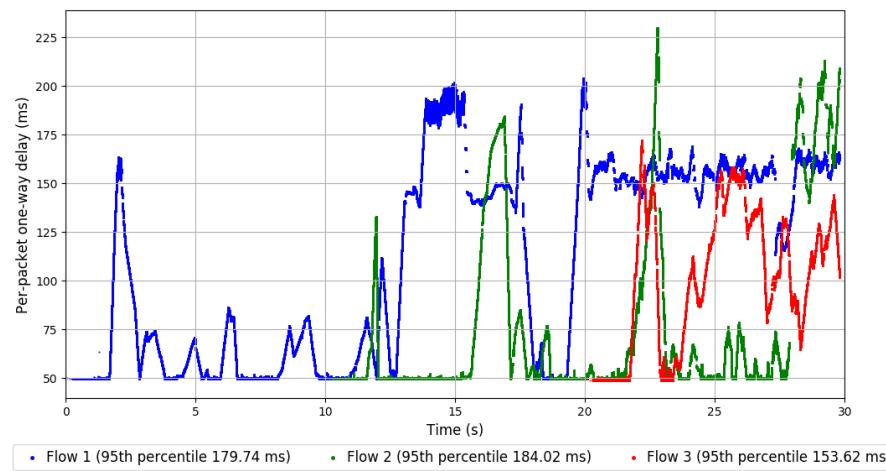
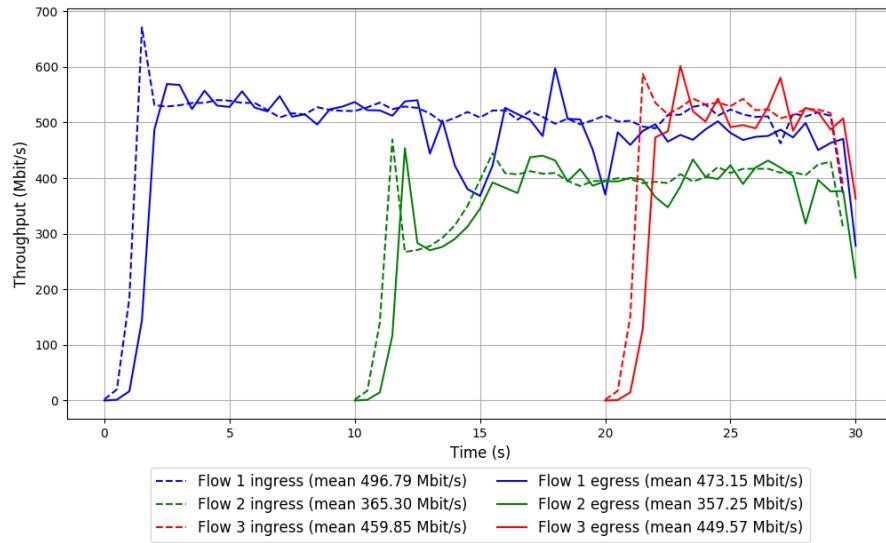


Run 1: Statistics of PCC-Allegro

```
Start at: 2018-09-11 20:43:43
End at: 2018-09-11 20:44:13
Local clock offset: 0.197 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-09-12 01:01:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 857.09 Mbit/s
95th percentile per-packet one-way delay: 176.577 ms
Loss rate: 4.12%
-- Flow 1:
Average throughput: 473.15 Mbit/s
95th percentile per-packet one-way delay: 179.740 ms
Loss rate: 5.08%
-- Flow 2:
Average throughput: 357.25 Mbit/s
95th percentile per-packet one-way delay: 184.017 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 449.57 Mbit/s
95th percentile per-packet one-way delay: 153.621 ms
Loss rate: 3.25%
```

## Run 1: Report of PCC-Allegro — Data Link

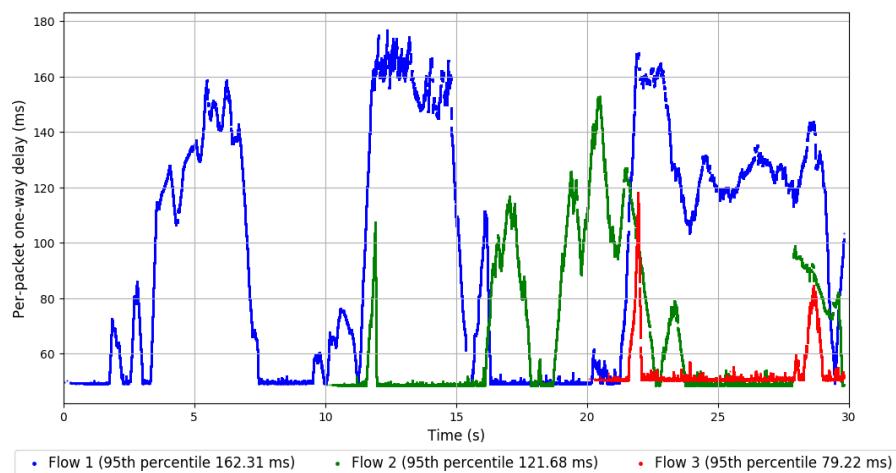
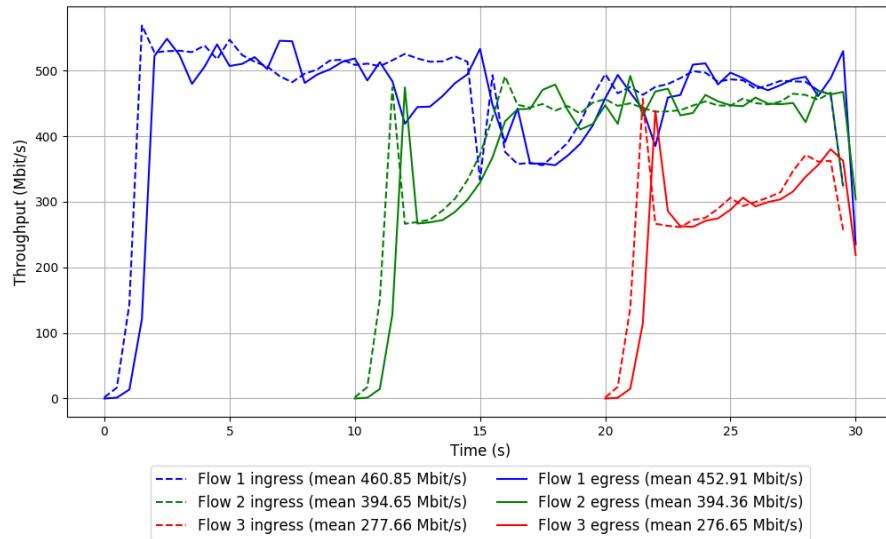


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-09-11 21:15:43
End at: 2018-09-11 21:16:13
Local clock offset: -0.078 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-09-12 01:01:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 805.15 Mbit/s
95th percentile per-packet one-way delay: 158.873 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 452.91 Mbit/s
95th percentile per-packet one-way delay: 162.309 ms
Loss rate: 2.05%
-- Flow 2:
Average throughput: 394.36 Mbit/s
95th percentile per-packet one-way delay: 121.678 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 276.65 Mbit/s
95th percentile per-packet one-way delay: 79.222 ms
Loss rate: 1.40%
```

Run 2: Report of PCC-Allegro — Data Link

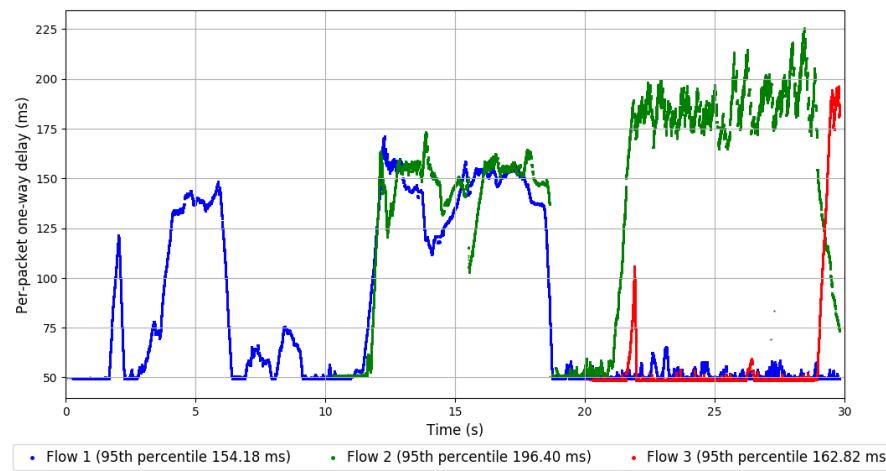
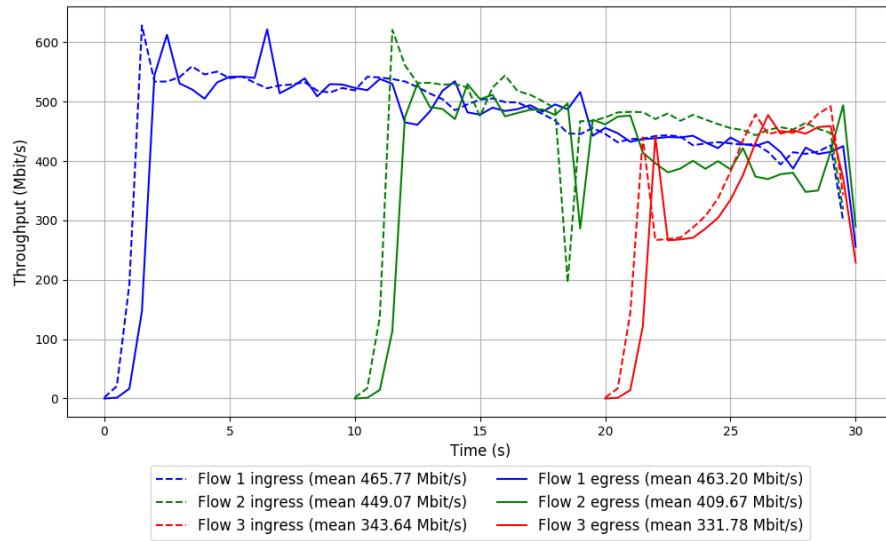


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-09-11 21:47:39
End at: 2018-09-11 21:48:09
Local clock offset: -0.051 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-09-12 01:15:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 843.43 Mbit/s
95th percentile per-packet one-way delay: 186.431 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 463.20 Mbit/s
95th percentile per-packet one-way delay: 154.179 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 409.67 Mbit/s
95th percentile per-packet one-way delay: 196.404 ms
Loss rate: 9.25%
-- Flow 3:
Average throughput: 331.78 Mbit/s
95th percentile per-packet one-way delay: 162.818 ms
Loss rate: 4.46%
```

Run 3: Report of PCC-Allegro — Data Link

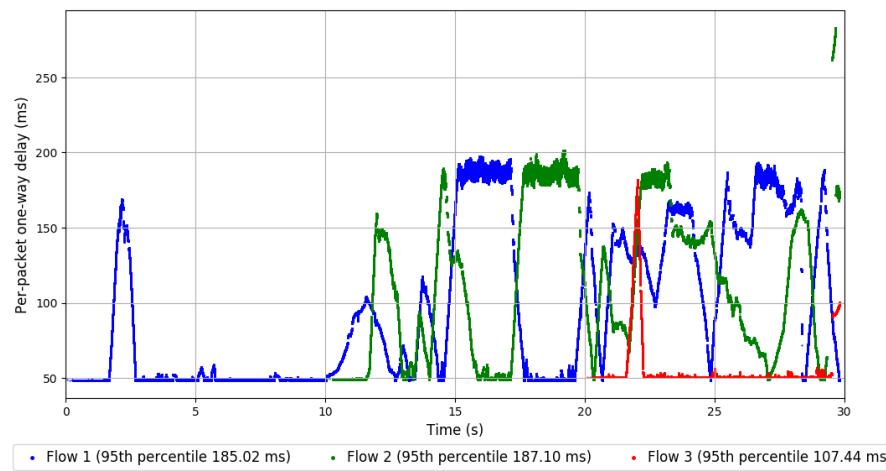
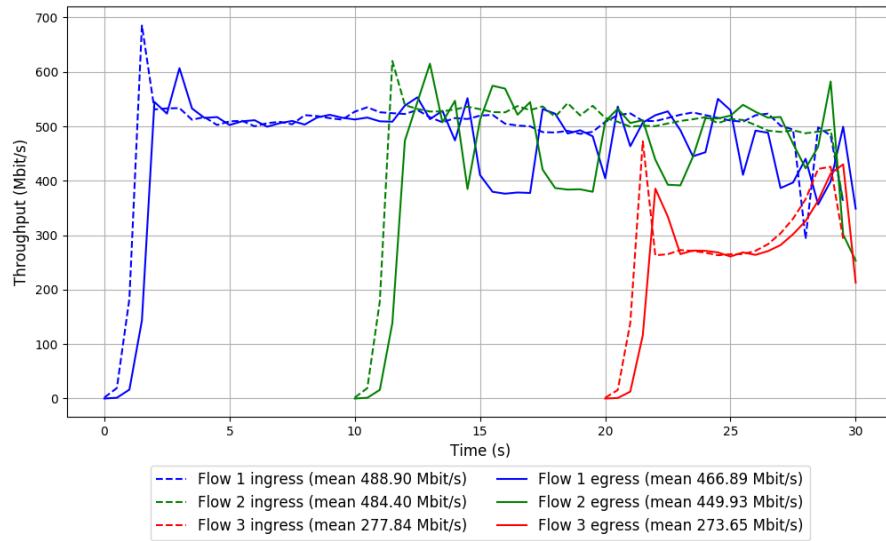


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-09-11 22:19:30
End at: 2018-09-11 22:20:00
Local clock offset: -0.44 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-09-12 01:21:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 854.82 Mbit/s
95th percentile per-packet one-way delay: 185.406 ms
Loss rate: 5.58%
-- Flow 1:
Average throughput: 466.89 Mbit/s
95th percentile per-packet one-way delay: 185.021 ms
Loss rate: 4.82%
-- Flow 2:
Average throughput: 449.93 Mbit/s
95th percentile per-packet one-way delay: 187.103 ms
Loss rate: 7.59%
-- Flow 3:
Average throughput: 273.65 Mbit/s
95th percentile per-packet one-way delay: 107.437 ms
Loss rate: 2.54%
```

Run 4: Report of PCC-Allegro — Data Link

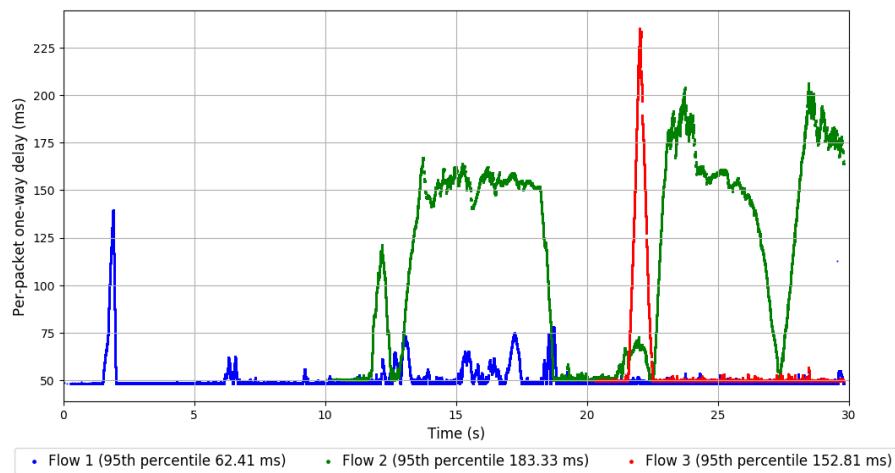
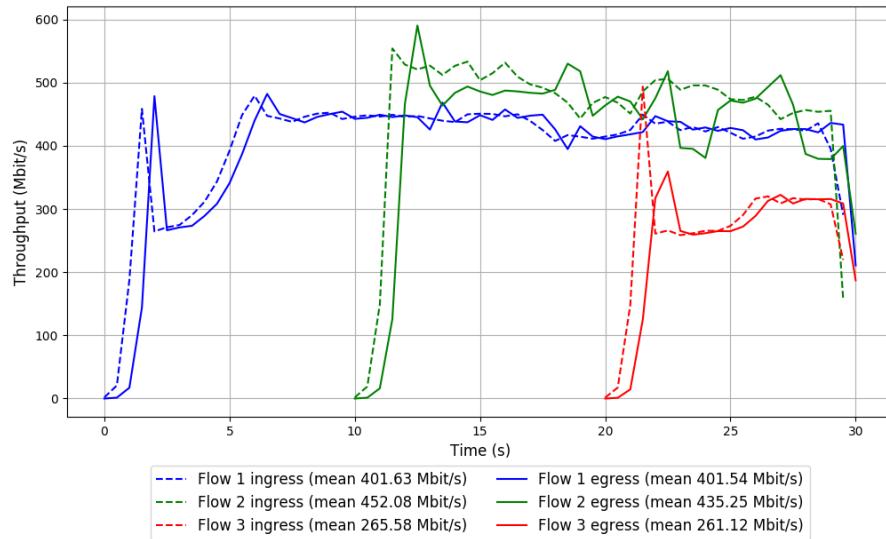


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-09-11 22:51:36
End at: 2018-09-11 22:52:06
Local clock offset: -0.447 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-09-12 01:21:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 775.71 Mbit/s
95th percentile per-packet one-way delay: 167.808 ms
Loss rate: 2.09%
-- Flow 1:
Average throughput: 401.54 Mbit/s
95th percentile per-packet one-way delay: 62.415 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 435.25 Mbit/s
95th percentile per-packet one-way delay: 183.330 ms
Loss rate: 4.22%
-- Flow 3:
Average throughput: 261.12 Mbit/s
95th percentile per-packet one-way delay: 152.808 ms
Loss rate: 2.71%
```

## Run 5: Report of PCC-Allegro — Data Link

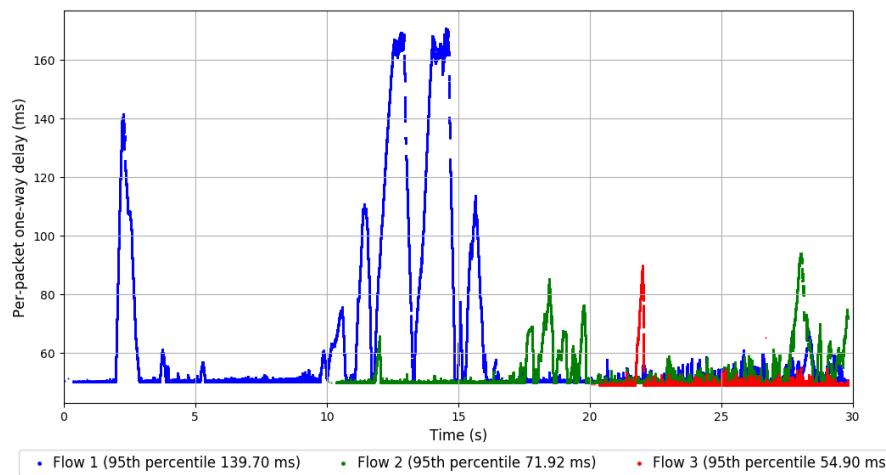
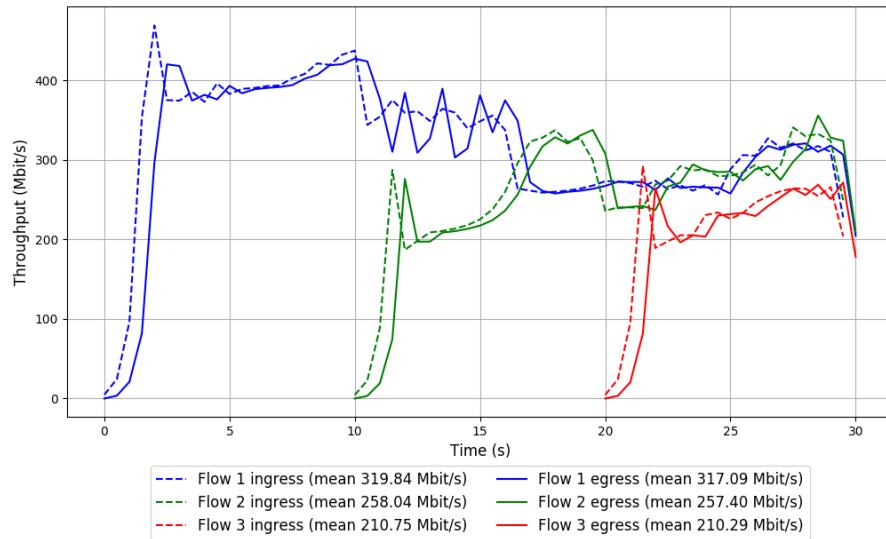


```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-11 20:16:13
End at: 2018-09-11 20:16:43
Local clock offset: -0.171 ms
Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2018-09-12 01:21:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 556.75 Mbit/s
95th percentile per-packet one-way delay: 108.584 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 317.09 Mbit/s
95th percentile per-packet one-way delay: 139.704 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 257.40 Mbit/s
95th percentile per-packet one-way delay: 71.925 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 210.29 Mbit/s
95th percentile per-packet one-way delay: 54.903 ms
Loss rate: 1.24%
```

Run 1: Report of PCC-Expr — Data Link

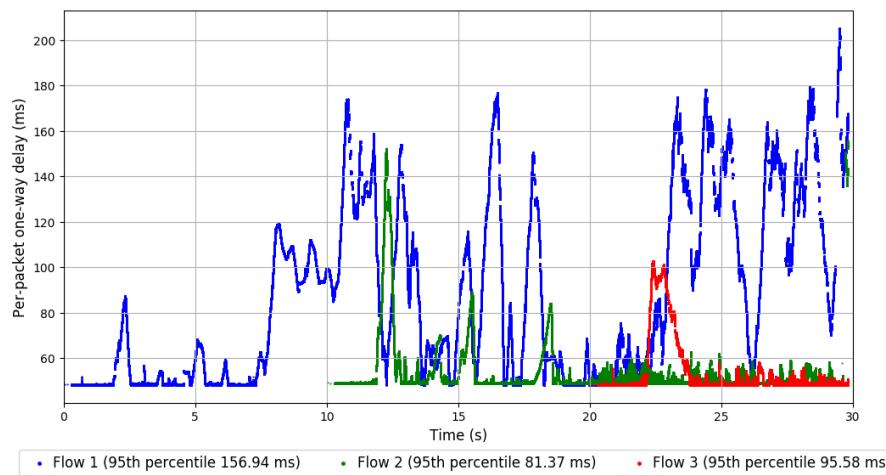
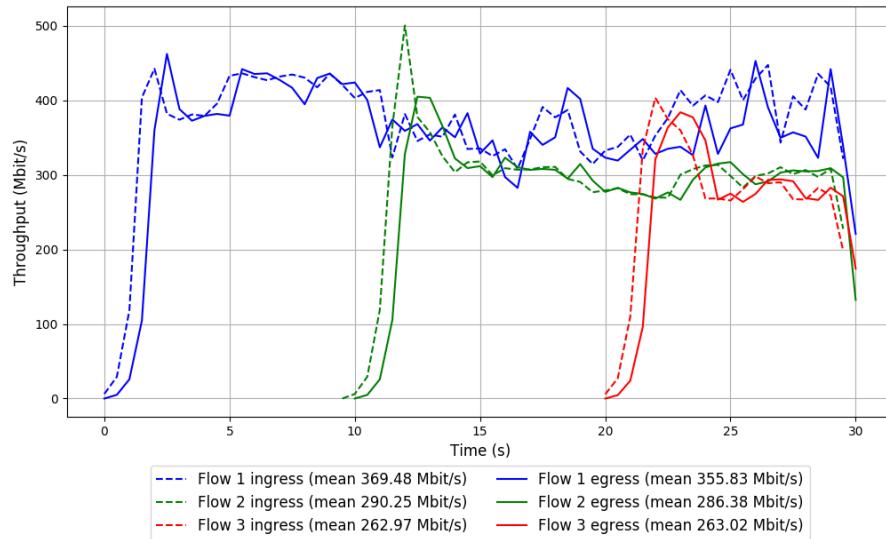


```
Run 2: Statistics of PCC-Expr
```

```
Start at: 2018-09-11 20:47:53
End at: 2018-09-11 20:48:23
Local clock offset: -0.438 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-09-12 01:21:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 632.34 Mbit/s
95th percentile per-packet one-way delay: 149.116 ms
Loss rate: 2.96%
-- Flow 1:
Average throughput: 355.83 Mbit/s
95th percentile per-packet one-way delay: 156.939 ms
Loss rate: 4.02%
-- Flow 2:
Average throughput: 286.38 Mbit/s
95th percentile per-packet one-way delay: 81.366 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 263.02 Mbit/s
95th percentile per-packet one-way delay: 95.584 ms
Loss rate: 0.98%
```

## Run 2: Report of PCC-Expr — Data Link

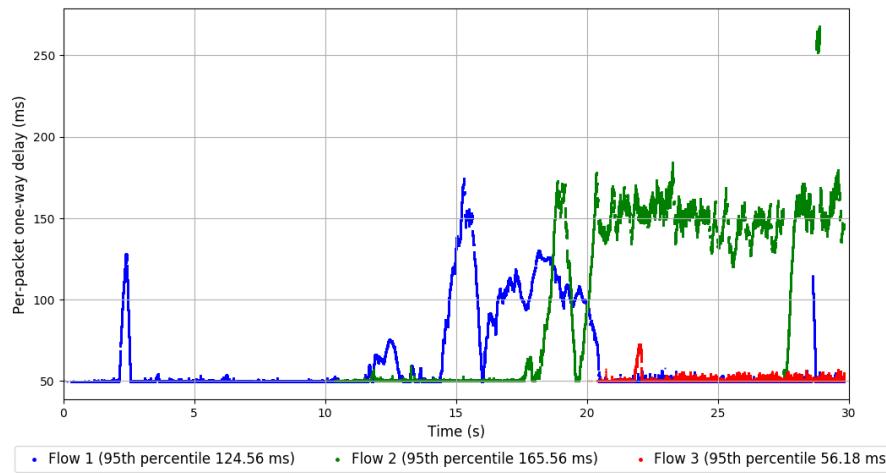
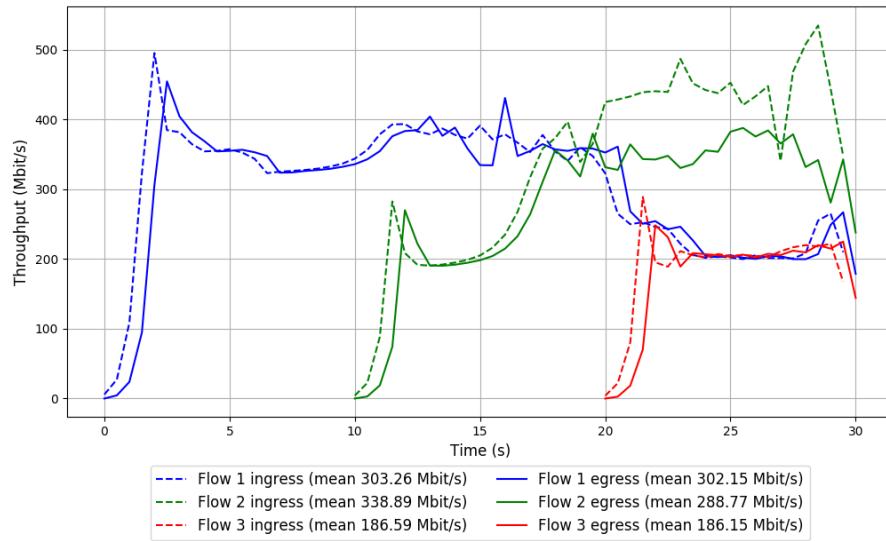


Run 3: Statistics of PCC-Expr

```
Start at: 2018-09-11 21:19:49
End at: 2018-09-11 21:20:19
Local clock offset: -0.414 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2018-09-12 01:21:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 554.83 Mbit/s
95th percentile per-packet one-way delay: 158.054 ms
Loss rate: 6.31%
-- Flow 1:
Average throughput: 302.15 Mbit/s
95th percentile per-packet one-way delay: 124.555 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 288.77 Mbit/s
95th percentile per-packet one-way delay: 165.565 ms
Loss rate: 15.23%
-- Flow 3:
Average throughput: 186.15 Mbit/s
95th percentile per-packet one-way delay: 56.183 ms
Loss rate: 1.29%
```

### Run 3: Report of PCC-Expr — Data Link

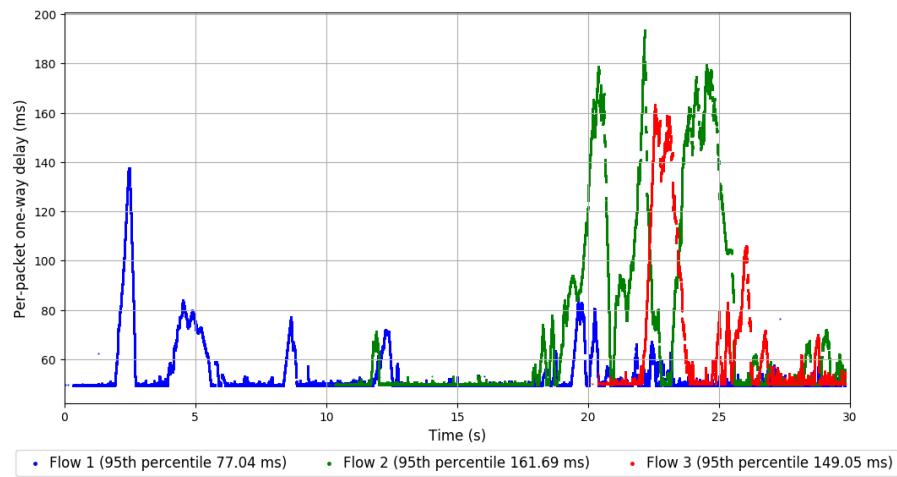
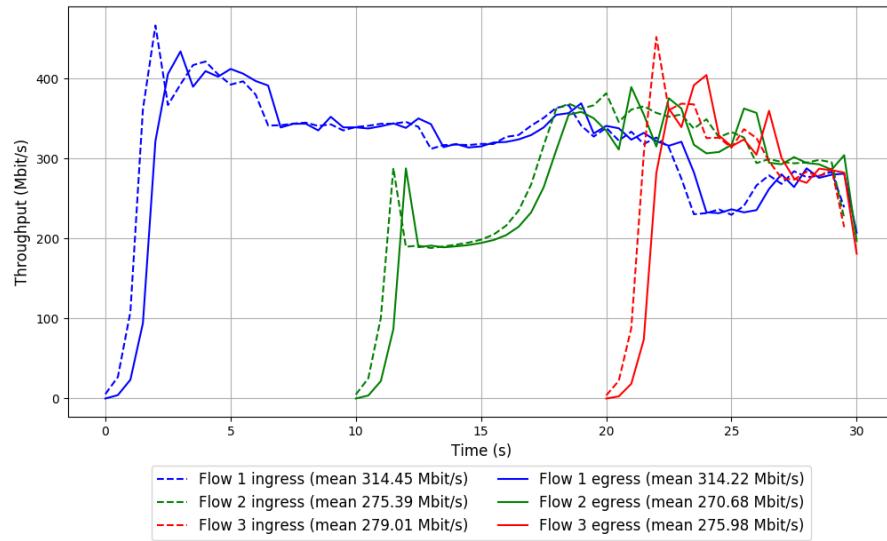


Run 4: Statistics of PCC-Expr

```
Start at: 2018-09-11 21:51:49
End at: 2018-09-11 21:52:19
Local clock offset: -0.068 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2018-09-12 01:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 584.34 Mbit/s
95th percentile per-packet one-way delay: 142.328 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 314.22 Mbit/s
95th percentile per-packet one-way delay: 77.037 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 270.68 Mbit/s
95th percentile per-packet one-way delay: 161.686 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 275.98 Mbit/s
95th percentile per-packet one-way delay: 149.053 ms
Loss rate: 2.11%
```

Run 4: Report of PCC-Expr — Data Link

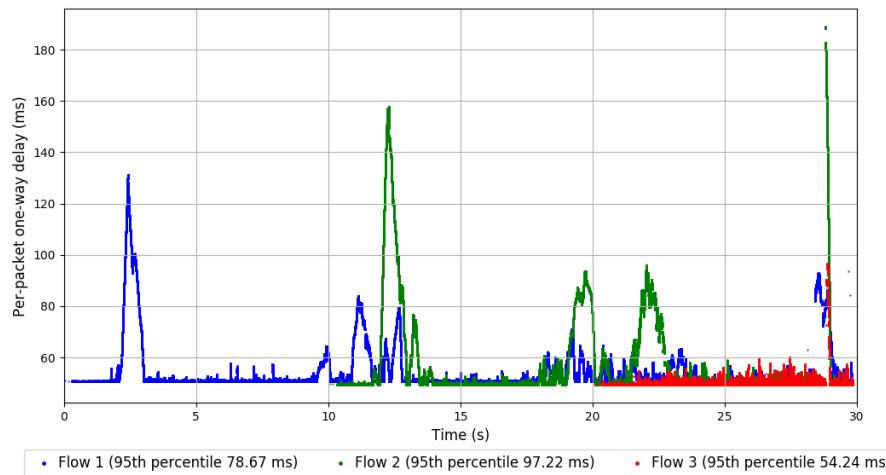
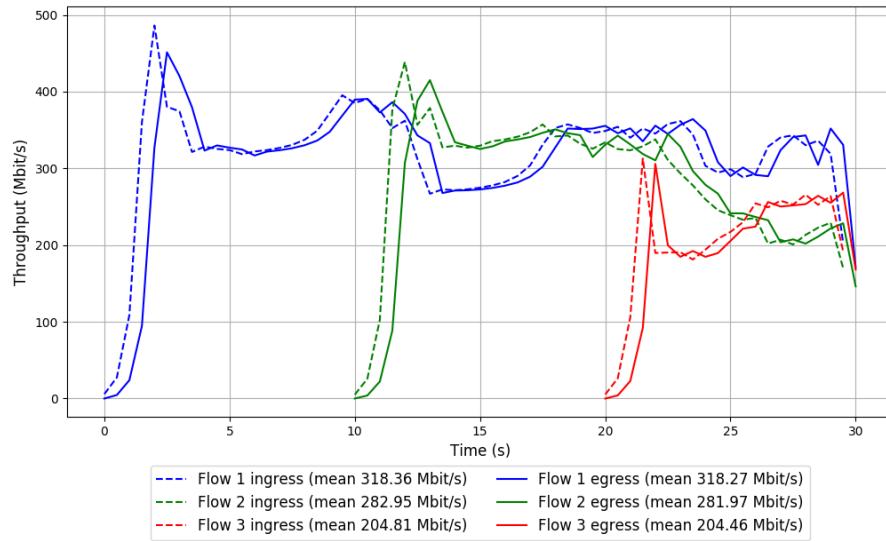


Run 5: Statistics of PCC-Expr

```
Start at: 2018-09-11 22:23:43
End at: 2018-09-11 22:24:13
Local clock offset: -0.119 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-09-12 01:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 572.40 Mbit/s
95th percentile per-packet one-way delay: 85.111 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 318.27 Mbit/s
95th percentile per-packet one-way delay: 78.665 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 281.97 Mbit/s
95th percentile per-packet one-way delay: 97.218 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 204.46 Mbit/s
95th percentile per-packet one-way delay: 54.241 ms
Loss rate: 1.12%
```

Run 5: Report of PCC-Expr — Data Link

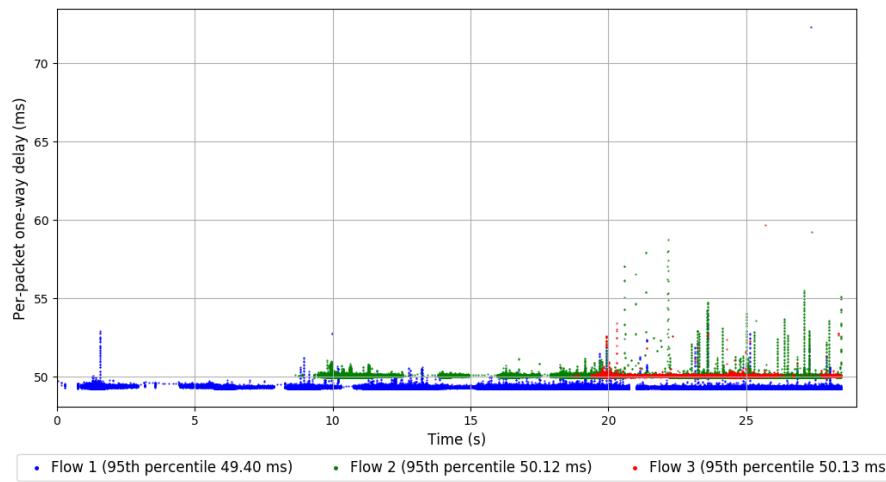
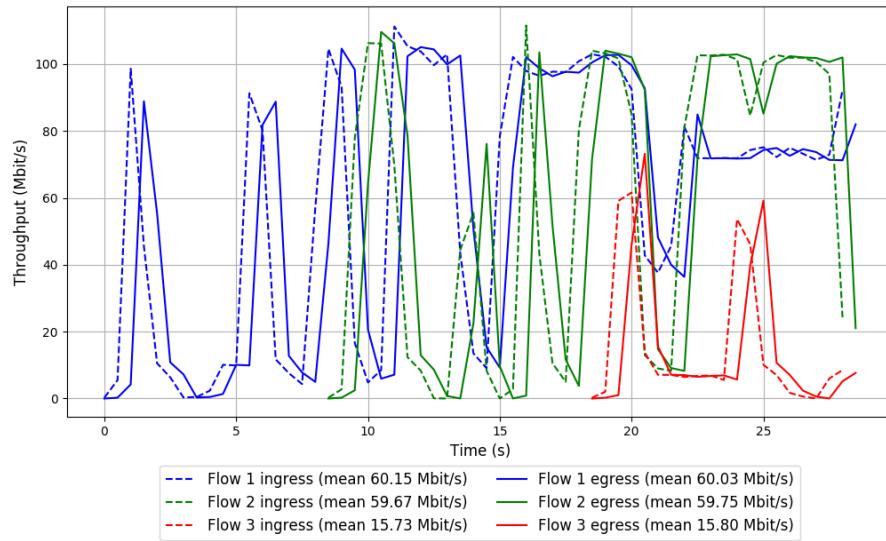


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-11 20:20:14
End at: 2018-09-11 20:20:44
Local clock offset: -0.149 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2018-09-12 01:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.11 Mbit/s
95th percentile per-packet one-way delay: 50.080 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 60.03 Mbit/s
95th percentile per-packet one-way delay: 49.402 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 59.75 Mbit/s
95th percentile per-packet one-way delay: 50.116 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 15.80 Mbit/s
95th percentile per-packet one-way delay: 50.132 ms
Loss rate: 0.54%
```

Run 1: Report of QUIC Cubic — Data Link

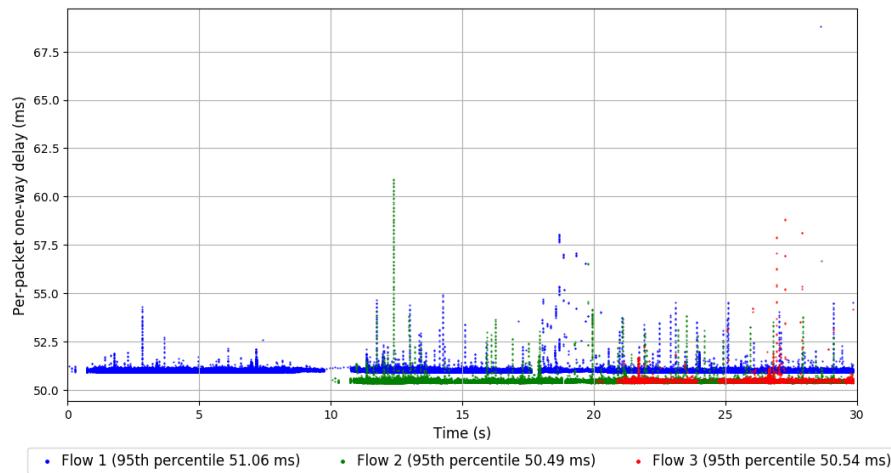
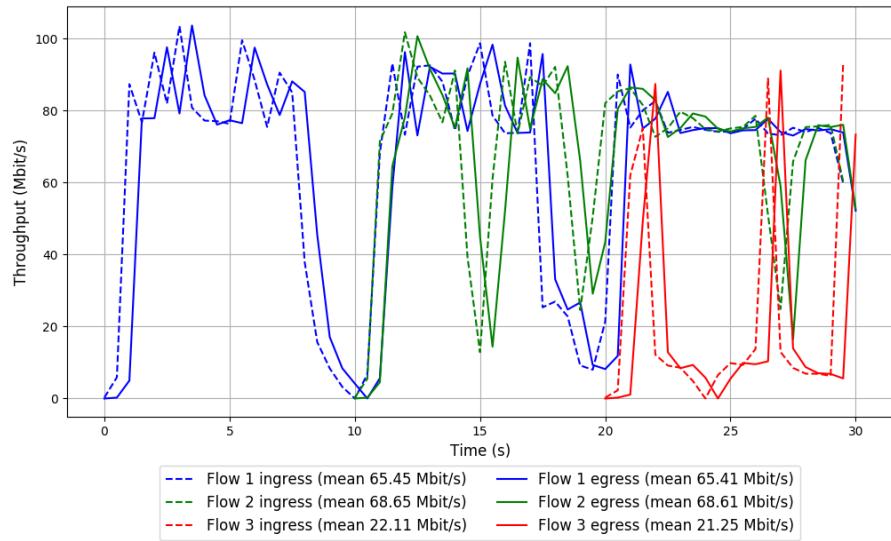


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-09-11 20:52:03
End at: 2018-09-11 20:52:33
Local clock offset: 0.231 ms
Remote clock offset: -0.135 ms

# Below is generated by plot.py at 2018-09-12 01:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.97 Mbit/s
95th percentile per-packet one-way delay: 51.034 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 65.41 Mbit/s
95th percentile per-packet one-way delay: 51.058 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 68.61 Mbit/s
95th percentile per-packet one-way delay: 50.488 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 21.25 Mbit/s
95th percentile per-packet one-way delay: 50.541 ms
Loss rate: 4.85%
```

## Run 2: Report of QUIC Cubic — Data Link

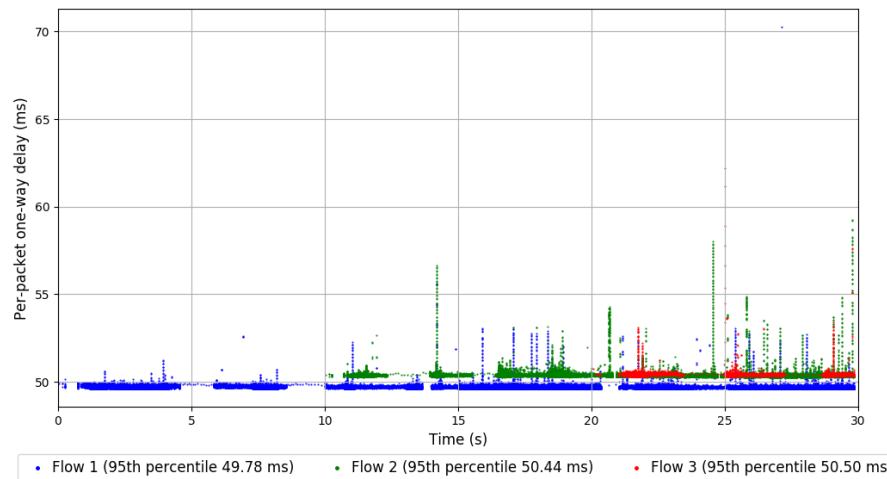
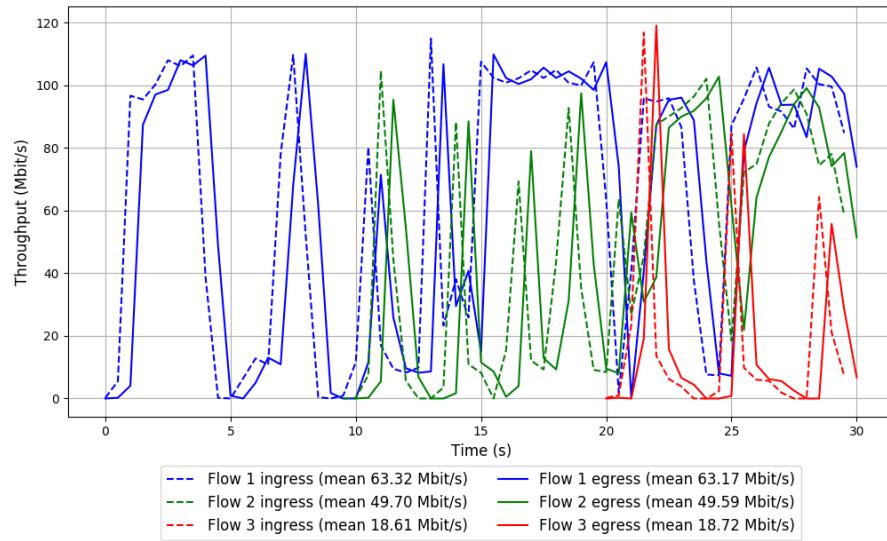


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-09-11 21:23:55
End at: 2018-09-11 21:24:25
Local clock offset: 0.284 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2018-09-12 01:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 102.28 Mbit/s
95th percentile per-packet one-way delay: 50.413 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 63.17 Mbit/s
95th percentile per-packet one-way delay: 49.782 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 49.59 Mbit/s
95th percentile per-packet one-way delay: 50.444 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 18.72 Mbit/s
95th percentile per-packet one-way delay: 50.496 ms
Loss rate: 0.45%
```

### Run 3: Report of QUIC Cubic — Data Link

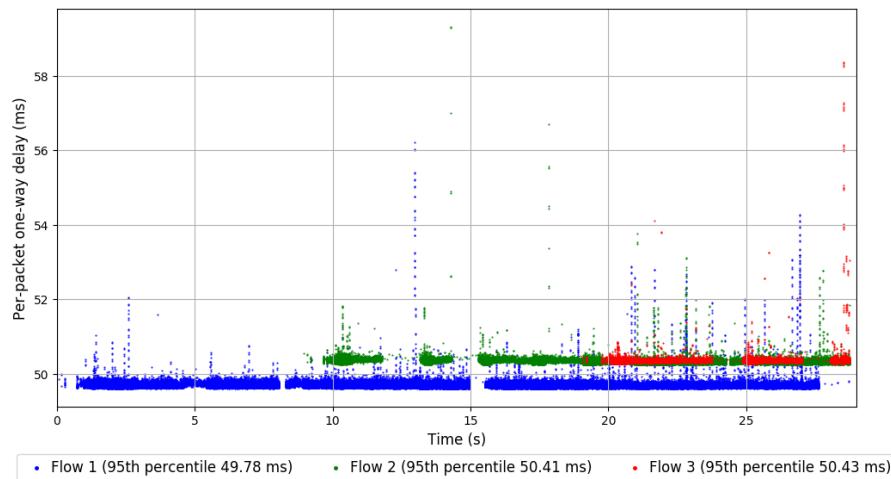
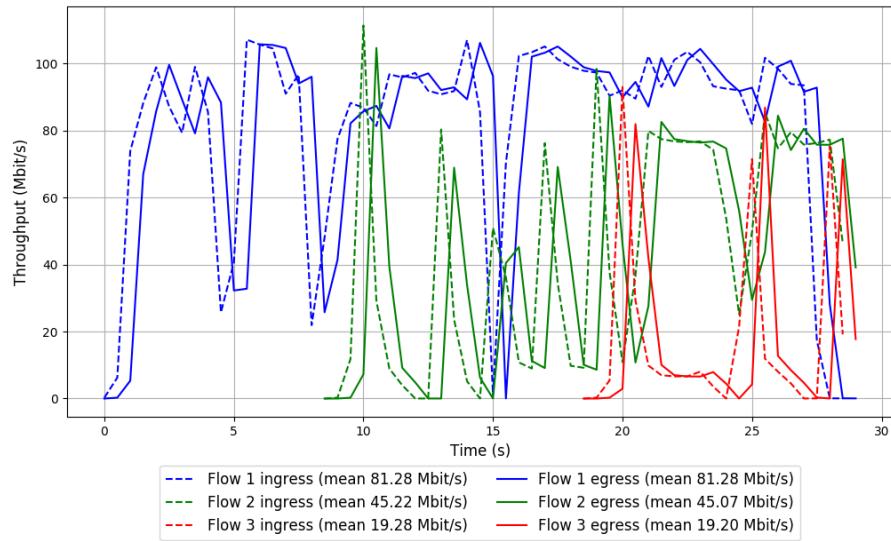


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-09-11 21:55:58
End at: 2018-09-11 21:56:28
Local clock offset: 0.27 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2018-09-12 01:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.81 Mbit/s
95th percentile per-packet one-way delay: 50.369 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 81.28 Mbit/s
95th percentile per-packet one-way delay: 49.779 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.07 Mbit/s
95th percentile per-packet one-way delay: 50.408 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 19.20 Mbit/s
95th percentile per-packet one-way delay: 50.429 ms
Loss rate: 1.40%
```

Run 4: Report of QUIC Cubic — Data Link

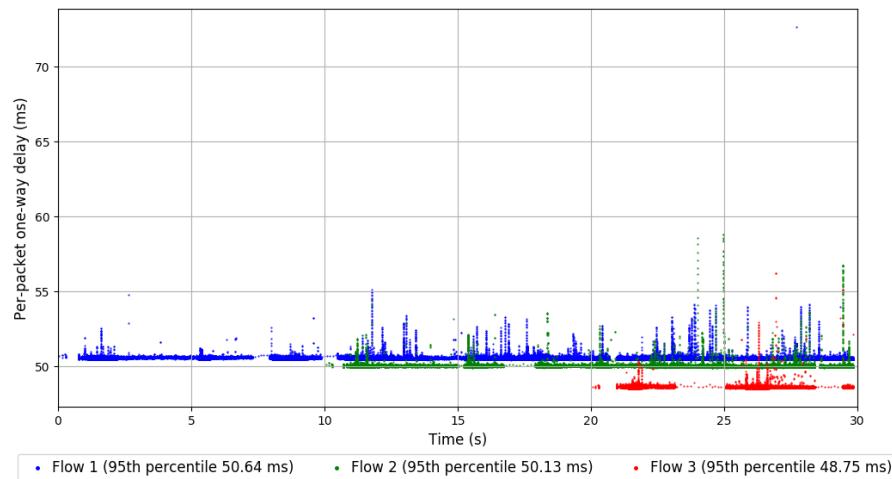
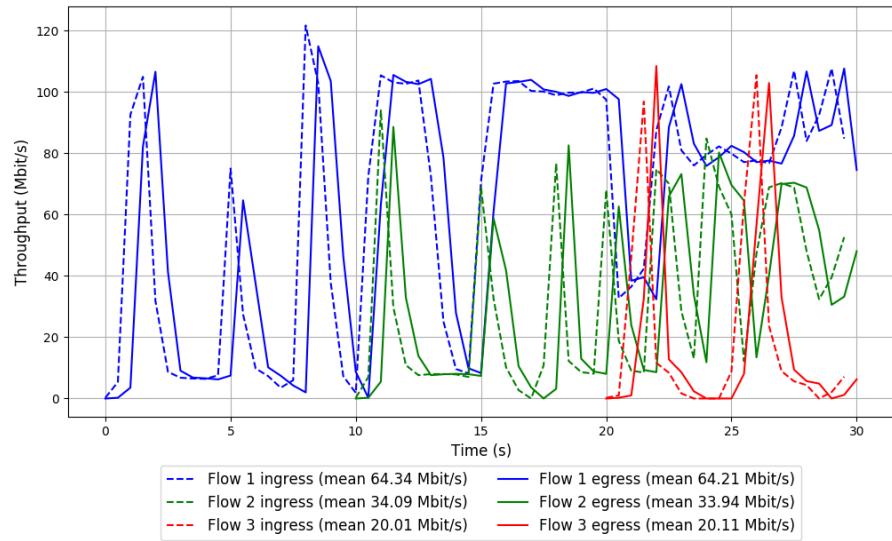


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-09-11 22:27:48
End at: 2018-09-11 22:28:18
Local clock offset: -0.13 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-09-12 01:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.36 Mbit/s
95th percentile per-packet one-way delay: 50.625 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 64.21 Mbit/s
95th percentile per-packet one-way delay: 50.642 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 33.94 Mbit/s
95th percentile per-packet one-way delay: 50.132 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 20.11 Mbit/s
95th percentile per-packet one-way delay: 48.753 ms
Loss rate: 0.45%
```

Run 5: Report of QUIC Cubic — Data Link

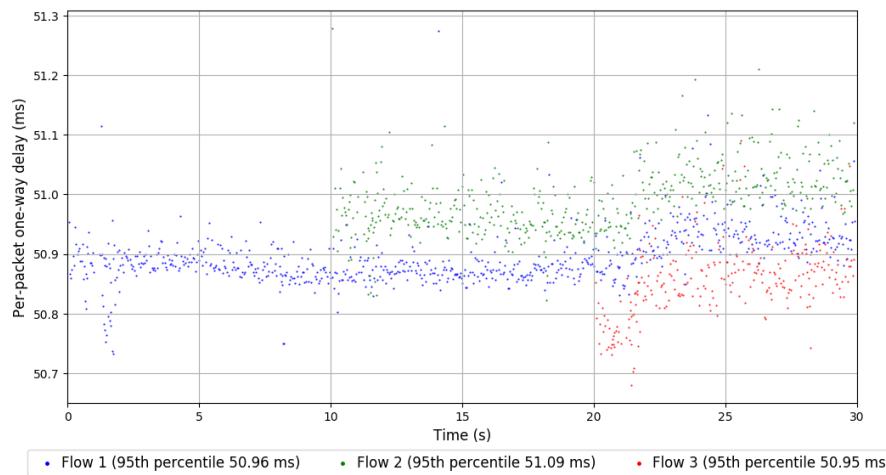
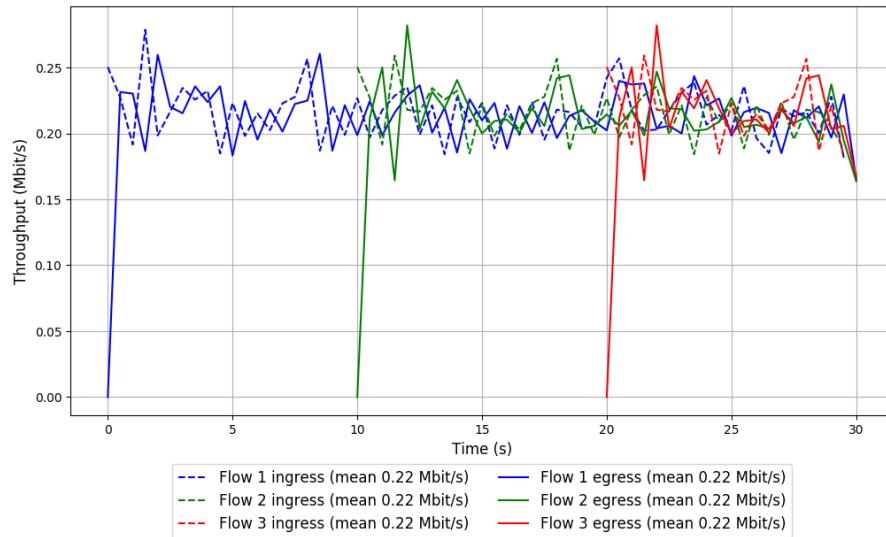


Run 1: Statistics of SCReAM

```
Start at: 2018-09-11 20:35:16
End at: 2018-09-11 20:35:46
Local clock offset: 0.23 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-09-12 01:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.048 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.964 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.088 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.948 ms
Loss rate: 1.09%
```

Run 1: Report of SCReAM — Data Link

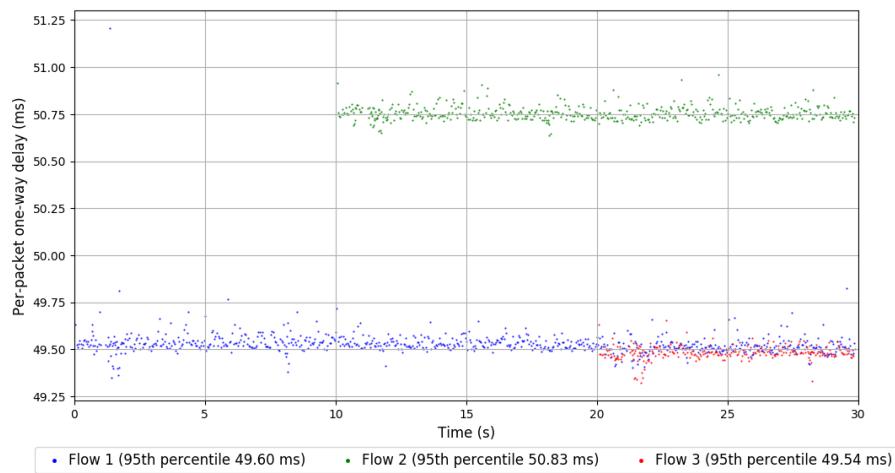
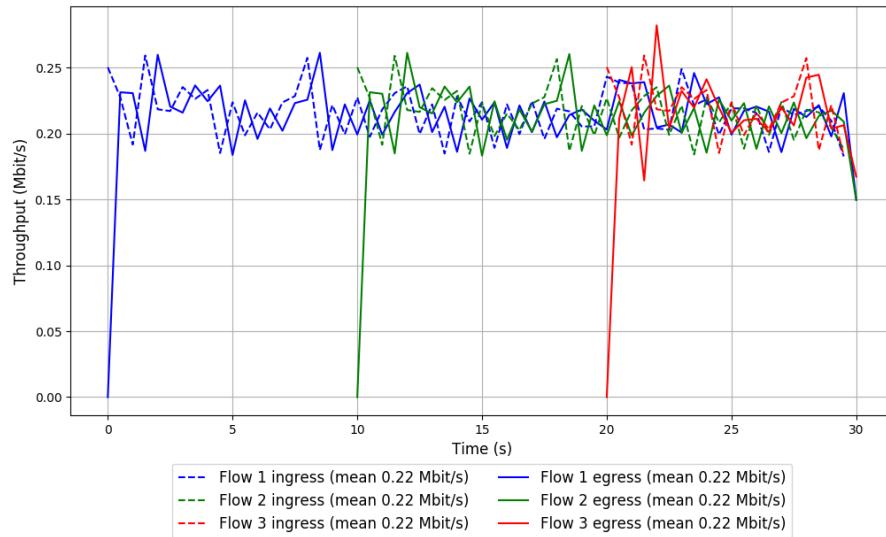


Run 2: Statistics of SCReAM

```
Start at: 2018-09-11 21:07:05
End at: 2018-09-11 21:07:35
Local clock offset: -0.075 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-09-12 01:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.788 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.597 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.826 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.538 ms
Loss rate: 1.09%
```

## Run 2: Report of SCReAM — Data Link

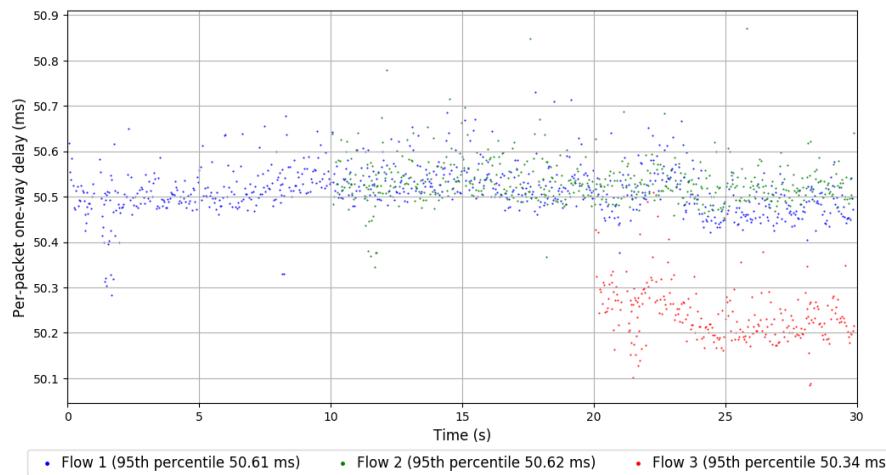
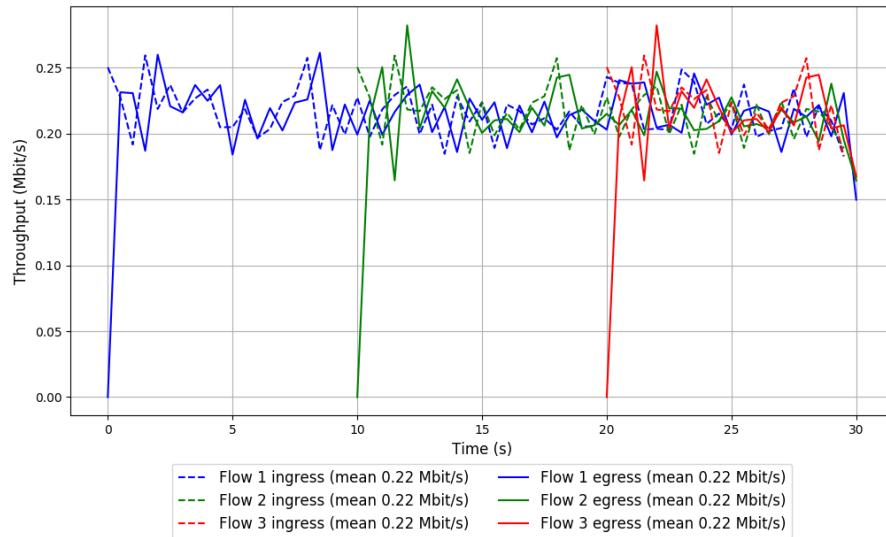


```
Run 3: Statistics of SCReAM

Start at: 2018-09-11 21:39:06
End at: 2018-09-11 21:39:36
Local clock offset: 0.262 ms
Remote clock offset: 0.046 ms

# Below is generated by plot.py at 2018-09-12 01:22:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.603 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.612 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.620 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.335 ms
Loss rate: 1.09%
```

### Run 3: Report of SCReAM — Data Link

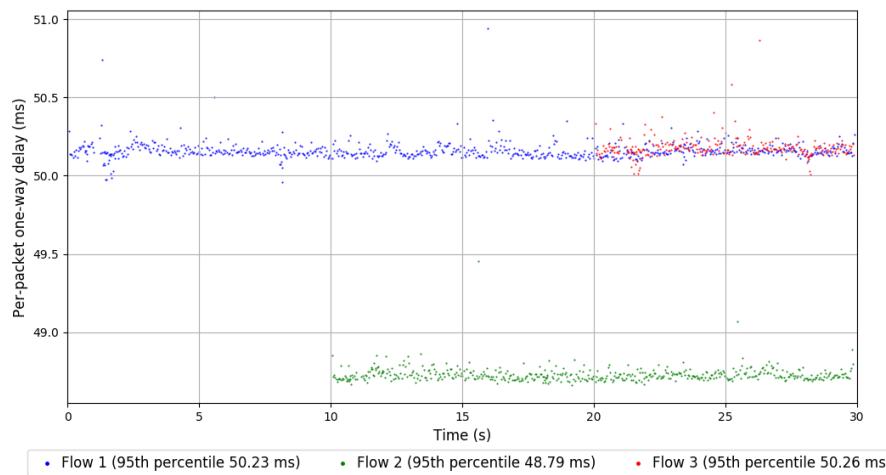
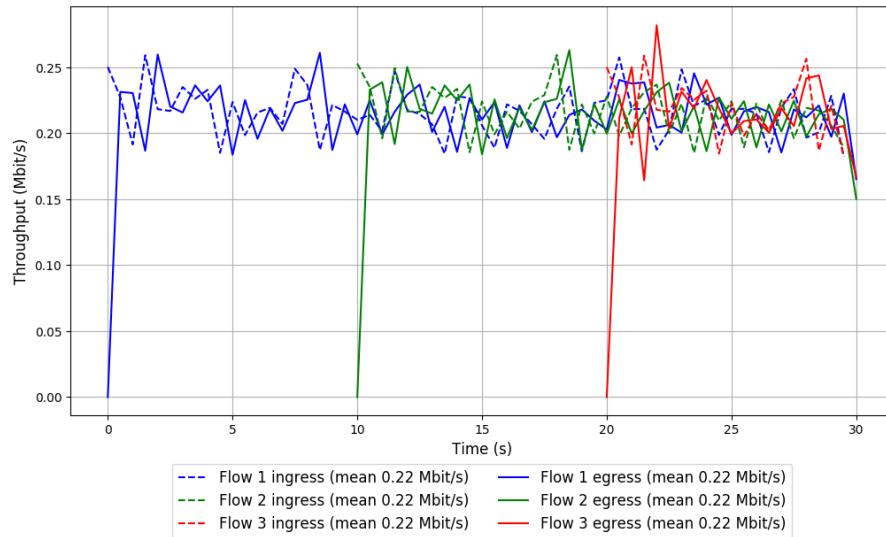


Run 4: Statistics of SCReAM

```
Start at: 2018-09-11 22:11:03
End at: 2018-09-11 22:11:33
Local clock offset: -0.086 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2018-09-12 01:22:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.224 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.227 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.791 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.264 ms
Loss rate: 1.09%
```

## Run 4: Report of SCReAM — Data Link

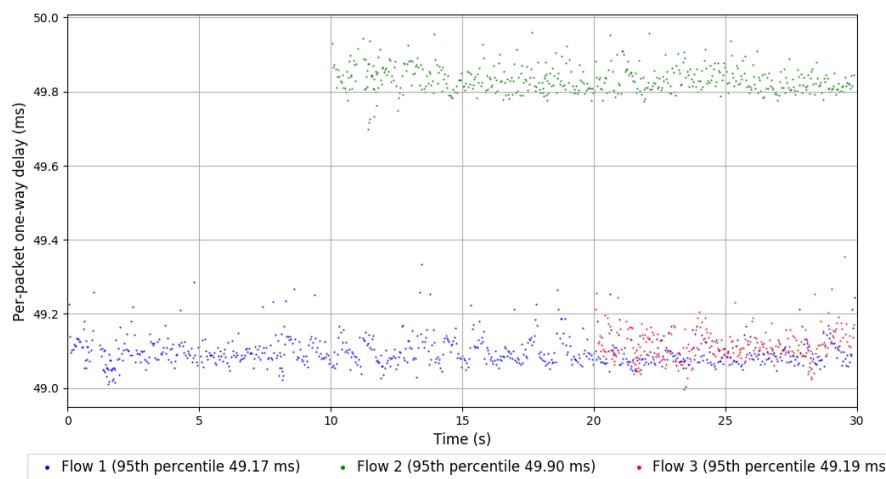
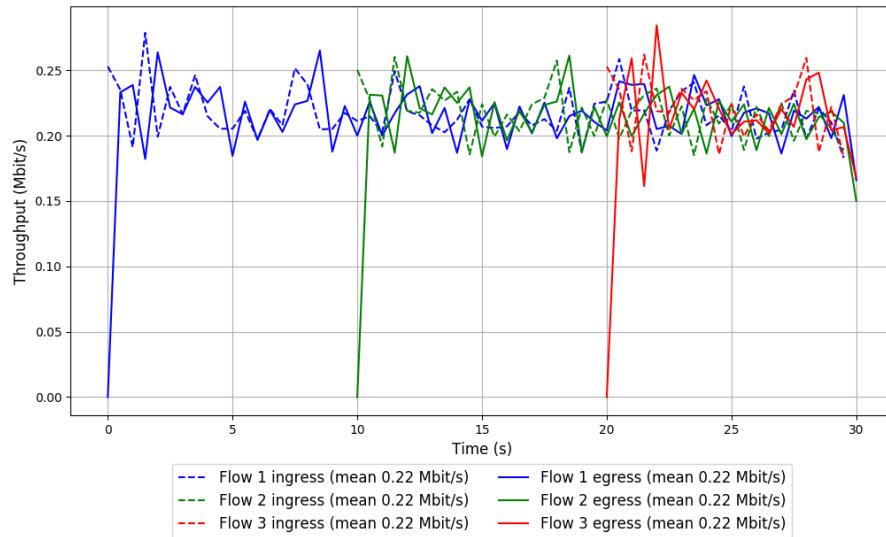


Run 5: Statistics of SCReAM

```
Start at: 2018-09-11 22:43:03
End at: 2018-09-11 22:43:33
Local clock offset: 0.223 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-09-12 01:22:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 49.869 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.166 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.898 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.190 ms
Loss rate: 1.08%
```

Run 5: Report of SCReAM — Data Link

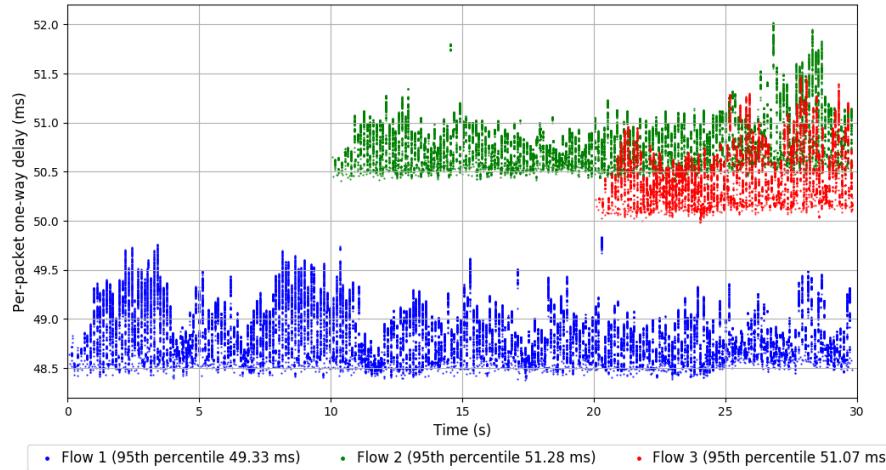
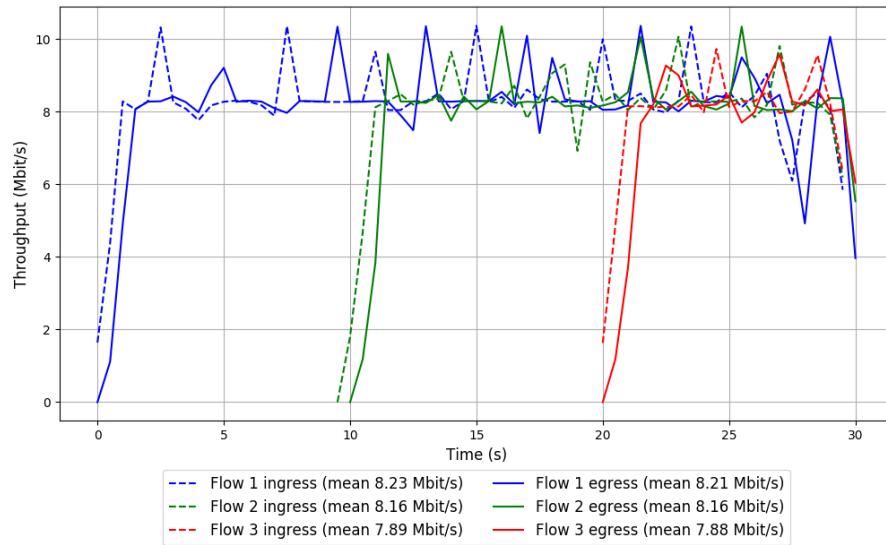


Run 1: Statistics of Sprout

```
Start at: 2018-09-11 20:40:24
End at: 2018-09-11 20:40:54
Local clock offset: -0.456 ms
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2018-09-12 01:22:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.21 Mbit/s
95th percentile per-packet one-way delay: 51.080 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 49.332 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 8.16 Mbit/s
95th percentile per-packet one-way delay: 51.276 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 51.071 ms
Loss rate: 1.30%
```

Run 1: Report of Sprout — Data Link

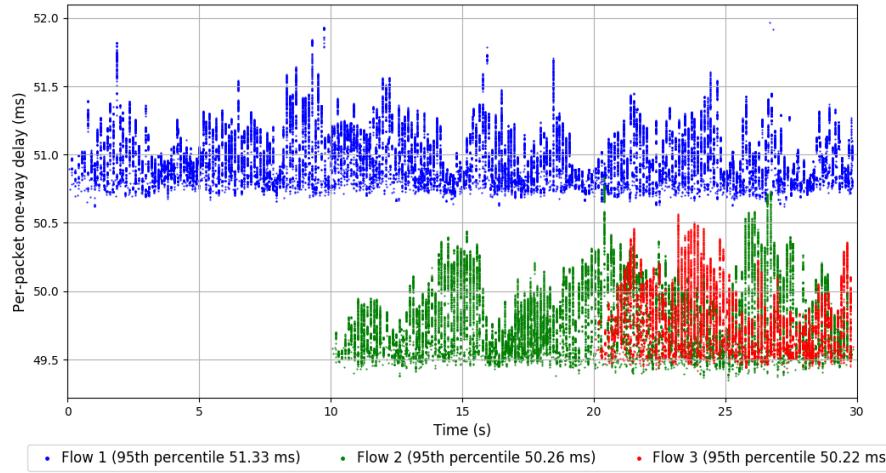
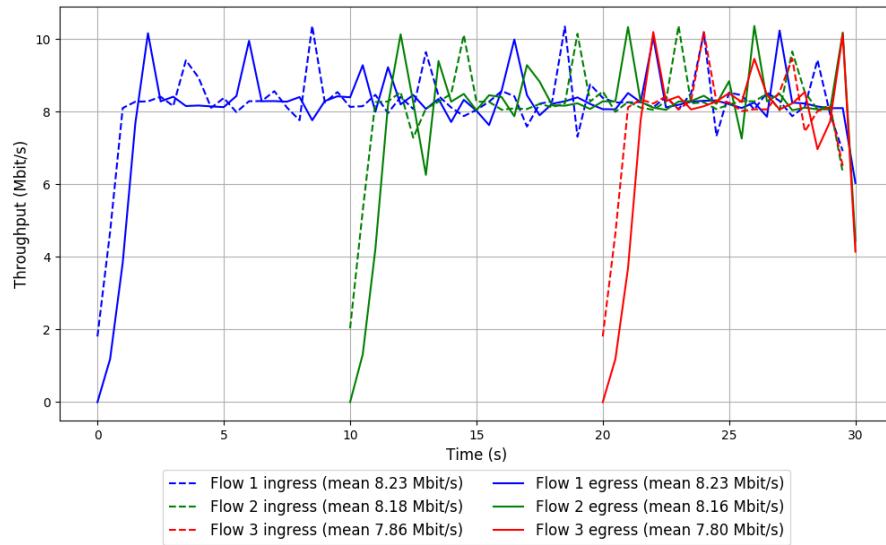


Run 2: Statistics of Sprout

```
Start at: 2018-09-11 21:12:21
End at: 2018-09-11 21:12:51
Local clock offset: -0.048 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-09-12 01:22:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.19 Mbit/s
95th percentile per-packet one-way delay: 51.251 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 51.331 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 8.16 Mbit/s
95th percentile per-packet one-way delay: 50.262 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 50.224 ms
Loss rate: 1.52%
```

## Run 2: Report of Sprout — Data Link

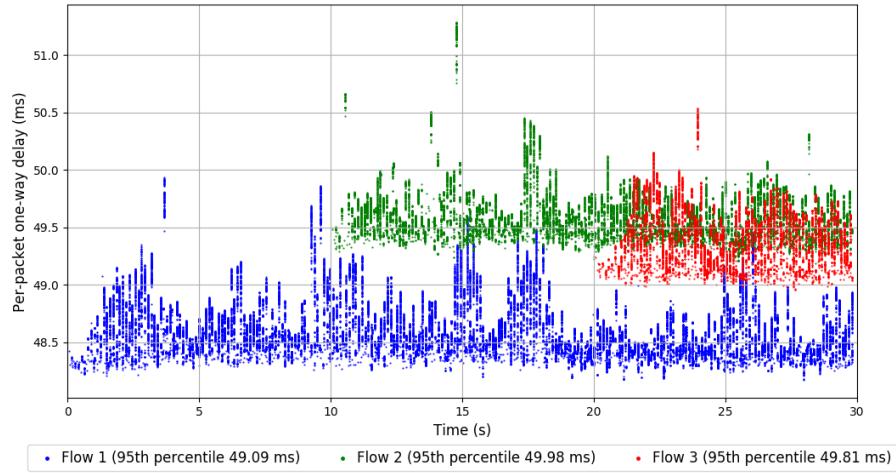
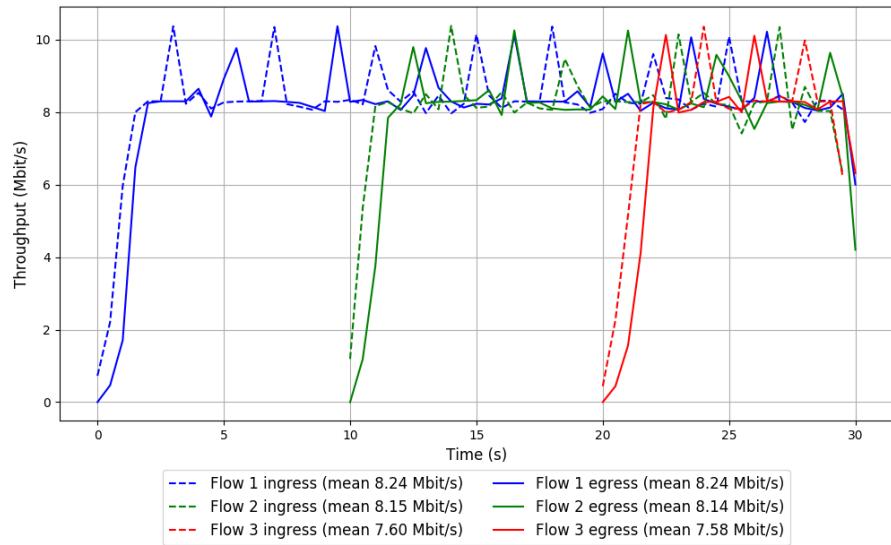


Run 3: Statistics of Sprout

```
Start at: 2018-09-11 21:44:22
End at: 2018-09-11 21:44:52
Local clock offset: -0.466 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2018-09-12 01:22:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.11 Mbit/s
95th percentile per-packet one-way delay: 49.799 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 49.086 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 49.980 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 49.814 ms
Loss rate: 1.31%
```

Run 3: Report of Sprout — Data Link

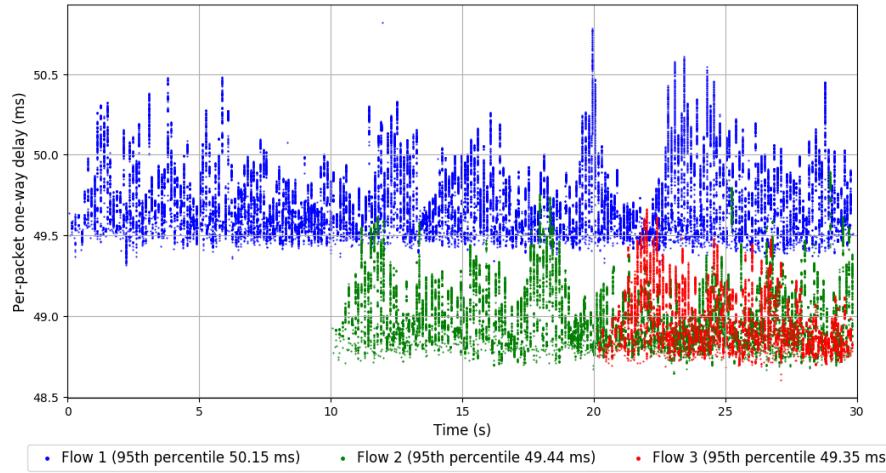
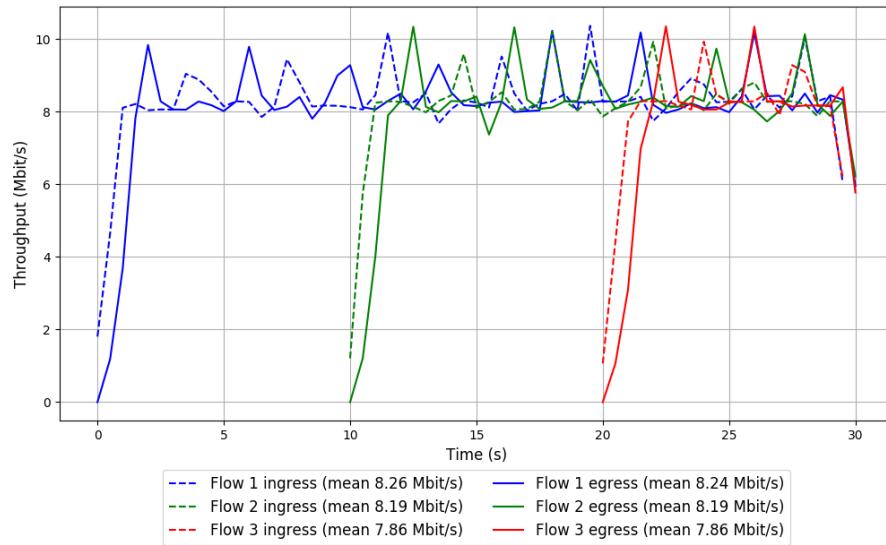


Run 4: Statistics of Sprout

```
Start at: 2018-09-11 22:16:09
End at: 2018-09-11 22:16:39
Local clock offset: -0.079 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-09-12 01:22:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.24 Mbit/s
95th percentile per-packet one-way delay: 50.037 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 50.149 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 49.436 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 49.349 ms
Loss rate: 1.25%
```

Run 4: Report of Sprout — Data Link

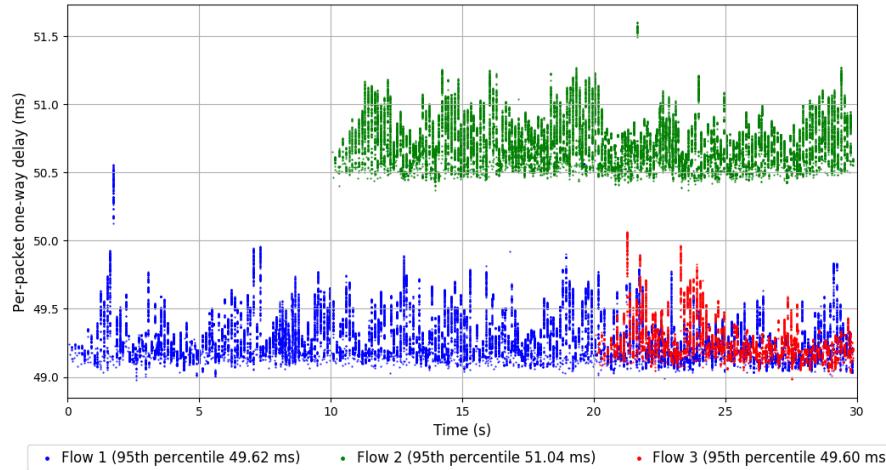
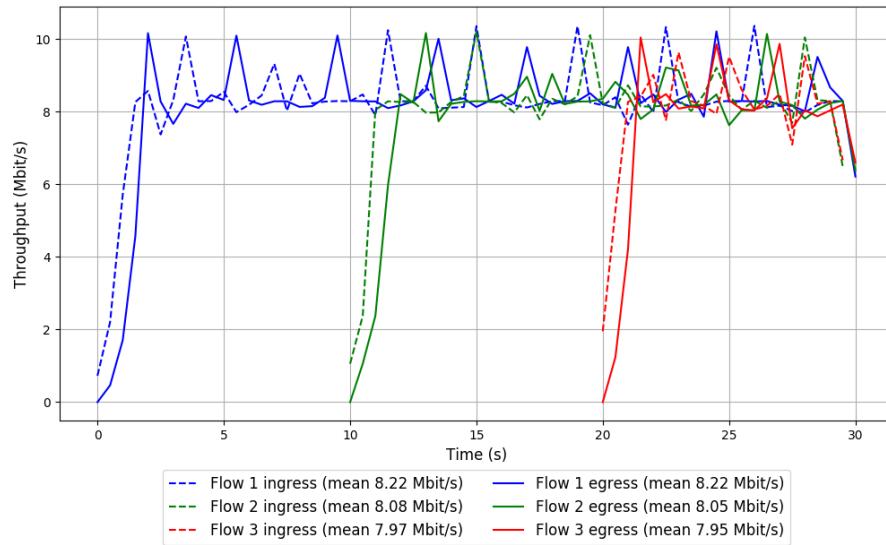


Run 5: Statistics of Sprout

```
Start at: 2018-09-11 22:48:18
End at: 2018-09-11 22:48:48
Local clock offset: 0.255 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-09-12 01:22:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.17 Mbit/s
95th percentile per-packet one-way delay: 50.906 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 49.617 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 8.05 Mbit/s
95th percentile per-packet one-way delay: 51.043 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 49.605 ms
Loss rate: 1.27%
```

Run 5: Report of Sprout — Data Link

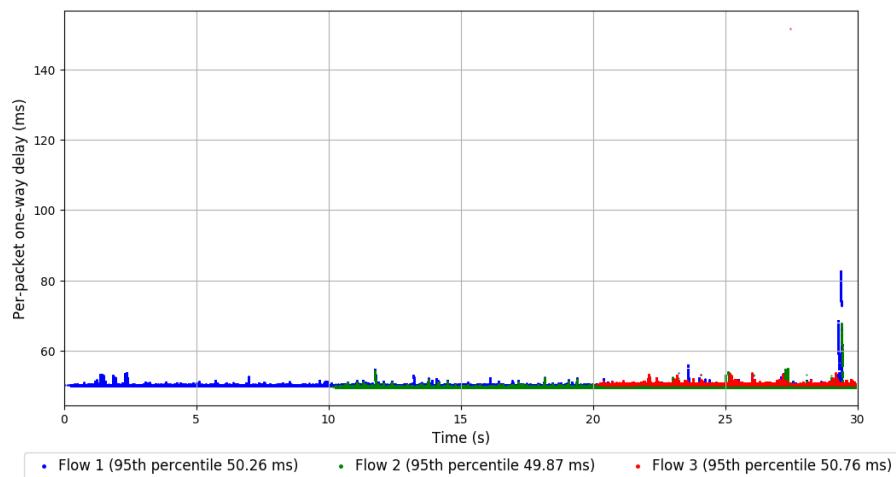
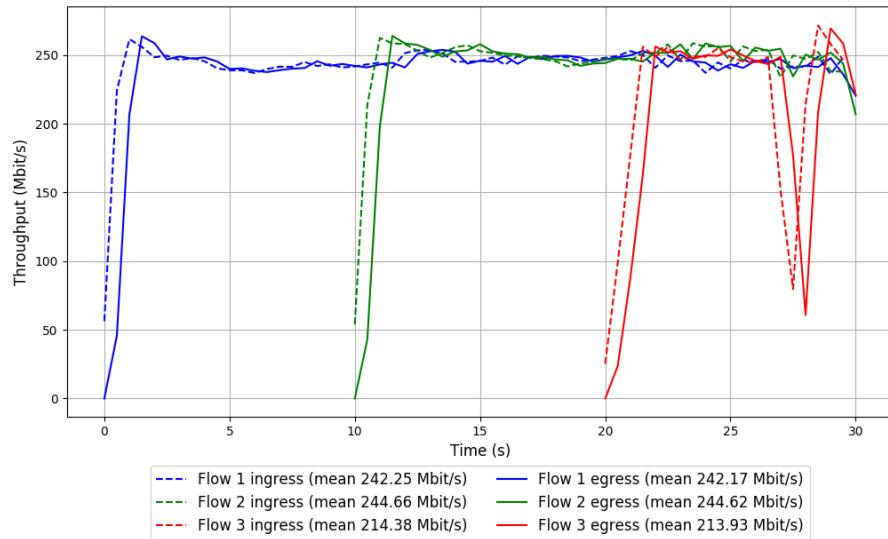


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-09-11 20:28:19
End at: 2018-09-11 20:28:49
Local clock offset: -0.122 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2018-09-12 01:32:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 475.42 Mbit/s
95th percentile per-packet one-way delay: 50.504 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 242.17 Mbit/s
95th percentile per-packet one-way delay: 50.255 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 244.62 Mbit/s
95th percentile per-packet one-way delay: 49.866 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 213.93 Mbit/s
95th percentile per-packet one-way delay: 50.762 ms
Loss rate: 1.22%
```

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

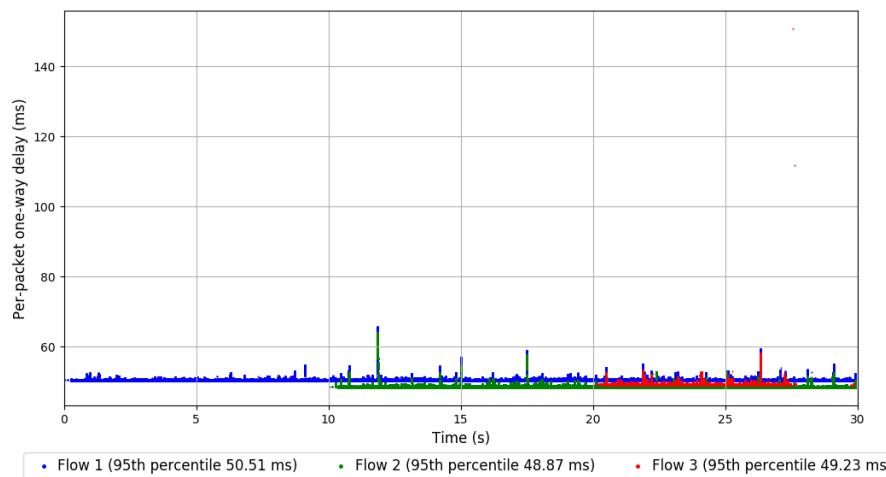
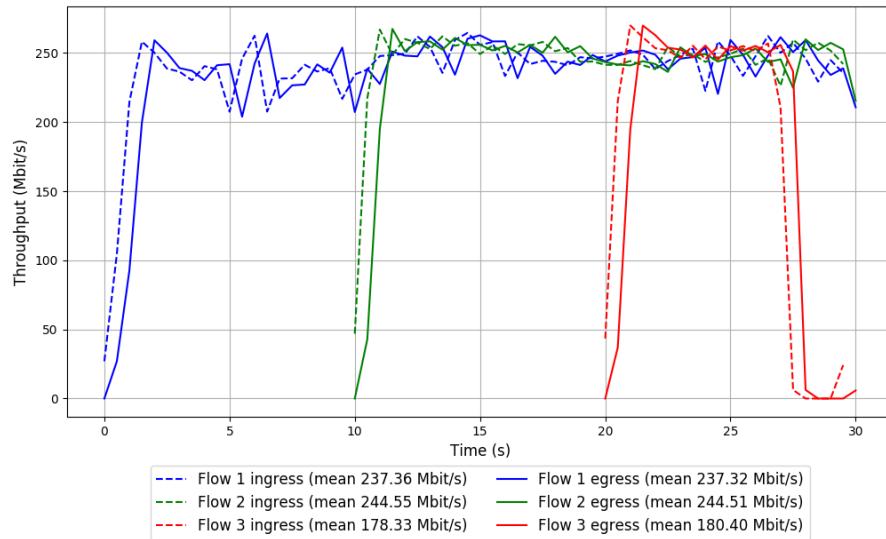


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-09-11 21:00:12
End at: 2018-09-11 21:00:42
Local clock offset: -0.443 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2018-09-12 01:32:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 459.10 Mbit/s
95th percentile per-packet one-way delay: 50.439 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 237.32 Mbit/s
95th percentile per-packet one-way delay: 50.507 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 244.51 Mbit/s
95th percentile per-packet one-way delay: 48.868 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 180.40 Mbit/s
95th percentile per-packet one-way delay: 49.230 ms
Loss rate: 0.52%
```

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

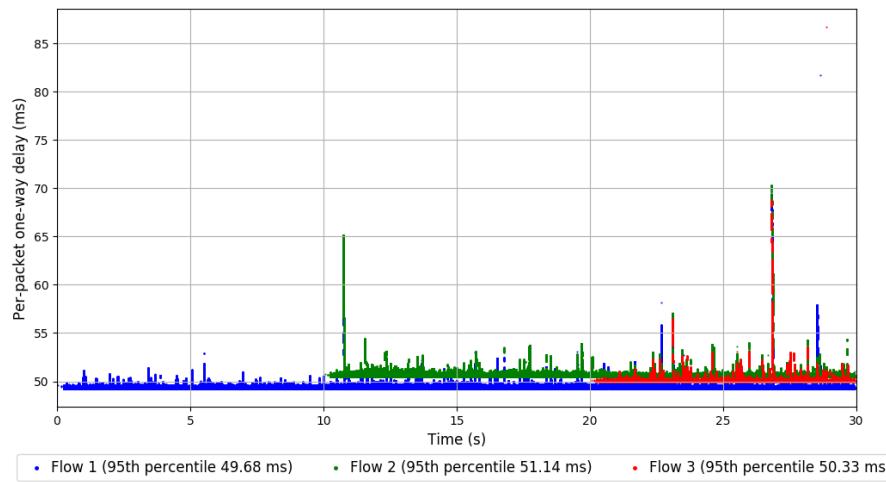
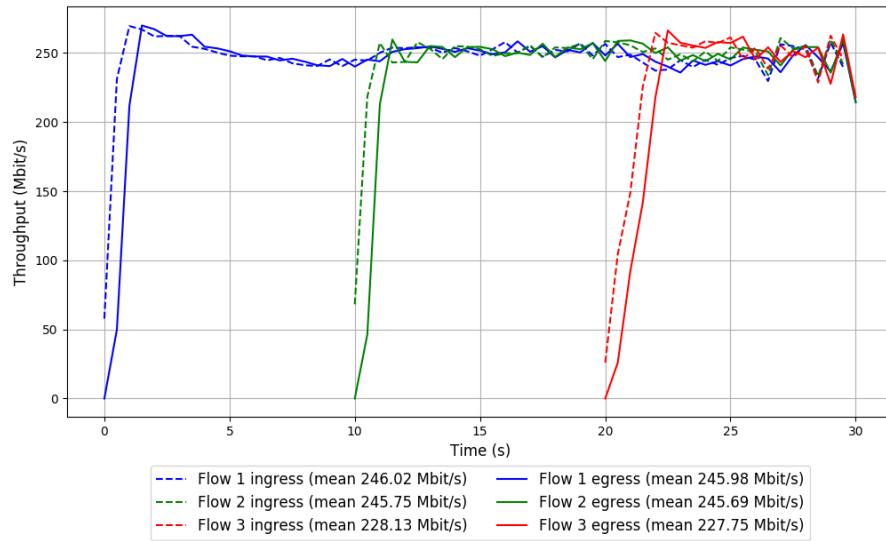


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-09-11 21:32:06
End at: 2018-09-11 21:32:36
Local clock offset: -0.119 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2018-09-12 01:32:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 484.54 Mbit/s
95th percentile per-packet one-way delay: 50.864 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 245.98 Mbit/s
95th percentile per-packet one-way delay: 49.677 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 245.69 Mbit/s
95th percentile per-packet one-way delay: 51.142 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 227.75 Mbit/s
95th percentile per-packet one-way delay: 50.325 ms
Loss rate: 1.18%
```

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

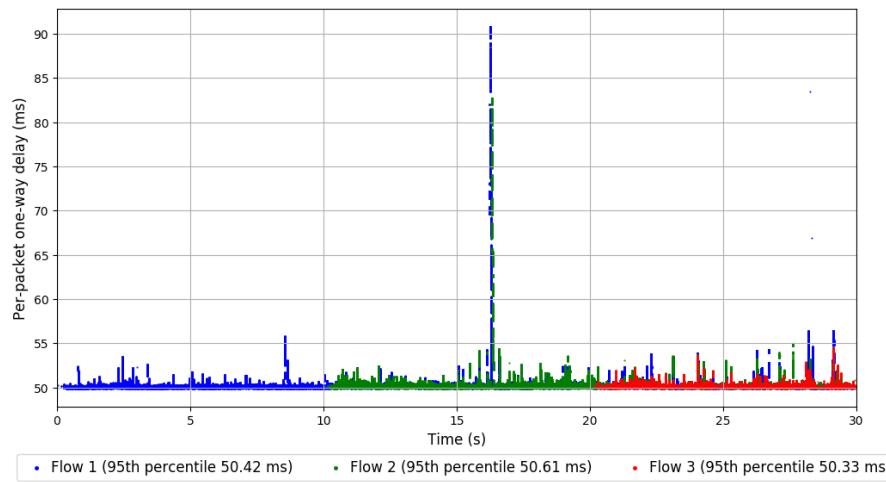
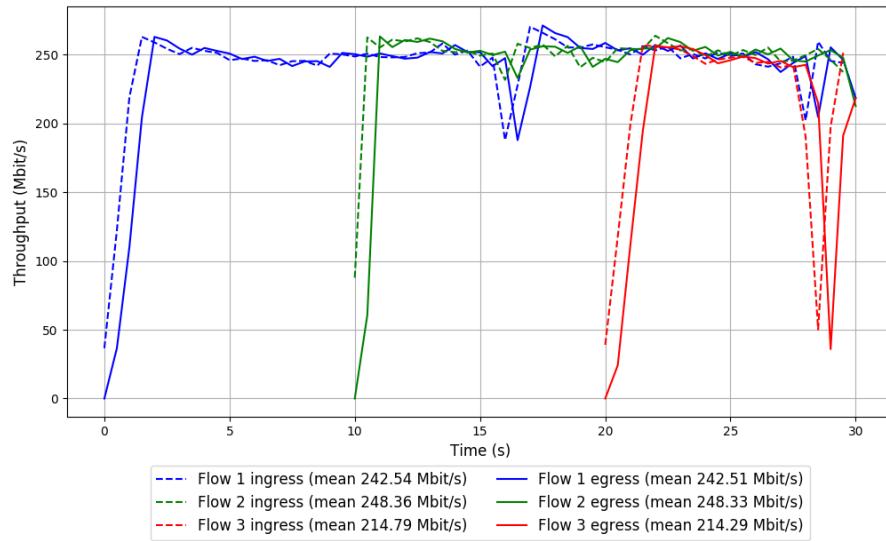


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-09-11 22:04:09
End at: 2018-09-11 22:04:39
Local clock offset: -0.079 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2018-09-12 01:32:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 478.24 Mbit/s
95th percentile per-packet one-way delay: 50.470 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 242.51 Mbit/s
95th percentile per-packet one-way delay: 50.420 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 248.33 Mbit/s
95th percentile per-packet one-way delay: 50.612 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 214.29 Mbit/s
95th percentile per-packet one-way delay: 50.331 ms
Loss rate: 1.26%
```

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

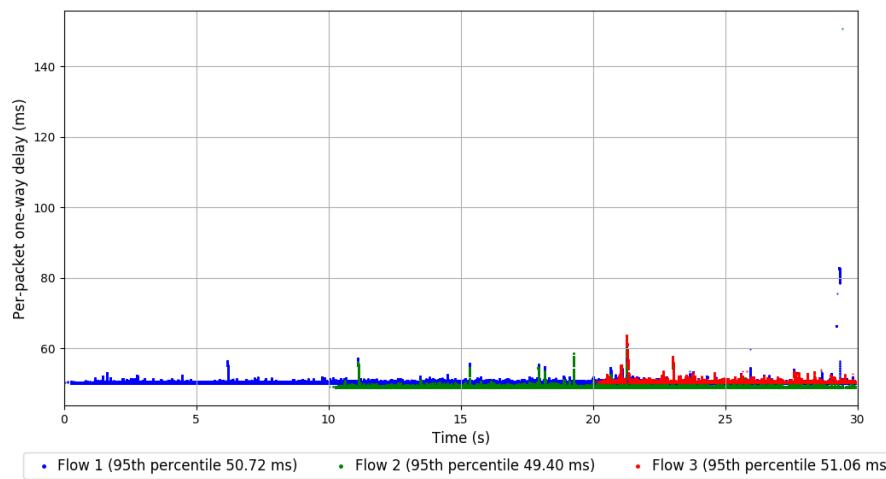
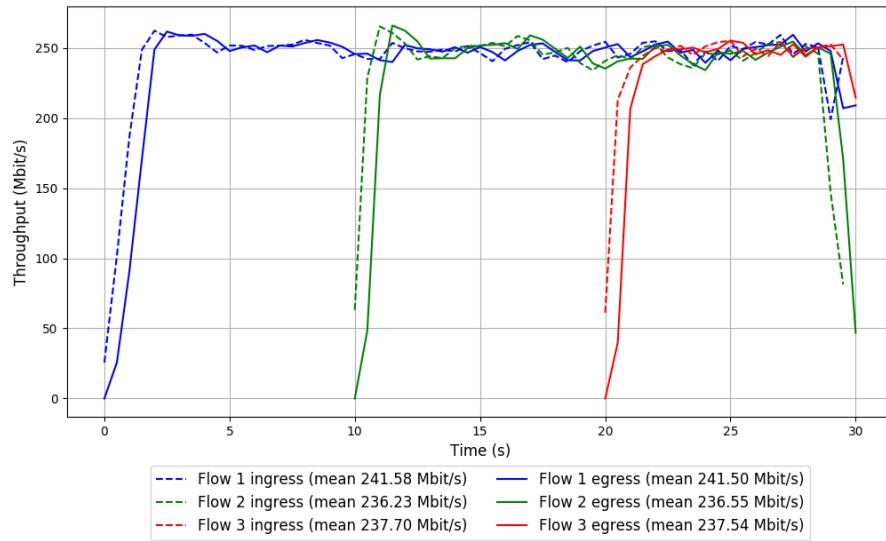


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-09-11 22:36:03
End at: 2018-09-11 22:36:33
Local clock offset: -0.515 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-09-12 01:34:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 477.23 Mbit/s
95th percentile per-packet one-way delay: 50.634 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 241.50 Mbit/s
95th percentile per-packet one-way delay: 50.719 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 236.55 Mbit/s
95th percentile per-packet one-way delay: 49.400 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 237.54 Mbit/s
95th percentile per-packet one-way delay: 51.065 ms
Loss rate: 1.09%
```

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

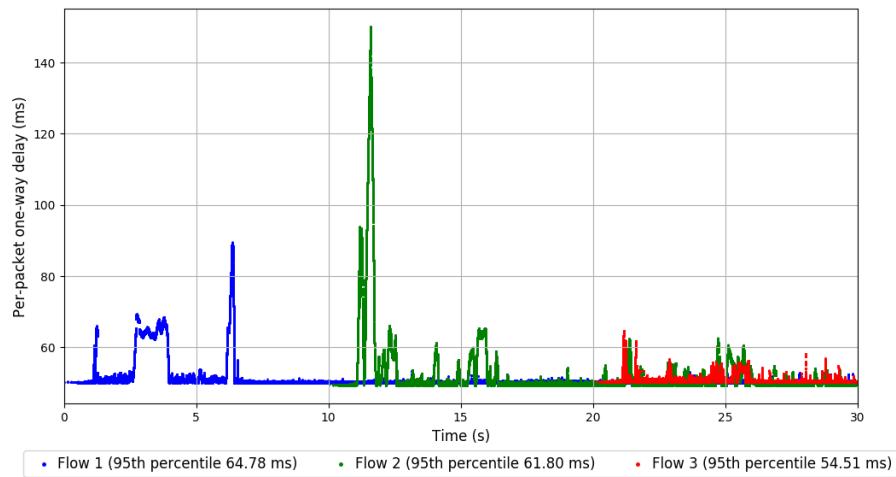
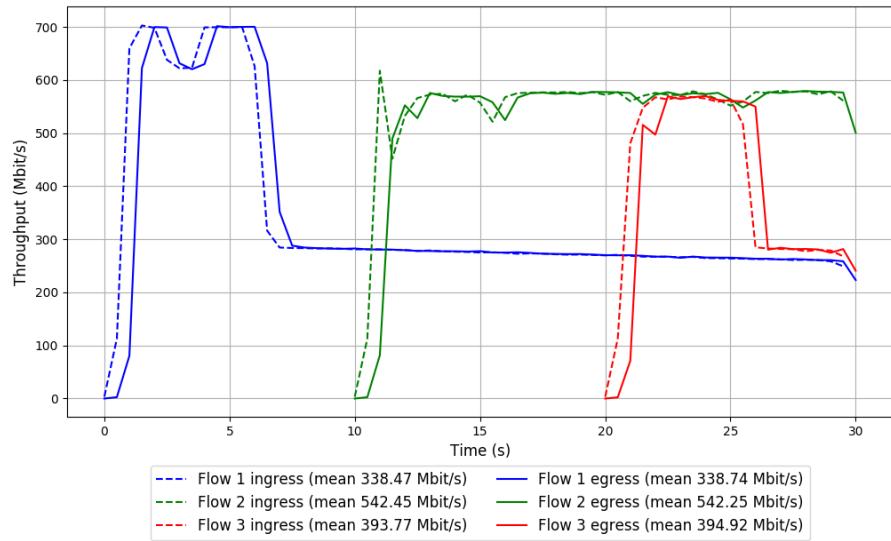


Run 1: Statistics of TCP Vegas

```
Start at: 2018-09-11 20:36:26
End at: 2018-09-11 20:36:56
Local clock offset: -0.163 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-09-12 01:36:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 829.81 Mbit/s
95th percentile per-packet one-way delay: 63.473 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 338.74 Mbit/s
95th percentile per-packet one-way delay: 64.779 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 542.25 Mbit/s
95th percentile per-packet one-way delay: 61.801 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 394.92 Mbit/s
95th percentile per-packet one-way delay: 54.510 ms
Loss rate: 0.71%
```

Run 1: Report of TCP Vegas — Data Link

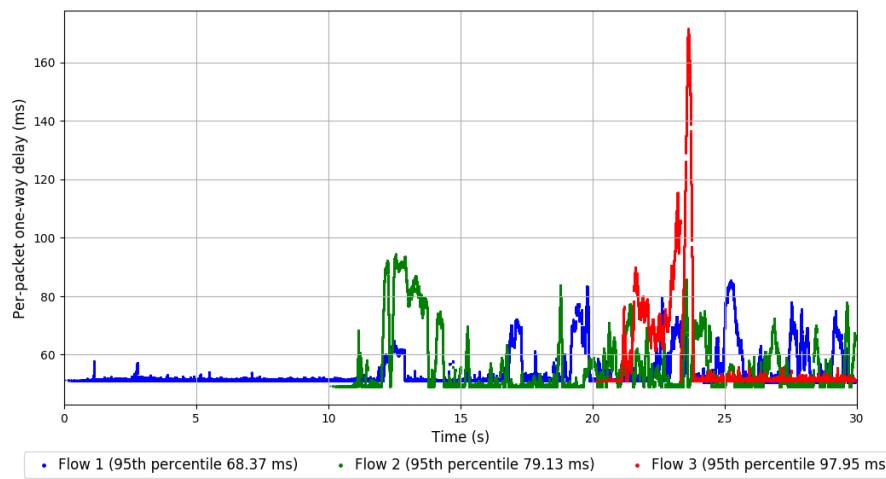
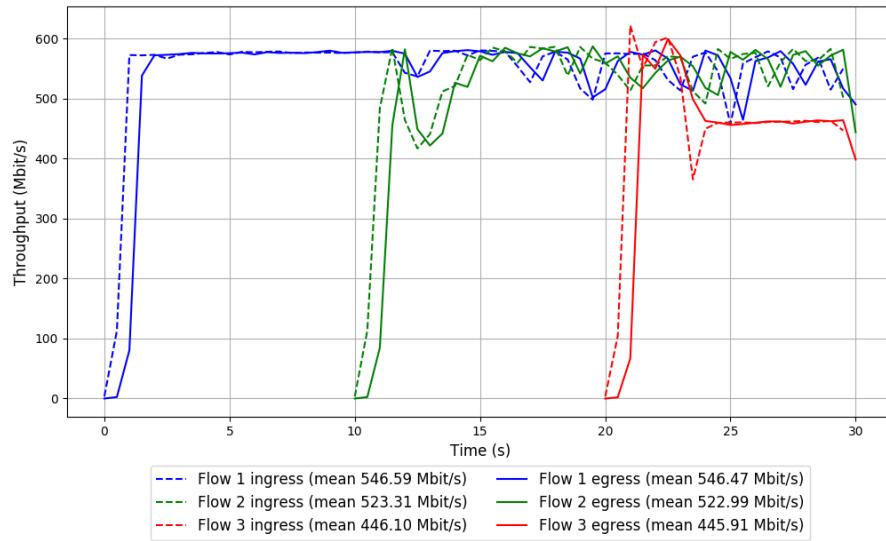


Run 2: Statistics of TCP Vegas

```
Start at: 2018-09-11 21:08:15
End at: 2018-09-11 21:08:45
Local clock offset: 0.297 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-09-12 01:40:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1041.46 Mbit/s
95th percentile per-packet one-way delay: 75.798 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 546.47 Mbit/s
95th percentile per-packet one-way delay: 68.368 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 522.99 Mbit/s
95th percentile per-packet one-way delay: 79.132 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 445.91 Mbit/s
95th percentile per-packet one-way delay: 97.952 ms
Loss rate: 1.06%
```

Run 2: Report of TCP Vegas — Data Link

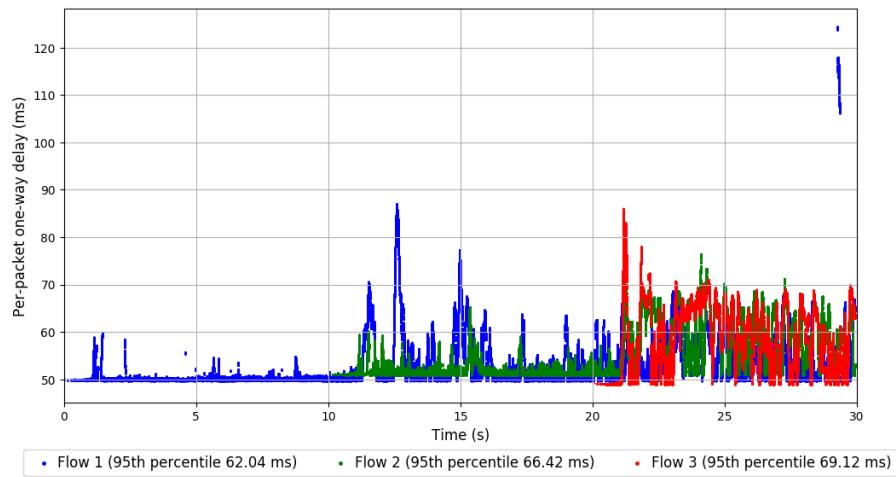
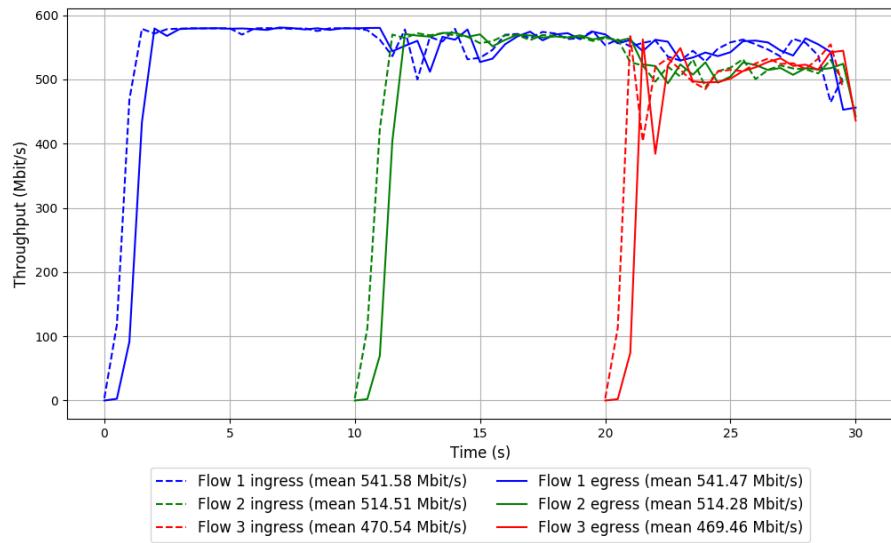


Run 3: Statistics of TCP Vegas

```
Start at: 2018-09-11 21:40:16
End at: 2018-09-11 21:40:46
Local clock offset: 0.282 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2018-09-12 01:42:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1038.32 Mbit/s
95th percentile per-packet one-way delay: 66.584 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 541.47 Mbit/s
95th percentile per-packet one-way delay: 62.038 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 514.28 Mbit/s
95th percentile per-packet one-way delay: 66.418 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 469.46 Mbit/s
95th percentile per-packet one-way delay: 69.120 ms
Loss rate: 1.23%
```

Run 3: Report of TCP Vegas — Data Link

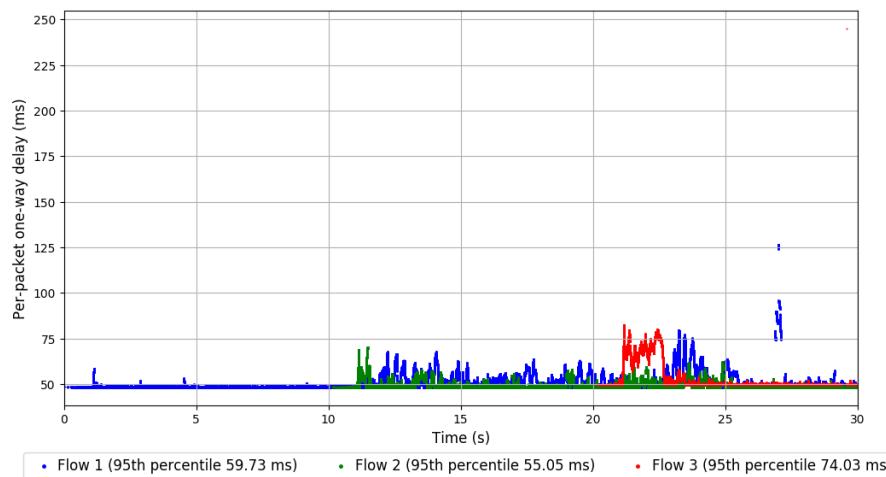
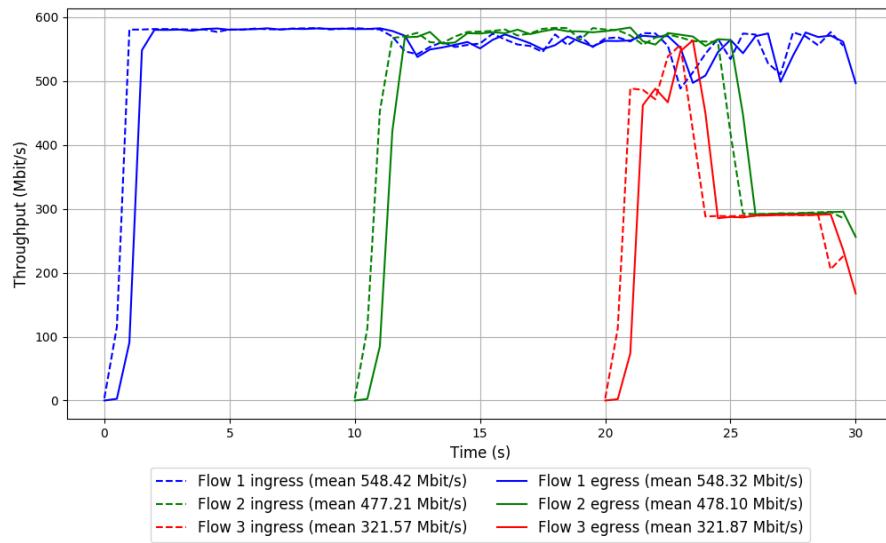


Run 4: Statistics of TCP Vegas

```
Start at: 2018-09-11 22:12:13
End at: 2018-09-11 22:12:43
Local clock offset: -0.436 ms
Remote clock offset: 0.024 ms

# Below is generated by plot.py at 2018-09-12 01:49:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 972.51 Mbit/s
95th percentile per-packet one-way delay: 60.803 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 548.32 Mbit/s
95th percentile per-packet one-way delay: 59.729 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 478.10 Mbit/s
95th percentile per-packet one-way delay: 55.052 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 321.87 Mbit/s
95th percentile per-packet one-way delay: 74.026 ms
Loss rate: 0.91%
```

Run 4: Report of TCP Vegas — Data Link

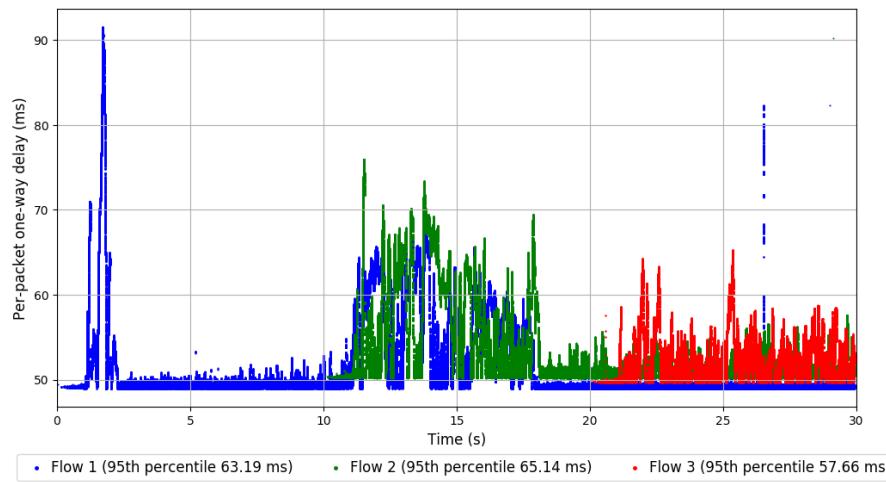
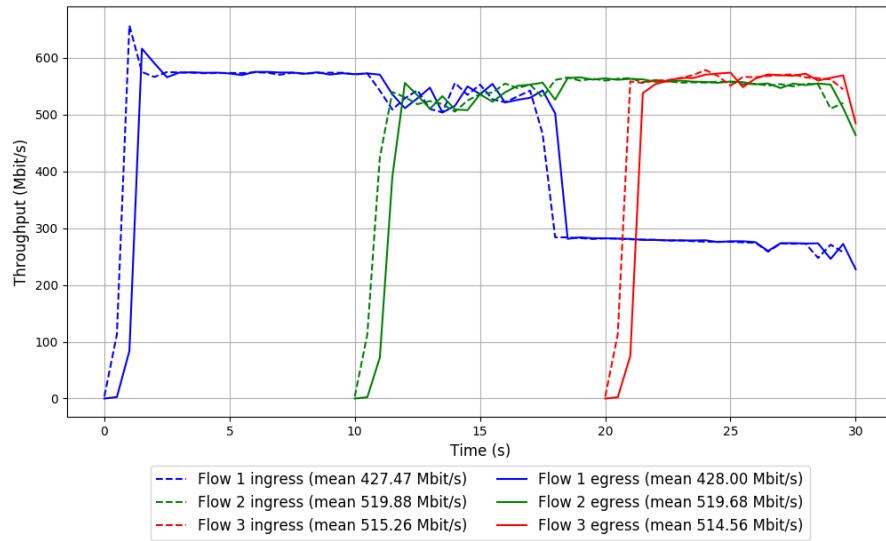


Run 5: Statistics of TCP Vegas

```
Start at: 2018-09-11 22:44:13
End at: 2018-09-11 22:44:43
Local clock offset: -0.454 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2018-09-12 01:49:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 943.34 Mbit/s
95th percentile per-packet one-way delay: 63.326 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 428.00 Mbit/s
95th percentile per-packet one-way delay: 63.192 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 519.68 Mbit/s
95th percentile per-packet one-way delay: 65.135 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 514.56 Mbit/s
95th percentile per-packet one-way delay: 57.663 ms
Loss rate: 1.12%
```

Run 5: Report of TCP Vegas — Data Link

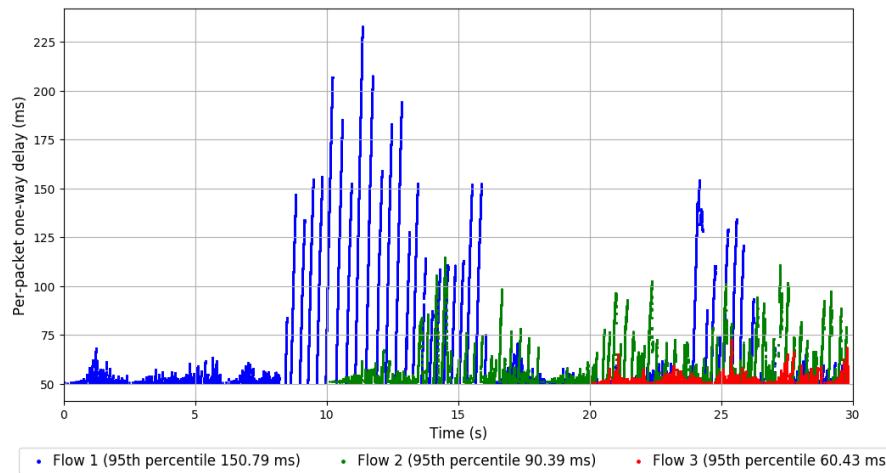
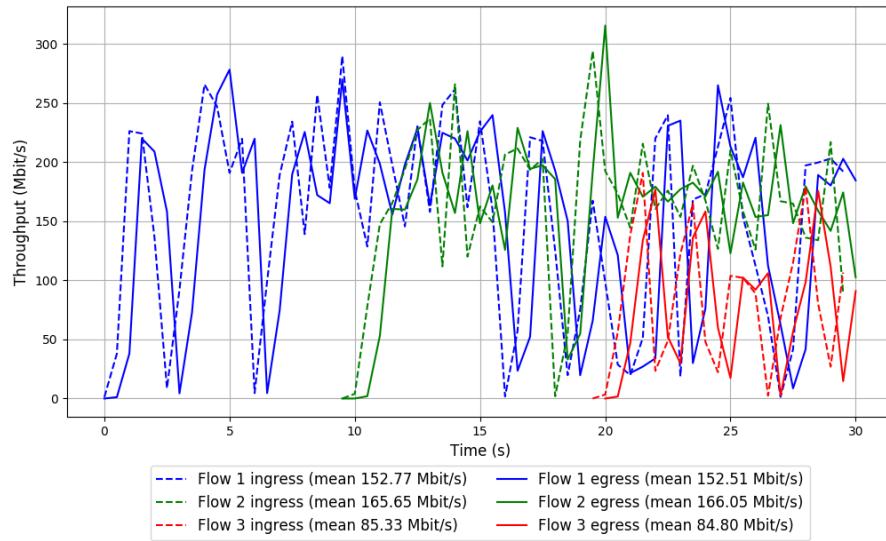


Run 1: Statistics of Verus

```
Start at: 2018-09-11 20:22:46
End at: 2018-09-11 20:23:16
Local clock offset: 0.26 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-09-12 01:49:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.86 Mbit/s
95th percentile per-packet one-way delay: 135.070 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 152.51 Mbit/s
95th percentile per-packet one-way delay: 150.791 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 166.05 Mbit/s
95th percentile per-packet one-way delay: 90.389 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 84.80 Mbit/s
95th percentile per-packet one-way delay: 60.434 ms
Loss rate: 1.66%
```

Run 1: Report of Verus — Data Link

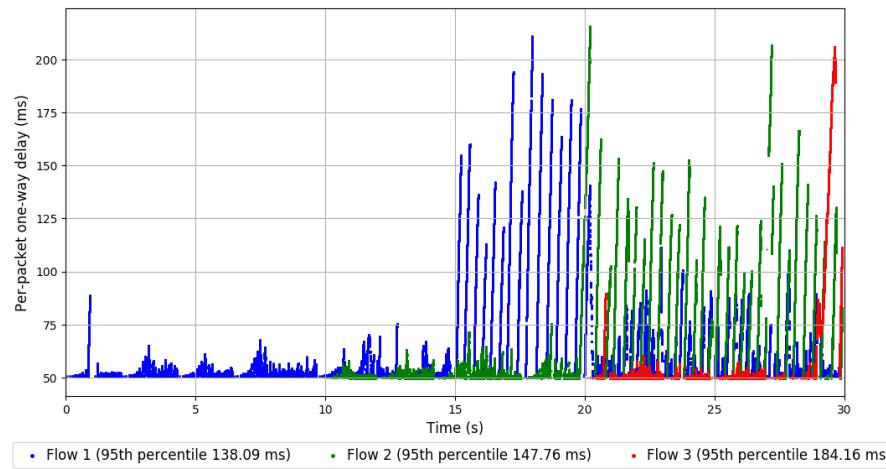
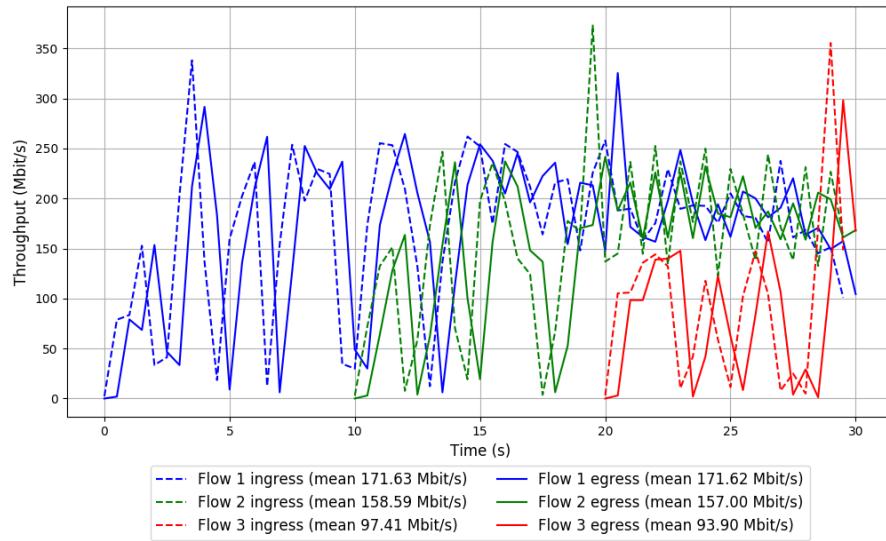


Run 2: Statistics of Verus

```
Start at: 2018-09-11 20:54:36
End at: 2018-09-11 20:55:06
Local clock offset: 0.253 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2018-09-12 01:49:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 306.55 Mbit/s
95th percentile per-packet one-way delay: 145.876 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 171.62 Mbit/s
95th percentile per-packet one-way delay: 138.085 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 157.00 Mbit/s
95th percentile per-packet one-way delay: 147.758 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 93.90 Mbit/s
95th percentile per-packet one-way delay: 184.157 ms
Loss rate: 4.59%
```

## Run 2: Report of Verus — Data Link

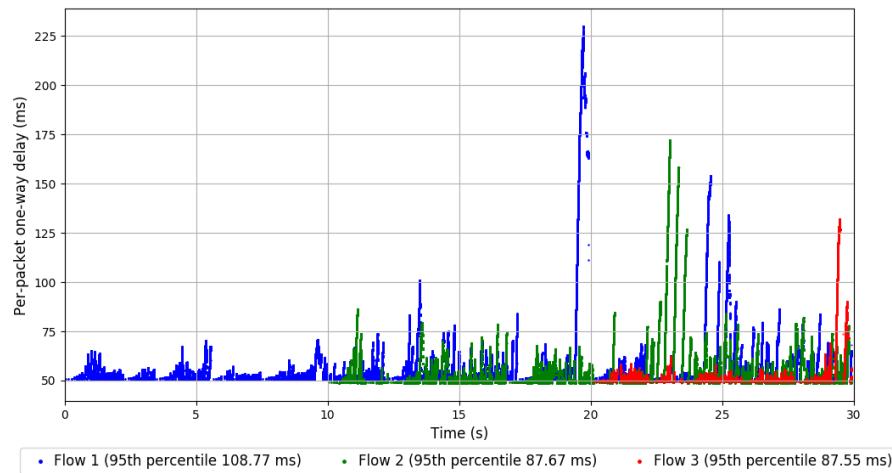
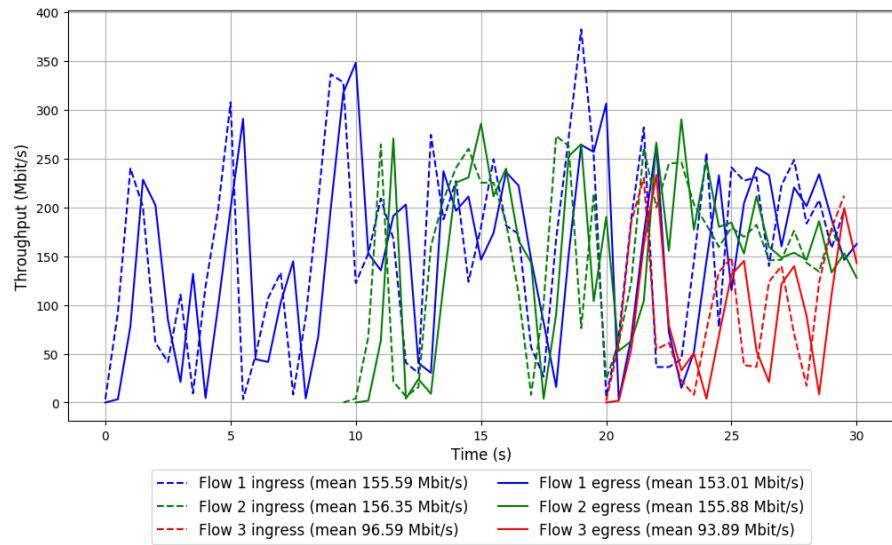


Run 3: Statistics of Verus

```
Start at: 2018-09-11 21:26:27
End at: 2018-09-11 21:26:57
Local clock offset: -0.037 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2018-09-12 01:49:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.64 Mbit/s
95th percentile per-packet one-way delay: 97.657 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 153.01 Mbit/s
95th percentile per-packet one-way delay: 108.766 ms
Loss rate: 1.85%
-- Flow 2:
Average throughput: 155.88 Mbit/s
95th percentile per-packet one-way delay: 87.668 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 93.89 Mbit/s
95th percentile per-packet one-way delay: 87.553 ms
Loss rate: 3.60%
```

### Run 3: Report of Verus — Data Link

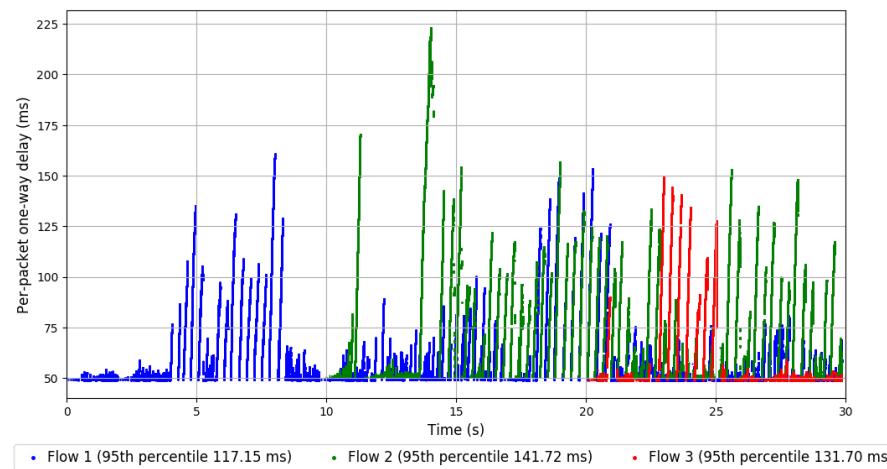
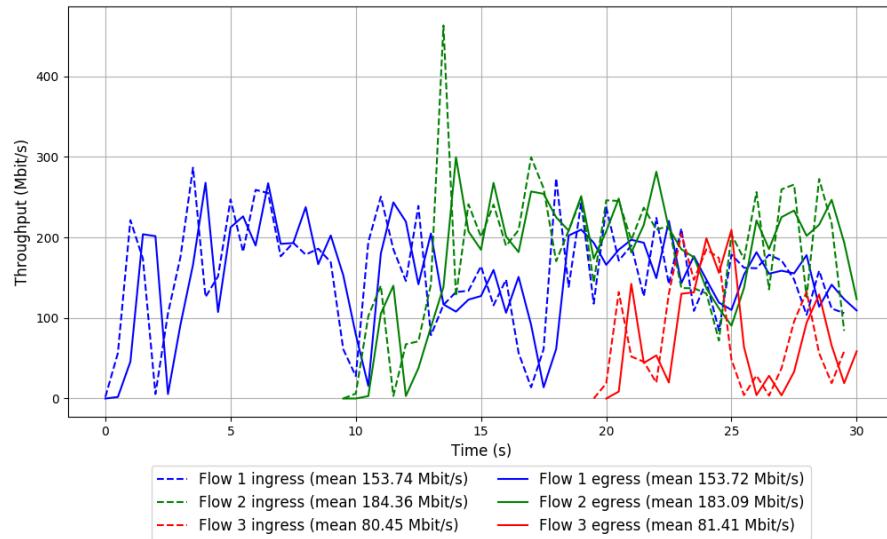


Run 4: Statistics of Verus

```
Start at: 2018-09-11 21:58:31
End at: 2018-09-11 21:59:01
Local clock offset: -0.458 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2018-09-12 01:49:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 302.27 Mbit/s
95th percentile per-packet one-way delay: 127.990 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 153.72 Mbit/s
95th percentile per-packet one-way delay: 117.147 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 183.09 Mbit/s
95th percentile per-packet one-way delay: 141.717 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 81.41 Mbit/s
95th percentile per-packet one-way delay: 131.700 ms
Loss rate: 0.00%
```

Run 4: Report of Verus — Data Link

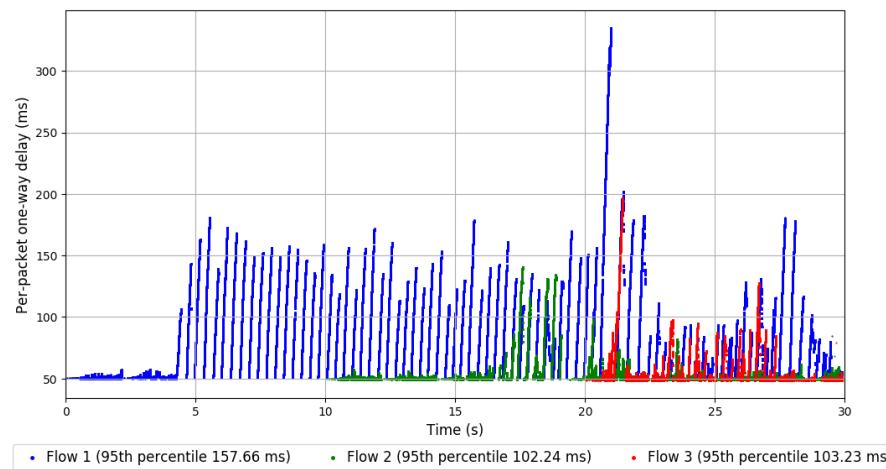
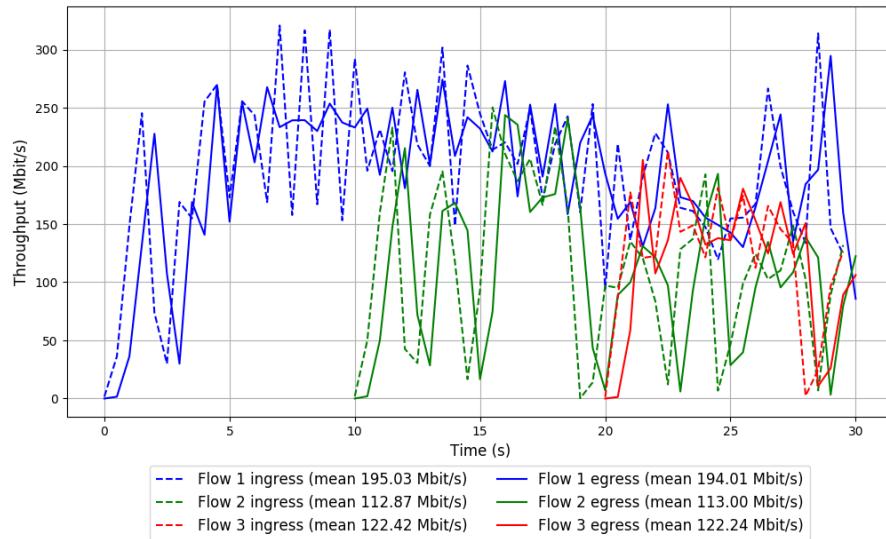


Run 5: Statistics of Verus

```
Start at: 2018-09-11 22:30:20
End at: 2018-09-11 22:30:50
Local clock offset: -0.145 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2018-09-12 01:51:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 309.31 Mbit/s
95th percentile per-packet one-way delay: 149.478 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 194.01 Mbit/s
95th percentile per-packet one-way delay: 157.664 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 113.00 Mbit/s
95th percentile per-packet one-way delay: 102.243 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 122.24 Mbit/s
95th percentile per-packet one-way delay: 103.229 ms
Loss rate: 1.14%
```

Run 5: Report of Verus — Data Link

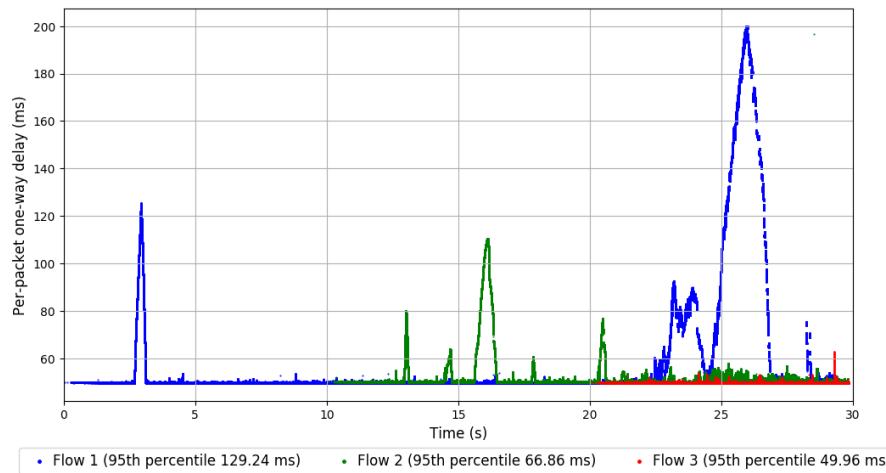
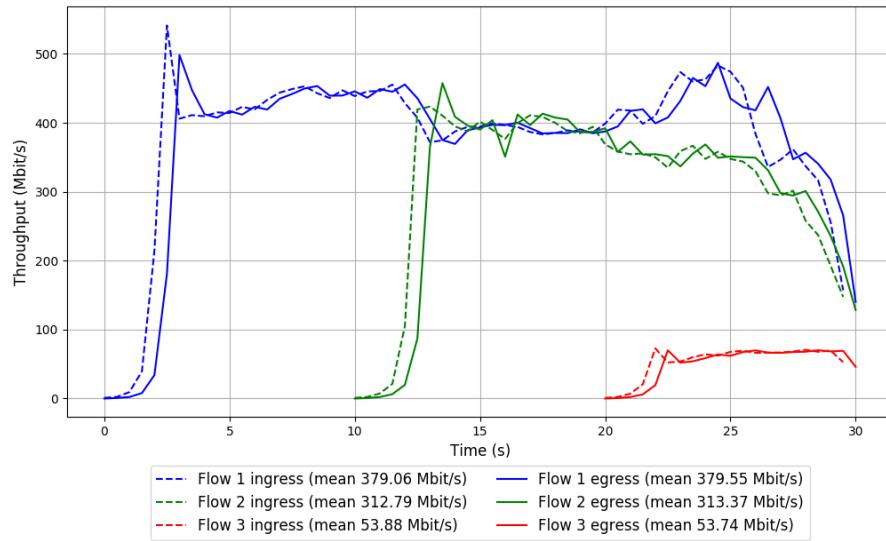


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-09-11 20:24:24
End at: 2018-09-11 20:24:54
Local clock offset: 0.259 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-09-12 01:52:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 605.14 Mbit/s
95th percentile per-packet one-way delay: 99.581 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 379.55 Mbit/s
95th percentile per-packet one-way delay: 129.240 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 313.37 Mbit/s
95th percentile per-packet one-way delay: 66.862 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 53.74 Mbit/s
95th percentile per-packet one-way delay: 49.960 ms
Loss rate: 1.27%
```

Run 1: Report of PCC-Vivace — Data Link

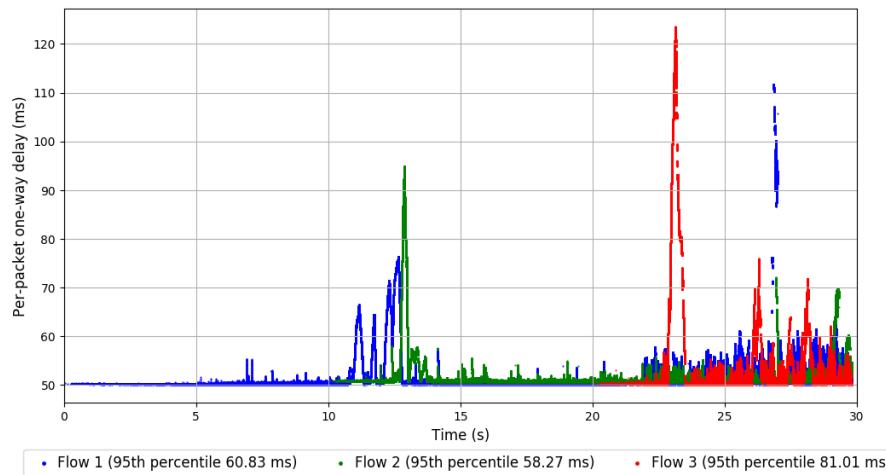
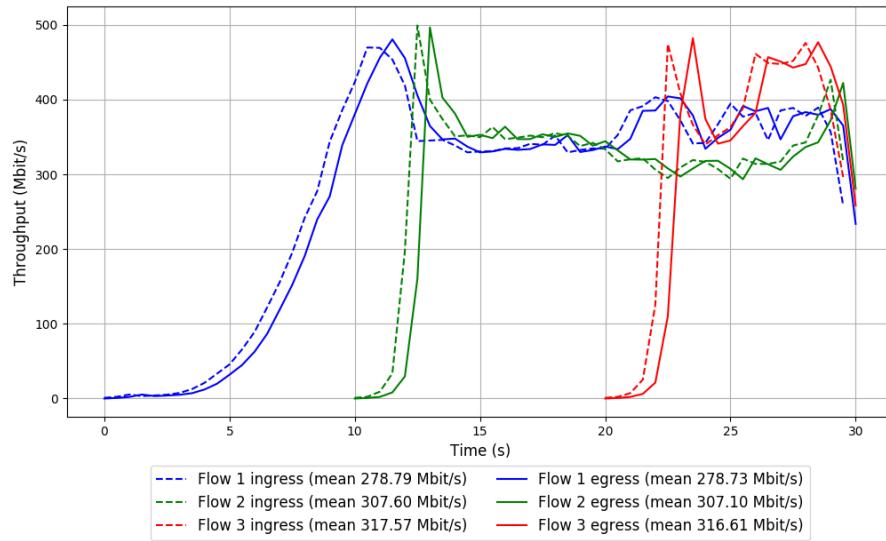


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-09-11 20:56:15
End at: 2018-09-11 20:56:45
Local clock offset: -0.087 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-09-12 01:52:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 586.41 Mbit/s
95th percentile per-packet one-way delay: 63.615 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 278.73 Mbit/s
95th percentile per-packet one-way delay: 60.833 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 307.10 Mbit/s
95th percentile per-packet one-way delay: 58.268 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 316.61 Mbit/s
95th percentile per-packet one-way delay: 81.012 ms
Loss rate: 1.33%
```

Run 2: Report of PCC-Vivace — Data Link

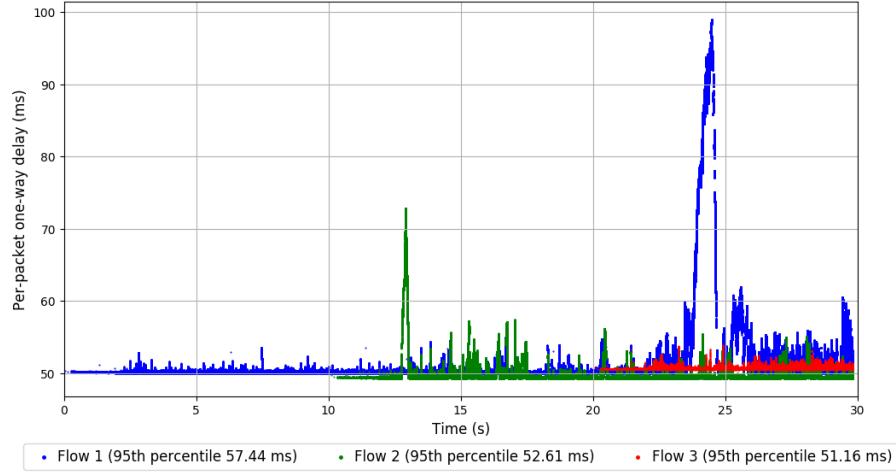
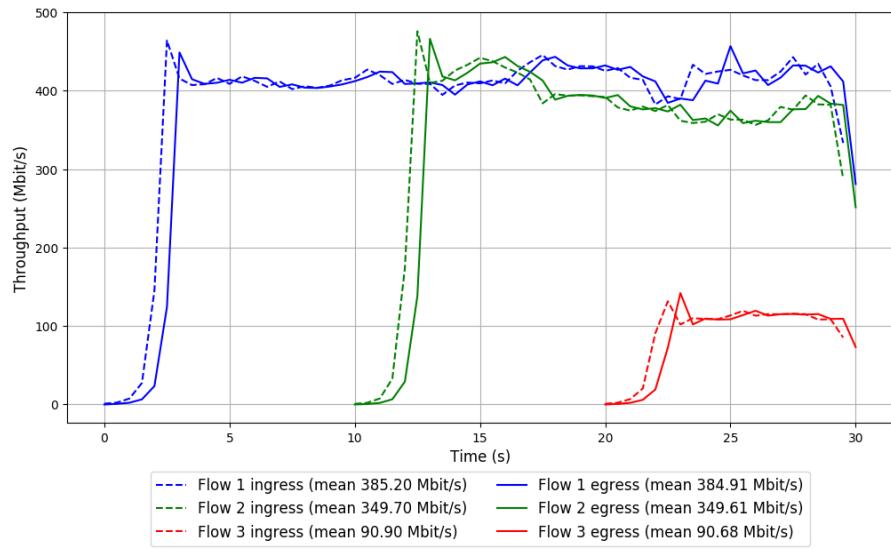


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-09-11 21:28:05
End at: 2018-09-11 21:28:35
Local clock offset: -0.055 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-09-12 01:53:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 646.06 Mbit/s
95th percentile per-packet one-way delay: 55.182 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 384.91 Mbit/s
95th percentile per-packet one-way delay: 57.443 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 349.61 Mbit/s
95th percentile per-packet one-way delay: 52.611 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 90.68 Mbit/s
95th percentile per-packet one-way delay: 51.162 ms
Loss rate: 1.27%
```

### Run 3: Report of PCC-Vivace — Data Link

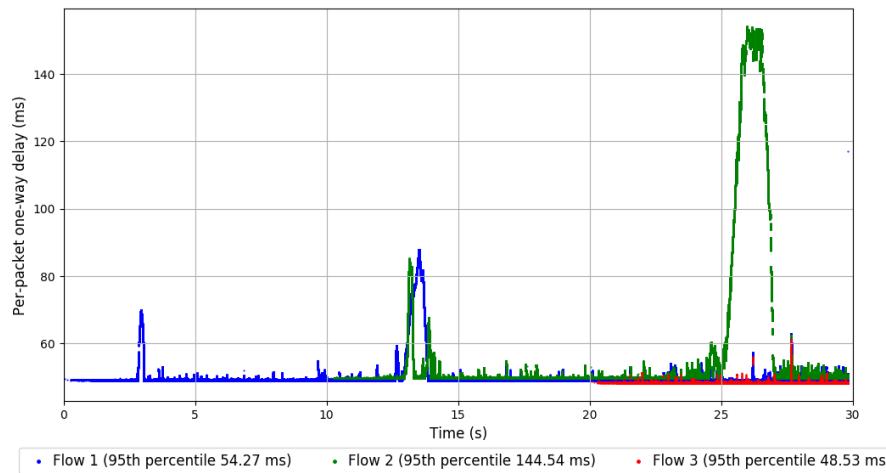
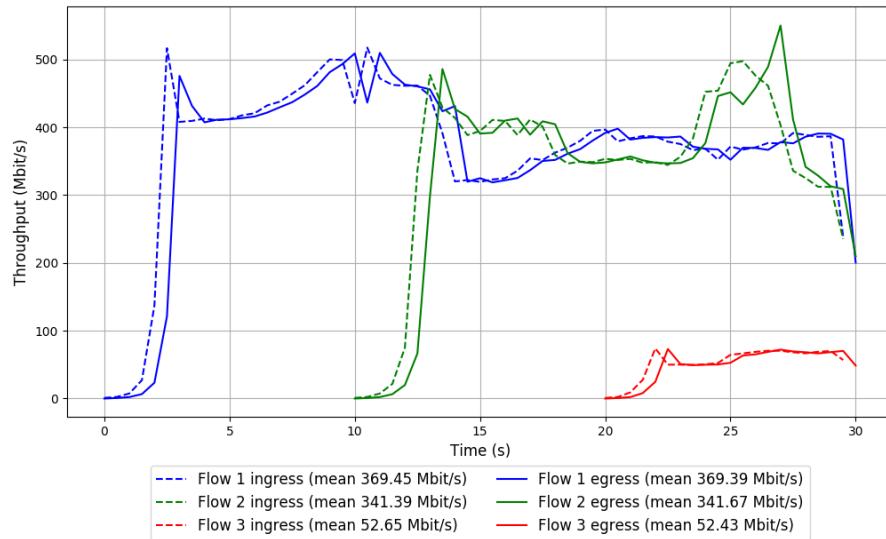


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-09-11 22:00:10
End at: 2018-09-11 22:00:40
Local clock offset: -0.45 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2018-09-12 01:53:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 613.41 Mbit/s
95th percentile per-packet one-way delay: 79.973 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 369.39 Mbit/s
95th percentile per-packet one-way delay: 54.269 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 341.67 Mbit/s
95th percentile per-packet one-way delay: 144.538 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 52.43 Mbit/s
95th percentile per-packet one-way delay: 48.526 ms
Loss rate: 1.45%
```

Run 4: Report of PCC-Vivace — Data Link

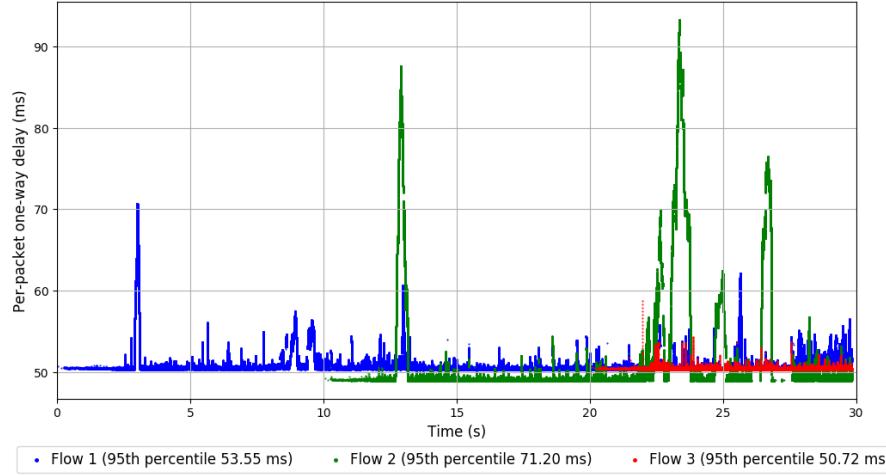
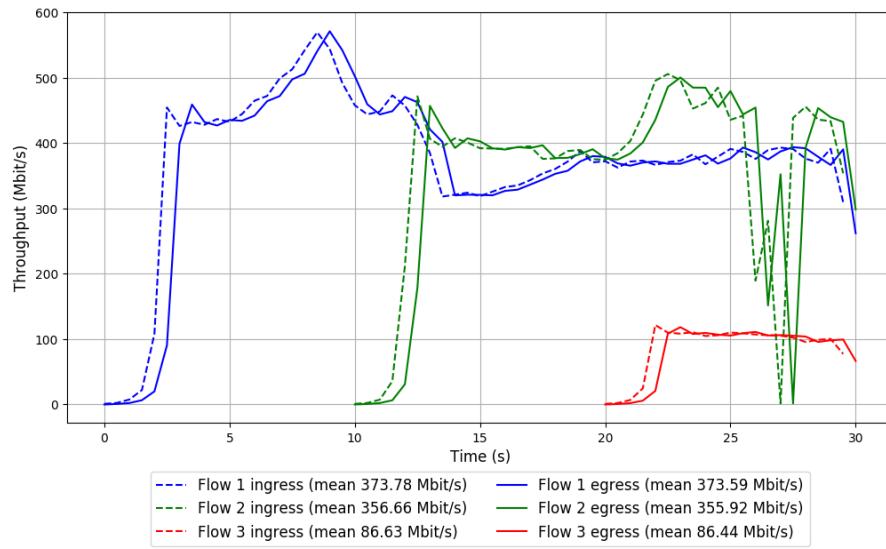


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-09-11 22:32:00
End at: 2018-09-11 22:32:30
Local clock offset: 0.247 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-09-12 01:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 638.16 Mbit/s
95th percentile per-packet one-way delay: 59.424 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 373.59 Mbit/s
95th percentile per-packet one-way delay: 53.547 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 355.92 Mbit/s
95th percentile per-packet one-way delay: 71.201 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 86.44 Mbit/s
95th percentile per-packet one-way delay: 50.723 ms
Loss rate: 1.24%
```

Run 5: Report of PCC-Vivace — Data Link

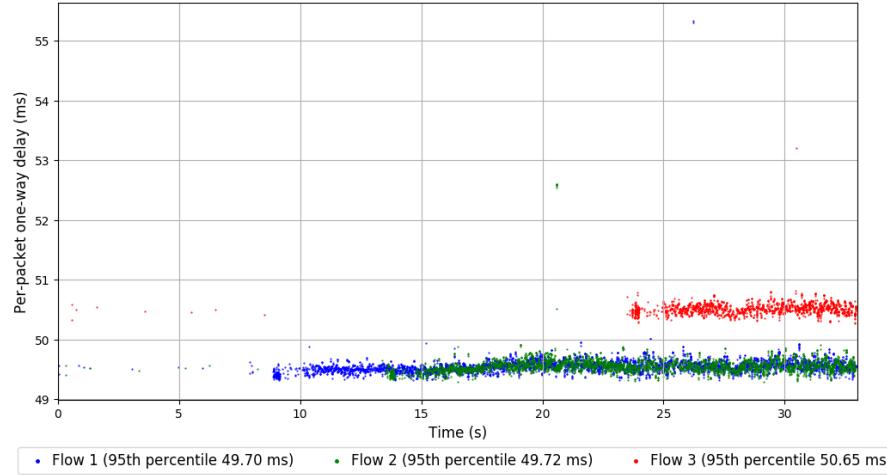
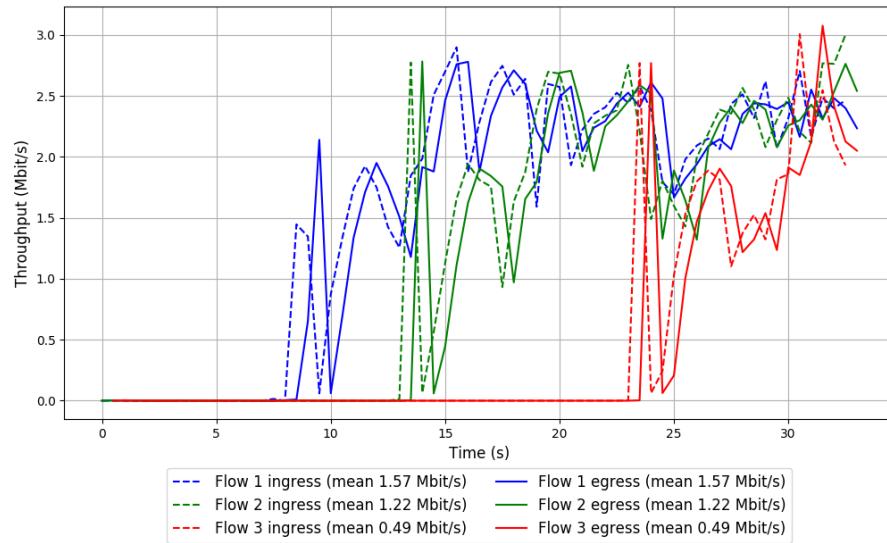


```
Run 1: Statistics of WebRTC media

Start at: 2018-09-11 20:30:13
End at: 2018-09-11 20:30:43
Local clock offset: -0.105 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-09-12 01:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 50.553 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 49.701 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 49.718 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 50.651 ms
Loss rate: 0.46%
```

Run 1: Report of WebRTC media — Data Link

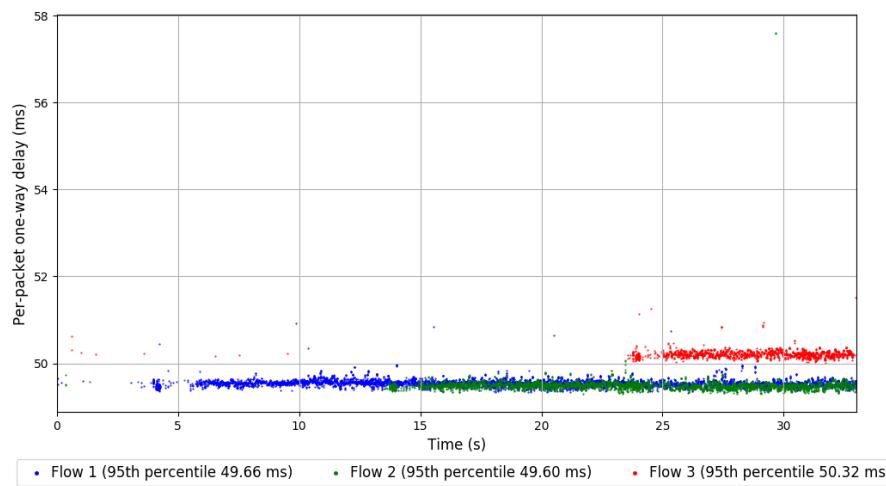
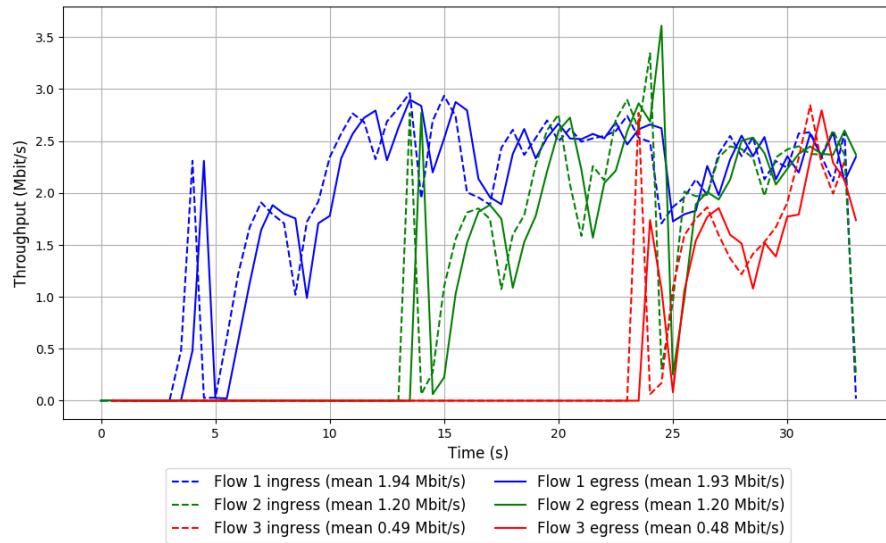


Run 2: Statistics of WebRTC media

```
Start at: 2018-09-11 21:02:05
End at: 2018-09-11 21:02:35
Local clock offset: -0.095 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2018-09-12 01:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 50.227 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 49.657 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 49.597 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 50.323 ms
Loss rate: 2.21%
```

Run 2: Report of WebRTC media — Data Link

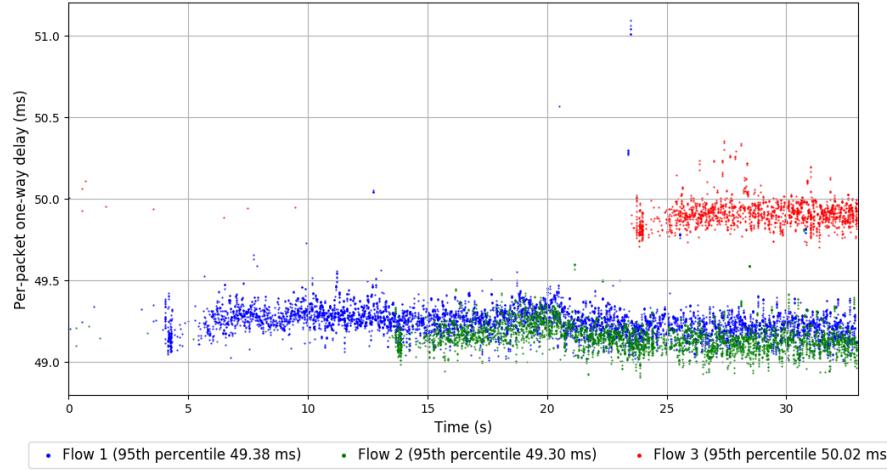
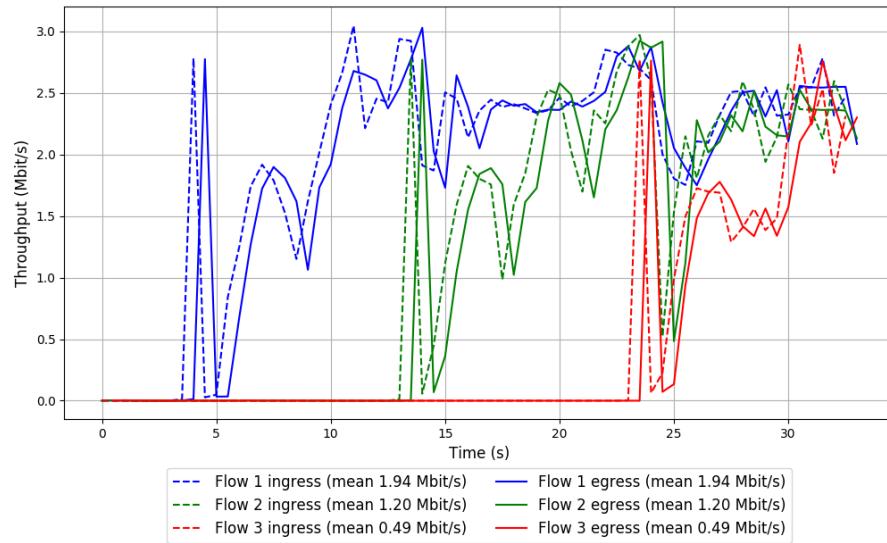


```
Run 3: Statistics of WebRTC media

Start at: 2018-09-11 21:34:01
End at: 2018-09-11 21:34:31
Local clock offset: 0.289 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-09-12 01:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 49.930 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 49.383 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 49.303 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 50.025 ms
Loss rate: 0.45%
```

Run 3: Report of WebRTC media — Data Link

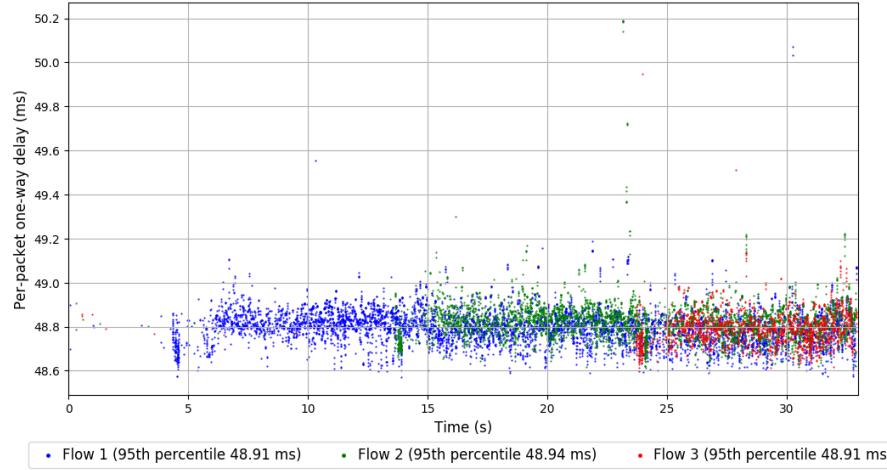
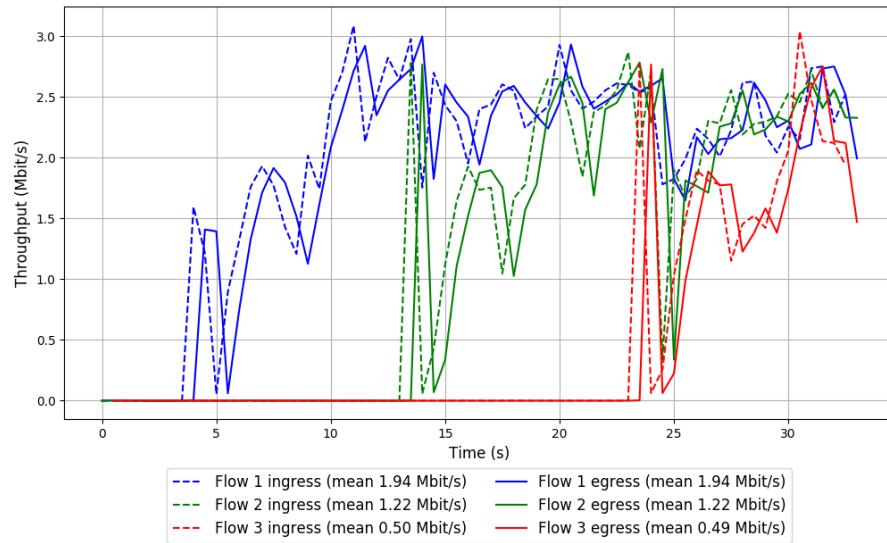


```
Run 4: Statistics of WebRTC media

Start at: 2018-09-11 22:06:04
End at: 2018-09-11 22:06:34
Local clock offset: -0.097 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2018-09-12 01:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.63 Mbit/s
95th percentile per-packet one-way delay: 48.920 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 48.909 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 48.939 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 48.912 ms
Loss rate: 2.26%
```

Run 4: Report of WebRTC media — Data Link



```
Run 5: Statistics of WebRTC media

Start at: 2018-09-11 22:37:57
End at: 2018-09-11 22:38:27
Local clock offset: 0.229 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-09-12 01:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 50.619 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 50.025 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 50.662 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 49.984 ms
Loss rate: 0.55%
```

Run 5: Report of WebRTC media — Data Link

