

## Pantheon Report

Generated at 2018-09-25 19:02:12 (UTC).

Data path: Mexico on **em1** (*remote*) → AWS California 2 on **ens5** (*local*).

Repeated the test of 19 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.stanford.edu** and have been applied to correct the timestamps in logs.

### System info:

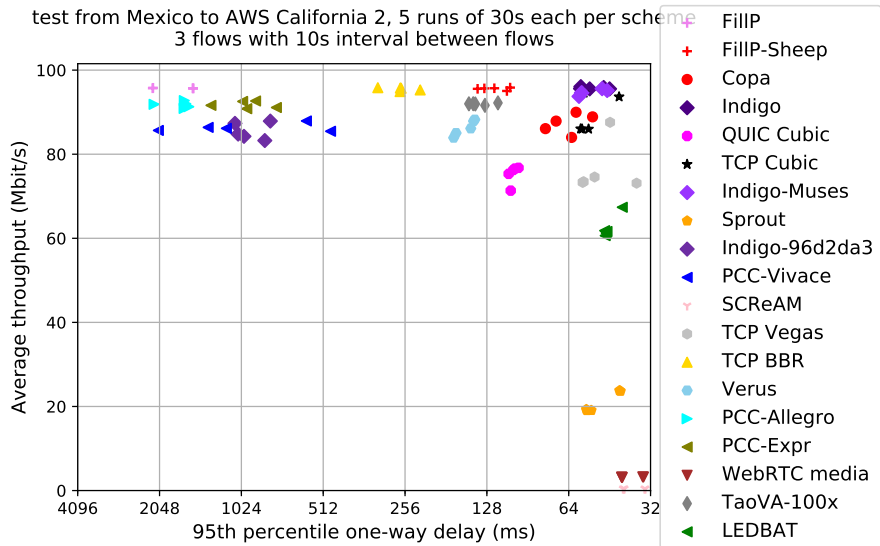
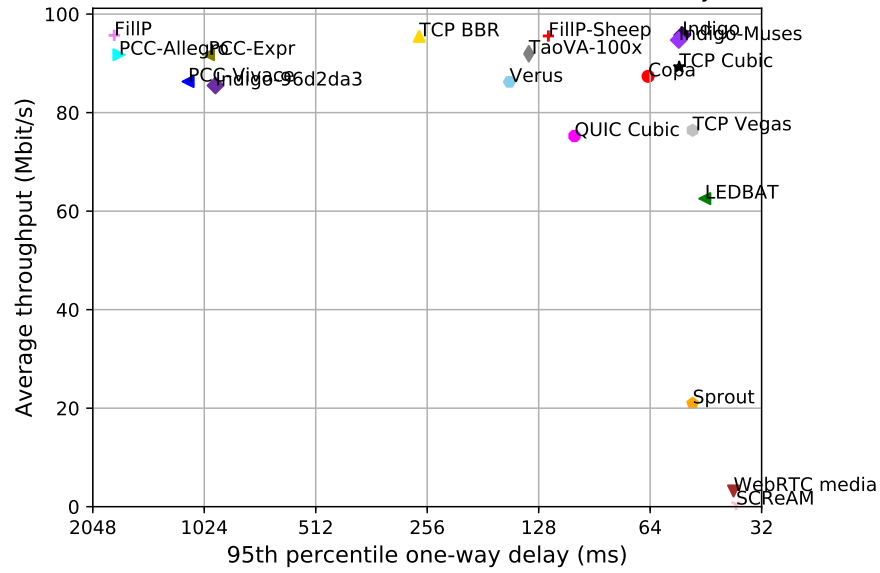
```
Linux 4.15.0-1021-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 184101 245469 368202
```

### Git summary:

```
branch: muses @ 90192f6b64ce1a1191dcca0e9ff9ee24950674d7
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ cbfce6db5ff5740dafa1771f813cd646339e1952
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-quick @ 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 Mexico to AWS California 2, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



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	59.20	39.35	30.54	219.74	333.60	376.62	1.12	1.98	4.87
Copa	5	51.36	39.12	30.10	76.30	62.53	46.26	0.12	0.25	0.76
TCP Cubic	5	53.52	37.22	33.15	55.40	50.38	68.69	0.28	0.29	0.86
FillP	5	57.74	36.95	40.55	902.18	957.88	1867.44	6.31	12.30	17.04
FillP-Sheep	5	58.16	41.36	29.98	97.56	159.91	183.29	1.14	0.89	1.27
Indigo	5	56.80	43.90	29.82	57.03	48.50	50.70	0.23	0.40	0.87
Indigo-96d2da3	5	51.25	38.29	26.77	866.10	932.88	1203.50	2.95	3.94	9.61
LEDBAT	5	37.52	28.18	19.00	45.31	46.14	44.77	0.24	0.31	1.10
Indigo-Muses	5	57.99	38.59	33.67	54.13	51.53	56.77	0.16	0.33	0.83
PCC-Allegro	5	58.63	35.04	29.99	1745.36	1994.62	348.94	17.17	17.64	3.38
PCC-Expr	5	56.89	37.65	29.94	842.06	1127.96	136.64	33.39	10.55	1.22
QUIC Cubic	5	41.38	37.10	28.00	96.11	109.26	140.07	0.28	0.43	1.10
SCReAM	5	0.22	0.22	0.22	37.52	37.51	37.50	0.26	0.39	0.63
Sprout	5	10.63	10.51	10.26	48.35	49.77	48.08	0.24	0.43	0.71
TaoVA-100x	5	55.95	37.77	32.78	121.77	146.50	163.30	0.44	0.85	2.08
TCP Vegas	5	40.42	36.81	34.72	67.15	46.05	41.00	0.26	0.39	0.83
Verus	5	51.07	41.66	22.69	156.58	115.45	240.06	0.39	0.78	1.65
PCC-Vivace	5	56.41	29.77	30.75	942.19	716.95	211.56	2.16	5.97	3.00
WebRTC media	5	1.78	1.01	0.41	38.07	38.10	38.10	0.11	0.34	0.75

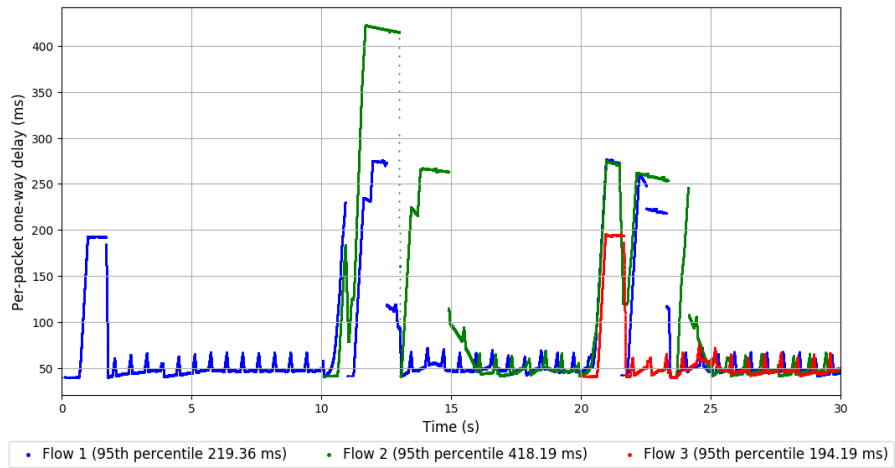
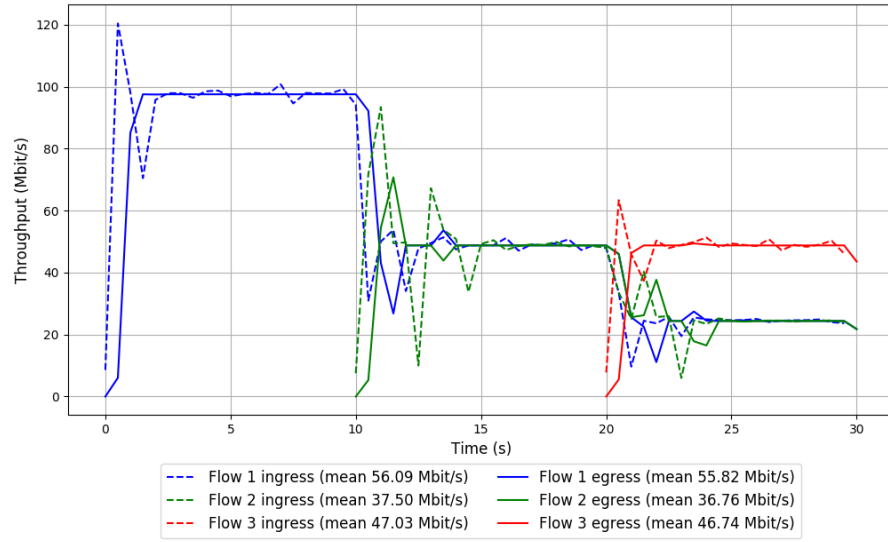


Run 1: Statistics of TCP BBR

Start at: 2018-09-25 16:54:54  
End at: 2018-09-25 16:55:24  
Local clock offset: 3.291 ms  
Remote clock offset: -7.569 ms

# Below is generated by plot.py at 2018-09-25 18:49:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.75 Mbit/s  
95th percentile per-packet one-way delay: 266.360 ms  
Loss rate: 1.25%  
-- Flow 1:  
Average throughput: 55.82 Mbit/s  
95th percentile per-packet one-way delay: 219.358 ms  
Loss rate: 0.72%  
-- Flow 2:  
Average throughput: 36.76 Mbit/s  
95th percentile per-packet one-way delay: 418.193 ms  
Loss rate: 2.36%  
-- Flow 3:  
Average throughput: 46.74 Mbit/s  
95th percentile per-packet one-way delay: 194.190 ms  
Loss rate: 1.40%

# Run 1: Report of TCP BBR — Data Link

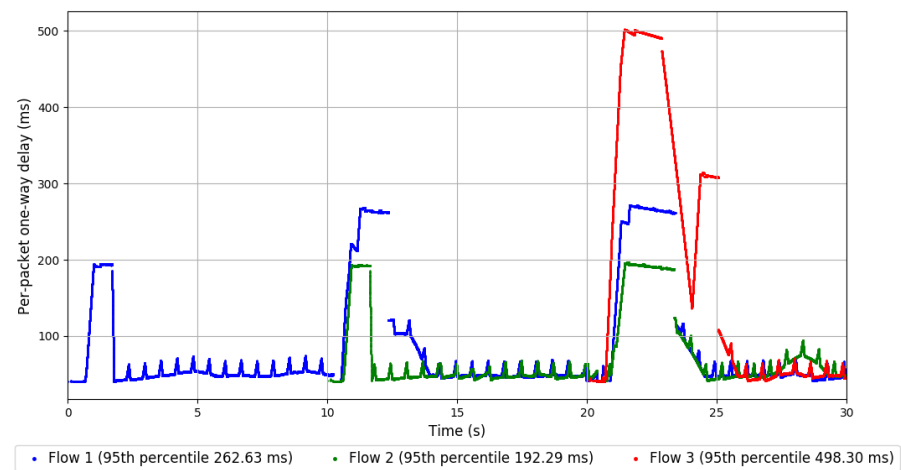
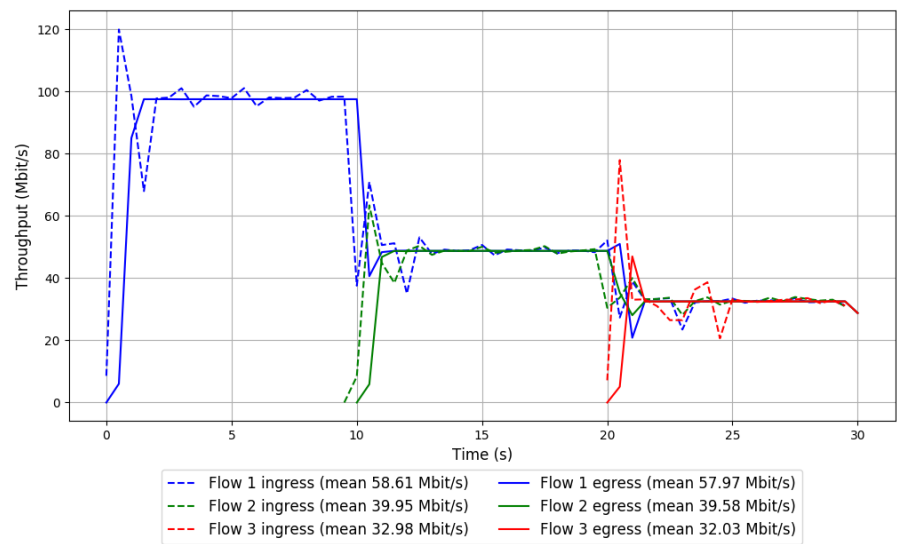


Run 2: Statistics of TCP BBR

Start at: 2018-09-25 17:21:21  
End at: 2018-09-25 17:21:51  
Local clock offset: 1.181 ms  
Remote clock offset: -6.485 ms

# Below is generated by plot.py at 2018-09-25 18:49:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.90 Mbit/s  
95th percentile per-packet one-way delay: 266.983 ms  
Loss rate: 1.60%  
-- Flow 1:  
Average throughput: 57.97 Mbit/s  
95th percentile per-packet one-way delay: 262.628 ms  
Loss rate: 1.34%  
-- Flow 2:  
Average throughput: 39.58 Mbit/s  
95th percentile per-packet one-way delay: 192.289 ms  
Loss rate: 1.32%  
-- Flow 3:  
Average throughput: 32.03 Mbit/s  
95th percentile per-packet one-way delay: 498.296 ms  
Loss rate: 3.64%

Run 2: Report of TCP BBR — Data Link

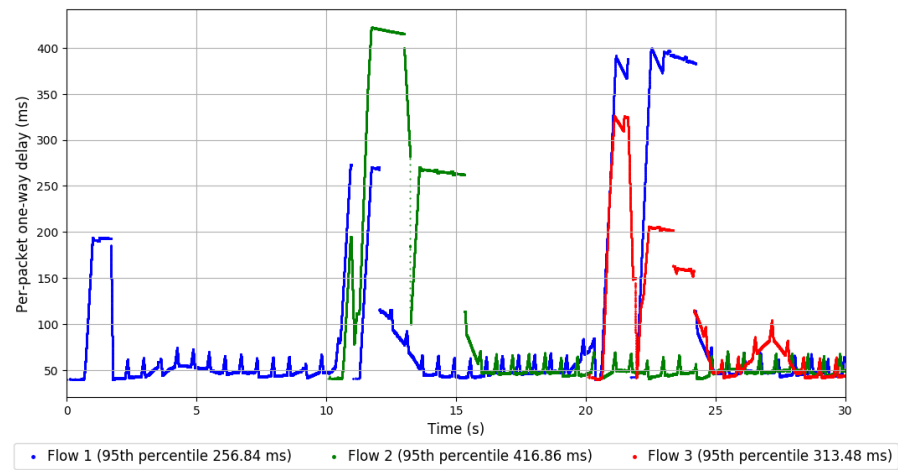
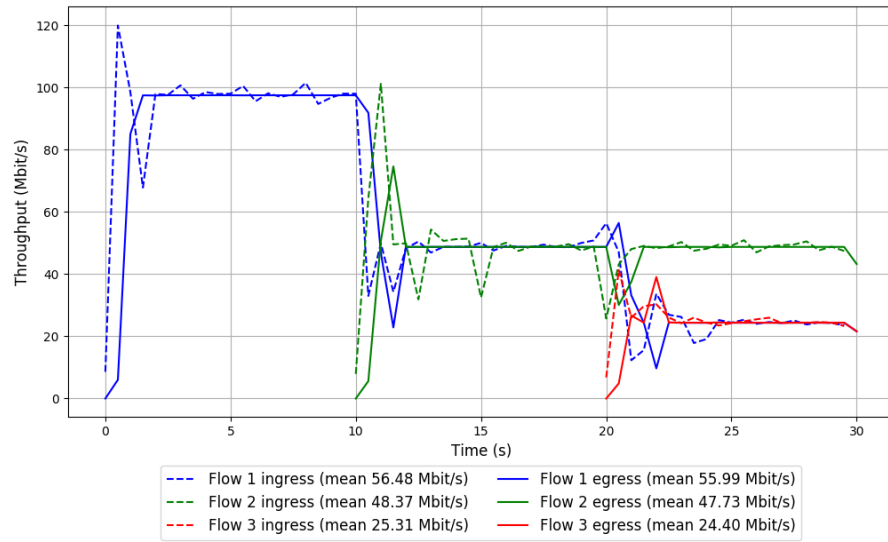


Run 3: Statistics of TCP BBR

Start at: 2018-09-25 17:47:56  
End at: 2018-09-25 17:48:26  
Local clock offset: 0.223 ms  
Remote clock offset: -4.861 ms

# Below is generated by plot.py at 2018-09-25 18:50:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.82 Mbit/s  
95th percentile per-packet one-way delay: 322.379 ms  
Loss rate: 1.59%  
-- Flow 1:  
Average throughput: 55.99 Mbit/s  
95th percentile per-packet one-way delay: 256.837 ms  
Loss rate: 1.11%  
-- Flow 2:  
Average throughput: 47.73 Mbit/s  
95th percentile per-packet one-way delay: 416.862 ms  
Loss rate: 1.71%  
-- Flow 3:  
Average throughput: 24.40 Mbit/s  
95th percentile per-packet one-way delay: 313.484 ms  
Loss rate: 4.35%

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



Run 4: Statistics of TCP BBR

Start at: 2018-09-25 18:14:20

End at: 2018-09-25 18:14:50

Local clock offset: 0.089 ms

Remote clock offset: -2.99 ms

# Below is generated by plot.py at 2018-09-25 18:50:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.70 Mbit/s

95th percentile per-packet one-way delay: 264.666 ms

Loss rate: 2.30%

-- Flow 1:

Average throughput: 63.24 Mbit/s

95th percentile per-packet one-way delay: 196.890 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 36.73 Mbit/s

95th percentile per-packet one-way delay: 420.000 ms

Loss rate: 3.03%

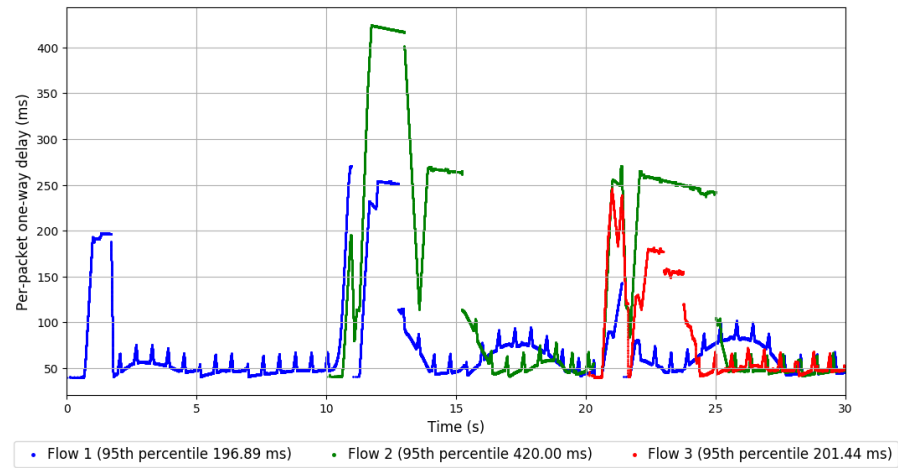
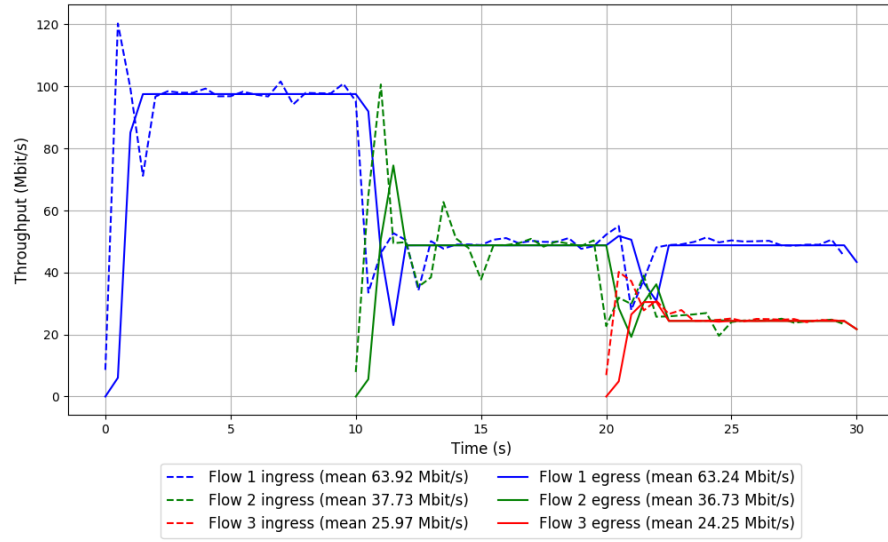
-- Flow 3:

Average throughput: 24.25 Mbit/s

95th percentile per-packet one-way delay: 201.438 ms

Loss rate: 7.40%

# Run 4: Report of TCP BBR — Data Link



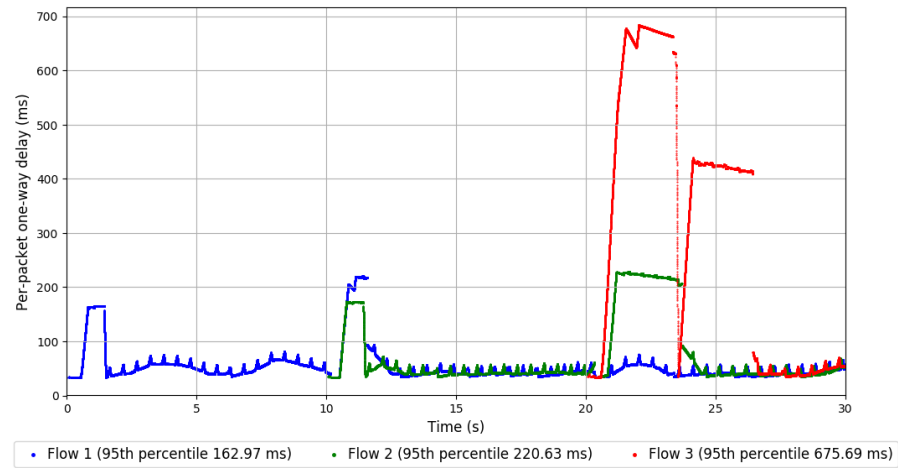
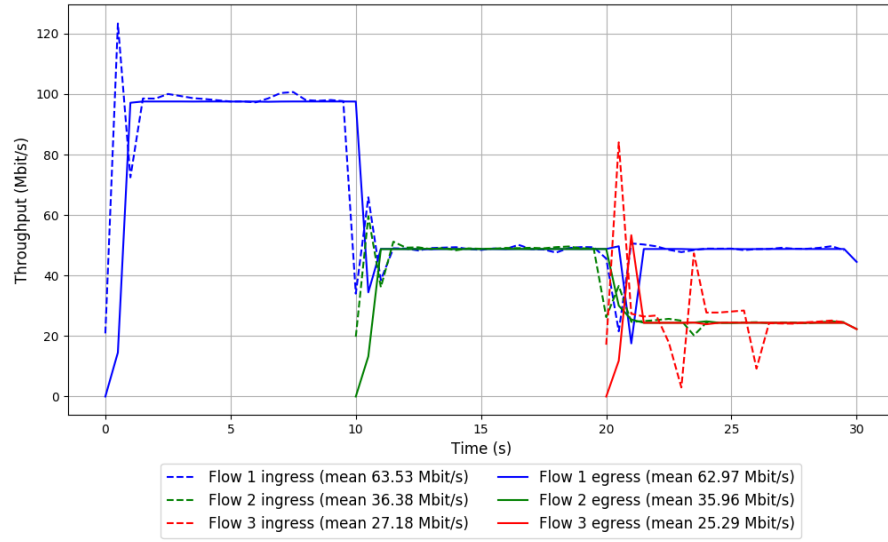


Run 5: Statistics of TCP BBR

Start at: 2018-09-25 18:40:37  
End at: 2018-09-25 18:41:07  
Local clock offset: -0.189 ms  
Remote clock offset: -2.045 ms

# Below is generated by plot.py at 2018-09-25 18:50:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.29 Mbit/s  
95th percentile per-packet one-way delay: 225.167 ms  
Loss rate: 1.80%  
-- Flow 1:  
Average throughput: 62.97 Mbit/s  
95th percentile per-packet one-way delay: 162.966 ms  
Loss rate: 1.10%  
-- Flow 2:  
Average throughput: 35.96 Mbit/s  
95th percentile per-packet one-way delay: 220.634 ms  
Loss rate: 1.47%  
-- Flow 3:  
Average throughput: 25.29 Mbit/s  
95th percentile per-packet one-way delay: 675.686 ms  
Loss rate: 7.57%

# Run 5: Report of TCP BBR — Data Link

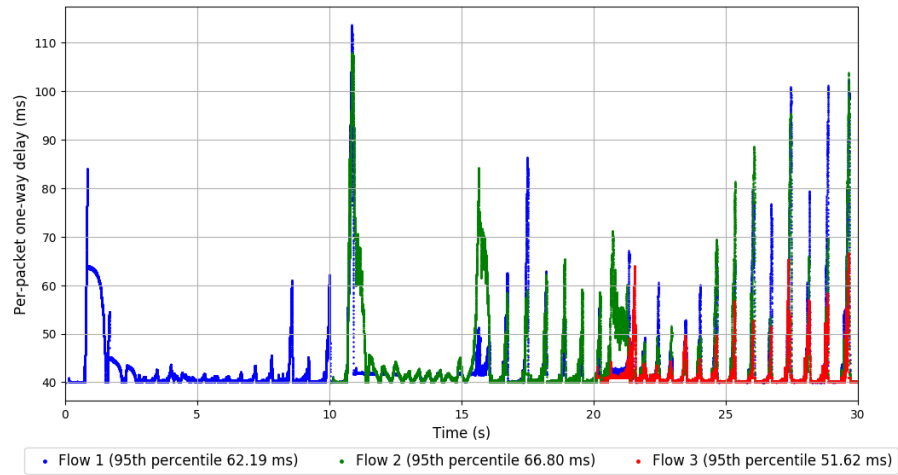
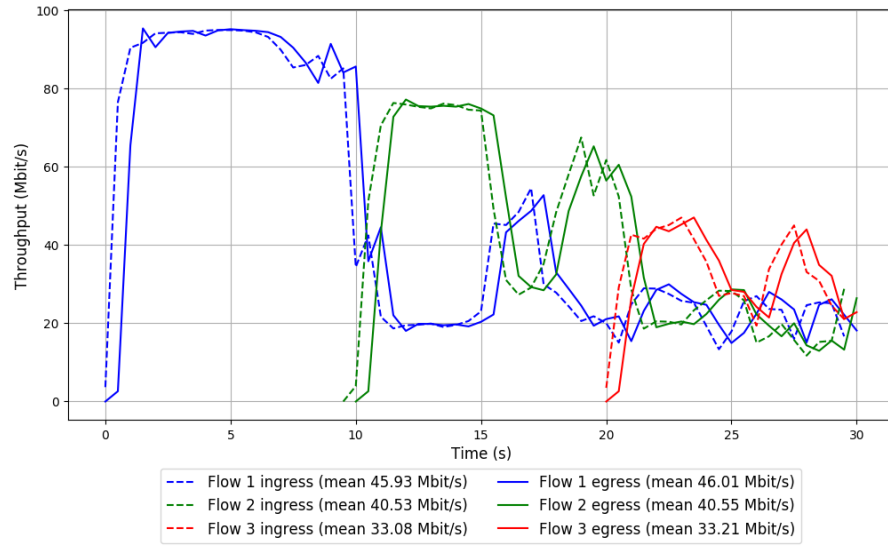


Run 1: Statistics of Copa

Start at: 2018-09-25 16:57:46  
End at: 2018-09-25 16:58:16  
Local clock offset: 3.544 ms  
Remote clock offset: -7.542 ms

# Below is generated by plot.py at 2018-09-25 18:50:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.99 Mbit/s  
95th percentile per-packet one-way delay: 62.466 ms  
Loss rate: 0.21%  
-- Flow 1:  
Average throughput: 46.01 Mbit/s  
95th percentile per-packet one-way delay: 62.187 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 40.55 Mbit/s  
95th percentile per-packet one-way delay: 66.798 ms  
Loss rate: 0.35%  
-- Flow 3:  
Average throughput: 33.21 Mbit/s  
95th percentile per-packet one-way delay: 51.618 ms  
Loss rate: 0.40%

## Run 1: Report of Copa — Data Link

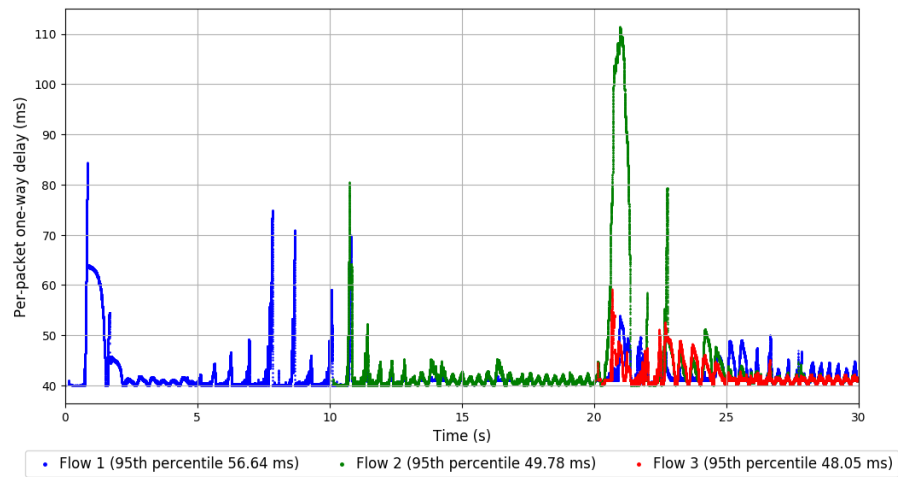
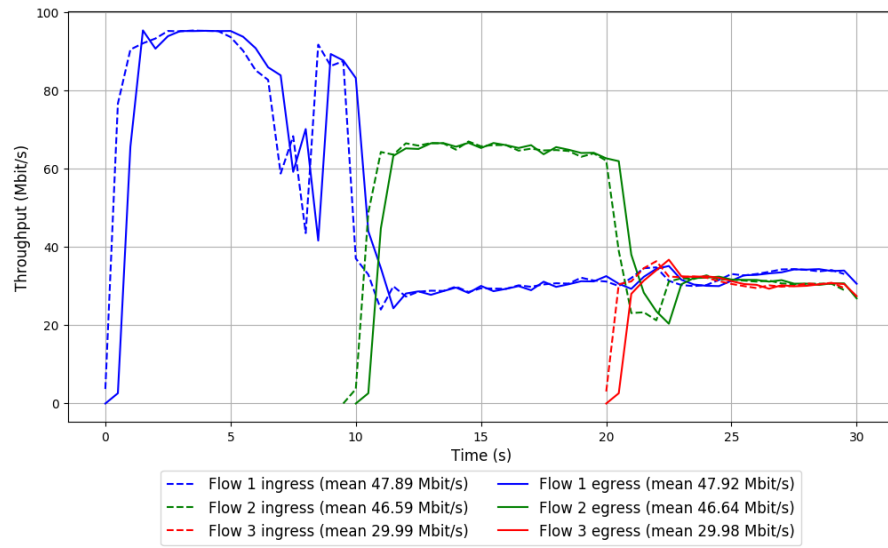


Run 2: Statistics of Copa

Start at: 2018-09-25 17:24:16  
End at: 2018-09-25 17:24:46  
Local clock offset: 0.903 ms  
Remote clock offset: -6.321 ms

# Below is generated by plot.py at 2018-09-25 18:50:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.88 Mbit/s  
95th percentile per-packet one-way delay: 52.296 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 47.92 Mbit/s  
95th percentile per-packet one-way delay: 56.638 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 46.64 Mbit/s  
95th percentile per-packet one-way delay: 49.781 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 29.98 Mbit/s  
95th percentile per-packet one-way delay: 48.053 ms  
Loss rate: 0.80%

## Run 2: Report of Copa — Data Link

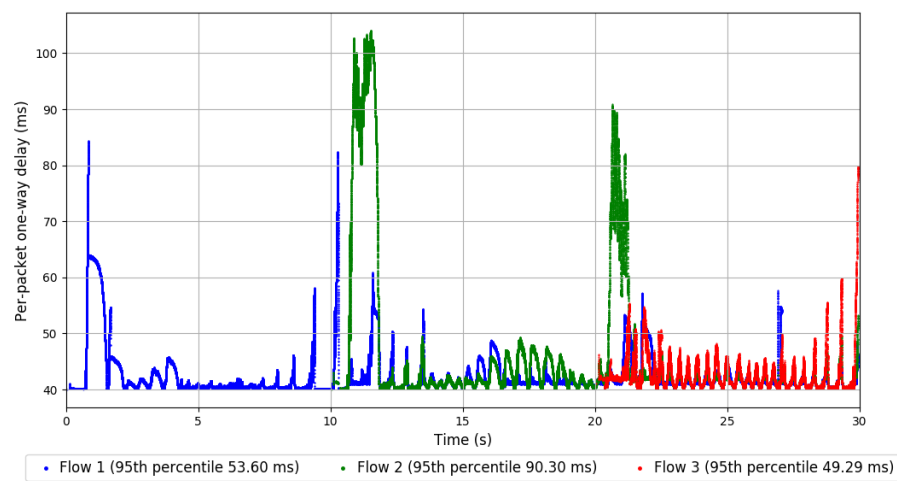
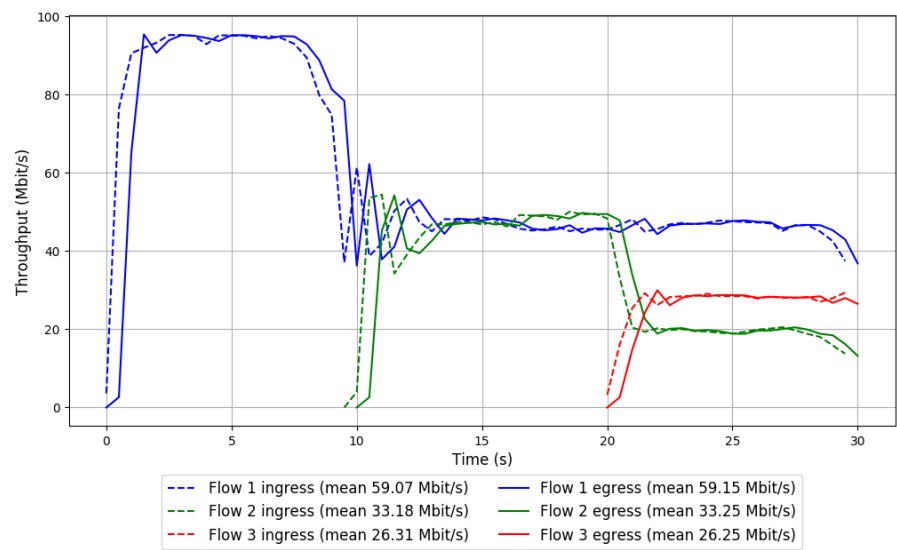


Run 3: Statistics of Copa

Start at: 2018-09-25 17:50:49  
End at: 2018-09-25 17:51:19  
Local clock offset: 0.228 ms  
Remote clock offset: -4.715 ms

# Below is generated by plot.py at 2018-09-25 18:50:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.98 Mbit/s  
95th percentile per-packet one-way delay: 60.140 ms  
Loss rate: 0.21%  
-- Flow 1:  
Average throughput: 59.15 Mbit/s  
95th percentile per-packet one-way delay: 53.598 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 33.25 Mbit/s  
95th percentile per-packet one-way delay: 90.301 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 26.25 Mbit/s  
95th percentile per-packet one-way delay: 49.291 ms  
Loss rate: 0.99%

Run 3: Report of Copa — Data Link



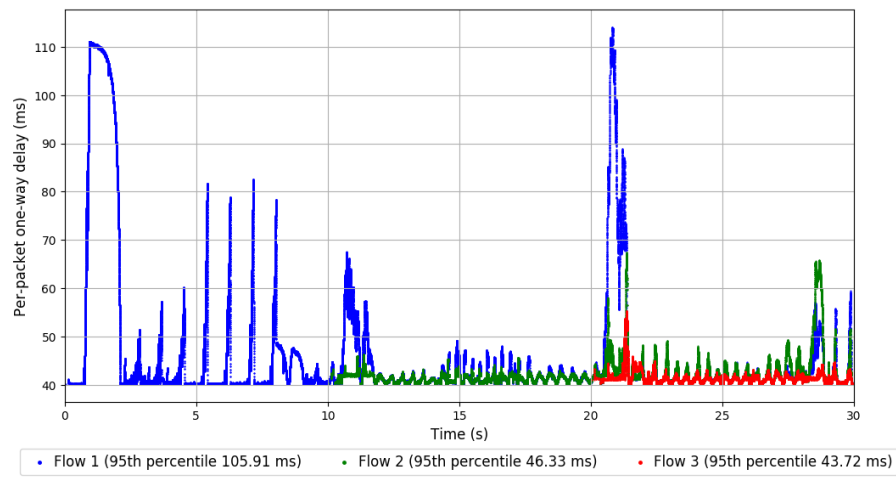
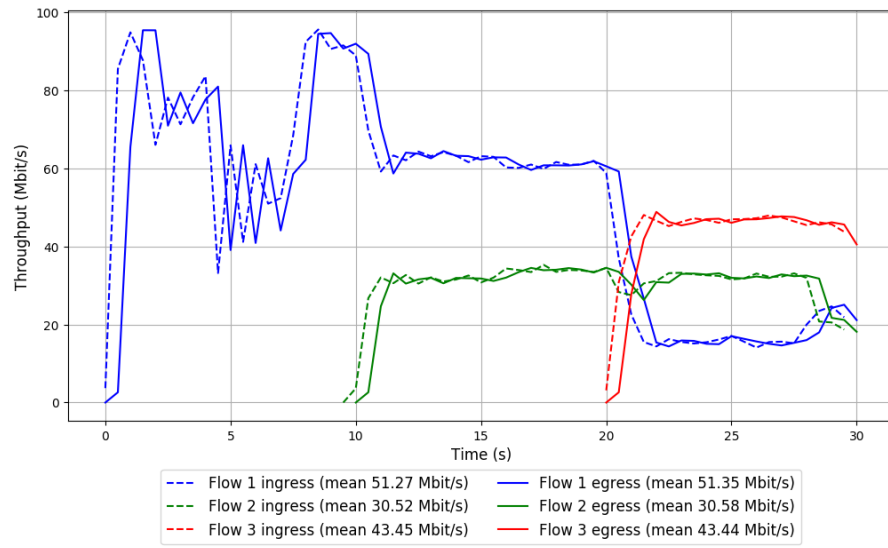


Run 4: Statistics of Copa

Start at: 2018-09-25 18:17:12  
End at: 2018-09-25 18:17:42  
Local clock offset: 0.049 ms  
Remote clock offset: -3.096 ms

# Below is generated by plot.py at 2018-09-25 18:51:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.08 Mbit/s  
95th percentile per-packet one-way delay: 77.952 ms  
Loss rate: 0.23%  
-- Flow 1:  
Average throughput: 51.35 Mbit/s  
95th percentile per-packet one-way delay: 105.905 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 30.58 Mbit/s  
95th percentile per-packet one-way delay: 46.327 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 43.44 Mbit/s  
95th percentile per-packet one-way delay: 43.721 ms  
Loss rate: 0.80%

# Run 4: Report of Copa — Data Link

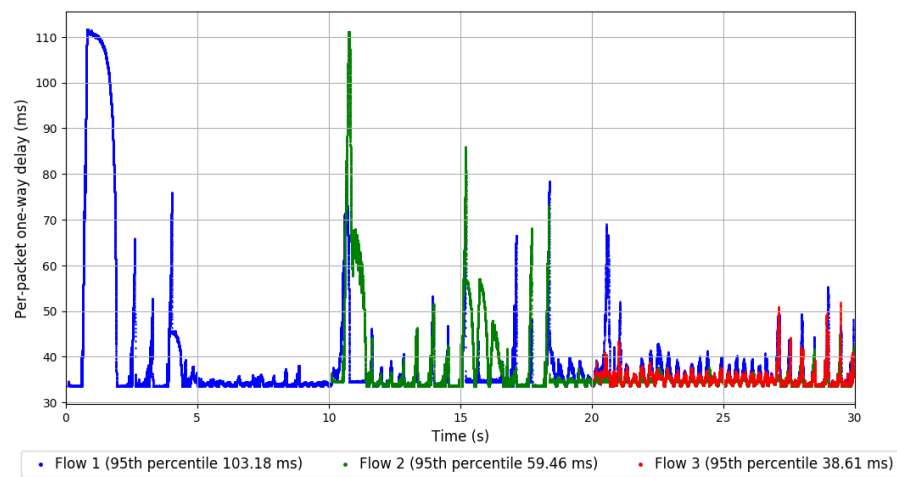
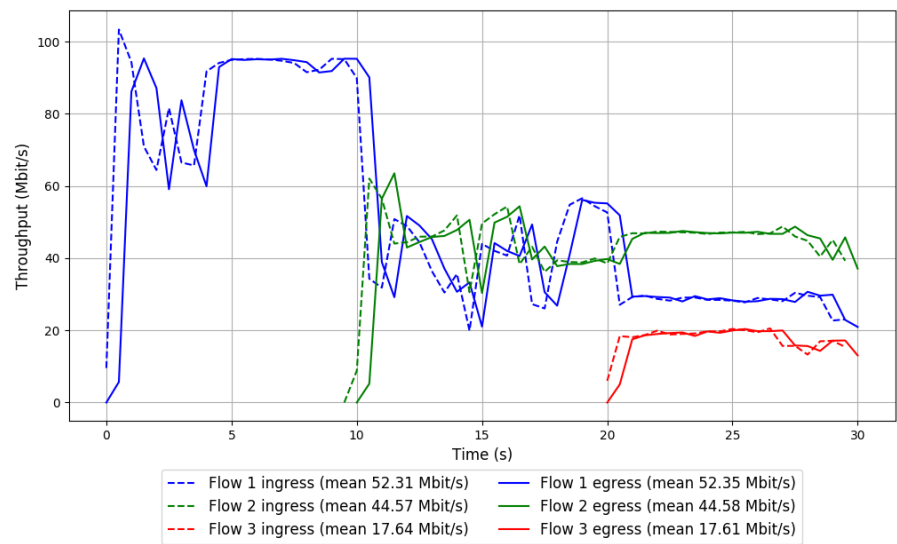


Run 5: Statistics of Copa

Start at: 2018-09-25 18:43:28  
End at: 2018-09-25 18:43:58  
Local clock offset: -0.157 ms  
Remote clock offset: -2.136 ms

# Below is generated by plot.py at 2018-09-25 18:52:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.88 Mbit/s  
95th percentile per-packet one-way delay: 71.222 ms  
Loss rate: 0.23%  
-- Flow 1:  
Average throughput: 52.35 Mbit/s  
95th percentile per-packet one-way delay: 103.183 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 44.58 Mbit/s  
95th percentile per-packet one-way delay: 59.462 ms  
Loss rate: 0.29%  
-- Flow 3:  
Average throughput: 17.61 Mbit/s  
95th percentile per-packet one-way delay: 38.606 ms  
Loss rate: 0.80%

Run 5: Report of Copa — Data Link

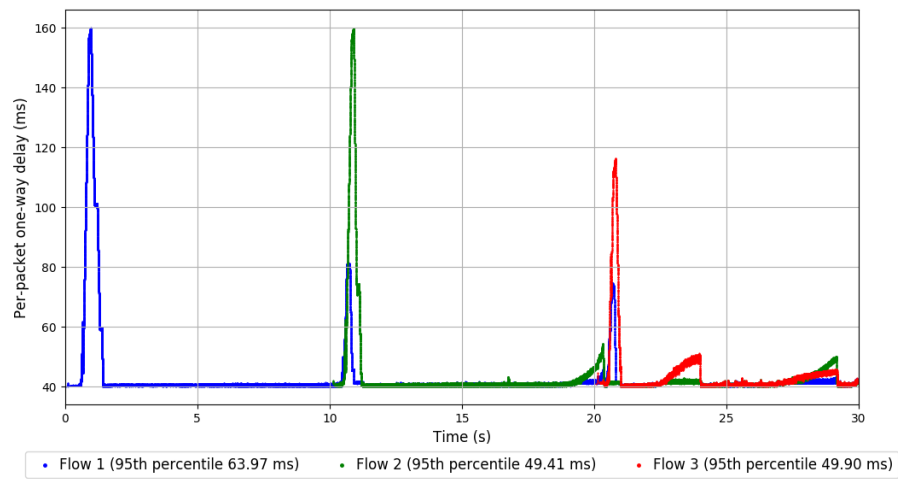
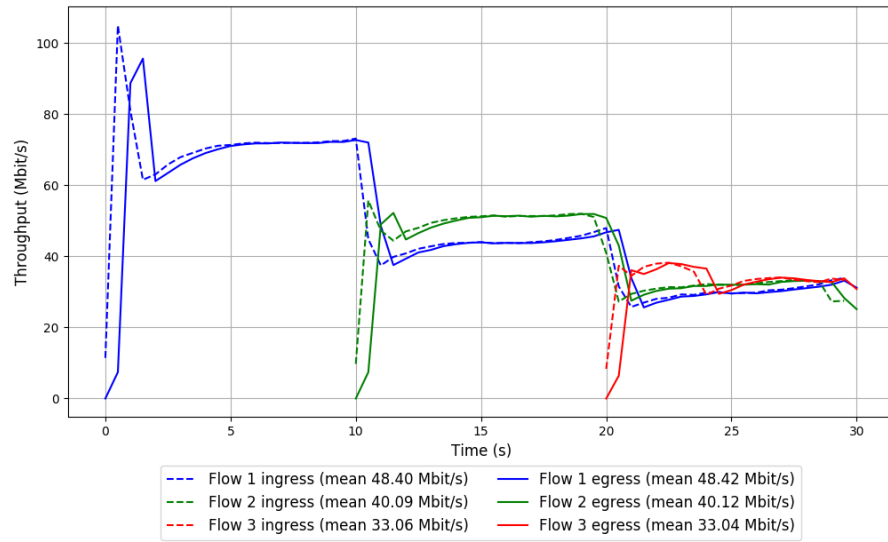


Run 1: Statistics of TCP Cubic

Start at: 2018-09-25 16:52:07  
End at: 2018-09-25 16:52:38  
Local clock offset: 3.018 ms  
Remote clock offset: -7.965 ms

# Below is generated by plot.py at 2018-09-25 18:52:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.04 Mbit/s  
95th percentile per-packet one-way delay: 57.860 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 48.42 Mbit/s  
95th percentile per-packet one-way delay: 63.967 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 40.12 Mbit/s  
95th percentile per-packet one-way delay: 49.405 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 33.04 Mbit/s  
95th percentile per-packet one-way delay: 49.895 ms  
Loss rate: 0.84%

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

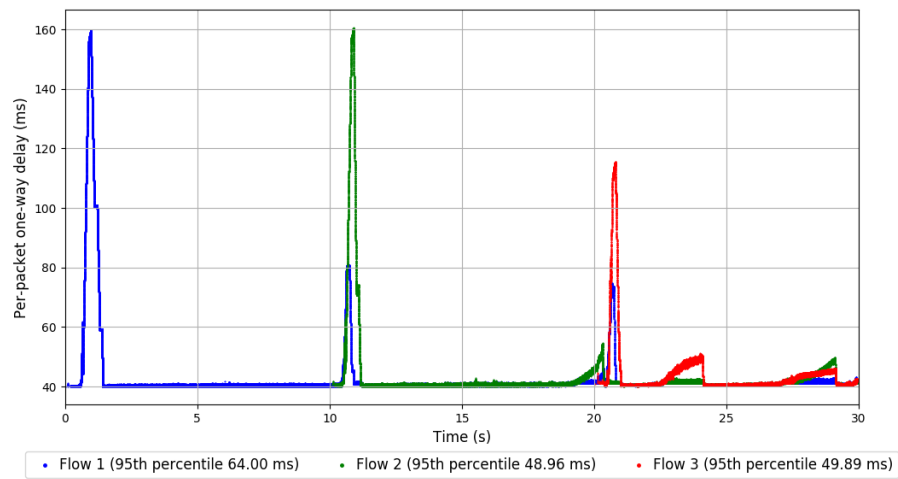
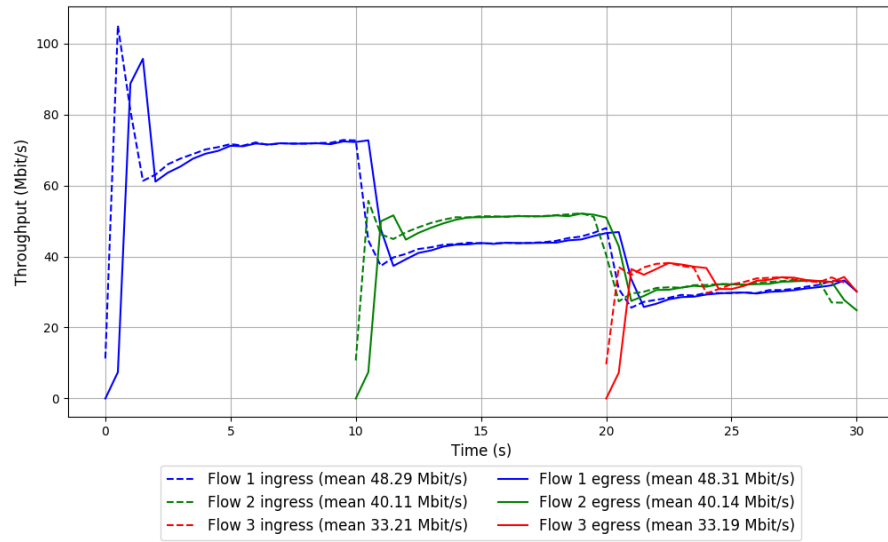


Run 2: Statistics of TCP Cubic

Start at: 2018-09-25 17:18:34  
End at: 2018-09-25 17:19:04  
Local clock offset: 1.595 ms  
Remote clock offset: -6.653 ms

# Below is generated by plot.py at 2018-09-25 18:52:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.00 Mbit/s  
95th percentile per-packet one-way delay: 57.148 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 48.31 Mbit/s  
95th percentile per-packet one-way delay: 64.004 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 40.14 Mbit/s  
95th percentile per-packet one-way delay: 48.964 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 33.19 Mbit/s  
95th percentile per-packet one-way delay: 49.888 ms  
Loss rate: 0.83%

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





Run 3: Statistics of TCP Cubic

Start at: 2018-09-25 17:45:10

End at: 2018-09-25 17:45:40

Local clock offset: 0.214 ms

Remote clock offset: -5.18 ms

# Below is generated by plot.py at 2018-09-25 18:52:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 85.99 Mbit/s

95th percentile per-packet one-way delay: 54.104 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 53.45 Mbit/s

95th percentile per-packet one-way delay: 57.767 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 36.82 Mbit/s

95th percentile per-packet one-way delay: 50.447 ms

Loss rate: 0.35%

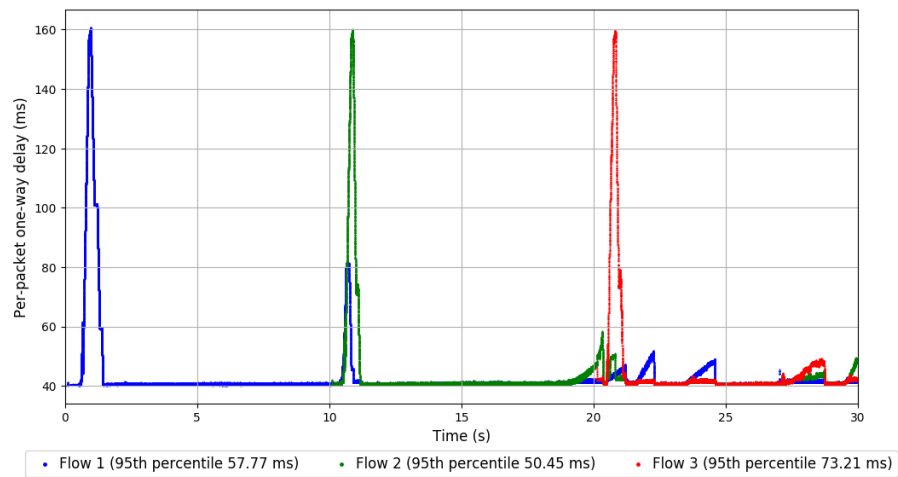
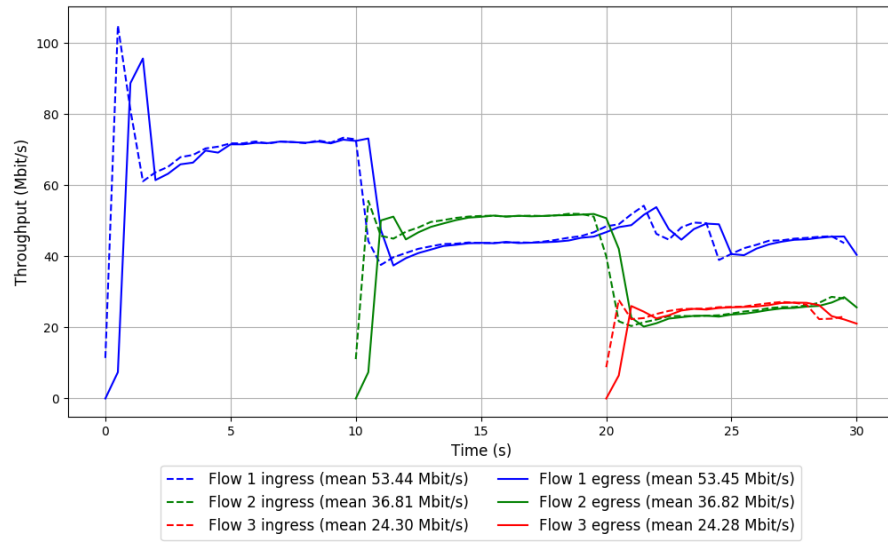
-- Flow 3:

Average throughput: 24.28 Mbit/s

95th percentile per-packet one-way delay: 73.212 ms

Loss rate: 0.85%

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



Run 4: Statistics of TCP Cubic

Start at: 2018-09-25 18:11:34

End at: 2018-09-25 18:12:04

Local clock offset: 0.101 ms

Remote clock offset: -3.1 ms

# Below is generated by plot.py at 2018-09-25 18:52:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.57 Mbit/s

95th percentile per-packet one-way delay: 56.209 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 63.72 Mbit/s

95th percentile per-packet one-way delay: 51.054 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 32.51 Mbit/s

95th percentile per-packet one-way delay: 60.905 ms

Loss rate: 0.25%

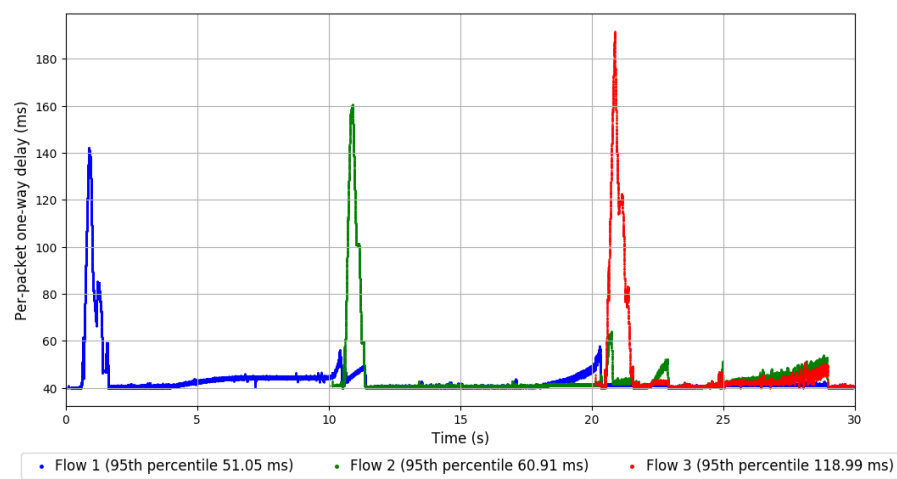
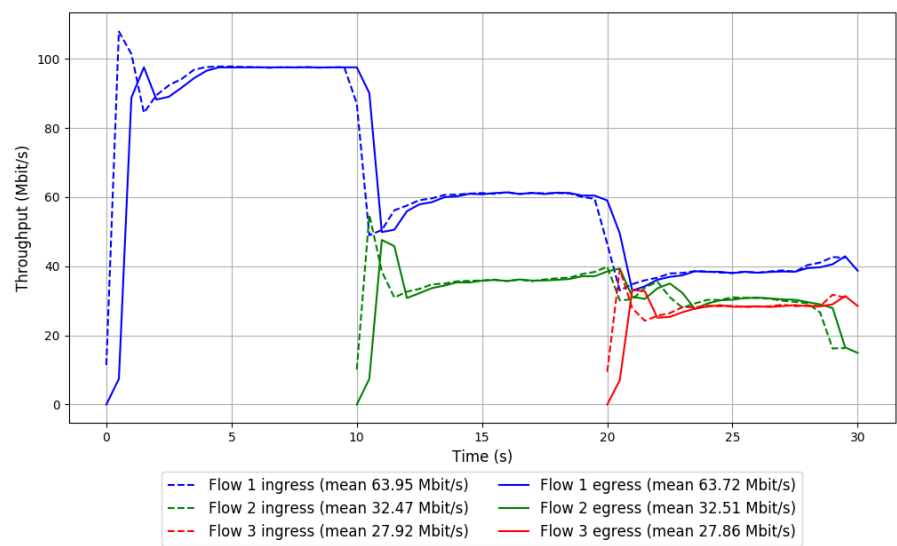
-- Flow 3:

Average throughput: 27.86 Mbit/s

95th percentile per-packet one-way delay: 118.986 ms

Loss rate: 1.02%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-09-25 18:37:52

End at: 2018-09-25 18:38:22

Local clock offset: -0.212 ms

Remote clock offset: -2.2 ms

# Below is generated by plot.py at 2018-09-25 18:52:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.66 Mbit/s

95th percentile per-packet one-way delay: 41.771 ms

Loss rate: 0.25%

-- Flow 1:

Average throughput: 53.69 Mbit/s

95th percentile per-packet one-way delay: 40.210 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 36.49 Mbit/s

95th percentile per-packet one-way delay: 42.158 ms

Loss rate: 0.22%

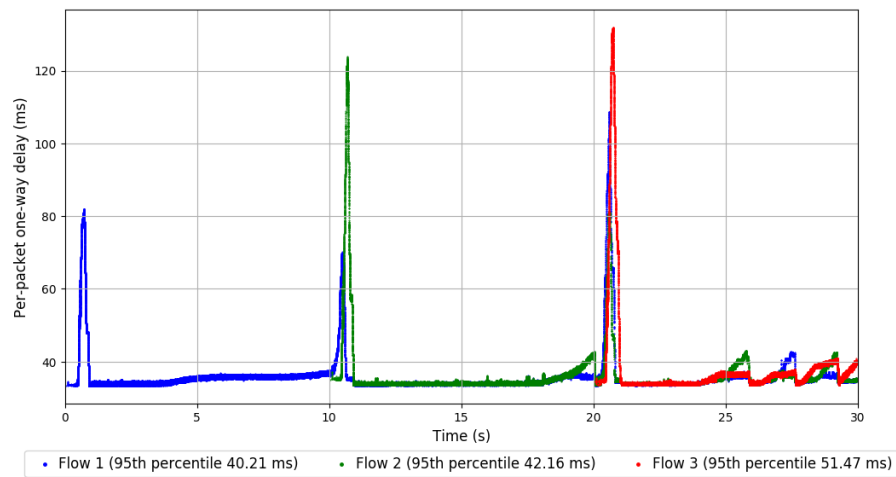
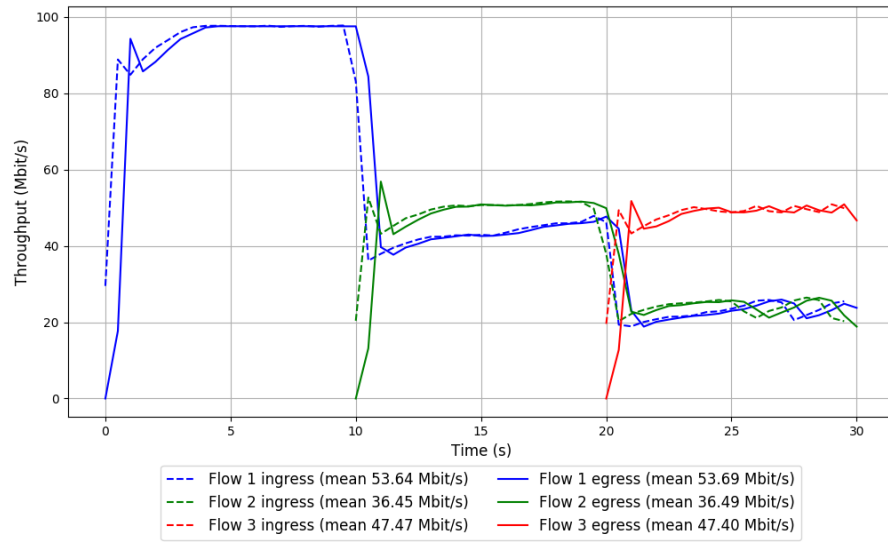
-- Flow 3:

Average throughput: 47.40 Mbit/s

95th percentile per-packet one-way delay: 51.472 ms

Loss rate: 0.77%

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

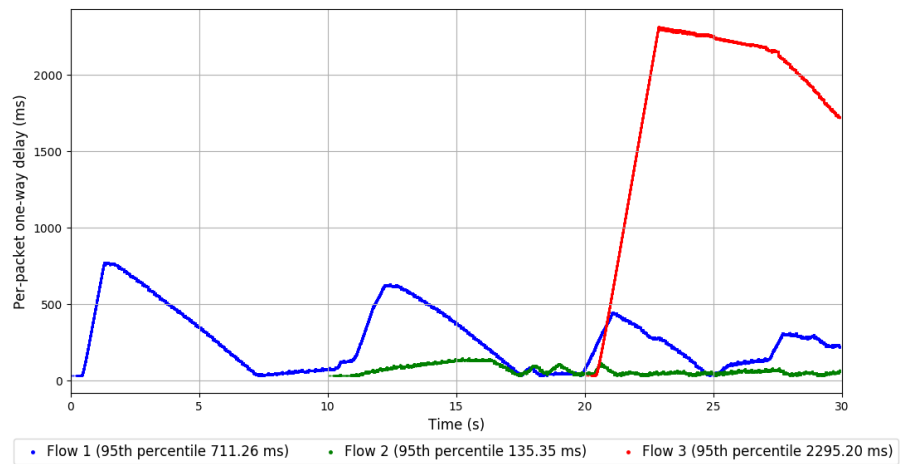
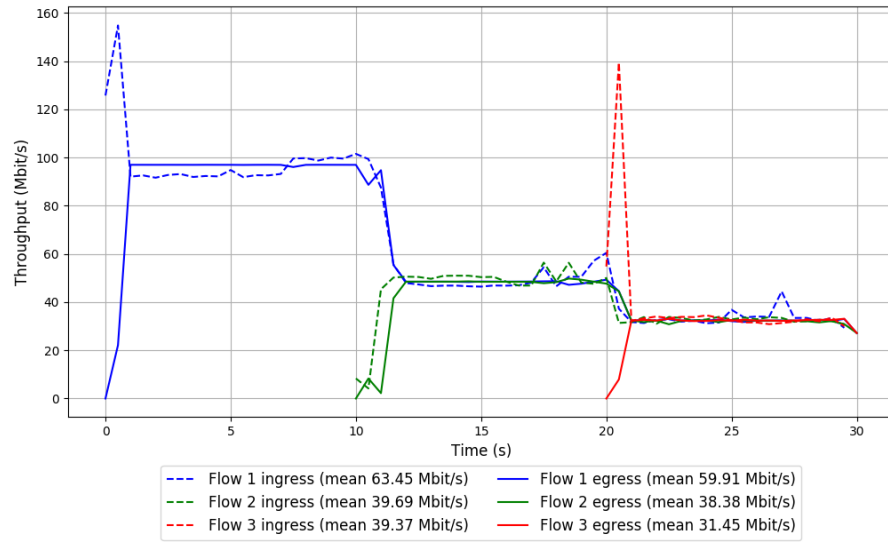


Run 1: Statistics of FillP

Start at: 2018-09-25 16:39:54  
End at: 2018-09-25 16:40:24  
Local clock offset: 0.578 ms  
Remote clock offset: -7.904 ms

# Below is generated by plot.py at 2018-09-25 18:52:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.80 Mbit/s  
95th percentile per-packet one-way delay: 2164.327 ms  
Loss rate: 7.09%  
-- Flow 1:  
Average throughput: 59.91 Mbit/s  
95th percentile per-packet one-way delay: 711.259 ms  
Loss rate: 5.77%  
-- Flow 2:  
Average throughput: 38.38 Mbit/s  
95th percentile per-packet one-way delay: 135.351 ms  
Loss rate: 3.58%  
-- Flow 3:  
Average throughput: 31.45 Mbit/s  
95th percentile per-packet one-way delay: 2295.202 ms  
Loss rate: 20.61%

# Run 1: Report of FillP — Data Link



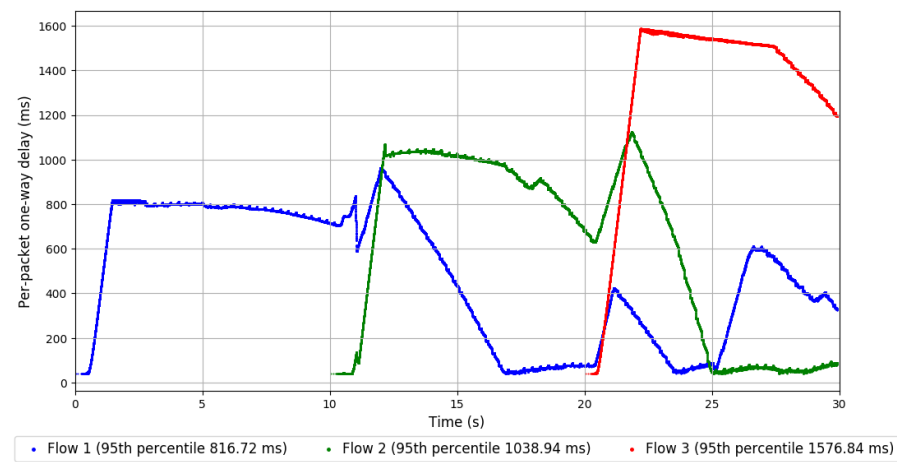
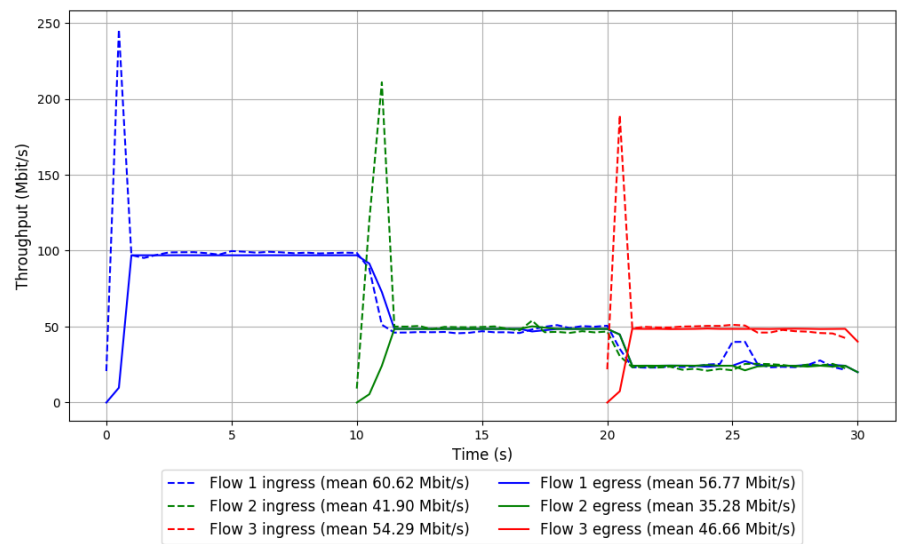


Run 2: Statistics of FillP

Start at: 2018-09-25 17:06:13  
End at: 2018-09-25 17:06:43  
Local clock offset: 4.122 ms  
Remote clock offset: -7.087 ms

# Below is generated by plot.py at 2018-09-25 18:52:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.64 Mbit/s  
95th percentile per-packet one-way delay: 1540.837 ms  
Loss rate: 10.44%  
-- Flow 1:  
Average throughput: 56.77 Mbit/s  
95th percentile per-packet one-way delay: 816.717 ms  
Loss rate: 6.58%  
-- Flow 2:  
Average throughput: 35.28 Mbit/s  
95th percentile per-packet one-way delay: 1038.940 ms  
Loss rate: 16.10%  
-- Flow 3:  
Average throughput: 46.66 Mbit/s  
95th percentile per-packet one-way delay: 1576.838 ms  
Loss rate: 14.68%

Run 2: Report of FillP — Data Link

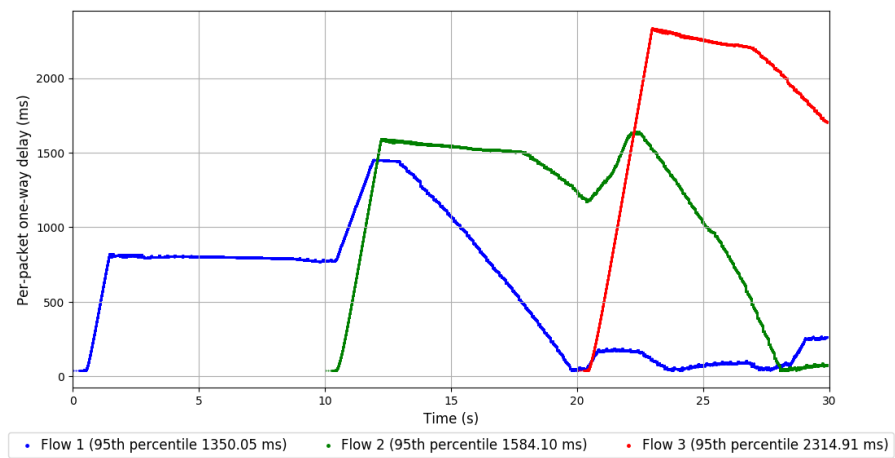
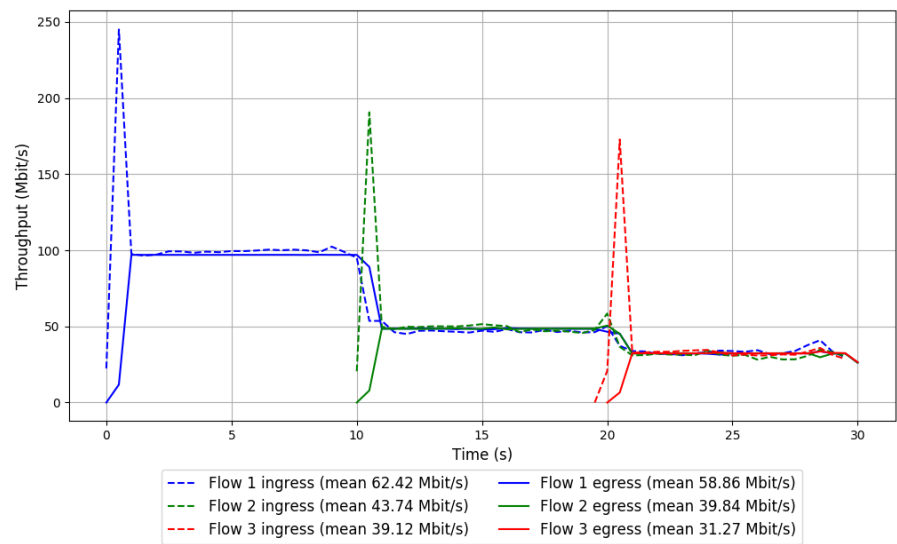


Run 3: Statistics of FillP

Start at: 2018-09-25 17:32:50  
End at: 2018-09-25 17:33:20  
Local clock offset: 0.368 ms  
Remote clock offset: -5.748 ms

# Below is generated by plot.py at 2018-09-25 18:52:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.68 Mbit/s  
95th percentile per-packet one-way delay: 2170.012 ms  
Loss rate: 8.71%  
-- Flow 1:  
Average throughput: 58.86 Mbit/s  
95th percentile per-packet one-way delay: 1350.048 ms  
Loss rate: 5.95%  
-- Flow 2:  
Average throughput: 39.84 Mbit/s  
95th percentile per-packet one-way delay: 1584.101 ms  
Loss rate: 9.28%  
-- Flow 3:  
Average throughput: 31.27 Mbit/s  
95th percentile per-packet one-way delay: 2314.906 ms  
Loss rate: 20.68%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-09-25 17:59:17

End at: 2018-09-25 17:59:47

Local clock offset: 0.212 ms

Remote clock offset: -3.95 ms

# Below is generated by plot.py at 2018-09-25 18:52:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.68 Mbit/s

95th percentile per-packet one-way delay: 1541.604 ms

Loss rate: 10.63%

-- Flow 1:

Average throughput: 56.79 Mbit/s

95th percentile per-packet one-way delay: 816.644 ms

Loss rate: 6.91%

-- Flow 2:

Average throughput: 35.34 Mbit/s

95th percentile per-packet one-way delay: 1032.692 ms

Loss rate: 16.18%

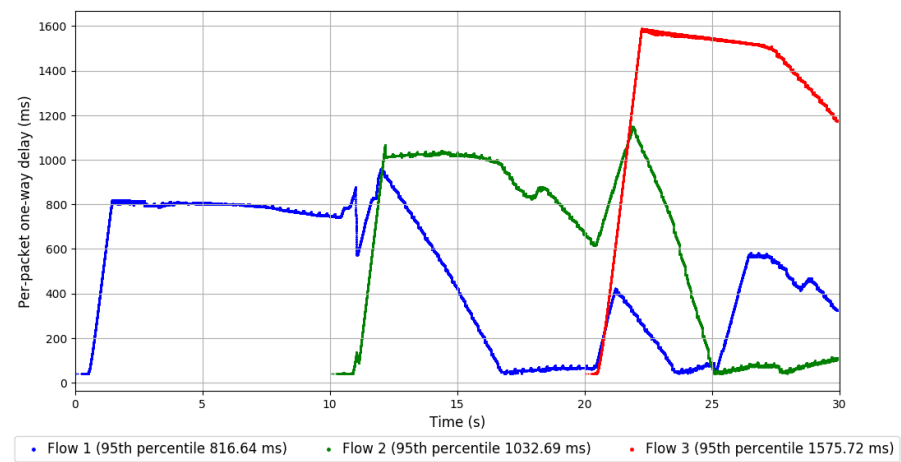
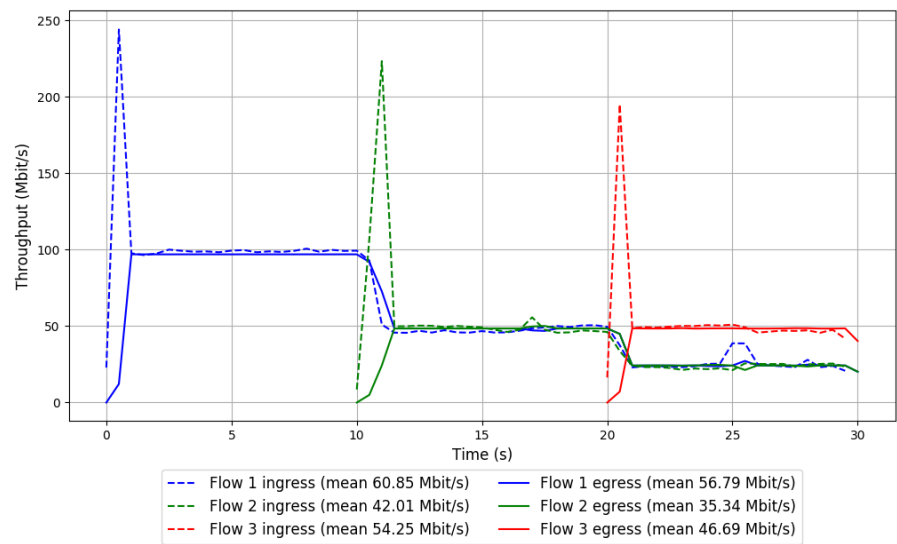
-- Flow 3:

Average throughput: 46.69 Mbit/s

95th percentile per-packet one-way delay: 1575.720 ms

Loss rate: 14.61%

Run 4: Report of FillP — Data Link

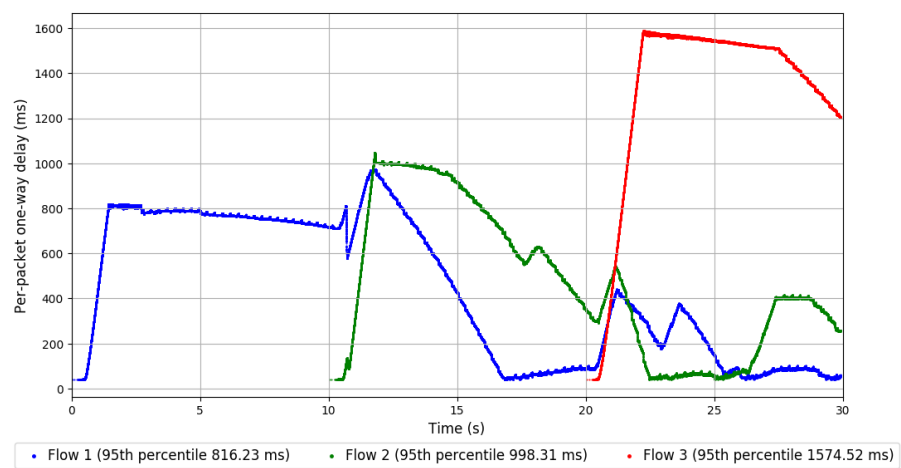
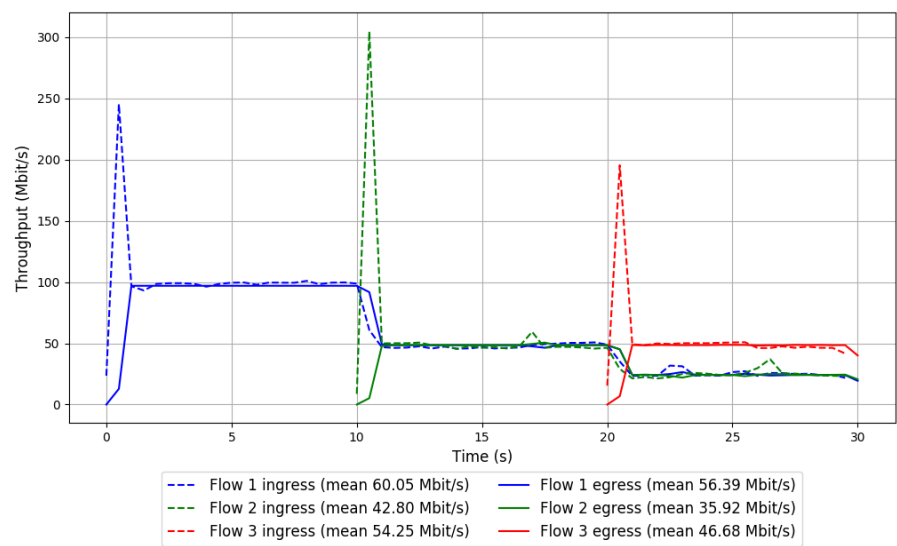


Run 5: Statistics of FillP

Start at: 2018-09-25 18:25:37  
End at: 2018-09-25 18:26:08  
Local clock offset: -0.069 ms  
Remote clock offset: -2.524 ms

# Below is generated by plot.py at 2018-09-25 18:53:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.69 Mbit/s  
95th percentile per-packet one-way delay: 1543.805 ms  
Loss rate: 10.41%  
-- Flow 1:  
Average throughput: 56.39 Mbit/s  
95th percentile per-packet one-way delay: 816.227 ms  
Loss rate: 6.32%  
-- Flow 2:  
Average throughput: 35.92 Mbit/s  
95th percentile per-packet one-way delay: 998.312 ms  
Loss rate: 16.38%  
-- Flow 3:  
Average throughput: 46.68 Mbit/s  
95th percentile per-packet one-way delay: 1574.519 ms  
Loss rate: 14.61%

Run 5: Report of FillP — Data Link



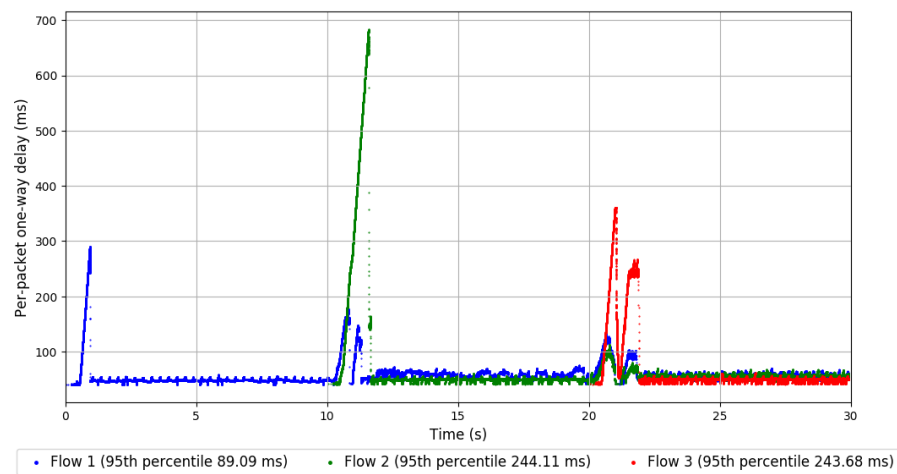
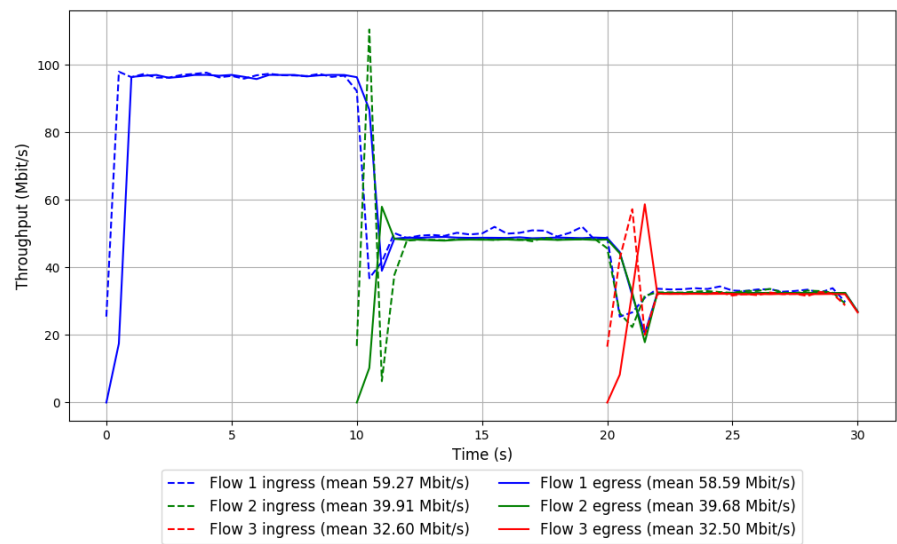


Run 1: Statistics of FillP-Sheep

Start at: 2018-09-25 16:53:31  
End at: 2018-09-25 16:54:01  
Local clock offset: 3.175 ms  
Remote clock offset: -7.894 ms

# Below is generated by plot.py at 2018-09-25 18:53:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.69 Mbit/s  
95th percentile per-packet one-way delay: 120.159 ms  
Loss rate: 1.23%  
-- Flow 1:  
Average throughput: 58.59 Mbit/s  
95th percentile per-packet one-way delay: 89.086 ms  
Loss rate: 1.39%  
-- Flow 2:  
Average throughput: 39.68 Mbit/s  
95th percentile per-packet one-way delay: 244.106 ms  
Loss rate: 0.92%  
-- Flow 3:  
Average throughput: 32.50 Mbit/s  
95th percentile per-packet one-way delay: 243.680 ms  
Loss rate: 1.09%

Run 1: Report of FillP-Sheep — Data Link

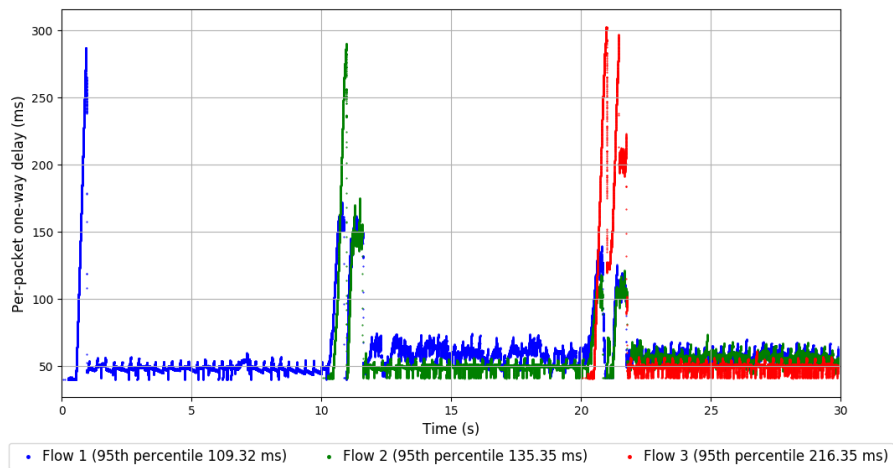
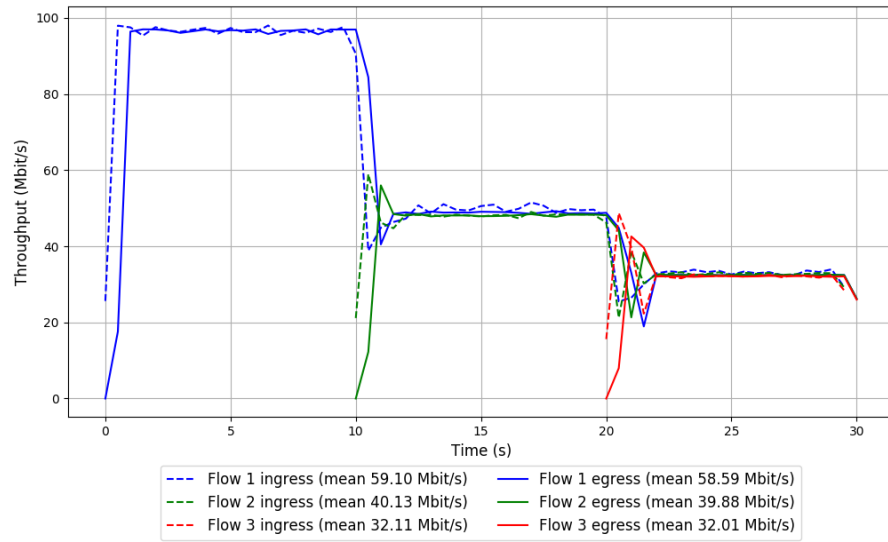


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-25 17:19:58  
End at: 2018-09-25 17:20:28  
Local clock offset: 1.385 ms  
Remote clock offset: -6.532 ms

# Below is generated by plot.py at 2018-09-25 18:53:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.65 Mbit/s  
95th percentile per-packet one-way delay: 130.784 ms  
Loss rate: 1.08%  
-- Flow 1:  
Average throughput: 58.59 Mbit/s  
95th percentile per-packet one-way delay: 109.316 ms  
Loss rate: 1.11%  
-- Flow 2:  
Average throughput: 39.88 Mbit/s  
95th percentile per-packet one-way delay: 135.347 ms  
Loss rate: 0.99%  
-- Flow 3:  
Average throughput: 32.01 Mbit/s  
95th percentile per-packet one-way delay: 216.348 ms  
Loss rate: 1.11%

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

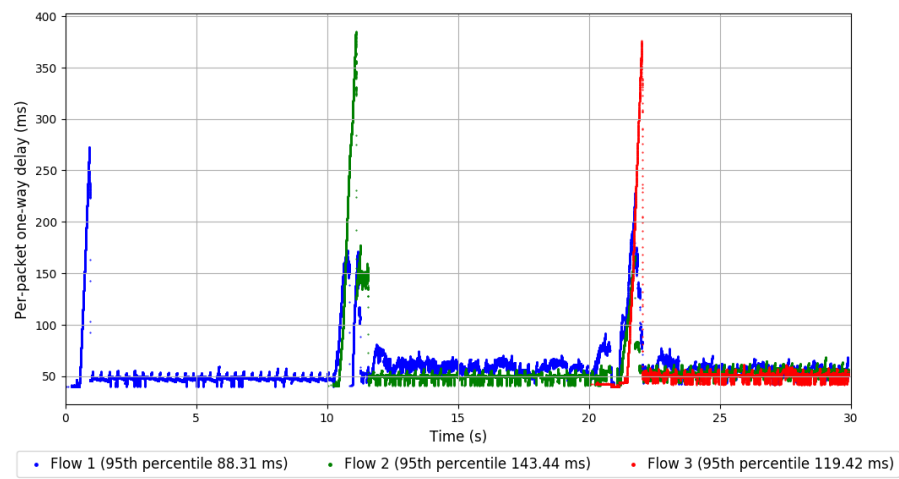
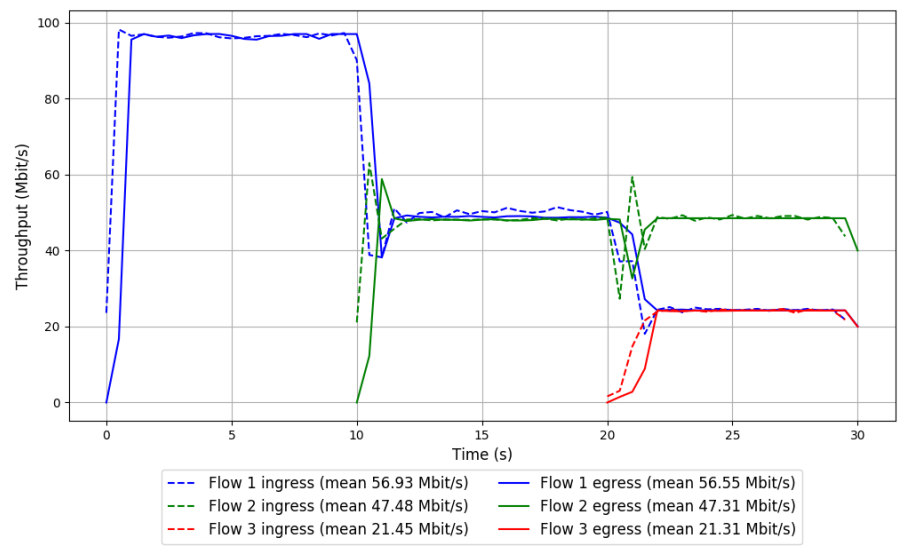


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-25 17:46:33  
End at: 2018-09-25 17:47:03  
Local clock offset: 0.22 ms  
Remote clock offset: -4.943 ms

# Below is generated by plot.py at 2018-09-25 18:53:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.04 Mbit/s  
95th percentile per-packet one-way delay: 108.029 ms  
Loss rate: 0.89%  
-- Flow 1:  
Average throughput: 56.55 Mbit/s  
95th percentile per-packet one-way delay: 88.310 ms  
Loss rate: 0.91%  
-- Flow 2:  
Average throughput: 47.31 Mbit/s  
95th percentile per-packet one-way delay: 143.436 ms  
Loss rate: 0.72%  
-- Flow 3:  
Average throughput: 21.31 Mbit/s  
95th percentile per-packet one-way delay: 119.416 ms  
Loss rate: 1.44%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2018-09-25 18:12:57

End at: 2018-09-25 18:13:27

Local clock offset: 0.093 ms

Remote clock offset: -3.06 ms

# Below is generated by plot.py at 2018-09-25 18:53:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.55 Mbit/s

95th percentile per-packet one-way delay: 138.470 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 58.47 Mbit/s

95th percentile per-packet one-way delay: 108.561 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 39.88 Mbit/s

95th percentile per-packet one-way delay: 146.196 ms

Loss rate: 0.97%

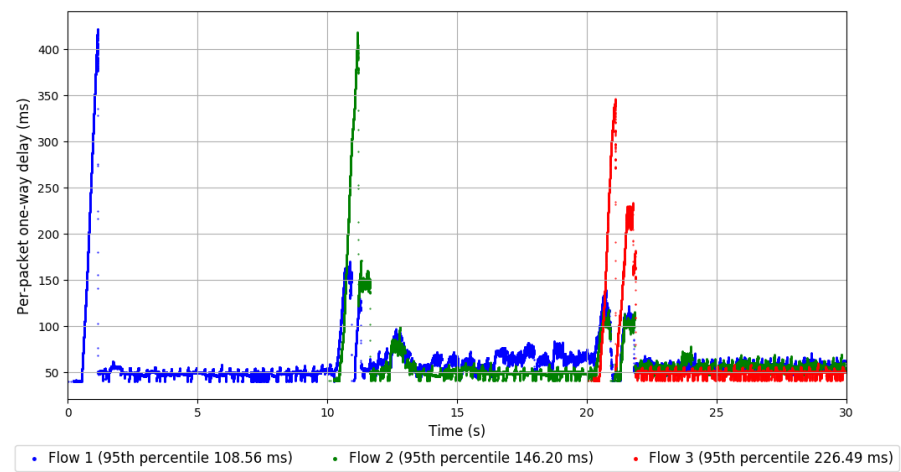
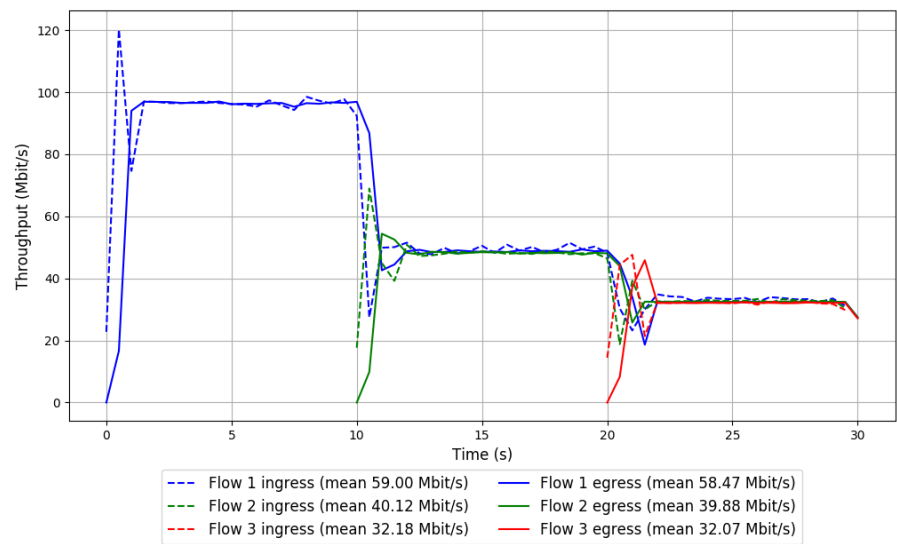
-- Flow 3:

Average throughput: 32.07 Mbit/s

95th percentile per-packet one-way delay: 226.490 ms

Loss rate: 1.12%

Run 4: Report of FillP-Sheep — Data Link



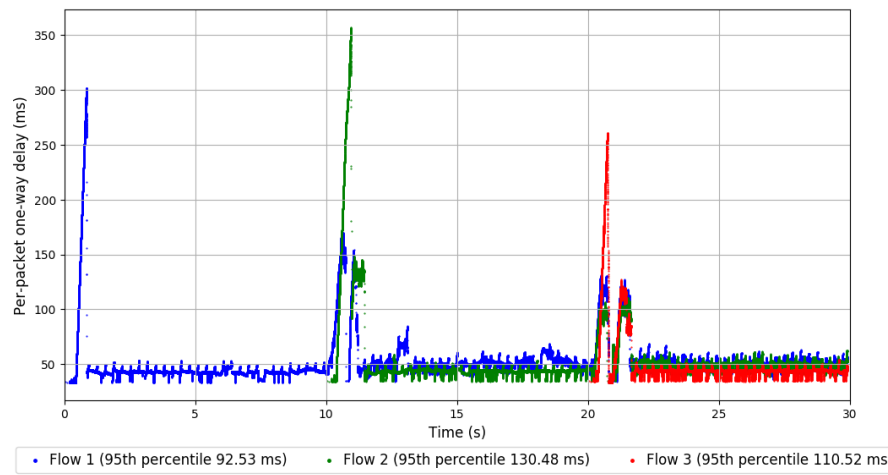
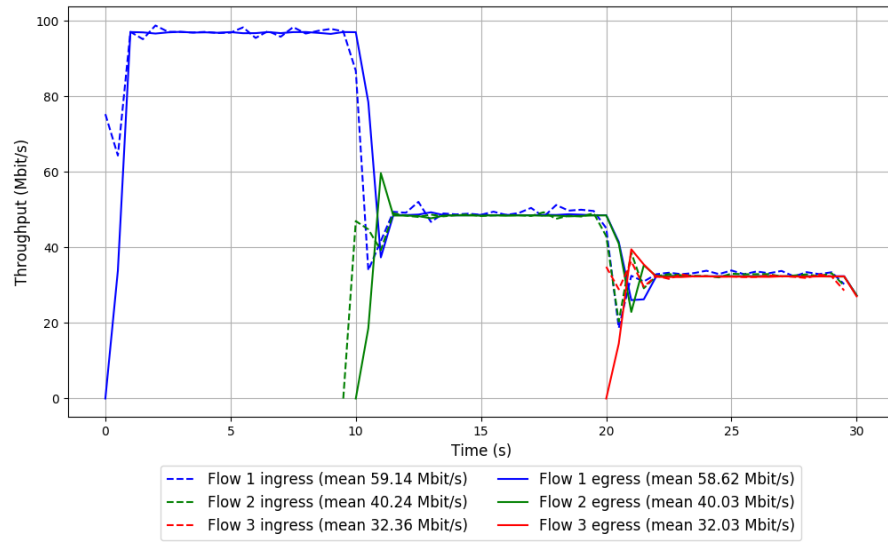


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-25 18:39:15  
End at: 2018-09-25 18:39:45  
Local clock offset: -0.218 ms  
Remote clock offset: -2.053 ms

```
# Below is generated by plot.py at 2018-09-25 18:53:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 105.111 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 58.62 Mbit/s
95th percentile per-packet one-way delay: 92.531 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 40.03 Mbit/s
95th percentile per-packet one-way delay: 130.480 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 32.03 Mbit/s
95th percentile per-packet one-way delay: 110.522 ms
Loss rate: 1.59%
```

## Run 5: Report of FillP-Sheep — Data Link

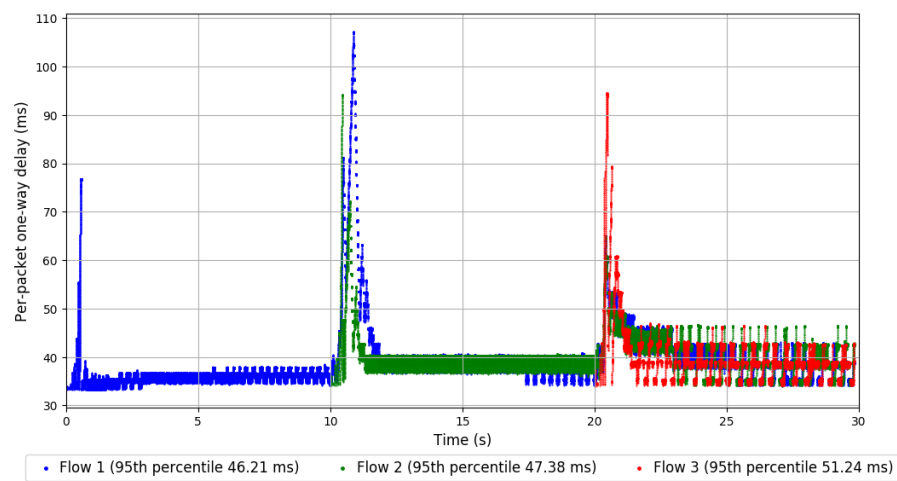
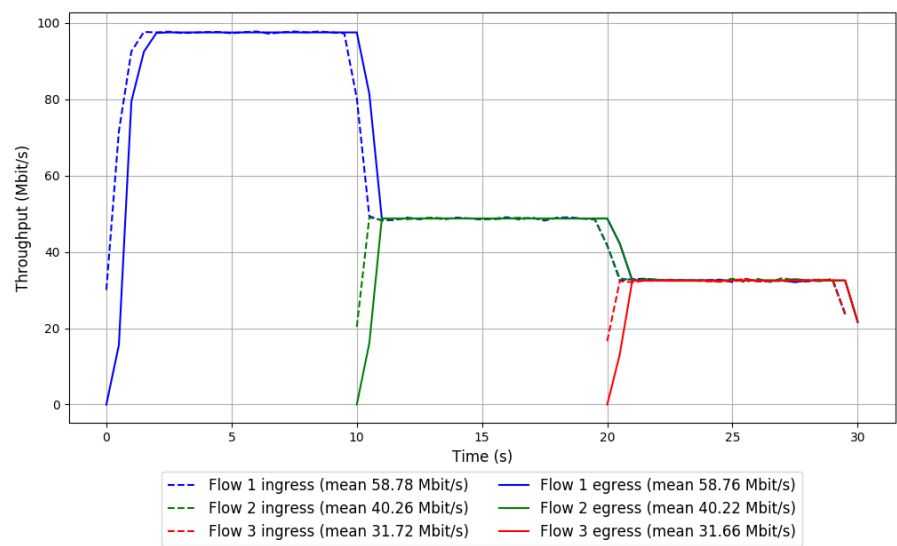


Run 1: Statistics of Indigo

Start at: 2018-09-25 16:41:16  
End at: 2018-09-25 16:41:46  
Local clock offset: 1.056 ms  
Remote clock offset: -7.903 ms

# Below is generated by plot.py at 2018-09-25 18:53:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.87 Mbit/s  
95th percentile per-packet one-way delay: 47.597 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 58.76 Mbit/s  
95th percentile per-packet one-way delay: 46.207 ms  
Loss rate: 0.24%  
-- Flow 2:  
Average throughput: 40.22 Mbit/s  
95th percentile per-packet one-way delay: 47.380 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 31.66 Mbit/s  
95th percentile per-packet one-way delay: 51.243 ms  
Loss rate: 0.82%

Run 1: Report of Indigo — Data Link

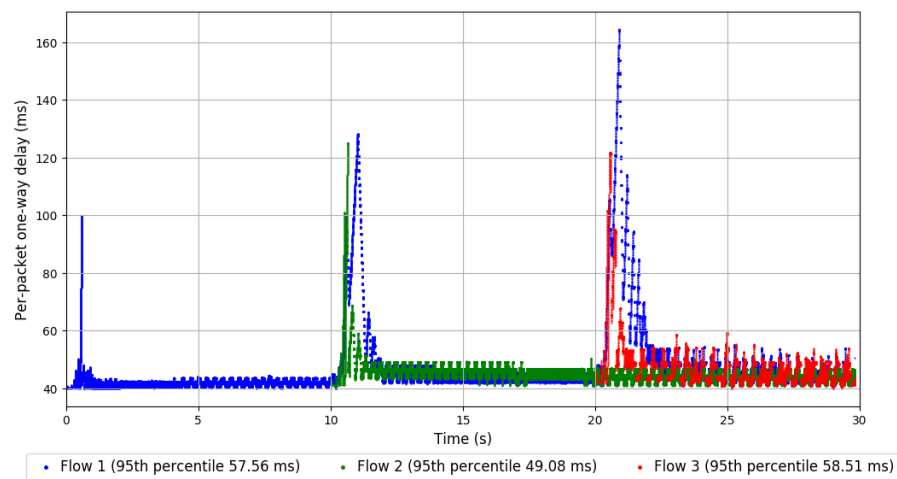
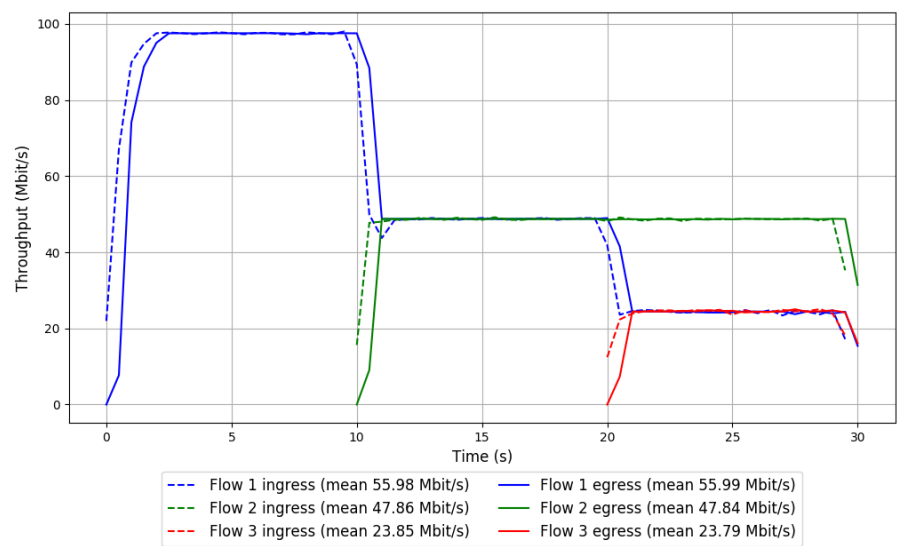


Run 2: Statistics of Indigo

Start at: 2018-09-25 17:07:37  
End at: 2018-09-25 17:08:07  
Local clock offset: 4.179 ms  
Remote clock offset: -7.053 ms

```
# Below is generated by plot.py at 2018-09-25 18:53:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.54 Mbit/s
95th percentile per-packet one-way delay: 53.592 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 55.99 Mbit/s
95th percentile per-packet one-way delay: 57.558 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 47.84 Mbit/s
95th percentile per-packet one-way delay: 49.079 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 23.79 Mbit/s
95th percentile per-packet one-way delay: 58.506 ms
Loss rate: 1.06%
```

Run 2: Report of Indigo — Data Link

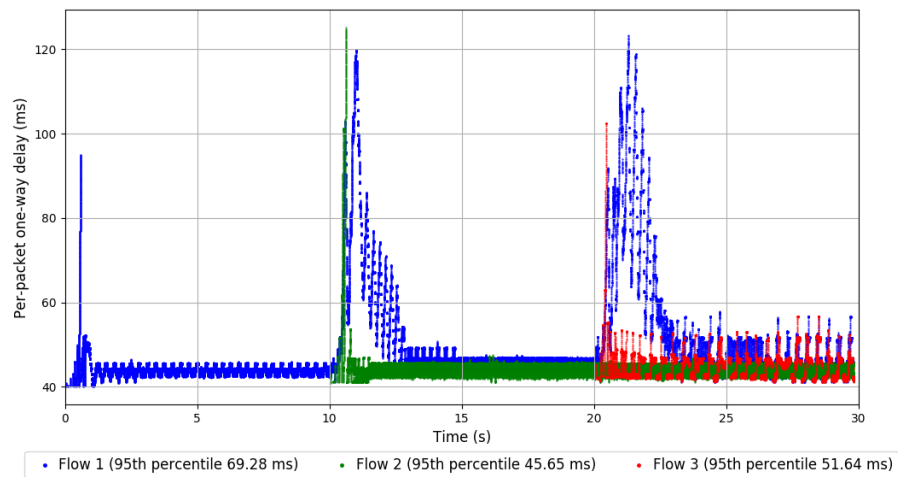
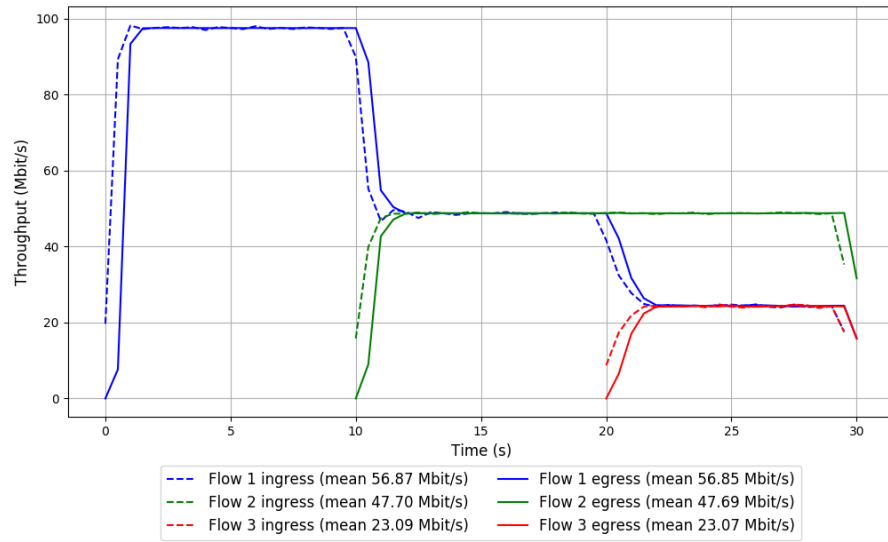


Run 3: Statistics of Indigo

Start at: 2018-09-25 17:34:13  
End at: 2018-09-25 17:34:44  
Local clock offset: 0.299 ms  
Remote clock offset: -5.767 ms

# Below is generated by plot.py at 2018-09-25 18:54:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.08 Mbit/s  
95th percentile per-packet one-way delay: 57.748 ms  
Loss rate: 0.37%  
-- Flow 1:  
Average throughput: 56.85 Mbit/s  
95th percentile per-packet one-way delay: 69.280 ms  
Loss rate: 0.29%  
-- Flow 2:  
Average throughput: 47.69 Mbit/s  
95th percentile per-packet one-way delay: 45.651 ms  
Loss rate: 0.41%  
-- Flow 3:  
Average throughput: 23.07 Mbit/s  
95th percentile per-packet one-way delay: 51.638 ms  
Loss rate: 0.85%

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



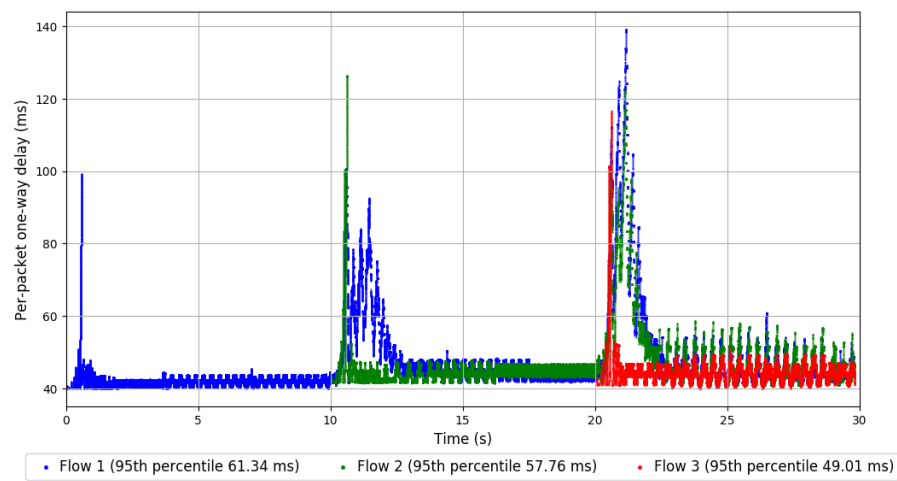
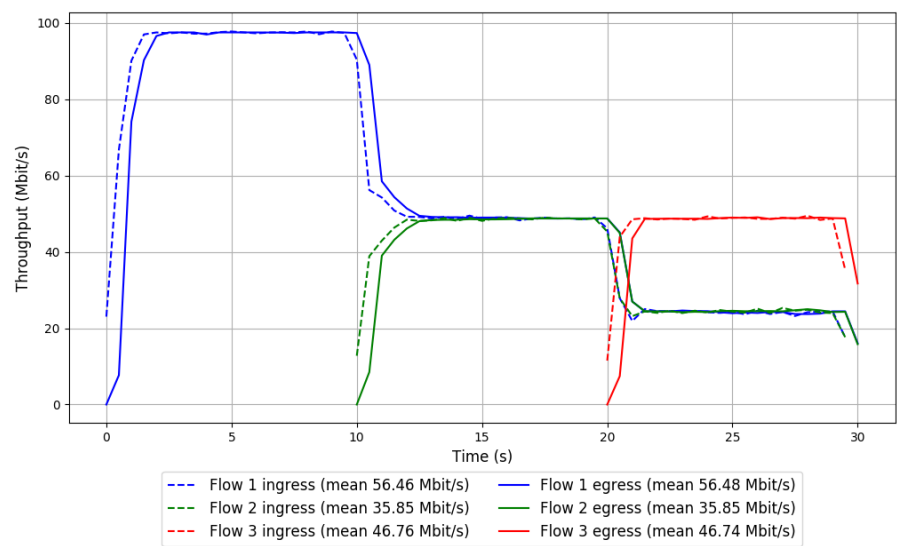


Run 4: Statistics of Indigo

Start at: 2018-09-25 18:00:40  
End at: 2018-09-25 18:01:10  
Local clock offset: 0.213 ms  
Remote clock offset: -3.766 ms

# Below is generated by plot.py at 2018-09-25 18:54:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.60 Mbit/s  
95th percentile per-packet one-way delay: 57.937 ms  
Loss rate: 0.37%  
-- Flow 1:  
Average throughput: 56.48 Mbit/s  
95th percentile per-packet one-way delay: 61.344 ms  
Loss rate: 0.23%  
-- Flow 2:  
Average throughput: 35.85 Mbit/s  
95th percentile per-packet one-way delay: 57.762 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 46.74 Mbit/s  
95th percentile per-packet one-way delay: 49.010 ms  
Loss rate: 0.83%

Run 4: Report of Indigo — Data Link

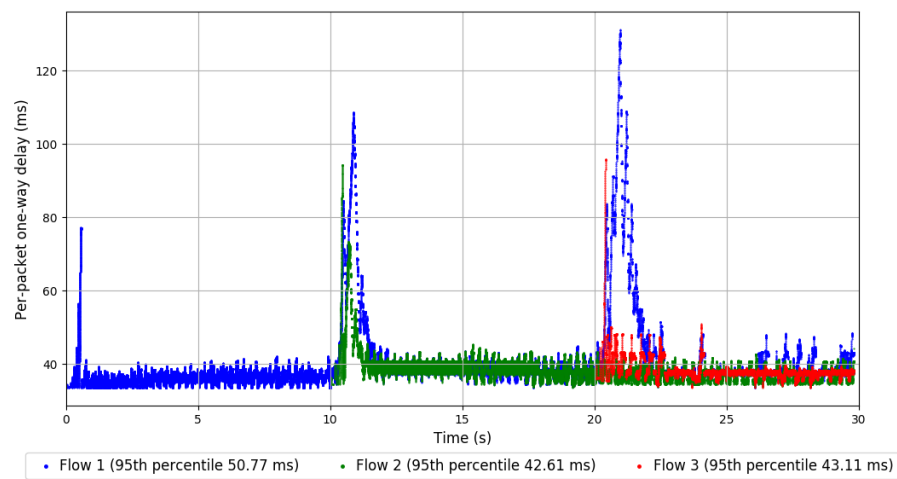
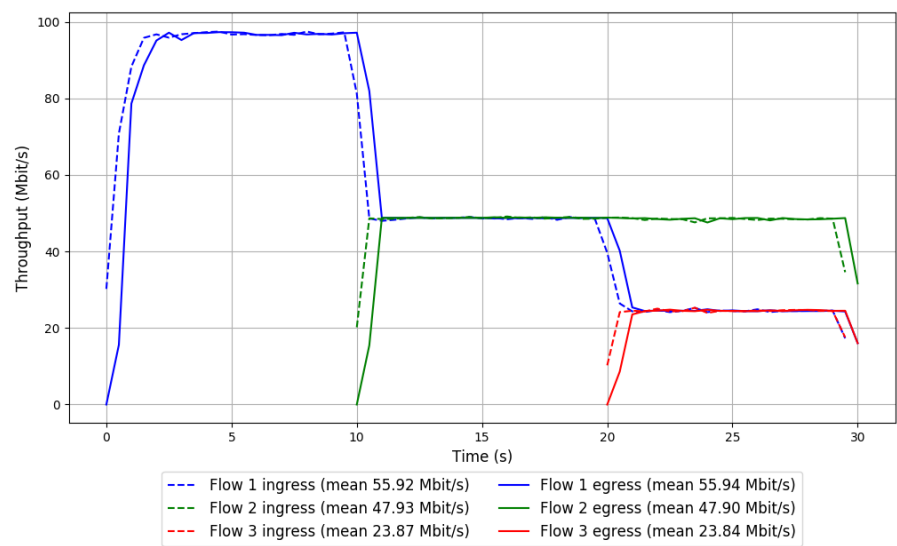


Run 5: Statistics of Indigo

Start at: 2018-09-25 18:27:01  
End at: 2018-09-25 18:27:31  
Local clock offset: -0.068 ms  
Remote clock offset: -2.551 ms

# Below is generated by plot.py at 2018-09-25 18:54:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.54 Mbit/s  
95th percentile per-packet one-way delay: 45.279 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 55.94 Mbit/s  
95th percentile per-packet one-way delay: 50.767 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 47.90 Mbit/s  
95th percentile per-packet one-way delay: 42.611 ms  
Loss rate: 0.35%  
-- Flow 3:  
Average throughput: 23.84 Mbit/s  
95th percentile per-packet one-way delay: 43.114 ms  
Loss rate: 0.80%

Run 5: Report of Indigo — Data Link

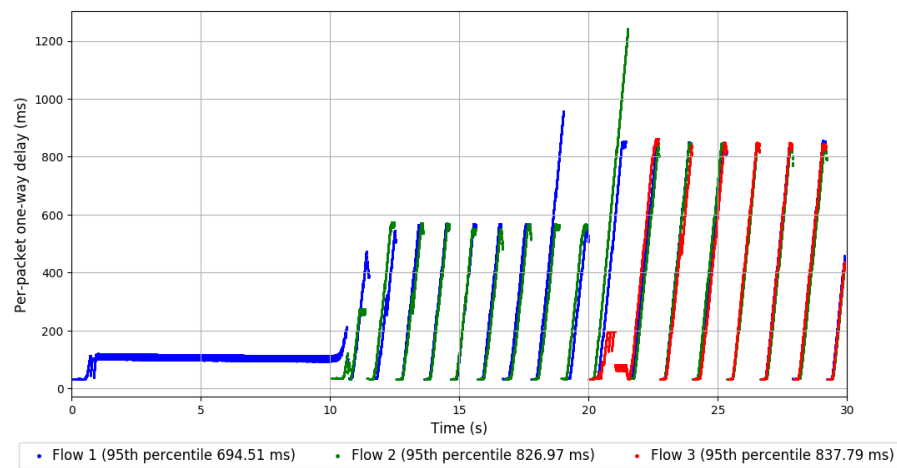
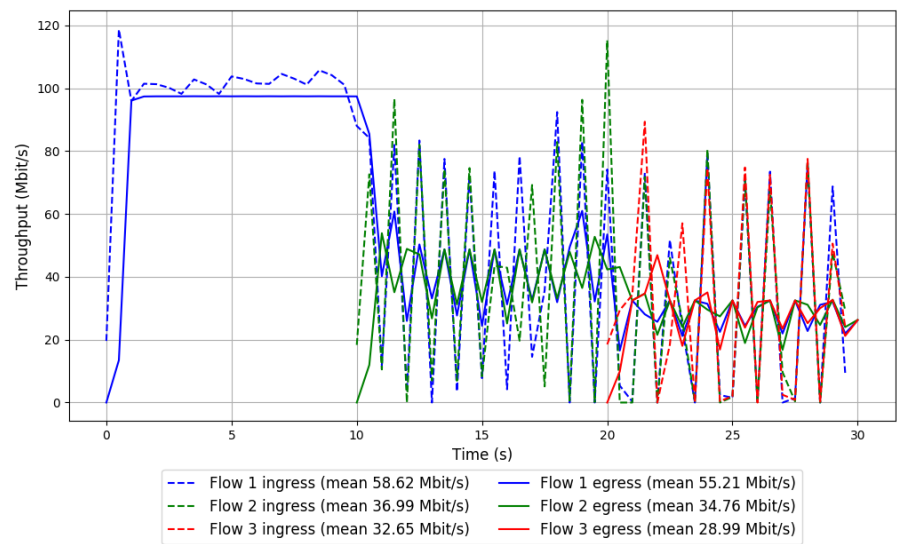


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-25 16:44:03  
End at: 2018-09-25 16:44:33  
Local clock offset: 1.723 ms  
Remote clock offset: -8.014 ms

# Below is generated by plot.py at 2018-09-25 18:54:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.88 Mbit/s  
95th percentile per-packet one-way delay: 801.278 ms  
Loss rate: 5.52%  
-- Flow 1:  
Average throughput: 55.21 Mbit/s  
95th percentile per-packet one-way delay: 694.515 ms  
Loss rate: 5.07%  
-- Flow 2:  
Average throughput: 34.76 Mbit/s  
95th percentile per-packet one-way delay: 826.965 ms  
Loss rate: 5.14%  
-- Flow 3:  
Average throughput: 28.99 Mbit/s  
95th percentile per-packet one-way delay: 837.794 ms  
Loss rate: 8.91%

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



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-25 17:10:25

End at: 2018-09-25 17:10:55

Local clock offset: 3.899 ms

Remote clock offset: -6.94 ms

# Below is generated by plot.py at 2018-09-25 18:54:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 84.79 Mbit/s

95th percentile per-packet one-way delay: 1052.436 ms

Loss rate: 3.54%

-- Flow 1:

Average throughput: 47.94 Mbit/s

95th percentile per-packet one-way delay: 991.887 ms

Loss rate: 2.42%

-- Flow 2:

Average throughput: 42.17 Mbit/s

95th percentile per-packet one-way delay: 1024.676 ms

Loss rate: 2.40%

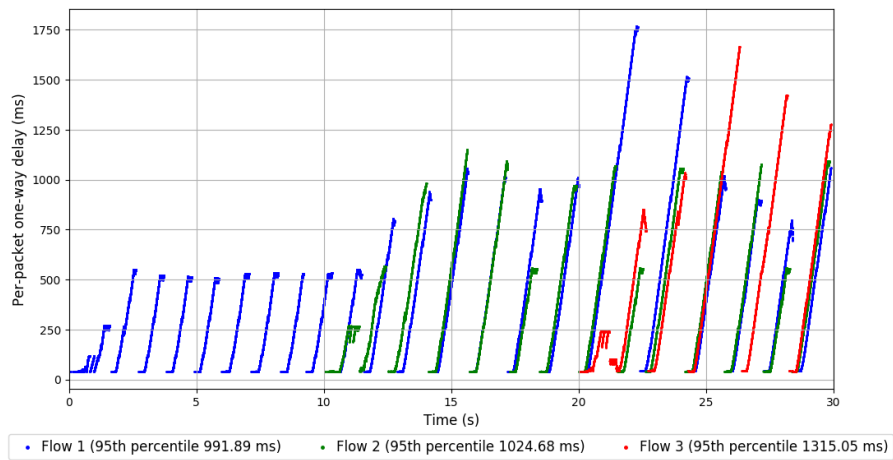
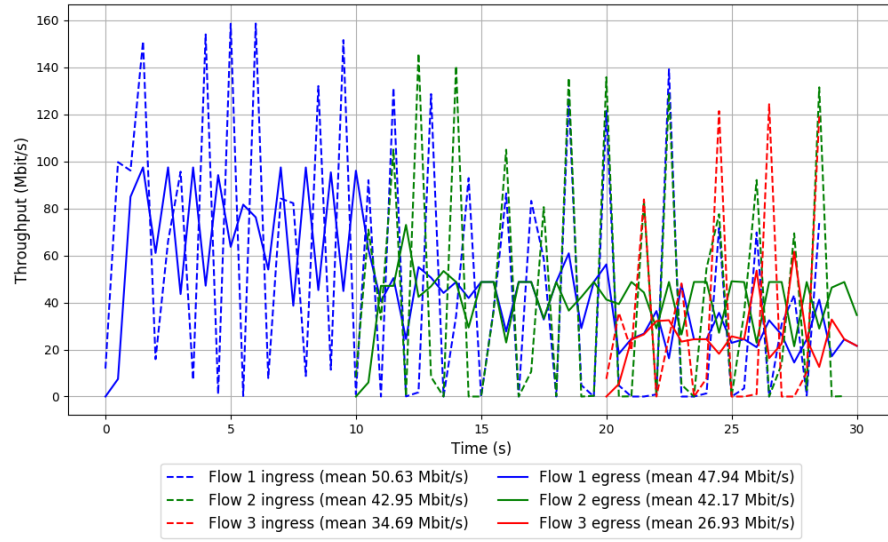
-- Flow 3:

Average throughput: 26.93 Mbit/s

95th percentile per-packet one-way delay: 1315.050 ms

Loss rate: 12.21%

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



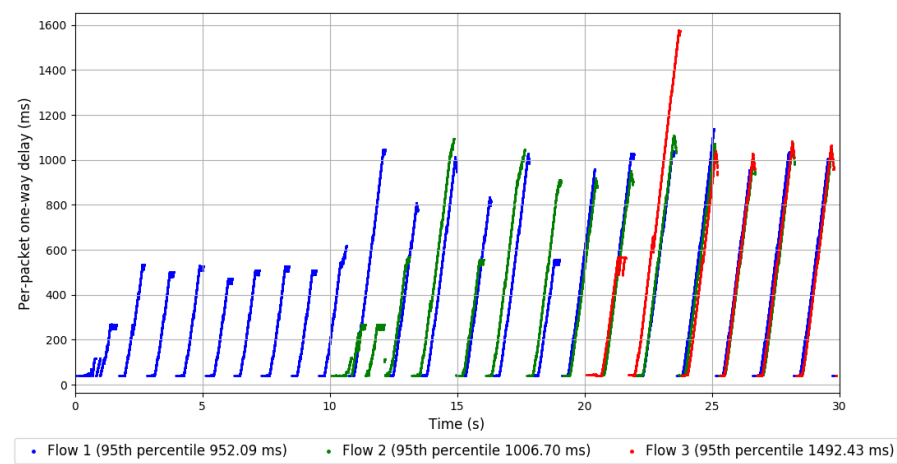
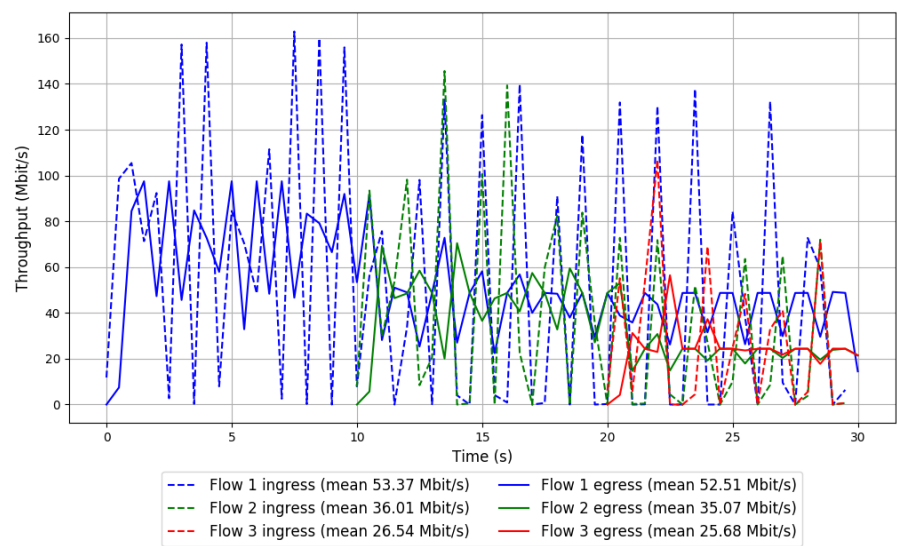


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-25 17:37:02  
End at: 2018-09-25 17:37:32  
Local clock offset: 0.237 ms  
Remote clock offset: -5.474 ms

# Below is generated by plot.py at 2018-09-25 18:54:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.25 Mbit/s  
95th percentile per-packet one-way delay: 1001.785 ms  
Loss rate: 2.42%  
-- Flow 1:  
Average throughput: 52.51 Mbit/s  
95th percentile per-packet one-way delay: 952.094 ms  
Loss rate: 1.90%  
-- Flow 2:  
Average throughput: 35.07 Mbit/s  
95th percentile per-packet one-way delay: 1006.702 ms  
Loss rate: 2.98%  
-- Flow 3:  
Average throughput: 25.68 Mbit/s  
95th percentile per-packet one-way delay: 1492.426 ms  
Loss rate: 4.01%

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

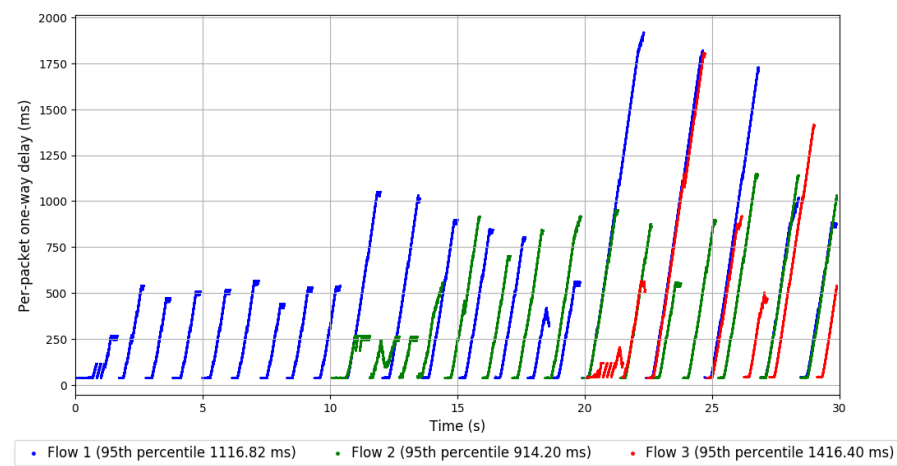
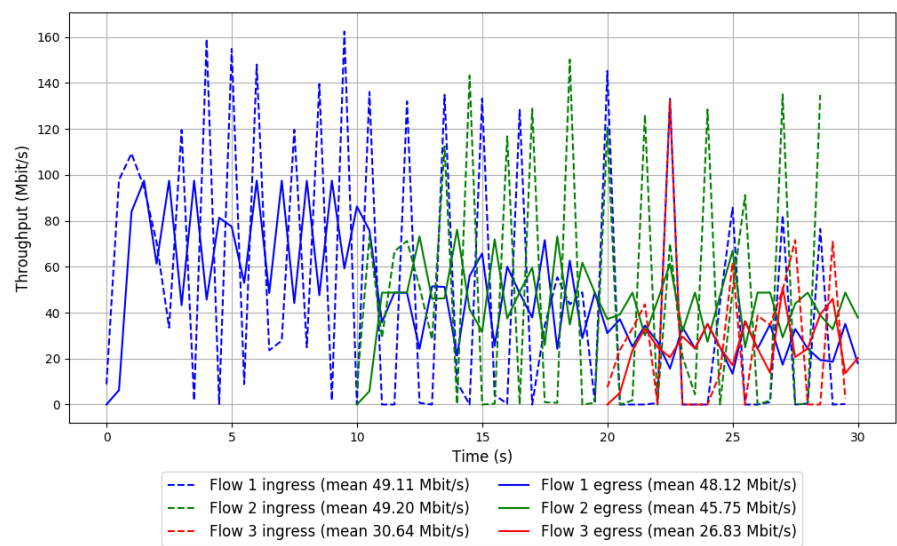


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-25 18:03:28  
End at: 2018-09-25 18:03:58  
Local clock offset: 0.17 ms  
Remote clock offset: -3.782 ms

# Below is generated by plot.py at 2018-09-25 18:54:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.34 Mbit/s  
95th percentile per-packet one-way delay: 1081.133 ms  
Loss rate: 3.27%  
-- Flow 1:  
Average throughput: 48.12 Mbit/s  
95th percentile per-packet one-way delay: 1116.816 ms  
Loss rate: 2.33%  
-- Flow 2:  
Average throughput: 45.75 Mbit/s  
95th percentile per-packet one-way delay: 914.199 ms  
Loss rate: 2.74%  
-- Flow 3:  
Average throughput: 26.83 Mbit/s  
95th percentile per-packet one-way delay: 1416.401 ms  
Loss rate: 9.71%

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

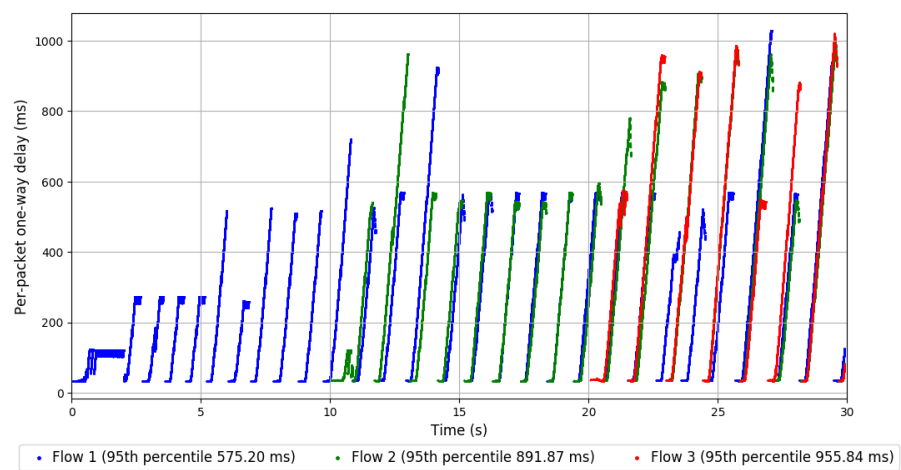
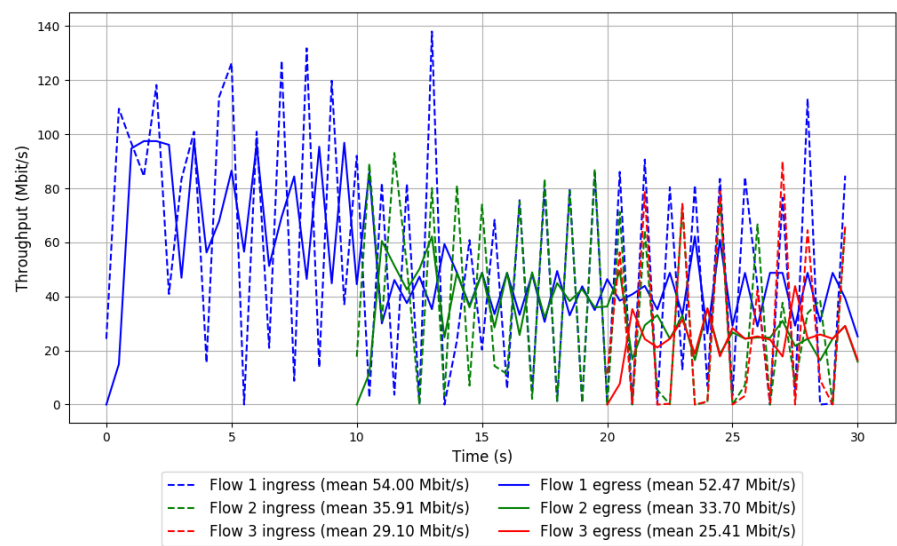


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-25 18:29:48  
End at: 2018-09-25 18:30:18  
Local clock offset: -0.079 ms  
Remote clock offset: -2.439 ms

# Below is generated by plot.py at 2018-09-25 18:54:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.25 Mbit/s  
95th percentile per-packet one-way delay: 839.705 ms  
Loss rate: 5.10%  
-- Flow 1:  
Average throughput: 52.47 Mbit/s  
95th percentile per-packet one-way delay: 575.196 ms  
Loss rate: 3.04%  
-- Flow 2:  
Average throughput: 33.70 Mbit/s  
95th percentile per-packet one-way delay: 891.871 ms  
Loss rate: 6.46%  
-- Flow 3:  
Average throughput: 25.41 Mbit/s  
95th percentile per-packet one-way delay: 955.837 ms  
Loss rate: 13.23%

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

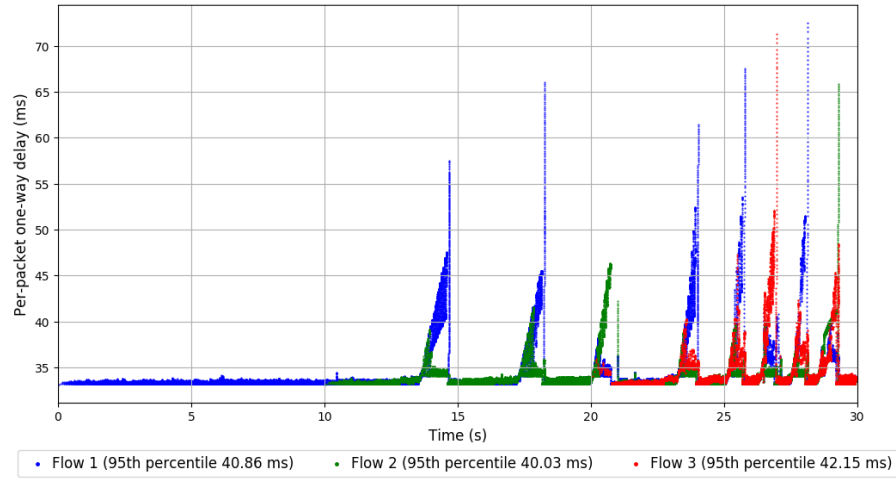
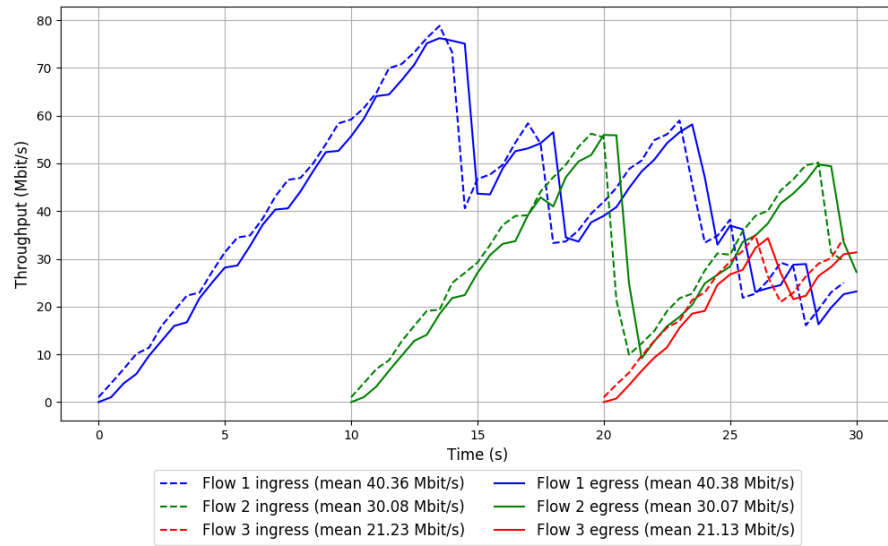


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-25 16:37:10
End at: 2018-09-25 16:37:40
Local clock offset: 0.38 ms
Remote clock offset: -7.626 ms

# Below is generated by plot.py at 2018-09-25 18:55:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.38 Mbit/s
95th percentile per-packet one-way delay: 40.679 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 40.38 Mbit/s
95th percentile per-packet one-way delay: 40.856 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 30.07 Mbit/s
95th percentile per-packet one-way delay: 40.030 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 21.13 Mbit/s
95th percentile per-packet one-way delay: 42.154 ms
Loss rate: 1.11%
```

# Run 1: Report of LEDBAT — Data Link





Run 2: Statistics of LEDBAT

Start at: 2018-09-25 17:03:27

End at: 2018-09-25 17:03:57

Local clock offset: 3.952 ms

Remote clock offset: -7.28 ms

# Below is generated by plot.py at 2018-09-25 18:55:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 61.82 Mbit/s

95th percentile per-packet one-way delay: 47.221 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 39.14 Mbit/s

95th percentile per-packet one-way delay: 45.795 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 26.02 Mbit/s

95th percentile per-packet one-way delay: 49.497 ms

Loss rate: 0.05%

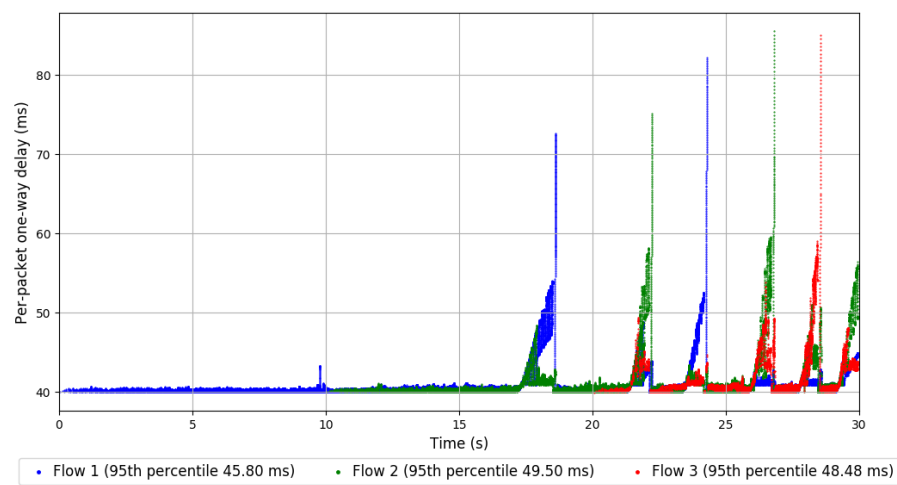
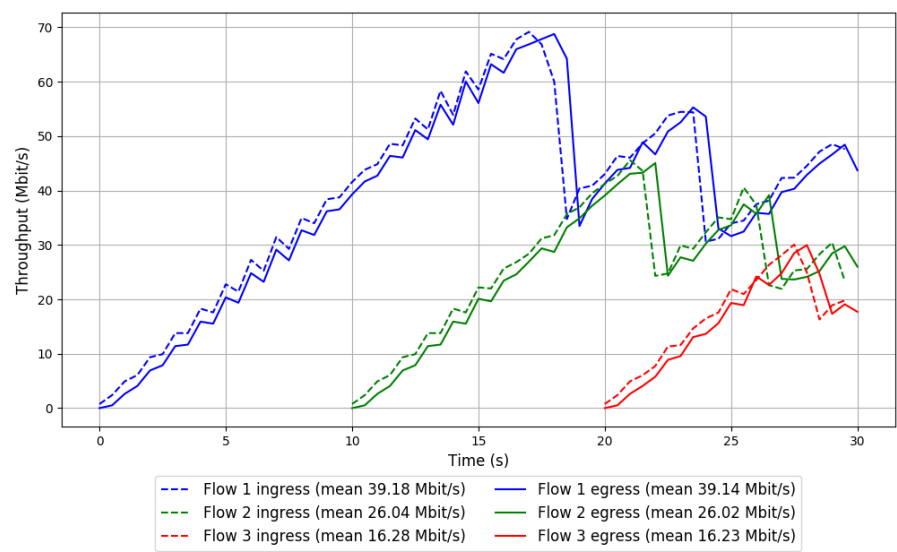
-- Flow 3:

Average throughput: 16.23 Mbit/s

95th percentile per-packet one-way delay: 48.485 ms

Loss rate: 1.06%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-09-25 17:30:04

End at: 2018-09-25 17:30:34

Local clock offset: 0.482 ms

Remote clock offset: -5.94 ms

# Below is generated by plot.py at 2018-09-25 18:55:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 60.64 Mbit/s

95th percentile per-packet one-way delay: 47.008 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 36.42 Mbit/s

95th percentile per-packet one-way delay: 47.426 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 27.02 Mbit/s

95th percentile per-packet one-way delay: 45.335 ms

Loss rate: 0.53%

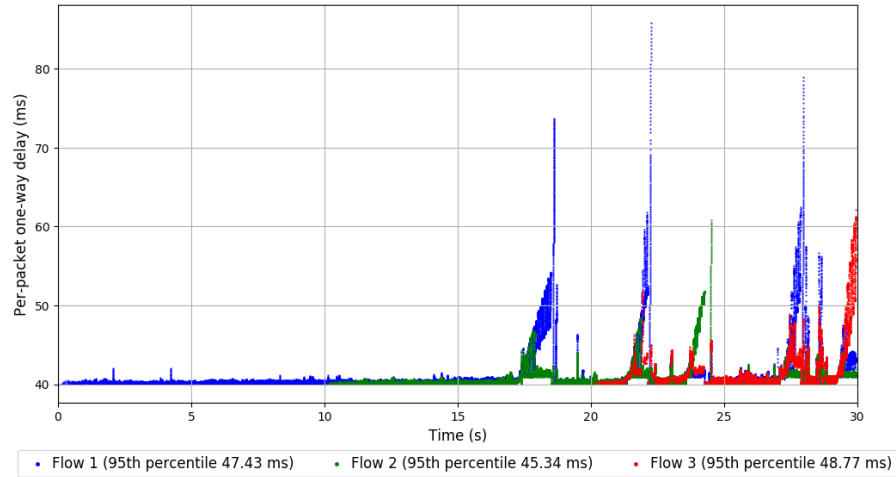
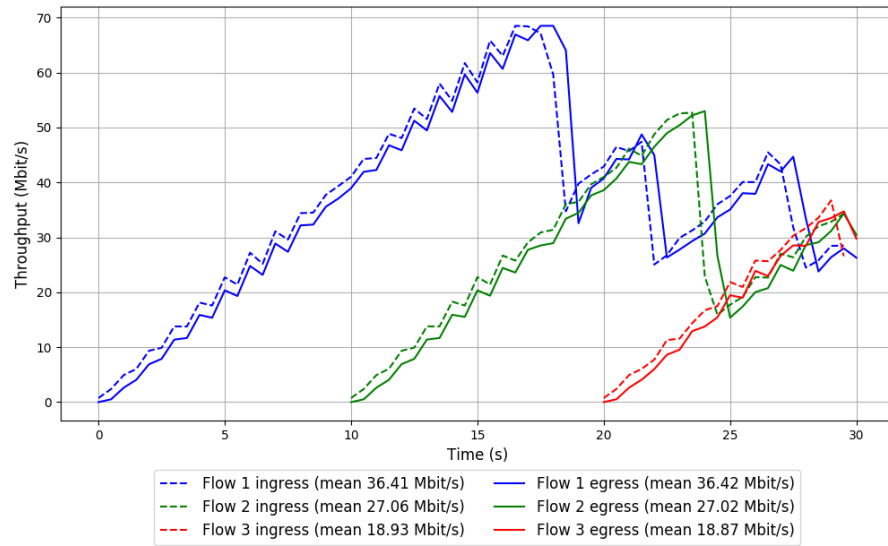
-- Flow 3:

Average throughput: 18.87 Mbit/s

95th percentile per-packet one-way delay: 48.765 ms

Loss rate: 0.23%

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

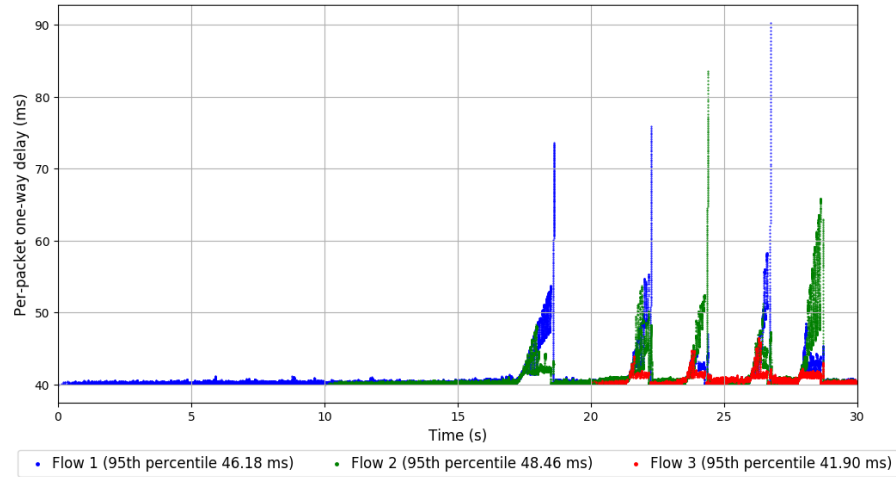
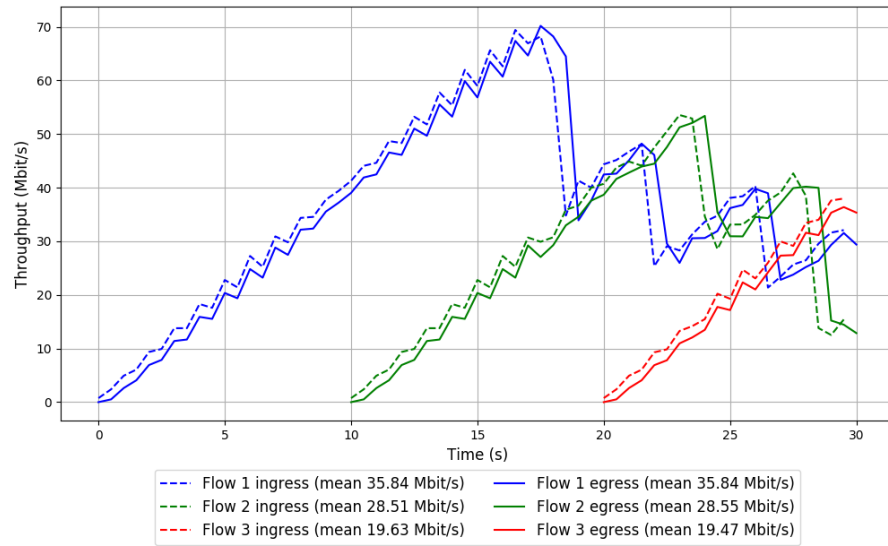


Run 4: Statistics of LEDBAT

Start at: 2018-09-25 17:56:31  
End at: 2018-09-25 17:57:01  
Local clock offset: 0.206 ms  
Remote clock offset: -4.243 ms

# Below is generated by plot.py at 2018-09-25 18:55:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 61.29 Mbit/s  
95th percentile per-packet one-way delay: 46.619 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 35.84 Mbit/s  
95th percentile per-packet one-way delay: 46.183 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 28.55 Mbit/s  
95th percentile per-packet one-way delay: 48.464 ms  
Loss rate: 0.23%  
-- Flow 3:  
Average throughput: 19.47 Mbit/s  
95th percentile per-packet one-way delay: 41.895 ms  
Loss rate: 1.56%

#### Run 4: Report of LEDBAT — Data Link

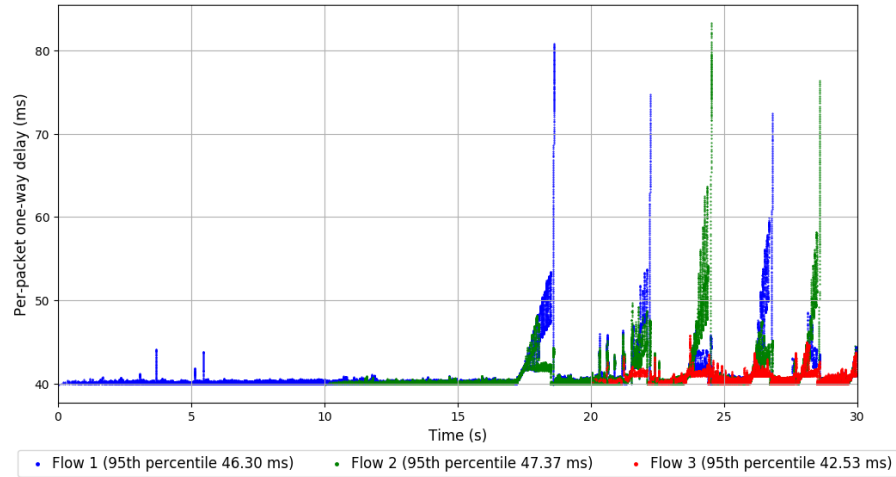
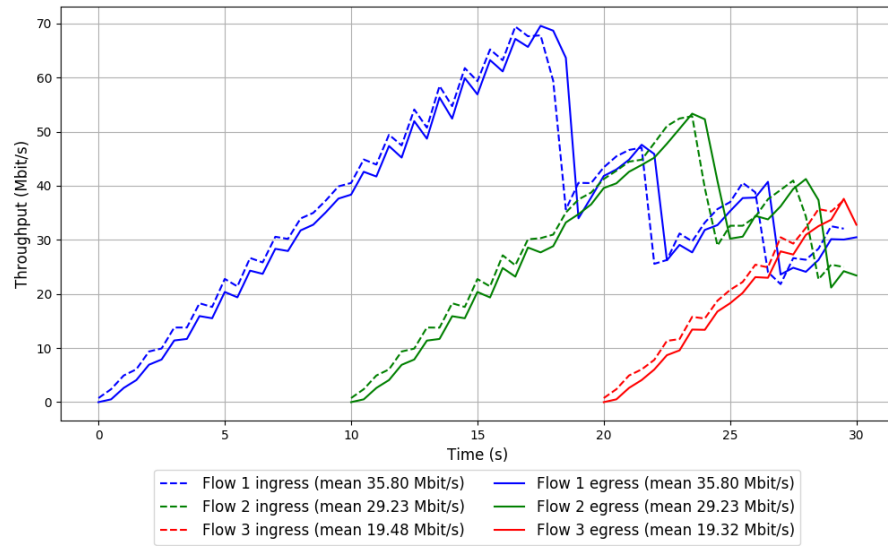


Run 5: Statistics of LEDBAT

Start at: 2018-09-25 18:22:52  
End at: 2018-09-25 18:23:22  
Local clock offset: -0.022 ms  
Remote clock offset: -2.654 ms

# Below is generated by plot.py at 2018-09-25 18:55:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 61.62 Mbit/s  
95th percentile per-packet one-way delay: 46.295 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 35.80 Mbit/s  
95th percentile per-packet one-way delay: 46.299 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 29.23 Mbit/s  
95th percentile per-packet one-way delay: 47.372 ms  
Loss rate: 0.37%  
-- Flow 3:  
Average throughput: 19.32 Mbit/s  
95th percentile per-packet one-way delay: 42.533 ms  
Loss rate: 1.56%

## Run 5: Report of LEDBAT — Data Link



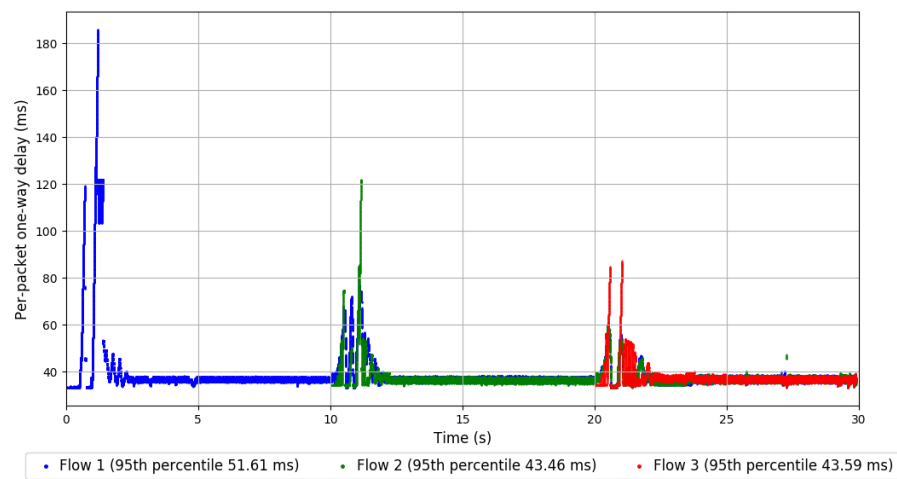
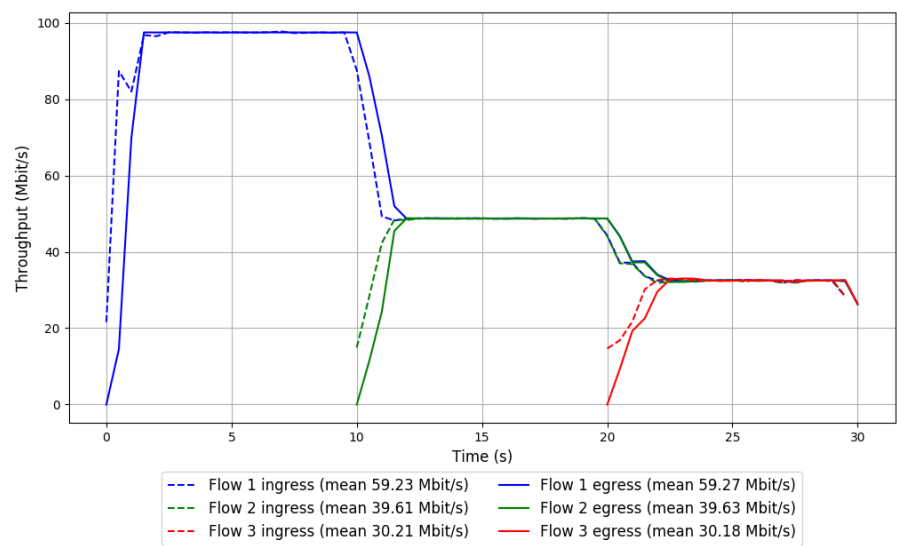


Run 1: Statistics of Indigo-Muses

Start at: 2018-09-25 16:42:40  
End at: 2018-09-25 16:43:10  
Local clock offset: 1.408 ms  
Remote clock offset: -8.004 ms

# Below is generated by plot.py at 2018-09-25 18:55:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.58 Mbit/s  
95th percentile per-packet one-way delay: 48.238 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 59.27 Mbit/s  
95th percentile per-packet one-way delay: 51.613 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 39.63 Mbit/s  
95th percentile per-packet one-way delay: 43.457 ms  
Loss rate: 0.29%  
-- Flow 3:  
Average throughput: 30.18 Mbit/s  
95th percentile per-packet one-way delay: 43.587 ms  
Loss rate: 0.74%

Run 1: Report of Indigo-Muses — Data Link

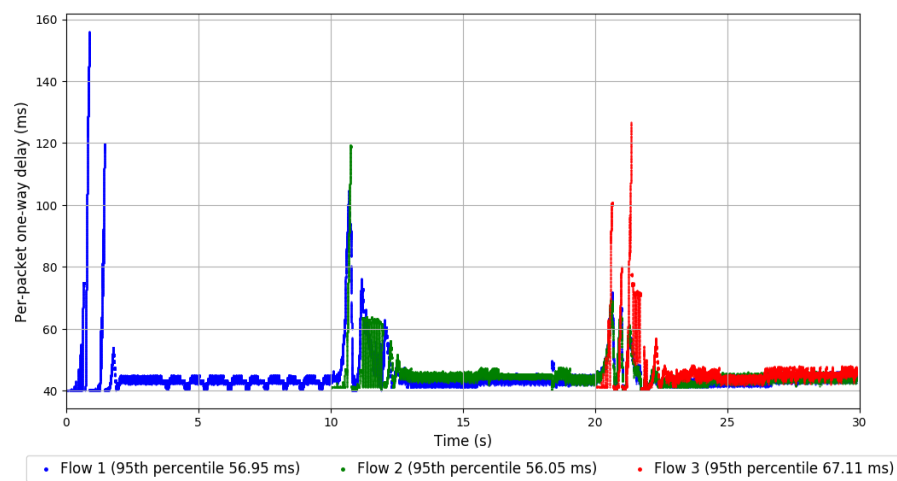
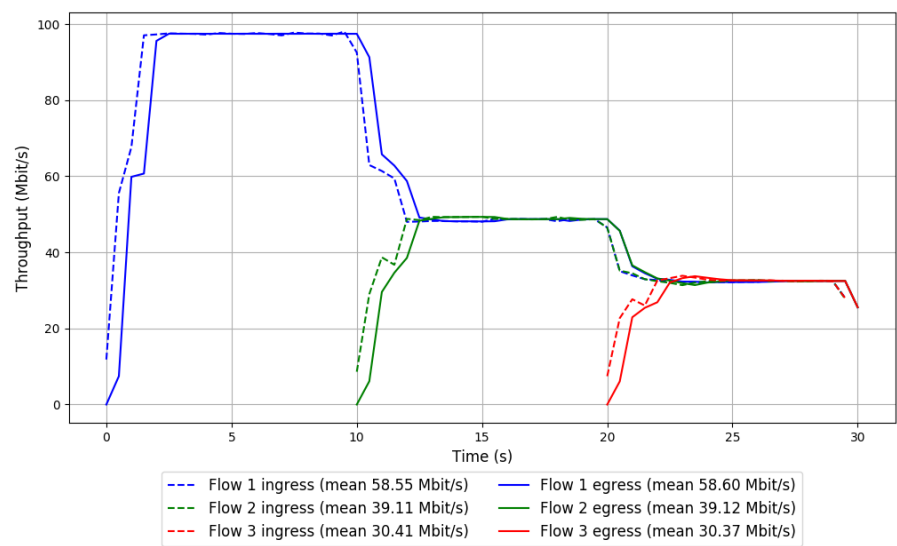


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-25 17:09:02  
End at: 2018-09-25 17:09:32  
Local clock offset: 4.269 ms  
Remote clock offset: -6.995 ms

# Below is generated by plot.py at 2018-09-25 18:56:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.62 Mbit/s  
95th percentile per-packet one-way delay: 57.258 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 58.60 Mbit/s  
95th percentile per-packet one-way delay: 56.955 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 39.12 Mbit/s  
95th percentile per-packet one-way delay: 56.050 ms  
Loss rate: 0.35%  
-- Flow 3:  
Average throughput: 30.37 Mbit/s  
95th percentile per-packet one-way delay: 67.112 ms  
Loss rate: 0.91%

Run 2: Report of Indigo-Muses — Data Link

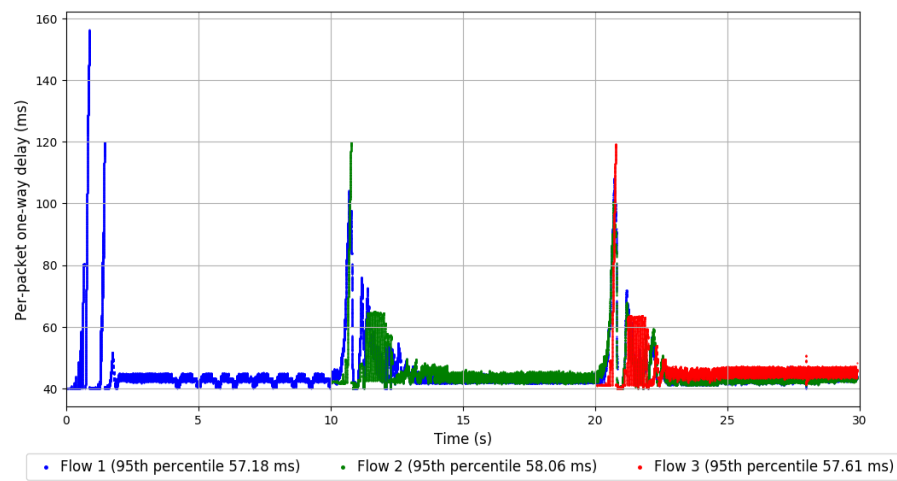
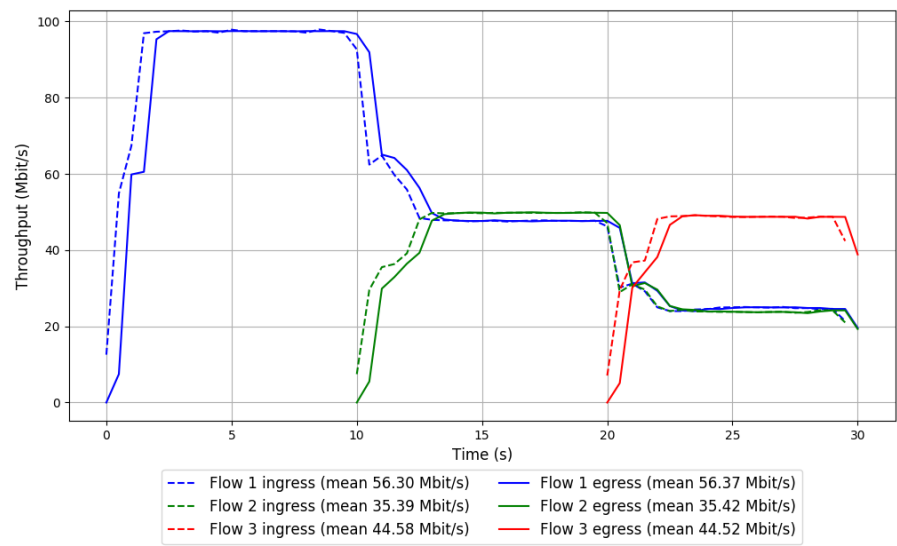


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-25 17:35:38  
End at: 2018-09-25 17:36:08  
Local clock offset: 0.239 ms  
Remote clock offset: -5.666 ms

# Below is generated by plot.py at 2018-09-25 18:56:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.58 Mbit/s  
95th percentile per-packet one-way delay: 57.519 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 56.37 Mbit/s  
95th percentile per-packet one-way delay: 57.177 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 35.42 Mbit/s  
95th percentile per-packet one-way delay: 58.058 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 44.52 Mbit/s  
95th percentile per-packet one-way delay: 57.610 ms  
Loss rate: 0.90%

Run 3: Report of Indigo-Muses — Data Link

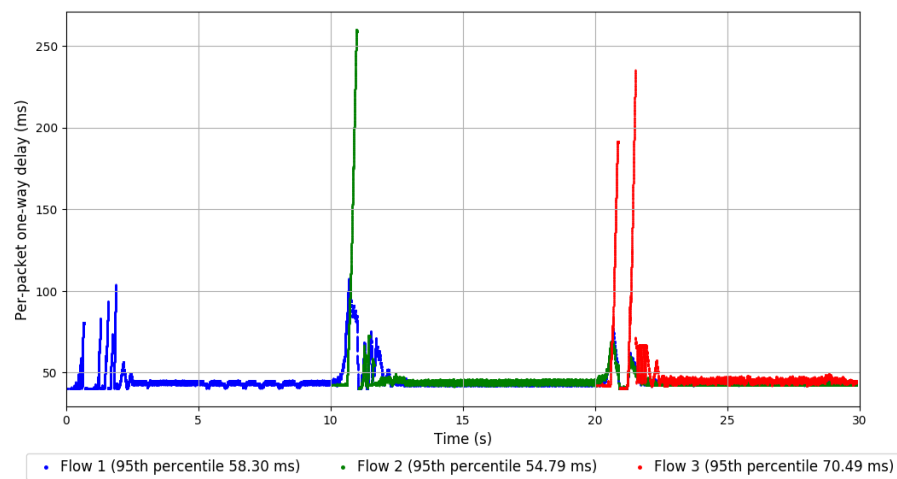
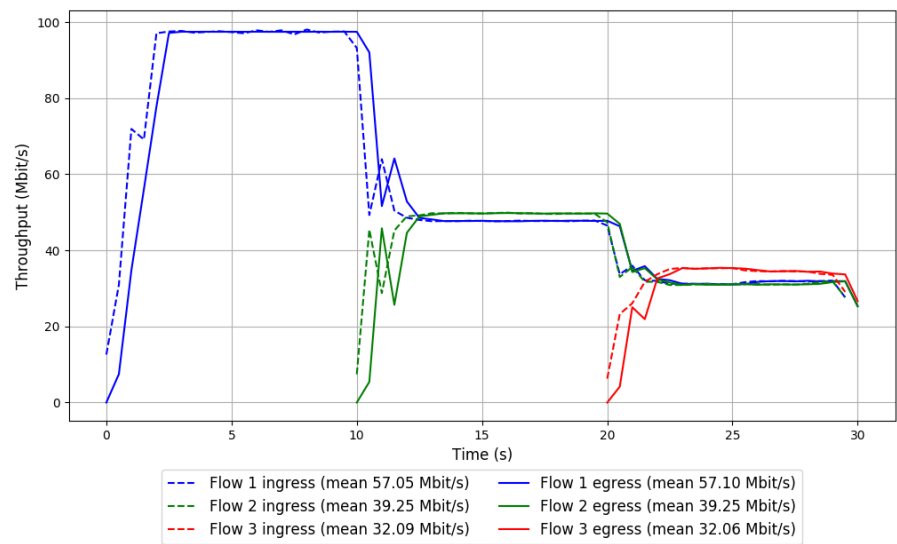


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-25 18:02:05  
End at: 2018-09-25 18:02:35  
Local clock offset: 0.182 ms  
Remote clock offset: -3.941 ms

# Below is generated by plot.py at 2018-09-25 18:56:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.74 Mbit/s  
95th percentile per-packet one-way delay: 58.664 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 57.10 Mbit/s  
95th percentile per-packet one-way delay: 58.295 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 39.25 Mbit/s  
95th percentile per-packet one-way delay: 54.792 ms  
Loss rate: 0.41%  
-- Flow 3:  
Average throughput: 32.06 Mbit/s  
95th percentile per-packet one-way delay: 70.486 ms  
Loss rate: 0.90%

Run 4: Report of Indigo-Muses — Data Link



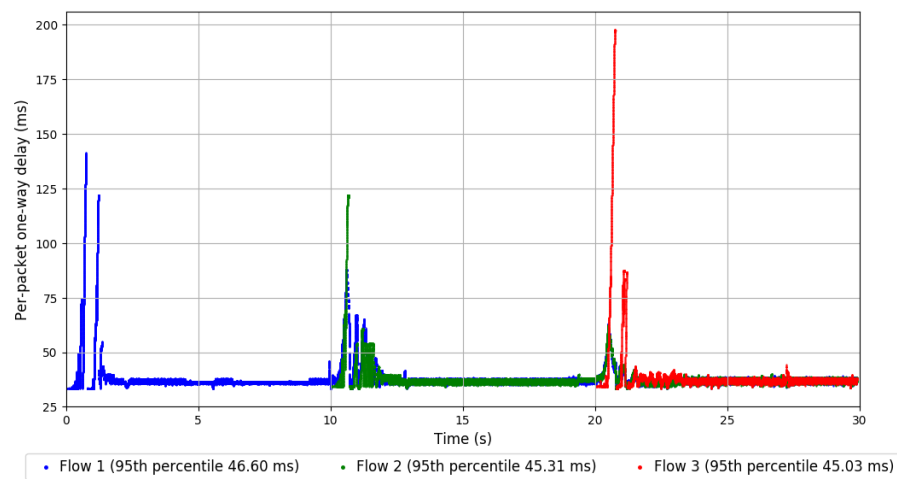
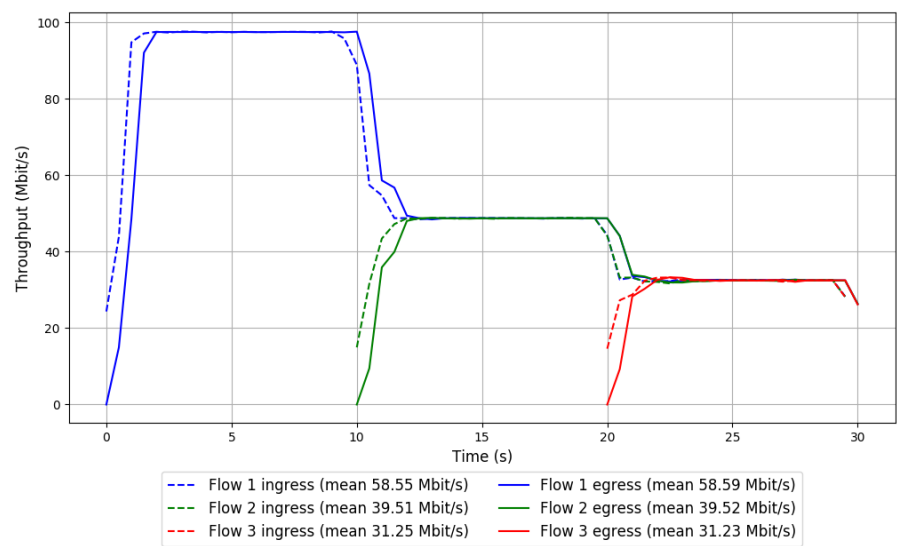


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-25 18:28:25  
End at: 2018-09-25 18:28:55  
Local clock offset: -0.096 ms  
Remote clock offset: -2.388 ms

# Below is generated by plot.py at 2018-09-25 18:56:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.15 Mbit/s  
95th percentile per-packet one-way delay: 46.211 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 58.59 Mbit/s  
95th percentile per-packet one-way delay: 46.598 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 39.52 Mbit/s  
95th percentile per-packet one-way delay: 45.306 ms  
Loss rate: 0.29%  
-- Flow 3:  
Average throughput: 31.23 Mbit/s  
95th percentile per-packet one-way delay: 45.033 ms  
Loss rate: 0.72%

Run 5: Report of Indigo-Muses — Data Link

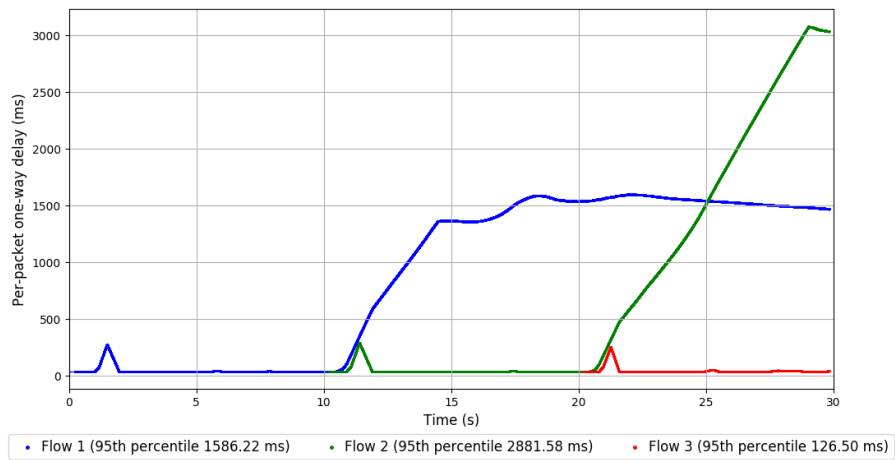
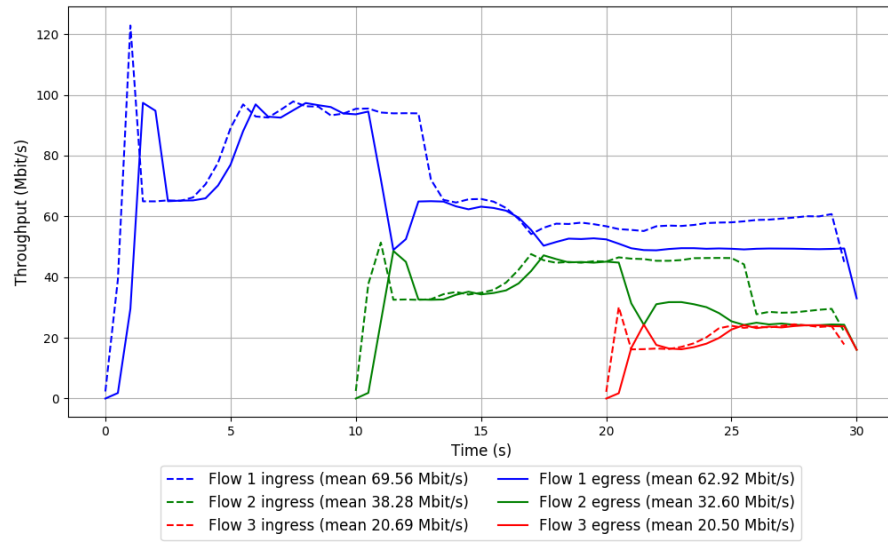


Run 1: Statistics of PCC-Allegro

Start at: 2018-09-25 17:00:37  
End at: 2018-09-25 17:01:07  
Local clock offset: 3.743 ms  
Remote clock offset: -7.213 ms

# Below is generated by plot.py at 2018-09-25 18:56:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.30 Mbit/s  
95th percentile per-packet one-way delay: 1598.146 ms  
Loss rate: 10.59%  
-- Flow 1:  
Average throughput: 62.92 Mbit/s  
95th percentile per-packet one-way delay: 1586.220 ms  
Loss rate: 9.78%  
-- Flow 2:  
Average throughput: 32.60 Mbit/s  
95th percentile per-packet one-way delay: 2881.581 ms  
Loss rate: 15.17%  
-- Flow 3:  
Average throughput: 20.50 Mbit/s  
95th percentile per-packet one-way delay: 126.495 ms  
Loss rate: 1.71%

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

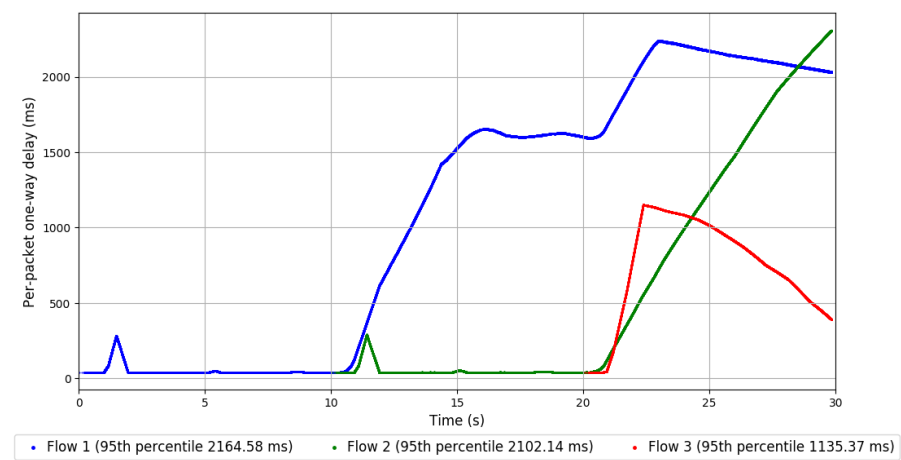
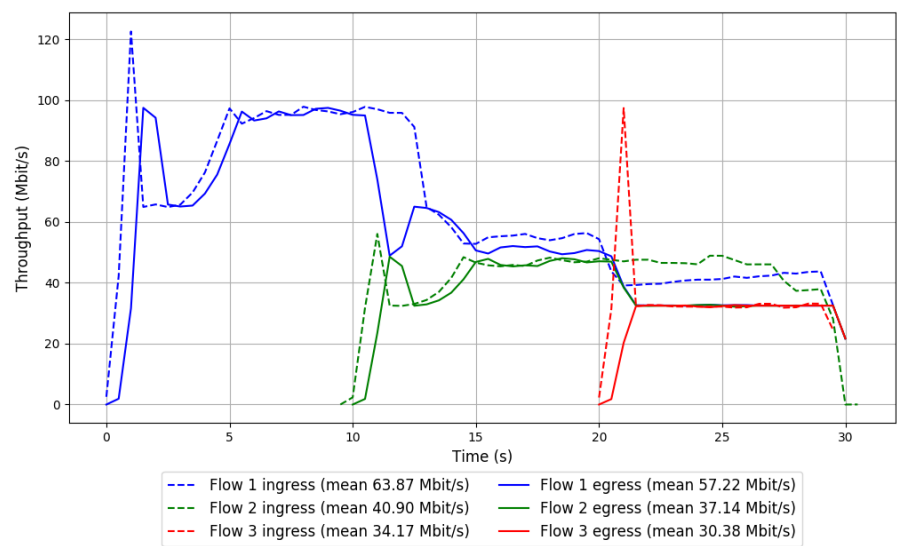


Run 2: Statistics of PCC-Allegro

Start at: 2018-09-25 17:27:11  
End at: 2018-09-25 17:27:41  
Local clock offset: 0.658 ms  
Remote clock offset: -6.164 ms

# Below is generated by plot.py at 2018-09-25 18:56:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.86 Mbit/s  
95th percentile per-packet one-way delay: 2144.339 ms  
Loss rate: 11.60%  
-- Flow 1:  
Average throughput: 57.22 Mbit/s  
95th percentile per-packet one-way delay: 2164.577 ms  
Loss rate: 10.64%  
-- Flow 2:  
Average throughput: 37.14 Mbit/s  
95th percentile per-packet one-way delay: 2102.137 ms  
Loss rate: 13.70%  
-- Flow 3:  
Average throughput: 30.38 Mbit/s  
95th percentile per-packet one-way delay: 1135.371 ms  
Loss rate: 11.71%

Run 2: Report of PCC-Allegro — Data Link

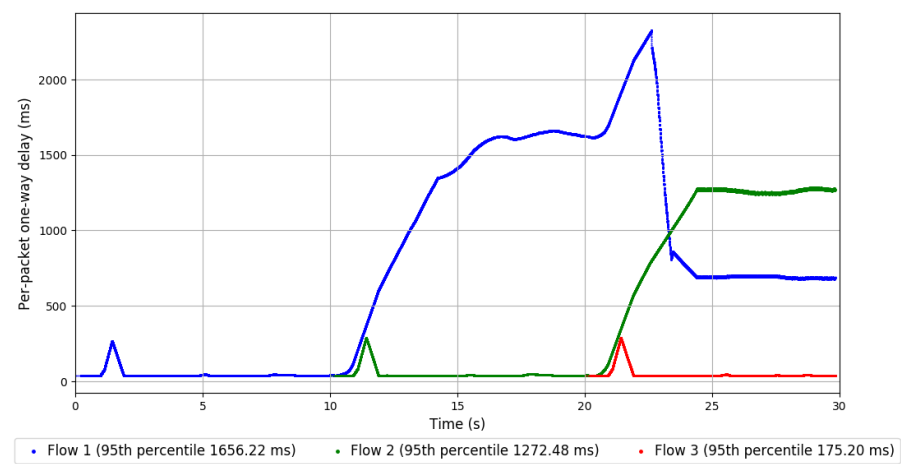
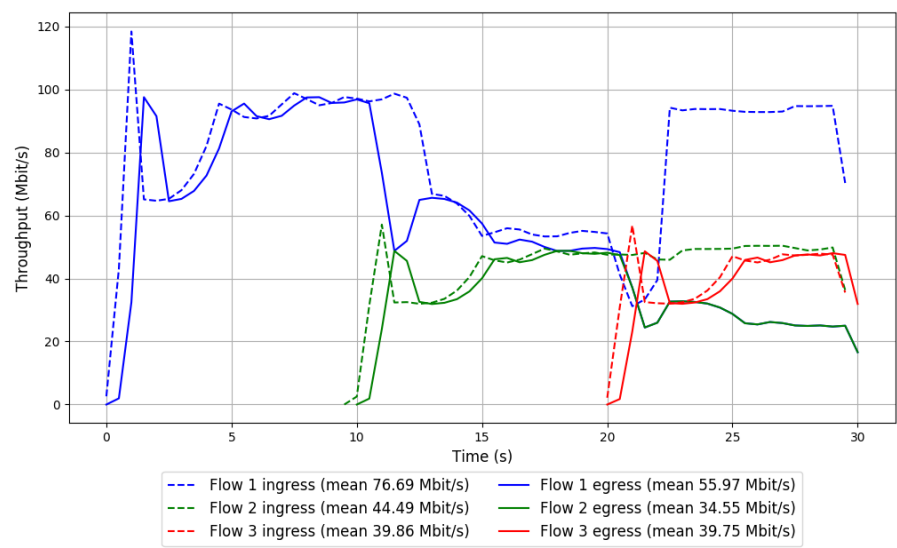


Run 3: Statistics of PCC-Allegro

Start at: 2018-09-25 17:53:41  
End at: 2018-09-25 17:54:11  
Local clock offset: 0.219 ms  
Remote clock offset: -4.424 ms

# Below is generated by plot.py at 2018-09-25 18:56:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.98 Mbit/s  
95th percentile per-packet one-way delay: 1638.625 ms  
Loss rate: 23.18%  
-- Flow 1:  
Average throughput: 55.97 Mbit/s  
95th percentile per-packet one-way delay: 1656.221 ms  
Loss rate: 27.19%  
-- Flow 2:  
Average throughput: 34.55 Mbit/s  
95th percentile per-packet one-way delay: 1272.478 ms  
Loss rate: 22.63%  
-- Flow 3:  
Average throughput: 39.75 Mbit/s  
95th percentile per-packet one-way delay: 175.196 ms  
Loss rate: 1.04%

Run 3: Report of PCC-Allegro — Data Link



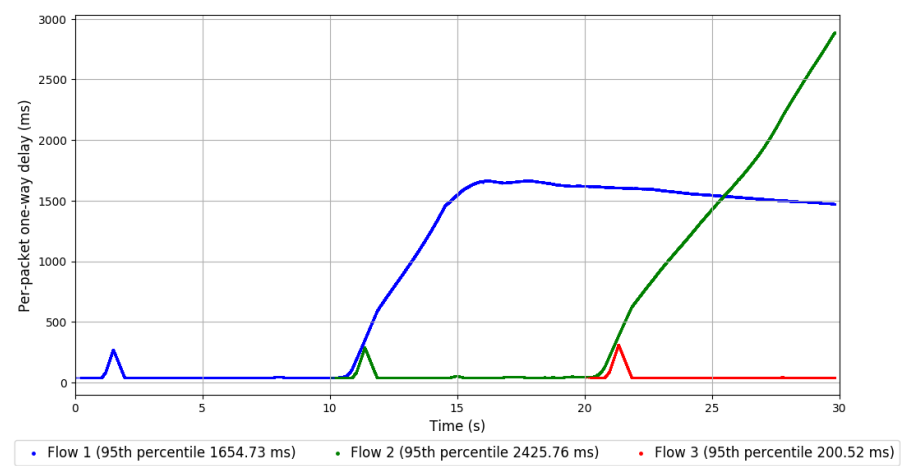
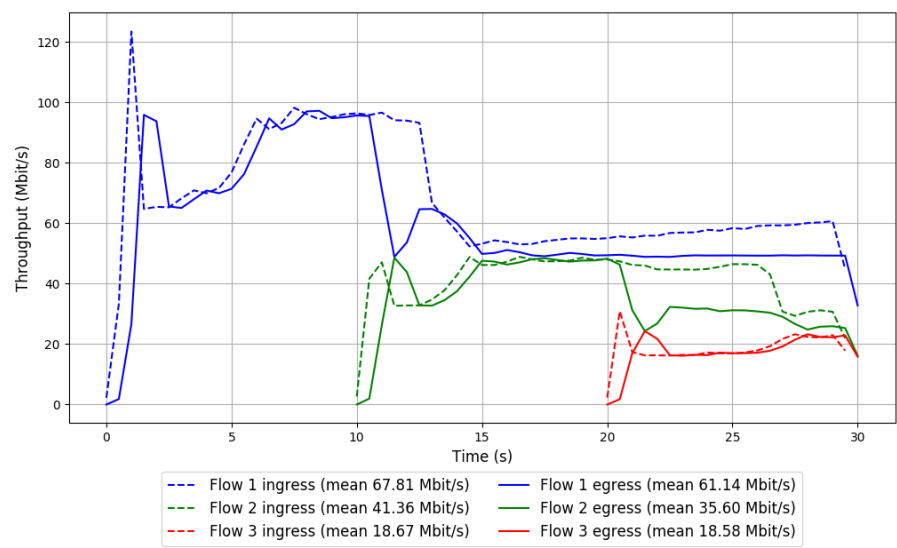


Run 4: Statistics of PCC-Allegro

Start at: 2018-09-25 18:20:02  
End at: 2018-09-25 18:20:32  
Local clock offset: 0.012 ms  
Remote clock offset: -2.812 ms

# Below is generated by plot.py at 2018-09-25 18:57:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.89 Mbit/s  
95th percentile per-packet one-way delay: 1662.798 ms  
Loss rate: 10.66%  
-- Flow 1:  
Average throughput: 61.14 Mbit/s  
95th percentile per-packet one-way delay: 1654.730 ms  
Loss rate: 10.06%  
-- Flow 2:  
Average throughput: 35.60 Mbit/s  
95th percentile per-packet one-way delay: 2425.757 ms  
Loss rate: 14.26%  
-- Flow 3:  
Average throughput: 18.58 Mbit/s  
95th percentile per-packet one-way delay: 200.522 ms  
Loss rate: 1.26%

Run 4: Report of PCC-Allegro — Data Link

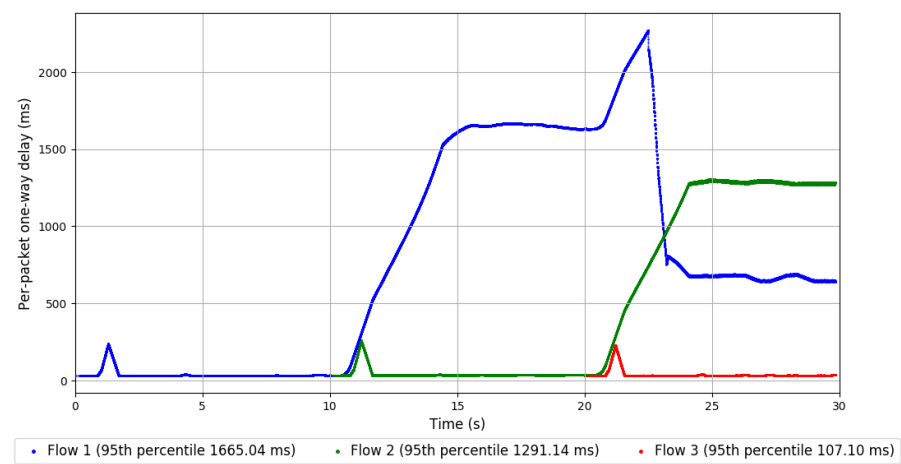
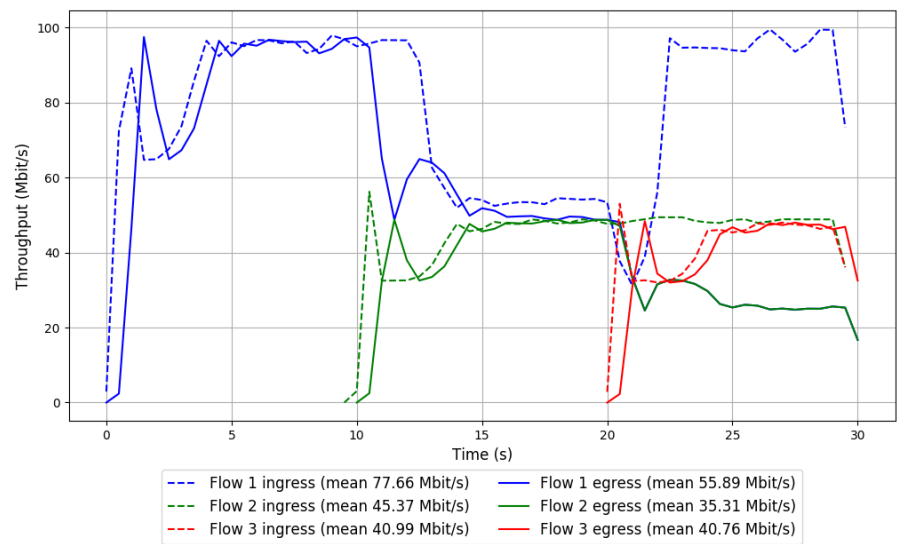


Run 5: Statistics of PCC-Allegro

Start at: 2018-09-25 18:46:17  
End at: 2018-09-25 18:46:47  
Local clock offset: -0.133 ms  
Remote clock offset: -1.892 ms

# Below is generated by plot.py at 2018-09-25 18:57:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.75 Mbit/s  
95th percentile per-packet one-way delay: 1660.115 ms  
Loss rate: 23.74%  
-- Flow 1:  
Average throughput: 55.89 Mbit/s  
95th percentile per-packet one-way delay: 1665.040 ms  
Loss rate: 28.18%  
-- Flow 2:  
Average throughput: 35.31 Mbit/s  
95th percentile per-packet one-way delay: 1291.138 ms  
Loss rate: 22.42%  
-- Flow 3:  
Average throughput: 40.76 Mbit/s  
95th percentile per-packet one-way delay: 107.097 ms  
Loss rate: 1.20%

Run 5: Report of PCC-Allegro — Data Link

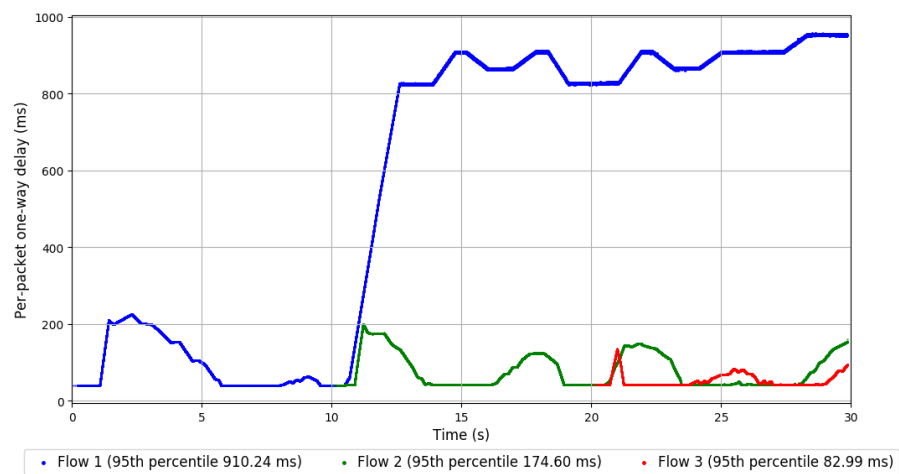
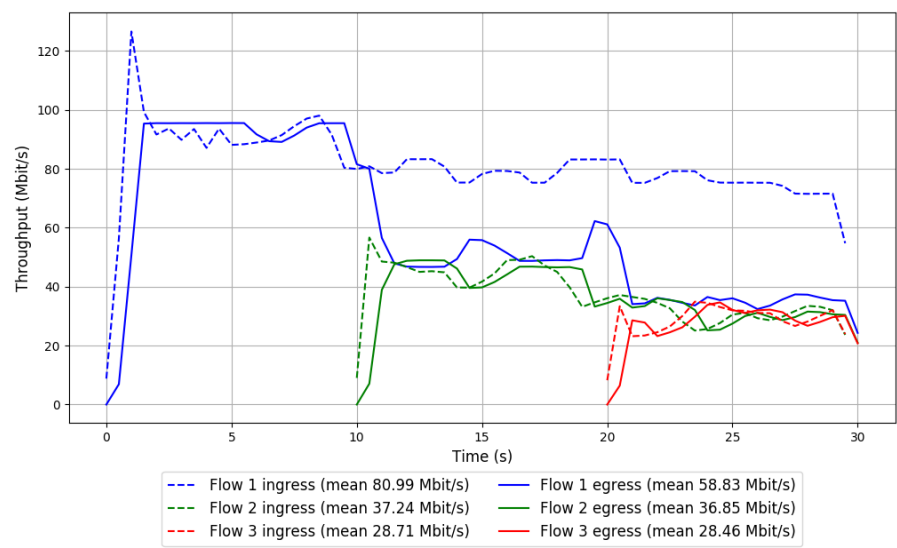


```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-25 16:56:18
End at: 2018-09-25 16:56:48
Local clock offset: 3.412 ms
Remote clock offset: -7.703 ms

# Below is generated by plot.py at 2018-09-25 18:58:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.66 Mbit/s
95th percentile per-packet one-way delay: 908.265 ms
Loss rate: 19.79%
-- Flow 1:
Average throughput: 58.83 Mbit/s
95th percentile per-packet one-way delay: 910.238 ms
Loss rate: 27.55%
-- Flow 2:
Average throughput: 36.85 Mbit/s
95th percentile per-packet one-way delay: 174.600 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 28.46 Mbit/s
95th percentile per-packet one-way delay: 82.992 ms
Loss rate: 1.65%
```

Run 1: Report of PCC-Expr — Data Link

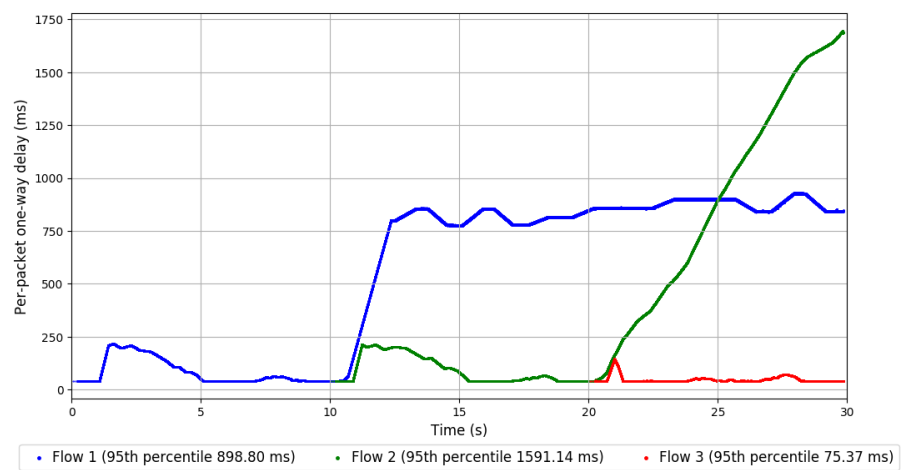
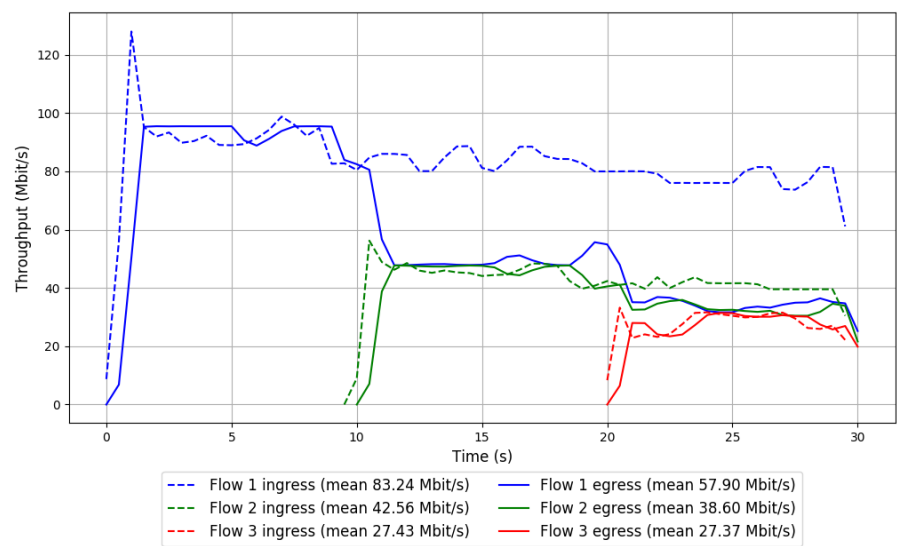


Run 2: Statistics of PCC-Expr

Start at: 2018-09-25 17:22:47  
End at: 2018-09-25 17:23:17  
Local clock offset: 1.039 ms  
Remote clock offset: -6.589 ms

# Below is generated by plot.py at 2018-09-25 18:58:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.55 Mbit/s  
95th percentile per-packet one-way delay: 1013.406 ms  
Loss rate: 23.47%  
-- Flow 1:  
Average throughput: 57.90 Mbit/s  
95th percentile per-packet one-way delay: 898.800 ms  
Loss rate: 30.62%  
-- Flow 2:  
Average throughput: 38.60 Mbit/s  
95th percentile per-packet one-way delay: 1591.137 ms  
Loss rate: 9.64%  
-- Flow 3:  
Average throughput: 27.37 Mbit/s  
95th percentile per-packet one-way delay: 75.367 ms  
Loss rate: 1.01%

Run 2: Report of PCC-Expr — Data Link





Run 3: Statistics of PCC-Expr

Start at: 2018-09-25 17:49:21

End at: 2018-09-25 17:49:51

Local clock offset: 0.259 ms

Remote clock offset: -4.78 ms

# Below is generated by plot.py at 2018-09-25 18:58:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.10 Mbit/s

95th percentile per-packet one-way delay: 761.503 ms

Loss rate: 28.94%

-- Flow 1:

Average throughput: 54.69 Mbit/s

95th percentile per-packet one-way delay: 759.662 ms

Loss rate: 36.29%

-- Flow 2:

Average throughput: 35.59 Mbit/s

95th percentile per-packet one-way delay: 795.494 ms

Loss rate: 19.74%

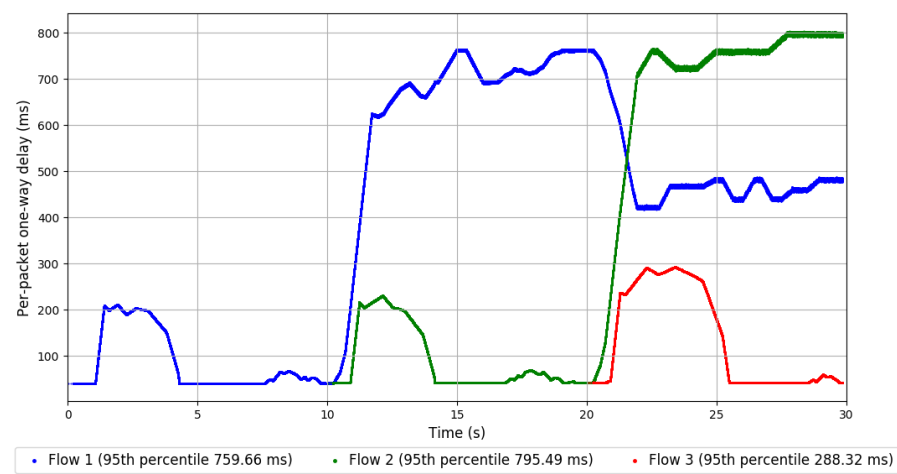
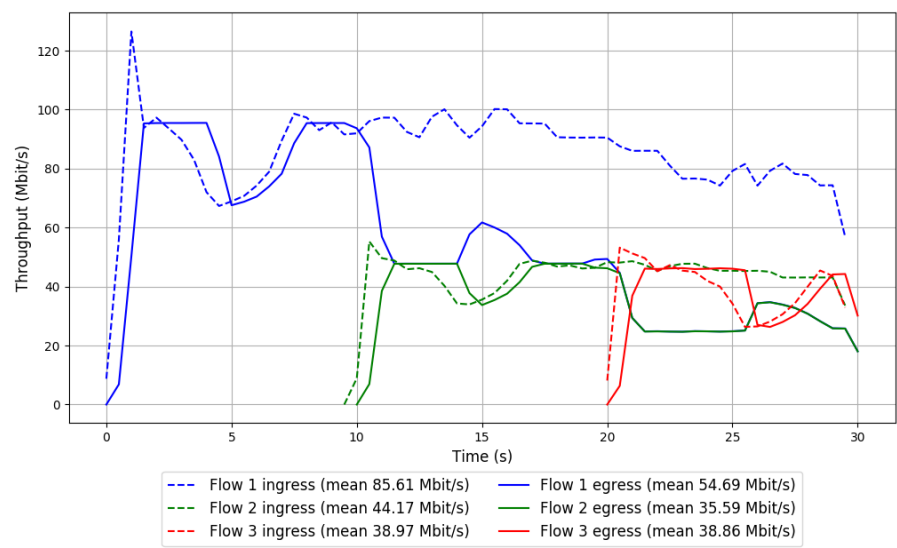
-- Flow 3:

Average throughput: 38.86 Mbit/s

95th percentile per-packet one-way delay: 288.317 ms

Loss rate: 1.05%

Run 3: Report of PCC-Expr — Data Link

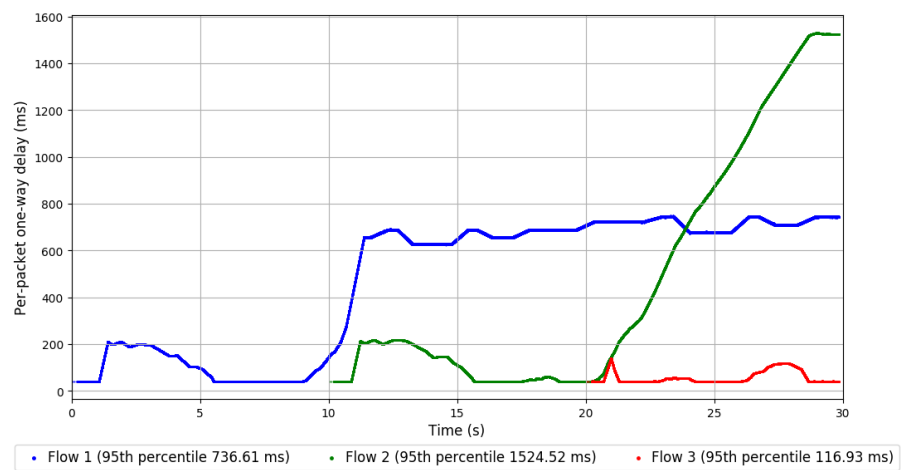
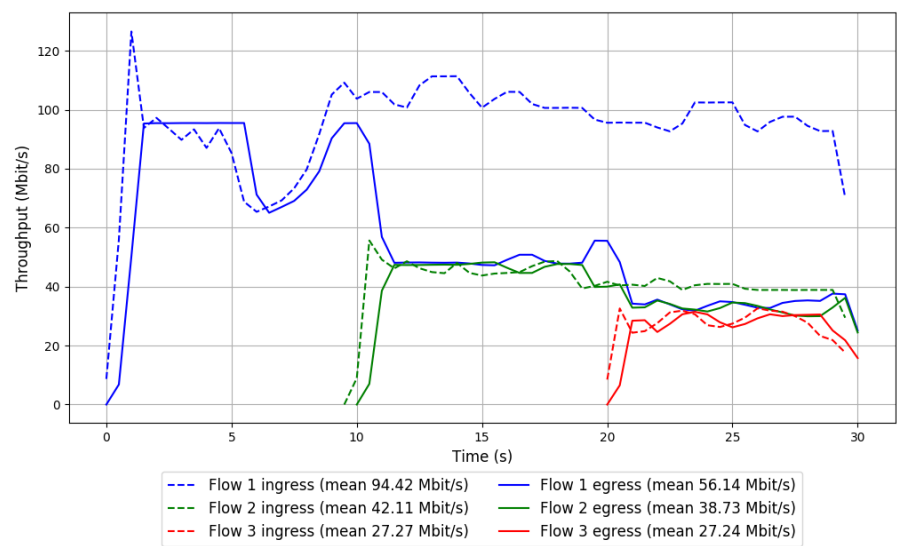


Run 4: Statistics of PCC-Expr

Start at: 2018-09-25 18:15:44  
End at: 2018-09-25 18:16:14  
Local clock offset: 0.073 ms  
Remote clock offset: -2.895 ms

# Below is generated by plot.py at 2018-09-25 18:58:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.82 Mbit/s  
95th percentile per-packet one-way delay: 978.333 ms  
Loss rate: 31.08%  
-- Flow 1:  
Average throughput: 56.14 Mbit/s  
95th percentile per-packet one-way delay: 736.611 ms  
Loss rate: 40.70%  
-- Flow 2:  
Average throughput: 38.73 Mbit/s  
95th percentile per-packet one-way delay: 1524.524 ms  
Loss rate: 8.39%  
-- Flow 3:  
Average throughput: 27.24 Mbit/s  
95th percentile per-packet one-way delay: 116.931 ms  
Loss rate: 0.89%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2018-09-25 18:42:00

End at: 2018-09-25 18:42:30

Local clock offset: -0.179 ms

Remote clock offset: -2.27 ms

# Below is generated by plot.py at 2018-09-25 18:58:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.61 Mbit/s

95th percentile per-packet one-way delay: 1325.413 ms

Loss rate: 25.10%

-- Flow 1:

Average throughput: 56.90 Mbit/s

95th percentile per-packet one-way delay: 904.997 ms

Loss rate: 31.79%

-- Flow 2:

Average throughput: 38.49 Mbit/s

95th percentile per-packet one-way delay: 1554.065 ms

Loss rate: 13.61%

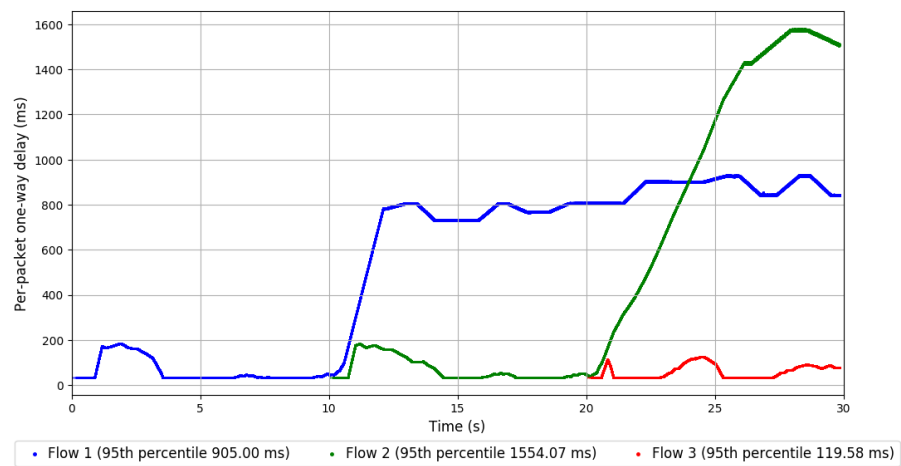
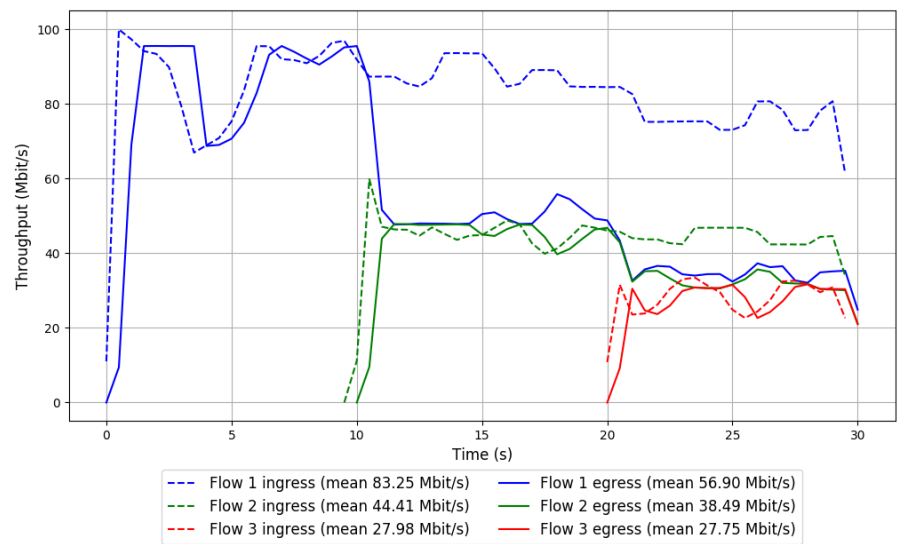
-- Flow 3:

Average throughput: 27.75 Mbit/s

95th percentile per-packet one-way delay: 119.576 ms

Loss rate: 1.50%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-25 16:46:44

End at: 2018-09-25 16:47:14

Local clock offset: 2.229 ms

Remote clock offset: -8.13 ms

# Below is generated by plot.py at 2018-09-25 18:58:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 76.26 Mbit/s

95th percentile per-packet one-way delay: 102.324 ms

Loss rate: 0.37%

-- Flow 1:

Average throughput: 43.40 Mbit/s

95th percentile per-packet one-way delay: 91.410 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 34.16 Mbit/s

95th percentile per-packet one-way delay: 128.968 ms

Loss rate: 0.48%

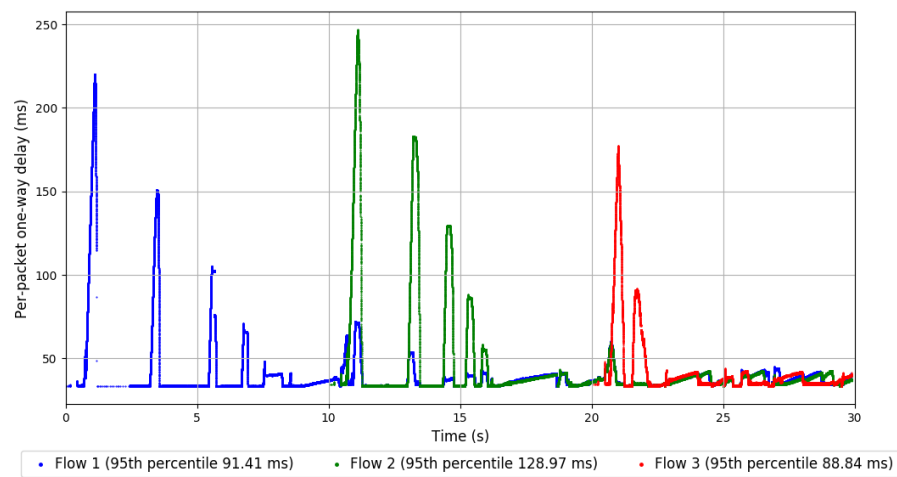
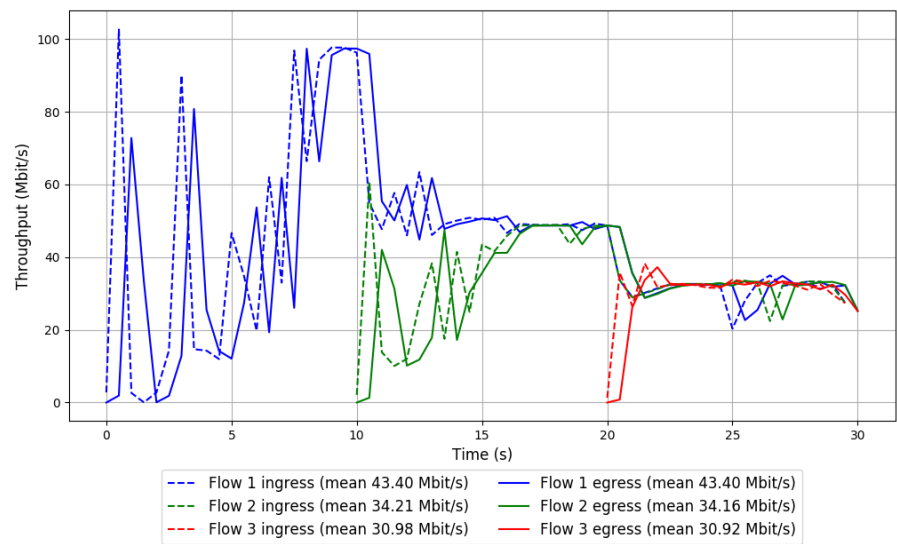
-- Flow 3:

Average throughput: 30.92 Mbit/s

95th percentile per-packet one-way delay: 88.839 ms

Loss rate: 0.86%

Run 1: Report of QUIC Cubic — Data Link



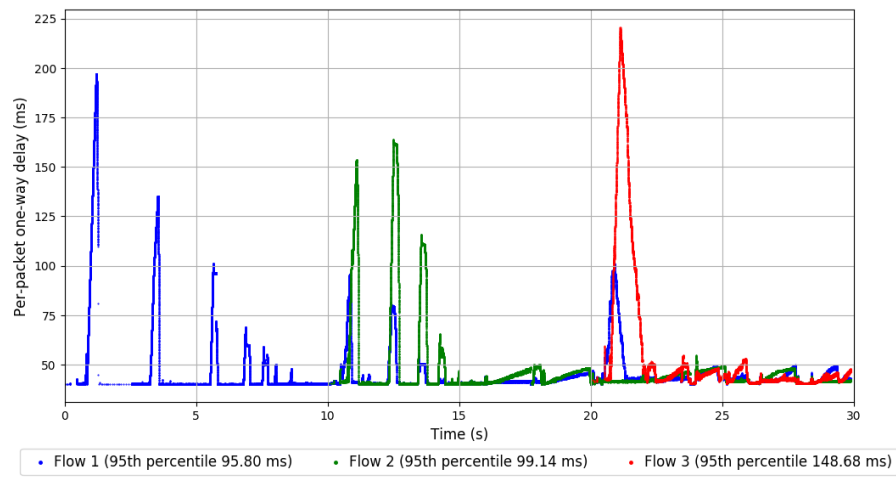
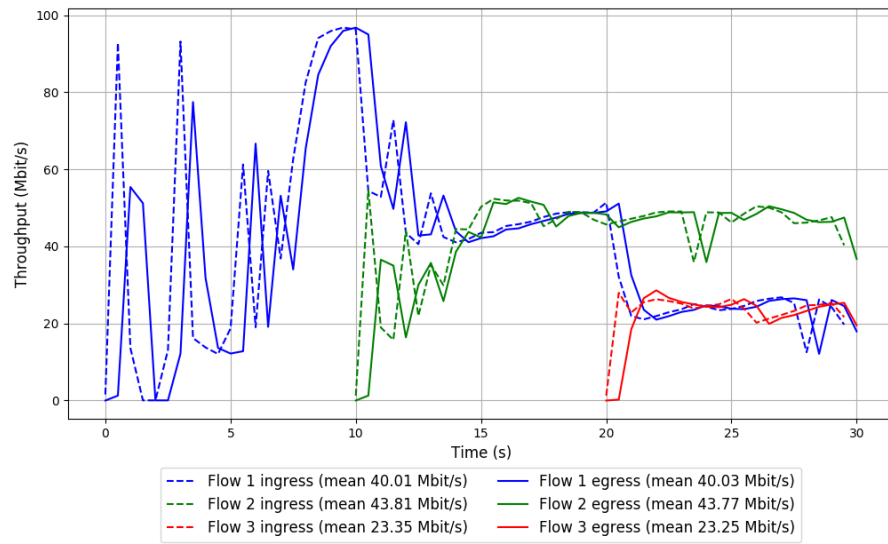


Run 2: Statistics of QUIC Cubic

Start at: 2018-09-25 17:13:07  
End at: 2018-09-25 17:13:37  
Local clock offset: 2.919 ms  
Remote clock offset: -6.793 ms

# Below is generated by plot.py at 2018-09-25 18:58:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.76 Mbit/s  
95th percentile per-packet one-way delay: 97.910 ms  
Loss rate: 0.41%  
-- Flow 1:  
Average throughput: 40.03 Mbit/s  
95th percentile per-packet one-way delay: 95.797 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 43.77 Mbit/s  
95th percentile per-packet one-way delay: 99.144 ms  
Loss rate: 0.48%  
-- Flow 3:  
Average throughput: 23.25 Mbit/s  
95th percentile per-packet one-way delay: 148.683 ms  
Loss rate: 1.23%

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

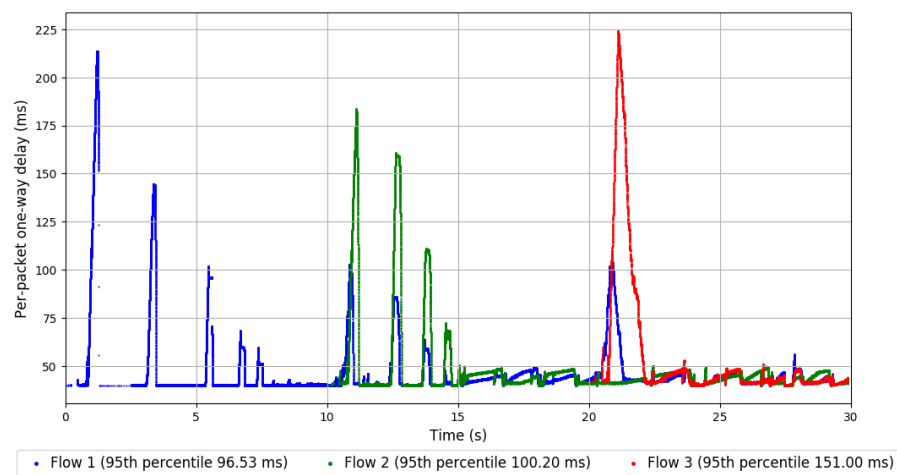
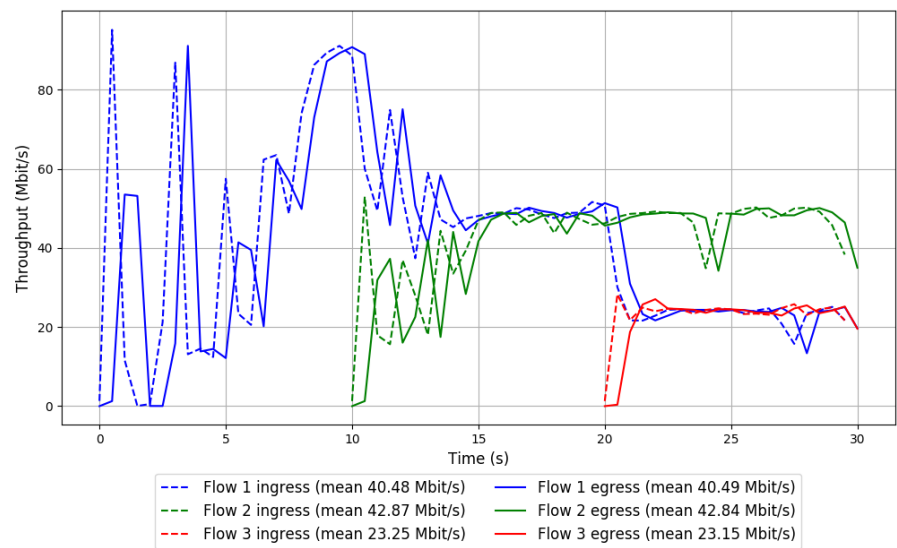


Run 3: Statistics of QUIC Cubic

Start at: 2018-09-25 17:39:43  
End at: 2018-09-25 17:40:13  
Local clock offset: 0.146 ms  
Remote clock offset: -5.341 ms

# Below is generated by plot.py at 2018-09-25 18:58:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.58 Mbit/s  
95th percentile per-packet one-way delay: 100.950 ms  
Loss rate: 0.42%  
-- Flow 1:  
Average throughput: 40.49 Mbit/s  
95th percentile per-packet one-way delay: 96.533 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 42.84 Mbit/s  
95th percentile per-packet one-way delay: 100.202 ms  
Loss rate: 0.47%  
-- Flow 3:  
Average throughput: 23.15 Mbit/s  
95th percentile per-packet one-way delay: 150.997 ms  
Loss rate: 1.25%

Run 3: Report of QUIC Cubic — Data Link

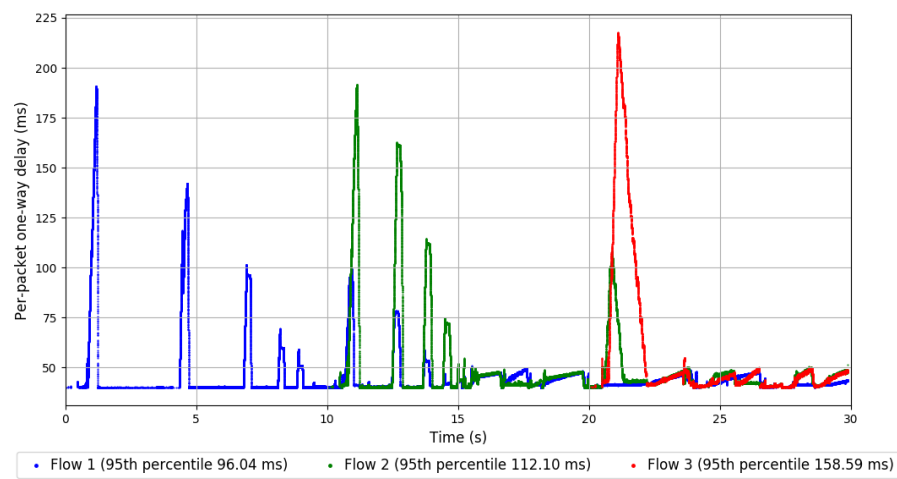
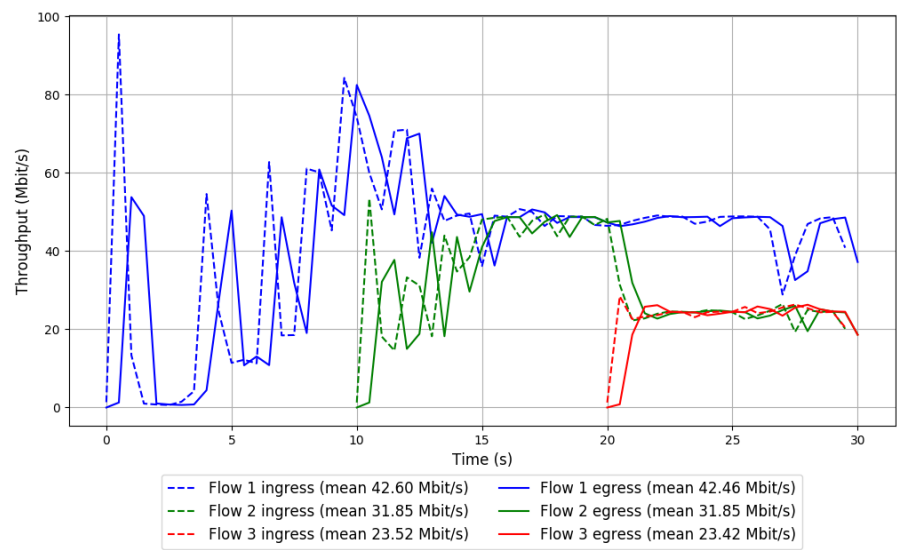


Run 4: Statistics of QUIC Cubic

Start at: 2018-09-25 18:06:09  
End at: 2018-09-25 18:06:39  
Local clock offset: 0.172 ms  
Remote clock offset: -3.647 ms

# Below is generated by plot.py at 2018-09-25 18:58:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.34 Mbit/s  
95th percentile per-packet one-way delay: 104.618 ms  
Loss rate: 0.58%  
-- Flow 1:  
Average throughput: 42.46 Mbit/s  
95th percentile per-packet one-way delay: 96.037 ms  
Loss rate: 0.56%  
-- Flow 2:  
Average throughput: 31.85 Mbit/s  
95th percentile per-packet one-way delay: 112.098 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 23.42 Mbit/s  
95th percentile per-packet one-way delay: 158.587 ms  
Loss rate: 1.17%

Run 4: Report of QUIC Cubic — Data Link

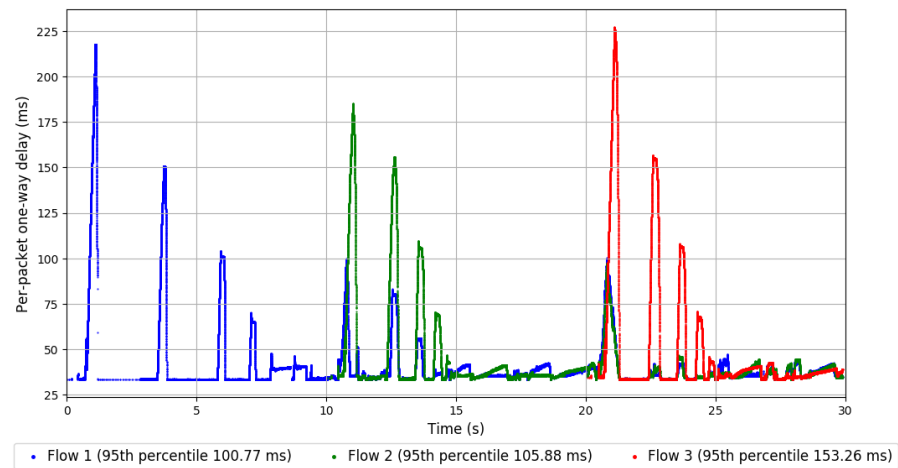
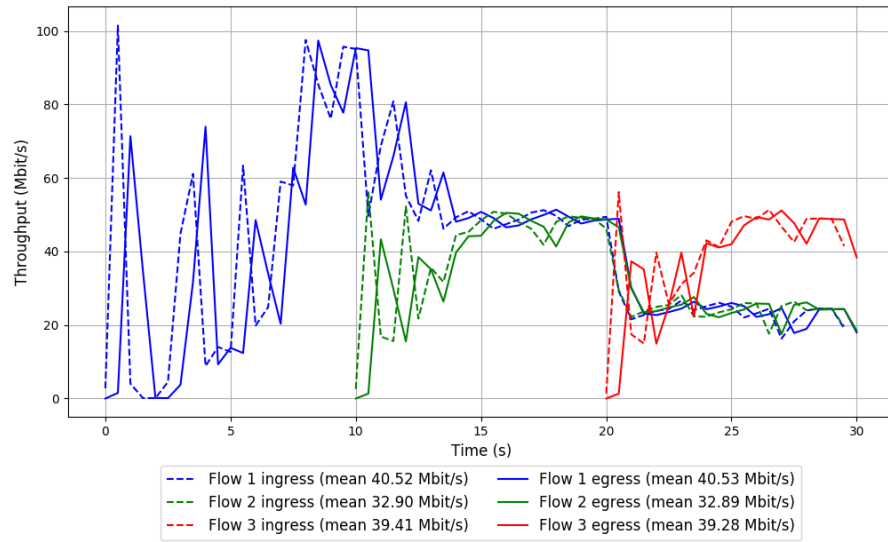


Run 5: Statistics of QUIC Cubic

Start at: 2018-09-25 18:32:29  
End at: 2018-09-25 18:32:59  
Local clock offset: -0.154 ms  
Remote clock offset: -2.353 ms

# Below is generated by plot.py at 2018-09-25 18:59:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 75.33 Mbit/s  
95th percentile per-packet one-way delay: 106.439 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 40.53 Mbit/s  
95th percentile per-packet one-way delay: 100.773 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 32.89 Mbit/s  
95th percentile per-packet one-way delay: 105.880 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 39.28 Mbit/s  
95th percentile per-packet one-way delay: 153.258 ms  
Loss rate: 1.01%

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



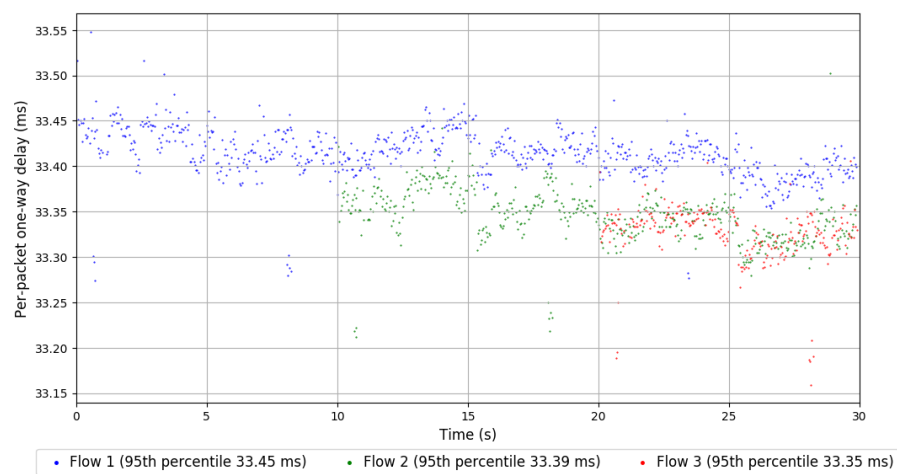
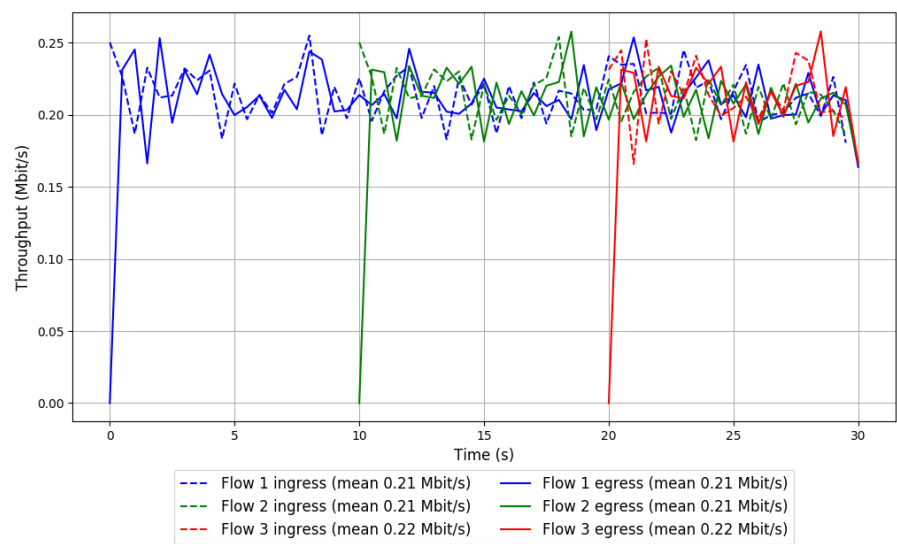


Run 1: Statistics of SReAM

Start at: 2018-09-25 16:45:26  
End at: 2018-09-25 16:45:56  
Local clock offset: 2.029 ms  
Remote clock offset: -8.061 ms

# Below is generated by plot.py at 2018-09-25 18:59:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.445 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.452 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.389 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.355 ms  
Loss rate: 0.71%

Run 1: Report of SReAM — Data Link

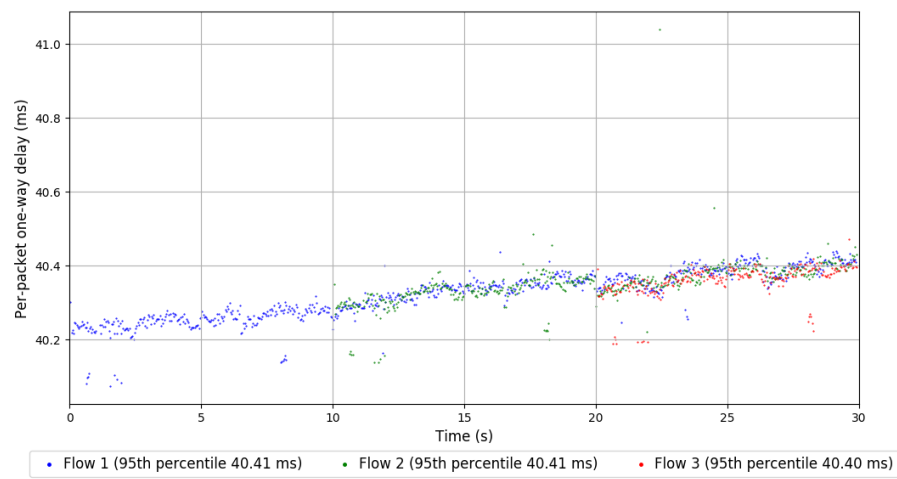
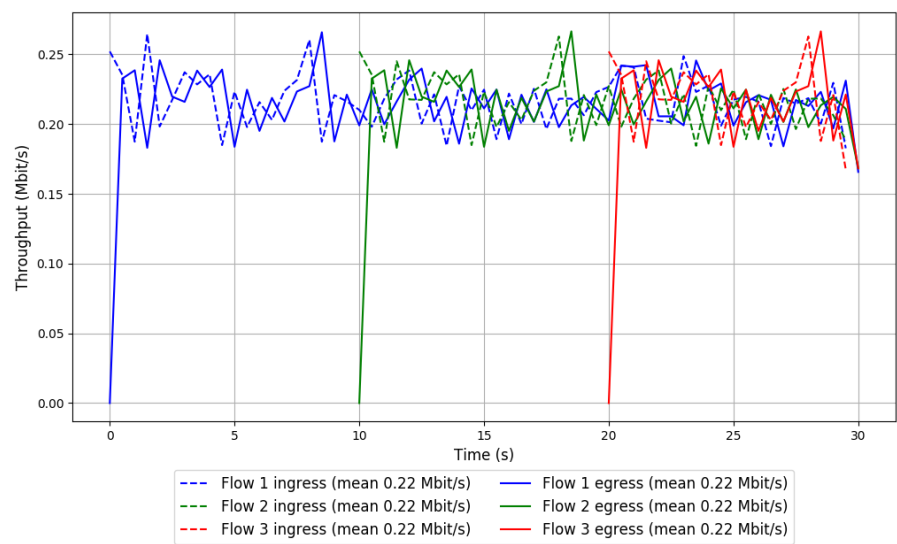


Run 2: Statistics of SReAM

Start at: 2018-09-25 17:11:49  
End at: 2018-09-25 17:12:19  
Local clock offset: 3.3 ms  
Remote clock offset: -6.863 ms

# Below is generated by plot.py at 2018-09-25 18:59:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 40.411 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 40.413 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 40.411 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 40.404 ms  
Loss rate: 0.35%

Run 2: Report of SReAM — Data Link

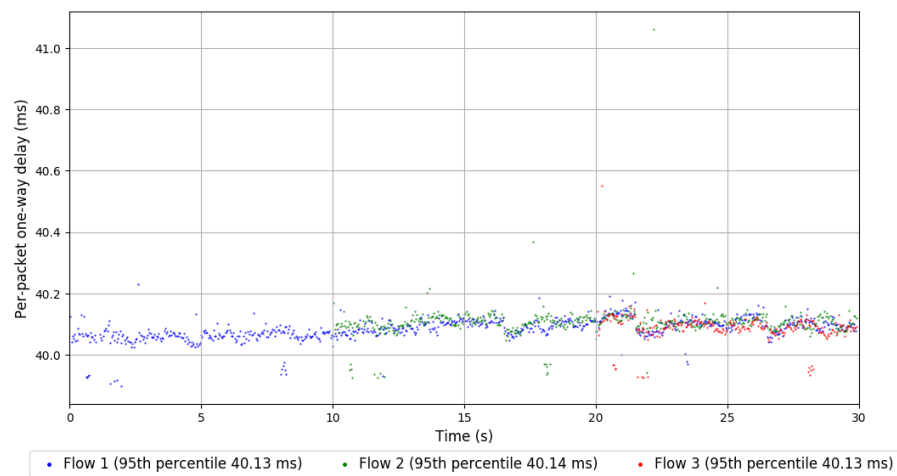
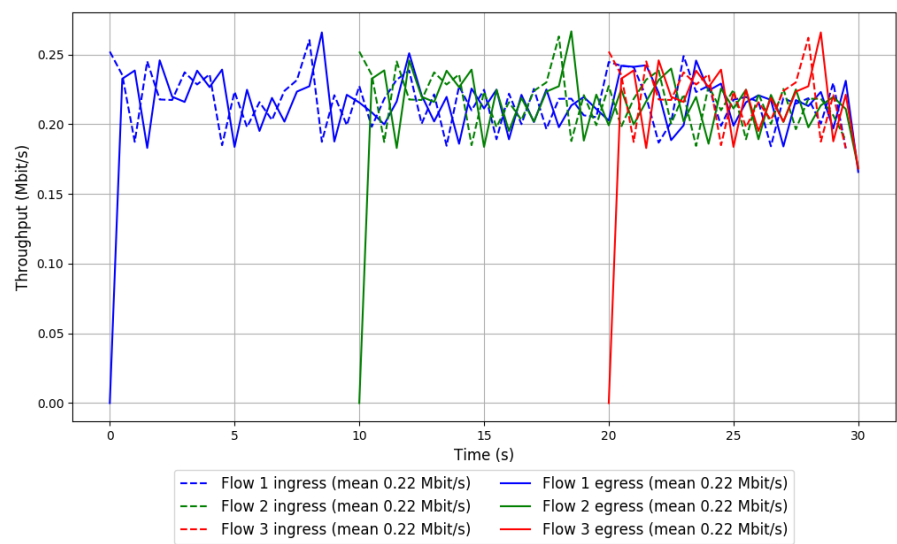


Run 3: Statistics of SCReAM

Start at: 2018-09-25 17:38:25  
End at: 2018-09-25 17:38:55  
Local clock offset: 0.171 ms  
Remote clock offset: -5.443 ms

# Below is generated by plot.py at 2018-09-25 18:59:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 40.134 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 40.133 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 40.140 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 40.130 ms  
Loss rate: 0.70%

Run 3: Report of SReAM — Data Link

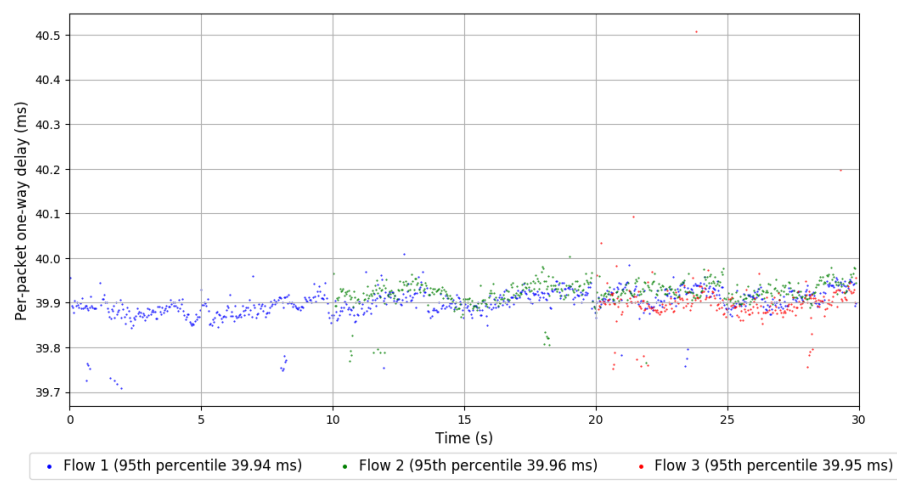
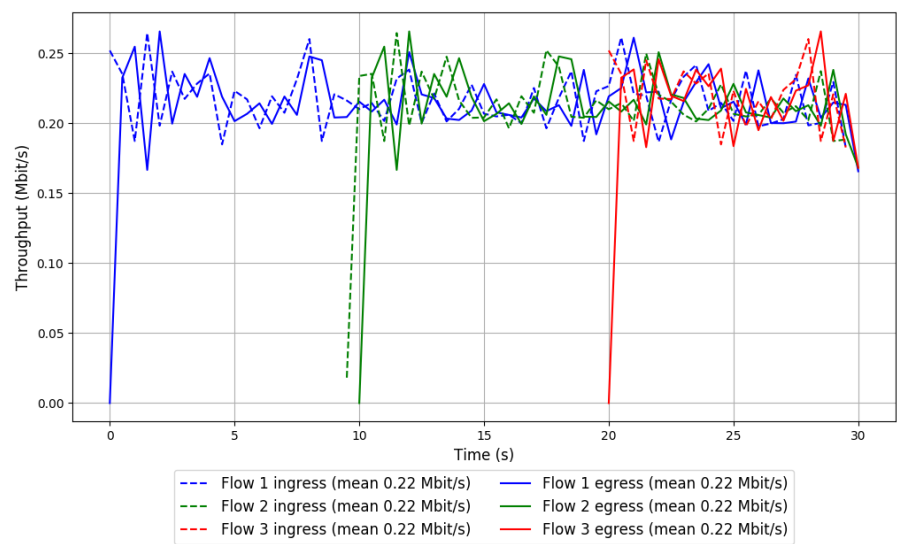


Run 4: Statistics of SReAM

Start at: 2018-09-25 18:04:51  
End at: 2018-09-25 18:05:21  
Local clock offset: 0.169 ms  
Remote clock offset: -3.386 ms

# Below is generated by plot.py at 2018-09-25 18:59:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 39.950 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 39.942 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 39.960 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 39.945 ms  
Loss rate: 0.70%

Run 4: Report of SReAM — Data Link



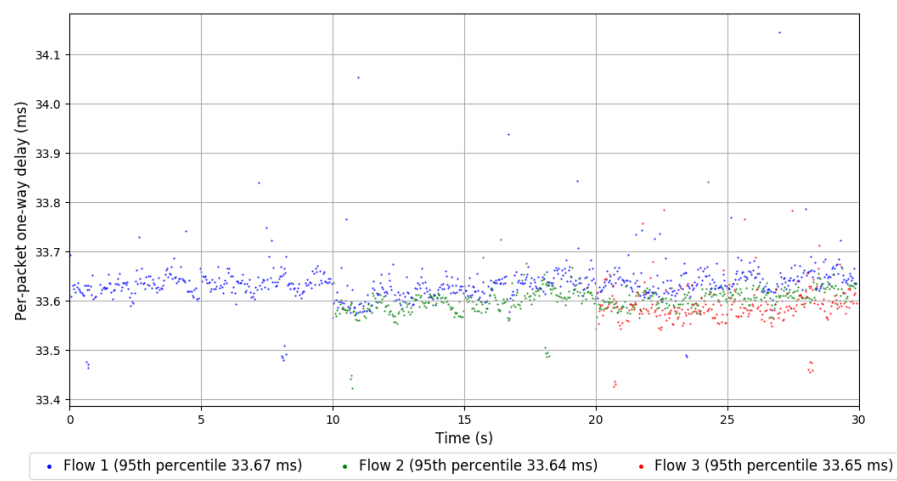
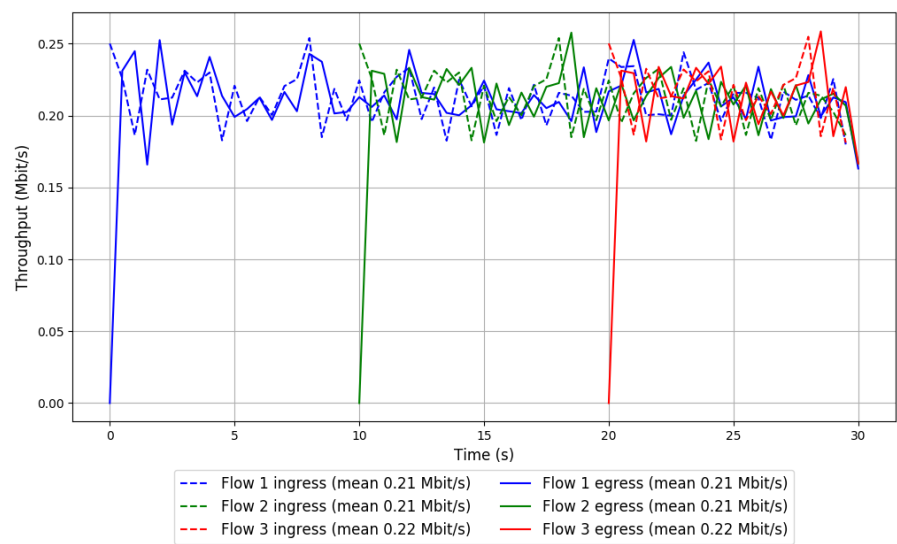


Run 5: Statistics of SReAM

Start at: 2018-09-25 18:31:10  
End at: 2018-09-25 18:31:40  
Local clock offset: -0.117 ms  
Remote clock offset: -2.417 ms

# Below is generated by plot.py at 2018-09-25 18:59:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.666 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.674 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.636 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.646 ms  
Loss rate: 0.71%

Run 5: Report of SReAM — Data Link

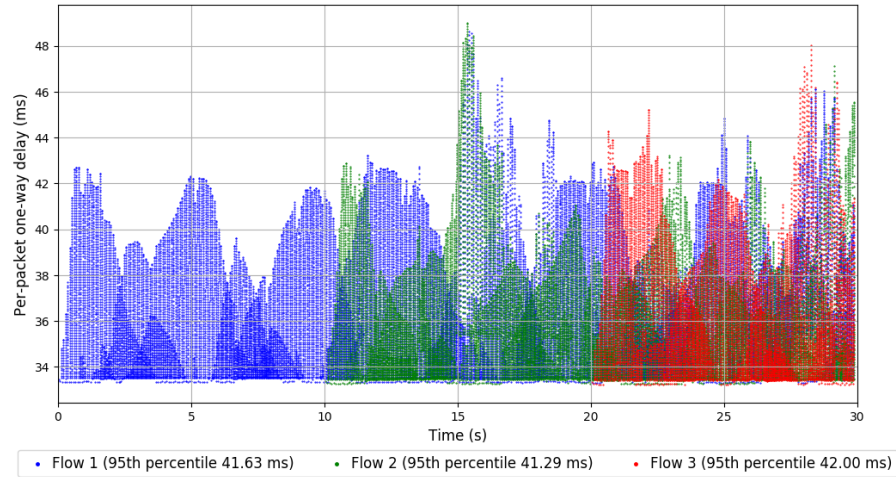
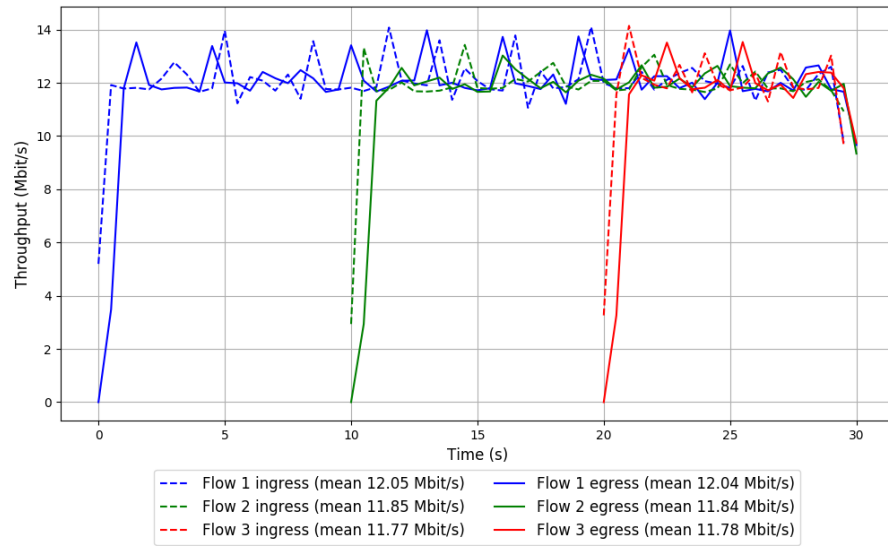


Run 1: Statistics of Sprout

Start at: 2018-09-25 16:50:48  
End at: 2018-09-25 16:51:18  
Local clock offset: 2.852 ms  
Remote clock offset: -7.805 ms

# Below is generated by plot.py at 2018-09-25 18:59:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.79 Mbit/s  
95th percentile per-packet one-way delay: 41.616 ms  
Loss rate: 0.34%  
-- Flow 1:  
Average throughput: 12.04 Mbit/s  
95th percentile per-packet one-way delay: 41.634 ms  
Loss rate: 0.24%  
-- Flow 2:  
Average throughput: 11.84 Mbit/s  
95th percentile per-packet one-way delay: 41.288 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 11.78 Mbit/s  
95th percentile per-packet one-way delay: 42.000 ms  
Loss rate: 0.49%

# Run 1: Report of Sprout — Data Link

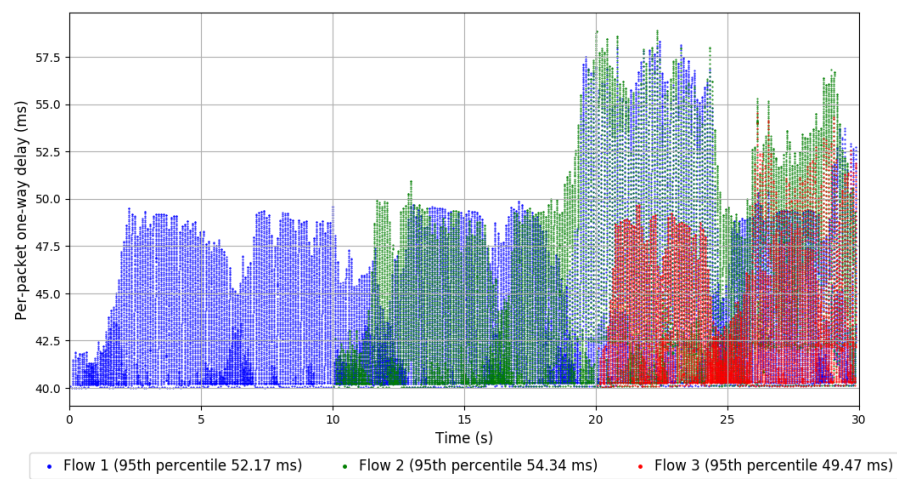
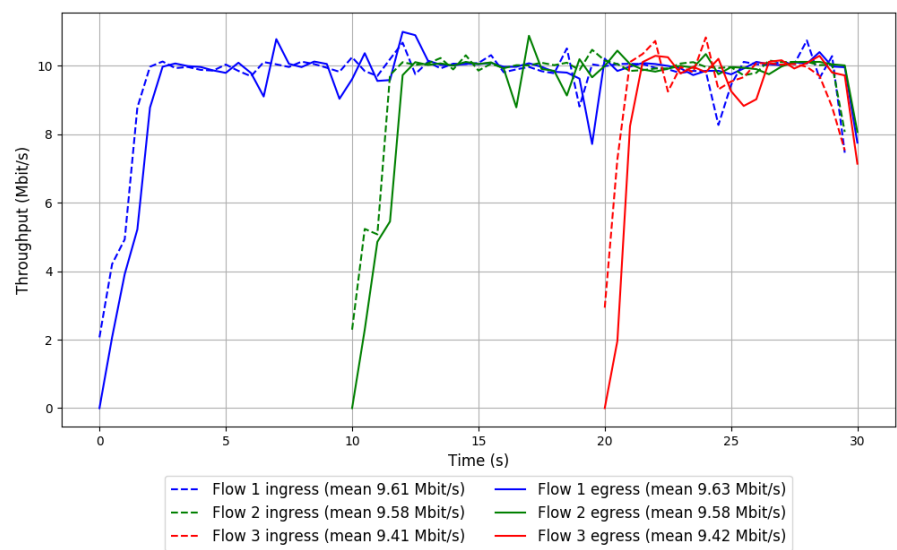


Run 2: Statistics of Sprout

Start at: 2018-09-25 17:17:14  
End at: 2018-09-25 17:17:44  
Local clock offset: 1.884 ms  
Remote clock offset: -6.711 ms

# Below is generated by plot.py at 2018-09-25 18:59:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 19.09 Mbit/s  
95th percentile per-packet one-way delay: 52.874 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 9.63 Mbit/s  
95th percentile per-packet one-way delay: 52.171 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 9.58 Mbit/s  
95th percentile per-packet one-way delay: 54.336 ms  
Loss rate: 0.53%  
-- Flow 3:  
Average throughput: 9.42 Mbit/s  
95th percentile per-packet one-way delay: 49.469 ms  
Loss rate: 0.56%

Run 2: Report of Sprout — Data Link

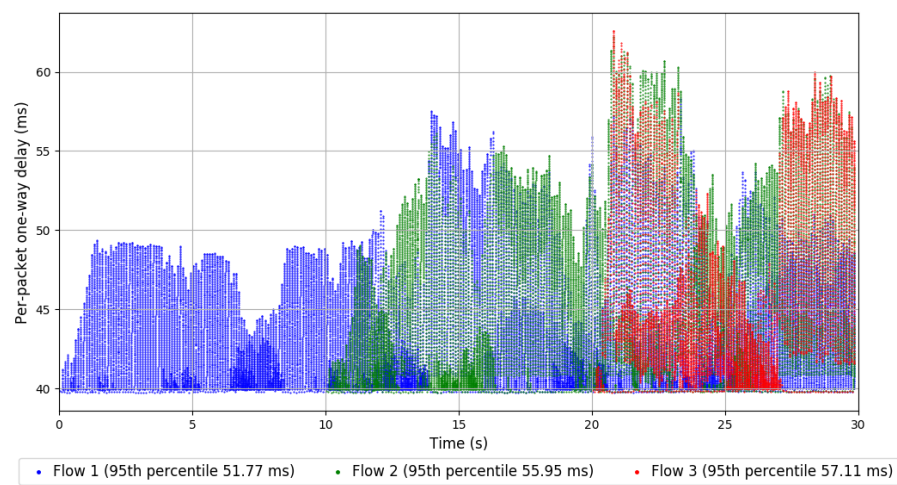
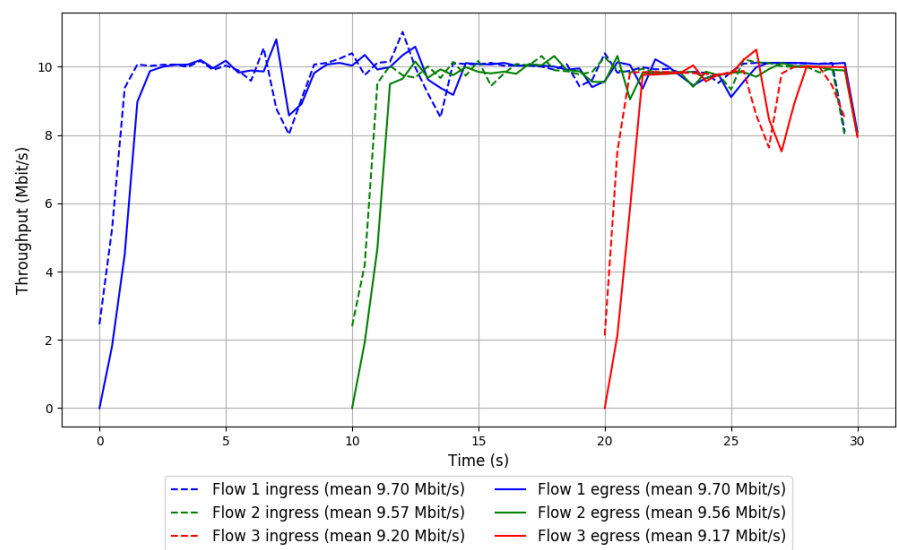


### Run 3: Statistics of Sprout

Start at: 2018-09-25 17:43:50  
End at: 2018-09-25 17:44:20  
Local clock offset: 0.194 ms  
Remote clock offset: -4.988 ms

```
# Below is generated by plot.py at 2018-09-25 18:59:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.06 Mbit/s
95th percentile per-packet one-way delay: 54.863 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 9.70 Mbit/s
95th percentile per-packet one-way delay: 51.767 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 55.950 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 9.17 Mbit/s
95th percentile per-packet one-way delay: 57.113 ms
Loss rate: 1.10%
```

Run 3: Report of Sprout — Data Link



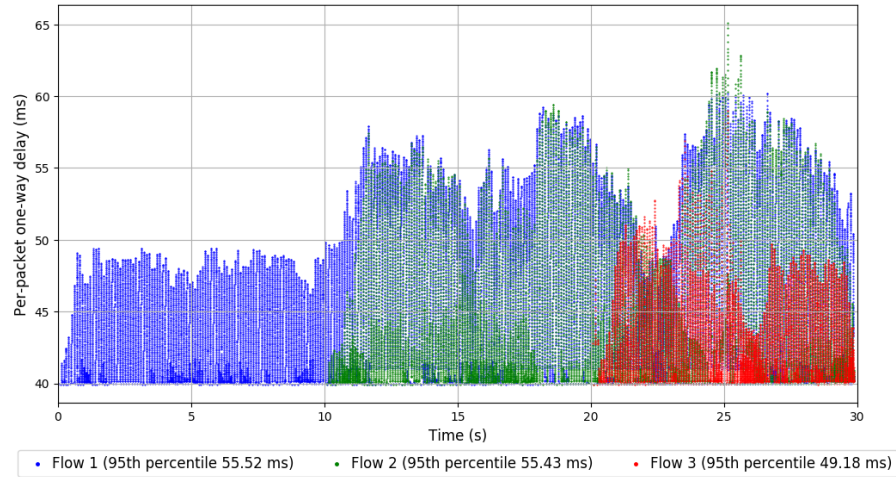
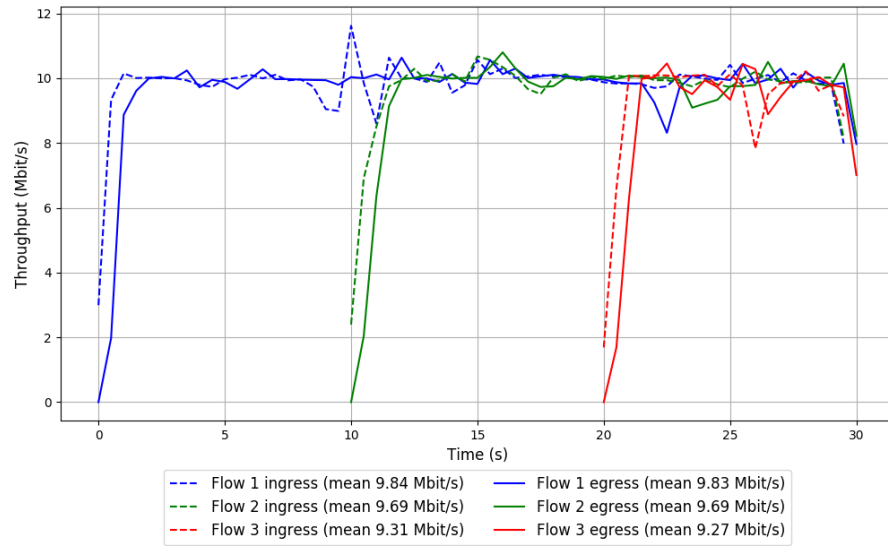


Run 4: Statistics of Sprout

Start at: 2018-09-25 18:10:14  
End at: 2018-09-25 18:10:44  
Local clock offset: 0.128 ms  
Remote clock offset: -3.208 ms

# Below is generated by plot.py at 2018-09-25 18:59:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 19.30 Mbit/s  
95th percentile per-packet one-way delay: 55.125 ms  
Loss rate: 0.48%  
-- Flow 1:  
Average throughput: 9.83 Mbit/s  
95th percentile per-packet one-way delay: 55.523 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 9.69 Mbit/s  
95th percentile per-packet one-way delay: 55.434 ms  
Loss rate: 0.45%  
-- Flow 3:  
Average throughput: 9.27 Mbit/s  
95th percentile per-packet one-way delay: 49.176 ms  
Loss rate: 1.03%

# Run 4: Report of Sprout — Data Link

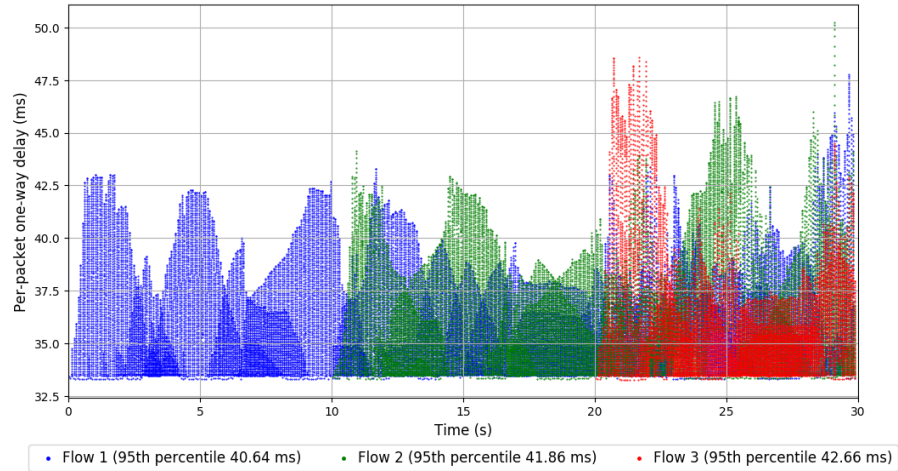
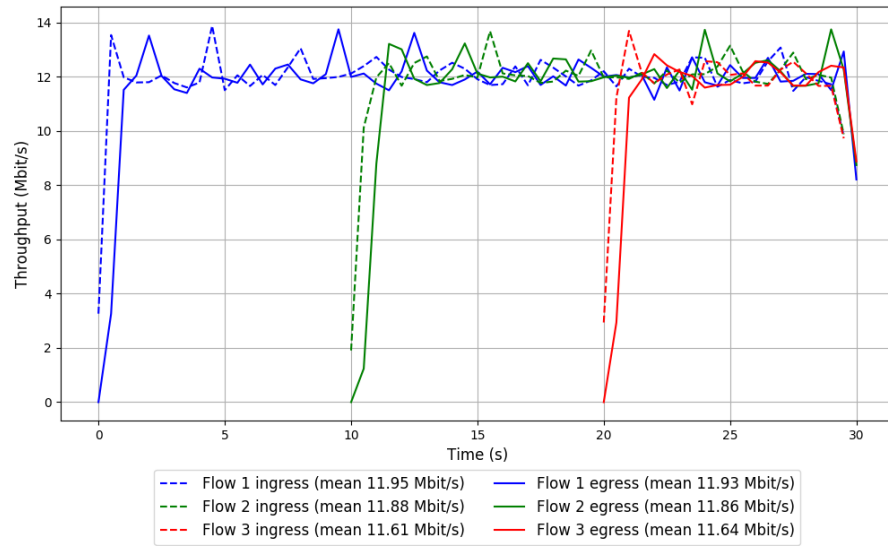


Run 5: Statistics of Sprout

Start at: 2018-09-25 18:36:33  
End at: 2018-09-25 18:37:03  
Local clock offset: -0.201 ms  
Remote clock offset: -2.194 ms

```
# Below is generated by plot.py at 2018-09-25 18:59:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.65 Mbit/s
95th percentile per-packet one-way delay: 41.294 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 40.640 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 41.858 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 11.64 Mbit/s
95th percentile per-packet one-way delay: 42.658 ms
Loss rate: 0.37%
```

# Run 5: Report of Sprout — Data Link

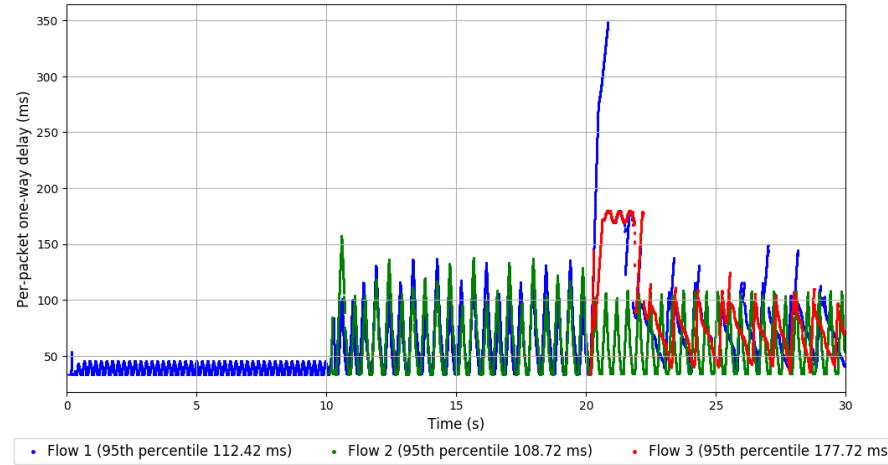
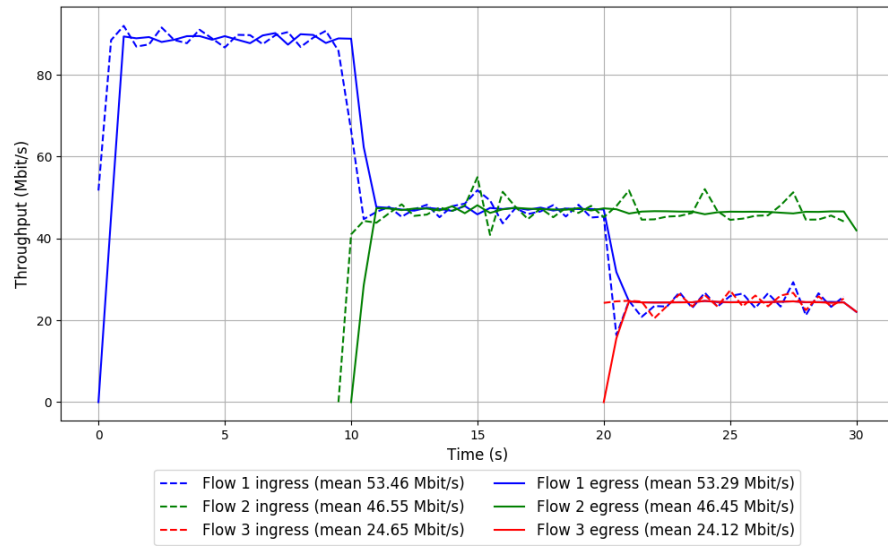


Run 1: Statistics of TaoVA-100x

Start at: 2018-09-25 16:35:44  
End at: 2018-09-25 16:36:14  
Local clock offset: 0.355 ms  
Remote clock offset: -7.746 ms

# Below is generated by plot.py at 2018-09-25 19:00:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.20 Mbit/s  
95th percentile per-packet one-way delay: 116.545 ms  
Loss rate: 0.73%  
-- Flow 1:  
Average throughput: 53.29 Mbit/s  
95th percentile per-packet one-way delay: 112.416 ms  
Loss rate: 0.53%  
-- Flow 2:  
Average throughput: 46.45 Mbit/s  
95th percentile per-packet one-way delay: 108.719 ms  
Loss rate: 0.54%  
-- Flow 3:  
Average throughput: 24.12 Mbit/s  
95th percentile per-packet one-way delay: 177.724 ms  
Loss rate: 2.77%

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

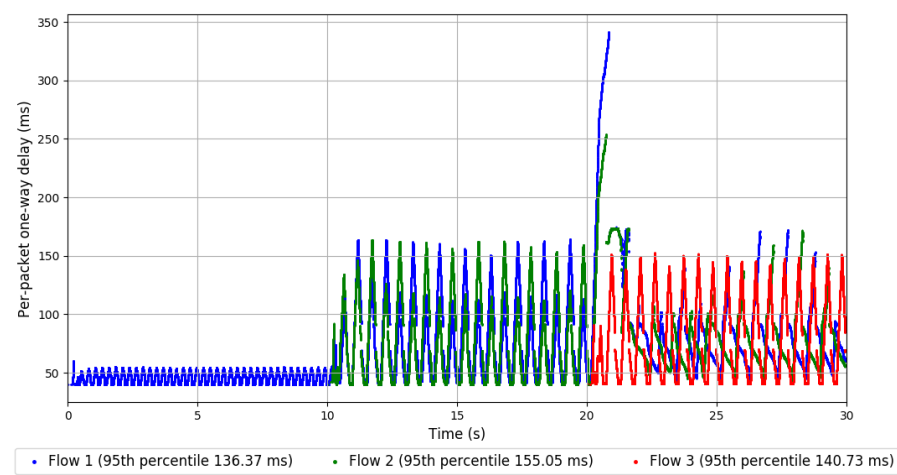
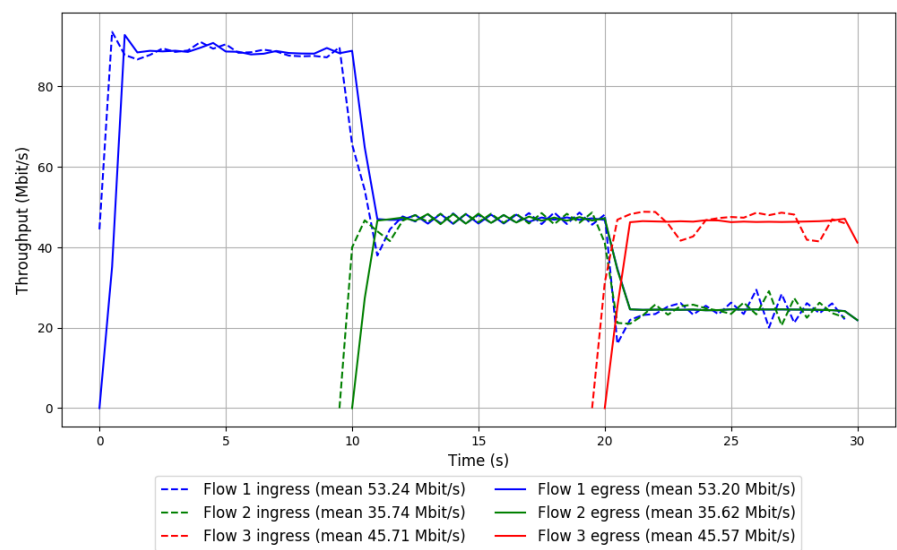


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-25 17:02:00  
End at: 2018-09-25 17:02:30  
Local clock offset: 3.85 ms  
Remote clock offset: -7.421 ms

# Below is generated by plot.py at 2018-09-25 19:00:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.00 Mbit/s  
95th percentile per-packet one-way delay: 143.692 ms  
Loss rate: 0.56%  
-- Flow 1:  
Average throughput: 53.20 Mbit/s  
95th percentile per-packet one-way delay: 136.370 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 35.62 Mbit/s  
95th percentile per-packet one-way delay: 155.050 ms  
Loss rate: 0.73%  
-- Flow 3:  
Average throughput: 45.57 Mbit/s  
95th percentile per-packet one-way delay: 140.734 ms  
Loss rate: 1.08%

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





Run 3: Statistics of TaoVA-100x

Start at: 2018-09-25 17:28:36

End at: 2018-09-25 17:29:06

Local clock offset: 0.574 ms

Remote clock offset: -6.02 ms

# Below is generated by plot.py at 2018-09-25 19:00:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.95 Mbit/s

95th percentile per-packet one-way delay: 141.175 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 60.28 Mbit/s

95th percentile per-packet one-way delay: 125.403 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 35.57 Mbit/s

95th percentile per-packet one-way delay: 155.330 ms

Loss rate: 1.08%

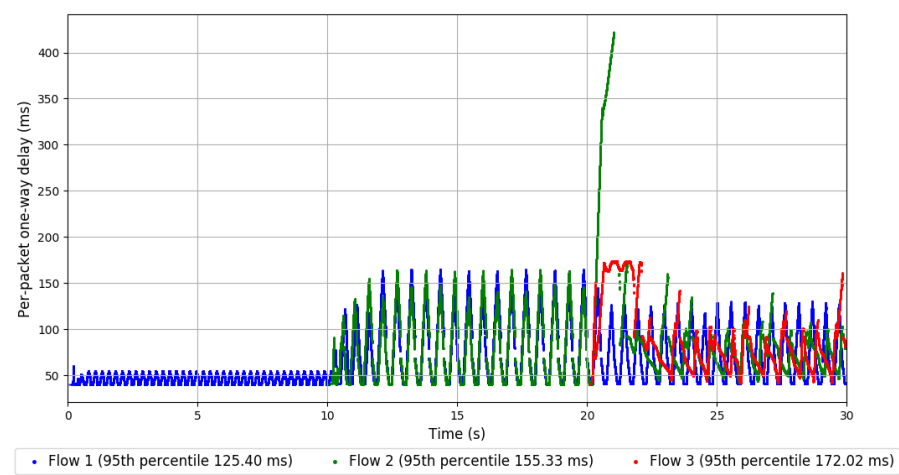
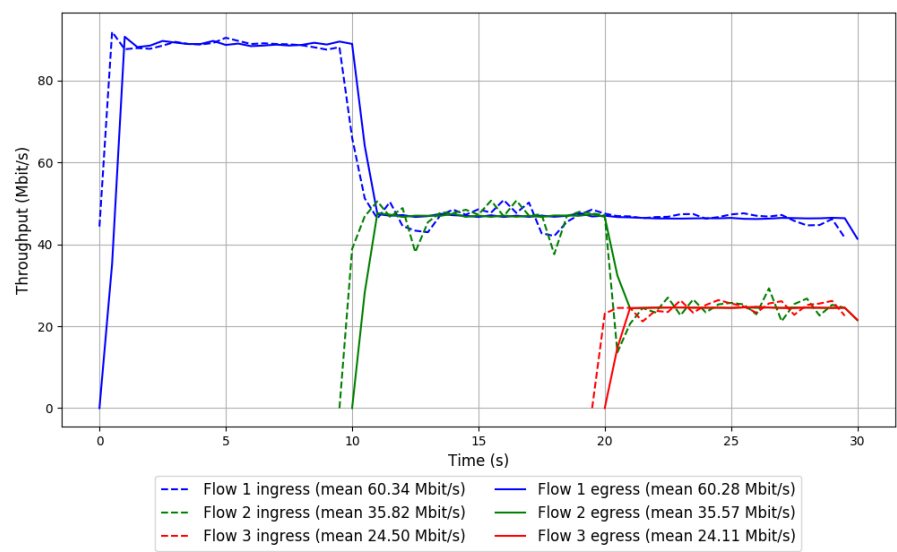
-- Flow 3:

Average throughput: 24.11 Mbit/s

95th percentile per-packet one-way delay: 172.019 ms

Loss rate: 2.35%

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

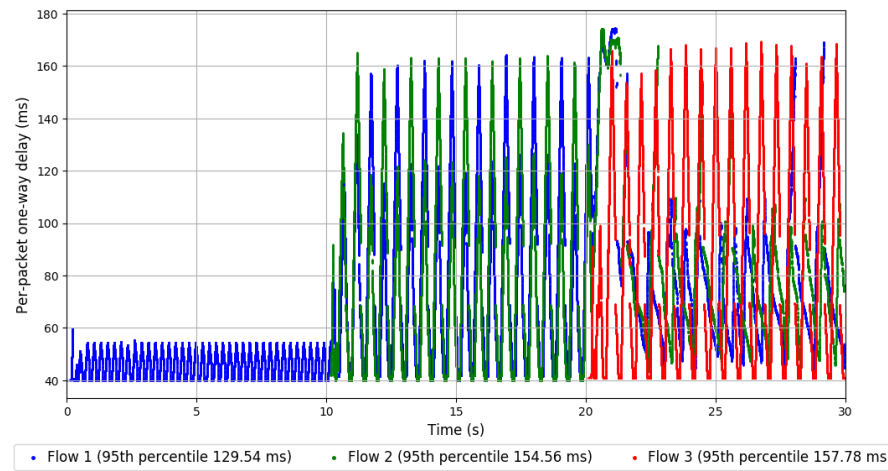
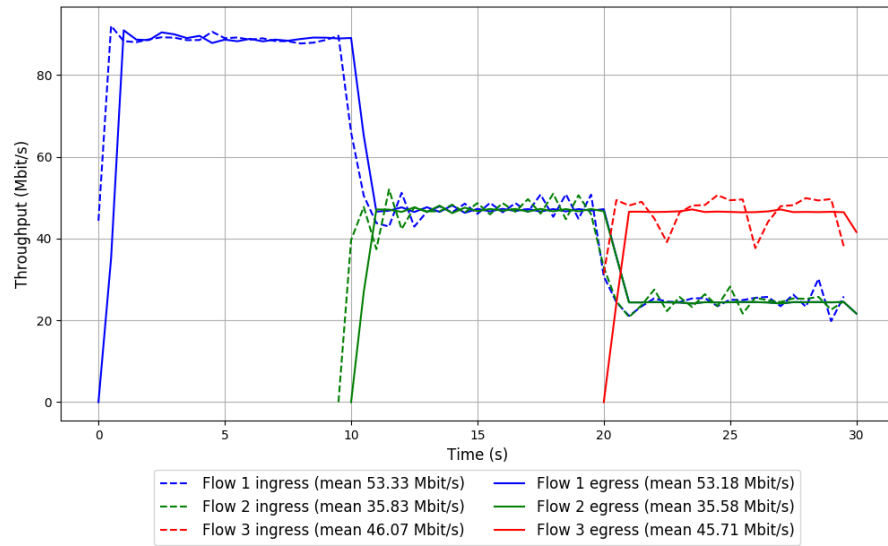


Run 4: Statistics of TaoVA-100x

Start at: 2018-09-25 17:55:04  
End at: 2018-09-25 17:55:34  
Local clock offset: 0.223 ms  
Remote clock offset: -4.297 ms

# Below is generated by plot.py at 2018-09-25 19:00:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.99 Mbit/s  
95th percentile per-packet one-way delay: 149.065 ms  
Loss rate: 0.85%  
-- Flow 1:  
Average throughput: 53.18 Mbit/s  
95th percentile per-packet one-way delay: 129.545 ms  
Loss rate: 0.53%  
-- Flow 2:  
Average throughput: 35.58 Mbit/s  
95th percentile per-packet one-way delay: 154.555 ms  
Loss rate: 1.08%  
-- Flow 3:  
Average throughput: 45.71 Mbit/s  
95th percentile per-packet one-way delay: 157.778 ms  
Loss rate: 1.57%

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

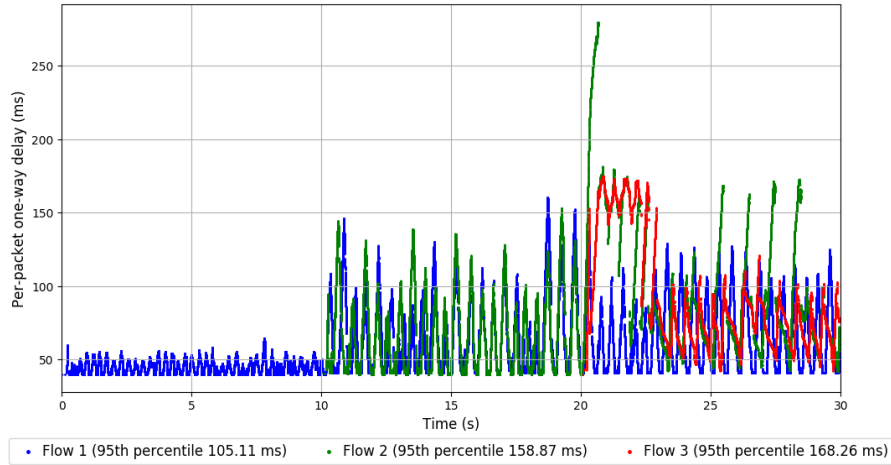
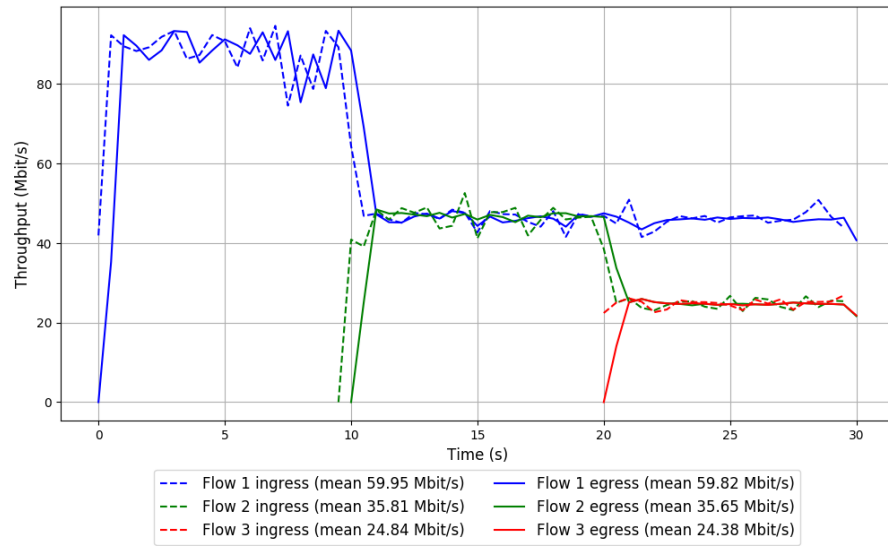


Run 5: Statistics of TaoVA-100x

Start at: 2018-09-25 18:21:26  
End at: 2018-09-25 18:21:56  
Local clock offset: -0.009 ms  
Remote clock offset: -2.685 ms

# Below is generated by plot.py at 2018-09-25 19:00:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.62 Mbit/s  
95th percentile per-packet one-way delay: 130.113 ms  
Loss rate: 0.75%  
-- Flow 1:  
Average throughput: 59.82 Mbit/s  
95th percentile per-packet one-way delay: 105.112 ms  
Loss rate: 0.46%  
-- Flow 2:  
Average throughput: 35.65 Mbit/s  
95th percentile per-packet one-way delay: 158.870 ms  
Loss rate: 0.83%  
-- Flow 3:  
Average throughput: 24.38 Mbit/s  
95th percentile per-packet one-way delay: 168.260 ms  
Loss rate: 2.61%

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

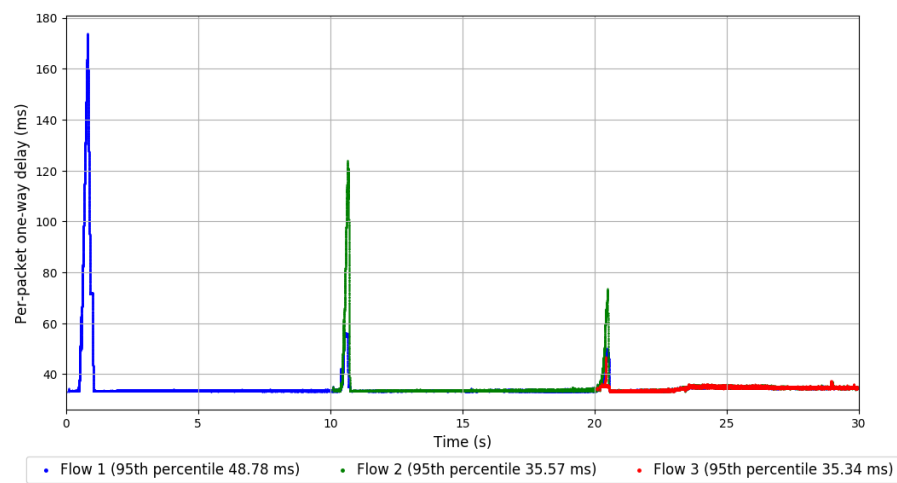
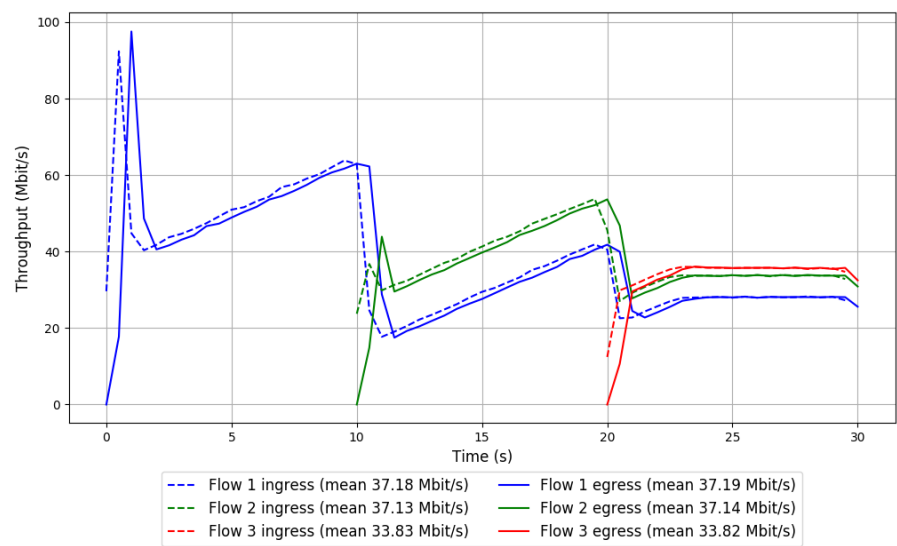


Run 1: Statistics of TCP Vegas

Start at: 2018-09-25 16:38:32  
End at: 2018-09-25 16:39:02  
Local clock offset: 0.442 ms  
Remote clock offset: -7.707 ms

# Below is generated by plot.py at 2018-09-25 19:00:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.11 Mbit/s  
95th percentile per-packet one-way delay: 36.021 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 37.19 Mbit/s  
95th percentile per-packet one-way delay: 48.784 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 37.14 Mbit/s  
95th percentile per-packet one-way delay: 35.568 ms  
Loss rate: 0.30%  
-- Flow 3:  
Average throughput: 33.82 Mbit/s  
95th percentile per-packet one-way delay: 35.343 ms  
Loss rate: 0.69%

Run 1: Report of TCP Vegas — Data Link



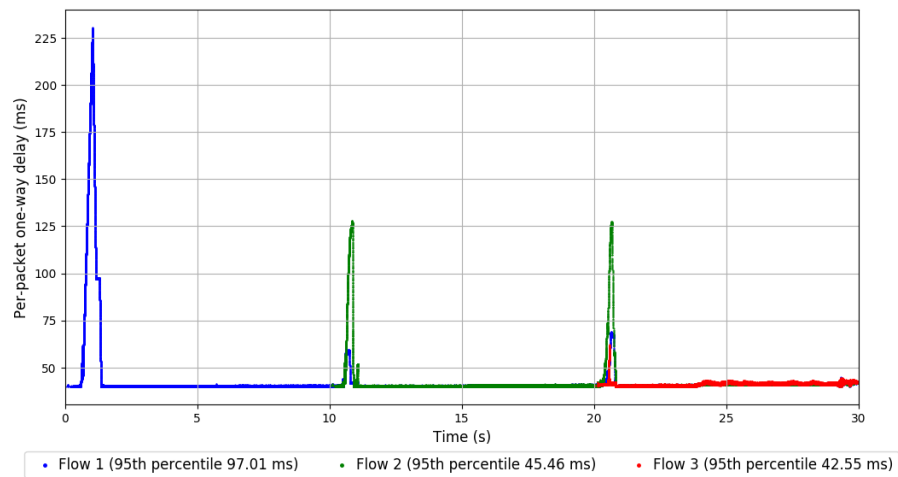
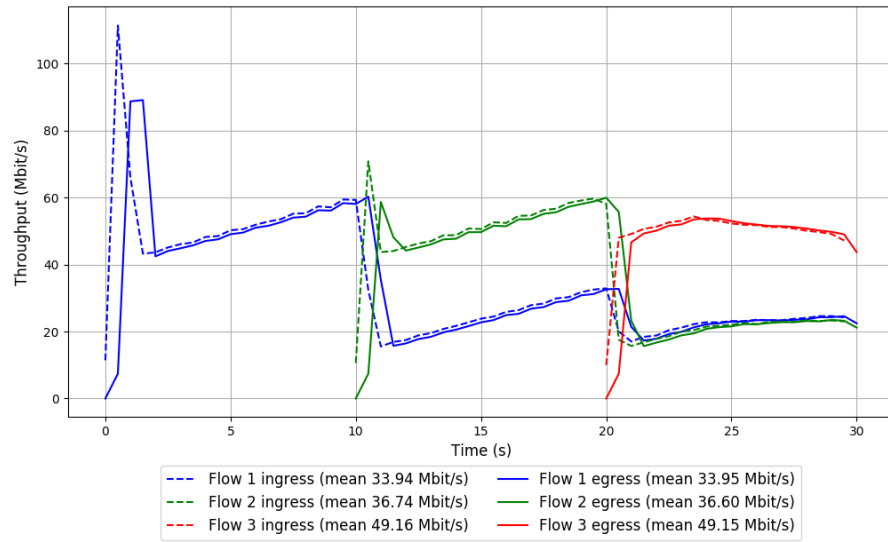


Run 2: Statistics of TCP Vegas

Start at: 2018-09-25 17:04:50  
End at: 2018-09-25 17:05:20  
Local clock offset: 4.034 ms  
Remote clock offset: -7.134 ms

# Below is generated by plot.py at 2018-09-25 19:00:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 74.57 Mbit/s  
95th percentile per-packet one-way delay: 51.409 ms  
Loss rate: 0.52%  
-- Flow 1:  
Average throughput: 33.95 Mbit/s  
95th percentile per-packet one-way delay: 97.008 ms  
Loss rate: 0.23%  
-- Flow 2:  
Average throughput: 36.60 Mbit/s  
95th percentile per-packet one-way delay: 45.461 ms  
Loss rate: 0.76%  
-- Flow 3:  
Average throughput: 49.15 Mbit/s  
95th percentile per-packet one-way delay: 42.548 ms  
Loss rate: 0.79%

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

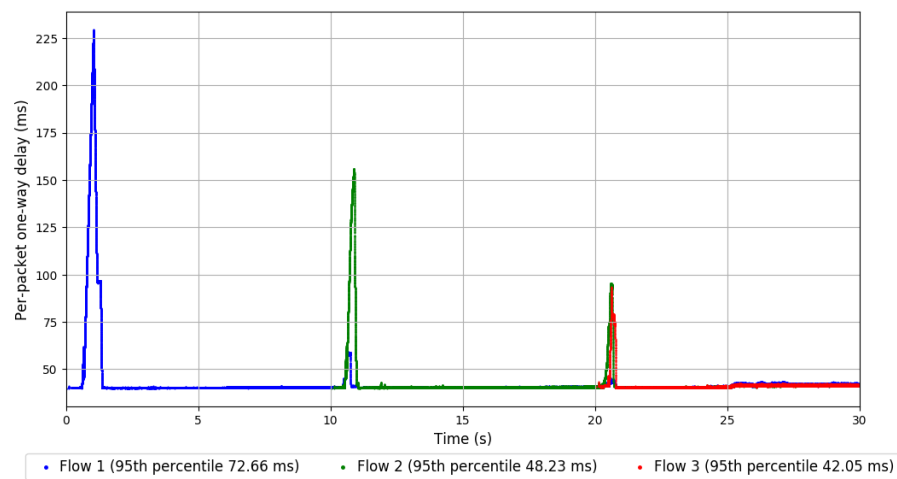
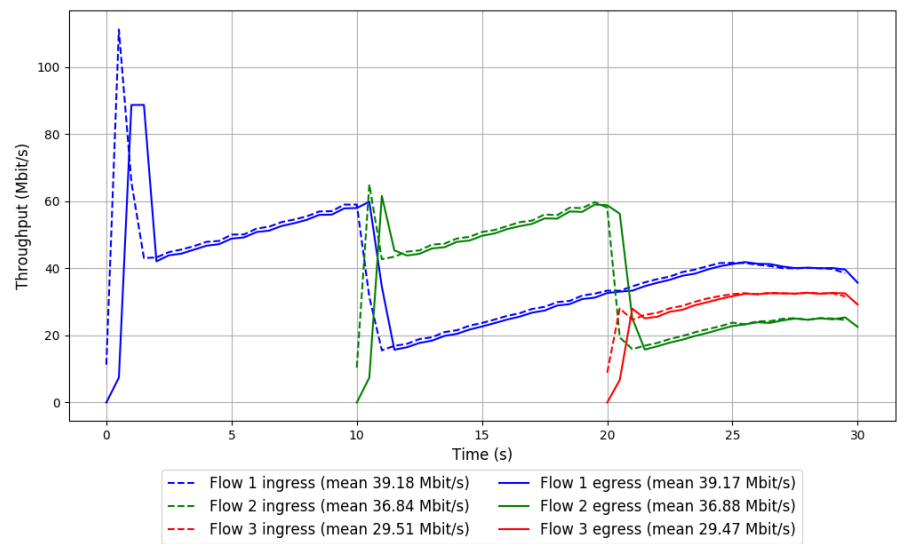


Run 3: Statistics of TCP Vegas

Start at: 2018-09-25 17:31:27  
End at: 2018-09-25 17:31:57  
Local clock offset: 0.415 ms  
Remote clock offset: -5.831 ms

# Below is generated by plot.py at 2018-09-25 19:00:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.46 Mbit/s  
95th percentile per-packet one-way delay: 56.397 ms  
Loss rate: 0.37%  
-- Flow 1:  
Average throughput: 39.17 Mbit/s  
95th percentile per-packet one-way delay: 72.659 ms  
Loss rate: 0.29%  
-- Flow 2:  
Average throughput: 36.88 Mbit/s  
95th percentile per-packet one-way delay: 48.232 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 29.47 Mbit/s  
95th percentile per-packet one-way delay: 42.045 ms  
Loss rate: 0.88%

Run 3: Report of TCP Vegas — Data Link

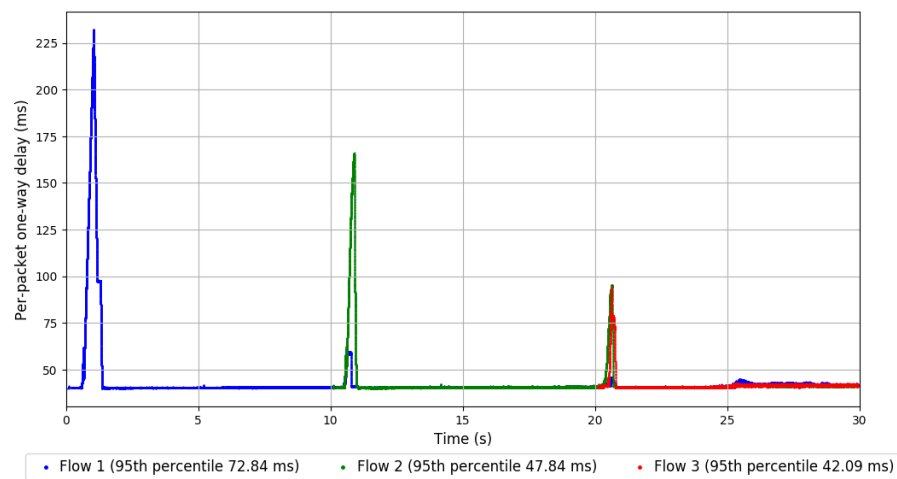
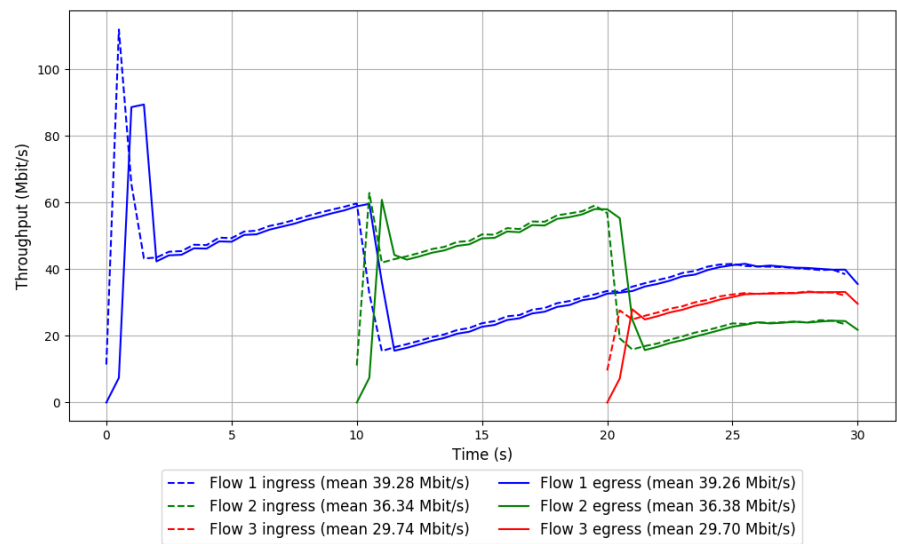


Run 4: Statistics of TCP Vegas

Start at: 2018-09-25 17:57:54  
End at: 2018-09-25 17:58:24  
Local clock offset: 0.216 ms  
Remote clock offset: -4.096 ms

# Below is generated by plot.py at 2018-09-25 19:00:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.30 Mbit/s  
95th percentile per-packet one-way delay: 56.892 ms  
Loss rate: 0.36%  
-- Flow 1:  
Average throughput: 39.26 Mbit/s  
95th percentile per-packet one-way delay: 72.839 ms  
Loss rate: 0.29%  
-- Flow 2:  
Average throughput: 36.38 Mbit/s  
95th percentile per-packet one-way delay: 47.843 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 29.70 Mbit/s  
95th percentile per-packet one-way delay: 42.086 ms  
Loss rate: 0.87%

Run 4: Report of TCP Vegas — Data Link

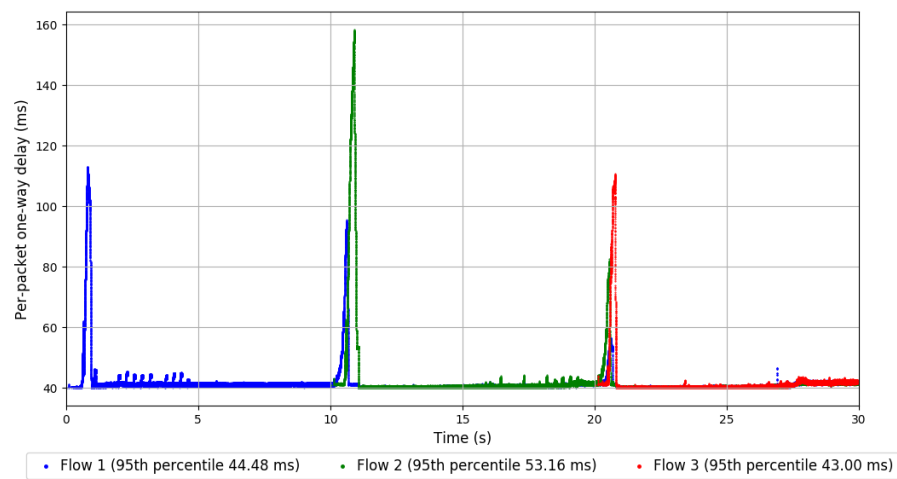
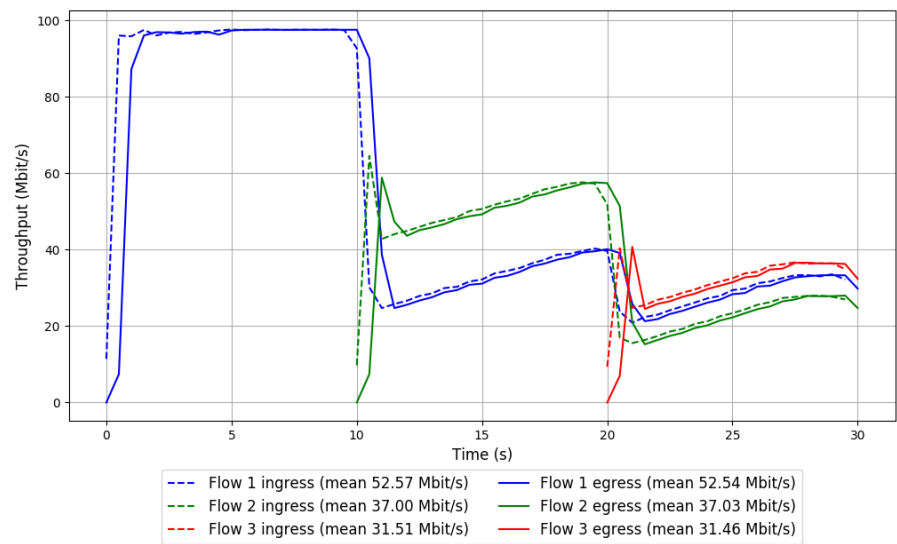


Run 5: Statistics of TCP Vegas

Start at: 2018-09-25 18:24:15  
End at: 2018-09-25 18:24:45  
Local clock offset: -0.043 ms  
Remote clock offset: -2.651 ms

# Below is generated by plot.py at 2018-09-25 19:00:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.59 Mbit/s  
95th percentile per-packet one-way delay: 45.083 ms  
Loss rate: 0.39%  
-- Flow 1:  
Average throughput: 52.54 Mbit/s  
95th percentile per-packet one-way delay: 44.481 ms  
Loss rate: 0.32%  
-- Flow 2:  
Average throughput: 37.03 Mbit/s  
95th percentile per-packet one-way delay: 53.155 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 31.46 Mbit/s  
95th percentile per-packet one-way delay: 43.001 ms  
Loss rate: 0.92%

Run 5: Report of TCP Vegas — Data Link



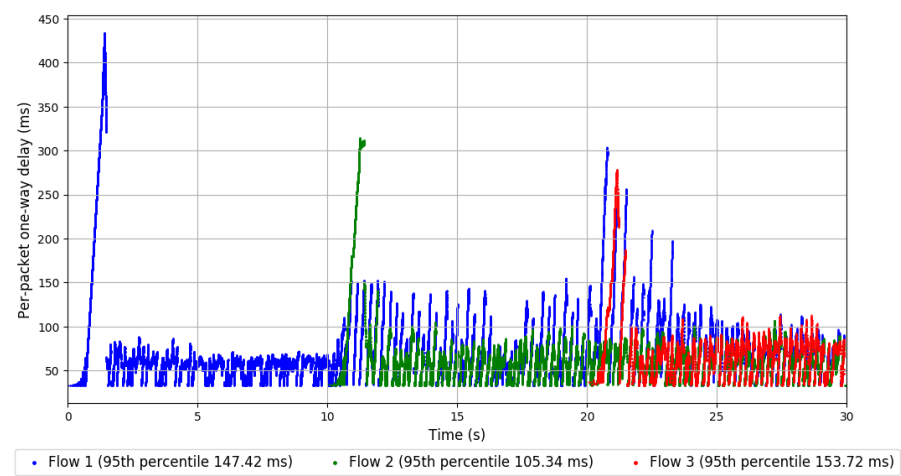
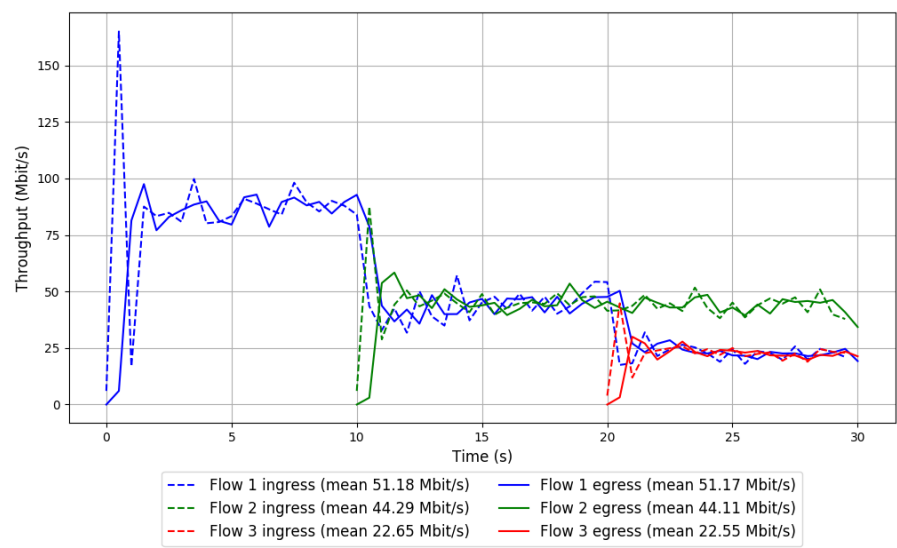


Run 1: Statistics of Verus

Start at: 2018-09-25 16:48:06  
End at: 2018-09-25 16:48:36  
Local clock offset: 2.49 ms  
Remote clock offset: -7.943 ms

# Below is generated by plot.py at 2018-09-25 19:01:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.88 Mbit/s  
95th percentile per-packet one-way delay: 143.330 ms  
Loss rate: 0.56%  
-- Flow 1:  
Average throughput: 51.17 Mbit/s  
95th percentile per-packet one-way delay: 147.424 ms  
Loss rate: 0.34%  
-- Flow 2:  
Average throughput: 44.11 Mbit/s  
95th percentile per-packet one-way delay: 105.344 ms  
Loss rate: 0.70%  
-- Flow 3:  
Average throughput: 22.55 Mbit/s  
95th percentile per-packet one-way delay: 153.725 ms  
Loss rate: 1.45%

Run 1: Report of Verus — Data Link

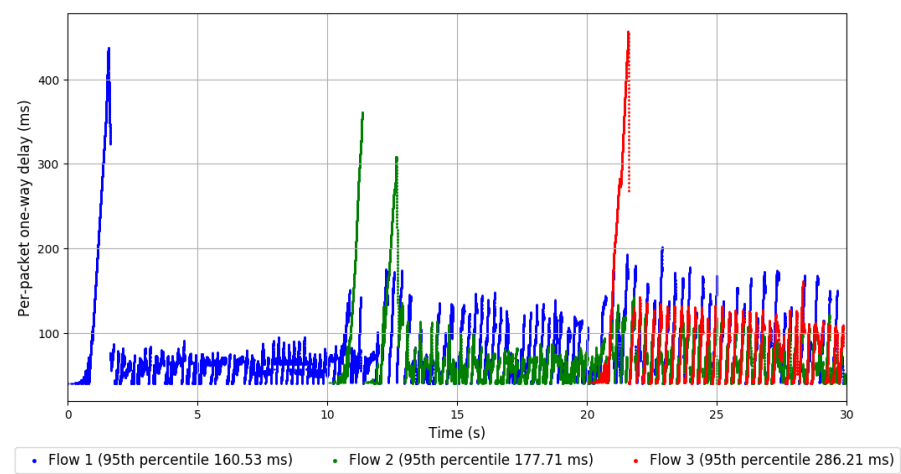
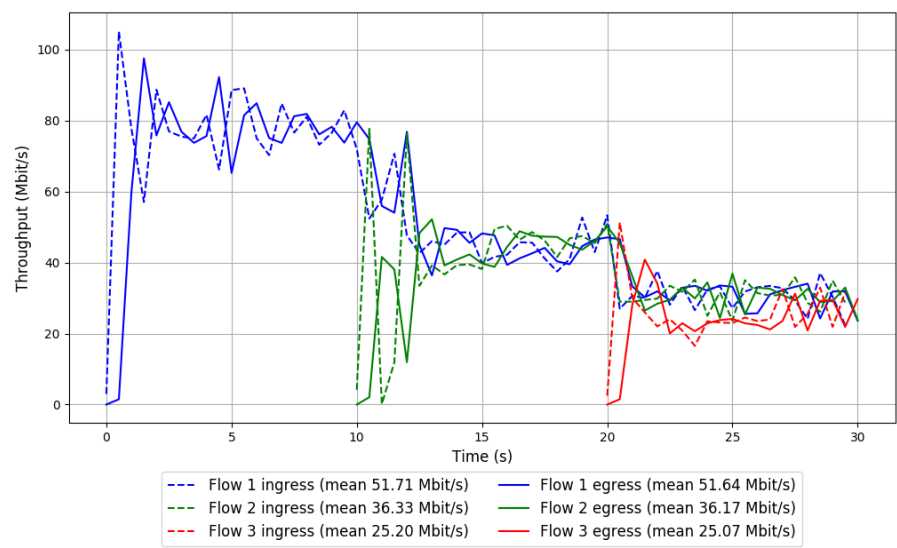


Run 2: Statistics of Verus

Start at: 2018-09-25 17:14:31  
End at: 2018-09-25 17:15:01  
Local clock offset: 2.506 ms  
Remote clock offset: -6.841 ms

# Below is generated by plot.py at 2018-09-25 19:01:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.91 Mbit/s  
95th percentile per-packet one-way delay: 169.603 ms  
Loss rate: 0.67%  
-- Flow 1:  
Average throughput: 51.64 Mbit/s  
95th percentile per-packet one-way delay: 160.528 ms  
Loss rate: 0.39%  
-- Flow 2:  
Average throughput: 36.17 Mbit/s  
95th percentile per-packet one-way delay: 177.706 ms  
Loss rate: 0.82%  
-- Flow 3:  
Average throughput: 25.07 Mbit/s  
95th percentile per-packet one-way delay: 286.212 ms  
Loss rate: 1.95%

Run 2: Report of Verus — Data Link

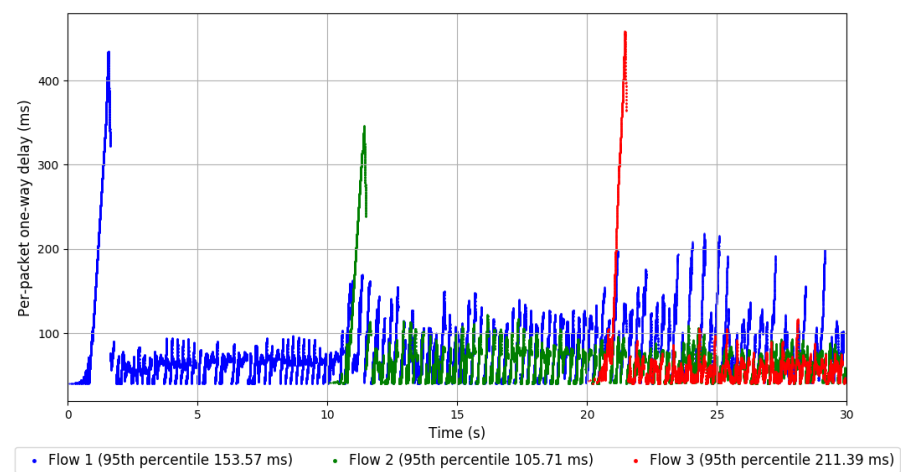
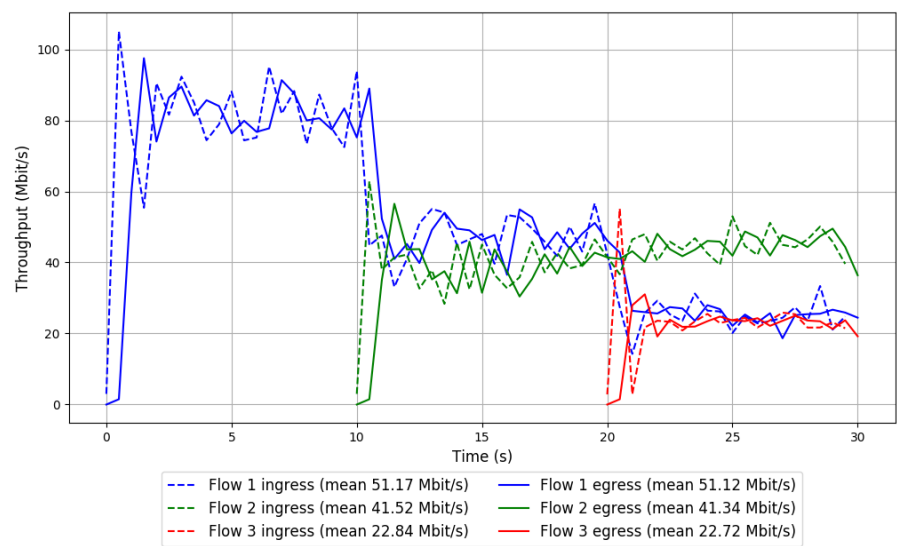


Run 3: Statistics of Verus

Start at: 2018-09-25 17:41:07  
End at: 2018-09-25 17:41:37  
Local clock offset: 0.156 ms  
Remote clock offset: -5.241 ms

# Below is generated by plot.py at 2018-09-25 19:01:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.13 Mbit/s  
95th percentile per-packet one-way delay: 146.728 ms  
Loss rate: 0.58%  
-- Flow 1:  
Average throughput: 51.12 Mbit/s  
95th percentile per-packet one-way delay: 153.570 ms  
Loss rate: 0.34%  
-- Flow 2:  
Average throughput: 41.34 Mbit/s  
95th percentile per-packet one-way delay: 105.713 ms  
Loss rate: 0.80%  
-- Flow 3:  
Average throughput: 22.72 Mbit/s  
95th percentile per-packet one-way delay: 211.387 ms  
Loss rate: 1.33%

Run 3: Report of Verus — Data Link

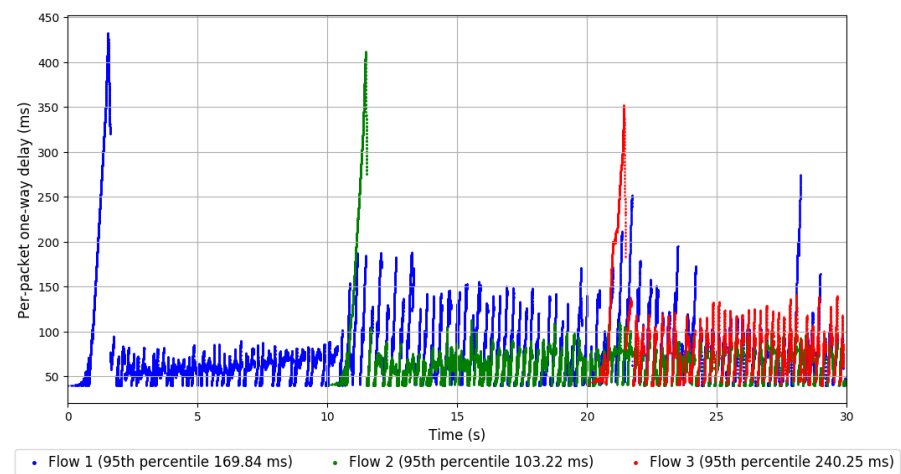
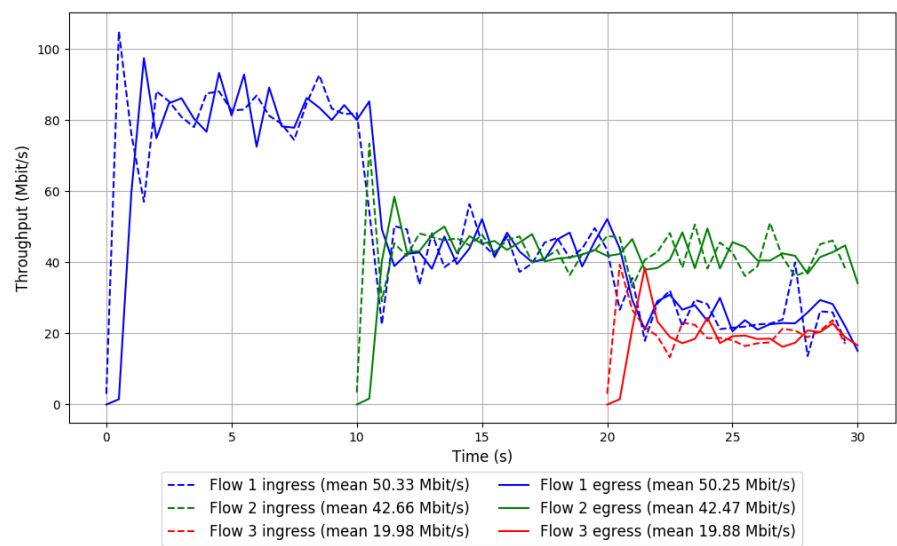


Run 4: Statistics of Verus

Start at: 2018-09-25 18:07:32  
End at: 2018-09-25 18:08:02  
Local clock offset: 0.156 ms  
Remote clock offset: -3.337 ms

# Below is generated by plot.py at 2018-09-25 19:01:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.04 Mbit/s  
95th percentile per-packet one-way delay: 166.125 ms  
Loss rate: 0.66%  
-- Flow 1:  
Average throughput: 50.25 Mbit/s  
95th percentile per-packet one-way delay: 169.840 ms  
Loss rate: 0.39%  
-- Flow 2:  
Average throughput: 42.47 Mbit/s  
95th percentile per-packet one-way delay: 103.225 ms  
Loss rate: 0.81%  
-- Flow 3:  
Average throughput: 19.88 Mbit/s  
95th percentile per-packet one-way delay: 240.251 ms  
Loss rate: 2.00%

Run 4: Report of Verus — Data Link



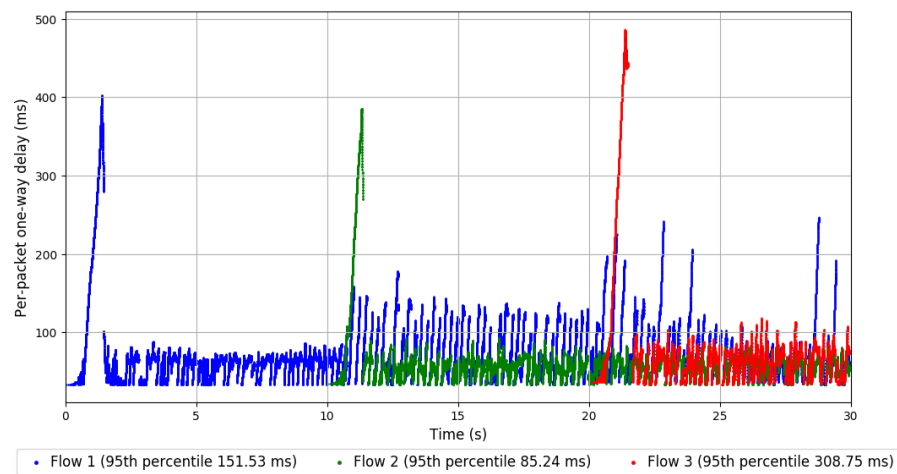
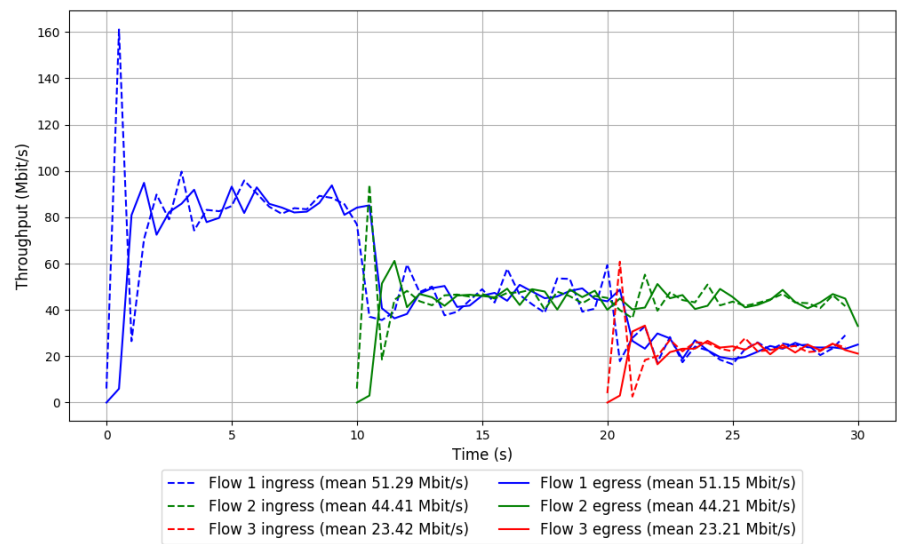


Run 5: Statistics of Verus

Start at: 2018-09-25 18:33:51  
End at: 2018-09-25 18:34:21  
Local clock offset: -0.178 ms  
Remote clock offset: -2.279 ms

# Below is generated by plot.py at 2018-09-25 19:01:50  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.24 Mbit/s  
95th percentile per-packet one-way delay: 141.775 ms  
Loss rate: 0.65%  
-- Flow 1:  
Average throughput: 51.15 Mbit/s  
95th percentile per-packet one-way delay: 151.530 ms  
Loss rate: 0.47%  
-- Flow 2:  
Average throughput: 44.21 Mbit/s  
95th percentile per-packet one-way delay: 85.239 ms  
Loss rate: 0.75%  
-- Flow 3:  
Average throughput: 23.21 Mbit/s  
95th percentile per-packet one-way delay: 308.749 ms  
Loss rate: 1.52%

Run 5: Report of Verus — Data Link

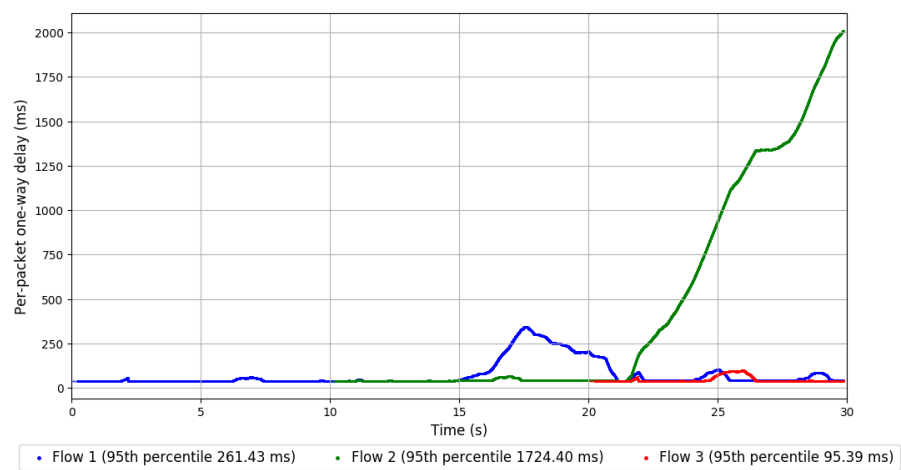
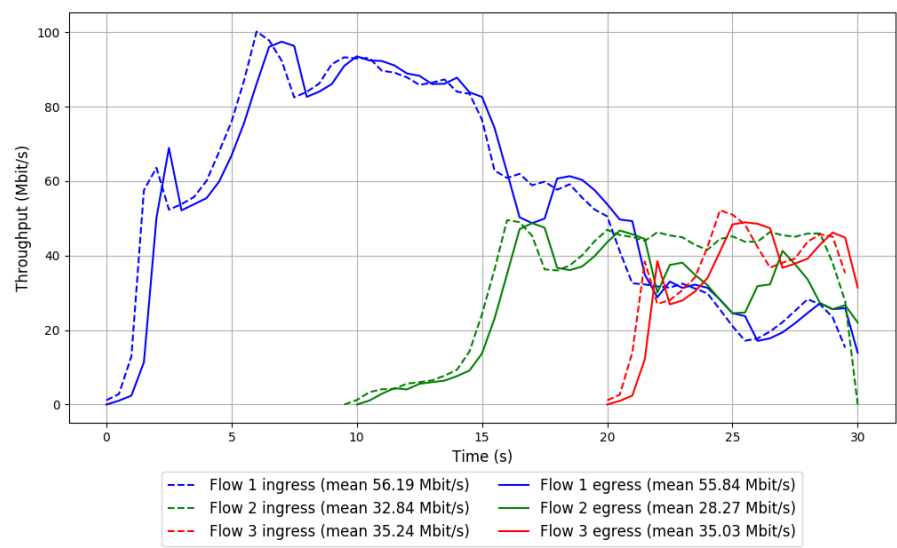


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-25 16:59:12  
End at: 2018-09-25 16:59:42  
Local clock offset: 3.651 ms  
Remote clock offset: -7.431 ms

# Below is generated by plot.py at 2018-09-25 19:01:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.15 Mbit/s  
95th percentile per-packet one-way delay: 1163.199 ms  
Loss rate: 4.68%  
-- Flow 1:  
Average throughput: 55.84 Mbit/s  
95th percentile per-packet one-way delay: 261.428 ms  
Loss rate: 0.88%  
-- Flow 2:  
Average throughput: 28.27 Mbit/s  
95th percentile per-packet one-way delay: 1724.400 ms  
Loss rate: 16.00%  
-- Flow 3:  
Average throughput: 35.03 Mbit/s  
95th percentile per-packet one-way delay: 95.395 ms  
Loss rate: 1.36%

Run 1: Report of PCC-Vivace — Data Link

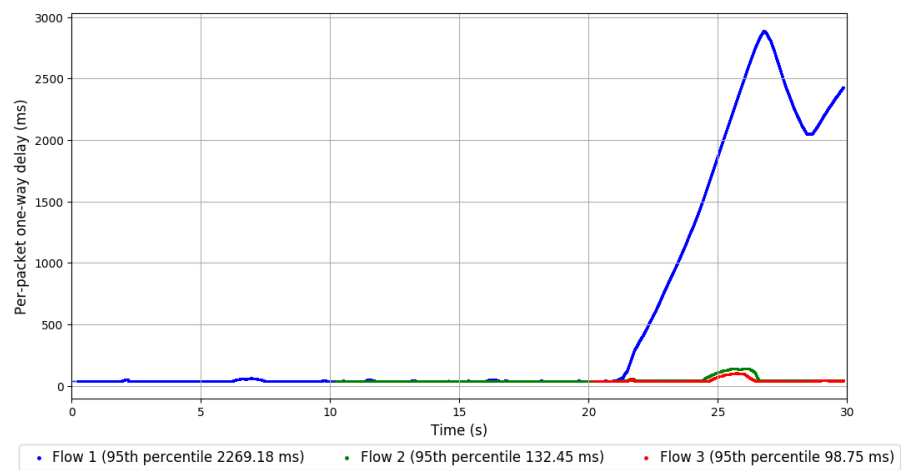
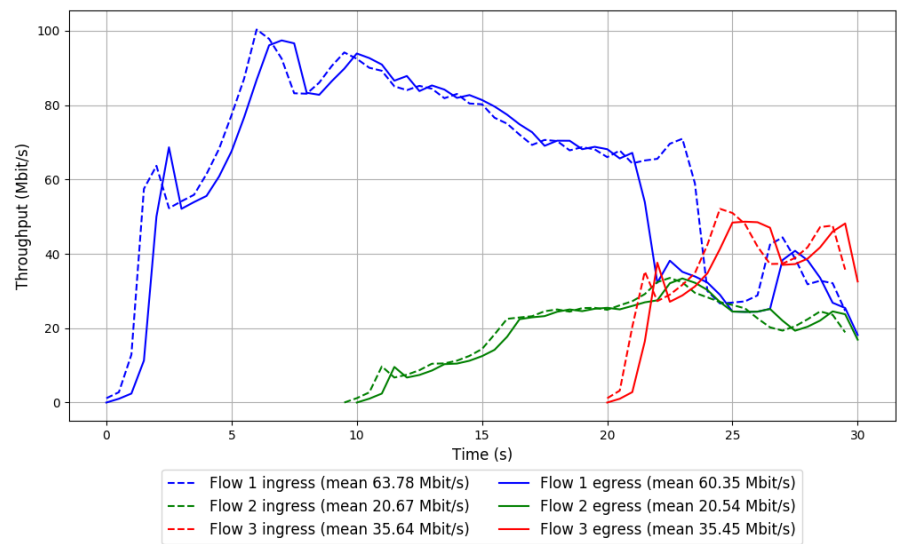


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-25 17:25:43  
End at: 2018-09-25 17:26:13  
Local clock offset: 0.761 ms  
Remote clock offset: -6.452 ms

# Below is generated by plot.py at 2018-09-25 19:02:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.66 Mbit/s  
95th percentile per-packet one-way delay: 2069.284 ms  
Loss rate: 4.34%  
-- Flow 1:  
Average throughput: 60.35 Mbit/s  
95th percentile per-packet one-way delay: 2269.176 ms  
Loss rate: 5.62%  
-- Flow 2:  
Average throughput: 20.54 Mbit/s  
95th percentile per-packet one-way delay: 132.453 ms  
Loss rate: 1.03%  
-- Flow 3:  
Average throughput: 35.45 Mbit/s  
95th percentile per-packet one-way delay: 98.748 ms  
Loss rate: 1.27%

Run 2: Report of PCC-Vivace — Data Link

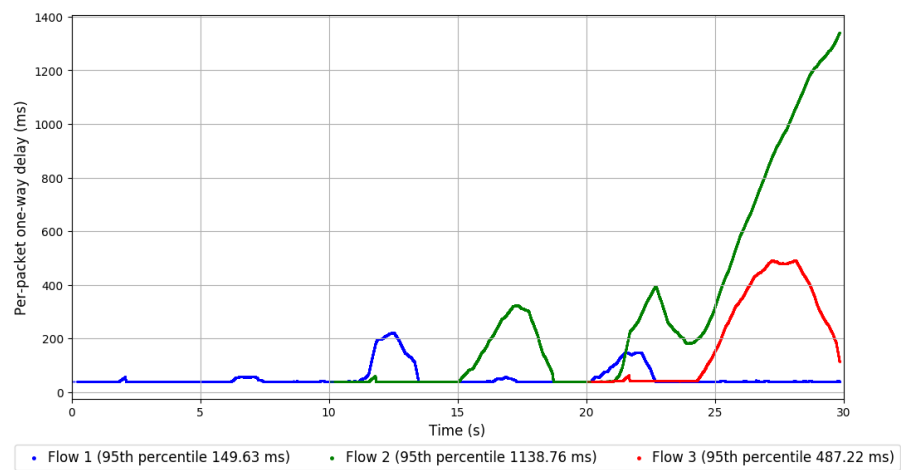
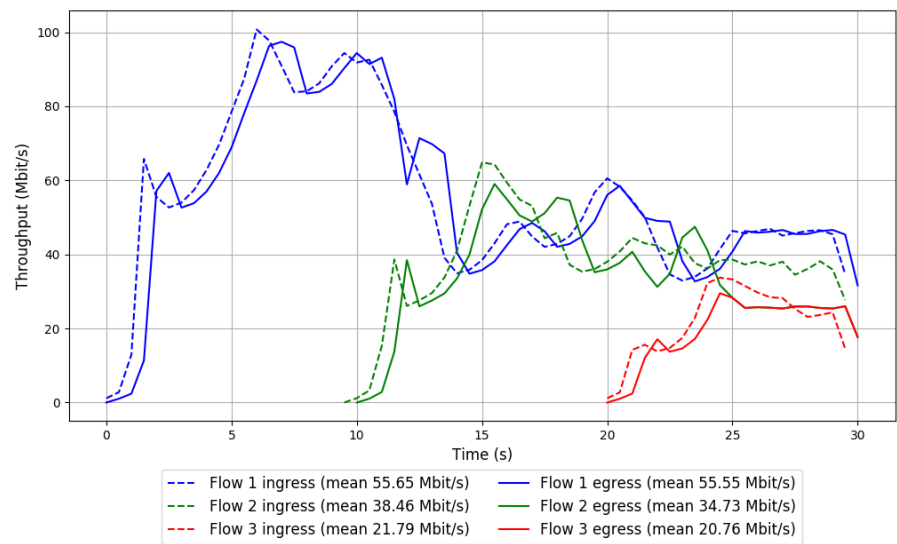


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-25 17:52:17  
End at: 2018-09-25 17:52:47  
Local clock offset: 0.233 ms  
Remote clock offset: -4.638 ms

# Below is generated by plot.py at 2018-09-25 19:02:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.46 Mbit/s  
95th percentile per-packet one-way delay: 481.257 ms  
Loss rate: 3.62%  
-- Flow 1:  
Average throughput: 55.55 Mbit/s  
95th percentile per-packet one-way delay: 149.626 ms  
Loss rate: 0.43%  
-- Flow 2:  
Average throughput: 34.73 Mbit/s  
95th percentile per-packet one-way delay: 1138.764 ms  
Loss rate: 10.03%  
-- Flow 3:  
Average throughput: 20.76 Mbit/s  
95th percentile per-packet one-way delay: 487.218 ms  
Loss rate: 5.49%

Run 3: Report of PCC-Vivace — Data Link





Run 4: Statistics of PCC-Vivace

Start at: 2018-09-25 18:18:38

End at: 2018-09-25 18:19:08

Local clock offset: 0.034 ms

Remote clock offset: -2.83 ms

# Below is generated by plot.py at 2018-09-25 19:02:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 86.38 Mbit/s

95th percentile per-packet one-way delay: 1357.148 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 53.85 Mbit/s

95th percentile per-packet one-way delay: 1374.038 ms

Loss rate: 2.60%

-- Flow 2:

Average throughput: 35.71 Mbit/s

95th percentile per-packet one-way delay: 84.168 ms

Loss rate: 0.51%

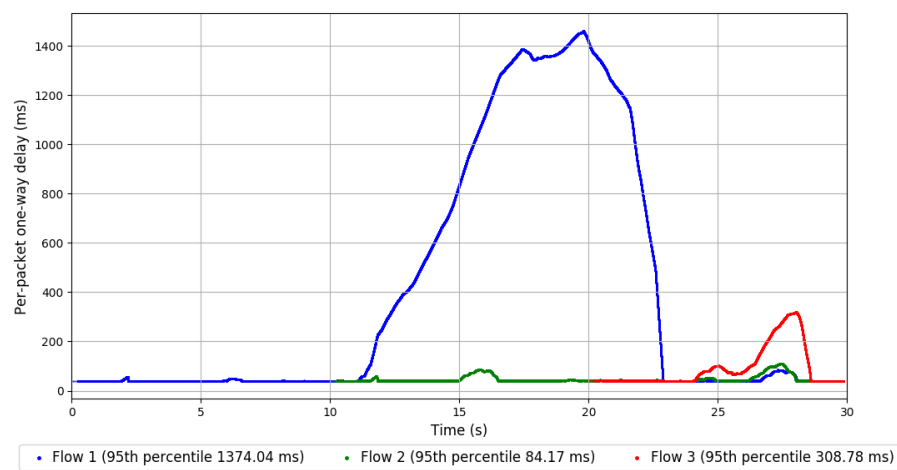
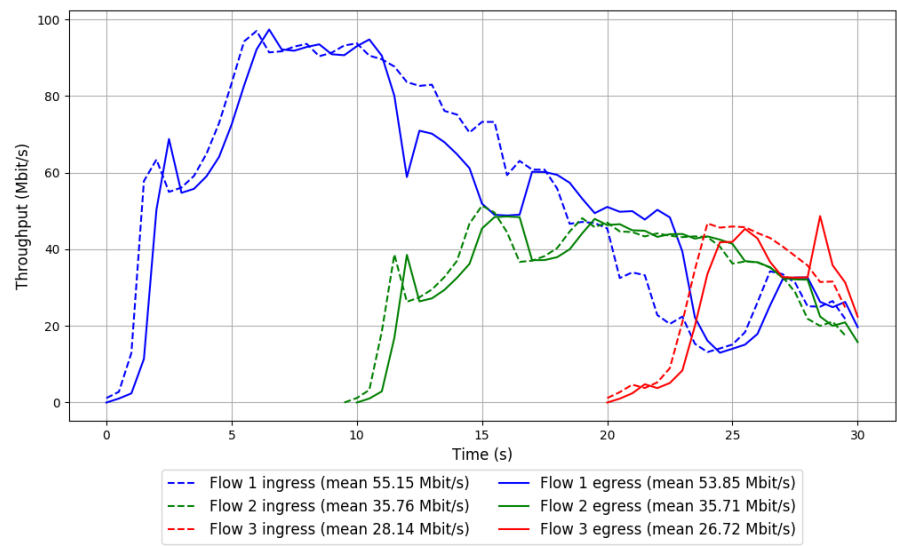
-- Flow 3:

Average throughput: 26.72 Mbit/s

95th percentile per-packet one-way delay: 308.782 ms

Loss rate: 5.80%

Run 4: Report of PCC-Vivace — Data Link

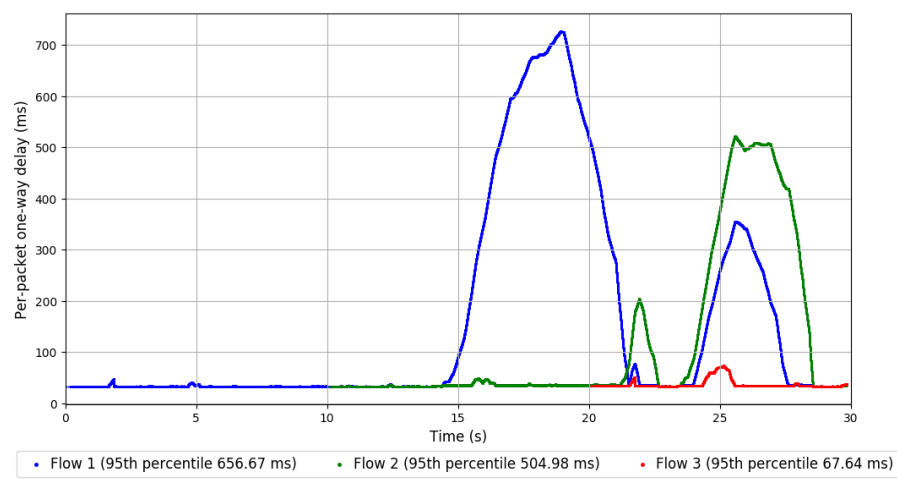
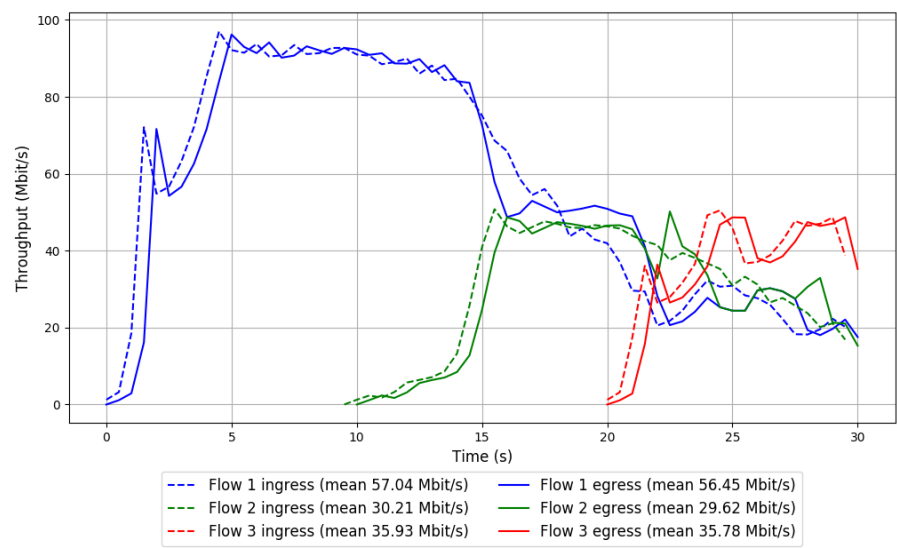


Run 5: Statistics of PCC-Vivace

Start at: 2018-09-25 18:44:53  
End at: 2018-09-25 18:45:23  
Local clock offset: -0.131 ms  
Remote clock offset: -1.945 ms

# Below is generated by plot.py at 2018-09-25 19:02:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.91 Mbit/s  
95th percentile per-packet one-way delay: 590.555 ms  
Loss rate: 1.46%  
-- Flow 1:  
Average throughput: 56.45 Mbit/s  
95th percentile per-packet one-way delay: 656.674 ms  
Loss rate: 1.26%  
-- Flow 2:  
Average throughput: 29.62 Mbit/s  
95th percentile per-packet one-way delay: 504.981 ms  
Loss rate: 2.28%  
-- Flow 3:  
Average throughput: 35.78 Mbit/s  
95th percentile per-packet one-way delay: 67.645 ms  
Loss rate: 1.07%

Run 5: Report of PCC-Vivace — Data Link

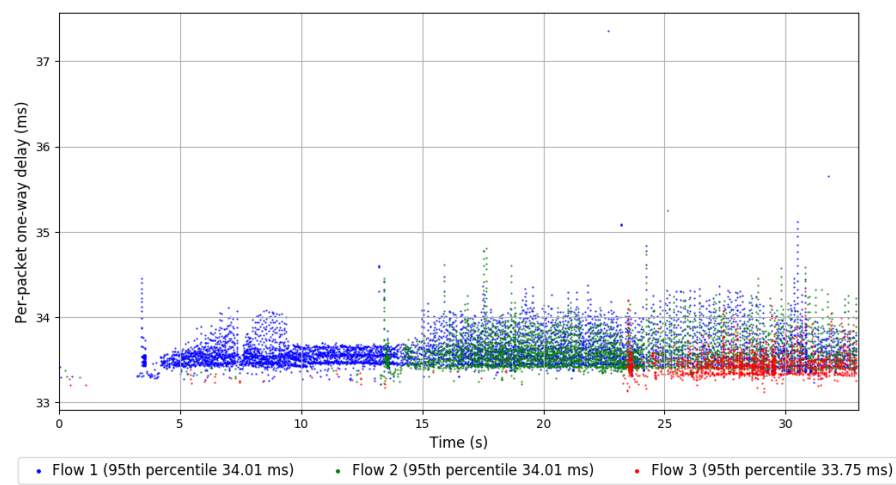
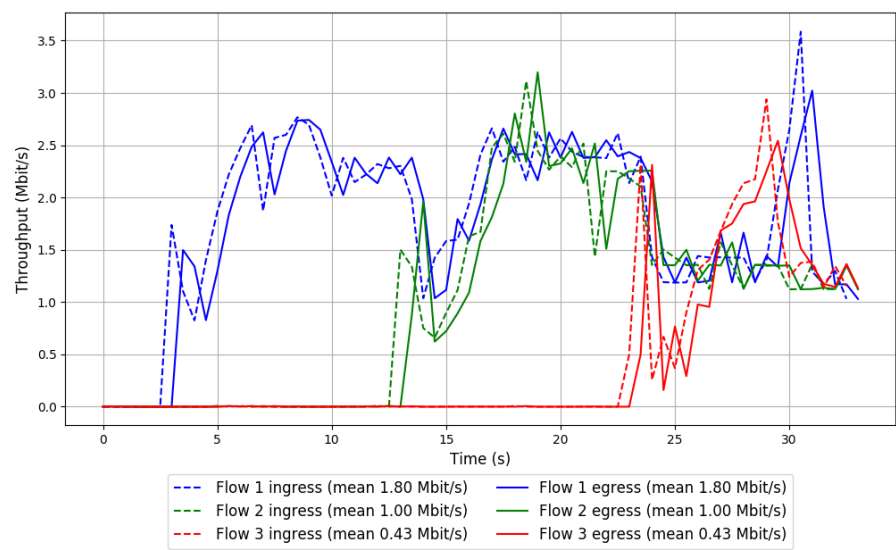


Run 1: Statistics of WebRTC media

Start at: 2018-09-25 16:49:30  
End at: 2018-09-25 16:50:00  
Local clock offset: 2.671 ms  
Remote clock offset: -7.844 ms

# Below is generated by plot.py at 2018-09-25 19:02:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.22 Mbit/s  
95th percentile per-packet one-way delay: 33.993 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 1.80 Mbit/s  
95th percentile per-packet one-way delay: 34.007 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 1.00 Mbit/s  
95th percentile per-packet one-way delay: 34.011 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.747 ms  
Loss rate: 0.81%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-09-25 17:15:55

End at: 2018-09-25 17:16:25

Local clock offset: 2.106 ms

Remote clock offset: -6.76 ms

# Below is generated by plot.py at 2018-09-25 19:02:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.22 Mbit/s

95th percentile per-packet one-way delay: 40.871 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 1.79 Mbit/s

95th percentile per-packet one-way delay: 40.779 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 40.886 ms

Loss rate: 0.34%

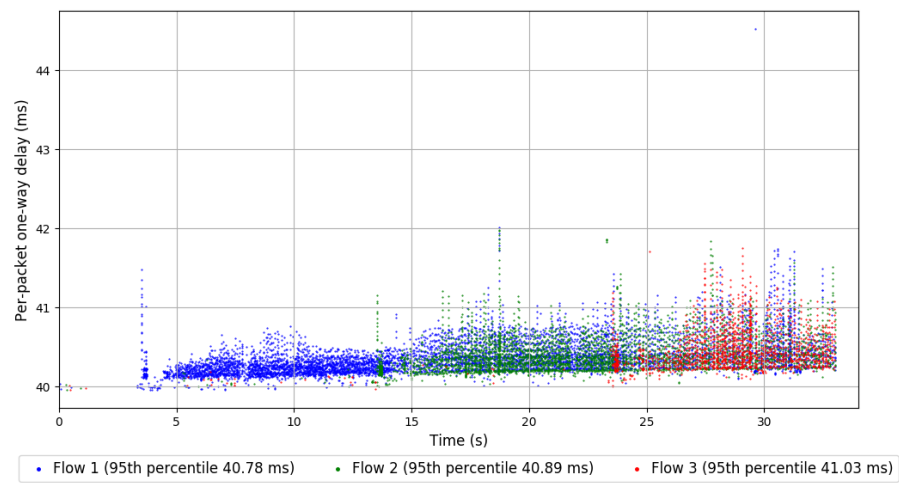
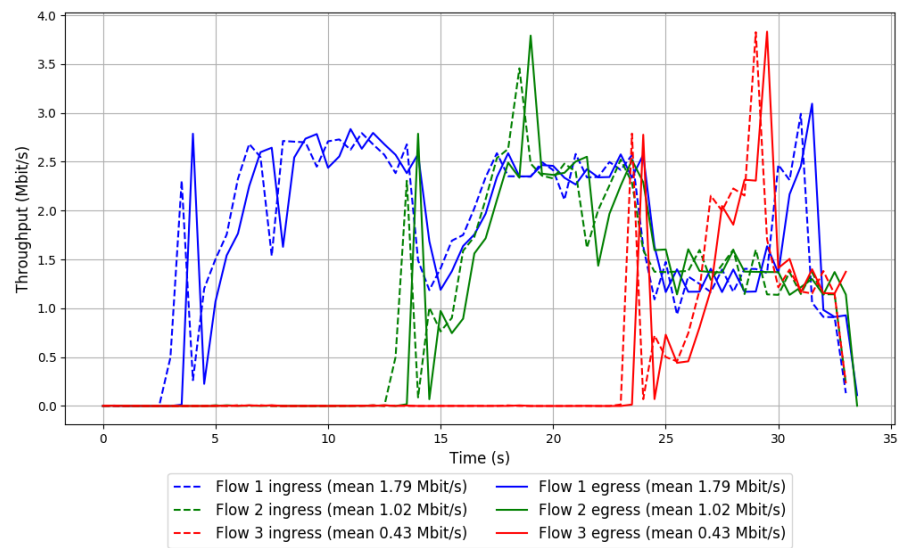
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 41.028 ms

Loss rate: 0.82%

Run 2: Report of WebRTC media — Data Link



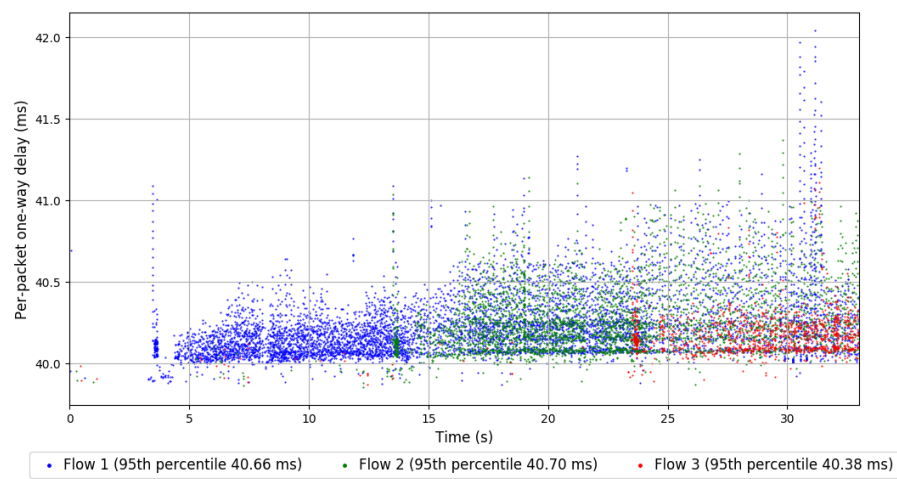
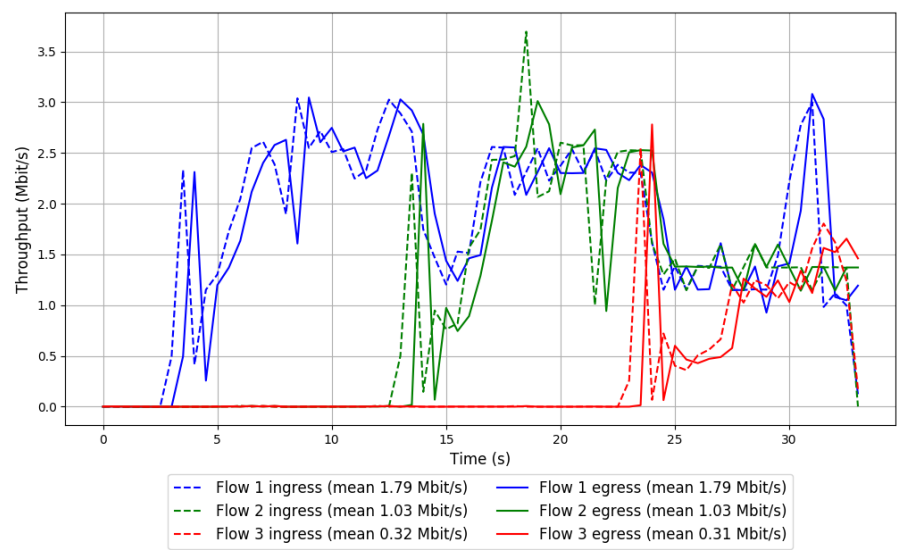


Run 3: Statistics of WebRTC media

Start at: 2018-09-25 17:42:31  
End at: 2018-09-25 17:43:01  
Local clock offset: 0.212 ms  
Remote clock offset: -5.172 ms

# Below is generated by plot.py at 2018-09-25 19:02:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.12 Mbit/s  
95th percentile per-packet one-way delay: 40.670 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 1.79 Mbit/s  
95th percentile per-packet one-way delay: 40.665 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 1.03 Mbit/s  
95th percentile per-packet one-way delay: 40.703 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 0.31 Mbit/s  
95th percentile per-packet one-way delay: 40.381 ms  
Loss rate: 1.30%

Run 3: Report of WebRTC media — Data Link

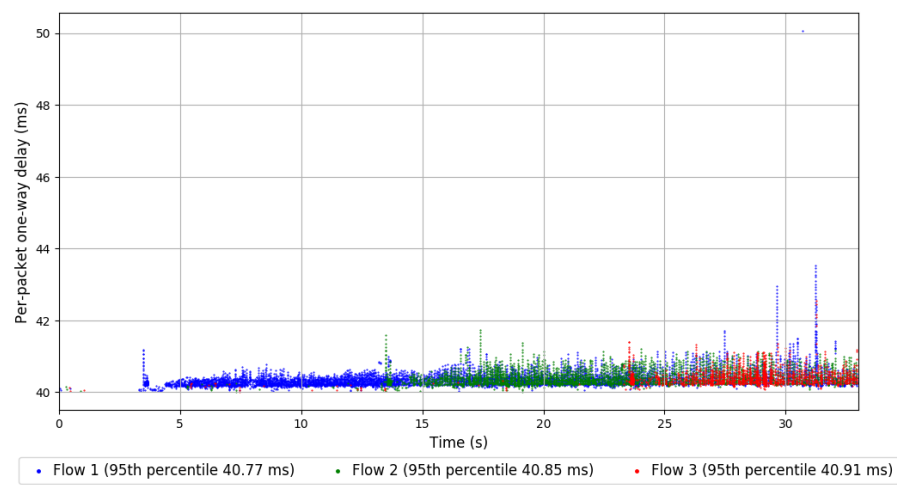
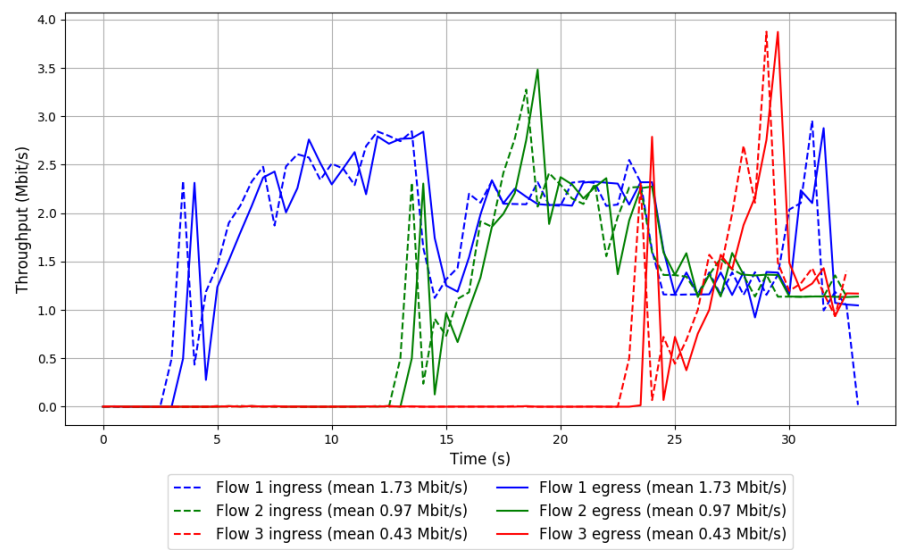


Run 4: Statistics of WebRTC media

Start at: 2018-09-25 18:08:55  
End at: 2018-09-25 18:09:26  
Local clock offset: 0.15 ms  
Remote clock offset: -3.417 ms

# Below is generated by plot.py at 2018-09-25 19:02:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.13 Mbit/s  
95th percentile per-packet one-way delay: 40.833 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 1.73 Mbit/s  
95th percentile per-packet one-way delay: 40.773 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.97 Mbit/s  
95th percentile per-packet one-way delay: 40.851 ms  
Loss rate: 0.35%  
-- Flow 3:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 40.914 ms  
Loss rate: 0.82%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-25 18:35:14

End at: 2018-09-25 18:35:44

Local clock offset: -0.188 ms

Remote clock offset: -2.27 ms

# Below is generated by plot.py at 2018-09-25 19:02:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.25 Mbit/s

95th percentile per-packet one-way delay: 34.175 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 34.141 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 34.064 ms

Loss rate: 0.34%

-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 34.428 ms

Loss rate: 0.01%

Run 5: Report of WebRTC media — Data Link

